

ADDENDUM NO: 02

Date Issued: December 4, 2015

Re: Red Rocks Community College Student Recreation Center

Construction Documents, Dated November 9, 2015

Architect's Project No. 15803.00

This Addendum is part of the construction Documents and contains additions, deletions, changes, and clarifications to Construction Documents dated November 9, 2015. Items noted herein shall be included in the Work and all bids submitted. Bidders shall acknowledge receipt of this Addendum in their bid.

SUBSTITUTION REQUESTS:

- ADD. #1-1. Add the following as an approved manufacturer to Specification 07 4213.23 Metal Composite Wall Panels.
 - 1. 07 4213.23_2.2_A1_b: Alucoil North America: Larson
- ADD. #1-2. Add the following as approved manufacturers to Specification 08 4513 Structured-Polycarbonate-Panel Assemblies
 - 1. 08 4513_2.2_A1_b: Extech Exterior Technologies, Inc: Interconnecting Polycarbonate Wall System 40 mm. Model 3440
 - 2. 08 4513_2.2_A1_c: Gallina USA, LLC / Crystal Structures: Arco Plus 547 40 mm.
- ADD. #1-3. Add the following product as an alternative alternate to products specified in 09 0500 FLOOR PREPERATION.
 - 1. 09 0500_2.1_A_3: US Concrete: Aridus Rapid-Drying Concrete
- ADD. #1-4. 09 2216 NON-STRUCTURAL METAL FRAMING:
 - 1. Add ClarkDietrich Building Systems to 09 2216_2.2_B.1.a as an approved manufacturer.
 - Add the following product as a replacement to product specified in 09 2216 – NON-STRUCTURAL METAL FRAMING – Slip-Type Head Joints.
 - i 09 2216_2.2_C4_a3: ClarkDietrich Building Systems;
 MaxTrak or BlazeFrame.
 - Add ClarkDietrich Building Systems: MaxTrak or BlazeFrame to 09 2216_2.2_D.1

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- ADD. #1-5. Add Aacer Flooring as an approved manufacturer to the following specifications:
 - 1. 09 6466 2.1 A2 Wood Athletic Flooring. Product: Aacer Flex
- ADD. #1-6. Add Engineered Air as an approved manufacturer to the following specifications: 23 75 13 2.1 A.
- ADD. #1-7. FDG Major Industries for 08 4513 Structured-Polycarbonate-Panel Assemblies Not Approved.
- ADD. #1-8. Maglin Site Furniture for Division 12 SITE FURNISHINGS Not Approved.

BID QUESTIONS:

- ADD. #1-9. Sheet C-510 shows a sump pit manhole and force-main at the SW corner of the addition with references to plumbing drawings for details. This information is not included on the plumbing drawings. Please provide info on the sump pit and any related pumps or piping. RESPONSE: Sump Pump information has been included in Addendum 02.
- ADD. #1-10. On Sheet A-802 Interior Elevations at A1 Entry Lobby Looking West, please clarify what the difference is between WVF1, WFM1, and WFM that fall between grid lines 1.1 and 2.5 approximately. RESPONSE:

 Please see updated A-802 attached. There is a Window Film

 Graphic (WFM) on Glazing and a Vinyl Film Graphic (VWG) on Gyp Board.
- ADD. #1-11. The Window Film Hatch Legend on Sheet A-802 does not provide a tag to identify the different types of Window Film to be installed at the appropriate locations. Please provide additional information.
 RESPONSE: The Hatch Legend represents various opacities for WFM and VWG.
- ADD. #1-12. What does VCG stand for on Sheet A-802 at Elevation A1 approximately between grid lines 2 and 2.5? RESPONSE: Revised to VWG (Vinyl Wall Graphic) on Sheet A-802 and included Finish Code in Finish Legend on A-600.
- ADD. #1-13. The Project Information for Bidders was issued separately from the contract documents. This document provides direction on contract form, liquidated damages and various other items. Please issue the "Project Information for Bidders" via addendum to formally incorporate

it and the information it contains in to the contract documents. **RESPONSE: Project Information for Bidder is attached.**

- ADD. #1-14. Is a payment & performance bond is required for this project?

 RESPONSE: Yes, both are required, plus a Bid Bond. The following forms are attached:
 - 1. Bid Bond State Form SBP-6.14
 - 2. Labor and Material Payment Bond SC-6.221
 - 3. Performance Bond State Form SC-6.22
- ADD. #1-15. Please confirm this project is exempt from state, county and local sales tax. **RESPONSE: Yes, project is exempt.**
- ADD. #1-16. Please reference sections 312000, 312333 and similar. Per industry standards Geotechnical Reports are "For information only" documents and are not contract documents. However the previously mentioned specification sections reference these documents as if they are contract documents. Please remove all references to the Geotechnical Report (other than for reference only)as a contract document and indicate all required work within the contract documents (plans and specifications). RESPONSE: Geotechnical Report has been included for reference only. On Specifications Table of Contents, ADD "FOR REFERENCE ONLY", to Appendix A Geotechnical Subsurface Exploration Program.
- ADD. #1-17. Please issue a complete list of the General Contractors who are prequalified to bid this project within the next addendum so they be known to all subcontractor bidders. **RESPONSE**:
 - 1. JHL Constructors, Inc
 - 2. Mark Young Construction, Inc.
 - 3. Nunn Construction, Inc.
 - 4. Pinkard Construction
 - 5. W.E. O'Neil Construction Company of Colorado
- ADD. #1-18. Although stated during the subcontractor walk through on Friday November 20th, 2015, that there is no anticipation of hazardous materials at the demo locations, please confirm that if hazardous materials are found, it is the owner's responsibility to remove.

 RESPONSE: Confirmed, please review attached Terms and Conditions for specifics.
- ADD. #1-19. Please reference section 312000.1.2.A.2. Please define location and quantities of existing on-site unsatisfactory soil materials to be replaced that is to be included within the bid. **RESPONSE: Satisfactory and**

Unsatisfactory Soils are defined in specification section 312000.2.1.B & C. Reference the geotechnical report for anticipated soil conditions.

- ADD. #1-20. Please reference section 312000.1.3.J and K. For the purpose of the bid shall the existing soils be used for fill and structural fill?

 RESPONSE: Specification section K referenced below indicates that on-site material may be used if approved by Geotechnical Engineer. Geotechnical report pages 23 and 36 indicate that on-site generated materials or approved import materials may be used.
- ADD. #1-21. Spec section 312000.3.5.A.2. references a 5' removal and recompact similar to what is recommended by the for information only Geotechnical Report. The Slab-on-grade notes on Sheet S-101 allows the slab-on-grade to be placed on native undisturbed soil. The Geotechnical report recommends scarifying and recompacting to 12" slab-on-grade used with a deep foundation system on page 11, paragraph 3 of the report. Please provide direction on what, if any, below slab-on-grade over excavation and recompact is required. RESPONSE: Refer to specification section 312000.3.5.A.2 for direction on below slab-on-grade over-excavation that is required.
- ADD. #1-22. Spec section 31 2000-10 under section 3.8 B., if the owner's representative and geotechnical consultant determines that continued excavation is required; will the contractor receive compensation in the form of a change order? If not, what quantity of unsatisfactory soils shall be included within the bid? RESPONSE: Refer to specification section 312000.3.8.D & E for direction.
- ADD. #1-23. Spec section 31 2000-14 under section 3.17 B 1., please state whether the separation geotextile is required as part of the bid. RESPONSE:

 Separation geotextile is only required as indicated in the specification section referenced above (if requested by the Geotechnical Engineer in the field). The geotechnical report does not call for the use of geotextile in the project earthwork recommendations and is therefore not anticipated to be needed.
- ADD. #1-24. Please reference specification section 31 6329.3.2.H. The use of temporary casing may be required to install the drilled piers. Shall the bidders include all costs of temporary casing of the piers within in the bid or should casing be priced as an additive unit price so the project only incurs the costs casing actually needed?
 - 1. If the unit price approach is desired please revise the alternate/unit price bid form. **RESPONSE: Temporary Casings should not be**

included in the base bid and should be bid as a unit price. Attached Bid Form has been revised.

- ADD. #1-25. Spec section 32 1216-6 under section 3.6 A. 1.; please remove "or as directed by geotechnical report" verbiage. **RESPONSE: Since the geotechnical report does not indicate number and thickness of asphalt lifts, the text mentioned above can be ignored.**
- ADD. #1-26. Spec section 32 1216-6 under section 3.6 A. 1.; No profile can be found in the contract documents, please provide. RESPONSE: No profile is referenced by the section indicated above. The roadway layout is indicated on plan sheet C-600 and grading is indicated on C-210 and C-211.
- ADD. #1-27. The page after sheet 23 0548-14 in volume 2 of the specification book has a blank sheet with the following words at the top; "Include this form in the specification to be completed by the contractor." Please confirm that this is not supposed to be in the specifications, or if it was intended, please provide the form it is referencing. **RESPONSE: This page can be deleted.**
- ADD. #1-28. Please reference the bid form item 8. Please confirm labor rates are not required to be submitted at the time of the bid. **Response:**Confirmed, not required at time of bid.
- ADD. #1-29. Are standard installation details available for A/V items such as equipment racks, projectors/screens, mounts, sound control panels and speaker wiring diagrams? **RESPONSE: Details have been provided within Addendum drawings TA-400 and TA-401.**
- ADD. #1-30. Sheet TA-800 responsibility matrix indicates motorized projector screens are furnished and installed by GC. Please advise if this is the intent? Would assume these are provided by AV Contractor.

 RESPONSE: TA-000 will be corrected to indicate that screens are provided by AV and installed by GC.
- ADD. #1-31. Note 210 on TA-151 is blank. Please confirm this callout should be a projector screen. **RESPONSE: Correct, Note 210 is the projection screen.**
- ADD. #1-32. Please advise if only coordination drawings as indicated in individual specification sections per 013100-1.6A shall be included or if overall BIM 3D coordination drawings as indicated in 013100-1.6C are required? RESPONSE: Only coordination drawings as indicated in individual specification sections will be required.

- ADD. #1-33. Please confirm that all permit fees are waived on this project. This includes all City and State building or trade permits. RESPONSE:
 State Building Permit provided by Owner, but individual trades are responsible for trade permits.
- ADD. #1-34. Floor finish code SD does not appear to be used anywhere but is listed on the schedule on sheet A-600, is it intended to be used somewhere?

 RESPONSE: SD is not used on this project, and can be deleted from Finish Schedule.
- ADD. #1-35. Spec 093013-2.3.B.2 requires that the waterproof membrane adhesive have a VOC content of 65 g/L or less. The only product listed, Bostik Ultra-set Advanced, has a 134g/L VOC. Bostik recommends their Gold Plus or Black Top waterproof membranes with VOC of 12.5 g/L and 31 g/L respectively. Are these products acceptable alternatives for this specification? RESPONSE: Revise 09 3013-2.3.B.2 VOC content to be 250 g/L or less.
- ADD. #1-36. Please confirm that data is not required at all AV wall device or card reader locations. Telecom drawings do not include all locations shown on AV plans or electrical AV rough-in plans. See TT-101 vs. TA-111 in Recreation Lounge 130 as an example. Data to card reader locations are not shown on sheet TT-101. Detail 1/TY301 indicates data is required at location. Please advise. RESPONSE: Card Reader locations do not require data. Drawings TT-000, TT-101 and TT-102 are updated with AV location information in this Addendum #2.
- ADD. #1-37. 2/EP-101 appears to show a transformer (T-1 & T-2) inside electrical room 134. E-003 shows the transformer outside of the addition on the South side. Please advise. **RESPONSE: There are three** transformers total. Two transformers (T1 & T2) stacked in the electroom 134 as well as a transformer on the exterior of the building, which is called T3.
- ADD. #1-38. Are projectors to be included in Rooms 151 & 153? TA-151 indicates rough-in only both rooms, TA-101 indicates a projector in Rm 151 only. Projector locations also differ between drawings. Please advise. RESPONSE: Room 151, Small Group Fitness AV contractor to provide and install a wall mounted short throw projector. Room 151 is also provided with ceiling rough in for possible future ceiling projector. Room 153, Medium Group Fitness Rough In Only for future projector, rough in to include both wall mount short throw and ceiling mount locations.

- ADD. #1-39. Please confirm whether AISC certification for fabricators, erectors and shop-painting is required? Requiring AISC certification for shop-painting really limits the number of fabricators and will increase costs.

 RESPONSE: An AISC certified fabricator is not required, if the fabricator is not AISC certified they must meet the alternate fabricator qualifications in spec section 05 1200 section 1.7. An AISC certified erector is not required, if the erector is not certified they must meet the alternate installer qualification in spec section 05 1200 section 1.7. AISC Certification is not required for shop painting.
- ADD. #1-40. Please confirm if SJI certification is required for the Steel Joist Framing, or as long as the manufacturer meets all other requirements per the specification they can be considered? RESPONSE: An AISC certified fabricator is not required, if the fabricator is not AISC certified they must meet the alternate fabricator qualifications in spec section 05 1200 section 1.7. An AISC certified erector is not required, if the erector is not certified they must meet the alternate installer qualification in spec section 05 1200 section 1.7. AISC Certification is not required for shop painting.
- ADD. #1-41. Please confirm if AWI certification is required for the Plastic-Laminated-Faced Architectural Cabinets. **RESPONSE: Confirmed.**
- ADD. #1-42. Regarding Climbing Walls: The spec states: 1.2 RELATED REQUIREMENTS_A. Section 01 10 00 "Summary" for loose climbing equipment provided by Owner. _B. Section 01 12 00 "Allowances" for description of Work in this Section affected by allowances. However, these sections do not exist. What equipment is provided by the Owner, and what portion of the work is affected by allowances?

 RESPONSE: These lines of text can be deleted 11 6733.02_1.2_A, B & C. Equipment provided by the Owner includes Ropes, Climbing Shoes, Harnesses, Helmets & Chalk Bag, Auto belay, General Climbing Equipment (Tap Handles, T-Handle Allen Wrench, and Route Setting Tape), and Quickdraws (for Lead Climbing). Add this equipment to 11 6733_2.3_G.
- ADD. #1-43. Regarding Scoreboards: The spec says the multi-sport scoreboards are Owner furnished / Owner installed, then later states the multi-sport scoreboards are Contractor furnished/Contractor installed. Who is responsible for furnishing and installing the score boards?

 RESPONSE: Contractor is responsible for furnishing and installing scoreboards. Revise 11 6643_1.1_A1 to "Contractor Furnished, Contractor Installed....."

- ADD. #1-44. The spec also states that there are (2) ice hockey scoreboards that are to be removed/modified/ and reinstalled. Where are the scoreboards being removed from, how are they being modified, and where are they being reinstalled? RESPONSE: Delete 11 6643_1.1_A2 "Remove, modify and relocate two existing ice hockey scoreboards."
- ADD. #1-45. Specification 095113-3.3.F.6 says to install hold down clips in areas indicated, nothing is noted on the RCP's. Just below in paragraph "A" it says to put hold down clips on all cross runners. Are hold down clips to be installed at all cross runners even if not indicated on the RCP's?

 RESPONSE: Hold down clips are only required on cross runners.

GENERAL:

- ADD. #1-46. Add the following State Forms:
 - 1. Project Information for Bidders
 - 2. Bid Alternate Form
 - SC6.21 Contractors Design-Bid-Build Agreement DBB A
 - 4. SC6.23DBB GC GENERAL CONDITIONS OF THE CONTRACTORS DBB AGREEMENT
 - 5. Exhibit B: Performance Bond State Form SC-6.22
 - 6. Exhibit C: Labor and Material Payment Bond SC-6.221
 - 7. Exhibit E: Ul-1 Certification and Affidavit Regarding Unauthorized Immigrants
 - 8. Exhibit F: Approved State Building Codes
 - 9. Bid Bond State Form SBP-6.14

CIVIL:

- ADD. #1-47. C-102: Verbiage of Note changed for site lighting, revised per drawing attached.
- ADD. #1-48. C-210: Add Note to indicate to ADA route grading, revised per drawing attached.
- ADD. #1-49. C-211: Revisions for ADA route grading, revised per drawing attached.
- ADD. #1-50. C-300: Verbiage of Note for Site Lighting, revised per drawing attached.
- ADD. #1-51. C-600: Added directional curb ramp and curb depression for ADA grading, revised per drawing attached.

LANDSCAPE:

- ADD. #1-52. Add scope of work for Contractor to provide and install all Site Furnishings, shown on the drawings and described in the specifications:
 - 1. Remove Note #28 from L-100 and L-101.

STRUCTURAL:

- ADD. #1-53. Revise General notes:
 - S-001: Revised occupancy category, seismic importance factor, seismic base shear, basic wind speed, components and cladding wind pressures, joist net uplift and snow load importance factor.
 - 2. S-001: Added climbing wall as a deferred submittal.
- ADD. #1-54. Revise concrete mix design:
 - 1. S-002: Revised W/C ratio for drilled piers and added note for fly ash.
- ADD. #1-55. Revise loads per revised criteria:
 - 1. S-005: Revised drift loads on load map.
- ADD. #1-56. Revise drilled piers:
 - 1. S-100: Revised drilled pier type at counter-fort locations
 - 2. S-100: Revised pier spacing at counter-fort locations.
 - 3. S-100: Added counter-fort and piers at grid 1.6
 - 4. S-100: Revised dimension to drilled pier at elevator pit.
- ADD. #1-57. Revised foundations:
 - 1. S-101: Revised section cut at grid Y.
 - 2. S-101: Added section cut at grid C.
 - 3. S-101: Revised and removed section cut near grid 1 adjacent to existing building.
 - 4. S-101: Clarified step location at grids 2-D and 105-C.
 - 5. S-101: Revised section cut at grid 5 and E.8.
 - 6. S-101: Clarified note for slab on grade sub-grade preparation.
 - 7. S-101: Added counter-fort at grid 1.6.
- ADD. #1-58. Revised columns:
 - 1. S-101: Revised column size near grid 2-C.
- ADD. #1-59. Revised level 2 framing:
 - 1. S-102: Revised framing at existing building entry between grid 100 and 101.
 - 2. Added beam and revised framing between grids C-D near grid 3.
 - 3. Clarified number of beams in note near grid E.

4. Added note for minimum W12 and W14 beam end reaction.

ADD, #1-60. Revised second floor slab:

- 1. S-102: Added chord reinforcing near grid D.
- 2. S-102: Added detail 9/S-508 two locations at grid F.

ADD. #1-61. Revised level 3 framing:

- 1. S-103: Revised girder size at grid E.
- 2. S-103: Added two W12x19 beams and diaphragm connection note near grids 2-C.
- 3. S-103: Removed stray note near grid 3.5-C.5. and 2.5-H.
- 4. S-103: Added "Bent" notation near grids D-E on grid 4.

ADD. #1-62. Revised high roof framing plan:

- 1. S-104: Clarified plan view extent of detail 20/S-505.
- 2. S-104: Added detail 3/S-508 near grids 7-A.
- 3. S-104: Clarified dimension to diagonals and added diagonals at locations noted on grid 4 and 7.
- 4. S-104: Revised beam size near grid A-4.5.
- 5. S-104: Removed "Bent" near grid 4-E.
- 6. S-104: Added dimension on grid A.

ADD. #1-63. Clarified entry framing:

- 1. 5/S-105: Added dimension and deck bearing elevation.
- 2. 6/S-105: Added dimension and deck bearing elevation.

ADD. #1-64. Revised wall elevations

- 1. 3/S-250: Defined plate size.
- 2. 4,5, 17, 18/S-250: Added details 9/S-507, 8/S-508 7/S-508 and 16/S-303.
- 3. 4/S-250: Removed detail 12/S-303.
- 4. 4, 18/S-250: Provided horizontal WF size.
- 5. 5/S-250: Extended HSS down to foundation.

ADD. #1-65. Revised foundation details:

1. 16/S-251: Clarified number of bars.

ADD. #1-66. Revised foundation details:

1. 19/S-252: Provided max opening dimensions.

ADD. #1-67. Revised foundation details:

1. 17/S-300: Removed vertical rebar.

ADD. #1-68. Revised foundation details:

- 1. 6/S-301: Revised drilled pier schedule.
- 2. 7/S-301: Added note for tooled joint.

ADD. #1-69. Revised foundation details:

- 1. 2, 6, 15/S-302: Showed pour down at drilled pier.
- 2. 9/S-302: Added reinforcing note and clarified rebar.
- 3. 10/S-302: Added reinforcing note.
- 4. 12/S-302: Revised pilaster ties.
- 5. 19/S-302: Added reinforcing note.

ADD. #1-70. Revised foundation details:

- 1. 2/S-303: Added elevation.
- 2. 9, 10/S-303: Removed key.
- 3. 16/S-303: Added detail for base plate at CMU.

ADD. #1-71. Revised CMU details:

1. 10/S-400: Removed exterior wall jamb schedule.

ADD. #1-72. Revised steel details:

1. 10/S-502: Revised deck connection schedule.

ADD. #1-73. Revised steel details:

- 1. 8/S-503: Provided additional connection information.
- 2. 18/S-503: Clarified connection.

ADD. #1-74. Revised steel details:

1. 6/S-504: Added diagonal brace requirements.

ADD. #1-75. Revised steel details:

- 1. 6/S-505: Clarified spacing.
- 2. 20/S-505: Expanded and revised detail to include corner support.

ADD. #1-76. Revised steel details:

- 1. 9/S-506: Clarified joist top chord.
- 2. 11/S-506: Clarified extent of joist top chord.
- 3. 18/S-506: Clarified depth of joist.

ADD. #1-77. Revised steel details:

- 1. 4, 5, 12, 16, 18, 19/S-507: Clarified geometry.
- 2. 6, 8/S-507: Added splice reference, clarified connection of brace.
- 3. 9/S-507: Added detail for connection.

ADD. #1-78. Revised steel details:

1. 3, 4, 7, 8, 9/S-508: Added details for connections.

ADD. #1-79. Clarified structural steel spec 05 1200:

- 1. Clarified alternate to AISC certification for fabricator and erectors.
- 2. Remove AISC certification for paint.

ARCHITECTURE:

- ADD. #1-80. Revise Built-Up Asphalt Roofing Spec Section 07 5113:
 - 1. Revise 2.3C Cap Sheet as follows: "Cap Sheet: ASTM 6163, Grade G, Type 1, SBS Glass Cap Sheet."
 - Revise 2.4B Granule-Surfaced Flashing Sheet as follows: "Granule-Surfaced Flashing Sheet: ASTM D 6163, Grade G, Type 1, glass-fiber-reinforced, SBS-modified asphalt sheet; granule-surfaced base flashing; suitable for application method specified."
- ADD. #1-81. Clarified Fire Protection Required for Columns in East Hall:
 - 1. Added UL Assembly to Spec Section 07 8100 Applied Fireproofing:
 - i On 07 8100_2.2_A, Replace "Insert drawing designation or ULdesign number" with "X771 at Columns and P732 at Roof for new construction south of Fire Wall."
 - LS101: Added Note to Structural Steel Columns in East Hall, "07 8100 – PROVIDE 3-HOUR PROTECTION AT COLUMNS (UL X771) TYPICAL FOR CONSTRUCTION SOUTH OF FIRE WALL"
 - Detail 5/A-409: Graphically added spray-applied fire resistive material and Note, "07 8100 SPRAY-APPLIED FIRE RESITIVE MATERIAL – 3" hour rating (UL X771)" to column at Grid 1.9/101.
 - A-501: Detail A3/A-501: Graphically added spray-applied fire resistive material and Note, "07 8100 SPRAY-APPLIED FIRE RESITIVE MATERIAL – 3" hour rating (UL X771)" to column at Grid 1.4/D. Relocating metal stud and GB wall furring around column to conceal column with wall.
- ADD. #1-82. Clarified Fire Ratings in Spec Section 07 8446 Fire-Resistive Joint Systems.
 - 1. On 3.7_B2, Revise Assembly Rating from "1 hour" to "1, 2, or 3 Hour, per Partition Type"
- ADD. #1-83. Add Paint System for metal substrates in Spec Section 09 9123 Interior Painting. 09 9123 3.6 A2
 - 2. Water-Based Light Industrial Coating Systems: Door Frames, and other Metal Substrates. (Addendum 02)

- i Prime Coat: Primer, rust-inhibitive, water based: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series, at 5.0 to 10.0 mils wet, 2.0 to 4.0 mils dry.
- ii Intermediate Coat: Light industrial coating, interior, water based, matching topcoat.
- iii Topcoat: Light industrial coating, interior, water based, eggshell: S-W Pro Industrial Pre-Catalyzed Water Based Epoxy, K45-151 Series, at 4.0 mils wet, 1.5 mils dry, per coat.
- ADD. #1-84. Add Two-way communication system at Elevator Landing of 2nd Floor:
 - 1. ADD Spec Section 10 1200 Rescue Assistance Signal System, per attached specification.
 - 2. On 1/A-102 Level 2 Floor Plan Add note, "10 1200 RESCUE ASSISTANCE SIGNAL SYSTEM", west of Door Opening #205.
- ADD. #1-85. Add Modular Handholds Climbing Walls.
 - 1. Add Modular Handholds under 11 6733_2.3_J, per attached specification (page 8 only).
- ADD. #1-86. Clarify Door Hardware for Structural Glass Walls:
 - Spec Section 13 0320 Structural Glass Walls. Add the following to 13 0320_2.3_C
 - i "3. Doors to be bi-directional 180 degree swing."
 - ii "4. No latch or locking devices to be included."
- ADD. #1-47. Clarify Class of Polycarbonate required.
 - 1. Revise the following: 08 4513_2.3_E3 "Combustibility Classification: Class CC1 based on testing according to ASTM D 635"
- ADD. #1-48. Clarified items related to Code Review:
 - G-100 Accessories and Plumbing Fixtures, ADD the following dimensions to the Urinal Screens. "4 feet tall, and minimum 60 inches above finish floor"
 - 2. G-100 Signage Mounting Heights. Revised mounting height of Braille to be 48 inches minimum above the floor.
 - 3. G-101 Interior Signage. ADD Sign Type 13 at Accessible Exits, per attached sheet.
 - G-101 Interior Signage. ADD Sign Type 14 to direct occupants to Accessible Exits, per attached sheet.
 - 5. LS101: Clarified opening 100 at Fire Wall to be a Horizontal Exit.
 - 6. A-000: Added Accessible Paths Diagram (2/A-000), per attached drawing.

- 7. A-100: Backfill Door Schedule. Revised Width of Door 1572C from 2'-9" to 3'-0".
- 8. A-101: At East Entry Lounge #122 and East Hall #120 clarified 1-Hr rated partitions per attached sheet.
- 9. 4/A-100 Catering Interior Elevation. Height of base cabinets and elevation of countertop revised so countertop is 2'-10" AFF.
- 10. 10/A-408 Level 2 Restrooms. Revise walls to allow LCD to be recessed, per attached Sheet.
- 11. 10/A-408 Level 2 Restrooms. Added grab bars to Men's and Women's Accessible Stalls, per attached Sheet.
- 12. A-480. On Detail D2 & D5 /A-480, revised handrail extension at top landing of stairs to 12" from top tread.
- 13. A-481. On Detail A1/A-480, revised handrail extension at top landing of stairs to 12" from top tread.
- 14. A-530. On Detail E1, Added Note "07 8446 HEAD-OF-WALL, FIRE-RESISTIVE JOINT SYSTEM PER PARTITION TYPE" to top of CMU Wall, along with graphic representation of joint system.
- 15. A-721: Door Types. Clarified Door Types FG1, FG2, FG3, and N1 to have Safety Glazing to comply with IBC 2406.
- 16. A-721: Door Types. Revised Door Type N1 Glazing from 20 minute to 60 minute.
- 17. A-721: Door Schedule. Revised Door 114A to have a 3-Hr Fire Rating.
- 18. A-725 and A-726, clarified locations required for Safety Glazing, per attached Drawings.
- ADD. #1-49. Clarified scope of work for wall between Backfill Renovation and Existing Hall.
 - 1. 10/A-100, added scope for removing existing Interior Canopy, per attached drawing.
 - On Detail 3/A-100, added scope for removing and reinstalling wood veneered panels at hall outside Meeting Rooms, per attached drawing.
 - 3. On Detail 2/A-100, added Interior Elevation Tag B1/A-550.
 - 4. A-550: Added Interior Elevation B1/A-550 per attached Drawing.
- ADD. #1-50. At Small Meeting Room, Large Meeting Room, and Group Room revised height of glazing, added Roller Shades, and Relocated Millwork:
 - 1. A-101 and 9/A-400: Relocated cabinets in Small Meeting Room #110, per attached sheet.
 - A-400 and 4/A-410: Revised height of glazing from full height to 48" tall per attached Sheet.

- A-400: Added Manual Roller Shades to Interior Windows on East Elevation at Small Meeting Room #110 and Large Meeting Room #115, per attached Sheet.
- 4. A-551: On C6/A-551 Revised Sill Detail of Glazing.
- 5. A-551: On A2/A-551 Added Roller Shade at Head Detail of Glazing.
- ADD. #1-51. Shifted Skylights in Gymnasium to avoid Mechanical Ductwork:
 - 1. On Detail 1/A-103, shifted skylights North and added dimensions in North-South Direction for Skylights.
 - i 20'-6" from 1st row to 2nd row
 - ii 22'-11" from 2nd row to 3rd row.
- ADD. #1-59. Added Intumescent Coating to exposed structural columns at East Entry:
 - 1. Add Spec Section 07 8123 INTUMESCENT FIREPROOFING per attached spec.
 - 2. On 5/A-310, Add keynote and scope of work for Intumescent Coating per attached sheet.
- ADD. #1-60. Note construction of metal downspouts to be open face:
 - On Detail D1/A-501 and C1 & C3/A-511, revise note "METAL DOWNSPOUT, FINISH TO MATCH CANOPY STRUCTURE" TO "METAL DOWNSPOUT 3" x 5" WITH OPEN FACE, FINISH TO MATCH CANOPY STRUCTURE"
- ADD. #1-61. Revise fireplace vent from side wall to thru the roof:
 - 1. A-554: Revised Detail A5/A-554, to route flue thru roof, rather than side wall, per attached Drawing.
 - A-554: Added Details A4 and C4 / A-554, for fireplace per attached Drawing.
- ADD. #1-62. Graphically added fascia profile to Roller Shades:
 - 1. On Details A2, A3, A4, and A5 / A-571 graphically added fascia profile cover to Roller Shades.
- ADD. #1-63. Clarified UL Listing for Roof System BUR 02:
 - 1. On Detail D2 RS BUR 02:
 - i Revised UL Listing to "P732"
 - ii Revised note "07 8100 SPRAY-APPLIED FIRE RESISTIVE MATERIALS" to "07 8100 SPRAY-APPLIED FIRE RESISTIVE MATERIALS 1-1/2" HOUR RATING"
- ADD. #1-64. Add Stencil at Fire Walls:

- 1. A-710 Added Keynote to Interior Partition Types:
 - i 18. PROVIDE SIGNAGE TYPE 15 (RE: SHEET G-101) AT ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS ABOVE CEILING. LOCATE WITHIN 15 FEET OF ENDS OF WALL, AND AT 30 FEET MAX SPACING.
- 2. G-101: Add Sign Type 15.

ADD. #1-65. Clarified Fire-Resistive Joint System at top of rated partitions, A-710:

- On Detail 4 D1b: At top of wall, REVISE "07 9200 ACOUSTICAL JOINT SEALANT" to "07 8446 – HEAD-OF-WALL, FIRE-RESISTIVE JOINT SYSTEM"
- On Detail 6 F1b: At top of wall, REVISE "07 9200 ACOUSTICAL JOINT SEALANT" to "07 8446 – HEAD-OF-WALL, FIRE-RESISTIVE JOINT SYSTEM"
- On Detail 15 J1bs: At top of wall, REVISE "07 9200 ACOUSTICAL JOINT SEALANT" to "07 8446 – HEAD-OF-WALL, FIRE-RESISTIVE JOINT SYSTEM"
- On Detail 14 K2bs: At top of wall, REVISE "07 9200 ACOUSTICAL JOINT SEALANT" to "07 8446 – HEAD-OF-WALL, FIRE-RESISTIVE JOINT SYSTEM"
- 5. On Detail 7 L2bs: At top of wall, REVISE "07 9200 ACOUSTICAL JOINT SEALANT" to "07 8446 HEAD-OF-WALL, FIRE-RESISTIVE JOINT SYSTEM"
- On Detail 12 R3b: At top of wall, REVISE "07 9200 ACOUSTICAL JOINT SEALANT" to "07 8446 – HEAD-OF-WALL, FIRE-RESISTIVE JOINT SYSTEM"

ADD. #1-66. Clarified Window Film locations and Nomenclature.

- Sheet A-600 FINISH LEGEND: Revised Windows Finish Code from "FLM" to "WFM – WINDOW FILM ON GLASS SUBSTRATE:
- Sheet A-600 FINISH LEGEND: Added Wall Finishes Finish Code:
 - i FINISH CODE: VWG
 - ii ITEM: VINYL WALL GRAPHIC
 - iii MANUFACTURER: TRIKES OR EQUAL
 - iv SERIES/PATTERN: CUSTOM PATTERN, REFER TO PLANS
 - v NUMBER: NOT APPLICABLE
 - vi COLOR: VARIES
 - vii SIZE: VARIES
 - viii FINISH REMARKS: REFER TO PLANS
 - ix SPECIFICATION SECTION: 09 7200
- 3. Sheet A-802 INTERIOR ELEVATIONS:

- i Added "WFM" and "VWG" to Window Film Hatch Legend.
- ii Updated Nomenclature for Window Film and Vinyl Wall Graphics on Detail A1/A-802, per attached drawing.
- 4. Sheet A-601 FINISH PLAN. Removed Keynote "Vinyl Film on Glass" at Small Meeting Room #110 and Group Room #102.

MECHANICAL:

- ADD. #1-67. 22 30 00 2.1 A. 1. Add T&S Brass.
- ADD. #1-68. 22 30 00 2.1 C. 1. Add T&S Brass
- ADD. #1-69. 22 30 00 2.1 D. 1. Add Delany
- ADD. #1-70. 22 30 00 2.4 A. 1. Add Acorn Terazzo Ware
- ADD. #1-71. 22 30 00 2.5 B 1. Proposed gas water heater shall comply with ASHRAE 90.1 2010 in lieu of 2007 edition indicated.
- ADD. #1-72. 22 30 00, 2.6 B 1. Proposed storage tanks shall comply with ASHRAE 90.1 2010 in lieu of 2007 edition indicated.
- ADD. #1-73. 22 3000, 2.7 A. Proposed water heater accessories shall comply with ASHRAE 90.1 2010 in lieu of 2007 edition indicated.
- ADD. #1-74. 23 73 13, 1.6 D 1., 23 7513 1.6 D 1 Proposed air handler shall comply with ASHRAE 62.1 2010 in lieu of 2007 edition indicated.
- ADD. #1-75. 23 73 13, 1.6 E., 23 7513 1.6 E Proposed air handler shall comply with ASHRAE 90.1 2010 in lieu of 2007 edition indicated.
- ADD. #1-76. 23 73 13, 2.2 A 7., 23 7513 2.2 A 7 Proposed air handler airstream surfaces shall comply with ASHRAE 62.1 2010 in lieu of 2007 edition indicated.
- ADD. #1-77. 23 09 93 3.14 A.&B. Replace "EF-6" with "EF-5."
- ADD. #1-78. 23 75 13 1.5 A. 7. b. Replace "Two weeks prior to bid" with "By the day of bid"
- ADD. #1-79. SP-2 Controls BAS to monitor the following for pump system:
 - 1. 1. Pump run status
 - 2. 2. High water alarm
 - 3. 3. Pump fail alarm
- ADD. #1-80. M-103 Revise sheet as shown
- ADD. #1-81. M-302 Revise sheet as shown
- ADD. #1-82. M-402 Revise sheet as shown
- ADD. #1-83. M-403 Revise sheet as shown
- ADD. #1-84. M-601 Revise sheet as shown
- ADD. #1-85. M-602 Revise sheet as shown
- ADD. #1-86. P-101 Revise sheet as shown
- ADD. #1-87. P-102 Revise sheet as shown

ELECTRICAL:

ADD. #1-88.	E002 One-Line modified to address plan review comments.
ADD. #1-89.	E002A – Existing one-line added
ADD. #1-90.	E002B – Existing one-line added
ADD. #1-91.	E003 - Electrical Power site plan - added name to transformer MVT3
ADD. #1-92.	E004 – Site lighting plan – updated bollard design
ADD. #1-93.	EP-101 – Electrical power plan – updated based on plan review
	comments
ADD. #1-94.	EP-102 – Electrical power plan – updated based on plan review
	comments
ADD. #1-95.	EP-601 – updated equipment schedule and added bollard fixture type
	to luminaire schedule
ADD. #1-96.	EP-603- updated panel schedules
ADD. #1-97.	Specification section 26 41 00 Facility Lightning Protection added
ADD. #1-98.	Specification section 28 31 00 Fire Detection and Alarm modified to

TECHNOLOGY:

TT-000 - Added Audiovisual data drop symbol to title page
TT-101 – Added Audiovisual data drops to plan.
TA-400 – Added Sheet to include Installation Details for Ceiling
Speakers, Sound Control Panels, Ceiling Projectors, Wall Mounted
Projection Screens, & Flat Panel Display Wall Mounts.
TA-401 – Added Sheet to include Installation Details for Wall
Mounted Equipment Racks & Wall Mount Short Throw Projectors.

GENERAL ATTACHMENTS:

Project Information for Bidders

Bid Alternate Form

SC6.21 Contractors Design-Bid-Build Agreement DBB A

add two way communication

SC6.23DBB GC GENERAL CONDITIONS OF THE CONTRACTORS DBB AGREEMENT

Exhibit B: Performance Bond – State Form SC-6.22

Exhibit C: Labor and Material Payment Bond – SC-6.221

Exhibit E: Ul-1 Certification and Affidavit Regarding Unauthorized Immigrants

Exhibit F: Approved State Building Codes

Bid Bond - State Form SBP-6.14

CIVIL ATTACHMENTS:

C-102, C-210, C-211, C-300, C-600

STRUCTURAL ATTACHMENTS:

 $S-001,\ S-002,\ S-005,\ S-100,\ S-101,\ S-102,\ S-103,\ S-104,\ S-105,\ S-250,\ S-251,\ S-252,\ S-300,\ S-301,\ S-302,\ S-303,\ S-400,\ S-502,\ S-503,\ S-504,\ S-505,\ S-506,\ S-507$ and $S-508,\ partial\ specification\ 05\ 1200$

ARCHITECTURAL ATTACHMENTS:

G-101, A-000, A-100, A-101, A-310, A-400, A-408, A-410, A-551, A-550, A-554, A-725, A-726, A-802, 078123, 10 1200, 11 6733 (page 8 only)

MECHANICAL ATTACHMENTS:

M-103, M-302, M-402, M-403, M-601, M-602

ELECTRICAL ATTACHMENTS:

E-002, E-002A, E-002B, E-003, E-004, EP-101, EP-102, E-601, E-603

TECHNOLOGY ATTACHMENTS:

TT-000, TT-101, TT-102, TA-400, TA-401

END OF ADDENDUM NO. 02

RED ROCKS COMMUNITY COLLEGE Student Recreation Center - Lakewood Campus

General Contractor BID PROJECT INFORMATION for BIDDERS

The anticipated schedule is:

Advertisement for Bid posted: Monday, Nov.9, 2015

Mandatory Pre-Bid at site: Friday, Nov. 13th, 2015 10:00 a.m. The Den –room #1592 (located at the west entrance of the Lakewood Campus near the bookstore). Interior campus map and directions visit: http://www.rrcc.edu/campus-maps.

Questions on bid docs and substitution requests via email submitted by Friday, Dec., 4th, 2015 5:00 p.m.

Subject Line: RRCC Student Rec Center

Email to: renee.archuleta@rrcc.edu AND cathy.rock@rrcc.edu

Notice of Final Question Response/addenda posting Wednesday, December 9^{th} , 2015 5:00 p.m.

Via RRCC Webpage: http://www.rrcc.edu/facilities/construction-projects.

Bids Due: Tuesday, December 15, 2015 2:00 p.m. Bid opening will be held in the Red Fox Room (room #1105 located at the east of the campus).

Projected Pre-Award Meeting/Notice of Award: Thursday, Dec. 17, 2015

Projected Notice to Proceed: Thursday, January 21, 2016

Projected Dates of Substantial Completion:

Phase 1, Rec Center Addition: 345 calendar days from NTP, projected to be December 30, 2016 Phase 2, Renovation of existing Fitness Center: 65 calendar days from turnover of space on December 12, 2016, projected to be February 14, 2017

Entire project Substantially Complete 391 calendar days from NTP projected to be February 14, 2017 Projected Date of Final Completion: 30 calendar days after Phase 2 Substantial Completion, projected to be March 16, 2017.

- 1. The Principal Representative has determined that the entire project shall be substantially complete within 345 calendar days from the date of the Notice to Proceed, and the project shall be finally complete, including the delivery of any or all guarantees and warranties, the submittal of sales and use tax payment forms, the completion of the final punch list and the calling for final inspection, within 30 calendar days, if applicable, from the date of substantial completion. In accordance with Article 46 of the General Conditions of the Contract, Time of Completion and Liquidated Damages, failure to complete the work within the agreed number of calendar days shall be considered breach of contract and subject the bidder to liquidated damages to the extent specified in Article 7D of the Contractor's Agreement Design/Bid/Build (SC-6.21). \$2,500 per day.
- 2. The right is reserved to waive informalities or irregularities and to reject any and all Bids.
- 3. Bidders may obtain Bidding Documents from: Downloading of Construction Documents via https://infoexchange.davispartnership.com/RRCC For Construction Set

Printed sets available through:

ABC Imaging 303-573-5757

Contact: Greg or Matthew

- 4. Each Bid shall be submitted on the required Bid Form and must be accompanied by a Bid Bond on State Buildings Programs Bid Bond Form Sc-6.14 in an amount not less than 5% of the total Bid. The Bid Bond may also be (1) a cashier's check or (2) a certified check made payable to the Treasurer of the State of Colorado in an amount not less than 5% of the total Bid. The Bid Bond is submitted as a guaranty that the Bid will be maintained in full force and effect for a period of thirty (30) days after the opening of the Bids for the project.
- 5. The Bidder promises, in submitting his Bid, that if issued a Notice of Award, he will, within the prescribed time, execute the required Agreement, furnish the required Performance Bond, Labor and Material Payment Bond, Insurance Policy and Certificates of Insurance, or forfeit his Bid Guaranty as Liquidated Damages.
- 6. For any State Public Works Project, per 8-17-101 C.R.S., Colorado labor shall be employed to perform at least 80% of the work. "Colorado Labor" means any person who is a resident of the state of Colorado at the time of the Public Works project. A governmental body that allows a waiver shall post notice and justification for the waiver on its web site. (Does not apply to any project that receives federal moneys)
- 7. Contractor's Registration is required in the State's CORE System at www.colorado.gov/vss. No registration fee.
- 8. Notice to nonresident bidders per 8-19-104 C.R.S., if a nonresident bidder is from a state that provides a percentage bidding preference to resident bidders of that state, then a comparable percentage disadvantage will be applied to the bid of that nonresident bidder.
- 9. If the bidder anticipates services under the contract or any subcontracts will be performed outside the United States or Colorado, the bidder shall provide in a written statement which must include, but need not be limited to, the type of services that will be performed at a location outside the United States or Colorado and the reason why it is necessary or advantageous to go outside the United States or Colorado to perform such services. (Does not apply to any project that receives federal moneys)
- 10.. Bidders are to disclose if they are a Service-Disabled Veteran Owned Small Business (SDVOSB). A SDVOSB per C.R.S. 24-103-211, means a business that is incorporated or organized in Colorado or maintains a place of business or has an office in Colorado and is officially registered and verified as a SDVOSB by the Center for Veteran Enterprise within the U.S. Department of Veterans Affairs. Attach proof of certification along with the proposal submission.

RRCC Contact Information:

Renée Archuleta Procurement Manager 303-914-6345 renee.archuleta@rrcc.edu

Cathy Rock Project Manager 303-914-6513 cathy.rock@rrcc.edu

Project updates will be posted publically on: http://www.rrcc.edu/facilities/construction-projects.



BID ALTERNATES FORM

Institution/Ag	gency: Red Rocks Community College	<u></u>	
Project No./Name: C14A0007 / Campus Recreation Center			
,			
Additive alt	ernates will not be used if deductible alternates used if additive alter		ductible alternates will not be
Additive Alt	ternates		
	cification section 01 2300 for descriptions o e base bid would be modified by the amour		
A.A. No. 1	Fitness Flooring		Add \$
A.A. No. 2	Landscape Walk		Add \$
Deductive A	Alternates (Not Applicable)		
Unit Prices			
Refer to spe	cification section 01 2200 for descriptions o	f the unit prices.	
D.A. No. 1	Square footage of sod soil preparation		Unit Price \$
D.A. No. 2	Irrigation	-	Unit Price \$
D.A. No. 3	Native Seed	_	Unit Price \$
D.A. No. 4	4" Concrete Walks	_	Unit Price \$
D.A. No. 5	Caissons	Over/ Lineal Foot	Under / Lineal Foot
	DP18A	Add \$	Deduct \$
	Casing for DP18A	Add \$	
	DP24A	Add \$	Deduct \$
	Casing for DP24A	Add \$	
	DP30A	Add \$	Deduct \$
	Casing DP30A	Add \$	
THE BIDDE	R:		
Company Na	ame		
Signature		Date	



CONTRACTOR'S DESIGN/BID/BUILD (D/B/B) AGREEMENT (STATE FORM SC-6.21)

DEPARTMENT ID:	
CONTRACT ID #:	
PROJECT #:	
PROJECT NAME:	

CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT

(STATE FORM SC-6.21)

TABLE OF C	CONTENTSPa	ge
DECITAL S		4
RECITALS		'
ARTICLE 1.	PERFORMANCE OF THE WORK	1
ARTICLE 2.	PROVISIONS OF THE CONTRACT DOCUMENTS	1
ARTICLE 3.	TIME OF COMPLETION	1
ARTICLE 4.	ESSENTIAL CONDITIONS	2
ARTICLE 5.	CONTRACT SUM	2
ARTICLE 6.	CONTRACT DOCUMENTS	2
ARTICLE 7.		2
1.	MODIFICATION OF ARTICLE 45. GUARANTEE INSPECTIONS AFTER	
	COMPLETION	
	MODIFICATION OF ARTICLE 27. LABOR AND WAGES	2
3.	MODIFICATION OF ARTICLE 39. NON-BINDING DISPUTE RESOLUTION –	
	FACILITATED NEGOTIATIONS	2
4.	MODIFICATION OF ARTICLE 46. TIME OF COMPLETION AND LIQUIDATED	
	DAMAGES	
5.	NOTICE IDENTIFICATION	3
SIGNATURE	APPROVALS	4

EXHIBITS:

- A. Contractor's Bid (Form SC-6.13)
- **B.** Performance Bond (Form SC-6.22)
- C. Labor and Material Payment Bond (Form SC-6.221)
- D. Insurance Certificates
- **E.** Certification and Affidavit Regarding Unauthorized Immigrants (required at contract signing prior to commencing work)
- **F.** Building Code Compliance Policy: Coordination of Approved Building Codes, Plan Reviews and Building Inspections.

SC-6.21 Rev. 7/2015

CONTRACTOR'S DESIGN/BID/BUILD (D/B/B) AGREEMENT (STATE FORM SC-6.21) Department ID: Contract ID #: Project #: 1. PARTIES. THIS AGREEMENT is entered into by and between the STATE OF COLORADO, acting by and through the <u>(agency)</u>, hereinafter referred to as the Principal Representative, and <u>(vendor name)</u> having its offices at <u>(vendor address)</u> hereinafter referred to as the Contractor. 2. EFFECTIVE DATE AND NOTICE OF NONLIABILITY. This Agreement shall not be effective or enforceable until it is approved and signed by the State Controller or its designee (hereinafter called the "Effective Date"), but shall be effective and enforceable thereafter in accordance with its provisions. The State shall not be liable to pay or reimburse Contractor for any performance hereunder or be bound by any provision hereof prior to the Effective Date. **RECITALS: WHEREAS**, the Principal Representative intends to (project name) hereinafter called the Project; and WHEREAS, authority exists in the Law and Funds have been budgeted, appropriated, and otherwise made available, and a sufficient unencumbered balance thereof remains available for payment In Fund Number ______, Account Number ______; and WHEREAS, this is a phase one waived contract, waiver number 156 Contractors Agreement for Capital Construction Form SC6.21. **WITNESSETH**, that the State of Colorado and the Contractor agree as follows: **ARTICLE 1. PERFORMANCE OF THE WORK** The Contractor shall perform all of the Work required for the complete and prompt execution of everything described or shown in, or reasonably implied from the Contract Documents for the above referenced Project. **ARTICLE 2. PROVISIONS OF THE CONTRACT DOCUMENTS** The Contractor agrees to perform the Work to the highest industry standards and to the satisfaction of the State of Colorado and its Architect/Engineer in strict accordance with the provisions of the Contract Documents. **ARTICLE 3. TIME OF COMPLETION** The Contractor agrees to Substantially Complete the Project within _____ calendar days from the date of the Notice to Proceed, in addition, the Contractor agrees to finally complete the Project from Substantial Completion to Final Acceptance within _____ calendar days for a total time of completion of the entire Project of ____ calendar days. The Contractor shall perform the

SC-6.21 Rev. 7/2015

Work with due diligence to completion.

ARTICLE 4. ESSENTIAL CONDITION

Timely completion of the Project is an essential condition of this Agreement. The Contractor shall be subject to any liquidated damages described in Article 7D for failure to satisfactorily complete the Work within the time periods in Article 3 above.

ARTICLE 5. CONTRACT SOM	
The Contractor shall be paid for the performance of this Agreem	•
and deductions as provided for in Articles 32, 34 and 35 of The 0	General Conditions of the
Construction Contract SC-6.23, the sum of	DOLLARS AND
NO/100* (\$*).	
ARTICLE 6. CONTRACT DOCUMENTS	
The Contract Documents, as enumerated in Article 1 of T	The General Conditions of the
Contractor's Design/Bid/Build (D/B/B) Agreement SC-6.23, a	are all essential parts of this

ARTICLE 7. OPTIONAL PROVISIONS AND ELECTIONS

Agreement and are fully incorporated herein.

The provisions of this Article 7 alter the Articles (The General Conditions of the Contractor's Design/Bid/Build Agreement SC-6.23) or enlarge upon them as indicated:

The Principal Representative and or the State Buildings Program shall mark boxes and initial where applicable.

1. MODIFICATION OF ARTICLE 45. GUARANTEE INSPECTIONS AFTER COMPLETION
If the box below is marked the six month guarantee inspection is not required. Principal Representative initial
 MODIFICATION OF ARTICLE 27. LABOR AND WAGES If the box is marked the Federal Davis-Bacon Act shall be applicable to the Project. The minimum wage rates to be paid on the Project shall be furnished by the Principal Representative and included in the Contract Documents. Principal Representative initial
3. MODIFICATION OF ARTICLE 39. NON-BINDING DISPUTE RESOLUTION – FACILITATED NEGOTIATIONS
If the box is marked, and initialed by the State as noted, the requirement to participate in facilitated negotiations shall be deleted from this Contract. Article 39, Non-Binding Dispute
Resolution – Facilitated Negotiations, shall be deleted in its entirety and all references to the
right to the same where ever they appear in the contract shall be similarly deleted.
The box may be marked only for projects with an estimated value of less than \$500,000. Principal Representative initial

4. MODIFICATION OF ARTICLE 46. TIME OF COMPLETION AND LIQUIDATED DAMAGES

If an amount is indicated immediately below, liquidated damages shall be applicable to this Project as, and to, the extent shown below. Where an amount is indicated below, liquidated damages shall be assessed in accordance with and pursuant to the terms of The General Conditions of the Design/Bid/Build Agreement Article 46, Time of Completion And Liquidated Damages, in the amounts and as here indicated. The election of liquidated damages shall limit and control the parties right to damages only to the extent noted.

SC-6.21 Rev. 7/2015

of Co tha as Co Re fro	For the inability to use the Project, for each day after the number of calendar ays specified in the Contractor's bid for the Project and the Agreement for achievement Substantial Completion, until the day that the Project has achieved Substantial completion and the Notice of Substantial Completion is issued, the Contractor agrees at an amount equal to
pe Co de No Co Co	For damages related to or arising from additional administrative, technical, apervisory and professional expenses related to and arising from the extended closeout eriod, for each day in excess of the number of calendar days specified in the contractor's bid for the Project and the Agreement to finally complete the Project as efined by the issuance of the Notice of Final Acceptance) after the issuance of the final otice of Substantial Completion, the Contractor agrees that an amount equal to
	mounts due but amounts remaining are insufficient to cover the entire assessment.
All No transn duly g	OTICE IDENTIFICATION otices pertaining to General Conditions or otherwise required to be given shall be mitted in writing, to the individuals at the addresses listed below, and shall be deemed given when received by the parties at their addresses below or any subsequent ns or addresses provided to the other party in writing.
No	otice to Principal Representative:
Wi	ith copies to (State Buildings Program (or Delegate) State of Colorado):
No	otice to Contractor:
Wi	Tith copies to:

SIGNATURE APPROVALS:

THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

*Persons signing for Contractor hereby swear and affirm that they are authorized to act on Contractor's behalf and acknowledge that the State is relying on their representations to that effect. **Principal is not a recognized title and will not be accepted**

THE CONTRACTOR	STATE OF COLORADO , acting by and through: (Insert Name & Title of Agency or IHE)	
	Ву:	
Legal Name of Contracting Entity	(Insert Name & Title of Person Signing for Agency or IHE)	
	Date:	
*Signature		
Signature	APPROVED	
	DEPARTMENT OF PERSONNEL &	
	ADMINISTRATION	
By Name (print) Title	STATE BUILDINGS PROGRAM	
Name (print) Title	State Architect (or authorized Delegate)	
Dat		
e:	By:	
	(Insert Name of Authorized Individual)	
	Date:	
ALL CONTRACTS MUST BE APPROVED BY THE STATE CONTROLLER: CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If Contractor begins performing prior thereto, the State of Colorado is not obligated to pay Contactor for such performance or for any goods and/or services provided hereunder. APPROVED: STATE OF COLORADO		
STATE CONTROLLER'S OFFICE State Controller (or authorized E		
By: (Insert Name & Title Individual)	e of Authorized	
Date:		

CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT

(STATE FORM SC-6.21)

EXHIBIT A

CONTRACTOR'S BID (Form SBP-6.13)

CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT

(STATE FORM SC-6.21)

EXHIBIT B

PERFORMANCE BOND (Form SC-6.22)

CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT

(STATE FORM SC-6.21)

EXHIBIT C

LABOR AND MATERIAL PAYMENT BOND (Form SC-6.221)

CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT

(STATE FORM SC-6.21)

EXHIBIT D

INSURANCE CERTIFICATE(S) (attached)

CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT

(STATE FORM SC-6.21)

EXHIBIT E

Certification and Affidavit Regarding Unauthorized Immigrants (required at contract signing prior to commencing work) (UI-1, attached)

CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT

(STATE FORM SC-6.21)

EXHIBIT F

Building Code Compliance Policy: Coordination of Approved Building Codes, Plan Reviews and Building Inspections



THE GENERAL CONDITIONS OF THE CONTRACTOR'S DESIGN/BID/BUILD (D/B/B) AGREEMENT

(STATE FORM SC-6.23)

THE GENERAL CONDITIONS OF THE CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT (STATE FORM SC-6.23)

TABLE OF CO	ONTENTSPag	је
THE CONTRA	ACT	
	DEFINITIONS	1
Α.	CONTRACT DOCUMENTS.	1
В.	DEFINITIONS OF WORDS AND TERMS USED	1
ARTICLE 2.	EXECUTION CORRELATIONS INTENT OF DOCUMENTS COMMUNICATIONS AND	
	COOPERATION.	4
A.	EXECUTION	4
B.	CORRELATION	4
C.		
D.	PARTNERING, COMMUNICATIONS AND COOPERATION	5
ARTICLE 3.	COPIES FURNISHED	
ARTICLE 4.	OWNERSHIP OF DRAWINGS	6
THE ARCHIT		
ARTICLE 5.	ARCHITECT/ENGINEER'S STATUS	6
	ARCHITECT/ENGINEER DECISIONS AND JUDGMENTS	
	DECISIONS	
	JUDGMENTS	
	ACCESS TO WORK	
D.	INSPECTION	7
THE CONTR	ACTOR.	
THE CONTRA		_
ARTICLE 7.		/ 0
ARTICLE 6.	MATERIALS AND EMPLOYEESSURVEYS, PERMITS, LAWS, TAXES AND REGULATIONS	0
ARTICLE 9.	SURVEYS	D Ω
A. R	PERMITS AND LICENSES.	Q Q
	TAXES	
O.	LAWS AND REGULATIONS.	a
ARTICI F 10	PROTECTION OF WORK AND PROPERTY	g
	GENERAL PROVISIONS.	
	SAFETY PRECAUTIONS	
	EMERGENCIES	_
	DRAWINGS AND SPECIFICATIONS ON THE WORK	
ARTICLE 12.	REQUESTS FOR INFORMATION AND SCHEDULES	11
Α.	REQUESTS FOR INFORMATION	11
B.	SCHEDULES	11
ARTICLE 13.	SHOP DRAWINGS, PRODUCT DATA AND SAMPLES	13
Α.	SUBMITTAL PROCESS	13
B.	FABRICATION AND ORDERING	13
	DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS	
	CONTRACTOR REPRESENTATIONS	
	SAMPLES AND TESTING	
	SAMPLES	
	TESTING – GENERAL	14
\sim	TESTING - CONCRETE AND SOILS	14

i

SC-6.23 Rev. 7/2015

_		
	TESTING – OTHER	
ARTICLE 15.	SUBCONTRACTS	.15
	CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES OR COLORADO	
B.	SUBCONTRACTOR LIST	15
	SUBCONTRACTOR SUBSTITUTIONS	
	CONTRACTOR RESPONSIBILITIES	
ARTICLE 16.	RELATIONS OF CONTRACTOR AND SUBCONTRACTOR	.16
ARTICLE 17.	MUTUAL RESPONSIBILITY OF CONTRACTORS.	.16
ARTICLE 18.	SEPARATE CONTRACTS	.16
ARTICLE 19.	USE OF PREMISES	.16
ARTICLE 20.	CUTTING, FITTING OR PATCHING	. 17
ARTICLE 21.	UTILITIES	. 17
Α.	TEMPORARY UTILITIES	. 17
В.	PROTECTION OF EXISTING UTILITIES	. 17
	CROSSING OF UTILITIES	
	UNSUITABLE CONDITIONS	
	TEMPORARY FACILITIES.	
	OFFICE FACILITIES.	
В.	TEMPORARY HEAT.	
C.	WEATHER PROTECTION	
D.	DUST PARTITIONS	
E.	BENCH MARKS	
F.	SIGN	
	SANITARY PROVISION	
	CLEANING UP	
	INSURANCE	
Α.	GENERAL	. 18
B.	COMMERCIAL GENERAL LIABILITY INSURANCE (CGL)	19
C.	AUTOMOBILE INSURANCE	19
D.	WORKERS COMPENSATIONS INSURANCE	.19
E.	UMBRELLA LIABILITY INSURANCE	. 20
F.	BUILDER'S RISK INSURANCE	20
G.	POLLUTION LIABILITY INSURANCE	21
H.	ADDITIONAL MISCELLANEOUS INSURANCE PROVISIONS	.21
ARTICLE 26.	CONTRACTOR'S PERFORMANCE AND PAYMENT BONDS	21
ARTICLE 27.	LABOR AND WAGES	. 22
ARTICLE 28.	ROYALTIES AND PATENTS	. 22
ARTICLE 29.	ASSIGNMENT	. 22
ARTICLE 30.	CORRECTION OF WORK BEFORE ACCEPTANCE	.22
PAYMENT AN	ND COMPENSATION	
ARTICLE 31.	APPLICATIONS FOR PAYMENTS	.23
A.	CONTRACTOR'S SUBMITTALS	. 23
	ARCHITECT/ENGINEER CERTIFICATION	
C.	RETAINAGE WITHHELD	24
	RELEASE OF RETAINAGE	
	CERTIFICATES FOR PAYMENTS	
ARTICLE 33.	PAYMENTS WITHHELD.	. 25
ARTICLE 34.	DEDUCTIONS FOR UNCORRECTED WORK	.26
ARTICLE 35.	CHANGES IN THE WORK	.26
	THE VALUE OF CHANGED WORK	
B.	DETAILED BREAKDOWN	
С	HAZARDOUS MATERIALS	
D	EMERGENCY FIELD CHANGE ORDERED WORK	
	APPROPRIATION LIMITATIONS – § 24-91-103.6, C.R.S., as amended	
ARTICI F 36	CLAIMS	30

	DIFFERING SITE CONDITIONS	
Α.	NOTICE IN WRITING	32
B.	LIMITATIONS	32
ARTICLE 38.	DELAYS AND EXTENSIONS OF TIME	32
ARTICLE 39.	NON-BINDING DISPUTE RESOLUTION – FACILITATED NEGOTIATIONS	33
COMPLETIO		
ARTICLE 40.	RIGHT OF OCCUPANCY	35
	COMPLETION, FINAL INSPECTION, ACCEPTANCE AND SETTLEMENT	
	NOTICE OF COMPLETION	
B.	FINAL INSPECTION	35
	NOTICE OF SUBSTANTIAL COMPLETION	
	NOTICE OF ACCEPTANCE	
E.	SETTLEMENT	37
	GENERAL WARRANTY AND CORRECTION OF WORK AFTER ACCEPTANCE	
ARTICLE 43.	LIENSONE-YEAR GUARANTEE AND SPECIAL GUARANTEES AND WARRANTIES	38
	ONE-YEAR GUARANTEE OF THE WORK	
	SPECIAL GUARANTEES AND WARRANTIES	
	GUARANTEE INSPECTIONS AFTER COMPLETION	
	TIME OF COMPLETION AND LIQUIDATED DAMAGES	
ARTICLE 47.	DAMAGES	41
ARTICLE 48.	STATE'S RIGHT TO DO THE WORK; TEMPORARY SUSPENSION OF WORK; DELAY DAMAGES	40
۸	STATE'S RIGHT TO DO THE WORK	42
A.	TEMPORARY SUSPENSION OF WORK	42
	DELAY DAMAGES	
APTICI E 40	STATE'S RIGHT TO TERMINATE CONTRACT.	43 42
	GENERAL	
A.	CONDITIONS AND PROCEDURES	43 42
	ADDITIONAL CONDITIONS	
APTICI E 50	TERMINATION FOR CONVENIENCE OF STATE	44 11
ARTICLE 30.	NOTICE OF TERMINATION	77
	PROCEDURES	
ARTICI F 51	CONTRACTOR'S RIGHT TO STOP WORK AND/OR TERMINATE CONTRACT	45
ARTICI F 52	SPECIAL PROVISIONS	46
A.	CONTROLLER'S APPROVAL	46
	FUND AVAILABILITY	_
	GOVERNMENTAL IMMUNITY	
D.	INDEPENDENT CONTRACTOR	46
	COMPLIANCE WITH LAW	
F.	CHOICE OF LAW	46
G.	BINDING ARBITRATION PROHIBITED	47
H.	SOFTWARE PIRACY PROHIBITION	47
I.	EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST	47
J.	VENDOR OFFSET	47
	PUBLIC CONTRACTS FOR SERVICES	
	PUBLIC CONTRACTS WITH NATURAL PERSONS	
ARTICLE 53.	MISCELLANEOUS PROVISIONS	48
	CONSTRUCTION OF LANGUAGE	
	SEVERABILITY	
	SECTION HEADINGS	
	AUTHORITY	
	INTEGRATION OF UNDERSTANDING	
F.	VENUE	
G	NO THIRD PARTY BENEFICIARIES	48

Н.	WAIVER	. 48
	INDEMNIFICATION	
	STATEWIDE CONTRACT MANAGEMENT SYSTEM	
K.	CORA DISCLOSURE	. 49

STATE OF COLORADO OFFICE OF THE STATE ARCHITECT STATE BUILDINGS PROGRAM

THE GENERAL CONDITIONS OF THE CONTRACTOR'S DESIGN/BID/BUILD AGREEMENT (STATE FORM SC-6.23)

ARTICLE 1. DEFINITIONS

A. CONTRACT DOCUMENTS

The Contract Documents consist of the following some of which are procedural documents used in the administration and performance of the Agreement:

- 1. Contractor's Design/Bid/Build Agreement; (SC-6.21);
- 2. Performance Bond (SC-6.22) and Labor and Material Payment Bond (SC-6.221);
- 3. General Conditions of the Contractor's Design/Bid/Build Agreement (SC- 6.23) and if applicable, Supplementary General Conditions:
- 4. Detailed Specification Requirements, including all addenda issued prior to the opening of the bids: and.
- 5. Drawings, including all addenda issued prior to the opening of the bids.
- 6. Change Orders (SC-6.31) and Amendments (SC-6.0), if any, when properly executed.
- 7. Authorization to Bid (SBP-6.10)
- 8. Information for Bidders (SBP-6.12);
- 9. Bid (SBP-6.13);
- 10. Bid Bond (SBP-6.14);
- 11. Notice of Award (SBP-6.15);
- 12. Builder's risk insurance certificates of insurance (ACORD 25-S);
- 13. Liability and Workers' compensation certificates of insurance;
- 14. Notice to Proceed (Design/Bid/Build) (SBP-6.26);
- 15. Notice of Approval of Occupancy/Use (SBP-01);
- 16. Notice of Partial Substantial Completion (SBP-071):
- 17. Notice of Substantial Completion (SBP-07);
- 18. Notice of Partial Final Acceptance (SC-6.27);
- 19. Notice of Final Acceptance (SBP-6.271);
- 20. Notice of Partial Contractor's Settlement (SC-7.3);
- 21. Notice of Contractor's Settlement (SBP-7.31);
- 22. Application and Certificate for Contractor's Payment (SBP-7.2);
- 23. Other procedural and reporting documents or forms referred to in the General Conditions, the Supplementary General Conditions, the Specifications or required by the State Buildings Program or the Principal Representative, including but not necessarily limited to Pre-Acceptance Check List (SBP-05) and the Building Inspection Record (SBP-BIR). A list of the current standard State Buildings Program forms applicable to this Contract may be obtained from the Principal Representative on request.

B. DEFINITIONS OF WORDS AND TERMS USED

- 1. AGREEMENT. The term "Agreement" shall mean the written agreement entered into by the State of Colorado acting by and through the Principal Representative and the Contractor for the performance of the Work and payment therefore, on State Form SC-6.21. The term Agreement when used without reference to State Form SC-6.21 may also refer to the entirety of the parties' agreement to perform the Work described in the Contract Documents or reasonably inferable there from. The term "Contract" shall be interchangeable with this latter meaning of the term Agreement
- 2. ARCHITECT/ENGINEER. The term "Architect/Engineer" shall mean either the architect of record or the engineer of record under contract to the State of Colorado for the Project identified in the Contract Documents.

- 3. CHANGE ORDER. The term "Change Order" means a written order directing the Contractor to make changes in the Work, in accordance with Article 35A, The Value of Changed Work.
- 4. COLORADO LABOR. The term "Colorado labor", as provided in C.R.S. § 8-17-101(2)(a), as amended, means any person who is a resident of the state of Colorado, at the time of the public Works project, without discrimination as to race, color, creed, sex, sexual orientation, marital status, national origin, ancestry, age, or religion except when sex or age is a bona fide occupational qualification. A resident of the state of Colorado is a person who can provide a valid Colorado driver's license, a valid Colorado state-issued photo identification, or documentation that he or she has resided in Colorado for the last thirty days.
- 5. CONTRACTOR. The word "Contractor" shall mean the person, company, firm, corporation or other legal entity entering into a contract with the State of Colorado acting by and through the Principal Representative
- 6. DAYS. The term "days" whether singular or plural shall mean calendar days unless expressly stated otherwise. Where the term "business days" is used it shall mean business days of the State of Colorado.
- 7. DRAWINGS. The term "Drawings" shall mean all drawings approved by appropriate State officials which have been prepared by the Architect/Engineer showing the Work to be done, except that where a list of drawings is specifically enumerated in the Supplementary General Conditions or division 1 of the Specifications, the term shall mean the drawings so enumerated, including all addenda drawings.
- 8. EMERGENCY FIELD CHANGE ORDER. The term "Emergency Field Change Order" shall mean a written change order for extra Work or a change in the Work necessitated by an emergency as defined in Article 35C executed on State form SC 6.31 and identified as an Emergency Field Change Order. The use of such orders is limited to emergencies and to the amounts shown in Article 35C.
- 9. FINAL ACCEPTANCE. The terms "final acceptance" or "finally complete" mean the stage in the progress of the Work, after substantial completion, when all remaining items of Work have been completed, all requirements of the Contract Documents are satisfied and the Notice of Acceptance can be issued. Discrete physical portions of the Project may be separately and partially deemed finally complete at the discretion of the Principal Representative when that portion of the Project reaches such stage of completion and a partial Notice of Acceptance can be issued.
- 10. FIXED LIMIT OF CONSTRUCTION COST. The term "Fixed Limit of Construction Cost" shall set forth a dollar amount available for the total Construction Cost of all elements of the Work as specified by the Principal Representative.
- 11. NOTICE. The term "Notice" shall mean any communication in writing from either contracting party to the other by such means of delivery that receipt cannot properly be denied. Notice shall be provided to the person identified to receive it in Article 7.5 (Contractor's Design/Bid/Build Agreement SC-6.21), Notice Identification, or to such other person as either party identifies in writing to receive Notice. Notice by facsimile transmission where proper transmission is evidence shall be adequate where facsimile numbers are included in Article 7.5 (Contractor's Design/Bid/Build Agreement SC-6.21). Notwithstanding an email delivery or return receipt, email Notice shall not be adequate. Acknowledgment of receipt of a voice message shall not be deemed to waive the requirement that Notice, where required, shall be in writing.
- 12. OCCUPANCY. The term "Occupancy" means occupancy taken by the State as Owner after the Date of Substantial Completion at a time when a building or other discrete physical portion of the Project is used for the purpose intended. The Date of Occupancy shall be the date of such first use, but shall not be prior to the date of execution of the Notice of Approval of Occupancy/Use. Prior to the date of execution of a Notice of Approval of Occupancy/Use, the state shall have no right to occupy and the project may not be considered safe for occupancy for the intended use.

- 13. OWNER. The term "Owner" shall mean the Principal Representative.
- 14. PRINCIPAL REPRESENTATIVE. The term "Principal Representative" shall be defined, as provided in § 24-30-1301(11), C.R.S., as the governing board of a state department, institution, or agency; or if there is no governing board, then the executive head of a state department, institution, or agency, as designated by the governor or the general assembly and as specifically identified in the Contract Documents, or shall have such other meaning as the term may otherwise be given in § 24-30-1301(11), C.R.S., as amended. The Principal Representative may delegate authority. The Contractor shall have the right to inquire regarding the delegated authority of any of the Principal Representative's representatives on the project and shall be provided with a response in writing when requested.
- 15. PRODUCT DATA. The term "Product Data" shall mean all submittals in the form of printed manufacturer's literature, manufacturer's specifications, and catalog cuts.
- 16. PROJECT. The "Project" is the total construction of which the Work performed under the Contract Documents is a part, and may include construction by the Principal Representative or by separate contractors.
- 17. REASONABLY INFERABLE. The phrase "reasonably inferable" means that if an item or system is either shown or specified, all material and equipment normally furnished with such items or systems and needed to make a complete installation shall be provided whether mentioned or not, omitting only such parts as are specifically excepted, and shall include only components which the Contractor could reasonably anticipate based on his or her skill and knowledge using an objective, industry standard, not a subjective standard. This term takes into consideration the normal understanding that not every detail is to be given on the Drawings and Specifications If there is a difference of opinion, the Principal Representative shall make the determination as to the standards of what reasonably inferable.
- 18. SAMPLES. The term "Samples" shall mean examples of materials or Work provided to establish the standard by which the Work will be judged.
- 19. SBP. The term "SBP" means "State Buildings", which is used in connection with labeling applicable State form documents (e.g., "SBP-01" is the form number for Notice of Approval of Occupancy/Use).
- 20. SC. The term "SC" means "State Contract" which is used in connection with labeling applicable State form documents (e.g. "SC 6.23" is the State form number for these General Conditions of the Contractor's Design/Bid/Build Agreement).
- 21. SCHEDULE OF VALUES. The term "Schedule of Values" is defined as the itemized listing of description of the Work by Division and Section of the Specifications. The format shall be the same as Form SC-7.2. Included shall be the material costs, and the labor and other costs plus the sum of both.
- 22. SHOP DRAWINGS. The term "Shop Drawings" shall mean any and all detailed drawings prepared and submitted by Contractor, Subcontractor at any tier, vendors or manufacturers providing the products and equipment specified on the Drawings or called for in the Specifications.
- 23. SPECIFICATIONS. The term "Specifications" shall mean the requirements of the CSI divisions of the project manual prepared by the Architect/Engineer describing the Work to be accomplished.
- 24. STATE BUILDINGS PROGRAM. Shall refer to the Office of the State Architect within the Department of Personnel & Administration of Colorado State government responsible for project administration, review, approval and coordination of plans, construction procurement policy, contractual procedures, and code compliance and inspection of all buildings, public Works and improvements erected for state purposes; except public roads and highways and projects under the supervision of the division of wildlife and the division of parks and outdoor recreation as provided in § 24-30-1301, et seq, C.R.S. The term State Buildings Program shall also mean that individual within a State Department agency or institution, including institutions of higher education, who has signed an agreement accepting delegation to perform all or part of the responsibilities and functions of State Buildings Program.
- 25. SUBCONTRACTOR. The term "Subcontractor" shall mean a person, firm or corporation supplying labor, materials, equipment and/or Services for Work at the site of the Project for, and under separate contract or agreement with the Contractor.

- 26. SUBMITTALS. The term "submittals" means drawings, lists, tables, documents and samples prepared by the Contractor to facilitate the progress of the Work as required by these General Conditions or the Drawings and Specifications. They consist of Shop Drawings, Product Data, Samples, and various administrative support documents including but not limited to lists of subcontractors, construction progress schedules, schedules of values, applications for payment, inspection and test results, requests for information, various document logs, and as-built drawings. Submittals are required by the Contract Documents, but except to the extent expressly specified otherwise are not themselves a part of the Contract Documents.
- 27. SUBSTANTIAL COMPLETION. The terms "substantial completion" or "substantially complete" mean the stage in the progress of the Work when the construction is sufficiently complete, in accordance with the Contract Documents as modified by any Change Orders, so that the Work, or at the discretion of the Principal Representative, any designated portion thereof, is available for its intended use by the Principal Representative and a Notice of Substantial Completion can be issued. Portions of the Project may, at the discretion of the Principal Representative, be designated as substantially complete.
- 28. SUPPLIER. The term "Supplier" shall mean any manufacturer, fabricator, distributor, material man or vendor.
- 29. SURETY. The term "Surety" shall mean the company providing the labor and material payment and performance bonds for the Contractor as obligor.
- 30. VALUE ENGINEERING. "Value Engineering" or "VE" is defined as an analysis and comparison of cost versus value of building materials, equipment, and systems. VE considers the initial cost of construction, coupled with the estimated cost of maintenance, energy use, life expectancy and replacement cost. VE related to this Project shall include the analysis and comparison of building elements in an effort to reduce overall Project costs, while maintaining or enhancing the quality of the design intent, whenever possible.
- 31. WORK. The term "Work" shall mean all or part of the labor, materials, equipment, and other services required by the Contract Documents or otherwise required to be provided by the Contractor to meet the Contractor's obligations under the Contract.

ARTICLE 2. EXECUTION, CORRELATION, INTENT OF DOCUMENTS, COMMUNICATION AND COOPERATION

A. EXECUTION

The Contractor, within ten (10) days from the date of Notice of Award, will be required to:

- 1. Execute the Agreement, State Form SC-6.21;
- 2. Furnish fully executed Performance and Labor and Material Payment Bonds on State Form s SC-6.22 and SC-6.221; and
- 3. Furnish certificates of insurance evidencing all required insurance on standard Acord forms designed for such purpose.
- 4. Furnish certified copies of any insurance policies requested by the Principal Representative.

B. CORRELATION

By execution of the Agreement the Contractor represents that the Contractor has visited the site, has become familiar with local conditions and local requirements under which the Work is to be performed, including the building code programs of the State Buildings Program as implemented by the Principal Representative, and has correlated personal observations with the requirements of the Contract Documents.

C. INTENT OF DOCUMENTS

The Contract Documents are complementary, and what is called for by any one document shall be as binding as if called for by all. The intention of the documents is to include all labor, materials, equipment and transportation necessary for the proper execution of the Work. Words describing materials or Work which have a well-known technical or trade meaning shall be held to refer to such recognized standards.

In any event, if any error exists, or appears to exist, in the requirements of the Drawings or Specifications, or if any disagreement exists as to such requirements, the Contractor shall have the

same explained or adjusted by the Architect/Engineer before proceeding with the Work in question. In the event of the Contractor's failure to give prior written Notice of any such errors or disagreements of which the Contractor or the Subcontractors at any tier are aware, the Contractor shall, at no additional cost to the Principal Representative, make good any damage to, or defect in, Work which is caused by such omission.

Where a conflict occurs between or within standards, Specifications or Drawings, which is not resolved by reference to the precedence between the Contract Documents, the more stringent or higher quality requirements shall apply so long as such more stringent or higher quality requirements are reasonably inferable. The Architect/Engineer shall decide which requirements will provide the best installation.

With the exception noted in the following paragraph, the precedence of the Contract Documents is in the following sequence:

- 1. The Agreement (SC-6.21);
- 2. The Supplementary General Conditions, if any:
- 3. The General Conditions (SC-6.23); and
- 4. Drawings and Specifications, all as modified by any addenda.

Change Orders and Amendments, if any, to the Contract Documents take precedence over the original Contract Documents.

Notwithstanding the foregoing order of precedence, the Special Provisions of Article 52 of the General Conditions, Special Provisions, shall take precedence, rule and control over all other provisions of the Contract Documents.

Unless the context otherwise requires, form numbers in this document are for convenience only. In the event of any conflict between the form required by name or context and the form required by number, the form required by name or context shall control. The Contractor may obtain State forms from the Principal Representative upon request.

D. PARTNERING, COMMUNICATIONS AND COOPERATION

In recognition of the fact that conflicts, disagreements and disputes often arise during the performance of construction contracts, the Contractor and the Principal Representative aspire to encourage a relationship of open communication and cooperation between the employees and personnel of both, in which the objectives of the Contract may be better achieved and issues resolved in a more fully informed atmosphere.

The Contractor and the Principal Representative each agree to assign an individual who shall be fully authorized to negotiate and implement a voluntary partnering plan for the purpose of facilitating open communications between them. Within thirty days (30) of the Notice to Proceed, the assigned individuals shall meet to discuss development of an informal agreement to accomplish these goals.

The assigned individuals shall endeavor to reach an informal agreement, but shall have no such obligation. Any plans these parties voluntarily agree to implement shall result in no change to the contract amount, and no costs associated with such plan or its development shall be recoverable under any contract clause. In addition, no plan developed to facilitate open communication and cooperation shall alter, amend or waive any of the rights or duties of either party under the Contract unless and except by written Amendment to the Contract, nor shall anything in this clause or any subsequently developed partnering plan be deemed to create fiduciary duties between the parties unless expressly agreed in a written Amendment to the Contract. It is also recognized that projects with relatively low contract values may not justify the expense or special efforts required. In the case of small projects with an initial Contract value under \$500,000, the requirements of the preceding paragraph shall not apply.

ARTICLE 3. COPIES FURNISHED

The Contractor will be furnished, free of charge, the number of copies of Drawings and Specifications as specified in the Contract Documents, or if no number is specified, all copies reasonably necessary for the execution of the Work.

ARTICLE 4. OWNERSHIP OF DRAWINGS

Drawings or Specifications, or copies of either, furnished by the Architect/Engineer, are not to be used on any other Work. At the completion of the Work, at the written request of the Architect/Engineer, the Contractor shall endeavor to return all Drawings and Specifications.

The Contractor may retain the Contractor's Contract Document set, copies of Drawings and Specifications used to contract with others for any portion of the Work and a marked up set of as-built drawings.

ARTICLE 5. ARCHITECT/ENGINEER'S STATUS

The Architect/Engineer is the representative of the Principal Representative for purposes of administration of the Contract, as provided in the Contract Documents and the Agreement. In case of termination of employment or the death of the Architect/Engineer, the Principal Representative will appoint a capable Architect/Engineer against whom the Contractor makes no reasonable objection, whose status under the Contract shall be the same as that of the former Architect/Engineer.

ARTICLE 6. ARCHITECT/ENGINEER DECISIONS AND JUDGMENTS, ACCESS TO WORK AND INSPECTION

A. DECISIONS

The Architect/Engineer shall, within a reasonable time, make decisions on all matters relating to the execution and progress of the Work or the interpretation of the Contract Documents, and in the exercise of due diligence shall be reasonably available to the Contractor to timely interpret and make decisions with respect to questions relating to the design or concerning the Contract Documents.

B. JUDGMENTS

The Architect/Engineer is, in the first instance, the judge of the performance required by the Contract Documents as it relates to compliance with the Drawings and Specifications and quality of Workmanship and materials.

The Architect/Engineer shall make judgments regarding whether directed Work is extra or outside the scope of Work required by the Contract Documents at the time such direction is first given. If, in the Contractor's judgment, any performance directed by the Architect/Engineer is not required by the Contract Documents or if the Architect/Engineer does not make the judgment required, it shall be a condition precedent to the filing of any claim for additional cost related to such directed Work that the Contractor, before performing such Work, shall first obtain in writing, the Architect/Engineer's written decision that such directed Work is included in the performance required by the Contract Documents. If the Architect/Engineer's direction to perform the Work does not state that the Work is within the performance required by the Contract Documents, the Contractor shall, in writing, request the Architect/Engineer to advise in writing whether the directed Work will be considered extra Work or Work included in the performance required by the Contract Documents.

The Architect/Engineer shall respond to any such written request for such a decision within three (3) business days and if no response is provided, or if the Architect/Engineer's written decision is to the effect that the Work is included in the performance required by the Contract Documents, the Contractor may file with the Principal Representative and the Architect/Engineer a Notice of claim in accordance with Article 36, Claims. Whether or not a Notice of claim is filed, the Contractor shall proceed with the ordered Work. Disagreement with the decision of the Architect/Engineer shall not be grounds for the Contractor to refuse to perform the Work directed or to suspend or terminate performance.

C. ACCESS TO WORK

The Architect/Engineer, the Principal Representative and representatives of State Buildings Program shall at all times have access to the Work. The Contractor shall provide proper facilities for such access and for their observations or inspection of the Work.

D. INSPECTION

The Architect/Engineer has agreed to make, or that structural, mechanical, electrical engineers or other consultants will make, periodic visits to the site to generally observe the progress and quality of the Work to determine in general if the Work is proceeding in accordance with the Contract Documents. Observation may extend to all or any part of the Work and to the preparation, fabrication or manufacture of materials.

Without in any way meaning to be exclusive or to limit the responsibilities of the Architect/Engineer or the Contractor, the Architect/Engineer has agreed to observe, among other aspects of the Work, the following for compliance with the Contract Documents:

- 1. Compaction testing reports based upon the findings and recommendations of the Principal Representative's testing consultant;
- 2. Bearing surfaces of excavations before concrete is placed based upon the findings and recommendations of the Principal Representative's soils engineering consultant;
- 2. Reinforcing steel after installation and before concrete is poured;
- Structural concrete:
- 4. Laboratory reports on all concrete testing based upon the findings and recommendations of the Principal Representative's testing consultant;
- 5. Structural steel during and after erection and prior to its being covered or enclosed;
- 6. Steel welding; Principal Representative will furnish steel welding inspection consultant/agency if required or necessary for the project;
- 7. Mechanical and plumbing Work following its installation and prior to its being covered or enclosed;
- 8. Electrical Work following its installation and prior to its being covered or enclosed; and
- 9. Any special or quality control testing required in the Contract Documents provided by the Principal Representative's testing consultant.

If the Specifications, the Architect/Engineer's instructions, laws, ordinances of any public authority require any Work to be specifically tested or approved, the Contractor shall give the Principal Representative, Architect/Engineer and appropriate testing agency (if necessary) timely notice of its readiness for observation by the Architect/Engineer or inspection by another authority, and if the inspection is by another authority, of the date fixed for such inspection, required certificates of inspection being secured by the Contractor. The Contractor shall give all required Notices to the Principal Representative or his or her designee for inspections required for the building inspection program. It shall be the responsibility of the Contractor to determine the Notice required by the State pursuant to Building Inspection Record for the Project, according to State form SBP-B.I.R., or the equivalent form required by the Principal Representative as approved by the State Buildings Program. If any such Work is covered up without approval or consent of the Architect/Engineer or prior to any building code inspection, it must, if required by the Architect/Engineer, the Principal Representative or the State Buildings Program, be uncovered for examination, at the Contractor's expense. If such Work is found to be not in accordance with the Contract Documents, the Contractor shall pay such costs. unless he or she shall show that the defect in the Work was caused by another contractor engaged by the Principal Representative. In addition, examination of questioned Work may be ordered, and if so ordered, the Work must be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the Contractor shall be reimbursed the cost of examination and replacement.

ARTICLE 7. CONTRACTOR'S SUPERINTENDENCE AND SUPERVISION

The Contractor shall employ, and keep present (as applicable) on the Project during its progress, a competent project manager as satisfactory to the Principal Representative. The project manager shall not be changed except with the consent of the Principal Representative, unless the project manager proves to

be unsatisfactory to the Contractor and ceases to be in his or her employ. The project manager shall represent the Contractor for the Project, and in the absence of the Contractor, all directions given to the project manager shall be as binding as if given to the Contractor. Directions received by the project manager shall be documented by the project manager and communicated in writing with the Contractor.

The Contractor shall employ, and keep present on the Project during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Architect/Engineer and the Principal Representative. The superintendent shall not be changed except with the consent of the Architect/Engineer and the Principal Representative, unless the superintendent proves to be unsatisfactory to the Project Manager/Contractor and ceases to be in his or her employ. The superintendent shall represent the Project Manager/Contractor in his or her absence and all directions given to the superintendent shall be as binding as if given to the Project Manager/Contractor. Directions received by the superintendent shall be documented by the superintendent and confirmed in writing with the Project Manager/Contractor.

The Contractor shall give efficient supervision to the Work, using his or her best skill and attention. He or she shall carefully study and compare all Drawings, Specifications and other written instructions and shall without delay report any error, inconsistency or omission which he or she may discover in writing to the Architect/Engineer. The Contractor shall not be liable to the Principal Representative for damage to the extent it results from errors or deficiencies in the Contract Documents or other instructions by the Architect/Engineer, unless the Contractor knew or had reason to know, that damage would result by proceeding and the Contractor fails to so advise the Architect/Engineer.

The superintendent shall see that the Work is carried out in accordance with the Contract Documents and in a uniform, thorough and first-class manner in every respect. The Contractor's superintendent shall establish all lines, levels, and marks necessary to facilitate the operations of all concerned in the Contractor's Work. The Contractor shall lay out all Work in a manner satisfactory to the Architect/Engineer, making permanent records of all lines and levels required for excavation, grading, foundations, and for all other parts of the Work.

ARTICLE 8. MATERIALS AND EMPLOYEES

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the Work.

Unless otherwise specified, all materials shall be new and both workmanship and materials shall be first class and of uniform quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor is fully responsible for all acts and omissions of the Contractor's employees and shall at all times enforce strict discipline and good order among employees on the site. The Contractor shall not employ on the Work any person reasonably deemed unfit by the Principal Representative or anyone not skilled in the Work assigned to him.

ARTICLE 9. SURVEYS, PERMITS, LAWS, TAXES AND REGULATIONS

A. SURVEYS

The Principal Representative shall furnish all surveys, property lines and bench marks deemed necessary by the Architect/Engineer, unless otherwise specified.

B. PERMITS AND LICENSES

Permits and licenses necessary for the prosecution of the Work shall be secured and paid for by the Contractor. Unless otherwise specified in the Specifications, no local municipal or county building permit shall be required. However, State Buildings Program requires each Principal Representative to administer a building code inspection program, the implementation of which may vary at each agency or institution of the State. The Contractors' employees shall become personally familiar with these local conditions and requirements and shall fully comply with such requirements. State electrical and

plumbing permits are required, unless the requirement to obtain such permits is altered by State Building's Programs. The Contractor shall obtain and pay for such permits.

Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Principal Representative, unless otherwise specified.

C. TAXES

Refund of Sales and Use Taxes

The Contractor shall pay all local taxes required to be paid, including but not necessarily limited to all sales and use taxes. If requested by the Principal Representative prior to issuance of the Notice to Proceed or directed in the Supplementary General Conditions or the Specifications, the Contractor shall maintain records of such payments in respect to the Work, which shall be separate and distinct from all other records maintained by the Contractor, and the Contractor shall furnish such data as may be necessary to enable the State of Colorado, acting by and through the Principal Representative, to obtain any refunds of such taxes which may be available under the laws, ordinances, rules or regulations applicable to such taxes. When so requested or directed, the Contractor shall require Subcontractors at all tiers to pay all local sales and use taxes required to be paid and to maintain records and furnish the Contractor with such data as may be necessary to obtain refunds of the taxes paid by such Subcontractors. No State sales and use taxes are to be paid on material to be used in this Project. On application by the purchaser or seller, the Department of Revenue shall issue to a Contractor or to a Subcontractor at any tier, a certificate or certificates of exemption per § 39-26-114(1)(d), C.R.S., and § 39-26-203, C.R.S.

Federal Taxes

The Contractor shall exclude the amount of any applicable federal excise or manufacturers' taxes from the proposal. The Principal Representative will furnish the Contractor, on request exemption certificates.

D. LAWS AND REGULATIONS

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn or specified. If the Contractor observes that the Drawings or Specifications require Work which is at variance therewith, the Contractor shall without delay notify the Architect/Engineer in writing and any necessary changes shall be adjusted as provided in Article 35, Changes In The Work.

The Contractor shall bear all costs arising from the performance of Work required by the Drawings or Specifications that the Contractor knows to be contrary to such laws, ordinances, rules or regulations, if such Work is performed without giving Notice to the Architect/Engineer.

ARTICLE 10. PROTECTION OF WORK AND PROPERTY

A. GENERAL PROVISIONS

The Contractor shall continuously maintain adequate protection of all Work and materials, protect the property from injury or loss arising in connection with this Contract and adequately protect adjacent property as provided by law and the Contract Documents. The Contractor shall make good any damage, injury or loss, except to the extent:

- 1. Directly due to errors in the Contract Documents;
- 2. Caused by agents or employees of the Principal Representative; and,
- 3. Due to causes beyond the Contractor's control and not to fault or negligence; provided such damage, injury or loss would not be covered by the insurance required to be carried by the Contractor;

B. SAFETY PRECAUTIONS

The Contractor shall take all necessary precautions for the safety of employees on the Project, and shall comply with all applicable provisions of federal, State and municipal safety laws and building

codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. He or she shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of Workers and the public and shall post danger signs warning against the hazards created by such features of construction as protruding nails, hoists, well holes, elevator hatchways, scaffolding, window openings, stairways and falling materials; and he or she shall designate a responsible member of his or her organization on the Project, whose duty shall be the prevention of accidents. The name and position of any person so designated shall be reported to the Architect/Engineer by the Contractor.

The Contractor shall provide all necessary bracing, shoring and tying of all structures, decks and framing to prevent any structural failure of any material which could result in damage to property or the injury or death of persons; take all precautions to insure that no part of any structure of any description is loaded beyond its carrying capacity with anything that will endanger its safety at any time during the execution of this Contract; and provide for the adequacy and safety of all scaffolding and hoisting equipment. The Contractor shall not permit open fires within the building enclosure. The Contractor shall construct and maintain all necessary temporary drainage and do all pumping necessary to keep excavations and floors, pits and trenches free of water. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work, except as otherwise noted.

The Contractor shall take due precautions when obstructing sidewalks, streets or other public ways in any manner, and shall provide, erect and maintain barricades, temporary walkways, roadways, trench covers, colored lights or danger signals and any other devices necessary or required to assure the safe passage of pedestrians and automobiles.

C. EMERGENCIES

In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor without special instruction or authorization from the Architect/Engineer or Principal Representative, is hereby permitted to act, at his or her discretion, to prevent such threatened loss or injury; and he or she shall so act, without appeal, if so authorized or instructed. Provided the Contractor has no responsibilities for the emergency, if the Contractor incurs additional cost not otherwise recoverable from insurance or others on account of any such emergency Work, the Contract sum shall be equitably adjusted in accordance with Article 35, Changes In The Work.

ARTICLE 11. DRAWINGS AND SPECIFICATIONS ON THE WORK

The Contractor shall keep on the job site one copy of the Contract Documents in good order, including current copies of all Drawings and Specifications for the Work, and any approved Shop Drawings, Product Data or Samples, and as-built drawings. As-built drawings shall be updated weekly by the Contractor and Subcontractors to reflect actual constructed conditions including dimensioned locations of underground Work and the Contractor's failure to maintain such updates may be grounds to withhold portions of payments otherwise due in accordance with Article 33, Payments Withheld. All such documents shall be available to the Architect/Engineer and representatives of the State. In addition, the Contractor shall keep on the job site one copy of all approved addenda, Change Orders and requests for information issued for the Work.

The Contractor shall develop procedures to insure the currency and accuracy of as-built drawings and shall maintain on a current basis a log of requests for information and responses thereto, a Shop Drawing and Product Data submittal log, and a Sample submittal log to record the status of all necessary and required submittals.

ARTICLE 12. REQUESTS FOR INFORMATION AND SCHEDULES

A. REQUESTS FOR INFORMATION

The Architect/Engineer shall furnish additional instructions with reasonable promptness, by means of drawings or otherwise, necessary for the proper execution of the Work. All such drawings and instructions shall be consistent with the Contract Documents and reasonably inferable there from. The

Architect/Engineer shall determine what additional instructions or drawings are necessary for the proper execution of the Work.

The Work shall be executed in conformity with such instructions and the Contractor shall do no Work without proper drawings, specifications or instructions. If the Contractor believes additional instructions, specifications or drawings are needed for the performance of any portion of the Work, the Contractor shall give Notice of such need in writing through a request for information furnished to the Architect/Engineer sufficiently in advance of the need for such additional instructions, specifications or drawings to avoid delay and to allow the Architect/Engineer a reasonable time to respond. The Contractor shall maintain a log of the requests for information and the responses provided.

B. SCHEDULES

Submittal Schedules

Prior to filing the Contractor's first application for payment, a schedule shall be prepared which may be preliminary to the extent required, fixing the dates for the submission and initial review of required Shop Drawings, Product Data and Samples for the beginning of manufacture and installation of materials, and for the completion of the various parts of the Work. It shall be prepared so as to cause no delay in the Work or in the Work of any other contractor. The schedule shall be subject to change from time to time in accordance with the progress of the Work, and it shall be subject to the review and approval by the Architect/Engineer. It shall fix the dates at which the various Shop Drawings Product Data and Samples will be required from the Architect/Engineer. The Architect/Engineer, after review and agreement as to the time provided for initial review, shall review and comment on the Shop Drawings, Product Data and Samples in accordance with that schedule. The schedule shall be finalized, prepared and submitted with respect to each of the elements of the Work in time to avoid delay, considering reasonable periods for review, manufacture or installation.

At the time the schedule is prepared, the Contractor, the Architect/Engineer and Principal Representative shall jointly identify the Shop Drawing, Product Data and Samples, if any, which the Principal Representative shall receive simultaneously with the Architect/Engineer for the purposes of owner coordination with existing facility standards and systems. The Contractor shall furnish a copy for the Principal Representative when so requested. Transmittal of Shop Drawings and Product Data copies to the Principal Representative shall be solely for the convenience of the Principal Representative and shall neither create nor imply responsibility or duty of review by the Principal Representative.

The Contractor may also, or at the direction of the Principal Representative at any time shall, prepare and maintain a schedule, which may also be preliminary and subject to change to the extent required, fixing the dates for the initial responses to requests for information or for detail drawings which will be required from the Architect/Engineer to allow the beginning of manufacture, installation of materials and for the completion of the various parts of the Work. The schedule shall be subject to review and approval by the Architect/Engineer. The Architect/Engineer shall, after review and agreement, furnish responses and detail drawings in accordance with that schedule. Any such schedule shall be prepared and approved in time to avoid delay, considering reasonable periods for review, manufacture or installation, but so long as the request for information schedule is being maintained, it shall not be deemed to transfer responsibility to the Contractor for errors or omissions in the Contract Documents where circumstances make timely review and performance impossible.

The Architect/Engineer shall not unreasonably withhold approval of the Contractor's schedules and shall inform the Contractor and the Principal Representative of the basis of any refusal to agree to the Contractor's schedules. The Principal Representative shall attempt to resolve any disagreements.

2. Schedule of Values

Within twenty-one (21) calendar days after the date of the Notice to Proceed, the Contractor shall submit to the Architect/Engineer and Principal Representative, for approval, and to the State Buildings Program when specifically requested, a complete itemized schedule of the values of the various parts of the Work, as estimated by the Contractor, aggregating the total price. The schedule of values shall be in such detail as the Architect/Engineer or the Principal Representative shall require, prepared on forms acceptable to the Principal Representative. It shall, at a minimum, identify on a separate line each division of the Specifications including the general conditions costs to be charged to the Project. The Contractor shall revise and resubmit the schedule of values for approval when, in the opinion of the Architect/Engineer or the Principal Representative, such resubmittal is required due to changes or modifications to the Contract Documents or the Contract sum.

The total cost of each line item so separately identified shall, when requested by the Architect/Engineer or the Principal Representative, be broken down into reasonable estimates of the value of:

- a. Material, which shall include the cost of material actually built into the Project plus any local sales or use tax paid thereon; and,
- b. Labor and other costs.

The cost of subcontracts shall be incorporated in the Contractor's schedule of values, and when requested by the Architect/Engineer or the Principal Representative, shall be separately shown as line items.

The Architect/Engineer shall review the proposed schedules and approve it after consultation with the Principal Representative, or advise the Contractor of any required revisions within ten (10) days of its receipt. In the event no action is taken on the submittal within ten days, the Contractor may utilize the schedule of values as its submittal for payment until it is approved or until revisions are requested.

When the Architect/Engineer deems it appropriate to facilitate certification of the amounts due to the Contractor, further breakdown of subcontracts, including breakdown by labor and materials, may be directed.

This schedule of values, when approved, will be used in preparing Contractor's applications for payment on State Form SC-7.2, Application for Payment.

3. Construction Schedules

Within twenty-one (21) calendar days after the date of the Notice to Proceed, the Contractor shall submit to the Architect/Engineer and the Principal Representative, and to the State Buildings Program when specifically requested, on a form acceptable to them, an overall timetable of the construction schedule for the Project. Unless the Supplementary General Conditions or the Specifications allow scheduling with bar charts or other less sophisticated scheduling tools, the Contractor's schedule shall be a critical-path method (CPM) construction schedule. The CPM schedule shall start with the date of the Notice to Proceed and include submittals activities, the various construction activities, change order Work (when applicable), close-out, testing, demonstration of equipment operation when called for in the Specifications. and acceptance. The CPM schedule shall at a minimum correlate to the schedule of values line items and shall be cost loaded if requested by the Architect/Engineer or Principal Representative. The completion time shall be the time specified in the Agreement and all Project scheduling shall allocate float utilizing the full period available for construction as specified in the Agreement on State Form SC 6.13, without indication of early completion, unless such earlier completion is approved in writing by the Principal Representative and State Building Programs.

The time shown between the starting and completion dates of the various elements within the construction schedule shall represent one hundred per cent (100%) completion of each element.

All other elements of the CPM schedule shall be as required by the Specifications. In addition, the Contractor shall submit monthly updates or more frequently, if required by the Principal Representative, updates of the construction schedule. These updates shall reflect the Contractor's "Work in place" progress.

When requested by the Architect/Engineer, the Principal Representative or the State Buildings Program, the Contractor shall revise the construction schedule to reflect changes in the schedule of values.

When the testing of materials is required by the Specifications, the Contractor shall also prepare and submit to the Architect/Engineer and the Principal Representative a schedule for testing in accordance with Article 14, Samples and Testing.

ARTICLE 13. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

A. SUBMITTAL PROCESS

The Contractor shall check and field verify all dimensions. The Contractor shall check, approve and submit to the Architect/Engineer in accordance with the schedule described in Article 12, Requests for Information and Schedules, all Shop Drawings, Product Data and Samples required by the specifications or required by the Contractor for the Work of the various trades. All Drawings and Product Data shall contain identifying nomenclature and each submittal shall be accompanied by a letter of transmittal identifying in detail all enclosures. The number of copies of Shop Drawings and Product Data to be submitted shall be as specified in the Specifications and if no number is specified then three copies shall be submitted.

The Architect/Engineer shall review and comment on the Shop Drawings and Product Data within the time provided in the agreed upon schedule for conformance with information given and the design concept expressed in, or reasonably inferred from, the Contract Documents. The nature of all corrections to be made to the Shop Drawings and Product Data, if any, shall be clearly noted, and the submittals shall be returned to the Contractor for such corrections. If a change in the scope of the Work is intended by revisions requested to any Shop Drawings and Product Data, the Contractor shall be requested to prepare a change proposal in accordance with Article 35, Changes In The Work. On resubmitted Shop Drawings, Product Data or Samples, the Contractor shall direct specific attention in writing on the transmittal cover to revisions other than those corrections requested by the Architect/Engineer on any previously checked submittal. The Architect/Engineer shall promptly review and comment on, and return, the resubmitted items.

The Contractor shall thereafter furnish such other copies in the form approved by the Architect/Engineer as may be needed for the prosecution of the Work.

B. FABRICATION AND ORDERING

Fabrication shall be started by the Contractor only after receiving approved Shop Drawings from the Architect/Engineer. Materials shall be ordered in accordance with approved Product Data. Work which is improperly fabricated, whether through incorrect Shop Drawings, faulty workmanship or materials, will not be acceptable.

Page 13 of 49

C. DEVIATIONS FROM DRAWINGS OR SPECIFICATIONS

The review and comments of the Architect/Engineer of Shop Drawings, Product Data or Samples shall not relieve the Contractor from responsibility for deviations from the Drawings or Specifications, unless he or she has in writing called the attention of the Architect/Engineer to such deviations at the time of submission, nor shall it relieve the Contractor from responsibility for errors of any sort in Shop Drawings or Product Data. Review and comments on Shop Drawings or Product Data containing identified deviations from the Contract Documents shall not be the basis for a Change Order or a claim based on a change in the scope of the Work unless Notice is given to the Architect/Engineer and Principal Representative of all additional costs, time and other impacts of the identified deviation by bring it to their attention in writing at the time the submittals are made, and any subsequent change in the Contract sum or the Contract time shall be limited to cost, time and impacts so identified.

D. CONTRACTOR REPRESENTATIONS

By preparing, approving, and/or submitting Shop Drawings, Product Data and Samples, the Contractor represents that the Contractor has determined and verified all materials, field measurements, and field construction criteria related thereto, and has checked and co-ordinated the information contained within each submittal with the requirements of the Work, the Project and the Contract Documents and prior reviews and approvals.

ARTICLE 14. SAMPLES AND TESTING

A. SAMPLES

The Contractor shall furnish for approval, with such promptness as to cause no delay in his or her Work or in that of any other Contractor, all Samples as directed by the Architect/Engineer. The Architect/Engineer shall check and approve such Samples, with reasonable promptness, but only for conformance with the design intent of the Contract Documents and the Project, and for compliance with any submission requirements given in the Contract Documents.

B. TESTING - GENERAL

The Contractor shall provide such equipment and facilities as the Architect/Engineer may require for conducting field tests and for collecting and forwarding samples to be tested. Samples themselves shall not be incorporated into the Work after approval without the permission of the Architect/Engineer.

All materials or equipment proposed to be used may be tested at any time during their preparation or use. The Contractor shall furnish the required samples without charge and shall give sufficient Notice of the placing of orders to permit the testing thereof. Products may be sampled either prior to shipment or after being received at the site of the Work.

Tests shall be made by an accredited testing laboratory. Except as otherwise provided in the Specifications, sampling and testing of all materials, and the laboratory methods and testing equipment, shall be in accordance with the latest standards and tentative methods of the American Society of Testing Materials (ASTM). The cost of testing which is in addition to the requirements of the Specifications shall be paid by the Contractor if so directed by the Architect/Engineer, and the Contract sum shall be adjusted accordingly by Change Order; provided however, that whenever testing shows portions of the Work to be deficient, all costs of testing including that required to verify the adequacy of repair or replacement Work shall be the responsibility of the Contractor.

C. TESTING - CONCRETE AND SOILS

Unless otherwise specified or provided elsewhere in the Contract Documents, the Principal Representative will contract for and pay for the testing of concrete and for soils compaction testing through an independent laboratory or laboratories selected and approved by the Principal Representative. The Contractor shall assume the responsibility of arranging, scheduling and coordinating the concrete sample collection efforts and soils compaction efforts in an efficient and cost effective manner. Testing shall be performed in accordance with the requirements of the Specifications, and if no requirements are specified, the Contractor shall request instructions and testing shall be as directed by the Architect/Engineer or the soils engineer, as applicable, and in accordance with standard industry practices.

The Principal Representative and the Architect/Engineer shall be given reasonable advance notice of each concrete pour and reserve the right to either increase or decrease the number of cylinders or the frequency of tests.

Soil compaction testing shall be at random locations selected by the soils engineer. In general, soils compaction testing shall be as directed by the soils engineer and shall include all substrate prior to backfill or construction.

D. TESTING - OTHER

Additional testing required by the Specifications will be accomplished and paid for by the Principal Representative in a manner similar to that for concrete and soils unless noted otherwise in the Specifications. In any case, the Contractor will be responsible for arranging, scheduling and coordinating additional tests. Where the additional testing will be contracted and paid for by the Principal Representative the Contractor shall give the Principal Representative not less than one month advance written Notice of the date the first such test will be required.

ARTICLE 15. SUBCONTRACTS

A. CONTRACT PERFORMANCE OUTSIDE OF THE UNITED STATES OR COLORADO

After the contract is awarded, Contractor is required to provide written notice to the Principal Representative no later than twenty (20) days after deciding to perform services under this contract outside the United States or Colorado or to subcontract services under this contract to a subcontractor that will perform such services outside the United States or Colorado. The written notification must include, but need not be limited to, a statement of the type of services that will be performed at a location outside the United States or Colorado and the reason why it is necessary or advantageous to go outside the United States or Colorado to perform the services. All notices received by the State pursuant to outsourced services shall be posted on the Colorado Department of Personnel & Administration's website. If Contractor knowingly fails to notify the Principal Representative of any outsourced services as specified herein, the Principal Representative, at its discretion, may terminate this contract as provided in C.R.S. § 24-102-206 (4). (Does not apply to any project that receives federal moneys)

B. SUBCONTRACTOR LIST

Prior to the Notice to Proceed to commence construction, the Contractor shall submit to the Architect/Engineer, the Principal Representative and State Buildings Program a preliminary list of Subcontractors. It shall be as complete as possible at the time, showing all known Subcontractors planned for the Work. The list shall be supplemented as other Subcontractors are determined by the Contractor and any such supplemental list shall be submitted to the Architect/Engineer, the Principal Representative and State Buildings Program not less than ten (10) days before the Subcontractor commences Work.

C. SUBCONTRACTOR SUBSTITUTIONS

The Contractor's list shall include those Subcontractors, if any, which the Contractor indicated in its bid, would be employed for specific portions of the Work if such indication was requested in the bid documents issued by the State. The substitution of any Subcontractor listed in the Contractor's bid shall be justified in writing not less than ten (10) days after the date of the Notice to Proceed to commence construction, and shall be subject to the approval of the Principal Representative. For reasons such as the Subcontractor's refusal to perform as agreed, subsequent unavailability or later discovered bid errors, or other similar reasons, but not including the availability of a lower Subcontract price, such substitution may be approved. The Contractor shall bear any additional cost incurred by such substitutions.

D. CONTRACTOR RESPONSIBLE FOR SUBCONTRACTORS

The Contractor shall not employ any Subcontractor that the Architect/Engineer, within ten (10) days after the date of receipt of the Contractor's list of Subcontractors or any supplemental list, objects to in writing as being unacceptable to either the Architect/Engineer, the Principal Representative or State Buildings Program. If a Subcontractor is deemed unacceptable, the Contractor shall propose a

substitute Subcontractor and the Contract sum shall be adjusted by any demonstrated difference between the Subcontractor's bids, except where the Subcontractor has been debarred by the State or fails to meet qualifications of the Contract Documents to perform the Work proposed.

The Contractor shall be fully responsible to the Principal Representative for the acts and omissions of Subcontractors and of persons either directly or indirectly employed by them. All instructions or orders in respect to Work to be done by Subcontractors shall be given to the Contractor.

ARTICLE 16. RELATIONS OF CONTRACTOR AND SUBCONTRACTOR

The Contractor agrees to bind each Subcontractor to the terms of these General Conditions and to the requirements of the Drawings and Specifications, and any Addenda thereto, and also all the other Contract Documents, so far as applicable to the Work of such Subcontractor. The Contractor further agrees to bind each Subcontractor to those terms of the General Conditions which expressly require that Subcontractors also be bound, including without limitation, requirements that Subcontractors waive all rights of subrogation, provide adequate general commercial liability and property insurance, automobile insurance and workers' compensation insurance as provided in Article 25, Insurance.

Nothing contained in the Contract Documents shall be deemed to create any contractual relationship whatsoever between any Subcontractor and the State of Colorado acting by and through its Principal Representative.

ARTICLE 17. MUTUAL RESPONSIBILITY OF CONTRACTORS

Should the Contractor cause damage to any separate contractor on the Work, the Contractor agrees, upon due Notice, to settle with such contractor by agreement, if he or she will so settle. If such separate contractor sues the Principal Representative on account of any damage alleged to have been so sustained, the Principal Representative shall notify the Contractor, who shall defend such proceedings if requested to do so by Principal Representative. If any judgment against the Principal Representative arises there from, the Contractor shall pay or satisfy it and pay all costs and reasonable attorney fees incurred by the Principal Representative, in accordance with Article 52C, Indemnification, provided the Contractor was given due Notice of an opportunity to settle.

ARTICLE 18. SEPARATE CONTRACTS

The Principal Representative reserves the right to enter into other contracts in connection with the Project or the Contract. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their Work, and shall properly connect and coordinate his or her Work with theirs. If any part of the Contractor's Work depends, for proper execution or results, upon the Work of any other contractor, the Contractor shall inspect and promptly report to the Architect/Engineer any defects in such Work that render it unsuitable for such proper execution and results. Failure of the Contractor to so inspect and report shall constitute an acceptance of the other contractor's Work as fit and proper for the reception of Work, except as to defects which may develop in the other Contractor's Work after the execution of the Contractor's Work.

To insure the proper execution of subsequent Work, the Contractor shall measure Work already in place and shall at once report to the Architect/Engineer any discrepancy between the executed Work and the Drawings.

ARTICLE 19. USE OF PREMISES

The Contractor shall confine apparatus, the storage of materials and the operations of workmen to limits indicated by law, ordinances, permits and any limits lines shown on the Drawings. The Contractor shall not unreasonably encumber the premises with materials.

The Contractor shall enforce all of the Architect/Engineer's instructions and prohibitions regarding, without limitation, such matters as signs, advertisements, fires and smoking.

Page 16 of 49

ARTICLE 20. CUTTING, FITTING OR PATCHING

The Contractor shall do all cutting, fitting or patching of Work that may be required to make its several parts come together properly and fit it to receive or be received by Work of other Contractors shown upon, or reasonably inferred from, the Drawings and Specifications for the complete structure, and shall provide for such finishes to patched or fitted Work as the Architect/Engineer may direct. The Contractor shall not endanger any Work by cutting, excavating or otherwise altering the Work and shall not cut or alter the Work of any other Contractor save with the consent of the Architect/Engineer.

ARTICLE 21. UTILITIES

A. TEMPORARY UTILITIES

Unless otherwise specifically stated in the Specifications or on the Drawings, the Principal Representative shall be responsible for the locations of all utilities as shown on the Drawings or indicated elsewhere in the Specifications, subject to the Contractor's compliance with all statutory or regulatory requirements to call for utility locates. When actual conditions deviate from those shown the Contractor shall comply with the requirements of Article 37, Differing Site Conditions. The Contractor shall provide and pay for the installation of all temporary utilities required to supply all the power, light and water needed by him and other Contractors for their Work and shall install and maintain all such utilities in such manner as to protect the public and Workmen and conform with any applicable laws and regulations. Upon completion of the Work, he or she shall remove all such temporary utilities from the site. The Contractor shall pay for all consumption of power, light and water used by him or her and the other Contractors, without regard to whether such items are metered by temporary or permanent meters. The Superintendent shall have full authority over all trades and Subcontractors at any tier to prevent waste. The cut-off date on permanent meters shall be either the agreed date of the date of the Notice of Substantial Completion or the Notice of Approval of Occupancy/Use of the Project.

B. PROTECTION OF EXISTING UTILITIES

Where existing utilities, such as water mains, sanitary sewers, storm sewers and electrical conduits, are shown on the Drawings, the Contractor shall be responsible for the protection thereof, without regard to whether any such utilities are to be relocated or removed as a part of the Work. If any utilities are to be moved, the moving must be conducted in such manner as not to cause undue interruption or delay in the operation of the same.

C. CROSSING OF UTILITIES

When new construction crosses highways, railroads, streets, or utilities under the jurisdiction of State, city or other public agency, public utility or private entity, the Contractor shall secure proper written permission before executing such new construction. The Contractor will be required to furnish a proper release before final acceptance of the Work.

ARTICLE 22. UNSUITABLE CONDITIONS

The Contractor shall not Work at any time, or permit any Work to be done, under any conditions contrary to those recommended by manufacturers or industry standards which are otherwise proper, unsuited for proper execution, safety and performance. Any cost caused by ill-timed Work shall be borne by the Contractor unless the timing of such Work shall have been directed by the Architect/Engineer or the Principal Representative, after the award of the Contract, and the Contractor provided Notice of any additional cost.

ARTICLE 23. TEMPORARY FACILITIES

A. OFFICE FACILITIES

The Contractor shall provide and maintain without additional expense for the duration of the Project temporary office facilities, as required and as specified, for its own use and the use of the Architect/Engineer, representatives of the Principal Representative and State Buildings Program.

B. TEMPORARY HEAT

The Contractor shall furnish and pay for all the labor, facilities, equipment, fuel and power necessary to supply temporary heating, ventilating and air conditioning, except to the extent otherwise specified,

and shall be responsible for the installation, operation, maintenance and removal of such facilities and equipment. Unless otherwise specified, the permanent HVAC system shall not be used for temporary heat in whole or in part. If the Contractor desires to put the permanent system into use, in whole or in part, the Contractor shall set it into operation and furnish the necessary fuel and manpower to safely operate, protect and maintain that HVAC system. Any operation of all or any part of the permanent HVAC system including operation for testing purposes shall not constitute acceptance of the system, nor shall it relieve the Contractor of his or her one-year guarantee of the system from the date of the Notice of Substantial Completion of the entire Project, and if necessary due to prior operation, the Contractor shall provide manufacturers' extended warranties from the date of the Contractor's use prior to the date of the Notice of Substantial Completion.

C. WEATHER PROTECTION

The Contractor shall, at all times, provide protection against weather, so as to maintain all Work, materials, apparatus and fixtures free from injury or damages.

D. DUST PARTITIONS

If the Work involves Work in an occupied existing building, the Contractor shall erect and maintain during the progress of the Work, suitable dust-proof temporary partitions, or more permanent partitions as specified, to protect such building and the occupants thereof.

E. BENCH MARKS

The Contractor shall maintain any site bench marks provided by the Principal Representative and shall establish any additional benchmarks specified by the Architect/Engineer as necessary for the Contractor to layout the Work and ascertain all grades and levels as needed.

F. SIGN

The Contractor shall erect and permit one 4' x 8' sign only at the site to identify the Project as specified or directed by the Architect/Engineer which shall be maintained in good condition during the life of the Project.

G. SANITARY PROVISION

The Contractor shall provide and maintain suitable, clean, temporary sanitary toilet facilities for any and all workmen engaged on the Work, for the entire construction period, in strict compliance with the requirement of all applicable codes, regulations, laws and ordinances, and no other facilities, new or existing, may be used by any person on the Project. When the Project is complete the Contractor shall promptly remove them from the site, disinfect, and clean or treat the areas as required. If any new construction surfaces in the Project other than the toilet facilities provided for herein are soiled at any time, the entire areas so soiled shall be completely removed from the Project and rebuilt. In no event may present toilet facilities of any existing building at the site of the Work be used by employees of any contractor.

ARTICLE 24. CLEANING UP

The Contractor shall keep the building and premises free from all surplus material, waste material, dirt and rubbish caused by employees or Work, and at the completion of the Work shall remove all such surplus material, waste material, dirt, and rubbish, as well as all tools, equipment and scaffolding, and shall wash and clean all window glass and plumbing fixtures, perform cleanup and cleaning required by the Specifications and leave all of the Work clean unless more exact requirements are specified.

ARTICLE 25. INSURANCE

A. GENERAL

The Contractor shall procure and maintain all insurance requirements and limits as set forth below, at his or her own expense, for the length of time set forth in Contract requirements. The Contractor shall continue to provide evidence of such coverage to State of Colorado on an annual basis during the aforementioned period including all of the terms of the insurance and indemnification requirements of this agreement. All below insurance policies shall include a provision preventing cancellation without thirty (30) days' prior notice by certified mail. A completed Certificate of Insurance shall be filed with

the Principal Representative and State Buildings Program within ten (10) days after the date of the Notice of Award, said Certificate to specifically state the inclusion of the coverages and provisions set forth herein and shall state whether the coverage is "claims made" or "per occurrence".

B. COMMERCIAL GENERAL LIABILITY INSURANCE (CGL)

This insurance must protect the Contractor from all claims for bodily injury, including death and all claims for destruction of or damage to property (other than the Work itself), arising out of or in connection with any operations under this Contract, whether such operations be by the Contractor or by any Subcontractor under him or anyone directly or indirectly employed by the Contractor or by a Subcontractor. All such insurance shall be written with limits and coverages as specified below and shall be written on an occurrence form.

General Aggregate \$2,000,000
Products – Completed Operations Aggregate \$2,000,000
Each Occurrence \$1,000,000
Personal Injury \$1,000,000

The following coverages shall be included in the CGL:

- 1. Per project general aggregate (CG 25 03 or similar)
- 2. Additional Insured status in favor of the State of Colorado and any other parties as outlined in The Contract and must include both ONGOING Operations AND COMPLETED Operations per CG2010 10/01 and CG 2037 10/01 or equivalent as permitted by law.
- 3. The policy shall be endorsed to be **primary and non-contributory** with any insurance maintained by Additional Insureds.
- 4. A waiver of Subrogation in favor of all Additional Insured parties.
- 5. Personal Injury Liability
- 6. Contractual Liability coverage to support indemnification obligation per Article 53.I
- 7. Explosion, collapse and underground (xcu)

The following exclusionary endorsements are prohibited in the CGL policy:

- 1. Damage to Work performed by Subcontract/Vendor (CG 22-94 or similar)
- 2. Contractual Liability Coverage Exclusion modifying or deleting the definition of an "insured contract" from the unaltered SO CG 0001 1001 policy from (CG 24 26 or similar)
- 3. If applicable to the Work to be performed: Residential or multi-family
- 4. If applicable to the Work to be performed :Exterior insulation finish systems
- 5. If applicable to the Work to be performed: Subsidence or Earth Movement

The Contractor shall maintain general liability coverage including Products and Completed Operations insurance, and the Additional Insured with primary and non-contributory coverage as specified in this Contract for three (3) years after completion of the project.

C. AUTOMOBILE LIABILITY INSURANCE and business auto liability covering liability arising out of any auto (including owned, hired and non-owned autos).

Combined Bodily Injury and Property Damage Liability (Combined Single Limit):

\$1,000,000 each accident

Coverages:

Specific waiver of subrogation

D. WORKERS' COMPENSATION INSURANCE

The Contractor shall procure and maintain Workers' Compensation Insurance at his or her own expense during the life of this Contract, including occupational disease provisions for all employees per statutory requirements. Policy shall contain a waiver of subrogation in favor of the State of Colorado.

The Contractor shall also require each Subcontractor to furnish Workers' Compensation Insurance, including occupational disease provisions for all of the latter's employees, and to the extent not furnished, the Contractor accepts full liability and responsibility for Subcontractor's employees.

In cases where any class of employees engaged in hazardous Work under this Contract at the site of the Project is not protected under the Workers' Compensation statute, the Contractor shall provide, and shall cause each Subcontractor to provide, adequate and suitable insurance for the protection of employees not otherwise protected.

E. UMBRELLA LIABILITY INSURANCE (for construction projects exceeding \$10,000,000, provide the following coverage):

The Contractor shall maintain umbrella/excess liability insurance on an occurrence basis in excess of the underlying insurance described in Section B-D above. Coverage shall follow the terms of the underlying insurance, included the additional insured and waiver of subrogation provisions. The amounts of insurance required in Sections above may be satisfied by the Contractor purchasing coverage for the limits specified or by any combination of underlying and umbrella limits, so long as the total amount of insurance is not less than the limits specified in each section previously mentioned.

Each occurrence \$5,000,000 Aggregate \$5,000,000

F. BUILDER'S RISK INSURANCE

Unless otherwise expressly stated in the Supplementary General Conditions (e.g. where the State elects to provide for projects with a completed value of less than \$1,000,000), the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Owner has an insurable interest in the property, or the Date of Notice specified on the Notice of Acceptance, State Form SBP-6.27 or whichever is later.

This insurance shall include interests of the Owner, the Contractor, Subcontractors and Subsubcontractors in the Project as named insureds.

All associated deductibles shall be the responsibility of the Contractor. Such policy may have a deductible clause but not to exceed ten thousand dollars (\$10,000.00).

Property insurance shall be on an "all risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, false Work, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

Contractor shall maintain Builders Risk coverage including partial use by Owner.

The Contractor shall waive all rights of subrogation as regards the State of Colorado and the Principal Representative, its officials, its officers, its agents and its employees, all while acting within the scope and course of their employment For damages caused by fire or thoer causes of loss to the extent covered by property insurance obtained pursuant to this Section or other property insurance applicable to the Work. The Contractor shall require all Subcontractors at any tier to similarly waive all such rights of subrogation and shall expressly include such a waiver in all subcontracts.

Upon request, the amount of such insurance shall be increased to include the cost of any additional Work to be done on the Project, or materials or equipment to be incorporated in the Project, under other independent contracts let or to be let. In such event, the Contractor shall be reimbursed for this cost as his or her share of the insurance in the same ratio as the ratio of the insurance represented by such independent contracts let or to be let to the total insurance carried.

The Principal Representative, with approval of the State Controller, shall have the power to adjust and settle any loss. Unless it is agreed otherwise, all monies received shall be applied first on rebuilding or repairing the destroyed or injured Work.

G. POLLUTION LIABILITY INSURANCE

If Contractor is providing directly or indirectly Work with pollution/environmental hazards, the Contractor must provide or cause those conducting the Work to provide Pollution Liability Insurance coverage. Pollution Liability policy must include contractual liability coverage. State of Colorado must be included as additional insureds on the policy. The policy limits shall be in the amount of \$1,000,000 with maximum deductible of \$25,000 to be paid by the Subcontractor/Vendor.

H. ADDITIONAL MISCELLANEOUS INSURANCE PROVISIONS

Certificates of Insurance and/or insurance policies required under this Contract shall be subject to the following stipulations and additional requirements:

- 1. Any and all deductibles or self-insured retentions contained in any Insurance policy shall be assumed by and at the sole risk of the Contractor;
- 2. If any of the said policies shall fail at any time to meet the requirements of the Contract Documents as to form or substance, or if a company issuing any such policy shall be or at any time cease to be approved by the Division of Insurance of the State of Colorado, or be or cease to be in compliance with any stricter requirements of the Contract Documents, the Contractor shall promptly obtain a new policy, submit the same to the Principal Representative and State Building Programs for approval if requested, and submit a Certificate of Insurance as hereinbefore provided. Upon failure of the Contractor to furnish, deliver and maintain such insurance as provided herein, this Contract, in the sole discretion of the State of Colorado, may be immediately declared suspended, discontinued, or terminated. Failure of the Contractor in obtaining and/or maintaining any required insurance shall not relieve the Contractor from any liability under the Contract, nor shall the insurance requirements be construed to conflict with the obligations of the Contractor concerning indemnification;
- 3. All requisite insurance shall be obtained from financially responsible insurance companies, authorized to do business in the State of Colorado and acceptable to the Principal Representative;
- 4. Receipt, review or acceptance by the Principal Representative of any insurance policies or certificates of insurance required by this Contract shall not be construed as a waiver or relieve the Contractor from its obligation to meet the insurance requirements contained in these General Conditions.

ARTICLE 26. CONTRACTOR'S PERFORMANCE AND PAYMENT BONDS

The Contractor shall furnish a Performance Bond and a Labor and Material Payment Bond on State Forms SC-6.22, Performance Bond, and SC-6.221, Labor and Material Payment Bond, or such other forms as State Buildings Program may approve for the Project, executed by a corporate Surety authorized to do business in the State of Colorado and in the full amount of the Contract sum. The expense of these bonds shall be borne by the Contractor and the bonds shall be filed with State Buildings Program.

If, at any time, a Surety on such a bond is found to be, or ceases to be in strict compliance with any qualification requirements of the Contract Documents or the bid documents, or loses its right to do business in the State of Colorado, another Surety will be required, which the Contractor shall furnish to State Buildings Program within ten (10) days after receipt of Notice from the State or after the Contractor otherwise becomes aware of such conditions.

ARTICLE 27. LABOR AND WAGES

In accordance with laws of Colorado, C.R.S. § 8-17-101(1), as amended, Colorado labor shall be employed to perform at least eighty percent of the Work. If the Federal Davis-Bacon Act shall be applicable to the Project, as indicated in Article 6B (Design/Bid/Build Agreement SC-6.21), Modification of Article 27, the minimum wage rates to be paid on the Project will be specified in the Contract Documents.

ARTICLE 28. ROYALTIES AND PATENTS

The Contractor shall be responsible for assuring that all rights to use of products and systems have been properly arranged and shall take such action as may be necessary to avoid delay, at no additional charge to the Principal Representative, where such right is challenged during the course of the Work. The Contractor shall pay all royalties and license fees required to be paid and shall defend all suits or claims for infringement of any patent rights and shall save the State of Colorado harmless from loss on account thereof, in accordance with Article 52C, Indemnification; provided, however, the Contractor shall not be responsible for such loss or defense for any copyright violations contained in the Contract Documents prepared by the Architect/Engineer or the Principal Representative of which the Contractor is unaware, or for any patent violations based on specified processes that the Contractor is unaware are patented or that the Contractor should not have had reason to believe were patented.

ARTICLE 29. ASSIGNMENT

Except as otherwise provided hereafter the Contractor shall not assign the whole or any part of this Contract without the written consent of the Principal Representative. This provision shall not be construed to prohibit assignments of the right to payment to the extent permitted by C.R.S. § 4-9-406, et. seq., as amended, provided that written Notice of assignment adequate to identify the rights assigned is received by the Principal Representative and the controller for the agency, department, or institution executing this Contract (as distinguished from the State Controller). Such assignment of the right to payment shall not be deemed valid until receipt by the Principal Representative and such controller and the Contractor assumes the risk that such written Notice of assignment is received by the Principal Representative and the controller for the agency, department, or institution involved. In case the Contractor assigns all or part of any moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Contractor shall be subject to all claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the Work called for in this Contract, whether said service or materials were supplied prior to or after the assignment. Nothing in this Article shall be deemed a waiver of any other defenses available to the State against the Contractor or the assignee.

ARTICLE 30. CORRECTION OF WORK BEFORE ACCEPTANCE

The Contractor shall promptly remove from the premises all Work or materials condemned or declared irreparably defective as failing to conform to the Contract Documents on receipt of written Notice from the Architect/Engineer or the Principal Representative, whether incorporated in the Work or not. If such materials shall have been incorporated in the Work, or if any unsatisfactory Work is discovered, the Contractor shall promptly replace and re-execute his or her Work in accordance with the requirements of the Contract Documents without expense to the Principal Representative, and shall also bear the expense of making good all Work of other contractors destroyed or damaged by the removal or replacement of such defective material or Work.

Should any defective Work or material be discovered during the process of construction, or should reasonable doubt arise as to whether certain material or Work is in accordance with the Contract Documents, the value of such defective or questionable material or Work shall not be included in any

application for payment, or if previously included, shall be deducted by the Architect/Engineer from the next application submitted by the Contractor.

If the Contractor does not perform repair, correction and replacement of defective Work, in lieu of proceeding by issuance of a Notice of intent to remove condemned Work as outlined above, the Principal Representative may, not less than seven (7) days after giving the original written Notice of the need to repair, correct, or replace defective Work, deduct all costs and expenses of replacement or correction as instructed by the Architect/Engineer from the Contractor's next application for payment in addition to the value of the defective Work or material. The Principal Representative may also make an equitable deduction from the Contract sum by unilateral Change Order, in accordance with Article 33, Payments Withheld and Article 35, Changes In The Work.

If the Contractor does not remove such condemned or irreparably defective Work or material within a reasonable time, the Principal Representative may, after giving a second seven (7) day advance Notice to the Contractor and the Surety, remove them and may store the material at the Contractor's expense. The Principal Representative may accomplish the removal and replacement with its own forces or with another Contractor. If the Contractor does not pay the expense of such removal and pay all storage charges within ten (10) days thereafter, the Principal Representative may, upon ten (10) days' written Notice, sell such material at auction or at private sale and account for the net proceeds thereof, after deducting all costs and expenses which should have been borne by the Contractor. If the Contractor shall commence and diligently pursue such removal and replacement before the expiration of the seven day period, or if the Contractor shall show good cause in conjunction with submittal of a revised CPM schedule showing when the Work will be performed and why such removal of condemned Work should be scheduled for a later date, the Principal Representative shall not proceed to remove or replace the condemned Work.

If the Contractor disagrees with the Notice to remove Work or materials condemned or declared irreparably defective, the Contractor may request facilitated negotiation of the issue and the Principal Representative's right to proceed with removal and to deduct costs and expenses of repair shall be suspended and tolled until such time as the parties meet and negotiate the issue

During construction, whenever the Architect/Engineer has advised the Contractor in writing, in the Specifications, by reference to Article 6, Architect/Engineer Decisions And Judgments, of these General Conditions or elsewhere in the Contract Documents of a need to observe materials in place prior to their being permanently covered up, it shall be the Contractor's responsibility to notify the Architect/Engineer at least forty-eight (48) hours in advance of such covering operation. If the Contractor fails to provide such notification, Contractor shall, at his or her expense, uncover such portions of the Work as required by the Architect/Engineer for observation, and reinstall such covering after observation. When a covering operation is continued from day to day, notification of the commencement of a single continuing covering operation shall suffice for the activity specified so long as it proceeds regularly and without interruption from day to day, in which event the Contractor shall coordinate with the Architect/Engineer regarding the continuing covering operation.

ARTICLE 31. APPLICATIONS FOR PAYMENTS

A. CONTRACTOR'S SUBMITTALS

On or before the first day of each month and no more than five days prior thereto, the Contractor may submit applications for payment for the Work performed during such month covering the portion of the Work completed as of the date indicated, and payments on account of this Contract shall be due per § 24-30-202(24) (correct notice of amount due), within forty-five (45) days of receipt by the Principal Representative of application for payments that have been certified by the Architect/Engineer. The Contractor shall submit the application for payment to the Architect/Engineer on State forms SBP-7.2, Certificate for Contractor's Payment, or such other format as the State Buildings Program shall approve, in an itemized format in accordance with the schedule of values or a cost loaded CPM schedule when required, supported to the extent reasonably required by the Architect/Engineer or the Principal Representative by receipts or other vouchers, showing payments for materials and labor, prior payments and payments to be made to Subcontractors and such other evidence of the Contractor's right to payments as the Architect/Engineer or Principal Representative may direct.

If payments are made on account of materials not incorporated in the Work but delivered and suitably stored at the site, or at some other location agreed upon in writing, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other procedure as will establish the Principal Representative's title to such material or otherwise adequately protect the Principal Representative's interests, and shall provide proof of insurance whenever requested by the Principal Representative or the Architect/Engineer, and shall be subject to the right to inspect the materials at the request of either the Architect/Engineer or the Principal Representative.

All applications for payment, except the final application, and the payments there under, shall be subject to correction in the next application rendered following the discovery of any error.

B. ARCHITECT/ENGINEER CERTIFICATION

In accordance with the Architect/Engineer's agreement with the Principal Representative, the Architect/Engineer after appropriate observation of the progress of the Work shall certify to the Principal Representative the amount that the Contractor is entitled to, and forward the application to the Principal Representative. If the Architect/Engineer certifies an amount different from the amount requested or otherwise alters the Contractor's application for payment, a copy shall be forwarded to the Contractor.

If the Architect/Engineer is unable to certify all or portions of the amount requested due to the absence or lack of required supporting evidence, the Architect/Engineer shall advise the Contractor of the deficiency. If the deficiency is not corrected at the end of ten (10) days, the Architect/Engineer may either certify the remaining amounts properly supported to which the Contractor is entitled, or return the application for payment to the Contractor for revision with a written explanation as to why it could not be certified.

C. RETAINAGE WITHHELD

Unless otherwise provided in the Supplementary General Conditions, an amount equivalent to five percent (5%) of the amount shown to be due the Contractor on each application for payment shall be withheld until the Work required by the Contract has been performed. The withheld percentage of the contract price of any such Work, improvement, or construction shall be administered according to § 24-91-101, et seq., C.R.S., as amended, and except as provided in § 24-91-103, C.R.S., as amended, and Article 31D, shall be retained until the Work or discrete portions of the Work, have been completed satisfactorily, finally or partially accepted, and advertised for final settlement as further provided in Article 41.

D. RELEASE OF RETAINAGE

The Contractor may, for satisfactory and substantial reasons shown to the Principal Representative's satisfaction, make a written request to the Principal Representative and the Architect/Engineer for release of part or all of the withheld percentage applicable to the Work of a Subcontractor which has completed the subcontracted Work in a manner finally acceptable to the Architect/Engineer, the Contractor, and the Principal Representative. Any such request shall be supported by a written approval from the Surety furnishing the Contractor's bonds and any surety that has provided a bond for the Subcontractor. The release of any such withheld percentage shall be further supported by such other evidence as the Architect/Engineer or the Principal Representative may require, including but not limited to, evidence of prior payments made to the Subcontractor, copies of the Subcontractor's contract with the Contractor, any applicable warranties, as-built information, maintenance manuals and other customary close-out documentation. Neither the Principal Representative nor the Architect Engineer shall be obligated to review such documentation nor shall they be deemed to assume any obligations to third parties by any review undertaken.

The Contractor's obligation under these General Conditions to guarantee Work for one year from the date of the Notice of Substantial Completion or the date of any Notice of Partial Substantial Completion of the applicable portion or phase of the Project, shall be unaffected by such partial

release; unless a Notice of Partial Substantial Completion is issued for the Work subject to the release of retainage.

Any rights of the Principal Representative which might be terminated by or from the date of any final acceptance of the Work, whether at common law or by the terms of this Contract, shall not be affected by such partial release of retainage prior to any final acceptance of the entire Project.

The Contractor remains fully responsible for the Subcontractor's Work and assumes any risk that might arise by virtue of the partial release to the Subcontractor of the withheld percentage, including the risk that the Subcontractor may not have fully paid for all materials, labor and equipment furnished to the Project.

If the Principal Representative considers the Contractor's request for such release satisfactory and supported by substantial reasons, the Architect/Engineer shall make a "final inspection" of the applicable portion of the Project to determine whether the Subcontractor 's Work has been completed in accordance with the Contract Documents. A final punch list shall be made for the Subcontractor's Work and the procedures of Article 41, Completion, Final Inspection, Acceptance and Settlement, shall be followed for that portion of the Work, except that advertisement of the intent to make final payment to the Subcontractor shall be required only if the Principal Representative has reason to believe that a supplier or Subcontractor to the Subcontractor for which the request is made, may not have been fully paid for all labor and materials furnished to the Project.

ARTICLE 32. CERTIFICATES FOR PAYMENTS

State Form SBP-7.2, Certificate For Contractor's Payment, and its continuation detail sheets, when submitted, shall constitute the Certificate of Contractor 's Application for Payment, and shall be a representation by the Contractor to the Principal Representative that the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and materials for which payment is requested have been incorporated into the Project except as noted in the application. If requested by the Principal Representative the Certificate of Contractor's Application for Payment shall be sworn under oath and notarized.

ARTICLE 33. PAYMENTS WITHHELD

The Architect/Engineer, the Principal Representative or State Buildings Program may withhold, or on account of subsequently discovered evidence nullify, the whole or any part of any application on account of, but not limited to any of the following:

- 1. Defective Work not remedied;
- 2. Claims filed or reasonable evidence indicating probable filing of claims;
- 3. Failure of the Contractor to make payments to Subcontractors for material or labor;
- 4. A reasonable doubt that the Contract can be completed for the balance of the contract price then unpaid;
- 5. Damage or injury to another contractor or any other person, persons or property except to the extent of coverage by a policy of insurance;
- 6. Failure to obtain necessary permits or licenses or to comply with applicable laws, ordinances, codes, rules or regulations or the directions of the Architect/Engineer;
- 7. Failure to submit a monthly construction schedule;
- 8. Failure of the Contractor to keep Work progressing in accordance with the time schedule;
- 9. Failure to keep a superintendent on the Work;
- 10. Failure to maintain as built drawings of the Work in progress;
- Unauthorized deviations by the Contractor from the Contract Documents; or
- 12. On account of liquidated damages.

In addition, the Architect Engineer, Principal Representative or State Buildings Program may withhold or nullify the whole or any part of any application for any reason noted elsewhere in these General Conditions of the Contractor's Design/Bid/Build Agreement. Nullification shall mean reduction of amounts shown as previously paid on the application. The amount withheld or nullified may be in such amount as the

Architect/Engineer or the Principal Representative estimates to be required to allow the State to accomplish the Work, cure the failure and cover any damages or injuries, including an allowance for attorneys fees and costs where appropriate. When the grounds for such withholding or nullifying are removed, payment shall be made for the amounts thus withheld or nullified on such grounds.

ARTICLE 34. DEDUCTIONS FOR UNCORRECTED WORK

If the Architect/Engineer and the Principal Representative deem it inexpedient to correct Work damaged or not performed in accordance with the Contract Documents, the Principal Representative may, after consultation with the Architect/Engineer and ten (10) days' Notice to the Contractor of intent to do so, make reasonable reductions from the amounts otherwise due the Contractor on the next application for payment. Notice shall specify the amount or terms of any contemplated reduction. The Contractor may during this period correct or perform the Work. If the Contractor does not correct or perform the Work, an equitable deduction from the Contract sum shall be made by Change Order, in accordance with Article 35, Changes In The Work, unilaterally if necessary. If either party elects facilitation of this issue after Notice is given, the ten-day (10) notice period shall be extended and tolled until facilitation has occurred.

ARTICLE 35. CHANGES IN THE WORK

The Principal Representative may designate, without invalidating the Agreement, and with the approval of State Buildings Program and the State Controller, may order extra Work or make changes with or without the consent of the Contractor as hereafter provided, by altering, adding to or deducting from the Work, the Contract sum being adjusted accordingly. All such changes in the Work shall be within the general scope of and be executed under the conditions of the Contract, except that any claim for extension of time made necessary due to the change or any claim of other delay or other impacts caused by or resulting from the change in the Work shall be presented by the Contractor and adjusted by Change Order to the extent known at the time such change is ordered and before proceeding with the extra or changed Work. Any claims for extension of time or of delay or other impacts, and any costs associated with extension of time, delay or other impacts, which are not presented before proceeding with the change in the Work, and which are not adjusted by Change Order to the extent known, shall be waived.

The Architect/Engineer shall have authority to make minor changes in the Work, not involving extra cost, and not inconsistent with the intent of the Contract Documents, but otherwise, except in an emergency endangering life or property, no extra Work or change in the Contract Documents shall be made unless by 1) a written Change Order, approved by the Principal Representative, State Buildings Program, and the State Controller prior to proceeding with the changed Work; or 2) by an Emergency Field Change Order approved by the Principal Representative and State Buildings Program as hereafter provided in Article 35C, Emergency Field Ordered Changed Work; or 3) by an allocation in writing of any allowance already provided in the encumbered contract amount, the Contract sum being later adjusted to decrease the Contract sum by any unallocated or unexpended amounts remaining in such allowance. No change to the Contract sum shall be valid unless so ordered.

A. THE VALUE OF CHANGED WORK

- 1. The value of any extra Work or changes in the Work shall be determined by agreement in one or more of the following ways:
 - a. By estimate and acceptance of a lump-sum amount;
 - b. By unit prices specified in the Agreement, or subsequently agreed upon, that are extended by specific quantities;
 - c. By actual cost plus a fixed fee in a lump sum amount for profit, overhead and all indirect and off-site home office costs, the latter amount agreed upon in writing prior to starting the extra or changed Work.
- 2. Where the Contractor and the Principal Representative cannot agree on the value of extra Work, the Principal Representative may order the Contractor to perform the changes in the Work and a Change Order may be unilaterally issued based on an estimate of the change in the Work prepared by the Architect/Engineer. The value of the change in the Work shall be the Principal Representative's determination of the amount of equitable adjustment attributable to

the extra Work or change. The Principal Representative's determination shall be subject to appeal by the Contractor pursuant to the claims process in Article 36, Claims.

3. Except as otherwise provided in Article 35B, Detailed Breakdown, below, the Cost Principles of the Colorado Procurement Rules in effect on the date of this Contract, pursuant to § 24-107-101, C.R.S., as amended, shall govern all Contract changes.

B. DETAILED BREAKDOWN

In all cases where the value of the extra or changed Work is not known based on unit prices in the Contractor's bid or the Agreement, a detailed change proposal shall be submitted by the Contractor on a Change Order Proposal (SC-6.312), or in such other format as the State Buildings Program approves, with which the Principal Representative may require an itemized list of materials, equipment and labor, indicating quantities, time and cost for completion of the changed Work.

Such detailed change proposals shall be stated in lump sum amounts and shall be supported by a separate breakdown, which shall include estimates of all or part of the following when requested by the Architect/Engineer or the Principal Representative:

- 1. Materials, indicating quantities and unit prices including taxes and delivery costs if any (separated where appropriate into general, mechanical and electrical and/or other Subcontractors' Work; and the Principal Representative may require in its discretion any significant subcontract costs to be similarly and separately broken down).
- 2. Labor costs, indicating hourly rates and time and labor burden to include Social Security and other payroll taxes such as unemployment, benefits and other customary burdens.
- 3. Costs of project management time and superintendence time of personnel stationed at the site, and other field supervision time, but only where a time extension, other than a weather delay, is approved as part of the Change Order, and only where such project management time and superintendence time is directly attributable to and required by the change; provided however that additional cost of on-site superintendence shall be allowable whenever in the opinion of the Architect/Engineer the impact of multiple change requests to be concurrently performed will result in inadequate levels of supervision to assure a proper result unless additional superintendence is provided.
- 4. Construction equipment (including small tools). Expenses for equipment and fuel shall be based on customary commercially reasonable rental rates and schedules. Equipment and hand tool costs shall not include the cost of items customarily owned by workers.
- 5. Workers' compensation costs, if not included in labor burden.
- 6. The cost of commercial general liability and property damage insurance premiums but only to the extent charged the Contractor as a result of the changed Work.
- 7. Overhead and profit, as hereafter specified.
- 8. Builder's risk insurance premium costs.
- 9. Bond premium costs.
- 10. Testing costs not otherwise excluded by these General Conditions.
- 11. Subcontract costs.

Unless modified in the Supplementary General Conditions, overhead and profit shall not exceed the percentages set forth in the table below.

To the October to the October to the	OVERHEAD	PROFIT	COMMISSION
To the Contractor or to Subcontractors for the portion of Work performed with their own forces:	10%	5%	0%
To the Contractor or to Subcontractors for Work performed by others at a tier immediately below either of them:	5%	0%	5%

Overhead shall include: a) insurance premium for policies not purchased for the Project and itemized above, b) home office costs for office management, administrative and supervisory personnel and assistants, c) estimating and change order preparation costs, d) incidental job burdens, e) legal costs, f) data processing costs, g) interest costs on capital, h) general office expenses except those attributable to increased rental expenses for temporary facilities, and all other indirect costs, but shall not include the Social Security tax and other direct labor burdens. The term "Work" as used in the proceeding table shall include labor, materials and equipment and the "Commission" shall include all costs and profit for carrying the subcontracted Work at the tiers below except direct costs as listed in items 1 through 11 above if any.

On proposals for Work involving both additions and credits in the amount of the Contract sum, the overhead and profit will be allowed on the net increase only. On proposals resulting in a net deduct to the amount of the Contract sum, profit on the deducted amount shall be returned to the Principal Representative at fifty percent (50%) of the rate specified. The inadequacy of the profit specified shall not be a basis for refusal to submit a proposal.

Except in the case of Change Orders or Emergency Field Change Orders agreed to on the basis of a lump sum amount or unit prices as described in paragraphs 35A1 and 35A2 above, The Value of Changed Work, the Contractor shall keep and present a correct and fully auditable account of the several items of cost, together with vouchers, receipts, time cards and other proof of costs incurred, summarized on a Change Order form (SC-6.31) using such format for supporting documentation as the Principal Representative and State Buildings Program approve. This requirement applies equally to Work done by Subcontractors. Only auditable costs shall be reimbursable on Change Orders where the value is determined on the basis of actual cost plus a fixed fee pursuant to paragraph 35A3 above, or where unilaterally determined by the Principal Representative on the basis of an equitable adjustment in accordance with the Procurement Rules, as described above in Article 35A, The Value Of Changed Work.

Except for proposals for Work involving both additions and credits, changed Work shall be adjusted and considered separately for Work either added or omitted. The amount of adjustment for Work omitted shall be estimated at the time it is directed to be omitted, and when reasonable to do so, the agreed adjustment shall be reflected on the schedule of values used for the next Contractor's application for payment.

The Principal Representative reserves the right to contract with any person or firm other than the Contractor for any or all extra Work; however, unless specifically required in the Contract Documents, the Contractor shall have no responsibility without additional compensation to supervise or coordinate the Work of persons or firms separately contracted by the Principal Representative.

C. HAZARDOUS MATERIALS

- 1. The Principal Representative represents that it has undertaken an examination of the site of the Work and has determined that there are no hazardous substances, as defined below, which the Contractor could reasonably encounter in its performance of the Work. In the event the Principal Representative so discovers hazardous substances, the Principal Representative shall render harmless such hazards before the Contractor commences the Work.
- 2. In the event the Contractor encounters any materials reasonably believed to be hazardous substances which have not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Principal Representative, in writing. For purposes of this Agreement, "hazardous substances" shall include asbestos, lead, polychlorinated biphenyl (PCB) and any or all of those substances defined as "hazardous substance", "hazardous waste", or "dangerous or extremely hazardous wastes" as those terms are used in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA), and shall also include materials regulated by the Toxic Substances Control Act (TSCA), the Clean Air Act, the Air

Quality Act, the Clean Water Act, and the Occupational Safety and Health Act. The Work in the affected area shall not therefore be resumed except by written agreement of the Principal Representative and the Contractor, if in fact materials that are hazardous substances have not been rendered harmless. The Work in the affected area shall be resumed only in the absence of the hazardous substances or when it has been rendered harmless or by written agreement of the Principal Representative and the Contractor.

3. The contractor shall not be required to perform Work without consent in any areas where it reasonably believes hazardous substances that have not been rendered harmless are present.

D. EMERGENCY FIELD CHANGE ORDERED WORK

The Principal Representative, without invalidating the Agreement, and with the approval of State Buildings Program and without the approval of the State Controller, may order extra Work or make changes in the case of an emergency that is a threat to life or property or where the likelihood of delays in processing a normal Change Order will result in substantial delays and or significant cost increases for the Project. Emergency Field Orders are not to be used solely to expedite normal Change Order processing absent a clear showing of a high potential for significant and substantial cost or delay. Such changes in the Work may be directed through issuance of an Emergency Field Change Order signed by the Contractor, the Principal Representative (or by a designee specifically appointed to do so in writing), and approved by the Director of State Buildings Program or his or her delegate. The change shall be directed using an Emergency Field Change Order form (SC-6.31E).

If the amount of the adjustment of the Contract price and time for completion can be determined at the time of issuance of the Emergency Field Change Order, those adjustments shall be reflected on the face of the Emergency Field Change Order. Otherwise, the Emergency Field Change Order shall reflect a not to exceed (NTE) amount for any schedule adjustment (increasing or decreasing the time for completion) and an NTE amount for any adjustment to Contract sum, which NTE amount shall represent the maximum amount of adjustment to which the Contractor will be entitled, including direct and indirect costs of changed Work, as well as any direct or indirect costs attributable to delays, inefficiencies or other impacts arising out of the change. Emergency Field Change Orders directed in accordance with this provision need not bear the approval signatures of the State Controller.

On Emergency Field Change Orders where the price and schedule have not been finally determined, the Contractor shall submit final costs for adjustment as soon as practicable. No later than seven (7) days after issuance, except as otherwise permitted, and every seven days thereafter, the Contractor shall report all costs to the Principal Representative and the Architect/Engineer. The final adjustment of the Emergency Field Change Order amount and the adjustment to the Project time for completion shall be prepared on a normal Change Order from (SC-6.31) in accordance with the procedures described in Article 35A, The Value of Changed Work, and B, Detailed Breakdown, above. Unless otherwise provided in writing signed by the Director of State Buildings Program to the Principal Representative and the Contractor, describing the extent and limits of any greater authority, individual Emergency Field Change Orders shall not be issued for more than \$25,000, nor shall the cumulative value of Emergency Field Change Orders exceed an amount of \$100,000.

E. APPROPRIATION LIMITATIONS - § 24-91-103.6, C.R.S., as amended

The amount of money appropriated, as shown on the Contractor's Design/Bid/Build Agreement (SC 6.21), is equal to or in excess of the Contract amount. No Change Order, Emergency Field Change Order, or other type of order or directive shall be issued by the Principal Representative, or any agent acting on his or her behalf, which directs additional compensable Work to be performed, which Work causes the aggregate amount payable under the Contract to exceed the amount appropriated for the original Contract, as shown on the Agreement (SC-6.21), unless one of the following occurs: (1) the Contractor is provided written assurance from the Principal Representative that sufficient additional lawful appropriations exist to cover the cost of the additional Work; or (2) the Work is covered by a contractor remedy provision under the Contract, such as a claim for extra cost. By way of example only, no assurance is required for any order, directive or instruction by the Architect/Engineer or the

Principal Representative to perform Work which is determined to be within the performance required by the Contract Documents; the Contractor's remedy shall be as described elsewhere in these General Conditions.

Written assurance shall be in the form of an Amendment to the Contract reciting the source and amount of such appropriation available for the Project. No remedy granting provision of this Contract shall obligate the Principal Representative to seek appropriations to cover costs in excess of the amounts recited as available to pay for the Work to be performed.

ARTICLE 36. CLAIMS

It is the intent of these General Conditions to provide procedures for speedy and timely resolution of disagreements and disputes at the lowest level possible. In the spirit of on the job resolution of job site issues, the parties are encouraged to use the partnering processes of Article 2D, Partnering, Communications and Cooperation, before turning to the more formal claims processes described in this Article 36, Claims. The use of non-binding dispute resolution, whether through the formal processes described in Article 39, Non-Binding Dispute Resolution – Facilitated Negotiations, or through less formal alternative processes developed as part of a partnering plan, are also encouraged. Where such process cannot resolve the issues in dispute, the claims process that follows is intended to cause the issues to be presented, decided and where necessary, documented in close proximity to the events from which the issues arise. To that end, and in summary of the remedy granting process that follows commencing with the next paragraph of this Article 36, Claims, the Contractor shall 1) first, seek a decision by the Architect/Engineer, and 2) shall second, informally present the claim to Principal Representative as described hereafter, and 3) failing resolution in the field, give Notice of intent to exercise statutory rights of review of a formal contract controversy, and 4) seek resolution outside the Contract as provided by the Procurement Code.

If the Contractor claims that any instructions, by detailed drawings, or otherwise, or any other act or omission of the Architect/Engineer or Principal Representative affecting the scope of the Contractor's Work, involve extra cost, extra time or changes in the scope of the Work under this Contract, the Contractor shall have the right to assert a claim for such costs or time, provided that before either proceeding to execute such Work (except in an emergency endangering life or property), or filing a Notice of claim, the Contractor shall have obtained or requested a written decision of the Architect/Engineer following the procedures as provided in Article 6A and B, Architect/Engineer Decisions and Judgments, respectively; provided, however, that in the case of a directed change in the Work pursuant to Article 36A4, no written judgment or decision of the Architect/Engineer is required. If the Contractor is delayed by the lack of a response to a request for a decision by the Architect/Engineer, the Contractor shall give Notice in accordance with Article 38, Delays and Extensions of Time.

Unless it is the Architect/Engineer's judgment and determination that the Work is not included in the performance required by the Contract Documents, the Contractor shall proceed with the Work as originally directed. Where the Contractor's claim involves a dispute concerning the value of Work unilaterally directed pursuant to Article 35A3 the Contractor shall also proceed with the Work as originally directed while his or her claim is being considered.

The Contractor shall give the Principal Representative and the Architect/Engineer Notice of any claim promptly after the receipt of the Architect/Engineer's decision, but in no case later than three (3) business days after receipt of the Architect/Engineer's decision (or no later than ten (10) days from the date of the Contractor's request for a decision when the Architect/Engineer fails to decide as provided in Article 6). The Notice of claim shall state the grounds for the claim and the amount of the claim to the extent known in accordance with the procedures of Article 35, Changes In The Work. The period in which Notice must be given may be extended by the Principal Representative if requested in writing by the Contractor with good cause shown, but any such extension to be effective shall be in writing.

The Principal Representative shall respond in writing, with a copy to the Architect/Engineer, within a reasonable time, and except where a request for facilitation of negotiation has been made as hereafter provided, in no case later than seven (7) business days (or at such other time as the Contractor and

Principal Representative agree) after receipt of the Contractor's Notice of claim regarding such instructions or alleged act or omission. If no response to the Contractor's claim is received within seven (7) business days of Contractor's Notice (or at such other time as the Contractor and Principal Representative agree) and the instructions have not been retracted, it shall be deemed that the Principal Representative has denied the claim.

The Principal Representative may grant or deny the claim in whole or in part, and a Change Order shall be issued if the claim is granted. To the extent any portion of claim is granted where costs are not clearly shown, the Principal Representative may direct that the value of that portion of the Work be determined by any method allowed in Article 35A, The Value of Changed Work. Except in the case of a deemed denial, the Principal Representative shall provide a written explanation regarding any portion of the Contractor's claim that is denied.

If the Contractor disagrees with the Principal Representative's judgment and determination on the claim and seeks an equitable adjustment of the Contract sum or time for performance, he or she shall give Notice of intent to exercise his or her statutory right to seek a decision on the contract controversy within ten (10) days of receipt of the Principal Representative's decision denying the claim. A "contract controversy," as such term is used in the Colorado Procurement Code, § 24-109-106, C.R.S., shall not arise until the initial claim process described above in this Article 36 has been properly exhausted by the Contractor. The Contractor's failure to proceed with Work directed by the Architect/Engineer or to exhaust the claim process provided above in this Article 36, shall constitute an abandonment of the claim by the Contractor and a waiver of the right to contest the decision in any forum.

At the time of filing the Notice of intent to exercise his or her statutory right to seek a decision on the contract controversy, the Contractor may request that the Principal Representative defer a decision on the contract controversy until a later date or until the end of the Project. If the Principal Representative agrees, he or she shall so advise the Contractor in writing. If no such request is made, or if the Principal Representative does not agree to such a request, the Principal Representative shall render a written decision within twenty (20) business days and advise the Contractor of the reasons for any denial. Unless the claim has been decided by the Principal Representative (as opposed to delegates of the Principal Representative), the person who renders the decision on this statutory contract controversy shall not be the same person who decided the claim. To the extent any portion of the contract controversy is granted where costs are not clearly shown, the Principal Representative may direct that the value of that portion of the Work be determined by any method allowed in Article 35A, The Value of Changed Work. In the event of a denial the Principal Representative shall give Notice to the Contractor of his or her right to administrative and judicial reviews as provided in the Colorado Procurement Code, § 24-109-201 et seq, C.R.S., as amended. If no decision regarding the contract controversy is issued within twenty (20) business days of the Contractor's giving Notice (or such other date as the Contractor and Principal Representative have agreed), and the instructions have not been retracted or the alleged act or omission have not been corrected, it shall be deemed that the Principal Representative has ruled by denial on the contract controversy. Except in the case of a deemed denial, the Principal Representative shall provide an explanation regarding any portion of the contract controversy that involves denial of the Contractor's claim.

Either the Contractor or the Principal Representative may request facilitation of negotiations concerning the claim or the contract controversy, and if requested, the parties shall consult and negotiate before the Principal Representative decides the issue. Any request for facilitation by the Contractor shall be made at the time of the giving of Notice of the claim or Notice of the contract controversy. Facilitation shall extend the time for the Principal Representative to respond by commencing the applicable period at the completion of the facilitated negotiation, which shall be the last day of the parties' meeting, unless otherwise agreed in writing.

Disagreement with the decision of the Architect Engineer, or the decision of the Principal Representative to deny any claim or denying the contract controversy, shall not be grounds for the Contractor to refuse to perform the Work directed or to suspend or terminate performance. During the period that any claim or contract controversy decision is pending under this Article 36, Claims, the Contractor shall proceed diligently with the Work directed.

In all cases where the Contractor proceeds with the Work and seeks equitable adjustment by filing a claim and or statutory appeal, the Contractor shall keep a correct account of the extra cost, in accordance with Article 35B, Detailed Breakdown supported by receipts. The Principal Representative shall be entitled to reject any claim or contract controversy whenever the foregoing procedures are not followed and such accounts and receipts are not presented.

The payments to the Contractor in respect of such extra costs shall be limited to reimbursement for the current additional expenditure by the Contractor made necessary by the change in the Work, plus a reasonable amount for overhead and profit, determined in accordance with Article 35B, Detailed Breakdown, determined solely with reference to the additional Work, if any, required by the change.

ARTICLE 37. DIFFERING SITE CONDITIONS

A. NOTICE IN WRITING

The Contractor shall promptly, and where possible before conditions are disturbed, give the Architect/Engineer and the Principal Representative Notice in writing of:

- 1. subsurface or latent physical conditions at the site differing materially from those indicated in or reasonably assumed from the information provided in the Contract Documents; and,
- 2. unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents.

The Architect/Engineer shall promptly investigate the conditions, and if it is found that such conditions do materially so differ and cause an increase or decrease in the Contractor 's costs of performance of any part of the Work required by the Contract Documents, whether or not such Work is changed as a result of such conditions, an equitable adjustment shall be made and the Contract sum shall be modified in accordance with Article 35, Changes In The Work.

If the time required for completion of the Work affected by such materially differing conditions will extend the Work on the critical path as indicated on the CPM schedule, the time for completion shall also be equitably adjusted.

B. LIMITATIONS

No claim of the Contractor under this clause shall be allowed unless the Contractor has given the Notice required in Article 37A, Notice In Writing, above. The time prescribed for presentation and adjustment in Articles 36, Claims and 38, Delays And Extensions Of Time, shall be reasonably extended by the State to the extent required by the nature of the differing conditions; provided, however, that even when so extended no claim by the Contractor for an equitable adjustment hereunder shall be allowed if not quantified and presented prior to the date the Contractor requests a final inspection pursuant to Article 41A, Notice Of Completion.

ARTICLE 38. DELAYS AND EXTENSIONS OF TIME

If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the State of Colorado or the Architect/Engineer, or of any employee or agent of either, or by any separately employed Contractor or by strikes, lockouts, fire, unusual delay in transportation, unavoidable casualties or any other causes beyond the Contractor's control, including weather delays as defined below, the time of Completion of the Work shall be extended for a period equal to such portion of the period of delays directly affecting the completion of the Work as the Contractor shall be able to show he or she could not have avoided by the exercise of due diligence.

The Contractor shall provide Notice in writing to the Architect/Engineer, the Principal Representative and State Buildings Program within three (3) business days from the beginning of such delay and shall file a written claim for an extension of time within seven (7) business days after the period of such delay has ceased, otherwise, any claim for an extension of time is waived.

Page 32 of 49

Provided that the Contractor has submitted reasonable schedules for approval when required by Article 12, Requests for Information and Schedules, if no schedule is agreed to fixing the dates on which the responses to requests for information or detail drawings will be needed, or Shop Drawings, Product Data or Samples are to be reviewed as required or allowed by Article 12B, Schedules, no extension of time will be allowed for the Architect/ Engineer's failure to furnish such detail drawings as needed, or for the failure to initially review Shop Drawings, Product Data or Samples, except in respect of that part of any delay in furnishing detail drawings or instructions extending beyond a reasonable period after written demand for such detailed drawings or instructions is received by the Architect/Engineer. In any event, any claim for an extension of time for such cause will be recognized only to the extent of delay directly caused by failure to furnish detail drawings or instructions or to review Shop Drawings, Product Data or Samples pursuant to schedule, after such demand.

All claims for extension of time due to a delay claimed to arise or result from ordered changes in the scope of the Work, or due to instructions claimed to increase the scope of the Work, shall be presented to the Architect/Engineer, the Principal Representative and State Buildings Program as part of a claim for extra cost, if any, in accordance with Article 36, Claims, and in accordance with the Change Order procedures required by Article 35, Changes In The Work.

Except as otherwise provided in this paragraph, no extension of time shall be granted when the Contractor has failed to utilize a CPM schedule or otherwise identify the Project's critical path as specified in Article 12, Requests for Information and Schedules, or has elected not to do so when allowed by the Supplementary General Conditions or the Specifications to use less sophisticated scheduling tools, or has failed to maintain such a schedule. Delay directly affecting the completion of the Work shall result in an extension of time only to the extent that completion of the Work was affected by impacts to the critical path shown on Contractor's CPM schedule. Where the circumstances make it indisputable in the opinion of the Architect/Engineer that the delay affected the completion of the Work so directly that the additional notice of the schedule impact by reference to a CPM schedule was unnecessary, a reasonable extension of time may be granted.

Extension of the time for completion of the Work will be granted for delays due to weather conditions only when the Contractor demonstrates that such conditions were more severe and extended than those reflected by the ten-year average for the month, as evidenced by the Climatological Data, U. S. Department of Commerce, for the Project area.

Extensions of the time for completion of the Work due to weather will be granted on the basis of one and three tenths (1.3) calendar days for every day that the Contractor would have Worked but was unable to Work, with each separate extension figured to the nearest whole calendar day.

For weather delays and delays caused by events, acts or omissions not within the control of the Principal Representative or any person acting on the Principal Representative's behalf, the Contractor shall be entitled to an extension of time only and shall not be entitled to recovery of additional cost due to or resulting from such delays. This Article does not, however, preclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

ARTICLE 39. NON-BINDING DISPUTE RESOLUTION – FACILITATED NEGOTIATIONS

The Contractor and Principal Representative agree to designate one or more mutually acceptable persons willing and able to facilitate negotiations and communications for the resolution of conflicts, disagreements or disputes between them at the specific request of either party with regard to any Project decision of either of them or any decision of the Architect/Engineer. The designation of such person(s) shall not carry any obligation to use their services except that each party agrees that if the other party requests the intervention of such person(s) with respect to any such conflict, dispute or disagreement, the non-requesting party shall participate in good faith attempts to negotiate a resolution of the issue in dispute. If the parties cannot agree on a mutually acceptable person to serve in this capacity one shall be so appointed; provided, however, that either party may request the director of State Buildings Program to appoint such a person, who, if appointed, shall be accepted for this purpose by both the Contractor and the Principal Representative.

Page 33 of 49

The cost, if any, of the facilitative services of the person(s) so designated shall be shared if the parties so agree in any partnering plan; or in the absence of agreement the cost shall be borne by the party requesting the facilitation of negotiation.

Any dispute, claim, question or disagreement arising from or relating to the Contract or an alleged breach of the Contract may be subject to a request by either party for facilitated negotiation subject to the limitations hereafter listed, and the parties shall participate by consultation and negotiation with each other, as guided by the facilitator and with recognition of their mutual interests, in an attempt to reach an equitable solution satisfactory to both parties.

The obligation to participate in facilitated negotiations shall be as described above and elsewhere in these General Conditions, as by way of example in Article 36, Claims, or Article 34, Deductions for Uncorrected Work and to the extent not more particularly described or limited elsewhere, each party's obligations shall be as follows:

- 1. a party shall not initiate communication with the facilitator regarding the issues in dispute; except that any request for facilitation shall be made in writing with copies sent, faxed or delivered to the other party;
- 2. a party shall prepare a brief written description of its position if so requested by the facilitator (who may elect to first discuss the parties' positions with each party separately in the interest of time and expense);
- a party shall respond to any reasonable request for copies of documents requested by the facilitator, but such requests, if voluminous, may consist of an offer to allow the facilitator access to the parties' documents;
- 4. a party shall review any meeting agenda proposed by a facilitator and endeavor to be informed on the subjects to be discussed:
- 5. a party shall meet with the other party and the facilitator at a mutually acceptable place and time, or, if none can be agreed to, at the time and place designated by the facilitator for a period not to exceed four hours unless the parties agree to a longer period;
- 6. a party shall endeavor to assure that any facilitation meeting shall be attended by any other persons in their employ that the facilitator requests be present, if reasonably available, including the Architect/Engineer;
- 7. each party shall participate in such facilitated face-to-face negotiations of the issues in dispute through persons fully authorized to resolve the issue in dispute;
- 8. each party shall be obligated to participate in negotiations requested by the other party and to perform the specific obligations described in paragraphs (1) through (10) this Article 39, Facilitated Negotiation, no more than three times during the course of the Project;
- 9. neither party shall be under any obligation to resolve any issue by facilitated negotiation, but each agrees to participate in good faith and the Principal Representative shall direct the Architect/Engineer to appropriately document any resolution or agreement reached and to execute any Amendment or Change Order to the Contract necessary to implement their agreement; and,
- 10. any discussions and documents prepared exclusively for use in the negotiations shall be deemed to be matters pertaining to settlement negotiations and shall not be subsequently available in further proceedings except to the extent of any documented agreement.

In accordance with State Fiscal Rules and Article 52F, Choice of Law; No Arbitration, nothing in this Article 39 shall be deemed to call for arbitration or otherwise obligate the State to participate in any form of binding alternative dispute resolution.

A partnering plan developed as described in Article 2D, Communications and Cooperation, may modify or expand the requirements of this Article but may not reduce the obligation to participate in facilitated negotiations when applicable. In the case of small projects estimated to be valued under \$500,000, the requirements of this Article may be deleted from this Contract, by modification in Article 7 (Contractor's Agreement SC-6.21), Optional Provisions And Elections. When so modified, the references to the parties' right to elect facilitated negotiation elsewhere in these General Conditions shall be deleted.

ARTICLE 40. RIGHT OF OCCUPANCY

The Principal Representative shall have the right to take possession of and to use any completed or partially completed portions of the Work, even if the time for completing the entire Work or portions of the Work has not expired and even if the Work has not been finally accepted, and the Contractor shall fully cooperate with the Principal Representative to allow such possession and use. Such possession and use shall not constitute an acceptance of such portions of the Work.

Prior to any occupancy of the Project, an inspection shall be made by the Principal Representative, State Buildings Program and the Contractor. Such inspection shall be made for the purpose of ensuring that the building is secure, protected by operation safety systems as designed, operable exits, power, lighting and HVAC systems, and otherwise ready for the occupancy intended and the Notice of Substantial Completion has been issued for the occupancy intended. The inspection shall also document existing finish conditions to allow assessment of any damage by occupants. The Contractor shall assist the Principal Representative in completing and executing State Form SBP-01, Approval of Occupancy/Use, prior to the Principal Representative's possession and use. Any and all areas so occupied will be subject to a final inspection when the Contractor complies with Article 41, Completion, Final Inspection, Acceptance and Settlement.

ARTICLE 41. COMPLETION, FINAL INSPECTION, ACCEPTANCE AND SETTLEMENT

A. NOTICE OF COMPLETION

When the Work, or a discrete physical portion of the Work (as hereafter described) which the Principal Representative has agreed to accept separately, is substantially complete and ready for final inspection, the Contractor shall file a written Notice with the Architect/Engineer that the Work, or such discrete physical portion, in the opinion of the Contractor, is substantially complete under the terms of the Contract. The Contractor shall prepare and submit with such Notice a comprehensive list of items to be completed or corrected prior to final payment, which shall be subject to review and additions as the Architect/Engineer or the Principal Representative shall determine after inspection. If the Architect/Engineer or the Principal Representative believe that any of the items on the list of items submitted, or any other item of Work to be corrected or completed, or the cumulative number of items of Work to be corrected or completed, will prevent a determination that the Work is substantially complete, those items shall be completed by the Contractor and the Notice shall then be resubmitted.

B. FINAL INSPECTION

Within ten (10) days after the Contractor files written Notice that the Work is substantially complete, the Architect/Engineer, the Principal Representative, and the Contractor shall make a "final inspection" of the Project to determine whether the Work is substantially complete and has been completed in accordance with the Contract Documents. State Buildings Program shall be notified of the inspection not less than three (3) business days in advance of the inspection. The Contractor shall provide the Principal Representative and the Architect/Engineer an updated punch list in sufficient detail to fully outline the following:

- 1. Work to be completed, if any; and
- 2. Work not in compliance with the Drawings or Specifications, if any.

A final punch list shall be made by the Architect/Engineer in sufficient detail to fully outline to the Contractor:

- 1. Work to be completed, if any;
- 2. Work not in compliance with the Drawings or Specifications, if any; and
- 3. unsatisfactory Work for any reason, if any.

The required number of copies of the final punch list will be countersigned by the authorized representative of the Principal Representative and will then be transmitted by the Architect/Engineer to the Contractor, the Principal Representative, and State Buildings Program. The Architect/Engineer's final punch list shall control over the Contractor's preliminary punch list.

C. NOTICE OF SUBSTANTIAL COMPLETION

Notice of Substantial Completion shall establish the date of substantial completion of the Project. The Contractor acknowledges and agrees that because the departments, agencies and institutions of the State of Colorado are generally involved with the business of the public at large, greater care must be taken in establishing the date of substantial completion than might otherwise be the case to ensure that a project or building or discrete physical portion of the Work is fully usable and safe for public use, and that such care necessarily raises the standard by which the concept of substantial completion is applied for a public building.

The Notice of Substantial Completion shall not be issued until the following have been fully established:

- 1. All required building code inspections have been called for and the appropriate code officials have affixed their signatures to the Building Inspection Record indicating successful completion of all required code inspections;
- 2. All required corrections noted on the Building Inspection Record shall have been completed unless the Architect/Engineer, the Principal Representative and State Buildings Program, in their complete and absolute discretion, all concur that the condition requiring the remaining correction is not in any way life threatening, does not otherwise endanger persons or property, and does not result in any undue inconvenience or hardship to the Principal Representative or the public;
- 3. The building, structure or Project can be fully and comfortably used by the Principal Representative and the public without undue interference by the Contractor's employees and Workers during the completion of the final punch list taking into consideration the nature of the public uses intended and taking into consideration any stage or level of completion of HVAC system commissioning or other system testing required by the Specifications to be completed prior to issuance of the Notice of Substantial Completion;
- 4. The Project has been fully cleaned as required by these General Conditions, and as required by any stricter requirements of the Specifications, and the overall state of completion is appropriate for presentation to the public; and
- 5. The Contractor has provided a schedule for the completion of each and every item identified on the punch list which specifies the Subcontractor or trade responsible for the Work, and the dates the completion or correction of the item will be commenced and finished; such schedule will show completion of all remaining final punch list items within the period indicated in the Contract for final punch list completion prior to Final Acceptance, with the exception of only those items which are beyond the control of the Contractor despite due diligence. The schedule shall provide for a reasonable punch list inspection process. Unless liquidated damages have been specified in Article 7.4 of the Contractor's Design/Bid/Build Agreement SC-6.21), the cost to the Principal Representative, if any, for re-inspections due to failure to adhere to the Contractor's proposed punch-list completion schedule shall be the responsibility of the Contractor and may be deducted by the Principal Representative from final amounts due to the Contractor.

Substantial completion of the entire Project shall not be conclusively established by a decision by the Principal Representative to take possession and use of a portion, or all of the Project, where portions of the Project cannot meet all the criteria noted above. Notice of Substantial Completion for the entire Project shall, however, only be withheld for substantial reasons when the Principal Representative has taken possession and uses all of the Project in accordance with the terms of Article 40, Right Of Occupancy. Failure to furnish the required completion schedule shall constitute a substantial reason for withholding the issuance of any Notice of Substantial Completion.

The Contractor shall have the right to request a final inspection of any discrete physical portion of the Project when in the opinion of the Principal Representative, The Architect/Engineer and State Buildings Program a final punch list can be reasonably prepared, without confusion as to which portions of the Project are referred to in any subsequent Notice of Partial Final Settlement which might be issued after such portion is finally accepted. Discrete physical portions of the Project may be, but

shall not necessarily be limited to, such portions of the Project as separate buildings where a Project consists of multiple buildings. Similarly, an addition to an existing building where the Project also calls for renovation or remodeling of the existing building may constitute a discrete physical portion of the Project. In such circumstances, when in the opinion of the Principal Representative, the Architect/Engineer and State Buildings Program, the requirements for issuance of a Notice of Substantial Completion can be satisfied with respect to the discrete portion of the Project, a partial Notice of Substantial Completion may be issued for such discrete physical portion of the Project.

D. NOTICE OF ACCEPTANCE

The Notice of Acceptance shall establish the completion date of the Project. It shall not be authorized until the Contractor shall have performed all of the Work to allow completion and approval of the Pre-Acceptance Checklist (SBP-05).

Where partial Notices of Substantial Completion have been issued, partial Notices of Final Acceptance may be similarly issued when appropriate for that portion of the Work. Partial Notice of Final Acceptance may also be issued to exclude the Work described in Change Orders executed during late stages of the Project where a later completion date for the Change Ordered Work is expressly provided for in the Contract as amended by the Change Order, provided the Work can be adequately described to allow partial advertisement of any Notice of Partial Final Settlement to be issued without confusion as to the Work included for which final payment will be made.

E. SETTLEMENT

Final payment and settlement shall be made on the date fixed and published for such payment except as hereafter provided. The Principal Representative shall not authorize final payment until all items on the Pre-Acceptance check list (SBP-05) have been completed, the Notice of Acceptance issued, and the Notice of Contractors Settlement published. If the Work shall be substantially completed, but Final Acceptance and completion thereof shall be prevented through delay in correction of minor defects, or unavailability of materials or other causes beyond the control of the Contractor, the Principal Representative in his or her discretion may release all amounts due to the Contractor except such amounts as may be in excess of three times the cost of completing the unfinished Work or the cost of correcting the defective Work, as estimated by the Architect/Engineer and approved by State Buildings Program. Before the Principal Representative may issue the Notice of Contractor's Settlement and advertise the Project for final payment, the Contractor shall have corrected all items on the punch list except those items for which delayed performance is expressly permitted, subject to withholding for the cost thereof, and shall have:

- 1. Delivered to the Principal Representative:
 - a. All guarantees and warranties:
 - All statements to support local sales tax refunds, if any;
 - c. Three (3) complete bound sets of required operating maintenance instructions; and,
 - d. One (1) set of hard copy as-built Contract Documents, and one (1) electronic copy showing all job changes.
- 2. Demonstrated to the operating personnel of the Principal Representative the proper operation and maintenance of all equipment.
- 3. Delivered to the State of Colorado Department of Personnel & Administration in accordance with C.R.S. § 24-103-210:
 - a. A written disclosure of the five most costly goods incorporated into the project, including iron, steel, or related manufactured goods and the total cost and country of origin of those five goods and whether the project was subject to any existing domestic content preferences.

Upon completion of the foregoing the Project shall be advertised in accordance with the Notice of Contractor's Settlement by two publications of Notice, the last publication appearing at least ten (10) days prior to the time of final settlement. Publication and final settlement should not be postponed or delayed solely by virtue of unresolved claims against the Project or the Contractor from Subcontractors, suppliers or materialmen based on good faith disputes; the resolution of the question of payment in such cases being directed by statute.

Except as hereafter provided, on the date of final settlement thus advertised, provided the Contractor has submitted a written Notice to the Architect/Engineer that no claims have been filed, and further provided the Principal Representative shall have received no claims, final payments and settlement shall be made in full. If any unpaid claim for labor, materials, rental machinery, tools, supplies or equipment is filed before payment in full of all sums due the Contractor, the Principal Representative and the State Controller shall withhold from the Contractor on the date established for final settlement, sufficient funds to insure the payment of such claim, until the same shall have been paid or withdrawn, such payment or withdrawal to be evidenced by filing a receipt in full or an order for withdrawal signed by the claimant or his or her duly authorized agent or assignee. The amount so withheld may be in the amount of 125% of the claims or such other amount as the Principal Representative reasonably deems necessary to cover expected legal expenses. Such withheld amounts shall be in addition to any amount withheld based on the cost to compete unfinished Work or the cost to repair defective Work. However, as provided by statute, such funds shall not be withheld longer than ninety (90) days following the date fixed for final settlement with the Contractor, as set forth in the published Notice of Contractor's Settlement, unless an action at law shall be commenced within that time to enforce such unpaid claim and a Notice of such action at law shall have been filed with the Principal Representative and the State Controller. At the expiration of the ninety (90) day period, the Principal Representative shall authorize the State Controller to release to the Contractor all other money not the subject of such action at law or withheld based on the cost to compete unfinished Work or the cost to repair defective Work.

Notices of Partial Final Settlement may be similarly advertised, provided all conditions precedent have been satisfied as though that portion of the Work affected stood alone, a Notice of Partial Acceptance has been issued, and the consent of surety to the partial final settlement has been obtained in writing. Thereafter, partial final payments may be made to the Contractor subject to the same conditions regarding unpaid claims.

ARTICLE 42. GENERAL WARRANTY AND CORRECTION OF WORK AFTER ACCEPTANCE

The Contractor warrants that the materials used and the equipment furnished shall be new and of good quality unless specified to the contrary. The Contractor further warrants that the Work shall, in all respects, be free from material defects not permitted by the Specifications and shall be in accordance with the requirements of the Contract Documents. Neither the final certificate for payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for defects or faulty materials or Workmanship. The Contractor shall be responsible to the Principal Representative for such warranties for the longest period permitted by any applicable statute of limitations.

In addition to these general warranties, and without limitation of these general warranties, for a period of one year after the date of any Notice of Substantial Completion, or any Notice of Partial Substantial Completion if applicable, the Contractor shall remedy defects, and faulty Workmanship or materials, and Work not in accordance with the Contract Documents which was not accepted at the time of the Notice of Final Acceptance, all in accordance with the provisions of Article 44, One-Year Guarantee And Special Guarantees And Warranties.

ARTICLE 43. LIENS

Colorado statutes do not provide for any right of lien against public buildings. In lieu thereof, § 38-26-107, C.R.S., provides adequate relief for any claimant having furnished labor, materials, rental machinery, tools, equipment, or services toward construction of the particular public Work in that final payment may not be made to a Contractor until all such creditors have been put on Notice by publication in the public press of

such pending payment and given opportunity for a period of up to ninety (90) days to stop payment to the Contractor in the amount of such claims.

ARTICLE 44. ONE-YEAR GUARANTEE AND SPECIAL GUARANTEES AND WARRANTIES

C. A. ONE-YEAR GUARANTEE OF THE WORK

The Contractor shall guarantee to remedy defects and repair or replace the Work for a period of one year from the date of the Notice of Substantial Completion or from the dates of any partial Notices of Substantial Completion issued for discrete physical portions of the Work. The Contractor shall remedy any defects due to faulty materials or Workmanship and shall pay for, repair and replace any damage to other Work resulting there from, which shall appear within a period of one year from the date of such Notice(s) of Substantial Completion. The Contractor shall also remedy any deviation from the requirements of the Contract Documents which shall later be discovered within a period of one year from the date of the Notice of Substantial Completion; provided, however, that the Contractor shall not be required to remedy deviations from the requirements of the Contract Documents where such deviations were obvious, apparent and accepted by the Architect/Engineer or the Principal Representative at the time of the Notice of Final Acceptance. The Principal Representative shall give Notice of observed defects or other Work requiring correction with reasonable promptness. Such Notice shall be in writing to the Architect/Engineer and the Contractor.

The one year guarantee of the Contractor's Work may run separately for discrete physical portions of the Work for which partial Notices of Substantial Completion have been issued, however, it shall run from the last Notice of Substantial Completion with respect to all or any systems common to the Work to which more than one Notice of Substantial Completion may apply.

This one-year guarantee shall not be construed to limit the Contractor's general warranty described in Article 42, General Warranty and Correction of Work After Acceptance, that all materials and equipment are new and of good quality, unless specified to the contrary, and that the Work shall in all respects be free from material defects not permitted by the Specifications and in accordance with the requirements of the Contract Documents.

B. SPECIAL GUARANTEES AND WARRANTIES

In case of Work performed for which product, manufacturers or other special warranties are required by the Specifications, the Contractor shall secure the required warranties and deliver copies thereof to the Principal Representative through the Architect/Engineer upon completion of the Work.

These product, manufacturers or other special warranties, as such, do not in any way lessen the Contractor's responsibilities under the Contract. Whenever guarantees or warranties are required by the Specifications for a longer period than one year, such longer period shall govern.

ARTICLE 45. GUARANTEE INSPECTIONS AFTER COMPLETION

The Architect/Engineer, the Principal Representative and the Contractor together shall make at least two (2) complete inspections of the Work after the Work has been determined to be substantially complete and accepted. One such inspection, the "Six-Month Guarantee Inspection," shall be made approximately six (6) months after date of the Notice of Substantial Completion, unless in the case of smaller projects valued under \$500,000 this inspection is declined in Article 7A (Contractor's Agreement SC-6.21), Modification of Article 45, in which case the inspection to occur at six months shall not be required. Another such inspection, the "Eleven-Month Guaranty Inspection" shall be made approximately eleven (11) months after the date of the Notice of Substantial Completion. The Contractor shall schedule and so notify all parties concerned, and the Principal Representative shall so notify State Buildings Program, of these inspections. If more than one Notice of Substantial Completion has been issued at the reasonable discretion of the Principal Representative separate eleven month inspections may be required where the one year guarantees do not run reasonably concurrent.

Written punch lists and reports of these inspections shall be made by the Architect/Engineer and forwarded to the Contractor, the Principal Representative, State Buildings Program, and all other participants within ten (10) days after the completion of the inspections. The punch list shall itemize all guarantee items, prior

punch list items still to be corrected or completed and any other requirements of the Contract Documents to be completed which were not waived by final acceptance because they were not obvious or could not reasonably have been previously observed. The Contractor shall immediately initiate such remedial Work as may be necessary to correct any deficiencies or defective Work shown by this report, and shall promptly complete all such remedial Work in a manner satisfactory to the Architect/Engineer, the Principal Representative and State Buildings Program.

If the Contractor fails to promptly correct all deficiencies and defects shown by this report, the Principal Representative may do so, after giving the Contractor ten (10) days written Notice of intention to do so.

The State of Colorado, acting by and through the Principal Representative, shall be entitled to collect from the Contractor all costs and expenses incurred by it in correcting such deficiencies and defects, as well as all damages resulting from such deficiencies and defects.

ARTICLE 46. TIME OF COMPLETION AND LIQUIDATED DAMAGES

It is hereby understood and mutually agreed, by and between the parties hereto, that the date of beginning, rate of progress, and the time for completion of the Work to be done hereunder are ESSENTIAL CONDITIONS of this Agreement, and it is understood and agreed that the Work embraced in this Contract shall be commenced at the time specified in the Notice to Proceed (SC-6.26).

It is further agreed that time is of the essence of each and every portion of this Contract, and of any portion of the Work described on the Drawings or Specifications, wherein a definite and certain length of time is fixed for the performance of any act whatsoever. The parties further agree that where under the Contract additional time is allowed for the completion of the Work or any identified portion of the Work, the new time limit or limits fixed by such extension of the time for completion shall be of the essence of this Agreement.

The Contractor acknowledges that subject to any limitations in the Advertisement for Bids, issued for the Project, the Contractor's bid is consistent with and considers the number of days to substantially complete the Project and the number of days to finally complete the Project to which the parties may have stipulated in the Agreement, which stipulation was based on the Contractor's bid. The Contractor agrees that Work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will ensure the Project will be substantially complete, and fully and finally complete, as recognized by the issuance of all required Notices of Substantial Completion and Notices of Final Acceptance, within any times stipulated and specified in the Agreement, as the same may be amended by Change Order or other written modification, and that the Principal Representative will be damaged if the times of completion are delayed.

It is expressly understood and agreed, by and between the parties hereto, that the times for the Substantial Completion of the Work or for the final acceptance of the Work as may be stipulated in the Agreement, and as applied here and in Article 7.4 of the Contractor's Design/Bid/Build Agreement SC-6.21), Modifications of Article 46, are reasonable times for these stages of completion of the Work, taking into such consideration all factors, including the average climatic range and usual industrial conditions prevailing in the locality of the building operations.

If the Contractor shall neglect, fail or refuse to complete the Work within the times specified in the Agreement, such failure shall constitute a breach of the terms of the Contract and the State of Colorado, acting by and through the Principal Representative, shall be entitled to liquidated damages for such neglect, failure or refusal, as specified in Article 7.4 of the Contractor's Design/Bid/Build Agreement SC-6.21, Modification of Article 46.

The Contractor and the Contractor's Surety shall be jointly liable for and shall pay the Principal Representative, or the Principal Representative may withhold, the sums hereinafter stipulated as liquidated damages for each calendar day of delay until the entire Project is 1) substantially completed, and the Notice (or all Notices) of Substantial Completion are issued, 2) finally complete and accepted and the Notice (or all Notices) of Acceptance are issued, or 3) both. Delay in substantial completion shall be measured from the Date of the Notice to Proceed and delay in final completion and acceptance shall be measured from the Date of the Notice of Substantial Completion.

In the first instance, specified in Article 7.4.1 of the Contractor's Design/Bid/Build Agreement SC-6.21, Modification of Article 46, liquidated damages, if any, shall be the amount specified therein, for each calendar day of delay beginning after the stipulated number of days for Substantial Completion from the date of the Notice to Proceed, until the date of the Notice of Substantial Completion. Unless otherwise specified in any Supplementary General Conditions, in the event of any partial Notice of Substantial Completion, liquidated damages shall accrue until all required Notices of Substantial Completion are issued.

In the second instance, specified in Article 7.4.2 of the Contractor's Design/Bid/Build Agreement SC-6.21, Modification of Article 46, liquidated damages, if any, shall be the amount specified in Article 7.4.2 of the Contractor's Design/Bid/Build Agreement SC-6.21, Modification of Article 46, for each calendar day in excess of the number of calendar days specified in the Contractor's bid for the Project and stipulated in the Agreement to finally complete the Project (as defined by the issuance of the Notice of Acceptance) after the final Notice of Substantial Completion has been issued.

In the third instance, when so specified in both Articles 7.4.1 and 7.4.2 of the Contractor's Agreement SC-6.21, both types of liquidated damages shall be separately assessed where those delays have occurred.

The parties expressly agree that said amounts are a reasonable estimate of the presumed actual damages that would result from any of the breaches listed, and that any liquidated damages that are assessed have been agreed to in light of the difficulty of ascertaining the actual damages that would be caused by any of these breaches at the time this Contract was formed; the liquidated damages in the first instance representing an estimate of damages due to the inability to use the Project; the liquidated damages in the second instance representing an estimate of damages due to the additional administrative, technical, supervisory and professional expenses related to and arising from the extended closeout period including delivery of any or all guarantees and warranties, the submittals of sales and use tax payment forms, the calling for the final inspection and the completion of the final punch list.

The parties also agree and understand that the liquidated damages to be assessed in each instance are separate and distinct, although potentially cumulative, damages for the separate and distinct breaches of delayed substantial completion or final acceptance. Such liquidated damages shall not be avoided by virtue of the fact of concurrent delay caused by the Principal Representative, or anyone acting on behalf of the Principal Representative, but in such event the period of delay for which liquidated damages are assessed shall be equitably adjusted in accordance with Article 38, Delays And Extensions Of Time.

ARTICLE 47. DAMAGES

If either party to this Contract shall suffer damage under this Contract in any manner because of any wrongful act or neglect of the other party or of anyone employed by either of them, then the party suffering damage shall be reimbursed by the other party for such damage. Except to the extent of damages liquidated for the Contractor's failure to achieve timely completion as set forth in Article 46, Time of Completion and Liquidated Damages, the Principal Representative shall be responsible for, and at his or her option may insure against, loss of use of any existing property not included in the Work, due to fire or otherwise, however caused. Notwithstanding the foregoing, or any other provision of this Contract, to the contrary, no term or condition of this contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, Section 24-10-101, et seq., CRS, as now or hereafter amended. The parties understand and agree that liability for claims for injuries to persons arising out of negligence of the State of Colorado, its departments, institutions, agencies, boards, officials and employees is controlled and limited by the provisions of Section 24-101-101, et seq., CRS, as now or hereafter amended.

Notice of intent to file a claim under this clause shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except that in the case of claims by the Principal Representative involving warranties against faulty Work or materials Notice shall be required only to the extent stipulated elsewhere in these General Conditions. Claims made to the Principal Representative involving extra cost or extra time arising by virtue of instructions to the Contractor to which Article 36, Claims, applies shall be made in accordance with Article

36. Other claims arising under the Contract involving extra cost or extra time which are made to the Principal Representative under this clause shall also be made in accordance with the procedures of Article 36, whether or not arising by virtue of instructions to the Contractor; provided however that it shall not be necessary to first obtain or request a written judgment of the Architect/Engineer.

Provided written Notice of intent to file a claim is provided as required in the preceding paragraph, nothing in this Article shall limit or restrict the rights of either party to bring an action at law or to seek other relief to which either party may be entitled, including consequential damages, if any, and shall not be construed to limit the time during which any action might be brought. Nothing in these General Conditions shall be deemed to limit the period of time during which any action may be brought as a matter of contract, tort, warranty or otherwise, it being the intent of the parties to allow any and all actions at law or in equity for such periods as the law permits. All such rights shall, however be subject to the obligation to assert claims and to appeal denials pursuant to Article 36, Claims, where applicable.

ARTICLE 48. STATE'S RIGHT TO DO THE WORK; TEMPORARY SUSPENSION OF WORK; DELAY DAMAGES

A. STATE'S RIGHT TO DO THE WORK

If after receipt of Notice to do so, the Contractor should neglect to prosecute the Work properly or fail to perform any provision of the Contract, the Principal Representative, after a second seven (7) days' advance written Notice to the Contractor and the Surety may, without prejudice to any other remedy the Principal Representative may have, take control of all or a portion of the Work, as the Principal Representative deems necessary and make good such deficiencies deducting the cost thereof from the payment then or thereafter due the Contractor, as provided in Article 30, Correction Of Work Before Acceptance and Article 33, Payments Withheld, provided, however, that the Architect/Engineer shall approve the amount charged to the Contractor by approval of the Change Order.

B. TEMPORARY SUSPENSION OF WORK

The State, acting for itself or by and through the Architect/Engineer, shall have the authority to suspend the Work, either wholly or in part, for such period or periods as may be deemed necessary due to:

- 1. Unsuitable weather;
- 2. Faulty Workmanship;
- 3. Improper superintendence or project management;
- 4. Contractor's failure to carry out orders or to perform any provision of the Contract Documents;
- 5: Loss of, or restrictions to, appropriations:
- 6. Conditions, which may be considered unfavorable for the prosecution of the Work.

If it should become necessary to stop Work for an indefinite period, the Contractor shall store materials in such manner that they will not become an obstruction or become damaged in any way; and he or she shall take every precaution to prevent damage to or deterioration of the Work, provide suitable drainage and erect temporary structures where necessary.

Notice of suspension of Work shall be provided to the Contractor in writing stating the reasons therefore. The Contractor shall again proceed with the Work when so notified in writing.

The Contractor understands and agrees that the State of Colorado cannot predict with certainty future revenues and could ultimately lack the revenue to fund the appropriations applicable to this Contract. The Contractor further acknowledges and agrees that in such event that State may, upon Notice to the Contractor, suspend the Work in anticipation of a termination of the Contract for the convenience of the State, pursuant to Article 50, Termination For Convenience of State. If the Contract is not so terminated the Contract sum and the Contract time shall be equitably adjusted at the time the Principal Representative directs the Work to be recommenced and gives Notice that the revenue to fund the appropriation is available.

C. DELAY DAMAGES

The Principal Representative and the State of Colorado shall be liable to the Contractor for the payment of any claim for extra costs, extra compensation or damages occasioned by hindrances or delays encountered in the Work only when and to the limited extent that such hindrance or delay is caused by an act or omission within the control of the Principal Representative, the Architect/Engineer or other persons or entities acting on behalf of the Principal Representative. Further, the Principal Representative and the State of Colorado shall be liable to the Contractor for the payment of such a claim only if the Contractor has provided required Notice of the delay or impact, or has presented its claim for an extension of time or claim of other delay or other impact due to changes ordered in the Work before proceeding with the changed Work. Except as otherwise provided, claims for extension of time shall be Noticed and filed in accordance with Article 38, Delays and Extensions of Time, within three (3) business days of the beginning of the delay with any claim filed within seven (7) days after the delay has ceased, or such claim is waived. Claims for extension of time or for other delay or other impact resulting from changes ordered in the Work shall be presented and adjusted as provided in Article 35, Changes in the Work.

ARTICLE 49. STATE'S RIGHTS TO TERMINATE CONTRACT

A. GENERAL

If the Contractor should be adjudged bankrupt, or if he or she should make a general assignment for the benefit of his or her creditors, or if a receiver should be appointed to take over his affairs, or if he or she should fail to prosecute his or her Work with due diligence and carry the Work forward in accordance with the construction schedule and the time limits set forth in the Contract Documents, or if he or she should fail to subsequently perform one or more of the provisions of the Contract Documents to be performed by him, the Principal Representative may serve written Notice on the Contractor and the Surety on performance and payment bonds, stating his or her intention to exercise one of the remedies hereinafter set forth and the grounds upon which the Principal Representative bases his or her right to exercise such remedy.

In such event, unless the matter complained of is satisfactorily cleared within ten (10) days after delivery of such Notice, the Principal Representative may, without prejudice to any other right or remedy, exercise one of such remedies at once, having first obtained the concurrence of the Architect/Engineer in writing that sufficient cause exists to justify such action.

B. CONDITIONS AND PROCEDURES

- The Principal Representative may terminate the services of the Contractor, which termination shall take effect immediately upon service of Notice thereof on the Contractor and his or her Surety, whereupon the Surety shall have the right to take over and perform the Contract. If the Surety does not provide Notice to the Principal Representative of its intent to commence performance of the Contract within ten (10) days after delivery of the Notice of termination. the Principal Representative may take over the Work, take possession of and use all materials, tools, equipment and appliances on the premises and prosecute the Work to completion by such means as he or she shall deem best. In the event of such termination of his or her service, the Contractor shall not be entitled to any further payment under the Contract until the Work is completed and accepted. If the Principal Representative takes over the Work and if the unpaid balance of the contract price exceeds the cost of completing the Work, including compensation for any damages or expenses incurred by the Principal Representative through the default of the Contractor, such excess shall be paid to the Contractor. If, however, the cost, expenses and damages as certified by the Architect/Engineer exceed such unpaid balance of the contract price, the Contractor and his or her Surety shall pay the difference to the Principal Representative.
- 2. The Principal Representative may require the Surety on the Contractor 's bond to take control of the Work and see to it that all the deficiencies of the Contractor are made good, with due diligence within ten (10) days of delivery of Notice to the Surety to do so. As between the Principal Representative and the Surety, the cost of making good such deficiencies shall all be borne by the Surety. If the Surety takes over the Work, either by election upon termination of the services of the Contractor pursuant to Section B(1) of this Article 49, State's Right To

Terminate Contract, or upon instructions from the Principal Representative to do so, the provisions of the Contract Documents shall govern the Work to be done by the Surety, the Surety being substituted for the Contractor as to such provisions, including provisions as to payment for the Work, the times of completion and provisions of this Article as to the right of the Principal Representative to do the Work or to take control of all or a portion of the Work.

3. The Principal Representative may take control of all or a portion of the Work and make good the deficiencies of the Contractor, or the Surety if the Surety has been substituted for the Contractor, with or without terminating the Contract, employing such additional help as the Principal Representative deems advisable in accordance with the provisions of Article 48A, State's Right To Do The Work; Temporary Suspension Of Work; Delay Damages. In such event, the Principal Representative shall be entitled to collect from the Contractor and his or her Surety, or to deduct from any payment then or thereafter due the Contractor, the costs incurred in having such deficiencies made good and any damages or expenses incurred through the default of Contractor, provided the Architect/Engineer approves the amount thus charged to the Contractor. If the Contract is not terminated, a Change Order to the Contract shall be executed, unilaterally if necessary, in accordance with the procedures of Article 35, Changes In The Work.

C. ADDITIONAL CONDITIONS

If any termination by the Principal Representative for cause is later determined to have been improper, the termination shall be automatically converted to and deemed to be a termination by the Principal Representative for convenience and the Contractor shall be limited in recovery to the compensation provided for in Article 50, Termination For Convenience Of State. Termination by the Contractor shall not be subject to such conversion.

ARTICLE 50. TERMINATION FOR CONVENIENCE OF STATE

A. NOTICE OF TERMINATION

The performance of Work under this Contract may be terminated, in whole or from time to time in part, by the State whenever for any reason the Principal Representative shall determine that such termination is in the best interest of State. Termination of Work hereunder shall be effected by delivery to the Contractor of a Notice of such termination specifying the extent to which the performance of Work under the Contract is terminated and the date upon which such termination becomes effective.

B. PROCEDURES

After receipt of the Notice of termination, the Contractor shall, to the extent appropriate to the termination, cancel outstanding commitments hereunder covering the procurement of materials, supplies, equipment and miscellaneous items. In addition, the Contractor shall exercise all reasonable diligence to accomplish the cancellation or diversion of all applicable outstanding commitments covering personal performance of any Work terminated by the Notice. With respect to such canceled commitments, the Contractor agrees to:

- 1. settle all outstanding liabilities and all claims arising out of such cancellation of commitments, with approval or ratification of the Principal Representative, to the extent he or she may require, which approval or ratification shall be final for all purposes of this clause; and,
- 2. assign to the State, in the manner, at the time, and to the extent directed by the Principal Representative, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the State shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

The Contractor shall submit his or her termination claim to the Principal Representative promptly after receipt of a Notice of termination, but in no event later than three (3) months from the effective date thereof, unless one or more extensions in writing are granted by the Principal Representative upon written request of the Contractor within such three month period or authorized extension thereof. Upon failure of the Contractor to submit his or her termination claim within the time allowed, the Principal Representative may determine, on the basis of information available to him, the amount, if

any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

Costs claimed, agreed to, or determined pursuant to the preceding and following paragraph shall be in accordance with the provisions of § 24-107-101, C.R.S., as amended and associated Cost Principles of the Colorado Procurement Rules as in effect on the date of this Contract.

Subject to the preceding provisions, the Contractor and the Principal Representative may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the termination under this clause, which amount or amounts may include any reasonable cancellation charges thereby incurred by the Contractor and any reasonable loss upon outstanding commitments for personal services which he or she is unable to cancel; provided, however, that in connection with any outstanding commitments for personal services which the Contractor is unable to cancel, the Contractor shall have exercised reasonable diligence to divert such commitments to other activities and operations. Any such agreement shall be embodied in an Amendment to this Contract and the Contractor shall be paid the agreed amount.

The State may from time to time, under such terms and conditions as it may prescribe, make partial payments against costs incurred by the Contractor in connection with the termination portion of this Contract, whenever, in the opinion of the Principal Representative, the aggregate of such payments is within the amount to which the Contractor will be entitled hereunder.

The Contractor agrees to transfer title and deliver to the State, in the manner, at the time, and to the extent, if any, directed by the Principal Representative, such information and items which, if the Contract had been completed, would have been required to be furnished to the State, including:

- a. completed or partially completed plans, Drawings and information; and,
- b. materials or equipment produced or in process or acquired in connection with the performance of the Work terminated by the Notice.

Other than the above, any termination inventory resulting from the termination of the Contract may, with written approval of the Principal Representative, be sold or acquired by the Contractor under the conditions prescribed by and at a price or prices approved by the Principal Representative. The proceeds of any such disposition shall be applied in reduction of any payments to be made by the State to the Contractor under this Contract or shall otherwise be credited to the price or cost of Work covered by this Contract or paid in such other manners as the Principal Representative may direct. Pending final disposition of property arising from the termination, the Contractor agrees to take such action as may be necessary, or as the Principal Representative may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the State has or may acquire an interest.

Any disputes as to questions of fact, which may arise hereunder, shall be subject to the Remedies provisions of the Colorado Procurement Code, §§ 24-109-101, et seq., C.R.S., as amended.

ARTICLE 51. CONTRACTOR'S RIGHT TO STOP WORK AND/OR TERMINATE CONTRACT

If the Work shall be stopped under an order of any court or other public authority for a period of three (3) months through no act or fault of the Contractor or of any one employed by him, then the Contractor may on seven (7) days' written Notice to the Principal Representative and the Architect/Engineer stop Work or terminate this Contract and recover from the Principal Representative payment for all Work executed, any losses sustained on any plant or material, and a reasonable profit only for the Work completed. If the Architect/Engineer shall fail to issue or otherwise act in writing upon any certificate for payment within ten (10) days after it is presented and received by the Architect/Engineer, as provided in Article 31, Applications For Payments, or if the Principal Representative shall fail to pay the Contractor any sum certified that is not disputed in whole or in part by the Principal Representative in writing to the Contractor and the Architect/Engineer within thirty (30) days after the Architect/Engineer's certification, then the Contractor may

Page 45 of 49

on ten (10) days' written Notice to the Principal Representative and the Architect/Engineer stop Work and/or give written Notice of intention to terminate this Contract.

If the Principal Representative shall thereafter fail to pay the Contractor any amount certified by the Architect/Engineer and not disputed in writing by the Principal Representative within ten (10) days after receipt of such Notice, then the Contractor may terminate this Contract and recover from the Principal Representative payment for all Work executed, any losses sustained upon any plant or materials, and a reasonable profit only for the Work completed. The Principal Representative's right to dispute an amount certified by the Architect/Engineer shall not relieve the Principal Representative of the obligation to pay amounts not in dispute as certified by the Architect/Engineer.

ARTICLE 52. SPECIAL PROVISIONS

A. CONTROLLER'S APPROVAL CRS 24-30-202(1)

This Contract shall not be deemed valid until it has been approved by the Colorado State Controller or designee.

B. FUND AVAILABILITY CRS 24-30-202(5.5)

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available

C. GOVERNMENTAL IMMUNITY

No term or condition of this contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

D. INDEPENDENT CONTRACTOR 4 CCR 801-2

Contractor shall perform its duties hereunder as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of the State. Contractor and its employees and agents are not entitled to unemployment insurance or orkers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Unemployment insurance benefits will be available to Contractor and its employees and agents only if such coverage is made available by Contractor or a third party. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this contract. Contractor shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. Contractor shall (a) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (b) provide proof thereof when requested by the State, and (c) be solely responsible for its acts and those of its employees and agents.

E. COMPLIANCE WITH LAW

Contractor shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. CHOICE OF LAW

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this contract, to the extent capable of execution.

G. BINDING ARBITRATION PROHIBITED

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this contract or incorporated herein by reference shall be null and void.

H. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00 State or other public funds payable under this contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of this contract and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Contractor is in violation of this provision, the State may exercise any remedy available at law or in equity or under this contract, including, without limitation, immediate termination of this contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

- I. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST CRS 24-18-201 & CRS 24-50-507 The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this contract. Contractor has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Contractor's services and Contractor shall not employ any person having such known interests.
- J. VENDOR OFFSET CRS 24-30-202(1) & CRS 24-30-202.4 Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

K. PUBLIC CONTRACTS FOR SERVICES. CRS §8-17.5-101.

[Not Applicable to agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental agreements, or information technology services or products and services] Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform Work under this contract and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform Work under this contract, through participation in the E-Verify Program or the Department program established pursuant to CRS §8-17.5-102(5)(c), Contractor shall not knowingly employ or contract with an illegal alien to perform Work under this contract or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform Work under this contract. Contractor (a) shall not use E-Verify Program or Department program procedures to undertake pre-employment screening of job applicants while this contract is being performed. (b) shall notify the subcontractor and the contracting State agency within three days if Contractor has actual knowledge that a subcontractor is employing or contracting with an illegal alien for Work under this contract, (c) shall terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Contractor participates in the Department program, Contractor shall deliver to the contracting State agency, Institution of Higher Education or political subdivision a written, notarized affirmation, affirming that Contractor has examined the legal Work status of such employee, and shall comply with all of the other requirements of the Department program. If Contractor fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the contracting State agency, institution of higher education or political subdivision may terminate this contract for breach and, if so terminated, Contractor shall be liable for damages.

Page 47 of 49

L. PUBLIC CONTRACTS WITH NATURAL PERSONS. CRS §24-76.5-101.

Contractor, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she (a) is a citizen or otherwise lawfully present in the United States pursuant to federal law, (b) shall comply with the provisions of CRS §24-76.5-101 et seq., and (c) has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this contract.

ARTICLE 53. MISCELLANEOUS PROVISIONS

A. CONSTRUCTION OF LANGUAGE

The language used in these General Conditions shall be construed as a whole according to its plain meaning, and not strictly for or against any party. Such construction shall, however, construe language to interpret the intent of the parties giving due consideration to the order of precedence noted in Article 2C, Intent of Documents.

B. SEVERABILITY

Provided this Agreement can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof, provided that the Parties can continue to perform their obligations under this Agreement in accordance with its intent.

C. SECTION HEADINGS

The captions and headings in this Agreement are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

D. AUTHORITY

Each person executing the Agreement and its Exhibits in a representative capacity expressly represents and warrants that he or she has been duly authorized by one of the parties to execute the Agreement and has authority to bind said party to the terms and conditions hereof.

E. INTEGRATION OF UNDERSTANDING

This Contract is intended as the complete integration of all understandings between the parties and supersedes all prior negotiations, representations, or agreements, whether written or oral. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or affect whatsoever, unless embodied herein in writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a written Change Order or Amendment to this Contract.

F. VENUE

All suits or actions related to this Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. NO THIRD PARTY BENEFICIARIES

Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Contract are incidental to the Contract, and do not create any rights for such third parties.

H. WAIVER

Waiver of any breach under a term, provision, or requirement of this Agreement, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

I. INDEMNIFICATION

Contractor shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees, to the extent such claims are caused by any negligent act or omission of the Contractor, its employees, agents, subcontractors or assignees pursuant to the terms of this Contract, but not to the extent such claims are caused by any negligent act or omission of, or breach of contract by, the State, its employees, agents, other contractors or assignees, or other parties not under control of or responsible to the Contractor.

J. STATEWIDE CONTRACT MANAGEMENT SYSTEM

If the maximum amount payable to Contractor under this Contract is \$100,000 or greater, either on the Effective Date or at anytime thereafter, this section shall apply.

Contractor agrees to be governed, and to abide, by the provisions of CRS 24-102-205, 24-102-206, 24-103-601, 24-103.5-101, 24-105-101, and 24-105-102 concerning the monitoring of vendor performance on state contracts and inclusion of contract performance information in a statewide contract management system.

Contractor's performance shall be subject to Evaluation and Review in accordance with the terms and conditions of this Contract, State law, including C.R.S 24-103.5-101, and State Fiscal Rules, Policies and Guidance. Evaluation and Review of Contractor's performance shall be part of the normal contract administration process and Contractor's performance will be systematically recorded in the statewide Contract Management System. Areas of Evaluation and Review shall include, but shall not be limited to quality, cost and timeliness. Collection of information relevant to the performance of Contractor's obligations under this Contract shall be determined by the specific requirements of such obligations and shall include factors tailored to match the requirements of Contractor's obligations. Such performance information shall be entered into the statewide Contract Management System at intervals established herein and a final Evaluation, Review and Rating shall be rendered within 30 days of the end of the Contract term. Contractor shall be notified following each performance Evaluation and Review, and shall address or correct any identified problem in a timely manner and maintain Work progress.

Should the final performance Evaluation and Review determine that Contractor demonstrated a gross failure to meet the performance measures established hereunder, the Executive Director of the Colorado Department of Personnel and Administration (Executive Director), upon request by the Principal Representative, and showing of good cause, may debar Contractor and prohibit Contractor from bidding on future contracts. Contractor may contest the final Evaluation, Review and Rating by: (a) filing rebuttal statements, which may result in either removal or correction of the evaluation (CRS 24-105-102(6)), or (b) under CRS 24-105-102(6), exercising the debarment protest and appeal rights provided in CRS 24-109-106, 107, 201 or 202, which may result in the reversal of the debarment and reinstatement of Contractor, by the Executive Director, upon a showing of good cause.

K. CORA DISCLOSURE

To the extent not prohibited by federal law, this Agreement and the performance measures and standards under CRS §24-103.5-101, if any, are subject to public release through the Colorado Open Records Act, CRS §24-72-101, et seq.

Page 49 of 49

STATE OF COLORADO OFFICE OF THE STATE ARCHITECT STATE BUILDINGS PROGRAMS

PERFORMANCE BOND

Institution/Agency:	Red Rocks Community College	
Project No./Name:	C14A0007 / Campus Recreation Center	

ND.

BONDING COMPANY: DO NOT MAKE ANY CHANGES TO THE LANGUAGE IN THIS BO
KNOW ALL PERSONS BY THESE PRESENTS:
That the Contractor
as Principal and hereinafter called "Principal,"
and
as Surety and hereinafter called "Surety," a corporation organized and existing under the laws of are held and firmly bound unto the STATE OF COLORADO acting by and through (AGENCY OR INSTITUTION)
hereinafter called the "Principal Representative", in the sum of Dollars (\$)
for the payment whereof the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly, by these presents.
WHEREAS, the Principal and the State of Colorado acting by and through the Principal Representative have entered into a certain Contract, hereinafter called "Contract," dated, 20, for the construction of a PROJECT described as

which Contract is hereby by reference made a part hereof;

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION, is such that, if the Principal shall promptly, fully and faithfully perform all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term of said Contract any extensions thereof that may be granted by the Principal Representative with or without notice to the Surety, and during the life of any guaranty required under the Contract, and shall also well and truly perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

AND THE SAID SURETY, for value received hereby stipulates and agrees that whenever the Principal shall be, and declared by the Principal Representative to be in default under said Contract, the State of Colorado having performed its obligations thereunder, the Surety may promptly remedy the default or shall promptly (1) Complete the Contract in accordance with its terms and conditions, or (2) Obtain a bid or bids for submittal to the Principal Representative for completing the Contract in accordance with its terms and conditions, and upon determination by the Principal Representative and Surety of the lowest responsible bidder, arrange for a contract between such bidder and the State of Colorado acting by and through the Principal Representative and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion, less the balance of the contract price but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount hereinbefore set forth. The term "balance of the contract price" as herein used shall mean the total amount payable to the Principal under the Contract and any amendments thereto, less the amount properly paid by the State of Colorado to the Contractor.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the State of Colorado.

IN WITNESS WHEREOF said Principal and of , A.D.,20_	day	
(Corporate Seal)	THE PRINCIPAL	
ATTEST:	Ву:	
Secretary	Title:	
(Corporate Seal)	SURETY	
	By:Attorney-in-fact	i

THIS BOND MUST BE ACCOMPANIED BY POWER OF ATTORNEY, EFFECTIVELY DATED

Note: This bond is issued simultaneously with another bond conditioned for the full and faithful payment for all labor and material of the contract.

State Form SC-6.22 (Rev. 9/2006)

STATE OF COLORADO OFFICE OF THE STATE ARCHITECT STATE BUILDINGS PROGRAMS

LABOR AND MATERIAL BOND

Institution/Agency:	Red Rocks Community College			
Project No./Name:	C14A0007 / Campus Recreation Center			
BONDING C	OMPANY: DO NOT MAKE ANY CHANGES TO THE LANGUAGE IN THIS BOND.			
KNOW ALL PERSC	ONS BY THESE PRESENTS:			
That the Contractor				
as Principal and her	reinafter called "Principal,"			
and				
- -	nafter called "Surety," a corporation organized and existing under the laws of are held and firmly bound unto the STATE OF COLORADO			
acting by and throug	gh (agency or institution)			
or furnished or shall performance of the	Principal Representative," and to all subcontractors and any others who have supplied supply or furnish materials, rental machinery, tools, or equipment actually used in the hereinafter identified Contract, or who have performed or shall perform labor in the a connection with said Contract, hereinafter called "Obligees" in the sum of			
together with interest at the rate of eight per cent (8%) per annum on all payments becoming due in accordance with said Contract, from the time such payments shall become due until such payment shall be made, for the payment of which, well and truly made to the Obligees, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly, by these presents.				
have entered into a	ncipal and the State of Colorado acting by and through the Principal Representative certain Contract, hereinafter called "Contract," dated, 20 for a PROJECT described as			
which Contract is he	ereby by reference made a part hereof;			

State Form SC-6.221 (Rev. 9/2008)

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal and the Surety shall fully indemnify and save harmless the State of Colorado and the Principal Representative from and against any and all costs and damages, including patent infringements, which either may suffer by reason of any failure or failures of the Principal promptly and faithfully to perform all terms and conditions of said Contract and shall fully reimburse and repay the State of Colorado and the Principal Representative all outlay and expense which the State of Colorado and the Principal Representative may incur in making good any such failure or failures, and further, if the Principal and his subcontractors shall duly and promptly pay for any and all labor, materials, team hire, sustenance, provisions, provender, rental machinery, tools, or equipment and other supplies which have been or shall be used or consumed by said Principal or his subcontractors in the performance of the work of said Contract, and it said Principal shall duly and promptly pay all his subcontractors the sums due them for any and all materials, rental machinery, tools, or equipment and labor that have been or shall be furnished, supplied, performed or used in connection with performance of said Contract, and shall also fully indemnify and save harmless the State of Colorado and the Principal Representative to the extent of any and all expenditures which either or both of them may be required to make by reason of any failures or defaults by the Principal or any subcontractor in connection with such payments: then this obligation shall be null and void, otherwise it shall remain in full force and effect.

It is expressly understood and agreed that any alterations which may be made in the terms of said Contract or in the work to be done under said Contract, or any extension(s) of time for the performance of the Contract, or any forebearance on the part of either the State of Colorado or the Principal to any of the others, shall not in any way release the Principal and the Surety, or either of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety of any such alteration, extension or forbearance being hereby waived.

IN WITNESS WHEREOF, the Principal and the Surety have executed this Bond, this day o, A.D., 20			
(Corporate Seal)	THE PRINCIPAL		
ATTEST:	Ву:		
Secretary	Title:		
(Corporate Seal)	SURETY		
	By:		

THIS BOND MUST BE ACCOMPANIED BY POWER OF ATTORNEY, EFFECTIVELY DATED

Note: This bond is issued simultaneously with another bond conditioned for the full and faithful performance of the contract.

State Form SC-6.221 (Rev. 9/2008)



STATE OF COLORADO OFFICE OF THE STATE ARCHITECT STATE BUILDINGS PROGRAMS

CERTIFICATION AND AFFIDAVIT REGARDING UNAUTHORIZED IMMIGRANTS

Institution/Agency: Red Rocks Community College		
Project No./Name: C14A0007 / Campus Recreation Center		
A. CERTIFICATION STATEMENT CRS 8-17.5-101 & 102 (HB 06-1343, SB 08-193)		
The Vendor, whose name and signature appear below, certifies and agrees as follows:		
1. The Vendor shall comply with the provisions of CRS 8-17.5-101 et seq. The Vendor shall not knowingly employ or contract with an unauthorized immigrant to perform work for the State or enter into a contract with a subcontractor that knowingly employs or contracts with an unauthorized immigrant.		
2. The Vendor certifies that it does not now knowing employ or contract with and unauthorized immigrant who will perform work under this contract, and that it will participate in either (i) the "E-Verify Program", jointly administered by the United States Department of Homeland Security and the Social Security Administration, or (ii) the "Department Program" administered by the Colorado Department of Labor and Employment in order to confirm the employment eligibility of all employees who are newly hired to perform work under this contract.		
3. The Vendor shall comply with all reasonable requests made in the course of an investigation under CRS 8-17.5-102 by the Colorado Department of Labor and Employment. If the Vendor fails to comply with any requirement of this provision or CRS 8-17.5-101 et seq., the State may terminate work for breach and the Vendor shall be liable for damages to the State.		
B. AFFIDAVIT CRS 24-76.5-101 (HB 06S-1023)		
1. If the Vendor is a sole proprietor , the undersigned hereby swears or affirms under penalty of perjury under the laws of the State of Colorado that (check one):		
☐ I am a United States citizen, or		
☐ I am a Permanent Resident of the United States, or		
☐ I am lawfully present in the United States pursuant to Federal law.		
I understand that this sworn statement is required by law because I am a sole proprietor entering into contract to perform work for the State of Colorado. I understand that state law requires me to provide protect I am lawfully present in the United States prior to starting work for the State. I further acknowledge that will comply with the requirements of CRS 24-76.5-101 et seq. and will produce the required form identification prior to starting work. I acknowledge that making a false, fictitious, or fraudulent statement representation in this sworn affidavit is punishable under the criminal laws of Colorado as perjury in the second degree under CRS 18-8-503 and it shall constitute a separate criminal offense each time a pub benefit is fraudulently received.		
CERTIFIED and AGREED to this day of, _20		
VENDOR:		
Vendor Full Legal Name		
BY:		
Signature of Authorized Representative Title		

EXHIBIT A

APPROVED STATE BUILDING CODES

The following approved building codes and standards have been adopted by State Buildings Programs (SBP) and other state agencies as identified below as the minimum requirements to be applied to all state-owned buildings and physical facilities including capital construction and controlled maintenance construction projects.

The 2012 edition of the International Building Code (IBC)

(as adopted by the Colorado State Buildings Program as follows: Chapter 1 as amended, Chapters 2-35 and Appendices C and I)

The 2012 edition of the International Mechanical Code (IMC)

(as adopted by the Colorado State Buildings Program as follows: Chapters 2-15 and Appendix A)

The 2012 edition of the International Energy Conservation Code (IECC)

(as adopted by the Colorado State Buildings Program)

The 2014 edition of the National Electrical Code (NEC)

(National Fire Protection Association Standard 70) (as adopted by the Colorado State Electrical Board)

The 2012 edition of the International Plumbing Code (IPC)

(as adopted by the Colorado Examining Board of Plumbers as follows: Chapter 1 Section 101.2,102, 105, 107, Chapters 2-13 and Appendices B, D, E, F and G)

The 2012 edition of the International Fuel Gas Code (IFGC)

(as adopted by the Colorado Examining Board of Plumbers as follows: Chapter 1 Section 101,102, 105, 107, Chapters 2-8 and Appendices A, B, and C)

The National Fire Protection Association Standards (NFPA)

(as adopted by the Department of Public Safety/Division of Fire Safety as follows with editions shown in parentheses: NFPA-1 (2006), 11 (2005), 12 (2005), 12A (2004), 13 (2002), 13D (2002), 13R (2002), 14 (2003), 15 (2001), 16 (2003), 17 (2002), 17A (2002), 20 (2003), 22 (2003), 24 (2002), 25 (2002), 72 (2002), 409 (2004), 423 (2004), 750 (2003) and 2001 (2004))

The 2010 edition of the ASME Boiler and Pressure Vessel Code

(as adopted by the Department of Labor and Employment/Boiler Inspection Section as follows: sections I, IV, V, VIII-Divisions 1 and 2 and 3, 1X, X including the 2011 addenda and B31.1, 2010 edition.)

The 2011 edition of the National Boiler Inspection Code (NBIC)

(as adopted by the Department of Labor and Employment/Boiler Inspection Section)

The 2012 edition of the Controls and Safety Devices for Automatically Fired Boilers CSD-1

(as adopted by the Department of Labor and Employment/Boiler Inspection Section)

The 2011 edition of the Boiler and Combustion Systems Hazards Code, NFPA 85

(as adopted by the Department of Labor and Employment/Boiler Inspection Section)

The 2013 edition of ASME A17.1 Safety Code for Elevators and Escalators

(as adopted by the Department of Labor and Employment/Conveyance Section and as amended by ASME International)

The 2005 edition of ASME A17.3 Safety Code for Existing Elevators and Escalators

(as adopted by the Department of Labor and Employment/Conveyance Section and as amended by ASME International)

Rev. 7/2015

Exhibit A

The 2005 edition of ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts (as adopted by the Department of Labor and Employment/Conveyance Section and as amended by ASME International)

The current edition of the Rules and Regulations Governing the Sanitation of Food Service Establishments

(as adopted by the Department of Public Health and Environment/Colorado State Board of Health)

<u>The 2009 edition of ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities</u> (Note, the 2003 edition as adopted by the Colorado General Assembly as follows: CRS 9-5-101, as amended, applies only to accessible housing)

Note: Additional codes, standards and appendices may be adopted by the state agencies and institutions in addition to the minimum codes and standards herein adopted by State Buildings Programs.

- 1. The 2012 edition of the IBC became effective on July 1 of 2013. Consult the state electrical and plumbing boards and the state boiler inspector and conveyance administrator and the Division of Fire Safety for adoption of current editions and amendments to their codes.
- 2. Projects should be designed and plans and specifications should be reviewed based upon the approved codes at the time of A/E contract execution. If an agency prefers to design to a different code such as a newer edition of a code that State Buildings Programs has not yet adopted, the agency must contact SBP for approval and then amend the A/E contract with a revised Exhibit C, Approved State Building Codes. Please note that the state plumbing and electrical boards enforce the editions of their codes that are in effect at the time of permitting not design.
- The state's code review agents, or the State Buildings Programs approved agency building
 official, shall review all documents for compliance with the codes stipulated herein. Note: The
 Department of Public Health and Environment, Division of Consumer Protection will review
 drawings for food service related projects.
- 4. This policy does not prohibit the application of various life safety codes as established by each agency for specific building types and funding requirements. NFPA 101 and other standards notwithstanding, approved codes will supersede where their minimum requirements are the most restrictive in specific situations. If a conflict arises, contact State Buildings Programs for resolution.
- 5. It is anticipated that compliance with the federal Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG) and Colorado Revised Statutes Section 9-5-101 will be met by compliance with the 2012 International Building Code and ICC/ANSI A117.1. However, each project may have unique aspects that may require individual attention to these legislated mandates.
- 6. The 2012 edition of the International Building Code (IBC) is to be applied to factory-built nonresidential structures as established by the Division of Housing within the Department of Local Affairs.

A. Appendices

Appendices are provided to supplement the basic provisions of the codes. Approved IBC Appendices are as follows:

Mandatory
 IBC Appendix Chapter C - Agricultural Buildings
 IBC Appendix Chapter I - Patio Covers

Exhibit A

2. Optional

Any non-mandatory appendix published in the International Building Code may be utilized at the discretion of the agency. Use of an appendix shall be indicated in the project code approach.

B. Amendments

1. International Building Code, Chapter 1 as amended

CHAPTER 1

SCOPE AND ADMINISTRATION

PART 1—SCOPE AND APPLICATION

SECTION 101 GENERAL

- **101.1 Title.** These regulations shall be known as the *Building Code* of the Department of Personnel & Administration/Office of the State Architect (DPA/OSA), hereinafter referred to as "this code".
- **101.2 Scope.** The provisions of this code shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Detached one- and two-family *dwellings* and multiple single-family *dwellings* (*townhouses*) not more than three *stories* above *grade plane* in height with a separate *means of egress* and their accessory structures shall comply with the *International Residential Code*.

- **101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically adopted.
- **101.3 Intent.** The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.
- **101.4 Referenced codes.** The other codes listed in Sections 101.4.1 through 101.4.6 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

- **101.4.1 Gas.** The provisions of the *International Fuel Gas Code* shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.
- **101.4.2 Mechanical.** The provisions of the *International Mechanical Code* shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, airconditioning and refrigeration systems, incinerators and other energy-related systems.
- **101.4.3 Plumbing.** The provisions of the *International Plumbing Code* shall apply to the installation, *alteration*, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system.
- **101.4.6 Energy.** The provisions of the *International Energy Conservation Code* shall apply to all matters governing the design and construction of buildings for energy efficiency.

SECTION 102 APPLICABILITY

102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

- **102.2 Other laws.** The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.
- **102.3 Application of references.** References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.
- **102.4 Referenced codes and standards.** The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2.
 - **102.4.1 Conflicts**. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.
 - **102.4.2.** Provisions in referenced codes and standards. Where the extent of the reference to the referenced code or standard includes subject matter that is within the scope of this code or the International Codes listed in Section 101.4, the provisions of this code or the International Codes listed in Section 101.4, as applicable, shall take precedence over the provisions in the referenced code or standard.
- **102.5 Partial invalidity.** In the event that any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.
- **102.6 Existing structures.** The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code or as is deemed necessary by DPA/OSA through its code review agent for the general safety and welfare of the occupants and the public.

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL

104.1 General. DPA/OSA as the building official is hereby authorized and directed to enforce the provisions of this code. DPA/OSA shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the

effect of waiving requirements specifically provided for in this code.

- **104.2 Plan reviews.** DPA/OSA through its code review agent shall review *construction documents* and issue compliance notices for the erection, and *alteration*, demolition and moving of buildings and structures and inspect the premises for which such compliance notices have been issued.
- **104.4 Inspections.** DPA/OSA through its code review agent shall make all of the required inspections, or DPA/OSA shall have the authority to accept reports of inspection by *approved agencies* or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved agency* or by the responsible individual. DPA/OSA is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise.
- **104.9** Approved materials and equipment. Materials, equipment and devices *approved* by DPA/OSA through its code review agent shall be constructed and installed in accordance with such approval.
 - **104.9.1 Used materials and equipment.** The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by DPA/OSA through its code review agent.
- **104.10 Modifications.** Wherever there are practical difficulties involved in carrying out the provisions of this code, DPA/OSA shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided DPA/OSA shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, safety, accessibility, life and fire or structural requirements. details action The of granting modifications shall be recorded and entered in the files of DPA/OSA.
 - **104.10.1 Flood hazard areas**. DPA/OSA shall not grant modifications to any provision required in *flood hazard areas* as established by Section 1612.3 unless a determination has been made that:
 - **1.** A showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render the elevation standards of Section 1612 inappropriate.

- **2**. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
- **3**. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with existing laws or ordinances.
- **4**. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.
- **5**. Submission to the applicant of written notice specifying the difference between the *design flood elevation* and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that construction below the *design flood elevation* increases risks to life and property.

104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where DPA/OSA through its code review agent finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, *fire resistance*, durability and safety.

104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

104.11.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, DPA/OSA through its code review agent shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, DPA/OSA through its code review agent shall approve the testing procedures. Tests shall be performed by an *approved agency*.

SECTION 105 PLAN REVIEWS

105.1 Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first contact a DPA/OSA code review agent.

105.2 Work exempt from plan review. Exemptions from plan review requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Plan review shall not be required for the following:

Building:

- One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m2).
- 2. Fences not over 6 feet (1829 mm) high.
- 3. Oil derricks.
- Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIIA liquids.
- 5. Water tanks supported directly on grade if the capacity does not exceed 5,000 gallons (18 925 L) and the ratio of height to diameter or width does not exceed 2:1.
- 6. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or *story* below and are not part of an *accessible route*.
- Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
- 8. Temporary motion picture, television and theater stage sets and scenery.
- Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 24 inches (610 mm) deep, do not exceed 5,000 gallons (18 925 L) and are installed entirely above ground.
- Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.

- 11. Swings and other playground equipment accessory to detached one- and two-family *dwellings*.
- 12. Window awnings supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support of Groups R-3 and U occupancies.
- 13. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

Electrical:

Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of *approved* portable electrical equipment to *approved* permanently installed receptacles.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas.

Temporary testing systems: A plan review shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

- 1. Portable heating appliance.
- 2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

- 1. Portable heating appliance.
- 2. Portable ventilation equipment.
- 3. Portable cooling unit.
- Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
- 5. Replacement of any part that does not alter its approval or make it unsafe.
- 6. Portable evaporative cooler.
- Self-contained refrigeration system containing 10 pounds (5 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

Plumbing:

- The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a plan review shall be obtained and inspection made as provided in this code.
- The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, plan review information shall be submitted promptly to DPA/OSA through its code review agent.

105.2.2 Repairs. Application or notice to DPA/OSA through its code review agent is not required for ordinary repairs to structures, replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

105.2.3 Public service agencies. A plan review shall not be required for the installation, *alteration* or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.

105.4 Validity of compliance notice. The issuance or granting of a compliance notice shall not be construed to be an approval of any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. The issuance of a compliance notice based on construction documents and other data shall not prevent DPA/OSA through its code review agent from requiring

the correction of errors in the *construction documents* and other data.

105.7 Placement of building inspection record. The building inspection record based on the compliance notice inspection recommendations shall be kept on the site of the work until the completion of the project.

SECTION 106 FLOOR AND ROOF DESIGN LOADS

- **106.1** Live loads posted. Where the live loads for which each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 50 psf (2.40 kN/m2), such design live loads shall be conspicuously posted by the owner in that part of each *story* in which they apply, using durable signs. It shall be unlawful to remove or deface such notices
- **106.2** Issuance of notice of approval of occupancy/use. A notice of approval of occupancy/use required by Section 111 shall not be issued until the floor load signs, required by Section 106.1, have been installed.
- **106.3 Restrictions on loading.** It shall be unlawful to place, or cause or permit to be placed, on any floor or roof of a building, structure or portion thereof, a load greater than is permitted by this code.

SECTION 107 SUBMITTAL DOCUMENTS

107.1 General. Submittal documents consisting of construction documents, statement of special inspections, geotechnical report and other data shall be submitted. The construction documents shall be prepared by a registered design professional where required by the statutes of the state of Colorado. Where special conditions exist, DPA/OSA through its code review agent is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: DPA/OSA is authorized to waive the submission of *construction documents* and other data not required to be prepared by a *registered design professional* if it is found that the nature of the work applied for is such that review of *construction documents* is not necessary to obtain compliance with this code.

107.2 Construction documents. Construction documents shall be in accordance with Sections 107.2.1 through 107.2.5.

- **107.2.1 Information on construction documents.** Construction documents shall be dimensioned and drawn upon suitable material. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations.
- **107.2.2** Fire protection system shop drawings. Shop drawings for the *fire protection system(s)* shall be submitted to indicate conformance to this code and the *construction documents* and shall be *approved* prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.
- **107.2.3 Means of egress.** The *construction documents* shall show in sufficient detail the location, construction, size and character of all portions of the *means of egress* including the path of the *exit discharge* to the *public way* in compliance with the provisions of this code. In other than occupancies in Groups R-2, R-3, and I-1, the *construction documents* shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.
- **107.2.4 Exterior wall envelope.** Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system which was tested, where applicable, as well as the test procedure used.

107.2.5 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from *lot lines*, the established street grades and the proposed finished

grades and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. DPA/OSA through its code review agent is authorized to waive or modify the requirement for a site plan when the application for plan review is for alteration or repair or when other wise warranted.

107.2.5.1 Design flood elevations. Where *design flood* elevations are not specified, they shall be established in accordance with Section 1612.3.1.

107.3 Examination of documents. DPA/OSA through its code review agent shall examine or cause to be examined the accompanying submittal documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

107.3.3 Phased approval. DPA/OSA through its code review agent is authorized to issue a compliance notice for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such compliance notice for the foundation or other parts of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a compliance notice for the entire structure will be granted.

107.3.4 Design professional in responsible charge.

107.3.4.1 General.

The registered design professional in responsible charge shall be responsible for reviewing and coordinating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building.

107.3.4.2 Deferred submittals. For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the plan review and

that are to be submitted to DPA/OSA through its code review agent within a specified period.

Deferral of any submittal items shall have the prior approval of DPA/OSA through its code review agent. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by DPA/OSA through its code review agent.

Documents for deferred submittal items shall be submitted to the *registered design professional in responsible charge* who shall review them and forward them to DPA/OSA through its code review agent with a notation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the deferred submittal documents have been approved by DPA/OSA through its code review agent.

107.4 Amended construction documents. Work shall be installed in accordance with the *approved construction documents*, and any changes made during construction that are not in compliance with the *approved construction documents* shall be resubmitted for approval as an amended set of *construction documents*.

SECTION 108 TEMPORARY STRUCTURES AND USES

108.1 General. DPA/OSA through its code review agent is authorized to issue a compliance notice for temporary structures and temporary uses. Such compliance notice shall be limited as to time of service, but shall not be permitted for more than 180 days. DPA/OSA through its code review agent is authorized to grant extensions for demonstrated cause.

108.2 Conformance. Temporary structures and uses shall conform to the structural strength, fire safety, *means of egress*, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure public health, safety and general welfare.

108.3 Temporary power. DPA/OSA through its code review agent is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary

certificate shall comply with the requirements specified for temporary lighting, heat or power in NFPA 70.

SECTION 109 FEES

109.1 Payment of fees. Refer to DPA/OSA Building Code Compliance Policy.

SECTION 110 INSPECTIONS

- 110.1 General. Construction or work for which a plan review is required shall be subject to inspection by DPA/OSA through its code review agent and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the holder of the notice to proceed to cause the work to remain accessible and exposed for inspection purposes. Neither DPA/OSA, its code review agent nor state agency shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.
- **110.2 Preliminary inspection.** Before issuing a compliance notice, DPA/OSA through its code review agent is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.
- **110.3 Required inspections.** DPA/OSA through its code review agent, upon notification, shall make the inspections set forth in Sections 110.3.1 through 110.3.10.
 - 110.3.1 Footing and foundation inspection. Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94, the concrete need not be on the job.
 - **110.3.2 Concrete** slab and under-floor inspection. Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary

- equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.
- **110.3.3 Lowest floor elevation.** In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the elevation certification required in Section 1612.5 shall be submitted to DPA/OSA through its code review agent.
- **110.3.4 Frame inspection.** Framing inspections shall be made after the roof deck or sheathing, all framing, *fireblocking* and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are *approved*.
- **110.3.5** Lath and gypsum board inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.
 - **Exception:** Gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly.
- **110.3.6 Fire- and smoke-resistant penetrations.** Protection of joints and penetrations in fire-resistance-rated assemblies, *smoke barriers* and smoke partitions shall not be concealed from view until inspected and *approved*.
- **110.3.7 Energy efficiency inspections.** Inspections shall be made to determine compliance with Chapter 13 and shall include, but not be limited to, inspections for: envelope insulation *R* and *U*-values, fenestration *U*-value, duct system *R*-value, and HVAC and water-heating equipment efficiency.
- **110.3.8 Other inspections.** In addition to the inspections specified above, DPA/OSA through its code review agent is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by DPA/OSA.
- **110.3.9 Special inspections.** For *special inspections*, see Section 1704.
- **110.3.10 Final inspection.** The final inspection shall be made after all work required is completed.

110.3.10.1 Flood hazard documentation. If located in a *flood hazard area*, documentation of the elevation of the lowest floor as required in Section 1612.5 shall be submitted to DPA/OSA prior to the final inspection.

110.4 Inspection agencies. DPA/OSA through its code review agent is authorized to accept reports of *approved* inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

110.5 Inspection requests. It shall be the duty of the holder of the notice to proceed or their duly authorized agent to notify DPA/OSA through its code review agent when work is ready for inspection. It shall be the duty of the notice to proceed holder to provide access to and means for inspections of such work that are required by this code.

110.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of DPA/OSA through its code review agent. The code review agent, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the holder of the notice to proceed or his or her agent wherein the same

fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the code review agent.

SECTION 111 CERTIFICATE OF OCCUPANCY

111.1 Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made, until DPA/OSA has issued a notice of approval of occupancy/use therefor as provided herein. Issuance shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

Exception: Notices of approval of occupancy/use are not required for work exempt from plan review under Section 105.2.

111.3 Temporary occupancy. DPA/OSA is authorized to issue a temporary notice of approval of occupancy/use for discrete portions of work before the completion of the entire work provided that such portion or portions shall be occupied safely.

C. Referenced Codes

1. While not adopted in entirety, portions of the following codes are referenced in the International Building Code (IBC), the International Mechanical Code (IMC), the International Energy Conservation Code (IECC) the International Plumbing Code (IPC), and the International Fuel Gas Code (IFGC). These following codes would be applied as reference standards.

2012 International Fire Code (IFC)
2012 International Existing Building Code (IEBC)

D. Referenced Standards

The IBC, IMC, IECC, IPC and IFGC standards shall be utilized to provide specific, or prescriptive, requirements on how to achieve the requirements established in the code. These standards may be unique to the code or may be derived from other established industry standards. Recognized standards may also be used to show compliance with the standard of duty established by the code.



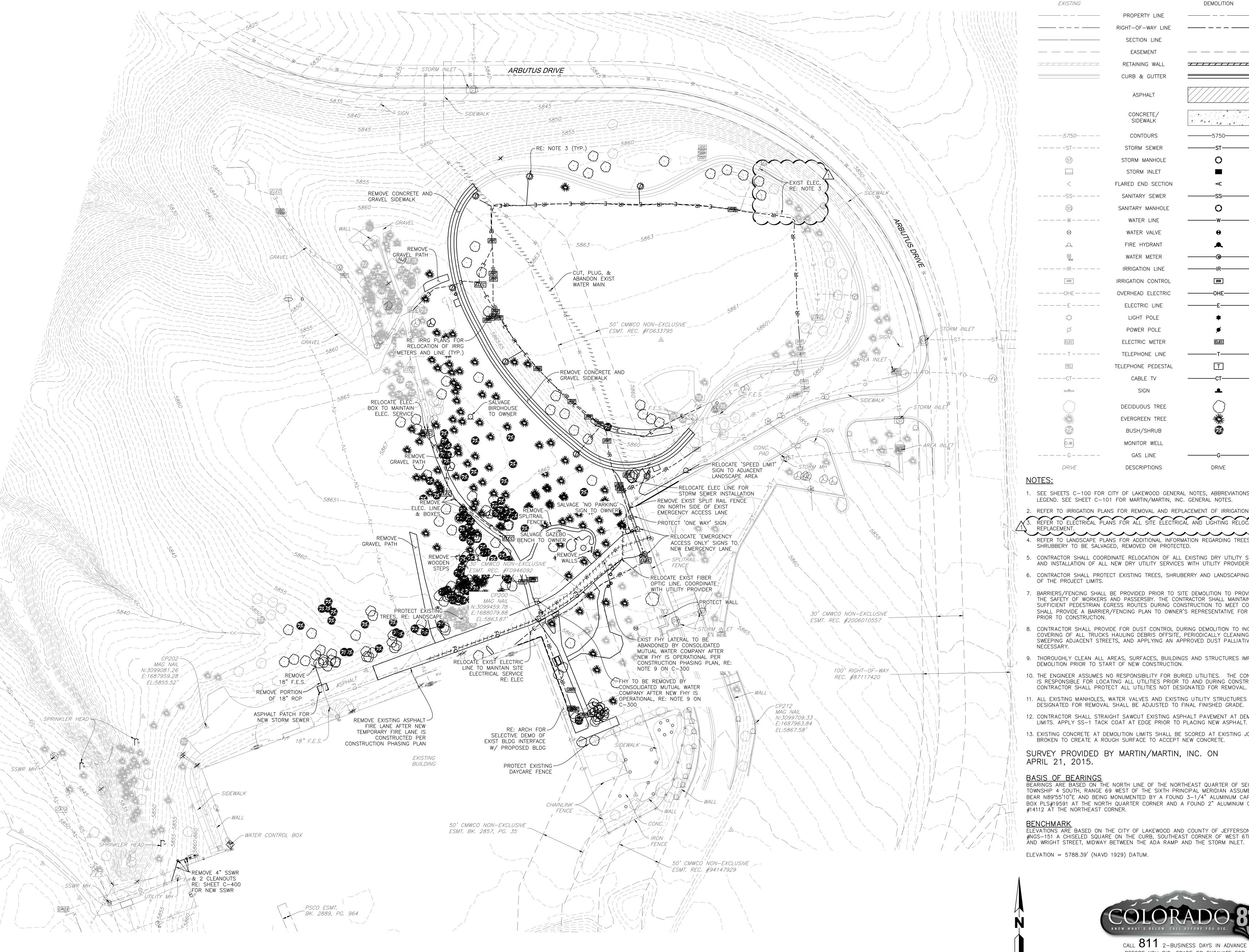
STATE OF COLORADO OFFICE OF THE STATE ARCHITECT STATE BUILDINGS PROGRAMS

BID BOND

Institution/Agency:	: Red Rocks Community Colle	ege			
• •	Name: C14A0007 / Campus Recreation Center				
KNOW ALL MEN BY	THESE PRESENTS:				
WHEREAS,PROPOSAL for the abo	hereinafter called the "PRINCIPAL", is submitting a he above described project, to the STATE OF COLORADO, hereinafter called the "OBLIGEE".				
PROPOSAL GUARAN forfeited as Liquidated	TY in an amount not less than five per	ndition of receiving the Proposals that the Principal submit with the cent (5%) of the Proposal, which sum it is specifically agreed is to be all defaults in his obligation as hereinafter specified, and, in pursuance ed.			
NOW THEREFORE, th	ne Principal and	a corporation of the State of			
, duly authorized to transact business in Colorado, as Surety, are held and firmly bound unto the Obligee, in the sum of five per cent (5%) of the Principal's total bid price, lawful money of the United States for the payment of which sum, well and truly to be made to the Obligee, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.					
after the opening of the time, execute the requi Certificates of Insurance	e proposals for the project, or, if the Prir ired Agreement, furnish the required Pe ce and Certification and Affidavit Regard	pal shall maintain his Proposal in full force and effect for thirty (30) days notipal's Proposal is accepted, the Principal shall, within the prescribed erformance Bond, Labor and Material Payment Bond, Insurance Policy, ding Illegal Aliens, then this obligation shall be null and void, otherwise upon demand as Liquidated Damages.			
IN WITNESS WHERE	OF said Principal and Surety have exec	cuted this Bond, this day of, A.D., 20			
(Corporate Seal)		THE PRINCIPAL			
ATTEST		Company Name			
		Address (including city, state and zip)			
Secretary		Phone number:			
Name (Print)		Signature			
(,		Name (Print) and Title			
		Name (Find and The			
	IGNATURES If the "Principal" is doing business as a Corporation, the Bid Bond shall be signed by an officer, i.e., President or Vice President. The signature of the officer shall be attested to by the Secretary and properly sealed. If the "Principal" is an individual or a partnership, the Bid Bond shall so indicate and be properly signed.				
If t					
(C	forporate Seal)	THE SURETY			
		Ву			
Se	ecretary	Attorney-in-Fact			

THIS BOND MUST BE ACCOMPANIED BY POWER OF ATTORNEY, EFFECTIVELY DATED.

FAILURE TO PROVIDE A PROPERLY EXECUTED BID BOND WITH A PROPERLY EXECUTED POWER OF ATTORNEY WILL RESULT IN THE BIDDER'S PROPOSAL BEING DEEMED NON-RESPONSIVE.



<u>LEGEND</u> EXISTING DEMOLITION PROPERTY LINE RIGHT-OF-WAY LINE SECTION LINE EASEMENT RETAINING WALL CURB & GUTTER **ASPHALT** CONCRETE/ 4. 4. 4. 4. 4. 1 SIDEWALK — — — *— 5750*— — — — CONTOURS -----STORM SEWER STORM MANHOLE STORM INLET FLARED END SECTION ----SANITARY SEWER SANITARY MANHOLE WATER LINE ----WATER VALVE FIRE HYDRANT WATER METER - - - - - IR - - - - -IRRIGATION LINE IRRIGATION CONTROL OVERHEAD ELECTRIC — — — OHE — — — ----E----ELECTRIC LINE LIGHT POLE POWER POLE ELEC ELECTRIC METER TELEPHONE LINE TELEPHONE PEDESTAL CABLE TV _ _ _ _ _ CT_ _ _ _ _ SIGN DECIDUOUS TREE EVERGREEN TREE BUSH/SHRUB MONITOR WELL GAS LINE

1. SEE SHEETS C-100 FOR CITY OF LAKEWOOD GENERAL NOTES, ABBREVIATIONS LIST AND LEGEND. SEE SHEET C-101 FOR MARTIN/MARTIN, INC. GENERAL NOTES.

DESCRIPTIONS

DRIVE

2. REFER TO IRRIGATION PLANS FOR REMOVAL AND REPLACEMENT OF IRRIGATION SYSTEMS.

4. REFER TO LANDSCAPE PLANS FOR ADDITIONAL INFORMATION REGARDING TREES AND SHRUBBERY TO BE SALVAGED, REMOVED OR PROTECTED.

- 5. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING DRY UTILITY SERVICES AND INSTALLATION OF ALL NEW DRY UTILITY SERVICES WITH UTILITY PROVIDERS.
- 6. CONTRACTOR SHALL PROTECT EXISTING TREES, SHRUBERRY AND LANDSCAPING OUTSIDE OF THE PROJECT LIMITS.
- BARRIERS/FENCING SHALL BE PROVIDED PRIOR TO SITE DEMOLITION TO PROVIDE FOR THE SAFETY OF WORKERS AND PASSERSBY. THE CONTRACTOR SHALL MAINTAIN SUFFICIENT PEDESTRIAN EGRESS ROUTES DURING CONSTRUCTION TO MEET CODE AND SHALL PROVIDE A BARRIER/FENCING PLAN TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE FOR DUST CONTROL DURING DEMOLITION TO INCLUDE COVERING OF ALL TRUCKS HAULING DEBRIS OFFSITE, PERIODICALLY CLEANING AND SWEEPING ADJACENT STREETS, AND APPLYING AN APPROVED DUST PALLIATIVE AS
- 9. THOROUGHLY CLEAN ALL AREAS, SURFACES, BUILDINGS AND STRUCTURES IMPACTED BY DEMOLITION PRIOR TO START OF NEW CONSTRUCTION.
- 10. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR BURIED UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO AND DURING CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL UTILITIES NOT DESIGNATED FOR REMOVAL.
- 11. ALL EXISTING MANHOLES, WATER VALVES AND EXISTING UTILITY STRUCTURES NOT DESIGNATED FOR REMOVAL SHALL BE ADJUSTED TO FINAL FINISHED GRADE.
- 12. CONTRACTOR SHALL STRAIGHT SAWCUT EXISTING ASPHALT PAVEMENT AT DEMOLITION
- 13. EXISTING CONCRETE AT DEMOLITION LIMITS SHALL BE SCORED AT EXISTING JOINTS AND BROKEN TO CREATE A ROUGH SURFACE TO ACCEPT NEW CONCRETE.

SURVEY PROVIDED BY MARTIN/MARTIN, INC. ON APRIL 21, 2015.

BASIS OF BEARINGS

SCALE: 1"=40'

ALL DIMENSIONS SHOWN ARE U.S. SURVEY FEET

BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 7, TOWNSHIP 4 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN ASSUMED TO BEAR N89°55'10"E AND BEING MONUMENTED BY A FOUND 3-1/4" ALUMINUM CAP IN RANGE BOX PLS#19591 AT THE NORTH QUARTER CORNER AND A FOUND 2" ALUMINUM CAP PLS #14112 AT THE NORTHEAST CORNER.

ELEVATIONS ARE BASED ON THE CITY OF LAKEWOOD AND COUNTY OF JEFFERSON BM #NGS-151 A CHISELED SQUARE ON THE CURB, SOUTHEAST CORNER OF WEST 6TH AVENUE

ELEVATION = 5788.39' (NAVD 1929) DATUM.



CALL 811 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR

MARKING OF UNDERGROUND MEMBER UTILITIES MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES

PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

DAVIS PARTNERSHIP ARCHITECTS

Denver | Denver, CO 80205

303.861.8555

Consultant

12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM

ADDENDUM #2 12/4/15 /1\

Project Information

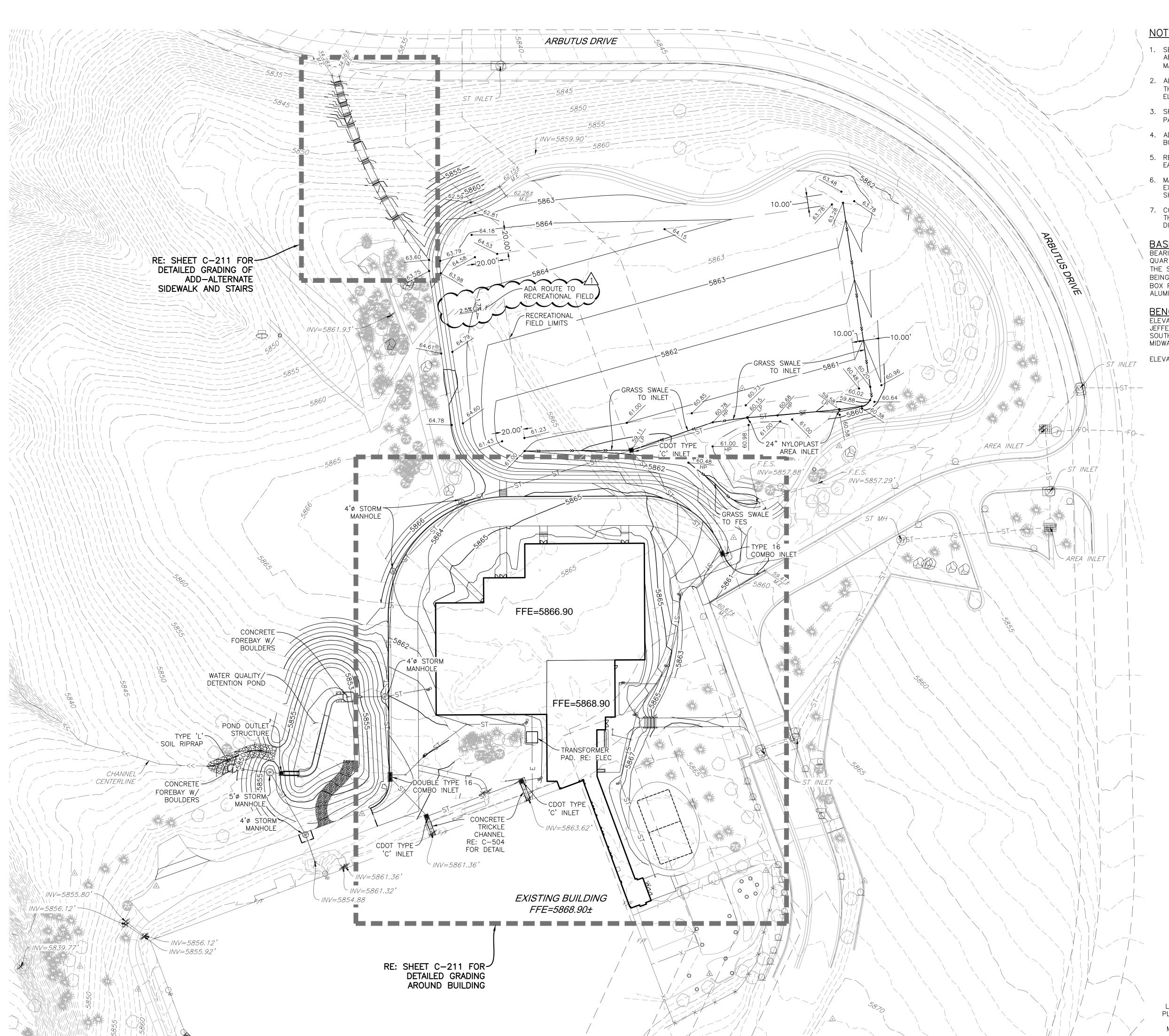
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Sheet Information

EXISTING CONDITIONS & DEMOLITION PLAN

Dec 4, 2015 ADDENDUM #2 Sheet Number:

M/M Project:



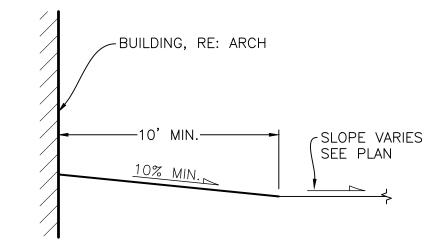


- 1. SEE SHEETS C-100 FOR CITY OF LAKEWOOD GENERAL NOTES, ABBREVIATIONS LIST AND LEGEND. SEE SHEET C-101 FOR MARTIN/MARTIN, INC. GENERAL NOTES.
- 2. ALL CONTOURS SHOWN ARE FINISHED GRADE ELEVATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE SUB-GRADE
- 3. SPOT ELEVATIONS ARE GIVEN AT FLOWLINE OR TOP OF PAVEMENT/LANDSCAPE UNLESS NOTED OTHERWISE.
- 4. ADJUST ALL EXISTING MANHOLE COVERS, FIRE HYDRANTS, VALVE BOXES, AND UTILITY BOXES TO MATCH FINAL GRADE.
- 5. REFER TO SPECIFICATIONS REGARDING OVER-EXCAVATION, EARTHWORK AND TRENCHING.
- 6. MAXIMUM CROSS SLOPE ACROSS ALL SIDEWALKS SHALL NOT EXCEED 2.0%. MAXIMUM LONGITUDINAL SLOPE ALONG ADA PATH SHALL NOT EXCEED 5.0%.
- 7. CONTRACTOR SHALL CONFIRM THE FINISHED FLOOR ELEVATION OF THE EXISTING BUILDING IS 5868.90±. NOTIFY ENGINEER OF ANY DISCREPANCIES.

BASIS OF BEARINGS BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 7, TOWNSHIP 4 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN ASSUMED TO BEAR N89°55'10"E AND BEING MONUMENTED BY A FOUND 3-1/4" ALUMINUM CAP IN RANGE BOX PLS#19591 AT THE NORTH QUARTER CORNER AND A FOUND 2" ALUMINUM CAP PLS #14112 AT THE NORTHEAST CORNER.

BENCHMARK
ELEVATIONS ARE BASED ON THE CITY OF LAKEWOOD AND COUNTY OF JEFFERSON BM #NGS-151 A CHISELED SQUARE ON THE CURB, SOUTHEAST CORNER OF WEST 6TH AVENUE AND WRIGHT STREET, MIDWAY BETWEEN THE ADA RAMP AND THE STORM INLET.

ELEVATION = 5788.39' (NAVD 1929) DATUM.

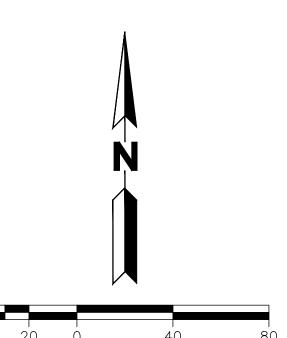


TYPICAL SLOPE AWAY FROM BUILDING IN LANDSCAPE AREAS

NOT TO SCALE

ENGINEERING APPROVAL CITY OF LAKEWOOD REVIEW IS ONLY FOR GENERAL COMPLIANCE WITH CITY OF LAKEWOOD ENGINEERING STANDARDS AND REQUIREMENTS. ALL RESPONSIBILITY FOR EXISTING CONDITIONS, CORRECTNESS OF DIMENSIONS, DETAILS, CONCEPTS, QUANTITIES AND SAFETY DURING CONSTRUCTION SHALL REMAIN WITH THOSE DESIGNING, DEVELOPING AND CONSTRUCTING THE PROJECT. THIS APPROVAL EXPIRES TWO YEARS FROM DATE OF APPROVAL

CITY ENGINEER



SCALE: 1"=40'
ALL DIMENSIONS SHOWN ARE U.S. SURVEY FEET



call 811 2-business days in advance BEFORE YOU DIG, GRADE OR EXCAVATE FOR MARKING OF UNDERGROUND MEMBER UTILITIES

MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



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Consultant



ADDENDUM #2 12/4/15 🔨

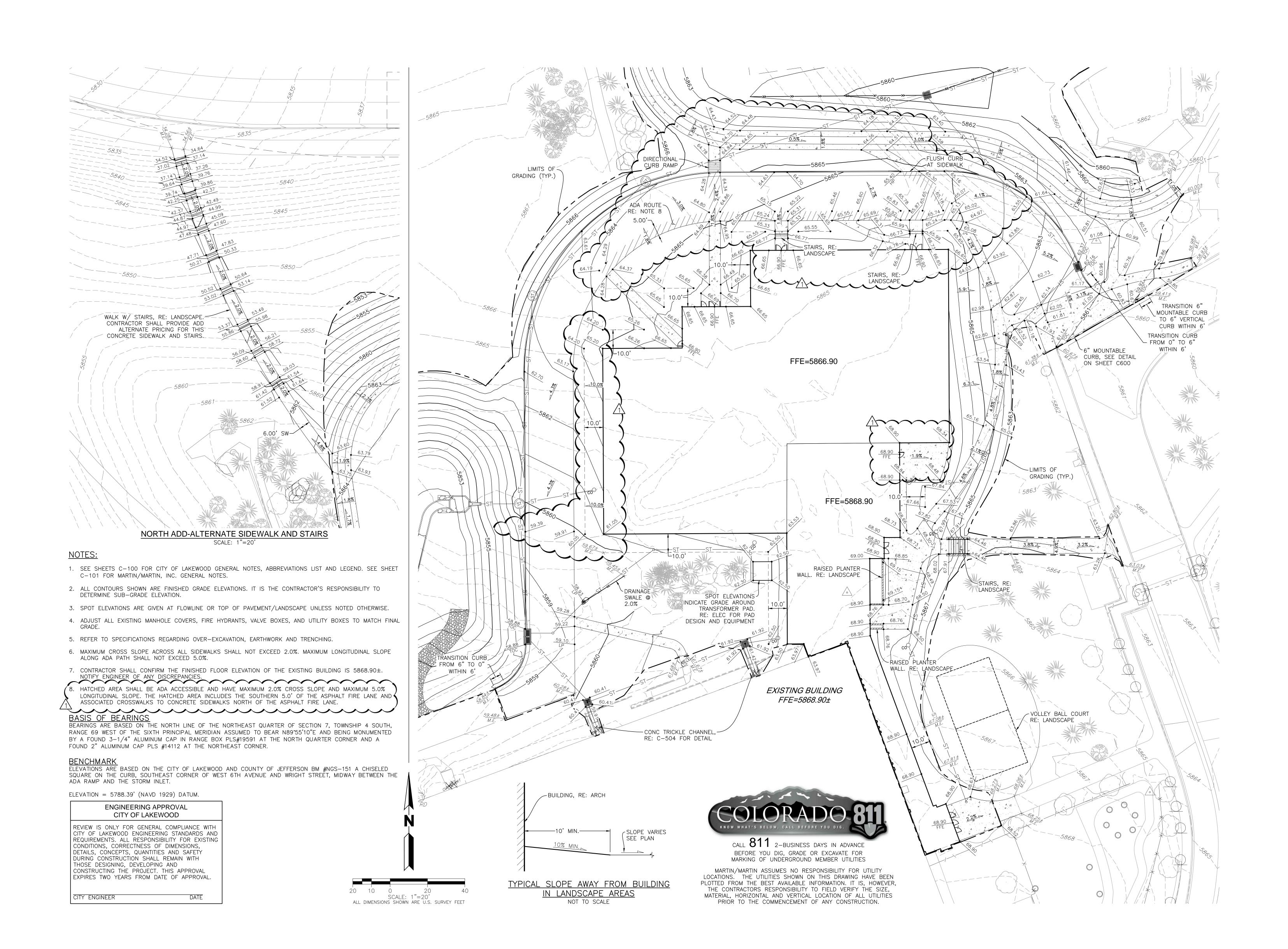
Project Information

COLLEGE

Sheet Information

Sheet Title:
OVERALL GRADING PLAN

Dec 4, 2015 ADDENDUM #2 Sheet Number:





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MARTIN/MARTIN
CONSULTING ENGINEERS
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Issue/Revisions Date No.

ADDENDUM #2 12/4/15

Project Information

COMMUNITY COLLEGATION CENTER
3300 W. 6th Avenue

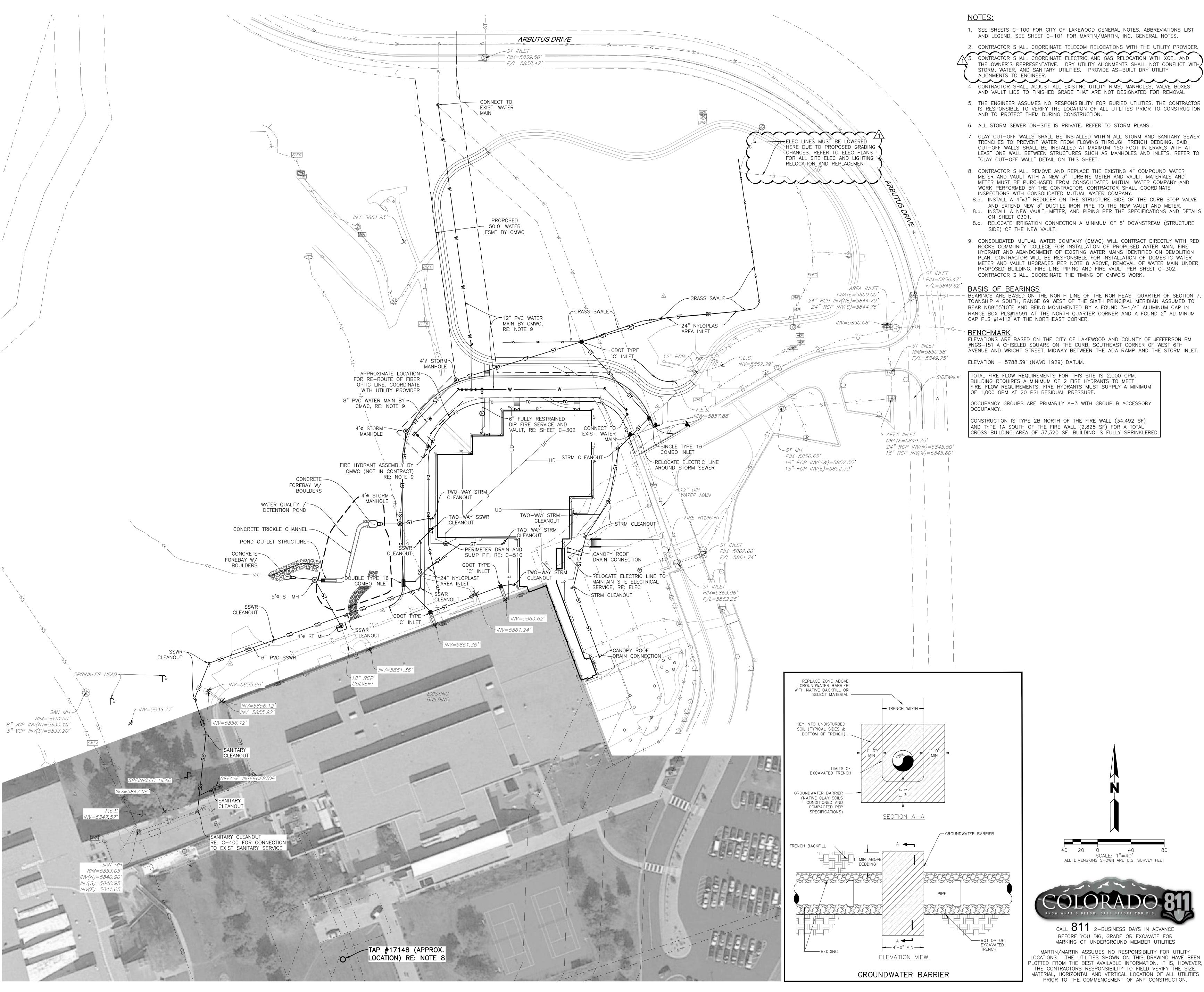
Sheet Information

Sheet Title:
DETAILED GRADING
PLAN

Dec 4, 2015 ADDENDUM #2
Sheet Number:

C-211

//M Project: 15



- 1. SEE SHEETS C-100 FOR CITY OF LAKEWOOD GENERAL NOTES, ABBREVIATIONS LIST AND LEGEND. SEE SHEET C-101 FOR MARTIN/MARTIN, INC. GENERAL NOTES.
- 2. CONTRACTOR SHALL COORDINATE TELECOM RELOCATIONS WITH THE UTILITY PROVIDER. CONTRACTOR SHALL COORDINATE ELECTRIC AND GAS RELOCATION WITH XCEL AND THE OWNER'S REPRESENTATIVE. DRY UTILITY ALIGNMENTS SHALL NOT CONFLICT WITH \prime STORM, WATER, AND SANITARY UTILITIES. PROVIDE AS-BUILT DRY UTILITY
- 4. CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY RIMS, MANHOLES, VALVE BOXES AND VAULT LIDS TO FINISHED GRADE THAT ARE NOT DESIGNATED FOR REMOVAL
- 5. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR BURIED UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION
- 7. CLAY CUT-OFF WALLS SHALL BE INSTALLED WITHIN ALL STORM AND SANITARY SEWER TRENCHES TO PREVENT WATER FROM FLOWING THROUGH TRENCH BEDDING. SAID CUT-OFF WALLS SHALL BE INSTALLED AT MAXIMUM 150 FOOT INTERVALS WITH AT LEAST ONE WALL BETWEEN STRUCTURES SUCH AS MANHOLES AND INLETS. REFER TO "CLAY CUT-OFF WALL" DETAIL ON THIS SHEET.
- 8. CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING 4" COMPOUND WATER METER AND VAULT WITH A NEW 3" TURBINE METER AND VAULT. MATERIALS AND METER MUST BE PURCHASED FROM CONSOLIDATED MUTUAL WATER COMPANY AND WORK PERFORMED BY THE CONTRACTOR. CONTRACTOR SHALL COORDINATE INSPECTIONS WITH CONSOLIDATED MUTUAL WATER COMPANY.
- 8.a. INSTALL A 4"x3" REDUCER ON THE STRUCTURE SIDE OF THE CURB STOP VALVE AND EXTEND NEW 3" DUCTILE IRON PIPE TO THE NEW VAULT AND METER.
- 8.b. INSTALL A NEW VAULT, METER, AND PIPING PER THE SPECIFICATIONS AND DETAILS
- 8.c. RELOCATE IRRIGATION CONNECTION A MINIMUM OF 5' DOWNSTREAM (STRUCTURE
- 9. CONSOLIDATED MUTUAL WATER COMPANY (CMWC) WILL CONTRACT DIRECTLY WITH RED ROCKS COMMUNITY COLLEGE FOR INSTALLATION OF PROPOSED WATER MAIN, FIRE HYDRANT AND ABANDONMENT OF EXISTING WATER MAINS IDENTIFIED ON DEMOLITION PLAN. CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLATION OF DOMESTIC WATER METER AND VAULT UPGRADES PER NOTE 8 ABOVE, REMOVAL OF WATER MAIN UNDER PROPOSED BUILDING, FIRE LINE PIPING AND FIRE VAULT PER SHEET C-302.

BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 7, TOWNSHIP 4 SOUTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN ASSUMED TO BEAR N89°55'10"E AND BEING MONUMENTED BY A FOUND 3-1/4" ALUMINUM CAP IN RANGE BOX PLS#19591 AT THE NORTH QUARTER CORNER AND A FOUND 2" ALUMINUM

#NGS-151 A CHISELED SQUARE ON THE CURB, SOUTHEAST CORNER OF WEST 6TH AVENUE AND WRIGHT STREET, MIDWAY BETWEEN THE ADA RAMP AND THE STORM INLET.

ELEVATION = 5788.39' (NAVD 1929) DATUM.

BUILDING REQUIRES A MINIMUM OF 2 FIRE HYDRANTS TO MEET FIRE-FLOW REQUIREMENTS. FIRE HYDRANTS MUST SUPPLY A MINIMUM OF 1,000 GPM AT 20 PSI RESIDUAL PRESSURE.

CONSTRUCTION IS TYPE 2B NORTH OF THE FIRE WALL (34,492 SF) AND TYPE 1A SOUTH OF THE FIRE WALL (2.828 SF) FOR A TOTAL GROSS BUILDING AREA OF 37,320 SF. BUILDING IS FULLY SPRINKLERED. **DAVIS PARTNERSHIP ARCHITECTS**

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Issue/Revisions

ADDENDUM #2 12/4/15 /\(\)

Project Information

COLLEGICENTER

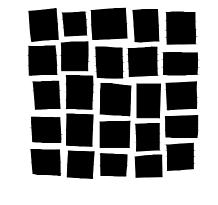
Sheet Information

Sheet Title: OVERALL UTILITY PLAN

Dec 4, 2015 ADDENDUM #2

Sheet Number:

M/M Project:





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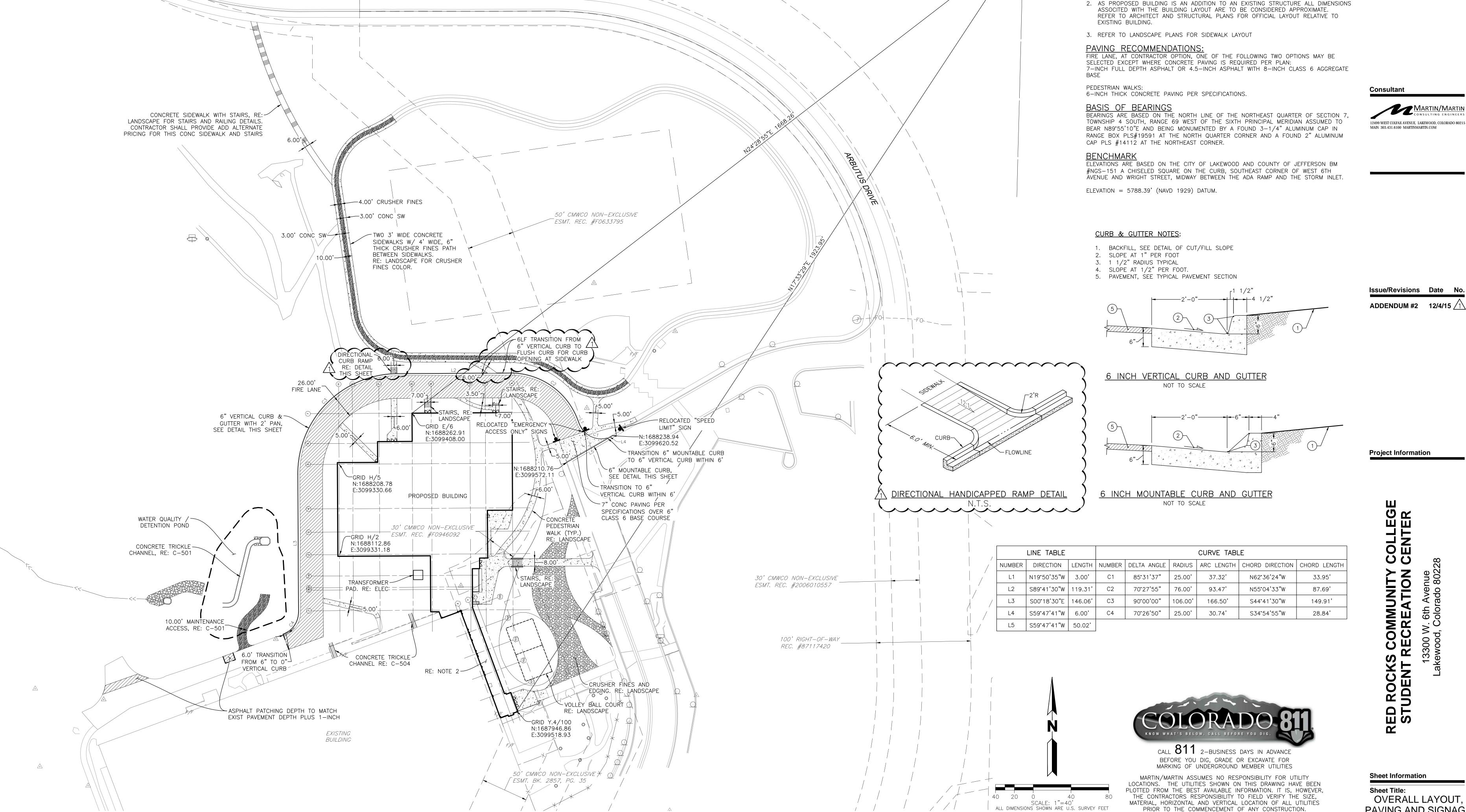
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COLLEGE RED ROCKS COMMUNITY STUDENT RECREATION

Sheet Information **Sheet Title:**

OVERALL LAYOUT, PAVING AND SIGNAGE PLAN

Dec 4, 2015 ADDENDUM #2 Sheet Number:



NE COR, SEC. 7-

NOTES:

1. SEE SHEETS C-100 FOR CITY OF LAKEWOOD GENERAL NOTES, ABBREVIATIONS LIST

AND LEGEND. SEE SHEET C-101 FOR MARTIN/MARTIN, INC. GENERAL NOTES.

1A. ENGINEER: REFERENCES ON THE STRUCTURAL DRAWINGS TO 'ENGINEER' MEAN THE STRUCTURAL ENGINEER OF RECORD. OTHER ENTITIES ARE SPECIFICALLY NOTED AS "CONTRACTOR'S ENGINEER", "MECHANICAL

1B. THESE NOTES SUPPLEMENT THE SPECIFICATIONS, WHICH SHALL BE REFERENCED FOR ADDITIONAL

1C. UNDERGROUND UTILITIES: LOCATE EXISTING UTILITIES AND NOTIFY ARCHITECT OF EXISTING UTILITIES OR

1D. STRUCTURAL ELEMENTS ARE CENTERED ON GRID LINES AND GRID LINE INTERSECTIONS UNLESS

2A. CONTRACT DOCUMENTS HAVE BEEN PREPARED USING AVAILABLE DRAWINGS AND SITE OBSERVATION AS

2B. DURING CONSTRUCTION. THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT NOW KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF

2D. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL CONDITIONS PRIOR TO SUBMITTING SHOP

2E. CONTRACTOR SHALL MAKE ALLOWANCE FOR THE RESOLUTION OF SUCH DISCOVERIES IN THE CONSTRUCTION

2F. SUBMIT A DIMENSIONED DRAWING OF ALL NEW OPENINGS THROUGH EXISTING STRUCTURE AND SECURE APPROVAL PRIOR TO CUTTING. DRAWING SHALL SHOW VERTICAL & HORIZONTAL LOCATION AND SIZE OF

3B. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DETAILS NOTED TYPICAL APPLY TO ALL SIMILAR CONDITIONS. WHERE NO SPECIFIC

4A. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES. REFER TO "LATERAL LOAD

4B. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE

4C. FOUNDATION WALLS SHALL NOT BE BACKFILLED UNTIL THE SLABS-ON-GRADE AND UPPER SLABS ARE IN-PLACE AND REACH FULL STRENGTH UNLESS ADEQUATE BRACING IS PROVIDED. USE ONLY HAND OPERATED TOOLS FOR COMPACTION ADJACENT TO FOUNDATION WALLS AND GRADE BEAMS. GRADE BEAMS SHALL BE BACKFILLED

- IF THE CONTRACTOR REQUESTS A CHANGE FROM THE STRUCTURAL DRAWINGS, IT SHALL BE APPROVED BY THE ARCHITECT AND DESIGNED BY MARTIN/MARTIN, INC. PRIOR TO SUBMITTING SHOP DRAWINGS. VARIATION

CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE IN SUBMITTALS ALL SHOP DRAWINGS SHALL REFERENCE THE STRUCTURAL DRAWING NUMBER AND DETAIL USED TO PREPARE

SUBMIT A STATEMENT OF RESPONSIBILITY FOR CONSTRUCTION OF THE LATERAL LOAD RESISTING SYSTEM

5C. NONCONFORMANCE: NOTIFY ARCHITECT OF CONDITIONS NOT CONSTRUCTED PER THE CONTRACT DOCUMENTS PRIOR TO PROCEEDING WITH CORRECTIVE WORK. SUBMIT PROPOSED REPAIR TO THE ARCHITECT

6A. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. NOTHING SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSTRUED AS ELIMINATING THE NEED FOR THE CONTRACTOR TO COMPLY

6B. THE CONTRACTOR SHALL ADD ALL NECESSARY BOLTS, ANCHOR BOLTS, PLATES, STIFFENER PLATES, STABILIZER PLATES, BRIDGING, BRACING, BEARING SEATS, COLUMN SPLICES, ETC., AS WELL AS CLOSURES FOR OPENINGS. IN ADDITION, FIELD WELD ANYTHING THAT MAY BE CONSIDERED A TRIP HAZARD, SUCH AS SHEAR

6C. WASHERS OR RINGS MAY BE WELDED TO COLUMNS TO PROVIDE FOR SAFETY CABLES. DO NOT PLACE HOLES

6D. ALL METAL JOISTS REQUIRED BY OSHA TO BE BOLTED SHALL HAVE ERECTION BOLTS INSTALLED REGARDLESS

6E. WHERE THE STRUCTURAL DRAWINGS APPEAR TO CONFLICT WITH OSHA REQUIREMENTS, THE STRUCTURAL DRAWINGS REPRESENT FINAL CONDITIONS ONLY. THE CONTRACTOR SHALL ADD ALL ERECTION FRAMING

ANTICIPATED ON THE STRUCTURE DURING ITS SERVICE LIFE. PROVIDE ALL REQUIRED ENGINEERING AND OTHER MEASURES TO ACHIEVE THE MEANS, METHODS, AND SEQUENCES OF WORK. SUCH ENGINEERING MAY INCLUDE,

ERECTION PROCEDURES WHICH ADDRESS STABILITY OF THE FRAME DURING CONSTRUCTION

STRUCTURAL ENGINEERING TO RESIST ANY OTHER LOADS NOT IDENTIFIED ON DESIGN DRAWINGS

CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND DRAWINGS FROM OTHER DISCIPLINES. THE CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS INTO SHOP DRAWINGS AND WORK.

8C. SEE ARCHITECTURAL PLANS FOR INTERIOR PARTITIONS. PARTITION FRAMING SHALL BE CONNECTED TO THE PRIMARY STRUCTURE IN SUCH A WAY SO AS TO ALLOW FOR VERTICAL LIVE LOAD DEFLECTIONS OF SPAN/360 OF THE FLOOR FRAMING. DO NOT MAKE RIGID VERTICAL AND HORIZONTAL CONNECTIONS TO THE PRIMARY STRUCTURE IN THE PLANE OF THE PARTITION. ALLOW 2" VERTICAL MOVEMENT OF PARTITIONS BEARING ON SLAB . DESIGN CRITERIA:

1A. THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING, NUMBER 15-3572, DATED JULY 8. 2015. PROVIDED CRITERIA FOR THE FOUNDATION DESIGN FOR THE PROJECT.

2. DRILLED PIERS:

2A. PIER CAPACITY CRITERIA:

MAXIMUM END BEARING PRESSURE = 40.000 PSF MAXIMUM SIDE SHEAR FOR LENGTH OF PENETRATION INTO BEDROCK FOR GRAVITY LOADS = 3,000

FOUNDATION NOTES

MAXIMUM SIDE SHEAR FOR LENGTH OF PENETRATION INTO BEDROCK FOR UPLIFT LOADS = 3.000 PSF

MINIMUM DEAD LOAD END BEARING PRESSURE MAINTAINED = 5,000 PSF WHERE MINIMUM DEAD LOAD PRESSURES WERE NOT OBTAINED, PIER LENGTHS WERE EXTENDED BEYOND THE MINIMUM PENETRATION AND LENGTH USING SIDE SHEAR TO COMPENSATE FOR THE DEAD LOAD DEFICIT.

3. **FOUNDATION WALLS:**

3A. EQUIVALENT FLUID PRESSURES USED FOR WALL DESIGN:

"ACTIVE" CONDITION = 50 PCF "AT REST" CONDITION = 71 PCF

FROST DEPTH = 36 INCHES

"PASSIVE" CONDITION = 285 PCF

3B. WALL DESIGN BASED ON ON-SITE CLAY BACKFILL ADJACENT TO FOUNDATION WALLS. SEE GEOTECHNICAL REPORT FOR REQUIREMENTS.

4A. ALL GRADE BEAMS. TIE BEAMS AND PIER CAPS SHALL BE CONSTRUCTED OVER A 4 INCH HIGH VOID.

PARTNERSHIP ARCHITECTS

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Issue/Revisions 12-4-2015 Addendum #2

Project Information

Sheet Information

Sheet Title: NOTES

CONSTRUCTION Nov 9, 2015 DOCUMENTS Sheet Number:

PRELIM Preliminary

PLF

Pounds Per Lineal Foot Pounds Per Square Foot Pounds Per Square Inch Point or Post-Tension or

Plate (Steel)

opng

OPP

OVS

PCA

Expansion Joint

Engineer-of-Record

Equally Spaced

∟quipment

Each Side

Each Wav

Expansion

EXP ANCH Expansion Anchor

Exterior

Finish(ed)

Floor

Elevation

Elevator

ENGR

EQ

EQ SP

Edge Nail

Engineer

Egual

Pretensioned

Not To Scale Normal Weight Concrete

On Center Opposite Hand

Oversized Power Actuated Fastener Portland Cement

Association Perpendicular

1F. WALLS, GRADE BEAMS AND THE UNDERSIDE OF CONCRETE ON METAL DECK SHALL BE CONSIDERED CRACKED FOR THE PURPOSE OF DESIGNING ANCHORS FOR ATTACHMENT OF DEFERRED SUBMITTAL ITEMS.

ICC REPORT WITH ALL PROPRIETARY STRUCTURAL ELEMENTS AND ANCHORS/FASTENERS.

1H. POWER ACTUATED FASTENERS (PAF) SHALL NOT BE USED TO RESIST GRAVITY TENSION LOADS. POWER ACTUATED FASTENERS SHALL NOT BE USED TO RESIST GRAVITY LOADS WHICH INCLUDE BRICK VENEER.

11. REFERENCE COLD-FORMED STEEL FRAMING NOTES FOR ADDITIONAL DEFERRED SUBMITTAL DESIGN CRITERIA.

1G. SUBMIT STAMPED STRUCTURAL CALCULATIONS FOR ALL DEFERRED SUBMITTAL ITEMS PRIOR TO OR CONCURRENTLY

WITH DRAWINGS OR PRODUCT DATA. INCLUDE ANALYSIS OF ATTACHMENT TO PRIMARY STRUCTURE. INCLUDE CURRENT

5B. SUBSTITUTIONS: ARCHITECTS APPROVAL SHALL BE SECURED FOR ALL SUBSTITUTIONS

IN COLUMNS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. ADJUST LOCATIONS OR ADD COLUMN SPLICES AS NECESSARY TO COMPLY WITH OSHA REQUIREMENTS. SUBMIT PROPOSED LOCATIONS.

7A. THE STRUCTURE DEFINED ON THE CONTRACT DOCUMENTS HAS BEEN DESIGNED ONLY FOR LOADS

8A. STRUCTURAL DRAWINGS ARE NOT STAND-ALONE DOCUMENTS AND ARE INTENDED TO BE USED IN

8B. COORDINATE DIMENSIONS OF ALL OPENINGS, BLOCKOUTS, DEPRESSIONS, ETC., WITH ARCHITECTURAL

ON GRADE.

SHEET NUMBER SHEET TITLE S-001 NOTES S-002 NOTES S-003

S-101 S-102 S-103

S-501

S-502

S-507

S-508

S-105 S-250

DRAWINGS, DRAWINGS FROM OTHER DISCIPLINES, AND FIELD CONDITIONS PRIOR TO SHOP DRAWING SUBMITTAL.

STRUCTURAL DRAWING LIST

QUALITY ASSURANCE

S-005 LOAD MAPS S-100 DRILLED PIER PLAN FOUNDATION PLAN LEVEL 2 FRAMING PLAN

ROOF FRAMING PLAN S-104 HIGH ROOF FRAMING PLAN SOUTH ENTRY PLAN

WALL ELEVATIONS WALL ELEVATIONS **ELEVATOR ELEVATIONS** S-253 BRACE ELEVATIONS

S-300 TYP CONCRETE DETAILS S-301 FOUNDATION DETAILS S-302 FOUNDATION DETAILS S-303 FOUNDATION DETAILS S-400 TYP MASONRY DETAILS S-500 TYP STL BM CONNS - LRFD

> STEEL DETAILS S-503 STEEL DETAILS S-504 STEEL DETAILS S-505 STEEL DETAILS S-506 STEEL DETAILS

TYP STL BM CONNS - LRFD

STEEL DETAILS

STEEL DETAILS

1B. DETAIL BARS IN ACCORDANCE WITH THE LATEST EDITIONS OF PUBLICATION SP-66: "ACI DETAILING MANUAL" WITH ADDED REQUIREMENTS OF THE PROJECT SPECIFICATION AND ACI 318: "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE."

2. REINFORCING MATERIALS:

REINFORCING MATERIAL TABLE								
REINF ELEMENT	ASTM	Fy (KSI)	Fu (KSI)	COMMENTS				
TYP REINFORCING	A615	60	90					
WELDED & FIELD BENT REINF	A706	60	80					
WELDED WIRE REINFORCING, SMOOTH	A185	65	75					
WELDED WIRE REINFORCING, DEFORMED	A497	70	80					

. REINFORCING FABRICATION:

- 3A. SPLICES:
- NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED ON DRAWINGS. MAKE BARS CONTINUOUS AROUND CORNERS. WHERE PERMITTED, SPLICES MAY BE MADE BY CONTACT LAPS OR MECHANICAL CONNECTORS.
- SEE 'LAP SPLICE SCHEDULE' FOR LAP LENGTHS. SPLICE CONTINUOUS TOP AND BOTTOM BARS IN WALLS, BEAMS, AND GRADE BEAMS 'LTS' UNLESS NOTED OTHERWISE.
- SPLICE TOP BARS AT MIDSPAN AND BOTTOM BARS OVER SUPPORT UNLESS NOTED OTHERWISE.
- 3B. MISCELLANEOUS REINFORCING REQUIREMENTS:
- PROVIDE ADDITIONAL BARS OR STIRRUPS REQUIRED TO SECURE REINFORCING IN
- PLACE DURING CONCRETE PLACEMENT. MAKE ALL REINFORCING BAR BENDS IN THE FABRICATOR'S SHOP UNLESS NOTED. NO WELDING OF REINFORCING PERMITTED UNLESS NOTED ON DRAWINGS. WHERE PERMITTED, PERFORM WELDING IN ACCORDANCE WITH AWS D1.4, LATEST EDITION. PROVIDE ADDED REINFORCING TO TRIM ALL OPENINGS, NOTCHES, AND REENTRANT
- CORNERS AS NOTED IN TYPICAL DETAILS. 3C. INCLUDE IN THE BID THE COST FOR THE MATERIAL, FABRICATION AND PLACING OF 500 LINEAR FEET OF #5 REINFORCING BARS AND 250 LINEAR FEET OF #7 REINFORCING BARS. THE REINFORCING WILL BE ADDED TO THE SHOP DRAWINGS AND IN FIELD OBSERVATION REPORTS BY THE ENGINEER AS "ADDED PER GENERAL NOTES." AN UP-TO-DATE TOTAL OF LINEAR FEET ADDED WILL BE MAINTAINED AND SUBSTANTIATED BY SHOP DRAWINGS AND FIELD OBSERVATION REPORTS.

4. STRUCTURAL CONCRETE MIX REQUIREMENTS:

	CONCRETE MIX TABLE						
CONC MIX TYPE	INTENDED USE	28 DAY STRENGTH, f'c (KSI)	CONCRETE WEIGHT	MAX WIC RATIO, INCLUDING FLY ASH	MAX AGGREGATE SIZE (IN), NOTE a	TOTAL AIR CONTENT (%), NOTE b	SHER REQUIREMENTS, NOTE c
1	DRILLED PIERS	4	NWC	0.45	1	{	DP, CLASS C FLY ASH NOT PERMITTED
2	GRADE BMS, TIE BMS, PILASTERS	4	NWC	0.45	3/4	5	CLASS C FLY ASH NOT PERMITTED
3	INT SLABS ON GRADE	4	NWC	0.50	3/4	NP	MSS
4	SLAB ON GRADE WITH MOISTURE SENSITIVE FLOORING	4	NWC	0.50	3/4	NP	SVT, MSS
5	EXPOSED/ FINISHED INTERIOR SLABS	4	NWC	0.50	3/4	NP	DUCTILECRETE, SVT, MSS
6	SLABS ON DECK	4	NWC	0.50	3/4	NP	
7	EXT SLABS	5	NWC	0.40	3/4	5	

CONCRETE MIX TABLE NOTES:

PROPORTIONS OF MATERIALS IN CONCRETE MIX SHALL BE ESTABLISHED TO: - PROVIDE THE MINIMUM COMPRESSIVE STRENGTH AS INDICATED IN THE MIX TABLE. DO NOT EXCEED THE MAXIMUM WATER-CEMENT RATIO NOTED. - PROVIDE WORKABILITY AND CONSISTENCY TO PERMIT CONCRETE TO BE WORKED READILY INTO FORMS AND AROUND REINFORCEMENT UNDER CONDITIONS OF PLACEMENT TO BE

EMPLOYED. WITHOUT SEGREGATION OR EXCESSIVE BLEEDING. CONTRACTOR SHALL SELECT APPROPRIATE SLUMP. USE ADMIXTURES AS REQUIRED TO OBTAIN DESIRED RESULTS. USE TYPE I / II PORTLAND CEMENT UNLESS NOTED OTHERWISE. FOR CONCRETE MIXES

USED ON FLOORS MINIMUM CEMENTITIOUS CONTENT SHALL BE 540 POUNDS PER CUBIC

IN ORDER TO ACHEIVE LEED POINT FOR RECYCLED CONTENT, CONTRACTOR SHALL CONSIDER USING UP TO 20% FLY ASH BY WEIGHT OF CEMENTITIOUS MATERIALS FOR CONCRETE MIXES USED IN SLABS, AND UP TO 40% FLY ASH BY WEIGHT OF CEMENTITIOUS MATERIALS FOR DRILLED PIERS, WALLS, AND COLUMNS. FOR FLY ASH CONTENT EXCEEDING 20% FLY ASH BY WEIGHT OF CEMENTITIOUS MATERIALS, CONCRETE SHALL ACHIEVE 500 PSI

FOR CONCRETE PLACED BY PUMPING PROVIDE CONCRETE MIX FLOWABILITY TO FACILITATE PUMPING. ENTRAINED AIR MAY BE USED TO FACILITATE PUMPING SUBJECT TO THE PROVISIONS OF NOTE b BELOW.

a. FOR THE MAXIMUM COARSE AGGREGATE SIZE INDICATED. USE THE FOLLOWING AGGREGATE SIZE NUMBERS PER ASTM C33: 3/8": #8 AGGREGATE

WITHIN 24 HOURS. SPECIFIED STRENGTH IN TABLE IS REQUIRED AT 56 DAYS.

3/4": #67 AGGREGATE 1": #57 AGGREGATE

b. WHERE AIR CONTENT IS INDICATED IN THE MIX TABLE, PROVIDE AIR ENTRAINING ADMIXTURE. TOTAL AIR CONTENT LIMITS INCLUDE BOTH ENTRAINED AND ENTRAPPED AIR +/-1 1/2%. 'NP' IN COLUMN INDICATES ADDITION OF ENTRAINED AIR IS NOT PERMITTED EXCEPT WHERE CONTRACTOR CAN DEMONSTRATE THAT SLABS WITH ENTRAINED AIR WILL HAVE A FINISH ACCEPTABLE TO THE ARCHITECT WITHOUT BLISTERS. AIR CONTENT NOTED IS BASED ON 3/4" AGGREGATE. IF 3/8" AGGREGATE IS USED, INCREASE AIR CONTENT BY 1 1/2%.

c. ABBREVIATIONS FOR OTHER REQUIREMENTS AS FOLLOWS: MSS = MAXIMUM SHRINKAGE STRAIN LIMITED. RE: SPECS. SVT = CONTRACTOR SHALL PROVIDE CONCRETE WITH REDUCED WATER IN ORDER TO ACHIEVE THE SLAB VAPOR TRANSMISSION REQUIRED FOR THE SPECIFIED FLOORING

MATERIALS DP = PROVIDE 5" MINIMUM SLUMP. FOR DRILLED PIERS CASED DURING CONSTRUCTION PROVIDE CONCRETE MIX WITH FLOWABILITY TO PREVENT ARCHING WHEN CASING IS PULLED. ENTRAINED AIR MAY BE USED TO FACILITATE CASING REMOVAL.

DUCTILECRETE = CONCRETE PROVIDED BY DUCTILECRETE SLAB SYSTEMS. GENERAL CONTRACTOR TO COORDINATE SLAB CONCRETE MIX, ADMIXTURES AND PLACEMENT WITH DUCTILECRETE SLAB SYSTEMS LLC. ANY SUBSTITUTIONS TO BE APPROVED PRIOR TO CONSTRUCTION.

5. SLAB-ON-GRADE:

5A. VERIFY ALKALINITY OF CONCRETE SURFACE, SLAB VAPOR TRANSMISSION, AND SLAB FLATNESS/LEVELNESS ARE COMPATIBLE WITH FLOORING SYSTEM AND ADHESIVES PRIOR TO INSTALLING FLOORING.

5B. TAKE PRECAUTIONS TO MINIMIZE SLAB CURLING. GRIND SLAB OR USE LEVELING COMPOUND IF FLOOR FLATNESS AND LEVELNESS VALUES ARE NOT ACCEPTABLE TO THE

NON-SHRINK GROUT: 6A. CONFORM TO ASTM C1107

6B. ACHIEVE 8000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.

- PLACING REINFORCEMENT:
- 7A. REINFORCEMENT PROTECTION: SEE 'CONCRETE COVER TABLE'
- SEE ACI 318-11 7.5 FOR REINFORCEMENT PLACING TOLERANCES AND ACI 117 FOR ADDITIONAL REQUIREMENTS

7B. PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE REINFORCEMENT AT POSITIONS SHOWN ON PLANS. ALL REINFORCING, DOWELS, BOLTS, AND EMBEDDED PLATES SHALL BE SET AND TIED IN PLACE BEFORE THE CONCRETE IS POURED. "STABBING" INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.

8. CONSTRUCTION/CONTROL JOINTS:

8A. SUBMIT DRAWINGS SHOWING CONSTRUCTION AND CONTROL JOINT LOCATIONS ALONG WITH THE SEQUENCE OF POURS. CONSTRUCTION JOINT LOCATIONS AND CASTING SEQUENCE SHALL BE ARRANGED TO MINIMIZE THE EFFECTS OF ELASTIC AND LONG-TERM SHORTENING/SHRINKAGE.

8B. CONSTRUCTION JOINT LOCATION AND CASTING SEQUENCE SHOWN ON THE DRAWINGS IS SUGGESTED AND HAS BEEN ARRANGED TO MINIMIZE THE EFFECTS OF ELASTIC AND LONG-TERM SHORTENING. SUBMIT DRAWINGS SHOWING PROPOSED CONSTRUCTION JOINT LOCATION AND CASTING SEQUENCE.

8C. CONSTRUCTION JOINTS IN SLABS-ON-DECK, SLABS-ON-GRADE, AND STRUCTURAL SLABS SHALL BE LOCATED TO ACCOMMODATE THE MAXIMUM LENGTH AND AREA THE CONTRACTOR CAN REASONABLY POUR, FINISH, AND JOINT IN THE SAME DAY, BUT SHALL NOT EXCEED 100 FEET WITH A MAXIMUM AREA OF 10,000 SQUARE FEET UNLESS APPROVED BY THE ENGINEER. AT SLABS WHICH ARE EXPOSED IN THE FINAL CONDITION REDUCE MAXIMUM POUR LENGTH TO 75 FEET AND MAXIMUM POUR AREA TO 7,500 SQUARE FEET.

8D. CONCRETE CONSTRUCTION JOINT SURFACE SHALL BE CLEANED AND ALL LAITANCE AND LOOSE MATERIAL REMOVED PRIOR TO SECOND CONCRETE PLACEMENT.

8E. SHEAR FRICTION JOINTS: WHERE CONSTRUCTION JOINTS ARE LABELED AS "ROUGHENED" ON THE DRAWINGS, THE ENTIRE JOINT SURFACE SHALL BE MECHANICALLY ROUGHENED TO A 1/4" AMPLITUDE AND THOROUGHLY CLEANED. EXPOSE THE COARSE AGGREGATE IN THE HARDENED CONCRETE AND REMOVE ALL LAITANCE AND LOOSE MATERIAL.

8F. INTENTIONALLY ROUGHENED CONSTRUCTION JOINTS: WHERE CONSTRUCTION JOINTS ARE LABELED AS "ROUGHENED" ON THE DRAWINGS, THE ENTIRE JOINT SURFACE SHALL BE MECHANICALLY ROUGHENED TO A 1/4" AMPLITUDE AND THOROUGHLY CLEANED. EXPOSE THE COARSE AGGREGATE IN THE HARDENED CONCRETE AND REMOVE ALL LAITANCE AND LOOSE

9. MEP AND OTHER OPENINGS AND EMBEDMENTS:

9A. PROVIDE SLEEVES AT OPENINGS (SUCH AS THOSE REQUIRED FOR PLUMBING AND ELECTRICAL PENETRATIONS) BEFORE PLACING CONCRETE. REMOVE METAL DECK AT SLEEVES AFTER CONCRETE HAS CURED. DO NOT CUT REINFORCING WHICH MAY CONFLICT. CORING OF CONCRETE IS NOT PERMITTED.

9B. REFER TO TYPICAL DETAILS FOR SPACING LIMITS ON SLEEVES AND FOR REQUIREMENTS FOR EMBEDDED CONDUIT AND PIPE.

<u>DEFINITIONS:</u>

1A. STRUCTURAL MASONRY IS DEFINED AS BEING EITHER LOAD BEARING AND/OR SERVING AS PART OF THE LATERAL LOAD RESISTING SYSTEM. STRUCTURAL MASONRY IS SHOWN ON THE STRUCTURAL PLANS AND DEFINED IN SCHEDULES AND DETAILS ON THE STRUCTURAL DRAWINGS.

1B. SEE ARCHITECTURAL DRAWINGS FOR LOCATION, THICKNESS AND EXTENT OF MASONRY PARTITIONS. SEE DETAILS ON THE STRUCTURAL DRAWINGS FOR GENERAL MASONRY PARTITION REQUIREMENTS.

1C. SEE ARCHITECTURAL DRAWINGS FOR ALL MASONRY VENEER REQUIREMENTS. SEE DETAILS ON THE STRUCTURAL DRAWINGS FOR MASONRY VENEER LOOSE LINTELS.

DESIGN STRENGTH: 2A. DEVELOP 1500 PSI COMPRESSIVE STRENGTH (fm) IN 28 DAYS.

- 2B. STEEL REINFORCING: PRIMARY REINFORCING: ASTM A615, 60 KSI
- HORIZONTAL JOINT REINFORCING: ASTM A82, PREFABRICATED, LADDER TYPE
- . SPLICES:
- 3A. SEE MASONRY LAP SPLICE SCHEDULE FOR LAP LENGTHS.
- INSTALLATION REQUIREMENTS:

4A. GROUT SOLID ALL CELLS CONTAINING REINFORCING, EMBEDDED ITEMS, AND ALL OTHER CELLS NOTED ON THE CONTRACT DOCUMENTS.

CONNECTIONS:

1A. PROVIDE CONNECTIONS DETAILS HEREIN. REFER TO SP SHOWN.

WELDING REQUIREMENTS

2A. WELDERS: HAVE IN POSSESSION CURRENT EVIDENCE OF PASSING THE APPROPRIATE AWS. QUALIFICATION TESTS.

2B. MINIMUM WELDS: AISC SPECIFICATION, NOT LESS THAN 3/16" FILLET, CONTINUOUS UNLESS OTHERWISE NOTED.

2C. WELD SIZES AND LENGTHS CALLED FOR ON THE DRAWINGS ARE THE NET EFFECTIVE REQUIRED. INCREASE WELD SIZE IF GAPS EXIST AT THE FAYING SURFACE.

2D. WELD SIZES SHALL BE AS SHOWN UNLESS A GREATER SIZE IS REQUIRED BY ANSI/AISC 360-05 TABLES J2.3 AND J2.4.

2E. ALL GROOVE WELDS SHALL BE COMPLETE PENETRATION UNLESS NOTED.

2F. FIELD WELDING SYMBOLS INDICATE SUGGESTED CONSTRUCTION PROCEDURES.

3. <u>COMPOSITE GRAVITY FRAMING:</u>

3A. COMPOSITE BEAMS ARE DESIGNED ASSUMING STUDS ARE INSTALLED IN THE WEAK POSITION (Rp = 0.6). SEE TYPICAL METAL DECK DETAILS FOR PLACEMENT REQUIREMENTS.

3B. COMPOSITE GIRDERS ARE DESIGNED ASSUMING STUDS ARE WELDED THROUGH THE METAL DECK AND/OR METAL DECKING/SHEET STEEL COVERS MORE THAN HALF OF THE TOP FLANGE (Rp = 0.75). SEE TYPICAL METAL DECK DETAILS FOR PLACEMENT REQUIREMENTS.

4A. FABRICATE BEAMS SUCH THAT ROLLING OR FABRICATION INDUCED CAMBER IS UP AFTER ERECTION.

4B. CAMBER SHOWN IS BASED ON THE COMPUTED DEFLECTION OF THE BEAM DUE TO SELF WEIGHT OF CONCRETE PLACED. DESIGN IS BASED ON THE THEORETICAL CONCRETE THICKNESS PLUS 1/2" THICKNESS FOR DECK LEVELING AND 1/2" THICKNESS FOR BEAM LEVELING. INCLUDE QUANTITY OF ADDED CONCRETE DUE TO DECK AND BEAM DEFLECTION IN

4C. VALUE NOTED ON PLAN IS IN-PLACE CAMBER, AFTER ERECTION, PRIOR TO PLACING CONCRETE. ADJUST FABRICATION AS REQUIRED TO ACHIEVE CAMBER SPECIFIED WITHIN TOLERANCES.

5. STRUCTURAL STEEL INSTALLATION:

5A. ALL HIGH STRENGTH BOLTS USED IN COLUMN SPLICES, CONNECTIONS OF BEAMS AND GIRDERS TO COLUMNS, AND WHERE NOTED ON THE DRAWINGS AS TYPE "SC" OR OTHER TYPE FOLLOWED BY "PT", SHALL BE TENSIONED TO THE VALUES OF TABLE J3.1 OF ANSI/AISC 360-10. OTHER HIGH-STRENGTH BOLTS MAY BE INSTALLED SNUG TIGHT AS DEFINED BY AISC.

6A. DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE (SJI) STANDARD SPECIFICATIONS, LATEST EDITION.

6B. SIZE, TYPE, AND SPACING OF JOIST BRIDGING PER CURRENT SJI REQUIREMENTS. USE 'X' BRIDGING AT DISCONTINUOUS ENDS OF BRIDGING UNLESS OTHERWISE NOTED ON PLANS OR DETAILS.

6C. REFER TO PLANS, DETAILS, AND SPECIAL JOIST LOADING DIAGRAMS FOR ADDITIONAL JOIST DESIGN REQUIREMENTS INCLUDING UNBALANCED, CONCENTRATED, AXIAL, AND UPLIFT

6D. DESIGN JOISTS AND BRIDGING FOR NET UPLIFT FORCES INDICATED IN DESIGN

SPECIFIED.

7A. SEE 'METAL DECK SCHEDULE' FOR MATERIALS, PROFILE, AND CONNECTIONS TO STRUCTURE.

7B. QUALITY CONTROL AND QUALITY ASSURANCE FOR STEEL DECK INSTALLATION SHALL BE IN ACCORDANCE WITH SDI QA/QC-2011, "STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR THE INSTALLATION OF STEEL DECK" AS MODIFIED BY TABLE C-1 CONTAINED IN THE COMMENTARY TO THAT STANDARD.

7C. DECK DESIGN IS IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) PUBLICATION NO. 31 AND DIAPHRAGM DESIGN MANUAL, LATEST EDITIONS.

7D. PLACE CONCRETE ON METAL DECK IN ACCORDANCE WITH SDI PUBLICATION NO. 31 TO LIMIT CONSTRUCTION LOADS TO ALLOWABLE MAGNITUDES.

7E. PLACE CONCRETE TO ELEVATION NOTED ON DRAWINGS, PROVIDE FLOOR FLATNESS NOTED IN SPECIFICATION. 7F. REINFORCE OPENINGS IN METAL ROOF DECK AND FLOOR DECK SUPPORTING

CONCRETE FILL IN ACCORDANCE WITH TYPICAL DECK OPENING DETAILS. 7G. INSTALL DECK OVER 4 SUPPORTS (3 SPAN CONTINUOUS) UNLESS NOTED OTHERWISE.

DO NOT INSTALL DECK AS SINGLE SPAN UNLESS SPECIFICALLY SHOWN ON DRAWINGS.

71. HANGERS: SEE TYPICAL METAL DECK DETAILS FOR ALLOWABLE HANGER LOADS, SPACING

AND ATTACHMENT.

7H. PROVIDE DECK ATTACHMENTS AS NOTED ON DRAWINGS.

8. STRUCTURAL COLD FORMED METAL FRAMING: 8A. COLD FORMED METAL FRAMING IS A PERFORMANCE SPECIFIED ITEM DESIGNED BY THE CONTRACTOR. PROVIDE STUD DEPTH INDICATED ON THE DRAWINGS. DO NOT EXCEED MAXIMUM SPACING INDICATED. VARY FLANGE WIDTH, GAGE, YIELD STRENGTH, BRACING, STUD SPACING, ETC. AS REQUIRED TO SATISFY PERFORMANCE CRITERIA IN THE CONTRACT DOCUMENTS. MINIMUM STUD GAGE SPECIFIED IS REQUIRED FOR ATTACHMENT OF OTHER MATERIALS TO STUDS. DO NOT BASE BIDS ON MINIMUM GAGE OR MAXIMUM SPACING

8B. REFER TO DETAILS FOR MINIMUM CONNECTIONS AND OTHER REQUIREMENTS. DEVELOP FORCES NOTED. DO NOT IMPOSE FORCES ON THE BUILDING STRUCTURE IN DIRECTIONS OR AT LOCATIONS OTHER THAN THAT SHOWN ON THE STRUCTURAL DRAWINGS. DO NOT IMPOSE FORCES LARGER THAN SPECIFIED. CONNECTIONS TO CONCRETE SHALL NOT USE PAFS TO RESIST TENSION LOADS.

S AS SHOWN IN THE 'STEEL BEAM CONNECTION SCHEDULES' AND		
PECIFICATION FOR ALTERNATIVES AND CONNECTIONS NOT	STEEL ELEMENT	A
OCCOSION OURDENT EVERTNOE OF RACCING THE ARREST	ANCHOR RODS	F1

ANCHOR RODS	F1554 GR 55	55	75	WELDABLE, HEAVY HEX HEADED
ANCHOR RODS IN MASONRY	F1554 GR 36, F1554 GR 55, OR A307 GRADE A/C	36	58	WELDABLE, STD HEX HE
BOLTS	A325 OR F1852		120	BOLTS ARE 3/4"Ø UNO, UTENSION-CONTROLLED WHERE POSSIBLE
COLD-FORMED STUDS/PLATE, 33 AND 43 MIL	A1003	33		
COLD-FORMED STUDS/PLATE, 54 MIL AND HEAVIER	A1003	50		
COLD-FORMED TRACK, ALL THICKNESSES	A1003	33		
DAS	A496	70	80	
HAS	A108	51	65	STUDS ARE 3/4"Ø UNO
OTHER SHAPES	A36	36	58	
PIPE	A53 GR B	35	60	
PLATES	A36	36	58	
RECT HSS	A500 GR C	50	62	
ROUND HSS	A500 GR C	46	62	
WELDING ELECTRODES,	E70			PER AWS

E60 OR E70

A992

STEEL MATERIAL TABLE

| Fu

COMMENTS

Fy (KSI) (KSI)

50 | 65 |--

METAL GAUGE CONVERSION						
GAUGE MINIMUM THICKNESS (MILS*)						
22	27					
20	33					
18	43					
16	54					
14	68					
12	97					

* 1 MIL = 1/1000"

THICKNESS OF THINNER

WELDING ELECTRODES,

THICKNESS OF THINNER

IIWF.WT

 $|PART \le 0.1 | INCHES (12 GA)|$

PART > 0.1 INCHES (12 GA)

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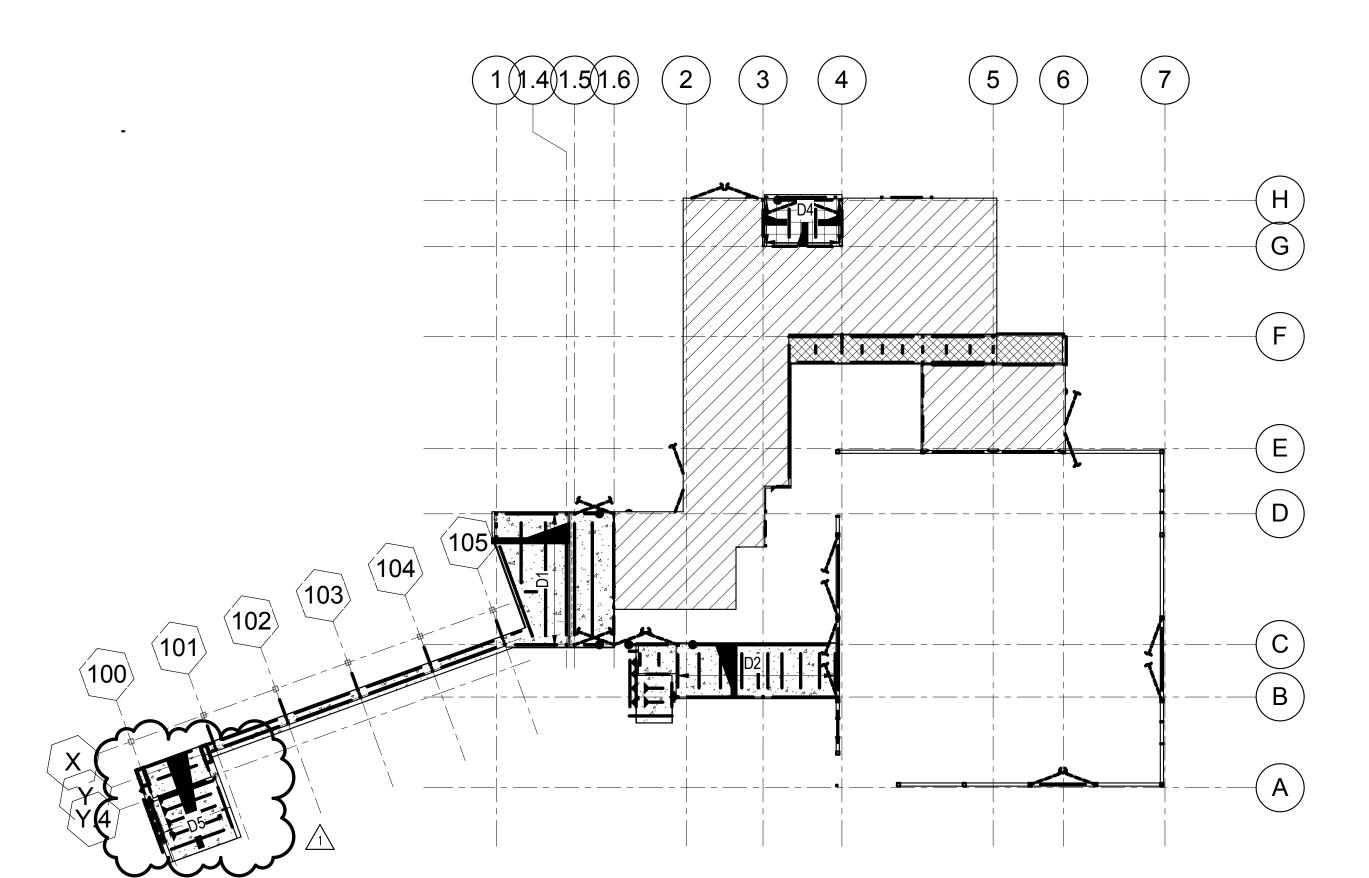
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Project Information

Sheet Information

Sheet Title: NOTES

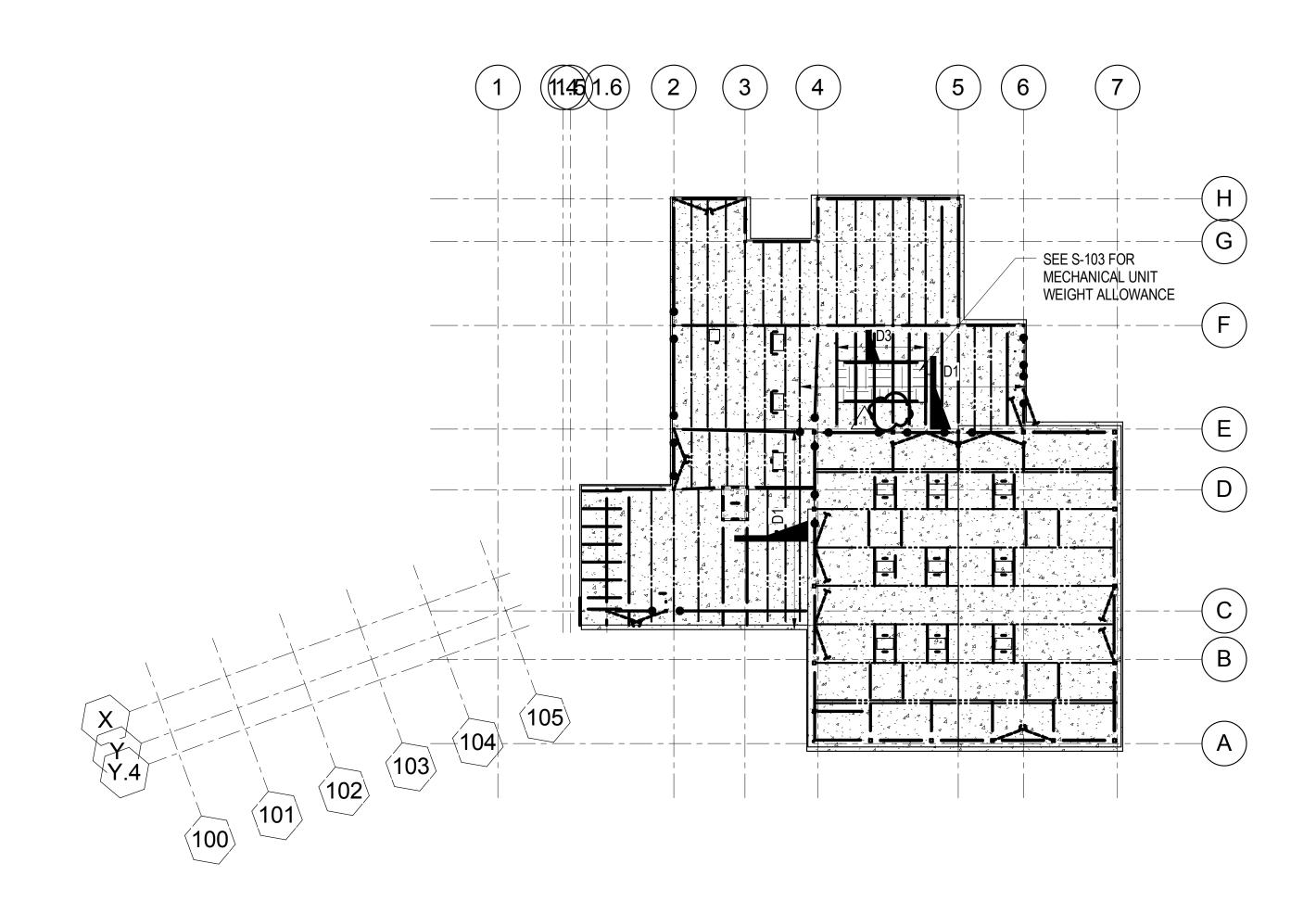
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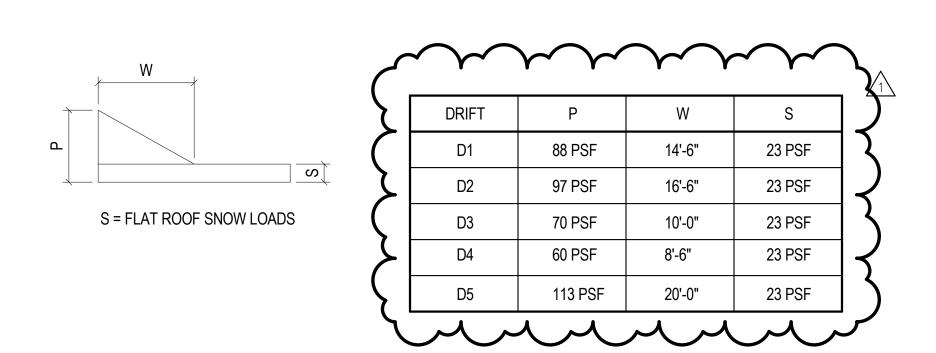
1" = 30'-0"

FOUNDATION

1" = 30'-0"



ROOF1" = 30'-0"



	LOAD AND STIFFNESS CRITERIA									
AREA	FLOOR MAP SYMBOL	LIVE LOAD (PSF)	LIVE LOAD REDUCTION	POINT LOAD (LB) NOTE 1	SNOW LOAD	TOTAL SUPERIMPOSED DEAD LOAD (PSF)	MAX M-E-P-FS SUPERIMPOSED DL (PSF)	MAXIMUM ROOFING SUPERIMPOSED DL (PSF)	MINIMUM NATURAL FREQUENCY	COMMENTS
SLAB ON GRADE		100	YES	2000	N/A	20	16	N/A	N/A	
REC FLOOR		100	YES	2000	N/A	27	12	N/A	8 HERTZ	TOTAL SUPERIMPOSED DEAD LOAD INCLUDES ALLOWANCE FOR 6 PSF FOR BEAM LEVELING CONCRETE AND 6 PSF FOR DECK LEVELING CONCRETE
TYP FLOOR		100	YES	2000	N/A	27	12	N/A	N/A	TOTAL SUPERIMPOSED DEAD LOAD INCLUDES ALLOWANCE FOR 6 PSF FOR BEAM LEVELING CONCRETE AND 6 PSF FOR DECK LEVELING CONCRETE
MECH ROOF		20 + UNIT WEIGHT	NO	2000	30	27	12	N/A	N/A	MECHANICAL UNIT WEIGHT ALLOWANCE NOTED ON PLAN
TERRACE ROOF		100	YES	2000	30	65	12	50	N/A	ROOFING SUPERIMPOSED DEAD LOAD INCLUDES 40 PSF ALLOWANCE FOR PAVE AND 6 PSF FOR BEAM LEVELING CONCREAND 6 PSF FOR DECK LEVELING CONCRE
ROOF		20	YES	150	30	25	12	10	N/A	SEE FRAMING PLAN FOR ADDITION POINT LOADS

NOTE 1: MAXIMUM LOAD DISTRIBUTED OVER A 2'-6"x2'-6" AREA PER IBC 2012 1607.4.



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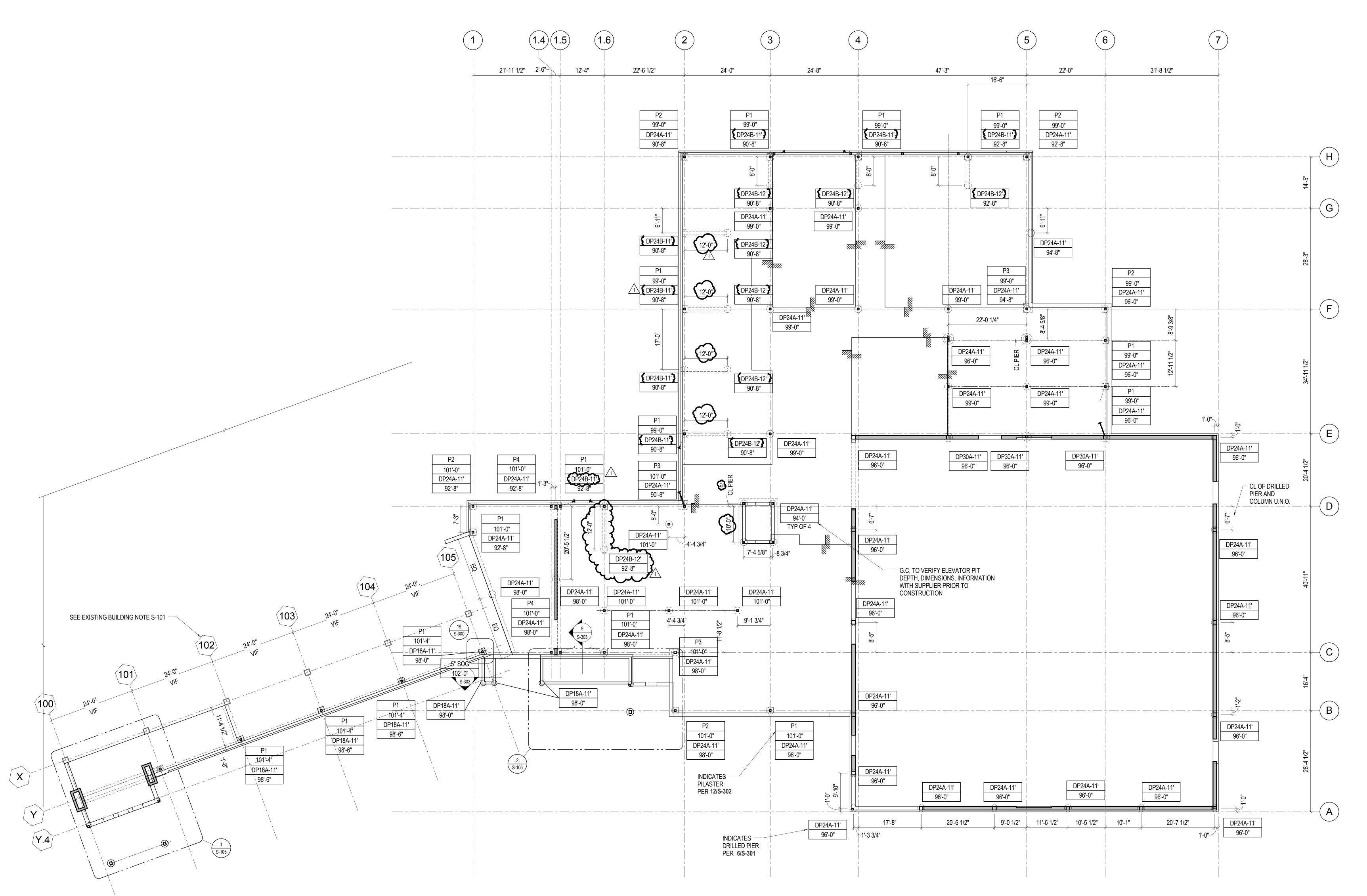
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Sheet Title:
LOAD MAPS

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CONSTRUCTION
Nov 9, 2015
DOCUMENTS
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DRILLED PIER PLAN

3/32" = 1'-0"

REFERENCE SHEET S-101 FOR FOUNDATION PLAN NOTES

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Addendum #2

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Sheet Title: DRILLED PIER PLAN

Nov 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

S-100

RETARDER PER RECOMMENDATIONS OF PCA AND ACI 302.1R-04.

G. REINFORCE SLAB ON GRADE OPENINGS PER 10/S-301.

F. VERIFY ALL FLOOR SLAB RECESS DEPTHS WITH FLOOR SUPPLIER/MANUFACTURER PRIOR TO CONSTRUCTION.

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S-101

OB #: 15.0 CIPAL: TL GS JECT MANAG

LEVEL 2

3/32" = 1'-0"

<u>STEEL FRAMING NOTES:</u>

1. SEE SO SERIES SHEETS FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS.

SEE S5 SERIES SHEETS FOR STEEL DETAILS
 SEE S500 TO S501 FOR TYPICAL STEEL CONNECTION DETAILS AND SCHEDULE
 SEE S502 FOR TYPICAL METAL DECK DETAILS AND SCHEDULE
 SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, FILL, PADS

AND CURBS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

6. SPACE BEAMS EQUALLY BETWEEN GRID LINES UNLESS DIMENSIONED OTHERWISE.

7. SEE ARCHITECTURAL DRAWINGS FOR EDGE OF SLAB DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS - TYPICAL

TOP OF BEAM ELEVATION = BOTTOM OF METAL DECK UNLESS NOTED OTHERWISE ON PLAN.
 REFERENCE12/S-502 FOR COMPOSITE BEAM STUD LAYOUT REQUIREMENTS.
 REFERENCE10/S-502 FOR METAL DECK SLAB SCHEDULE.
 REFERENCE 17/S-503 FOR RESTRICTIONS AND REINFORCING FOR CONDUIT IN SLAB ON METAL DECK.
 SUBMIT PROPOSED LAYOUT FOR REVIEW PRIOR TO CONSTRUCTION.

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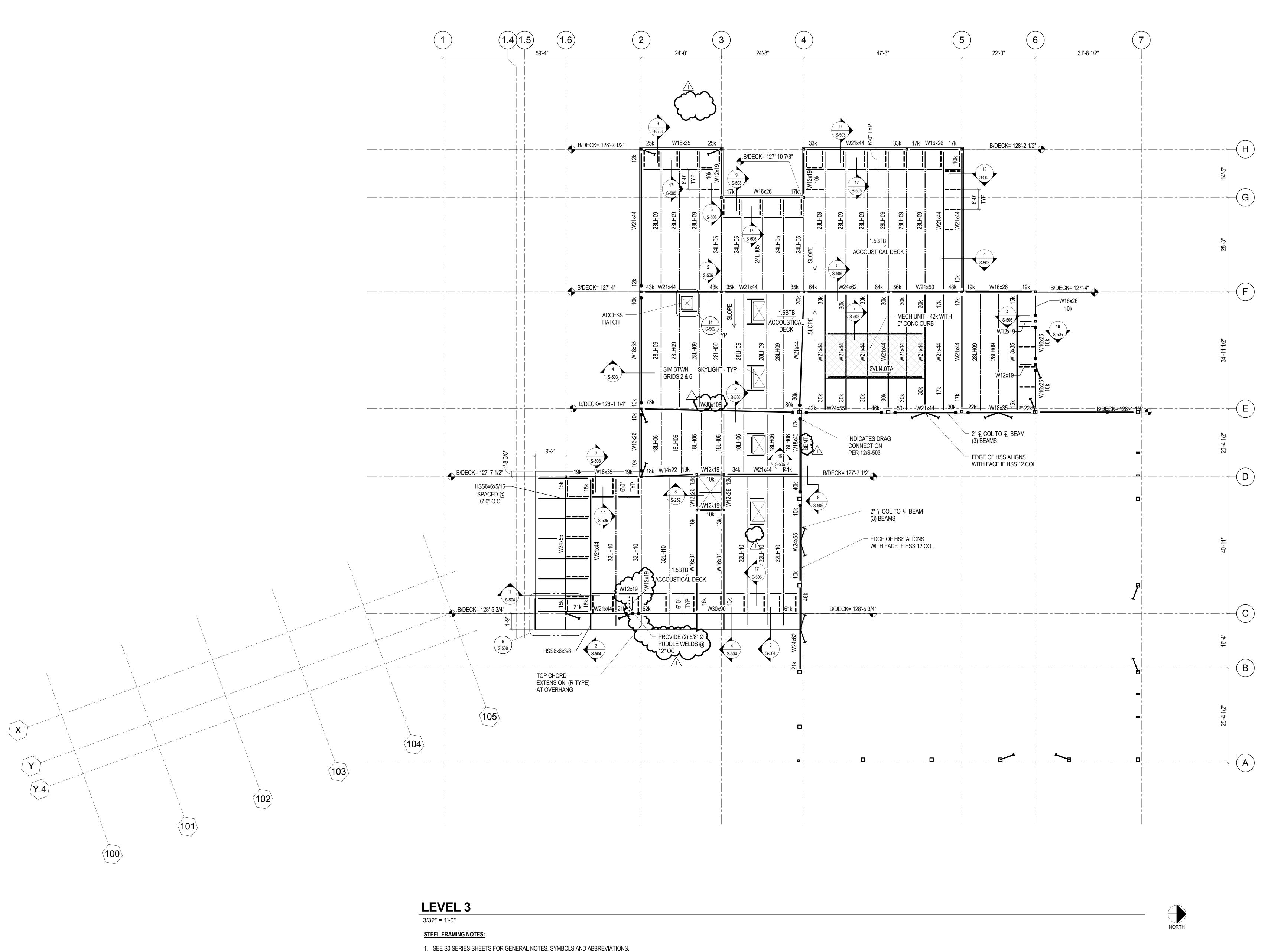
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LEVEL 2 FRAMING
PLAN

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S-102

MM JOB #: 15.0256.S.01 PRINCIPAL: TL EOR: GS PROJECT MANAGER: LP



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Sheet Title:

ROOF FRAMING

PLAN

Nov 9, 2015 DOCUMENTS
Sheet Number:

S-103

MM Project: 15.0256.S.01

DRAWINGS - TYPICAL 8. 10. REFERENCE 10/S-502 FOR METAL DECK SLAB SCHEDULE.

4. SEE S502 FOR TYPICAL METAL DECK DETAILS AND SCHEDULE

3. SEE S500 TO S501 FOR TYPICAL STEEL CONNECTION DETAILS AND SCHEDULE

6. SPACE BEAMS EQUALLY BETWEEN GRID LINES UNLESS DIMENSIONED OTHERWISE.

5. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SLAB SLOPES, DEPRESSIONS, FILL, PADS AND

7. SEE ARCHITECTURAL DRAWINGS FOR EDGE OF SLAB DIMENSIONS NOT SHOWN ON THE STRUCTURAL

2. SEE S5 SERIES SHEETS FOR STEEL DETAILS

CURBS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

MM JOB #: 15.0256.S.01 PRINCIPAL: TL EOR: GS PROJECT MANAGER: LP



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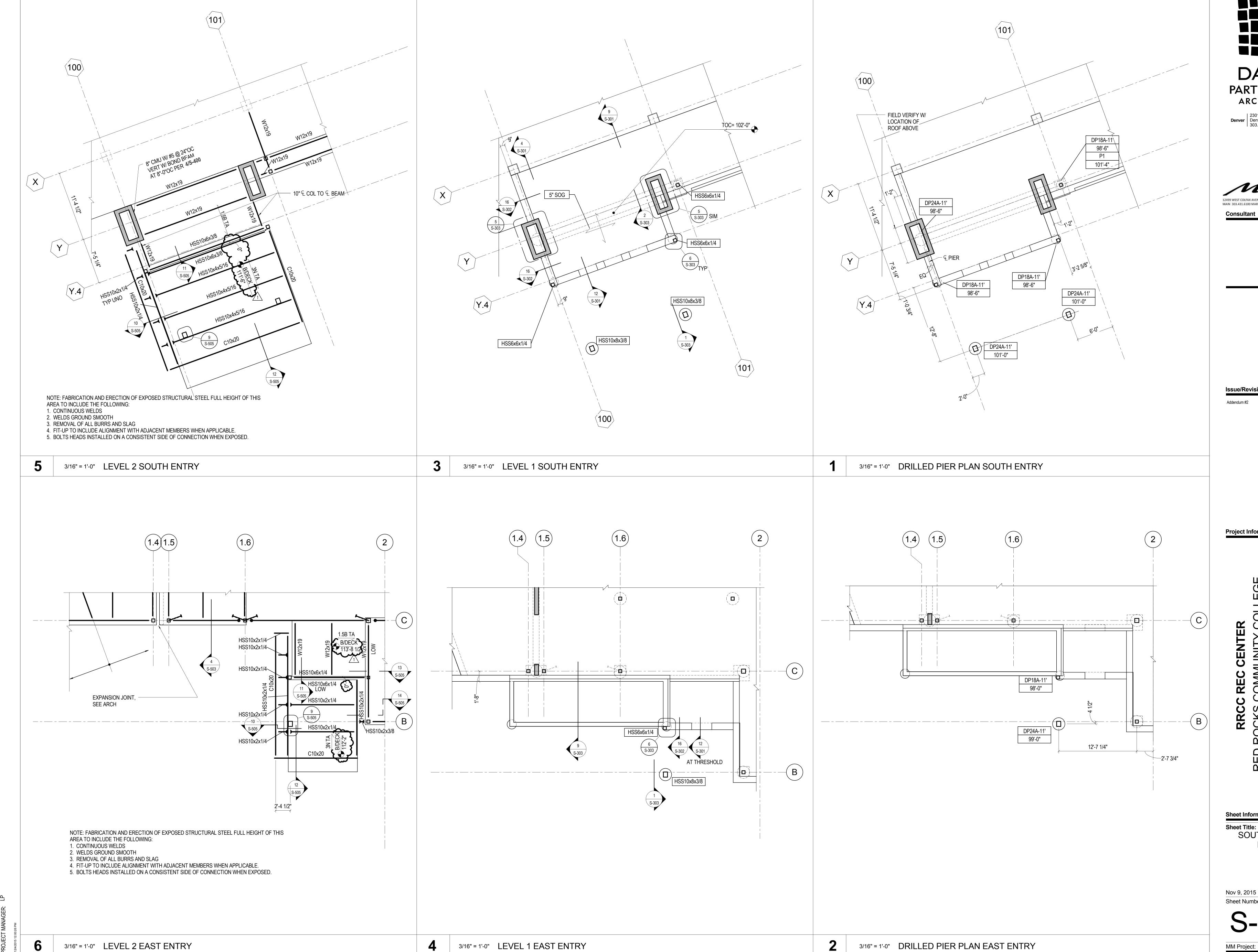
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Sheet Information

Sheet Title:
HIGH ROOF
FRAMING PLAN

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Sheet Number:

S-104



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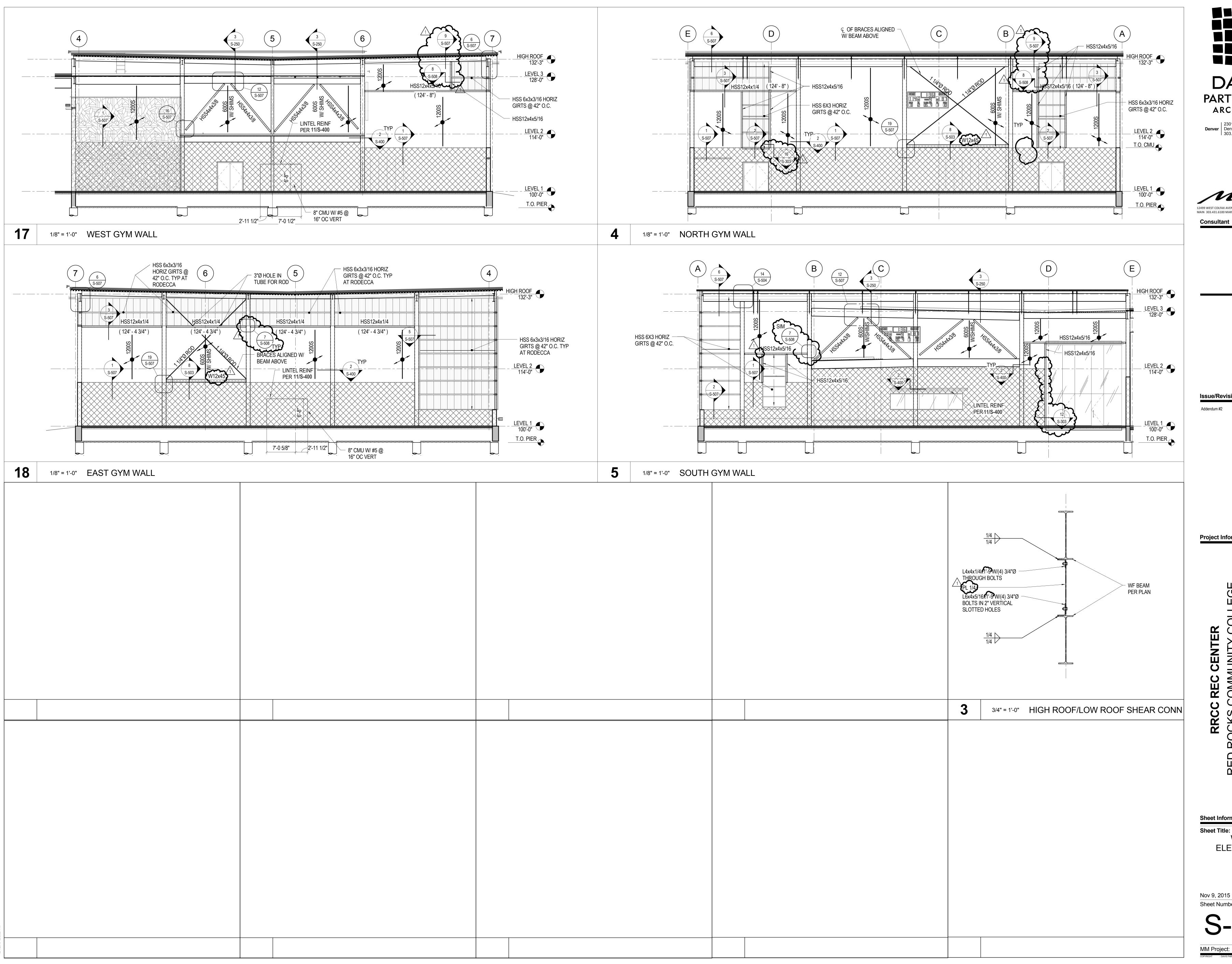
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Sheet Title: SOUTH ENTRY PLAN

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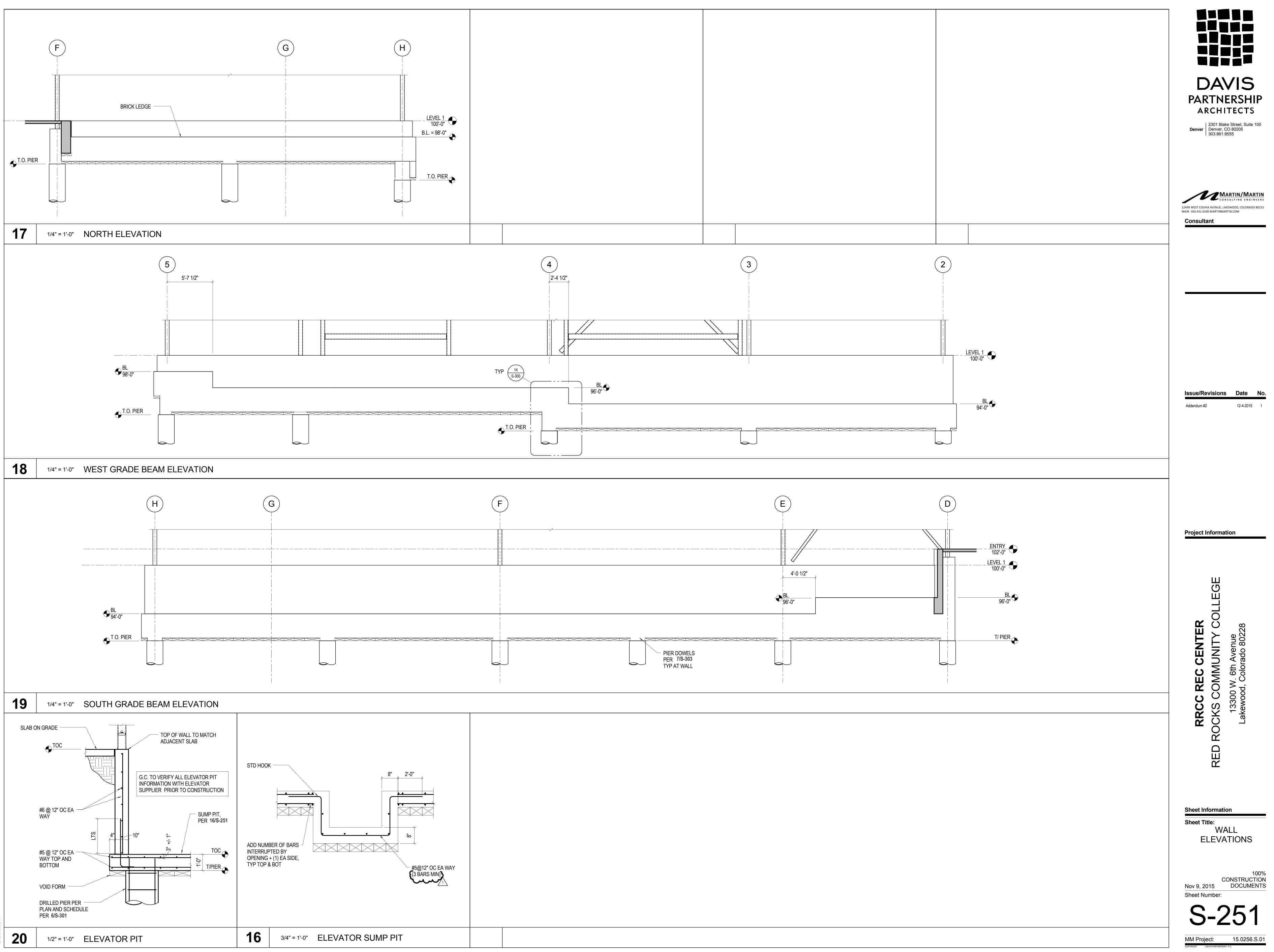
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WALL ELEVATIONS

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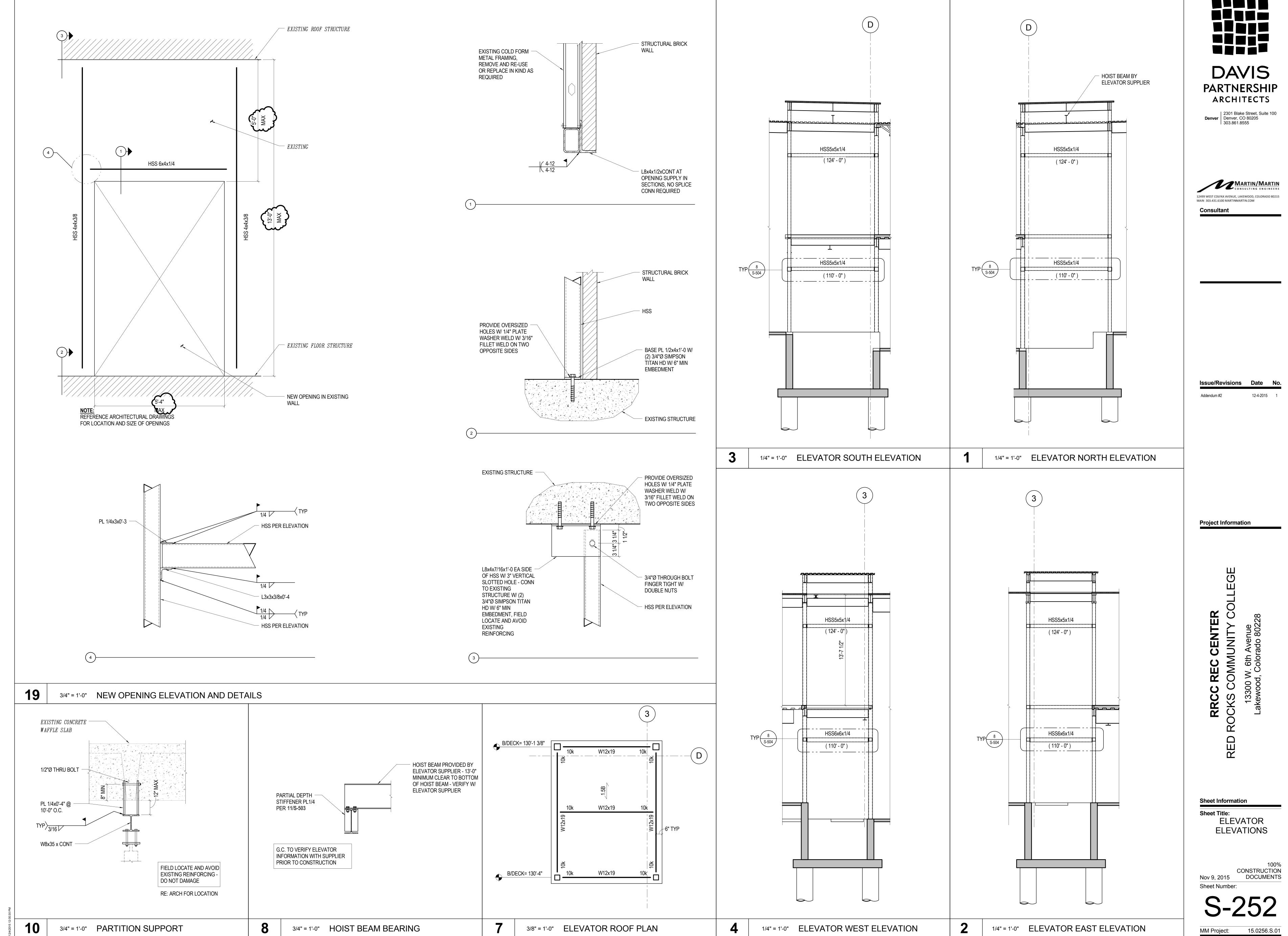
WALL ELEVATIONS

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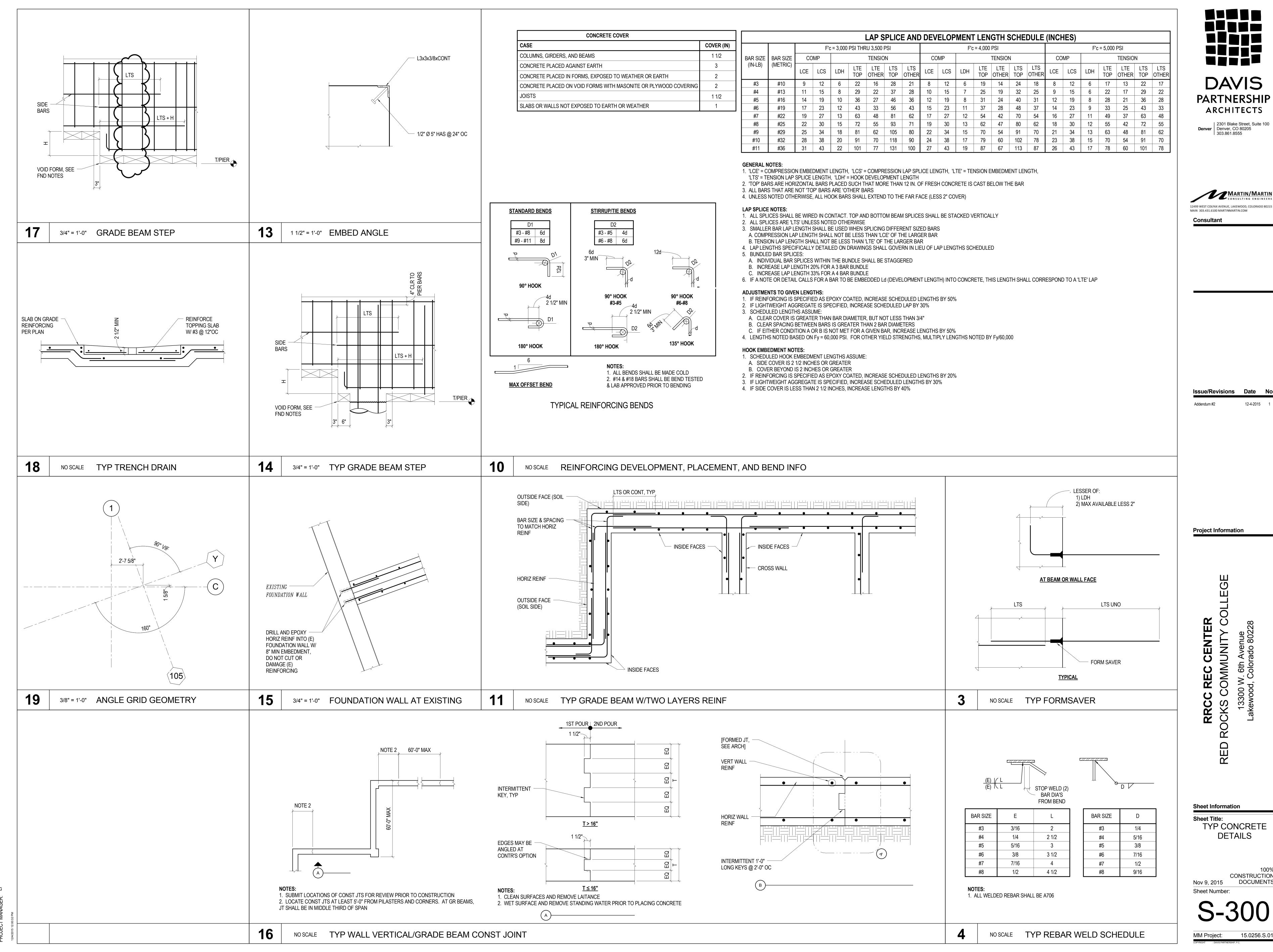
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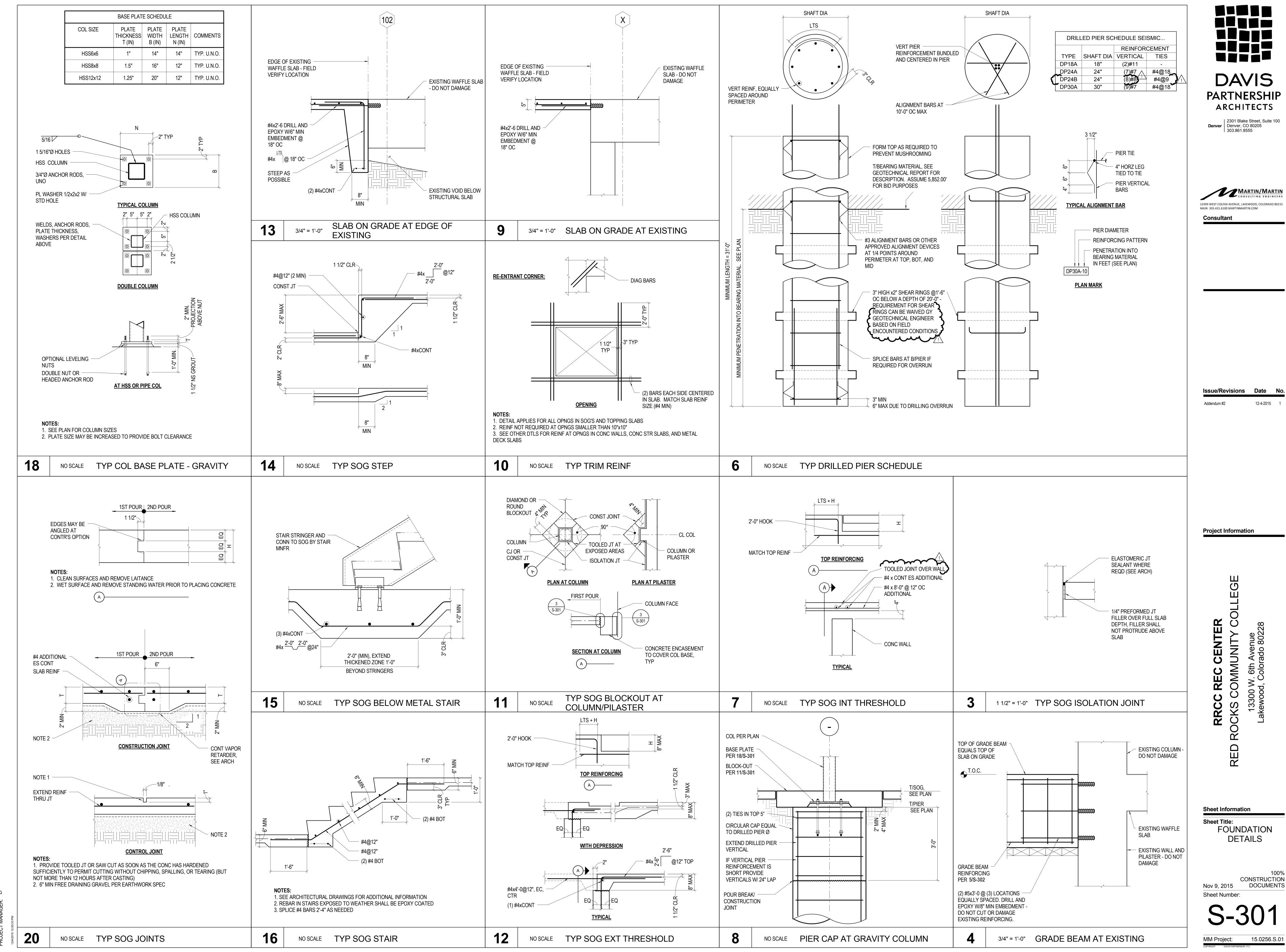
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Sheet Title: TYP CONCRETE **DETAILS**

CONSTRUCTION DOCUMENTS Nov 9, 2015 Sheet Number:



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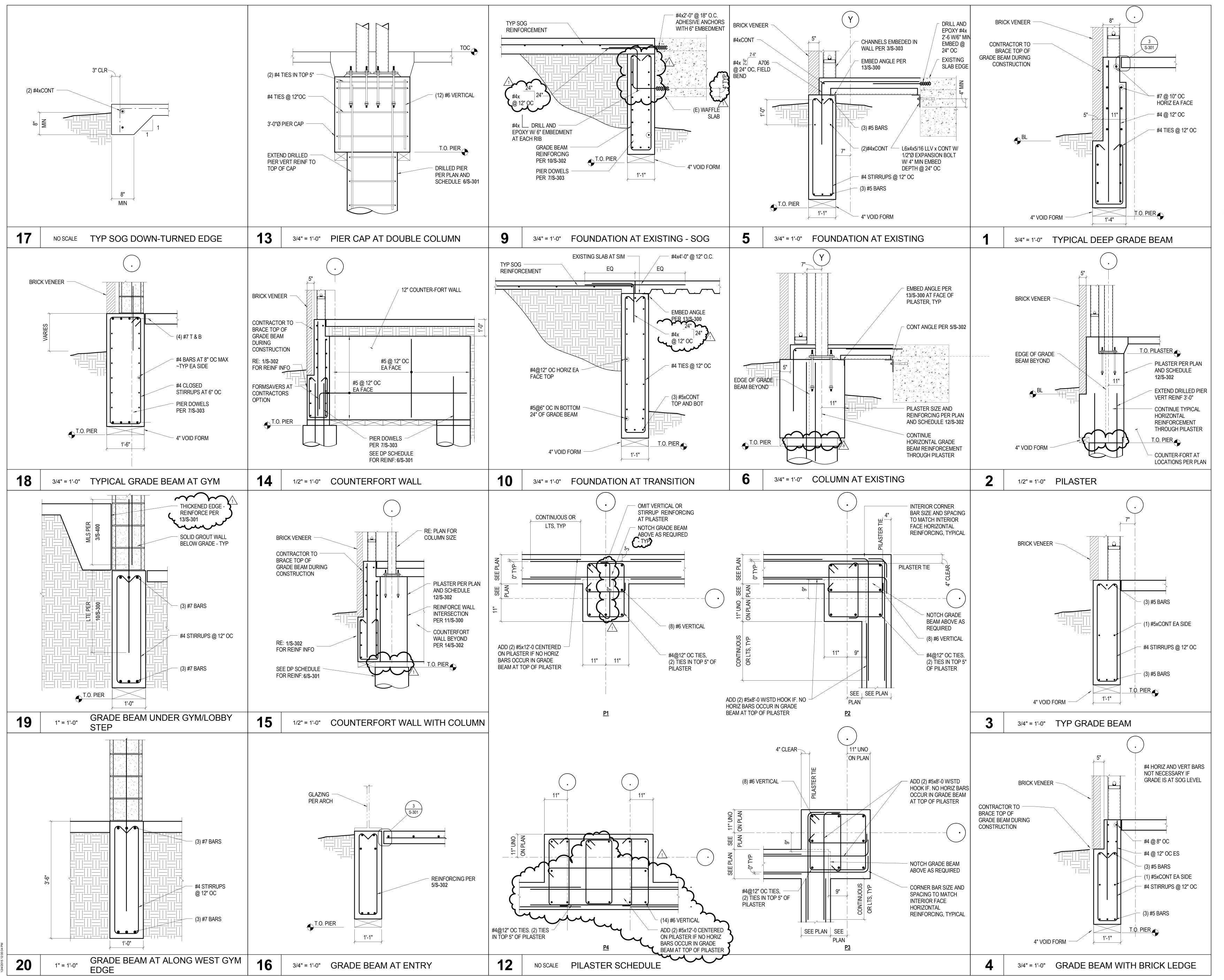
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Project Information

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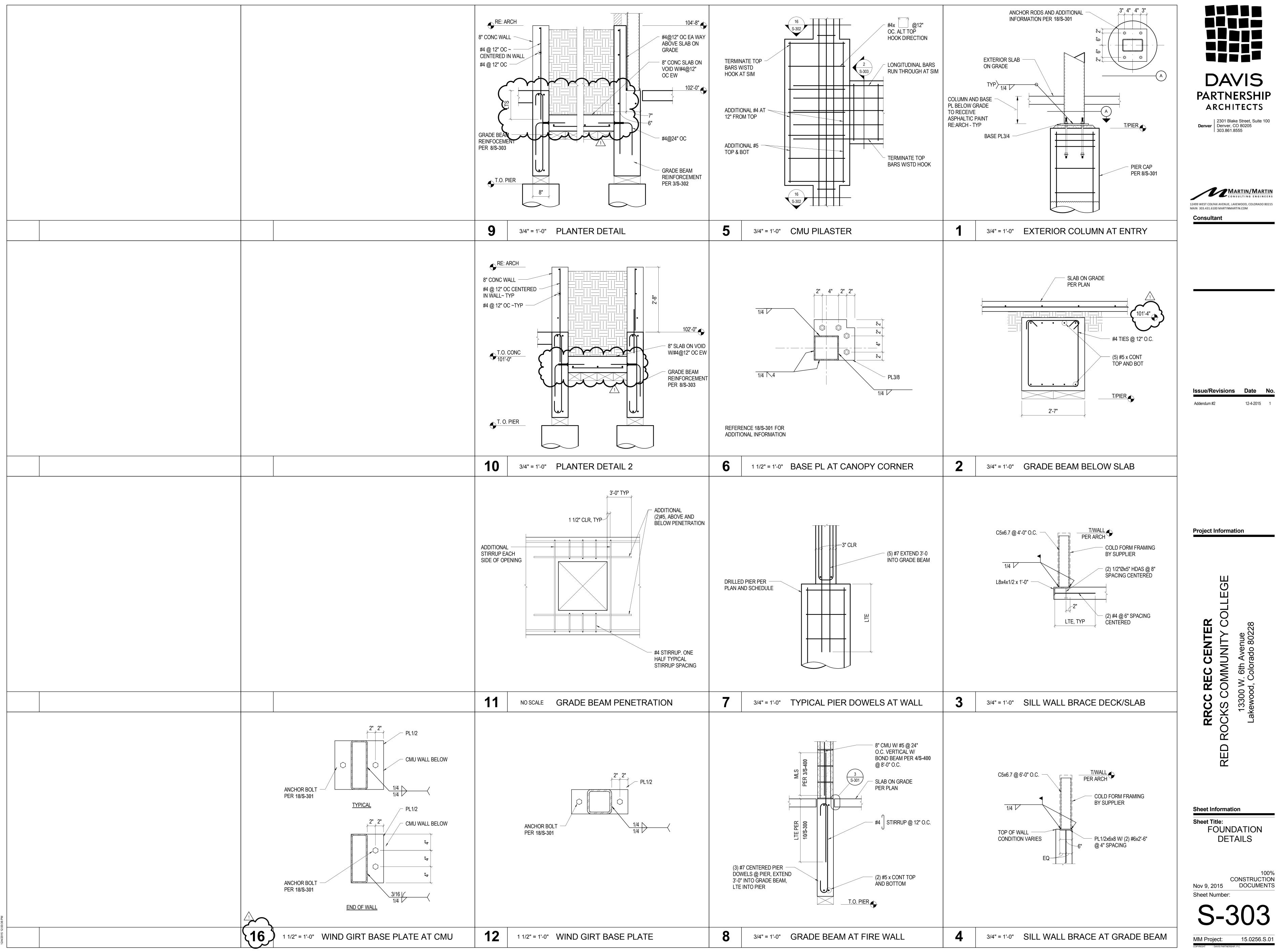
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Lakewood, Colorado 80228

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FOUNDATION
DETAILS

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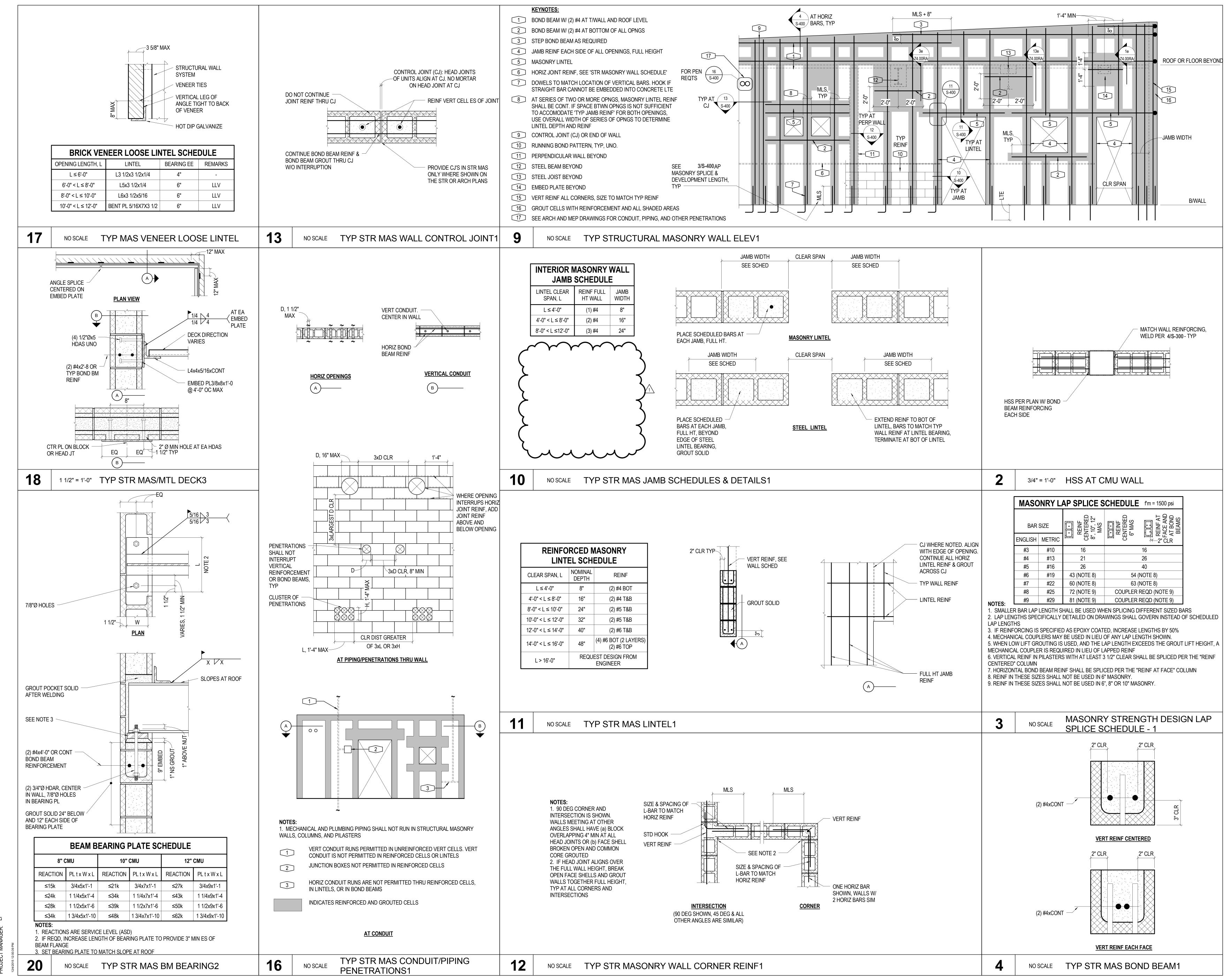
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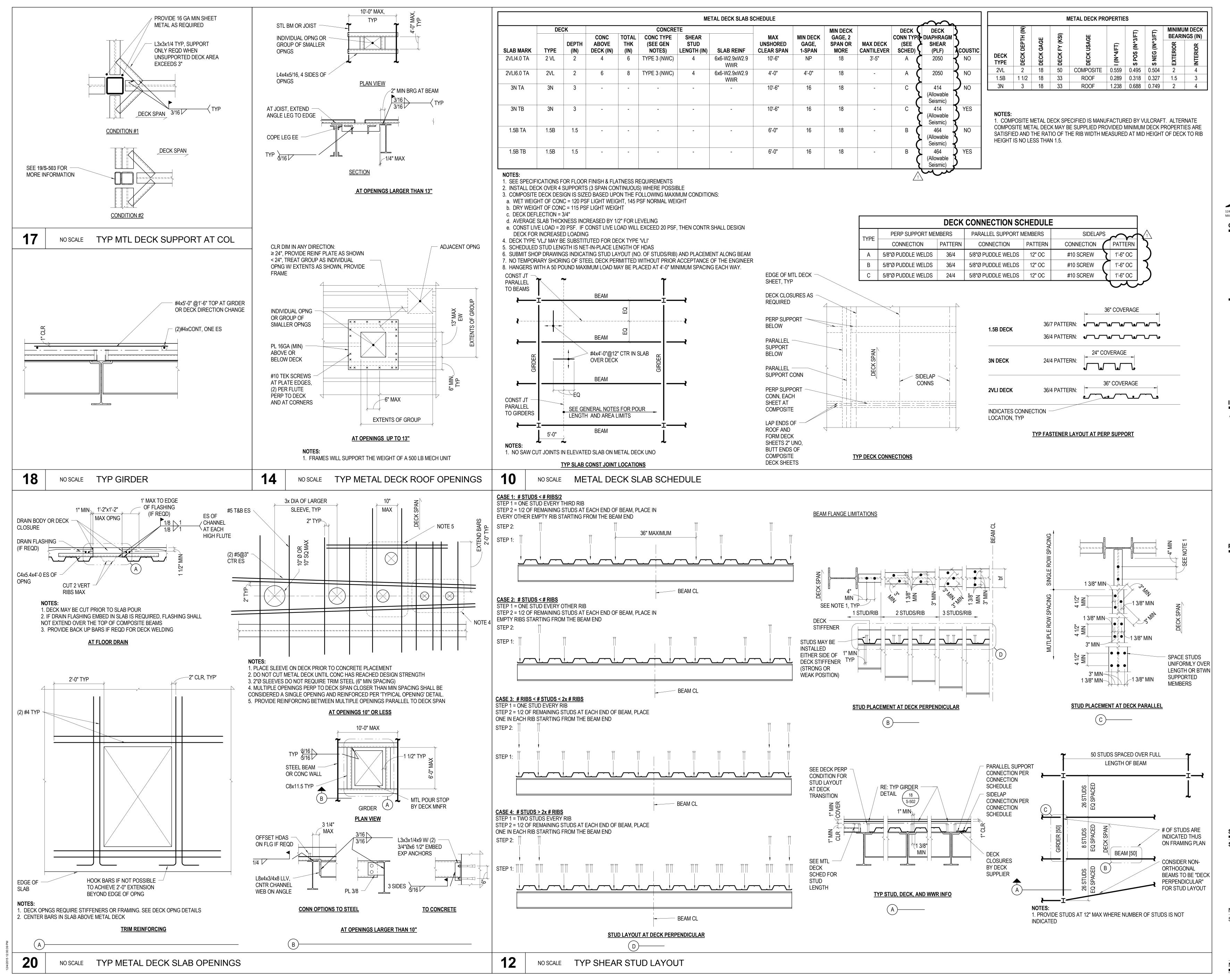
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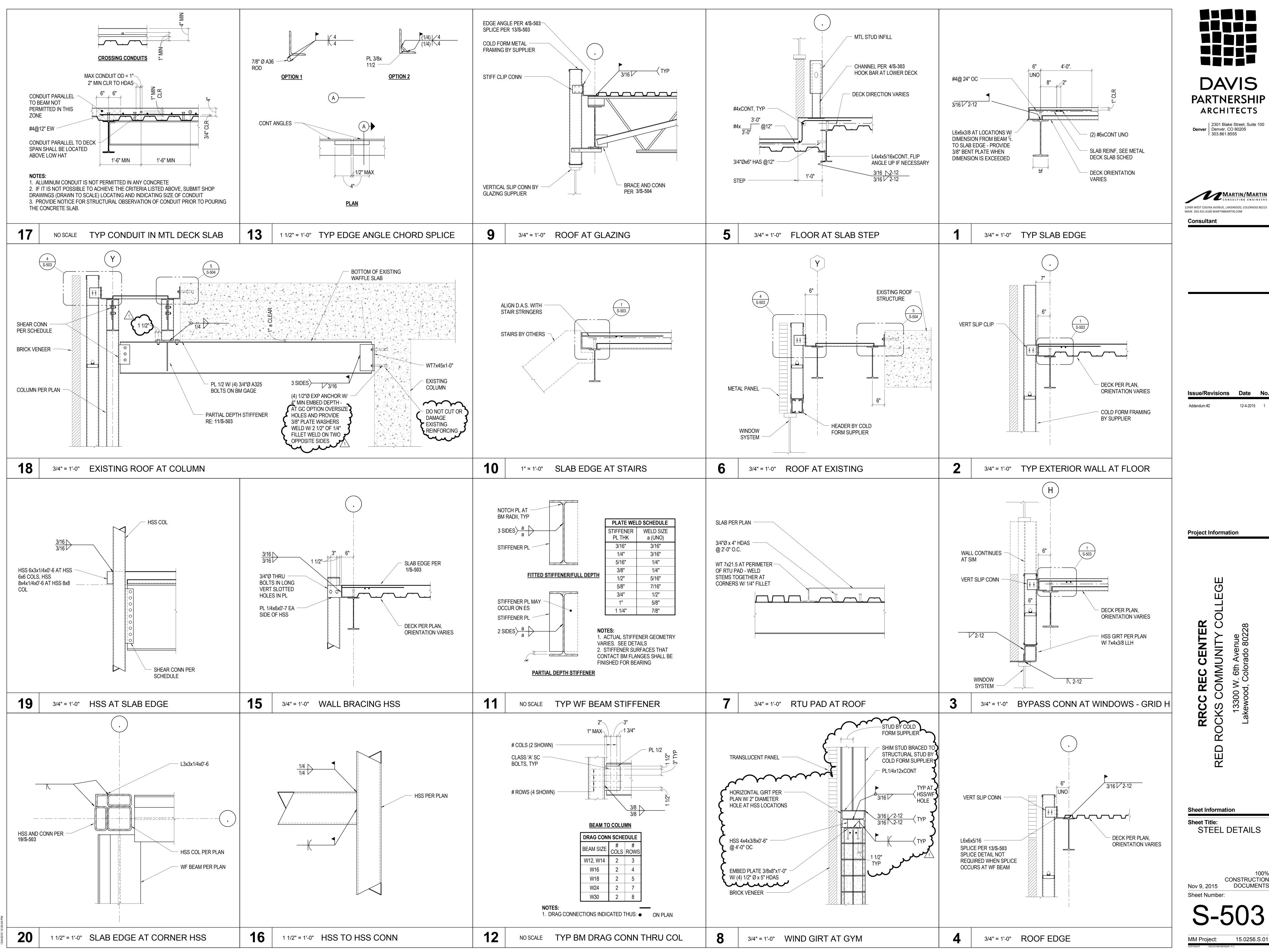
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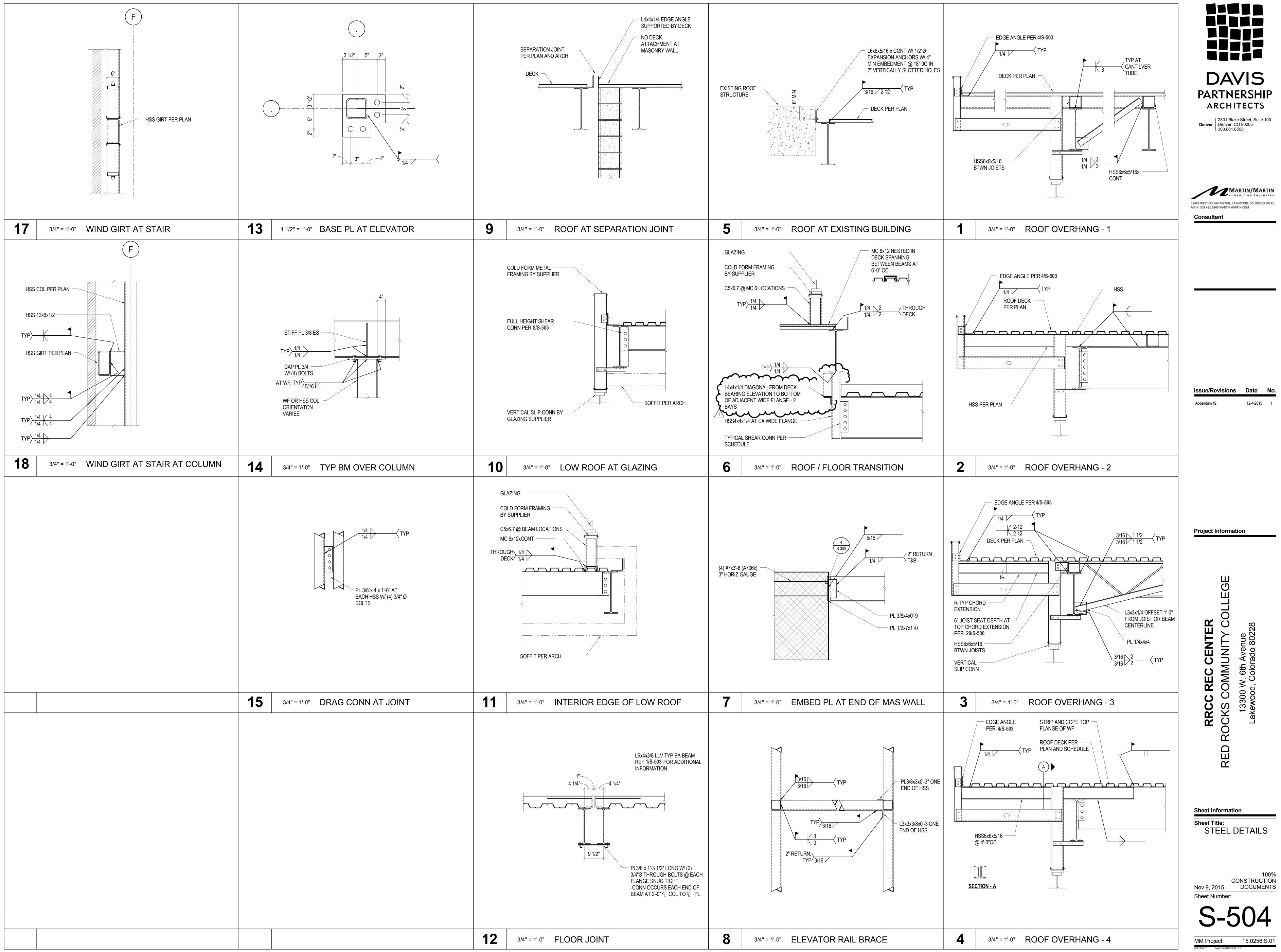
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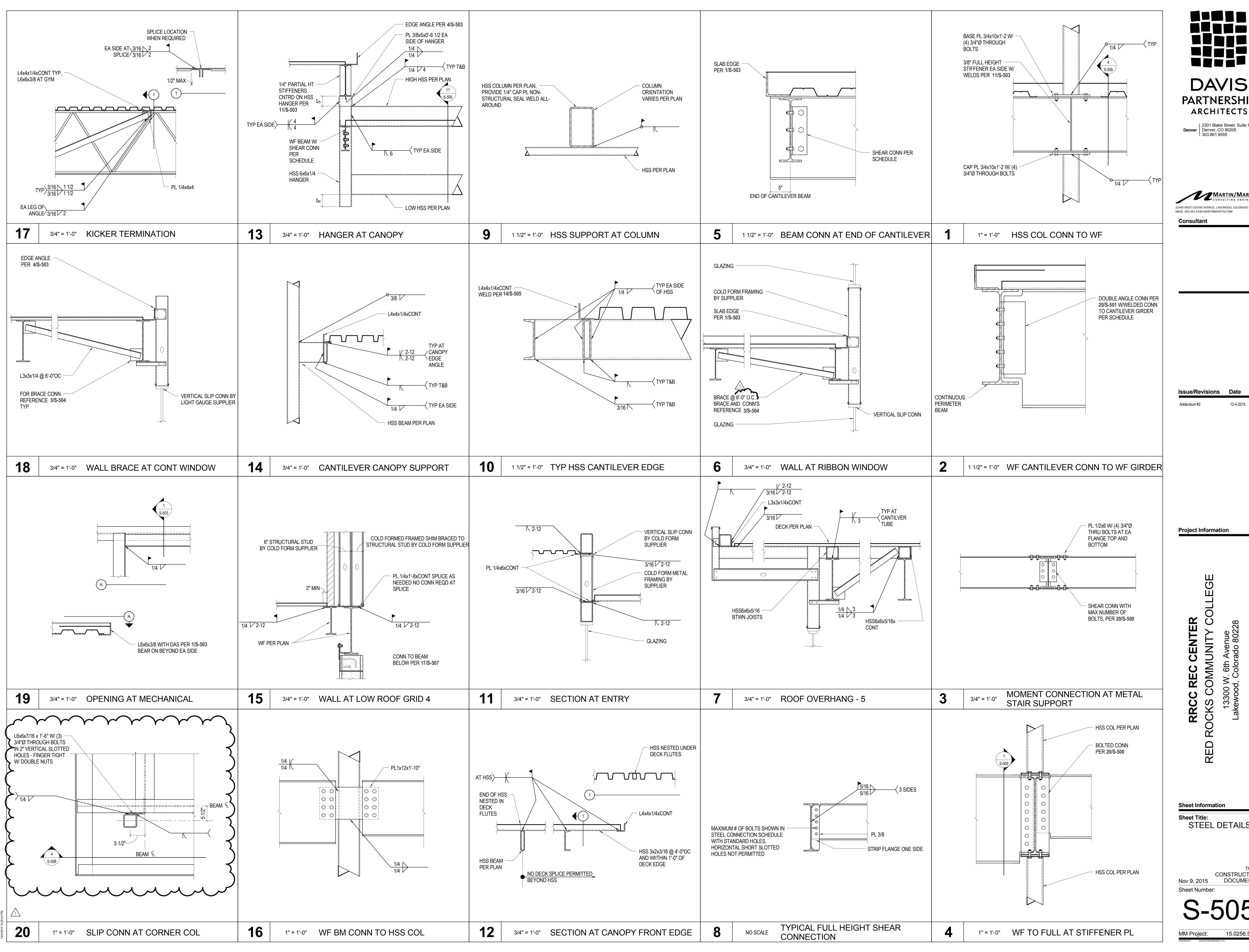
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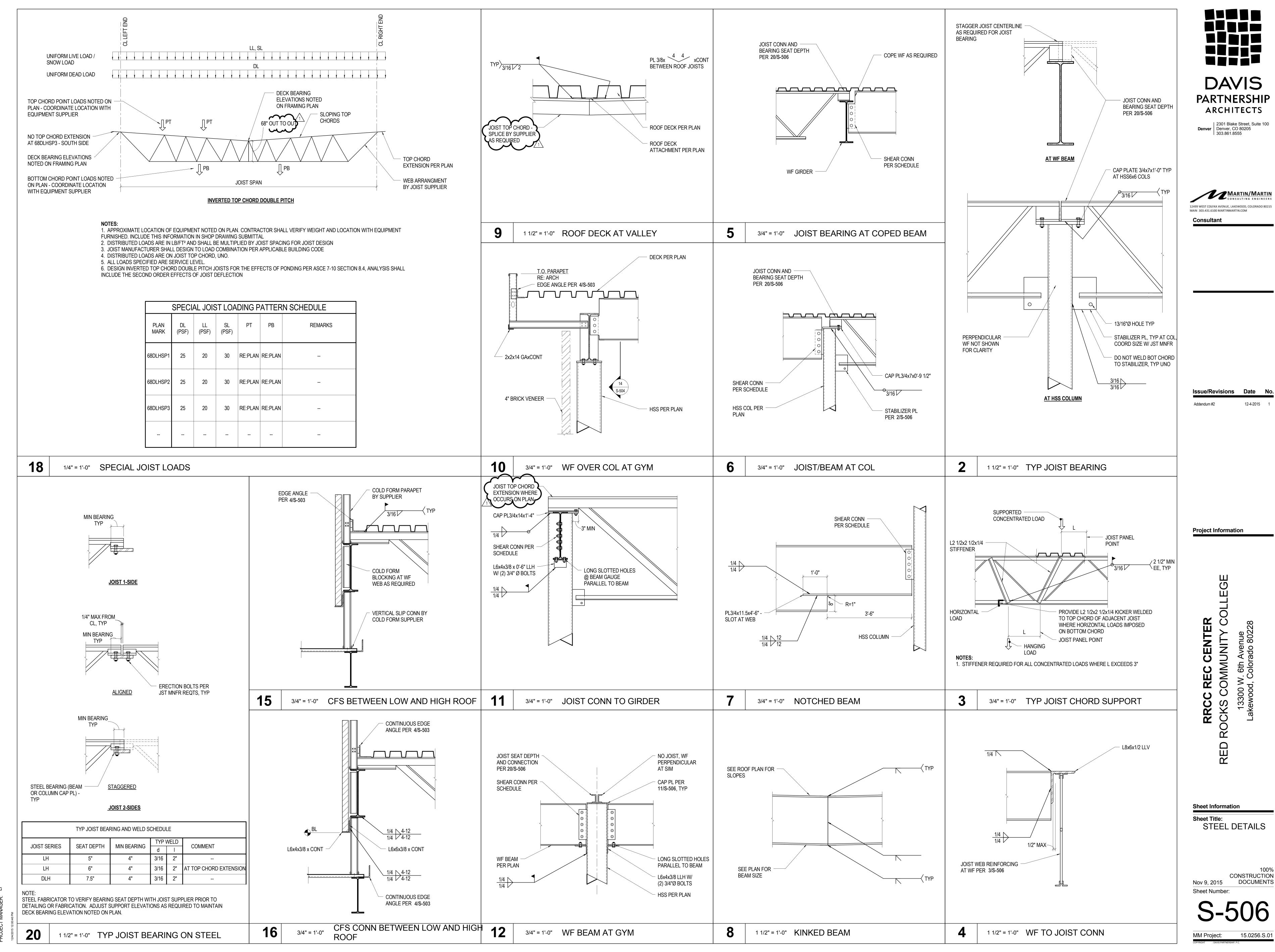
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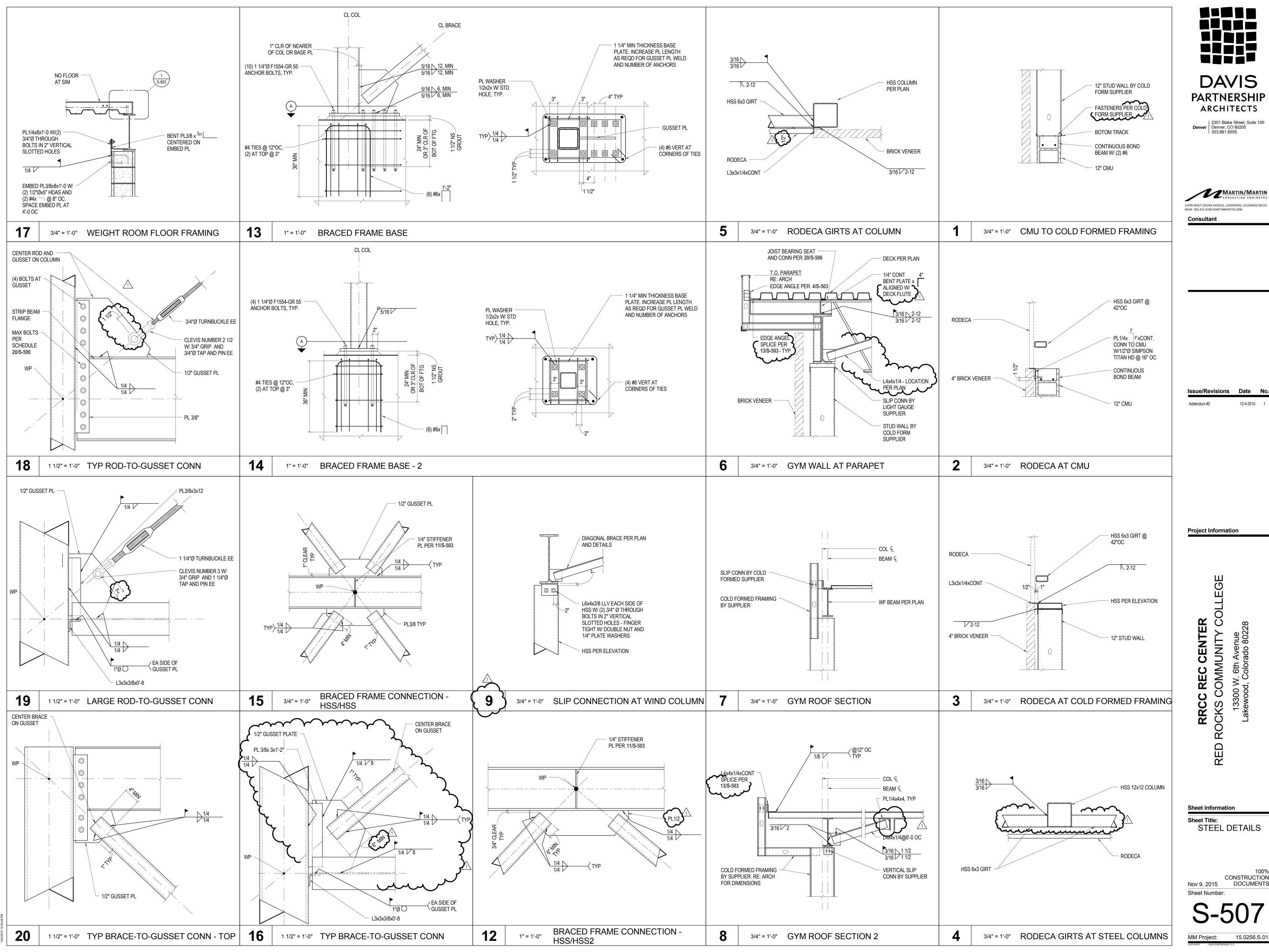
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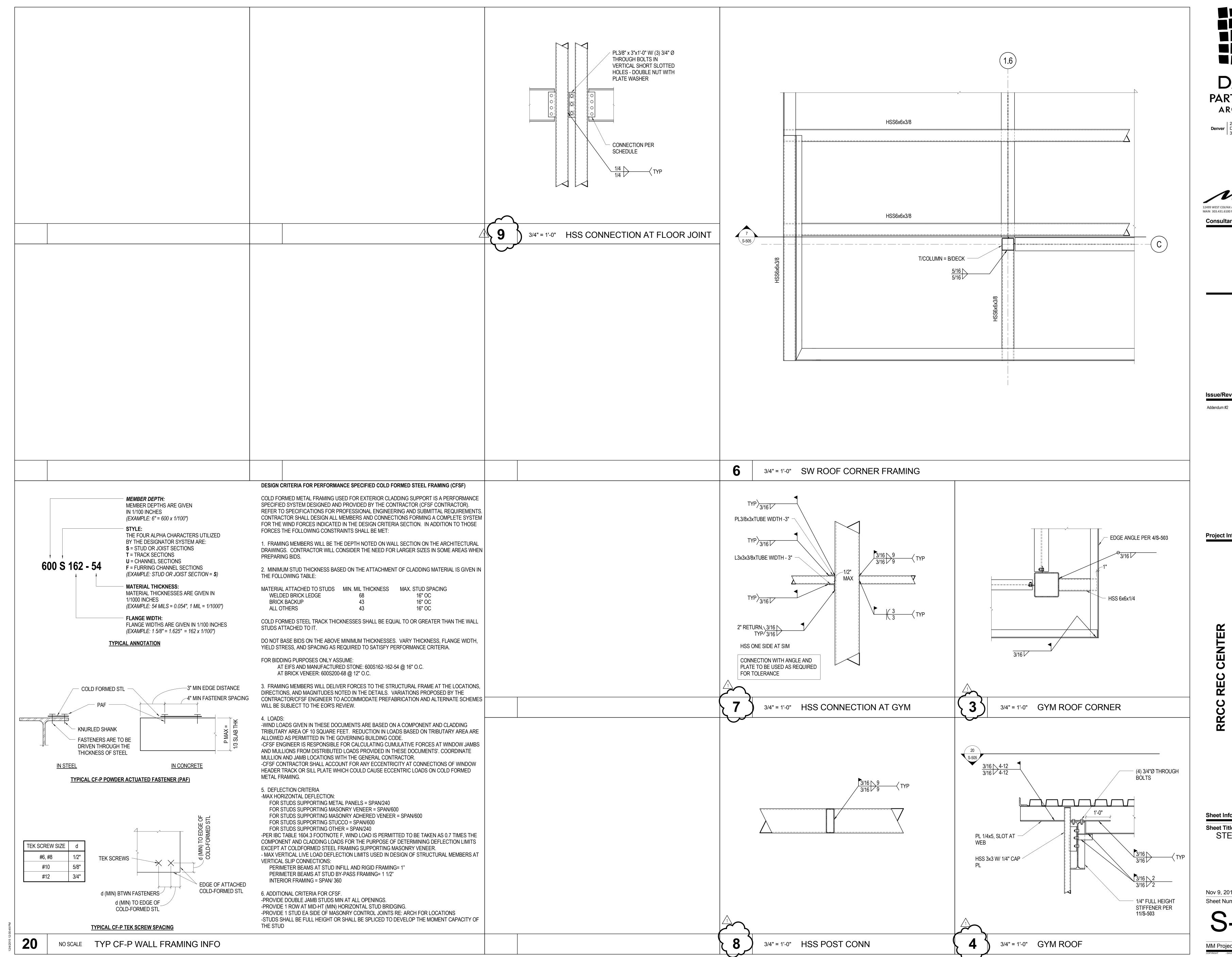
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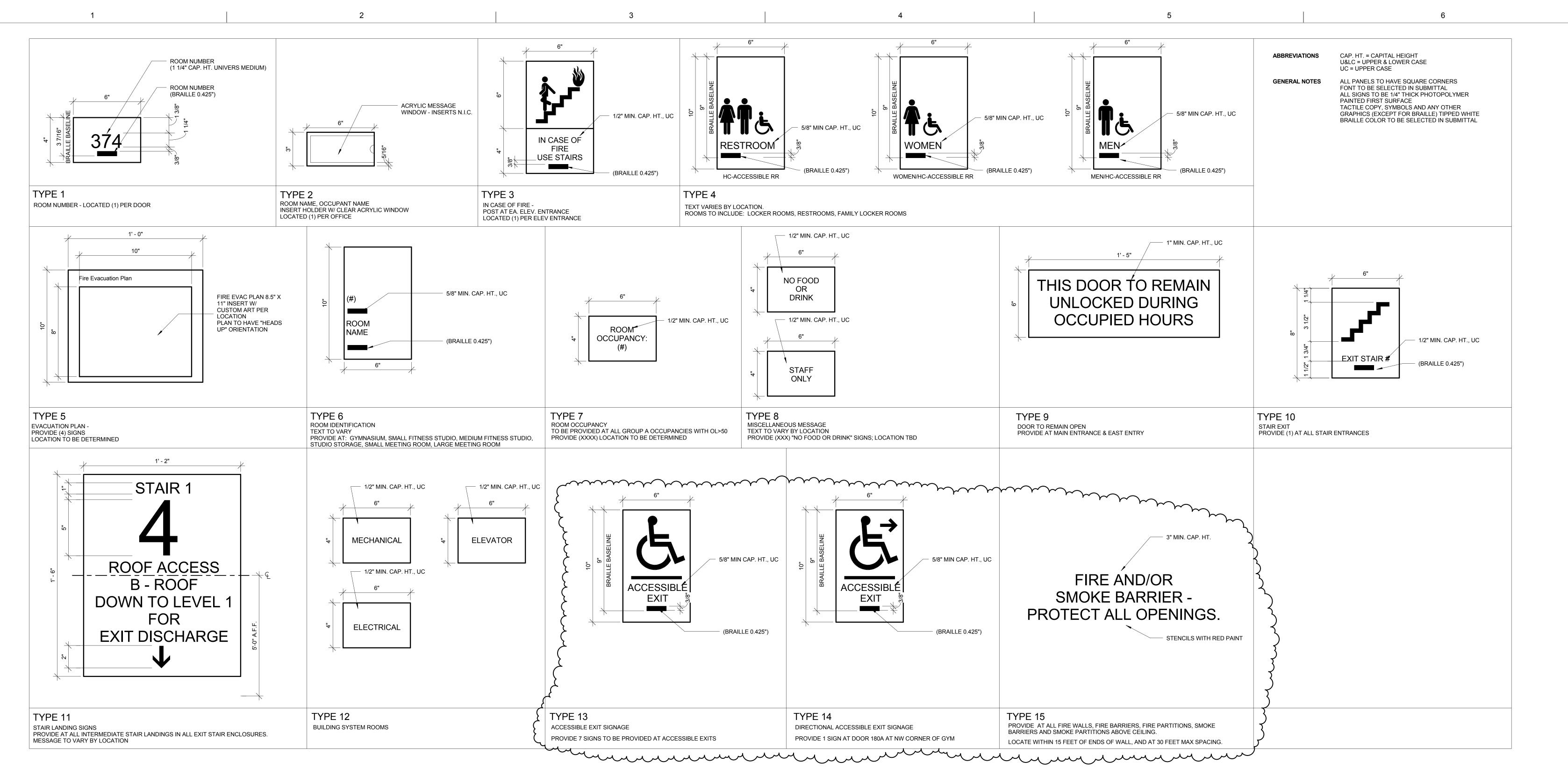
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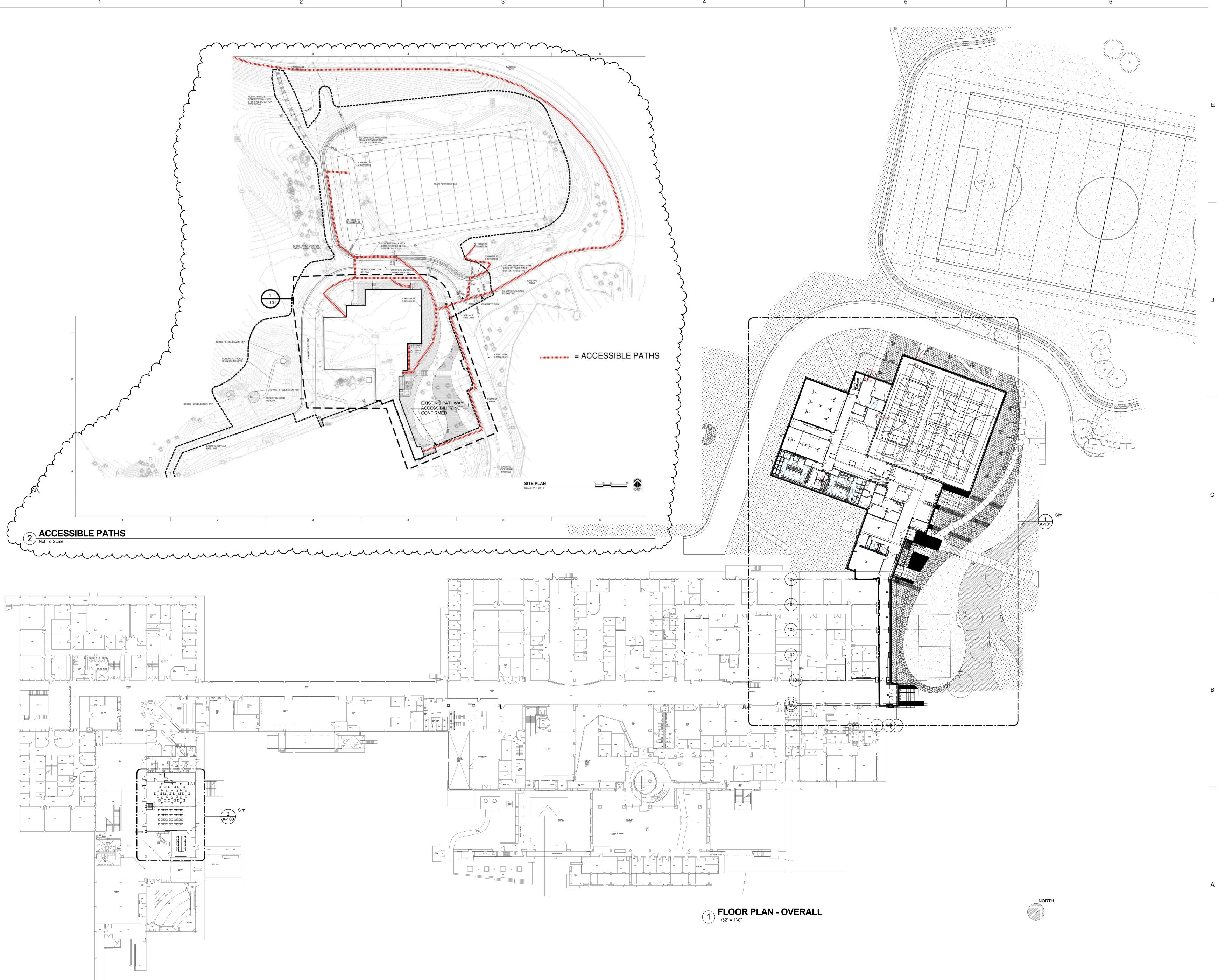
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INTERIOR SIGNAGE

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G-101

DPA Project: 15803.00



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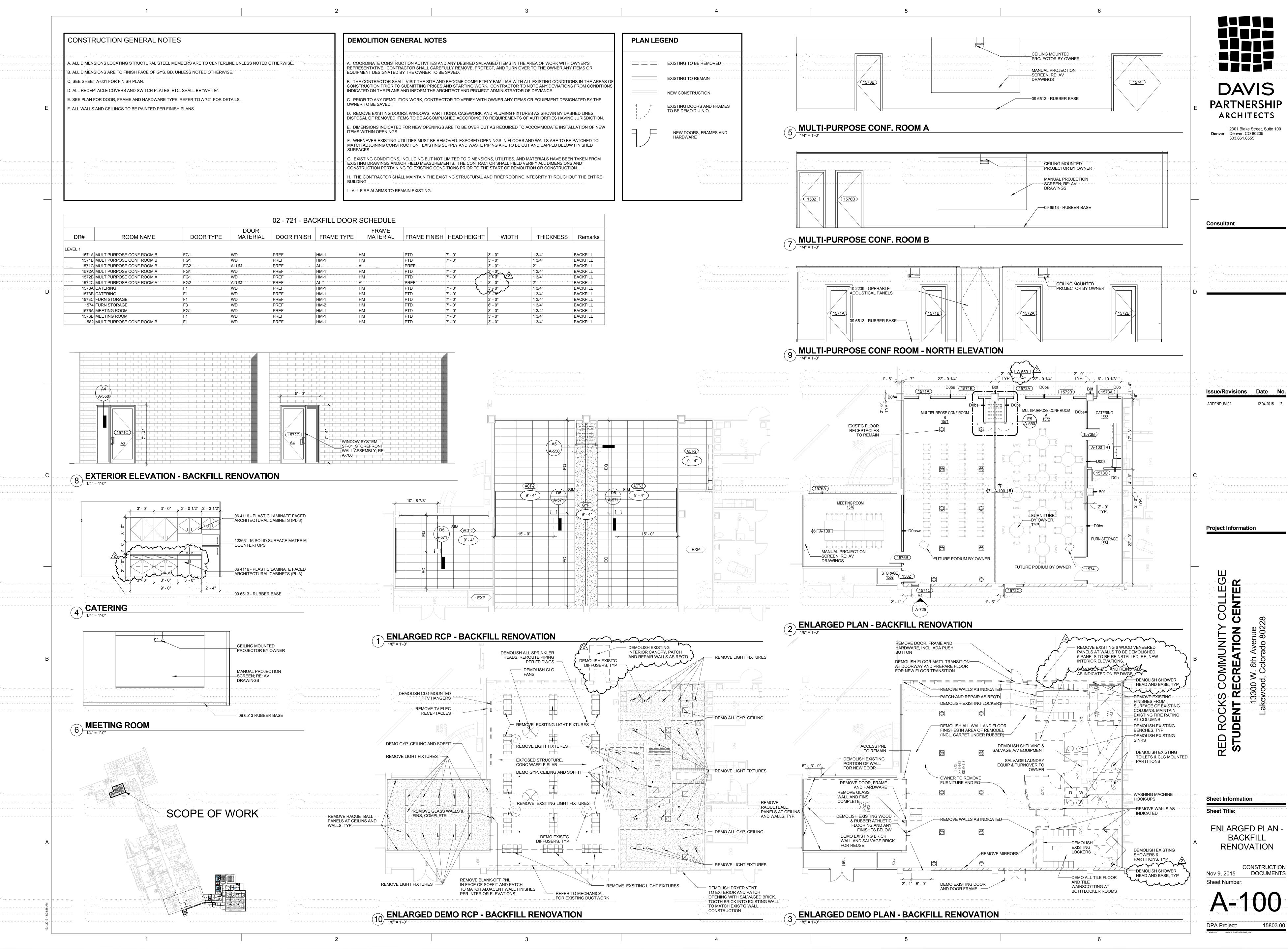
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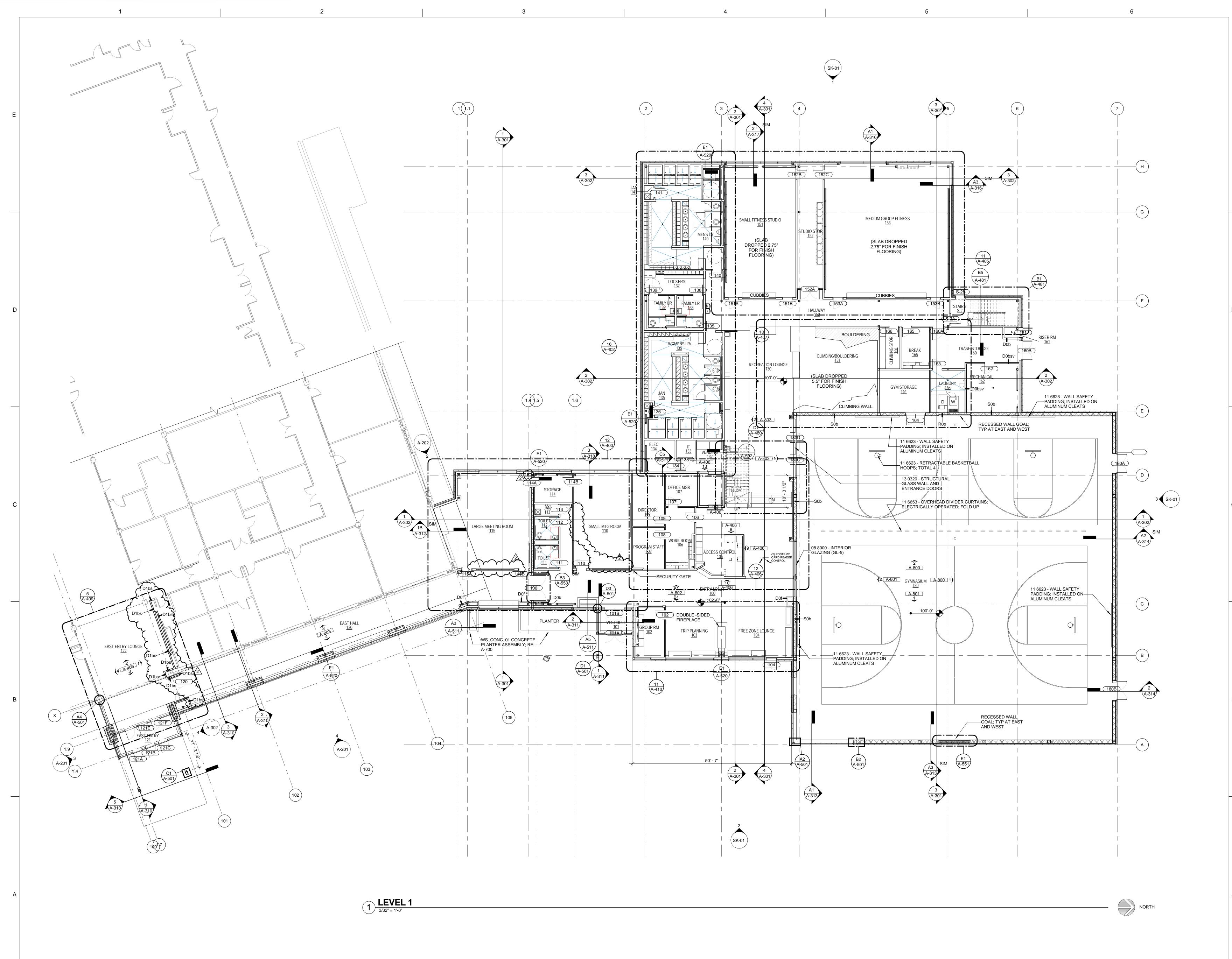
OVERALL FLOOR PLAN

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Sheet Number:

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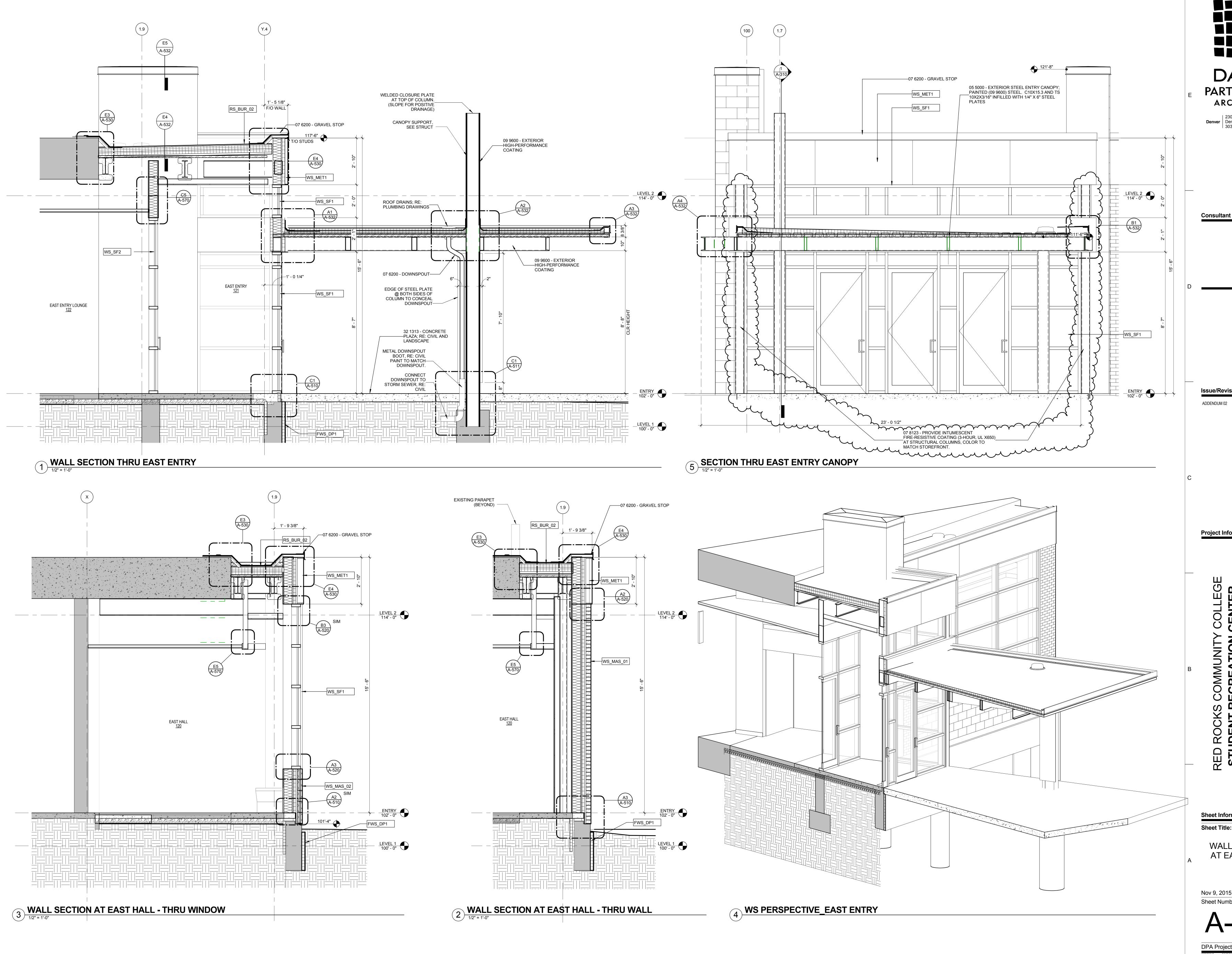
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FLOOR PLAN -LEVEL ONE

Nov 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

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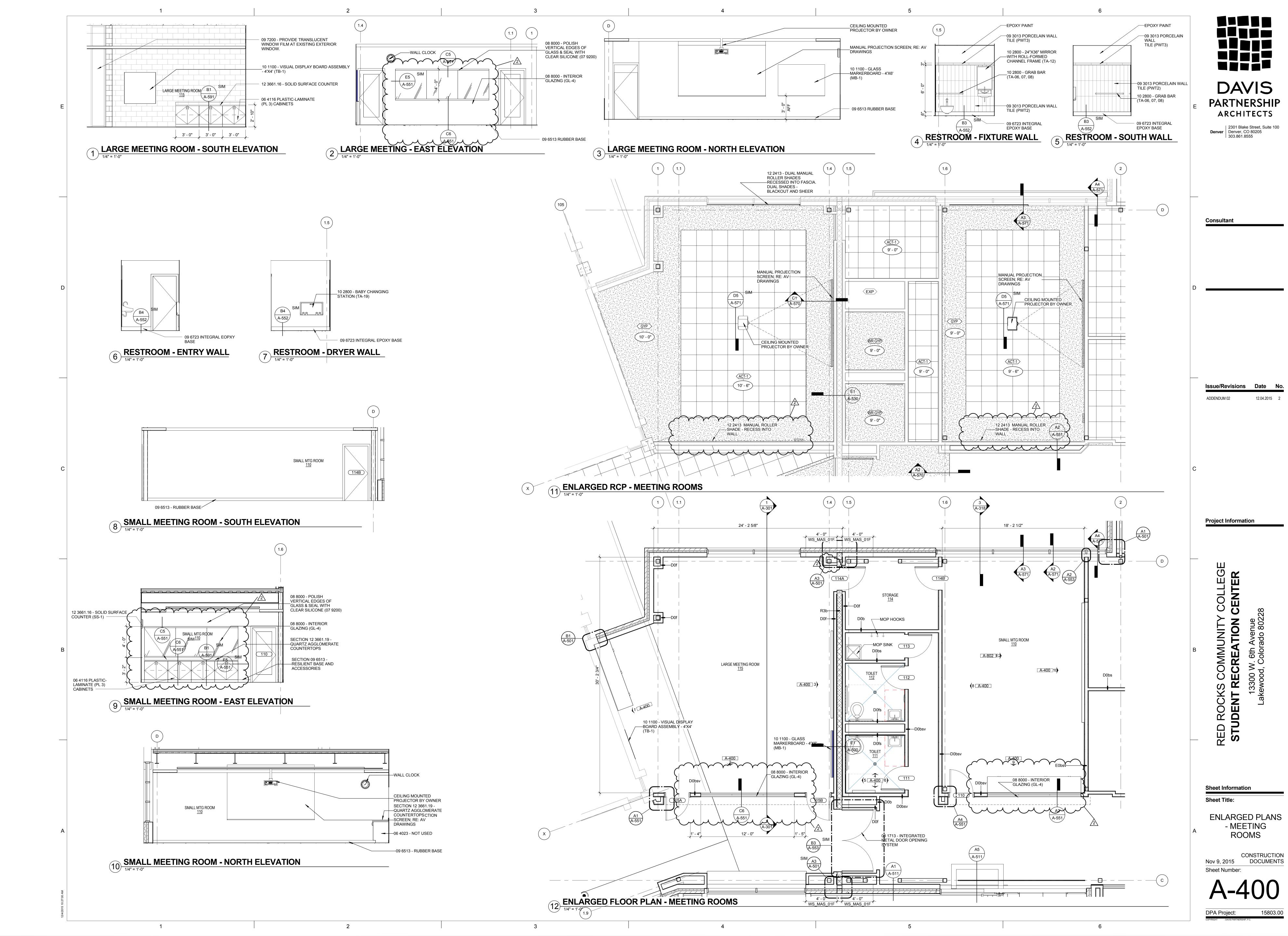
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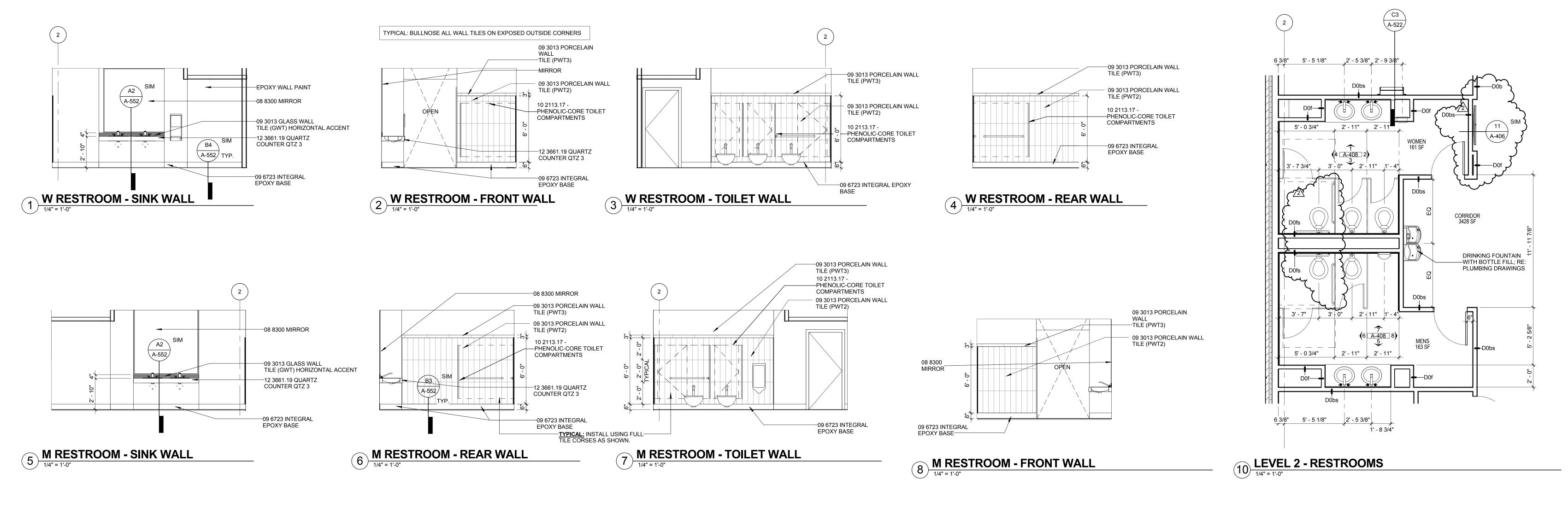
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WALL SECTIONS AT EAST ENTRY

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Nov 9, 2015 DOCUMENTS Sheet Number:





FLAT PANEL DISPLAY

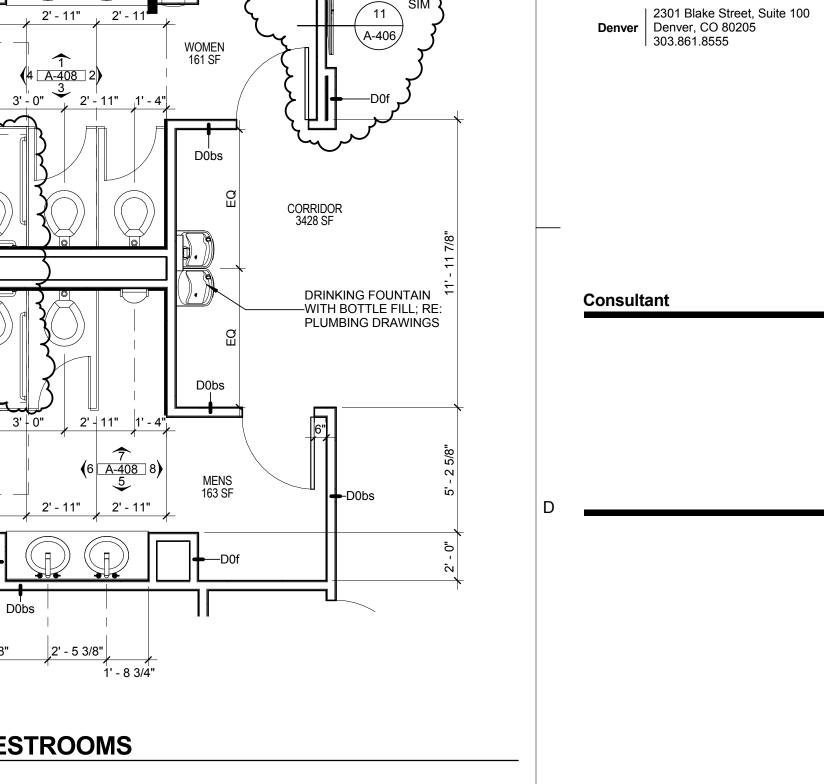
MONITOR; RE: AV

DRAWINGS

DRINKING FOUNTAIN
WITH BOTTLE FILL; RE:
PLUMBING DRAWINGS

CORRIDOR 3428 SF

STRENGTH AND CONDITIONING - SOUTH WALL



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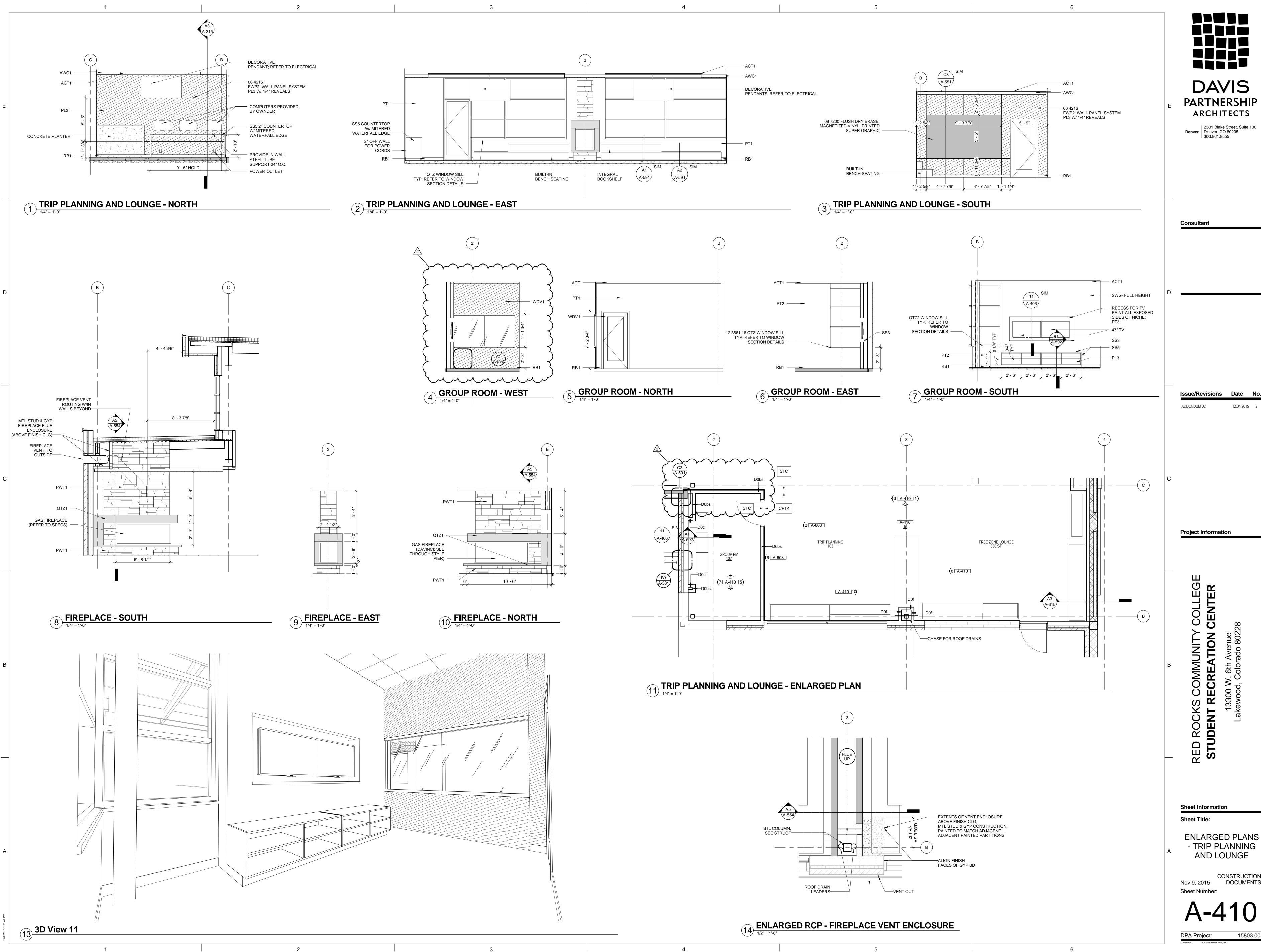
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ENLARGED PLANS

- LEVEL 2 RESTROOMS

Nov 9, 2015 CONSTRUCTION DOCUMENTS Sheet Number:

FUNCTIONAL TRAINING 980 SF



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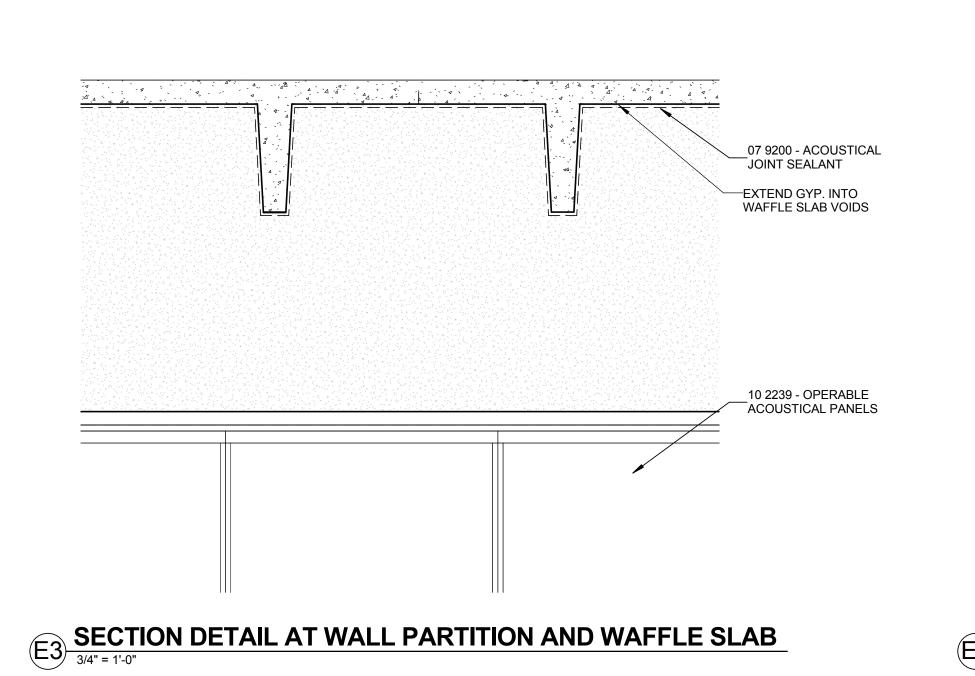
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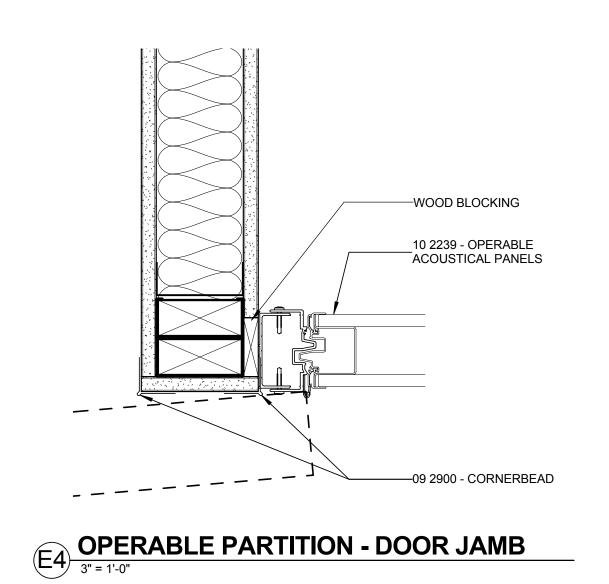
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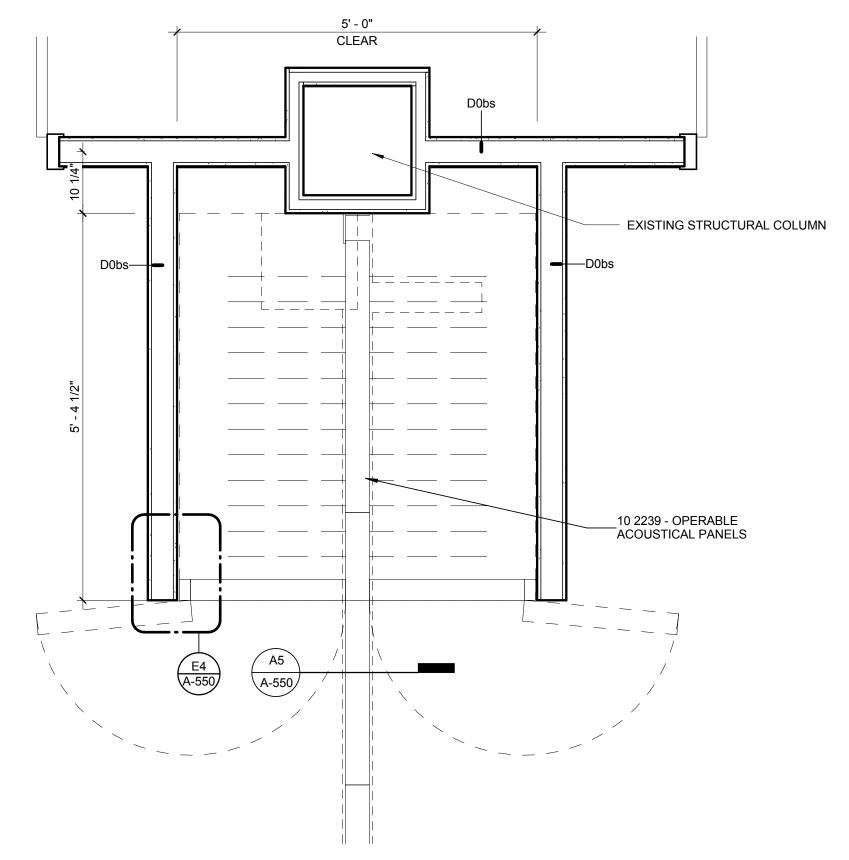
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ENLARGED PLANS - TRIP PLANNING AND LOUNGE

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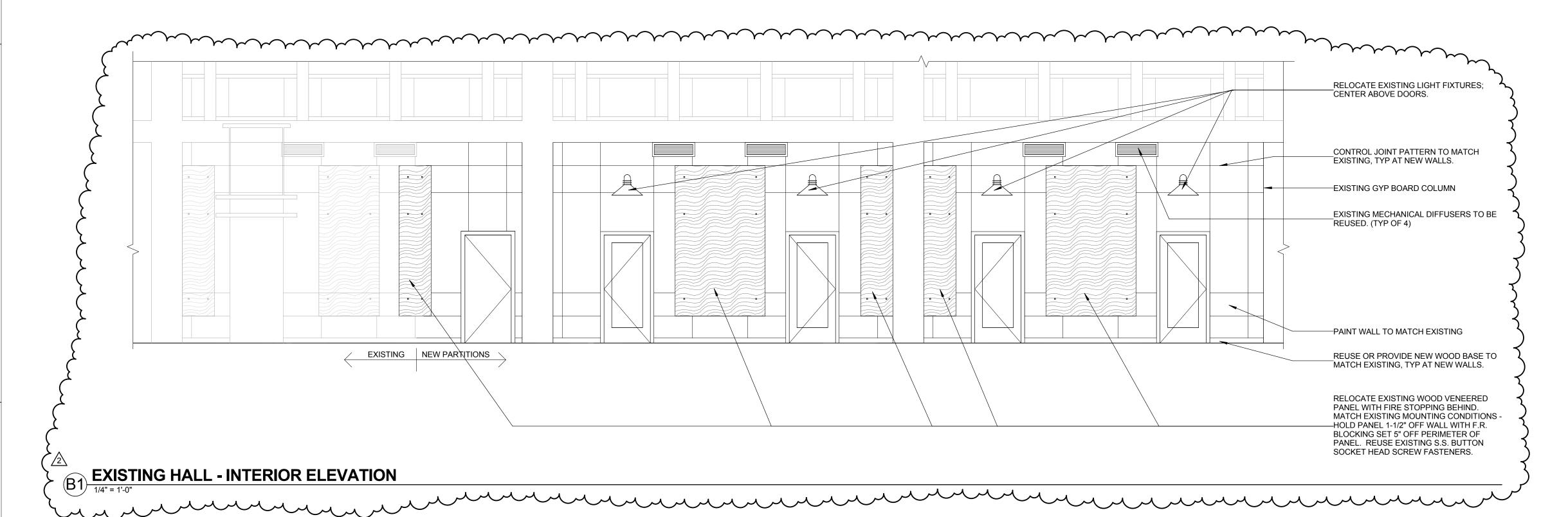


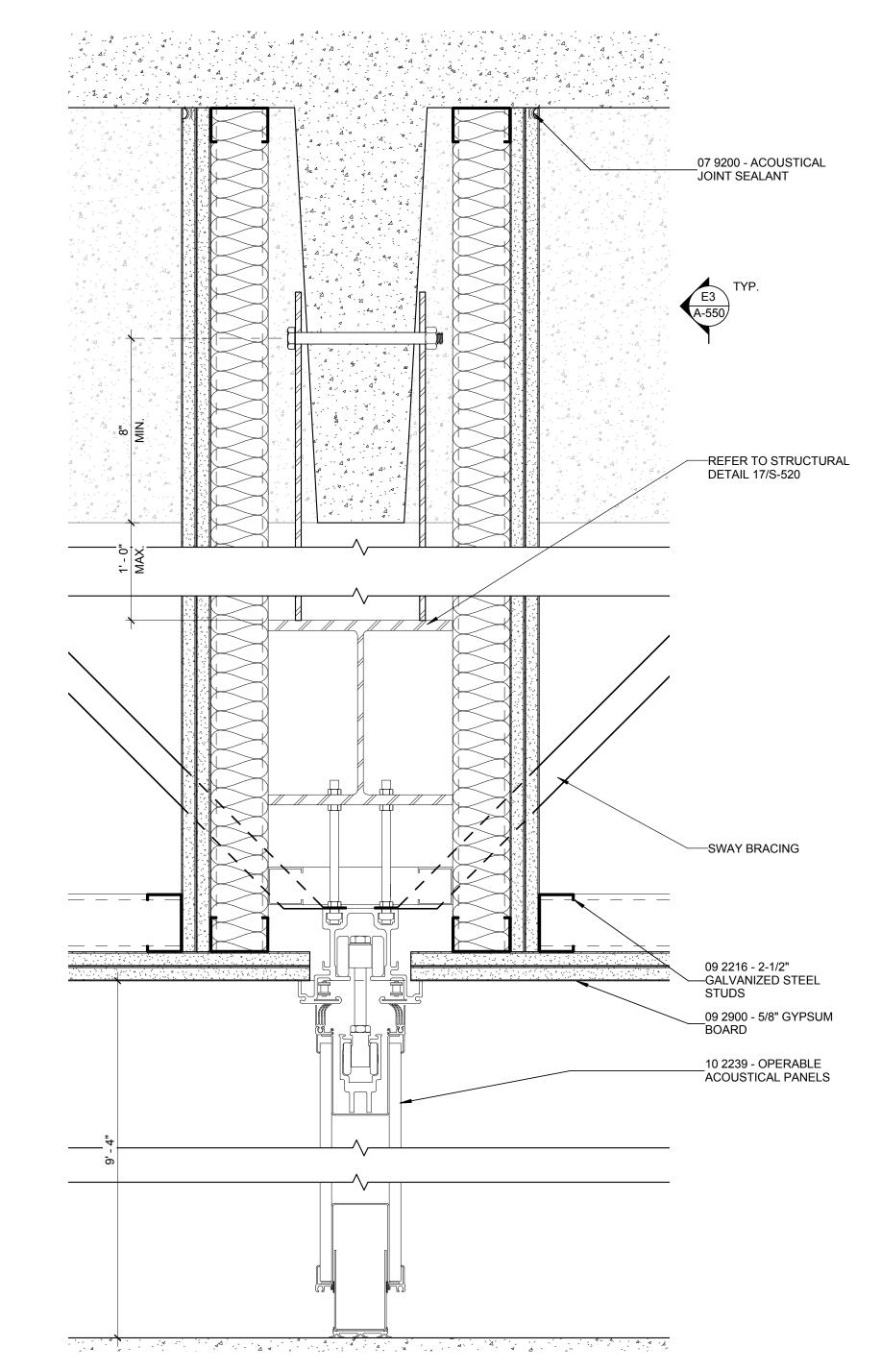




PLAN DETAIL AT OPERABLE PARTITION

3/4" = 1'-0"





09 2216 - 3-5/8" EXIST'G MASONRY GALVANIZED STEEL——— STUDS _04 2613 - THRU WALL INFILL EXIST'G WALL FLASHING BEHIND STL LINTEL TO __05 5000 - GALVANIZED STEEL ANGLE L4X4X1/4 MAINTAIN FLUSH FINISH FACE OF WALL INSIDE SET IN PLACE FROM INTERIOR 09 2900 - 5/8" GYPSUM_ BOARD 09 2900 - CORNERBEAD-08 4113 -—ALUMINUM-FRAMED __ STOREFRONT

DETAIL - NEW STOREFRONT HEAD

1 1/2" = 1'-0"

SECTION DETAIL AT OPERABLE PARTITION HEADER

3" = 1'-0"

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SREATION CENTER
W. 6th Avenue

STUDENT RECREATIO

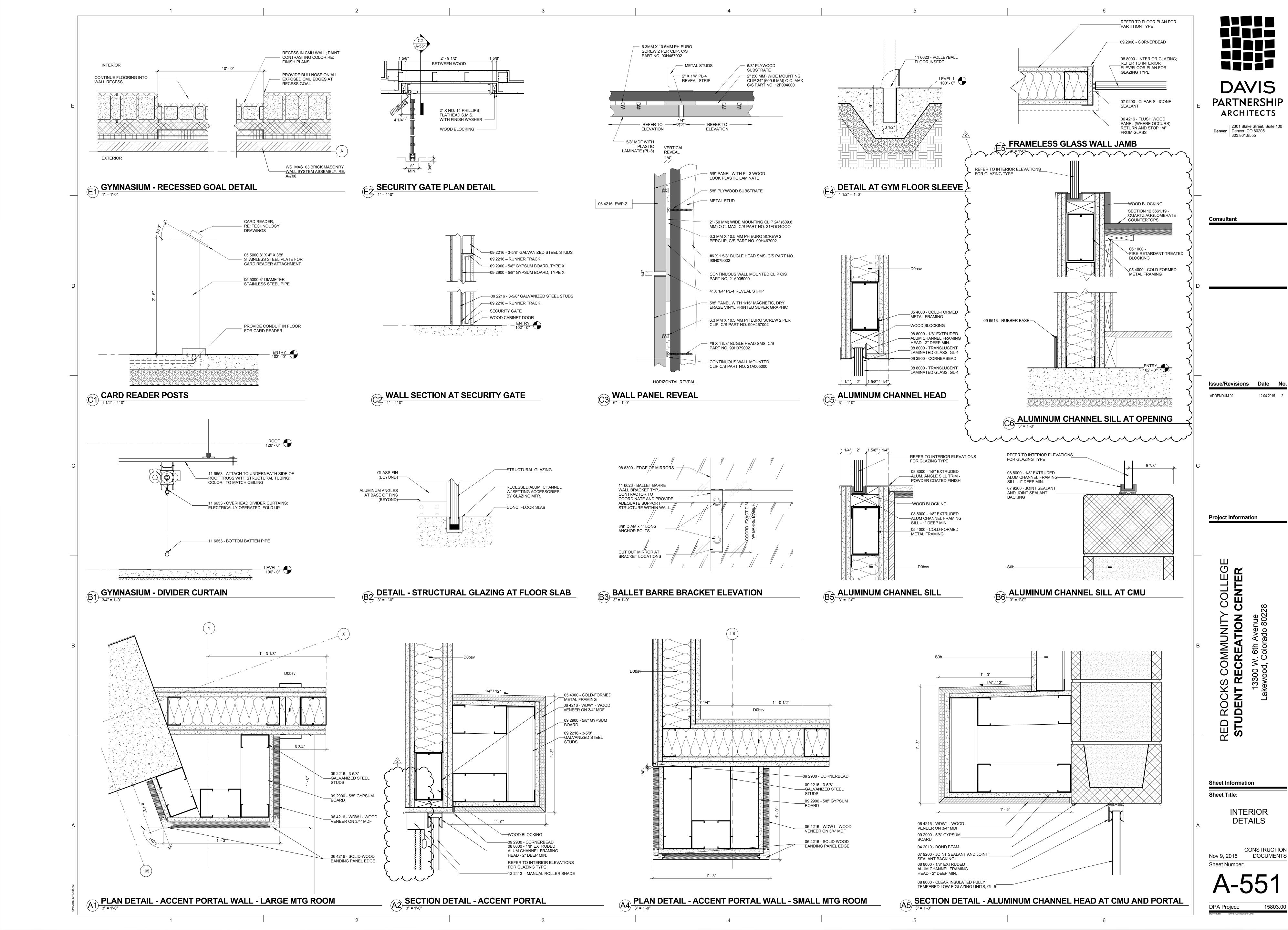
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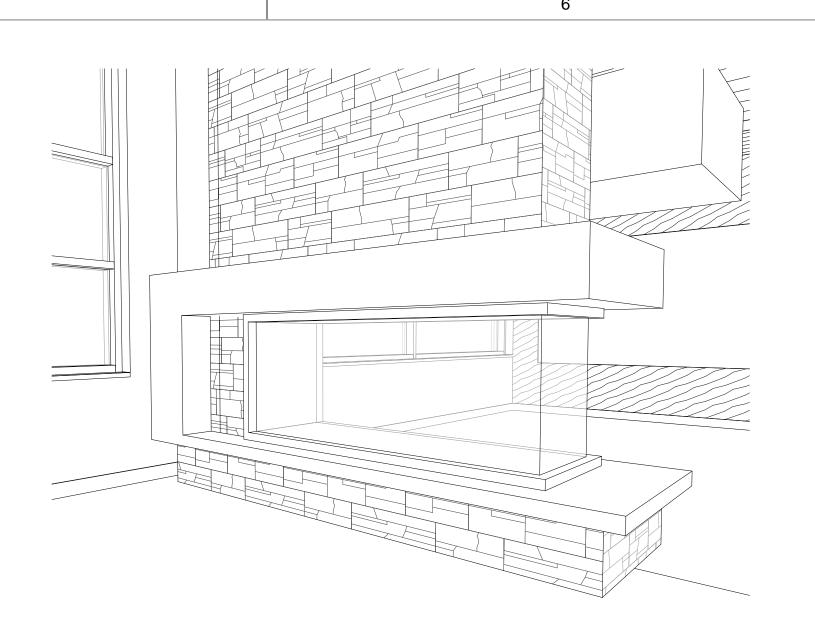
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INTERIOR DETAILS AT BACKFILL RENOVATION

Nov 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

A-550





- | , | , | -

SEE STRUCT SEE STRUCT

ENCLOSURE DEPTH
COORDINATE WITH MFR

3' - 0 1/4"



10 3116 - MANUFACTURED GAS FIREPLACES POWERED ROOF VENT BY MANUFACTURER, G.C. TO COORD W/ ROOF SYSTEM MFR. STANDARD PENETRATION & FLASHING DETAILS—

STL ANGLE SIDES OF ROOF DECK OPENING, GC TO COORD

EXACT LOCATION OF PENETRATION
W/ FIREPLACE SHOP DWGS

RECONFIGURED ROOF FRAMING W/ (2) BEAMS AT EITHER SIDE OF GRID 3, SEE STRUCT SKETCH ISSUED W/ THIS ADDENDUM —

LIGHT COVE; REFER TO ELECTRICAL

COLD-FORMED METAL FRAMING TO STRUCTURE ABOVE

> MORTAR BED W/ WIRE MESH

06 1053 WOOD BACKING

DOUBLE-WALLED VENT DUCT (INTAKE & EXHAUST) BY GAS FIREPLACE MFR.

2 1/2" METAL STUD FRAMING-

10 3116 - MANUFACTURED GAS FIREPLACES-

3-SIDED 'PENINSULA' GAS FIREPLACE, RE: MFR

09 2900 5/8" OR 3/4" NON-COMBUSTIBLE

SUBSTRATE BOARD

MORTAR BED W/ WIRE MESH -

WOOD BACKING

06 1053

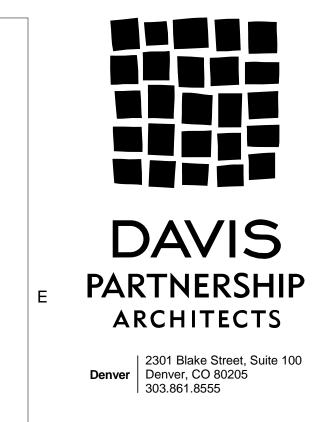
CROSS SECTION - FIREPLACE

FIREPLACE FRAME -

PWT1

MTL STUD FRAMED ROOF CURB

CANT STRIP



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12.04.2015 2

ADDENDUM 02

Project Information

RED ROCKS COMMUNITY STUDENT RECREATION

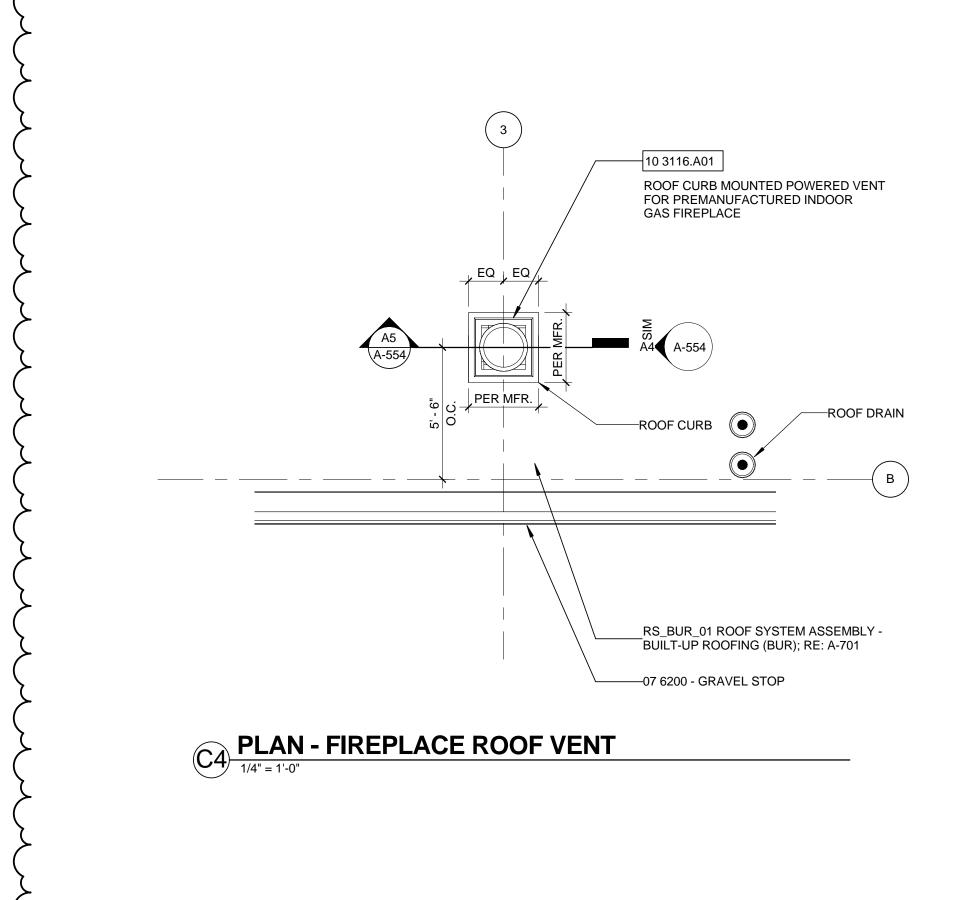
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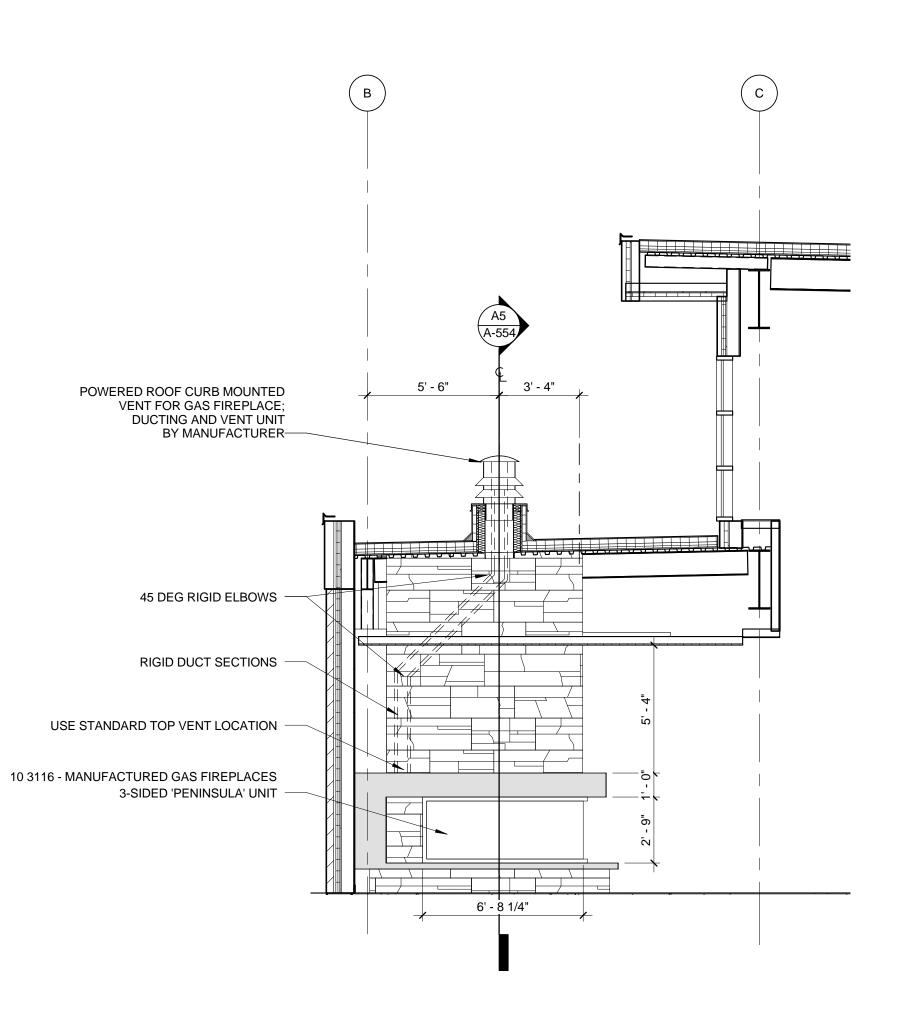
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INTERIOR **DETAILS**

CONSTRUCTION Nov 9, 2015 DOCUMENTS Sheet Number:

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SECTION - FIREPLACE VENT ROUTING



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13300 W. 6th Avenue

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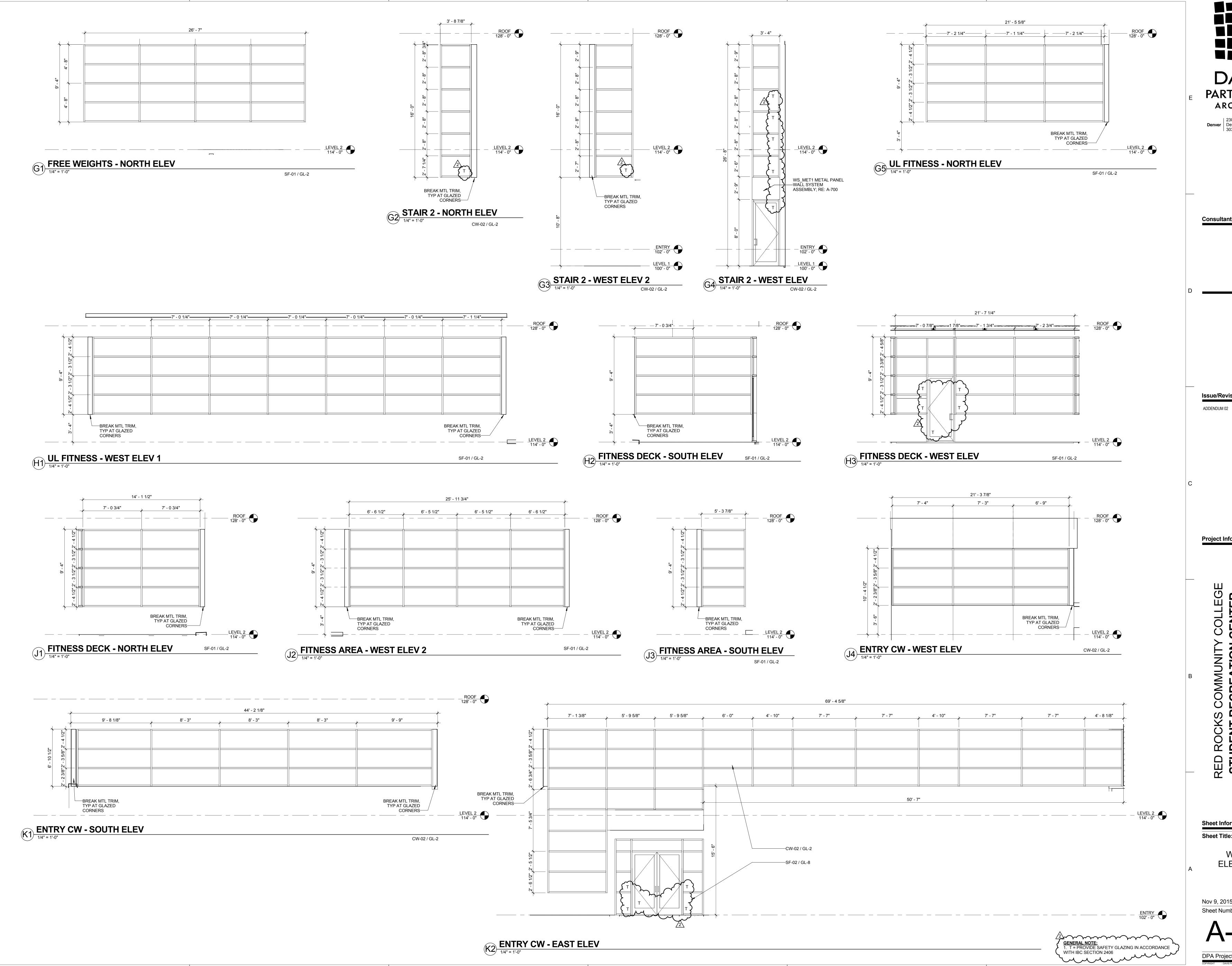
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WINDOW ELEVATIONS

CONSTRUCTION
Nov 9, 2015 DOCUMENTS

Sheet Number:
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DPA Project: 15803



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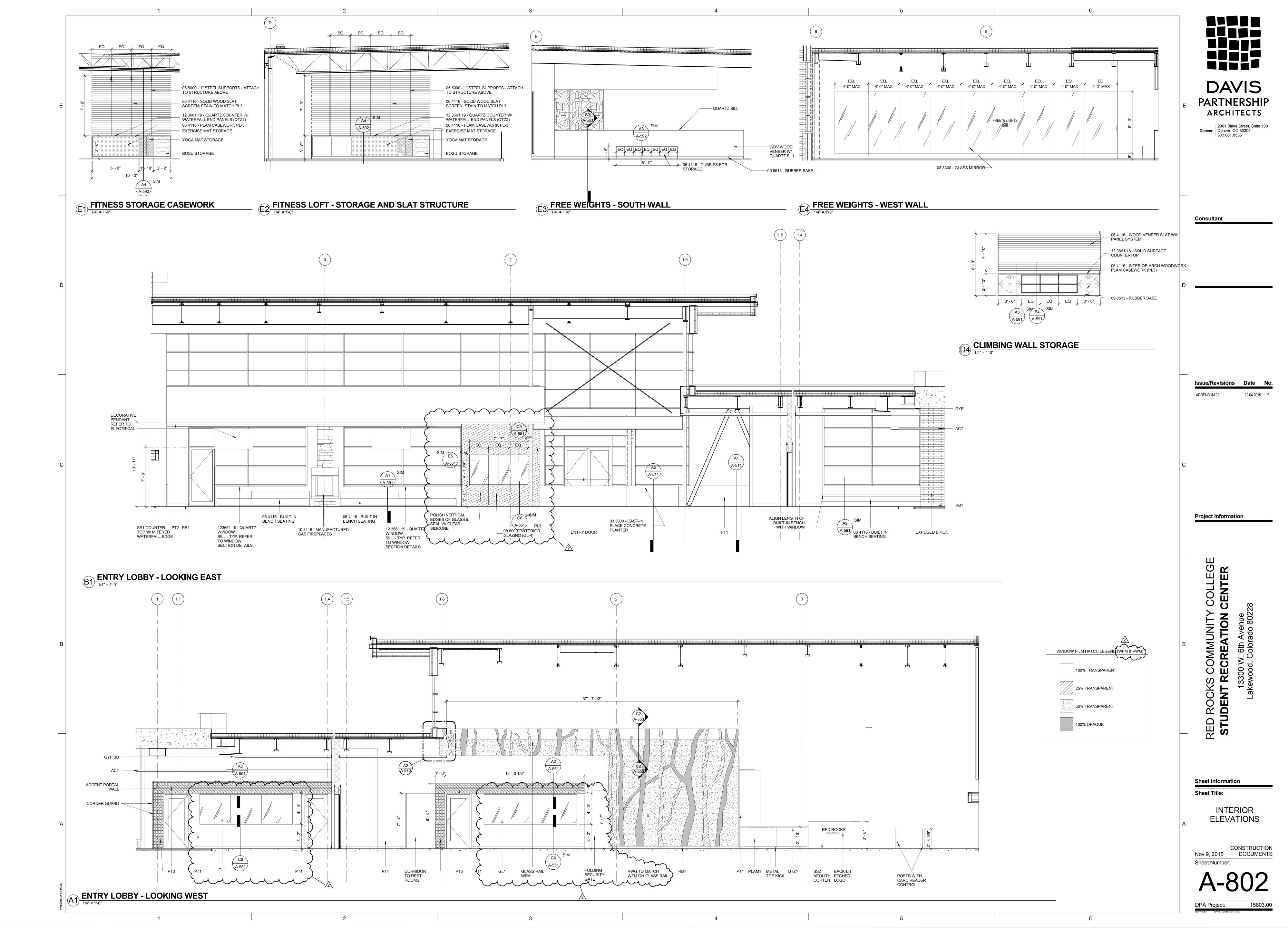
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Project Information

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WINDOW **ELEVATIONS**

Sheet Number:



SECTION 07 8123 - INTUMESCENT FIREPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes mastic and intumescent fire-resistive coatings.
- B. Related Requirements:
 - 1. Section 078100 "Applied Fireproofing" for sprayed fire-resistive materials (SFRM).

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review products, design ratings, restrained and unrestrained conditions, thicknesses, and other performance requirements.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Framing plans or schedules, or both, indicating the following:
 - 1. Extent of fireproofing for each construction and fire-resistance rating.
 - 2. Applicable fire-resistance design designations of a qualified testing and inspecting agency acceptable to authorities having jurisdiction.
 - 3. Minimum fireproofing thicknesses needed to achieve required fire-resistance rating of each structural component and assembly.
 - 4. Treatment of fireproofing after application.
- C. Samples: For each exposed product and for each color and texture specified, 4 inches square in size.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

- B. Product Certificates: For each type of fireproofing.
- C. Evaluation Reports: For fireproofing, from ICC-ES.
- D. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual certified, licensed, or otherwise qualified by fireproofing manufacturer as experienced and with sufficient trained staff to install manufacturer's products according to specified requirements.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not apply fireproofing when ambient or substrate temperature is 50 deg F or lower unless temporary protection and heat are provided to maintain temperature at or above this level for 24 hours before, during, and for 24 hours after product application.
- B. Ventilation: Ventilate building spaces during and after application of fireproofing, providing complete air exchanges according to manufacturer's written instructions. Use natural means or, if they are inadequate, forced-air circulation until fireproofing dries thoroughly.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Assemblies: Provide fireproofing, including auxiliary materials, according to requirements of each fire-resistance design and manufacturer's written instructions.
- Source Limitations: Obtain fireproofing for each fire-resistance design from single source.
- C. Fire-Resistance Design: Indicated on Drawings, tested according to ASTM E 119 or UL 263; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- D. Asbestos: Provide products containing no detectable asbestos.

2.2 MASTIC AND INTUMESCENT FIRE-RESISTIVE COATINGS

A. Mastic and Intumescent Fire-Resistive Coating (UL X650): Manufacturer's standard, , and complying with indicated fire-resistance design.

- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Albi Manufacturing, a division of StanChem, Inc. .
 - b. Carboline Company, a subsidiary of RPM International; .
 - c. Hilti. Inc..
 - d. International Protective Coatings;
 - e. Isolatek International; Cafco SprayFilm-WB 4.
- 2. Application: Designated for "exterior" and "conditioned interior space purpose" use by a qualified testing agency acceptable to authorities having jurisdiction.
- 3. Thickness: As required for fire-resistance design indicated, measured according to requirements of fire-resistance design.
- 4. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.
 - b. Smoke-Developed Index: 50 or less.
- 5. Hardness: Not less than 80, Type D durometer, according to ASTM D 2240.
- 6. Finish: .
 - a. Color and Gloss: Match Architect's sample.

2.3 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that are compatible with fireproofing and substrates and are approved by UL or another testing and inspecting agency acceptable to authorities having jurisdiction for use in fire-resistance designs indicated.
- B. Substrate Primers: Primers approved by fireproofing manufacturer and complying with required fire-resistance design by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- C. Topcoat: Suitable for application over applied fireproofing; of type recommended in writing by fireproofing manufacturer for each fire-resistance design.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrates and other conditions affecting performance of the Work and according to each fire-resistance design.

Project #: DPA 15803.00

- 1. Verify that substrates are free of dirt, oil, grease, release agents, rolling compounds, mill scale, loose scale, incompatible primers, paints, and encapsulants, or other foreign substances capable of impairing bond of fireproofing with substrates under conditions of normal use or fire exposure.
- 2. Verify that objects penetrating fireproofing, including clips, hangers, support sleeves, and similar items, are securely attached to substrates.
- 3. Verify that substrates receiving fireproofing are not obstructed by ducts, piping, equipment, or other suspended construction that will interfere with fireproofing application.
- B. Conduct tests according to fireproofing manufacturer's written instructions to verify that substrates are free of substances capable of interfering with bond.
- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Cover other work subject to damage from fallout or overspray of fireproofing materials during application.
- B. Clean substrates of substances that could impair bond of fireproofing.
- C. Prime substrates where included in fire-resistance design and where recommended in writing by fireproofing manufacturer unless compatible shop primer has been applied and is in satisfactory condition to receive fireproofing.
- D. For applications visible on completion of Project, repair substrates to remove surface imperfections that could affect uniformity of texture and thickness in finished surface of fireproofing. Remove minor projections and fill voids that would telegraph through fire-resistive products after application.

3.3 APPLICATION

- A. Construct fireproofing assemblies that are identical to fire-resistance design indicated and products as specified, tested, and substantiated by test reports; for thickness, primers, topcoats, finishing, and other materials and procedures affecting fireproofing work.
- B. Comply with fireproofing manufacturer's written instructions for mixing materials, application procedures, and types of equipment used to mix, convey, and apply fireproofing; as applicable to particular conditions of installation and as required to achieve fire-resistance ratings indicated.
- C. Coordinate application of fireproofing with other construction to minimize need to cut or remove fireproofing.

- 1. Do not begin applying fireproofing until clips, hangers, supports, sleeves, and other items penetrating fireproofing are in place.
- 2. Defer installing ducts, piping, and other items that would interfere with applying fireproofing until application of fireproofing is completed.
- D. Install auxiliary materials as required, as detailed, and according to fire-resistance design and fireproofing manufacturer's written instructions for conditions of exposure and intended use. For auxiliary materials, use attachment and anchorage devices of type recommended in writing by fireproofing manufacturer.
- E. Spray apply fireproofing to maximum extent possible. After the spraying operation in each area, complete the coverage by trowel application or other placement method recommended in writing by fireproofing manufacturer.
- F. Extend fireproofing in full thickness over entire area of each substrate to be protected.
- G. Install body of fireproofing in a single course unless otherwise recommended in writing by fireproofing manufacturer.
- H. Provide a uniform finish complying with description indicated for each type of fireproofing material and matching finish approved for required mockups.
- I. Cure fireproofing according to fireproofing manufacturer's written instructions.
- J. Do not install enclosing or concealing construction until after fireproofing has been applied, inspected, and tested and corrections have been made to deficient applications.
- K. Finishes: Where indicated, apply fireproofing to produce the following finishes:
 - 1. Rolled, Spray-Textured Finish: Even finish produced by rolling spray-applied finish with a damp paint roller to remove drippings and excessive roughness.

3.4 FIELD QUALITY CONTROL

- A. Special Inspections: Engage a qualified special inspector to perform the following special inspections:
 - 1. Test and inspect as required by the IBC, Subsection 1705.14, "Mastic and Intumescent Fire-Resistant Coatings."
- B. Perform the tests and inspections of completed Work in successive stages. Do not proceed with application of fireproofing for the next area until test results for previously completed applications of fireproofing show compliance with requirements. Tested values must equal or exceed values as specified and as indicated and required for approved fire-resistance design.
- C. Fireproofing will be considered defective if it does not pass tests and inspections.

Project #: DPA 15803.00

- Remove and replace fireproofing that does not pass tests and inspections, and 1. retest.
- Apply additional fireproofing, per manufacturer's written instructions, where test 2. results indicate insufficient thickness, and retest.
- D. Prepare test and inspection reports.

3.5 CLEANING, PROTECTING, AND REPAIRING

- Cleaning: Immediately after completing spraying operations in each containable area of Α. Project, remove material overspray and fallout from surfaces of other construction and clean exposed surfaces to remove evidence of soiling.
- B. Protect fireproofing, according to advice of manufacturer and Installer, from damage resulting from construction operations or other causes, so fireproofing is without damage or deterioration at time of Substantial Completion.
- C. As installation of other construction proceeds, inspect fireproofing and repair damaged areas and fireproofing removed due to work of other trades.
- D. Repair fireproofing damaged by other work before concealing it with other construction.
- E. Repair fireproofing by reapplying it using same method as original installation or using manufacturer's recommended trowel-applied product.

END OF SECTION 07 8123

SECTION 10 1200 - RESCUE ASSISTANCE SIGNAL SYSTEM - AUDIO/VISUAL

Part 1 General

1.1 SUMMARY

A. Section Includes: Furnish, install, and wire all equipment associated with the installation of an Audio-Visual Rescue Assistance Signal System to comply with ADA requirements. This work shall include a main annunciator panel, remote call stations, power supply, outlet boxes, cables and wiring as shown on the drawings and as specified herein.

1.2 SUBMITTALS

- A. General: Data sheets on all equipment being provided as well recommended cable types. Internal control cabinet drawings showing internal block diagram connections shall be provided. Wiring diagrams showing typical field wiring connections as well as single line floorplan indicating equipment locations as well as cable routings and quantities.
- **B. Product Data:** Submit product data, including manufacturer's (Spec- Data) product sheet, for specified products.
- **C. Shop Drawings:** Submit shop drawings showing layout, profiles and product components, including anchorage and accessories. Include cabling diagrams, wiring diagrams, station installation details, and equipment cabinet details.
- **D. Quality Assurance Submittals:** Submit the following:
 - I. Test Reports: Certified test reports showing compliance with specified performance characteristics.
 - 2. Manufacturer's Instructions: Manufacturer's installationinstructions.
 - Manufacturer's Field Reports: Manufacturer's field reports specified herein.

E. Closeout Submittals: Submit the following:

- I. Operation and Maintenance Data: Operation and maintenance datafor installed products in accordance with Division I Closeout Submittals (Maintenance Data and Operation Data) Section.Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance. Include troubleshooting guide, wiring terminal identification and equipment parts list.
- 2. Warranty: Warranty documents specified herein.

F. Project Closeout

- I. A one-year maintenance contract offering continued factory authorized service of this system shall be provided as part of this contract. Built drawings that include changes to wiring, wiring designations, junction box labeling and other pertinent information shall be supplied upon completion of the project.
- 2. The contractor shall furnish manufacturer's manuals of the completed system including individual specifications sheets, schematics, inter-panel

and intra-panel wiring diagrams.

- a. All information necessary for the proper maintenance and operation of the system must be included.
- b. Provide four copies.
- 3. As built drawings that include changes to wiring, wiring designations, junction box labeling, and other pertinent information shall be supplied upon completion of the project.
- 4. Provide a minimum of two (2) hours of in-service training with the system.
 - a. These sessions shall be broken into segments that will facilitate the training of the system users in operating station equipment.
 - b. Operating manuals and user's guides shall be provided at the time of training.

1.3 WARRANTY

- **A. Project Warranty:** Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed byauthorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
 - I. All materials and installation shall be guaranteed to be free of defects in material and workmanship for one year after final acceptance of installation and tests.

1.4 INSTALLATION STANDARDS

- **A.** The system shall be installed in accordance with the 1993 NEC and ADA requirements.
- **B.** The completed system shall be in compliance with state and local electrical codes.
- **C.** All wiring shall test free from grounds and shorts.

1.5 SYSTEM OPERATIONS

- **A.** Furnish, install and place into operation a Rescue Assistance System for this building as indicated on the drawings and as specified herein.
- **B.** A common annunciator shall be provided at the main building entrance where shown on the drawings to indicate light and tone signals from multiple remote call stations.
 - I. When the call station switch is activated, a red LED button illuminates and a one shot tone sounds.
 - 2. When the alarm signal is acknowledged, the remote call station is signaled with a flashing light and tone.
 - 3. Voice communication with the remote call can then be initiated from the annunciator.
 - 4. Optional access to a public telephone system shall be provided when specified.

Part 2 Products (Rescue Assistance System - Audio/Visual)

2.1 RESCUE ASSISTANCE-VISUAL EQUIPMENT

- **A. Manufacturer:** Subject to compliance with requirements, provide products by the following, or approved equal as a substitution request: Cornell Communications, Inc.
 - I. Contact: 79I5N8ISt St., Milwaukee, WI53223-3830; Telephone, 800-558-8957; (4I4) 35I-4660; Fax, (4I4) 35I-4657.

2.2 CORNELL 4200 RESCUE ASSISTANCE-AUDIOIVISUAL SYSTEM AND COMPONENTS

A. Equipment

 This system shall consist of a remote call stations, which will share a common annunciator panel and optional access to a public telephone system for external alarm notification.

B. Annunciator

- The annunciator panel shall be a CORNELL Model A4200, with capacity for 1 zone, surface mounted at the Main Fire Department Entrance to the building.
 - a. Verify location with the Local Fire Marshal and the Architect.
- 2. An alternate action switch with internal LED indicator shall be included for each zone.
 - A yellow LED light on the zone switch shall illuminate and the alarm shall emit a repeating sound if the supervised wiring is faulted.
- 3. An audible alarm shall be mounted on the annunciator panel, which will emit a minimum sound level of 90 db at 30 cm when a remote station calls
 - a. Depressing the zone switch will answer a zone and open the intercom line to the zone.
- 4. The front panel shall have silk-screened zone designations and operating directions as well as zone designation strips.
- 5. The power supply shall be a I20 volt emergency battery backup, CORNELL model B-5243A or P-5I2243A.
- 6. The optional, TAK-4200 telephone access kit will place a call to a designated location via a dedicated public telephone line to notify them of the alarm.

C. Remote Call Stations

- I. The remote call station shall be CORNELL Model 420IB/V or 420IB/VM, vandal resistant with one momentary switch with LED and loudspeaker.
- 2. The station shall have hands free voice communication with the annunciator.
- 3. The station shall have silk-screened operating instructions.
- 4. The station shall be flush wall mounted on a 2-gang stainless steel plate with a 48" maximum mounting height for forward reach, and a 54" maximum for side reach.

2.3 SOURCE QUALITY

Project #: DPA 15803.00

A. Source Quality: Obtain rescue assistance equipment and system from a single manufacturer.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

3.2 EXAMINAITON

A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.3 INSTALLATION

A. Cabling Requirements

- Wiring from the annunciator to the call station shall be CORNELL CB-4200 custom cable.
- 2. Wiring from the annunciator to the power supply shall be I8- gauge, 2 conductor.
- 3. Verify cable types with the Rescue Assistance System Manufacturer.
- 4. The optional telephone access kit requires a I20V AC outlet and dedicated external telephone line.

B. Rescue Assistance Signal System – Audio-Visual Installation

- Complete system shall be installed in strict accordance with manufacturer's recommendations.
- 2. Wiring shall be installed in raceways throughout the building.
 - a. Conduit, if required, shall be I/2" minimum.

3.4 FIELD QUALITY REQUIREMENTS

- A. Site Tests (Post Installation Testing): Checkout final connections to the system shall be made by a factory technician authorized by the manufacturer of the products installed.
 - I. Factory authorized technicians shall demonstrate operation of the complete system and each major component to the staff.
 - 2. System field wiring diagrams shall be provided to this subcontractor by the system prior to installation.
- **B. Inspection:** Perform a complete functional test of the system upon completion of the installation and instruct the staff in the operation and maintenance of the system.

3.5 CLEANING

A. Cleaning: Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally

dispose of debris.

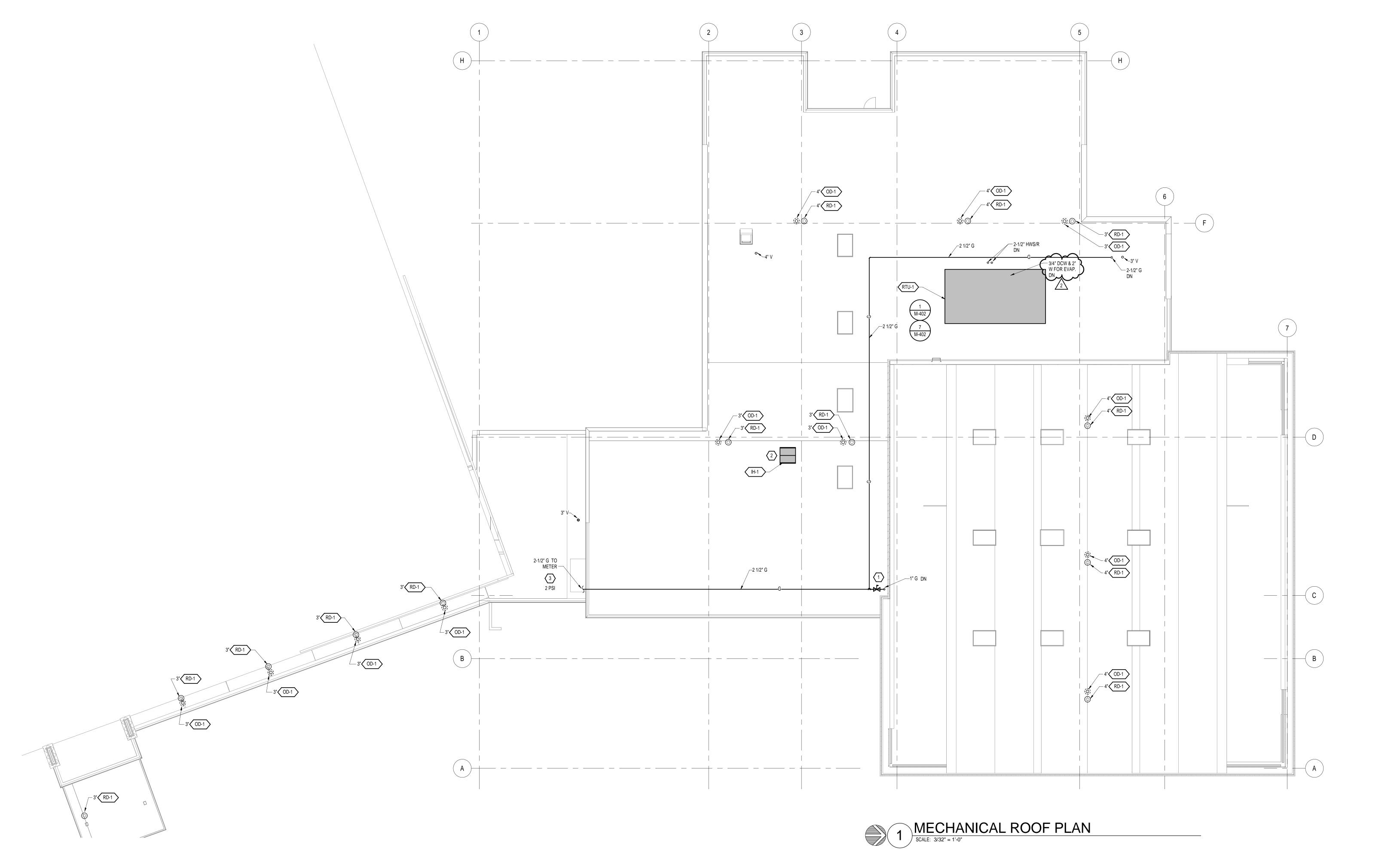
END OF SECTION 10 1200

- J. Modular Handholds (Addendum 02): Composed of polyurethane to minimize breakage.
 - a. Acceptable Manufacturers: Franklin Handholds, Egrips, Solll handholds.
 - 2. Handhold selection shall be made based on strong functionality of the potential user base and shall include:
 - a. Large Holds
 - b. Medium Holds
 - c. Small Holds
 - d. Bolt-on Footholds
 - 3. To include handhold bolt of appropriate length.
 - 4. Quantity: 800 Handholds.

2.4 MATERIALS

- A. Steel Structural Tubing: ASTM A 500, Grade B, hot-dip galvanized according to ASTM A 123/A 123M.
- B. Steel Mechanical Tubing: ASTM A 513, welded steel mechanical tubing, hot-dip galvanized according to ASTM A 123/A 123M.
- C. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- D. Plywood: DOC PS-1 and the following:
 - 1. Emissions: Plywood made without urea-formaldehyde.
 - 2. Certified Wood: Source material in compliance with FSC STD-01-001.
 - 3. Fire-Retardant-Treated Plywood: AWPA C27, Interior Type A, labeled by agency acceptable to authorities having jurisdiction.
 - 4. Nominal Thickness: Not less than 3/4 inch (19 mm).
 - 5. Grade: CDX.
- E. Cement Surfacing:
 - 1. Polymer-modified, fiber-reinforced portland cement plaster ASTM C 150.
 - 2. Expanded-metal lath, ASTM C 847 with ASTM A 653/A 653M G60 coating.
 - 3. Metal lath and trim accessories.
- F. Cement Surfacing Stain: Manufacturer's standard semi-transparent stain application recommended by stain manufacturer for application to new concrete surfaces, meeting project VOC limitations.
- G. Anchorages: Anchor bolts, hot-dip galvanized according to ASTM A 153/A 153M.

CLIMBING WALLS 11 6733 - 8



SHEET NOTES

COORDINATE ALL WORK WITH ALL OTHER TRADES.

KEY NOTES

- PROVIDE PRESSURE REGULATOR FOR 3/4" NATURAL GAS. REDUCE PRESSURE TO 14" WC. CONTINUE 1" GAS PIPING DN.
- 2 INTAKE HOOD AT TOP OF ELEVATOR SHAFT WITH MOTORIZED DAMPER AND TEMPERATURE SENSOR IN SHAFT.
- 2-1/2" 2 PSI NATURAL GAS TO METER. RUN ON ROOF OF EXISTING BUILDING TO METER. DISTANCE FROM THIS LOCATION TO METER IS APPROXIMATELY 1200 FT. COORDINATE WITH UTILITY TO VERIFY PRESSURE REQUIREMENTS. PIPING IS SIZED FOR 2600 MBH LOAD AT 1800 FT.

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sue/Revisions Date No.

11/20/15 1 12/4/15 2

ADDENDUM 2

Project Information

ROCKS COMMUNITY COLLEGE
13300 W. 6th Avenue
Lakewood, Colorado 80228

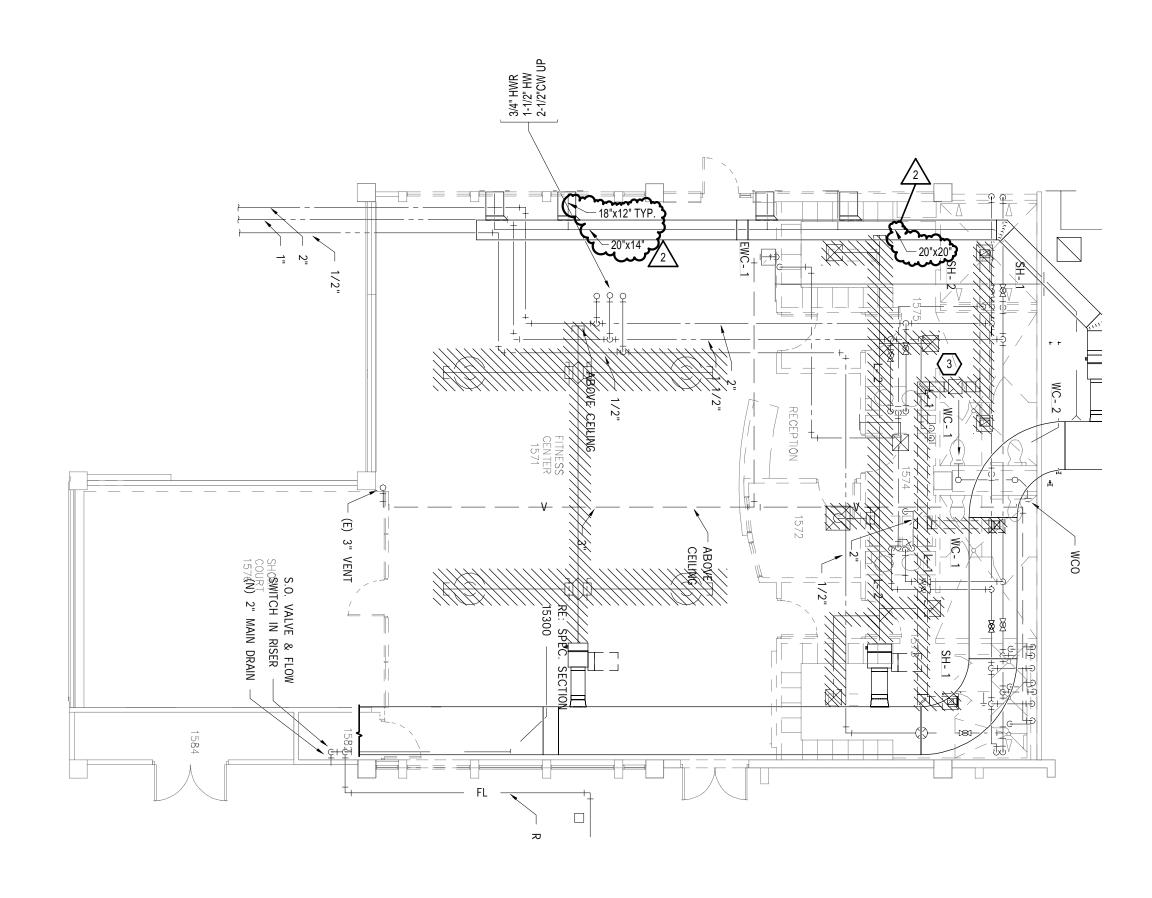
Sheet Information

Sheet Title: MECHANICAL

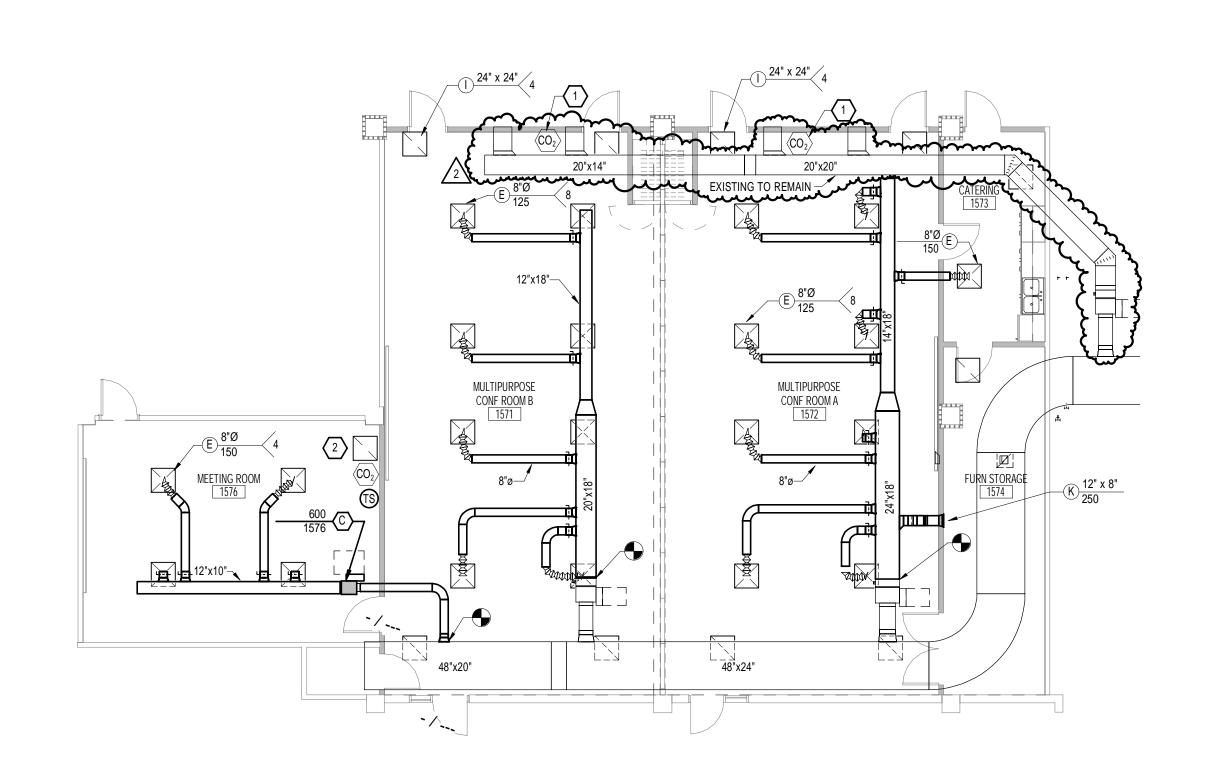
ROOF PLAN

Nov. 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

M-103

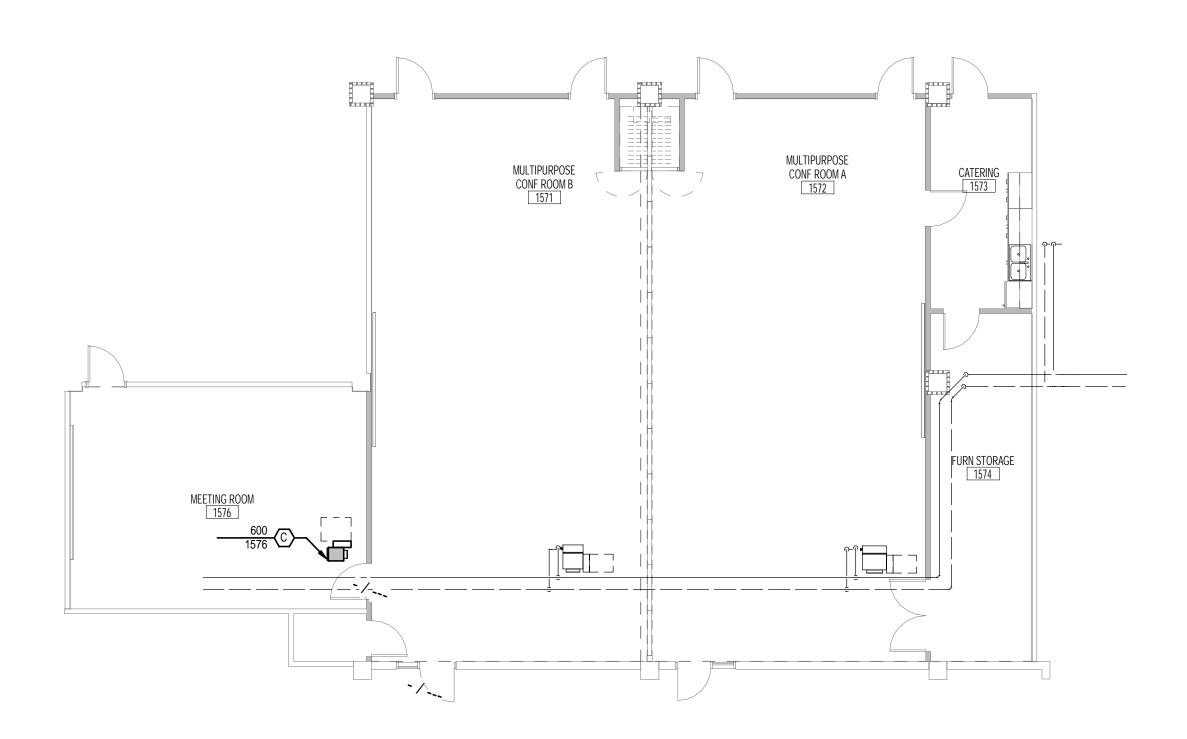






2 LEVEL 1 MECHANICAL PLAN

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



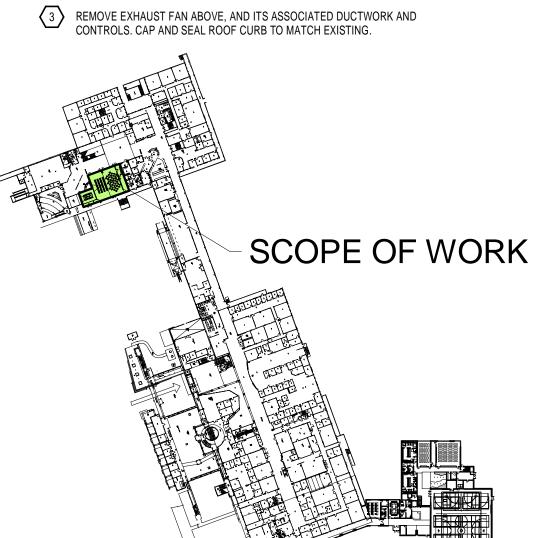
SHOWN FOR REFERENCE ONLY

SHEET NOTES

 REVISE EXISTING DUCTWORK TO SERVE THE THREE MEETING ROOMS. VAV BOXES AND CONTROLS FOR EACH AREA TO REMAIN. PROVIDE NEW DUCTWORK, DIFFUSERS AND RETURN GRILLES AS SHOWN. PIPING PLAN SHOWN FOR REFERENCE.
 MODIFIY EXISTING FIRE SPRINKLER SYSTEM TO ACCOMMODATE REMODEL SPACES. ADD PIPING AND NEW SPRINKLER HEADS AS REQUIRED. 2

KEY NOTES

PROVIDE NEW CO2 SENSORS FOR EXISTING VAV BOX. TIE INTO EXISTING CONTROLS AND UPDATE SEQUENCE PER NEW VAV BOXES. 2 PROVIDE SOUND BOOT FOR THIS RETURN GRILLE.



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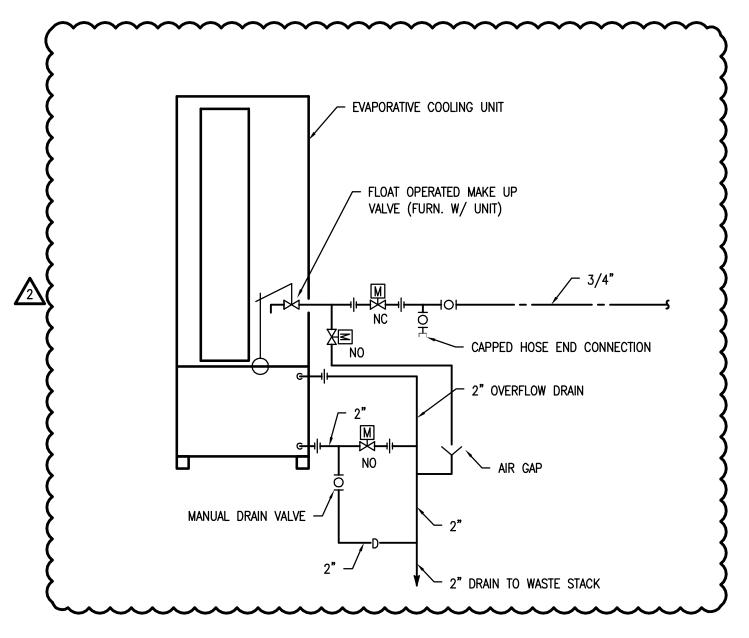
Consultant

ADDENDUM 2 12/4/15 2

Project Information

Sheet Information Sheet Title:
ENLARGED
MECHANICAL
PLANS

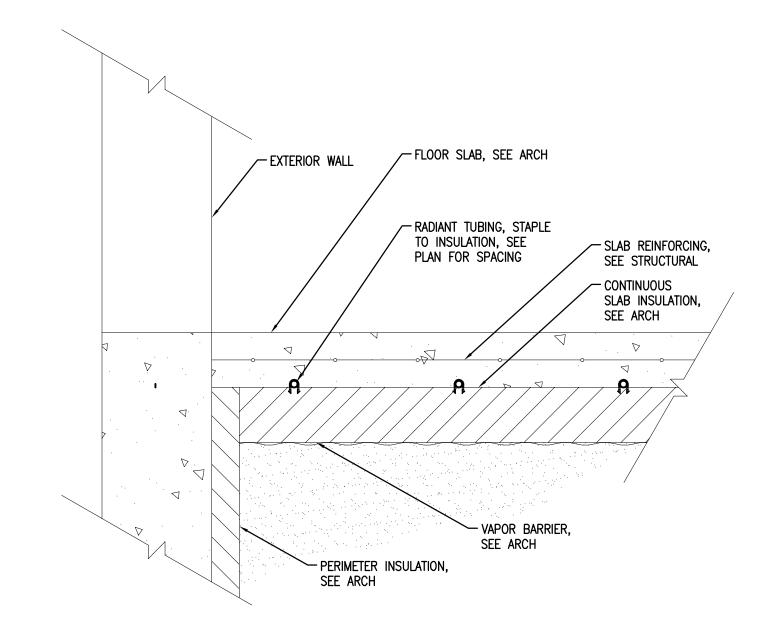
Nov. 9, 2015 CONSTRUCTION DOCUMENTS



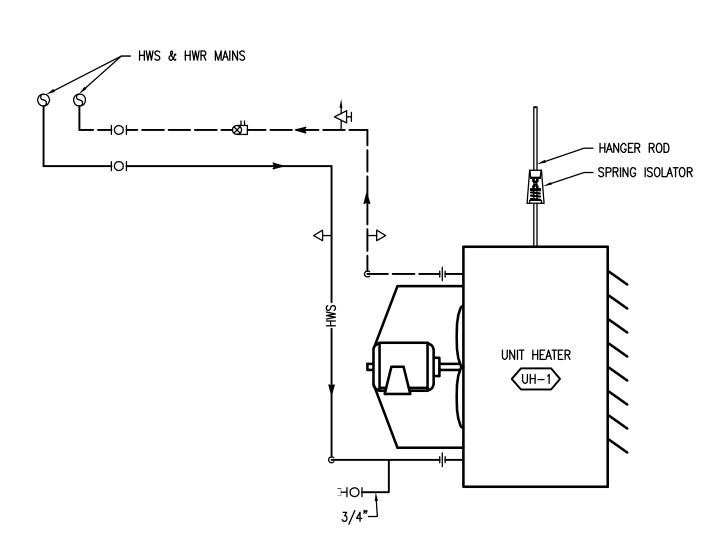
NOTES

- 1. AUTO FILL/DRAIN KIT TO BE FURNISHED WITH UNIT.
- 2. MAKE-UP/FILL CONNECTION AND DRAIN LOCATION SHALL BE ON OPPOSITE SIDES OF
- 3. SUMP BASIN SHALL BE CONSTRUCTED FOR POSITIVE (COMPLETE) DRAINAGE.
- 4. MAKE-UP MUST BE ABOVE OVERFLOW.
- 5. ALL AUTOMATIC VALVES AND NON-DRAINABLE DOMESTIC WATER PIPING SHALL BE LOCATED IN WARM SPACE. (NOT OUTDOORS)



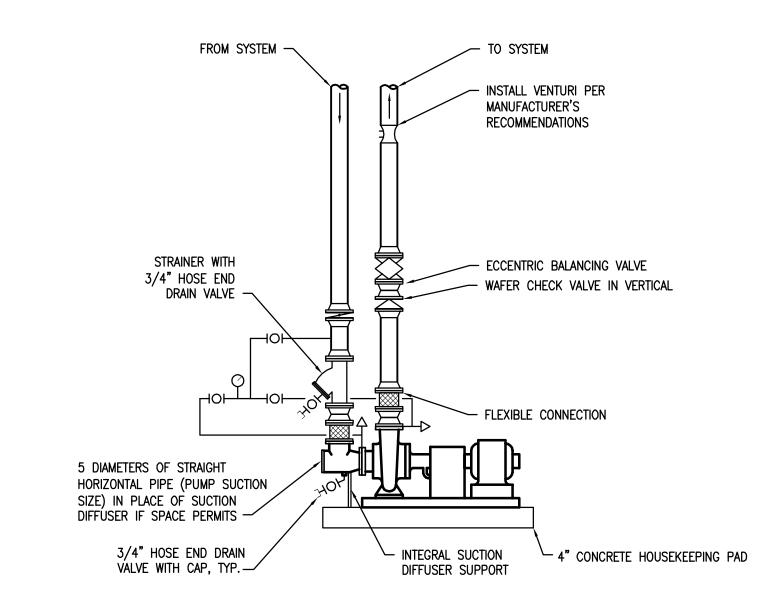




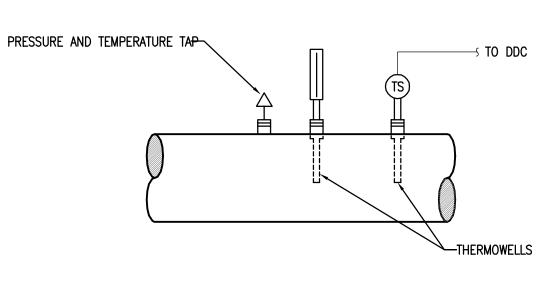


CABINET UNIT HEATER DETAIL

SCALE: NONE

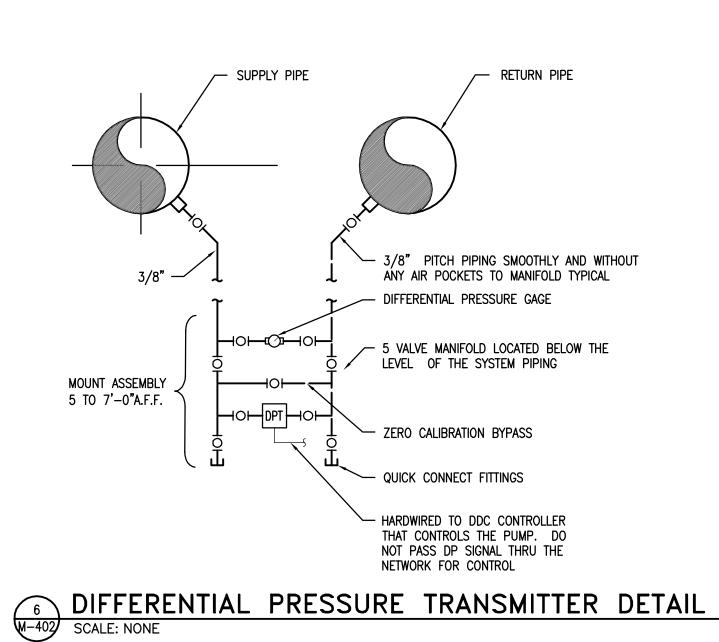


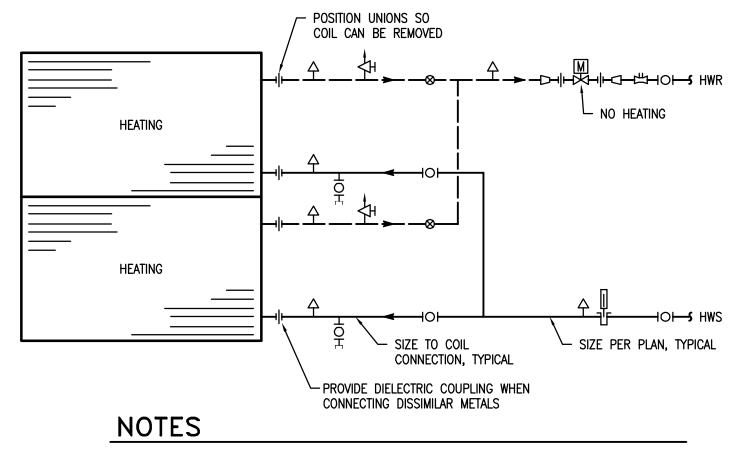
END SUCTION PUMP DIAGRAM
SCALE: NONE



TEMPERATURE SENSOR DETAIL

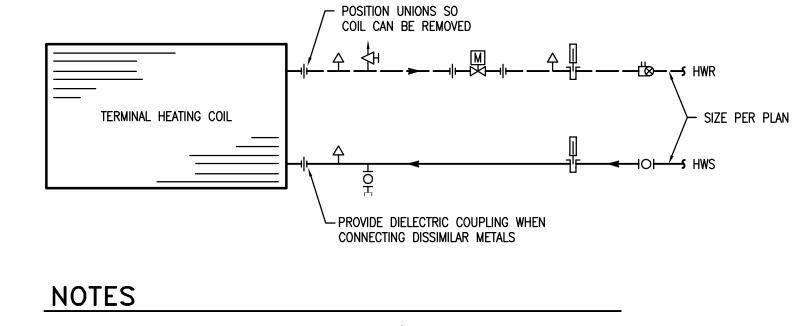
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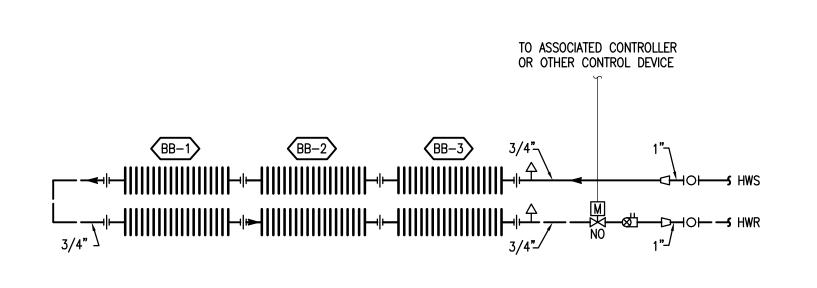
- 1. INSTALL FLOW MEASURING DEVICES PER MANUFACTURER'S RECOMMENDATIONS
- REDUCERS SHALL BE PROVIDED AT COIL AND TEMPERATURE CONTROL VALVE WHERE REQUIRED.
- THERMOMETERS REQUIRED ON PIPE SIZES 3" & LARGER ONLY.

7 2-WAY VALVE HEATING DETAIL M-402 SCALE: NONE (STACKED COIL SHOWN, SINGLE COIL SIMILAR)

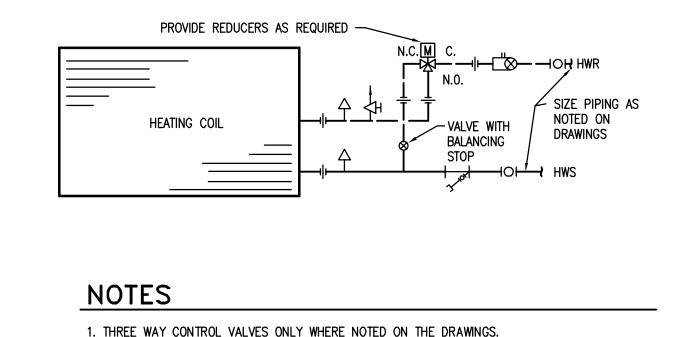


- 1. INSTALL FLOW MEASURING DEVICES PER MANUFACTURER'S RECOMMENDATIONS
- 2. REDUCERS SHALL BE PROVIDED AT COIL AND TEMPERATURE CONTROL VALVE WHERE REQUIRED.
- 3. THERMOMETERS REQUIRED ON PIPE SIZES 3" & LARGER ONLY.
- 4. INCLUDES VAV BOX, FAN COIL, CABINET UNIT HEATER, AND UNIT HEATER COILS.

* TERMINAL HEATING COIL - 2-WAY VALVE DETAIL M-402 SCALE: NONE

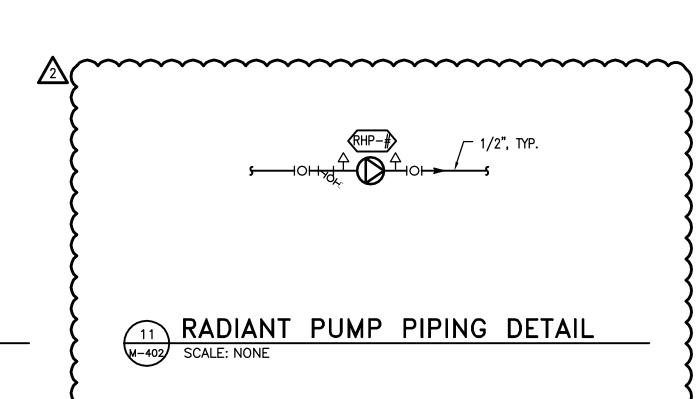


9 BASEBOARD CONVECTORS DIAGRAM
SCALE: NONE



1. THREE WAY CONTROL VALVES ONLY WHERE NOTED ON THE DRAWINGS. TERMINAL HEATING COIL - 3-WAY VALVE DETAIL

SCALE: NONE



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Consultant

Issue/Revisions Date ADDENDUM 1 11/20/15 1

12/4/15 2

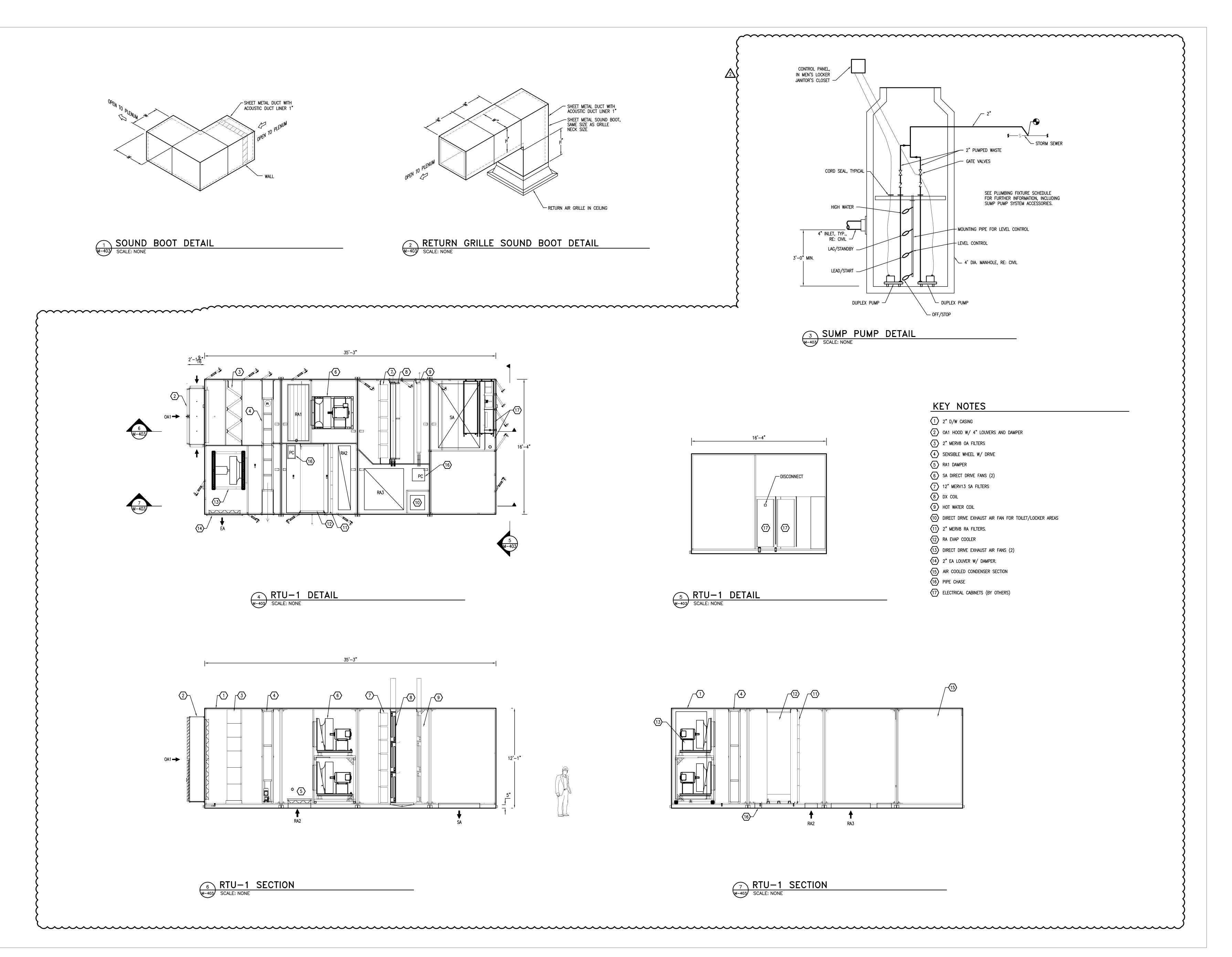
ADDENDUM 2

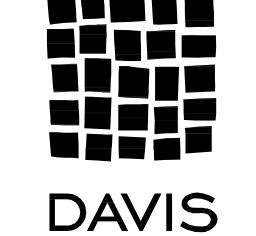
Project Information

STUDE! RED RO

Sheet Information MECHANICAL DETAILS

CONSTRUCTION Nov. 9, 2015 DOCUMENTS **Sheet Number:**





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RMH Group project number 19231

Consultant

 Issue/Revisions
 Date
 No.

 ADDENDUM 1
 11/20/15
 1

 ADDENDUM 2
 12/4/15
 2

Project Information

STUDENT RECREATION CENTER
RED ROCKS COMMUNITY COLLEGE
13300 W. 6th Avenue

Sheet Information

Sheet Title:
MECHANICAL DETAILS

Nov. 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

M-403

PA Project:

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TAG	PURPOSE	TYPE	MIN.			SUPF	LY FA	N SEC	TION						EXHAUS	T/RETU	RN FAN	SELEC	TION				-	TOILET/	/LOCKE	R EXHAU	ST FAN	SELECT	ION										Н	EAT REC	COVERY I	MODULE										E,	VAPORATI	VE COOLING	3 MEDIA	
			OSA	TOTAL	TSP	ESP	RPM	BHP	HF	VF	DIA.	TYPE	TOTAL	TSP	ESP	RPM	BHP	HP	VFD	DIA.	TYPE	TOTA	AL TS	SP E	ESP	RPM E	BHP I	HP VF	D DIA	. TYPE					S	UMMER										WINTER				\neg	AREA	MEDIA	A MEDI	A EDB EWE	B LDB F	PUMP
		2	CFM	CFM IN	. W.G. IN	I. W.G.							CFM	IN. W.G	IN. W.G) .						CFM	И IN. V	N.G. IN	. W.G.						CFM	EFF %	EA EDB	EA EW	B EA LD	B EA L	WB SA E	EDB SA	EWB S	A LDB	SA LWB	CFM	EFF %	EA EDB	EA EWB	EA LDB	SA EDB	SA EWB	SA LDB S	3A LWB	SQ. FT.	DEPTH (IN.) EFF.	°F °F	°F	HP II
RTU-1	REC CENTER	\	13,500	47,000	5.90	2.50	1231	(2)30	7 (2)	40 Y	40	PLN	42,956	2.54	0.50	1158	13.3	(2) 20) Y	36	PLN	4,660	3.0	87 (0.70	1734	1.4 3	.00 Y	′ 18	PLN	47,000	66.8	58.3	56	86.2	64.	7 9:	5 6	60	70.5	51.6	10260	43.5	70	52	6.3	-5	-5.5	27.6	22.9	78	12	89.3	78 56.1	1 58.3	-
CFU-1	CLIMBING		₹	1,800	3.20	0.50 3	010.00	1.40	1.5	0 Y	14	PLN	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-	- -	-	-
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Α.	PERFORMANCE IS	AT SITE CO	NDITION	3						F. A	IR HAN	DLERS	MAY CO	NTAIN R	SERVE	CAPACIT	Y AND	CAPACI	TY FOR					1.		EXHAU:	ST AIRF	LOW INC	CLUDES	PURGE (CFM.																									

			AIR	HAN	DLIN	IG U	NIT :	SOU	ND F	POW	ER L	.EVE	L SC	CHE	DULI		
TAG		SUPPI	LY FAN C	DUTLET,	dB PER (OCTAVE	BAND		R	ETURN/E	XHAUST	FAN INL	ET, dB P	ER OCTA	VE BAN	D	NOTES
	63	125	250	500	1000	2000	4000	8000	63	125	250	500	1000	2000	4000	8000	
AHU-1	98	105	106	107	104	98	94	89	69	73	80	82	76	74	73	76	
CFU-1	81	78	77	78	73	76	73	66	76	79	81	87	75	73	74	70	

C. APD ON ALL COILS AND COMPONENTS IS AT IS AT COOLING TOTAL CFM

D. ALL OTHER PERFORMACE IS AT SPECIFIED CFM FOR THAT COMPONENT

E. PROVIDE 120V JUNCTION BOX FOR RTU-1 LIGHTING/OUTLET POWER

PROVIDE 120 V JUNCTION BOX FOR RTU-1 CONTROL POWER

A. SOUND POWER LEVELS AT SCHEDULED PERFORMANCE, PER ARI 260.

		Н	EATIN	G WAT	ER COI	L							DIRECT	EXPAN	ISION C	OIL					F	FILTER SPE	С		EL	ECTRIC/	٩L		MANUFACTURER	NOTE
CFM	MB	H ED	B LDB	GPM	ROWS	APD	WPD	AREA	NO.	NO.	ARRANGE-	TOTAL	SENS.	EDB	EWB	LDB	LWB	ROWS	APD	REFRIG.	INITIAL	GAS	FINAL	٧	PHASE	FLA	MCA	OPD	AND MODEL	
		°F	°F			IN. W.G.	FT. HD.	SQ. FT.	COILS	CIRCUITS	MENT	MBH	MBH	°F	°F	°F	°F		IN. W.G.		SPEC/MERV	SPEC	SPEC/MERV							
3,000	426	6.4 45	70	28.9	-	0.01	8.6	90.2	3	1	-	738	715	75.4	61.5	57.8	55.8	-	0.27	410A	F-D/ MERV8A		F_F/MERV 13	460	3	262	275	300	ANNEX AIR ERP-1-40-EW30-EC-H-DX	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	F-D/ MERV8A		F-E/MERV 15	460	3	2	20	20	TEMPTROL PANELIZED	

TAG	PURPOSE	TYPE	MOUNTING	PATTERN	NC	ACCESSORIES	MANUFACTURER &	NOTES
					MAX		MODEL	
Α	DISPLACEMENT SUPPLY	PERFORATED	IN-WALL	1-WAY	25	-	PRICE DF1W	1
В	DISPLACEMENT SUPPLY	PERFORATED	LAY-IN/SURF.	1-WAY	25	-	PRICE DF1L	11
С	DISPLACEMENT SUPPLY	PERFORATED	SURFACE	1-WAY	25	-	PRICE DF1R	2, 3
D	FILTER RETURN GRILLE	LOUVERED	SURFACE	-	25	-	PRICE 96-L SERIES	10
Е	SUPPLY DIFFUSER	SQUARE	LAY-IN/SURF.	4-WAY	25	-	PRICE SCDA	5
F	DOOR TRNSFR GRILLE	LOUVERED	SURFACE	-	25	-	PRICE ATGH	6
G	RETURN GRILLE	LOUVERED	SURFACE	-	25	-	PRICE 530-L	
Н	RETURN GRILLE	PERFORATED	LAY-IN	-	25	-	PRICE PFRF	9
I	RETURN GRILLE	PERFORATED	SURFACE	-	25	-	PRICE PDDR	9
J	EXHAUST GRILLE	LOUVERED	SURFACE	-	25	-	PRICE 630-L	
K	SUPPLY DIFFUSER	LOUVERED	SURFACE	DBL. DEFL.	25	-	PRICE 620	
L	SUPPLY GRILLE	LOUVERED	SURFACE	-	25	-	PRICE 97	4
М	RETURN GRILLE	LOUVERED	SURFACE	-	25	-	PRICE 98	

- GENERAL NOTES: A ASSUMES 10Db ROOM ABSORPTION
- B SEE PLANS FOR SIZING INFO

WITH ARCHITECT

PERFORMANCE IS SPECIFIED AT 5870 FT.

C. NC LEVELS ARE REFERENCE ONLY

B. MINIMUM OCCUPIED CFM SHALL BE % UNLESS OTHERWISE NOTED. UNOCCUPIED CFM SHALL BE 0.

- C COORDINATE ANY COLOR CHOICE
- 1. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE APPROPRIATE WALL FRAMING FOR

G. MINIMUM ASHRAE 90.1 EFFICIENCY, AFUE OR THERMAL EFFICIENCY

H. EQUIPMENT WITH 208V NAMEPLATES SHALL HAVE MOTORS SUITABLE FOR

OPERATION AT 180 VOLTS OR PROVIDED 200V TO 208V TRANSFORMERS

UNDER 225,000 BTUH, OTHERWISE COMBUSTION EFFICIENCY

- 24" WIDTH DIFFUSER MODELS. PROVIDE REMOVABLE FACE.
- 3. FACTORY PAINT PER ARCHITECT. 4. PROVIDE WITH OBD
- 5. 24"x24" MODULE TYPICAL, COORDINATE WITH REFLECTED CEILING PLAN FOR MOUNTING TYPE.
- 6. COORDINATE WITH ARCHITECT FOR BORDER TYPE AND SECURITY DETAIL. 7. ALUMINUM EXHAUST GRILLE FOR HIGH MOISTURE AREAS. PROVIDE WITH ALUMINUM DAMPER
- AND STAINLESS STEEL ATTACHING HARDWARE.
- 8. COORDINATE WITH ARCHITECT FOR FINISH AND CONSTRUCTION OF COLUMN ENCLOSURE ABOVE DIFFUSER TO A FINISHED FLOOR HEIGHT OF 9'-6".
- 9. 24"x12" AND 24"x24" MODULE TYPICAL AS SHOWN UNLESS OTHERWISE NOTED ON PLANS.
- 10. PROVIDE WITH 1/4 TURN SCREWS ON FACE FOR SERVICE ACCESS, FILTER AND FILTER FRAME BEHIND GRILLE.
- 11. PROVIDE WITH MFG'S PLENUM.

										EAN	POV	VERE	ED V	ARIA	BLE	E AIF	NO	LUME UN	NIT S	CHE	EDU	ILE												
TAG	COOLING	INLET	OUTLET	APD			FAN						HE	ATING CO	OIL		PIPE	SOUND		DISC	CHARGI	E SOU	ND POW	ER			R4	DIATED	SOUN	D POW	ΞR		MANUFACTURER	NOTES
	CFM	SIZE	SIZE	IN. WC.	TYPE	MAX COOLING CFM	MAX CFM	ESP IN. WC.	MOTOR HP	VOLTS	PHASE	ROWS	EAT °F	LAT °F	MBH	GPM	SIZE	ATTENUATOR	125	250	500	1K	2K	4K	ROOM NC	125	250	500	1K	2K	4K	ROOM NC	& MODEL	
PVAV-1-1	3500	16"	48"x18"	0.5	SERIES	3500	4000	1.0	(2) 3/4	277	1	2	58	92	51.9	3.6	1"	-	84	79	79	78	76	75	25	78	77	70	66	64	62	25	PRICE FDC 7016	1, 2
PVAV-1-2	1200	14"	16"x15"	0.4	PARALLEL	1600	1400	1.0	1/2	277	1	2	58	92	17.8	1.2	3/4"	-	69	59	52	49	41	36	25	58	49	45	37	30	26	25	PRICE FDV 4014	1, 2
PVAV-1-3	2800	16"	48"x18"	0.5	SERIES	3200	4000	1.0	(2) 3/4	277	1	2	58	92	41.5	2.9	3/4"	-	78	72	74	73	71	68	25	74	71	68	61	57	54	25	PRICE FDC 7016	1, 2
PVAV-1-4	1275	14"	16"x15"	0.4	PARALLEL	1600	1400	1.0	1	277	1	2	58	92	18.9	1.3	3/4"	-	69	59	52	49	41	36	25	58	49	45	37	30	26	25	PRICE FDV 4014	1, 2
PVAV-1-5	500	8"	14"x12"	0.4	SERIES	560	700	1.0	1/2	277	1	2	58	92	7.4	0.5	1/2"	-	66	56	53	49	46	42	25	60	55	50	46	43	40	25	PRICE FDC 2008	1, 2
PVAV-1-6	1200	12"	16"x15"	0.4	SERIES	1600	2000	1.0	1	277	1	2	58	92	17.8	1.2	3/4"	-	76	70	65	66	61	59	25	71	64	55	52	47	43	25	PRICE FDC 4012	1, 2
PVAV-1-7	800	10"	14"x12"	0.4	SERIES	1120	1400	1.0	1	277	1	2	58	92	11.9	0.8	1/2"	-	70	64	63	62	58	54	25	59	58	52	51	47	42	25	PRICE FDC 3010	1, 2
PVAV-1-8	800	10"	14"x12"	0.4	SERIES	1120	1400	1.0	1	277	1	2	58	92	11.9	0.8	1/2"	-	70	64	63	62	58	54	25	59	58	52	51	47	42	25	PRICE FDC 3010	1, 2
PVAV-1-9	880	12"	14"x12"	0.4	PARALLEL	1120	1400	1.0	1/2	277	1	2	58	92	13.0	0.9	1/2"	-	66	56	53	47	43	35	25	56	46	42	37	28	26	25	PRICE FDV 3012	1, 2
PVAV-1-10	1030	12"	14"x12"	0.4	PARALLEL	1120	1400	1.0	1/2	277	1	2	58	92	15.3	1.1	1/2"	-	70	59	55	50	46	39	25	59	50	45	40	31	28	25	PRICE FDV 3012	1, 2
PVAV-1-11	1900	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	28.2	2.0	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
PVAV-1-12	1900	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	28.2	2.0	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
PVAV-2-1	1980	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	29.3	2.1	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
PVAV-2-2	125	6"	12"x10"	0.4	PARALLEL	320	400	1.0	1/3	277	1	2	58	92	1.9	0.1	1/2"	-	64	50	41	35	31	27	25	48	37	33	30	25	23	25	PRICE FDV 2006	1, 2
PVAV-2-3	900	10"	14"x12"	0.4	SERIES	1120	1400	1.0	1/2	277	1	2	58	92	13.3	0.9	1/2"	-	72	65	65	64	60	56	25	61	59	54	53	49	45	25	PRICE FDC 3010	1, 2
PVAV-2-4	1845	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	27.3	1.9	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
PVAV-2-5	2450	16"	24"x18"	0.4	PARALLEL	2600	3200	1.0	1	277	1	2	58	92	36.3	2.5	3/4"	-	65	57	54	49	47	42	25	56	49	48	41	38	34	25	PRICE FDV 6016	1, 2
PVAV-2-6	2600	16"	24"x18"	0.5	PARALLEL	2600	3200	1.0	1	277	1	2	58	92	38.5	2.7	3/4"	-	66	58	55	50	48	43	25	58	50	49	43	39	35	25	PRICE FDV 6016	1, 2

- A. HEATING CAPACITIES/GPM BASED ON 50% AIRFLOW, 30% PROPYLENE GLYCOL, 140 °F EWT, 110 °F LWT.
- B. PERFORMANCE IS SPECIFIED AT 5870 FT.
- C. MINIMUM OCCUPIED CFM SHALL BE 50% UNLESS OTHERWISE NOTED.
- UNOCCUPIED CFM SHALL BE 0. D. COIL DATA AND OUTLET DIMENSIONS ARE FOR GENERAL REFERENCE ONLY.
- REFER TO DETAILED VAV UNIT SCHEDULE FOR SPECIFIC TERMINAL AND COIL SIZES.
- E. MOTOR VOLTAGE SHALL BE AS LISTED ABOVE UNLESS NOTED OTHERWISE.

TAG	COOLING	INLET	OUTLET	APD			FAN						HE.	ATING C	OIL		PIPE	SOUND		DIS	CHARG	E SOU	ND POW	/ER			RA	DIATE	SOUNI	D POWE	ΞR		MANUFACTURER	NOTES
	CFM	SIZE	SIZE	IN. WC.	TYPE	MAX COOLING	MAX	ESP	MOTOR	VOLTS	PHASE	ROWS	EAT	LAT	MBH	GPM	SIZE	ATTENUATOR	125	250	500	1K	2K	4K	ROOM	125	250	500	1K	2K	4K	ROOM	& MODEL	
						CFM	CFM	IN. WC.	HP				°F	°F											NC							NC		
FPVAV-1-1	3500	16"	48"x18"	0.5	SERIES	3500	4000	1.0	(2) 3/4	277	1	2	58	92	51.9	3.6	1"	-	84	79	79	78	76	75	25	78	77	70	66	64	62	25	PRICE FDC 7016	1, 2
FPVAV-1-2	1200	14"	16"x15"	0.4	PARALLEL	1600	1400	1.0	1/2	277	1	2	58	92	17.8	1.2	3/4"	-	69	59	52	49	41	36	25	58	49	45	37	30	26	25	PRICE FDV 4014	1, 2
FPVAV-1-3	2800	16"	48"x18"	0.5	SERIES	3200	4000	1.0	(2) 3/4	277	1	2	58	92	41.5	2.9	3/4"	-	78	72	74	73	71	68	25	74	71	68	61	57	54	25	PRICE FDC 7016	1, 2
FPVAV-1-4	1275	14"	16"x15"	0.4	PARALLEL	1600	1400	1.0	1	277	1	2	58	92	18.9	1.3	3/4"	-	69	59	52	49	41	36	25	58	49	45	37	30	26	25	PRICE FDV 4014	1, 2
FPVAV-1-5	500	8"	14"x12"	0.4	SERIES	560	700	1.0	1/2	277	1	2	58	92	7.4	0.5	1/2"	-	66	56	53	49	46	42	25	60	55	50	46	43	40	25	PRICE FDC 2008	1, 2
FPVAV-1-6	1200	12"	16"x15"	0.4	SERIES	1600	2000	1.0	1	277	1	2	58	92	17.8	1.2	3/4"	-	76	70	65	66	61	59	25	71	64	55	52	47	43	25	PRICE FDC 4012	1, 2
FPVAV-1-7	800	10"	14"x12"	0.4	SERIES	1120	1400	1.0	1	277	1	2	58	92	11.9	0.8	1/2"	-	70	64	63	62	58	54	25	59	58	52	51	47	42	25	PRICE FDC 3010	1, 2
FPVAV-1-8	800	10"	14"x12"	0.4	SERIES	1120	1400	1.0	1	277	1	2	58	92	11.9	0.8	1/2"	-	70	64	63	62	58	54	25	59	58	52	51	47	42	25	PRICE FDC 3010	1, 2
FPVAV-1-9	880	12"	14"x12"	0.4	PARALLEL	1120	1400	1.0	1/2	277	1	2	58	92	13.0	0.9	1/2"	-	66	56	53	47	43	35	25	56	46	42	37	28	26	25	PRICE FDV 3012	1, 2
FPVAV-1-10	1030	12"	14"x12"	0.4	PARALLEL	1120	1400	1.0	1/2	277	1	2	58	92	15.3	1.1	1/2"	-	70	59	55	50	46	39	25	59	50	45	40	31	28	25	PRICE FDV 3012	1, 2
FPVAV-1-11	1900	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	28.2	2.0	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
FPVAV-1-12	1900	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	28.2	2.0	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
FPVAV-2-1	1980	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	29.3	2.1	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
FPVAV-2-2	125	6"	12"x10"	0.4	PARALLEL	320	400	1.0	1/3	277	1	2	58	92	1.9	0.1	1/2"	-	64	50	41	35	31	27	25	48	37	33	30	25	23	25	PRICE FDV 2006	1, 2
FPVAV-2-3	900	10"	14"x12"	0.4	SERIES	1120	1400	1.0	1/2	277	1	2	58	92	13.3	0.9	1/2"	-	72	65	65	64	60	56	25	61	59	54	53	49	45	25	PRICE FDC 3010	1, 2
FPVAV-2-4	1845	16"	20"x18"	0.5	PARALLEL	1920	2400	1.0	1	277	1	2	58	92	27.3	1.9	3/4"	-	67	59	54	52	47	43	25	77	59	52	50	44	38	25	PRICE FDV 5016	1, 2
FPVAV-2-5	2450	16"	24"x18"	0.4	PARALLEL	2600	3200	1.0	1	277	1	2	58	92	36.3	2.5	3/4"	-	65	57	54	49	47	42	25	56	49	48	41	38	34	25	PRICE FDV 6016	1, 2
FPVAV-2-6	2600	16"	24"x18"	0.5	PARALLEL	2600	3200	1.0	1	277	1	2	58	92	38.5	2.7	3/4"	-	66	58	55	50	48	43	25	58	50	49	43	39	35	25	PRICE FDV 6016	1, 2

JIES:		
1	١	DUCT SIZES SHALL BE THE SAME AS BOX INLET/OUTLET SIZES
		UNLESS OTHERWISE NOTED ON THE DRAWINGS
2	2	PROVIDE FAN POWERED TERMINAL UNIT WITH ECM MOTOR

	MOTOR VOLIMOL OF MEL BL 710 LIGHLD 7100 VL
F.	SOUND DATA FOR SCHEDULED FLOW AND APD.

					F	AN SCH	IEDU	LE				
TAG	SERVICE	TYPE	CFM	ESP	FAN	DRIVE	E	LECTRIC	AL	WEIGHT	MANUFACTURER &	NOTES
					RPM		HP	V	PH	LB.	MODEL	
EF-1	1ST SOUTH RRs & JAN	UPBLAST	300	0.50		DIRECT	1/6	115	1	41	GREENHECK CUE-085-VG	1, 2, 6
EF-2	2ND ELECTRICAL 204	CEILING	400	0.35		DIRECT	1/6	115	1	49	GREENHECK SQ-90-VG	2, 3, 6
EF-3	2ND IT 203	CEILING	400	0.55		DIRECT	1/2	115	1	57	GREENHECK SQ-90-VG	2, 4, 6
EF-4	1ST ELECTRICAL 134	INLINE	1,000	0.40		DIRECT	1/2	277	1	57	GREENHECK SQ-120-VG	2, 4, 6
EF-5	LAUNDRY/DRYER	ANGLE	700	0.40		DIRECT	1/2	115	1	70	ENERVEX BESB 250	1, 5, 7
GENER/	AL NOTES:							NOTES:				
A.	PERFORMANCE IS AT 583	70 FT. ASL						1.	ROOF	CURB		
B.	FANS MAY CONTAIN RES	ERVE CAPACITY, B	ALANCE TO	PLAN C	FM.			2.	MOTO	RIZED DAMI	PER BY TEMPERATURE CONT	ROL SECTION
C.	EQUIPMENT WITH 208V N	IAMEPLATES SHALL	HAVE MO	TORS SU	ITABLE F	OR		3.	PROV	IDE WITH FA	CTORY VIBRATION ISOLATOR:	S
	OPERATION AT 180 VOLT	S OR PROVIDED WI	TH 200V T	O 208V TF	RANSFOR	RMERS		4.	PROV	IDE WITH FA	CTORY INLET GUARD AND VIE	BRATION ISOLATORS
								5.	INTEF	RLOCK W/ DR	YER OPERATION. COORDINAT	E W/ ELECTRICAL
								6.	ECM I	MOTOR		
											SCREEN ON THIS FAN'S LOUVE	\mathbb{R}
								_(

2

UNLESS OTHERWISE NOTED ON THE DRAWINGS

2. PROVIDE LINED DUCT 5 DUCT WIDTHS LONG PRIOR TO FIRST TAKE-OFF

TAG	PURPOSE	DESCRIPTION	CFM	AIRFOILS	DIAMETER	SOUND LEVEL	EL	.ECTRIC	٩L	RPM	CONTROL	FLA	ODP	WEIGHT	MANUFACTURER &	NOTES
							HP	V	PH					LB.	MODEL	
AP-1	STAIRWELL	VENTURI FAN	700		-	<50 Dba		115	1			0.4	10	14	AIR PEAR 45 PSP4	
BAF-1	SMALL GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-2	SMALL GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-3	SMALL GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-4	SMALL GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-5	MEDIUM GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-6	MEDIUM GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-7	MEDIUM GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-8	MEDIUM GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-9	MEDIUM GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-10	MEDIUM GROUP FITNESS	HAIKU FAN			60"			115	1		WIRELESS WALL CONTROL	0.4		16	BIG FANS HAIKU	A,B,C,D,E,G,H,I,J,K
BAF-11	TRX	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-12	STRENGTH	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-13	STRENGTH	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-14	OPEN AREA	10' POWERFOIL X	74,100	10.00	120"	<55 Dba	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-15	CLIMBING WALL	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-16	GYM	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-17	GYM	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-18	GYM	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K
BAF-19	GYM	10' POWERFOIL X	74,100	10.00	120"	<55 dBA	1.0	460	3	103	ONBOARD VSD	1.7 A	10	325	BIG FANS PX-10	A,B,C,D,E,G,H,I,J,K

						VAR	RIABI	LE A	IR V	OLU	ME UI	NIT S	CHE	EDUL	.E					
TAG	MAX.	INLET	OUTLET	APD			DISCHAF	RGE SOU	ND POWE	R				RADIAT	ED SOUN	D POWE	₹		MANUFACTURER	NOTES
	COOLING CFM	SIZE	SIZE	IN. WC.	125	250	500	1K	2K	4K	ROOM NC	125	250	500	1K	2K	4K	ROOM NC	& MODEL	
Α	150	4"	12"x8"	0.04	68	67	69	67	60	46	25	69	63	59	56	60	64	25	PRICE SDV	1, 2
В	400	6"	12"x8"	0.2	76	76	79	78	72	59	25	69	63	59	56	60	64	25	PRICE SDV	1, 2
С	700	8"	12"x10"	0.2	76	73	68	66	63	59	25	69	63	59	56	60	64	25	PRICE SDV	1, 2
D	1000	10"	14"x12"	0.2	76	73	68	66	63	59	25	69	63	59	56	60	64	25	PRICE SDV	1, 2
Е	1500	12"	16"x16"	0.2	78	78	81	79	72	60	25	69	63	59	56	60	64	25	PRICE SDV	1, 2
F	2100	14"	20"x18"	0.2	78	78	81	79	72	60	25	69	63	59	56	60	64	25	PRICE SDV	1, 2
G	3200	16	24"x18"	0.2	78	78	81	79	72	60	25	69	63	59	56	60	64	25	PRICE SDV	1, 2

A. HEATING CAPACITIES/GPM BASED ON 100% AIRFLOW, 30% PROPYLENE GLYCOL, 140 °F EWT, 110 °F LWT, 100% AIR FLOW RATE.

1. DUCT SIZES SHALL BE THE SAME AS BOX INLET/OUTLET SIZES,

A. VERIFY EXTENSION TUBE LENGTH AND MOUNTING BRACKET WITH MANUFACTURER PRIOR TO ORDERING.

B. SUPPLY WITH POWERFOIL AIRFOILS AND WINGLETS. C. SUPPLY WITH SMART SENSE 365 WALL MOUNTED CONTROL PAD AND TEMPERATURE OPTIMIZATION SENSORS FULLY INTEGRATED WITH THE ONBOARD CONTROL AND CONNECTED VIA CAT5 CABLE.

D SUPPLY WITH C FACED MOTOR, TWO FASTENERS PER BLADE, SAFETY BETAINER CLIPS, SAFETY CABLE AND HERMETICALLY SEALED GEARBOX (FOR POOL APLICATION) E. EXTRUDED ALUMINUM BLADES.

- P. PROVIDE WHITH 15 DES WHOLE IS FOR ABRIZONTAL AIR DISTRIBUTION FOR ADDITIONAL GOODING G. LIFETIME WARRANTY ON AIRFOIL BLADES AND HUB, 5 YEARS ON MOTOR, CONTROLLER AND GEAR BOX.
 - H. FAN VOLTAGE TO BE CONFIRMED PRIOR TO ORDERING, USE STRANDED WIRE, NOT SOLID
 - I. ACTUAL DUTY IN POOL IS 5% OF MAXIMUM CFM. ESTIMSATED OPERATING HP IS APPROX. 0.5 HP J. PROVIDE "BIG FAN PACKAGE"
- K. COORDINATE ANY CUSTOM COLOR REQUIREMENTS WITH OWNER
- MIN. FAN PLACEMENT REQUIREMENTS: 1 BOTTOM OF FAN SHOULD BE AT LEAST 10' AFF
 - 2 FAN SHOULD BE AT LEAST 2' AWAY, IN ANY DIRECTION, FROM ANY POSSIBLE OBSTRUCTIONS
 - 3 FANS SHOULD NOT BE MOUNTED WITHIN TWO FAN DIAMETERS OF ANY LARGE AIR MOVING EQUIPMENT

DAVIS **PARTNERSHIP**

Denver | 2301 Blake Street, Suite 100 | Denver, CO 80205 | 303.861.8555

ARCHITECTS

engineering a greener future MECHANICAL, ELECTRICAL, INDUSTRIAL + SUSTAINABLE DESIGN 12600 West Colfax Avenue Lakewood Colorado 80215 Phone 303.239.0909 Fax 303.235.0218 www.rmhgroup.com RMH Group project number

Consultant

Issue/Revisions Date No. ADDENDUM 1 11/20/15 1

ADDENDUM 2

Project Information

Sheet Information

Sheet Title: MECHANICAL SCHEDULES

CONSTRUCTION Nov. 9, 2015 DOCUMENTS Sheet Number:

			IMC 2012 VENT	TILATION SCHEE	DULE			
ZONE/ROOM	OCCUPANCY CATEGORY	AREA SF	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	AREA OUTDOOR AIR RATE (CFM/SF)	PEOPLE	SUPPLY (CFM)	OUTDOOR AIR (OA) REQUIRED (CFM)	SUPPLIED (O/ (30% OA NEW A 30% EXISTIN AHU)
ENTRY LOBBY 100	MAIN ENTRY LOBBY	914	5	0.06	8	1,645	95	494
GROUP ROOM 102	OFFICE	133	5	0.06	8	500	48	150
TRIP PLANNING 103	OFFICE	603	5	0.06	18	1,200	126	360
ACCESS CONTROL 105	OFFICE	716	8	0.06	2	450	58	135
WORK ROOM 106	OFFICE	166	5	0.06	2	130	20	39
OFFICE MGR 107	OFFICE	105	5	0.06	2	100	16	30
PROGRAM STAFF 108	OFFICE	131	5	0.06	2	110	18	33
DIRECTOR 109	OFFICE	168	5	0.06	2	160	20	48
SM. MTG. RM. 110	CONFERENCE/MEETING	550	5	0.06	12	1,200	93	360
TOILET 111	REST ROOM	56	0	0.06	1	110	3	33
TOILET 112	REST ROOM	56	0	0.06	1	110	3	33
STORAGE 114	STORAGE	112	0	0.12	0	75	13	23
LG. MTG. RM. 115	CONFERENCE/MEETING	786	5	0.06	18	1,200	137	360
EAST HALL 120	CORRIDOR	1317	0	0.06	12	2,800	79	840
EAST ENTRY	CORRIDOR	295	0	0.06	4	700	18	210
RECREATION LOUNGE 130	MULTIUSE/ASSEMBLY	798	5	0.06	10	800	98	240
LIMBING/BOULDERING 131	HEALTH CLUB/WEIGHT RM	723	20	0.06	9	1,600	223	480
IT 133	ELECTRICAL EQUIPMENT	36	0	0.06	0	0	2	0
ELEC. 134	ELECTRICAL EQUIPMENT	98	0	0.06	0	1,000	6	300
WOMEN'S LR 135	REST ROOM	703	0	0.06	12	800	42	240
LOCKERS 137	REST ROOM	143	0	0.06	4	150	9	45
FAMILY LR 138	REST ROOM	85	0	0.06	2	150	5	45
FAMILY LR 139	REST ROOM	85	0	0.06	2	150	5	45
MEN'S LR 140	REST ROOM	729	0	0.06	2	800	44	240
HALLWAY 150	CORRIDOR	653	0	0.06	2	220	39	66
SM. FITNESS STUDIO 151	HEALTH CLUB/AEROBICS	952	20	0.06	20	1,760	457	528
STUDIO STORAGE 152	STORAGE	321	0	0.12	0	150	39	45
MED. GROUP FITNESS 153	HEALTH CLUB/AEROBICS	1679	20	0.06	44	3,780	981	1134
TRASH/STORAGE 160	STORAGE	314	0	0.12	0	180	38	54
LAUNDRY 163	LAUNDRY	146	5	0.12	2	180	28	54
GYM STORAGE 164	STORAGE	214	0	0.12	0	85	26	26
BREAK 165	BREAK ROOM	119	5	0.12	4	280	34	84
CLIMBING STORAGE 166	STORAGE	84	0	0.12	0	75	10	23
GYM 180	GYM	10300	0	0.3	206	12,240	3090	3672
CARDIO/STRETCH 202	HEALTH CLUB/AEROBICS	1321	20	0.06	11	2,000	299	600
IT 203	ELECTRICAL EQUIPMENT	30	0	0.06	0	400	2	120
ELEC. 204	ELECTRICAL EQUIPMENT	39	0	0.06	0	400	2	120
CARDIO COORD. 205	OFFICE	182	5	0.06	2	125	21	38
MEN'S 207	REST ROOM	166	0	0.06	5	200	10	60
WOMEN'S 208	REST ROOM	166	0	0.06	5	200	10	60
EQUIP. STORAGE 209	STORAGE	149	0	0.12	0	110	18	33
UNCTIONAL TRAINING 211	HEALTH CLUB/AEROBICS	1320	20	0.06	14	1,845	359	554
CARIO EQUIPMENT 215	HEALTH CLUB/AEROBICS	2380	20	0.06	42	5,050	983	1515
FREE WEIGHTS 220	HEALTH CLUB/WEIGHT RM	1205	20	0.06	15	1,300	372	390
CONFERENCE 1571	CONFERENCE/MEETING	1058	5	0.06	30	1,000	213	300
CONFERENCE 1572	CONFERENCE/MEETING	1035	5	0.06	30	1,000	212	300
CATERING 1573	COFFEE	149	5	0.06	2	150	19	45
MEETING ROOM 1576	CONFERENCE/MEETING	453.25	5	0.06	18	600	117	180
Ez = 1 (OVERHEAD CEILING	G SUPPLY - COOL AIR)	<u> </u>	1	INITIAL O.A. = CFM Vbz	1		8561	14781
				Ez			0.8	0.8
				TOTAL O.A. =CFM Voz			6849	11825

				CA	ABIN	ET/U	NIT	HEA	TER	SCH	EDU	LE		
TAG	TYPE	HTG	GPM	WPD	CFM	RPM			ELECT	ΓRICAL			MANUFACTURER	NOTES
		MBH		FT. HD.			HP	V	PH	FLA	MCA	OPD	& MODEL	
CUH-1	CABINET	15.3	1.3	-	335	1050	1/15	115	1	1	-	15	VULCAN F, SIZE 03	1
UH-1	HORIZONTAL	4.6	0.9	1.00	210	1350	16 W	115	1	1	-	15	VULCAN HV-108A	1
UH-2	HORIZONTAL	5.1	-	-	210	1350	-	115	1	12.5	-	20	QMARK CWH3150F	2, 3
UH-3	HORIZONTAL	5.1	-	-	210	1350	-	115	1	12.5	-	20	QMARK CWH3150F	2, 3
GENERAL	NOTES:										NOTES:			

A. PERFORMANCE IS AT SEA LEVEL CONDITIONS B. HEATED FLUID IS 30% PROPYLENE GLYCOL AT 140°F EWT AND 100°F LWT 1. PROVIDE UNIT WITH WALL MOUNTED THERMOSTAT

C. EQUIPMENT WITH 208V NAMEPLATES SHALL HAVE MOTORS SUITABLE FOR OPERATION AT 180 VOLTS OR PROVIDED WITH 200V TO 208V TRANSFORMERS

ELECTRIC HEAT 3. UNIT MOUNTED THERMOSTAT AND WALL MOUNTING

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	BRACKET

				PUN	AP S	SCH	EDL	JLE				
TAG	PURPOSE	TYPE	GPM	FEET	RPM	EFF	VFD	EL	.ECTRIC	AL	MANUFACTURER &	NOTES
				HEAD				HP	V	PH	MODEL	
HWP-1	HEATING HOT WATER	END SUCTION	102	50.0	-	-	Υ	5	460	3	ARMSTRONG SERIES 4030	1
HWP-2	HEATING HOT WATER	END SUCTION	102	50.0	-	-	Υ	5	460	3	ARMSTRONG SERIES 4030	1
RHP-1	RADIANT SLAB, ENT. LBY. 100	INLINE	2.0	10.5	-	-	-	-	115	1	GRUNFOS UPS	1, 2
RHP-2	RADIANT SLAB, TRIP PLN. 103	INLINE	1.0	8.0	-	-	-	-	115	1	GRUNFOS UPS	1, 2
RHP-2	RADIANT SLAB, FREE ZN. 104	INLINE	1.5	9.5	-	-	-	-	115	1	GRUNFOS UPS	1, 2
)										
	HWP-1 HWP-2 RHP-1 RHP-2	HWP-1 HEATING HOT WATER HWP-2 HEATING HOT WATER RHP-1 RADIANT SLAB, ENT. LBY. 100 RHP-2 RADIANT SLAB, TRIP PLN. 103	HWP-1 HEATING HOT WATER END SUCTION HWP-2 HEATING HOT WATER END SUCTION RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE	TAG PURPOSE TYPE GPM HWP-1 HEATING HOT WATER END SUCTION 102 HWP-2 HEATING HOT WATER END SUCTION 102 RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0	TAG PURPOSE TYPE GPM FEET HEAD HWP-1 HEATING HOT WATER END SUCTION 102 50.0 HWP-2 HEATING HOT WATER END SUCTION 102 50.0 RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0	TAG PURPOSE TYPE GPM FEET RPM HEAD HWP-1 HEATING HOT WATER END SUCTION 102 50.0 - HWP-2 HEATING HOT WATER END SUCTION 102 50.0 - RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 - RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0 -	TAG PURPOSE TYPE GPM HEAD FEET HEAD RPM HEAD EFF HEAD HWP-1 HEATING HOT WATER END SUCTION 102 50.0 - - HWP-2 HEATING HOT WATER END SUCTION 102 50.0 - - RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 - - RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0 - -	TAG PURPOSE TYPE GPM HEAD FEET HEAD RPM HEAD EFF VFD HEAD HWP-1 HEATING HOT WATER END SUCTION 102 50.0 - - Y HWP-2 HEATING HOT WATER END SUCTION 102 50.0 - - Y RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 - - - RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0 - - -	TAG PURPOSE TYPE GPM FEET HEAD RPM EFF HP VFD EL HWP-1 HEATING HOT WATER END SUCTION 102 50.0 - - - Y 5 HWP-2 HEATING HOT WATER END SUCTION 102 50.0 - - Y 5 RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 - - - - - RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0 - - - - -	TAG PURPOSE TYPE GPM FEET HEAD RPM EFF HEAD VFD HEAD ELECTRICE HWP-1 HEATING HOT WATER END SUCTION 102 50.0 - - - Y 5 460 HWP-2 HEATING HOT WATER END SUCTION 102 50.0 - - Y 5 460 RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 - - - - - 115 RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0 - - - - - - 115	TAG PURPOSE TYPE GPM FEET HEAD RPM EFF VFD ELECTRICAL HWP-1 HEATING HOT WATER END SUCTION 102 50.0 - - Y 5 460 3 HWP-2 HEATING HOT WATER END SUCTION 102 50.0 - - Y 5 460 3 RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 - - - - - 115 1 RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0 - - - - - 115 1	HWP-1 HEATING HOT WATER END SUCTION 102 50.0 - - Y 5 460 3 ARMSTRONG SERIES 4030 HWP-2 HEATING HOT WATER END SUCTION 102 50.0 - - Y 5 460 3 ARMSTRONG SERIES 4030 RHP-1 RADIANT SLAB, ENT. LBY. 100 INLINE 2.0 10.5 - - - - - 115 1 GRUNFOS UPS RHP-2 RADIANT SLAB, TRIP PLN. 103 INLINE 1.0 8.0 - - - - - 115 1 GRUNFOS UPS

1. FLUID IS 30% PROPYLENE GLYCOL @ 110°F

2. MULTI-SPEED PUMP

			EXPAN	ISION TAN	IK SCHE	DULE		
			MIN. TANK VOL.	ACCEPTANCE	PRECHARGE	DIMENSIONS	MANUFACTURER	
TAG	PURPOSE	TYPE	(GALLONS)	VOLUME (GAL.)	(PSI)	(DIA. x HT.)	AND MODEL	NOTES
ET-1	HEATING WATER	BLADDER	33	13	20	24"X39"	AMTROL EXTROL 200-L	
ET-2	DOMESTIC WATER	BLADDER	11	3	20	12"x26"	AMTROL EXTROL AX-20V	
GENERAL	NOTES:							
A.	ALL TANKS SHALL B	E ASME STAMPI	ΞD					

						C	OIL	SCI	HED	ULE				
TAG	SIZE	CFM	TOTAL	SENS.	EDB	EWB	LDB	LWB	GPM	ROWS	APD	WPD	MANUFACTURER	NOTES
			MBH	MBH	°F	°F	°F	°F			IN. WC.	FT	& MODEL	
HC-1	60"x57"	9,850	-	377	58	-	100.8	-	39.6	3	0.11	6.1	TEMTROL 5WC-8-57x60x3-6 AL	1
ENERAL I	NOTES:										NOTES:			
Α.	. PERFORMANCE I	S AT SITE (CONDITIO	NS							1.	APD	IS 0.16" AT FULL COOLING FLOW OF 12,2	250 CFM.

SYM.	PLUMBING FIXTURE SCHEDULE DESCRIPTION		CONNECT	ION SIZES'	+
		W	V	C	Н
DET-1	DOMESTIC HOT WATER EXPANSION TANK - AMTROL #ST-452-C. 211 GALLON TOTAL VOLUME. 211 GALLON MAXIMUM ACCEPTANCE VOLUME. ASME RATED, 90" TALL X 30" Ø				
DF-1	DRINKING FOUNTAIN, ELKAY LZSTLDDWSSK. ADA COMPLIANT DUAL HIGH/LOW BUBBLERS WITH SENSOR OPERATED BOTTLE FILLER. NON-REFRIGERATED, NON-FILTERED, SURFACE MOUNTED WITH HEAVY DUTY STATINLESS STEEL SKIRT. 120V, 1Ø.				
DF-2	DRINKING FOUNTAIN, ELKAY LZSTLDDWSSK. ADA COMPLIANT DUAL HIGH/LOW BUBBLERS WITH SENSOR OPERATED BOTTLE FILLER. NON-REFRIGERATED, NON-FILTERED, SURFACE MOUNTED WITH HEAVY DUTY STATINLESS STEEL SKIRT. 120V, 1Ø.				
DHWCP-1	DOMESTIC HOT WATER CIRCULATING PUMP - ARMSTRONG #E9.2B. 16 GPM AT 25 FT. HD. BRONZE FITTED FOR OPEN SYSTEM SERVICE. 115V, 1Ø, 1/6 HP, 3350 RPM.				
DSN-1	DOWNSPOUT NOZZLE - JOSAM 25010, ROUGH NIKALOY FINISH, WALL FLANGE, SIZE AS NOTED ON THE DRAWINGS.				
FD-1	FLOOR DRAIN (FINISHED AREAS) - JOSAM 30000-A, COATED CAST IRON FLOOR DRAIN, TWO PIECE BODY, DOUBLE DRAINAGE FLANGE, BOTTOM NO-HUB OUTLET CONNECTION, ADJUSTABLE SATIN BRONZE STRAINER, VANDAL PROOF SCREWS. 1/2" TRAP PRIMER TAP FOR FLOOR DRAINS IN TOILET ROOMS. ALL OTHER FD-1 DRAINS ARE TO HAVE SURE SEAL TRAP GUARDS.	PLAN	-	-	-
FD-2	FLOOR DRAIN (UNFINISHED AREAS)- JOSAM 35130, COATED CAST TWO PIECE IRON BODY, DOUBLE DRAINAGE FLANGE, FLASHING FLANGE, SEEPAGE SLOTS, BOTTOM NO-HUB OUTLET CONNECTION, 9" MEDIUM-DUTY SECURED GRATE, REMOVABLE SEDIMENT BUCKET. PROVIDE SURE SEAL TRAP GUARD.	PLAN	-	-	-
FS-1	FLOOR SINK - JOSAM 49320A, 12" X 6" DEEP CAST IRON BODY WITH ACID RESISTANT INTERIOR, DOUBLE DRAINAGE FLANGE, DOME STRAINER, WITH NIKALOY HALF GRATE AS REQUIRED FOR APPLICATION, NO- HUB CONNECTION.	PLAN	-	-	-
GD-1	GARBAGE DISPOSER, IN-SINK-ERATOR EVOLUTION PRO-ESSENTIAL, CONTINUOUS FEED, STAINLESS STEEL GRINDING ELEMENTS AND SWIVEL LUGS, 3/4 HP, 8.1 AMPS, 115 V, 1 PH.	1-1/2"	-	-	-
HB-1	HOSE BIBB, WOODFORD #24. 3/4" HOSE END AND VACUUM BREAKER. METAL WHEEL HANDLE.				
HB-2	HOSE BIBB, WOODFORD #MB24. 3/4" HOSE END AND VACUUM BREAKER. FULLY RECESSED COMPOSITE BOX WITH STAINLESS STEEL COVER AND CYLINDER KEYED DOOR.				
L-1	LAVATORY, KOHLER #K2210. ADA COMPLIANT, UNDER COUNTER MOUNT, SELF-RIMMING, WHITE VITREOUS CHINA, 17" x 14" OVAL, WITH OVERFLOW. CHROME PLATED ALL BRASS 1-1/4" P-TRAP, SUPPLY AND WASTE FITTINGS. ADA COMPLIANT OFFSET TAILPIECE, GRID STRAINER. CHICAGO FAUCET #116.201.AB.1 BATTERY OPERATED SENSOR FAUCET. 0.5 GPM VANDAL PROOF SPRAY, ADJUSTABLE TO 5 SECOND RUN TIME, ANSI 61. PROVIDE WILKINS #ZW3870XLT THERMOSTATIC MIXING VALVE, 0.5 GPM, ASSE 1070, NSF 61 FOR INDIVIDUAL LAVATORIES AND WATTS #LFMMV ASSE 1070, NSF 61 FOR LAVATORIES IN GROUPS. PROVIDE TRUBRO ADA INSULATION KIT.	1-1/4"	1-1/4"	1/2"	1/2"
L-2	LAVATORY, KOHLER #2031. ADA COMPLIANT, WALL HUNG WITH FLOOR MOUNTED CARRIER, WHITE VITREOUS CHINA 21"x18", SINGLE HOLE. CHROME PLATED ALL BRASS 1-1/4" P-TRAP, SUPPLY AND WASTE FITTINGS. ADA COMPLIANT OFFSET TAIL PIECE, GRID STRAINER. CHICAGO FAUCET #116.201.AB.1 BATTERY OPERATED SENSOR FAUCET, 0.5 GPM VANDAL PROOF SPRAY, ADJUSTABLE TO 5 SECOND RUN TIME, ANSI 61. PROVIDE WILKINS #ZW3870XLT THERMOSTATIC MIXING VALVE, 0.5 GPM, ASSE 1070, NSF 61 FOR INDIVIDUAL LAVATORIES AND WATTS #LFMMV ASSE 1070, NSF 61 FOR LAVATORIES IN GROUPS. PROVIDE TRUBRO ADA INSULATION KIT.	1-1/4"	1-1/4"	1/2"	1/2"
MSB-1	MOP BASIN, FIAT, TERRAZZO TSB 100, 24" X 24" X 12" COMBINATION DOME STRAINER, STAINLESS STEEL RIM GUARDS ALL SIDES. FAUCET- CHICAGO #445-897 SRCXKCP, CHROME PLATED WITH LEVER HANDLES, INTEGRAL STOPS, VACUUM BREAKER, WALL BRACE, PAIL HOOK, 3/4" HOSE THREAD ON SPOUT AND INTEGRAL SHUT-OFF AND CHECK STOPS, MOUNT AT 36"AFF. PROVIDE STAINLESS STEEL WALL GUARDS ON ALL EXPOSED WALLS.	2"	1-1/4"	1/2"	1/2"
OD-1	ROOF OVERFLOW DRAIN, JOSAM #21500-22-16. COATED CAST IRON DRAIN, LARGE CAST IRON LOCKING DOME STRAINER, CLAMP RING WITH GRAVEL STOP. ADJUSTABLE HEIGHT TOP, LARGE SUMP WITH ANCHOR FLANGE. BOTTOM OUTLET, INTERNAL 2" TO 6" RAISED WEIR.				
RD-1	ROOF DRAIN, JOSAM #21500-22. COATED CAST IRON DRAIN, LARGE CAST IRON LOCKING DOME STRAINER, CLAMP RING WITH GRAVEL STOP. ADJUSTABLE HEIGHT TOP, LARGE SUMP WITH ANCHOR FLANGE. BOTTOM OUTLET.				
RD-2	DECK DRAIN. JOSAM MODEL 24200 -1-20-VP. LARGE SUMP, ROUND HEEL PROOF GRATE, CLAMP RING, FOR DUAL LEVEL DRAINAGE DECKS. BOTTOM OUTLET.	2"			
S-1	SINK - ELKAY #LRAD2222, 18 GAUGE STAINLESS STEEL, SINGLE COMPARTMENT, SELF RIMMING. 19"x16"x6-1/2" DEEP BOWL, 2 HOLE PUNCH. ADA COMPLIANT, FULLY UNDERCOATED. DELTA #711 HDF SINGLE HANDLE FAUCET WITH 10" SWING SPOUT WITH 5-1/2" REACH, 1.5 GPM. PROVIDE WITH CRUMB CUP STRAINER, CHROME PLATED ALL BRASS WASTE TRIM, STOPS. PROVIDE WILKINS #ZW3870XLT THERMOSTATIC MIXING VALVE, ASSE 1070, NSF 61. PROVIDE WITH DISPOSER GD-1.				
S-2	LAUNDRY SINK, FIAT FL-1. FLOOR MOUNTED WITH LEGS, 20"x17"x13" DEEP BOWL. 8" FAUCET PUNCH ON BACKSPLASH. CHICAGO #510-GC613ALCP TWO HANDLE FAUCET WITH SWING SPOUT, HAND SPRAY AND DIVERTER, INTEGRAL INLET CHECKS, WALL MOUNTING BRACKET. PROVIDE PRESSURE TYPE VACUUM BREAKERS ON HOT AND COLD WATER SUPPLIES. PROVIDE WILKINS #ZW3870XLT THERMOSTATIC MIXING VALVE, ASSE 1070, NSF 61. PROVIDE FLEX SUPPLIES WITH STOPS AND ALL BRASS CHROME PLATED WASTE TRIM.				
S-3	KITCHEN SINK,, ADA COMPLIANT, ELKAY MODEL NO. LRADQ-3322, TWO COMPARTMENT, 18 GAUGE TYPE 304 STAINLESS STEEL, 33" X 22" O.D. 6-1/2" DEEP BOWL, SELF RIMMING, STAINLESS STEEL BASKET STRAINER. 1 1/2" 17 GAUGE CHROME PLATED P-TRAP WITH CLEAN-OUT, CHROME PLATED FLEXIBLE ANGLE SUPPLIES WITH KEYED STOPS. FAUCET, ZURN MODEL Z871G 3, 8"CENTERS, DECK MOUNTED FITTING, CAST SWING SPOUT, AERATOR, DOMED LEVER HANDLES, CERAMIC DISC CARTRIDGES, WITH HAND SPRAY. PROVIDE WITH GD-1. ALL COMPONENTS MUST COMPLY WITH ADA.				
SA	WATER HAMMER SHOCK ARRESTOR, JOSAM #75000-S. PISTON TYPE WITH WROUGHT COPPER SHELL, ASSE #WH-2010.				
SH-1	SHOWER, POWERS #e707G-10000. HYDROGUARD SERIES. COMBINATION TEMPERATURE & PRESSURE TEMPERING VALVE. ASSE 1016. ADJUSTABLE HIGH LIMIT STOP, SELF CONTAINED CARTRIDGE, INTEGRAL CHECKS. ALL PARTS OF THE VALVE ARE ACCESSIBLE FROM THE FRONT. PROVIDE WITH ARM AND FLANGE LESS HEAD. MODIFY WITH BRICOR #B100 SUPER MAX SHOWER HEAD. 1.25 GPM AT 50 PSI.				
SH-2	SHOWER, POWERS #e707G0010W. ADA COMPLIANT, HYDROGUARD SERIES. COMBINATION TEMPERATURE & PRESSURE TEMPERING VALVE. ASSE 1016. ADJUSTABLE HIGH LIMIT STOP, SELF CONTAINED CARTRIDGE, INTEGRAL CHECKS. ALL PARTS OF THE VALVE ARE ACCESSIBLE FROM THE FRONT. PROVIDE WITH 24" STAINLESS STEEL ADA WALL GRAB BAR, METAL BRAIDED HOSE, LESS SHOWER WAND. MODIFY WITH BRICOR #B110 CH-HH HAND HELD SHOWER HEAD WAND. 1.125 GPM AT 50 PSI. PROVIDE IN-LINE VACUUM BREAKER IN HAND HELD SHOWER.				
SP-1	ELEVATOR SUMP PUMP - STANCOR #SE-50. SUBMERSIBLE TYPE. 50 GPM AT 17 FT. HD. 1/2 HP, 115V. PROVIDE WITH OIL MINDER SENSOR TO DE-ENERGIZE PUMP WHEN SUREACE OIL APPROACHES PUMP INLET. PROVIDE DISCHARGE CHECK VALVE.	~~~	~~~		
SP-2	PERIMETER DRAIN DUPLEX SUMP PUMP - WEIL 1418-38M-XXBB, 25 GPM @ 24 FT. HD. (2) 3/4 HP PUMP MOTORS, 208/3. PROVIDE WITH REMOVAL RAIL SYSTEM (WEIL #2613-2CI), DISCHARGE FLANGE KIT AND SUB BASE, CONTROL PANEL (WEIL #8138), MERCURY TETHERED FLOAT SWITCHES (WEIL #8234K1004M).	2"			•
TD-1	TRENCH DRAIN - ZURN #ZS880. STAINLESS STEEL LINEAR SHOWER DRAIN. X" LONG CENTER SECTION WITH BOTTOM OUTLET AND DOME STRAINER. MULTIPLE X" LONG EXTENSION SECTIONS. LENGTH AS SHOWN ON PLAN.	~~	~~		<u></u>
TP-1	TRAP PRIMER, SLOAN #VBF-72-A. CONNECTS TO WATER CLOSET FLUSH VALVE VB RISER. CONNECT TO FLOOR DRAINS IN TOILET ROOM.				
UR-1	URINAL, TOTO UE930 AND TOTO TEU1UN12#CP. WALL MOUNTED, WHITE VITREOUS CHINA WITH FLOOR MOUNTED CARRIER. ADA COMPLIANT, 0.25 GPF. SYSTEM TO INCLUDE BATTERY POWERED, SENSOR ACTIVATED 0.25 GPF FLUSH VALVE. 3/4" TOP SPUD.	2"	1-1/4"	3/4"	-
	WATER CLOSET, TOTO CT708E. WALL MOUNTED WITH CARRIER BOLTED TO FLOOR. BACK OUTLET, 1.6 GPF, WHITE VITREOUS CHINA, SIPHON JET, ELONGATED RIM BOWL WITH 1-1/2" TOP SPUD. K-4670-CA OPEN FRONT SEAT LESS COVER. TOTO TET1LN32#CP 1.28 GPF BATTERY OPERATED. PROVIDE PORT ON FLUSH VALVE VACUUM BREAKER RISER FOR TRAP PRIMER CONNECTION.	4"	2"	1-1/4"	-
WC-2 WH-1	WATER CLOSET, SAME AS WC-1 EXCEPT MOUNT AT 18" A.F.F. TO SEAT FOR ADA ACCESS. WALL HYDRANT, WOODFORD #B67. FREEZELESS TYPE WITH BACKFLOW PREVENTOR, 3/4" HOSE END. RECESSED BOX WITH FLUSH HINGED COVER WITH KEYED	4"	2"	1-1/4"	~~
	LATCH. PROVIDE WITH BALL VALVE IN MECHANICAL ROOM FOR ISOLATION. THERMOSTATIC MIXING VALVE FOR HOT WATER DISTRIBUTION SYSTEMS, ASSE 1017. LEONARD #TM-186-15020-PRV. ADJUSTABLE HIGH TEMP. LIMIT STOP, INDIRECT CHECK STOPS, WALL SUPPORT, OUTLET BALL VALVE. 1-1/4" INLET, 2" OUTLET, 1 GPM MINIMUM FLOW, 106 GPM AT 20 PSI AP. DUAL HIGH/LOW VALVES.	•••			
TMV-2	OUTLET PRV AND PRESSURE GAUGE. DIAL THERMOMETERS OUTLET & INLET. THERMOSTATIC MIXING VALVE - WATTS # LSMMV. ASSE 1070, LEAD FREE. 0.5 TO 12 GPM. ADJUSTIBLE TEMPERATURE SETTING. INTEGRAL INLET FILTERS AND				
	CHECK VALVES. TON SIZES EQUAL BRANCH PIPE SIZES UNLESS NOTED ON PLAN OR REQUIRED TO BE OVERSIZED BY CODE.				

				ł	HE/	ATIN	IG W	/AT	ER	ВО	ILE	RS	SCH	HED	UL	Е			
TAG	TYPE	MBH	MBH	FUEL	EFF	MDP	SVS	GPM	EWT	LWT			ELEC.	TRICAL			WEIGHT	MANUFACTURER	NOTES
		INPUT	OUTPUT	TYPE	%*	PSIG**	PSIG***		°F	°F	HP	٧	PH	FLA	MCA	OPD	LB.	& MODEL	
B-1	CONDENSING	800	752	NG	94	-	50	46	110	140	-	120	1	2.7	-	20	405	LOCHINVAR KNIGHT XL KBN 801	1, 2, 3
B-2	CONDENSING	800	752	NG	94	-	50	46	110	140	-	120	1	2.7	-	20	405	LOCHINVAR KNIGHT XL KBN 801	ODEL IIGHT XL KBN 801 1, 2, 3 IIGHT XL KBN 801 1, 2, 3 IMMOR AWN801PM 2 RCULATION PUMP.
DWH-1	CONDENSING	INPUT OUTPUT TYPE %* PSIG*** PSIG*** STIG*** STIG***																	
GENERAL	NOTES:		•					•			NOTE	<u>S:</u>				•			
A.	PERFORMANCE IS AT S	TE COND	OITIONS								1.	PRO	VIDE	WITH M	1ANUF.	ACTUR	ER'S VAR	NABLE SPEED CIRCULATION PUMP.	
B.	BOILER HEATED FLUID I	30% PF	ROPYLEN	E GLY	COL						2.	PRO	VIDE	WITH M	IANUF.	ACTUR	ER'S NEU	ITRALIZATION KIT.	
C.	EQUIPMENT WITH 208V I	NAMEPLA	ATES SHA	ALL HA	VE MC	TORS S	SUITABLE	FOR			3.	PRO	VIDE '	WITH 1	00 PSI	ASME	RELIEF V	AVLE.	
	OPERATION AT 180 VOL	TS OR PF	ROVIDED	WITH 2	00V T	208V	TRANSFO	ORMER	RS										
D.	PROVIDE MASTER BOILI	ER WITH I	MODBUS	COMM	IUNICA	TION C	ARD, AN	D FIEL	D										
	BUS PROTONODE BACN	ET TO M	ODBUS G	ATEWA	Υ														
	* THERMAL, COMBUSTION	OR AFU	E EFFICIE	NCY P	ER AS	HRAE 9	90.1		** MIN	IMUM I	DESIG	N PRE	SSURE	Ē				***SAFETY VALVE SETTING	

AG	DESCRIPTION		ELECTR	ICAL		NOTES
		POWER	AMPS	V	PH	
AC-1	INDOOR COOLING UNIT. MITSUBISHI PKA-A30KA6, R410 A REFRIGERANT, FACTORY CONDENSATE PUMP. PROVIDE WITH WIRELESS CONTROLLER. 22,246 BTUH CAPACITY.	56 W	-	208	1	
3B-1,2,3	STERLING VERSA-LINE JVB-2M, PEDESTAL MOUNTED BASEBOARD CONVECTOR, 3/4" COPPER TWIN TUBE, 7 FT. SECTION, 4890 BTUH EA (699 BTUH/FT.) @ 1.1 GPM. PROVIDE MFG'S. CONTINUOUS COVER TO ENCLOSE ALL SECTIONS (BB-1,2,3).	-	-	-	-	1
CU-1	OUTDOOR CONDENSING UNIT FOR AC-1. MITSUBISHI PUY-A30NHA6. PROVIDE WITH FACTORY WIND BAFFLE.	-	0.75	208	1	2
DWST-1, 2	200 GALLON INSULATED AND JACKETED ASME RATED DOMESTIC HOT WATER STORAGE TANKS.	-	-	-	-	
H-1	GREENHECK FGI-24X30, INTAKE HOOD FOR ELEVATOR SHAFT. MIN. 3 SQ. FT. OF FREE AREA. PROVIDE WITH MOTORIZED DAMPER, 14" ROOF CURB AND TEMPERATURE SENSOR.	-	-	-	-	
RP-1,2,3,4,5,6,7	CEILING RADIANT PANELS, VESTIBULES. QMARK CP757	750 W	-	277	1	
NOTES:						
1.	FLUID IS 30% PG @ 140° F EWT.					
2.	40A MOCP PER MANF. REQ. AC-1 IS POWERED FROM CU-1.					

3. EQUIPMENT WITH 208V NAMEPLATES SHALL HAVE MOTORS SUITABLE FOR OPERATION AT 180 VOLTS OR PROVIDED 200V TO 208V TRANSFORMERS.

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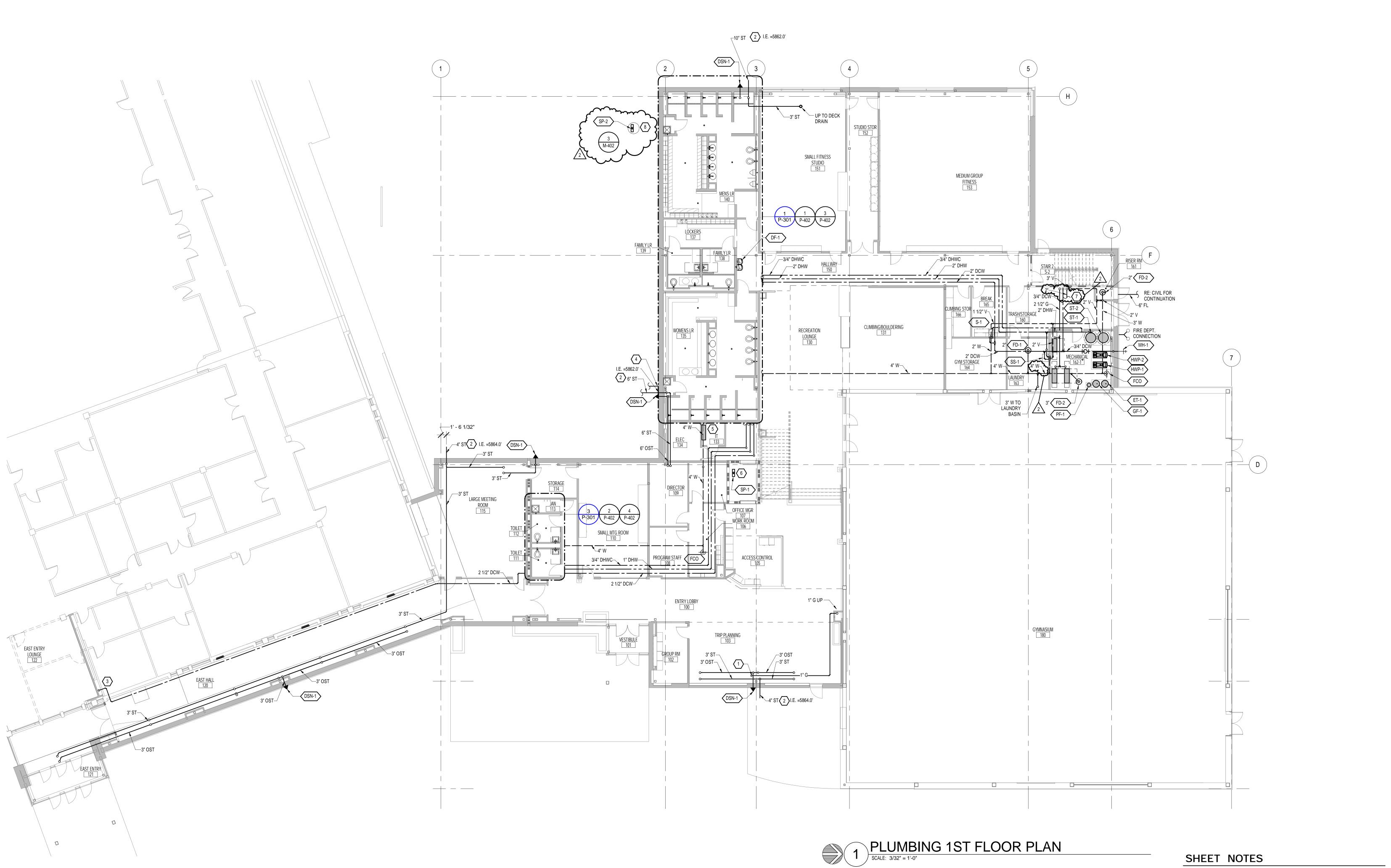
ADDENDUM 1 11/20/15 1 ADDENDUM 2 **12/4/15 2**

Project Information

Sheet Information

Nov. 9, 2015 CONSTRUCTION DOCUMENTS Sheet Number:

MECHANICAL SCHEDULES



SHEET NOTES

1. COORDINATE ALL WORK WITH ALL OTHER TRADES.

KEY NOTES

- 3/4" G DN TO FIREPLACE (BY OTHERS). PROVIDE PRESSURE REGULATOR (ON ROOF), DIRT LEG, AND SHUTOFF VALVE. INSTALL PER MANUFUCTURER'S INSTRUCTIONS.
- REFERENCE CIVIL UTILTY DRAWINGS FOR CONTINUATION. ALL VARIANCES IN INVERT ELEVATIONS SHALL BE OFFSET INSIDE THE BUILDING.
- CONNECT NEW 2-1/2" DCW TO EXISTING IN EXISTING BUILDING CRAWL SPACE. PROVIDE BUILDING ISOLATION VALVE.
- (4) CONNECT NEW 1" DCW TO IRRIGATION SYSTEM.
- ROUTE 1/2" CONDENSATE DRAIN WITH CHECK VALVE FROM AC-1 TO SERVICE SINK IN WOMEN'S LOCKER ROOM.
- ROUTE 2" W FROM SP-1 TO SERVICE SINK IN WOMEN'S LOCKER ROOM.
 ROUTE 1-1/2" VENT FROM SUMP TO NEARBY RESTROOM VENT. SEE
 PLUMBING ISOMETRICS, SHEET P-402.

 ROUTE 2" W FROM RTU EVAP TO 4" TRAPPED STANDPIPE. LOCATE
 STANDPIPE OPPOSITE OF SS-1 IN MECHANICAL ROOM. DUPLEX SUMP PUMP FOR PERIMETER DRAIN. ROUTE 2" PRESSURE STORM PIPING TO STORM MAIN. SEE SHEET C-510 FOR FURTHER INFORMATION AND STORM MAIN LOCATION.

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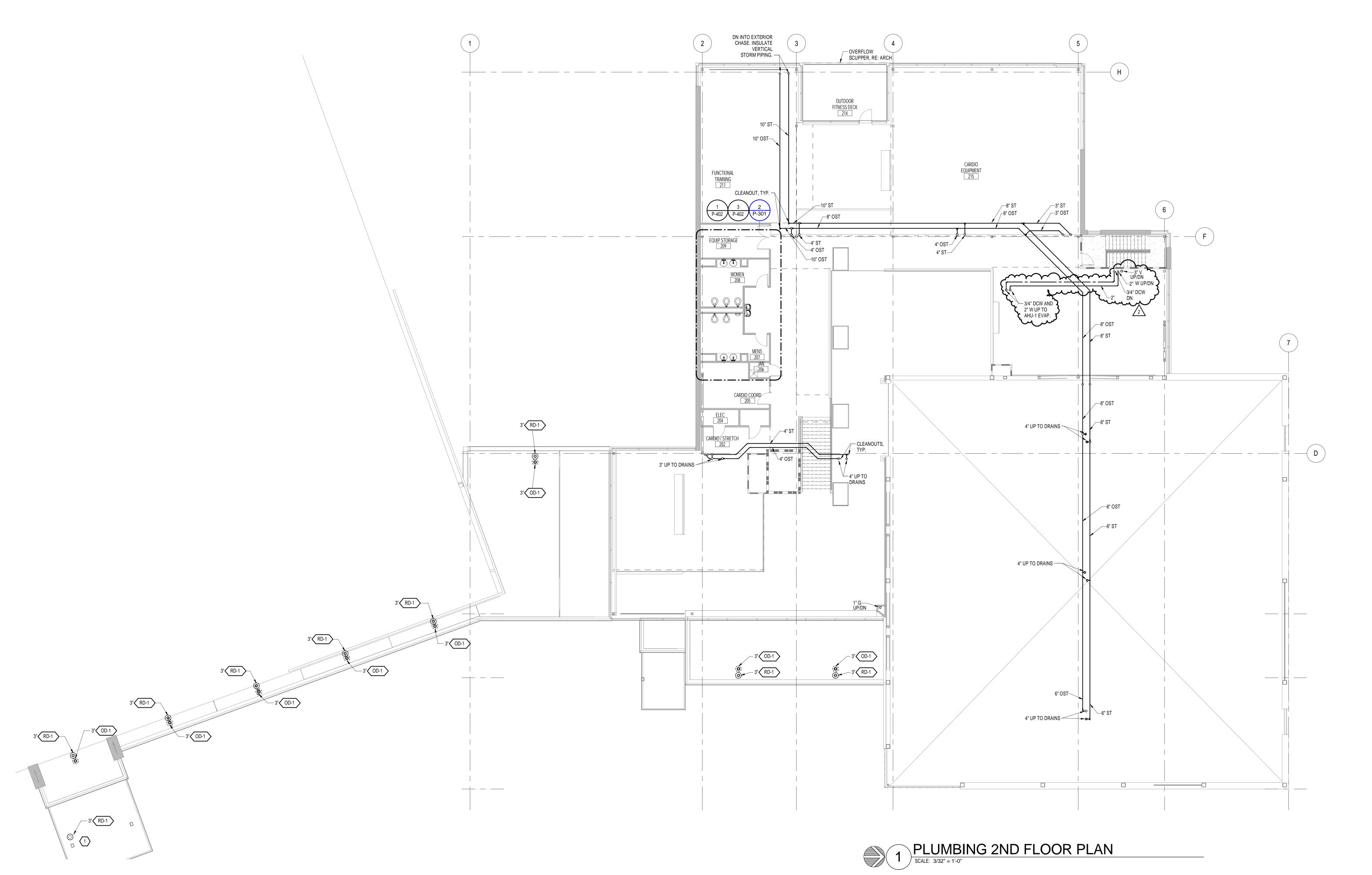
11/20/15 1 12/4/15 2 ADDENDUM 2

Project Information

Sheet Information

Sheet Title: PLUMBING 1ST FLOOR PLAN

CONSTRUCTION Nov. 9, 2015 DOCUMENTS Sheet Number:



SHEET NOTES

COORDINATE ALL WORK WITH ALL OTHER TRADES.

KEY NOTES

THIS ROOF DRAIN TO DRAIN TO GRADE. RE: ARCH FOR OVERFLOW SCUPPER.

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Sheet Information

Sheet Title:
PLUMBING 2ND
FLOOR PLAN

Nov. 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

P-102

PPA Project: 15803.



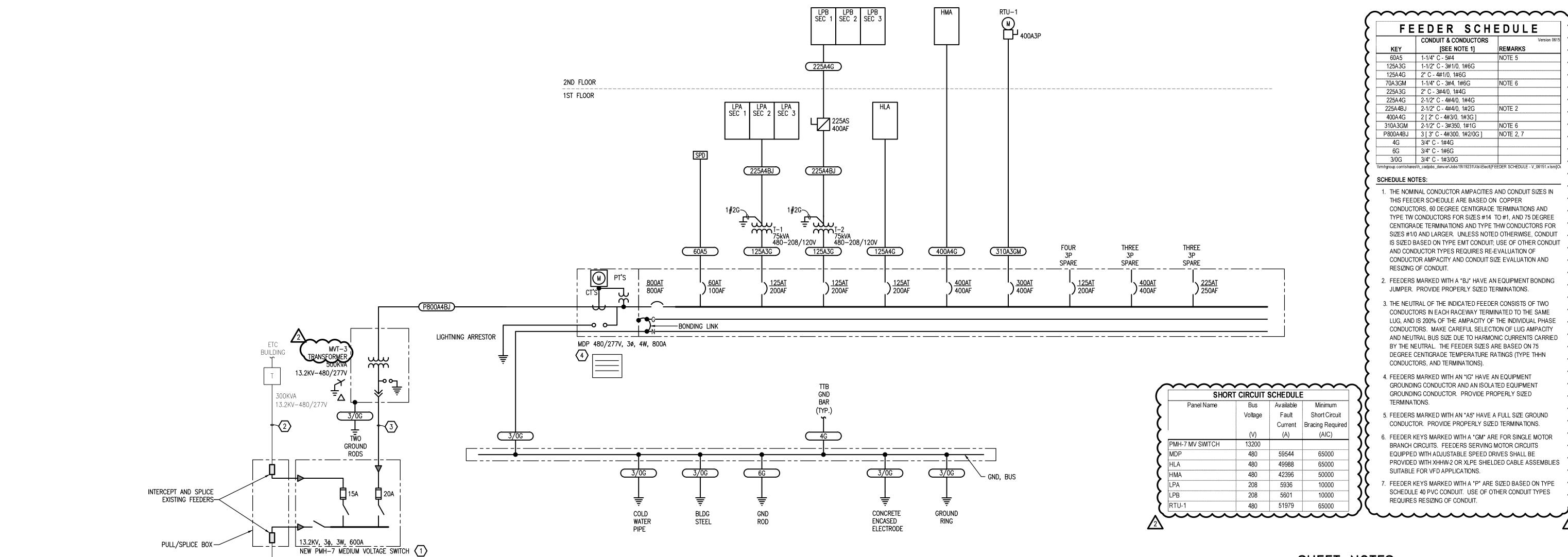
VOLTAGE: 120/208 V, 3PH, 4W ROSS SQUARE FEET: 35818 SF

GROSS SQUARE FEET: 35818 SF

586 AMP REQUIRED CAPACITY = 402 kW @ 83% PF = 487 kVA & 13.6 VA/SF REQUIRED

800 AMP ACTUAL CAPACITY = 549 kW @ 83% PF = 665 kVA & 18.6 VA/SF ACTUAL

	NEC	DEM	AND LO	AD S	SUMMA	RY					V	/A/SF LOA	D SUMM/	٩RY
			POWER	CO	NNECT	ED	DEMAN)	CALCUI	ATED	CONNE	CTED	CALCU	LATED
LOAD TYPE	kW		FACT		kVA		FACTOF	}	LOAD		LOAD		DEMAN	D LOA
LIGHTING											0.8	VA/SF	0.9	VA/S
INCANDESCENT	0.0	@	100%	=	0.0	@	125%	=	0.0	kVA				
INDUCTIVE LTG	25.7	@	95%	=	27.0	@	125%	=	33.8	kVA				
RECEPTACLES											0.9	VA/SF	0.6	VA/S
FIRST 10 kVA	9.5	@	95%	=	10.0	@	100%	=	10.0	kVA				
REMAINDER	21.7	@	95%	=	22.8	@	50%	=	11.4	kVA				
MOTORS											9.6	VA/SF	11.1	VA/S
LARGEST	173	@	80%	=	217	@	125%	=	271	kVA				
REMAINDER	101	@	80%	=	127	@	100%	=	127	kVA				
APPLIANCES	12.6	@	80%	=	15.7	@	100%	=	15.7	kVA	0.4	VA/SF	0.4	VA/S
HEAT	4.4	@	100%	=	4.4	@	125%	=	5.5	kVA	0.1	VA/SF	0.2	VA/S
COMPUTER	2.4	@	95%	=	2.5	@	100%	=	2.5	kVA	0.1	VA/SF	0.1	VA/S
OTHER	8.9	@	85%	=	10.5	@	100%	=	10.5	kVA	0.3	VA/SF	0.3	VA/S
NONCOINCIDENT	0.0	@	95%	=	0.0	@	0%	=	0.0	kVA	0.0	VA/SF	-	VA/S
PEAK LOAD	0.0	@	90%	=	0.0	@	125%	=	0.0	kVA	0.0	VA/SF	0.0	VA/S
0 % SPARE	0.0	@	90%	=	0.0	@	100%	=	0.0	kVA	0.0	VA/SF	0.0	VA/S
TOTAL	360	kW	83%		436	kV/	4		487	kVA	12.2	VA/SF	13.6	VA/S



SHEET NOTES

1. LIGHT LINEWEIGHT INDICATES EXISTING. DARK LINEWEIGHT INDICATES NEW WORK.

KEY NOTES

- INTERCEPT EXISTING UNDERGROUND FEEDER AND PROVIDE NEW S&C 15kV PMH-7
 PAD-MOUNTED SWITCH, 600 AMP CONTINUOUS WITH 200 AMP FUSE COMPARTMENTS. CATALOG
 NUMBER 55132R4-C3E3E1G7 WITH KEY INTERLOCKS FOR FUSE COMPARTMENTS. FUSE STORAGE
 HOLDER IN COMPARTMENT 1 AND INNER BARRIER PANELS FOR DEADFRONT ENTRY. PROVIDE
 S&C SML-20 STYLE FUSES.
- 2 EXISTING FEEDERS ARE COPPER XLPE ESSEX 4/0 MV-90 CABLE.
- NEW FEEDERS SHALL BE 3#2 15KV, MV-105 SHIELDED, 133% & 1#6 600V THWN GROUND IN 4" CONDUIT.
- PROVIDE PLAQUE DENOTING LOCATION OF ALL SERVICES, FEEDERS, AND BRANCH CIRCUITS SUPPLYING THE BUILDING, PER NEC 225.37 AND 230.2(E).

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12/4/15 2

Project Information

ADDENDUM 2

DENT RECREATION CENTER
ROCKS COMMUNITY COLLEGE
13300 W. 6th Avenue

Sheet Information

Sheet Title:
ELECTRICAL ONE-LINE
DIAGRAM

CONSTRUCTION
Nov. 9, 2015 DOCUMENTS
Sheet Number:

E-002

DPA Project: 15803.00

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4-Dec-15 by nhei 12/4/2015

TO EXISTING EXISTING XCEL

ENERGY POWER POLE

WING

EXISTING S&C MEDIUM VOLTAGE SWITCHGEAR

13.2KV-480/277V

13.2KV, 3φ, 3W, 600A

13.2KV-480/277V

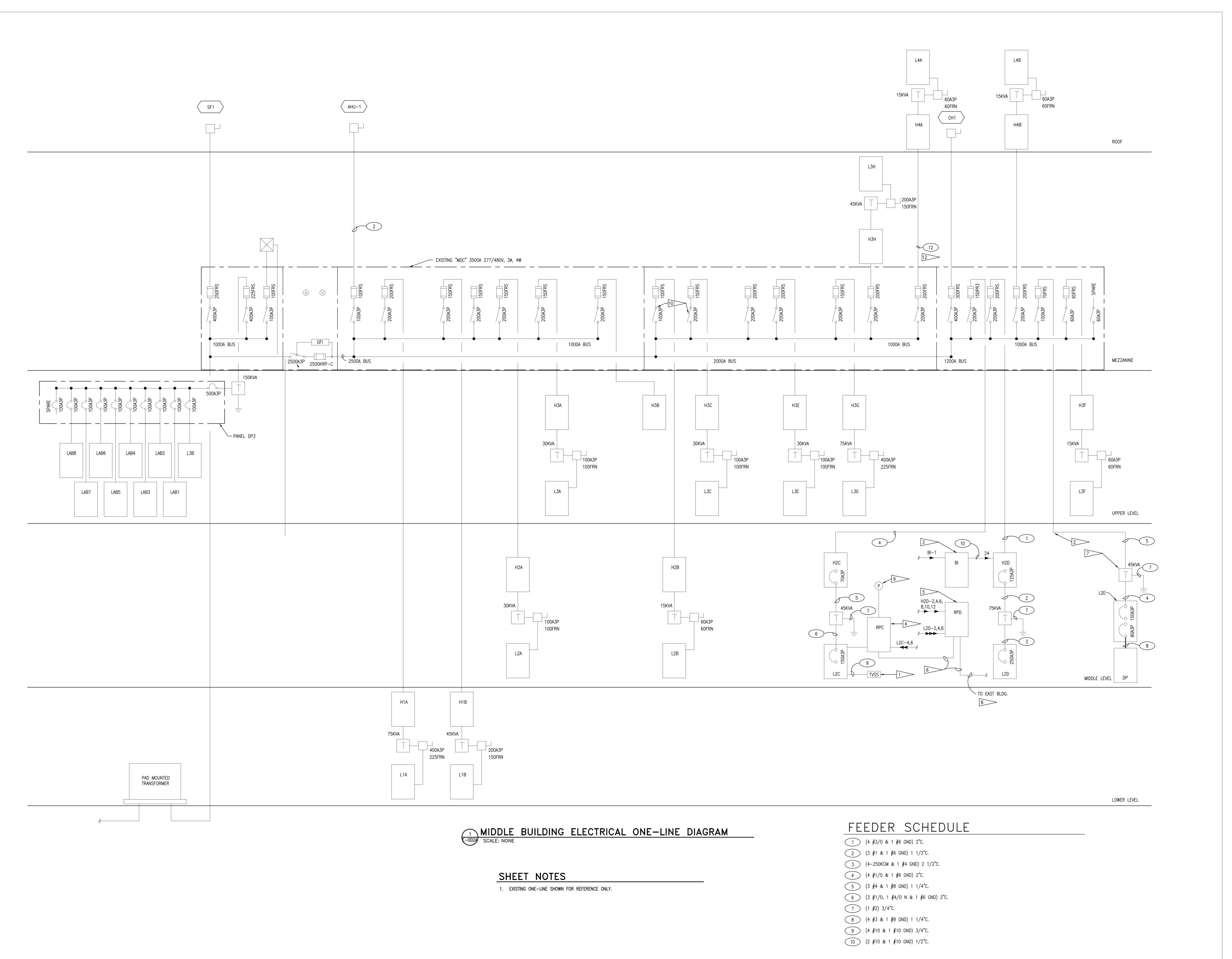
Campus Load Study

30 Day Peak Demand Amps
+ 25%

New Load This Project

Total New Load Amps
- Peak Load Observed August 2015

TELECTRICAL ONE-LINE DIAGRAM



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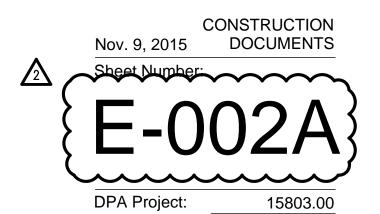
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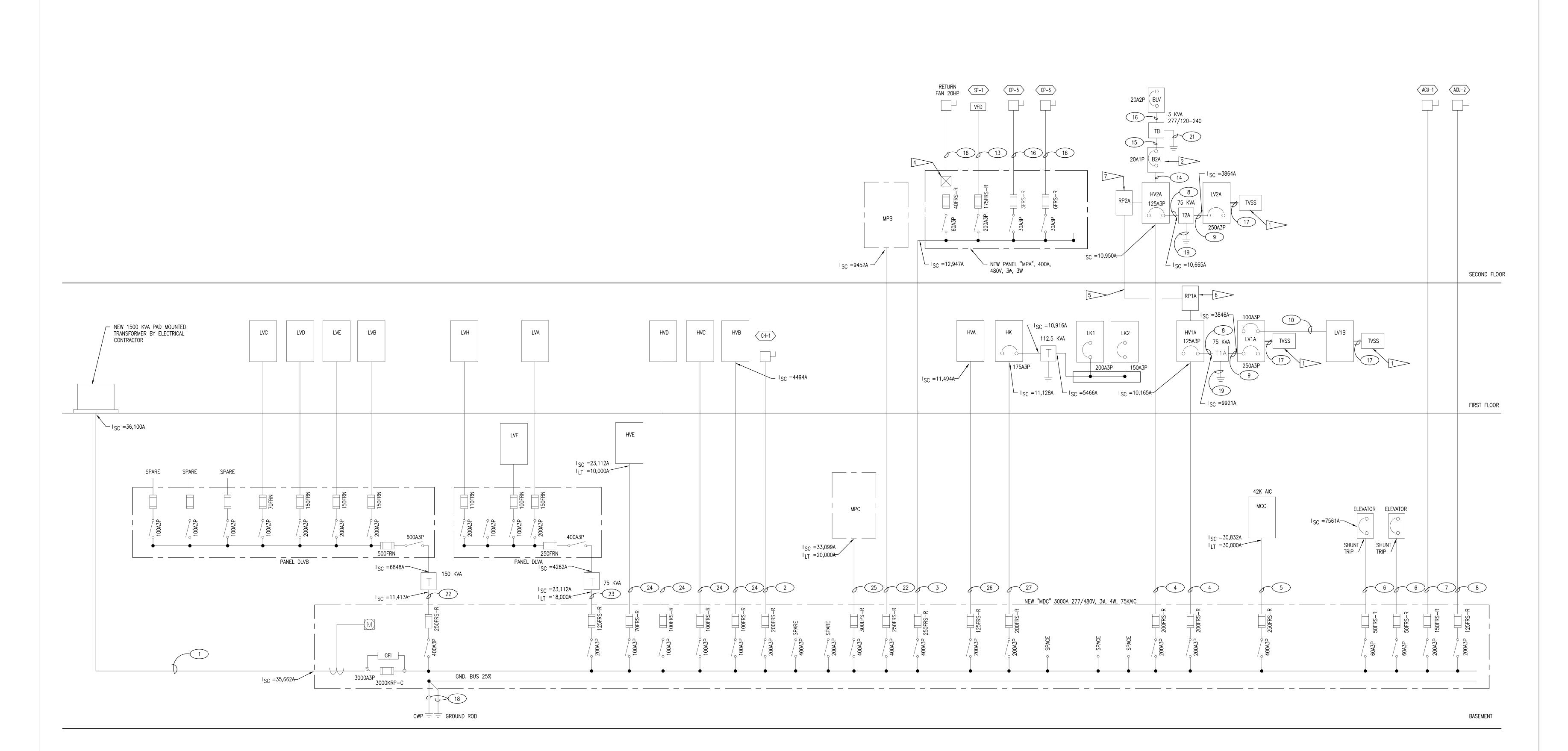
ADDENDUM 2

SOCKS COMMUNITY COLLEG

Sheet Information

Sheet Title:
ELECTRICAL ONE-LINE
DIAGRAM





EAST BUILDING ELECTRICAL ONE-LINE DIAGRAM

SCALE: NONE

SHEET NOTES 1. EXISTING ONE-LINE SHOWN FOR REFERENCE ONLY.

2 (3 #3/0 & 1 #6 G.) 2" C. 3 (3-250KCM & 1 #3 G.) 3" C. 4 (4 #3/0 & 1 #6 G.) 2 1/2" C. 5 (4-250KCM & 1 #3 G.) 3" C. 6 (3 #6 & 1 #10 G.) 1" C. 7 (3 #1/0 & 1 #6 G.) 1 1/2" C.

9 (3-250KCM, 1-500KCM N & 1 #4 G.) 3" C.

12 NOT USED

13 (3 #2/0 & 1 #6 G.) 1 1/2" C.

18 (1 #3/0) 3/4" C. 19 (1 #2) 1/2" C. 20 NOT USED 21 (1 #12) 1/2" C. 22 (3 #4/0 & #2 G.) 2 1/2" C., EXISTING 23 (3 #2 & 1 #6 G.) 1 1/2" C., EXISTING

24 (4 #2 & 1 #8 G.) 2" C., EXISTING

27 (4 #3/0 & 1 #6 G.) 2 1/2" C., EXISTING

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ELECTRICAL ONE-LINE DIAGRAM

Nov. 9, 2015 CONSTRUCTION DOCUMENTS

Sheet Title:

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FEEDER SCHEDULE

1 8[(4-500KCM)3 1/2" C.] IN FOUR EXISTING AND FOUR NEW CONDUITS 14 (2 #8 & 1 #10 G.) 3/4" C. 15 (2 #12 & 1 #12 G.) 1/2" C.

16 (3 #12 & 1 # 12 G.) 3/4" C. 17 (4 #10 & 1 #10 G.) 3/4" C.

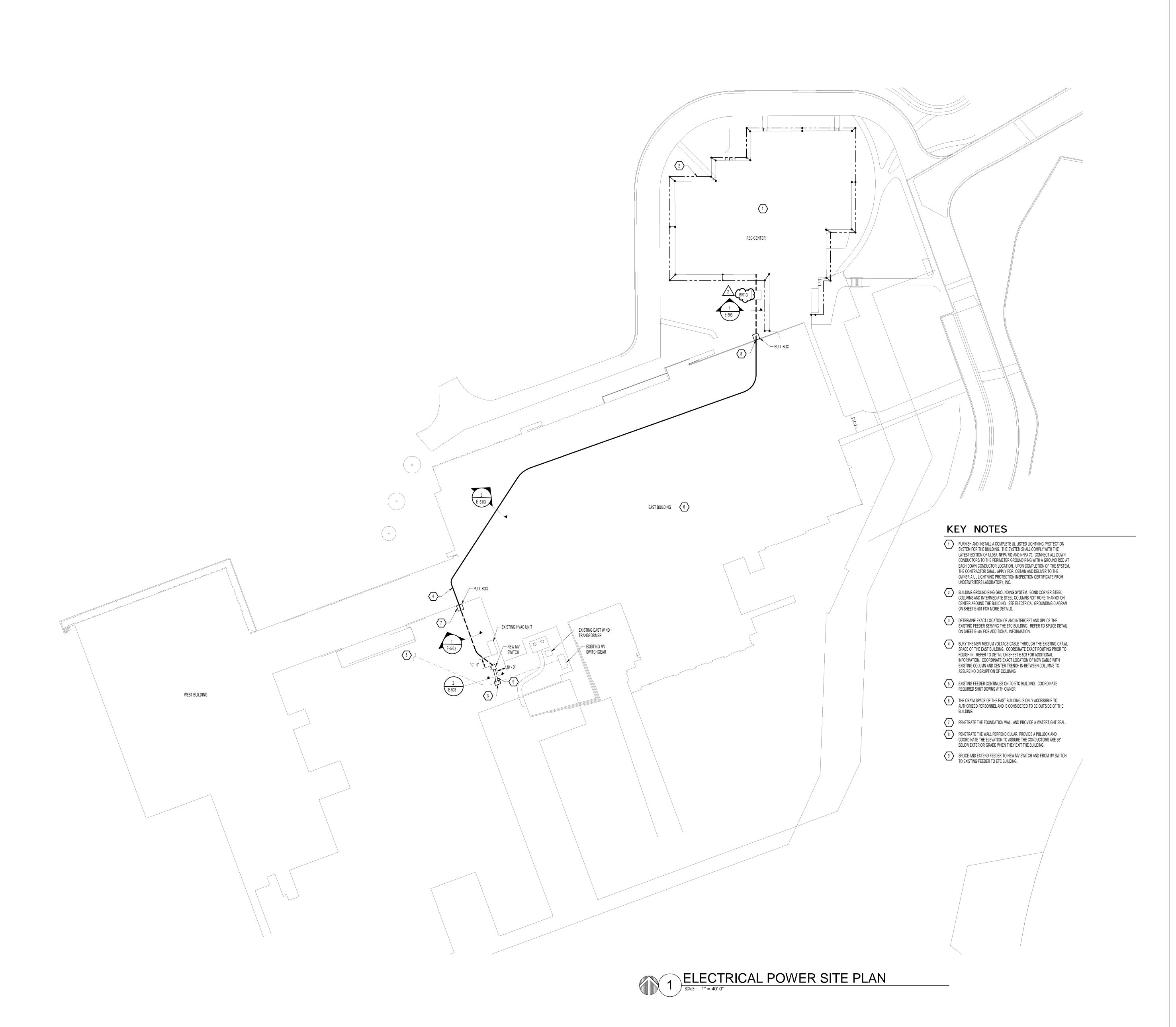
8 (3 #1 & 1 #6 G.) 1 1/4" C.

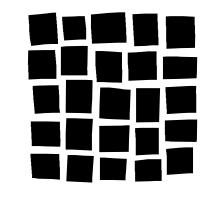
10 (3 #1, 1 #3/0 N. & 1 #8 G.) 2" C.

11 NOT USED

25 (3-250KCM & 1 #3 G.) 3" C., EXISTING

26 (4 #1 & 1 #6 G.) 2" C., EXISTING





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12/4/15 2

ADDENDUM 2

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Sheet Information

Sheet Title:
ELECTRICAL SITE
PLAN

CONSTRUCTION
Nov. 9, 2015 DOCUMENTS
Sheet Number:

E-003

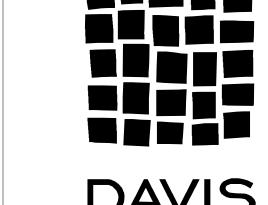


1 ELECTRICAL LIGHTING SITE PLAN
SCALE: 1" = 40'-0"

SHEET NOTES

LOCATE EXISTING CIRCUITS AND MAINTAIN THEM DURING CONSTRUCTION. ALL SITE LIGHTING IS INTENDED TO BE ON DURING CONSTRUCTION.

REMOVE EXISTING BOLLARD AT THIS LOCATION AND REMOVE EXISTING ANCHOR BOLTS FROM CONCRETE BASE. DRILL HOLES FOR NEW BOLLARD ANCHOR BOLTS INTO EXISTING CONCRETE BASE AND EPOXY THEM INTO 2 EXISTING LIGHT POLE TO REMAIN. PROVIDE NEW CONCRETE BASE FOR BOLLARD AT THIS LOCATION.



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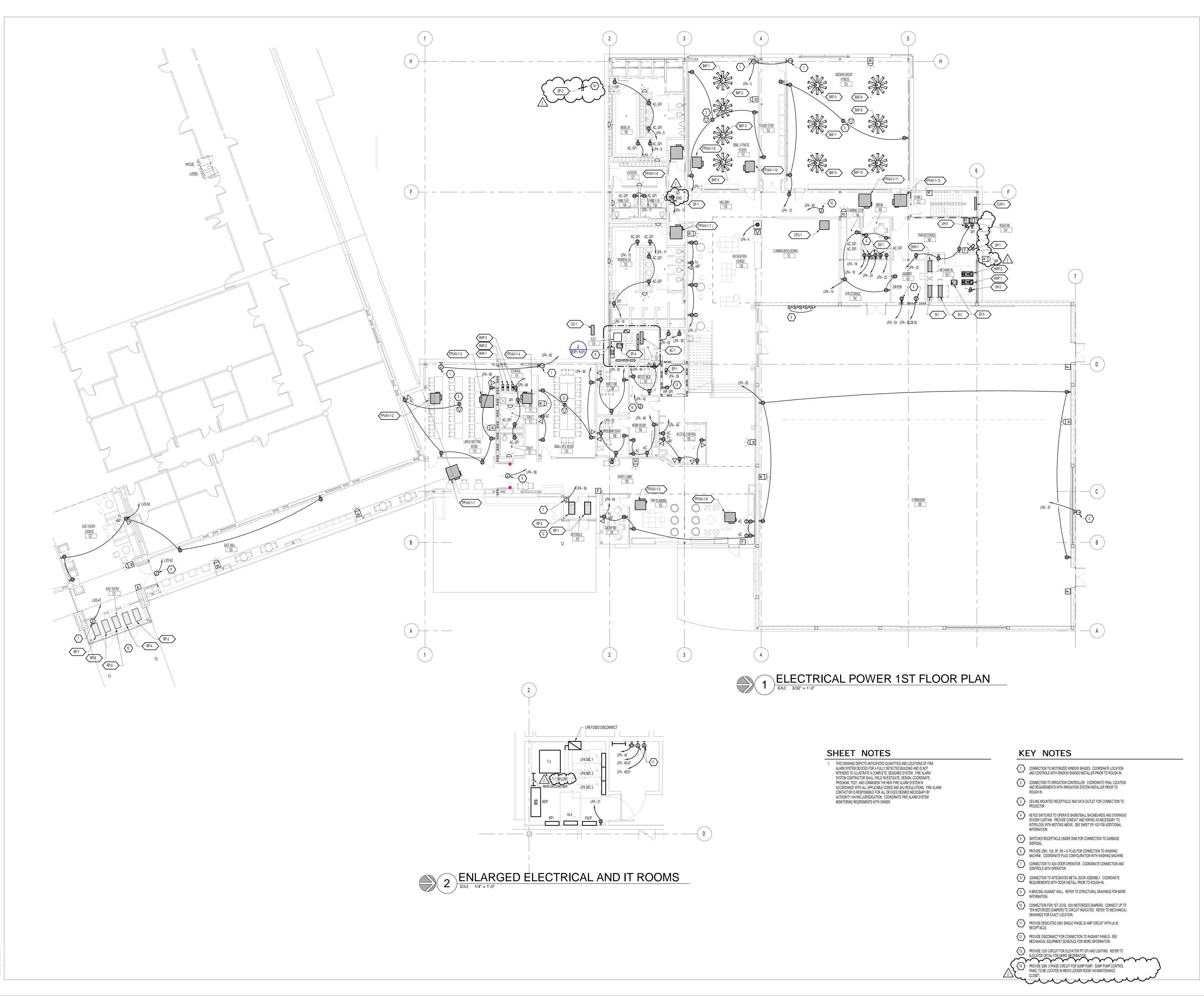
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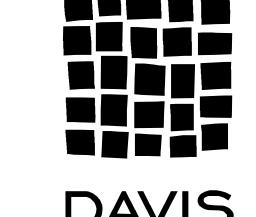
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Sheet Information

Sheet Title: SITE LIGHTING PLAN

Nov. 9, 2015 CONSTRUCTION DOCUMENTS Sheet Number:





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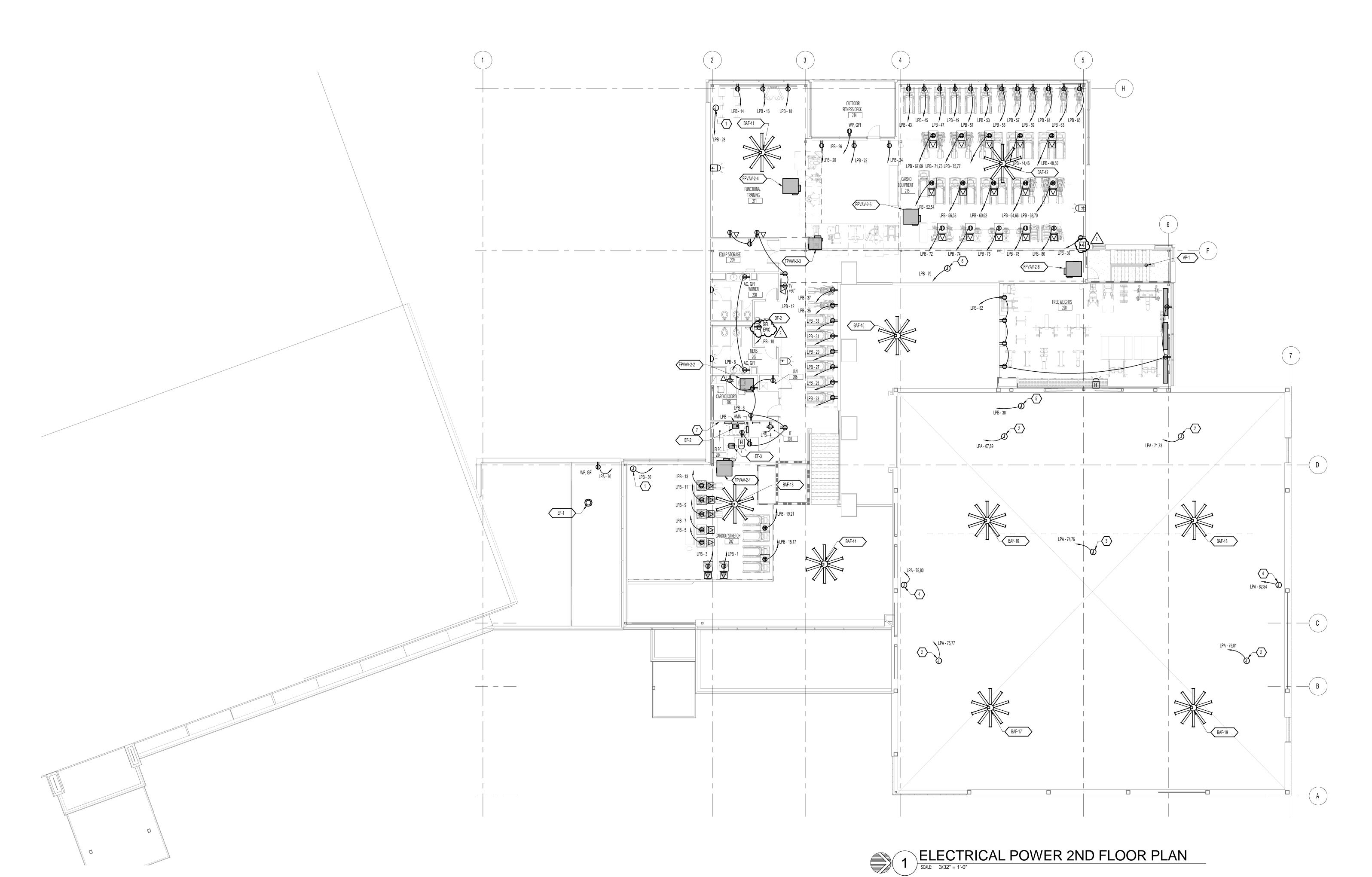
Sheet Title:
ELECTRICAL
POWER 1ST

Nov. 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

FLOOR PLAN

EP-10²

DPA Project:

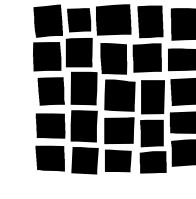


SHEET NOTES

1. THIS DRAWING DEPICTS ANTICIPATED QUANTITIES AND LOCATIONS OF FIRE ALARM SYSTEM DEVICES FOR A FULLY DETECTED BUILDING AND IS NOT INTENDED TO ILLUSTRATE A COMPLETE, DESIGNED SYSTEM. FIRE ALARM SYSTEM CONTRACTOR SHALL FIELD INVESTIGATE, DESIGN, COORDINATE, PROGRAM, TEST, AND COMMISION THE NEW FIRE ALARM SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES AND AHJ REGULATIONS. FIRE ALARM CONTACTOR IS RESPONSIBLE FOR ALL DEVICES DEEMED NECESSARY BY AUTHORITY HAVING JURISDICATION. COORDINATE FIRE ALARM SYSTEM MONITORING REQIREMENTS WITH OWNER.

KEY NOTES

- CONNECTION TO MOTORIZED WINDOW SHADES. COORDINATE LOCATION AND CONTROLS WITH WINDOW SHADES INSTALLER PRIOR TO ROUGH IN.
- CONNECTION TO BASKETBALL BACKBOARD LIFT MOTORS. INTERLOCK WITH KEYED SWITCHES IN GYMNASIUM. SEE SHEET EP-101 FOR MORE INFORMATION.
- CONNECTION TO OVERHEAD DIVIDER CURTAIN LIFT MOTOR. INTERLOCK WITH KEYED SWITCHES IN GYMNASIUM. SEE SHEET EP-101 FOR MORE INFORMATION.
- CONNECTION TO ELECTRONIC SCOREBOARD WITH WIRELESS CONTROLLERS.
- CONNECTION TO CONTROL DAMPER. SEE MECHANICAL DRAWING FOR EXACT LOCATION.
- CONNECTION TO 2ND LEVEL 120V MOTORIZED DAMPERS AND BASEBOARD HEATING CONTROL POWER.CONNECT UP TO TEN MOTORIZED DAMPERS TO CIRCUIT INDICATED. REFER TO MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LOCATION.
- RESERVE SPACE FOR FUTURE PV SYSTEM EQUIPMENT. STUB CONDUIT BELOW ROOF FOR FUTURE PV SYSTEM FEEDERS.



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Sheet Information
Sheet Title:
ELECTRICAL
POWER 2ND

CONSTRUCTION
Nov. 9, 2015 DOCUMENTS
Sheet Number:

FLOOR PLAN

EP-102

DPA Project:

I			I			T	EG	UIPIVIEN	SCHED	JLE			100::		DICC	Version 0215
	ITEM			MOTOR	LINIT	LINIT	LINIT	DANEL	ELICINO		CTARTER CTARTER	CTARTER	LOCAL	DISC	DISC.	
	ITEM DESCRIPTION (SEE NOTE 2)	VOLTS	PH	MOTOR HP	UNIT AMPS	UNIT KVA	UNIT KW	PANEL (SEE NOTE 5)	FUSING (SEE NOTE 1)	FEEDER	STARTER STARTER TYPE SIZE	BY	DISC. SW.	DISC. BY	LOCATION SEE NOTE 4	REMARKS
	BOILER 1	115	1	——————————————————————————————————————	2.7	0.3	0.2	LPA	- (SEE NOTE 1)	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P	DIV. 26	AT UNIT -	REMARNS
'	BOILER 2	115	1		2.7	0.3	0.2	LPB	_	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
_	SMALL GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	SMALL GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
AF-3	SMALL GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
AF-4	SMALL GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
AF-5	MEDIUM GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	MEDIUM GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
7 1	MEDIUM GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
7.11 0	MEDIUM GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
, •	MEDIUM GROUP FITNESS	115	1		0.4	0.0	0.0	LPA	1 1	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	MEDIUM GROUP FITNESS TRX	115 460	1	1	0.4	0.0	0.0	LPA HMA	3.5	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P 30A, 3P	DIV. 26 DIV. 26	AT UNIT -	
	STRENGTH	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G 3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	STRENGTH	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	OPEN AREA	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	CLIMBING WALL	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	GYM	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	GYM	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	GYM	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	GYM	460	3	1	2.1	1.7	1.3	HMA	3.5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	CLIMBING AREA FAN UNIT	460	3	1-1/2	2.0	1.6	1.3	HMA	5	3/4" C - 3#12, 1#12G	0 1	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	CABINET UNIT HEATER	115	1	1/15	1.0	0.1	0.1	LPA	4.5	3/4" C - 2#12, 1#12G	0 00	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	DRINKING FOUNTAIN	115	1		5.0	0.6	0.5	LPA	-	3/4" C - 2#12, 1#12G	0 -	DIV. 23			AT UNIT -	
	DRINKING FOUNTAIN HOT WATER RECIRC PUMP	115	1	410	5.0	0.6	0.5	LPB		3/4" C - 2#12, 1#12G	0 -		CORD & PLUG			
	WATER HEATER	115 115	1	1/6	2.4	0.5	0.4	LPA LPA	6.25	3/4" C - 2#12, 1#12G 3/4" C - 2#12, 1#12G	0 0	DIV. 23	STO, 2P 30A, 3P	DIV. 26 DIV. 26	AT UNIT - AT UNIT -	
	1ST SOUTH RR AND JAN	115	1	1/6	4.4	0.5	0.2	LPA	6.25	3/4" C - 2#12, 1#12G	0 -	DIV. 23	30A, 3P	DIV. 26	AT UNIT -	
	2ND FLOOR ELEC ROOM	115	1	1/6	4.4	0.5	0.4	LPB	6.25	3/4" C - 2#12, 1#12G	0 0	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
· -	2ND FLOOR IT ROOM	115	1	1/2	9.8	1.1	0.9	LPB	15	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	1ST FLOOR ELEC ROOM	277	1	1/2	3.3	0.9	0.7	HMA	5.6	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
F-5 L	LAUNDRY ROOM	115	1	1/2	9.8	1.1	0.9	LPA	15	3/4" C - 2#10, 1#10G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
PVAV-1-1	FAN POWERED VAV	277	1		6.6	1.8	1.5	HMA	9	3/4" C - 2#12, 1#12G		DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
PVAV-1-2	FAN POWERED VAV	277	1	1/2	3.3	0.9	0.7	HMA	5.6	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1		6.6	1.8	1.5	HMA	9	3/4" C - 2#12, 1#12G		DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1	5.2	1.4	1.2	HMA	9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1/2	3.3	0.9	0.7	HMA	5.6	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277 277	1	1	5.2	1.4	1.2	HMA	9 9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1	5.2 5.2	1.4	1.2 1.2	HMA HMA	9	3/4" C - 2#12, 1#12G 3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26 DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1/2	3.3	0.9	0.7	HMA	5.6	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1/2	3.3	0.9	0.7	HMA	5.6	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1	5.2	1.4	1.2	HMA	9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1	5.2	1.4	1.2	HMA	9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
PVAV-2-1	FAN POWERED VAV	277	1	1	5.2	1.4	1.2	HMA	9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
PVAV-2-2	FAN POWERED VAV	277	1	1/3	2.0	0.6	0.4	HMA	3.2	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1/2	3.3	0.9	0.7	HMA	5.6	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1	5.2	1.4	1.2	HMA	9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1	5.2	1.4	1.2	HMA	9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	FAN POWERED VAV	277	1	1	5.2	1.4	1.2	HMA	9	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
- '	GARBAGE DISPOSAL	115	1	3/4	8.1	0.9	0.7	LPA	20	3/4" C - 2#10, 1#10G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	PUMP PUMP	460	3	5	11.0	8.8	7.0	HMA	20	3/4" C - 3#12, 1#12G	VFD NOTE 3	DIV. 23	20A, 3P	DIV. 26	AT UNIT -	
–	CEILING RADIANT PANELS	460 277	3	5	2.7	8.8 0.7	7.0 0.6	HMA HMA	20	3/4" C - 3#12, 1#12G 3/4" C - 2#12, 1#12G	VFD NOTE 3	DIV. 23	20A, 3P 20A, 2P	DIV. 26 DIV. 26	AT UNIT -	
	CEILING RADIANT PANELS	277	1		2.7	0.7	0.6	HMA	7	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P 20A, 2P	DIV. 26	AT UNIT -	
-	CEILING RADIANT PANELS	277	1	_	2.7	0.7	0.6	HVC	7	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
	CEILING RADIANT PANELS	277	1		2.7	0.7	0.6	HVC	7	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
	CEILING RADIANT PANELS	277	1		2.7	0.7	0.6	HVC	7	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
	CEILING RADIANT PANELS	277	1		2.7	0.7	0.6	HVC	7	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
P-7 (CEILING RADIANT PANELS	277	1		2.7	0.7	0.6	HVC	7	3/4" C - 2#12, 1#12G	0 -	DIV. 23	20A, 2P	DIV. 26	AT UNIT -	
HP-1	RADIANT SLAB	115	1	1/2	9.8	1.1	0.9	LPA	15	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	RADIANT SLAB	115	1	1/2	9.8	1.1	0.9	LPA	15	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	RADIANT SLAB	115	1	1/2	9.8	1.1	0.9	LPA	15	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	\sim
	ROOFTOP UNIT	460	3		272	217	173	MDP	300	2 - 1/2" C - 3#350, 1#2G	VFD NOTE 3	DIV. 23	400A, 3P	DIV. 26	AT UNIT -	
-	ELEVATOR SUMP PUMP	115	1	1/2	9.8	1.1	0.9	LPA	15	3/4" C - 2#12, 1#12G	0 1	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	\sim
. –	SUMP PUMP	200	3		7.4	2.6	2.1	LPA	10	3/4" C - 3#12, 1#12G	0 -	DIV. 23	20A, 3P	DIV. 26	AT UNIT -	
	UNIT HEATER UNIT HEATER	115	1		0.3	0.0	0.0	LPA	-	3/4" C - 2#12, 1#12G	0 -	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	UNIT HEATER UNIT HEATER	115	1		12.5	1.4	1.2	LPA	-	3/4" C - 2#8, 1#8G	0 -	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	UNIT HEATER AIR PEAR UNIT	115	1		12.5	1.4	1.2	LPA	-	3/4" C - 2#8, 1#8G	0 -	DIV. 23	STO, 2P	DIV. 26	AT UNIT -	
	INDOOR COOLING UNIT	115 115	1		0.4 4.4	0.0	0.0	LPB LPA	-	3/4" C - 2#12, 1#12G 3/4" C - 2#10, 1#10G	0 0	DIV. 23	STO, 2P 30A, 2P	DIV. 26 DIV. 26	AT UNIT - AT UNIT FEI	D FROM CU-1
- '	OUTDOOR CONDENSING UNIT	200	1	-	25.0	5.0	4.0	LPA	-	3/4" C - 2#10, 1#10G	0 -	DIV. 23	60A, 3P	DIV. 26	AT UNIT -	OF INCINI CO-I
o-ı \	TOTAL		3	0	383	305	244	LFA	-	0/+ 0 - 0#10, 1#10G		טע . עום	ا ۱۵۵۸, ۵۲	DIV. 20	ATOMIT -	Version 021:

20A, 2P = 2-POLE MOTOR RATED SWITCH

FVNR = FULL VOLTAGE NON-REVERSING

SSRVS = SOLID STATE REDUCED VOLTAGE

STO, 2P = MANUAL STARTER SWITCH WITH

THERMAL OVERLOADS

2S1W = TWO SPEED, ONE WINDING 2S2W = TWO SPEED, TWO WINDING

FVR = FULL VOLTAGE REVERSING SM, 2P = 2-POLE MANUAL STARTER SWITCH

VFD = VARIABLE SPEED DRIVE

1. FUSE SIZE INDICATED MUST BE USED IN COMBINATION WITH PROPERLY SIZED OVERLOAD RELAYS. UNLESS INDICATED OTHERWISE, FUSES SHALL BE BUSSMANN LPS-RK OR LPN-RK. CONFIRM ACTUAL NAMEPLATE DATA OF EQUIPMENT AND PROVIDE FUSES RECOMMENDED BY MANUFACTURER. 2. COORDINATE ELECTRICAL EQUIPMENT REQUIREMENTS WITH THE ACTUAL MECHANICAL EQUIPMENT SUPPLIED.

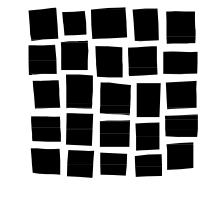
3. COORDINATE THE REQUIREMENTS WITH THE VFD SUPPLIED. OVERCURRENT PROTECTION, AND FEEDER SIZE SHALL MATCH THAT REQUIRED BY THE VFD NAMEPLATE DATA. ALL MOTOR CIRCUIT CONDUCTORS FROM VFDS SHALL BE XHHW-2 OR XLPE SHIELDED CABLE ASSEMBLIES SUITABLE FOR VFD APPLICATIONS. BASE CONDUCTOR AMPACITY ON 60 DEGREE CENTIGRADE WIRE AND TERMINATIONS FOR SIZES #14 TO #1, AND 75 DEGREE CENTIGRADE WIRE AND TERMINATIONS FOR SIZES #1/0 AND LARGER.

4. LOCATE DISCONNECT WITHIN SIGHT OF MOTOR. IF CONTROLLER IS WITHIN SIGHT OF MOTOR AND IS EQUIPPED WITH A DISCONNECTING MEANS, A SEPARATE DISCONNECT IS NOT REQUIRED. IF CONTROLLER IS A VFD, COORDINATE WITH MECHANICAL TEMPERATURE CONTROL TO PROVIDE A SAFETY INTERLOCK IN THE DISCONNECT TO INDICATE THE STATUS OF THE DISCONNECT. IF THE DISCONNECT IS OPEN, THE VFD SHALL BE DISABLED.

5. REFER TO PANEL SCHEDULES FOR EXACT CIRCUIT NUMBER.

6. IF A FUSE SIZE IS INDICATED, PROVIDE A FUSED DISCONNECT UNLESS INDICATED OTHERWISE.

Y 4	QTY 1	LAMP(S) SPEC LED INCLUDED	DESCRIPTION 4' LONG CONTINUOUS RUN DIRECT/INDIRECT LINEAR LED	FINISH ALUMINUM	MOUNT PENDANT	MANUFACTURER AXIS	SPECIFICATION CATALOG NUMBER BBDILED-B3-MF-640-320-35-C-8-AP-D-1	VOLT 277	V-A 30	NOTES 2
	•	W/UNIT 3500K	PENDANT WITH 80% UP AND 20% DOWN DISTRIBUTION	PAINT	+8'-0" AFF					
X	1	LED INCLUDED W/UNIT 3500K	SAME AS TYPE A4 EXCEPT WITH EM BATTERY	ALUMINUM PAINT	PENDANT +8'-0" AFF	AXIS	BBDILED-B3-MF-640-320-35-C-8-AP-D-1-B1	277	30	2
В	1	LED INCLUDED W/UNIT	8' LONG CONTINUOUS RUN DIRECT/INDIRECT LINEAR LED PENDANT WITH 80% UP AND 20% DOWN DISTRIBUTION	ALUMINUM PAINT	PENDANT +8'-0" AFF	AXIS	BBDILED-B3-MF-640-320-35-C-8-AP-D-1	277	59	2
X	1	3500K LED INCLUDED W/UNIT	SAME AS TYPE A EXCEPT WITH EM BATTERY	ALUMINUM PAINT	PENDANT +8'-0" AFF	AXIS	BBDILED-B3-MF-640-320-35-C-8-AP-D-1-B2	277	59	2
2	1	3500K	SAME AS TYPE A8 EXCEPT 12' LENGTH	ALUMINUM PAINT	PENDANT +8'-0" AFF	AXIS	BBDILED-B3-MF-640-320-35-C-12-AP-D-1	277	88	2
4	1	3500K LED INCLUDED	SAME AS TYPE AI8 EXCEPT 4' LENGTH	ALUMINUM	PENDANT	AXIS	BBILED-B3-MF-950-35-C-4-AP-277-D-1	277	30	2
3	1	W/UNIT 3500K LED INCLUDED	8' LONG CONTINUOUS RUN INDIRECT LINEAR LED PENDANT	PAINT ALUMINUM	+8'-0" AFF PENDANT	AXIS	BBILED-B3-MF-950-35-C-8-AP-277-D-1	277	59	2
v	1	W/UNIT 3500K LED INCLUDED	SAME AS TYPE AI8 EXCEPT WITH EM BATTERY	PAINT ALUMINUM	+8'-0" AFF PENDANT	AXIS	BBILED-B3-MF-950-35-C-8-AP-277-D-1-B2	277	 59	
Х	1	W/UNIT 3500K		PAINT	+8'-0" AFF					2
	1	LED INCLUDED W/UNIT 4000K	LED HIGH BAY FIXTURE WITH WHITE ENAMEL FINISH, 30,000 LUMEN PACKAGE AND CLEAR PRISMATIC ACRYLIC LENS	STANDARD	PENDANT +30'-0" AFF	METALUX	HBLED-LD4-30-W-A-120-L835-EL14-ED-2	277	228	2
	1	LED INCLUDED 3500K 85+CRI	RECESSED LED FLUORESCENT TROFFER	STANDARD	RECESSED IN GRID	METALUX	2GC-LD1-48-A-UNV-L835	277	46	2
	1	LED INCLUDED W/UNIT	4" LED DOWNLIGHT	STANDARD	RECESSED IN GRID/GYP	HALO	H457-T-E010-EL406-9-35-TL410H	277	10	2
	1	3500K LED INCLUDED W/UNIT	WET LOCATION 4" LED DOWNLIGHT WITH DROP OPAL LENS	STANDARD	RECESSED IN GYP	HALO	H457TATE010-EL406935-TL402HS	277	12	2
	2	3500K 5000 LUMEN LED	1X4 INDUSTRIAL LED FIXTURE WITH WIREGUARD	STANDARD	PENDANT +7'-6" AFF	METALUX	4ILED-LD4-5-W-UNV-L835-SD-1-ILED-WG4	277	55	2
(2		SAME AS TYPE G EXCEPT WITH EM BATTERY	STANDARD	PENDANT		4ILED-LD4-5-W-UNV-L835-SD-1-ILED-WG4-	277	55	2
	1	3500K 85+CRI LED INCLUDED	DECORATIVE 2X4 LED FROSTED ACRYLIC PRISMATIC LENS	STANDARD	+7'-6" AFF RECESSED		EL14W Z3-W-L-1-L35-A-C-277-2X4	277	56	2
	4	W/UNIT 3500K			IN GRID				EO	
(1	W/UNIT 3500K	SAME AS TYPE H EXCEPT WITH EMERGENCY BALLAST	STANDARD	RECESSED IN GRID		Z3-W-L-1-L35-A-C-277-2X4-E	277	56	2
	1	LED INCLUDED W/UNIT 3500K	4' LED LOCKER ROOM COVE FIXTURE	STANDARD	ABOVE LOCKER	SELF ELECTRONICS	CREST-48-35K-110-S-S	277	40	2
(1	LED INCLUDED W/UNIT	WALL MOUNTED LED STAIRWELL LIGHT WITH EM BATTERY AND 0-10V DIMMING BALLAST	STANDARD	WALL +7'-0" AFF	NEO RAY	S23-DI-W-2-L35-4-277-SI-EM	277	40	2
3	1	W/UNIT	3' WALL MOUNTED LED FIXTURE	STANDARD	WALL +6" ABOVE	NEO RAY	S23-DI-W-2-L35-3-277-SI	277	30	2
	1	3500K LED INCLUDED W/UNIT	4' WALL MOUNTED LED BATHROOM FIXTURE	STANDARD	MIRROR/STALL WALL +6" ABOVE	NEO RAY	S23-DI-W-2-L35-4-277-SI	277	40	2
X	1	3500K	SAME AS TYPE 4 EXCEPT WITH EM BATTERY	STANDARD	MIRROR/STALL WALL	NEO RAY	S23-DI-W-2-L35-4-277-SI-EM	277	40	2
3	1	3500K LED INCLUDED	3' WALL GRAZING LED	STANDARD	+7'-6" AFF RECESSED	10	05-l-35K-10ASYM-100-1-X-2	277	30	2
1	1	W/UNIT 3500K LED INCLUDED	4' WALL GRAZING LED	STANDARD	IN SOFFIT RECESSED	10	05-I-35K-10ASYM-100-1-X-2	277	40	2
)	1	W/UNIT 3500K LED INCLUDED	2'X4" WIDE RECESSED LINEAR SLOT FIXTURE	STANDARD	IN SOFFIT RECESSED	FOCAL POINT	FSM2L-FL-865-35K-1C-UNV-LD1-TF-WH	277	22	2
		W/UNIT 3500K			IN GYP					
-	1	LED INCLUDED W/UNIT 3500K	SAME AS TYPE N2 EXCEPT 4' LENGTH	STANDARD	RECESSED IN GYP	FOCAL POINT	FSM4L-FL-865-35K-1C-UNV-LD1-TF-WH	277	43	2
X	1	LED INCLUDED W/UNIT 3500K	SAME AS TYPE N EXCEPT WITH EM BATTERY	STANDARD	RECESSED IN GYP	FOCAL POINT	FSM4L-FL-865-35K-1C-UNV-LD1-TF-WH- EC	277	43	2
	1	LED INCLUDED W/UNIT	5' WIDE AND 2' DEEPLED SQUARE PENDANT	PER ARCHITECT	PENDANT BOTTOM AT	BARBICAN	16-5060-LF-24"-ACB-HTO	277	108	2
	1	3500K LED INCLUDED W/UNIT	SURFACE MOUNTED LED FIXTURE WITH FROSTED LENS	STANDARD	+7'-0" SURFACE	STONE	CL530-FR-PC-DOB24	277	24	2
	1	3500K LED INCLUDED W/UNIT	LED SUPERSPOT TRACK LIGHTING	STANDARD	TRACK STRUCTURE	LSI	V-10-30K-CC-B	277	53	2
	1	3000K LED INCLUDED	900 LUMENS PER FOOT STEM MOUNTED LED WALL WASHER	STANDARD	WALL	ALW	RLP1S-X-HP900-3500K-RLED-DIM-277-	277	10/FT	2
	1	W/UNIT 3500K LED INCLUDED	0-10V DIMMABLE SMALL PROFILE 500 LUMEN LED COVE	STANDARD	STEM MOUNT RECESSED	FOCAL POINT	AL FCOL-HN-1250LF-30K-1C-277-LD1	277	12/FT	2
	1	W/UNIT 3000K LED INCLUDED	VERTICALLY MOUNTED 4' TALL DECORATIVE LED SCONCE	SATIN NICKEL	IN COVE 6'-0" AFF	TECH LIGHTING	700BCGIAR-6-48-K-S-LED835-277-EMI	277	31	2
		W/UNIT 3500K	WITH SATIN NICKEL FINISH		MIRROR					
	1	LED INCLUDED WITH UNIT	EDGE LIT EXIT SIGN WITH ARROWS AND NUMBER OF FACPLATES PER DRAWINGS.	PER LOCAL CODES	REFER TO DRAWINGS	SURE LITE	EUX7-R-WH-SD	277	10	1,2
	1	LED INCLUDED WITH UNIT 80+CRI	36" DIAMETER DECORATIVE LED DRUM PENDANT	PER ARCHITECT	+8'-0" AFF	BARBICAN	16-0436-LF-XX-SM-HTO-XX-LED277V-DB	277	73	2
X	1	LED 3000K	WALL MOUNTED EXTERIOR LED FIXTURE	CITY SILVER	WALL +6" ABOVE	LUMIERE	303-W1-LEDB1-3000-UNV-T2-DIM10-CS	277	10	2
3	1	80+CRI LED 3000K	1200 LUMEN LED SURFACE DOWNLIGHT	STANDARD	ADJACENT DOOR SURFACE	HALO	SLD612-8-35-WH	277	15	2
)	1	80+CRI 2500 LUMEN LED	2500 LUMEN LED CYLINDER DOWNLIGHT WITH 55 DEGREE BEAM ANGLE AND PEWTER TRIM	PER ARCHITECT	PENDANT +20'-0" AFF	ACUITY	ICO CYL-35-25-6PR-55D-277-PMWL	277	40	2
1	1	1000 LUMEN LED	1000 LUMEN LED CYLINDER DOWNLIGHT WITH PEWTER TRIM	PER	PENDANT	ACUITY	ICO CYLLW-35/10-2PR-LSS-MVOLT-UGZ	277	14	2
3	1	3500K LED INCLUDED	LED WIDE ANGLE COVE	ARCHITECT STANDARD	+10'-0" AFF RECESSED	SELF	ARROW-L48-24V	277/24	8	2
	1	W/UNIT 2700K			IN COVE	ELECTRONICS		277	_	
1	1	W/UNIT RGB	RGB COLOR CHANGING LED WITH DMX CONTROL	STANDARD	+7'6" AFF		COLORBURST 6-W-21		26	2
	1	LED INCLUDED W/UNIT 3000K	LED BOLLARD	SILVER	BOLLARD 36" TALL	LUMIERE	303-B2-LEDB4-3000-277-T2-DIM10-CS-36	277	31	2
(1	LED INCLUDED W/UNIT	6300 LUMEN LED POLE MOUNTED FIXTURE WITH TYPE 2 DISTRIBUTION, 700MA DRIVER MOUNTED ON A 12' ROUND	DARK BRONZE	12' POLE	KIM	SAR-1SA-2-70-40L-3K-277-DB	277	93	2
-	1	1800 LUMEN	TAPERED STEEL POLE 2' WALL MOUNTED JANITOR CLOSET LENSED LED FIXTURE 28	STANDARD	WALL MOUNTED ABOVE DOOR	METALUX	2SNLED-LD4-18SL-LC-UNV-L830	277	20	2
N	1	1300 LUMEN	42" TALL LED BOLLARD WITH ASYMETRIC DISTRIBUTION AND FULL CUTOFF OPTICS	PER ARCHITECT	GRADE	LITHONIA	DSXB LED-12C-700-30K-ASY-MVOLT	277	31	2
	A A	W/UNIT 3000K	TOTAL OFF OFFICE	ARUMITEUT					A A	



DAVIS **PARTNERSHIP** ARCHITECTS

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Consultant

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Issue/Revisions Date No. ADDENDUM 1 11/20/15 1

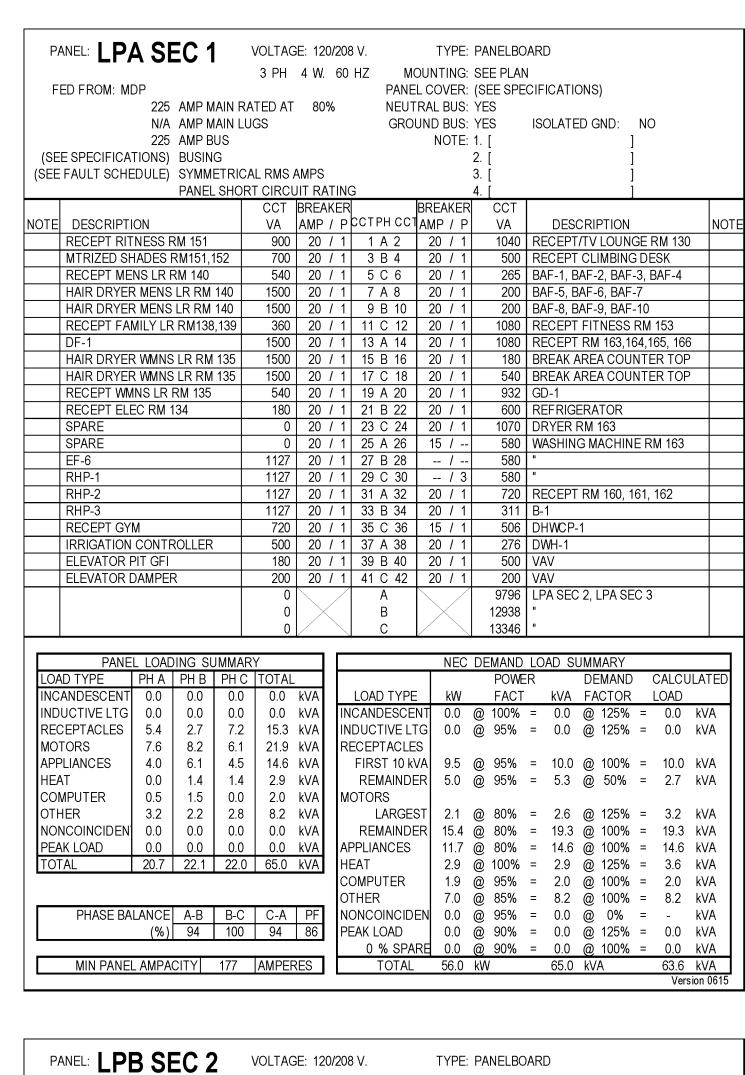
ADDENDUM 2 **12/4/15 2**

Project Information

Sheet Information

Sheet Title: ELECTRICAL SCHEDULES

Nov. 9, 2015 CONSTRUCTION DOCUMENTS Sheet Number:



PA	ANEL: LPA	A SE	EC 2)	VOLTAC	3E: 12	20/2	08 V.		TYPE:	PA	NELBC	ARD					
	— . /	•				4 W	1. 6	O HZ M	OUN	ITING:	SE	E PLAN	1					
FE	ED FROM: ME)P						PANE	EL C	OVER:	(SE	E SPE	CIFICATI	IONS)				
		N/A	AMP N	1AIN R	ATED AT	- 80)%	NEU ⁻	TRAI	L BUS:	YΕ	S		·				
		MLO	AMPN	1AIN L	UGS			GRC	UNE	BUS:	YE	S	ISOLAT	ED GND:	NO	C		
			AMP B							NOTE:		•]			
•	E SPECIFICAT										2. [•]			
(SEE	FAULT SCHE	DULE)									3. []			
			PANEL	<u> SHOI</u>	RT CIRC	_			<u>. </u>		4.		1]			
	D EGG D I D T I				CCT					EAKEF		CCT	5-0					
NOTE	DESCRIPTION				VA			P CCT PH CC				VA		CRIPTIO			N	10
	RECEPT IT F		100		360	20				0 / 1				SCONTR				_
	L6-30 RECEF	21 RM 1	133		180	20				0 / 1				T PT OFF	ICE 1	0/		_
	" 10.00 DE0E	OT DM 4	100		180					0 / 1			WORK F			400		
	L6-30 RECEF	21 KM 1	133		180		/			0 / 1				ORS OF				
	VENDING M	ACLUNIE	=		180		1		_	0 / 1				T PT OFF		08		
	VENDING MA				1200		1		_	0 / 1 5 / 1	_			T RM 102		DENE	,	
	SP-1	4CHINE			1200 1127		$\frac{\prime}{I}$			3 / 1 0 / 1	_			NTRY DO OOR ASSI			<u> </u>	
	UH-2				1437		$\frac{\prime}{I}$			0 / 1				T MEETIN				
	UH-1				1437		$\frac{\prime}{I}$			0 / 1				D SHADE			15	
	UH-3			-	1437		$\frac{\prime}{I}$			0 / 1				T RM 111				
	CUH-1				115		$\frac{\prime}{I}$		_	0 / 1	_			T MEETIN				
	BASKETBALI	LIETA	/OTOR		790					5 / 1 5 / 1			EF-1		IO I (IV	1110		
	"		NO TOIL		790		$\frac{'}{I}$		_	0 / 1	_			ROOFTC)P RF	CEPT	_	
	BASKETBALI	LIFT	/OTOR		790	_	$\frac{'}{I}$			0 / 1	\vdash		FACP	1100110	// IXL	<u>OLI I</u>		
	"	, ,	101011		790		.			5 / -		790		R LIFT MO	OTOR	!		_
	BASKETBALI	LIFT	/OTOR		790		$\dot{\overline{T}}$			 / 2		790	"	<u> </u>	31311			
	"				790		.			0 /		500	SCORE	BOARD				
	BASKETBALL	L LIFT N	MOTOR		790		7		_	/ 2	_	500	"					
	П				790	†	1	2 81 B 82	2	0 /		500	SCORE	BOARD				
	ELEVATOR F	PIT GFI			180	20	7	1 83 C 84	Ι.	/ 2		500	"					
•				•		•		•	•				•					
	PANEI	L LOAD	ING SU	JMMA	RY] [NEC	DE	MAND	LOAD S	UMMARY	/			
LOA	D TYPE	PH A	PH B	PH C	TOTAL	-						POWE	R	DEMAN	1D	CALC	JLATE	Ð
	ANDESCENT	0.0	0.0	0.0	1	kVA		LOAD TYPI	_	kW		FACT	kVA			LOAD		
	UCTIVE LTG	0.0	0.0	0.0	0.0	kVA		INCANDESCE		0.0	_	100%		\sim		0.0	kVA	
	EPTACLES	1.6	2.2	4.0	1	kVA		INDUCTIVE L		0.0	@	95%	= 0.0	@ 1259	% =	0.0	kVA	
	TORS	4.8	5.1	2.6	1	kVA		RECEPTACLE			_							
	LIANCES	0.5	2.5	3.0	1	kVA		FIRST 10 k		7.3	_		= 7.7	@ 1009		7.7	kVA	
HEA		0.0	1.4	1.4	1	kVA		REMAIND	ᄖ	0.0	@	95%	= 0.0	@ 50%	6 =	-	kVA	
	MPUTER	0.5	1.0	0.0	1	kVA		MOTORS		0.0	_	000/	0.0	0.405	٠,	~ ~	13.78	
OTH		2.4	0.7	2.4		kVA		LARGE		2.0	@	80%	= 2.6	@ 1259		3.2	kVA	
	NCOINCIDEN	0.0	0.0	0.0		kVA		REMAIND	⊏K	7.9	@	80%	= 9.9	@ 1009		9.9	kVA	
	K LOAD	0.0	0.0	0.0		kVA	4 1	APPLIANCES		4.8	@	80%	= 6.0	@ 1009		6.0	kVA	
TOT	AL	9.8	12.9	13.4	36.0	kVA		HEAT		2.9	_		= 2.9	@ 1259		3.6	kVA	
								COMPUTER		1.4	@	95% 95%	= 1.5	@ 1009		1.5	kVA	
	PHASE BAI		A-B	B-C	C-A	PF		OTHER NONCOINCID	 	4.7 0.0	@	85% 95%	= 5.5 = 0.0	_		5.5 -	kVA kVA	
	FIIASE BAI	LANCE (%)	74	96	70	86		NONCOINCIL PEAK LOAD	'LIN	0.0	@	90%	= 0.0	_	% =	0.0	kVA	
		(70)	<u> </u>	1 30	1 10	1 00	ıl			0.0	ω	JU /0	- 0.0	w IZJ	,u —	0.0	V A V	

MIN PANEL AMPACITY 104 AMPERES

0 % SPARE 0.0 @ 90% = 0.0 @ 100% = 0.0 kVA

TOTAL 31.0 kW 36.0 kVA 37.4 kVA

P.A	ANEL: LP	A SE	EC 3	}	VOLTAG	SE: 12	0/2	08 V.		TYPE:	PAI	NELBO	ARD				
			_		3 PH	4 W.	. 6	O HZ M	OUN	ITING:	SEI	E PLAN	1				
FI	ED FROM: ME)P						PANE	EL C	OVER:	(SE	E SPE	CIFICATI	ONS)			
		N/A	AMP M	IAIN RA	TED AT	80	%	NEUT	ΓRΑΙ	_BUS:	ΥE	S		,			
		MLO	AMP M	IAIN LU	GS			GRO	UND	BUS:	YE	S	ISOLAT	ED GND:	NO		
			AMP B						ı	NOTE:]		
•	E SPECIFICAT	,									2. [']		
(SEE	FAULT SCHE	DULE)									3. []		
			PANEL	SHOR	T CIRCU	_			lo o r	- 4 1/ 55	4. [007	Ι				
NOTE	DECODIDE	ON				BREA				EAKER		CCT	DEC.	ADIDTION			١.
NOTE		ON						P CCT PH CC	-		_	VA		CRIPTION			
	SPARE				0					0 / 1		0					
	CU-1				2500	40		87 B 88 2 89 C 90	_	0 / 1		0					_
\sim	SP-2				2500 854	15	\sim		2	0 / 1 0 / 1		0	SPARE SPARE				_
	3P-Z				854		_	9 1 A 92 9 3 B 94	2			0					_
	п				854		•	3 95 C 96	2				SPARE				\dashv
	SPARE				004	20		1 97 A 98	2				SPARE				
	SPARE				0	20		1 99 B 100	2			0					\dashv
	SPARE				0	20	$\frac{'}{I}$		2				SPARE				-+
	SPARE				0	-	Ť			0 / 1		0					\dashv
	SPARE				0	20	.			0 / 1		0					\neg
	SPARE				0	20	.	_	2			0	SPARE				
	SPARE					20	7	1 109 A 110	2			0	SPARE				\neg
	SPARE				0	20	7	1 111 B 112	2	0 / 1		0	SPARE				
	SPARE				0	20	7	1 113 C 114	2	0 / 1		0	SPARE				
	SPARE				0	20	1	1 115 A 116	2	0 / 1		0	SPARE				
	SPARE				0	20	1	1 117 B 118	2	0 / 1		0	SPARE				
	SPARE				0	20	1	1 119 C 120	2	0 / 1		0	SPARE				
	SPARE				0	20	1			0 / 1		0					
	SPARE				0	20	1		_	0 / 1		0	SPARE				
	SPARE				0	20	/	1 125 C 126	2	0 / 1		0	SPARE				
	PANEI	LOAD	ING SU	JMMAR	Υ		Г			NEC	DE	MAND	LOAD S	UMMARY			
LOA	D TYPE	PH A	PH B	PH C	TOTAL							POWE	:R	DEMAND) (CALCU	JLAT
	ANDESCENT	0.0	0.0	0.0	0.0	kVA	L	LOAD TYPE		kW		FACT	kVA			LOAD	
	UCTIVE LTG	0.0	0.0	0.0	0.0	kVA		INCANDESCE			_	100%		@ 125%		0.0	kV/
	EPTACLES	0.0	0.0	0.0	0.0	kVA		INDUCTIVE L		0.0	@	95%	= 0.0	@ 125%	=	0.0	kV/
	TORS	0.9	0.9	0.9	2.6	kVA		RECEPTACLE			_						
	PLIANCES	0.0	2.5	2.5	5.0	kVA		FIRST 10 k		0.0	_	95%	= 0.0	@ 100%		0.0	kV/
HEA		0.0	0.0	0.0	0.0	kVA		REMAINDI	EK	0.0	@	95%	= 0.0	@ 50%	=	-	kV/
	MPUTER	0.0	0.0	0.0	0.0	kVA		MOTORS		0.4	6	000/	_ 00	@ 40EM	_	2.0	13.74
OTH		0.0	0.0	0.0	0.0	kVA		LARGE		2.1		80%	= 2.6	@ 125%		3.2	kV/
	NCOINCIDEN	0.0	0.0	0.0	0.0	kVA		REMAINDI	EK			80%	= 0.0	@ 100%		0.0	kV/
TOT	K LOAD	0.0	0.0 3.4	0.0 3.4	8.0	kVA		APPLIANCES HEAT		4.0		80% 100%	= 5.0	@ 100% @ 125%		5.0	kV/
101	ΛL	0.9	3.4	J.4	0.0	kVA		COMPUTER		0.0 0.0	_		= 0.0 = 0.0	@ 125% @ 100%		0.0 0.0	kV# kV#
								OTHER			_		= 0.0	@ 100%		0.0	kV <i>i</i>
	PHASE BAI		A-B	B-C	C-A	PF		OTHER NONCOINCID	EνΙ	0.0	_	95%	= 0.0	@ 100%	=	-	kV/
	I HAOL DAI	-ANCE (%)	3	100	3	75		NONCOINCID PEAK LOAD	LIN	0.0	_	90%	= 0.0	@ 125%		0.0	kV/
		(/0 /	J	100		75	 	O % SPA			_	90%		_		0.0	k\//

MIN PANEL AMPACITY 23 AMPERES

0 % SPARE 0.0 @ 90% = 0.0 @ 100% = 0.0 kVA

TOTAL 6.0 kW 8.0 kVA 8.2 kVA

PA	NEL: LP	R SF	FC 1		VOLTAC	SE: 120	0/20	08 V.	T١	YPE:	PAN	IELBO	ARD			
		J 0L		ı					TNUC	ING·	SEE	PLAN	J			
l FE	D FROM: MI	OP.			0 1 11		0.						CIFICATI	ONS)		
			AMP M	IAIN RA	ATED AT	80	%	NEUT						,		
		N/A	AMP N	1AIN LU	JGS			GRO	UND E	BUS: YES ISOLATED GND: NO						
		225	AMP B	US					NO	OTE:	1. []		
	SPECIFICAT	,									2. []		
(SEE	FAULT SCHE	EDULE)									3. []		
			PANEL	SHOR	T CIRC						4. [г			
NOTE	DECODIDE	011				BREA			BREA			CCT	DE0	ODIDTION		
	DESCRIPTI		ıT		VA			CCTPH CCT				VA		CRIPTION		N ₁
	FITNESS EQ				360					/ 1			EF-2	T DM 000		
	FITNESS EQ				360					/ 1				IT RM 203		-
	FITNESS EQ FITNESS EQ				360 360	20	<u>/ 1</u> / 1			/ 1 / 1				HALL,RM2 RESTROO		
	FITNESS EQ				360	20	<u>/ 1</u> / 1		20	/ 1 / 1			DF-2	KESTROO	101 207,200	-
	FITNESS EQ				360		<u>/ 1</u> / 1			/ 1 / 1				TV,RM 209	a	
	FITNESS EQ			-	360		/ / 1			/ 				TRAINING		+
	FITNESS EQ			-	1000		/ / 1			/ 1 / 1		180		TRAINING		+
	FITNESS EQ				1000		/ / 1			/ 1		180		TRAINING		
	FITNESS EQ				1000		/ 			/ 1				TRAINING		+
	FITNESS EQ				1000	20				/ 1				TRAINING		\top
	FITNESS EQ				1000	20				/ 1				TRAINING		
	FITNESS EQ	UIPMEN	IT T		1000	20	/ 1	25 A 26	20	/ 1		180	RECEPT	FITNESS [DECK 214	
	FITNESS EQ	UIPMEN	IT T		1000	20	/ 1	27 B 28	20	/ 1		700	MOTOR	ZED SHAD	ES RM 21	1
	FITNESS EQ	UIPMEN	ΙT		1000	20	/ 1	29 C 30	20	/ 1		700	MOTOR	ZED SHAD	ES	
	FITNESS EQ	UIPMEN	ΙT		1000	20	/ 1	31 A 32	20	/ 1		311				
	FITNESS EQ	UIPMEN	١T		1000	20	/ 1	33 B 34	20	/ 1		180		ROOFTOP		
	FITNESS EQ				360		/ 1			/ 1		180		STR & CO		5
	FITNESS EQ	UIPMEN	IT		360	20	/ 1			/ 1		200		NTROL DA	MPER	
	SPARE				0		/ 1			/ 1						
	SPARE				0	20	/ 1		20	11	1		SPARE)	2.0	
					0		/	A				0070	" TAR 2EC	2, LPB SE	J 3	
					0			B C				8880				
					U							0000				
	DANE	L LOAD	ING SI	ΙΜΜΔΕ	PV		Г		ı	VIEC.	DEM	ΙΔΝΓ		UMMARY		
LOA	D TYPE	PH A	PH B		TOTAL		H		T	10		POWE		DEMAND	CALCU	II ATFI
	ANDESCENT	0.0	0.0	0.0	0.0	kVA		LOAD TYPE	:	kW		FACT		FACTOR	LOAD	
	JCTIVE LTG	0.2	0.0	0.0	0.2	kVA	h	NCANDESCE				00%		@ 125%		kVA
REC	EPTACLES	5.8	5.2	6.5	17.5	kVA		NDUCTIVE L1			_		= 0.2	@ 125%		kVA
	ORS	9.5	11.2	9.0	29.7	kVA		RECEPTACLE						•		
I I	LIANCES	0.0	0.6	0.5	1.1	kVA		FIRST 10 k		9.5	@ 9	95%	= 10.0	@ 100%	= 10.0	kVA
HEA	т	0.0	0.0	0.0	0.0	kVA		REMAINDE			_	95%	= 7.5	<u>@</u> 50%	= 3.8	kVA
COM	1PUTER	0.5	0.0	0.0	0.5	kVA	N	MOTORS						_		
ОТН		0.5	1.1	0.7	2.3	kVA		LARGES			@ 8		= 1.1	@ 125%		kVA
l I	COINCIDEN		0.0	0.0	0.0	kVA		REMAINDE					= 28.6	@ 100%		kVA
	K LOAD	0.0	0.0	0.0	0.0	kVA		APPLIANCES			@ 8		= 1.1	@ 100%		kVA
TOT	AL	16.4	18.1	16.7	51.0	kVA		HEAT			_	00%		@ 125%		kVA
								COMPUTER			_		= 0.5	@ 100%		kVA
						T = -		OTHER			_	85%	= 2.3	@ 100%		kVA
	PHASE BA		A-B	B-C	C-A	PF		NONCOINCID			\sim		= 0.0	@ 0%	= -	kVA
L		(%)	90	92	98	86	F	PEAK LOAD			\sim	90%	= 0.0	@ 125%		kVA
_	MINI DANIE	ALIDA		400	LALIDES	250	F	0 % SPA TOTAL				90%	= 0.0	@ 100%		kVA
	MIN PANEL	AMPA(:11 Y I	133	AMPER	<⊢S	- 1	17314	/	4.0	kW		51.0	kVA	48.0	kVA

P	ANEL: LP	R SE	=C 2		VOLTAC	3E: 120	0/20	8 V.		TYPE:	PA	NELBO	ARD				
	L	J 01	_0 2		3 PH							E PLAN					
F	ED FROM: MI)P			0 1 11	T 00.	00		EL COVER: (SEE SPECIFICATIONS)								
•			AMP N	AAIN RA	TED AT	80	%	NEUTRAL BUS: YES									
			AMP N							ND BUS: YES ISOLAT				ED GND:	NO)	
		225	AMP B	BUS					1	NOTE:	1.	1			1		
(SE	E SPECIFICAT	TIONS)	BUSIN	IG							2.				j		
(SEE	FAULT SCHE	DULE)	SYMM	ETRIC/	AL RMS	AMPS					3.]		
			PANEL	L SHOR	T CIRC	JIT RA	TIN				4.]		
						BREA				EAKEF		CCT					
NOTE	DESCRIPTI				VA			CCTPH CC				VA		CRIPTION			NOT
	FITNESS EQ				1000	20				0 / 1				S EQUIPM			
	FITNESS EQ				1000					0 / 1				SEQUIPM			
	FITNESS EQ				1000		<u>/ 1</u>		20					SEQUIPM			
	FITNESS EQ				1000		<u>/ 1</u>		20					S EQUIPM			
	FITNESS EQ				1000		/ 1		20					SEQUIPM			
	FITNESS EQ	•			1000		/ 1		20					SEQUIPM			
	FITNESS EQ				360		/ 1			0 / 1	_			SEQUIPM			
	FITNESS EQ				360		<u>/ 1</u>		20					SEQUIPM			
	FITNESS EQ				360	20	<u>/ 1</u>	59 C 60	20					SEQUIPM			_
	FITNESS EQ				360		<u>/ 1</u> / 1	61 A 62	20					S EQUIPM			_
	FITNESS EQ FITNESS EQ				360 360				20					S EQUIPM			_
	FITNESS EQ				360		<u>/ 1</u> / 1		20					S EQUIPM S EQUIPM			_
	FITNESS EQ				360	+	/ 1 / 1		20					S EQUIPIN			
	FITNESS EQ				360	+	/ 1		20					S EQUIPM			-
	FITNESS EQ				360		/ 1		20					S EQUIPM			
	FITNESS EQ				360	+	/ 1		20					S EQUIPM			
	FITNESS EQ				1000	1	/ 1	77 C 78	20		1			S EQUIPM			_
	VAV, BABEB				500	+	/ 1	 		0 / 1				S EQUIPM			
	AP-1	071112	7011111		46	+	/ 1	1	20				RECEP1				
	SPARE				0		/ 1		_	0 / 1			SPARE	11111 1 10			
					-												<u> </u>
	PANE	L LOAD	ING SU	JMMAR	Υ					NEC	DE	MAND	LOAD S	UMMARY			
LOA	ND TYPE	PH A	PH B	PH C	TOTAL	-						POWE	R	DEMAN	D	CALCU	LATED
INC	ANDESCENT	0.0	0.0	0.0	0.0	kVA		LOAD TYPE		kW		FACT	kVA	FACTOR	₹	LOAD	
	UCTIVE LTG	0.2	0.0	0.0	0.2	kVA		CANDESCE		0.0	@	100%	= 0.0	@ 125%	o =	0.0	kVA
	CEPTACLES	3.4	3.6	2.9	9.9	kVA		IDUCTIVE L		0.2	@	95%	= 0.2	@ 125%	o =	0.3	kVA
	TORS	6.0	6.1	6.0	18.1	kVA	R	ECEPTACLE									
	PLIANCES	0.0	0.0	0.0	0.0	kVA		FIRST 10 k	- 1	9.4	@		= 9.9	@ 100%		9.9	kVA
HE/		0.0	0.0	0.0	0.0	kVA		REMAIND	ER	0.0	@	95%	= 0.0	@ 50%	=	-	kVA
	MPUTER	0.5	0.0	0.0	0.5	kVA	М	OTORS							_		
	HER	0.0	0.4	0.0	0.4	kVA		LARGE	- 1	0.8	@	80%	= 1.0	@ 125%		1.3	kVA
	NCOINCIDEN		0.0	0.0	0.0	kVA		REMAIND	ER	13.6	@		= 17.0	_		17.0	kVA
	K LOAD	0.0	0.0	0.0	0.0	kVA		PPLIANCES		0.0	@		= 0.0	@ 100%		0.0	kVA
TOT	AL	10.1	10.1	8.9	29.0	kVA		EAT		0.0	\sim	100%		@ 125%		0.0	kVA
								OMPUTER		0.5	@		= 0.5	@ 100%		0.5	kVA
	DUAGE DA	LANCE	A 5	L B A	I C A			THER	_,	0.3	@	85%	= 0.4	@ 100%		0.4	kVA
	PHASE BA			B-C	C-A	PF		ONCOINCID	⊨N	0.0	@	95%	= 0.0	@ 0%	, =	-	kVA
Ц		(%)	100	88	88	86	۱۲	EAK LOAD		0.0	@	90%	= 0.0	@ 125%		0.0	kVA
_	MIN PANEL	ALIDA	OITVI	82	TANADES	250	\vdash	0 % SPA TOTAL	КЦ	0.0 25.0	@ kW	90%	= 0.0	@ 100% kVA	0 =	0.0	kVA
	MINI PANEL		i .I I Y I	×/	AMPER	7F5	- 1	ι () ι Δ Ι		/n i i	ZVV		74 N	K V A		29.4	kVA

SPARE	1 /	NEL: LPE) O)				3 V.				NELBO						
NA AMP MAIN RATED AT 80% NEUTRAL BUS: YES SOLATED GND: NO NO NO NO NO NO NO NO						3 PH	4 W.	60											
MLO AMP MAIN LUGS 225 AMP BUS NOTE: 1.	FE	ED FROM: ML												CIFIC	CATIO	ONS)			
SEE FAULT SCHEDULE SYMMETRICAL RMS AMPS SEE FAULT SCHEDULE SYMMETRICAL RMS AMPS SEE FAULT SCHEDULE SYMMETRICAL RMS AMPS STANKE							80%	6										_	
SEE SPECIFICATIONS						JGS			GRO					180	LAIE	D GND:	, N	O	
SEE FAULT SCHEDULE SYMMETRICAL RMS AMPS PANEL SHORT CIRCUIT RATING 4.	, 0E1									ľ	NOTE:		-]		
PANEL SHORT CIRCUIT RATING	•		•			AL DMO	A					•	[r]		
DESCRIPTION	SEE	FAULI SCHE	DULE)					TINI	_				[r]		
DEC DESCRIPTION				PANEL	- SHUK					חחר	AVEE		COT				j		
RTU-1 RECEPT, LIGHTING	ᇺ	DECODIDE	ON												DEC	CDIDTIO	vI.		NOT
RTU-1 CONTROLS				NITING.												CRIPTIO	<u> </u>		INOT
SPARE				שחוווש															
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PANEL LOADING SUMMARY																			
PANEL LOADING SUMMARY																			
DEMAND CALCULATED CALCULA		OI AILL						' '	123 0 120		7 / 1			017	NI VL				
DEMAND CALCULATED CALCULA		PANE	ΙΙΟΔΓ	ING SI	ΙΜΜΔΕ	PΥ		г			NEC	DF	MAND	ΙΟΔ	D SI	IMMARY	,		
INCANDESCENT 0.0 0.0 0.0 0.0 0.0 kVA INDUCTIVE LTG 0.2 0.0 0.0 0.2 kVA RECEPTACLES 0.2 0.0 0.0 0.0 0.0 kVA MOTORS 0.0 0.0 0.0 0.0 0.0 kVA MOTORS 0.0 0.0 0.0 0.0 0.0 kVA HEAT 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 kVA NONCOINCIDEN 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0	ΙΩΑ							\vdash			IVLO				0			CALCI	II ATED
INDUCTIVE LTG 0.2 0.0 0.0 0.2 kVA RECEPTACLES 0.2 0.0 0.0 0.2 kVA NONCOINCIDEN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA PEAK LOAD 0.0 0.0 0.0 0.0 0.0 0.0 kVA TOTAL 0.3 0.4 0.0 0.0 0.0 kVA COMPUTER 0.3 0.4 0.0 0.0 kVA TOTAL 0.3 0.4 0.0 0.0 kVA							k\/A		I OAD TYPE		kW				k\/A				
RECEPTACLES 0.2 0.0 0.0 0.0 0.2 kVA MOTORS 0.0 0.0 0.0 0.0 kVA APPLIANCES 0.0 0.0 0.0 0.0 0.0 kVA RECEPTACLES FIRST 10 kVA 0.2 @ 95% = 0.2 @ 100% = 0.2 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA REMAINDER 0.0 0.						1						ര							_{kVA}
MOTORS 0.0 0.0 0.0 0.0 kva APPLIANCES 0.0 0.0 0.0 kva HEAT 0.0 0.0 0.0 kva COMPUTER 0.0 0.0 0.0 kva OTHER 0.0 0.4 0.0 0.4 kva NONCOINCIDEN 0.0 0.0 0.0 kva PEAK LOAD 0.0 0.0 0.0 kva TOTAL 0.3 0.4 0.0 1.0 kva HEAT 0.0 0.0 0.0 0.0 kva TOTAL 0.3 0.4 0.0 1.0 kva HEAT 0.0 0.0 0.0 0.0 kva COMPUTER 0.0 0.0		1				1						_				_			
APPLIANCES 0.0 0.0 0.0 0.0 kVA HEAT 0.0 0.0 0.0 kVA COMPUTER 0.0 0.0 0.0 0.0 kVA NONCOINCIDEN 0.0 0.0 0.0 0.0 kVA PEAK LOAD 0.0 0.0 0.0 0.0 kVA TOTAL 0.3 0.4 0.0 1.0 kVA COMPUTER 0.3 0.4 0.0 1.0 kVA COMPUTER 0.3 0.3 0.4 0.0 1.0 kVA NONCOINCIDEN 0.3 0.4 0.0 0.0 0.0 kVA COMPUTER 0.3 0.3 0.4 0.0 0.0 1.0 kVA COMPUTER 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						1					J	~	0				•	5.0	
REMAINDER 0.0 0.0 0.0 0.0 0.0 0.0 kVA MOTORS 0.0 0.0 0.0 0.0 kVA MOTORS 0.0 0.0 0.0 0.0 0.0 0.0 kVA NONCOINCIDEN 0.0 0.0 0.0 0.0 0.0 kVA PEAK LOAD 0.3 0.4 0.0 1.0 kVA HEAT 0.0 0.0 0.0 0.0 kVA HEAT 0.0 0.0 0.0 0.0 0.0 kVA HEAT 0.0 0.0 0.0 0.0 0.0 kVA COMPUTER 0.0 0.0 0.0 0.0 0.0 0.0 kVA OTHER 0.3 0.85% = 0.4 0.0 0.0 0.0 kVA 0.0 0.0 kVA 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA 0.0						1		1 "			0.2	@	95%	=	0.2	@ 1009	6 =	0.2	_{kVA}
COMPUTER O.0 0.0 0.0 0.0 kva OTHER OTHER O.0 0.4 0.0 0.4 kva NONCOINCIDEN O.0 0.0 0.0 0.0 kva PEAK LOAD O.0 0.0 0.0 kva TOTAL O.3 0.4 0.0 1.0 kva HEAT COMPUTER OTHER OTHE		1				1						_				_		-	
OTHER 0.0 0.4 0.0 0.4 kVA NONCOINCIDEN 0.0 0.0 0.0 0.0 kVA PEAK LOAD 0.0 0.0 0.0 kVA TOTAL 0.3 0.4 0.0 1.0 kVA HEAT 0.0 0.0 0.0 0.0 kVA COMPUTER 0.0 0.0 0.0 0.0 kVA OTHER 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 kVA						1		М		- `	5.5	<u>ت</u>	, 0			G 30 /			
NONCOINCIDEN 0.0 0.0 0.0 0.0 kva PEAK LOAD 0.0 0.0 0.0 kva TOTAL 0.3 0.4 0.0 1.0 kva HEAT 0.0 0.0 0.0 0.0 kva COMPUTER 0.0		1				1		1"		ST	0.0	@	80%	=	0.0	@ 1259	6 =	0.0	_{kVA}
PEAK LOAD 0.0 0.0 0.0 kva TOTAL 0.3 0.4 0.0 1.0 kva HEAT 0.0 0.		1				1						_				_			
TOTAL 0.3 0.4 0.0 1.0 kVA HEAT 0.0 @ 100% = 0.0 @ 125% = 0.0 kVA COMPUTER 0.3 @ 85% = 0.4 @ 100% = 0.4 kVA		1				1		А		- `		_				_			
COMPUTER 0.0 @ 95% = 0.0 @ 100% = 0.0 kVA OTHER 0.3 @ 85% = 0.4 @ 100% = 0.4 kVA												_				_			
OTHER 0.3 @ 85% = 0.4 @ 100% = 0.4 kVA		· ·-	3.5	U 0.1	1 0.0	1						_							
												_							
TWITE EXAMPLE AND A SECOND CONTROL OF THE SE		PHASE RAI	LANCE	A-R	B-C	C-A	PF			_{=N}		_				_			
(%) 57 -71 -29 100 PEAK LOAD 0.0 @ 90% = 0.0 @ 125% = 0.0 kVA										-: `		_				_			
0 % SPARE 0.0 @ 90% = 0.0 @ 100% = 0.0 kVA			(/0)	- 01	<u>, , , , , , , , , , , , , , , , , , , </u>	1 20	,,,,	1 '		RF		_				_			
MIN PANEL AMPACITY 2 AMPERES TOTAL 1.0 kW 1.0 kVA 0.9 kVA		MIN PANFI	AMPA	CITYI	2	AMPER	RES	\vdash		- '-		_							

F	ED FROM: xx	XX			3 PH	4 W. 6	υHZ				SEE PLAN (SEE SPE		-IONS	3)			
	LD I NOW. XX		AMP M	IAIN RA	ATED AT	80%			RAL B			011 1071	10110	')			
			AMP M					GRO	UND B	US:	YES IS	SOLATE) GNE	D:	NO		
			AMP B						NO	TE:	1. NEW LO	DAD ON	EXIS	TING B	REAKE	R	
	С	OPPER									2. []			
		10000			AL RMS		10				3. []			
			PANEL	. SHUR		JIT RATIN BREAKE			BREAK	_	4. [CCT						$\overline{}$
NOTE	DESCRIPTI	ΟN			VA	AMP / F		PH CC			VA	DE	SCRIE	PTION			Імот
NOTE	RM 1015	<u> </u>			540	20 /		A 2	20			RM 10		11011			1101
	RM 1015				360	20 /	_	B 4	20			RM 10		<i>I</i> 1019			+
	RM 1015				720	20 / 1		C 6	20		360	RM 10	_				1
	RECEPT IN U	JSE			540	20 / 1	1 7	A 8	20	/ 1	900	RM 10	08, RN	<i>I</i> 1013			
	RECEPT IN U				720	20 / 1		B 10	20		720	RM 10					
	RECEPT IN U				360	20 / 1		C 12	20			RM 10					
	RECEPT IN U	JSE			900	20 / 1		A 14	20			FLOOF			M 1131		
	RM 1016	1 1010			540	20 /	_	B 16	20			RM 10		<i>I</i> I 1017			
	RM 1009, RM RECEPT IN U				360 540	20 / 2		C 18	20			RM 10		IICE			
	RM 1131 WF		1		360	20 /	_	B 22	20			RECE					+-
	RM 1131 WIF			-+	360	20 /		C 24	20			RM 10		JUL			+-
	RECEPT IN U				1080	20 /		A 26	20			RM 10					+-
	RECEPT IN U				540	20 /		B 28	20			RECE		USE			\top
	RECEPT IN U				180	20 / 1		C 30	20 .			RECE					
	RM 1013 FL0				180			A 32	20 .			RECE					
	RM 1016 FL0				180	20 / 1		B 34	20			RECE					
	RM 1016 FL0		D		180	20 / 1	_	C 36	20			RM 10					
	RECEPT IN U				540	20 / 1		A 38	20			RECE		USE			
	RECEPT IN U			-	720 900	20 / 2		B 40 C 42	20			RM 102					
	RM 1025	JOE			360	20 /		A 44	20			RECE		IISE			+-
	VAV			+	400	20 /		B 46	20			RECE					+
1	E. ENTRY DO	OOR OP	ERATO	₹ 🕇	240							RECE					+-
	RECEPT IN U				720	20 /		A 50	20	_	1220	EAST I			NGE		1
	RECEPT IN U	JSE			540	30 / 1		B 52	20	/ 1	380	E ENT	RY DC	OOR AS	SEMB	LY	1
	RECEPT IN U	JSE			360	20 / 1		C 54	20 .		900	RECE					
	RM 1003				540	20 / 1	_	A 56	20		180	RECE					
	RM 1007				720	20 / 1		B 58	20		540	RECE					
	RECEPT IN U				360	20 / 1	_	C 60	20		540	RECE					
	RECEPT IN U		ND C	-+	180 500	20 / 2		A 62 B 64	20		180 540	RECE!					_
	RM 1013110		/110	+	360	20 /		C 66	20		360	RECE					+
	RM 1009 WF)		720	20 /	_	A 68	20		540	RM 10					+
	RM 1009 WF				360	20 /		B 70	20		360	RECE					+
	RM 1009 WF	REMOLD	EAST		720	20 / 1	1 71	C 72	20 .	/ 1	720	RECE	PT IN T	USE			
	RM 1009 WF	REMOLD	WEST		360	20 / 1		A 74	20		720	RM 10					
	RM 1016				180	20 / 1	_	B 76	20		540						
	RM 1013 WF				540	20 / -		C 78	20		360						
	RM 1013 WF				540	/ 2		A 80	15	-	240	RECE!					+
	RM 1013 WF RM 1013 WF				540 540			B 82 C 84	20		720			USE			+
	TIMI TO TO MAIL	VEINIOED	•	<u> </u>	J 4 U	/ 2	- 1 03	U 04		1	120	I IVIVI IO	10				
	PANEL	LOADI	NG SUI	MMAR'	Y	ПГ				NE	C DEMAN	ID LOAI) SUI	MMAR'	<u> </u>		
	ND TYPE	PH A	PH B	PH C	TOT		_	_			POWE	:R		DEMAN	ND CA		ATED
	ANDESCENT	1	0.0	0.0	1	kVA		D TYPE		W	FACT			FACTO			
	UCTIVE LTG	1	0.0	0.0	0.0			DESCE			@ 100%		_			0.0	
	CEPTACLES	14.8	13.0	14.0	1			TIVEL		.0	@ 95%	= 0.0	@	125%	= 0	0.0	kVA
	TORS PLIANCES	0.0 0.0	0.0 0.0	0.2	0.2			PTACLE		E	@ 0E0/	_ 40	n 😞	1000/	_ 4/	1 0	,,,,
HEA		0.0	0.0	0.0	0.0	kVA kVA		ST 10 k' MAINDI			@ 95% @ 95%					0.0 6.0	
	MPUTER	0.0	0.0	0.0	0.0		OTON			,.0	w 00/0	JI.	u w	JU /0	. 10	J.U	, v /
OTH		0.5	1.1	0.0	1.6	kVA		LARGE	st o	.2	@ 80%	= 0.2	2 @	125%	= 0	.3	kVA
	VCOINCIDEN ⁻	1	0.0	0.0	0.0	kVA		MAINDI		.0			_	100%			kVA
	AK LOAD	0.0	0.0	0.0	0.0			ANCES		.0			@	100%	= 0		kVA
TOT	AL	15.3	14.1	14.3	43.7		HEAT		0	.0	@ 100%		_	125%			kVA
	· · · · · · · · · · · · · · · · · · ·							UTER		.0			_	100%			kVA
		= = '			1		THE				\sim	= 1.6	_	100%			kVA
	PHASE BA			B-C				OINCID			@ 95%		_	0%			kVA
		(%)	92	99	93	93 F	PEAK I				@ 90% @ 90%		_	125% 100%		0.0	
	MIN PANE	ΔMDΛ/	CITVI	77	AMPER	, _{ES}	U	% SPA TOT			<u>@_90%_</u> kW	= 0.0	$\overline{}$			7.9	kVA
1	IVIIIN FAINE	- VIAILY		1.1		\LU		101	/\∟ 4	ι.υ	I/ V V	44.	U KV/	r1			n 0615

	ED FROM: H2D 225 AMP MAIN I N/A AMP MAIN I 400 AMP BUS COPPER BUSING 10000 SYMMETRI	3 PH RATED AT LUGS	4 W. 60 80%	HZ MO PANE NEUT	OUNTING: EL COVER: FRAL BUS: UND BUS: NOTE:	(SEE SPE YES YES IS		R
I	PANEL SHO		JIT RATING BREAKER		BREAKER	4. [CCT]	
NOTE	DESCRIPTION			ССТРН ССТ		VA	DESCRIPTION	NOTE
1012	VENDING	700	20 / 1		20 / 1		LIGHTING DISPLAY	11012
	VENDING	700	20 / 1		20 / 1		LIGHTING DISPLAY	
	VENDING	700	20 / 1	5 C 6	20 / 1		LIGHTING KIOSK	
	VENDING	700	20 / 1	7 A 8	20 / 1	0	SPARE	
	RECEPT 1571	700	20 / 1	9 B 10	20 / 1	_	RECEPT	
	RECEPT 1571	720	20 / 1	11 C 12	20 / 1		RECEPT MEETING RM 148	1
	RECEPT	540	20 / 1	13 A 14	20 / 1		CONF ROOM RECEPT	1
	RECEPT	720	20 / 1	15 A 14	20 / 1		RECEPT	
	DOOR/DAMP(DOOR 1561)	720	20 / 1	17 C 18	20 / 1		RECEPT	+
	RECEPT	360	20 / 1	19 A 20	20 / 1		RECEPT COFFEE BAR	
	RECEPT	360	20 / 1	21 B 22	20 / 1		REFRIGERATOR	
	RECEPT	360	20 / 1	21 B 22 23 C 24	20 / 1		DISPOSAL	
		900			15 / 1		DRYER FAN	
	RECEPT		20 / 1	25 A 26				
	RECEPT	900	20 / 1	27 B 28	20 / 1	1120	RECEPT	
_	RECEPT HEALTH OFFICE	900	20 / 1	29 C 30	20 / 1		RECEPT	
1	GARBAGE DISPOSAL	1000	20 / 1	31 A 32	20 / 1		RECEPT	
1	CONF ROOM PROJECTOR	360	20 / 1	33 B 34	15 / 1		DOOR	
1	REFRIGERATOR	600	20 / 1	35 C 36	15 / 1		DOOR	
1	COUNTER TOP RECEPT	540	20 / 1	37 A 38	20 / 1		RECEPT	
1	KITCHEN RECEPT	360	20 / 1	39 B 40	20 / 1		EWC	
1	CONF ROOM SLIDING WALL	400	15 / 1	41 C 42	20 / 1		RECEPT	
	RECEPT PROGRAM RM	540	15 / 1	43 A 44	15 / 1		RECEPT/TVSS	
	BOOKSTORE BACKROOM	360	20 / 1	45 B 46	20 / 1	360	RECEPT/TVSS	
	BOOKSTORE TRACK LTG	400	20 / 1		15 / 1		EF-1/TVSS	
	BOOKSTORE RECEPT	360	20 / 1	49 A 50	20 / 1	540	RECEPT LOWER LEVEL	
	BOOKSTORE RECEPT	540	20 / 1	51 B 52	30 /	700	ICE CREAM MACHINE	
	BOOKSTORE RECEPT	360	20 / 1	53 C 54	/ 2	700	П	
	FITNESS FLOOR BOX	360	20 / 1	55 A 56	20 / 1		VENDING - BOOKSTORE	
	FITNESS FLOOR BOX	360	20 / 1	57 B 58	20 / 1		WIREMOLD BOOKSTORE	
	FITNESS FLOOR BOX	360	20 / 1	59 C 60	20 / 1	540	RECEPT BOOKSTORE	
	SPARE	0	20 / 1	61 A 62	20 / 1	0	SPARE	
	REACH IN COOLER	500	20 / 1	63 B 64	20 / 1	0	SPARE	
	SPARE	0	20 / 1	65 C 66	20 / 1	720	FITNESS FLOOR BOX	
	BOOKSTORE CASH WRAP	360	20 / 1	67 A 68	30 /	700	ICE CREAM RECEPT	
	BOOKSTORE CASH WRAP	360	20 / 1	69 B 70	/ 2	700	н	
	BOOKSTORE CASH WRAP	360	20 / 1	71 C 72	20 / 1	500	BOOKSTORE COMPUTER	
	BOOKSTORE CASH WRAP	360	20 / 1	73 A 74	50 /	4300	DISHWASHER	
	BOOKSTORE SHELF LTG	400	20 / 1	75 B 76	/ 2	4300	п	
	BOOKSTORE STORAGE	540	20 / 1	77 C 78	50 /	3750	COFFEE MAKER	
	BOOKSTORE LIFT	2100	40 /	79 A 80	/ 2	3750	п	
	п	2100	/	81 B 82	30 /	0	SPARE	
	II .	2100	/ 3		/ 2	0	"	

u u				2100		 3 83 C 84 -	/ 2		0	"					
PANEL	LOADI	NG SU	<u>MMARY</u>				N.	EC	DEMAN	ND.	LOAD	SUMMAR	<u> Y</u>		
LOAD TYPE	PH A	PH B	PH C	TOT	AL				POWE	R		DEMA	ND	CALC	JLATED
INCANDESCENT	1.5	0.6	0.8	2.9	kVA	LOAD TYPE	kW		FACT		kVA	FACT	OR	LOAD	
INDUCTIVE LTG	0.0	0.0	0.0	0.0	kVA	INCANDESCENT	2.9	@	100%	=	2.9	@ 125%	=	3.6	kVA
RECEPTACLES	8.1	8.4	8.6	25.1	kVA	INDUCTIVE LTG	0.0	@	95%	=	0.0	@ 125%	=	0.0	kVA
MOTORS	3.8	2.8	5.1	11.7	kVA	RECEPTACLES									
APPLIANCES	8.8	6.9	5.1	20.7	kVA	FIRST 10 kVA	9.5	@	95%	=	10.0	@ 100%	=	10.0	kVA
HEAT	0.0	0.0	0.0	0.0	kVA	REMAINDER	14.3	@	95%	=	15.1	@ 50%	=	7.6	kVA
COMPUTER	0.0	0.0	0.5	0.5	kVA	MOTORS									
OTHER	2.1	0.7	1.4	4.2	kVA	LARGEST	5.0	@	80%	=	6.3	@ 125%	=	7.9	kVA
NONCOINCIDENT	0.0	0.0	0.0	0.0	kVA	REMAINDER	4.3	@	80%	=	5.4	100%	=	5.4	kVA
PEAK LOAD	0.0	0.0	0.0	0.0	kVA	APPLIANCES	16.6	@	80%	=	20.7	@ 100%	=	20.7	kVA
TOTAL	24.3	19.4	21.5	65.1	kVA	HEAT	0.0	@	100%	=	0.0	@ 125%	=	0.0	kVA
•						COMPUTER	0.5	@	95%	=	0.5	@ 100%	=	0.5	kVA
						OTHER	3.6	@	85%	=	4.2	@ 100%	=	4.2	kVA
PHASE BA	LANCE	A-B	B-C	C-A	PF	NONCOINCIDEN	0.0	@	95%	=	0.0	@ 0%	=		kVA
	(%)	80	90	88	88	PEAK LOAD	0.0	@	90%	=	0.0	@ 125%	=	0.0	kVA
						0 % SPARE	0.0	@	90%	=	0.0	@ 100%	=	0.0	kVA
MIN PANEI	_ AMPA	CITY	166	AMPE	RES	TOTAL	57.0	kW	1		65.0	kVA		59.9	kVA
														Vers	on 0615

LPA SEC 2 SEC 3 SEC 1

LPB LPB LVD(E) L2D(E)
SEC 2 SEC 3

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ADDENDUM 1 11/20/15 1

12/4/15 2

Project Information

ADDENDUM 2

ECREATION CENTER
COMMUNITY COLLEG

Sheet Information

Sheet Title:
ELECTRICAL SCHEDULES

Nov. 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

E-603

DPA Project:

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SECTION 26 4100 - FACILITY LIGHTNING PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes lightning protection for buildings and structures.
- B. This is a performance specification. Provide design, material and labor to install a complete lighting protection system meeting the requirements set forth in these specifications and on the drawings.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.3 REQUIREMENTS OF REGULATORY AGENCIES AND STANDARDS

- A. The lightning protection system shall conform to the requirements of the Lightning Protection Institute, Underwriter's Laboratories (UL) Lightning Protection Inspection Certificate, including Lightning Protection Components, UL 96, and Lightning Protection Installations, UL-96A, and the Standard for the Installation of Lightning Protection Systems, NFPA 780.
- B. UL Lightning Protection Inspection Certificate and LPI Certification, including forms LPI-175A and 175B, shall be furnished for the system installed.
- C. All components of the lightning protection system shall be UL listed and approved for use as installed.

1.4 SUBMITTALS

- A. Product Data: Air terminals, mounting accessories, conductors, connectors, ground rods, inspection wells, etc.
- B. Shop Drawings: Detail lightning protection system design, including air-terminal locations, conductor routing and connections, and bonding and grounding provisions. Include indications for use of raceway and data on how concealment requirements will be met. Documents shall bear the signature and certification of a Colorado licensed Professional Engineer or a NRTL listed or certified by LPI as a Master Installer/Designer.
- C. Qualification data for firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include data on listing or certification by nationally recognized testing laboratory (NRTL) or trade association.

- D. Certification, signed by Contractor, that roof adhesive for air terminals and cable holder buses are approved by manufacturers of both the terminal assembly and the single-ply membrane roofing material.
- E. Completed UL Lightning Protection Inspection Certificate Application Form and the LPI forms 175A and 175B.
- F. Field inspection reports indicating compliance with specified requirements.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who is NRTL listed or who is certified by LPI as a Master Installer/Designer.
- B. Listing and Labeling: As defined in NFPA 780, Article 2-2, "Definitions."
- C. Provide UL Lightning Protection Inspection Certificate.

1.6 COORDINATION

A. Coordinate installation of lightning protection with installation of other building systems and components, including electrical wiring, supporting structures and building materials, metal bodies requiring bonding to lightning protection components, and building finishes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. A-C Lightning Security, Inc.
 - 2. Automatic Lightning Protection
 - 3. Harger Lightning Protection, Inc.
 - 4. Heary Bros. Lightning Protection Co. Inc.
 - 5. Independent Protection Company, Inc.
 - 6. Robbins Lightning, Inc.
 - 7. Thompson Lightning Protection, Inc.
 - 8. National Lightning Protection

9. VFC Inc.

2.2 LIGHTNING PROTECTION SYSTEM COMPONENTS

- A. All equipment shall be new and of a single manufacturer.
- B. All materials and conductors shall be galvanically compatible. Materials acceptable or use with copper are brass, nickel, tin, stainless steel, and Monel. Materials acceptable for use with aluminum are magnesium, zinc, galvanized steel, stainless steel, and wrought iron.
- C. Air terminals shall be solid, round copper/bronze and shall project a minimum of 10 inches above object to be protected. Class I air terminals shall be 3/8-inch diameter.
- D. Air terminal bases shall be cast bronze with bolted pressure cable connectors, suitable for fastening to the supporting structure.
- Cable fasteners shall be cast bronze construction, electrolytically compatible with conductor.
- F. Above-grade Cable Connections: Bonding devices, cable splices, and miscellaneous connectors shall be cast bronze with bolted pressure connections to cable and shall be electrolytically compatible with conductor type. Cast or stamped, crimp-style fittings are not acceptable for above grade use.
- G. Below-grade Cable Connections: Burndy Hyground compression type.
- H. Ground terminations shall consist of a 5/8" x 10'-0" copper-clad steel ground rod.
- I. Inspection wells shall be non-metallic, minimum interior dimension inches, and length 1'-6" deep. Inspection well cover shall be non-metallic, minimum thickness 1/2-inch with bolt to hold cover in place.
- J. Adhesive for air terminal bases and cable holder bases shall be "GE 1200" mastic. Confirm compatibility of adhesive with roofing manufacturer prior to purchase/installation.
- K. Class I main conductors shall be No. 32R with 32 strands of No. 16 AWG copper wire. Down lead conductors shall be the same as main conductors if the structure steel of the building is not used.
- L. Where structural steel is used as an element of a lightning protection system, all conductors necessary shall be Class I. Ground rod, connector, and air terminal sizes shall also be as required by the building's height.
- M. Where a part of a building is more than 75 feet in height and another part of the same building is less than that height, Class II equipment shall be used for all grounding. However, roof equipment sizes shall be as required by the height of the portion of the building on which it is installed.
- N. Where the roofing membrane is covered with rock, provide concrete pavers to provide a means of adhesive attachment for the cable holder base.

PART 3 - EXECUTION

3.1 INSTALLATION

- Install lightning protection components and systems according to UL 96A, LPI-175, and NFPA 780.
- B. Install conductors with direct paths from air terminals to ground connections. No bend of a conductor shall form an included angle of less than 90 degrees, nor shall it have a radius of bend less than 8 inches.
- C. Conceal the following conductors:
 - 1. System conductors.
 - 2. Down conductors.
 - Interior conductors.
 - 4. Conductors within normal view from exterior locations at grade within 200 feet (60 m) of building.
 - 5. Notify Architect at least 48 hours in advance of inspection before concealing lightning protection components.
- D. Air Terminals on Single-Ply Membrane Roofing: Comply with adhesive manufacturer's written instructions.
- E. All materials shall be installed in a neat, workmanlike manner. The system shall be installed in the most inconspicuous manner possible. Air terminals shall be located within 2 feet of exposed corners and roof edges. Air terminal shall be installed plumb, and equally spaced to provide a clean appearance.
- F. Down-lead conductors shall not be brought directly through the roof. Through-roof connectors with solid rods and appropriate roof flashings shall be utilized for this purpose. Coordinate details of all roof penetrations with the Roofing Contractor.
- G. When the main framing members of a structural steel building are 3/16 inch or more in thickness, they may be utilized as the down-leads of a lightning protection system.
 - On installations of this type, the air terminals shall be bonded directly to the steel framework or the air terminals shall be interconnected by roof or ridge conductors as required, and these roof or ridge conductors shall be bonded through the roof to the steel framework.
 - 2. If such roof conductors are employed, they shall be bonded to steel framework at intervals of not more than 100'-0".
 - 3. Connections shall be made on cleaned areas of the steel framework and shall be accomplished by the use of bonding plates with bolt pressure cable connectors having a surface contact area of not less than 8 square inches, bolted or welded securely to the steel or by brazing.

- H. Metal roof projections located outside a zone of protection shall be bonded to the main lightning conductor system. If these projections are inherently connected to the metal framework and are electrically continuous with the lightning protection system through their structural connections, this may be considered the bond and an additional interconnection is not required.
- I. Ground connections shall be made at approximately every other steel column, around the perimeter, and in no case shall be installed over 60 feet apart. Ground terminals shall be attached to such steel columns at the lowest available point with bonding plates having a surface contact area of not less than eight square inches, bolted or welded securely to cleaned areas of the structural steel. Grounding for steel framed structures shall comply with requirements NEC, UL, and NFPA-101.
- J. Provide a solid bond from the lightning protection system to the main water service and other building ground systems. Provide a Surge Protective Device at the building power service.
- K. An underground ground ring conductor encircling a structure shall be in direct contact with earth at a depth of not less than 18 inches and a minimum of 24 inches from the outside of the building. The counterpoise installation based on requirements in section 26 0526 "Grounding and Bonding" may be used as a ground loop required by NFPA-780.

3.2 CORROSION PROTECTION

- A. Do not combine materials that can form an electrolytic couple that will accelerate corrosion in the presence of moisture unless moisture is permanently excluded from junction of such materials.
- Use conductors with protective coatings where conditions would cause deterioration or corrosion of conductors.

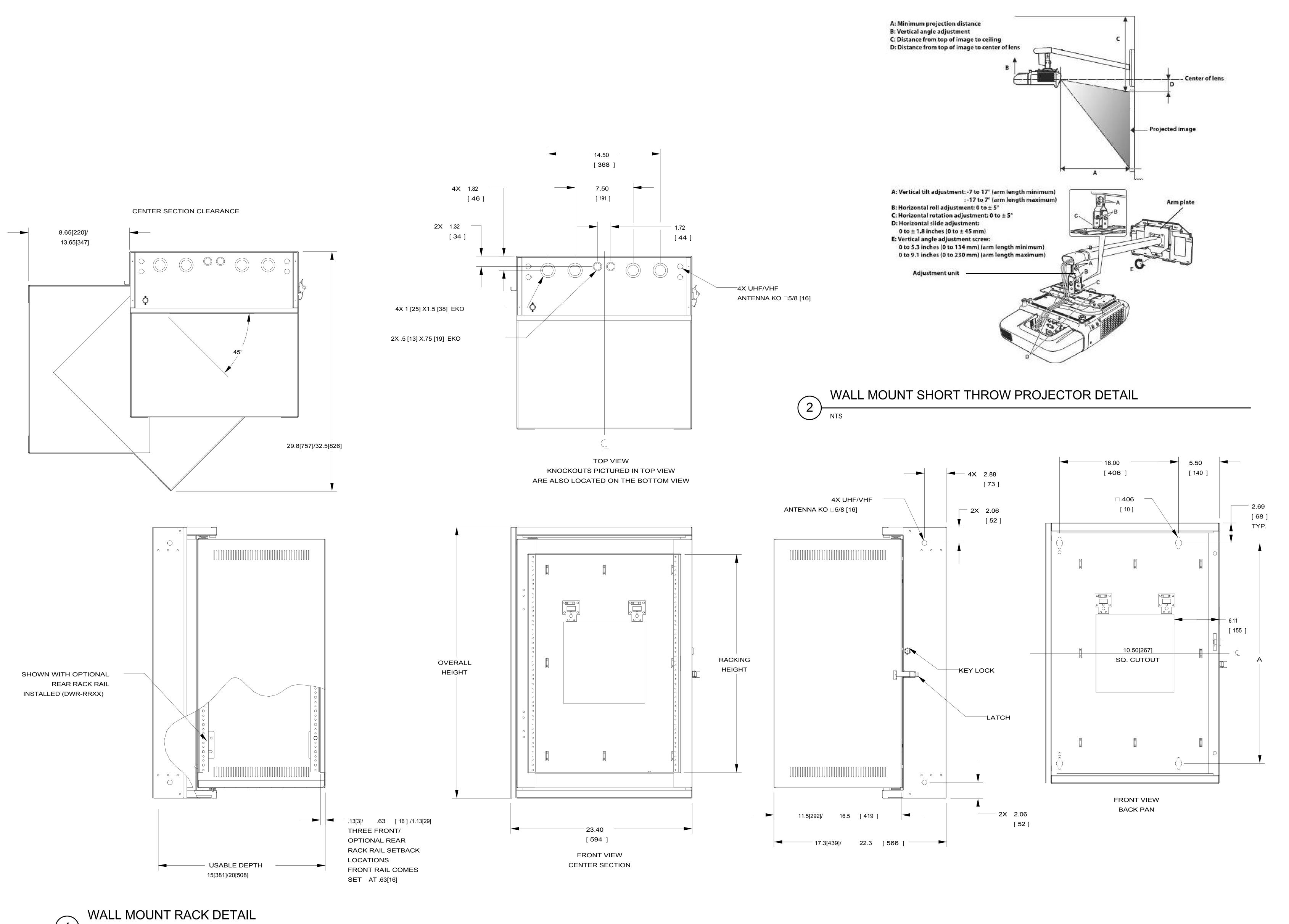
3.3 FIELD QUALITY CONTROL

- A. Periodic Inspections: Engage an LPI inspector to perform periodic inspections during construction and at its completion, according to LPI-177.
- B. UL Inspection: Apply for inspection by UL as required to obtain a UL Lightning Protection Inspection Certificate for system.

3.4 AS-BUILT DRAWINGS

A. Contractor shall submit to the Architect, copies of as-built drawings in accordance with Division 1. The submittal shall include the UL Lightning Protection Inspection Certificate.

END OF SECTION 26 4100



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Issue/Revisions Date

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ADDENDUM 02

Project Information

T RECREATION CENTER

S COMMUNITY COLLEGE

13300 W. 6th Avenue

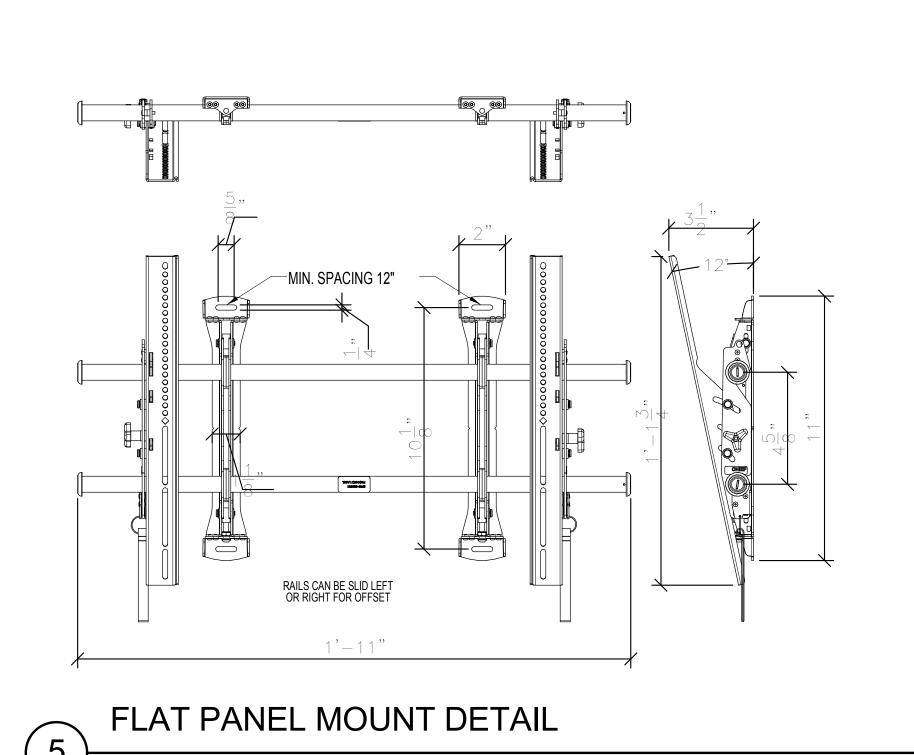
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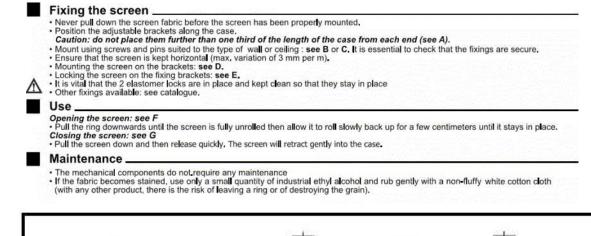
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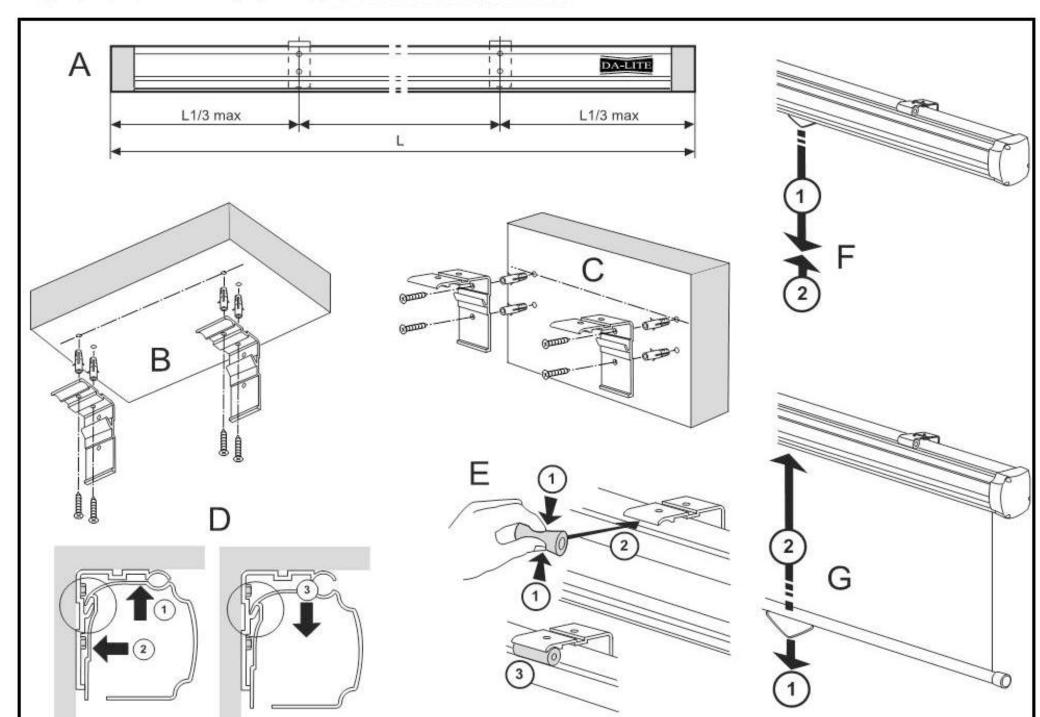
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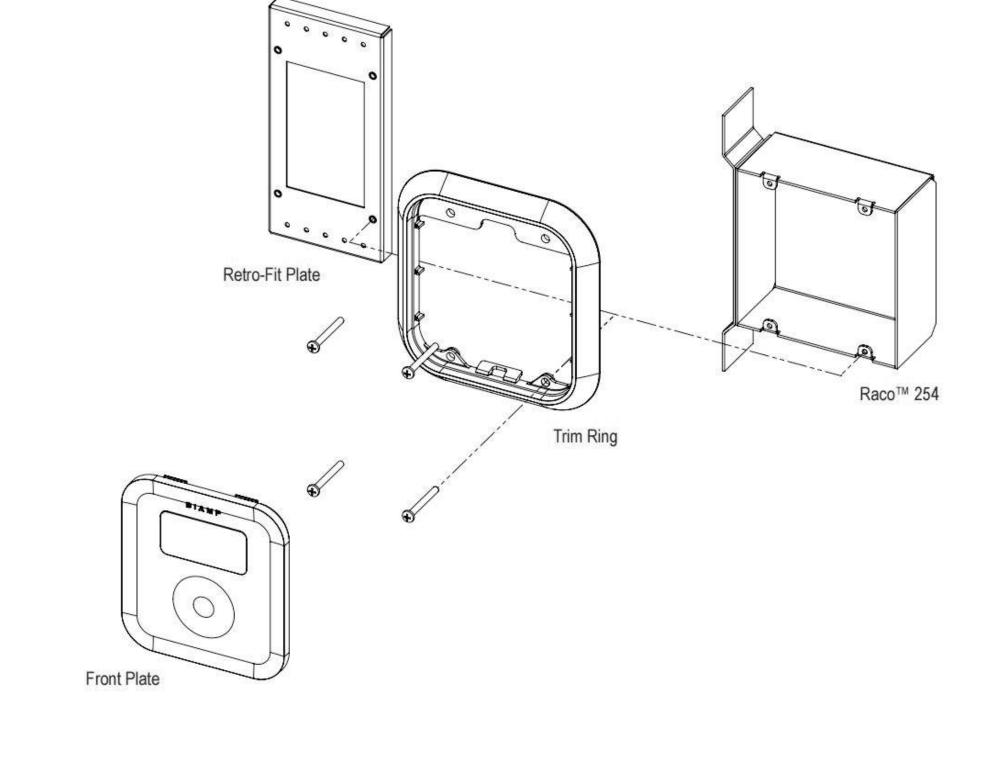
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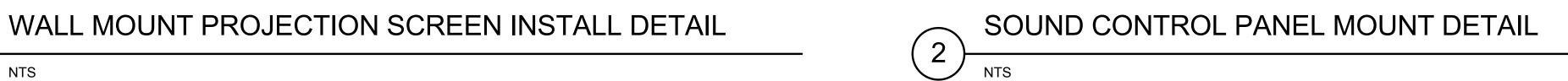
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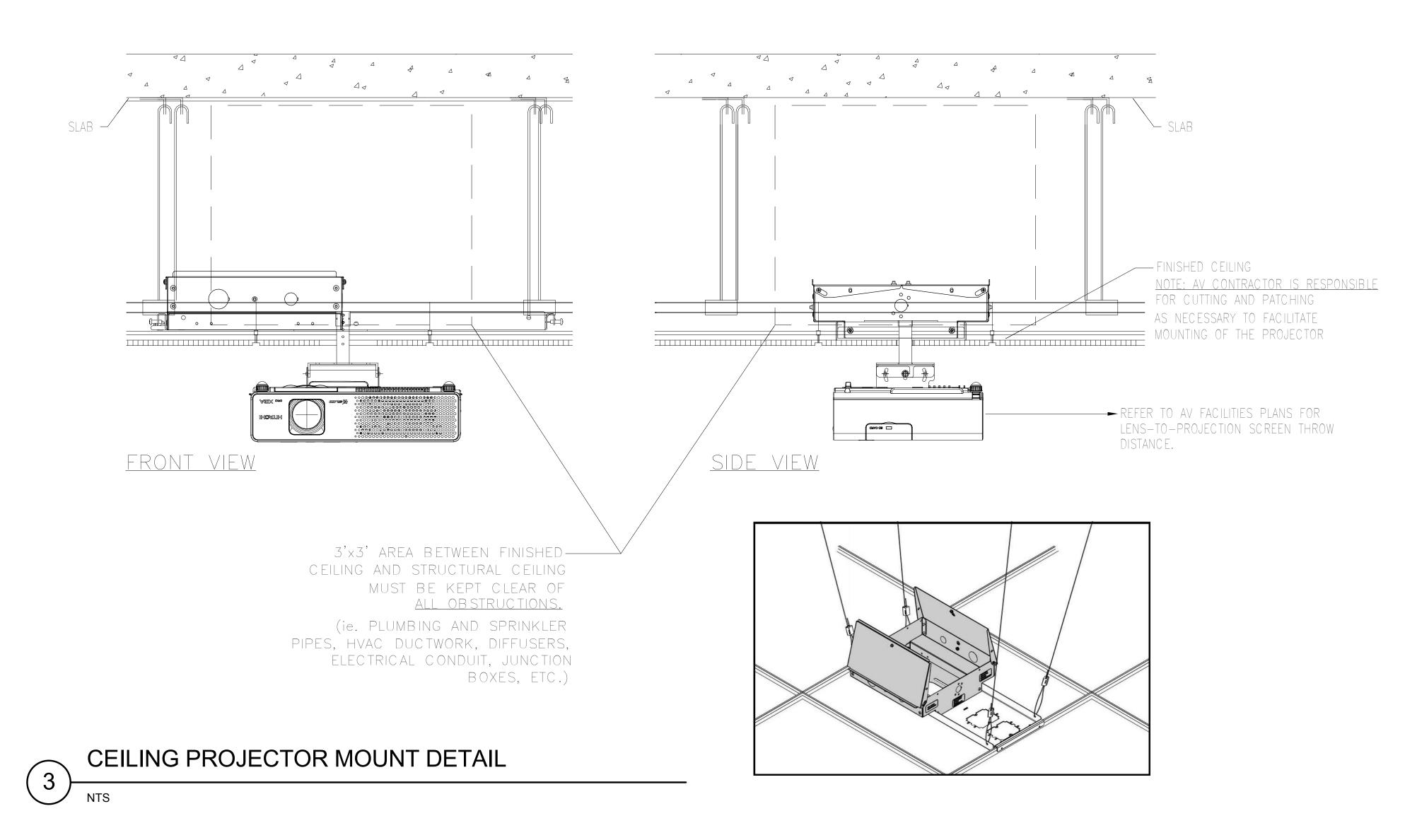


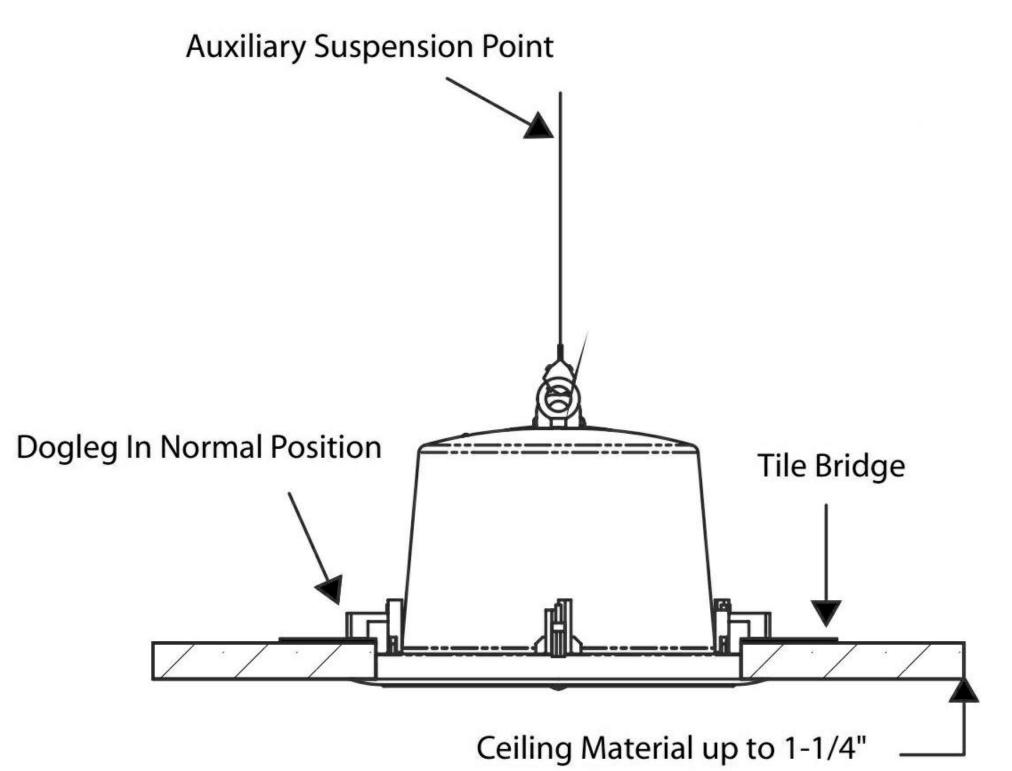




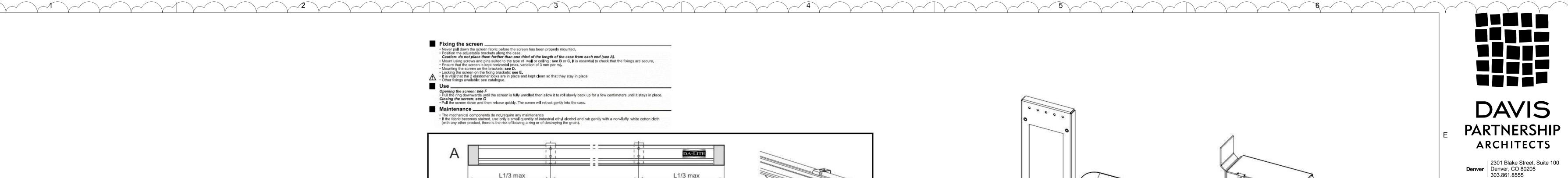




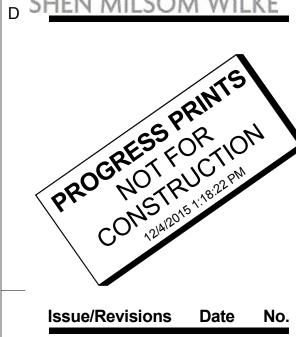












ADDENDUM 02

Project Information

Sheet Information Sheet Title: AUDIOVISUAL **DETAILS**

CONSTRUCTION Nov. 9, 2015 DOCUMENTS Sheet Number:

DRAWING LIST:	ABBREVIATIONS:	SYMBOLS	SYMBOLS	GENERAL NOTES
Sheet Number TT-000 TELECOM SYMBOLS, NOTES AND ABBREVIATIONS TT-101 TELECOM LEVEL 1 FLOOR PLAN TT-102 TELECOM LEVEL 2 FLOOR PLAN TT-103 TELECOM LEVEL 1 BACKFILL FLOOR PLAN TT-151 TELECOM LEVEL 1 RCP TT-152 TELECOM LEVEL 2 RCP TT-200 TELECOM EVAL PROP TT-300 TELECOM RISERS DIAGRAM TT-400 TELECOM DETAILS TT-401 TELECOM DETAILS	ABBREVIATIONS: AFF - ABOVE FINISHED FLOOR AV - AUDIOVISUAL C - CONDUIT CAT-3 - TIAVEIA CATEGORY 3 RATED CAT-5E - TIAVEIA CATEGORY 5 RATED CAT-6 - TIAVEIA CATEGORY 6 RATED CAT-6 - TIAVEIA CATEGORY 6 RATED CAT-7 - CEILING COAX - COAVIAL CABLE CP - CONSOLIDATION POINT C - INTERMEDIATE CROSS-CONNECT ID INSIDE DIAMETER IDF - INTERMEDIATE DISTRIBUTION FRAME J-BOX - JUNCTION BOX LAN - LOCAL AREA NETWORK MC - MAIN CROSS-CONNECT MM - MAIN-OLE MM - MAIN-OLE MM - MULTIMODE MTER - MAIN TELECOMMUNICATIONS EQUIPMENT ROOM NIC - NOT IN CONTRACT NTS - NOT TO SCALE O.D OUTSIDE DIAMETER OFE - OWNER FURNISHED EQUIPMENT OSP - OUTSIDE PLANT P.P PATCH PANEL PR - PAIR PB - PULLBOX PBX - PRIVATE BRANCH EXCHANGE RW - RACEWAY SM - SINGLE MODE ST - STRAND STP - SHELDED TWISTED PAIR TEMP - TELECOMMUNICATIONS GROUND BAR TR - TELECOMMUNICATIONS SERVICE ENTRANCE ROOM TSER - TELECOMMUNICATIONS SERVICE ENTRANCE ROOM TSER - TELECOMMUNICATIONS SERVICE ENTRANCE ROOM TSER - TELECOMMUNICATIONS GROUND BAR TR - TELECOMMUNICATIONS SERVICE ENTRANCE ROOM TSER - TELECOMMUNICATIONS SERVICE ENTRANCE ROOM TSER - TELECOMMUNICATIONS SERVICE ENTRANCE ROOM TYP - TYPICAL U.O.N UNINTERRUPTIBLE POWER SUPPLY UTP - UNSHIELDED TWISTED PAIR VOIP - VOICE OVER INTERNET PROTOCOL WAN - WIDE AREA NETWORK WAP - WIRELESS ACCESS POINT WM.O WIRELESS ACCESS POINT WM.O WIRELESS ACCESS POINT WM.O WIRELESS ACCESS POINT WM.O WIREWAY WIREWAY WIREWAY	SYMBOLS WALL MOUNTED SINGLE DATA OUTLET (#) CATEGORY 6A CABLES TO THE DESIGNATED TECHNOLOGY ROOM PROVIDE 4" BOX WI-GANG OPENING AND 1" CONDUIT FROM THE OUTLET 10 THE NEAREST CABLE TRAY OR TR. 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INSTALL FIRESTOP TO ALL SLAB AND WALL PENETRATIONS PROVIDED FOR THE INSTALLATION OF TELECOMMUNICATIONS CABLE AS REQUIRED TO MAINTAIN FIRE RATING OF SLAB OR WALL REVIEW ARCHITECTS PLANS FOR PARTITION TYPES. 1. PROVIDE IDENTIFICATION LABELS FOR ALL TELECOMMUNICATIONS CABLES AT BOTH ENDS. 2. PROVIDE DESIGNATION LABELS FOR ALL TELECOMMUNICATIONS CABLES AT AND ELECTRICAL PLANS. 4. COORDINATE WILL BOX LOCATIONS AND DIMENSIONS WITH ARCHITECTURAL AND ELECTRICAL PLANS. 5. INSTALL CONDUIT AND LADDER RACK FOR TELECOMMUNICATIONS WIRING TO MAINTAIN A MINIMUM OF SEPARATION FROM FLUORESCENT LIGHTING. 6. PROVIDE CABLE STRAPS NO GREATER THAN 3' APART TO SUPPORT CABLES WHERE NO CABLE TRAYS AND CONDUITS ARE PROVIDED. 7. INSTALL EACH CABLE SET INDICATED BY THE SYMBOLS LIST FROM THE OUTLET LOCATION BOCK THE RESPECTIVE SERVING TELECOM ROOM. 8. IF CONFIDENCES ARE FOOLDED. 7. INSTALL EACH CABLE SET INDICATED BY THE SYMBOLS LIST FROM THE OUTLET LOCATION BOCK TO THE RESPECTIVE SERVING TELECOM ROOM. 8. 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				 MAINTAIN MINIMUM BEND RADIUS OF 10X O.D. FOR CONDUITS GREATER THAN 2" DIAMETER. MAINTAIN MINIMUM BEND RADIUS OF 6X O.D. FOR CONDUITS EQUAL TO OR LESS THAN 2" DIAMETER. PROVIDE PULL BOXES (SIZE AS NOTED) AFTER EVERY 30m OF RUN OR AFTER EVERY 180-DEGREES OF BEND. DO NOT INSTALL PULL BOXES IN LIEU OF A BEND. REAM AND BUSH THE ENDS OF ALL CONDUITS. PROVIDE AND LEAVE IN PLACE A PULL STRING IN EACH CONDUIT.

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STUDENT RECREATION CENTER
RED ROCKS COMMUNITY COLLEGE

Sheet Information

Sheet Title:

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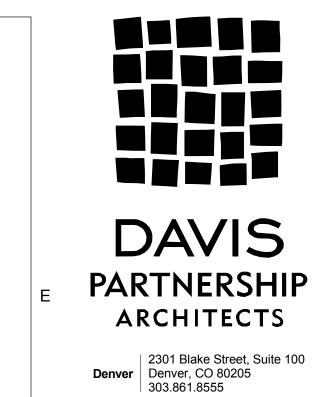
ADDENDUM 02

Sheet Number:

TELECOM SYMBOLS, NOTES

ABBREVIATIONS

Nov. 9, 2015 CONSTRUCTION DOCUMENTS



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Issue/Revisions Date No.

ADDENDUM 02 12.04

Project Information

T RECREATION CENTER
KS COMMUNITY COLLEGE
13300 W. 6th Avenue

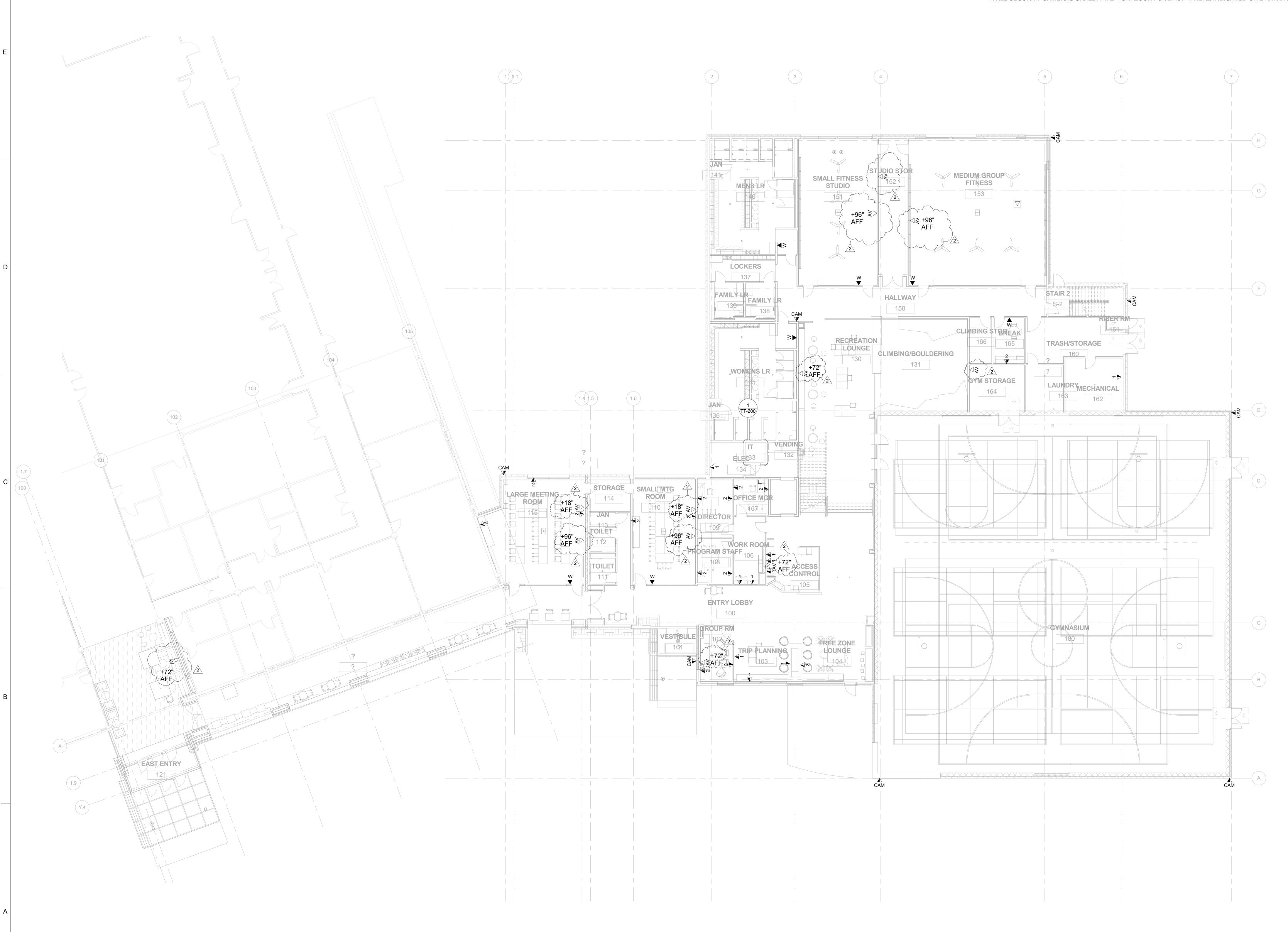
Sheet Information

Sheet Title:
TELECOM LEVEL 1
FLOOR PLAN

Nov. 9, 2015 CONSTRUCTION DOCUMENTS
Sheet Number:

TT-101

DPA Project: 15803.00



1 LEVEL 1 TELECOM PLAN 3/32" = 1'-0"

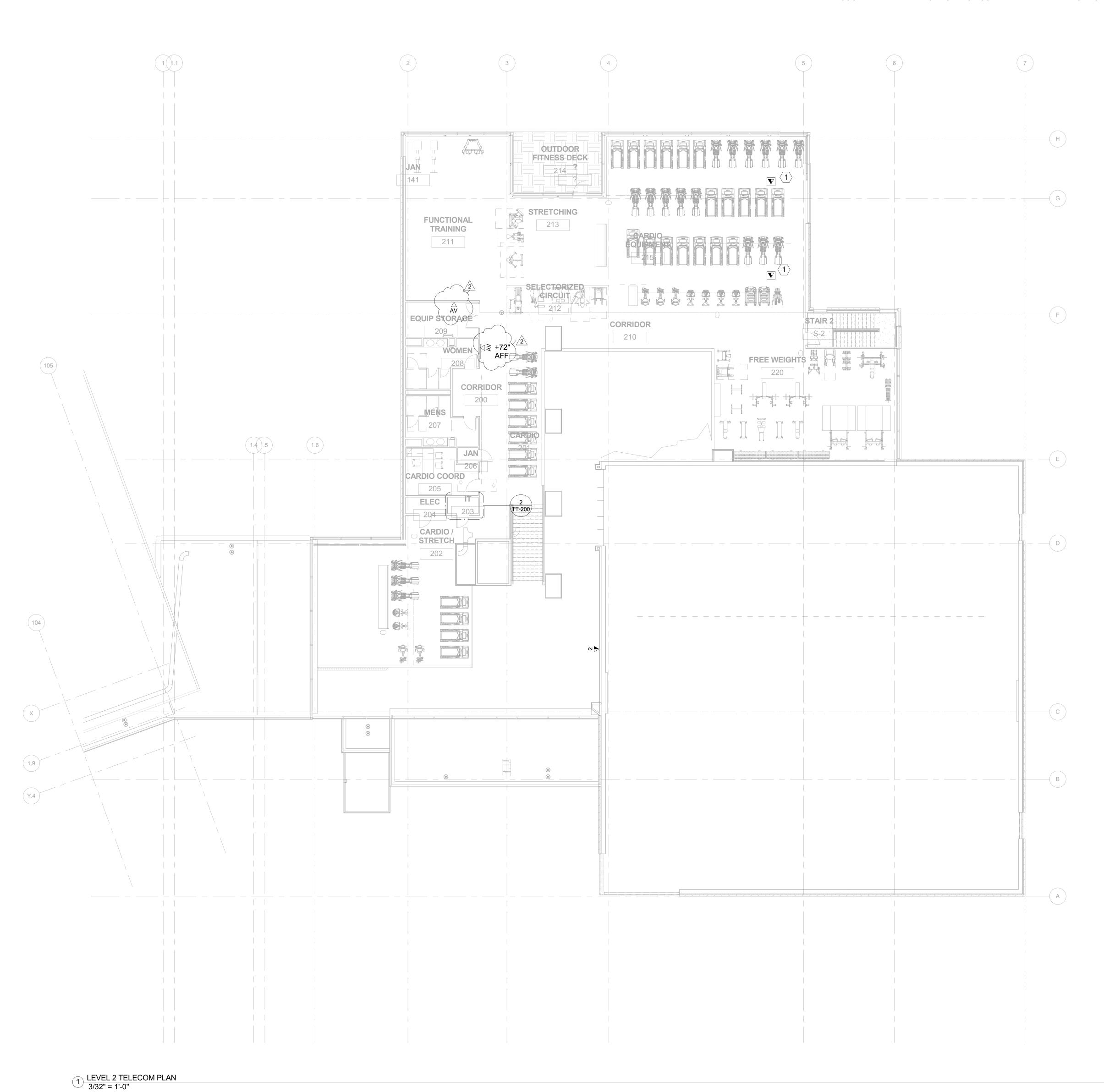
TELECOM PLAN GENERAL NOTES:

1. ALL TV LOCATIONS IN FITNESS AREA SHALL RECIEVE A DROP FOR IPTV.

TELECOM PLAN KEYED NOTES:

1. COORDINATE WITH ELECTRICAL FOR COMBINED DATA AND ELECTRICAL FLOORBOX LOCATIONS





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ADDENDUM 02

Sheet Information

Sheet Title: TELECOM LEVEL 2 FLOOR PLAN

Nov. 9, 2015 CONSTRUCTION DOCUMENTS Sheet Number: