ADDENDUM NO. 2

RFP 15-001

October 3, 2014

To All Bidders:

The following change is hereby made a part of RFP 15-001 – Key West City Hall at Glynn Archer, Phase 2 – New Construction and Major Renovation, as fully and as completely as if the same were fully set forth therein:

The mandatory pre-bid meeting for all bidders was held on site at 1300 White Street on September 24, 2014. A copy of the sign-in list along with a transcribed list of all attendees is attached. Please address any transcription errors, particularly in e-mail addresses, to: blbender@bellsouth.net for correction.

1. Detail Sheet Substitution:
Detail Sheets A11.0, A11.1, A11.2, A11.4, and A11.5 have been deleted and replaced with the enclosed detail sheets A11.0, A11.1, A11.2, A11.4, A11.5, and A11.10. Detail Sheet A11.10 has been added to the set of drawings.

2. EV Charging Station:
Contractor to provide and install one electric vehicle charging station where shown on Sheet A1.1. Enclosed is a Specification for the charging station, Section 111136, Vehicle Charging Equipment. Attached to this Addendum is a foundation detail for the EV Charging Station. Contractor shall also provide and install one painted 6" diam. pipe steel bollard in front of charging station. Steel Bollard to be set in non-shrink grout 24"into ground. Bollard shall also be filled with non-shrink grout.

3. Solar Photovoltaic System Specification 263100:
Specification Section 263100, Photovoltaic Systems, is attached to this Addendum.

4. Addendum One correction:
Addendum One was missing page 2 when it was issued. Attached is the full Addendum One, including the missing page.

5. Data outlet at Office 260:
RE: Sheet E2.2B: Add (1) data outlet at the NE corner of Office 260, adjacent to the electrical outlet. A revised Sheet E2.2B is attached to this Addendum.

6. Contractor Question:
The proposal form will need to be re issued to include all of the alternates. **Answer: The updated proposal form has been posted on DemandStar.**

7. Contractor Question:
Instructions to proposers item 20: Are we to include costs for carpet material and installation in our proposal? Will this value be given to us prior to bid, since the contract is assigned to us? **Answer: Yes to both questions. The proposal is included in this Addendum.**

8. Contractor Question:
For the Proposal Breakdown is the City looking for values by trade? **Answer: Yes.**

9. Contractor Question:
For the Subcontractors listed in our proposal please indicate which trades we are to list. **Answer: Contractor to list most sizable trades, including Mechanical, Plumbing, Electrical, Fire Protection, Security, Technology, Landscape, Framing, Drywall, Structural Steel, Concrete, Roofing, Etc.**

10. Contractor Question:
Reference the Lead based paint report; will Lead abatement be required? **Answer: Based on our initial 2012 LBP inspection, most if not all of the interior LBP/LCPs identified have been demolished and disposed of in Phase I last Spring. The exterior paint had LBP identified in some areas, and LCP in other areas around the perimeter. EE&G will soon prepare a Lead Hazard Control Plan that outlines guidelines for an LBP contractor to perform surface preparation/washing operation to establish a "Negative Exposure Assessment" over a three-day period. If exposure levels are below permissible limits, then regular painting subcontractors can proceed with normal repainting operations on exterior and minor interior areas that remain. As for removal of exterior stucco (with LBP) in vertical strips on 8-10 areas around the Bldgs A & B, EE&G will prepare a LBP Removal Workplan for spot abatement along these areas to be specified by Bender (approx. 1 foot wide by height of bldg). Refer to the Lead Abatement Report.**

11. Contractor Question:
Spec Section 030100 Maintenance of Concrete: Page 5 bottom of page states that this work is to be done after a complete evaluation and analysis has been done. There does not appear to be structural repair of concrete surfaces noted in the plans. Please advise if there is any work for us to provide related to this section of the specifications in our bid. **Answer: Concrete repair will be required. Scope cannot be determined until after a complete evaluation and analysis per 030100.3.02 is completed. In addition, Structural Drawings S1.1 and S1.2 denote locations where structural repair of existing concrete is required using FRP. Also see 17/A11.4.**

12. Contractor Question:
Specification 035400 Cast Underlayment, is this to be used at detail 10/A9.4? Are there any other locations which this topping system is used? **Answer: No. Cast Underlayment is to be used in the event that the structural concrete topping over pre-stressed hollow core planks does not provide the recommended flatness level for flooring finish installation. Detail 10/A9.4 and others on same sheet (exterior stairs) shall be done with "Sika Monotop 615" or equal; as indicated on 4/S-2.10.**

13. Contractor Question:
055220 Illuminated Railing Systems: Please add detail or detailed plans clarifying locations that Lighted Rail is located. Plan L-10 is unclear for some locations of lighted rail and Aluminum Guardrail, (keyed notes 6 and 16). Sheet E1.1A shows lighted rail on the east exterior ramp, sheet E1.1B does not show any lighted rail locations on the west side of the building which conflicts with L-10 which does show lighted rails on the west side of the building. **Answer: The lighted railings are shown correctly on Sheet**

E1.1A. It occurs only at the ADA ramp at the east side of the building. Landscape drawings L-10, L-41 and L-42 have been updated to reflect the correct lighted guardrail configuration, and are included in this Addendum.

14. Contractor Question:
Detail 4A/A9.6: confirm that the stair treads are to have a 2" gap between the flat bars. **Answer: The flat bars are 2" wide; the gaps are 1/2".**

15. Contractor Question:
For Alternate 7, will a sketch be issued depicting some concrete walks to be deleted? **Answer: Delete the concrete landing and the concrete walkways that connect the landings to the main sidewalks. An additional sketch will not be issued.**

16. Contractor Question:
There is a discrepancy listing Section 055213 Decorative Metal Railings in the Table of Contents, the pages are labeled 0552133 Decorative Metal Railings. **Answer: The Specification Section is 05 52 13.**

17. Contractor Question:
Section 055213 Decorative Metal Railings; does this section apply to exterior railings only? **Answer: Yes.**

18. Contractor Question:
066100 Quartz Surface Fabrications: there is a wide range of pricing in the full range of colors and patterns mentioned in the specs, consider narrowing the selections to eliminate the premium colors/patterns which come with premium prices. **Answer: Specification 066100 - QUARTZ SURFACING FABRICATIONS has been revised to indicate SILESTONE as the basis of design and range of colors and patterns to be selected from Group IV (Standard Size 120in x 55in); or equal from list of approved manufacturers. The revised Specification Section is attached to this Addendum.**

19. Contractor Question:
Will any structural modifications be needed at the entry Portico (White St. side) to meet code requirements for wind uplift? **Answer: Yes. See structural Sheet S1.2.**

20. Contractor Question:
Sheet A3.1A, note 6 indicates that the PMMA roof coating is to be applied to the parapet walls of the chiller enclosure, section 8/A16.2 shows stucco on the walls of the parapet and the liquid applied roof coating only at the top of the parapet (horizontal surface). Please advise if the section is correct, and stucco only is to be applied to the chiller enclosure interior walls. **Answer: Section 8/A16.2 is incorrect. Corner beads and plaster (stucco) shall be applied to the top of referenced parapet walls (horizontal/sloped surfaces), then coated with reinforced PMMA roof coating.**
Both sides of walls shall be coated with plaster as noted on referenced detail.

21. Contractor Question:
Section 081416: part 2.04 wood veneer species has not been selected. Please select a species for bidding purposes. **Answer: Specification Section "081416 FLUSH WOOD DOORS" has been revised to indicate 'Plain Sliced Cherry' as the species and cut to be provided for all wood doors. The updated Spec section is attached to this Addendum.**

22. Contractor Question:
Sheet A11.1; Detail 20/A11.5 is noted on many door jambs. The detail cannot be found on sheet A11.5, please advise. **Answer: Refer to new door detail sheets A11.0, A11.1, A11.2, A11.4, A11.5, and A11.10 issued with this Addendum.**

23. Contractor Question:
Sheet A1.1 list alternates one thru 6, need to add 7 & 8. **Answer: Sheet A1.1 is incorrect. Refer to updated List of Alternates in Addendum One. The corrected Addendum One is attached to this Addendum.**

24. Contractor Question:
With regard to building signage we are aware of the signage plans and details on sheets A15.2 thru A15.4, will a signage specification be issued? **Answer: A Specification for Signage will be issued in the next Addendum.**

25. Contractor Question:
Also with regard to exterior signage we find no exterior building identification or way-finding signs, please advise. **Answer: No exterior way-finding signage is required. An exterior elevation sketch showing exterior signage is attached to this Addendum. The final verbiage of the signage requires City approval and is subject to change; however, Contractor to bid signage as drawn.**

26. Revision to Instructions to Proposers:
Instructions to Proposers, Item 16, Time of Completion, change to: "The Proposer agrees to begin work within twenty (20) calendar days after the date of the Notice to Proceed, substantially complete the construction in the lump sum base price and accepted alternates within three hundred eighty (380) calendar days, and complete the construction of all items in the lump sum base price and all accepted alternates, in all respects, for this particular project within four hundred ten (410) calendar days after the date of the Notice to Proceed."

27. Contractor Question:
The Fire Alarm in the common areas must be in conduit. Is this true with all areas? **Answer: Yes, all fire alarm wiring shall be run in conduit.**

28. Coffee Maker Deletion:
All coffee makers shall be deleted from the project.

29. Water supply lines at Break Rooms:
Contractor shall provide and install (2) water supply lines at all Break Rooms (Rooms 107, 128, 116A, 136, 217, 230A) for installation of one hot/cold water dispenser, and one coffee maker (coffee maker provided by others). **Answer: Revised isometric drawings have included these requirements at all Break Rooms. Updated plumbing drawings P4.1 and P4.2 are included in this Addendum.**

30. Hot/Cold Water Dispensers:
Contractor shall provide and install hot/cold water dispensers at all Break Rooms (Rooms 107, 128, 116A, 136, 217, 230A). See specification Section 113100, and Interior Elevations.

31. As-Built Drawing Standards:
The City of Key West is requesting that all supplied data collections, as builds, drawings and files to be compatible with esri ArcGIS 10.2.2 Software, as these are the solutions that work within its current computing environment. If there are any questions or concerns on whether your files meet this request, please contact the City of Key West GIS department. 305-809-3721. The current computing environment consists of:
- Microsoft SQL Server - Windows 7/Server 2008 - ESRI GIS Platform

Interfaces and Integrations :

The City of Key West uses a number of software applications critical to its core operation and mission. The proposed mobile asset data collection solution will need to interface or integrate with these existing platforms. - Arc Collector-ArcGIS Online - ArcMap 10.2

32. Drawing Clarification:
Re: Sheet L-70: There is a suction line called out to Wing B cistern but not to Wing A. Is this correct?
Answer: Yes. As the cisterns are interconnected, only one point of suction is required.

33. Drawing Clarification:
Re: Sheet C-5: Hex Note #7 is unclear "Storm inlets to be during construction"
Answer: Text should read "Storm inlets should be protected during construction"

34. Drawing Clarification:
Re: Drawing detail 4/A5.5: The two windows in the photo are to be removed and restored for reinstallation at the building interior.

35. Outlet at Office 141:
Re: Sheet E2.1B: Contractor shall provide and install an additional outlet in mid-wall at the east side of Room 141. The updated Sheet E2.1B is attached to this Addendum.

36. New Power and Data Outlet at Reception 220:
Re: Sheet E2.2A: Contractor shall provide and install power and data outlets to copier located behind receptionist at Room 220. The updated Sheet E2.2A is attached to this Addendum.

37. New Outlet at Office 228:
Re: Sheet E2.2A: Contractor shall provide and install new outlet at west wall of Office 228. The updated Sheet E2.2A is attached to this Addendum.

38. New FPD and FB3 at Office 133:
Re: Sheet EAV2-1B: Contractor shall provide and install new FPD and FB3 at west wall of Office 133.

39. Note on drawing, Sheet T2.00:
Re: Sheet T2.00: At conduit notes, replace reference to Mail Room 126 with reference to Audio-Visual 125. **Answer: The Note Should state that the conduits are to stub up in a chase adjacent to the Audio Visual Room 125**

40. Specifications Section 126125.2
Contractor is authorized to use existing parts salvaged from existing seating.

41. Specification Section 096813.2.01.2
Mike's question: Milliken is the only acceptable manufacturer. Have we told them we're buying materials and labor and transferring responsibility to them? **Answer: See Instructions to Proposers, Item 20. We are using an NJPA agreement. The City will pay Milliken Carpet contract directly. The quotation is being provided as an information item to allow the GC to formulate a price for coordination and /or add a markup. Allen Solomon of Key Carpet provided a proposal for both material and labor. This proposal is included in this Addendum.**

42. Specification Section 113100.202B
Mikes question: Microwave called out as countertop type. Drawings show under-counter.
Answer: Microwave Model PEB9159SFSS by GE can be installed in either condition. Drawings are correct.

43. Specification Section 230923.1.3.A.3
Mike's question: BMS contractor being required to be within 100mi of Key West may be a little stringent. That doesn't quite get us to Key Largo. **Answer: HNGS Specification Section 230923 has been modified to change requirement to 250 miles. The updated spec section 230923 is included in this Addendum.**

44. Specification Section 236423.1.03.10.C
Mikes question: Should there be a maximum distance or time of response on this statement? **Answer: HNGS: Specification Section 236423 has been modified to incorporate distance and availability. The updated Spec Section 236423 is included in this Addendum.**

45. Specification Sections 260943.1.01 and 265113
Mike's question: There is a reference to a Section 265113- Incandescent Lighting. No such section. There is also a reference to 265116- Fluorescent Interior Lighting. Where do we have fluorescent lighting? **Answer: Disregard reference to Section 265113. See lighting schedules.**

46. Substitution Request: Dayton Superior Co.:
Re: 030100 - MAINTENANCE OF CONCRETE Proposers are allowed to submit their products as long as they are listed under Part 2.01. Dayton Superior Corporation is listed therein, therefore they can submit their product, <u>as long as they meet the specification and are deemed equal by the A/E.</u> This determination will occur during the construction phase.

47. Substitution Request: SAFTI FIRST Fire Rated Glass and Framing Systems:
Superlite II-XL 60, as manufactured by SAFTI FIRST Fire Rated Glass and Framing Systems has been **APPROVED** as a substitution to the specified Contraflam 60. Note that fire rated framing is also required.

48. Substitution Request: SWF Contract Roller Shades:
SWF Contract Roller Shades are **NOT APPROVED** as a substitution for Lutron (as the basis of design).

49. Substitution Request: Perminator 15 Mil Underslab Vapor Barrier
Perminator 15 Mil Underslab Vapor Barrier, as manufactured by W.R. Meadows, is **APPROVED** as a substitution.

50. Substitution Request: Design Hardware (door hardware manufacturer)
'Design Hardware' is **NOT APPROVED** as a provider of door hardware for the project.

51. Specifications Table of Contents:
The Table of Contents, Specification Section 000110, has been updated to include all of the new Specification Sections in this Addendum. This section is attached to this Addendum.

52. Substitution Request: Lamvin Acoustical Wall Panels, Sonic I Beveled Edge, and Sonic II Beveled Edge.
Lamvin Acoustical Wall Panels, Sonic I Beveled Edge, and Sonic II Beveled Edge are **NOT APPROVED** as a substitution for Decoustic AP panels.

53. Contractor Question:
The 085700 Doors (CGI) are specified to have SOLEXIA tinted glass. Spec Section 085123 Steel Windows only references the glass color on the drawings and calls for an ATLANTICA tint. Please specify which glass color is required. **Answer: Aluminum Door Spec 085700.2.2.F.7.a.1.b calls for "Green (SOLEXIA)" by PPG as the tint for aluminum door glazing, and the low e-coating "as indicated on drawings". The low-e coating on the doors should be 'PPG Solarban 70XL' (to match steel windows). A revised Specification Section 085700 is attached to this Addendum.**

54. Contractor Question:
Confirm that the window at the south wall of office 153 is an F type window. Also please provide a detail for the counter at the F type windows. **Answer: Yes. The window at the south wall of Office 153 is an F type window. Counter transaction tray is built into the window sill. See Spec Section 085659. Additional details are not required.**

55. Contractor Question:
Where are projection screens shown? **Answer: The projection screens are shown on the EAV drawings.**

56. Contractor Question:
Sheet L-11: Furnishing item F7 is not found on the plan, confirm one required at the Butterfly Garden only in base bid. **Answer: Furnishing item "F7" is located under the Shade Structure at the Butterfly Garden. Currently, it is labeled as "F6", this is incorrect. The corrected Sheet L-11 is attached to this Addendum.**

57. Contractor Question:
Please show underground conduit routing to solar panels & carports. **Answer: Electrical Sheet E1.1 has been updated to show routing, and is included in this Addendum.**

58. Contractor Question:
Reference 9/S2.8: Please provide size and species for ceiling joist to replace existing termite damaged joists. **Answer: The intent was to replace with same. 2x4 Southern Yellow Pine No. 2 is acceptable.**

59. Contractor Question:
Sheet L-10 item 10 planter pot, indicates 6, beside the 6 at the front 3 more are indicated west of the commission chambers. Confirm 9 are required. **Answer: 9 are required. The corrected Sheet L-10 is attached to this Addendum.**

60. Contractor Question:
Is removal of the site fencing in this contract? **Answer: Yes. All existing chain link site fencing shall be removed when the job is complete.**

61. Contractor Question:
Sheet L12: providing and installing the compass rose in stone as shown in the drawing will be difficult at best to install and result in a satisfactory end result due to the nature of the material and the sharp edges at the points of the compass (16 total). We request that a poured in place process be allowed from the same supplier using aggregate as required for each of the colors and textures indicated. Also what is the finishes required at the inner three circles of the compass rose? **Answer: Poured in placed process is acceptable per phone conversation with the fabricator / supplier. A mock-up was also requested by Littlejohn to confirm quality & finishes. The revised Sheet L-12 is attached to this Addendum.**

62. Contractor Question:
Sheet M2.1A, 50x16 return air duct shows a fire damper thru EMR room wall, partly in and partly outside the wall. Please provide revised drawing correcting. **Answer: M2.1A 50x16 duct is to be located above interstitial space above elevator machine room. Due to the use of silencers, it is not going to be possible to locate fire dampers at floor penetrations or ducts penetrating fire rated walls with silencers. Ducts with this condition should be provided with a 2hr rated enclosure and framing for an out of wall fire damper installation. See note added in drawings M2.1A, M2.1B, M2.2A, and M2.2B.**

63. Contractor Question:
Same area as noted above, sheet T2.01 shows 8, 4" conduits, coordinate routing of duct and conduits. **Answer: There are (2) Sets of 4" Conduits route from two locations at the street (Total of (8) 4" conduits routed into the facility. This provides diverse routing of carrier/service provider signal cable. Secondary telephone service entrance route added to the HNGS site plan. This drawing is included with this Addendum.**

64. Contractor Question:
Sheet S1.1 indicates three concrete bollards at the ramp, near the front entry (east side), sheet L-10 and L-43 indicates same columns as masonry. **Answer: Masonry columns are correct. S1.1 has been revised and issued with this addendum.**

65. Contractor Question:
Sheet S1.1 at the west ramp shows section 11/S2.2, a monolithic slab/footing pour, sheet L-11, note 11, shows a different foundation with a wall. Shall we use details shown in the landscape plan?
Answer: Section 11/S2.2 is correct.

66. Contractor Question:
Sheet L-11 indicates to see architectural drawings for screen wall detail at generator. A1.1A, shows wall for dumpster but not generator. Please advise if a screen wall is required for the generator. Provide

necessary details. **Answer: The architectural screen wall has been deleted and is not required. Landscape Sheet L-11 has been updated to reflect this, and is included in this Addendum.**

67. Contractor Question:
Provide details for generator pad. **Answer: See equipment pad detail K/S5.1**

68. Plan and Reflected Ceiling Plan reissue:
Architectural Drawing Sheets A2.1, A2.1A, A2.1B, A2.2, A2.2A, A2.2B, A4.1, A4.1A, A4.1B, A4.2, A4.2A, A4.2B, A8.1, A8.2, A8.3, A8.4, A9.1, A9.5, A9.10, A11.6, A11.7, A11.8, A12.3, A19.3, G1, LS-1, and LS-2 have been updated, and are reissued with this Addendum.

69. Proposal Due Date:
The Bid Due Date has been postponed to Wednesday, October 22.

70. Number of Copies of Proposals:
In Request for Proposals, Item 8, Submission of Proposals, change three (3) copies to four (4) copies.

71. Contractor Question: Interior Storefront Door Hardware:
Please confirm that the hardware for the interior storefront doors is intended as listed, as the listed hardware is not standard storefront hardware. **Answer: Confirmed. Please see response #72 below.**

72. Contractor Question: Interior Storefront Stile Type:
The interior storefront specification does not list a stile type, (narrow, medium, or wide stile). In order to accommodate the lockset specified the doors will need to be a wide stile door. Please clarify that a wide stile door is required for bidding purposes. **Answer: The interior storefronts have been changed from the currently specified YKK YES 45 FS system, to KAWNEER IR500 with 350 Std. doors which are medium stile (3-1/2" vertical stile, 3-1/2" top and 6-1/2" bottom rail). We can update to the 500 series which is wide stile (5" vertical stile, 5" top and 6-1/2" bottom rail) if needed.**

73. Contractor Question: Doors 115 and 142:
Doors #115 and #142 are noted as fire rated. We have not found an exterior door with an NOA and with a fire rating. Please advise. **Answer: The Vetrotech VDS (HI) door system specified for Doors 115 and 142 has both a Florida Product Approval (FL16922) and a 1 hour fire rating. The cutsheets for these doors are attached to this addendum.**

74. Contractor Question: Door 142A:
Door # 142A is interior but hardware call-out for exterior impact hardware, please confirm intended hardware. **Answer: No need for exterior impact hardware at this interior door**

75. Contractor Question: Exterior Storefront Entrances:
Please confirm all exterior storefront entrances are intended to be manufactured by CGI or approved equal. **Answer: See Door Schedule.**

76. Reinforcing at concrete wall openings:
The Sika concrete reinforcement products installed at the window openings have been updated. Sheet S1.1 has been updated to reflect this. This sheet is attached to this Addendum.

Attachments:

A. Mandatory Pre-Bid Sign In Sheets & Transcription of Sign-In Sheets
B. Revised Specification Section 085700 Aluminum Doors (RE: Addendum Item 53)
C. Updated Architectural Sheets A11.0, A11.1, A11.2, A11.4, A11.5, and A11.10. Note that Detail Sheet A11.10 has been added to the set of drawings. (RE: Addendum Item 1)
D. Addendum One, including missing page. (RE: Addendum Item 4)
E. Specification Section 263100, Photovoltaic Systems (RE: Addendum Item 3)
F. Updated Architectural Drawings, Sheets A2.1, A2.1A, A2.1B, A2.2, A2.2A, A2.2B, A4.1, A4.1A, A4.1B, A4.2, A4.2A, A4.2B, A8.1, A8.2, A8.3, A8.4, A9.1, A9.5, A9.10, A11.6, A11.7, A11.8, A12.3, A19.3, G1, LS-1, LS-2. (RE: Addendum Item 68)
G. Specification Section 111136, Vehicle Charging Equipment (RE: Addendum Item 2)
H. Exterior Elevations showing new exterior signage (RE: Addendum Item 25)
I. Revised Specification Section 066100, Quartz Surfacing Fabrications (RE: Addendum Item 18)
J Updated Structural Sheet S1.1 (RE: Addendum Item 64)
K. Updated MEP Sheets E1.1, E2.1A, E2.1B, E2.2A, E2.2B, E6.1, E6.5, E7.01, E7.02, M2.1A, M2.1B, M2.2A, M2.2B, P4.1, P4.2 (RE: Addendum Item 5, 29, 35, 36, 37, 57, and 62)
L. Not used.
M. Milliken Contract (RE: Addendum Item 7 and 41)
N. Specification Section 230923, updated. (RE: Addendum Item 43)
O. Specification 236423, Scroll Water Chillers, updated. (RE: Addendum Item 44)
P. Specification 081416, Flush Wood Doors, updated. (RE: Addendum Item 21)
Q. Specification 000110, Table of Contents, updated. (RE: Addendum Item 51)
R. EV Charging Station Foundation Sketch (RE: Addendum Item 2)
S. Updated Landscape Sheet L-10 (RE: Addendum Item 59)
T. Updated Landscape Sheet L-11 (RE: Addendum Item 56)
U. Updated Landscape Sheet L-12 (RE: Addendum Item 61)
V. Updated Landscape Sheet L-41 (RE: Addendum Item 13)
W. Updated Landscape Sheet L-42 (RE: Addendum Item 13)
X. Cutsheet for Vetrotech Impact fire rated door. (RE: Addendum Item 73)

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 2 by acknowledging Addendum in their proposal or by submitting the addendum with the bid package. Bids submitted without acknowledgement or without this Addendum may be considered non-responsive.

_____ _____

Signature Name of Business

CITY HALL AT GLYNN ARCHER
PRE-BID MEETING
September 24, 2014 10:00AM

COMPANY	REPRESENTATIVE	PHONE/CELL	E-MAIL
Biltmore Construction	Tony Jenkins	727-638-0937	tjenkins@biltmoreconstruction.com
Biltmore Construction	Barry Cercone	727-423-0442	bcercone@biltmoreconstruction.com
Biltmore Construction	Travis Parker		tparker@biltmoreconstruction.com
AVI-SPL	Paul Wareham	954-938-9382	Paul.wareham@avispl.com
City of Key West	Mike Vieux	305.809.3964	mvieux@cityofkeywest-fl.gov
Burke Construction	David Martinez	305-986-0158	dmartinez@bcgconstruction.net
Triple M Roofing	Sam Ilee	954-524-7000	sam@triplemroofing.com
Conch Construction and Roofing, Inc.	Michael Garcia	305-304-4188	Conchroofing@gmail.com
Key West Trim Works	Brian Dunn	305-504-4714	bdunnkwtw@gmail.com
Integrated Security Systems	Ernesto Diaz	305-341-4638	ediaz@teamiss.com
FHP Tectonics	Riley Barron	224-645-6941	rbarron@fhpaschen.com
Gary's Plumbing & Fire	Bill Hamberger	305-296-6013	Garysplumbing1@aol.com
Charley Toppino & Sons	Andrew Toppino	305-797-6839	ajtoppino@gmail.com
DL Porter	Gene Lenhart	941-929-9400	garyber@dlporter.com
CPS	George White	813-997-3948	gwhite@completeproperty.com

CITY HALL AT GLYNN ARCHER
PRE-BID MEETING
September 24, 2014 10:00AM

COMPANY	REPRESENTATIVE	PHONE/CELL	E-MAIL
Nearshore Electric	Dwight Devore	305-294-3991	dwightnearshore@bellsoutn.net
ADS Services, Inc.	Greg Godec	813-465-8006	gregorygodec@msn.com
Salt Services, Inc.	Lisa Kaul	305-289-1150	lisak@saltservice.net
Bella	Niels Hubbell	404-915-1286	niels@concretebella.com
Coastal Construction	Tim Neely	305-796-0628	tneely@coastalconstruction.com
Douglas N. Higgins	Paul Waters	305-797-1019	paulw@dnhiggins.com
Littlejohn	Keith Oropeza	407-222-9583	koropeza@leainc.com
Bender & Associates Architects	Bert Bender	305-296-1347	blbender@bellsouth.net
Bender & Associates Architects	David Salay	305-296-1347	blbender@bellsouth.net
Bender & Associates Architects	Emily Schulte	305-296-1347	blbender@bellsouth.net

SECTION 08 57 00

ALUMINUM DOORS

1.1 SECTION INCLUDES

A. Swing Doors: Impact-resistant aluminum swing doors, frames, sidelites, transoms, and structural mullions, including aluminum extrusions, finish, glass, door hardware, water-barrier thresholds, and weather strips, for high velocity hurricane zone (HVHZ) construction.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry.

B. Section 07 91 26 - Joint Fillers.

C. Section 08 80 00 - Glazing.

1.3 REFERENCES

A. American Architectural Manufacturers Association:
1. AAMA 701/702: Pile weatherstripping and replaceable weatherseals.
2. AAMA 2603: Organic coatings on aluminum.
3. AAMA 2605: High-performance organic coatings on aluminum.

B. American Society of Civil Engineers
1. ASCE 7: Minimum Design Loads for Buildings and other Structures.

C. American Society for Testing and Materials:
1. ASTM B 221: Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM E 283: Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
3. ASTM E 330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.
4. ASTM E 331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

D. Florida Building Code, 2010 edition (FBC):
1. FBC-B -- Florida Building Code, Building (including 2012 Supplement).
2. FBC-TP -- Florida Building Code, Test Protocols for HVHZ.
a. FBC-TP TAS-201 -- Impact Test Procedures.
b. FBC-TP TAS-202 -- Criteria for Testing Impact and Nonimpact Resistant Building Envelope Components Using Uniform Static Air Pressure.
c. FBC-TP TAS-203 -- Criteria for Testing Products Subject to Cyclic Wind

Pressure Loading.

1.4 PERFORMANCE REQUIREMENTS

A. Impact-Resistant Aluminum Door Performance:
   1. Structural Test: ASTM E 330.
   2. Water Infiltration Resistance: ASTM ES47/E 331 and FBC TAS 202.
   3. Air Infiltration Resistance: ASTM E 283.
   4. Windborne Debris Impact Resistance: Pass large missile impact tests; Florida Building Code, FBC TAS 201.
   5. Hurricane Wind Pressure Resistance: After passing large missile impact test, pass cyclic pressure tests following FBC TAS 203.

1.5 SUBMITTALS

A. Shop Drawings: Refer to Section 013000 - Administrative Requirements for complete submittal procedures. Indicate elevations, locations, markings, quantities, material, head jamb and sill conditions, metal thickness, sizes, shapes, dimensions, finishes and wind pressures.

B. Product Data: Provide detailed data on Manufacturers catalog data on each product to be used, including Miami Dade County Product Approval (NOA).

C. Selection Samples: For each finish specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Not less than 10 years of experience in manufacturing impact-resistant aluminum windows and doors.

B. Installer Qualifications: Skilled and experienced to install manufacturer's units of the types specified.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging in a clean, dry area until ready for installation.

B. Protect exposed metal and glass surfaces to prevent damage to finish.

1.8 WARRANTIES

A. Warranty Period: Contact CGI Windows and Doors, Inc. for details on 10 year limited warranty.
   1. Structural, Hardware and Certain Finishes: 10 years.
   2. Stress Cracks on Glass: 1 year.
   3. Delamination on Laminated Glass Units: 5 years.
   4. Insulated Glass (sealed component): 10 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: CGI Windows and Doors, Inc. , 10100 N. W. 25th St. ; Miami, FL 33172; Toll Free Tel: 800-442-9042 ; Tel: 305-593-6590; Fax: 305-593-6592; Email:ocordova@cgiwindows.com; www.cgiwindows.com

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 SWING DOORS (SENTINEL)

A. Swing Doors: "Sentinel" Series 450 SN Doors by CGI Windows and Doors, Inc.

B. Swing Door Design:
1. Out-swing configuration.
2. 2 inches (51 mm) thick (nominal) door panels.
3. Complete frame, threshold and weatherstripping.
4. Extruded snap-on square glazing bead profile (contemporary).
5. Extruded astragal adaptor.
6. Muntins: Semi-contoured (exterior only) 1 inch (25 mm) double applied muntins.

C. Performance Requirements:
1. Outswing Doors: Max. 3 ft x 8 ft panel.
a. 100 psf Positive and Negative with annealed/annealed glass.
b. 100 psf Positive and 110 psf Negative with heat strengthened glass.

D. Air Infiltration Resistance:
1. Outswing Doors: No more than 0.07 cfm/sqft of glass area at static air pressure difference of 6.24 psf.

E. Water Infiltration Resistance:
1. Outswing Doors: No water penetration at a static air pressure differential of 15 percent of positive design pressure with a maximum tested performance of 15 psf.

F. Construction: Heavyweight extruded aluminum sections for wet glazing, precision cut and assembled with sealant filled hairline joints and no visible screws. Provide grooves in extrusions to receive 3 lines of weather stripping where doors abut frames.
1. Member Wall Thickness: 0.125 inch (3.2 mm) minimum; 0.150 inch (3.8 mm) at hardware mounting locations.
2. Member Sizes: Widths including glazing beads.
a. Top Rails and Stiles: 1.918 inches (48.7 mm) thick by 5.5 inches (157 mm).
b. Bottom Rails: 1.918 inches (48.7 mm) thick by 8 inches (203 mm).

3. Sightlines:
   a. Top Rails: 6.25 inches (15.88 cm).
   b. Jambs: 6.75 inches (17.146 cm).
   c. Sills: 8 inches (20.32 cm).
4. Door Corner Construction: Assemble using two 3/8 inch (8.9 mm) threaded compression rods in rails, secured at each end with washers and hex nuts.
5. Glazing Beads: Snap-in design, for interior wet glazing, 0.060 inch (1.5 mm) wall thickness, with at least 0.50 inch (12.7 mm) glass bite for impact-resistant glazing.
6. Finishes: Uniform at all visible surfaces exterior and interior.
7. Factory Glazing:
   a. Laminated Impact Resistant Glass Units: 7/16 inch (11 mm) thick (nominal), type 2T(E), as specified on 08800.2.06.B.2.
   b. Where indicated on drawings, provide 7/16 inch (11 mm) thick (nominal), composite solid infill panels consisting of a 1/4 inch (6.35 mm) plywood panel sandwiched between one layer of 0.90 inch (2.28 mm) aluminum sheet on each side; painted to match door frame color.

2.3 FINISHES

A. AAMA 2605 Kynar Finish: Pretreatment plus 2 coat, 70 percent polyvinylidene fluoride (PVDF) coating, or manufacturer approved equal.
   1. Color: As selected by Architect.

PART 3 EXECUTION

3.1 PREPARATION

A. Before start of unit installation, check openings for adequacy of pressure preservative treated wood blocking that will receive frames. Check the size, quantity, spacing, clearances, and rigidity of fastenings and their conformance to the specified NOA.

3.2 PREPARATION

A. Coordinate with Section 06 10 00 - Rough Carpentry
   1. 3/4 inch (19 mm) or 1-1/2 inch (38.1 mm) as per specified NOA rectangular or beveled pressure preservative treated South Yellow Pine blocking, set in a full bed of sealant.
   2. Fasten with to structure with drilled concrete fasteners spaced as required in NOA, so that blocking is continuous and is tightly butted to fill corners of each opening.

B. Coordinate with Section 07 91 26 - Joint Fillers
   1. Sealant at exterior perimeter of aluminum frames, in deeply grooved stucco or in 1/4 inch (6 mm) gaps where other exterior finish materials terminate next to frames.
   2. Sealant in 1/8 inch (3.2 mm) gap at frame interior perimeters where sills and interior finish materials such as gypsum board and tile terminate next to

frames.

C. Perform cutting, fitting, forming, drilling, and grinding of frames, without damage to finish, as needed to fit project conditions and make watertight. Replace components with damage to exposed finishes.

3.3 WINDOW INSTALLATION

A. Install windows following manufacturer's instructions.

B. Attach window frame and shims to perimeter blocking at openings to accommodate construction tolerances and other irregularities. Maintain integrity of air barriers and vapor retarder sheets.

C. Align windows plumb and level, free of warp or twist.

D. Adjust vents to close snugly and put in smooth operating order.

3.4 DOOR INSTALLATION

A. Install doors and frames in accordance with manufacturer's instructions, requirements of NOA for hurricane and impact-resistant construction, and approved shop drawings.

B. Set frames plumb, square, level, and aligned to receive doors. Anchor frames to adjacent construction in strict accordance with manufacturer's recommendations, requirements of governing NOA, and within specified tolerances.

C. Where aluminum surfaces contact alkaline substrates such as concrete or mortar, and metals other than stainless steel or zinc, protect from direct contact by painting reactive substrate and dissimilar metals with a heavy coating of bituminous paint in the field.

D. Hang doors and adjust hardware to achieve specified clearances and proper door operation.

E. Demonstrate doors and hardware are in good working order.

3.5 CLEANING

A. Refer to manufacturer's instructions for proper cleaning and maintenance of the products.

END OF SECTION

ADDENDUM NO. 1
RFP 15-001

To All Bidders:

The following change is hereby made a part of RFP 15-001 – Key West City Hall at Glynn Archer, Phase 2 – New Construction and Major Renovation, as fully and as completely as if the same were fully set forth therein:

1. **Change date of Mandatory Prebid Meeting to September 24, 2014, at 10:00 AM on the site, at 1300 White Street, Key West, FL 33041. Bid date and time remain October 15, 2014 at 3:00 PM.**

2. **Replace Section 012300 – Alternates with revised Copy Attached.**

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 by acknowledging Addendum in their proposal or by submitting the addendum with the bid package. Bids submitted without acknowledgement or without this Addendum may be considered non-responsive.

_____ _____

Signature Name of Business

SECTION 012300

ALTERNATES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Description of alternates.

B. Procedures for pricing alternates.

C. Documentation of changes to Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

A. Section 001100 - Proposal Requirements:

1. Proposal Requirements:

a. Instructions to Proposers: Instructions for preparation of pricing for alternatives.

b. Proposal Form: List of alternatives as supplement to Proposal Form

2. Contract Forms:

a. Contract: Incorporating monetary value of accepted alternatives.

1.03 ACCEPTANCE OF ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted alternates will be identified in the Owner-Contractor Agreement.

B. Coordinate related work and modify surrounding work to integrate the Work of each alternate.

1.04 SCHEDULE OF ALTERNATES

A. Alternate No. 1 – The base bid includes one of the three solar array structures (e.g. Photovoltaic (PV) Systems) identified in the plans. State the amount of addition to the base bid to add the second solar array structure, including PV modules, PV arrays, inverters, and interconnecting circuits, steel structure including foundations, and miscellaneous equipment required for a fully operational system.

1. Base Bid Item: Division 26 Sections including 263100 – Photovoltaic Systems; and 051213 – Architecturally Exposed Structural Steel; 099610 – High Performance Coatings For Steel; including Drawing numbers A17.1, A17.2 and S1.4.

2. Alternative Item: Division 26 Sections including 263100 – Photovoltaic Systems; and 051213 – Architecturally Exposed Structural Steel; 099610 – High Performance Coatings For Steel; including Drawing numbers A17.1, A17.2 and S1.4.

B. Alternate No. 2 – The base bid includes one of the three solar array structures. State the amount of addition to the base bid to add the third solar array structure, including solar

panels, steel structure including foundations, and miscellaneous equipment required for a fully operational system:

1. Base Bid Item: Division 26 Sections including 263100 – Photovoltaic Systems; and 051213 – Architecturally Exposed Structural Steel; 099610 – High Performance Coatings for Steel; including Drawing Sheets A17.1, A17.2 and S1.4.

2. Alternative Item: Division 26 Sections including 263100 – Photovoltaic Systems; and 051213 – Architecturally Exposed Structural Steel; 099610 – High Performance Coatings for Steel; including Drawing Sheets A17.1, A17.2 and S1.4.

C. Alternate No. 3 – The base bid includes asphalt pavement at the parking lot. State the amount of addition to the base bid to substitute concrete for asphalt:

1. Base Bid Item: Sections 321216 – Asphalt Paving and 321313 – Concrete Paving; and Drawing numbers C5 and C6 including Detail 8/C6.

2. Alternative Item: Sections 321216 – Asphalt Paving and 321313 – Concrete Paving; and Drawing number C5 and C6 including 10/C6.

D. Alternate No. 4 – The base bid includes the Commission Chamber roof framing as shown on Sheet S1.3. State the amount of change to the base bid price (add, deduct or no change) to substitute the alternate bid framing.

1. Base bid item: Sheet S1.3.

2. Alternative item: Sheets S1.3A and S2.11.

E. Alternate No. 5 – The base bid includes the concrete slab and site furnishings at the pavilion in the Butterfly Garden at Grinnell Street. State the amount of addition to the base bid to furnish, install, including foundations, and finish the pavilion structures.

1. Base bid item: Sheets L-11, L-13, and L-21.

2. Alternative item: Sheets L-11, L-13, L-21, and S2.9 for foundation.

F. Alternate No. 6 – The base bid includes the drip irrigation system with one Hunter I-Core Station with a baseline Watertec S.100 Smart Watering Device with one soil moisture sensor. State the amount of addition to the base bid to add the baseline 3200 pedestal mount controller, installed with 6 soil moisture sensors and hydrometer. Substitute a Hoover pump station for the base bid 5 HP centrifugal pump.

1. Base Bid Item: Spec Section 328400, Drawings Sheets L-80, and L-81.

2. Alternate Bid Item: Spec Section 328400, Drawings Sheets L-80, and L-81.

G. Alternate No. 7 – Delete the four historic fire escapes, concrete foundation and extended sidewalks at their bases, leaving landing at the top and adding railing and guard on the 3rd side where the stair was. State the amount of change to the base bid price (deduct) to eliminate said items.

1. Base Bid Item: Spec Section 055120 - Historic Replica Fire Escapes, Drawings Sheets A-9.6 and A-9.7.

H. Alternate No. 8 – The base bid includes manually operated dual roller shades (blackout and shear) for all windows at the Commission Chamber. State the amount of change to the base bid to upgrade all shades at Commission Chamber to Lutron Sivoia QS motorized dual roller shades, or equal.
   1. Base Bid Item: Spec Section 122400 - Window Shades.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 263100

PHOTOVOLTAIC SYSTEMS

PART 1 - GENERAL

1.01 SECTION INCUDES

A. This section specifies the design, furnishing, complete installation, connection and testing of the Photovoltaic System. This includes PV modules, PV arrays, inverters, interconnecting circuits consisting of conduit and wire monitoring and communications.

1. Solar Energy Systems

2. PV laminates (cells laminated into rigid sheets, with connecting cables)

3. PV modules (laminates in mounting frames)

4. Inverters

5. Mounting structures

1.02 RELATED REQUIREMENTS

A. Section 260010 - Basic Electrical General Requirements.

1.03 REFERENCE STANDARDS

A. General:

1. For requirements relating to reference standards, see Section 014219 - Reference Standards.

2. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

B. Florida Building Code, 2010 edition (FBC):

1. FBC-B -- Florida Building Code, Building (including 2012 Supplement).

C. International Electrotechnical Commission (IEC):

1. IEC 60529 -- Degrees of Protection Provided by Enclosures (IP Code); 2013.

2. IEC 61215 -- Crystalline Silicon Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval; 2005.

D. Institute of Electrical and Electronics Engineers (IEEE):

1. IEEE 1262 -- IEEE Recommended Practice for Qualification of Photovoltaic (PV) Modules; 1995.

2. IEEE 1374 -- IEEE Guide for Terrestrial Photovoltaic Power System Safety; 1998.

3. IEEE 1547 -- IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems; 2003.

4. IEEE 1547.1 -- IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems; 2005.

E. National Fire Protection Association (NFPA):

1. NFPA 70 -- National Electric Code; 2008.

F. Underwriters Laboratories (UL):

1. UL 1703 -- Standard for Flat-Plate Photovoltaic Modules and Panels; 2002.
2. UL 1741 -- Standard for Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources; 2010.

1.04 SYSTEM DESCRIPTION

A. Definitions:

1. CEC: California Energy Commission
2. ETFE: Ethylene Tetrafluoroethylene
3. FEP: Fluorinated Ethylene Propylene
4. IP Code: Required Ingress Protection to comply with IEC 60529
5. MPPT: Maximum Power Point Tracking
6. PTC: USA standard conditions for PV
7. PV: Photovoltaic
8. STC: Standard Test Conditions defined in IEC 61215.

B. General Requirements: The following outlines general requirements of the project. Additional details are provided throughout the construction documents.

1. Design, provide and install complete photovoltaic (PV) power systems, including support structures necessary to mount the systems on the canopy with a UL Listed PV mounting system connected to the structural steel.
2. Specify layout and location of the systems at the site.
3. Deliver, assemble, and install the equipment at the site.
4. Conduct acceptance testing on each system and a minimum of two, 3-hour training sessions for the site on the operation and maintenance of the system.
5. Provide required documentation and System Manual.
6. Systems shall require minimal maintenance.

C. PV Arrays:

1. PV arrays shall be located to prevent shading from trees, poles, or other structures at any time, and any day of the year.
2. PV arrays must be securely installed as dictated by site conditions to accommodate for high wind loads, and subsequent potential for damage from flying debris.

3. PV array and supporting structure must comply with wind uplift requirements per FBC CH16, and must be able to withstand design wind speeds of at least 180 mph (3-second gusts).
4. PV array and auxiliary equipment must meet all seismic requirements.
5. The weight of the PV array must not exceed the canopy structural requirements.
6. Certification of the canopy's structural compatibility for any equipment placed on the canopy must be furnished from a licensed Structural Engineer.

1.05 SUBMITTALS

A. General:
   1. For submittal procedures, refer to Section 007200 - General Conditions (AIA A201 - 2007SP, including but not limited to Section 3.12) and Section 013000 - Administrative Requirements.
   2. Sufficient information, clearly presented, shall be included to determine compliance with drawings and specifications.

B. Product Data: Submit manufacturer's published Technical Data Sheets for PV modules and inverters.
   1. Include performance, rating, catalog cuts, pictures, manufacturer's specifications, material composition, and gauge thickness.
   2. Include written Certificate of Compliance confirming accuracy and genuineness of Product Data information included in this submittal.

C. Shop Drawings:
   1. Include plans, elevations, sections, diagrams and details for complete system.
   2. Include control system diagrams, wiring diagrams, interconnections diagrams, wireless connection diagrams, illustrative diagrams, and other like items.
   3. Include diagrams for power, signal, and control wiring.
   4. Include details of equipment assemblies. Indicate dimensions, required clearances, method of field assembly, components, and location and size of each field connection.
   5. Include details of fabrication and assembly.

D. Engineering Calculations:
   1. Submit engineering calculations indicating the energy produced by the system.

E. Warranties:
   1. Manufacturer's Materials and Workmanship Warranty.
   2. Manufacturer's Minimum Power Output Warranty.

F. Operation and Maintenance Data: Submit System Manual consisting of PV Modules,

Inverters, and BOS Equipment.

1.06 QUALITY ASSURANCE

A. Installing contractor must have demonstrated experience with a minimum of at least two installations of comparable size and scope and located in a ISO 12944 Classification C5M environment (Coastal and offshore areas with high salinity).

B. Contractor must also have qualified service support available for same day support, i.e. within 24 hours.

C. The system shall be designed and installed based on trade knowledge, codes and standards, and accepted industry practices in the relevant design, installation and maintenance of the PV system described in the latest edition of the Study Guide for Photovoltaic System Installers and Sample Examination Questions, prepared for U.S. Department of Energy and Sandia National Laboratories.

D. The photovoltaic power system shall include an array of PV modules and support structures, an inverter, and associated Balance-of-System (BOS) components including wiring, conduit, disconnects, over-current devices, surge suppression and grounding equipment, and metering panel.

E. The Authority Having Jurisdiction (AHJ) must also approve the system.

1. Criteria for system approvals are based on applicable codes and standards, and consistency with industry accepted design practices.

2. Evidence to support these criteria must be contained in the supplier's System Manual, which shall contain all applicable information concerning the equipment and installation.

F. Systems installed under this project shall be turned over to the Owner with a complete System Manual at the time of acceptance tests and end-user training.

1.07 WARRANTY

A. Manufacturer's Special Materials and Workmanship Warranty:

1. Manufacturer agrees to repair or replace components of PV modules, inverters, and mounting systems that fail in materials or workmanship within five years from date of Substantial Completion.

2. Manufacturer's materials and workmanship warranties include, but are not limited to, the following:

a. Faulty operation of PV modules.

b. Failure of module output.

B. Manufacturer's Special Product and Minimum Power Output Warranty:

1. Manufacturer agrees to repair or replace PV modules that fail to exhibit the minimum power output within specified warranty period.

2. Special warranty, applying to modules only, on a full replacement basis, for 25

years.

3. Manufacturer's minimum power output warranties include, but are not limited to, the following:

    a. Specified minimum power output to 87 percent or more.

PART 2 - PRODUCTS

2.01 PV MODULES

A. Modules shall meet or exceed the requirements of IEEE 1262 and UL 1703, or equivalent standards.

B. Rated PV System Capacity: Rated PV system capacity must be specified in Direct Current (DC) kilowatts (both STC and PTC ratings) and in Alternating Current (AC) kilowatts CEC.

    1. The STC rating, or Standard Test Conditions rating, is also referred to as the kilowatt peak (kWp) DC output. Specific PV module manufacturer maximum and minimum power data must be specified for this rating.

    2. For the PTC rating use current ratings from the CEC listing.

C. AC Loss Assumptions: AC Loss Assumptions - Loss factors are used to convert theoretical DC output at PTC to actual AC output at PTC. The effective AC output of the proposed PV system is calculated from the PTC rating taking into effect system losses.

    1. Respondent must provide the AC loss assumptions with kWh output calculation.

    2. The effective AC output must include losses for: DC Cabling, Connections, Inverter Module, Coefficient of Temperature, Module Mismatch, Soiling, Shading Losses, Tracking Losses, Transformer Losses, AC Wiring, and Auxiliary Loads.

2.02 PERFORMANCE REQUIREMENTS

A. NRTL (Nationally Recognized Testing Laboratory) Listing: Shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for electrical and fire safety, Class A, according to UL 1703.

B. FM approved for NFPA 70, Class 1, Division 2, Group C and Group D hazardous locations.

2.03 SYSTEM DESCRIPTION

A. The PV system is a complete system and, as such, substitution of any part of the design could affect the performance and therefore the predicted output of the system. The projected performance is based on the design as shown on the associated drawings.

    The components of the system fit together based on physical size and weights of the modules, module output and electrical characteristics, inverter capacity, shading obstructions, etc. Contractor substitutions of any component will require an engineered re-design proving equivalent performance, to be reviewed by the Electrical Engineer.

B. Grid-Tied PV System:

1. System will be grid-tied and connected via a dedicated utility meter (utility supplied) to KEYS ENERGY. Drawings of the interconnection to the utility will be submitted to KEYS ENERGY for approval prior to commencement of this work.
2. Three Solar Carport Arrays: Each array consists of 108 PV modules generating 37.26 kWp for a total of 324 PV modules generating 111.78 kWp.
3. Main System Components:
    a. PV modules
    b. Array frame
    c. Inverters
    d. Overcurrent protection/combiner box
    e. Mounting structure
    f. Interconnecting circuits consisting of conductors and conduit
    g. Lockable disconnects at the PV array Power Panel and at the Main Electrical Room
    h. Utility Meter Socket

2.04 MANUFACTURED UNITS

A. Cell Materials Monocrystalline.
    1. c-Si.
B. Module Construction:
    1. Nominal Size: 41.2 inches wide by 61.4 inches long.
    2. Weight: 41 lbs.
    3. The PV modules shall be framed flat-plate mono-crystalline silicone modules.
    4. The PV arrays shall be sized to achieve the production of electrical AC power noted on the drawings. The indicated rating shall be based upon the PTC rating of the modules.
    5. The PV modules shall meet or exceed the requirements of UL 1703.
    6. The PV modules' electrical characteristics including current-voltage (I-V) curves and temperature coefficients of module power, voltage, and current shall be characterized by a research laboratory such as the Florida Solar Energy Center, the National Renewable Energy Laboratory, Sandia National Laboratories, or Arizona State University.
C. Combiner Box: The PV Array Source Circuit Combiner Box shall meet the following requirements:
    1. Min. 600 Vdc rating.

2. A series fuse for each input circuit, each rated at 15A and Min. 600 Vdc.
3. Lightning/surge protection.
4. Fuse holders to be dead front, rated at Min. 600 Vdc, and shall be touch safe.
5. Enclosures to be NEMA 4X.

2.05 CAPACITIES AND CHARACTERISTICS

A. Minimum Electrical Characteristics:
1. Rated Open Circuit Voltage (Voc): 68.2 V
2. Maximum System Voltage: 1000 V
3. Maximum Power at Voltage (Vmpp): 57.3 V
4. Short-Circuit Temperature Coefficient: 3.5 mA/degrees C
5. Rated Short-Circuit Current (Isc): 6.39 A
6. Maximum System: 1000 V
7. Rated Operation Current (Ipm): 6.02 A
8. Maximum Power at STC (Pmax): 345 W

B. Additional Electrical Characteristics:
1. Tolerance of Pmax: +10 percent/-5 percent
2. Series Fuse Rating: 20 A
3. Module Efficiency: 21 percent
4. Normal Operating Temperature Characteristics (NOTC): 800 W/m^2, 20 degrees C ambient, 1 m/s wind speed

2.06 MODULE FRAMING

A. PV laminates mounted in anodized extruded-aluminum frames.

B. Entire assembly UL listed for electrical and fire safety, Class A, according to UL 1703, complying with IEC 61215.

C. Frame strength exceeding requirements of certifying agencies in subparagraph above.

2.07 ARRAY CONSTRUCTION

A. Framing
1. Material: Extruded aluminum.
2. Maximum System Weight: Less than 4 lb/sq. ft.

B. Structure Mounting
1. Fastened to structure.

2. Rated to 180-mph wind.

C. Service Life: 25 years.

2.08 INVERTER

A. Control Type: MPPT Maximum power point tracker control

B. Electrical Characteristics Solar Parking Shelters:

	Shelter 1	Shelter 2	Shelter 3	
PV Input Power	37.26 kW	37.26 kW	37.26 kW	
Number of PV module	108	108	108	
Number of Phases	3	3	3	
Maximum Voc	500 V		500 V	500 V
PV Start Voltage	200 V	200 V	200 V	200 V
MPPT Voltage Range	295 - 595 V	295 - 595 V	295 - 595 V	295 - 595 V
Input Current Impp(STC)	3 @ 36A DC	3 @ 36A DC	3 @ 36A DC	
Number of String Inputs	18	18	18	
Nominal Output Voltage	208 V AC	208 V AC	208 V AC	
Integrated AC and DC Disconnects	Yes	Yes	Yes	
Max DC Fuse Rating	20 A/string	20 A/string	20 A/string	
Continuous Duty Rated	Yes	Yes	Yes	
Maximum Output Current				
Peak Efficiency	94 percent	94 percent	94 percent	
Nominal Frequency Range	60 Hz	60 Hz	60 Hz	
Power Factor at Full Load	> 0.99	> 0.99	> 0.99	
Harmonic Distortion	< 3 percent THD	< 3 percent THD	< 3 percent THD	
Every positive conductor shall be fused				

C. Inverter/Isolation Transformer

1. The system shall include inverters with AC output rated as shown and described on the plans. The inverters shall be capable of automatic and continuous operation.
2. Inverters must be compliant with IEEE 1547 and be listed to UL 1741 by a NRTL.
3. Any ancillary equipment or modifications of inverter hardware required to install the inverter in parallel with the utility grid to meet the above standards must be provided with the inverter.
4. The output of the system shall not exceed the harmonic distortion levels as specified in IEEE 519.
5. If used outside, the inverter must be rated for outdoor use with safety enclosure and cover protection minimum.

D. Operating Conditions

1. Operating Ambient Temperatures: 32 to plus 100 deg F (0 to plus 38 deg C)
2. Storage Temperature: 32 to plus 100 deg F
3. Relative Humidity: 0 to 95 percent, non-condensing

E. Enclosure

1. NEMA 4, Type 3R
2. Enclosure Material: Steel
3. Cooling Methods:
   a. Fan convection cooling
   b. Passive cooling
4. Protective Functions:
   a. AC over/under voltage
   b. AC over/under frequency
   c. Ground over current
   d. Overtemperature
   e. AC and DC overcurrent
   f. DC over voltage
5. Standard liquid crystal display, four lines, 20 characters, with user display and on/off toggle switch.
6. Weight: 84 lbs
7. Dimensions: 17 x 50 x 10 inches (height x width x depth)

F. Disconnects

1. Low-voltage disconnect
2. Low-voltage reconnect
3. High-temperature disconnect
4. High-temperature reconnect

G. Regulatory Approvals

1. IEEE 1547.1
2. IEEE 1547.3
3. UL 1741

2.09 SYSTEM OVERCURRENT PROTECTION

A. Combiner Box

1. UL Listed 20A
2. Fuses: 20 A
3. Circuit Breakers: 20 A
4. Enclosure: NEMA Type 3R

2.10 MOUNTING STRUCTURES

A. Structural Mount: Extruded aluminum and three rail system.

2.11 BALANCE OF SYSTEM (BOS) REQUIREMENTS

A. Outdoor enclosures shall be at minimum rated NEMA 3R.

2.12 MONITORING AND COMMUNICATIONS

A. The system must be able to provide the following data in real time:

1. Energy production and kW output

a. Information for the system must be available off site through an internet site. The site shall provide real time data as well as a summary of daily, weekly, monthly, and annual output. The monitoring service shall extend at least five years with pricing included in the bid. An internet connection or phone line on site will be provided. Supplier must provide all other equipment on and off site to collect, organize, and display the data on the internet site.

2.13 REPLACEMENT AND SPARE PARTS

A. System components must be clearly specified as to the type, manufacturer, and model number for later needs for replacement and service as required, and documented in the System Manual.

1. Sources for this equipment shall also be identified.
2. It is required the supplier/installer either maintain or have a ready source for replacement components as needed for required warranties or service.

2.14 SYSTEM DOCUMENTATION REQUIREMENTS

A. The installer and system supplier shall provide two copies of the System Manual at the completion of the project. At a minimum, the following items must be supplied as part of the System Manual:

1. Overview of major system components, principles of operation, and safety considerations.
2. Location of equipment on property or building.
3. Complete parts list and specifications for the overall system and individual components, including all electrical components, mechanical hardware, and other equipment required for installing the system.
4. Diagram indicating overall layout of entire system, including PV array, and location of BOS (Balance of System), hardware and inverter with respect to the array and building facilities.
5. Electrical schematics and diagrams including: equipment locations, and ratings, array ratings in kWp, kW-PTC, and kW-AC, number, manufacturer, and model of PV modules, number of modules per string, number of strings, string amperage nominal and ISC, array nominal voltage, voltage open circuit, nominal current, current short circuit (ISC), terminal boxes; locations, and number of strings, combiner boxes; fuse ratings and number of strings, string locations and number, all conduit size and type, wire sizes number and designations, fuses and disconnect ratings, inverter and isolation transformer manufacturer and models, location, and ratings, data collection system; manufacturer and model number and electrical location of weather station, data acquisition system, meter(s), communication links (modems, phone lines), power supplies if needed, grounding, job information including customer, location, date, designer, copy of signed permits, legend with symbol descriptions if not labeled.
6. Mechanical drawings showing details of module/array mechanical support structure and instructions for assembling/disassembling and installing arrays on canopy or the ground as required.
7. Procedures for operating, disconnecting, servicing, and maintaining complete system and individual components.
8. Warranty information on individual components as required in this bid document.
9. Equipment manufacturers' specifications and operations manuals, including those for PV modules, inverters, and BOS equipment.
10. The as-built drawings will be turned over to Buyer upon completion (within 30 days of commissioning) and shall be signed and dated by the contractor.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrate areas and conditions, with Installer present, for compliance with

requirements for installation tolerances and other conditions affecting performance of the Work.

B. Do not begin installation until mounting surfaces have been properly prepared.

C. If preparation of mounting surfaces is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

D. Examine modules and array frame before installation. Reject modules and arrays that are wet, moisture damaged, or mold damaged.

E. Examine supporting structures for suitable conditions where PV system will be installed.

F. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

B. Perform tests and inspections with the assistance of a factory-authorized service representative.

C. PV module will be considered defective if it does not pass tests and inspections.

D. Prepare field quality control reports.

3.03 ELECTRICAL DESIGN AND INSTALLATION REQUIREMENTS

A. The electrical design and installation of the PV system shall conform to NFPA 70. Article 690 of the NEC applies specifically to photovoltaic system safety, protection, control, and interface with other sources. Other articles of the NEC also apply.

B. The PV system electrical design shall also comply with IEEE 1374.

C. The following are specific electrical requirements for this system and installation:

1. Equipment and electrical hardware used in the system, including overcurrent protection, disconnects, surge suppression devices, conduit, wiring and terminals, must be approved, recognized, or listed for the intended application by a NRTL, and have appropriate voltage, current, and temperature ratings for the application.

2. Inverters, controllers, and PV modules must have specific listings as noted elsewhere in this document.

3. Circuit breakers, fuses, and disconnects must be listed or recognized for use in DC circuits where applicable.

   a. Equipment only rated for use in AC circuits will not be permitted for use in DC circuits.

4. Wiring (conductors) must be properly sized and rated for the application, including ampacity and voltage drop.

a. Conductor ampacities for PV array source circuits must be based on both NEC and UL de-rating factors (156 percent).

b. Other system conductors must be de-rated 125 percent per the NEC.

5. Voltage drop in array DC source circuits shall be limited to no more than 3 percent including losses in conductors, and through fuses, blocking diodes, and termination points as applicable.

6. Wiring shall be listed for a minimum operation of 600 volts and temperature rating of 90 degrees C in wet locations.

   a. With an exception of the PV module interconnect wiring, the use of any exposed conductors or cabling (excluding grounds) is not acceptable.

   b. Conductors must be installed in conduit.

   c. Metallic conduit is not allowed for use when in contact with soil.

7. PV module interconnect wiring must be sunlight-resistant USE2, or equivalent rated conductor, and must be attached to module junction boxes using weather-tight strain relief. The module wiring interconnections shall use a connector device that allows quick assembly and disassembly of the arrays under no load conditions. These connectors must be listed by a NRTL, and be weather-sealed, guarded and polarity protected.

8. With the exception of the module interconnect wiring, terminations must use listed box terminal or compression type connections, and must be made with an appropriate junction box or enclosure.

   a. Exposed, field splices between conductors will not be permitted.

   b. Twist on wire splices, crimped, soldered, or taped connections are not permitted for the required field installed wiring of DC circuits.

   c. Proper torque specifications shall be provided for all of the required field connections, and all the termination points shall be liberally coated with an anti-corrosion spray to preserve the quality of connections over time.

9. System conductors must have appropriate means for disconnecting and overcurrent protection, and require the use of switches, fuses or circuit breakers as applicable.

   a. Overcurrent devices shall have trip ratings no greater than the de-rated ampacity of the conductors that it protects.

10. Series connected strings of modules (source circuits) must include a series fuse as required by UL and NEC Standards to prevent excessive reverse current flow through modules in source circuits under fault conditions, and diodes must be contained in a listed junction/combiner box.

    a. Parallel connections of modules in individual source circuits are discouraged, and are only allowed as long as the module listing allows for a series fuse with high enough capacity required for this configuration.

b. Series source circuit fuses shall be rated for at least 1.56 times the source circuit short-circuit current rating, and no greater than that specified on the module listing.

11. Blocking diodes for array source circuits are optional.

    a. If used, these diodes must have voltage and current ratings (at temperature) at least twice the open-circuit voltage and short-circuit current ratings of the source circuits.

12. Metallic modules frames, panel/array support structures, metal enclosures, panelboards and the inverter cabinets must be properly bonded to a common equipment grounding conductor and terminate at the grounding electrode at the utility service point.

    a. If a grounding electrode is not already in place, a grounding electrode, such as a ground rod, must be installed at the system with a maximum earth resistance of 25 ohms.

    b. Grounding connections and terminations shall be made accessible for routine inspections and maintenance as required.

13. Surge suppression on the DC and AC side of the inverter must be provided.

14. Silicon oxide varistors (SOVs) commonly used to protect electrical panels and equipment may be used for this purpose, and may be provided and/or required by the inverter manufacturer.

15. Equipment installed outside shall have enclosures rated as NEMA 4, NEMA 3R or better and have superior strength and corrosion resistance properties.

16. An advanced utility watt-hour meter socket enclosure shall be provided on the PV system side of this disconnect.

17. All electrical equipment, enclosures, disconnects, and overcurrent devices must be clearly marked and identified. A one-line diagram of the system must be kept on site for reference.

3.04 MECHANICAL DESIGN AND INSTALLATION REQUIREMENTS

A. Hardware required for installing PV arrays and other system equipment must be provided for the installations.

B. The following are requirements for mounting the PV arrays, equipment, and other materials and mechanical design considerations associated with these projects:

    1. The array mounting systems and overall installation must meet all applicable local building codes and be capable of withstanding winds of Category C or greater (180 mph - 3 second gust) for all attachment points, which are consistent with the module manufacturer's installation instructions, and the requirements of FBC CH16. Calculations or certifications from a licensed professional engineer or NRTL verifying that the system can withstand these wind forces, as installed on the ground or a building structure is required.

2. A licensed Structural Engineer must certify the structural compatibility for the additional solar equipment load.
    a. PV array and any auxiliary equipment must meet all seismic requirements.
3. The PV arrays shall be protected from flying debris.
4. The system installation and equipment layout shall be considered with respect to the need for access, maintenance and future expansion of the system.
5. Array mounting hardware supplied for this installation shall be compatible with site considerations and environment.
    a. Special attention shall be paid to minimizing the risk from exposed fasteners, sharp edges, and potential damage to the modules or support structure.
    b. Corrosion resistance and durability of the mechanical hardware is emphasized. Materials shall be selected to avoid corrosion and degradation.
    c. The use of ferrous metals, contact of dissimilar metals, and the use of wood or plastic components are prohibited. Provide aluminum and/or stainless steel components and hardware.
6. This installation will be high profile. Tile aesthetics of the overall installation are extremely important.
    a. To create a uniform appearance of the array, spacing between individual modules and panels shall be kept to the minimum and overall layout in keeping with the overall architectural features of the buildings and properties.
    b. As much as possible, all mechanical hardware, conduit, junction boxes, and other equipment shall be concealed beneath and/or behind the array, and all other electrical work performed neatly and as inconspicuously as possible.
7. The array layout shall be consistent with the electrical ordering (and labeling) of source circuits in the array combiner boxes.
    a. Ease of access for array troubleshooting and maintenance is desired by allowing access to the back of the array for module junction box servicing, and removal/replacement of individual source circuits (panels) and modules if necessary.

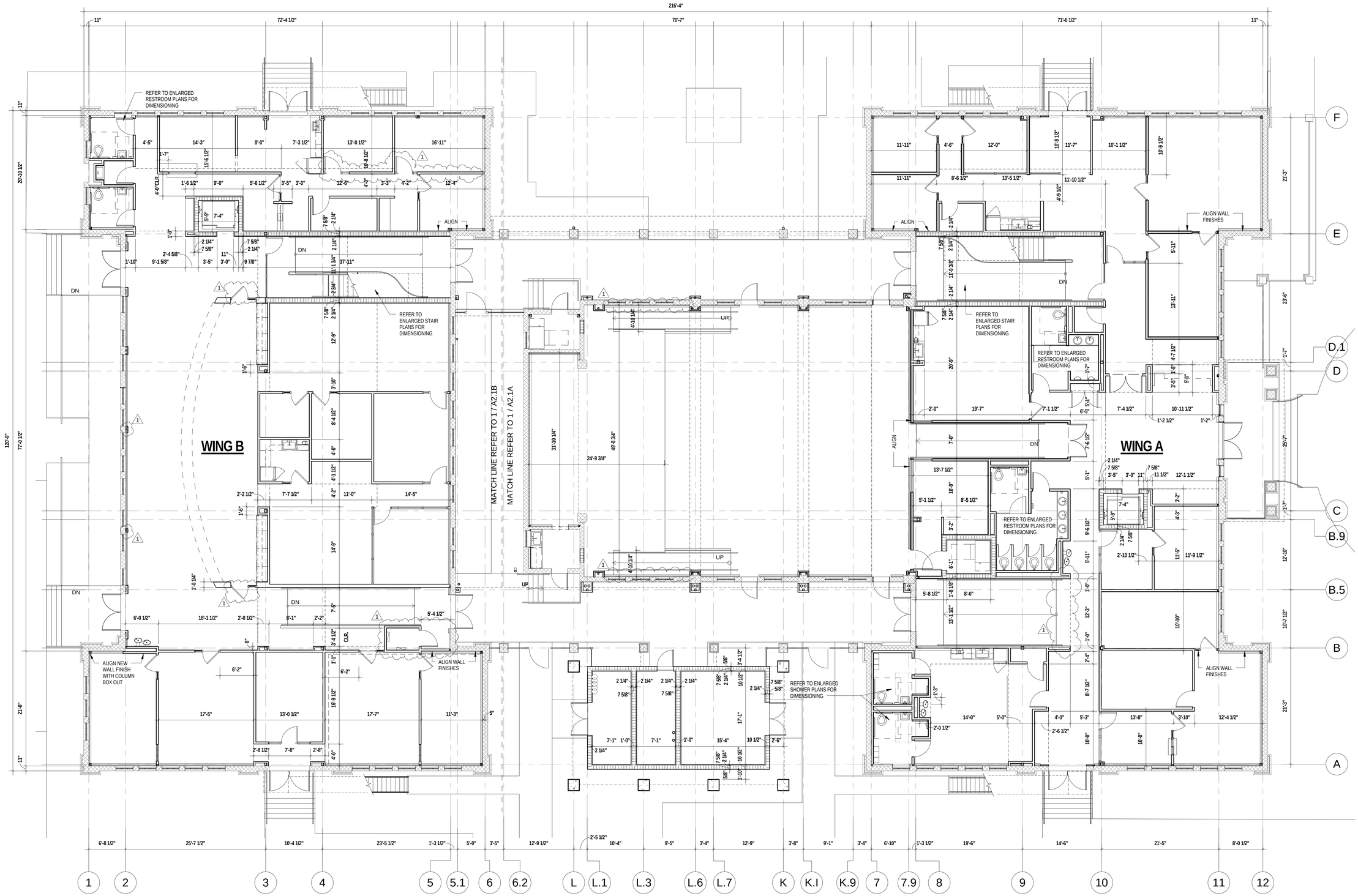
3.05 INSPECTIONS, ACCEPTANCE TESTING, AND USER TRAININGS

A. System installations must be properly plan checked, permitted, and inspected by the AHJ.
    1. Evidence of these permit(s) and inspections shall be provided at the time of acceptance testing and before final payment will be authorized.
B. Acceptance testing will verify that the system and equipment specified in the bid was installed in a safe, workman-like, and code-compliant manner, and is operating properly under all conditions.
C. The Contractor will also be required to provide a minimum of two, 2-hour training

sessions.

1. Topics to be covered in this training include theory of operation, operating requirements, component descriptions and specifications, maintenance requirements and schedule, safety precautions, and overview of the System Manual and recordkeeping.

End of Section



1 OVERALL 1ST FLOOR PLAN

A2.1 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

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REVISIONS:		
NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

PHASE 2

1300 WHITE STREET KEY WEST, FLORIDA

CITY OF KEY WEST

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Bender & Associates ARCHITECTS p.a.

Project No : 1305

OVERALL 1ST FLOOR PLAN

Date: 08/08/14

PERMIT SET

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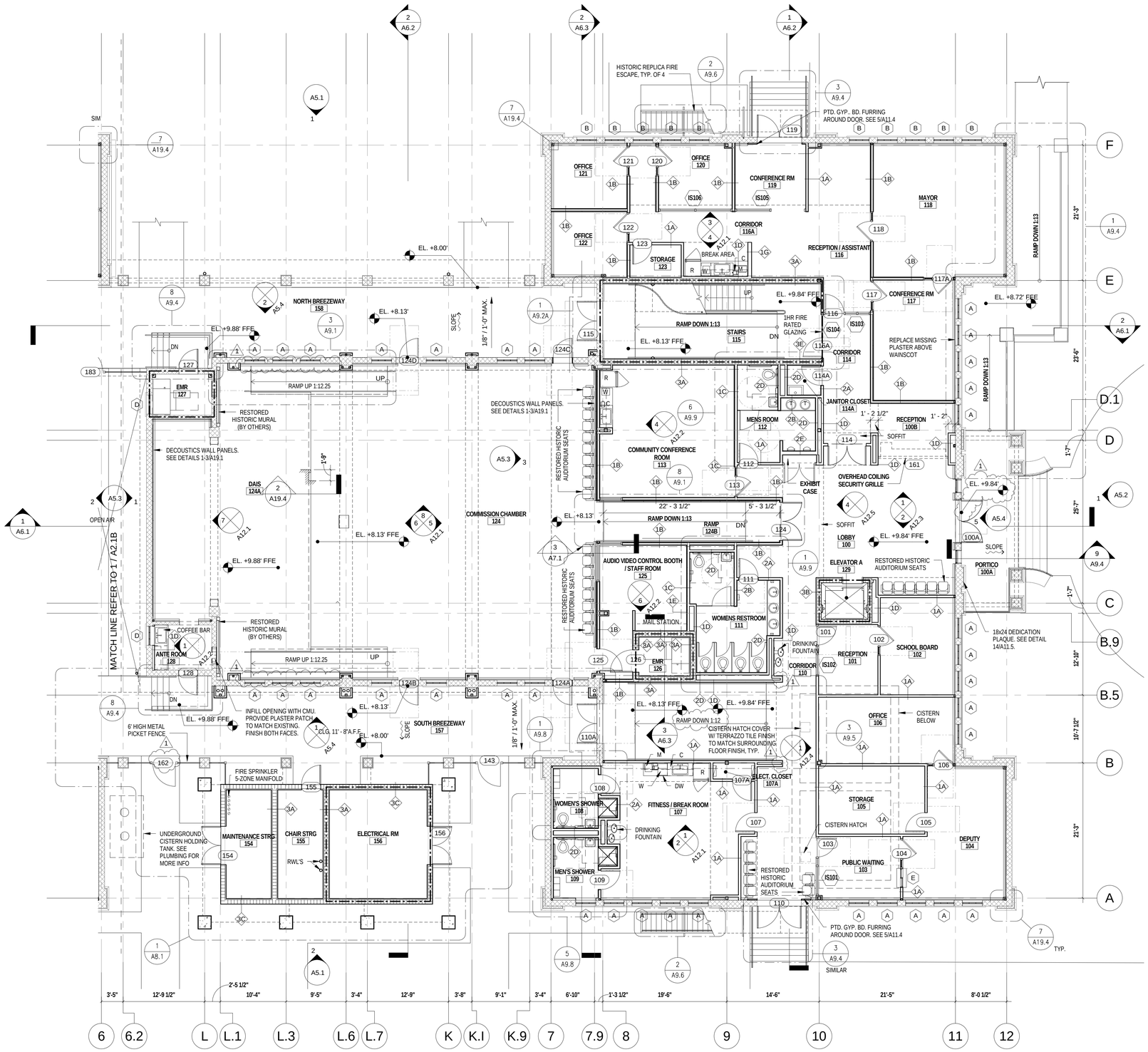

1 1st FLOOR - WING A

A2.1A 1/8" = 1'-0"

GENERAL NOTES

SOIL TREATMENT, PER FBC-B SECTION 1816.1:

1. TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMITICIDES, INCLUDING SOIL APPLIED PESTICIDES, BAITING SYSTEMS, AND PESTICIDES APPLIED TO WOOD, OR OTHER APPROVED METHODS FOR TERMITE PROTECTION LABELED FOR USE AS A PREVENTATIVE TREATMENT TO NEW CONSTRUCTION. SEE FBC-B SECTION 202, REGISTERED TERMITICIDE. UPON COMPLETION OF THE APPLICATION OF THE TERMITE PROTECTIVE TREATMENT, A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT:
"THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."

2. REFER TO OVERALL FLOOR PLAN SHEETS A2.1 & A2.2 FOR INTERIOR LAYOUT DIMESIONS. ALL INTERIOR DIMENSIONS ARE SHOWN TO THE FACE OF FINISH SURFACES, UNLESS OTHERWISE NOTED.

3. PER FBC-B SECTION 719: INSULATING MATERIALS, WHERE CONCEALED AS INSTALLED IN BUILDINGS OF ANY TYPE OF CONSTRUCTION, SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450.

4. INSTALL 3/4" A/C PLYWOOD, WITH GOOD SIDE OUT FROM 6" ABOVE F.F. TO 8'-6" ABOVE F.F. PAINT WITH TWO COATS OF FIRE RETARDANT PAINT.

5. THE HISTORIC GLYNN ARCHER SCHOOL IS A SIGNIFICANT LOCAL RESOURCE. CARE SHALL BE TAKEN TO PROTECT THE EXTERIOR CONCRETE WALLS AND MATERIALS SCHEDULED TO BE RE-USED IN THE BUILDING. SUCH MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, STEEL WINDOWS, T&G WOOD FLOORING AND LUMBER TO SALVAGE AND MILLED FOR RE-USE IN THE BUILDING.

6. TWO TYPES OF PINE WERE USED IN THE BUILDING: OLD GROWTH SOUTHERN YELLOW PINE AND OLD GROWTH LONG LEAF PINE, AKA ANTIQUE HEART PINE. THE VAST MAJORITY OF THE FLOORING IS SOUTHERN YELLOW PINE. ALL OF THE FLOORING IN THE AUDITORIUM IS BELIEVED TO BE LONG LEAF HEART PINE. THIS MATERIAL IS PLANNED FOR MILLING AND REUSE ON THE STAGE.

7. THE T&G FLOORING IS IN GOOD TO EXCELLENT CONDITION. HOWEVER, A SIZE ABLE QUANTITY IS DETERIORATED FROM BUG INFESTATION AND WILL NOT BE ABLE TO BE MILLED FOR REUSE. THE LONG LEAF HEART PINE IS 1" THICK X 3" FACE DIMENSION. AFTER MILLING, THIS MATERIAL WILL BE 7/8" THICK WITH A 2- 9/16" FACE DIMENSION. THIS MATERIAL WILL BE USED FOR THE STAGE FLOOR AND FACIA.

8. THE YELLOW PINE T&G FLOORING IS 1 ¼" THICK X 3" FACE DIMENSION. IT IS NOT ANTICIPATED THAT THIS MATERIAL WILL BE SUITABLE FOR MILLING DUE TO ANTICIPATED DETERIORATION FROM BUG INFESTATION.

9. THE 2X6 STUDS WILL BE USED FOR SLEEPERS UNDER THE STAGE FLOORING AND FOR FURRING AT THE FACE OF THE STAGE. SINCE THESE MEMBERS WILL BE LAID FLAT, THERE IS NO NEED TO DRESS THE LUMBER OR REMOVE MISCELLANEOUS NAILS OR OTHER FASTENERS.

10. FLOOR JOISTS, RAFTERS AND OTHER FRAMING LUMBER INCLUDE VARIOUS SIZES, BUT PREDOMINANTLY THESE ARE NOMINAL 2 X 14 PINE BOARDS, 26 FEET LONG. THE GENERAL CONTRACTOR WILL BE REQUIRED TO SORT THIS MATERIAL AND RIP THE BOARDS FOR DELIVERY TO A MILLING SHOP. APPROXIMATELY 2" WILL BE CUT FROM EACH EDGE TO REMOVE EXISTING NAILS. THIS WILL REDUCE THE 2X14 MEMBERS TO NOMINAL 2X10 MEMBERS. THESE BOARDS WILL THEN BE MILLED INTO T&G WAINSCOT MATERIAL, BASEBOARDS, WINDOW SILLS, TRIM AND HANDRAILS.

11. ALL LUMBER WILL BE SORTED INTO THREE GROUPS: LONG LEAF HEART PINE SUITABLE FOR REUSE (THIS LUMBER WILL BE HEAVIER THAN SOUTHERN PINE), SOUTHERN PINE SUITABLE FOR REUSE, AND MATERIAL TO BE RECYCLED.

12. THIS PROJECT IS SEEKING LEED CERTIFICATION AT THE GOLD LEVEL UNDER THE U.S. GREEN BUILDING COUNCIL'S LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN PROGRAM. IT IS A PROJECT GOAL TO DIVERT NEARLY ALL OF THE SALVAGED MATERIAL FROM THE LAND FILL. (THE PHASE ON SELECTIVE DEMOLITION PHASE DIVERTED 94.6 PERCENT.) THE PRIORITIES FOR THIS LUMBER IS AS FOLLOWS:
a. RECLAIMED FOR USE ON SITE
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13. ALL SAWDUST RESULTING FROM MILLING OPERATIONS SHALL BE RECOVERED AND DELIVERED TO THE KEY WEST POLICE DEPARTMENT'S HORSE STABLE AT THE TRUMAN WATERFRONT PARK FOR THEIR USE. CONTRACTORS ARE ADVISED THAT THIS IS CURRENTLY A STANDARD AGREEMENT BETWEEN HANSEN AND BRINGLE MILLWORK AND THE KEY WEST POLICE DEPARTMENT.

LEGEND

- MTL STUD EXTERIOR WALL
- 8" or 12" CMU WALL
- 1 HR FIRE RATED WALL ASSEMBLY
- GYPSUM WALLBOARD PARTITION
- EXISTING CONCRETE WALL/COLUMN TO REMAIN
- R — REFRIGERATOR
- STOREFRONT
- WINDOW
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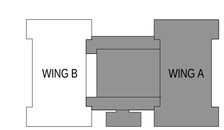
- IS1 — INTERIOR STOREFRONT TAG
- C — COFFEE MAKER
- DW — DISH WASHER
- M — MICROWAVE
- W — WATER DISPENSER

NOTE: SEE SHEET A18.1 FOR CISTERN DETAILS AND DIMENSIONS



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Project No : 1305

1ST FLOOR PLAN - WING A

Date: 08/08/14

A2.1A

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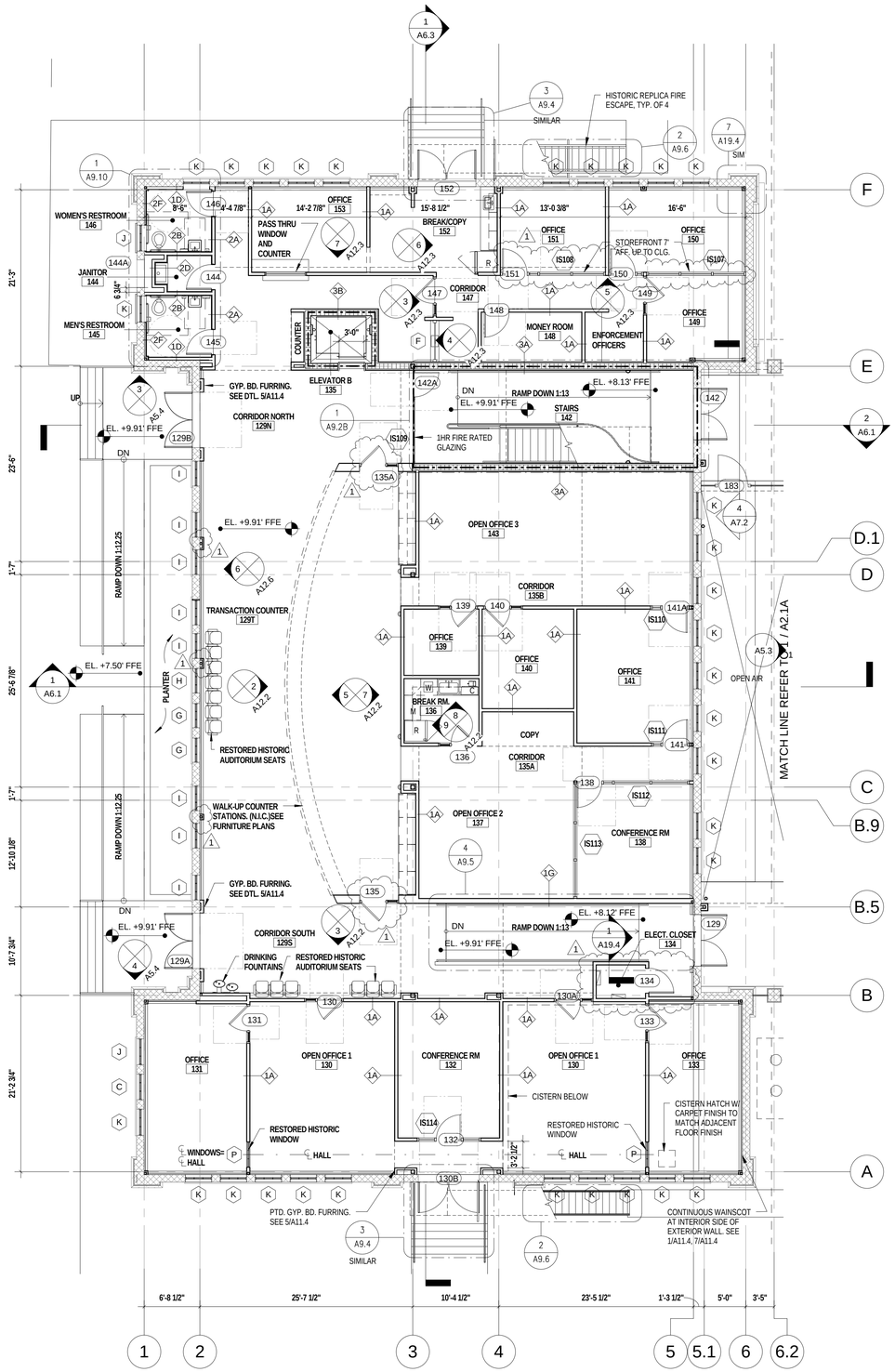

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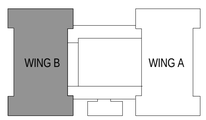

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Bender & Associates ARCHITECTS p.a.

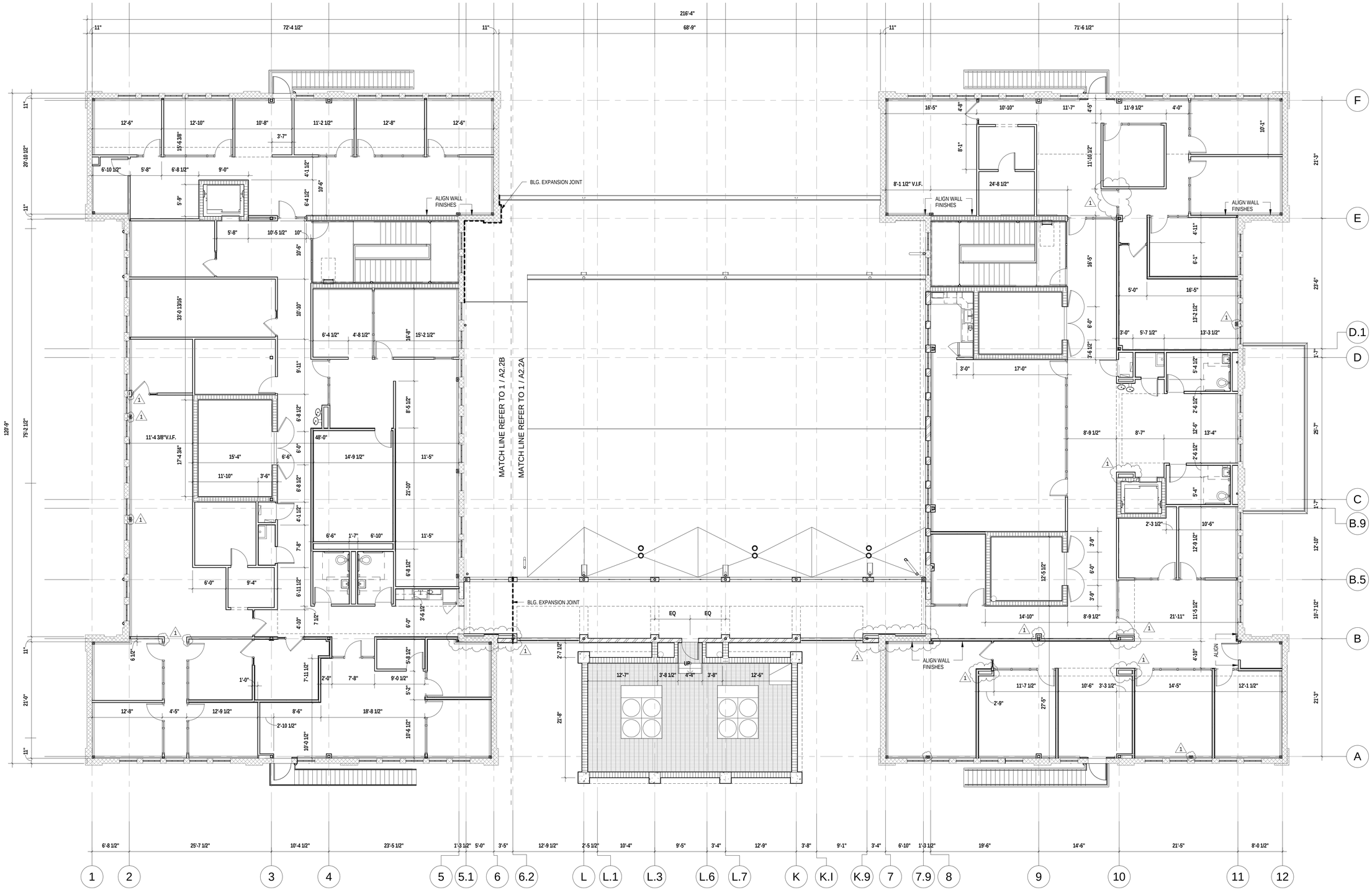
Project No : 1305

1ST FLOOR PLAN - WING B

Date: 08/08/14

A2.1B

OF



1 OVERALL 2ND FLOOR PLAN

A2.2 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

0 8 16 24 32

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

PHASE 2

1300 WHITE STREET KEY WEST, FLORIDA

CITY OF KEY WEST

MCHARRY ASSOCIATES
ARCHITECTURE / ENGINEERING / INTERIORS
AAC000986 EB0003663
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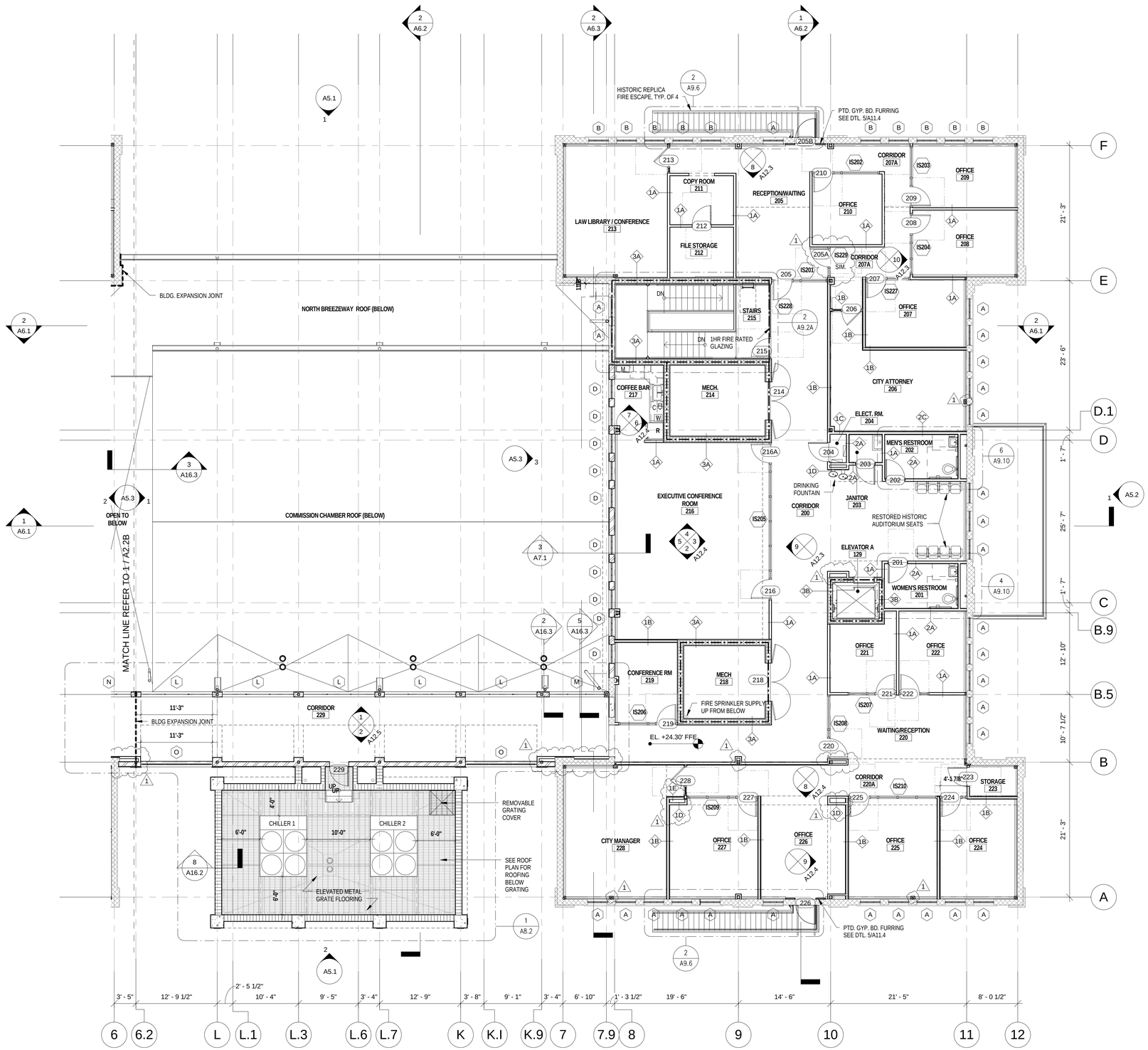
Project No : 1305

OVERALL 2ND FLOOR PLAN

Date: 08/08/14

A2.2

OF



1 2ND FLOOR PLAN - WING A

A2.2A 1/8" = 1'-0"

GENERAL NOTES

SOIL TREATMENT, PER FBC-B SECTION 1816.1:

1. TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMITICIDES, INCLUDING SOIL APPLIED PESTICIDES, BAITING SYSTEMS, AND PESTICIDES APPLIED TO WOOD, OR OTHER APPROVED METHODS FOR TERMITE PROTECTION LABELED FOR USE AS A PREVENTATIVE TREATMENT TO NEW CONSTRUCTION. SEE FBC-B SECTION 202, REGISTERED TERMITICIDE. UPON COMPLETION OF THE APPLICATION OF THE TERMITE PROTECTIVE TREATMENT, A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT:
"THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."

2. REFER TO OVERALL FLOOR PLAN SHEETS A2.1 & A2.2 FOR INTERIOR LAYOUT DIMESIONS. ALL INTERIOR DIMENSIONS ARE SHOWN TO THE FACE OF FINISH SURFACES, UNLESS OTHERWISE NOTED.

3. PER FBC-B SECTION 719: INSULATING MATERIALS, WHERE CONCEALED AS INSTALLED IN BUILDINGS OF ANY TYPE OF CONSTRUCTION, SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450.

4. INSTALL 3/4" A/C PLYWOOD, WITH GOOD SIDE OUT FROM 6" ABOVE F.F. TO 8'-6" ABOVE F.F. PAINT WITH TWO COATS OF FIRE RETARDANT PAINT.

5. THE HISTORIC GLYNN ARCHER SCHOOL IS A SIGNIFICANT LOCAL RESOURCE. CARE SHALL BE TAKEN TO PROTECT THE EXTERIOR CONCRETE WALLS AND MATERIALS SCHEDULED TO BE RE-USED IN THE BUILDING. SUCH MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, STEEL WINDOWS, T&G WOOD FLOORING AND LUMBER TO SALVAGE AND MILLED FOR RE-USE IN THE BUILDING.

6. TWO TYPES OF PINE WERE USED IN THE BUILDING: OLD GROWTH SOUTHERN YELLOW PINE AND OLD GROWTH LONG LEAF PINE, AKA ANTIQUE HEART PINE. THE VAST MAJORITY OF THE FLOORING IS SOUTHERN YELLOW PINE. ALL OF THE FLOORING IN THE AUDITORIUM IS BELIEVED TO BE LONG LEAF HEART PINE. THIS MATERIAL IS PLANNED FOR MILLING AND REUSE ON THE STAGE.

7. THE T&G FLOORING IS IN GOOD TO EXCELLENT CONDITION. HOWEVER, A SIZE ABLE QUANTITY IS DETERIORATED FROM BUG INFESTATION AND WILL NOT BE ABLE TO BE MILLED FOR REUSE. THE LONG LEAF HEART PINE IS 1" THICK X 3" FACE DIMENSION. AFTER MILLING, THIS MATERIAL WILL BE 7/8" THICK WITH A 2- 9/16" FACE DIMENSION. THIS MATERIAL WILL BE USED FOR THE STAGE FLOOR AND FACIA.

8. THE YELLOW PINE T&G FLOORING IS 1 ½" THICK X 3" FACE DIMENSION. IT IS NOT ANTICIPATED THAT THIS MATERIAL WILL BE SUITABLE FOR MILLING DUE TO ANTICIPATED DETERIORATION FROM BUG INFESTATION.

9. THE 2X6 STUDS WILL BE USED FOR SLEEPERS UNDER THE STAGE FLOORING AND FOR FURRING AT THE FACE OF THE STAGE. SINCE THESE MEMBERS WILL BE LAID FLAT, THERE IS NO NEED TO DRESS THE LUMBER OR REMOVE MISCELLANEOUS NAILS OR OTHER FASTENERS.

10. FLOOR JOISTS, RAFTERS AND OTHER FRAMING LUMBER INCLUDE VARIOUS SIZES, BUT PREDOMINANTLY THESE ARE NOMINAL 2 X 14 PINE BOARDS, 26 FEET LONG. THE GENERAL CONTRACTOR WILL BE REQUIRED TO SORT THIS MATERIAL AND RIP THE BOARDS FOR DELIVERY TO A MILLING SHOP. APPROXIMATELY 2" WILL BE CUT FROM EACH EDGE TO REMOVE EXISTING NAILS. THIS WILL REDUCE THE 2X14 MEMBERS TO NOMINAL 2X10 MEMBERS. THESE BOARDS WILL THEN BE MILLED INTO T&G WAINSCOT MATERIAL, BASEBOARDS, WINDOW SILLS, TRIM AND HANDRAILS.

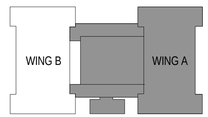
11. ALL LUMBER WILL BE SORTED INTO THREE GROUPS: LONG LEAF HEART PINE SUITABLE FOR REUSE (THIS LUMBER WILL BE HEAVIER THAN SOUTHERN PINE), SOUTHERN PINE SUITABLE FOR REUSE, AND MATERIAL TO BE RECYCLED.

12. THIS PROJECT IS SEEKING LEED CERTIFICATION AT THE GOLD LEVEL UNDER THE U.S. GREEN BUILDING COUNCIL'S LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN PROGRAM. IT IS A PROJECT GOAL TO DIVERT NEARLY ALL OF THE SALVAGED MATERIAL FROM THE LAND FILL. (THE PHASE ON SELECTIVE DEMOLITION PHASE DIVERTED 94.6 PERCENT.) THE PRIORITIES FOR THIS LUMBER IS AS FOLLOWS:
a. RECLAIMED FOR USE ON SITE
b. RECLAIMED FOR USE BY OTHERS
c. RECYCLED

13. ALL SAWDUST RESULTING FROM MILLING OPERATIONS SHALL BE RECOVERED AND DELIVERED TO THE KEY WEST POLICE DEPARTMENT'S HORSE STABLE AT THE TRUMAN WATERFRONT PARK FOR THEIR USE. CONTRACTORS ARE ADVISED THAT THIS IS CURRENTLY A STANDARD AGREEMENT BETWEEN HANSEN AND BRINGLE MILLWORK AND THE KEY WEST POLICE DEPARTMENT.

LEGEND

- MTL STUD EXTERIOR WALL
- 8" or 12" CMU WALL
- 1 HR FIRE RATED WALL ASSEMBLY
- GYPSUM WALLBOARD PARTITION
- EXISTING CONCRETE WALL/COLUMN TO REMAIN
- R — REFRIGERATOR
- STOREFRONT
- WINDOW
- 101 — DOOR TAG. (SEE SHEET A11.0 & A11.1)
- A — WINDOW TAG (SEE SHEET A11.3)
- 3A — WALL TAG (SEE SHEET A10.0)
- IS1 — INTERIOR STOREFRONT TAG
- C — COFFEE MAKER
- DW — DISH WASHER
- M — MICROWAVE
- W — WATER DISPENSER



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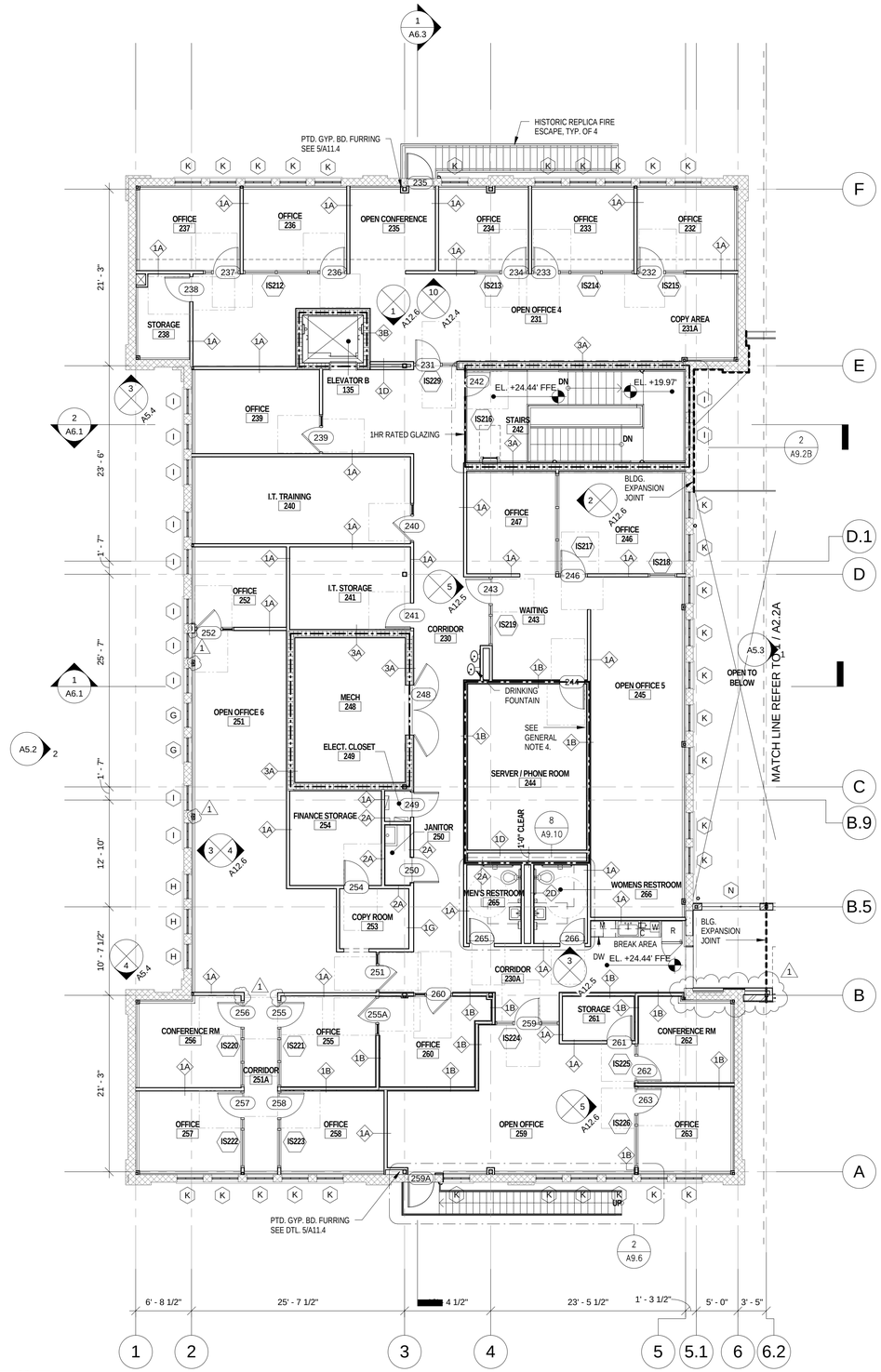
Project No : 1305

2ND FLOOR PLAN - WING A

Date: 08/08/14

A2.2A

OF



1 2ND FLOOR PLAN - WING B

A2.2B 1/8" = 1'-0"

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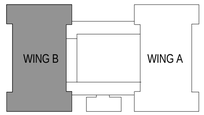

SCALE: 1/8" = 1'=0"

0 8 16 24 32

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL
AT GLYNN ARCHER
PHASE 2
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CITY OF KEY WEST

MCHARRY ASSOCIATES
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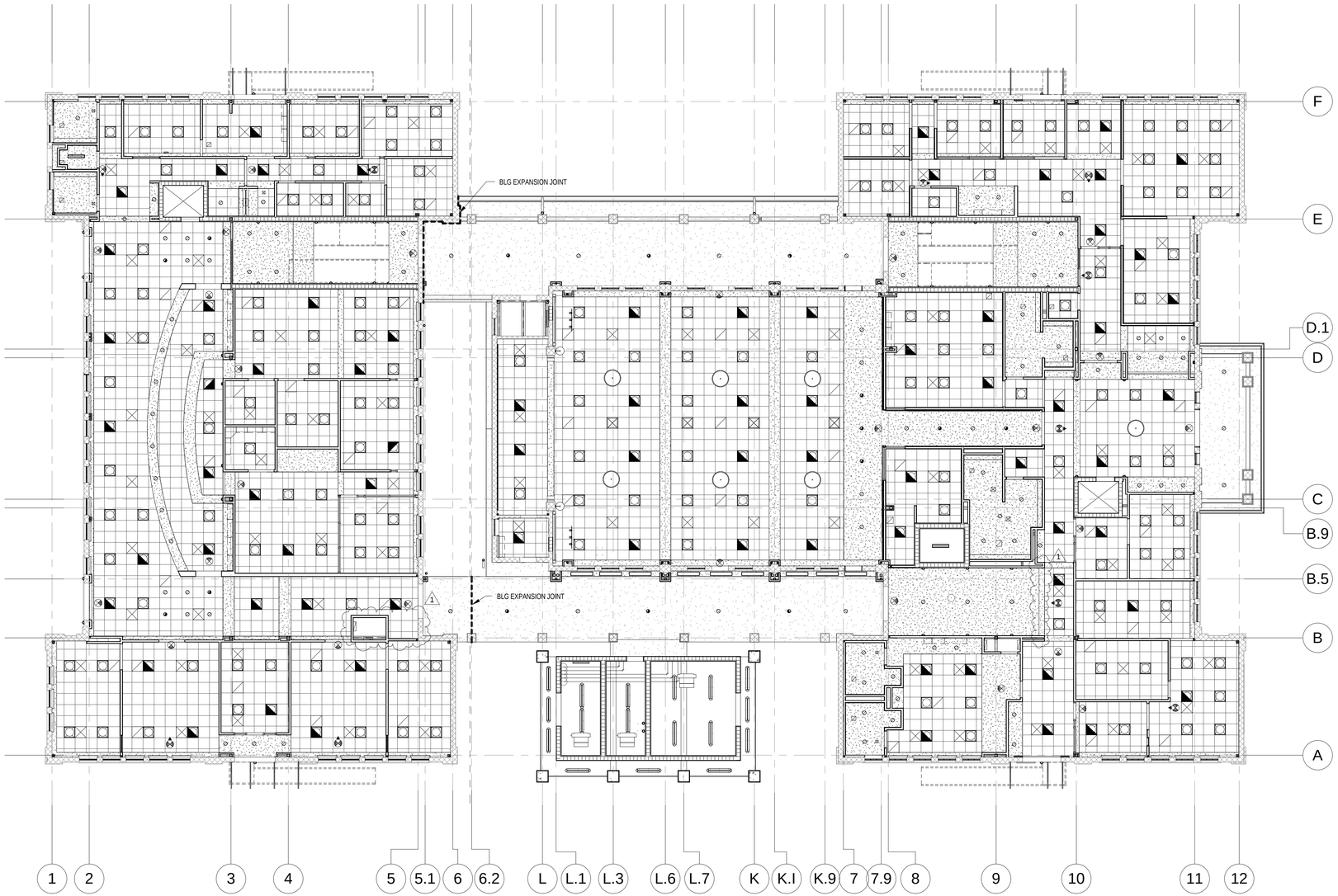
Project No : 1305

2ND FLOOR PLAN - WING B

Date: 08/08/14

A2.2B

OF



1 OVERALL 1ST FLOOR RCP

A4.1 3/32" = 1'-0"

SCALE: 3/32" = 1'-0"

0 10 20 30 40

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
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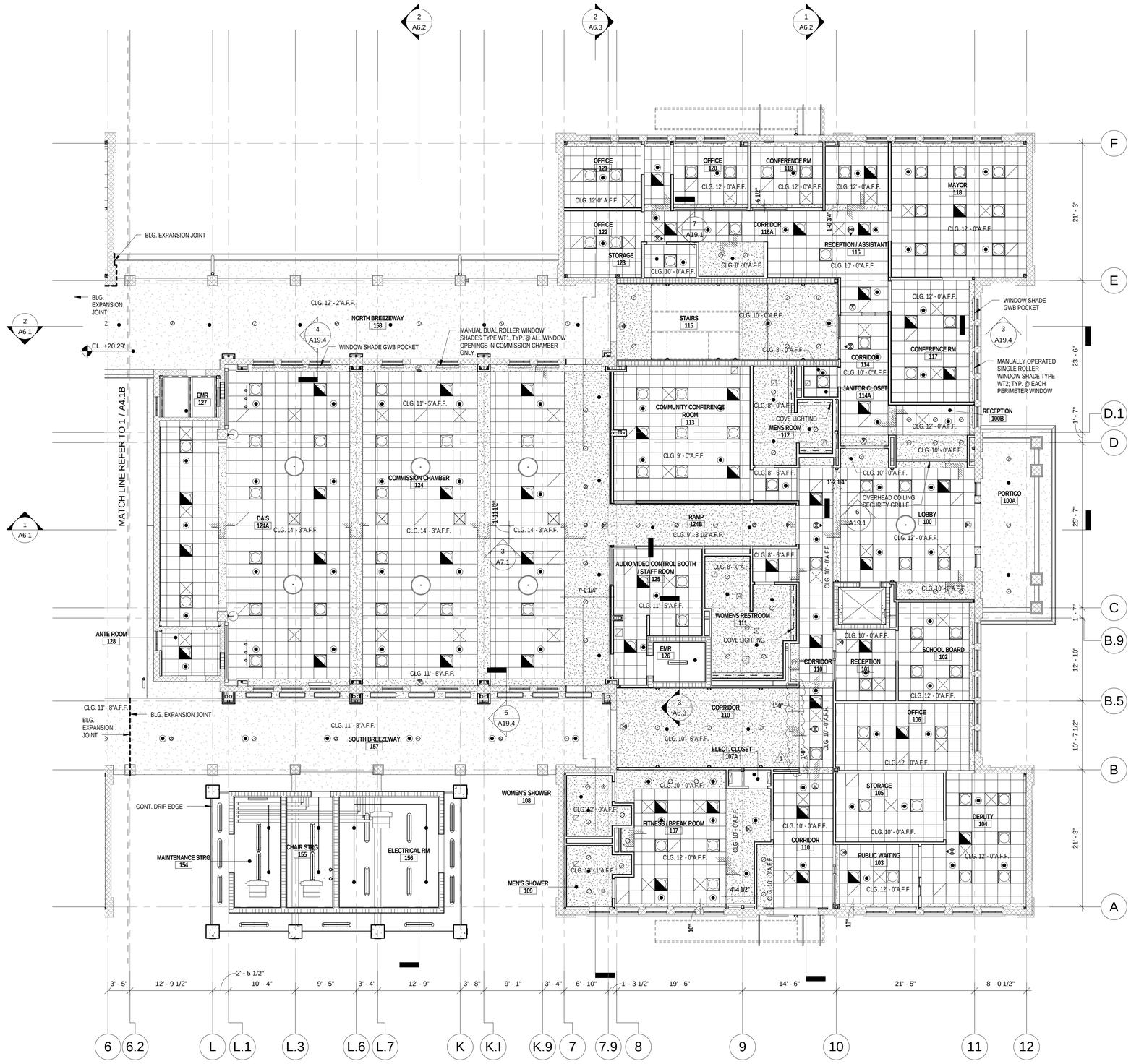
OVERALL 1ST FLOOR RCP

Date: 08/08/14

A4.1

OF



1 1ST FLOOR RCP - WING A

A4.1A 1/8" = 1'-0"

GENERAL CEILING NOTES

1. THE GENERAL CONTRACTOR IS REQUIRED TO COORDINATE THE INSTALLATION OF ALL BUILDING SERVICES AND UTILITIES BEING INSTALLED BY THE VARIOUS TRADES. PARTICULAR ATTENTION IS CALLED TO THE INSTALLATION OF MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION SYSTEMS ABOVE CEILINGS. THE GLYNN ARCHER SCHOOL IS A SIGNIFICANT LOCAL HISTORIC RESOURCE AND RESTORATION OF THE HISTORIC CHARACTERISTICS OF THE EXTERIOR ENVELOPE HAS BEEN GIVEN A HIGH PRIORITY. THE CEILING HEIGHTS HAVE BEEN DESIGNED TO RESPECT, RETAIN AND MATCH THE HISTORIC WINDOW HEADS IN HEIGHT. THE A/E DESIGN TEAM HAS ENDEAVORED TO RESOLVE THE MAJOR ISSUES; HOWEVER, THE CONTRACTOR SHALL PLAN ALL ACTIVITIES TO ENSURE A MINIMUM OF INTERFERENCE BETWEEN TRADES.

2. CEILING HEIGHTS AT PERIMETER SPACES SHALL BE SET FLUSH WITH WITH EXISTING HISTORIC WINDOW HEADS, UNLESS SPECIFICALLY NOTED OTHERWISE.

3. CEILING HEIGHTS ARE BASED ON DIMENSION ABOVE FINISHED FLOOR.

4. PRIOR TO INSTALLATION, CONTRACTOR MUST NOTIFY THE ARCHITECT OF ANY DEVIATIONS OR CONFLICTS BETWEEN ARCHITECTURAL REFLECTED CEILING PLANS AND OTHER DISCIPLINES, AND SHALL SECURE APPROVAL OF SUCH FROM THE ARCHITECT.

5. BUILDING SYSTEMS, FIXTURES, AND DEVICES SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS SUCH AS LIGHT FIXTURES, AIR DIFFUSERS, AND SPRINKLER HEADS ARE SHOWN TO DENOTE LOCATION AND LAYOUT PATTERN WHERE PLACEMENT IS CRITICAL. THE ARCHITECTURAL DRAWINGS DO NOT REPRESENT COMPLETE SYSTEMS THAT ARE SHOWN ON OTHER DRAWINGS.

6. REFER TO MECHANICAL DRAWINGS FOR TYPES AND SIZES OF SUPPLY AND RETURN GRILLES.

7. LIGHTING FIXTURES, ALARM DEVICES AND EXIT SIGNS ARE SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LAYOUT CLARITY ONLY. SEE ELECTRICAL DRAWINGS FOR TOTAL QUANTITIES AND OTHER REQUIREMENTS.

8. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING SCHEDULE AND LIGHTING FIXTURES NOT SHOWN ON ARCHITECTURAL DRAWINGS.

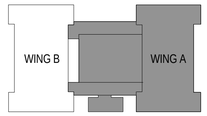
9. WHERE AN ITEM IS MOUNTED ON THE CEILING, IT SHALL BE CENTERED ON THE ELEMENT IN WHICH IT IS PLACED (CEILING PANEL, GYPSUM BOARD BAND, CONTROL JOINT, ETC) UNLESS INDICATED OTHERWISE.

10. CENTER SPRINKLER HEADS IN THE CEILING TILE/PANEL. SPRINKLER HEADS SHALL BE ALIGNED IN BOTH DIRECTIONS.

11. CONTRACTOR TO INSTALL CEILING GRID TIE WIRES AS PER CODE. GRID TIE WIRES TO ATTACH TO STRUCTURE ABOVE THRU APPROPIATE BLOCKING WHERE REQUIRED. DO NOT ATTACH TO HVAC DUCTWORK OR SOFFIT SUBFRAMING.

LEGEND

- 2'X2' SUSPENDED ACOUSTICAL CEILING PANEL & GRID SYSTEM
- GYPSUM WALLBOARD CEILING
- STUCCO/PLASTER CEILING
- 2'X2' RECESSED TROFFER FIXTURE
- 2'X2' RECESSED TROFFER FIXTURE W/ BATTERY BACK UP
- RECESSED DOWNLIGHT LIGHTING FIXTURE
- RECESSED DOWNLIGHT LIGHTING FIXTURE W/ BATTERY BACK UP
- EXTERIOR SURFACE MOUNTED LIGHTING FIXTURE
- SURFACE MOUNTED LIGHTING FIXTURE
- SURFACE MOUNTED LIGHTING FIXTURE
- HVAC DIFFUSER (RETURN AIR)
- HVAC DIFFUSER (SUPPLY AIR)
- FIRE SPRINKLER HEAD - PENDANT
- FIRE SPRINKLER HEAD - CONCEALED PENDANT
- FIRE SPRINKLER HEAD - SIDE-WALL MOUNT
- EXIT SIGN
- DECORATIVE PENDANT LIGHTING FIXTURE
- SURFACE MOUNTED TRACK LIGHTING FIXTURE
- RECESEED COVE LIGHTING FIXTURE
- DECORATIVE INTERIOR SCONCE
- EXTERIOR SCONCE



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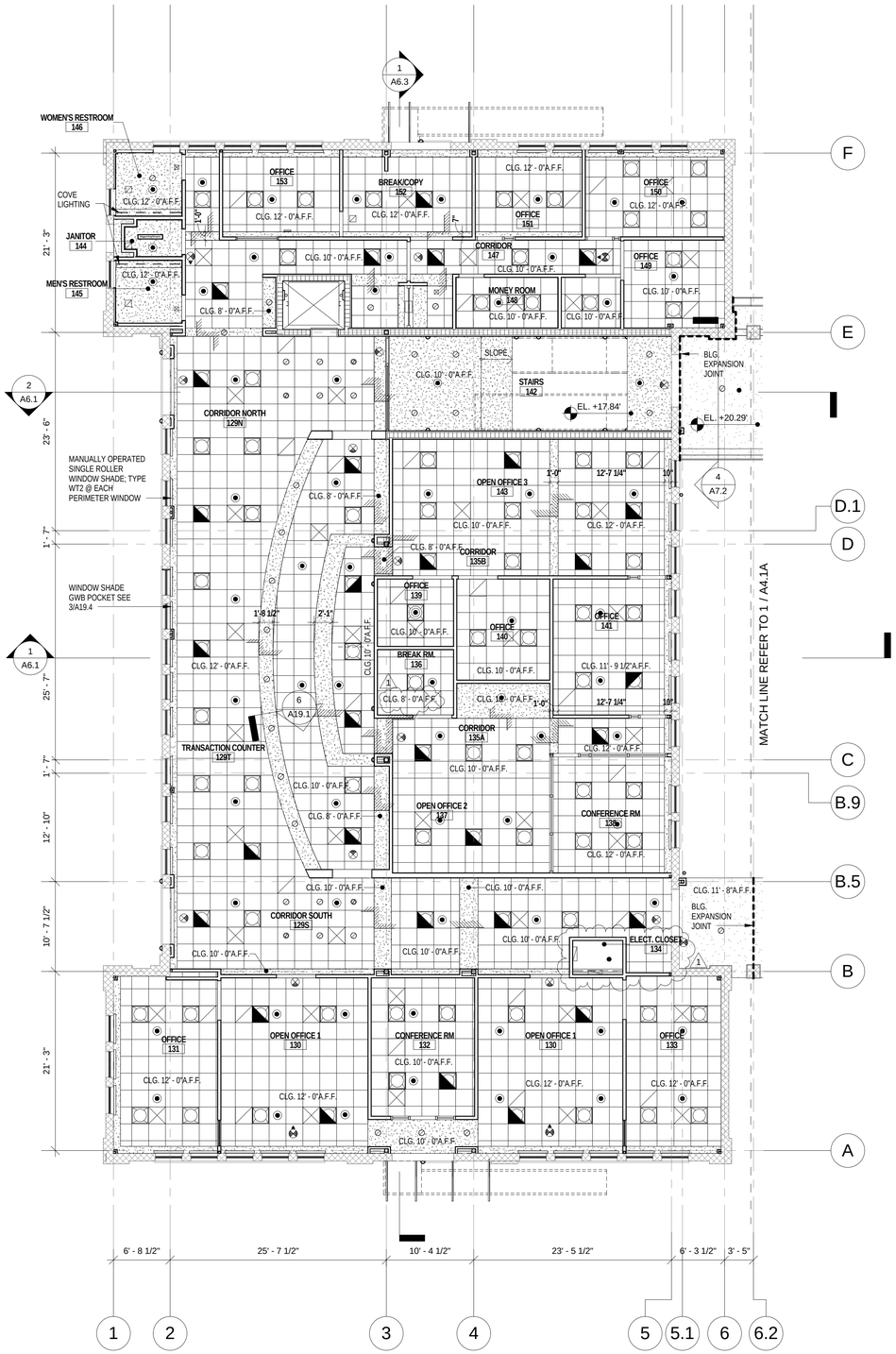
Project No : 1305

FIRST FLOOR RCP - WING A

Date: 08/08/14

A4.1A

OF



1 1ST FLOOR RCP - WING B

A4.1B 1/8" = 1'-0"

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8. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING SCHEDULE AND LIGHTING FIXTURES NOT SHOWN ON ARCHITECTURAL DRAWINGS.

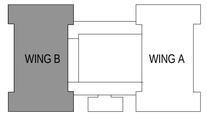
9. WHERE AN ITEM IS MOUNTED ON THE CEILING, IT SHALL BE CENTERED ON THE ELEMENT IN WHICH IT IS PLACED (CEILING PANEL, GYPSUM BOARD BAND, CONTROL JOINT, ETC) UNLESS INDICATED OTHERWISE.

10. CENTER SPRINKLER HEADS IN THE CEILING TILE/PANEL. SPRINKLER HEADS SHALL BE ALIGNED IN BOTH DIRECTIONS.

11. CONTRACTOR TO INSTALL CEILING GRID TIE WIRES AS PER CODE. GRID TIE WIRES TO ATTACH TO STRUCTURE ABOVE THRU APPROPIATE BLOCKING WHERE REQUIRED. DO NOT ATTACH TO HVAC DUCTWORK OR SOFFIT SUBFRAMING.

LEGEND

- 2'X2' SUSPENDED ACOUSTICAL CEILING PANEL & GRID SYSTEM
- GYPSUM WALLBOARD CEILING
- STUCCO/PLASTER CEILING
- 2'X2' RECESSED TROFFER FIXTURE
- 2'X2' RECESSED TROFFER FIXTURE W/ BATTERY BACK UP
- RECESSED DOWNLIGHT LIGHTING FIXTURE
- RECESSED DOWNLIGHT LIGHTING FIXTURE W/ BATTERY BACK UP
- EXTERIOR SURFACE MOUNTED LIGHTING FIXTURE
- SURFACE MOUNTED LIGHTING FIXTURE
- SURFACE MOUNTED LIGHTING FIXTURE
- HVAC DIFFUSER (RETURN AIR)
- HVAC DIFFUSER (SUPPLY AIR)
- FIRE SPRINKLER HEAD - PENDANT
- FIRE SPRINKLER HEAD - CONCEALED PENDANT
- FIRE SPRINKLER HEAD - SIDE-WALL MOUNT
- EXIT SIGN
- DECORATIVE PENDANT LIGHTING FIXTURE
- SURFACE MOUNTED TRACK LIGHTING FIXTURE
- RECESEED COVE LIGHTING FIXTURE
- DECORATIVE INTERIOR SCONCE
- EXTERIOR SCONCE



SCALE: 1/8" = 1'-0"

0 8 16 24 32

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

PHASE 2

1300 WHITE STREET KEY WEST, FLORIDA

CITY OF KEY WEST

MCHARRY ASSOCIATES
ARCHITECTURE / ENGINEERING / INTERIORS
AAC000986 EB0003663
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MIAMI, FLORIDA 33133 (305)445-3765
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Telephone (305) 296-4747
Facsimile (305) 296-2727
Florida License AAC002022

Bender & Associates ARCHITECTS p.a.

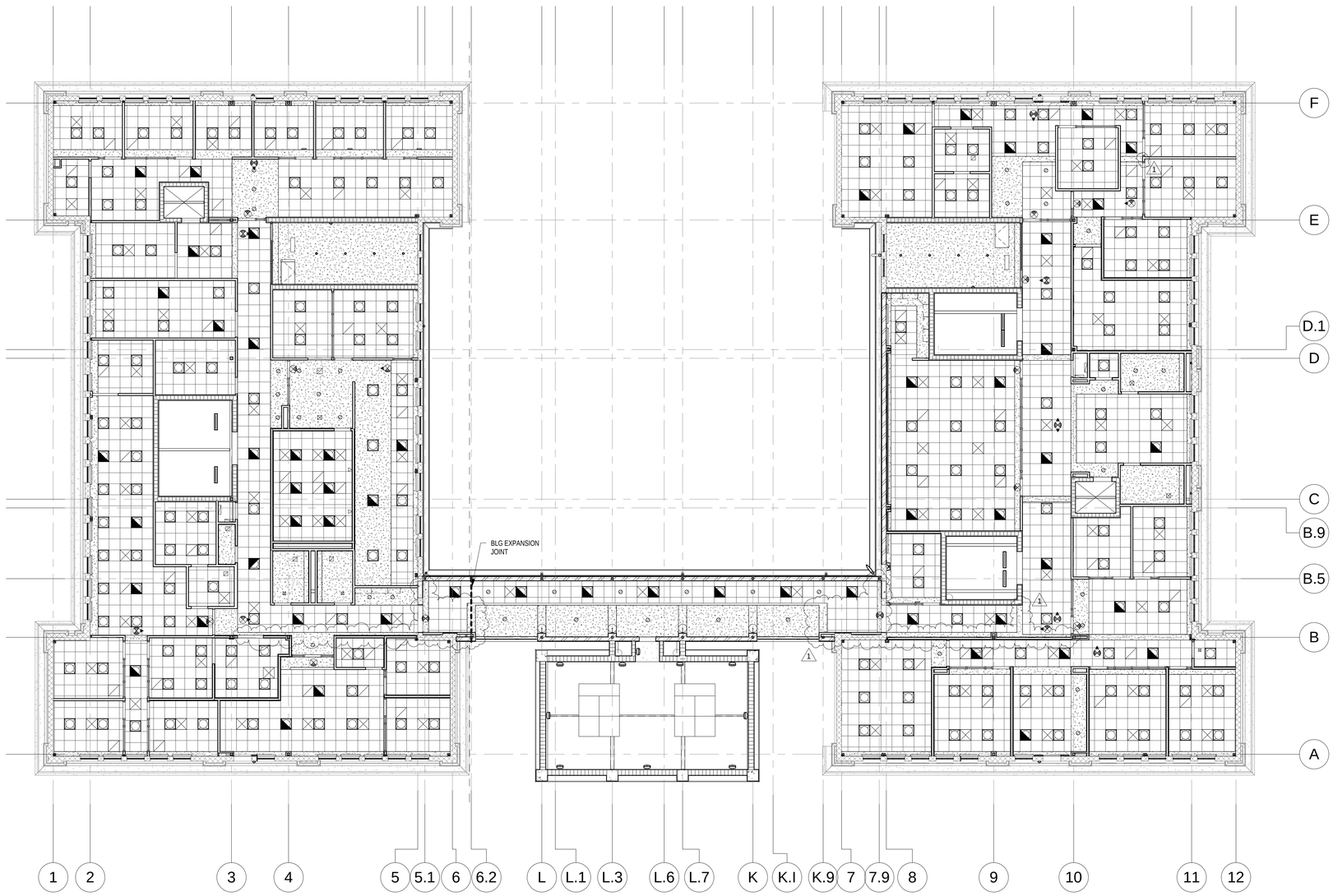
Project No : 1305

1ST FLOOR RCP - WING B

Date: 08/08/14

A4.1B

OF



1 OVERALL 2ND FLOOR RCP

A4.2 3/32" = 1'-0"

SCALE: 3/32" = 1'-0"

0 10 20 30 40

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

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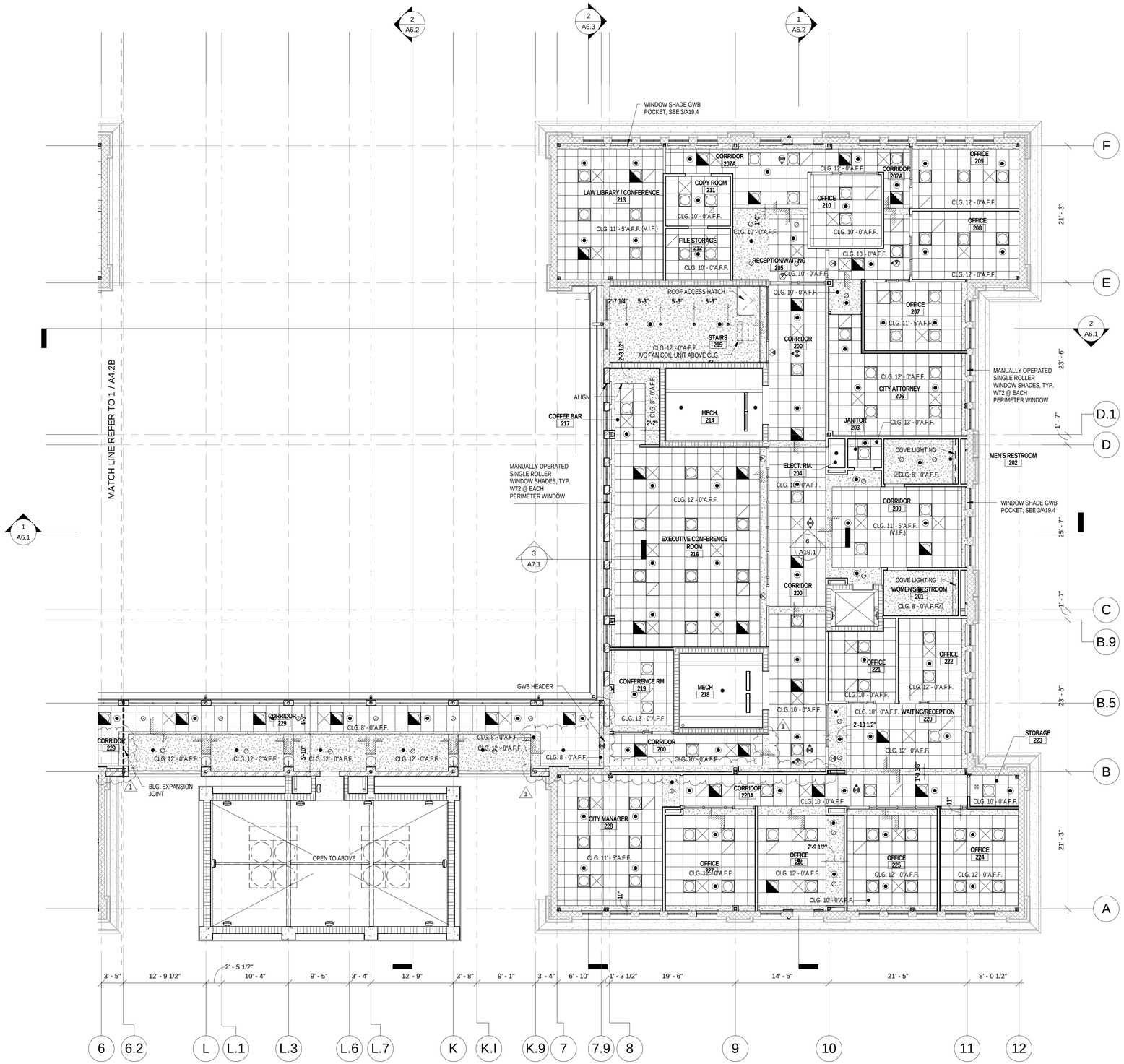
Project No : 1305

OVERALL 2ND FLOOR RCP

Date: 08/08/14

A4.2

OF



1 2ND FLOOR RCP - WING A

A4.2A 1/8" = 1'-0"

GENERAL CEILING NOTES

1. THE GENERAL CONTRACTOR IS REQUIRED TO COORDINATE THE INSTALLATION OF ALL BUILDING SERVICES AND UTILITIES BEING INSTALLED BY THE VARIOUS TRADES. PARTICULAR ATTENTION IS CALLED TO THE INSTALLATION OF MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION SYSTEMS ABOVE CEILINGS. THE GLYNN ARCHER SCHOOL IS A SIGNIFICANT LOCAL HISTORIC RESOURCE AND RESTORATION OF THE HISTORIC CHARACTERISTICS OF THE EXTERIOR ENVELOPE HAS BEEN GIVEN A HIGH PRIORITY. THE CEILING HEIGHTS HAVE BEEN DESIGNED TO RESPECT, RETAIN AND MATCH THE HISTORIC WINDOW HEADS IN HEIGHT. THE A/E DESIGN TEAM HAS ENDEAVORED TO RESOLVE THE MAJOR ISSUES; HOWEVER, THE CONTRACTOR SHALL PLAN ALL ACTIVITIES TO ENSURE A MINIMUM OF INTERFERENCE BETWEEN TRADES.

2. CEILING HEIGHTS AT PERIMETER SPACES SHALL BE SET FLUSH WITH WITH EXISTING HISTORIC WINDOW HEADS, UNLESS SPECIFICALLY NOTED OTHERWISE.

3. CEILING HEIGHTS ARE BASED ON DIMENSION ABOVE FINISHED FLOOR.

4. PRIOR TO INSTALLATION, CONTRACTOR MUST NOTIFY THE ARCHITECT OF ANY DEVIATIONS OR CONFLICTS BETWEEN ARCHITECTURAL REFLECTED CEILING PLANS AND OTHER DISCIPLINES, AND SHALL SECURE APPROVAL OF SUCH FROM THE ARCHITECT.

5. BUILDING SYSTEMS, FIXTURES, AND DEVICES SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS SUCH AS LIGHT FIXTURES, AIR DIFFUSERS, AND SPRINKLER HEADS ARE SHOWN TO DENOTE LOCATION AND LAYOUT PATTERN WHERE PLACEMENT IS CRITICAL. THE ARCHITECTURAL DRAWINGS DO NOT REPRESENT COMPLETE SYSTEMS THAT ARE SHOWN ON OTHER DRAWINGS.

6. REFER TO MECHANICAL DRAWINGS FOR TYPES AND SIZES OF SUPPLY AND RETURN GRILLES.

7. LIGHTING FIXTURES, ALARM DEVICES AND EXIT SIGNS ARE SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LAYOUT CLARITY ONLY. SEE ELECTRICAL DRAWINGS FOR TOTAL QUANTITIES AND OTHER REQUIREMENTS.

8. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING SCHEDULE AND LIGHTING FIXTURES NOT SHOWN ON ARCHITECTURAL DRAWINGS.

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- 2'X2' RECESSED TROFFER FIXTURE W/ BATTERY BACK UP
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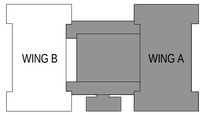
- FIRE SPRINKLER HEAD - PENDANT
- FIRE SPRINKLER HEAD - CONCEALED PENDANT
- FIRE SPRINKLER HEAD - SIDE-WALL MOUNT
- EXIT SIGN
- DECORATIVE PENDANT LIGHTING FIXTURE
- SURFACE MOUNTED TRACK LIGHTING FIXTURE
- RECESSED COVE LIGHTING FIXTURE
- DECORATIVE INTERIOR SCONCE
- EXTERIOR SCONCE



SCALE: 1/8" = 1'-0"

0 8 16 24 32

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

PHASE 2

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CITY OF KEY WEST

MCHARRY ASSOCIATES
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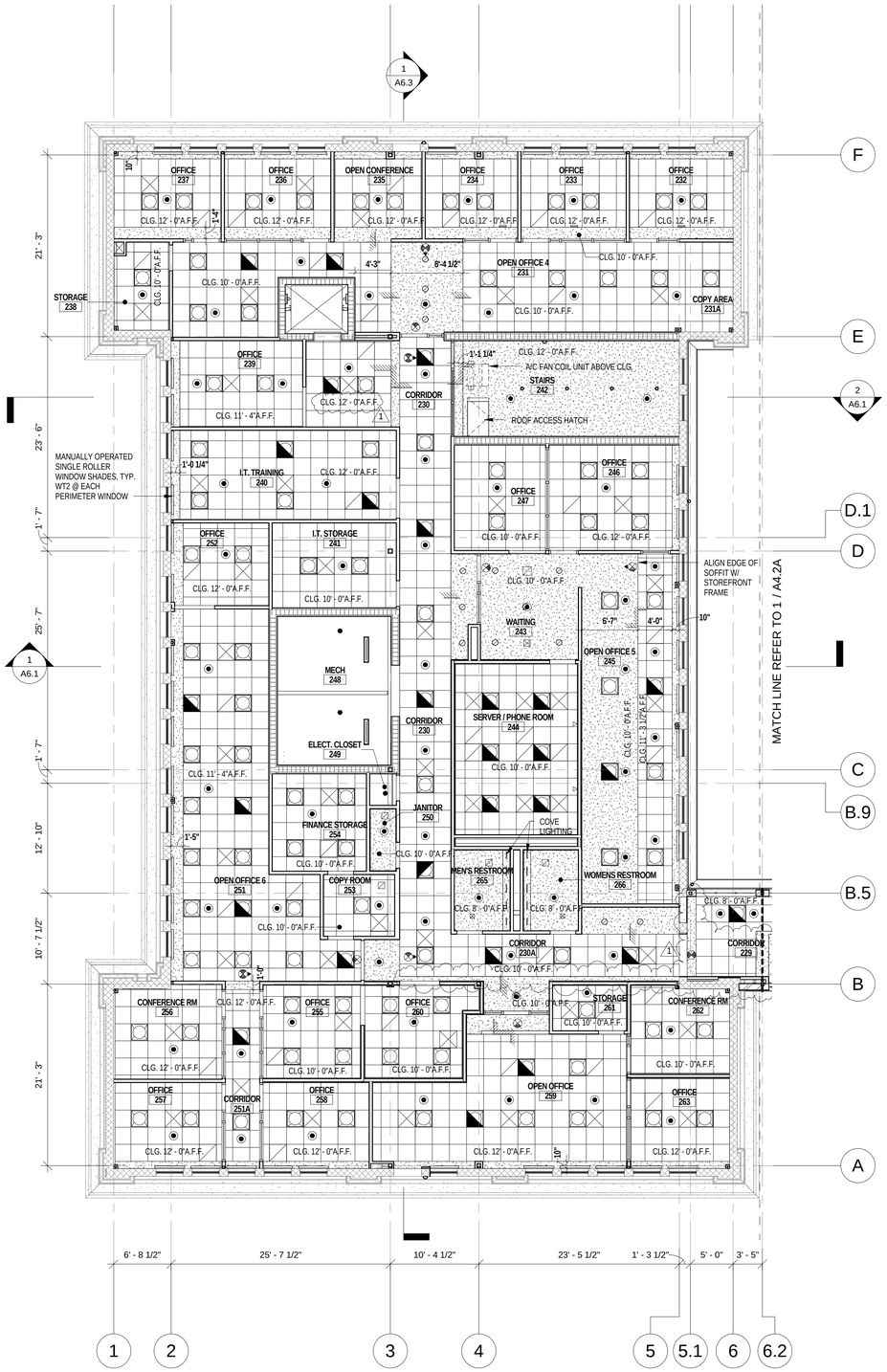
Project No : 1305

2ND FLOOR RCP - WING A

Date: 08/08/14

A4.2A

OF



1 2ND FLOOR RCP - WING B

A4.2B 1/8" = 1'-0"

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- RECESEED COVE LIGHTING FIXTURE
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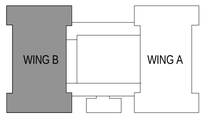

SCALE: 1/8" = 1'-0"

0 8 16 24 32

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

PHASE 2

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CITY OF KEY WEST

MCHARRY ASSOCIATES
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Bender & Associates ARCHITECTS p.a.

Project No : 1305

2ND FLOOR RCP - WING B

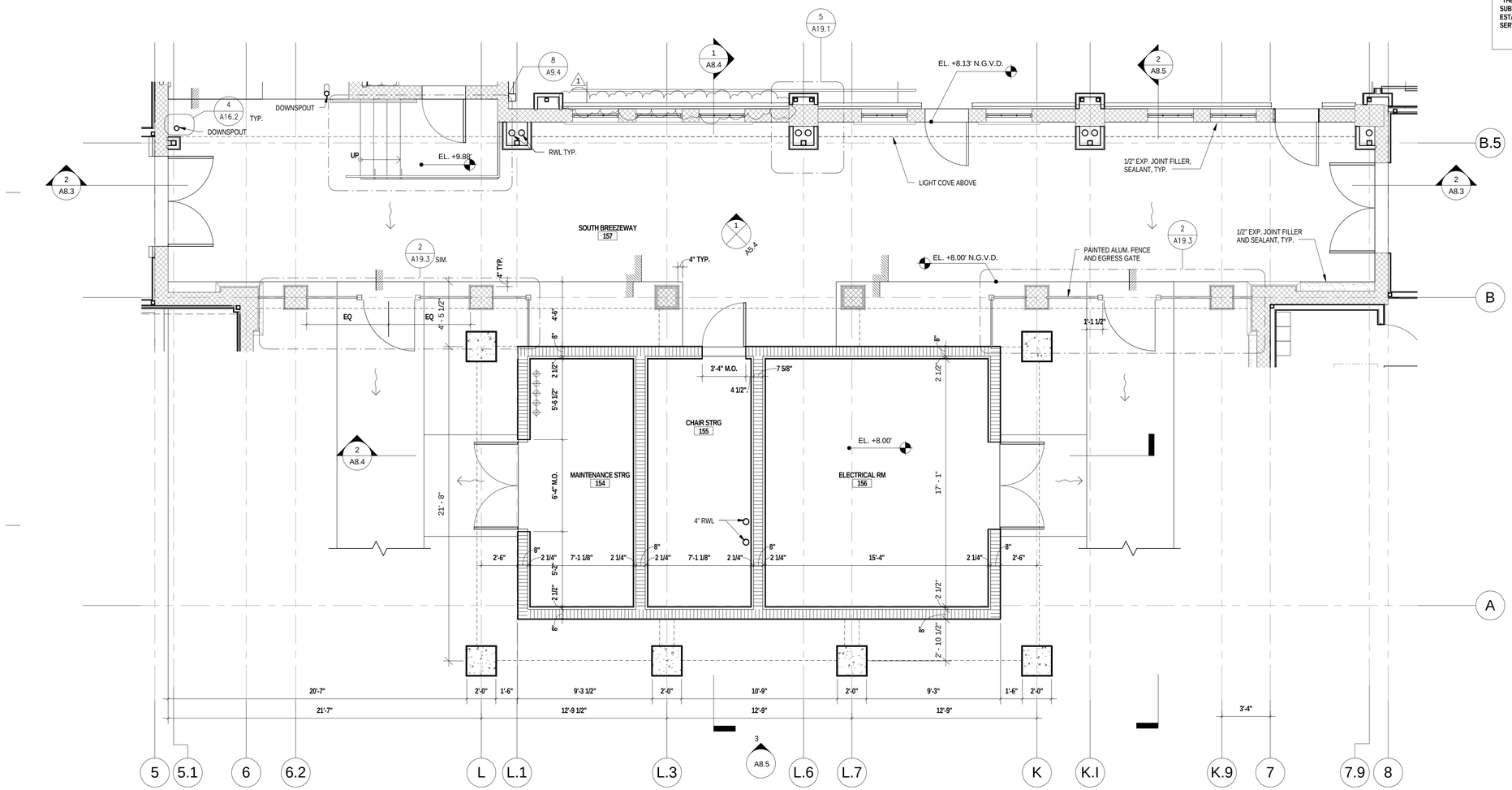
Date: 08/08/14

A4.2B

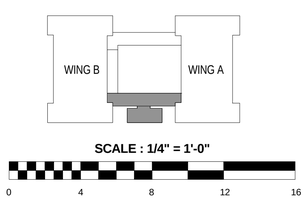
OF

GENERAL NOTE:

1. TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMITICIDES, INCLUDING SOIL APPLIED PESTICIDES, BAITING SYSTEMS, AND PESTICIDES APPLIED TO WOOD, OR OTHER APPROVED METHODS FOR TERMITE PROTECTION LABELED FOR USE AS A PREVENTATIVE TREATMENT TO NEW CONSTRUCTION. SEE FBC-B SECTION 202, REGISTERED TERMITICIDE. UPON COMPLETION OF THE APPLICATION OF THE TERMITE PROTECTIVE TREATMENT, A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT:
"THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."



1 1ST FLOOR SOUTH BREEZEWAY ENLARGED PLAN
A2.1A | A8.1
1/4" = 1'-0"



PERMIT SET

REVISIONS:		
NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER
PHASE 2
1300 WHITE STREET KEY WEST, FLORIDA
CITY OF KEY WEST

MCHARRY ASSOCIATES
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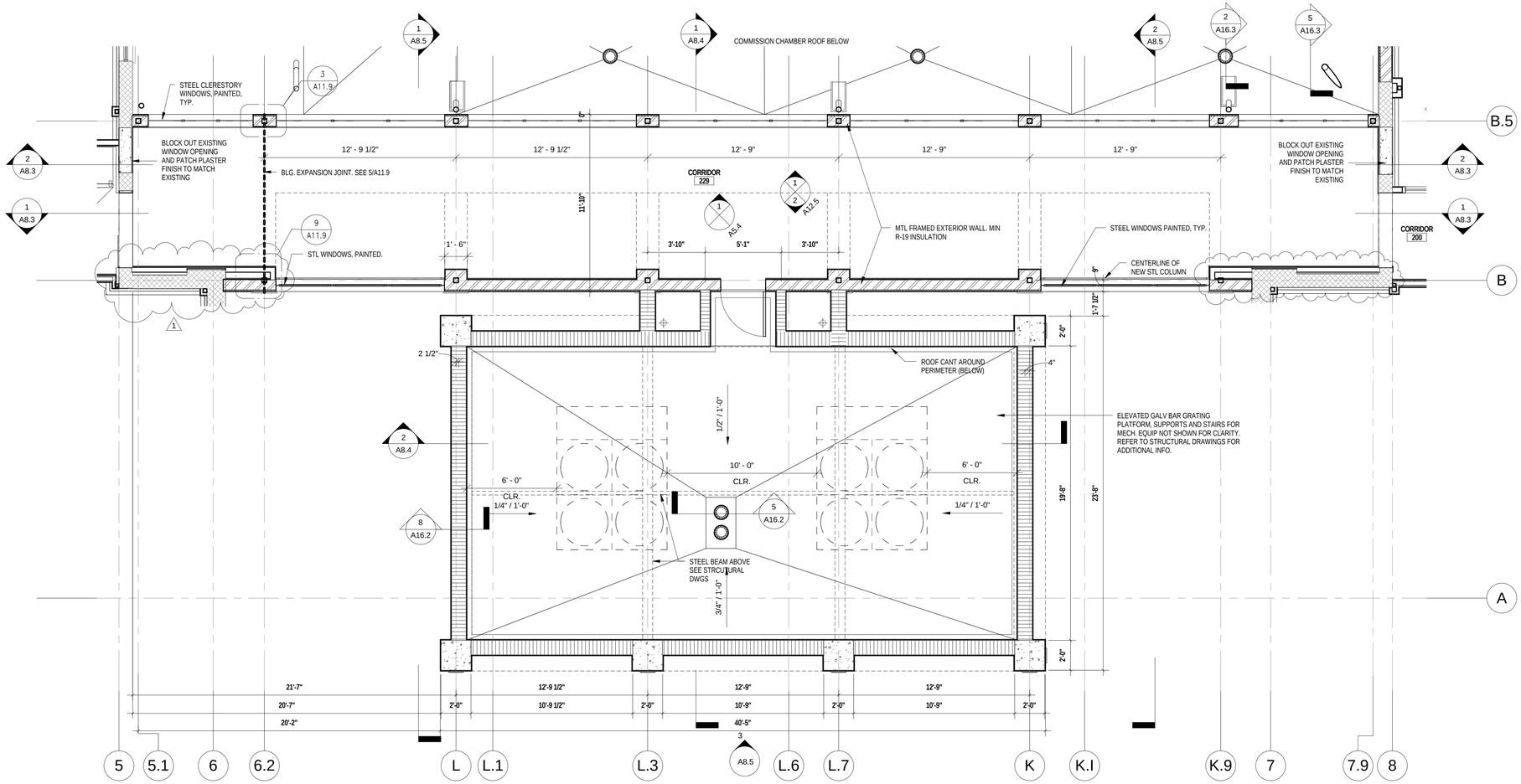
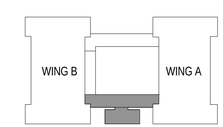
Project No : 1305
ENLARGED BRIDGE PLANS - 1ST FLOOR
Date: 08/08/14

A8.1
OF



1 2ND FLOOR ENLARGED PLAN

A2.2A A8.2 1/4" = 1'-0"



SCALE : 1/4" = 1'-0"

0 4 8 12 16

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

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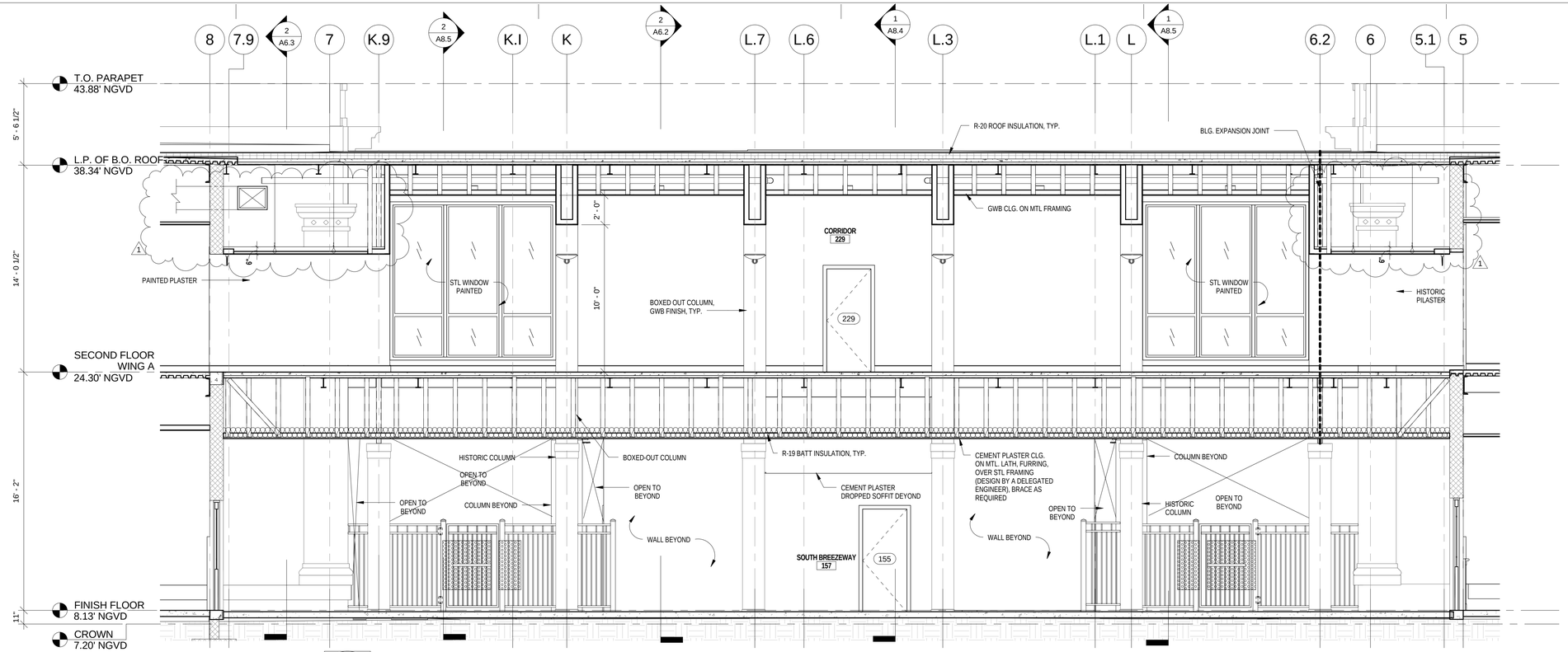
Project No : 1305

ENLARGED BRIDGE PLANS - 2ND FLOOR

Date: 08/08/14

A8.2

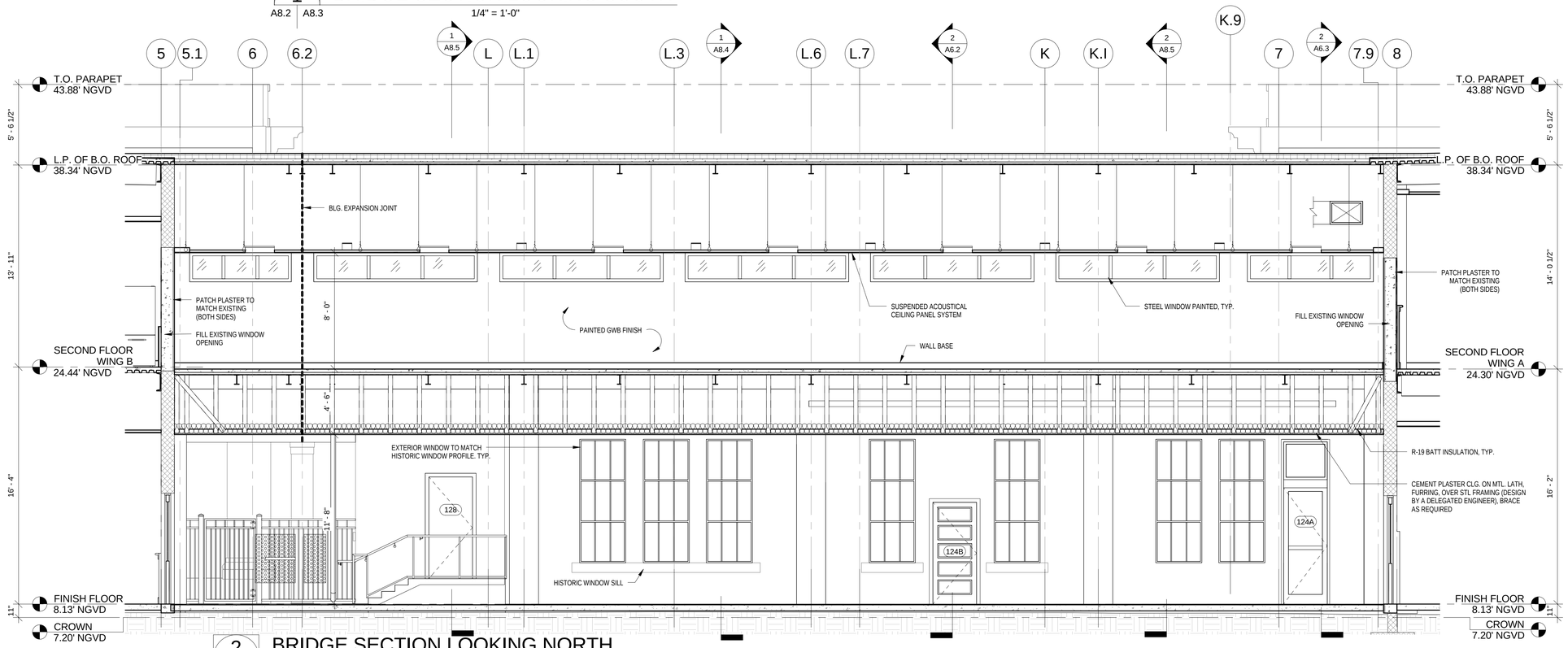
OF



1 BRIDGE SECTION LOOKING SOUTH

A8.2 | A8.3

1/4" = 1'-0"



2 BRIDGE SECTION LOOKING NORTH

A8.1 | A8.3

1/4" = 1'-0"

REVISIONS:

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1	ADDENDUM 2	10/02/14

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Project No : 1305

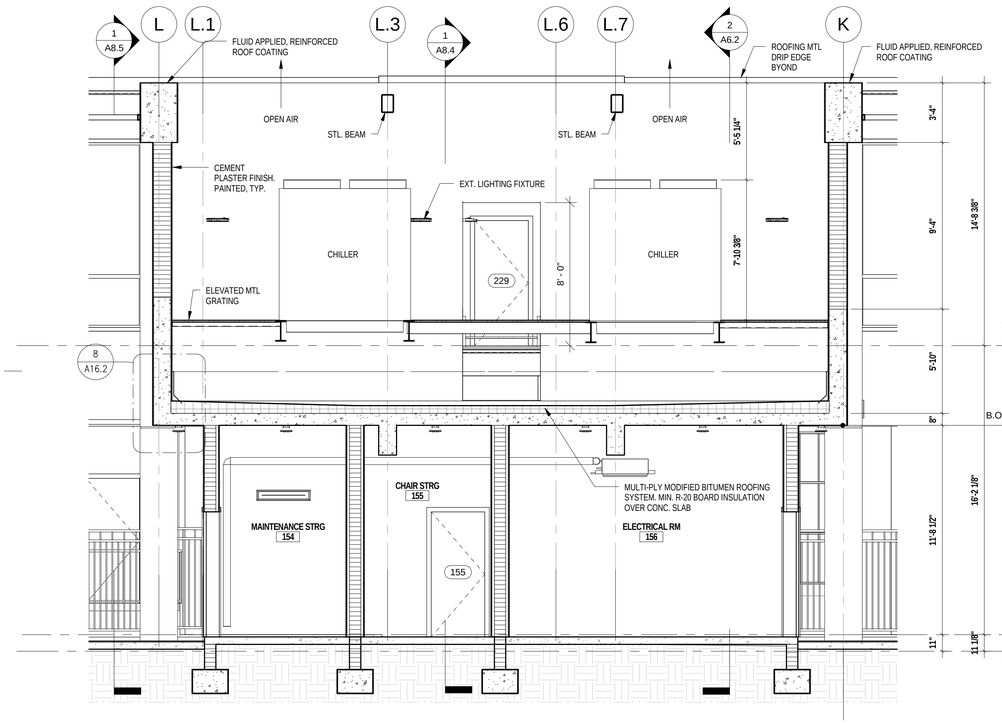
BRIDGE - LONGITUDINAL SECTIONS

Date: 08/08/14

PERMIT SET

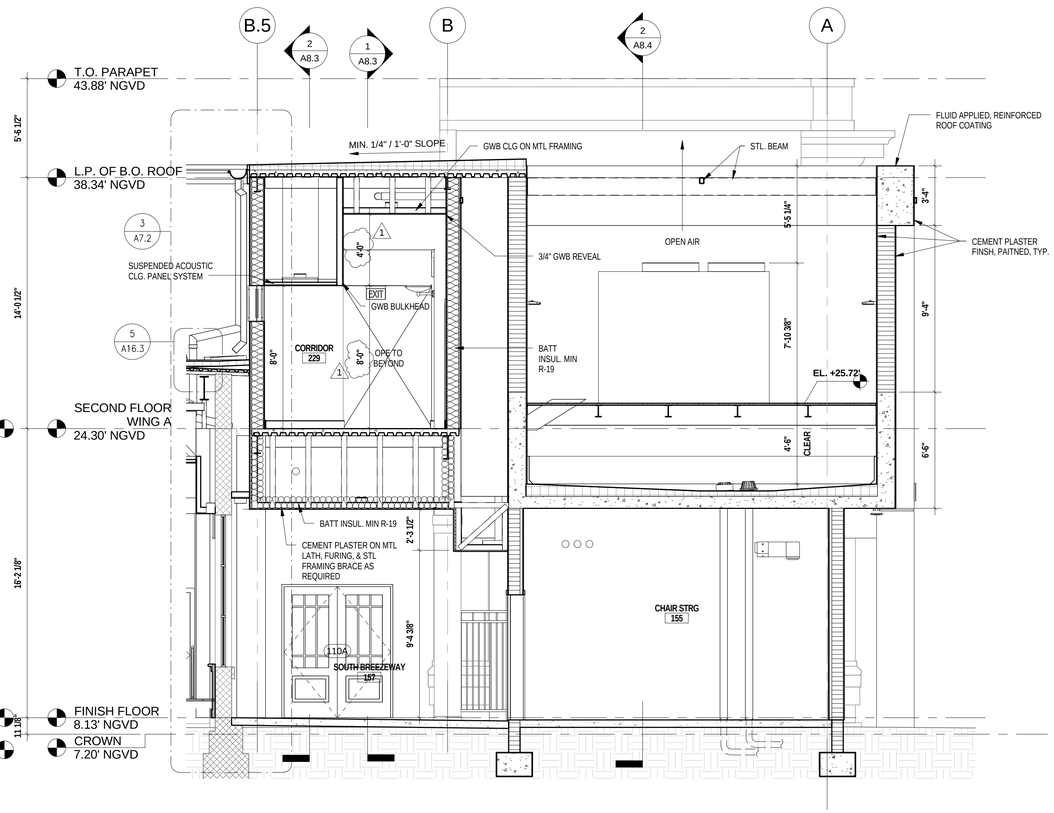
A8.3

OF



2 CHILLER CROSS SECTION

A8.1 | A8.4 1/4" = 1'-0"



1 CHILLER SECTION

A8.1 | A8.4 1/4" = 1'-0"

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Project No : 1305

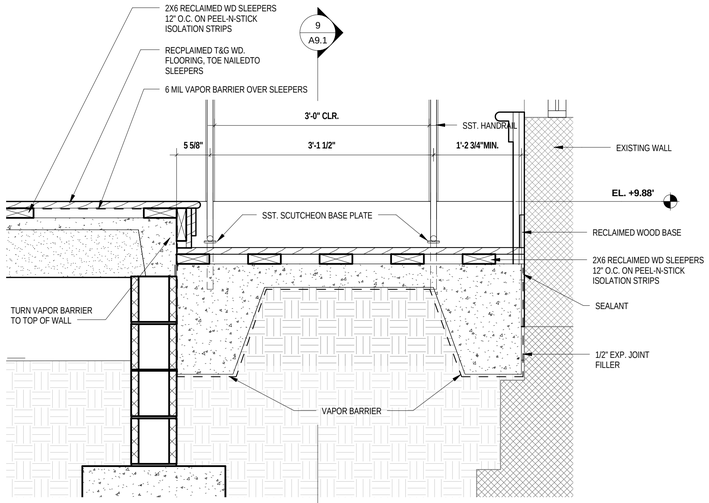
BRIDGE SECTIONS

Date: 08/08/14

A8.4

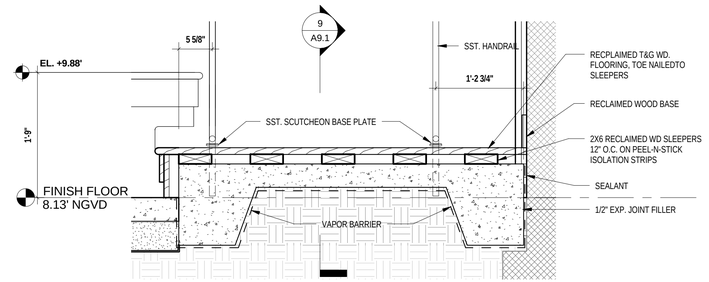
OF

PERMIT SET



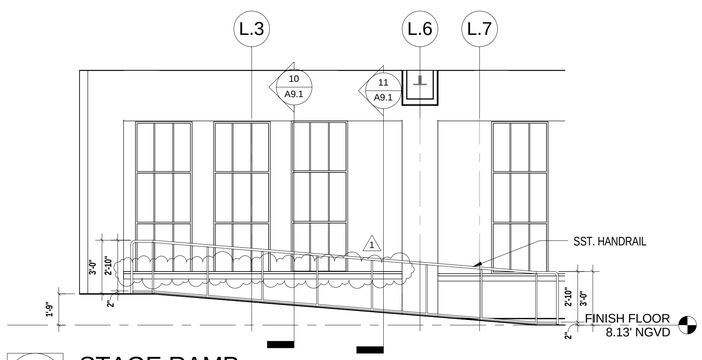
10 STAGE AND RAMP CROSS SECTION DETAIL

A9.1 1" = 1'-0"



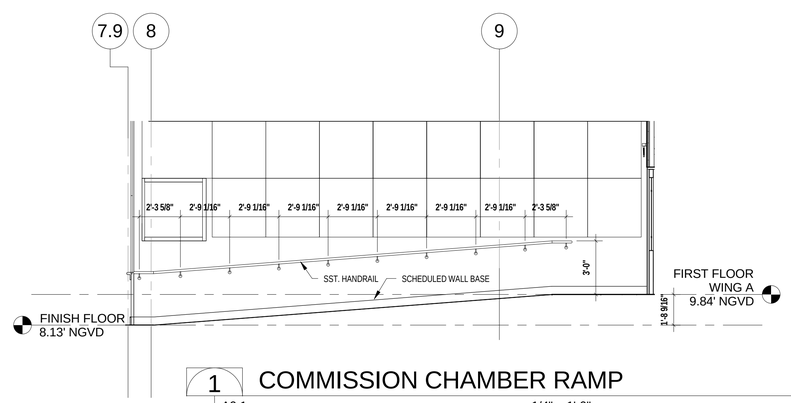
11 RAMP CROSS SECTION DETAIL

A9.1 1" = 1'-0"



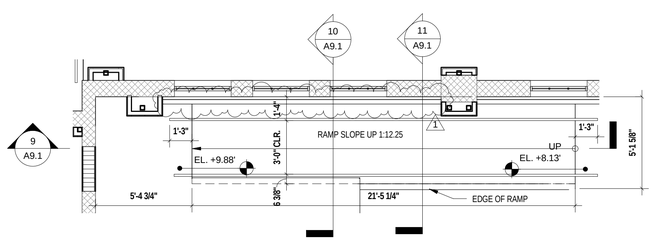
9 STAGE RAMP

A9.1 1/4" = 1'-0"



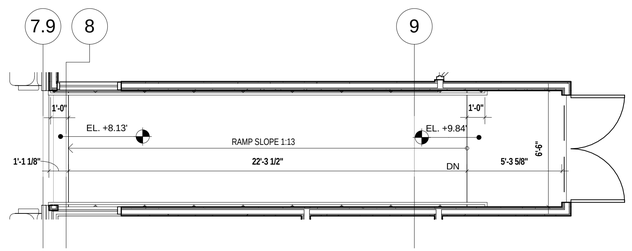
1 COMMISSION CHAMBER RAMP

A9.1 1/4" = 1'-0"



3 STAGE RAMP PLAN

A9.1 1/4" = 1'-0"



8 CHAMBER ENTRY RAMP

A9.1 1/4" = 1'-0"

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL
AT GLYNN ARCHER
PHASE 2
1300 WHITE STREET KEY WEST, FLORIDA
CITY OF KEY WEST

MCHARRY ASSOCIATES
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Florida License AAC002022
Bender & Associates ARCHITECTS p.a.

Project No : 1305

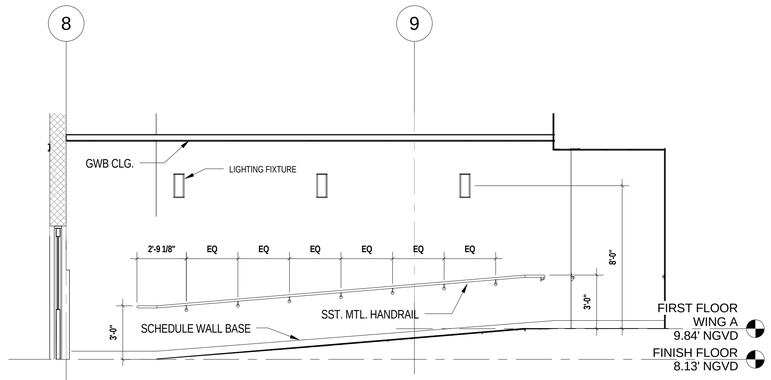
ENLARGED INTERIOR COMMISSION CHAMBER RAMPS + RAILING DETAILS

Date: 08/08/14

PERMIT SET

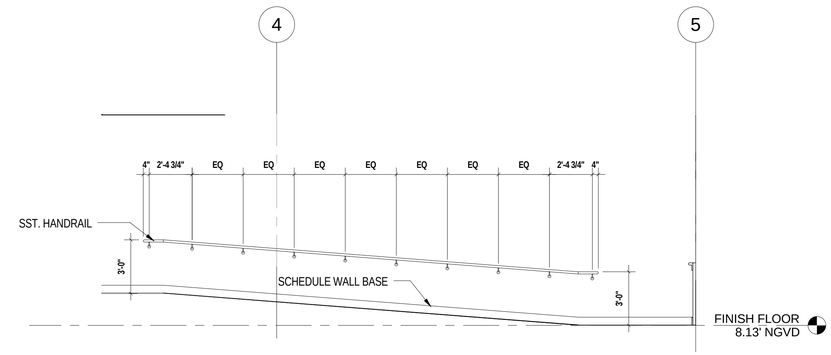
A9.1

OF



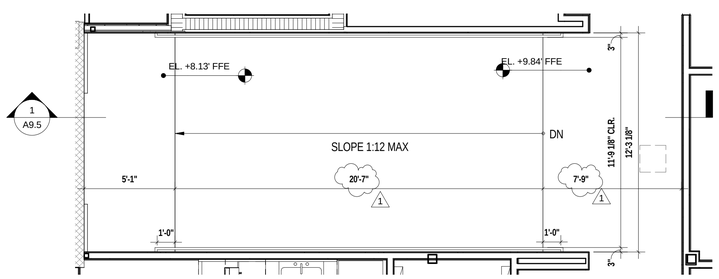
1 SECTION AT WING A SOUTH RAMP

A9.5 1/4" = 1'-0"



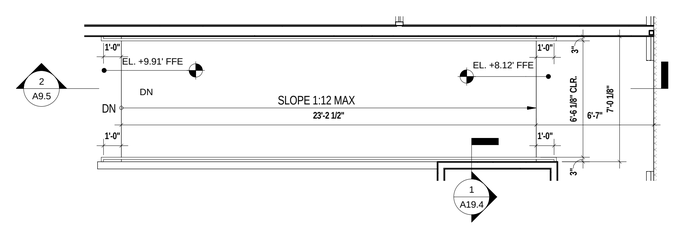
2 SECTION AT WING B SOUTH RAMP

A9.5 1/4" = 1'-0"



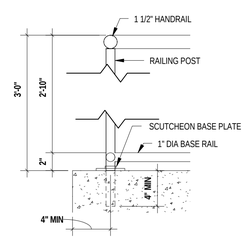
3 WING A SOUTH RAMP PLAN

A9.5 1/4" = 1'-0"



4 WING B SOUTH RAMP PLAN

A9.5 1/4" = 1'-0"



5 TYPICALRAILING POST MOUNT DETAIL

A9.5 1 1/2" = 1'-0"

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

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Bender & Associates ARCHITECTS p.a.

Project No : 1305

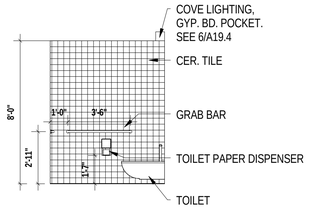
RAMP PLANS AND HANDRAILS

Date: 08/08/14

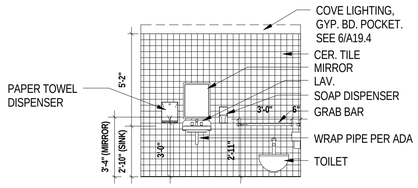
PERMIT SET

A9.5

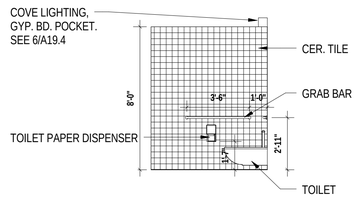
OF



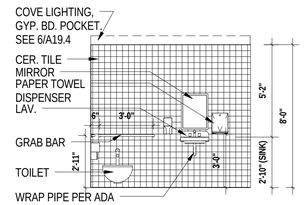
12 266 Women's Bathroom - North
A9.10 1/4" = 1'-0"



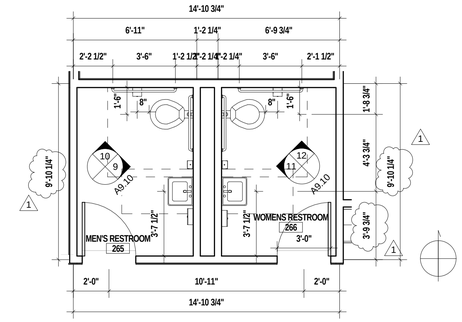
11 266 Women's Restroom - West
A9.10 1/4" = 1'-0"



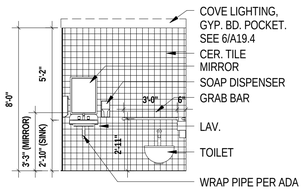
10 265 Men's Bathroom - North
A9.10 1/4" = 1'-0"



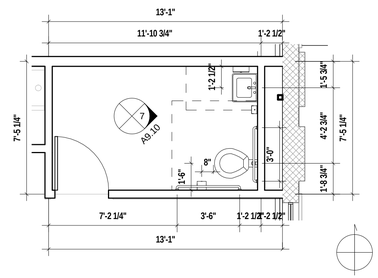
9 265 Men's Bathroom - East
A9.10 1/4" = 1'-0"



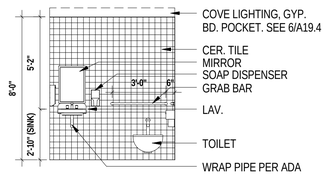
8 Restrooms 265, 266 Enlarged Plans
A9.10 1/4" = 1'-0"



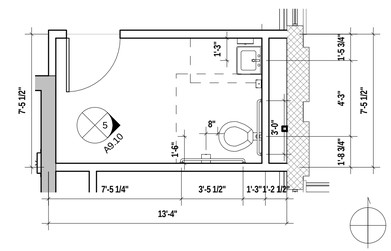
7 202 Men's Restroom - East
A9.10 1/4" = 1'-0"



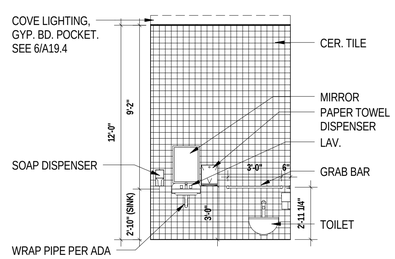
6 Men's Room 202 Enlarged Plan
A9.10 1/4" = 1'-0"



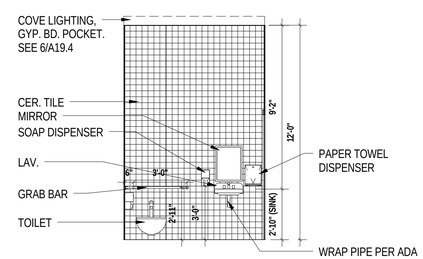
5 201 Women's Restroom - East
A9.10 1/4" = 1'-0"



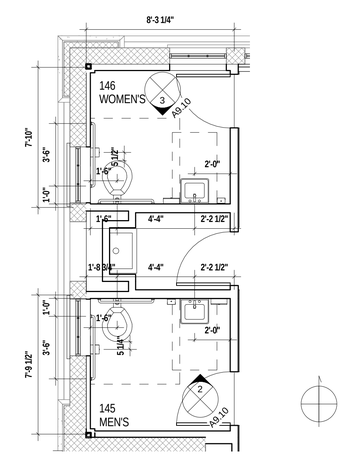
4 Women's Room 201 Enlarged Plan
A9.10 1/4" = 1'-0"



3 146 Women's Restroom - South
A9.10 1/4" = 1'-0"



2 145 Men's Restroom - North
A9.10 1/4" = 1'-0"



1 Restrooms 145, 146 Enlarged Plan
A9.10 1/4" = 1'-0"

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

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Bender & Associates ARCHITECTS p.a.

Project No : 1305

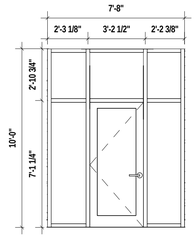
ENLARGED BATHROOM PLANS + INTERIOR ELEVATIONS

Date: 08/08/14

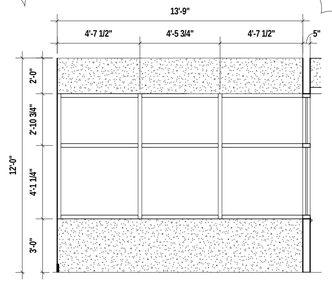
A9.10

OF

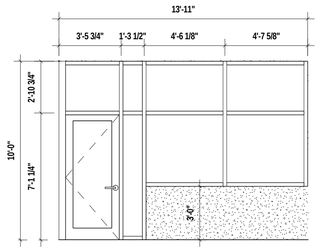
PERMIT SET



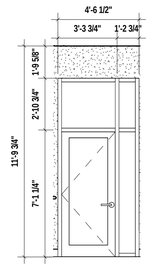
14 INTERIOR STOREFRONT 114
A11.6 1/4" = 1'-0"



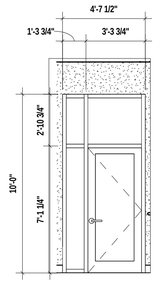
13 INTERIOR STOREFRONT 113
A11.6 1/4" = 1'-0"



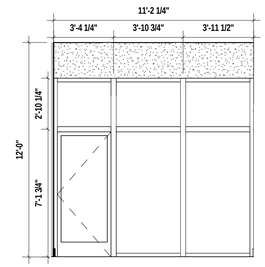
12 INTERIOR STOREFRONT 112
A11.6 1/4" = 1'-0"



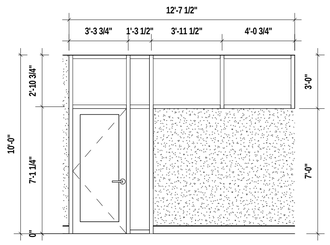
11 INTERIOR STOREFRONT 111
A11.6 1/4" = 1'-0"



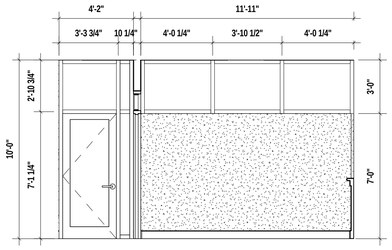
10 INTERIOR STOREFRONT 110
A11.6 1/4" = 1'-0"



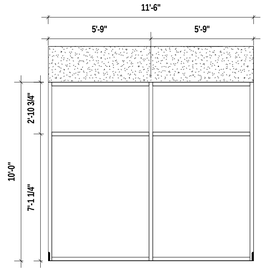
9 INTERIOR STOREFRONT 109
A11.6 1- HR FIRE RATED 1/4" = 1'-0"



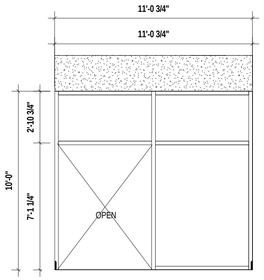
8 INTERIOR STOREFRONT 108
A11.6 1/4" = 1'-0"



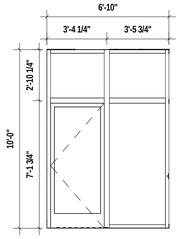
7 INTERIOR STOREFRONT 107
A11.6 1/4" = 1'-0"



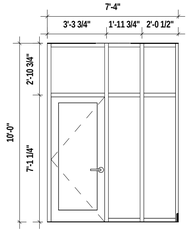
6 INTERIOR STOREFRONT 106
A11.6 1/4" = 1'-0"



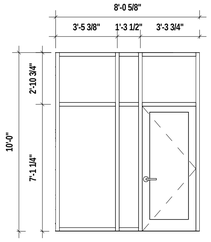
5 INTERIOR STOREFRONT 105
A11.6 1/4" = 1'-0"



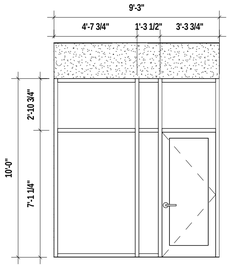
4 INTERIOR STOREFRONT 104
A11.6 1- HR FIRE RATED 1/4" = 1'-0"



3 INTERIOR STOREFRONT 103
A11.6 1/4" = 1'-0"



2 INTERIOR STOREFRONT 102
A11.6 1/4" = 1'-0"



NOTE: ALL INTERIOR STOREFRONT GLASS SHALL BE TEMPERED.

1 INTERIOR STOREFRONT 101
A11.6 1/4" = 1'-0"

1

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

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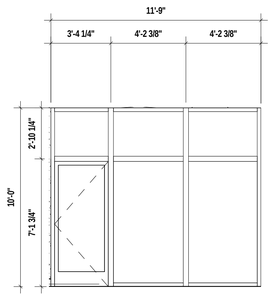
Project No : 1305

INTERIOR STOREFRONT ELEVATIONS & DETAILS - FIRST FLOOR

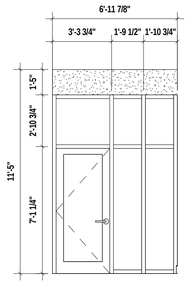
Date: 08/08/14

A11.6

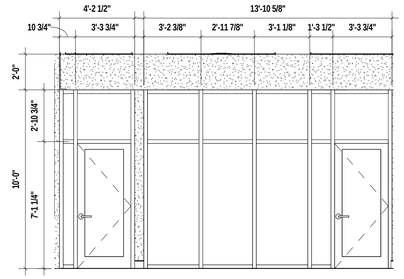
OF



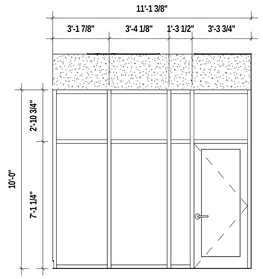
12 INTERIOR STOREFRONT 228
A11.7 1/4" = 1'-0"
1- HR FIRE RATED



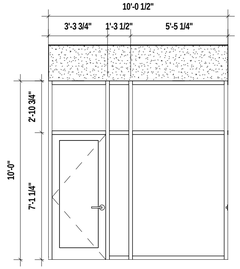
11 INTERIOR STOREFRONT 227
A11.7 1/4" = 1'-0"



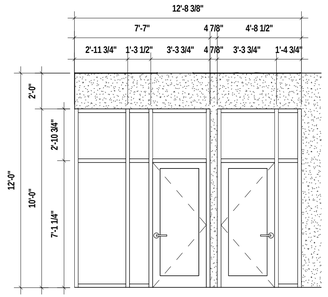
10 INTERIOR STOREFRONT 210
A11.7 1/4" = 1'-0"



9 INTERIOR STOREFRONT 209
A11.7 1/4" = 1'-0"



8 INTERIOR STOREFRONT 208
A11.7 1/4" = 1'-0"



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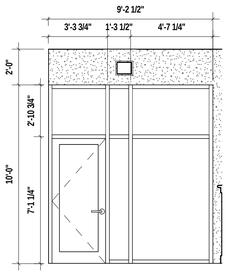
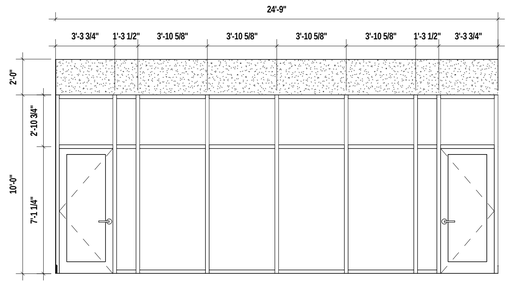
A11.7 1/4" = 1'-0"



6 INTERIOR STOREFRONT 206
A11.7 1/4" = 1'-0"



5 INTERIOR STOREFRONT 205
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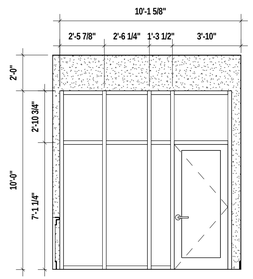
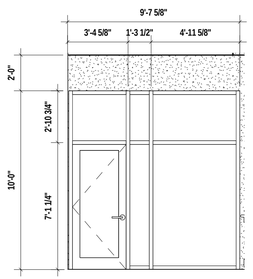
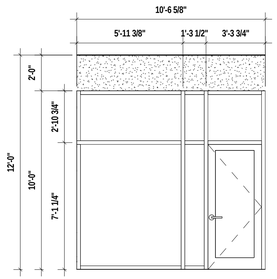


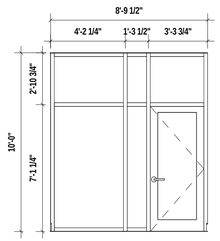
4 INTERIOR STOREFRONT 204
A11.7 1/4" = 1'-0"



3 INTERIOR STOREFRONT 203
A11.7 1/4" = 1'-0"



2 INTERIOR STOREFRONT 202
A11.7 1/4" = 1'-0"



1 INTERIOR STOREFRONT 201
A11.7 1/4" = 1'-0"

NOTE: ALL INTERIOR STOREFRONT GLASS SHALL BE TEMPERED.

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

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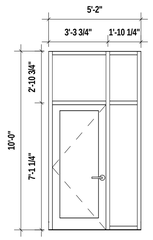
Project No : 1305

INTERIOR STOREFRONT ELEVATIONS & DETAILS - SECOND FLOOR WING A

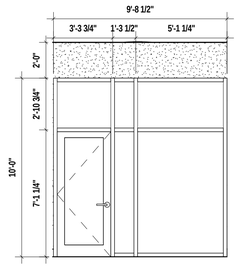
Date: 08/08/14

A11.7

OF



16 INTERIOR STOREFRONT 229
A11.8 1/4" = 1'-0"



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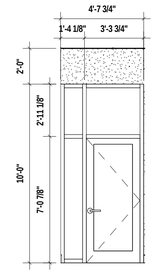

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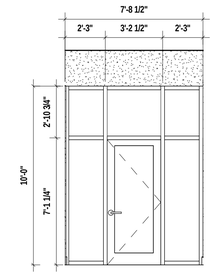

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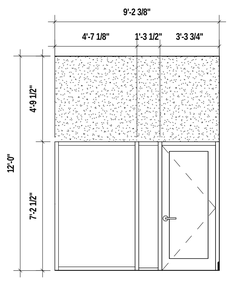

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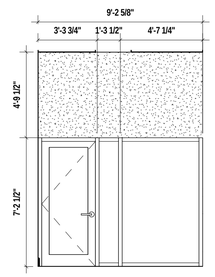

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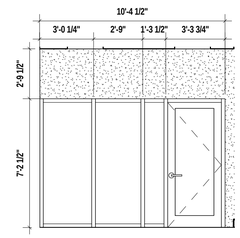

10 INTERIOR STOREFRONT 221
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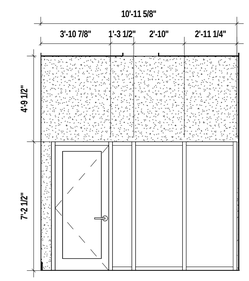

9 INTERIOR STOREFRONT 220
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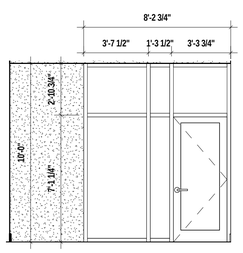

8 INTERIOR STOREFRONT 219
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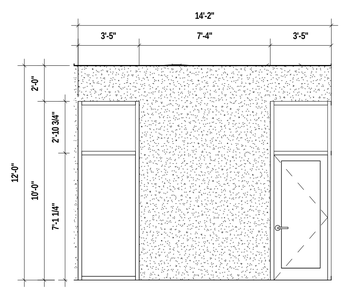

7 INTERIOR STOREFRONT 218
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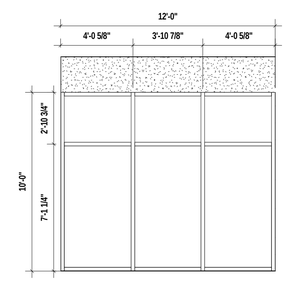

6 INTERIOR STOREFRONT 217
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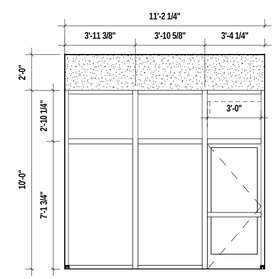
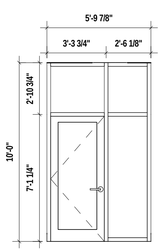


5 INTERIOR STOREFRONT 216
A11.8 1-HR FIRE RATED 1/4" = 1'-0"



4 INTERIOR STOREFRONT 215
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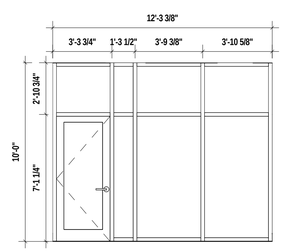

3 INTERIOR STOREFRONT 214
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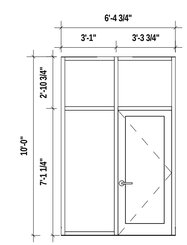
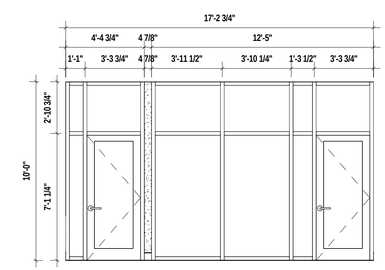


2 INTERIOR STOREFRONT 213
A11.8 1/4" = 1'-0"



1 INTERIOR STOREFRONT 212
A11.8 1/4" = 1'-0"

NOTE: ALL INTERIOR STOREFRONT GLASS SHALL BE TEMPERED.

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

PHASE 2
1300 WHITE STREET KEY WEST, FLORIDA
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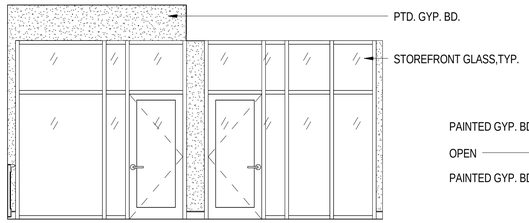
Project No : 1305

INTERIOR STOREFRONT ELEVATIONS & DETAILS - SECOND FLOOR WING B

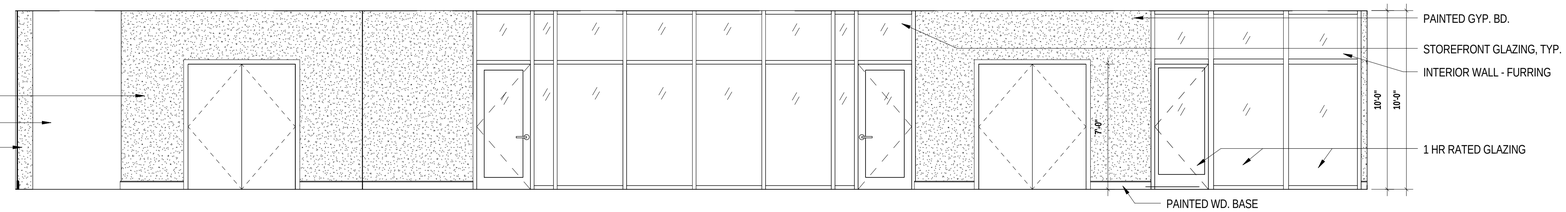
Date: 08/08/14

A11.8

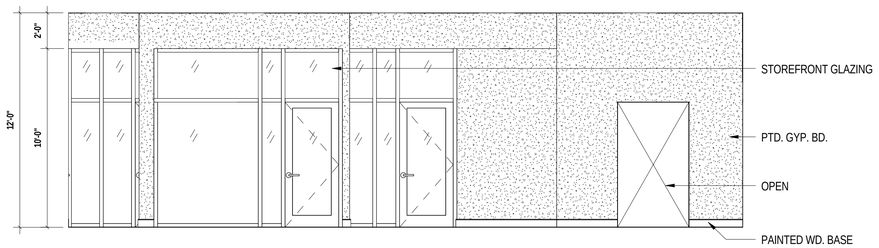
OF



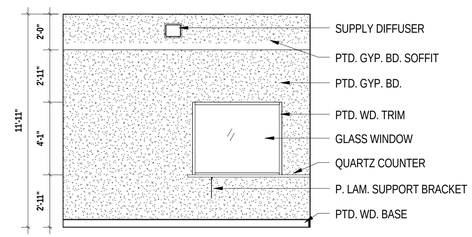
10 205 Reception - East
A12.3 1/4" = 1'-0"



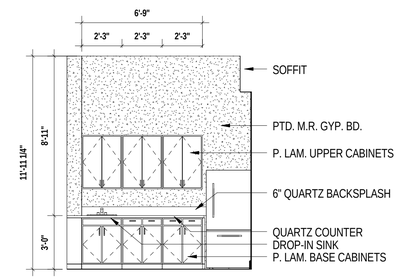
9 200 Corridor - West
A12.3 1/4" = 1'-0"



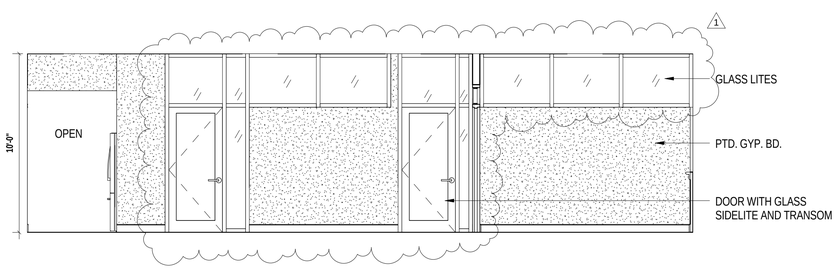
8 205 Reception - South
A12.3 1/4" = 1'-0"



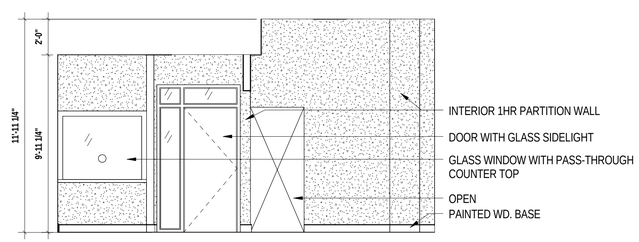
7 153 Office - South
A12.3 1/4" = 1'-0"



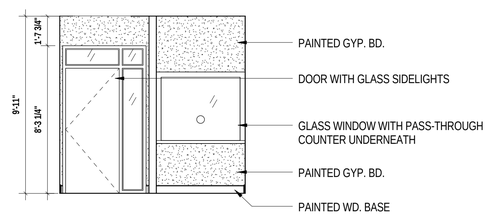
6 152 Break Copy Room - East
A12.3 1/4" = 1'-0"



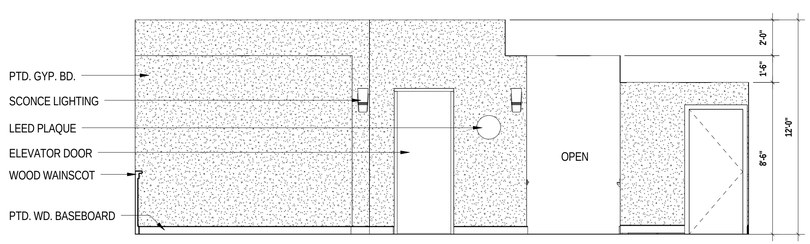
5 147 Corridor - North
A12.3 1/4" = 1'-0"



4 147 Corridor - West
A12.3 1/4" = 1'-0"



3 147 Corridor - East
A12.3 1/4" = 1'-0"



2 100 Lobby - South
A12.3 1/4" = 1'-0"

1 100 Lobby - North
A12.3 1/4" = 1'-0"

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

PHASE 2

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Project No : 1305

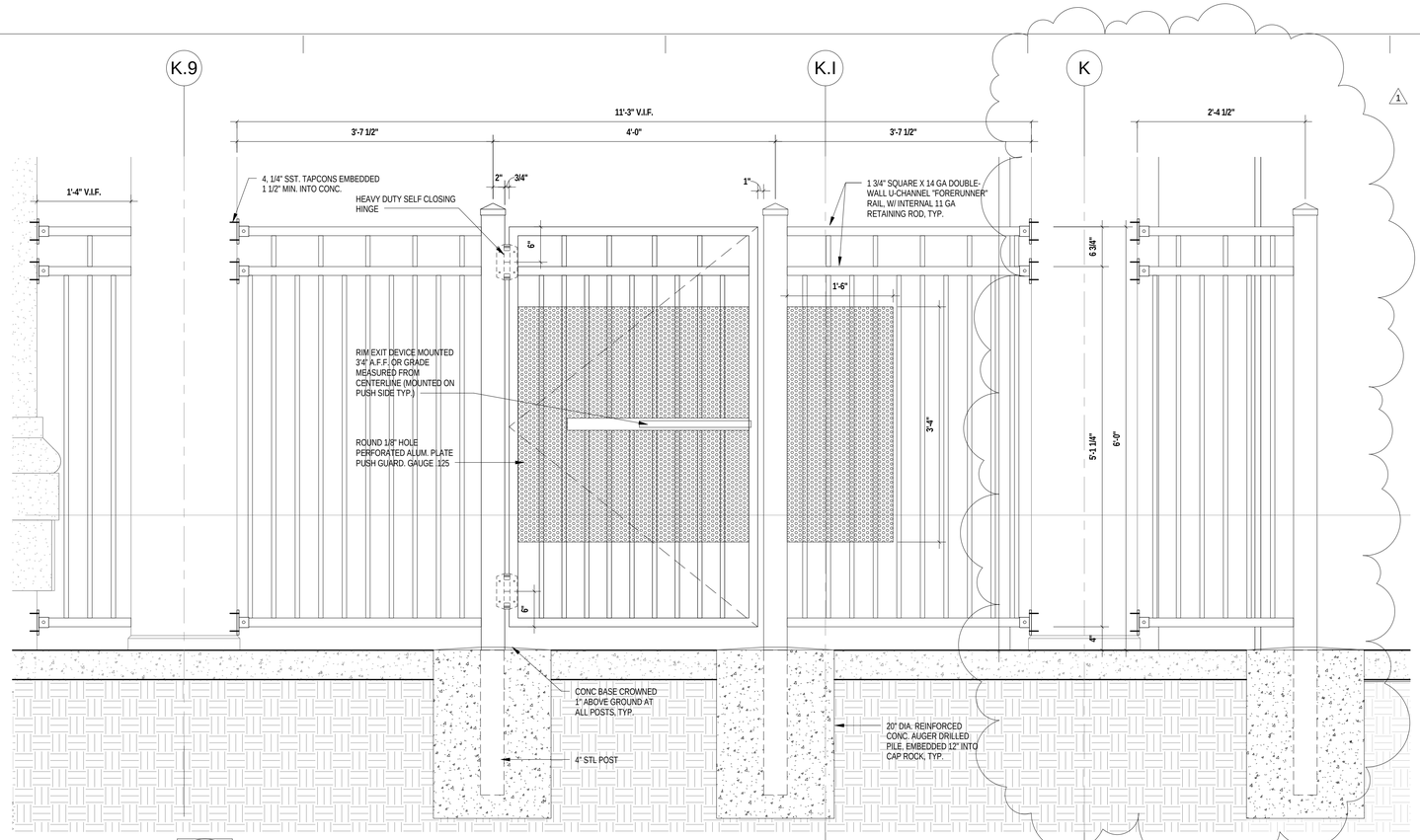
INTERIOR ELEVATIONS

Date: 08/08/14

A12.3

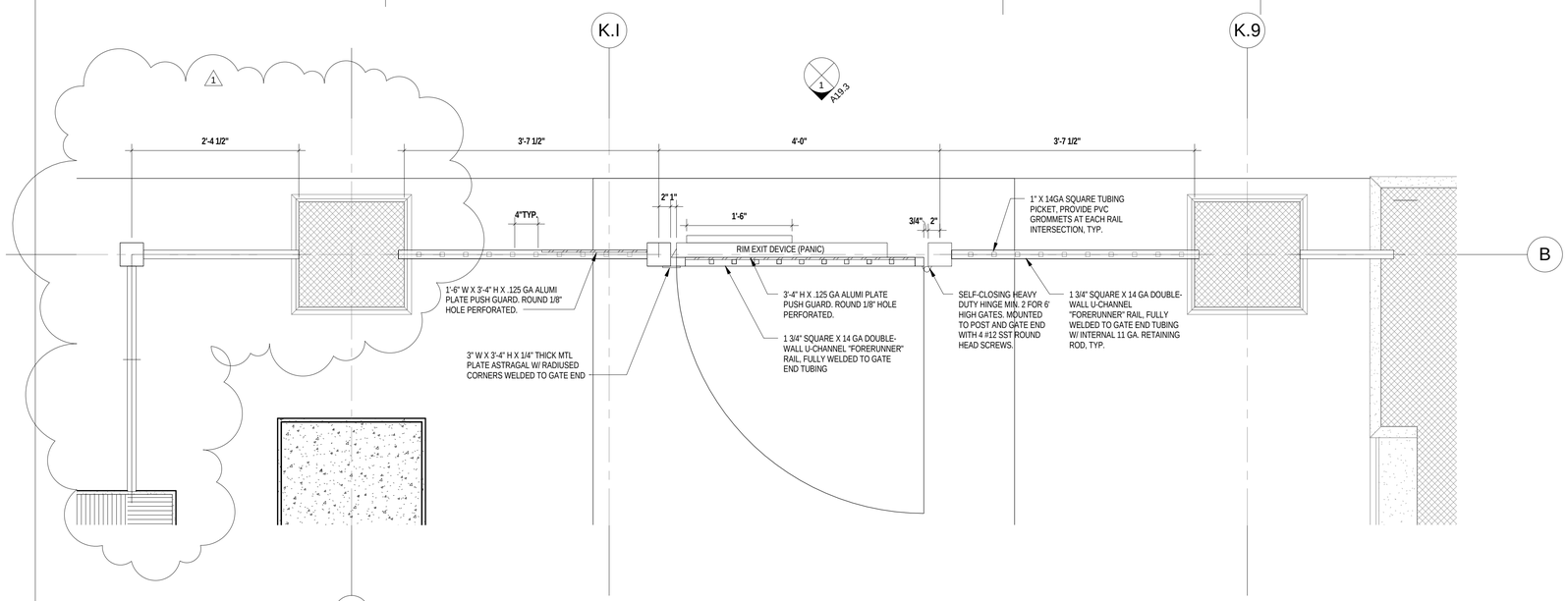
OF

PERMIT SET



1 FENCE ELEVATION DETAIL

A19.3 1" = 1'-0"



2 FENCE PLAN DETAIL

A19.3 1" = 1'-0"

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

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Bender & Associates ARCHITECTS p.a.

Project No : 1305

GENERAL DETAILS - EXTERIOR FENCE AND GATE

Date: 08/08/14

PERMIT SET

A19.3

OF

BUILDING CODE CRITERIA

1. PROJECT SCOPE: MAJOR RENOVATION OF EXISTING HISTORIC BUILDING, INCLUDING SELECTIVE DEMOLITION, REPAIRS, ALTERATIONS, RESTORATIONS, CHANGES OF OCCUPANCY, ADDITIONS, AND RELATED SITEWORK.

2. GOVERNING BUILDING CODE:

2.1 FLORIDA BUILDING CODE, EXISTING BUILDING (FBC-EB); 2010 EDITION.

2.1.1 HISTORIC BUILDINGS (FBC-EB CHAPTER 11):

2.1.1.1 HISTORIC STRUCTURES OR PORTIONS OF SUCH STRUCTURES THAT DO NOT STRICTLY COMPLY WITH THIS CODE SHALL BE CONSIDERED TO BE IN COMPLIANCE IF IT CAN BE SHOWN TO THE SATISFACTION OF THE BUILDING CODE OFFICIAL THAT EQUIVALENT PROTECTION HAS BEEN PROVIDED OR THAT NO HAZARD WILL BE CREATED OR CONTINUED THROUGH NONCOMPLIANCE (FBC-EB SECTION 1105.1).

2.1.1.2 COMPLIANCE OPTION: LIFE SAFETY AND PROPERTY CONSERVATION SHALL BE PROVIDED IN ACCORDANCE WITH OPTION 2 – COMPLIANCE ALTERNATIVE-BASED PROVISIONS (FBC-EB SECTION 1105.2).

2.1.1.3 REPAIRS, ALTERATIONS, RESTORATIONS, CHANGES OF OCCUPANCY, AND ADDITIONS SHALL BE GUIDED BY THE RECOMMENDED APPROACHES IN REHABILITATION SET FORTH IN THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION AND GUIDELINES FOR REHABILITATING HISTORIC BUILDINGS (FBC-EB APPENDIX B).

2.2 IN ADDITION TO REQUIREMENTS OF FBC-EB, APPLICABLE REQUIREMENTS IN THE FOLLOWING VOLUMES SHALL APPLY:

2.2.1 FLORIDA BUILDING CODE, BUILDING (FBC-B); INCLUDING 2012 SUPPLEMENT.

2.2.2 FLORIDA BUILDING CODE, ACCESSIBILITY CODE (FBC-A).

2.2.3 FLORIDA BUILDING CODE, PLUMBING (FBC-P).

2.2.4 FLORIDA BUILDING CODE, MECHANICAL (FBC-M).

2.2.5 FLORIDA BUILDING CODE, FUEL GAS (FBC-FG).

2.3 FLORIDA FIRE PREVENTION CODE, 2010 EDITION (FFPC); INCLUDING THE FOLLOWING:

2.3.1 FFPC NFPA 1(FL) – FIRE CODE, FLORIDA EDITION.

2.3.2 FFPC NFPA 101(FL) – LIFE SAFETY CODE, FLORIDA EDITION.

3. USE AND OCCUPANCY CLASSIFICATION(S):

3.1 THE SCOPE OF THIS PROJECT WILL RESULT IN CHANGE OF USE, AS FOLLOWS:

3.1.1 EXISTING: MIXED OCCUPANCIES, NON-SEPARATED (FBC-B SECTION 508; FFPC NFPA 101(FL) SECTION 6.1.14), INCLUDING THE FOLLOWING:

3.1.1.1 EDUCATION, GROUP E (PUBLIC EDUCATION FACILITY, K-12).

3.1.1.2 ASSEMBLY, GROUP A-1 (AUDITORIUM, W/ FIXED SEATING).

3.1.2 NEW: MIXED OCCUPANCIES, NON-SEPARATED (FBC-B SECTION 508; FFPC NFPA 101(FL) SECTION 6.1.14), INCLUDING THE FOLLOWING:

3.1.2.1 BUSINESS, GROUP B (SINGLE TENANT).

3.1.2.2 ASSEMBLY, GROUP A-3 (LECTURE HALL).

3.1.3 INCIDENTAL USE AREAS (FBC-B SECTION 508.2; FFPC NFPA 101(FL) SECTION 6.1.14.1.3):

4. BUILDING HEIGHT AND AREA (FBC-B SECTIONS 503, 504 AND 506):

4.1 MIXED OCCUPANCY, NON-SEPARATED: PER FBC-B SECTION 508.3.2, THE ALLOWABLE BUILDING AREA AND HEIGHT OF THE BUILDING SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR THE OCCUPANCY GROUPS UNDER CONSIDERATION FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN ACCORDANCE WITH FBC-B SECTION 503.1. IN THIS BUILDING, OCCUPANCY GROUP A-3 IS THE MOST RESTRICTIVE USE.

4.2 BASED ON OCCUPANCY GROUP A-3 (MOST RESTRICTIVE) AND TYPE III-B CONSTRUCTION, FULLY SPRINKLERED, MAX ALLOWABLE BUILDING HEIGHT AND AREA ARE AS FOLLOWS:

		MAXIMUM ALLOWABLE		NEW, AS PROVIDED IN DESIGN
		PER FBC-B TABLE 503	W/ ALLOWABLE INCREASE FOR SPRINKLERS	
HEIGHT	# FLOORS	2	3	2
	FEET	55	75	37
FLOOR AREA	1ST FL (SF)	9500	28500*	21,557
	2ND FL (SF)	9500	28500*	15,555

NOTE: "*" DENOTES THAT THE MAX ALLOWABLE FLOOR AREA DOES NOT INCLUDE ALLOWABLE INCREASES FOR FRONTAGE.

5. TYPE OF CONSTRUCTION:

5.1 TYPE OF CONSTRUCTION (FBC-B SECTIONS 602.1.1 AND 602.3): TYPE III-B (EXTERIOR WALLS ARE OF NONCOMBUSTIBLE MATERIALS AND THE INTERIOR BUILDING ELEMENTS ARE OF ANY MATERIAL PERMITTED BY FBC).

5.2 FIRE RESISTANCE RATINGS (FBC-B SECTION 602.1):

5.2.1 STRUCTURAL FRAME: 0 HOURS.

5.2.2 BEARING WALLS:

5.2.2.1 EXTERIOR: 2 HOURS.

5.2.2.2 INTERIOR: 0 HOURS.

5.2.3 NON-BEARING WALLS AND PARTITIONS: 0 HOURS; BUT NOT LESS THAN THE FIRE-RESISTANCE RATING REQUIRED BY OTHER SECTIONS OF GOVERNING BUILDING CODE OR WHERE INDICATED ON THE DRAWINGS.

5.2.4 FLOOR CONSTRUCTION:

5.2.4.1 REQUIRED: 0 HOURS

5.4.4.2 PROVIDED: 0 HOURS, EXCEPT 1-HR, WHERE INDICATED ON DRAWINGS

5.2.5 ROOF CONSTRUCTION:

5.2.5.1 REQUIRED: 0 HOURS

5.2.5.2 PROVIDED: 0 HOURS

6. FIRE AND SMOKE PROTECTION FEATURES:

6.1 FIRE BARRIERS: SHALL COMPLY WITH FBC-B SECTION 707.

6.1.1 SEPARATION OF INCIDENTAL USE AREAS (FBC-B SECTION 508.2.5):

6.1.1.1 WHERE GOVERNING BUILDING CODE PERMITS AN AUTOMATIC FIRE-EXTINGUISHING SYSTEM WITHOUT A FIRE BARRIER, THE INCIDENTAL USE AREA SHALL BE SEPARATED FROM THE REMAINDER OF THE BUILDING BY CONSTRUCTION CAPABLE OF RESISTING THE PASSAGE OF SMOKE.

6.2 VERTICAL OPENINGS (FFPC NFPA 101(FL) SECTION 8.6):

6.2.1 EVERY FLOOR THAT SEPARATES STORIES IN THE BUILDING SHALL MEET ONE OF THE FOLLOWING CRITERIA:

6.2.1.1 FLOOR SMOKE BARRIERS: FLOOR SHALL BE CONSTRUCTED AS A SMOKE BARRIER TO FORM A BASIC DEGREE OF COMPARTMENTATION (FFPC NFPA 101(FL) SECTION 8.5).

6.2.1.2 FLOOR OPENINGS:

6.2.1.2.1 SHAFTS: SHALL COMPLY WITH REQUIREMENTS OF FBC-B SECTION 708, AND FFPC NFPA 101(FL) SECTION 8.6.4

6.2.1.2.2 REQUIRED: 1 HOUR

6.2.1.2.4 PROVIDED: 1 HOUR

6.2.1.2.4 CONVENIENCE OPENINGS: SHALL COMPLY WITH REQUIREMENTS OF FFPC NFPA 101(FL) SECTION 8.6.8.

7 MEANS OF EGRESS COMPONENTS:

7.1 DOORS (FBC-B SECTION 1008):

7.1.1 MINIMUM SIZE: CLEAR WIDTH OF NOT LESS THAN 32 INCHES X HEIGHT NOT LESS THAN 80 INCHES.

7.1.2 PROJECTIONS INTO CLEAR OPENING WIDTH: NO PROJECTIONS LOWER THAN 34 INCHES AFF. PROJECTIONS BETWEEN 34 INCHES (864 MM) AND 80 INCHES AFF SHALL NOT EXCEED 4 INCHES.

7.1.3 SWING: DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL WHERE SERVING AN OCCUPANT LOAD OF 50 OR MORE PERSONS OR A GROUP H OCCUPANCY.

7.1.4 OPENING FORCE: PER FBC-B SECTION 1008.1.3.

7.1.5 PANIC AND FIRE EXIT HARDWARE: DOORS SERVING A GROUP H OCCUPANCY AND DOORS SERVING ROOMS OR SPACES WITH AN OCCUPANT LOAD OF 50 OR MORE IN A GROUP A OCCUPANCY SHALL NOT BE PROVIDED WITH A LATCH OR LOCK UNLESS IT IS PANIC HARDWARE OR FIRE EXIT HARDWARE.

7.2 STAIRWAYS (FBC-B SECTION 1009):

7.2.1 MINIMUM WIDTH: PER FBC-B SECTION 1005.1, BUT NOT LESS THAN 44 INCHES (OR 36 INCHES WHERE SERVING AN OCCUPANT LOAD OF LESS THAN 50. PROVIDED: 48"

7.2.2 MINIMUM HEADROOM: 80 INCHES.

7.2.3 RISER HEIGHT: 7 INCHES MAX, AND 4 INCHES MIN.

7.2.4 TREAD DEPTH: 11 INCHES MIN.

7.2.5 STAIRWAY LANDINGS:

7.2.5.1 WIDTH OF LANDING SHALL BE NOT LESS THAN THE WIDTH OF STAIRWAY SERVED.

7.2.5.2 EVERY LANDING SHALL HAVE A MINIMUM DIMENSION MEASURED IN THE DIRECTION OF TRAVEL EQUAL TO THE WIDTH OF THE STAIRWAY. SUCH DIMENSION NEED NOT EXCEED 48 INCHES WHERE THE STAIRWAY HAS A STRAIGHT RUN.

7.2.5.3 DOORS OPENING ONTO A LANDING SHALL NOT REDUCE THE LANDING TO LESS THAN ONE-HALF THE REQUIRED WIDTH.

7.2.5.4 WHEN FULLY OPEN, THE DOOR SHALL NOT PROJECT MORE THAN 7 INCHES INTO A LANDING.

7.2.6 ENCLOSURES UNDER STAIRWAYS: THE WALLS AND SOFFITS WITHIN ENCLOSED USABLE SPACES UNDER ENCLOSED AND UNENCLOSED STAIRWAYS SHALL BE PROTECTED BY 1-HR FIRE-RATED CONSTRUCTION OR THE FIRE-RATING OF THE STAIRWAY ENCLOSURE, WHICHEVER IS GREATER.

7.2.6.1 ACCESS TO THE ENCLOSED SPACE SHALL NOT BE DIRECTLY FROM WITHIN THE STAIR ENCLOSURE.

7.2.6.2 THERE SHALL BE NO ENCLOSED USABLE SPACE UNDER EXTERIOR EXIT STAIRWAYS UNLESS THE SPACE IS COMPLETELY ENCLOSED IN 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION. THE OPEN SPACE UNDER EXTERIOR STAIRWAYS SHALL NOT BE USED FOR ANY PURPOSE.

7.2.7 MAX VERTICAL RISE: A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE GREATER THAN 12 FEET BETWEEN FLOOR LEVELS OR LANDINGS.

7.2.7.1 MAX VERTICAL RISE PROVIDED: 11'-9" (STAIR 115)

7.3 RAMPS (FBC-B SECTION 1010):

7.3.1 SLOPE: RUNNING SLOPE NOT STEEPER THAN ONE UNIT VERTICAL IN 12 UNITS HORIZONTAL (8.333-PERCENT)

7.3.2 VERTICAL RISE: THE MAX RISE FOR ANY RAMP RUN SHALL NOT EXCEED 30 INCHES.

7.3.3 DIMENSIONS:

7.3.3.1 MINIMUM WIDTH: NOT LESS THAN WIDTH REQUIRED FOR CORRIDORS PER FBC-B SECTION 1018.2.

7.3.3.2 MINIMUM HEADROOM: NOT LESS THAN 80 INCHES. PROVIDED: 10 FEET

7.3.3.3 RESTRICTIONS: MEANS OF EGRESS RAMPS SHALL NOT REDUCE IN WIDTH IN THE DIRECTION OF EGRESS TRAVEL. PROJECTIONS INTO THE REQUIRED RAMP AND LANDING WIDTH ARE PROHIBITED. DOORS OPENING ONTO A LANDING SHALL NOT REDUCE THE CLEAR WIDTH TO LESS THAN 42 INCHES.

7.3.4 RAMP LANDINGS:

7.3.4.1 RAMPS SHALL HAVE LANDINGS AT THE BOTTOM AND TOP OF EACH RAMP, POINTS OF TURNING, ENTRANCE, EXITS AND AT DOORS AND IN ACCORDANCE WITH THE FBC-A.

7.3.4.2 LANDINGS SHALL COMPLY WITH FBC-B SECTIONS 1010.6.1 THROUGH 1010.6.5.

7.4 CORRIDORS (FBC-B SECTION 1018):

7.4.1 CONSTRUCTION:

7.4.1.1 FIRE RESISTANCE RATING REQUIRED: 0 HOURS (PER FBC-B TABLE 1018.1, FULLY SPRINKLERED BUILDINGS OF OCCUPANCY GROUPS A AND B).

7.4.2 MINIMUM WIDTH PER FBC 1018.2: REQUIRED: 36" (WHEN OCCUPANT LOAD FOR AREA SERVED IS LESS THAN 50). PROVIDED: 36"

7.4.3 MAXIMUM DEAD END: 50 FT (FBC-B SECTION 1018.4, EXCEPTION 2).

7.5 EXITS (FBC-B SECTION 1020):

7.5.1 MINIMUM NUMBER OF EXITS FROM STORIES: 2 (PER FBC-B TABLE 1021.1, BASED ON THE OCCUPANT LOAD OF LESS THAN 500 PER STORY).

7.5.2 MAXIMUM EXIT ACCESS TRAVEL DISTANCE (FBC-B TABLE 1016.1):

7.5.2.1 OCCUPANCY GROUP A, FULLY SPRINKLERED: 250 FT.

7.5.2.2 OCCUPANCY GROUP B, FULLY SPRINKLERED: 300 FT.

7.5.3 MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE PER FBC 1028.8:

7.5.3.1 OCCUPANCY GROUP A-3 (FBC-B SECTION 1028.8):

7.5.3.1.1 WHERE SERVING MORE THAN 50 OCCUPANTS: FIRST 20 FT FROM ANY POINT.

7.5.3.1.2 WHERE SERVING NOT MORE THAN 50 OCCUPANTS: FIRST 75 FT FROM ANY POINT. PRODIVDED 47'-1"

7.5.3.1.3 WHERE PATH IS THROUGH ADJACENT ROW: WHERE ONE OF THE TWO PATHS OF TRAVEL IS ACROSS THE AISLE THROUGH A ROW OF SEATS TO ANOTHER AISLE, THERE SHALL BE NOT MORE THAN 24 SEATS BETWEEN THE TWO AISLES, AND THE MIN CLEAR WIDTH BETWEEN ROWS FOR THE ROW BETWEEN THE TWO AISLES SHALL BE 12 INCHES PLUS 0.6 INCH FOR EACH ADDITIONAL SEAT ABOVE SEVEN IN THE ROW BETWEEN AISLES.

7.5.3.2 OCCUPANCY GROUP B, FULLY SPRINKLERED: 100 FT (FBC-B SECTION 1014.3, EXCEPTION 1; FBC-B SECTION 1030.4)

7.6 ADDITIONAL MEANS OF EGRESS REQUIREMENTS FOR ASSEMBLY OCCUPANCY:

7.6.1 ASSEMBLY MAIN EXIT: EVERY ASSEMBLY OCCUPANCY SHALL BE PROVIDED WITH A MAIN ENTRANCE/EXIT.

7.6.1.1 THE MIN AGGREGATE WIDTH OF THE MAIN ENTRANCE FOR GROUP A OCCUPANCY SHALL BE SUFFICIENT TO ACCOMMODATE 50 PERCENT OF THE OCCUPANT LOAD AND SHALL BE AT THE LEVEL OF EXIT DISCHARGE OR SHALL CONNECT TO A STAIRWAY OR RAMP LEADING TO A STREET.

7.6.1.2 EACH LEVEL OF A GROUP A OCCUPANCY SHALL HAVE ACCESS TO A MAIN EXIT AND SUCH ACCESS SHALL HAVE SUFFICIENT CAPACITY TO ACCOMMODATE 50 PERCENT OF THE OCCUPANT LOAD OF SUCH LEVELS.

7.6.1.3 WHERE THE MAIN EXIT FROM AN ASSEMBLY OCCUPANCY IS THROUGH A LOBBY OR FOYER, THE AGGREGATE CAPACITY OF ALL EXITS FROM THE LOBBY OR FOYER SHALL BE PERMITTED TO PROVIDE THE REQUIRED CAPACITY OF THE MAIN EXIT REGARDLESS OF WHETHER ALL SUCH EXITS SERVE AS ENTRANCES TO THE BUILDING.

7.6.2 ASSEMBLY OTHER EXITS: EACH LEVEL OF AN ASSEMBLY OCCUPANCY SHALL HAVE ACCESS TO A MAIN EXIT AND SHALL BE PROVIDED WITH ADDITIONAL EXITS OF SUFFICIENT WIDTH TO ACCOMMODATE ONE-HALF OF THE TOTAL OCCUPANT LOAD SERVED BY THAT LEVEL.

7.6.2.1 SUCH ADDITIONAL EXITS SHALL BE LOCATED AS FAR FROM THE MAIN ENTRANCE/EXIT AS PRACTICABLE.

7.6.2.2 SUCH EXITS SHALL BE ACCESSIBLE FROM A CROSS AISLE OR A SIDE AISLE.

7.6.3 WIDTH OF MEANS OF EGRESS:

7.6.3.1 MINIMUM WIDTH: CLEAR WIDTH OF THE MEANS OF EGRESS SHALL PROVIDE SUFFICIENT CAPACITY IN ACCORDANCE WITH FBC-B SECTION 1028.6.

7.6.4 TRAVEL DISTANCE (SPRINKLERED BUILDING): EXITS AND AISLES SHALL BE SO LOCATED THAT THE TRAVEL DISTANCE TO AN EXIT DOOR SHALL NOT BE GREATER THAN 250 FEET.

7.6.4.1 WHERE AISLES ARE PROVIDED FOR SEATING, THE DISTANCE SHALL BE MEASURED ALONG THE AISLES AND AISLE ACCESSWAY WITHOUT TRAVEL OVER OR ON THE SEATS.

7.6.5 AISLES:

7.6.5.1 AISLE ACCESSWAYS FOR TABLES AND SEATING SHALL COMPLY WITH FBC-B SECTION 1017.4.

7.6.5.2 MINIMUM AISLE WIDTH (FBC-B SECTION 1028.9):

7.6.5.2.1 FOR AISLE STAIRS HAVING SEATING ON EACH SIDE: 48 INCHES; OR 36 INCHES WHERE THE AISLE SERVES LESS THAN 50 SEATS.

7.6.5.2.2 FOR AISLE STAIRS HAVING SEATING ON ONLY ONE SIDE: 36 INCHES.

7.6.5.2.3 WHERE THE AISLE IS SUBDIVIDED BY A HANDRAIL: 23 INCHES BETWEEN AN AISLE STAIR HANDRAIL OR GUIARD AND SEATING.

7.6.5.2.4 FOR LEVEL OR RAMPED AISLES HAVING SEATING ON BOTH SIDES: 42 INCHES; OR 36 INCHES WHERE THE AISLE SERVES LESS THAT 50 SEATS; OR 30 INCHES WHERE THE AISLE DOES NOT SERVE MORE THAN 14 SEATS.

7.6.5.2.5 FOR LEVEL OR RAMPED AISLES HAVING SEATING ON ONLY ONE SIDE: 36 INCHES; OR 30 INCHES WHERE THE AISLE DOES NOT SERVE MORE THAN 14 SEATS; OR 23 INCHES BETWEEN AN AISLE STAIR HANDRAIL AND SEATING WHERE AN AISLE DOES NOT SERVE MORE THAN FIVE ROWS ON ONE SIDE.

7.6.5.3 AISLE TERMINATION (FBC-B SECTION 1028.9.5): EACH END OF AN AISLE SHALL TERMINATE AT CROSS AISLE, FOYER, DOORWAY, VOMITORY, OR CONCOURSE HAVING ACCESS TO AN EXIT.

7.6.5.3.1 DEAD-END AISLES: SHALL NOT BE GREATER THAN 20 FEET IN LENGTH, EXCEPT WHERE LONGER DEAD END IS PERMITTED IN ACCORDAINCE WITH FBC-B SECTION 1028.9.5.

7.6.5.4 AISLE ACCESSWAYS: THE AISLE ACCESSWAY BETWEEN ROWS OF SEATING SHALL HAVE A CLEAR WIDTH OF NOT LESS THAN 12 INCHES, AND THE MINIMUM WIDTH SHALL BE INCREASED IN ACCORDANCE WITH FBC-B SECTION 1028.10.2.

8. INTERIOR FINISHES (FBC-B CHAPTER 8; FFPC NFPA 101-FL SECTIONS 10.2, 13.3.3, AND 38.3.3):

8.1 WALL AND CEILING FINISHES, SPRINKLERED BUILDING: INTERIOR WALL AND CEILING FINISH SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN THAT SPECIFIED IN FBC-B TABLE 803.9 FOR THE GROUP AND LOCATION DESIGNATED; THE MOST STRINGENT REQUIRMENTS OF OCCUPANCY GROUPS A AND B ARE AS FOLLOWS:

8.1.1 EXIT ENCLOSURES AND EXIT PASSAGEWAYS: CLASS B.

8.1.2 CORRIDORS: CLASS B.

8.1.3 ROOMS AND ENCLOSED SPACES: CLASS C.

8.1.4 REFER TO LIFE SAFETY DRAWINGS FOR FINISHES PROVIDED.

8.2 FLOOR FINISHES, SPRINKLERED BUILDING:

8.2.1 EXIT ENCLOSURES, EXIT PASSAGEWAYS, CORRIDORS AND ROOMS OR SPACES NOT SEPARATED FROM CORRIDORS BY FULL-HEIGHT PARTITIONS EXTENDING FROM THE FLOOR TO THE UNDERSIDE OF THE CEILING: FLOOR FINISH SHALL WITHSTAND A MINIMUM CRITICAL RADIANT FLUX NOT LESS THAN CLASS II, EXCEPT AS FOLLOWS:

8.2.1.1 IN A FULLY SPRINKLERED BUILDING, INTERIOR FLOOR FINISH AND FLOOR COVERING MATERIALS COMPLYING WITH THE DOC FF-1 "PILL TEST" (CPSC 16 CFR, PART 1630) ARE PERMITTED IN ANY AREA WHERE CLASS II MATERIALS ARE REQUIRED (FBC-B SECTION 804.4.1 EXCEPTION; SEE ALSO NFPA 101(FL) SECTION 10.2.8.2).

8.2.1.1 TRADITIONALTYPE FLOOR FINISHES AND COVERINGS (E.G., WOOD, VINYL, LINOLEUM, TERRAZZO, AND RESILIENT FLOOR COVERING MATERIALS THAT ARE NOT COMPRISED OF FIBERS) ARE NOT REQUIRED TO COMPLY WITH REQUIREMENTS OF FBC-B SECTION 804 (FBC-B SECTION 804.1 EXCEPTION).

9. FIRE PROTECTION SYSTEMS:

9.1 AUTOMATIC SPRINKLER SYSTEM (FBC-B SECTION 903.2):

9.1.1 ALLOWABLE FLOOR AREA (FBC-B SECTION 506): WHERE THE BUILDING IS FULLY SPRINKLERED, THE MAXIMUM ALLOWABLE FLOOR AREA IS INCREASED BY 200 PERCENT.

9.2 STANDPIPE SYSTEM (FBC-B SECTION 905):

9.3 PORTABLE FIRE EXTINGUISHERS (FBC-B SECTION 906): SHALL BE PROVIDED IN OCCUPANCIES AND LOCATIONS AS REQUIRED BY THE FFPC.

9.3.1 WHERE REQUIRED: IN GROUP A AND B OCCUPANCIES EQUIPPED THROUGHOUT WITH QUICK RESPONSE SPRINKLERS, PORTABLE FIRE EXTINGUISHERS SHALL BE REQUIRED IN THE FOLLOWING LOCATIONS:

9.3.1.1 WITHIN 30 FEET OF COMMERCIAL COOKING EQUIPMENT (NOT APPLICABLE IN THIS BUILDING)

9.3.1.2 IN AREAS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED, USED OR DISPENSED.

9.3.1.3 ON EACH FLOOR OF STRUCTURES UNDER CONSTRUCTION, IN ACCORDANCE WITH THE FFPC.

9.3.1.4 AS REQUIRED BY THE FFPC.

9.3.1.5 SPECIAL-HAZARD AREAS, INCLUDING BUT NOT LIMITED TO COMPUTER ROOMS AND GENERATOR ROOMS, WHERE REQUIRED BY THE FIRE CODE OFFICIAL.

9.3.2 PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION AND NFPA 10.

9.3.3 SIZE AND DISTRIBUTION OF PORTABLE FIRE EXTINGUISHERS SHALL BE IN ACCORDANCE WITH FBC-B SECTIONS 906.3.1 THROUGH 906.3.4.

10. MEANS OF EGRESS (FBC-B CHAPTER 10):

10.1 CEILING HEIGHT: THE MEANS OF EGRESS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET 6 INCHES, EXCEPT AS PERMITTED IN FBC-B SECTION 1003.2.

10.2 OCCUPANT LOAD:

10.2.1 FLOOR AREA PER OCCUPANT (FBC-B TABLE 1004.1.1):

10.2.1.1 ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM: 300 SF/OCC, GROSS

10.2.1.2 ASSEMBLY AREAS HAVING FIXED SEATS AND AISLES: NUMBER OF FIXED SEATS

10.2.1.3 ASSEMBLY AREAS IN WHICH FIXED SEATING IS NOT INSTALLED (UNCONCENTRATED - TABLES AND CHAIRS): 15 SF/OCC, NET.

10.2.1.4 BUSINESS AREAS: 100 SF/OCC, GROSS

10.2.1.5 EXERCISE ROOMS WITH EQUIPMENT: 50 SF/OCC, GROSS

10.2.1.6 STAGES AND PLATFORMS: 15 SF/OCC, NET

10.2.2 OUTDOOR AREAS: YARDS, PATIOS, COURTS AND SIMILAR OUTDOOR AREAS ACCESSIBLE TO AND USABLE BY THE BUILDING OCCUPANTS SHALL BE PROVIDED WITH MEANS OF EGRESS AS REQUIRED BY FBC-B CHAPTER 10.

10.2.2.1 THE OCCUPANT LOAD OF SUCH OUTDOOR AREAS SHALL BE ASSIGNED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE ANTICIPATED USE.

10.2.2.2 WHERE OUTDOOR AREAS ARE TO BE USED BY PERSONS IN ADDITION TO THE OCCUPANTS OF THE BUILDING, AND THE PATH OF EGRESS TRAVEL FROM THE OUTDOOR AREAS PASSES THROUGH THE BUILDING, MEANS OF EGRESS REQUIREMENTS FOR THE BUILDING SHALL BE BASED ON THE SUM OF THE OCCUPANT LOADS OF THE BUILDING PLUS THE OUTDOOR AREAS.

10.3 ACCESSIBLE MEANS OF EGRESS: SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF FBC-A.

PLUMBING FIXTURE COUNT

PER FBC-PLUMBING TABLE 403.1:
BUSINESS OCCUPANY = **341**
ASSEMBLY OCCUPANCY = **362**
TOTAL BUILDING OCCUPANCY = **703**

1

CLASSIFICATION: BUSINESS		CLASSIFICATION: ASSEMBLY	
MEN = 171	WOMEN = 171	MEN = 181	WOMEN = 181
WC 1 PER 25 FOR THE FIRST 50 & 1 PER 50 FOR THE REMAINDER EXCEEDING 50		WC 1 PER 125	WC 1 PER 65
LAV 1 PER 40 FOR THE FIRST 80 & 1 PER 80 FOR THE REMAINDER EXCEEDING 80		LAV 1 PER 200	
DF 1 PER 100		DF 1 PER 500	
SERV SINK 1		SERV SINK 1	

FIXTURE TOTALS		
	REQUIRED	PROVIDED
MEN:		
WC	7	5
UR	0	2
LAV	5	6
WOMEN:		
WC	8	8
LAV	6	7
DRINKING FOUNTAIN	5	8
SERV SINK	2	4

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

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Bender & Associates ARCHITECTS p.a.

Project No : 1305

BUILDING CODE CRITERIA

Date: 08/08/14

PERMIT SET

G.1

OF

PORTABLE FIRE EXTINGUISHER REQUIREMENTS

CLASSIFICATION OF HAZARDS	AREA	REQUIRED	PROVIDED	UL RATING
LIGHT HAZARD, CLASS A (1 PER 3,000 SF)				
FIRST FLOOR	21,557	8	9	3-A:40-B:C
SECOND FLOOR	15,555	6	8	3-A:40-B:C
MAIXMUM TRAVEL DISTANCE TO EXTINGUISHER		75'	65'-9"	

EGRESS CRITERIA

	FBC-B CODE REFERENCE	ALLOWED	AS DESIGNED
OCCUPANCY CLASSIFICATION: A (ASSEMBLY)			
MAX. EXIT ACCESS TRAVEL DIST. (SPRINKLERED)	1028.7	250	47'-1"
*COMMON PATH OF TRAVEL	1028.8	20/75	47'-1"
MAX DEAD END CORRIDOR	1018.4	20	0
OCCUPANCY CLASSIFICATION: B (BUSINESS)			
MAX. EXIT ACCESS TRAVEL DIST. (SPRINKLERED)	1016.1	300	155'-0"
COMMON PATH OF TRAVEL	1030.2	100	82'-1"
MAX DEAD END CORRIDOR	1018.4	50	39'-8"

*NOTE:
COMMON PATH IN ASSEMBLY AREAS SERVING LESS THAN 50 OCCUPANTS CAN NOT EXCEED 75 FT MAX., OTHERWISE 20 FT MAX. PER FBC-B 1028.8

CAPACITY OF MEANS OF EGRESS

OCCUPANCY CLASSIFICATION: GROUP B (BUSINESS) & A-3 (ASSEMBLY) FBC-B TABLE 1005.1 FBC-B TABLE 1018.1
FULLY SPRINKLERED

	OCC. LOAD	EGRESS COMPONENT	REQUIRED	PROVIDED
1st FLOOR (BUSINESS)	185+ (1/6* 481)= 262	MIN. NUMBER OF EXITS	2	9
		*CORRIDOR	44" MIN.	58"
		DOORS		
		0.2 CAPACITY FACTOR 262 X 0.2 = 52.4IN. CLEAR (1)	(2)32 IN CLR DOORS PER FBC 1005.1	
1st FLOOR (ASSEMBLY)	279+18 +65 = 362	MIN. NUMBER OF EXITS	2	3
		*CORRIDOR	36" MIN.	36" (a)
		DOORS		
		0.2 CAPACITY FACTOR 362X 0.2 = 72.4IN. CLEAR (1)	(4)32 IN CLR DOORS PER FBC 1005.1	
2ND FLOOR	156	MIN. NUMBER OF EXITS	2	3
		*CORRIDOR	44" MIN.	60"
		DOORS		
		0.2 CAPACITY FACTOR 156 X 0.2 = 31.2IN. CLEAR	(2)32 IN CLR DOORS PER FBC 1005.1	(3) 32 IN CLR DOORS
		STAIRS		
		0.30 CAPACITY FACTOR (156 X 0.3) = 46.8 IN CLEAR	(3) 18.6 IN MIN. CLR PER FBC 1005.1	(3) 48 IN MIN. CLR

(a):
1.CORRIDORS SERVING 50 OR MORE OCCUPANTS MUST BE A MIN. 44 IN WIDE. WHEN OCCUPANT LOAD IS LESS THAN 50 THAN THE MINIMUM CORRIDOR WIDTH = 36" PER FBC - B 1018.2

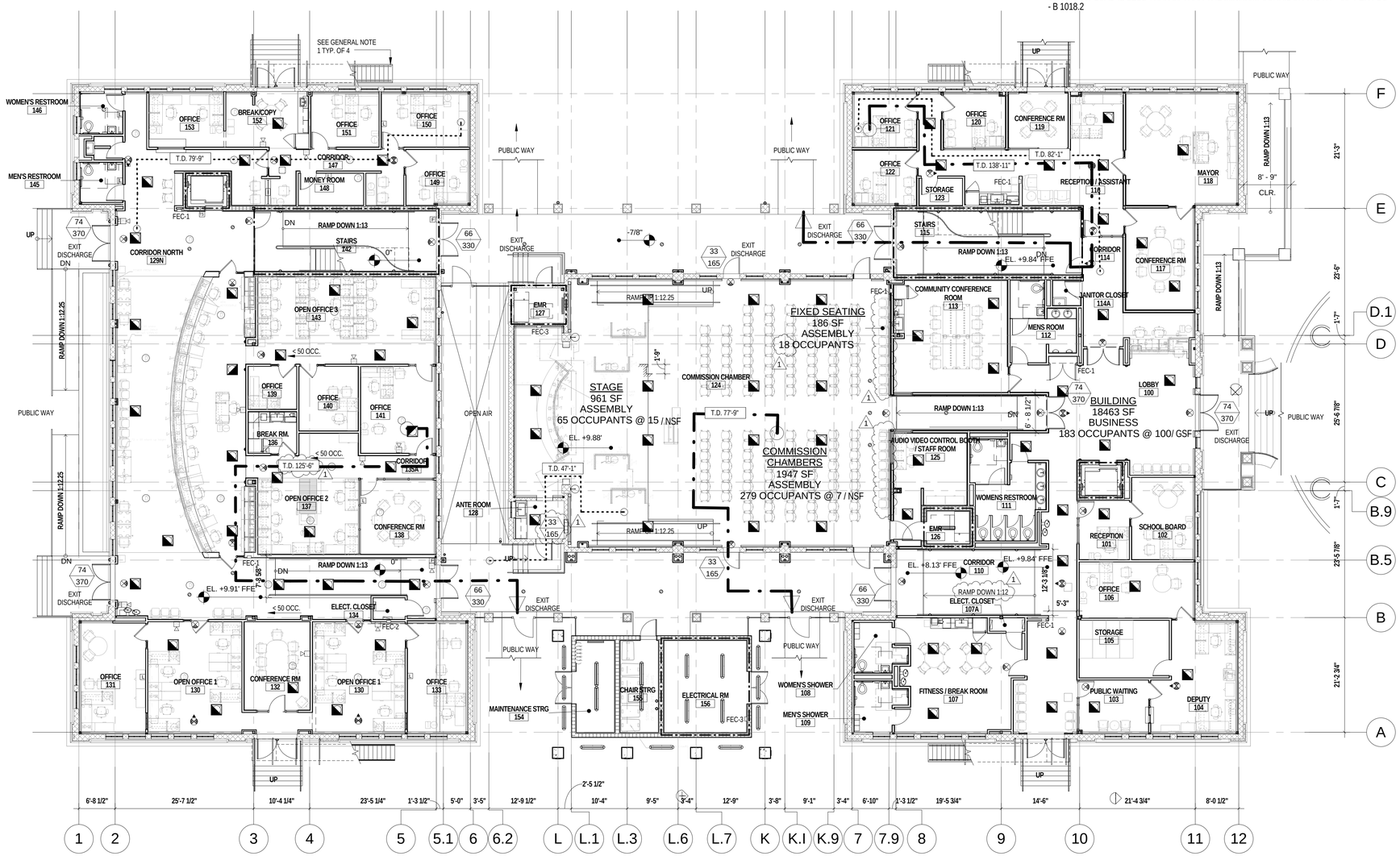
OCCUPANT LOAD

FLOOR LEVEL	NAME	CLASSIFICATION TYPE	AREA	OCCUPANT	OCCUPANT FACTOR	OCCUPANT LOAD
1ST FLOOR	COMMISSION CHAMBERS	ASSEMBLY	1947 SF	0 (1)	7	279 (1)
1ST FLOOR	FIXED SEATING	ASSEMBLY	186 SF	18	0	18
1ST FLOOR	STAGE	ASSEMBLY	961 SF	0	15	65
ASSEMBLY			3095 SF			362 (1)
1ST FLOOR	BUILDING	BUSINESS	18463 SF	0	100	185
BUSINESS			18463 SF			185
1ST FLOOR			21557 SF			547 (1)
2ND FLOOR	BUILDING	BUSINESS	15555 SF	0	100	156
BUSINESS			15555 SF			156
2ND FLOOR			15555 SF			156
Grand total			37113 SF			703 (1)

INTERIOR WALL & CEILING FINISHES

FBC TABLE 803.5

GROUP A-3 SPRINKLERED (MORE RESTRICTIVE THAN BUSINESS)	ALLOWED	PROVIDED
EXIT PASSAGEWAYS	B	B
EXIT ACCESS CORRIDORS	B	B
ROOMS & ENCLOSED SPACES	C	B



1 FIRST FLOOR LIFE SAFETY PLAN
LS-1 3/32" = 1'-0"

SCALE: 3/32" = 1'-0"
0 10 20 30 40

GENERAL NOTES:

6GENERAL NOTES

1. EXISTING HISTORIC STEEL FIRE ESCAPES TO BE REPLICATED AS PART OF THE HISTORICAL RESTORATION WORK, BUT NOT TO BE USED AS A COMPONENT OF THE MEANS OF EGRESS.

FIRE PROTECTION DURING BUILDING DEMOLITION, ALTERATION AND CONSTRUCTION OPERATIONS:

2. PORTABLE FIRE EXTINGUISHERS: STRUCTURES UNDER DEMOLITION, ALTERATION AND CONSTRUCTION SHALL BE PROVIDED WITH APPROVED PORTABLE FIRE EXTINGUISHERS IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF FBC AND FFPC, INCLUDING BUT NOT LIMITED TO FBC-B SECTION 906 AND 3309, FBC-EB SECTION 1404, NFPA 1(FL) SECTION 16.3, AND NFPA 241-2004 CHAPTERS 7, 8, 9 AND 10.

3. SUITABILITY, DISTRIBUTION AND MAINTENANCE OF PORTABLE FIRE EXTINGUISHERS SHALL BE IN ACCORDANCE WITH NFPA 10-2007. AT LEAST ONE 10-LB MULTI-PURPOSE UL-LISTED DRY CHEMICAL FIRE EXTINGUISHER WITH MINIMUM RATING OF 4-A:40-B:C SHALL BE PROVIDED AND MAINTAINED IN PLAIN SIGHT WITHIN AN ACCESSIBLE LOCATION AT EACH STORAGE SHED AND CONSTRUCTION TRAILER, AND ON EACH FLOOR WITHIN EACH RAMP AND STAIRWAY.

4. FLAMMABLE AND COMBUSTIBLE LIQUIDS: STORAGE, HANDLING OR USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS SHALL BE RESTRICTED TO AREAS OUTSIDE OF THE STRUCTURE(S), AT LEAST 25 FT FROM ENTRANCES, OUTDOOR AIR INTAKES AND OPERABLE WINDOWS, AND IN STRICT COMPLIANCE WITH NFPA 1(FL) SECTION 16.2.3.1 AND CHAPTER 66; NFPA 30-2008, AND LEED INDOOR AIR QUALITY REQUIREMENTS.

5. ADDITIONAL PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED WHERE SPECIAL HAZARDS EXIST (E.G., AREAS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED). SPARE FIRE EXTINGUISHERS SHALL BE PROVIDED ON SITE FOR IMMEDIATE REPLACEMENT OF DISCHARGED FIRE EXTINGUISHERS. FREE ACCESS TO PORTABLE FIRE EXTINGUISHERS SHALL BE MAINTAINED AT ALL TIMES.

6. STORAGE OF CLASS I AND CLASS II LIQUIDS SHALL NOT EXCEED 60 GALLONS WITHIN 50 FEET OF THE STRUCTURE. STORAGE AREAS SHALL BE KEPT FREE OF WEEDS, DEBRIS AND COMBUSTIBLE MATERIALS NOT NECESSARY TO THE STORAGE. OPEN FLAMES AND SMOKING SHALL NOT BE PERMITTED IN FLAMMABLE AND COMBUSTIBLE STORAGE LIQUIDS STORAGE AREAS. SUCH STORAGE AREAS SHALL BE APPROPRIATELY POSTED AS "NO SMOKING" AREAS. CLASS I LIQUIDS SHALL BE DISPENSED ONLY WHERE THERE ARE NO OPEN FLAMES OR OTHER SOURCES OF IGNITION WITHIN THE POSSIBLE PATH OF VAPOR TRAVEL.

LIFE SAFETY LEGEND

- 1 HR RATED WALL / PARTITION
- XX / XX — CLR EGRESS WIDTH (INCHES) / EGRESS CAPACITY (# OF PERSONS)
- COMMON PATH
- FURTHEST POINT FROM EXIT — T.D. 200'-4" — MAXIMUM EXIT ACCESS TRAVEL DISTANCE — PATH OF EGRESS TRAVEL — EXIT DISCHARGE
- H — FIRE ALARM HORN / VISUAL ALARM
- P — FIRE PULL STATION
- S — SPEAKER (PUBLIC ANNOUNCEMENT)
- SL — STROBE LIGHT
- D — SMOKE DETECTOR
- H — HEAT DETECTOR
- EMERGENCY EXIT
- LIGHTING FIXTURE ON EMERGENCY CIRCUIT
- FIRE SPRINKLER HEAD

FIRE EXTINGUISHER CABINETS

- FEC-1 — RECESSED
- FEC-2 — SEMI-RECESSED
- FEC-3 — SURFACE MOUNTED

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

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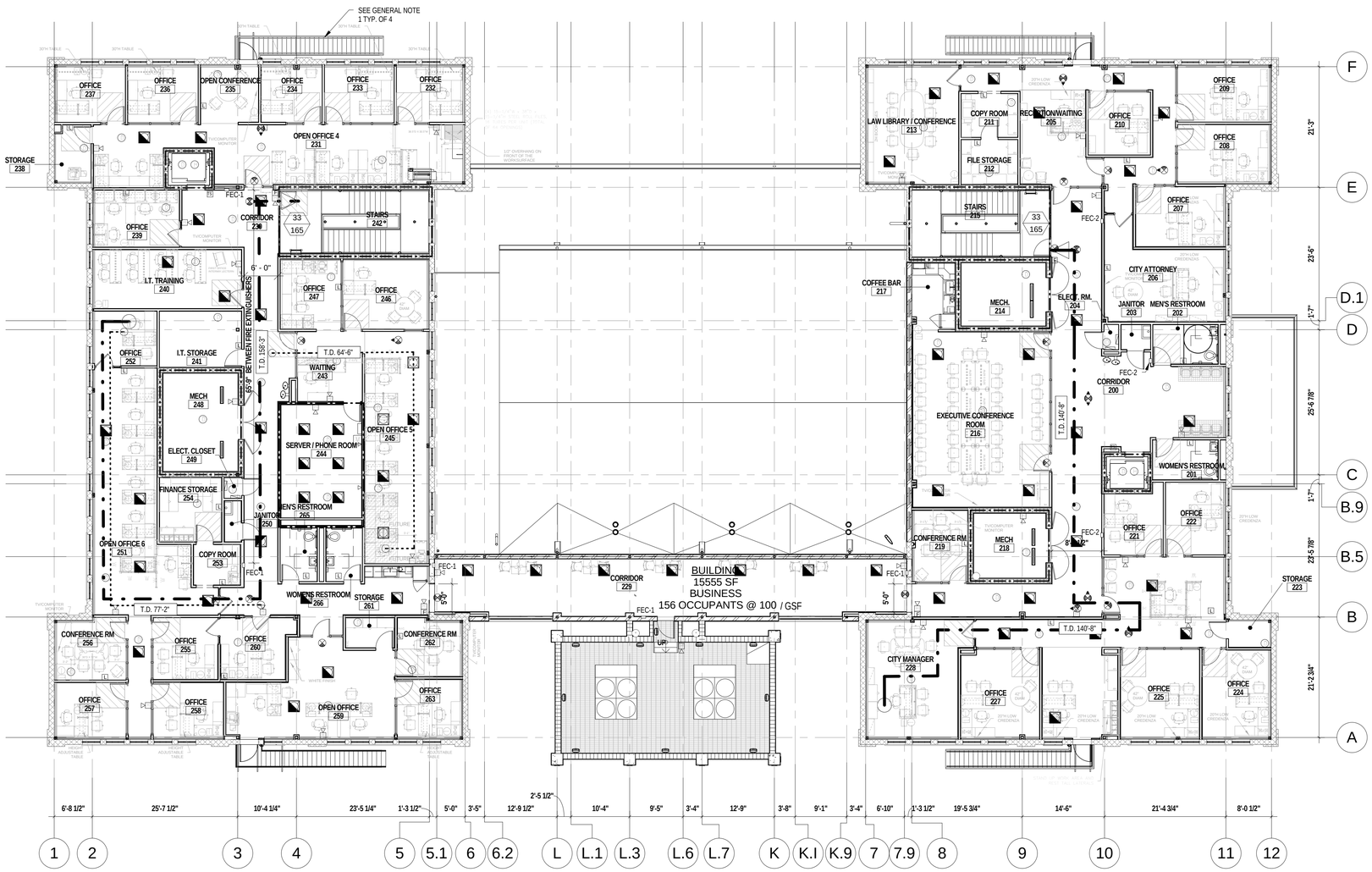
Project No : 1305
FIRST FLOOR LIFE SAFETY PLAN
Date: 08/08/14

LS-1
OF

OCCUPANT LOAD

FLOOR LEVEL	NAME	CLASSIFICATION TYPE	AREA	OCCUPANT	OCCUPANT FACTOR	OCCUPANT LOAD
1ST FLOOR	COMMISSION CHAMBERS	ASSEMBLY	1947 SF	0	7	279
1ST FLOOR	FIXED SEATING	ASSEMBLY	186 SF	18	0	18
1ST FLOOR	STAGE	ASSEMBLY	961 SF	0	15	65
ASSEMBLY			3095 SF			362
1ST FLOOR	BUILDING	BUSINESS	18463 SF	0	100	185
BUSINESS			18463 SF			185
1ST FLOOR			21557 SF			547
2ND FLOOR	BUILDING	BUSINESS	15555 SF	0	100	156
BUSINESS			15555 SF			156
2ND FLOOR			15555 SF			156
Grand total			37113 SF			703



1 SECOND FLOOR LIFE SAFETY PLAN

LS-2 3/32" = 1'-0"

SCALE: 3/32" = 1'-0"

0 10 20 30 40

GENERAL NOTES:

6GENERAL NOTES

1. EXISTING HISTORIC STEEL FIRE ESCAPES TO BE REPLICATED AS PART OF THE HISTORICAL RESTORATION WORK, BUT NOT TO BE USED AS A COMPONENT OF THE MEANS OF EGRESS.

FIRE PROTECTION DURING BUILDING DEMOLITION, ALTERATION AND CONSTRUCTION OPERATIONS:

2. PORTABLE FIRE EXTINGUISHERS: STRUCTURES UNDER DEMOLITION, ALTERATION AND CONSTRUCTION SHALL BE PROVIDED WITH APPROVED PORTABLE FIRE EXTINGUISHERS IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF FBC AND FFPC, INCLUDING BUT NOT LIMITED TO FBC-B SECTION 906 AND 3309, FBC-EB SECTION 1404, NFPA 1(FL) SECTION 16.3, AND NFPA 241-2004 CHAPTERS 7, 8, 9 AND 10.

3. SUITABILITY, DISTRIBUTION AND MAINTENANCE OF PORTABLE FIRE EXTINGUISHERS SHALL BE IN ACCORDANCE WITH NFPA 10-2007. AT LEAST ONE 10-LB MULTI-PURPOSE UL-LISTED DRY CHEMICAL FIRE EXTINGUISHER WITH MINIMUM RATING OF 4-A:40-B:C SHALL BE PROVIDED AND MAINTAINED IN PLAIN SIGHT WITHIN AN ACCESSIBLE LOCATION AT EACH STORAGE SHED AND CONSTRUCTION TRAILER, AND ON EACH FLOOR WITHIN EACH RAMP AND STAIRWAY.

4. FLAMMABLE AND COMBUSTIBLE LIQUIDS: STORAGE, HANDLING OR USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS SHALL BE RESTRICTED TO AREAS OUTSIDE OF THE STRUCTURE(S), AT LEAST 25 FT FROM ENTRANCES, OUTDOOR AIR INTAKES AND OPERABLE WINDOWS, AND IN STRICT COMPLIANCE WITH NFPA 1(FL) SECTION 16.2.3.1 AND CHAPTER 66; NFPA 30-2008, AND LEED INDOOR AIR QUALITY REQUIREMENTS.

5. ADDITIONAL PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED WHERE SPECIAL HAZARDS EXIST (E.G., AREAS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED). SPARE FIRE EXTINGUISHERS SHALL BE PROVIDED ON SITE FOR IMMEDIATE REPLACEMENT OF DISCHARGED FIRE EXTINGUISHERS. FREE ACCESS TO PORTABLE FIRE EXTINGUISHERS SHALL BE MAINTAINED AT ALL TIMES.

6. STORAGE OF CLASS I AND CLASS II LIQUIDS SHALL NOT EXCEED 60 GALLONS WITHIN 50 FEET OF THE STRUCTURE. STORAGE AREAS SHALL BE KEPT FREE OF WEEDS, DEBRIS AND COMBUSTIBLE MATERIALS NOT NECESSARY TO THE STORAGE. OPEN FLAMES AND SMOKING SHALL NOT BE PERMITTED IN FLAMMABLE AND COMBUSTIBLE STORAGE LIQUIDS STORAGE AREAS. SUCH STORAGE AREAS SHALL BE APPROPRIATELY POSTED AS "NO SMOKING" AREAS. CLASS I LIQUIDS SHALL BE DISPENSED ONLY WHERE THERE ARE NO OPEN FLAMES OR OTHER SOURCES OF IGNITION WITHIN THE POSSIBLE PATH OF VAPOR TRAVEL.

LIFE SAFETY LEGEND

- 1 HR RATED WALL / PARTITION
- XX / XX — CLR EGRESS WIDTH (INCHES) / EGRESS CAPACITY (# OF PERSONS)
- COMMON PATH
- FURTHEST POINT FROM EXIT — MAXIMUM EXIT ACCESS TRAVEL DISTANCE — T.D. 200'-4" — PATH OF EGRESS TRAVEL — EXIT DISCHARGE
- H — FIRE ALARM HORN / VISUAL ALARM
- FP — FIRE PULL STATION
- S — SPEAKER (PUBLIC ANNOUNCEMENT)
- SL — STROBE LIGHT
- D — SMOKE DETECTOR
- H — HEAT DETECTOR
- EMERGENCY EXIT
- LIGHTING FIXTURE ON EMERGENCY CIRCUIT
- FIRE SPRINKLER HEAD

FIRE EXTINGUISHER CABINETS

- FEC-1 — RECESSED
- FEC-2 — SEMI-RECESSED
- FEC-3 — SURFACE MOUNTED

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL
AT GLYNN ARCHER
PHASE 2
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CITY OF KEY WEST

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Bender & Associates ARCHITECTS p.a.

Project No : 1305

SECOND FLOOR LIFE SAFETY PLAN

Date: 08/08/14

PERMIT SET

LS-2

OF

SECTION 11 11 36

VEHICLE CHARGING EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Electric vehicle charging systems.

1.2 RELATED REQUIREMENTS

A. Section 03 30 00 – Cast-in-Place Concrete: Concrete pad for pedestal-mount installation.

B. Division 26 – Electrical: Circuit breaker, electrical conduit, and electrical supply wires.

1.3 REFERENCE STANDARDS

A. IEC 60529 – Degrees of Protection Provided by Enclosures (IP Code).

B. ISO/IEC 15693 – Identification cards -- Contactless integrated circuit cards -- Vicinity cards.

C. National Electrical Code (NEC) Article 625 – Electric Vehicle Charging System.

D. NEMA 250 – Enclosures for Electrical Equipment (1000 Volts Maximum).

E. NFPA 70 – National Electrical Code (NEC).

F. SAE J1772 – Electric Vehicle and Plug in Hybrid Electric Vehicle Conductive Charge Coupler.

G. UL 2231-1 – Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits: General Requirements.

H. UL 2231-2 – Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits: Particular Requirements for Protection Devices for Use in Charging Systems.

I. UL 2594 – Electric Vehicle Supply Equipment.

1.4 PREINSTALLATION MEETINGS

A. Convene pre-installation meeting before start of installation of electric vehicle charging systems.

B. Require attendance of parties directly affecting work of this section, including Contractor, Architect, installer, and manufacturer's representative.

C. Review materials, installation, adjusting, cleaning, demonstration, instruction and training, protection, maintenance, and coordination with other work.

1.5 SUBMITTALS

A. Comply with Section 01 33 00 – Submittal Procedures.

B. Product Data:
   1. Submit manufacturer's product data, including installation instructions.
   2. Submit manufacturer's project proposal describing electric vehicle charging subsystems:
      a. Charging station.
      b. Mounting device options.
      c. Web-based software and network services.

C. Shop Drawings: Submit project shop drawings, including plans, elevations, sections, and details, indicating dimensions, tolerances, materials, components, fabrication, fasteners, hardware, finish, electrical wiring diagrams, options, and accessories as required by Owner.

D. Manufacturer's Project References: Submit manufacturer's list of successfully completed electric vehicle charging system projects, including project name and location, name of architect, and type and quantity of electric vehicle charging systems furnished.

E. Operation and Maintenance Data: Provide detailed information required for Owner to properly operate and maintain equipment.

F. Warranty Documentation: Submit manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Manufacturer regularly engaged, for a minimum of 3 years, in the manufacturing of electric vehicle charging systems of similar type to that specified.

B. Installer's Qualifications:
   1. Installer regularly engaged, for a minimum of 5 years, in installation of low-voltage distribution equipment.
   2. Employ persons trained for installation of low-voltage distribution equipment.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:
   1. Store and handle materials in accordance with manufacturer's instructions.
   2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
   3. Store materials in clean, dry area indoors.
   4. Protect materials and finish during storage, handling, and installation to prevent damage.

1.8 WARRANTY

A. Warranty Period: 5 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer: SemaConnect, Inc., 4961 Telsa Drive, Suite A, Bowie, Maryland 20715. Toll Free 800-663-5633. Phone 301-352-3730. Fax 301-352-4232. Website www.semaconnect.com. Email info@semaconnect.com.

B. Substitutions: See Section 016000 - Product Requirements.

C. Single Source: Provide materials from single manufacturer.

2.2 ELECTRIC VEHICLE CHARGING SYSTEMS

A. Electric Vehicle Charging Systems:
   1. Electric vehicle charging stations.
   2. Software and network services.
   3. Electric vehicle driver access.
   4. Maintenance and service.
   5. Installation and training.

2.3 ELECTRIC VEHICLE CHARGING STATIONS

A. Electric Vehicle Charging Stations: "ChargePro 620".
   1. Mounting: Dual-head pedestal mount.
   2. Head Unit:
      a. Factory-assembled, 1-piece, sealed enclosure.
      b. No field assembly required.
      c. Dimensions: 20 inches high by 6 inches wide by 6 inches deep.

d. Enclosure Primary Material: Aluminum.

3. Access Panel: For installation and maintenance.
4. LED Lights: Indication of electric vehicle charging station status.
   a. Steady Blue: Station available.
   b. Flashing Green: Vehicle charging.
   c. Steady Green: Vehicle fully charged.
   d. Steady Red: Ground-fault detection.
5. LCD Messaging Screen:
   a. Communicates charging instructions to electric vehicle drivers.
   b. Backlit.
6. Standard Cable Management: Looped cable on rack.
   a. When charging session is complete, electric vehicle driver returns plug to head unit and manually loops cable on stainless steel cable rack.
7. Smart Card Authentication:
   a. For open or restricted access control.
   b. Manufacturer's "SemaCharge Passes" available for electric vehicle drivers.
   c. For billing and payment for electric vehicle drivers.
8. Plug: Able to charge all new electric and plug-in hybrid electric vehicles.
9. Electricity Metering: Energy monitoring.

B. Power:
1. AC Power Output, Maximum: Level 2. 7.2 kW (240 VAC at 30 A).
2. AC Power Input: Level 2. 30 A; Line 1, Line 2, and Earth (no neutral).
3. Vehicle-to-Charger Connection: SAE J1772 EV Connector, 18-foot cable.
4. Energy Metering Accuracy: 1 percent at 5-minute interval (standard).
5. Standby Power: 5 W typical.
6. Service Panel Breaker: Dual-pole, 40-A, common-trip breaker, dedicated circuit.

C. Safety:
1. Safety, Ground-Fault-Circuit Interrupt: 5 mA CCID with auto retry (15-minute delay, 3 tries).
2. Automatic Plug-Out Detection: Power terminated, SAE J1772. SMS or email notification.
3. General Safety Compliance: UL Certified; CCID, UL 2231-1 and UL 2231-2; Meets UL 2594; NEC Article 625 Compliant.

D. Network:
1. Wide Area Network: Commercial CDMA or GPRS cellular network.
2. Network Communication Protocol: TCP/IP.
3. Network Security: HTTPS; 128-bit AES Encryption.
4. Smart Card Reader: ISO 15693.

E. Communications Device:
1. LED Array: 270-degree visibility, multi-color visual status indication.
2. LCD Screen: 2 lines, 16 characters per line.

F. Site Conditions:

1. Outdoor Rated:
    a. NEMA 250: NEMA 3R.
    b. IEC 60529: IP44.
2. Operating Relative Humidity: Maximum 95 percent, non-condensing.
3. Operating Temperature Range, Ambient: Minus 22 degrees F to 122 degrees F (minus 30 degrees C to 50 degrees C).

G. Surge Protection: 6 kV at 3,000 A.

H. EMI Compliance: FCC Part 15 Class A.

2.4 SOFTWARE AND NETWORK SERVICES

A. Station Management Software:
1. Provide Owner with web-based SemaConnect station management software.
2. Capable of configuring stations for pricing and access policies.
    a. Pricing Policies Include: Time-of-use, duration-based, and kWh pricing.
    b. Access Policies Include: Private-only, public-only, or combined private/public access.
3. Capable of generating operational reports, including:
    a. Transaction Reports: Summary of individual session details (e.g. plug-in time, plug-out time, kWh delivered).
    b. Usage Reports: Histogram summary of station usage by time-of-day in one-hour intervals.
    c. Cost Reports: Summary of electricity cost generated by station usage.
    d. Revenue Reports: Summary of Owner revenue generated from driver fees.
    e. Sustainability Reports: Summary of carbon offset and fossil fuel consumption reduced due to usage of charging stations.

B. Driver Account Software:
1. Provide electric vehicle drivers with web-based SemaConnect driver account management software.
2. Drivers register with address contact and credit card payment information.
3. Drivers can specify SMS txt and email alert preferences (e.g. charge complete and plug-out).
4. Drivers can monitor charging session history, including fees incurred and kWh consumed.

C. Network Services:
1. Monitor state-of-health of charging station 24/7.
2. Automated driver billing and Owner payment.
3. Pricing and access policy configuration through web-based software.
4. Near real-time monitoring and reporting of charging session data.
5. Near real-time mapping of station location, availability, access, and pricing information.
6. Multiple portals for key stakeholders, including Owner, electric vehicle drivers, and customer service.

2.5 DRIVER ACCESS

A. Account-Based Access Methods for Repeat Users:
   1. SemaConnect Smart Card: Drivers can access and pay for sessions.
   2. SemaConnect Smart Phone App: Drivers can locate, check real-time availability, start and pay for sessions.
   3. PlugShare Smart Phone App: Drivers can locate, check real-time availability, start and pay for sessions.

B. Non-Account-Based Access Methods for First-Time Users:
   1. SemaConnect 1-800 Number: Drivers can start and pay for sessions using 1-800-663-5633.
   2. SemaConnect Mobile Web Site: Drivers can start and pay for sessions via Smart Phone via semacharge.com home page.
   3. PlugShare Smart Phone App: Drivers can locate, check real-time availability, start and pay for sessions.

2.6 ACCESSORIES

A. Anchors Plates:
   1. For pedestal-mount installations.
   2. Steel.
   3. Top Plate: 3/8 inch by 8 inches by 8 inches.
   4. Tube: 18 inches by 2.5-inch diameter.
   5. Stabilizing Rods: 8 inches long.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas to receive electric vehicle charging stations.

B. Verify surfaces to support electric vehicle charging stations are clean, dry, flat, plumb, level, square, stable, rigid, and capable of supporting the weight.

C. Notify Architect of conditions that would adversely affect installation or subsequent use.

D. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

A. Install electric vehicle charging stations in accordance with manufacturer's instructions at locations indicated on the Drawings.

B. Install electric vehicle charging stations in accordance with NFPA 70.

C. Pedestal Mount:
   1. Install concrete pad to dimensions indicated on the Drawings.
   2. Imbed anchor plate into concrete pad plumb, level, and square.
   3. Place concrete for pad as specified in Section 03 30 00.
   4. Bolt pedestal to anchor plate.
      a. Adjust for plumb, level, and square with 4 set screws included in base.
   5. Attach head unit to pedestal.

D. Electrical: Install circuit breaker, run electrical conduit, and connect electrical supply wires as specified in Division 26.

E. Install electric vehicle charging stations weathertight.

F. Install top of electric vehicle charging stations 56 inches above grade.

G. Cable Management: Install standard cable management system in accordance with manufacturer's instructions plumb, level, and square.

H. Manufacturer:
   1. Provide advisory assistance and guidance to installer for electrical preparation work and installation of electric vehicle charging stations.
   2. Perform testing and monitoring of electric vehicle charging stations for full operational performance.

3.3 CLEANING

A. Clean electric vehicle charging stations promptly after installation in accordance with manufacturer's instructions.

B. Do not use harsh cleaning materials or methods that could damage finish.

3.4 DEMONSTRATION

A. Demonstrate for Owner's personnel that electric vehicle charging systems function properly in every respect.

3.5 INSTRUCTION AND TRAINING

A. Provide instruction and training of Owner's personnel in the operation and maintenance of electric vehicle charging systems.

B. Include Instruction and Training for:
   1. Electric vehicle charging stations.
   2. Station management software.
   3. Electric vehicle driver software.
   4. Establishing access and pricing policies for Owner's electric vehicle charging station program.

C. Provide instruction and training by factory-trained and certified representative of manufacturer.

3.6 PROTECTION

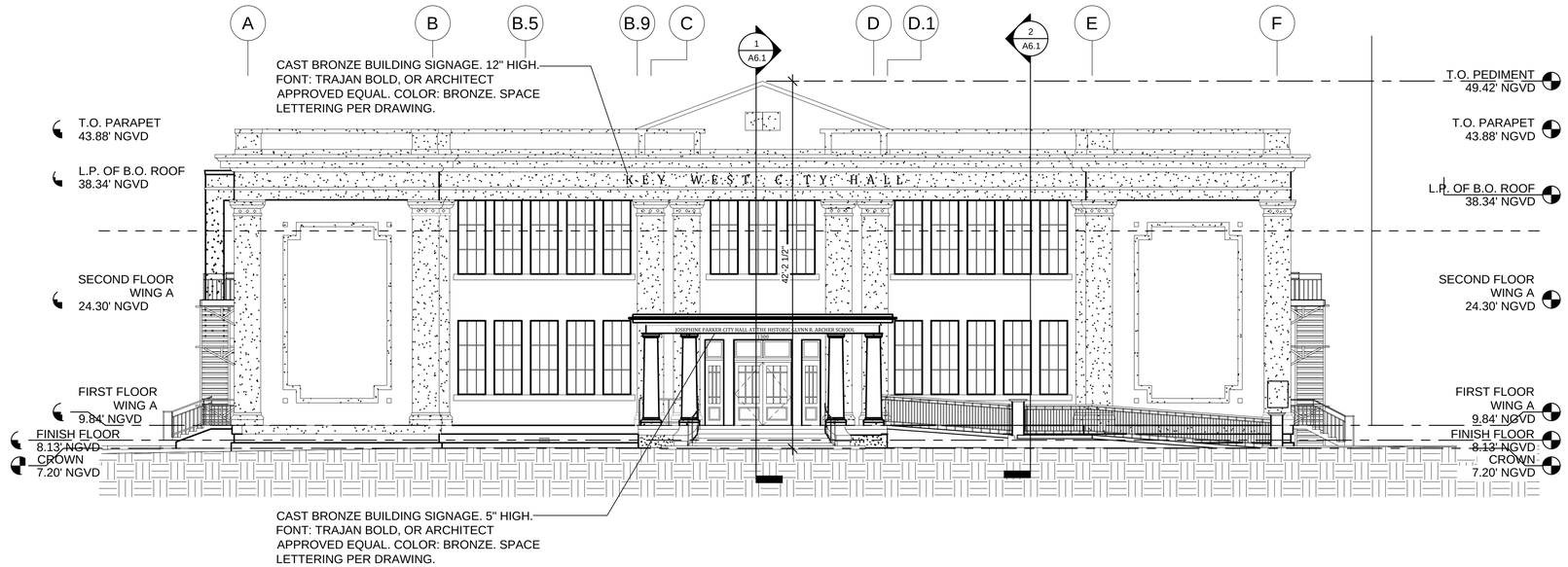
A. Protect installed electric vehicle charging stations to ensure that, except for normal weathering, stations will be without damage or deterioration at time of Substantial Completion.

3.7 MAINTENANCE

A. Provide operational service by manufacturer to minimize system downtime and to minimize maintenance costs incurred by Owner.
   1. Service shall include full replacement of universal charging station head unit.
   2. Manufacturer shall ship replacement unit to Owner.
   3. Failed unit shall be returned to manufacturer in same box as used to ship replacement unit.
   4. Owner's electric vehicle charging system shall be immediately operational with installation of replacement unit.

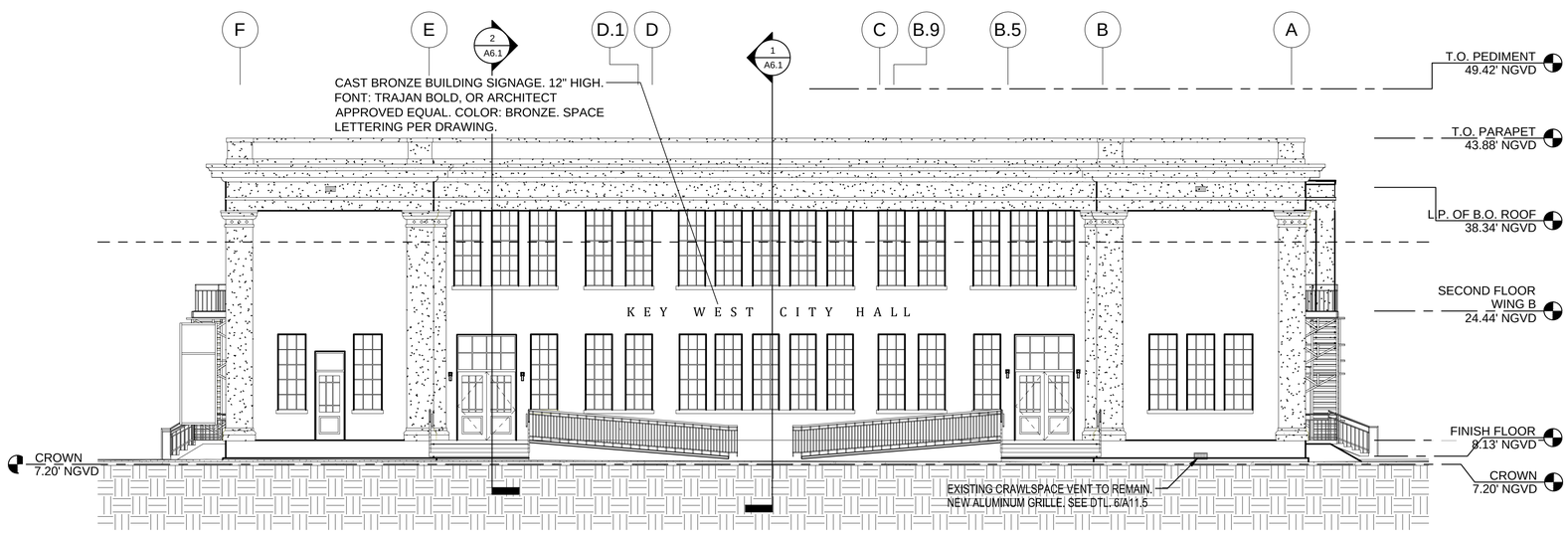
B. Include in Network Service Fee:
   1. Real-time monitoring of operational performance of electric vehicle charging stations.
   2. Automatic upgrade to latest version of system software packages, including electric vehicle charging stations, station management software, and driver account software.
   3. Access to manufacturer's 24/7 customer support.
   4. System machine-to-machine communication fees.
   5. Integration into manufacturer's network operation center.

END OF SECTION 11 11 36



1 EAST EXTERIOR ELEVATION - SIGNAGE

A- 1/8" = 1'-0"



1 WEST EXTERIOR ELEVATION - SIGNAGE

A- 1/8" = 1'-0"

REVISIONS:

KEY WEST CITY HALL AT GLYNN ARCHER

1300 WHITE STREET KEY WEST, FLORIDA
CITY OF KEY WEST

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Bender & Associates ARCHITECTS *p.a.*

Project No: 1305

Date: 8/8/14

PERMIT SET

OF

SECTION 066100

QUARTZ SURFACE FABRICATIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Countertops.

1.02 RELATED REQUIREMENTS

A. 013516.07 - Leed Prohibited Content Installer Certification

B. 015721 - Indoor Air Quality Controls

C. 016116 - VOC Content Restrictions

D. Section 064100 - Architectural Wood Casework.

E. Section 079005 - Joint Sealers.

F. Section 224216.16 - Commercial Sinks: Sinks.

1.03 REFERENCE STANDARDS

A. For requirements relating to reference standards, see Section 014219 - Reference Standards.

B. American Society for Testing and Materials (ASTM):
   1. ASTM C97 -- Absorption and Bulk Specific Gravity of Dimension Stone.
   2. ASTM C99 -- Modulus of Rupture of Dimension Stone.
   3. ASTM C170 -- Compressive Strength of Dimension Stone.
   4. ASTM C370 -- Moisture Expansion.
   5. ASTM C501 -- Relative Resistance to Wear of Unglazed Tile to Taber Abraser.
   6. ASTM C482 -- Bond Strength of Ceramic Tile to Portland Cement.
   7. ASTM C484 -- Thermal Shock Resistance of Glazed Ceramic Tile.
   8. ASTM C531 -- Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacings and Polymer Concrete.
   9. ASTM C648 -- Breaking Strength of Ceramic Tile.
   10. ASTM C1026 -- Resistance of Ceramic Tile to Freeze Thaw Cycling.
   11. ASTM E84 -- Standard Test Method for Surface Burning Characteristics of Building Materials.
   12. ASTM E662 -- Smoke Density.

C. International Solid Surface Fabricators Association (ISSFA):
   1. ISSFA-2 -- Classification and Standards for Solid Surfacing Material.

D. Marble Institute of America, Inc. (MIA):
   1. MIA (DSDM) -- Dimensional Stone Design Manual.

E. National Electrical Manufacturers Association (NEMA):
   1. NEMA LD 3 -- High-Pressure Decorative Laminates.

F. U.S. Product Standards (PS):

1. PS 1 -- Structural Plywood

1.04 SUBMITTALS

A. General:
   1. For submittal procedures, refer to Section 007200 - General Conditions (AIA A201 - 2007SP, including but not limited to Section 3.12) and Section 013000 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.

C. Shop Drawings: Provide complete detailed shop drawings showing installation of quartz surfacing fabrications.
   1. General:
      a. Indicate dimensions, thicknesses, required clearances, tolerances, materials, colors, finishes, fabrication details, field jointing, adjacent construction, design load parameters, methods of support, integration of plumbing components, and anchorages.
      b. Indicate materials, component profiles, fastening methods, jointing details, hardware and accessories.
   2. Countertops: Coordinate and submit shop drawings required in this section with shop drawings of cabinets and casework specified in Section 064100 - Architectural Wood Casework.

D. Samples:
   1. Selection Samples: For each finish product specified, color chips representing manufacturer's Group IV (Standard Size) colors and patterns; and samples of actual product representing manufacturer's full range of available surface finish options within specified price range.
   2. Verification Samples: For each finish product specified, minimum size 6 inches (150 mm) square, representing actual product, color, pattern and surface finish.

E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

F. Installation Instructions: Manufacturer's installation instructions and recommendations.

G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

H. Warranty: Provide manufacturer’s 10 year warranty against defects in materials and workmanship.

1.05 QUALITY ASSURANCE

A. Fabricator/Installer Qualifications: Company specializing in fabrication and installation of the products and assemblies specified in this section, with minimum five years of documented experience and certified in writing by the countertop manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Quality Standard: Same as custom built-in cabinets and casework; see Section 064100 - Architectural Wood Casework.

B. Quartz Surfacing: Sheet or slab of natural quartz and plastic resin self-supporting over structural members.
   1. Flat Sheet Thickness: 3/8 inch (1 cm), 3/4 inch (2 cm) or 1-1/4 inches (3 cm), as indicated on drawings; if not indicated, provide 1-1/4 inch (3 cm).
   2. Natural Quartz and Resin Composite Sheets, Slabs and Castings: Shall comply with ISSFA-2 and NEMA LD 3; high-performance polyester resin, unfilled, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
      a. NSF approved for food contact.
   3. Performance Requirements:
      a. Surface Burning Characteristics (ASTM E84): Flame spread 25, maximum; smoke developed 450, maximum.
      b. Static coefficient of friction: 0.75 dry, 0.68 wet, tested to ASTM C1028.
      c. Water absorption: 0.03 percent, tested to ASTM C97.
      d. Compressive strength: 29,100 psi, tested to ASTM C170.
      e. Bond strength: 235 psi, tested to ASTM C482.
      f. Modulus of rupture: 6310 psi, tested to ASTM C99.
      g. Flexural strength: 5840 psi, tested to ASTM C880.
      h. Breaking strength: 480 lbf, tested to ASTM C648.
      i. Impact strength: Minus 352 feet, tested to ASTM C256.
      j. Density: 2.47 grams per cubic centimeter, tested to ASTM C373.
      k. Stain resistance: Not affected by 10 percent hydrochloric acid or 10 percent KOH, tested to ASTM C650.
      l. Thermal shock resistance: Pass 5 cycles, tested to ASTM C484.
      m. Abrasive index: 65-Ha = 25, tested to ASTM C241.
      n. Thermal expansion: 1.670 x 10-5 in/in/deg F, tested to ASTM C531.
      o. Deicing resistance: Rating of 0, tested to ASTM C672/C672M.
      p. Freeze/thaw resistance: 0 tiles at 15 cycles, tested to ASTM C10264.
   4. Certifications:
      a. GEI indoor Air Quality Certified.
      b. GEI Children and Schools Certified.

c. NSF/ANSI 51 Certified.
d. Kosher Certified.

5. Manufacturers:
   a. Basis of Design:
      (1) Silestone ® by Consentino USA, Inc. ; 2245 Texas Drive, Suite 600 77479 Sugar Land, (TX) USA. Phone: +1 281-494-7277
      Fax: +1 877-532-6394. www.cosentino.com
   b. Other Manufacturers:
      (1) Cambria USA: www.cambriausa.com
      (2) Caesarstone Corporation: www.caesarstoneus.com
      (3) Seieffe Corporation: www.okite.us.

C. Accessory Materials:
1. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch (19 mm) thick; join lengths using metal splines.
   a. For additional information, refer to Section 061000 - Rough Carpentry.
2. Adhesives:
   a. Mounting Adhesive: Chemical-resistant waterproof structural grade "50-year" silicone or epoxy adhesive of a type recommended by manufacturer for materials being joined, application and conditions of use.
      (1) Max. VOC 70g/L
   b. Quartz Surfacing Adhesive: Chemical-resistant waterproof epoxy or polyester adhesive of a type recommended by manufacturer for materials being joined, application and conditions of use.
      (1) Adhesive which will be visible in finished Work shall be tinted to match quartz surface.
      (2) Max. VOC 70g/L
3. Joint Sealant: Mildew-resistant silicone sealant, clear.
      (1) Max. VOC 70g/L
4. Solvent: Denatured alcohol for cleaning quartz surfacing, to assure adhesion of adhesives and sealants.
5. Cleaning Agents: Mild soap and water.

2.03 FABRICATION

A. General:
1. Inspect materials for defects prior to fabrication.
2. Layout quartz surfacing fabrications to minimize joints and avoid L-shaped pieces of quartz surfacing, and fabricate with hairline joints.
3. Shop-fabricate quartz surfacing components to the greatest extent practical; comply with the MIA (DSDM).
4. Fabricate quartz surfacing components in the largest sections practicable, with exposed surface of joints flush.
5. Join lengths of quartz surfacing materials using best method recommended by manufacturer.
6. Cut and polish with water-cooled power tools.
7. Cutouts shall have a minimum of 3/8 inch (1 cm) radius.

8. Polish exposed edges (including edges of cutouts) that will be exposed in finished Work.
9. Laminate layers of quartz surfacing as required to create built-up edges, following procedures recommended by the manufacturer.

B. Countertops:
1. Material: Quartz surfacing.
   a. Thickness: As indicated on drawings; if not indicated, provide 1-1/4 inch (3 cm) except at exposed edges (see Exposed Edge Detail).
   b. Color and Pattern: To be selected by Architect from manufacturer's Group IV (Standard Size) colors and patterns.
2. Fabricate countertops to overhang 1 inch (25 mm) beyond fronts and ends of cabinet or wall beneath, except at edges abutting adjacent cabinet or wall finish.
3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.
4. Exposed Edge Detail: Exposed edges to be built up to 1-1/2 inch (3.81 cm) thick, and finished with edge profile as indicated on drawings.
5. Exposed Surface Finish: To be selected by Architect from manufacturer's Group IV (Standard Size) of surface finish options.
6. Secure countertop to base cabinet or wall beneath, as applicable, with concealed fasteners and with contact surfaces set in waterproof glue, per approved shop drawings.

C. Backsplashes and Endsplashes:
1. Material: Quartz surfacing.
   a. Thickness: As indicated on drawings; if not indicated, provide 1 inch (2.54 cm) x 4 inch (10.16 cm)
   b. Color and Pattern: To be selected by Architect from manufacturer's Group IV (Standard Size) of colors and patterns; matching countertop selection.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

D. Site Verification:
1. Verify dimensions by field measurements prior to installation.
2. Verify that substrates supporting quartz surfaces are plumb, level and flat to within 1/8 inch in 10 ft, and that all necessary supports and blocking are in place.
3. Base cabinets shall be secured to adjoining units and back wall.

E. Inspect quartz surface materials for defects prior to installation.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Install materials in accordance with manufacturer's instructions and approved shop drawings

B. Preliminary Installation:
   1. Position materials to verify the correct size.
   2. If size adjustments, or additional fabrication is necessary, use water-cooled tools. Protect jobsite and surface from dust and water. Perform work away from installation site if possible.
   3. Allow gaps for expansion of not less than 1/8 inch (1.5 mm) per 10 ft when installed between walls or other fixed structure.

C. Permanent Installation:
   1. After verification of fit and finish, clean substrate; remove loose and foreign matter which may interfere with adhesion. Clean quartz surface backside and joints using denatured alcohol.
   2. Horizontal Surface: Apply continuous bead of mounting adhesive around perimeter of structural substrate and supports.
   3. Vertical Surface: Apply continuous bead of mounting adhesive around perimeter. In addition, apply 1/4 inch mounting adhesive bead every 8 inches on vertical center.
   4. Install quartz surfacing plumb, level, square and flat, to within 1/8 inch in 10 feet, non-cumulative.
   5. Align adjacent pieces in same plane.
   6. Securely attach quartz surfacing fabrications to cabinets or wall, as applicable, using concealed fasteners. Make flat surfaces level; shim where required.

D. Joints:
   1. Joints between Adjacent Pieces of Quartz Surfacing:
      a. Joints shall be flush, tight fitting, level and neat.
      b. Securely join adjacent pieces using specified Quartz Surfacing Adhesive; fill joints level to polished surface.
      c. Secure adjacent quartz surfaces with vacuum clamps until adhesive hardens.
   2. Joints between Quartz Surfacing and Other Materials or Finishes: Seal joint between quartz surfacing fabrications and adjacent construction, using specified Joint Sealant.

3.04 TOLERANCES

A. Variation from Horizontal: 1/8 inch in 10 feet (3 mm in 3 m), maximum.

B. Offset from Wall, Countertops: 1/8 inch (3 mm) maximum; 1/16 inch (1.5 mm) minimum.

C. Joint Width between Adjacent Pieces of Quartz Surfacing: Hairline.

D. Surface Lippage at Joints between Adjacent Pieces of Quartz Surfacing: Exposed surfaces shall be flush, with no lippage.

E. Field Joints (except Joints between Adjacent Pieces of Quartz Surfacing): 1/8 inch (3 mm) wide, maximum.

3.05 CLEANING

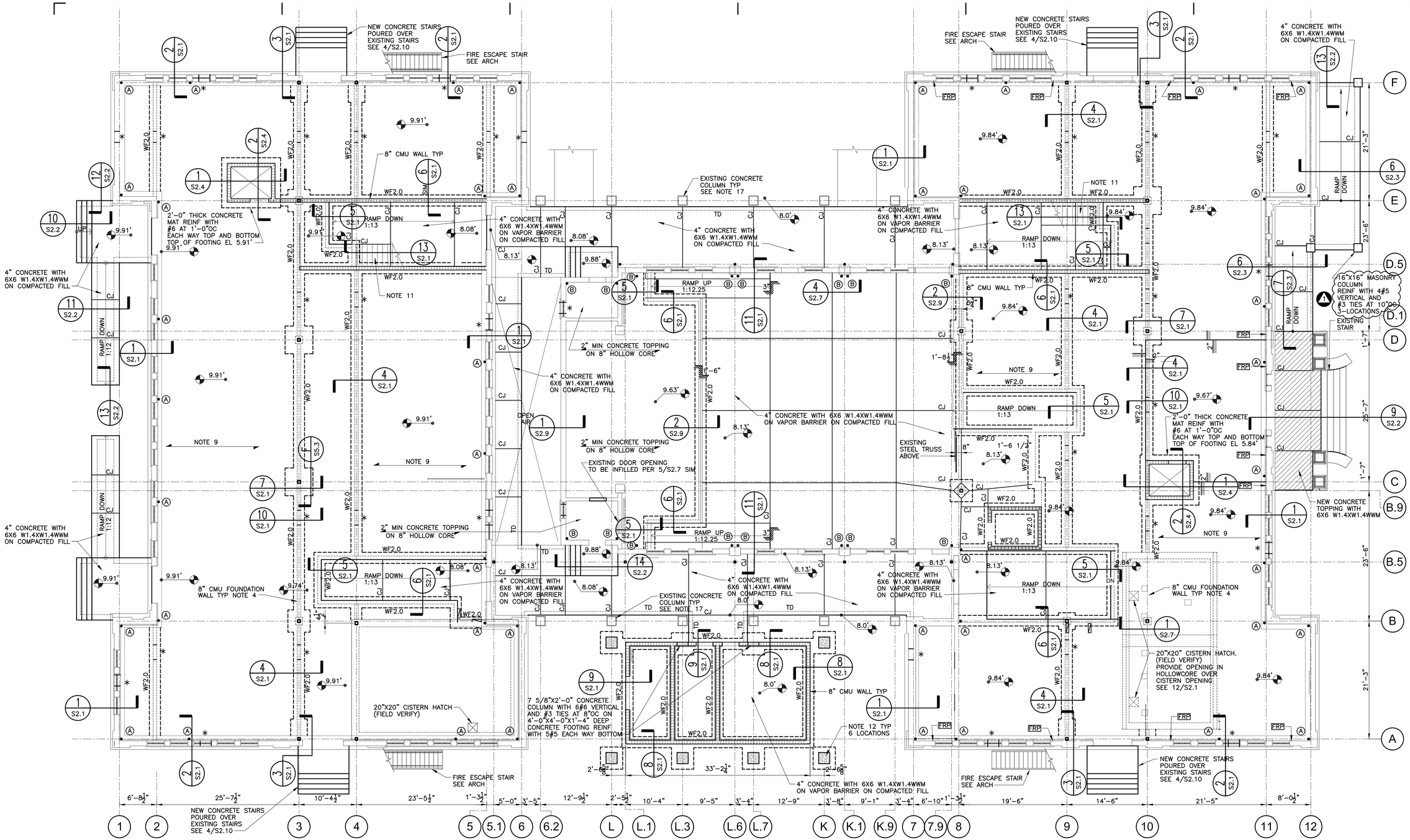
A. Clean countertops surfaces thoroughly.

3.06 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION



FOUNDATION AND FIRST FLOOR PLAN

SCALE: $\frac{1}{8}$" = 1'-0"

NOTES:

1. FINISH FLOOR ELEVATION = +8.13' NGVD UNO. COORDINATE FLOOR ELEVATIONS, SLOPES, AND RECESSES WITH ARCHITECT AND CIVIL DRAWINGS. ALL ELEVATION MARKS ARE NGVD.
2. TOP OF FOOTING ELEVATION 6.80' UNLESS NOTED OTHERWISE. TOP OF EXTERIOR FOOTINGS SHALL BE MINIMUM 8" BELOW FINISH GRADE.
3. STEP FOOTINGS BELOW WATER AND SANITARY PIPES. SEE TYPICAL DETAILS E/S5.1 AND F/S5.1.
4. 8" CMU FOUNDATION WALLS SHALL BE REINFORCED WITH #5 VERTICAL CENTERED AT 1'-4" ON CENTER. FILL ALL REINFORCED CELLS SOLID WITH 3000 PSI GROUT.
5. 8" CMU WALLS AT STAIRS AND ELEVATORS SHALL BE REINFORCED WITH #5 VERTICAL CENTERED AT 4'-0" ON CENTER. FILL ALL REINFORCED CELLS SOLID WITH 3000 PSI GROUT. SEE TYPICAL DETAILS FOR ADDITIONAL REQUIRED REINFORCEMENT.
6. 8" CMU WALLS AT CHILLER BUILDING SHALL BE REINFORCED WITH #5 VERTICAL EACH FACE AT 8" ON CENTER. FILL ALL REINFORCED CELLS SOLID WITH 3000 PSI GROUT. SEE TYPICAL DETAILS FOR ADDITIONAL REQUIRED REINFORCEMENT.
7. WF2.0 – DENOTES 2'-0" WIDE X 1'-4" DEEP CONTINUOUS CONCRETE WALL FOOTING REINFORCED WITH 2-#5 CONTINUOUS TOP AND BOTTOM AND #3 TIES AT 1'-4" ON CENTER. EXTEND CONTINUOUS REINF MIN 2'-0" INTO ISOLATED COLUMN FOUNDATION. SEE DETAIL L/S5.1 WHERE CONTINOUS FOOTING ABUTS EXISTING FOOTING.
8. SEE ARCHITECTURAL DRAWINGS FOR HEIGHT, WIDTH, AND LOCATION OF MASONRY WALLS AND WALL OPENINGS.
9. 8" PRESTRESSED, PRECAST, CONCRETE HOLLOWCORE SLAB WITH 2" MINIMUM CONCRETE TOPPING (3" AT BEARING) WITH 6X6 – W2.0XW2.0 WWM. COORDINATE LOCATION OF AV FLOOR BOXES TO BE RECESSED INTO TOP OF HOLLOW CORE SLAB.
10. COORDINATE SIZE AND LOCATION OF ELEVATOR SUMP PIT AND PISTON BLOCKOUT WITH ELEVATOR MANUFACTURER. SEE DETAIL A/S2.4.
11. PRE-FABRICATED METAL STAIRS, LANDINGS AND CONNECTIONS TO THE BUILDING STRUCTURE SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE STAIR FABRICATOR. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND DETAILS.
12. 24" X 24" CONCRETE COLUMN REINFORCED WITH 16#6 VERTICAL AND #3 TIES AT 12" ON CENTER ON 4'-0" X 4'-0" X 1'-4" DEEP CONCRETE FOOTING REINFORCED WITH 5-#5 EACH WAY BOTTOM.
13. Ⓐ – DENOTES HSS3X3X3/16 AT PERIMETER WALL. SEE WALL SECTIONS FOR ADDITIONAL INFORMATION.
14. Ⓑ – DENOTES HSS3X3X1/4 ON 3/4"X4"X8" BASE PLATE. SECURE TO EXISTING FOUNDATION WITH 2-3/4"DIA ADHESIVE ANCHORS MIN 9" EMBED. SECURE TO EXISTING CONCRETE WALL/COLUMN WITH L4X4X1/4X1'-0" AND 2-3/4"DIA ADHESIVE ANCHORS MIN 6 3/4" EMBED EACH SIDE AT MID-HEIGHT.
15. CJ – DENOTES CONSTRUCTION/CONTRACTION JOINT. SEE DETAILS A AND B ON S5.1.
16. TD – DENOTES TURN-DOWN SLAB. SEE DETAIL D/S5.1.
17. INSTALL (2) STRIPS OF SIKA CARBODUR TYPE S 512 (OR EQUIVALENT) VERTICALLY EACH SIDE OF COLUMN. INSTALL SIKA WRAP HEX 103C AROUND COLUMN FOR FULL HEIGHT OF COLUMN. INSTALL STRIPS WITH SIKADUR 30 (OR EQUIVALENT) AND WRAP WITH SIKADUR 330 AND SIKADUR 300 (OR EQUIVALENT) PER MANUF INSTRUCTIONS. CARBON FIBER SHALL BE INSTALLED BY AN INSTALLER CERTIFIED BY THE CARBON FIBER MANUF. (Δ)
18. FRP – DENOTES LOCATION WHERE STRUCTURAL STRENGTHENING OF EXISTING CONCRETE WALL IS REQUIRED. INSTALL SIKA CARBODUR TYPE S 512 STRIP (OR EQUIVALENT) EACH FACE OF WALL MAXIMUM 8" FROM EDGE OF OPENING. STRIPS SHALL BE CONTINUOUS FOR FULL HEIGHT OF WALL FLOOR-TO-FLOOR FROM JUST BELOW ROOF COPING TO GROUND FLOOR LEDGE. INSTALL STRIPS WITH SIKADUR 30 (OR EQUIVALENT) PER MANUFACTURER'S INSTRUCTIONS. CARBON FIBER SHALL BE INSTALLED BY AN INSTALLER CERTIFIED BY THE CARBON FIBER MANUFACTURER.
19. * DESIGNATES FOUNDATION WALL OPENING. SEE 10/S2.1.

ATLANTIC ENGINEERING SERVICES
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PH: 904.743.4633 FX: 904.725.9295
312295
FL COA #791 SC COA #1691

PERMIT SET

REVISIONS:

NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

1302 WHITE STREET KEY WEST, FLORIDA
CITY OF KEY WEST

MARK J. KEISTER PE 37435

MC HARRY ASSOCIATES
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Bender & Associates ARCHITECTS p.a.

Project N: 1305

FOUNDATION AND FIRST FLOOR PLAN

Date: 8/8/14

S1.1

5 OF 23

KEY CARPET
TILE & FURNITURE

1901 South Roosevelt Blvd, #105S
Key West, Florida 33040
Email: alanlindasolomon@bellsouth.net

Phone: 305-294-4071
Fax: 305-294-2126

May 28, 2014

Key West City Hall @Glenn Archer
c/o Bender & Associates Architects, P.A.
410 Angela Street
Key West, FL 33040

RE: **Key West City Hall Carpet Purchase under NJPA State of Florida Price List**

We are now able to give you the most current pricing for the carpet tiles:

Charcoal	292 sq.yds.	
Chalk	1748 sq. yds.	
Graphite	1135 sq. yds.	
Total required:	3175 sq. yds @ $30.69	$97,440.75
	For Tractionback	4,095.75
	All Labor & Materials to Floor Prep & Install	30,162.50
		$131,699.00

We hope this meets with your approval. Our installers are top-notch and have successfully completed many projects here, including the Ferry Terminal last year.

Sincerely,

Alan Solomon

Alan Solomon, President

SECTION 230923

DIRECT DIGITAL CONTROL (DDC) SYSTEM FOR HVAC

1. PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. All work of this Division shall be coordinated and provided by the single Building Management System (BMS) Contractor.

B. The work of this Division shall be scheduled, coordinated, and interfaced with the associated work of other trades.

C. The work of this Division shall be as required by the Specifications, Point Schedules and Drawings.

D. If the BMS Contractor believes there are conflicts or missing information in the project documents, the Contractor shall promptly request clarification and instruction from the design team.

1.2 BMS DESCRIPTION

A. The Building Management System (BMS) shall be a complete system designed for use with the enterprise IT systems. This functionality shall extend into the equipment rooms. Devices residing on the automation network located in equipment rooms and similar shall be fully IT compatible devices that mount and communicate directly on the IT infrastructure in the facility. Contractor shall be responsible for coordination with the owner's IT staff to ensure that the BMS will perform in the owner's environment without disruption to any of the other activities taking place on that LAN.

(Optional) The BMS shall utilize wireless sensor- and field-level communication as described in the following sections. Contractor shall be responsible for coordination with the owner's IT staff to ensure there will be no interference with other wireless communication taking place in the building (e.g. WiFi).

B. All points of user interface shall be on standard PCs that do not require the purchase of any special software from the BMS manufacturer for use as a building operations terminal. The primary point of interface on these PCs will be a standard Web Browser.

C. The work of the single BMS Contractor shall be as defined individually and collectively in all Sections of this Division specifications together with the associated Point Sheets and Drawings and the associated interfacing work as referenced in the related documents.

D. Provide a complete, neat and workmanlike installation. Use only manufacturer employees who are skilled, experienced, trained, and familiar with the specific equipment, software, standards and configurations to be provided for this Project.

E. The BMS as provided shall incorporate, at minimum, the following integrated features, functions and services:

1. Operator information, alarm management and control functions.
2. Enterprise-level information and control access.
3. Information management including monitoring, transmission, archiving, retrieval, and reporting functions.
4. Diagnostic monitoring and reporting of BMS functions.
5. Offsite monitoring and management access.
6. Energy management
7. Standard applications for terminal HVAC systems.
8. Indoor Air Quality monitoring and control

1.3 QUALITY ASSURANCE

A. General

1. The Building Management System Contractor shall be the primary manufacturer-owned branch office that is regularly engaged in the engineering, programming, installation and service of total integrated Building Management Systems.
2. The BMS Contractor shall be a recognized national manufacturer, installer and service provider of BMS.
3. The BMS Contractor shall have a branch facility within a 250-mile radius of the job site supplying complete maintenance and support services on a 24 hour, 7-day-a-week basis.
4. The Building Management System architecture shall consist of the products of a manufacturer regularly engaged in the production of Building Management Systems, and shall be the manufacturer's latest standard of design at the time of bid.

1.4 REFERENCES

A. In the case of conflicts or discrepancies, the more stringent regulation shall apply.

1.5 SUBMITTALS

A. Shop Drawings, Product Data, and Samples

1. The BMS contractor shall submit a list of all shop drawings with submittals dates within 30 days of contract award.
2. The BMS Contractor shall correct any errors or omissions noted in the first review.
3. At a minimum, submit the following:

a. BMS network architecture diagrams including all nodes and interconnections.
b. Systems schematics, sequences and flow diagrams.
c. Control Damper Schedule including a separate line for each damper provided under this section and a column for each of the damper attributes, including: Code Number, Fail Position, Damper Type, Damper Operator, Duct Size, Damper Size, Mounting, and Actuator Type.
d. Control Valve Schedules including a separate line for each valve provided under this section and a column for each of the valve attributes: Code Number, Configuration, Fail Position, Pipe Size, Valve Size, Body Configuration, Close off Pressure, Capacity, Valve CV, Design Pressure, and Actuator Type.
e. Room Schedule including a separate line for each VAV box and/or terminal unit indicating location and address
f. Details of all BMS interfaces and connections to the work of other trades.
g. Product data sheets or marked catalog pages including part number, photo and description for all products including software.

1.6 RECORD DOCUMENTATION

A. Operation and Maintenance Manuals

1. Three (3) copies of the Operation and Maintenance Manuals shall be provided to the Owner's Representative upon completion of the project. The entire Operation and Maintenance Manual shall be furnished on Compact Disc media, and include the following for the BMS provided:
   a. Table of contents.
   b. As-built system record drawings. Computer Aided Drawings (CAD) record drawings shall represent the as-built condition of the system and incorporate all information supplied with the approved submittal.
   c. Manufacturers product data sheets or catalog pages for all products including software.
   d. System Operator’s manuals.
   e. Archive copy of all site-specific databases and sequences.
   f. BMS network diagrams.
   g. Interfaces to all third-party products and work by other trades.

1.7 WARRANTY

A. Standard Material and Labor Warranty:

1. Provide a one-year labor and material warranty on the BMS.
2. If within twelve (12) months from the date of acceptance of product, upon written notice from the owner, it is found to be defective in operation,

workmanship or materials, it shall be replaced, repaired or adjusted at the option of the BMS Contractor at the cost of the BMS Contractor.

3. Maintain an adequate supply of materials within 300 miles of the Project site such that replacement of key parts and labor support, including programming. Warranty work shall be done during BMS Contractor's normal business hours.

2. PART 2 – PRODUCTS

2.1 GENERAL DESCRIPTION

A. The Building Management System (BMS) shall use an open architecture and fully support a multi-vendor environment. To accomplish this effectively, the BMS shall not be limited to a single open communication protocol standard, but to also integrate a wide variety of third-party devices and applications via additional protocols and through the latest software standards. The system shall be designed for use on the Internet, or intranets using off the shelf, industry standard technology compatible with other owner provided networks.

B. The Building Management System shall consist of the following:

1. Standalone Network Automation Engine(s)
2. DDC Controllers (HVAC etc.)
3. Local Display Devices
4. Operator Workstation

C. Acceptable Manufacturers

1) Johnson Controls, Metasys (Basis of Bid)
2) Siemens Building Systems, APOGEE
3) Trane, Summit

2.2 BMS ARCHITECTURE

A. Automation Network

1. The automation network shall be based on a PC industry standard of Ethernet TCP/IP. Where used, LAN controller cards shall be standard "off the shelf" products available through normal PC vendor channels.
2. The BMS shall network multiple user interface clients, automation engines, system controllers and application-specific controllers. Provide application and data server(s) as required for systems operation.
3. The automation network shall be capable of operating at a communication speed of 100 Mbps, with full peer-to-peer network communication.

B. Control Network

1. Control networks shall provide either “Peer-to-Peer,” Master-Slave, or Supervised Token Passing communications, and shall operate at a minimum communication speed of 9600 baud.
2. DDC Controllers shall reside on the control network.
3. (Optional) The control network shall utilize ZigBee wireless mesh protocol for sensor- and field-level communication. The wireless network shall be capable of being integrated with any existing or future wired network with no loss of BMS integrity.

2.3 USER INTERFACE

A. Dedicated Web Based User Interface

1. The Owner shall provide and install a personal computer for command entry, information management, network alarm management, and database management functions. All real-time control functions, including scheduling, history collection and alarming, shall be resident in the BMS Network Automation Engines to facilitate greater fault tolerance and reliability.
2. Dedicated User Interface Architecture – The architecture of the computer shall be implemented to conform to industry standards, so that it can accommodate applications provided by the BMS Contractor and by other third party applications suppliers, including but not limited to Microsoft Office Applications. Specifically it must be implemented to conform to the following interface standards.
   a. Microsoft Internet Explorer for user interface functions
   b. Microsoft Office Professional for creation, modification and maintenance of reports, sequences other necessary building management functions
   c. Microsoft Outlook or other eMail program for supplemental alarm functionality and communication of system events, and reports
   d. Required network operating system for exchange of data and network functions such as printing of reports, trends and specific system summaries.
3. PC Hardware – The personal computer(s) shall be configured as follows:
   a. Memory – 512 MB (Minimum)
   b. CPU– Pentium 4 or greater; 2.8 MHz or Faster Clock Speed
   c. Hard Drive – 40 GB or greater hard drive
   d. Hard drive backup system – CD/RW, DVD/RW or network backup software provided by IT department
   e. CD ROM Drive – 32X performance
   f. Ports – (2) Serial and (1) parallel, (2) USB ports
   g. Keyboard – 101 Keyboard and 2 Button Mouse
   h. CRT configuration – 1-2 CRTs as follows:

◊ Each Display – 17” Flat Panel Monitor 1280 x 1024 resolution minimum

◊ Display card with multiple monitor support

i. LAN communications – Ethernet communications board; 3Comm or equal.

4. Operating System Software

a. Windows XP

b. Where user interface is not provided via browser, provide complete operator workstation software package, including any hardware or software keys. Include the original installation disks and licenses for all included software, device drivers, and peripherals.

B. Distributed Web Based User Interface

1. All features and functions of the dedicated user interface previously defined in this document shall be available on any computer connected directly or via a wide area or virtual private network (WAN/VPN) to the automation network and conforming to the following specifications.

2. The software shall run on the Microsoft Internet Explorer (6.0 or higher) browser.

C. User Interface Application Components

1. Operator Interface

a. An integrated browser based client application shall be used as the user operator interface program.

b. All Inputs, Outputs, Setpoints, and all other parameters as defined within Part 3, shown on the design drawings, or required as part of the system software, shall be displayed for operator viewing and modification from the operator interface software.

c. The user interface software shall provide help menus and instructions for each operation and/or application.

d. The operation of the control system shall be independent of the user interface, which shall be used for operator communications only. Systems that rely on an operator workstation to provide supervisory control over controller execution of the sequences of operations or system communications shall not be acceptable.

2. Schedules

a. A graphical display for time-of-day scheduling and override scheduling of building operations shall be provided. At a minimum, the following functions shall be provided:

◊ Weekly schedules

◊ Exception Schedules

◊ Monthly calendars.

b. Changes to schedules made from the User Interface shall directly modify the Network Automation Engine schedule database.

3. Password

a. Multiple-level password access protection shall be provided to allow the user/manager to user interface control, display, and database manipulation capabilities deemed appropriate for each user, Based on an assigned password.

4. Dynamic Color Graphics

a. The graphics application program shall be supplied as an integral part of the User Interface. Browser or Workstation applications that rely only upon HTML pages shall not be acceptable.

b. The graphics applications shall include a create/edit function and a runtime function. The system architecture shall support an unlimited number of graphics documents (graphic definition files) to be generated and executed.
The graphics shall be able to display and provide animation based on real-time data that is acquired, derived, or entered.

c. Operation from graphics – It shall be possible to change values (setpoints) and states in system controlled equipment by using drop-down windows

5. Historical trending and data collection

a. Each Automation Engine shall store trend and point history data for all analog and digital inputs and outputs, as follows:

◊ Any point, physical or calculated, may be designated for trending. Two methods of collection shall be allowed:
Defined time interval
Upon a change of value

6. Trend data viewing and analysis

a. Provide a trend viewing utility that shall have access to all database points.

b. It shall be possible to retrieve any historical database point for use in displays and reports by specifying the point name and associated trend name.

c. Trend studies shall be capable of calculating and displaying calculated variables including highest value, lowest value and time based accumulation.

2.4 AUTOMATION ENGINES

A. Network Automation Engine (NAE)

1. The Network Automation Engine shall be a fully user-programmable, supervisory controller. The Automation Engine shall monitor the network of distributed application-specific controllers, provide global strategy and

direction, and communicate on a peer-to-peer basis with other Automation Engines.

2. Automation network – The Network Automation Engine (NAE) shall reside on the automation network.

3. User Interface – Each NAE shall have the ability to deliver a web based user interface as previously described. All computers connected physically or virtually to the automation network shall have access to the web based UI. Systems without such capability at this level shall provide a user interface via the combination of operator workstations and Web servers as determined by the owner for comparable operation.

4. Power Failure – In the event of the loss of normal power, The NAE shall continue to operate for a user adjustable period of up to 10 minutes after which there shall be an orderly shutdown of all programs to prevent the loss of database or operating system software. Flash memory shall be incorporated for all critical controller configuration data.

   a. During a loss of normal power, the control sequences shall go to the normal system shutdown conditions.

   b. Upon restoration of normal power and after a minimum off-time delay, the controller shall automatically resume full operation without manual intervention through a normal soft-start sequence.

5. Certification – All controllers shall be listed by Underwriters Laboratories (UL).

2.5 APPLICATION SPECIFIC CONTROLLERS

A. Air Handling Unit Controllers (AHU)

1. Each Air Handling Unit controller shall operate as a standalone controller capable of performing its specified control responsibilities independently of other controllers in the network. Each AHU controller shall be a microprocessor-Based, multi-tasking, real-time digital control processor

B. VAV Modular Assembly (VMA)

1. The VAV Modular Assembly shall provide both standalone and networked direct digital control of pressure-independent, variable air volume terminal units.

2. The VAV Modular Assembly shall be a configurable digital controller with integral differential pressure transducer and damper actuator. All components shall be connected and mounted as a single assembly that can be removed as one piece.

2.6 SOFTWARE PROGRAMMING/TOOLS

A. Program Editor

1. Definition of operator device characteristics, DDC panels, individual points, applications, and control sequences shall be performed through the browser based user interface.
2. All temperature and equipment control strategies and energy management routines shall be definable by the operator. System definition and modification procedures shall not interfere with normal system operation and control.
3. The programming environment shall provide help menus and instructions for each operation and/or application performed, for all programming library functions, and for the programming language itself.

2.7 INPUT DEVICES

A. General Requirements

1. Installation, testing, and calibration of all sensors, transmitters, and other input devices shall be provided to meet the system requirements.

B. Temperature Sensors

1. General Requirements:
   a. Sensors and transmitters shall be provided, as outlined in the input/output summary and sequence of operations.
   b. The temperature sensor shall be of the resistance type, and shall be either two-wire 1000 ohm nickel RTD, or two-wire 1000 ohm platinum RTD.
   c. The following point types (and the accuracy of each) are required, and their associated accuracy values include errors associated with the sensor, lead wire, and A to D conversion:

Point Type	**Accuracy**
Chilled Water	± .5°F.
Room Temp	± .5°F.
Duct Temperature	± .5°F.
All Others	± .75°F.

2. Room Temperature and Room Temperature/Humidity Sensors
   a. Room sensors shall be constructed for either surface or wall box mounting.
   b. Room sensors shall have the following options when specified:
      ◊ Setpoint reset slide switch providing a ±3 degree (adjustable) range.
      ◊ Individual heating/cooling setpoint slide switches.
      ◊ A momentary override request push button for activation of after-hours operation.
      ◊ Analog thermometer.

c. (Optional) Room sensors shall capable of communicating wirelessly via the ZigBee protocol. Sensors shall utilize two (2) AA batteries and shall not require a dedicated 24 VDC power feed. Sensors shall have a minimum five (5) year battery life along with battery level indication reported through the BMS. Please reference Section 2.9.

3. Thermo wells
   a. When thermo wells are required, the sensor and well shall be supplied as a complete assembly, including wellhead and Greenfield fitting.
   b. Thermo wells and sensors shall be mounted in a threadolet or 1/2" NFT saddle and allow easy access to the sensor for repair or replacement.
4. Outside Air Sensors
   a. Outside air sensors shall be designed to withstand the environmental conditions to which they will be exposed. They shall also be provided with a solar shield.
   b. Temperature transmitters shall be of NEMA 3R construction and rated for ambient temperatures.
5. Duct Mount Sensors
   a. Duct mount sensors shall mount in an electrical box through a hole in the duct, and be positioned so as to be easily accessible for repair or replacement.
   b. Duct sensors shall be insertion type and constructed as a complete assembly, including lock nut and mounting plate.
6. Averaging Sensors
   a. For ductwork greater in any dimension that 48 inches and/or where air temperature stratification exists, an averaging sensor with multiple sensing points shall be used.

C. Humidity Sensors
   1. The sensor shall be a solid-state type, relative humidity sensor of the Bulk Polymer Design. The sensor element shall resist service contamination.
   2. The humidity transmitter shall be equipped with non-interactive span and zero adjustments, a 2-wire isolated loop powered, 4-20 mA, 0-100% linear proportional output.
   3. The humidity transmitter shall meet the following overall accuracy, including lead loss and Analog to Digital conversion. 3% between 20% and 80% RH @ 77 Deg F unless specified elsewhere.
   4. Duct type sensing probes shall be constructed of 304 stainless steel, and shall be equipped with a neoprene grommet, bushings, and a mounting bracket.
   5. Acceptable Manufacturers: Johnson Controls, Veris Industries, and Mamac.

D. Differential Pressure Transmitters
   1. General Air and Water Pressure Transmitter Requirements:

a. Pressure transmitters shall be constructed to withstand 100% pressure over-range without damage, and to hold calibrated accuracy when subject to a momentary 40% over-range input.
b. Pressure transmitters shall transmit a 0 to 5 VDC, 0 to 10 VDC, or 4 to 20 mA output signal.
c. Differential pressure transmitters used for flow measurement shall be sized to the flow sensing device, and shall be supplied with Tee fittings and shut-off valves in the high and low sensing pick-up lines to allow the balancing Contractor and Owner permanent, easy-to-use connection.
d. A minimum of a NEMA 1 housing shall be provided for the transmitter. Transmitters shall be located in accessible local control panels wherever possible.

2. Building Differential Air Pressure Applications (-1” to +1” w.c.)
   a. The differential pressure transmitter shall be of industrial quality and transmit a linear, 4 to 20 mA output in response to variation of differential pressure or air pressure sensing points.
   b. The differential pressure transmitter shall have non-interactive zero and span adjustments that are adjustable from the outside cover and meet the following performance specifications:
      ◊ -1.00 to +1.00 w.c. input differential pressure ranges. (Select range appropriate for system application)
      ◊ 4-20 mA output.
      ◊ Maintain accuracy up to 20 to 1 ratio turndown.
      ◊ Reference Accuracy: +0.2% of full span.
   c. Acceptable Manufacturers: Johnson Controls and Setra.
3. Medium Differential Air Pressure Applications (5” to 21” w.c.)
   a. The pressure transmitter shall be similar to the Low Air Pressure Transmitter, except that the performance specifications are not as severe. Differential pressure transmitters shall be provided that meet the following performance requirements:
      ◊ Zero & span: (c/o F.S./Deg. F): .04% including linearity, hysteresis and repeatability.
      ◊ Accuracy: 1% F.S. (best straight line) Static Pressure Effect: 0.5% F.S. (to 100 PSIG.
      ◊ Thermal Effects: <+.033 F.S./Deg. F. over 40°F. to 100°F. (calibrated at 70°F.).
   b. Acceptable manufacturers: Johnson Controls and Setra.

E. Flow Monitoring

F. Status and Safety Switches
   1. General Requirements

a. Switches shall be provided to monitor equipment status, safety conditions, and generate alarms at the BMS when a failure or abnormal condition occurs. Safety switches shall be provided with two sets of contacts and shall be interlock wired to shut down respective equipment.

2. Current Sensing Switches

a. The current sensing switch shall be self-powered with solid-state circuitry and a dry contact output. It shall consist of a current transformer, a solid state current sensing circuit, adjustable trip point, solid state switch, SPDT relay, and an LED indicating the on or off status. A conductor of the load shall be passed through the window of the device. It shall accept over-current up to twice its trip point range.

b. Current sensing switches shall be used for run status for fans, pumps, and other miscellaneous motor loads.

c. Current sensing switches shall be calibrated to show a positive run status only when the motor is operating under load. A motor running with a broken belt or coupling shall indicate a negative run status.

d. Acceptable manufacturers: Veris Industries

3. Air Filter Status Switches

a. Differential pressure switches used to monitor air filter status shall be of the automatic reset type with SPDT contacts rated for 2 amps at 120VAC.

b. A complete installation kit shall be provided, including: static pressure tops, tubing, fittings, and air filters.

c. Provide appropriate scale range and differential adjustment for intended service.

d. Acceptable manufacturers: Johnson Controls, Cleveland Controls

2.8 OUTPUT DEVICES

A. Actuators

1. General Requirements

a. Damper and valve actuators shall be electronic and/or pneumatic, as specified in the System Description section.

B. Control Dampers

1. The BMS Contractor shall furnish all automatic dampers. All automatic dampers shall be sized for the application by the BMS Contractor or as specifically indicated on the Drawings.

2. All dampers used for throttling airflow shall be of the opposed blade type arranged for normally open or normally closed operation, as required. The damper is to be sized so that, when wide open, the pressure drop is a sufficient amount of its close-off pressure drop to shift the characteristic curve to near linear.

3. All dampers used for two-position, open/close control shall be parallel blade type arranged for normally open or closed operation, as required.

4. Damper frames and blades shall be constructed of either galvanized steel or aluminum. Maximum blade length in any section shall be 60”. Damper blades shall be 16-gauge minimum and shall not exceed eight (8) inches in width. Damper frames shall be 16-gauge minimum hat channel type with corner bracing. All damper bearings shall be made of reinforced nylon, stainless steel or oil-impregnated bronze. Dampers shall be tight closing, low leakage type, with synthetic elastomer seals on the blade edges and flexible stainless steel side seals. Dampers of 48”x48” size shall not leak in excess of 8.0 cfm per square foot when closed against 4” w.g. static pressure when tested in accordance with AMCA Std. 500.

C. Control Relays

1. Control Pilot Relays

a. Control pilot relays shall be of a modular plug-in design with retaining springs or clips.
b. Mounting Bases shall be snap-mount.
c. DPDT, 3PDT, or 4PDT relays shall be provided, as appropriate for application.
d. Contacts shall be rated for 10 amps at 120VAC.
e. Relays shall have an integral indicator light and check button.
f. Acceptable manufacturers: Johnson Controls, Lectro

D. Control Valves

1. All automatic control valves shall be fully proportioning and provide near linear heat transfer control. The valves shall be quiet in operation and fail-safe open, closed, or in their last position. All valves shall operate in sequence with another valve when required by the sequence of operations. All control valves shall be sized by the control manufacturer, and shall be guaranteed to meet the heating and cooling loads, as specified. All control valves shall be suitable for the system flow conditions and close against the differential pressures involved. Body pressure rating and connection type (sweat, screwed, or flanged) shall conform to the pipe schedule elsewhere in this Specification.

2. Chilled water control valves shall be modulating plug, ball, and/or butterfly, as required by the specific application. Modulating water valves shall be sized per manufacturer’s recommendations for the given application. In general, valves (2 or 3-way) serving **variable** flow air handling unit coils shall be sized for a pressure drop equal to the actual coil pressure drop, but no less than 5 PSI. Valves (3-way) serving **constant** flow air handling unit coils with secondary circuit pumps shall be sized for a pressure drop equal to 25% the actual coil pressure drop, but no less than 2 PSI. Mixing valves (3-way) serving secondary water circuits shall be sized for a pressure drop

of no less than 5 PSI. Valves for terminal reheat coils shall be sized for a 2 PSIG pressure drop, but no more than a 5 PSI drop.

3. Ball valves shall be used for hot and chilled water applications, water terminal reheat coils, radiant panels, unit heaters, package air conditioning units, and fan coil units except those described hereinafter.

4. Acceptable manufacturers: Johnson Controls

2.9 (OPTIONAL) WIRELESS DEVICES

A. General Requirements

1. All wireless communication shall utilize the BACnet ZigBee mesh protocol.

B. Temperature and Temperature/Humidity Sensors

1. Sensors shall include capability to measure and transmit temperature, humidity and occupancy override in combination without the use of separate sensors.

2. Sensors shall utilize two (2) AA batteries and shall not require a dedicated 24 VDC power feed.

3. Sensors shall have digital display capability.

4. Sensors shall have a minimum five (5) year battery life along with battery level indication reported through the BMS.

5. Sensors shall have LED indication of diagnostic information for use in commissioning and troubleshooting.

6. Wireless cooler/freezer temperature sensors shall be provided for use in cooler/freezer temperature monitoring as necessary.

C. Wireless Routers and Repeaters

1. Addressable, flag-type routers and repeaters shall be used to receive and transmit wireless communication.

2. Routers shall be connected and powered via the SA bus controller port. Repeaters shall require a separate 24V power supply.

D. Wireless Coordinators

1. Coordinators shall serve as end-of-line wireless devices for up to thirty-five (35) wireless-enabled controllers. Coordinators shall hard-wired downstream into the building communication bus.

3. PART 3 – PERFORMANCE / EXECUTION

3.1 BMS SPECIFIC REQUIREMENTS

A. Graphic Displays

1. Provide a color graphic system flow diagram display for each system with all points as indicated on the point list. All terminal unit graphic displays shall be from a standard design library.
2. User shall access the various system schematics via a graphical penetration scheme and/or menu selection. .

B. Actuation / Control Type

1. Primary Equipment
   a. Controls shall be provided by equipment manufacturer as specified herein.
   b. All damper and valve actuation shall be electric.
2. Air Handling Equipment
   a. All air handers shall be controlled with a HVAC-DDC Controller
   b. All damper and valve actuation shall be electric.
3. Terminal Equipment:
   a. Terminal Units (VAV, UV, etc.) shall have electric damper and valve actuation.
   b. All Terminal Units shall be controlled with HVAC-DDC Controller)

3.2 INSTALLATION PRACTICES

A. BMS Wiring (See Section J for wireless installation)

1. All conduit, wiring, accessories and wiring connections required for the installation of the Building Management System, as herein specified, shall be provided by the BMS Contractor unless specifically shown on the Electrical Drawings under Division 16 Electrical. All wiring shall comply with the requirements of applicable portions of Division 16 and all local and national electric codes, unless specified otherwise in this section.
2. All BMS wiring materials and installation methods shall comply with BMS manufacturer recommendations.
3. Class 2 Wiring
   a. Class 2 (24VAC or less) wiring shall be installed in conduit unless otherwise specified.
   b. Conduit is not required for Class 2 wiring in concealed accessible locations. Class 2 wiring not installed in conduit shall be supported every 5’ from the building structure utilizing metal hangers designed for this application. Wiring shall be installed parallel to the building structural lines. All wiring shall be installed in accordance with local code requirements.
4. Class 2 signal wiring and 24VAC power can be run in the same conduit. Power wiring 120VAC and greater cannot share the same conduit with Class 2 signal wiring.

5. Provide for complete grounding of all applicable signal and communications cables, panels and equipment so as to ensure system integrity of operation. Ground cabling and conduit at the panel terminations. Avoid grounding loops.

B. BMS Line Voltage Power Source

1. 120-volt AC to control panels used for the Building Management System shall be provided by Division 16.
2. Circuits used for the BMS shall be dedicated to the BMS and shall not be used for any other purposes.
3. DDC terminal unit controllers may use AC power from motor power circuits.

C. BMS Raceway

1. All wiring shall be installed in conduit or raceway except as noted elsewhere in this specification. Minimum control wiring conduit size 1/2”.
2. Where it is not possible to conceal raceways in finished locations, surface raceway (Wiremold) may be used as approved by the Architect.

D. Penetrations

1. Provide fire stopping for all penetrations used by dedicated BMS conduits and raceways.
2. All openings in fire proofed or fire stopped components shall be closed by using approved fire resistive sealant.
3. All wiring passing through penetrations, including walls shall be in conduit or enclosed raceway.

E. BMS Identification Standards

1. Node Identification. All nodes shall be identified by a permanent label fastened to the enclosure. Labels shall be suitable for the node location.

F. BMS Panel Installation

1. The BMS panels and cabinets shall be located as indicated at an elevation of not less than 2 feet from the bottom edge of the panel to the finished floor. Each cabinet shall be anchored per the manufacturer’s recommendations.

G. Input Devices

1. All Input devices shall be installed per the manufacturer recommendation
2. Locate components of the BMS in accessible local control panels wherever possible.

H. HVAC Input Devices – Genera1

1. All Input devices shall be installed per the manufacturer recommendation
2. Locate components of the BMS in accessible local control panels wherever possible.

3. The mechanical contractor shall install all in-line devices such as temperature wells, pressure taps, airflow stations, etc.
4. Input Flow Measuring Devices shall be installed in strict compliance with ASME guidelines affecting non-standard approach conditions.
5. Outside Air Sensors
   a. Sensors shall be mounted on the North wall to minimize solar radiant heat impact or located in a continuous intake flow adequate to monitor outside air conditions accurately.
   b. Sensors shall be installed with a rain proof, perforated cover.
6. Building Differential Air Pressure Applications (-1” to +1” w.c.):
   a. Transmitters exterior sensing tip shall be installed with a shielded static air probe to reduce pressure fluctuations caused by wind.
   b. The interior tip shall be inconspicuous and located as shown on the drawings.
7. Air Flow Measuring Stations:
   a. Where the stations are installed in insulated ducts, the airflow passage of the station shall be the same size as the inside airflow dimension of the duct.
   b. Station flanges shall be two inch to three inch to facilitate matching connecting ductwork.
8. Duct Temperature Sensors:
   a. Duct mount sensors shall mount in an electrical box through a hole in the duct and be positioned so as to be easily accessible for repair or replacement.
9. Space Sensors:
   a. Shall be mounted per ADA requirements.

I. HVAC Output Devices

1. All output devices shall be installed per the manufacturers recommendation. The mechanical contractor shall install all in-line devices such as control valves, dampers, airflow stations, pressure wells, etc.
2. Actuators: All control actuators shall be sized capable of closing against the maximum system shut-off pressure. The actuator shall modulate in a smooth fashion through the entire stroke. When any pneumatic actuator is sequenced with another device, pilot positioners shall be installed to allow for proper sequencing.
3. Control Dampers: Shall be opposed blade for modulating control of airflow. Parallel blade dampers shall be installed for two position applications.
4. Control Valves: Shall be sized for proper flow control with equal percentage valve plugs. The maximum pressure drop for water applications shall be 5 PSI. The maximum pressure drop for steam applications shall be 7 PSI.

5. Electronic Signal Isolation Transducers: Whenever an analog output signal from the Building Management System is to be connected to an external control system as an input (such as a chiller control panel), or is to receive as an input a signal from a remote system, provide a signal isolation transducer. Signal isolation transducer shall provide ground plane isolation between systems. Signals shall provide optical isolation between systems

J. Wireless Installation

1. Prior to installation, wireless system functionality shall be ensured via field testing or floor plan analysis. When locating sensors, routers and repeaters, all signal-attenuating material shall be accounted and compensated for (e.g. metal, brick or concrete).
2. To ensure reliability, Contractor shall provide no fewer than two (2) downstream paths of communication per VAV or field controller. Wireless repeaters (requiring 24V power) shall be installed as needed to maintain wireless mesh integrity.
3. All wireless sensors (temperature and/or temperature plus humidity) shall be located as indicated on the drawings, but no greater than 50 ft. from the nearest wireless router.
4. All wireless routers shall be located on individual terminal or air-handling unit controllers as indicated on the drawings, but no greater than 50 ft. from the nearest wireless router or repeater.
5. Wireless coordinators shall be installed as end-of-line wireless devices no greater than 50 ft. from the nearest wireless router or repeater. Coordinators shall then be hard-wired into the building communication bus. Reference Section A.2 for wiring specifications.

3.3 TRAINING

A. The BMS contractor shall provide the following training services:

1. One day of on-site orientation by a system technician who is fully knowledgeable of the specific installation details of the project. This orientation shall, at a minimum, consist of a review of the project as-built drawings, the BMS software layout and naming conventions, and a walk through of the facility to identify panel and device locations.

3.4 COMMISSIONING

A. Fully commission all aspects of the Building Management System work.

B. Acceptance Check Sheet

1. Prepare a check sheet that includes all points for all functions of the BMS as indicated on the point list included in this specification.

2. Submit the check sheet to the Engineer for approval

3. The Engineer will use the check sheet as the basis for acceptance with the BMS Contractor.

C. VAV box performance verification and documentation:

1. The BMS Contractor shall test each VAV box for operation and correct flow. At each step, after a settling time, box air flows and damper positions will be sampled. Following the tests, a pass/fail report indicating results shall be produced. Possible results are Pass, No change in flow between full open and full close, Reverse operation or Maximum flow not achieved. The report shall be submitted as documentation of the installation.

D. Promptly rectify all listed deficiencies and submit to the Engineer that this has been done.

END OF SECTION 230923

SECTION 236423

SCROLL WATER CHILLERS

1. GENERAL

1.01. GENERAL REQUIREMENTS

The requirements of this Section shall conform to the general provisions of the Contract, including General and Supplementary Conditions, Conditions of the Contract, and Contract Drawings.

1.02. SCOPE

Provide Microprocessor controlled, multiple scroll compressor, air-cooled, liquid chillers of the scheduled capacities as shown and indicated on the Drawings, including but not limited to:

1. Chiller package
2. Charge of refrigerant and oil
3. Electrical power and control connections
4. Chilled liquid connections
5. Manufacturer start-up

1.03. QUALITY ASSURANCE

A. Products shall be Designed, Tested, Rated and Certified in accordance with, and Installed in compliance with applicable sections of the following Standards and Codes:

1. AHRI 550/590 – Water Chilling Packages Using the Vapor Compression Cycle
2. AHRI 370 – Sound Rating of Large Outdoor Refrigerating and Air-Conditioning Equipment
3. ANSI/ASHRAE 15 – Safety Code for Mechanical Refrigeration
4. ANSI/ASHRAE 34 – Number Designation and Safety Classification of Refrigerants
5. ASHRAE 90.1 – Energy Standard for Buildings Except Low-Rise Residential Buildings
6. ANSI/NFPA 70 – National Electrical Code (N.E.C.)
7. ASME Boiler and Pressure Vessel Code, Section VIII, Division 1
8. OSHA – Occupational Safety and Health Act
9. Manufactured in facility registered to ISO 9001
10. Conform to Intertek Testing Services for construction of chillers and provide ETL/cETL Listed Mark

B. Factory Run Test: Chiller shall be pressure-tested, evacuated and fully charged with refrigerant and oil, and shall be factory operational run tested with water flowing through the vessel.

C. Chiller manufacturer shall have a factory trained and supported service organization. Service organization shall have a branch facility within a 250-mile radius of the job site supplying complete maintenance and support services on a 24 hour, 7-day-a-week basis.

D. Warranty: Manufacturer shall Warrant all equipment and material of its manufacture against defects in workmanship and material for a period of eighteen (18) months from date of shipment or twelve (12) months from date of start-up, whichever occurs first.

1.04. DELIVERY AND HANDLING

A. Unit shall be delivered to job site fully assembled with all interconnecting refrigerant piping and internal wiring ready for field installation and charged with refrigerant and oil by the Manufacturer.

B. Provide protective covering over vulnerable components for unit protection during shipment. Fit nozzles and open ends with plastic enclosures.

C. Unit shall be stored and handled per Manufacturer’s instructions.

2. PRODUCTS

2.01. CHILLER MATERIALS AND COMPONENTS

A. General: Install and commission, as shown on the schedules and plans, factory assembled, charged, and tested air cooled scroll compressor chiller(s) as specified herin. Chiller shall be designed, selected, and constructed using a refrigerant with Flammability rating of "1", as defined by ANSI/ASHRAE STANDARD 34 Number Designation and Safety Classification of Refrigerants. Chiller shall include not less than two refrigerant circuits above 50 tons (200kW), scroll compressors, direct-expansion type evaporator, air-cooled condenser, refrigerant, lubrication system, interconnecting wiring, safety and operating controls including capacity controller, control center, motor starting components and special features as specified herin or required for safe, automatic operation.

B. Cabinet: External structural members shall be constructed of heavy guage, galvanized steel coated with baked on powder paint which, when subject to ASTM B117, 1000 hour, 5% salt spray test, yields minimum ASTM 1654 rating of "6".

C. Operating Characteristics: Provide low and high ambient temperature control options as required to ensure unit is capable of operation from 30°F to 115°F (-1°C to 46°C) ambient temperature. [Optional: 0°F to 125°F (-18°C to 52°C) ambient.]

D. Service Isolation valves: Discharge (ball type) isolation valves factory installed per refrigerant circuit. Includes a system high-pressure relief valve in compliance with ASHRAE15.

E. Pressure Transducers and Readeout Capability

1. Discharge Pressure Transducers: Permits unit to sense and display discharge pressure.
2. Suction Pressure Transducers: Permits unit to sense and display suction pressure.
3. High Ambient Control: Allows units to operate when the ambient temperature is above 115°F (46°C). Includes discharge pressure transducers

2.02. COMPRESSORS

A. Compressors: Shall be hermetic, scroll-type, including:

1. Compliant design for axial and radial sealing.
2. Refrigerant flow through the compressor with 100% suction cooled motor.
3. Large suction side free volume and oil sump to provide liquid handling capability.
4. Compressor crankcase heaters to provide extra liquid migration protection.
5. Annular discharge check valve and reverse vent assembly to provide low-pressure drop, silent shutdown and reverse rotation protection.
6. Initial oil charge.
7. Oil level sight glass.
8. Vibration isolator mouonts for compressors.
9. Brazed-type connections for fully hermetic refrigerant circuits.
10. Compressor Motor overloads capable of monitoring compressor motor current. Provides extra protection against compressor reverse rotation, phase-loss and phase-imbalance.

2.03. REFRIGERANT CIRCUIT COMPONENTS

Each refrigerant circuit shall include: a discharge service ball type isolation valve, high side pressure relief, liquid line shutoff valve with charging port, low side pressure relief device, filter-drier, solenoid valve, sight glass with moisture indicator, electronic expansion valves, and flexible, closed-cell foam insulated suction line and suction pressure transducer.

2.04. HEAT EXCHANGERS

A. Evaporator:

1. Evaporator shall be brazed-plate stainless steel construction capable of refrigerant working pressure of 650 psig (3103 kPa) and liquid side pressure of 150 psig (1034 kPa) [Option for 300 psig (2068 kPa) available].
2. Brazed plate heat exchangers shall be UL listed.
3. Exterior surfaces shall be covered with 3.4" (19mm), flexible, closed cell insulation, thermal conductivity of 0.26k ([BTU/HR-Ft² - °F]/in.) maximum.
4. Water nozzles shall be provided with grooves for field provided ANSI/AWWA C-606 mechanical couplings.

5. Evaporator shall include vent and drain fittings and thermostatically controlled heaters to protect to -20°F (-29°C) ambient in off-cycle.
6. A 20-mesh, serviceable wye-strainer and mechanical couplings shall be provided for field installation on evaporator inlet prior to startup.

B. Air-cooled Condenser:

1. Coils: Condenser coils shall be constructed of a single material to avoid galvanic corrosion due to dissimilar metals. Coils and headers are brazed as one piece. Integral sub cooling is included. Coils shall be designed for a design working pressure of 650 PSIG (45 bar). Condenser coil shall be washable with potable water under 100 psi (7 bar) pressure.
2. Low Sound Fans: Shall be dynamically and statically balanced, direct drive, corrosion resistant glass fiber reinforced composite blades molded into a low noise, full-airfoil cross section, providing vertical air discharge and low sound. Each fan shall be provided in an individual compartment to prevent crossflow during fan cycling. Guards of heavy gauge, PVC (poly- vinylchloride) coated or galvanized steel shall be factory installed.
3. Fan Motors: High efficiency, direct drive, 6 pole, 3 phase, insulation class “F”, current protected, Totally Enclosed Air-Over (TEAO) , rigid mounted, with double sealed, permanently lubricated, ball bearings.

2.05. CONTROLS

A. General: Automatic start, stop, operating, and protection sequences across the range of scheduled conditions and transients.

B. Power/Control Enclosure: Rain and dust tight NEMA 3R powder painted steel cabinet with hinged, latched, and gasket sealed door.

C. Microprocessor Control Center:

1. Automatic control of compressor start/stop, anti-coincidence and anti-recycle timers, automatic pumpdown at system shutdown, condenser fans, evaporator pump, evaporator heater, unit alarm contacts, and chiller operation from 0°F to 125°F (-18°C to 52°C) ambient. Automatic reset to normal chiller operation after power failure.
2. Software stored in non-volatile memory, with programmed setpoints retained in lithium battery backed real-time-clock (RTC) memory for minimum 5 years.
3. Forty character liquid crystal display, descriptions in English (or Spanish, French, Italian, or German), numeric data in English (or Metric) units. Sealed keypad with sections for Setpoints, Display/Print, Entry, Unit Options & clock, and On/Off Switch.
4. Programmable Setpoints (within Manufacturer limits): display language; chilled liquid temperature setpoint and range, remote reset temperature range, daily schedule/holiday for start/stop, manual override for servicing, low and high ambient cutouts, low liquid temperature cutout, low suction pressure cutout, high

discharge pressure cutout, anti-recycle timer (compressor start cycle time), and anti-coincident timer (delay compressor starts).

5. Display Data: Return and leaving liquid temperatures, low leaving liquid temperature cutout setting, low ambient temperature cutout setting, outdoor air temperature, English or metric data, suction pressure cutout setting, each system suction pressure, liquid temperature reset via a 4-20milliamp or 0-10 VDC input, anti-recycle timer status for each compressor, anti-coincident system start timer condition, compressor run status, no cooling load condition, day, date and time, daily start/stop times, holiday status, automatic or manual system lead/lag control, lead system definition, compressor starts/operating hours (each), status of hot gas valves, evaporator heater and fan operation, run permissive status, number of compressors running, liquid solenoid valve status, load & unload timer status, water pump status.
6. System Safeties: Shall cause individual compressor systems to perform auto shut down; manual reset required after the third trip in 90 minutes. System Safeties include: high discharge pressure, low suction pressure, high pressure switch, and motor protector. Compressor motor protector shall protect against damage due to high input current or thermal overload of windings.
7. Unit Safeties: Shall be automatic reset and cause compressors to shut down if low ambient, low leaving chilled liquid temperature, under voltage, and flow switch operation.
8. Alarm Contacts: Low ambient, low leaving chilled liquid temperature, low voltage, low battery, and (per compressor circuit): high discharge pressure, and low suction pressure.
9. BAS Communications: YORKTalk 2, BACnet MS/TP, Modbus and N2 communication capabilities are standard.

D. Manufacturer shall provide any controls not listed above, necessary for automatic chiller operation. Mechanical Contractor shall provide field control wiring necessary to interface sensors to the chiller control system.

2.06. POWER CONNECTION AND DISTRIBUTION

A. Power Panels:

1. NEMA 3R/12 rain/dust tight, powder painted steel cabinets with hinged, latched, and gasket sealed outer doors. Provide main power connection(s), control power connections, compressor and fan motor start contactors, current overloads, and factory wiring.
2. Power supply shall enter unit at a single location, be 3 phase of scheduled voltage, and connect to individual terminal blocks per compressor. Separate disconnecting means and/or external branch circuit protection (by Contractor) required per applicable local or national codes.

B. Compressor, control and fan motor power wiring shall be located in an enclosed panel or routed through liquid tight conduit.

2.07. ACCESSORIES AND OPTIONS

Some accessories and options supersede standard product features. Your Johnson Controls representative will be pleased to provide assistance.

A. Microprocessor controlled, Factory installed Across-the-Line type compressor motor starters as standard.

B. Outdoor Ambient Temperature Control

C. Power Supply Connections:

1. Single Point or Multiple Point Disconnect: Single or Dual point Non-Fused Disconnect(s) and lockable external handle (in compliance with Article 440-14 of N.E.C.) can be supplied to isolate the unit power voltage for servicing. Separate external fusing must be supplied, by others, in the incoming power wiring, which must comply with the National Electric Code and/or local codes.

D. Control Power Transformer: Converts unit power voltage to 120-1-60 (500 VA capacity). Factory-mounting includes primary and secondary wiring between the transformer and the control panel.

E. Condenser Coil Environmental Protection (Factory applied):

1. Post-Coated Dipped: Dipped-cured coating on condenser coils for seashore and other corrosive applications (with the exception of strong alkalis, oxidizers, and wet bromine, chlorine and fluorine in concentrations greater than 100 ppm).

F. Protective Chiller Panels (Factory)

1. Louvered/Wire Panels: Louvered steel panels on external condenser coils painted as per remainder of unit cabinet. Heavy gauge, welded wire-mesh, coated to resist corrosion, around base of machine to restrict unauthorized access.

G. Evaporator options:

1. Provide 1-1/2”” evaporator insulation in lieu of standard 3/4”.

H. Sound Reduction (Factory installed):

1. Ultra Quiet - Low speed, reduced noise fans
2. Compressor Acoustic Sound Blankets

I. Vibration Isolation (Field installed):

1. 1” Deflection Spring Isolators: Level adjustable, spring and cage type isolators for mounting under the unit base rails.

3. EXECUTION

3.01. INSTALLATION

A. General: Rig and Install in full accordance with Manufacturer’s requirements, Project drawings, and Contract documents.

B. Location: Locate chiller as indicated on drawings, including cleaning and service maintenance clearance per Manufacturer instructions. Adjust and level chiller on support structure.

C. Components: Installing Contractor shall provide and install all auxiliary devices and accessories for fully operational chiller.

D. Electrical: Coordinate electrical requirements and connections for all power feeds with Electrical Contractor (Division 26).

E. Controls: Coordinate all control requirements and connections with Controls Contractor.

F. Finish: Installing Contractor shall paint damaged and abraded factory finish with touch-up paint matching factory finish.

END OF SECTION 230513

SECTION 081416

FLUSH WOOD DOORS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Flush wood doors.

1.02 RELATED REQUIREMENTS

A. Section 081113 - Hollow Metal Doors and Frames.

B. Section 081433 - Stile and Rail Doors.

C. Section 087100 - Door Hardware.

D. Section 088000 - Glazing.

1.03 REFERENCE STANDARDS

A. For requirements relating to reference standards, see Section 014219 - Reference Standards.

B. American Society for Testing and Materials (ASTM):
   1. ASTM E413 -- Classification for Rating Sound Insulation.
   2. ASTM E1408 -- Standard Test Method for Laboratory Measurement of the Sound Transmission Loss of Door Panels and Door System).

C. American Woodwork Institute (AWI).
   1. AWI/AWMAC/WI (AWS) -- Architectural Woodwork Standards.

D. Architectural Woodwork Manufacturers Association of Canada (AWMAC).

E. Florida Building Code, 2010 edition (FBC):
   1. FBC-B -- Florida Building Code, Building (including 2012 Supplement).

F. Intertek Testing Services NA, Inc. (ITS):
   1. ITS (DIR) -- Directory of Listed Products.

G. National Fire Protection Association (NFPA):
   1. NFPA 80 -- Standard for Fire Doors and Other Opening Protectives.
   2. NFPA 252 -- Standard Methods of Fire Tests of Door Assemblies.

H. Underwriters Laboratories Inc. (UL):
   1. UL (BMD) -- Building Materials Directory.
   2. UL 10B -- Standard for Fire Tests of Door Assemblies.
   3. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies.
   4. UL 1784 -- Standard for Air Leakage Tests of Door Assemblies.

I. Window and Door Manufacturers Association (WDMA):
   1. WDMA I.S.1-A -- Architectural Wood Flush Doors.

J. Woodwork Institute (WI).

1.04 SUBMITTALS

A. General:
   1. For submittal procedures, refer to Section 007200 - General Conditions (AIA A201 - 2007SP, including but not limited to Section 3.12) and Section 013000 - Administrative Requirements.

B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
   1. Include product data for doors; finishing specifications and materials; and product data for glass and glazing materials.

C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
   1. Illustrate door opening criteria; glazing details; hardware types and locations, and hardware blocking requirements and location.
   2. Provide the information required by AWI/AWMAC/WI (AWS).
   3. Include certification program label.

D. Specimen warranty.

E. Test Reports: Show compliance with specified requirements for the following:
   1. Sound-retardant doors and frames; sealed panel tests are not acceptable.

F. Samples:
   1. Door Construction Samples: Submit two samples of door construction, 12 x 12 inch (300 x 300 mm) in size cut from top corner of door.
   2. Finish Selection Samples (for factory pre-finishing):
      a. Submit wood veneer color charts illustrating available range of wood grains, stain colors, and sheens, for selection of up to four initial finishes.
      b. Submit samples of door veneer, 6 x 6 inch (150 x 150 mm) in size illustrating Architect's four initial finish selections.
      c. Make adjustments in finish characteristics (e.g., wood grain, stain color, sheen) per Architect's request, and resubmit samples of for final finish selection.
   3. Finish Verification Samples (for factory pre-finishing): Submit two samples of door veneer, 12 x 12 inch (300 x 300 mm) in size illustrating wood grain, stain color, and sheen.

G. LEED Report: Submit for wood products made from sustainably harvested wood (FSC-Certified), salvaged and reused wood, wood fabricated from recovered timber, and locally-sourced wood, as specified in Section 013515 - LEED Certification Procedures.

H. Manufacturer's Installation Instructions: Indicate special installation instructions.

I. Warranty, executed in Owner's name.

1.05 QUALITY ASSURANCE

A. Maintain one copy of the specified door quality standard on site for review during installation and finishing.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
   1. Company with at least one project in the past 5 years with value of woodwork within 20 percent of cost of woodwork for this Project.

C. Installed Fire Rated Assembly: Conform to NFPA 80 for fire rated class as indicated.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging. Inspect for damage.

C. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

1.07 WARRANTY

A. For additional warranty requirements, see Section 017800 - Closeout Submittals.

B. Interior Doors: Provide manufacturer's warranty for the life of the installation.

C. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Wood Veneer Faced Doors:
   1. Graham Wood Doors: www.grahamdoors.com.
   2. Eggers Industries: www.eggersindustries.com.
   3. Haley Brothers: www.haleybros.com.
   4. Marshfield Door Systems, Inc: www.marshfielddoors.com.

2.02 DOORS

A. All Doors:.
   1. Quality Level: Premium Grade, in accordance with AWI/AWMAC/WI (AWS).
   2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.

B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.
   1. Provide solid core doors at all locations.
   2. Fire Rated Doors: Tested to ratings indicated on drawings in accordance with FBC-B SECTION 715; UL or WH (ITS) labeled.
      a. Fire rated door assemblies required to have a minimum fire protection rating of 20 minutes where located in corridor walls or smoke barrier walls having a fire-resistance rating in accordance with FBC-B TABLE 715.4 shall be tested in accordance with NFPA 252 or UL 10C without the hose stream test.
   3. Smoke and Draft Control Doors: In addition to required fire rating, provide door assemblies tested in accordance with UL 1784 with maximum air leakage of 3.0

cfm per sq ft (0.01524 cu m/s/sq m) of door opening at 0.10 inch w.g. (24.9 Pa) pressure at both ambient and elevated temperatures; with "S" label; no additional gasketing or edge sealing allowed.

a. Smoke and draft control doors complying with UL 1784 shall be labeled in accordance with FBC-B SECTION 715.4.6.1 and shall show the letter “S” on the fire rating label of the door.

4. Sound Retardant Doors: Minimum STC of 35, calculated in accordance with ASTM E413, tested in accordance with ASTM E1408.
5. Wood veneer facing with factory transparent finish.

2.03 DOOR AND PANEL CORES

A. Non-Rated Solid Core and 20 Minute Rated Doors: Type structural composite lumber core (SCLC), plies and faces as indicated above.

B. Fire Rated Doors: Mineral core, Type FD, plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.

C. Sound Retardant Doors: Equivalent to Type PC construction with core as required to achieve rating specified; plies and faces as indicated above.

2.04 DOOR FACINGS

A. Wood Veneer Facing for Transparent Finish:
1. Grade Description: AA, in accordance with AWI P-200, Section 1300.
2. Specie and Cut: Plain Sliced Cherry
3. Vertical Edges: Same species as face veneer.
4. Matching:
a. Between Individual Pieces of Veneer: Book match.
b. Doors in Pairs Sets:
(1) Pair match each pair;
(2) Set match pairs within 10 feet (3 m) of each other when doors are closed.

B. Facing Adhesive: Type I - waterproof.

2.05 ACCESSORIES

A. Glazing Stops: Wood, of same species as door facing, butted corners; prepared for countersink style tamper proof screws.

B. Astragals for Non-Rated Double Doors: Steel, T shaped, overlapping and recessed at face edge.

C. Astragals for Fire Rated Double Doors: Steel, T shaped, overlapping and recessed at face edge, specifically for double doors.

2.06 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:

1. Provide solid blocks at lock edge and top of door for closer for hardware reinforcement.
2. Provide solid blocking for other through-bolted hardware.

C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

E. Provide edge clearances in accordance with the quality standard specified.

2.07 FACTORY FINISHING - WOOD VENEER DOORS

A. Finish work in accordance with AWI/AWMAC/WI (AWS), Section 5 - Finishing for Grade specified and as follows:
   1. Transparent:
      a. System - 11, Polyurethane, Catalyzed.
      b. Stain: As selected by Architect.
      c. Sheen: Satin.

B. Factory finish doors in accordance with approved sample.

C. Seal door top edge with color sealer to match door facing.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.02 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.
   1. Install fire-rated doors in accordance with NFPA 80 and UL requirements.

B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.

C. Use machine tools to cut or drill for hardware.

D. Coordinate installation of doors with installation of frames and hardware.

E. Coordinate installation of glazing.

3.03 TOLERANCES

A. Conform to specified quality standard for fit and clearance tolerances.

B. Conform to specified quality standard for telegraphing, warp, and squareness.

3.04 ADJUSTING

A. Adjust doors for smooth and balanced door movement.

B. Adjust closers for full closure.

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SECTION 000100

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D. Section 007200 - General Conditions:
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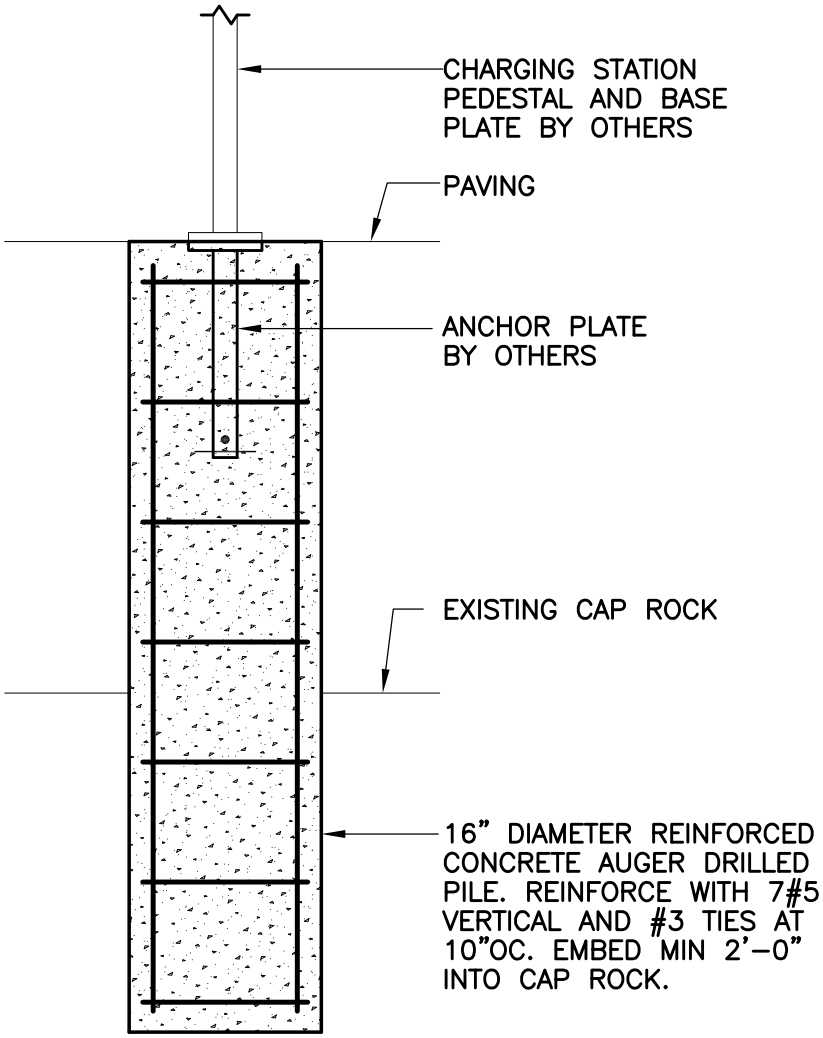

ELECTRICAL VEHICLE CHARGING STATION FOUNDATION

MARK J KEISTER PE 37435

SHEET TITLE	SCALE	REVISION	DATE
ELECTRIC VEHICLE CHARGING STATION FND			10/01/14

AES
6501 Arlington Expressway
Building B, Suite 201
Jacksonville, FL 32211
PH: 904.743.4633 FX: 904.725.9295
FL COA #791 SC COA #1691

PROJECT
KEY WEST CITY HALL
AT GLENN ARCHER
CITY OF KEY WEST

PROJECT NO. 312-295
WORK W/ SHEET
SKETCH NO. SK-1

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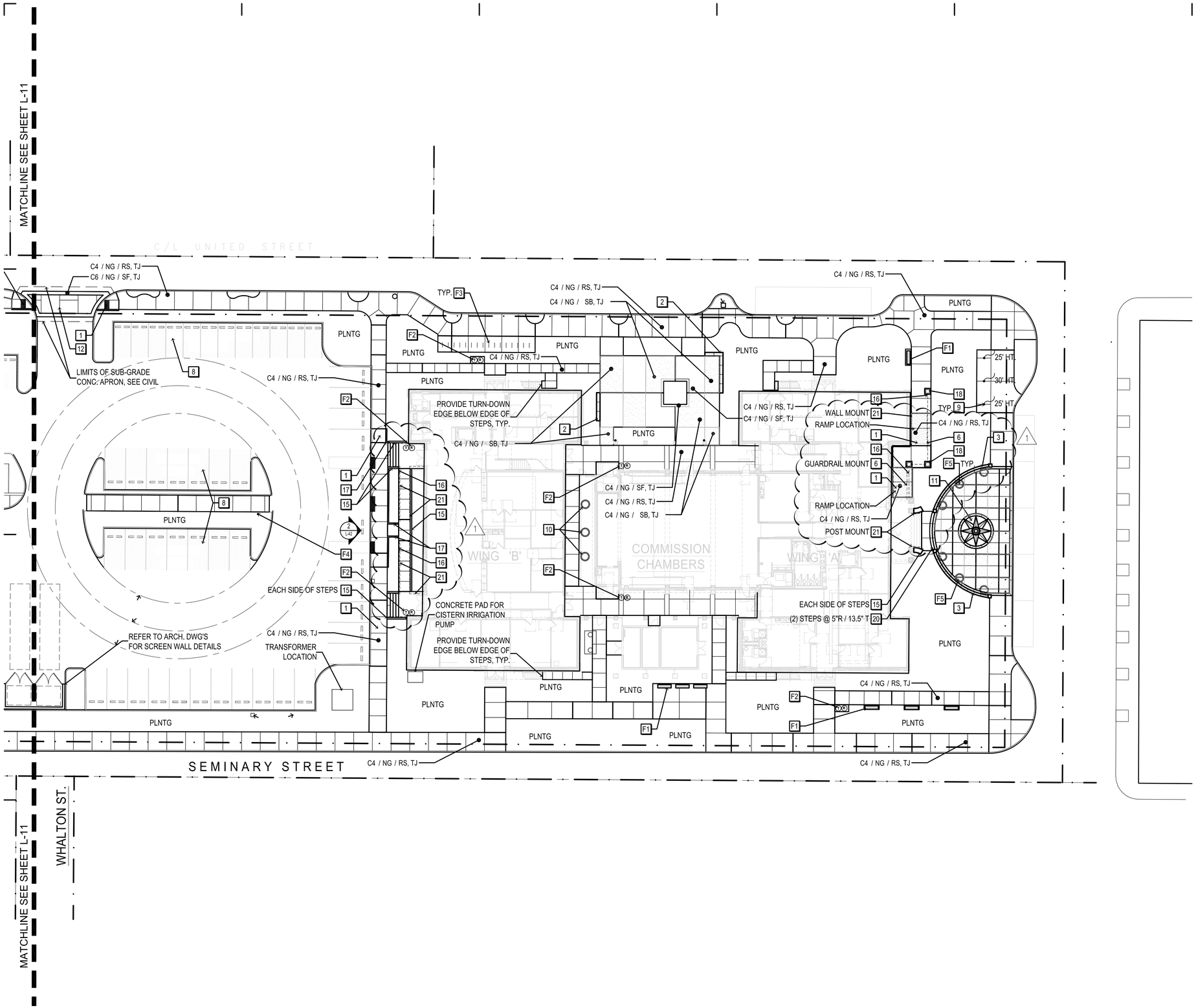

1 / L-10 HARDSCAPE PLAN
SCALE: 1"=20'-0"

SHEET NOTES

1. REFER TO SHEET NOTE #1 / L-12 FOR ALL SPECIALTY AGGREGATES TO BE USED IN CONCRETE PLACEMENT. SPECIALTY AGGREGATES ARE TO BE USED FOR FINISH WORK ONLY. LIMEROCK AGGREGATE IS ACCEPTABLE FOR ALL OTHER CONCRETE INSTALLATIONS, PROVIDED IN ADD-MIX.

2. THE CONTRACTOR SHALL PROVIDE A 4'X4' MOCK-UP IN THE FIELD OF EACH HARDSCAPE FLATWORK TYPE FOR REVIEW BY THE OWNER / LA PRIOR TO FINAL PLACEMENT OF PROPOSED CONCRETE SURFACES.

3. REFER TO CIVIL ENGR'S DWG'S FOR ALL DETAILS & REQUIREMENTS ASSOCIATED WITH ALL HANDICAP RAMPS

4. GEOPAVE POROUS PAVEMENT BY PRESTO GEOSYSTEMS, PERVIOUS PAVEMENT AT PARKING SPACES. SEE CIVIL DRAWINGS AND ARCHITECTURAL SITE PLAN.

SYMBOLS LEGEND

EJ -EXPANSION JOINT
CJ -CONTROL JOINT
PLNTG-PLANTING (SEE PLANT. PLANS)

MT /CLR/FIN
- FINISH
- COLOR
- MATERIAL

MATERIAL
A -ASPHALT
C4 -CONCRETE - 4" THICK
C6 -CONCRETE - 6" THICK
FS -FLAGSTONE- 2" THICK

COLOR
FS -FLORIDA SUNRISE
NG -NATURAL GRAY

FINISH
RS -ROCK SALT
SB -SAND BLAST; EXPOSED AGG.
SF -SPONGE FLOAT
TJ -TOOLED JOINTS
CL -CLEAVED FACE

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8. POROUS FLEXIBLE PAVEMENT SYSTEM- SEE NOTE #4 ABOVE
9. FLAGPOLE W/ FLAG (3) BY EDER FLAG MFG. COMPANY PH: 800.558.6044 www.ederflag.com -SEE DETAIL 2/L-41
10. PLANTER POTS- SEE SHEET L-13 / F-5 (QTY.9)
11. COMPASS ROSE - SEE HARDSCAPE ENLARGEMENTS FOR SPECIFICATIONS
12. CONCRETE CROSSWALK
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14. RELOCATED FRANK H. BUTLER, JR. MEMORIAL STONE
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16. DECORATIVE ANODIZED ALUM. GUARDRAIL- BLACK ANODIZED
17. 6"H X 6"W CONCRETE LANDSCAPE CURB
18. MASONRY COLUMN W/ PRECAST CAP & BASE- SEE DETAILS 1A, B & C/ L-43
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F7 PICNIC TABLE, SEE SHEET L-13

TRUE NORTH
PROJECT NORTH

PERMIT SET

REVISIONS:		
NO.	DESCRIPTION	DATE
1	ADDENDUM 2	10/02/14

KEY WEST CITY HALL AT GLYNN ARCHER

1300 WHITE STREET KEY WEST, FLORIDA
CITY OF KEY WEST

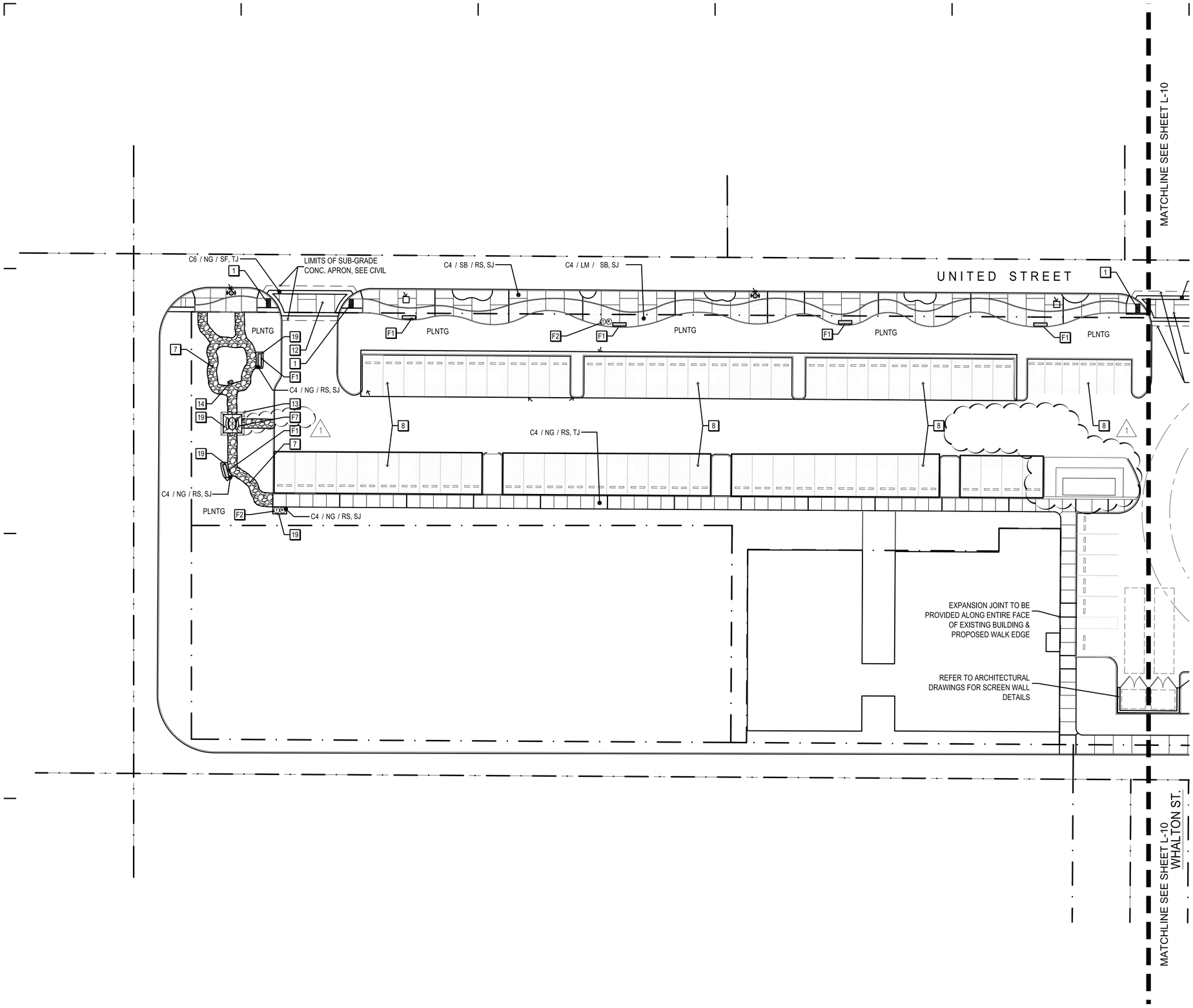
LITTLEJOHN ENGINEERING ASSOCIATES
P.O. BOX 1274 KEY WEST, FLORIDA 33041
PH: 305-294-9511 FAX: 305-294-9512 EMAIL: LEA@LEA-KEYWEST.COM
Kevin A. O'Donnell - President Kevin A. O'Donnell - President Kevin A. O'Donnell - President

410 Angela Street
Key West, Florida 33040
Telephone (305) 296-1347
Facsimilie (305) 296-2727
Florida License AAC002022

Bender & Associates ARCHITECTS *p.a.*

Project N.º 1305
SITE HARDSCAPE PLAN
Date: 10/02/14

L-10
OF



1 L-11 HARDSCAPE PLAN
SCALE: 1"=20'-0"

SHEET NOTES

1. REFER TO SHEET NOTE #1 / L-12 FOR ALL SPECIALTY AGGREGATES TO BE USED IN CONCRETE PLACEMENT. SPECIALTY AGGREGATES ARE TO BE USED FOR FINISH WORK ONLY. LIMEROCK AGGREGATE IS ACCEPTABLE FOR ALL OTHER CONCRETE INSTALLATIONS, PROVIDED IN ADD-MIX.

2. THE CONTRACTOR SHALL PROVIDE A 4'X4' MOCK-UP IN THE FIELD OF EACH HARDSCAPE FLATWORK TYPE FOR REVIEW BY THE OWNER / LA PRIOR TO FINAL PLACEMENT OF PROPOSED CONCRETE SURFACES.

3. REFER TO CIVIL ENGR'S DWG'S FOR ALL DETAILS & REQUIREMENTS ASSOCIATED WITH ALL HANDICAP RAMPS

4. GEOPAVE POROUS PAVEMENT BY PRESTO GEOSYSTEMS, PERVIOUS PAVEMENT AT PARKING SPACES. SEE CIVIL DRAWINGS AND ARCHITECTURAL SITE PLAN.

SYMBOLS LEGEND

EJ -EXPANSION JOINT
CJ -CONTROL JOINT
PLNTG-PLANTING (SEE PLANT. PLANS)

MT /CLR/FIN
FINISH
COLOR
MATERIAL

MATERIAL
A -ASPHALT
C4 -CONCRETE - 4" THICK
C6 -CONCRETE - 6" THICK
FS -FLAGSTONE- 2" THICK

COLOR
FS -FLORIDA SUNRISE
NG -NATURAL GRAY

FINISH
RS -ROCK SALT
SB -SAND BLAST; EXPOSED AGG.
SF -SPONGE FLOAT
TJ -TOOLED JOINTS
CL -CLEAVED FACE

1 HANDICAP RAMP- SEE CIVIL DWGS., C-3 FOR GRADING INFO.
2 18" WIDE SEATWALL -SEE DETAILS 1A & B/L-41
3 GARDEN WALL -SEE DETAIL 4/L-42
4 PEDESTRIAN BENCH- SEE SHEET L-13 / F1
5 BIKE RACK- SEE SHEET L-13 / F-3
6 LR5- LED ILLUMINATED HANDRAIL- BY COLE LIGHTING OR EQUAL, SEE DETAILS 3/L-41 & 1,2,3/L-42
7 FLAGSTONE GARDEN WALK- SEE DETAIL 4/L-40
8 POROUS FLEXIBLE PAVEMENT SYSTEM- SEE NOTE #4 ABOVE
9 FLAGPOLE W/ FLAG (3) BY EDER FLAG MFG. COMPANY PH: 800.558.6044 www.ederflag.com -SEE DETAIL 2/L-41
10 PLANTER POTS- SEE SHEET L-13 / F-5 (QTY.9)
11 COMPASS ROSE - SEE HARDSCAPE ENLARGEMENTS FOR SPECIFICATIONS
12 CONCRETE CROSSWALK
13 10'x10' "GABLE" SHADE STRUCTURE- SEE SHEET L-13 / F-6 (ADD ALT. ITEM)
14 RELOCATED FRANK H. BUTLER, JR. MEMORIAL STONE
15 P.I.P. CONCRETE WALL- SEE DETAIL 4 / L-41
16 DECORATIVE ANODIZED ALUM. GUARDRAIL- BLACK ANODIZED
17 6"H X 6"W CONCRETE LANDSCAPE CURB
18 MASONRY COLUMN W/ PRECAST CAP & BASE- SEE DETAILS 1A, B & C/ L-43
19 4" THICK CONCRETE PAD
20 CONCRETE STEPS
21 ALUMINUM HANDRAIL, SEE HANDRAIL SPECIFICATIONS & NOTES, SHEET L-41

FURNISHING LEGEND

F1 BENCH, SEE SHEET L-13
F2 TRASH, SEE SHEET L-13
F3 BIKE RACK, SEE SHEET L-13
F4 ASH URN, SEE SHEET L-13
F5 PLANTER, SEE SHEET L-13
F6 GAZEBO, SEE SHEET L-13 (ADD ALT. ITEM)
F7 PICNIC TABLE, SEE SHEET L-13

TRUE NORTH
PROJECT NORTH

PERMIT SET

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AT GLYNN ARCHER
1300 WHITE STREET KEY WEST, FLORIDA
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Project N º 1305
SITE HARDSCAPE PLAN
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L-11
OF

SHEET NOTES

1. EXPOSED AGGREGATE CONCRETE APPLICATIONS:

   BROWN RIVER ROCK AGGREGATE- 3 MM MIN. - 5 MM MAXIMUM SIZE

   OYSTER- SMALL CRUSHED SHELL AGGREGATE- 7MM MIN. - 12MM MAX.

   COQUINA- SMALL CRUSHED SHELL AGGREGATE- 5MM MIN.

   LIMEROCK AGGREGATE IS ACCEPTABLE FOR ALL OTHER CONCRETE APPLICATIONS, PROVIDED IN ADD-MIX.

2. THE CONTRACTOR SHALL PROVIDE A 4'X4' MOCK-UP IN THE FIELD OF EACH HARDSCAPE FLATWORK TYPE FOR REVIEW BY THE OWNER / LA PRIOR TO FINAL PLACEMENT OF PROPOSED CONCRETE SURFACES.

3. ALL CORAL STONE SHALL BE OF ARCHITECTURAL CAST TYPE, WATER JET CUT, FILLED & HONED OF HARD DENSITY, 3/4" MINIMUM THICKNESS & PLACED ON A 4" THICK CONCRETE SUB-BASE. CORAL STONE TO BE WATER JET CUT FOR ORTHOGONAL S.S. LETTERING PLACEMENT. SEALANTS & CAULKS TO BE PROVIDED BY CONTRACTOR PER MANUFACTURER'S RECOMMENDATIONS.

AVAILABLE THRU:
CORAL STONE USA
CONTACT: JOHN
PH. 615.587.1259
coralstone2008@yahoo.com

4. REFER TO THE CIVIL ENGINEER'S DRAWINGS FOR GRADING INFORMATION- SHEET C-3.

SYMBOLS LEGEND

EJ -EXPANSION JOINT
CJ -CONTROL JOINT
PLNTG-PLANTING (SEE PLANT. PLANS)

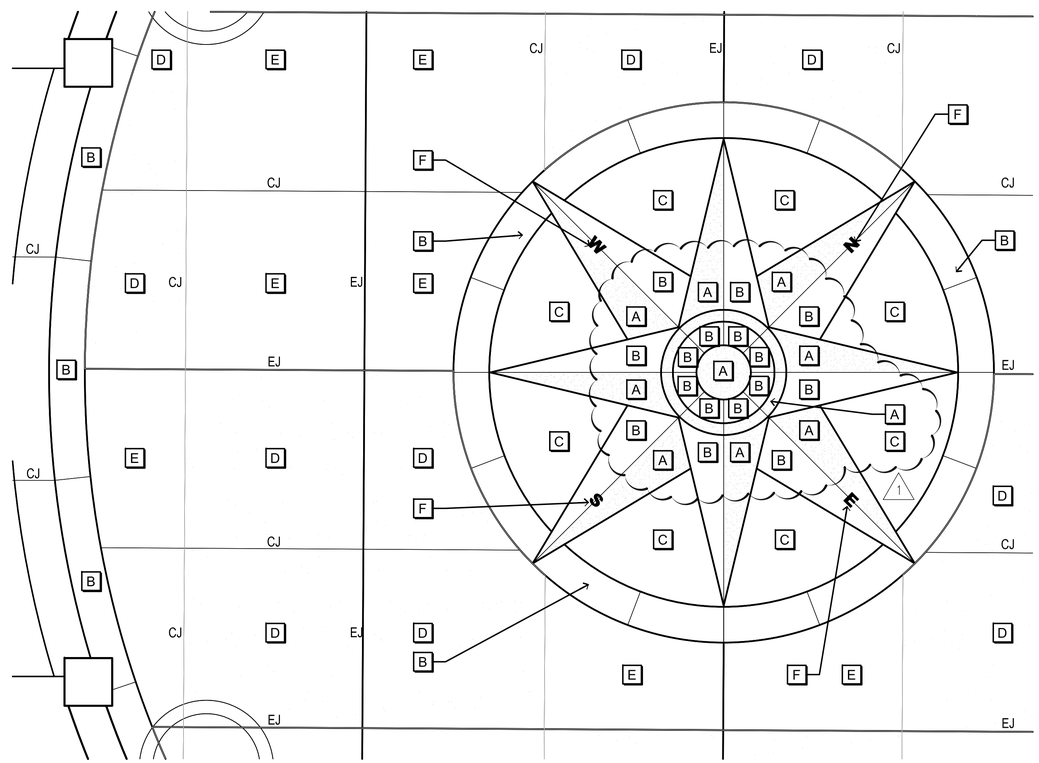
MT /CLR/FIN
- FINISH
- COLOR
- MATERIAL

MATERIAL
- A -ASPHALT
- C4 -CONCRETE - 4" THICK
- C6 -CONCRETE - 6" THICK
- FS -FLAGSTONE- 2" THICK

COLOR
- FS -FLORIDA SUNRISE
- NG -NATURAL GRAY

FINISH
- RS -ROCK SALT
- SB -SAND BLAST; EXPOSED AGG.
- SF -SPONGE FLOAT
- TJ -TOOLED JOINTS
- CL -CLEAVED FACE

- A — ARCHITECTURAL CAST CORAL- COLOR: PINK
- B — ARCHITECTURAL CAST CORAL- COLOR: CLASSIC
- C — EXPOSED AGGREGATE CONCRETE- NATURAL GRAY W/ OYSTER SHELL LIGHT SAND-BLAST
- D — EXPOSED AGGREGATE CONCRETE- NATURAL GRAY W/ 1/4" PEA GRAVEL LIGHT SAND-BLAST
- E — EXPOSED AGGREGATE CONCRETE- NATURAL GRAY W/ LIME ROCK LIGHT SAND-BLAST
- F — 3/4" THICK, 316 MARINE GRADE S.S. DIRECTIONAL LETTERING (N,E,S & W)



1 / L-12 HARDSCAPE PLAN ENLARGEMENT
SCALE: 1/2"=1'-0"

TRUE NORTH
PROJECT NORTH

PERMIT SET

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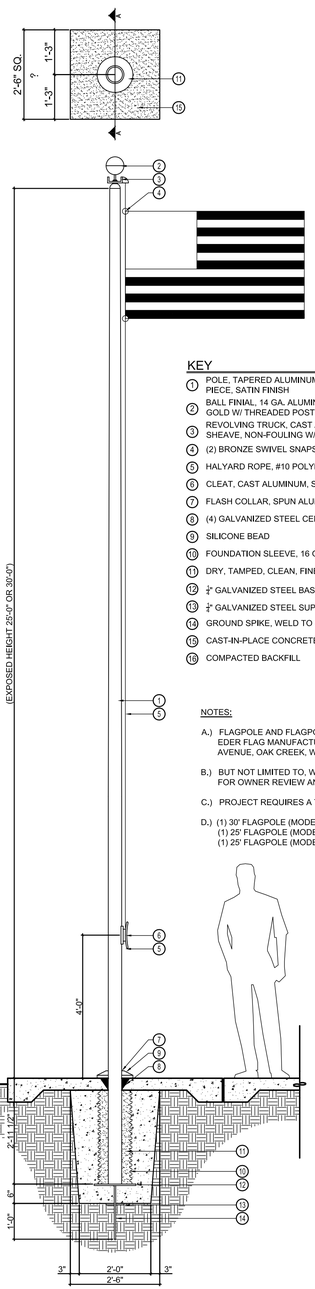
Project N.º 1305

SITE HARDSCAPE PLAN ENLARGEMENTS

Date: 10/02/14

L-12

OF



KEY

1. POLE, TAPERED ALUMINUM (6063-T6), SINGLE PIECE, SATIN FINISH
2. BALL FINIAL, 14 GA. ALUMINUM ANODIZED GOLD W/ THREADED POST
3. REVOLVING TRUCK, CAST ALUMINUM, SINGLE SHEAVE, NON-FOULING W/ STAINLESS STEEL BEARINGS.
4. (2) BRONZE SWIVEL SNAPS W/ COVERS
5. HALYARD ROPE, #10 POLYESTER, WHITE
6. CLEAT, CAST ALUMINUM, STANDARD DUTY
7. FLASH COLLAR, SPUN ALUMINUM
8. (4) GALVANIZED STEEL CENTERING WEDGES
9. SILICONE BEAD
10. FOUNDATION SLEEVE, 16 GA. CORRUGATED HOT DIP GALVANIZED
11. DRY, TAMPED, CLEAN, FINE BUILDERS SAND
12. ½" GALVANIZED STEEL BASE PLATE
13. ½" GALVANIZED STEEL SUPPORT PLATE
14. GROUND SPIKE, WELD TO SUPPORT PLATE
15. CAST-IN-PLACE CONCRETE FOOTING (3,000 PSI)
16. COMPACTED BACKFILL

NOTES:

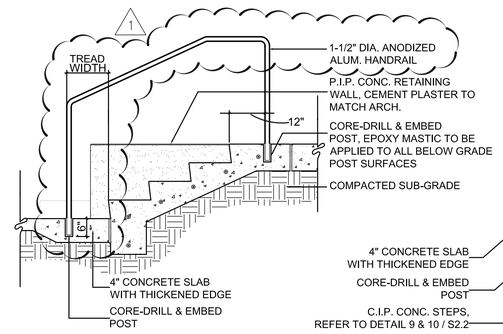
A.) FLAGPOLE AND FLAGPOLE ACCESSORIES AS MANUFACTURED BY EDER FLAG MANUFACTURING COMPANY, 1000 W. RAWSON AVENUE, OAK CREEK, WI 53154 (800)558-6044 OR OWNER APPROVED EQUAL.

B.) BUT NOT LIMITED TO, WINDLOAD DATA AND WARRANTY INFORMATION, FOR OWNER REVIEW AND APPROVAL PRIOR TO PROCUREMENT.

C.) PROJECT REQUIRES A TOTAL OF 3 FLAGPOLES (2 @ 25', 1 @ 30')

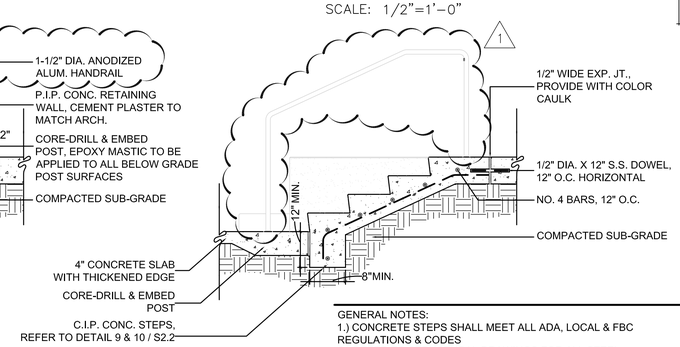
D.) (1) 30' FLAGPOLE (MODEL # EC 30 IH) (AMERICAN FLAG 5'x8')- CENTER
(1) 25' FLAGPOLE (MODEL # EC 25 IH) (STATE OF FLORIDA FLAG 4'x6')- SIDE
(1) 25' FLAGPOLE (MODEL # EC-25 IH) (CITY OF KEY WEST FLAG 4'x6')- SIDE

FLAG POLE DETAIL 2
SCALE: 1/2"=1'-0" L41



CONCRETE STEPS SHOWN WITH 13.5" TREAD/ 6.25" RISER (SEE CIVIL DRAWINGS- SHEET C3 FOR SPECIFIC STEP REQUIREMENTS)

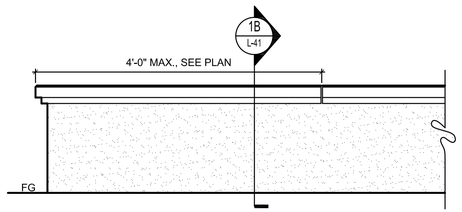
Ⓐ Section @ Handrail Embedment



GENERAL NOTES:
1.) CONCRETE STEPS SHALL MEET ALL ADA, LOCAL & FBC REGULATIONS & CODES
2.) REFER TO STRUCTURAL DRAWINGS FOR ALL STEEL REINFORCEMENT DETAILS & STRUCTURAL NOTES- SHEET S2.2
3.) ALL HANDRAIL POSTS TO BE INSTALLED WITH NON-METALLIC / NON-SHRINK GROUT & CLEAR CAULK
4.) CONTRACTOR TO VERIFY ALL DIMENSIONS & LAYOUT IN THE FIELD PRIOR TO FABRICATION.
5.) NO HANDRAIL EXTENSIONS SHALL EXTEND INTO INTERSECTING WALKS.

Ⓑ Section Thru Steps

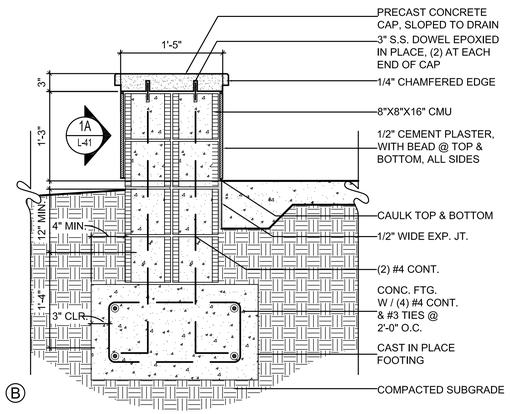
SECTION THRU CHEEK WALL 4
SCALE: 1/2"=1'-0" L41



NOTES:
-ALL WALL DIMENSIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
-CEMENT PLASTER COLOR FOR ALL FACE OF WALLS & COLUMNS TO MATCH BUILDING FACADE.
-VERTICAL CONTROL JOINTS TO BE PROVIDED FOR ALL WALLS @ 10'-0" O.C., MAX.
-POSITIVE DRAINAGE TO BE PROVIDED AWAY FROM EACH FACE OF ALL WALLS.

Ⓐ

SECTION THRU STEPS @ N.E. BUILDING ENTRY 3
SCALE: 1/2"=1'-0" L41



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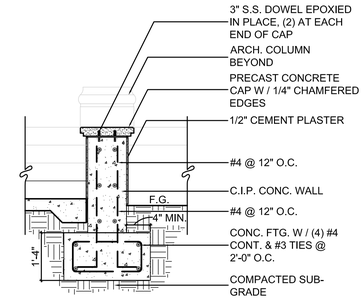

SECTION THRU SEAT WALL 1
SCALE: 1"=1'-0" L41

SHEET NOTES:

1. ALL EXPANSION JOINTS TO BE CAULKED, COLORED CAULK USED IN JOINTS TO MATCH ADJACENT PAVING. CONTRACTOR TO SUBMIT SAMPLE(S) TO OWNER/LANDSCAPE ARCHITECT FOR REVIEW & APPROVAL PRIOR TO INSTALLATION.

2. EXPANSION JOINTS TO BE PROVIDED IN CONCRETE AT A MINIMUM DISTANCE OF 30'-0" ON CENTER.

3. ALL DIMENSIONS TAKEN FROM FACE OF WALL / CURB UNLESS NOTED OTHERWISE ON PLAN.

4. CONTRACTOR TO PROVIDE 4' X 4' MOCK-UP OF EACH HARDSCAPE FLATWORK ELEMENT. EACH MOCK-UP SHALL INCLUDE THE COLOR, FINISH, TYPICAL CONTROL AND EXPANSION JOINT PATTERN AND COLORED CAULK. ALL MOCK-UPS SHALL BE CONSIDERED A PART OF THE SUBMITTAL PROCESS AND REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER, PRIOR TO INSTALLATION.

5. SEE ARCHITECTURAL DRAWINGS FOR ALL DETAILS ASSOCIATED WITH DUMPSTER AREA SCREEN WALL & ACCESS GATES.

6. REFER TO CIVIL ENGINEER'S DWG'S FOR GENERAL SITE GRADING INFORMATION.

7. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW FOR ALL PRECAST CAPS PRIOR TO FABRICATION.

HANDRAIL SPECIFICATIONS & NOTES:

1. ALL HANDRAILS AND MOUNTING BRACKETS SHALL BE CLASS I NATURAL ANODIZED ALUMINUM FINISH: AAMA 611 AA-M12C22A41 CLEAR ANODIC COATING. ALL OTHER RAILING SYSTEM COMPONENTS (GUARDRAILS AND CAPS, BALUSTRADES, TOP AND BOTTOMS HORIZONTAL RAILS, POSTS, ETC.) SHALL BE CLASS I COLOR ANODIZED ALUMINUM FINISH: AAMA 611 AA-M12C22A42 INTEGRALLY COLORED ANODIC COATING OR AAMA 612 ELECTROLYTICALLY DEPOSITED COLORED ANODIC COATING WITH ELECTROLYTICALLY DEPOSITED ORGANIC SEAL; COLOR: BLACK.

2. ALL HANDRAIL POSTS ARE TO BE INSTALLED IN RAMP SURFACE WITH CORE-DRILL METHODS, CONTRACTOR TO PROVIDE NON-SHRINK GROUT, CLEAR CAULK TO BE APPLIED AT ALL LOCATIONS

3. HANDRAILS FOR ALL STEPS & RAMPS SHALL COMPLY WITH SECTION 505 OF THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN & RELATED FBC.

4. HEIGHT OF HANDRAILS SHALL BE 36" IN HEIGHT MEASURED FROM TOP OF TREAD OR TOP OF SLAB.

5. ALL HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION GRIPPING SURFACE WITH AN O.D. OF 1-1/2".

6. ALL HANDRAILS SHALL EXTEND HORIZONTALLY 12 INCHES MIN. BEYOND THE NOSING OF THE LAST TREAD.

7. HANDRAILS SHALL EXTEND AT THE BOTTOM OF EACH STAIR FLIGHT FOR A HORIZONTAL DISTANCE AT LEAST EQUAL TO ONE TREAD DEPTH BEYOND THE LAST RISER NOSING.

8. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION OF ALL METAL WORK.

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CITY OF KEY WEST

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P.O. BOX 1123 KEY WEST, FLORIDA 33041
P: 305.293.0772 F: 305.293.0773 CA: 26000
E-mail: info@littlejohnassociates.com
Florida LC Licensed Professional Firm ■ Florida LC Licensed Professional Firm Code

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Bender & Associates ARCHITECTS p.a.

Project N º 1305
SITE HARDSCAPE DETAILS
Date: 10/02/14

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L-41
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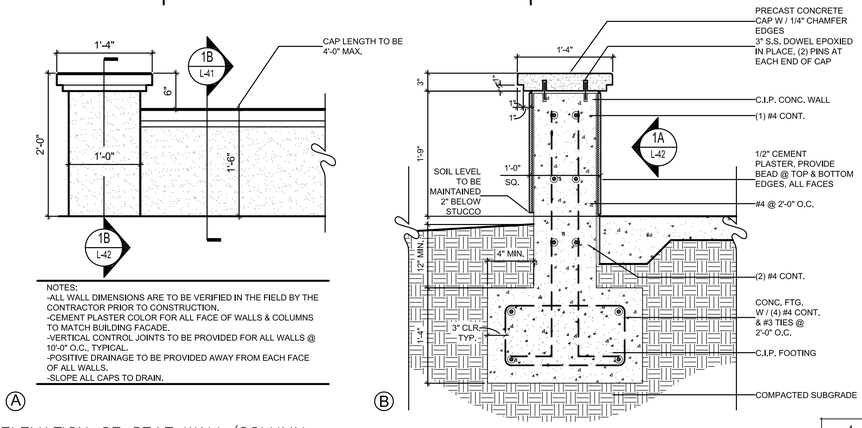
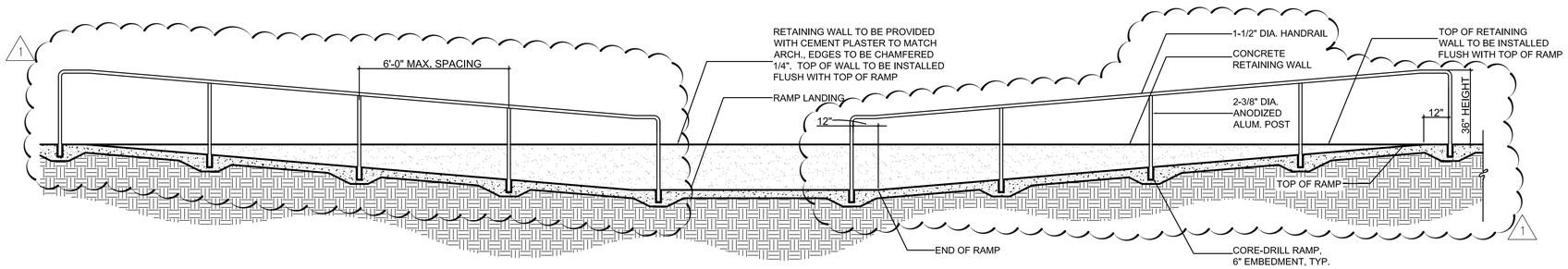


ELEVATION OF SEAT WALL/COLUMN

SCALE: 1"=1'-0"

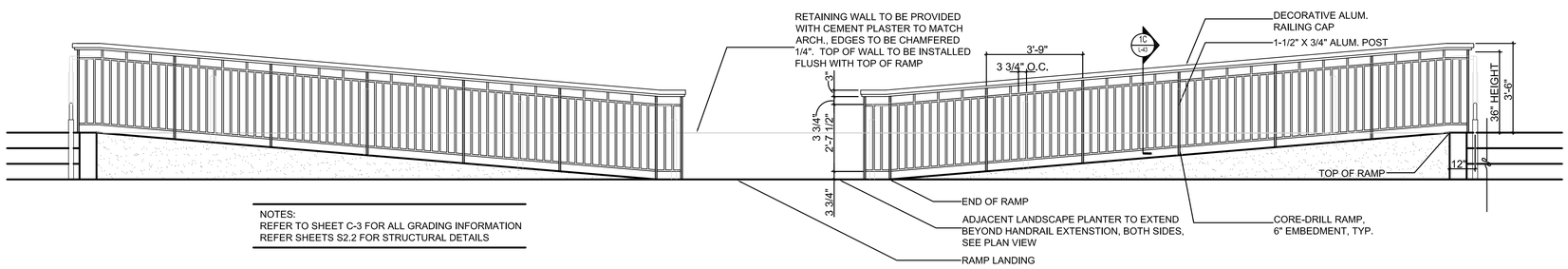
4 L42



ELEVATION OF ADA ACCESSIBLE RAMP @ REAR OF BUILDING

SCALE: 3/8"=1'-0"

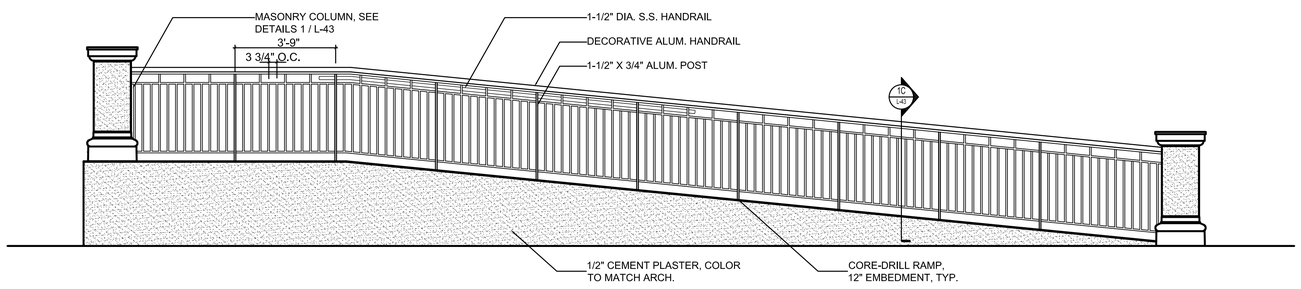
3 L42



INTERIOR ELEVATION OF ADA ACCESSIBLE RAMP @ REAR OF BUILDING

SCALE: 3/8"=1'-0"

2 L42



EXTERIOR ELEVATION OF ADA ACCESSIBLE RAMP @ FRONT OF BUILDING

SCALE: 3/8"=1'-0"

1 L42

SHEET NOTES:

1. ALL EXPANSION JOINTS TO BE CAULKED, COLORED CAULK USED IN JOINTS TO MATCH ADJACENT PAVING. CONTRACTOR TO SUBMIT SAMPLE(S) TO OWNER/LANDSCAPE ARCHITECT FOR REVIEW & APPROVAL PRIOR TO INSTALLATION.

2. EXPANSION JOINTS TO BE PROVIDED IN CONCRETE AT A MINIMUM DISTANCE OF 30'-0" ON CENTER.

3. ALL DIMENSIONS TAKEN FROM FACE OF WALL / CURB UNLESS NOTED OTHERWISE ON PLAN.

4. CONTRACTOR TO PROVIDE 4' X 4' MOCK-UP OF EACH HARDSCAPE FLATWORK ELEMENT. EACH MOCK-UP SHALL INCLUDE THE COLOR, FINISH, TYPICAL CONTROL AND EXPANSION JOINT PATTERN AND COLORED CAULK. ALL MOCK-UPS SHALL BE CONSIDERED A PART OF THE SUBMITTAL PROCESS AND REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER, PRIOR TO INSTALLATION.

5. SEE ARCHITECTURAL DRAWINGS FOR ALL DETAILS ASSOCIATED WITH DUMPSTER AREA SCREEN WALL & ACCESS GATES.

6. REFER TO CIVIL ENGINEER'S DWG'S FOR GENERAL SITE GRADING INFORMATION.

7. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW FOR ALL PRECAST CAPS PRIOR TO FABRICATION.

HANDRAIL SPECIFICATIONS & NOTES:

1. ALL HANDRAILS AND MOUNTING BRACKETS SHALL BE CLASS I NATURAL ANODIZED ALUMINUM FINISH: AAMA 611 AA-M12C22A41 CLEAR ANODIC COATING. ALL OTHER RAILING SYSTEM COMPONENTS (GUARDRAILS AND CAPS, BALUSTRADES, TOP AND BOTTOMS HORIZONTAL RAILS, POSTS, ETC.) SHALL BE CLASS I COLOR ANODIZED ALUMINUM FINISH: AAMA 611 AA-M12C22A42 INTEGRALLY COLORED ANODIC COATING OR AAMA 612 ELECTROLYTICALLY DEPOSITED COLORED ANODIC COATING WITH ELECTROLYTICALLY DEPOSITED ORGANIC SEAL; COLOR: BLACK.

2. ALL HANDRAIL POSTS ARE TO BE INSTALLED IN RAMP SURFACE WITH CORE-DRILL METHODS, CONTRACTOR TO PROVIDE NON-SHRINK GROUT, CLEAR CAULK TO BE APPLIED AT ALL LOCATIONS

3. HANDRAILS FOR ALL STEPS & RAMPS SHALL COMPLY WITH SECTION 505 OF THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN & RELATED FBC.

4. HEIGHT OF HANDRAILS SHALL BE 36" IN HEIGHT MEASURED FROM TOP OF TREAD OR TOP OF SLAB.

5. ALL HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION GRIPPING SURFACE WITH AN O.D. OF 1-1/2".

6. ALL HANDRAILS SHALL EXTEND HORIZONTALLY 12 INCHES MIN. BEYOND THE NOSING OF THE LAST TREAD.

7. HANDRAILS SHALL EXTEND AT THE BOTTOM OF EACH STAIR FLIGHT FOR A HORIZONTAL DISTANCE AT LEAST EQUAL TO ONE TREAD DEPTH BEYOND THE LAST RISER NOSING.

8. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION OF ALL METAL WORK.

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Bender & Associates ARCHITECTS p.a.

Project No 1305

SITE HARDSCAPE DETAILS

Date: 10/02/14

PERMIT SET

L-42

OF

ZHLA.36
Windstorm-rated Assemblies

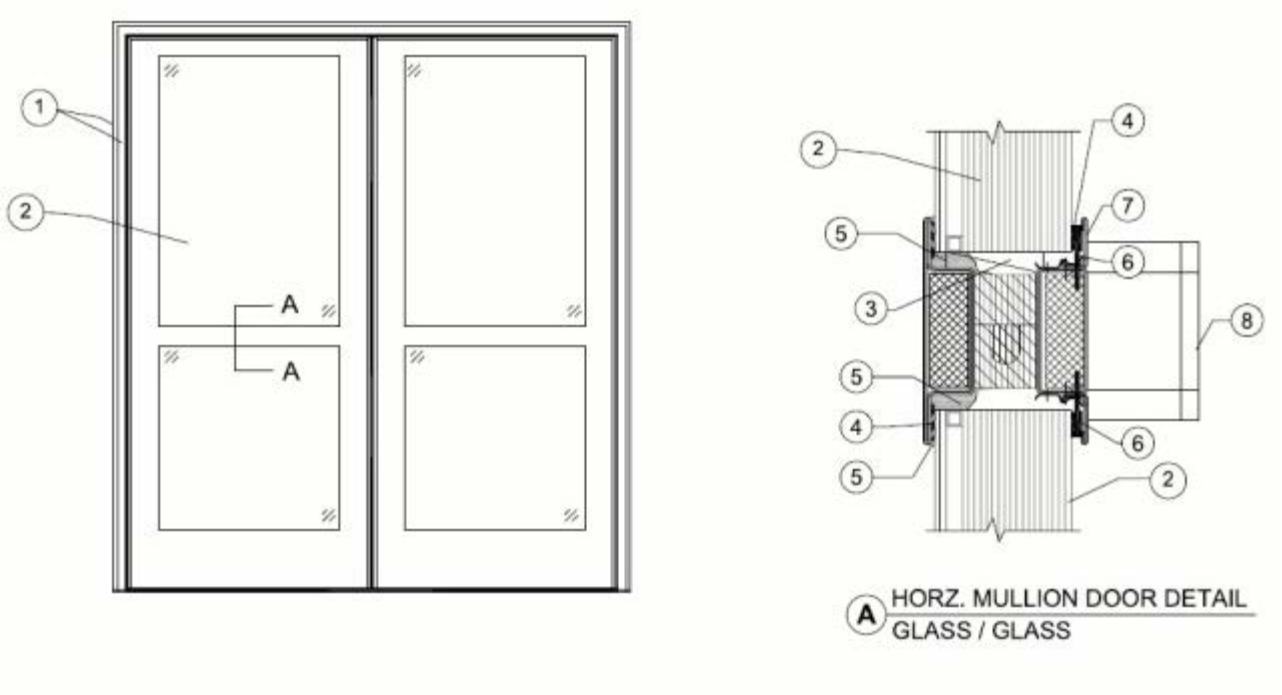
Page Bottom

Windstorm-rated Assemblies

See General Information for Windstorm-rated Assemblies

Assembly No. 36

March 21, 2014



Standard	Rating
ASTM E1886, ASTM E1996, ASTM E330, TAS 201, TAS 202, TAS 203	Design Pressure +/- 65 psf Large Missile Impact, 350 ft.lbs

1. **Swinging Door and Frame for Windstorm Rated Assembly* —** Max door opening size 84 in. (2134 mm) wide by 96 in. (2438 mm) height for pairs or 42 in. (1067 mm) wide by 96 in. (2438 mm) height for single door. Door has integral openings for glazing (see Item 2). Frame is three sided and supplied with the door. Door, glazing and frame assembly to be installed per manufacturer installation instructions.

VETROTECH SAINT-GOBAIN NORTH AMERICA INC (View Classification) — VDS (-HI) Door System

2. **Glazing Material for Windstorm Rated Assembly* —** Supplied with door for field installation in accordance with manufacturer installation instructions. Min 1-3/4 in. (44 mm), 2-1/8 in. (54 mm) or 2-3/16 in. (56 mm) thickness laminated glass supplied in various sizes. Max exposed glass area per leaf not to exceed 17.1 ft^2 (1.59 m^2), max exposed glass area per opening not to exceed 10.2 ft^2 (0.95 m^2) with max exposed dimensions of 31-5/16 in. (79.6 cm) wide and 46-7/8 in. (119.1 cm) high. Glazing supplied with 2.25 mm thick self-adhesive intumescent tape (not shown) which is used to line the perimeter of the glass; width of tape to be same width as the glazing material.

VETROTECH SAINT-GOBAIN NORTH AMERICA INC (View Classification) — Contraflam 60 HI (IGU) or Contraflam 90 HI (IGU)

3. **Setting Blocks —** Glazing supplied with setting blocks (hardwood, calcium silicate or neoprene plastic) for setting of glass. Two setting blocks to be used at bottom of each glazed opening at nom quarter points.

4. **Gasket —** Supplied by door manufacturer. Closed cell foam glazing tape applied around perimeter of glass (both faces of door) for setting into the stops. Glass is set on setting blocks (Item 3) and located against a full back bedding of Dow Corning 995 sealant.

5. **Sealant —** Supplied by door manufacturer. Glass is set on setting blocks (Item 3) and located against and a full back bedding of Dow Corning 995 sealant.

6. **Securing Plates —** Nom 2-1/2 by 1 in. (64 by 25 mm) by 16 ga steel plates supplied with the door. Two securing plates are placed at quarter points on each side, top and bottom of glazed opening on push side of door to retain the glass. Plate is secured to door frame with #8 by 1/2 in. (13 mm) self drill tech screw (SRT) per manufacturer installation instructions.

7. **Glazing Beads —** Min 16 ga galvanized steel by 13/16 in. (20 mm) high beads of various sizes, cut to fit tightly along the perimeter of one face (push side of door) of glazing material. Secured to framing member with two #8 by 1/2 in. (13 mm) self drill tech screws (SRT) located max 6 in. (152 mm) from each corner.

8. **Latching Hardware* —** Latching hardware for pairs of doors is factory or field supplied for field installation in accordance with manufacturer installation instructions.

VON DUPRIN L L C (View Classification) — Model WS9927F Surface Vertical Mount Exit Hardware

8A. **Latching Hardware* —** Latching hardware for single doors is factory or field supplied for field installation in accordance with manufacturer installation instructions.

SARGENT MFG CO (View Classification) — Model HC8800F Surface Rim Exit Device

9. **Hinges —** (Not Shown) Three VSG concealed hinges are supplied with the doors and located within the door pockets at hinge stile in accordance with the door manufacturer instructions.

10. **Wall —** Not Shown. Adjoining wood stud, steel stud or masonry wall or steel structure.

*Bearing the Certification Mark of UL

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Products for Use in Windstorm-rated Assemblies

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Products for Use in Windstorm-rated Assemblies

See General Information for Products for Use in Windstorm-rated Assemblies

VETROTECH SAINT-GOBAIN NORTH AMERICA INC R27724
SUITE 110
2108 B ST NW
AUBURN, WA 98001 USA

Product	Assembly No.	Test Method	Ratings
Model VDS Curtain Wall (may include "HI" suffix)	35	ANSI/ASTM E330, TAS 202, TAS 203	+/- 65 psf
		ANSI/ASTM E1886, ASTM E1996, TAS 201	Large Missile Impact, +/- 65 psf
Model VDS Door System for Use in VDS Curtain Wall (VDS may include "HI" suffix)	35	ANSI/ASTM E330, TAS 202, TAS 203	+/- 65 psf
		ANSI/ASTM E1886, ASTM E1996, TAS 201	Large Missile Impact, +/- 65 psf
Model VDS Door System (may include "HI" suffix)	36	ANSI/ASTM E330, TAS 202, TAS 203	+/- 65 psf
		ANSI/ASTM E1886, ASTM E1996, TAS 201	Large Missile Impact, +/- 65 psf
Glazing Material for Use in Windstorm Rated Assemblies, Contraflam 60 HI (IGU) Contraflam 90 HI (IGU) and Contraflam 120 HI (IGU)	35, 36	ANSI/ASTM E330, TAS 202, TAS 203	+/- 65 psf
		ANSI/ASTM E1886, ASTM E1996, TAS 201	Large Missile Impact, +/- 65 psf

Last Updated on 2014-03-03

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