



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Administrative Services

KIMBERLY K. HOOD
Executive Director

Division of Facilities Construction and Management

DAVID G. BUXTON
Director

ADDENDUM NO. 3

Date: December 15, 2008

To: Contractors

From: Jim Russell, Project Manager, DFCM

Reference: Library/Classroom Building
Snow College
DFCM Project No. 07258700

Subject: **Addendum No. 3**

Pages	Addendum Cover Sheet	1 page
	Revised Project Schedule	1 page
	Architect's Addendum	3 pages
	Revised Electrical Addendum	15 pages
	Revised Mechanical Addendum	13 pages
	Revised Door Hardware Addendum	17 pages
	<u>Revised Drawings</u>	<u>5 pages</u>
	Total	55 pages

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

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

3.1 SCHEDULE CHANGES: See attached revised Project Schedule

3.2 GENERAL ITEMS: See attached Architect's Addendum.



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES
Division of Facilities Construction and Management

DFCM

**PROJECT SCHEDULE – REVISED
PER ADDENDUM NO. 3 DATED DECEMBER 15, 2008**

PROJECT NAME:	LIBRARY/CLASSROOM BUILDING SNOW COLLEGE – EHPRAIM, UTAH			
DFCM PROJECT NO.	07258700			
Event	Day	Date	Time	Place
Request for Proposals and Construction Documents Available	Tuesday	November 4, 2008	1:00 PM	DFCM 4110 State Office Bldg SLC, UT and the DFCM web site *
Mandatory Pre-Proposal Site Meeting	Tuesday	November 18, 2008	10:00 AM	Heritage Room Noyes Bldg. 150 E. 100 North Snow College, Ephraim, UT
Last Day to Submit Questions prior to submittal of Statements of Qualifications	Thursday	November 20, 2008	1:00 PM	Kurt Baxter 4110 State Office Building, SLC, UT kbaxter@utah.gov
Addendum Deadline	Tuesday	November 25, 2008	2:00 PM	DFCM web site *
Prime Contractors turn in References, Statements of Qualifications, Management Plans, and Termination Debarment Certifications	Tuesday	December 2, 2008	12:00 NOON	DFCM 4110 State Office Bldg SLC, UT
Short Listing by Selection Committee (if applicable)	Tuesday	December 9, 2008	1:00 PM	4112 State Office Building SLC, UT 84114
Last Date to Submit Questions for Final Addendum	Monday	December 15, 2008	4:00 PM	Jim Russell – DFCM E-mail jimrussell@utah.gov Fax (801)-538-3267
Final Addendum Deadline (exception for bid delays)	Thursday	December 18, 2008	2:00 PM	DFCM web site *
Prime Contractors Turn In Cost Proposals, Schedules, Cost Reduction Proposals, and Schedule of Completion	Tuesday	December 30, 2008	12:00 NOON	DFCM 4110 State Office Bldg SLC, UT
Subcontractor List Due	Wednesday	December 31, 2008	12:00 NOON	DFCM 4110 State Office Bldg SLC, UT Fax 801-538-3677
Interviews	Wednesday	January 7, 2009	TBA	4112 State Office Building SLC, UT
Announcement	Thursday	January 8, 2009	TBA	
Substantial Completion Date	Friday	June 18, 2010	5:00 PM	

* DFCM's web site address is <http://dfcm.utah.gov>.



Addendum #003

P:\B07-051 Snow College Library\ADDENDA\ADD #3\ADD #03-.doc

PROJECT NAME: SNOW COLLEGE LIBRARY / CLASSROOM BUILDING **DATE:** DEC 11, 2008
DFCM Proj. No: DFCM # 07258700
FROM: Cooper Roberts Simonsen Associates (435) 673-7362
55 S. Bluff St. Suite B Fax 435) 673-7392
St. George, UT 84770
TO: All Bidders

This Addendum forms a part of the Contract Documents and modifies the original Bid Documents dated Sept. 15, 2008 as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of (3) 8 1/2"x11" pages, (17) 8 1/2"x11" specification pages, (13) 8 1/2"x11" Mechanical Addendum, (15) 8 1/2"x11" Electrical Addendum, and (5) 30"x42" drawing pages.

I. CHANGES TO PRIOR ADDENDA:

- I-1 V-1 Alternates 1 & 2 remain as originally noted in the documents.
- I-2 SECTION 087100 – DOOR HARDWARE
DELETE: Entire section

INSERT: ATTACHED SECTION 087100 – DOOR HARDWARE & HARDWARE SCHEDULE
- I-3 REMOVE sheet AE601 – WINDOW SCHEDULE & replace with attached sheet AE601 – WINDOW SCHEDULE
- I-4 REMOVE sheet AE602 – DOOR SCHEDULE & replace with attached sheet AE602 – DOOR SCHEDULE
- I-5 REMOVE sheet AE603 DOOR TYPES & DETAILS and replace with attached sheet AE603 – DOOR TYPES & DETAILS

II. CHANGES TO BIDDING REQUIREMENTS:

- II-1 NONE

III. CHANGES TO AGREEMENT & OTHER CONTRACT FORMS:

- III-1 NONE

IV. CHANGES TO CONDITIONS OF THE CONTRACT:

- IV-1 NONE



V. CHANGES TO SPECIFICATIONS:

- V-1 SECTION 076100 – SHEET METAL ROOFING
Part 2 – Products
2.1 Roofing Sheet Metals
EDIT B.6 to read:
6. COLOR: Englert Ultra-Cool Low Gloss color: Slate Gray or similar as approved by architect.

- V-2 SECTION 102217- Modular Wall Partitions
2.05 MANUFACTURERS
1. Basis-of-Design Product: Subject to compliance with requirements, provide walls by DIRTT Environmental Solutions or comparable product, approved by Architect prior to bid, by one of, but not limited to the following:
2. MANUFACTURERS
 - A. DIRTT Environmental Solutions
 - B. Haworth - Enclose
 - C. Environmental Wall Systems – Iris Wall Lite
 - D. Transwall – Corporate Wall

- V-3 SECTION 081113 – HOLLOW METAL DOORS & FRAMES
2.3 STANDARD HOLLOW METAL DOORS

EDIT:
B. Exterior Doors
1. LEVEL **3**

EDIT:
C. Interior Doors
1. LEVEL **3**

- V-4 CAFÉ Menu Board:
Manufacture for menu board is LSI Industries or similar as approved by architect. Backlighting is NOT approved.

- V-5 SECTION 08800 – GLAZING
USE SOLARBAN 70

- V-6 SECTION 051200 STRUCTURAL STEEL FRAMING
1.6 QUALITY ASSURANCE
ALL REQUIREMENTS VERIFIED AND REQUIRED BY OWNER.

- V-7 SECTION 044200 – EXTERIOR CLADDING
PART 2 – PRODUCTS
DELETE SECTION:
2.1 GRANITE

- V-8 See the attached MECHANICAL ADDENDUM
- V-9 See attached ELECTRICAL ADDENDUM.

VI. CHANGES TO DRAWINGS:

- VI-1 For Window types M, N & P, see detail A5 & B5/AE409. Windows are wood jamb as detailed.
- VI-2 Sheet AE106, near grids B-3, **DELETE** keyed note 8.
- VI-3 Sheet AE107, near grid A.4 & 2, **DELETE** keyed note 3.
- VI-4 Sheet AE108a
Change three windows on grid aa, between 3-4 to window 'TYPE F'.
- VI-5 SHEET AE406 – ENLARGED FLOORPLAN
DELETE:
All keyed notes referring to fixed seating.
- VI-6 SHEET AE601 – WINDOW SCHEDULE
Glass Type C:
EDIT:
1" insulated, clear, tempered
- VI-7 REMOVE sheet AE117 – ROOF PLAN and replace with attached sheet AE117 – ROOF PLAN
- VI-8 REMOVE sheet AS104 – ARCHITECTURAL SITE DETAILS and replace with attached sheet AS104 – ARCHITECTURAL SITE DETAILS.

End of Addendum

ELECTRICAL ADDENDUM

Snow College Library
CRSA

December 15, 2008

ELECTRICAL ADDENDUM

Contents of Electrical Addendum:	Written Addendum	4 pages
	Division 16 Unit Price Form	3 pages
	Revision Drawings	8 pages (8½ x 11)

GENERAL ITEMS

1. The Electrical Unit Price Form is attached to this addendum and shall be completed before award of contract. The unit prices given shall be guaranteed for the duration of the project, and is the same for adds or deducts.
2. Allowances: Include the following allowances in the bid. Allowances prices shall include all materials and labor for complete installation and operation, and shall be valid for the duration of the project:
 - a. Exit Signs (E10-1): 5 each, including 100' of typical branch conduit and wiring.
 - b. Smoke Detectors: 10 each, including 50' of typical fire alarm conduit and wiring.
 - c. Horn/Strobe Lights: 10 each, including 50' of typical fire alarm conduit and wiring.
 - d. Connections to Miscellaneous 120V/20A Equipment: 10 each, including 100' of typical branch conduit and wiring.

DRAWINGS

Sheet EE-001:

1. Symbol Legend: Change the description of the Cable Tray symbol with "A" text to be: "Cable tray below raised access floor."

Sheet ES-101a:

1. Sheet Keynote #1 applies to existing underground power line running diagonally from switch S3 to switch S2.
2. Sheet Keynote #2 applies to the existing underground communications line running diagonally, parallel to the power line reference in keynote #1.
3. Sheet Keynote #4 applies to switch "S3" indicated on the plan.
4. Sheet Keynote # 5 applies to the homerun 1HA-11,13,15.
5. Sheet Keynote #6 applies to existing sectionalizer P7 and new switch S15 shown on plan.

Sheet ES-401:

1. Apply the following Sheet Keynote to the cable tray and light fixtures in the tunnel:
 - 1 . Coordinate location of cable tray and light fixtures in tunnel with mechanical piping installation. Refer to mechanical details.

Sheet EP-101:

1. Apply the following Sheet Keynote to the ATC panel in Mechanical Room 022:
 - 6 .Coordinate locations of ATC panels with mechanical controls installer and provide 120V power to each location. Include allowance of 100' of conduit and wiring per panel for different or additional ATC panel locations.

ELECTRICAL ADDENDEUM

Snow College Library
CRSA

December 15, 2008

2. Sheet Keynote #5: Change the word “siring” to “wiring”.
3. Electrical Room 018: Mount transformer “TS” on wall above panel “SL”.

Sheet EP-102:

1. Drinking fountain outlet near gridline 2-C shall be GFI type.
2. Delete Sheet Keynote #6 reference in Data Room 108.
3. Homerun circuit for security gate (ref. keynote #4) is 1QLA-52.

Sheet EP-103:

1. Delete Sheet Keynote #6 reference in Data Room 208.

Sheet EP-104:

1. Apply the following Sheet Keynote to the ATC panels in Mechanical Rooms 316 and 317:
 - 5 .Coordinate locations of ATC panels with mechanical controls installer and provide 120V power to each location. Include allowance of 100’ of conduit and wiring per panel for different or additional ATC panel locations.
2. Electrical Room 314: Change extra “4LA” designation (next to the screened panels) to “future”.

Sheet EP-104a:

1. Mechanical Rooms 316, 317, Storage Room 318 and Mechanical Chase: Refer to Sheet EP-104 for outlets, equipment and circuiting.
2. Group Study 307: Add ceiling outlet for projector, with reference keynote #1. Circuit to 4LA-29. Circuit screen (ref keynote #2) with adjacent outlet.

Sheet EP-601:

1. Increase size of new pad-mounted transformer from 750 kVA to **1,000 kVA**.
2. Increase size of main service conduits and conductors (from pad-mounted transformer to 1MDP) from “52” to “53” as per Conductor and Conduit Schedule.
3. Increase size of main circuit breaker and bus in “1MDP” from 1200/3 to 1600/3, 100% rated.

Sheet EP-602:

1. Panelboard “SH”: Delete 100/3 main fusible switch. This panel is main-lug only with fusible branch devices.
2. Change switch size in “GDP” feeding “ATS-Q” from 100/3 to 200/3.

Sheet EP-603:

ELECTRICAL ADDENDEUM

Snow College Library
CRSA

December 15, 2008

1. Change voltage of "SE-1" to 208V/3-phase. Change wiring to 3 #12, 1 #12 GR, 0.75" CND. Change circuit breaker in panel to 20A/3P.

Sheet EL-101:

1. Change elevator pit light circuit to EL-2 in lieu of 1LA-77.
2. Classroom 024 and 027:
 - a. Provide emergency transfer device "ET" for all emergency lights in this room.
 - b. Provide entry lighting control station "ES" adjacent to doors 024B and 027A.
3. Refer to revision drawing EL-101-RV3 for circuiting revision.

Sheet EL-102:

1. Circuit "TX-6" fixtures at circulation desk with counter outlets and provide wall switch behind desk for these fixtures.
2. Café Serving Counter: One (TX-2) fixture should be changed to (TX-5).
3. Auditorium 101: Provide emergency transfer device "ET" for all emergency lights in this room.
4. Conference Room 102: Provide two occupancy sensors to control lights in this room: centered, one towards north end and one towards south end.
5. Conference Room 102: Sheet Keynote #4 applies to undercabinet lights.
6. Delete the two (OG-9) ground lights shown outside main entry.
7. Refer to revision drawings EL-102-RV3-1, 2 and 3 for circuiting revisions.

Sheet EL-103:

1. Refer to revision drawings EL-103-RV3-1 and 2 for circuiting revisions.

Sheet EL-104:

1. Refer to revision drawing EL-104-RV3 for circuiting revisions.

Sheet EL601:

1. Fixture type DL-11: Change input voltage to 277V.
2. Fixture type DL-99: Change input voltage to 277V.

Sheet EL602:

1. Detail A3: This detail applies to wall stations that are designated as "WSA" on plans.
2. Detail D4: This detail applies to wall stations that are designated as "WSB" on plans.

ELECTRICAL ADDENDEUM

Snow College Library
CRSA

December 15, 2008

3. Relay Schedule "1RA": Add circuit 1LA-78, "Reading Track" to schedule with Control Group "A" and Control Method "1".
4. Relay Schedule "2RA": Change Control Group and Method of relay #4 to B and 2 respectively.
5. Relay Schedule "3RA":
 - a. Add circuit 3HA-10, "South Reading Area" to schedule with Control Group "B" and Control Method "2".
 - b. Change Control Group and Method of relay #6 to B and 2 respectively.
6. Relay Schedule "4RA": Relay #6: Add "Stair Chandalier" to Load Description.

Sheets ET-101 through ET-104a:

1. Apply General Sheet Notes to these sheets. See attached revision drawing ET-101-RV3

Sheet EY-104, EY1-4a:

1. Add (3) smoke detectors, one in each of (3) skylights.

All Electrical Plan Sheets (Power, Lighting, Technology and Auxiliary):

1. As a point of emphasis: **RACEWAYS ARE NOT ALLOWED IN ELEVATED SLABS.** This requirement is indicated in the specifications, but is emphasized here to ensure that this item is not missed in the bid price.

END OF ELECTRICAL ADDENDUM

Attachments:

Division 16 Unit Price Form	3 pages
Revision Drawings	8 pages (8½ x 11)

ELECTRICAL UNIT PRICE FORM

UNIT PRICES

1. Lighting fixtures

a. **Lighting fixtures (materials only):** Guarantee unit prices for each item listed. Change order (add or deduct) amounts for lighting fixtures (excluding lamps, sales tax, and installation) shall be the prices listed below multiplied by the quantities added or deducted.

<u>Type</u>	<u>Manufacturer</u>	<u>Unit Price</u>
AS-16d	_____	_____
CM-16 per 8' piece	_____	_____
CM-17 per 16' piece	_____	_____
DF-17	_____	_____
DF-37	_____	_____
DF-37d	_____	_____
DF-37L	_____	_____
DF-98	_____	_____
DF-99	_____	_____
DL-11	_____	_____
DL-99	_____	_____
E10-1	_____	_____
E10-2	_____	_____
EP-1	_____	_____
ET	_____	_____
G-1	_____	_____
G-2	_____	_____
G-2d	_____	_____
GF-4	_____	_____
OC-32	_____	_____
OC-99	_____	_____
OG-9	_____	_____
OJ-1	_____	_____
P3-12	_____	_____
PS-1 per 4' section	_____	_____
S-3	_____	_____
SA-1	_____	_____
SA-1W	_____	_____
TH-2 per 4' section	_____	_____
TH-12	_____	_____
TX-1	_____	_____
TX-2	_____	_____
TX-3	_____	_____
TX-4	_____	_____
TX-5	_____	_____
TX-6	_____	_____
UC-5	_____	_____
W-3	_____	_____
WS-1	_____	_____

<u>Type</u>	<u>Manufacturer</u>	<u>Unit Price</u>
WS-2		
WS-3		
WS-4		
WS-5		
ZX-11		

- b. **Lighting fixture installation:** Guarantee unit prices for each item listed. Change order (add or deduct) amounts for installation of lighting fixtures (excluding fixtures, lamps, and sales tax) and including 30' of typical branch wiring shall be the prices listed below multiplied by the quantities added or deducted.

<u>Type</u>	<u>Manufacturer</u>	<u>Unit Price</u>
AS-16d		
CM-16 per 8' piece		
CM-17 per 16' piece		
DF-17		
DF-37		
DF-37d		
DF-37L		
DF-98		
DF-99		
DL-11		
DL-99		
E10-1		
E10-2		
EP-1		
ET		
G-1		
G-2		
G-2d		
GF-4		
OC-32		
OC-99		
OG-9		
OJ-1		
P3-12		
PS-1 per 4' section		
S-3		
SA-1		
SA-1W		
TH-2 per 4' section		
TH-12		
TX-1		
TX-2		
TX-3		
TX-4		
TX-5		
TX-6		

Type	Manufacturer	Unit Price
UC-5		
W-3		
WS-1		
WS-2		
WS-3		
WS-4		
WS-5		
ZX-11		

2. **Devices:** Guarantee unit prices for each item listed. Change order (add or deduct) amounts for complete installation shall be the prices listed below multiplied by the quantities added or deducted. Unit price shall include material and labor for complete installation of wiring devices.

Include 50' of branch wiring or cabling (as applicable) with the following:

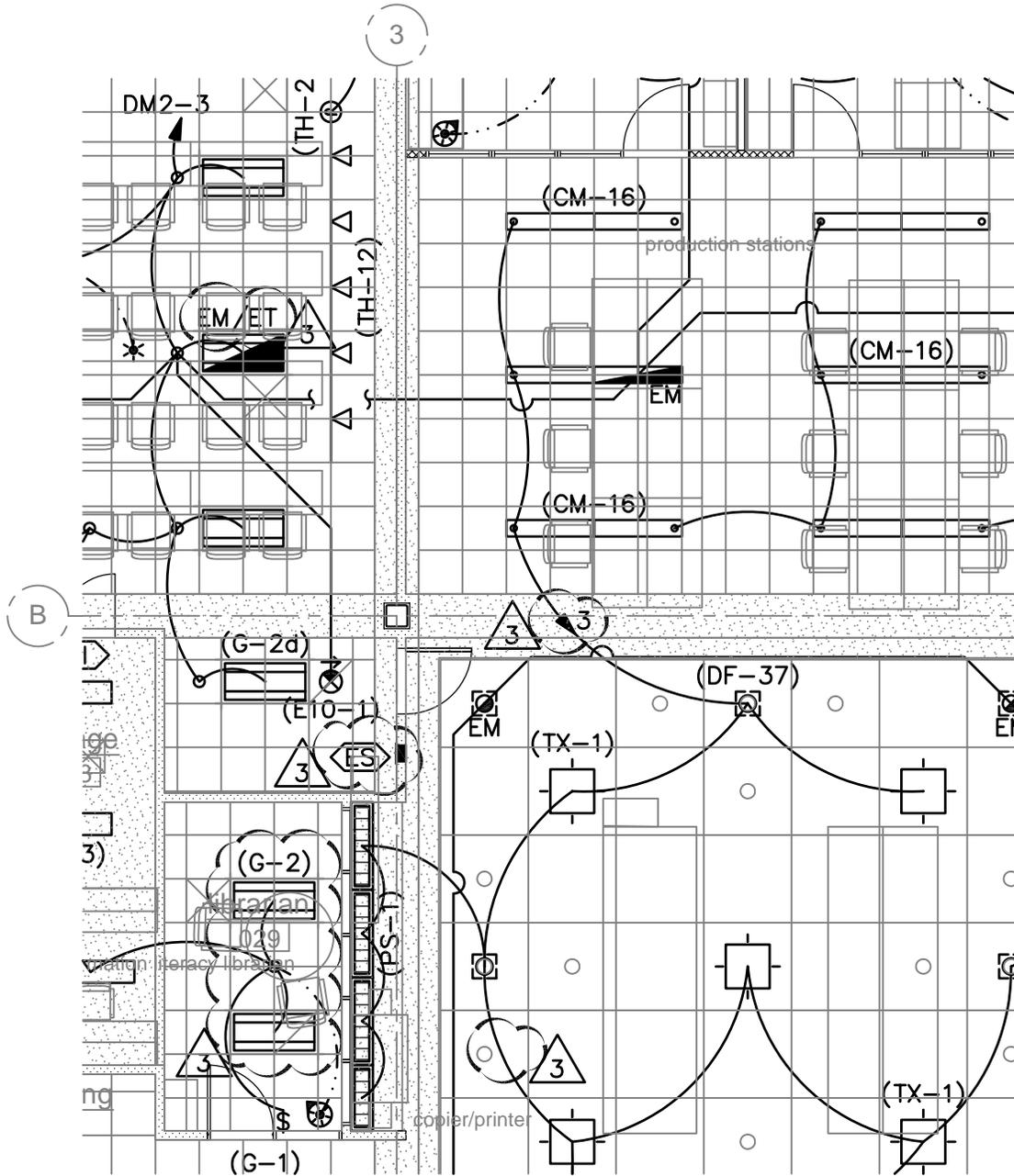
Wiring Device	Unit Price
Convenience Outlet	
Switch	
Three-way switch	
Four-way switch	
Floor box (FB-4)	
Poke-Through (PT-1)	
GFCI outlet	
Weatherproof outlet	
Voice/Data Outlet with Conduit Stub	
Smoke Detector	
Duct Detector	
Horn/Strobe	
Control Module	
Monitor Module	
Smoke Damper Connection	

3. Provide unit prices for the following:

3/4" CND, with 4 #14THWN		Lf
3/4" CND, with 4 #12THWN		Lf
3/4" CND, with 4 #10THWN		Lf
1" CND, with 4 #8 THWN		Lf
3/4" CND		Lf
1" CND		Lf

4. Electrician billing rates per hour:

Superintendent	
Journeyman	



**SPECTRUM
ENGINEERS**

175 South Main Street, Suite 300
Salt Lake City, Utah 84111
801-328-5151 800-678-7077
FAX 801-328-5155
www.spectrum-engineers.com
© 2008 Spectrum Engineers, Inc.

REFERENCE: EL-101

ISSUE: ADDENDUM #3

DATE: 2008-12-09

PROJ NO: 20070473

DRAWN BY: DLM

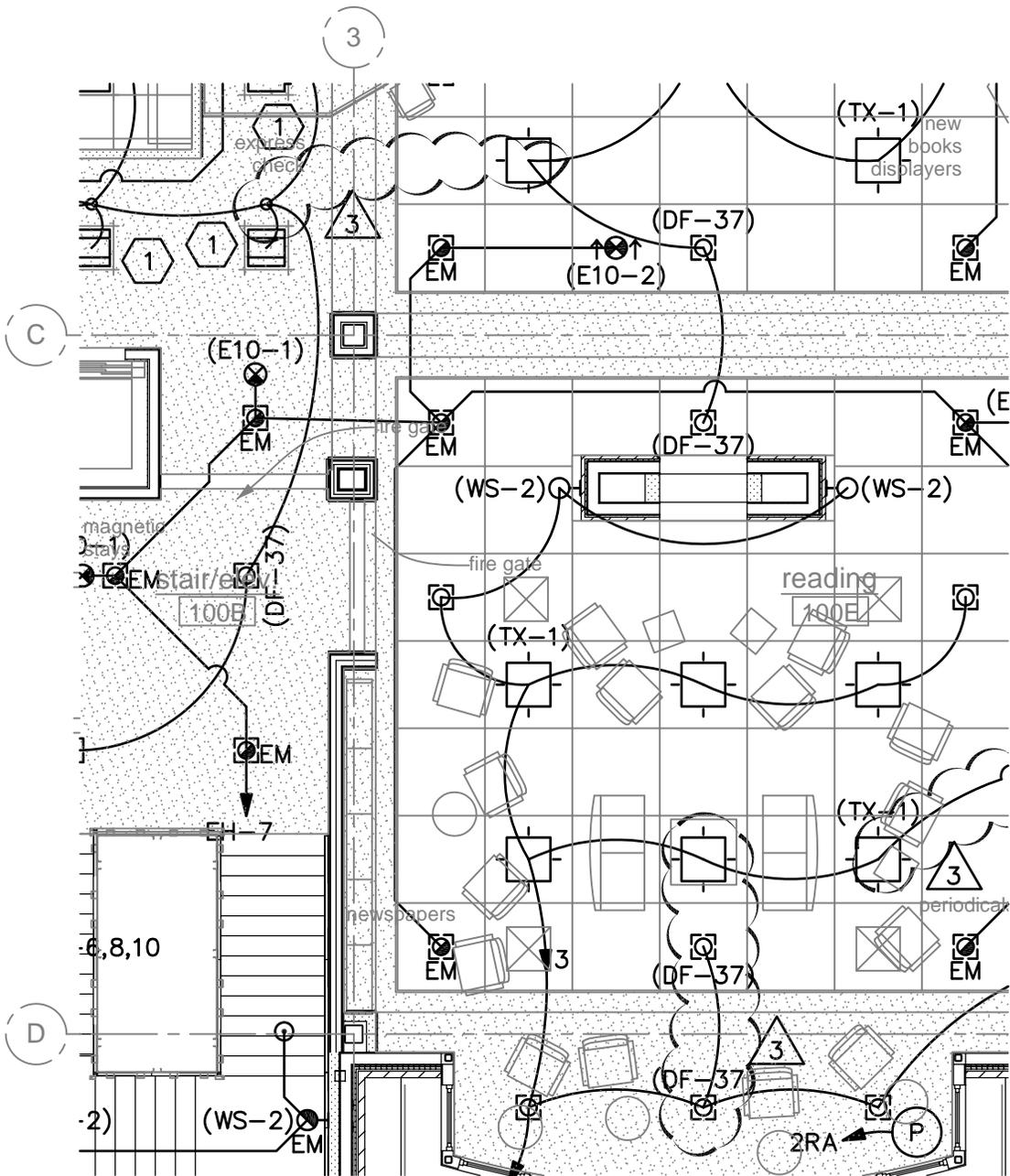
CHECKED BY: DEW

PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
BASEMENT LEVEL LIGHTING PLAN

SCALE
1/8" = 1'-0"

EL-101-RV3



SPECTRUM ENGINEERS

175 South Main Street, Suite 300
 Salt Lake City, Utah 84111
 801-328-5151 800-678-7077
 FAX 801-328-5155
 www.spectrum-engineers.com
 © 2008 Spectrum Engineers, Inc.

REFERENCE: EL-102

ISSUE: ADDENDUM #3

DATE: 2008-12-09

PROJ NO: 20070473

DRAWN BY: DLM

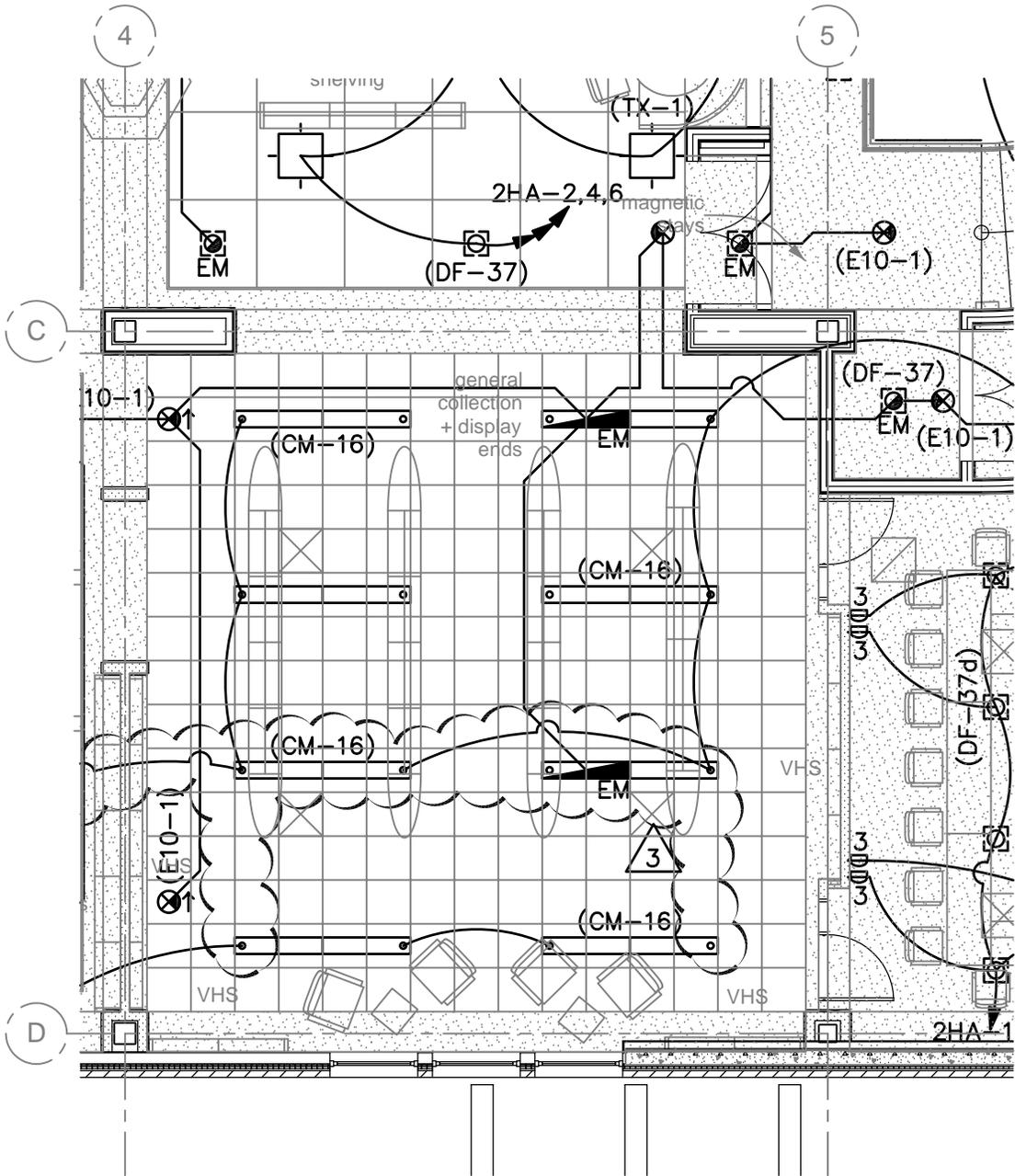
CHECKED BY: DEW

PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
LEVEL 1 MAIN LEVEL LIGHTING PLAN

SCALE
 1/8" = 1'-0"

EL-102-RV3-1



**SPECTRUM
ENGINEERS**

175 South Main Street, Suite 300
Salt Lake City, Utah 84111
801-328-5151 800-678-7077
FAX 801-328-5155
www.spectrum-engineers.com
© 2008 Spectrum Engineers, Inc.

REFERENCE: EL-102

ISSUE: ADDENDUM #3

DATE: 2008-12-09

PROJ NO: 20070473

DRAWN BY: DLM

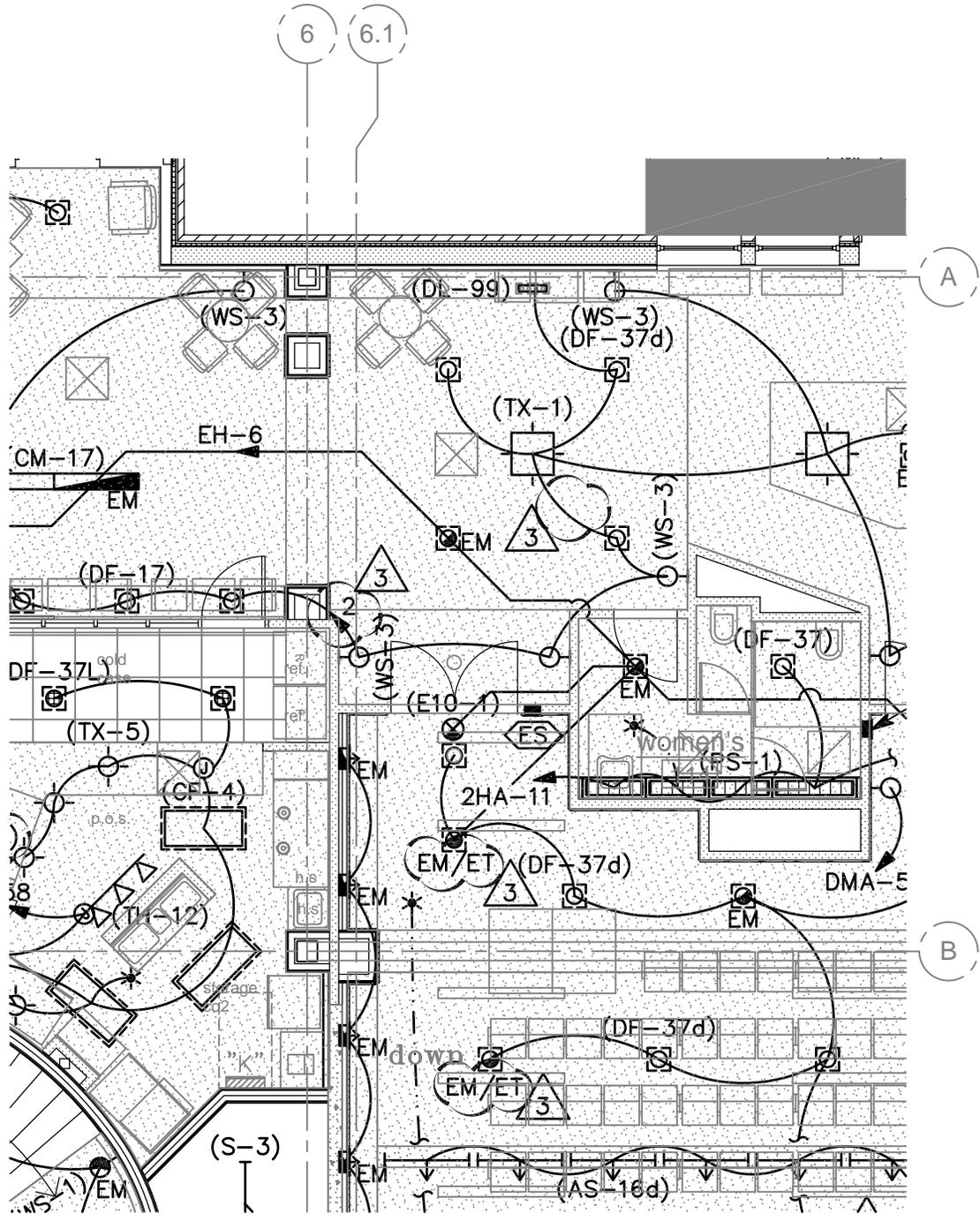
CHECKED BY: DEW

PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
LEVEL 1 MAIN LEVEL LIGHTING PLAN

SCALE
1/8" = 1'-0"

EL-102-RV3-2



**SPECTRUM
ENGINEERS**

175 South Main Street, Suite 300
Salt Lake City, Utah 84111
801-328-5151 800-678-7077
FAX 801-328-5155
www.spectrum-engineers.com
© 2008 Spectrum Engineers, Inc.

REFERENCE: EL-102

ISSUE: ADDENDUM #3

DATE: 2008-12-09

PROJ NO: 20070473

DRAWN BY: DLM

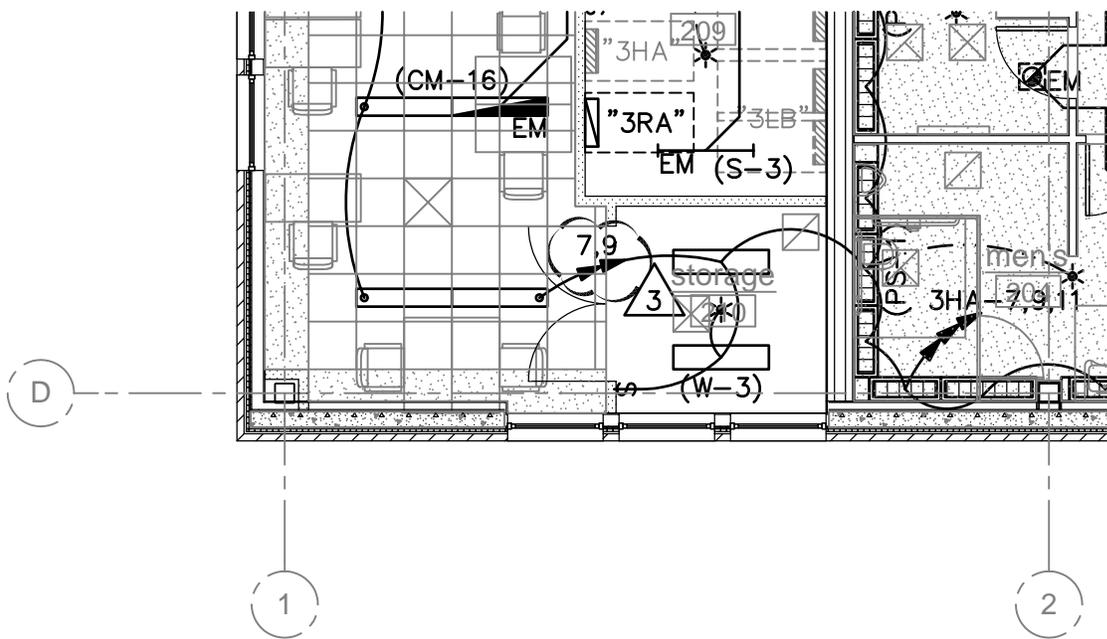
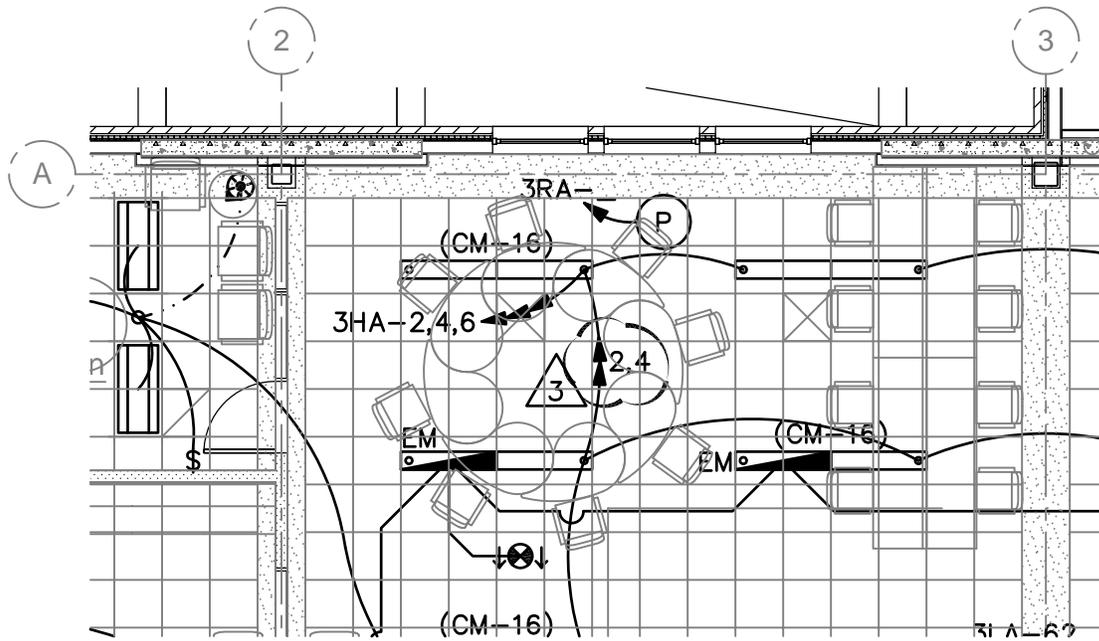
CHECKED BY: DEW

PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
LEVEL 1 MAIN LEVEL LIGHTING PLAN

SCALE
1/8" = 1'-0"

EL-102-RV3-3



175 South Main Street, Suite 300
 Salt Lake City, Utah 84111
 801-328-5151 800-678-7077
 FAX 801-328-5155
 www.spectrum-engineers.com
 © 2008 Spectrum Engineers, Inc.

REFERENCE:	EL-103
ISSUE:	ADDENDUM #3
DATE:	2008-12-09
PROJ NO:	20070473
DRAWN BY:	DLM
CHECKED BY:	DEW

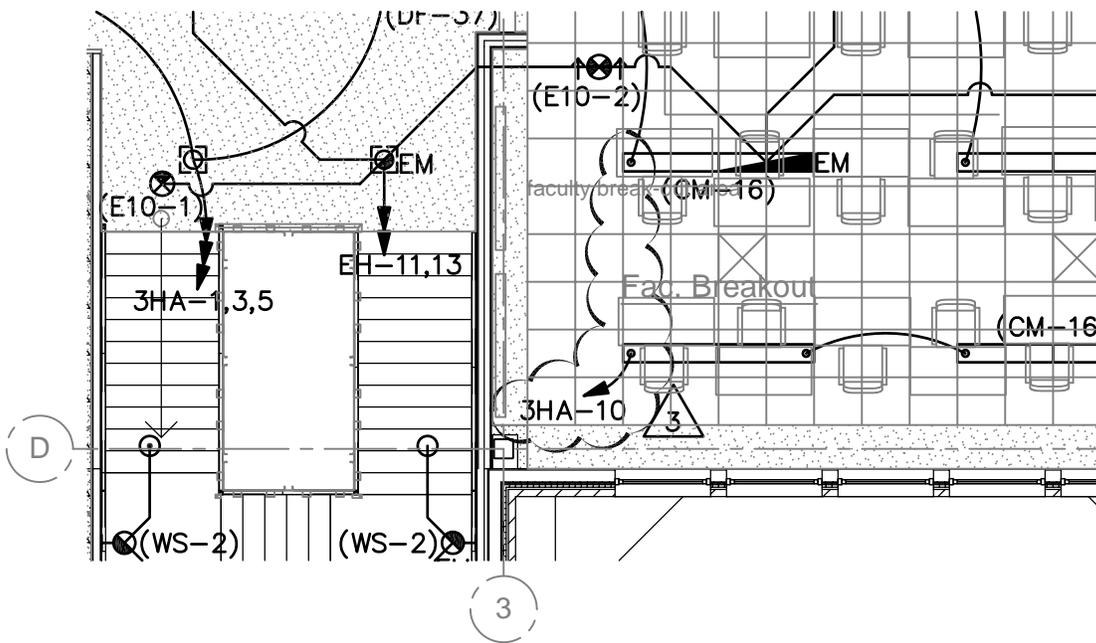
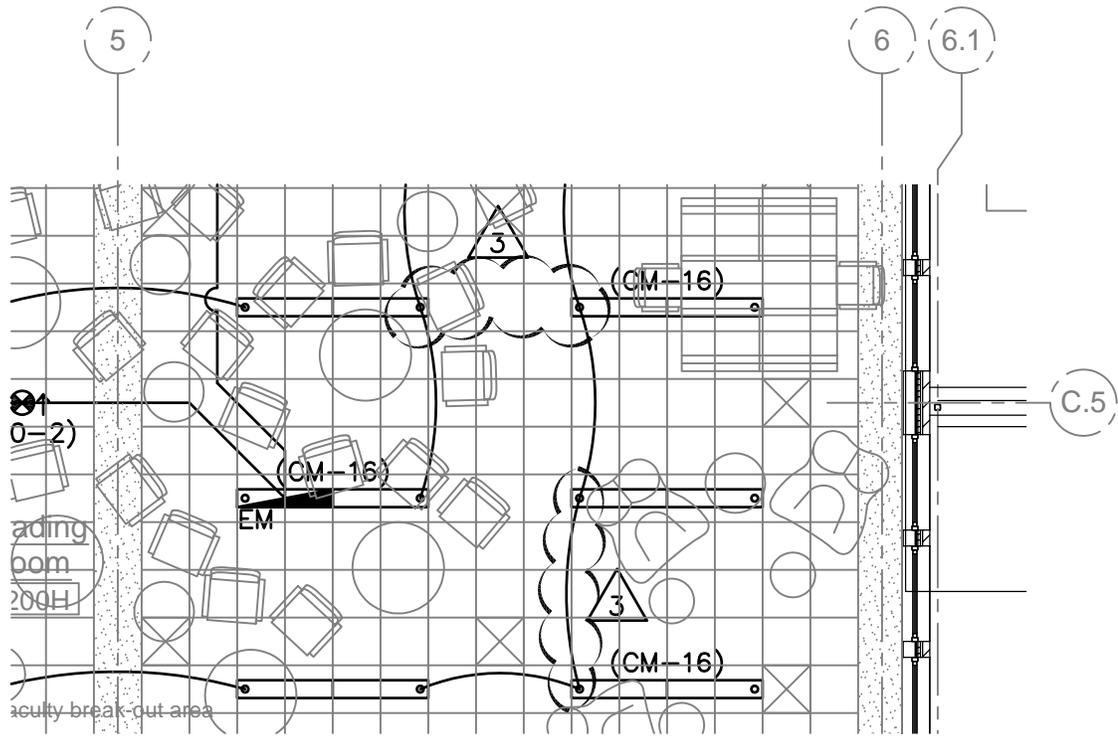
PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
LEVEL 2 LIGHTING PLAN

SCALE
 1/8" = 1'-0"

EL-103-RV3-1

P:\2007\20070473\5Archive\4CONDOC\ADDENDUM\0003\73EL-103-RV3-2.dwg Last Plotted: 12/08/2008 @ 11:06 By: DLM



**SPECTRUM
ENGINEERS**

175 South Main Street, Suite 300
Salt Lake City, Utah 84111
801-328-5151 800-678-7077
FAX 801-328-5155
www.spectrum-engineers.com
© 2008 Spectrum Engineers, Inc.

REFERENCE: EL-103

ISSUE: ADDENDUM #3

DATE: 2008-12-09

PROJ NO: 20070473

DRAWN BY: DLM

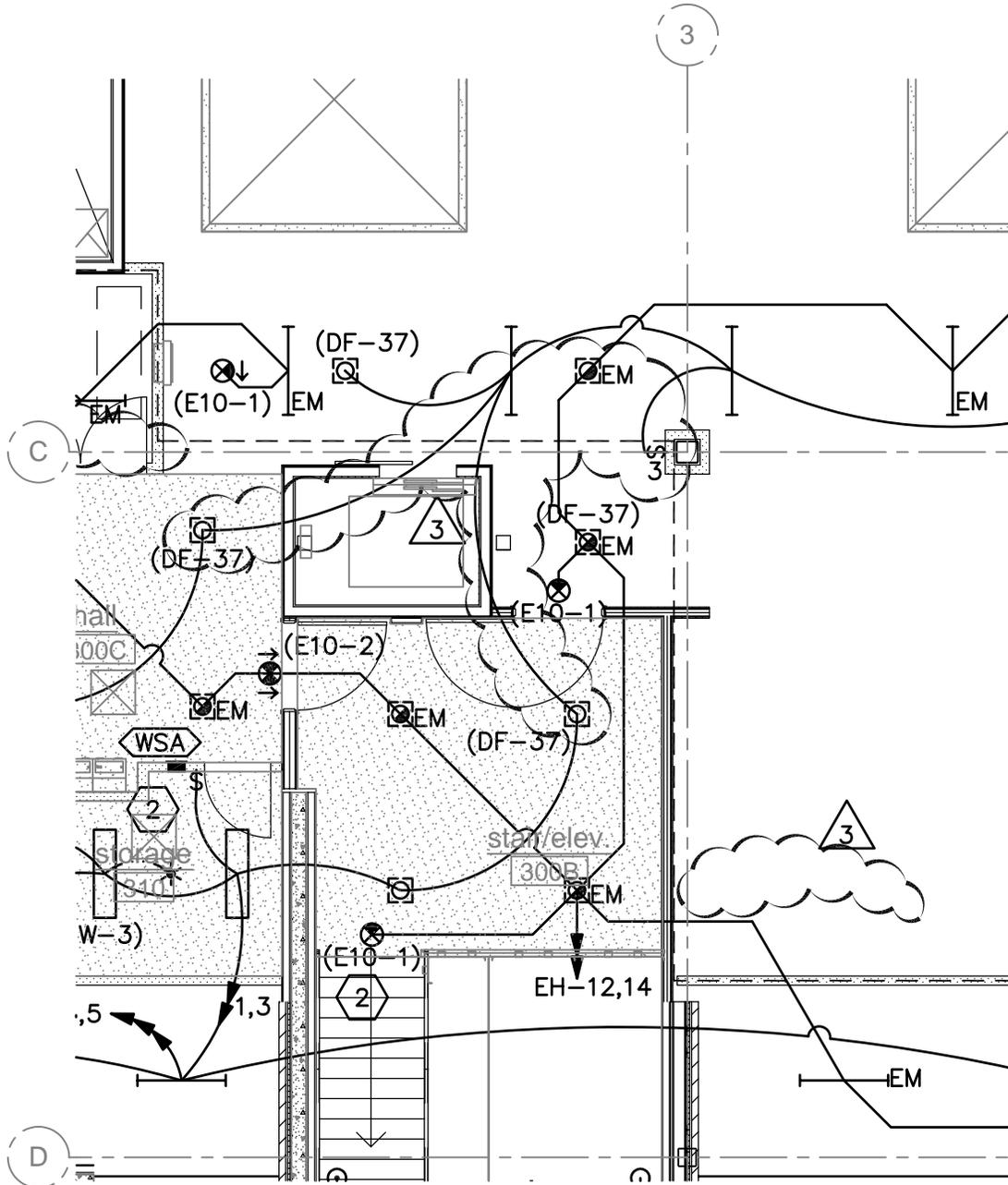
CHECKED BY: DEW

PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
LEVEL 2 LIGHTING PLAN

SCALE
1/8" = 1'-0"

EL-103-RV3-2



SPECTRUM ENGINEERS

175 South Main Street, Suite 300
 Salt Lake City, Utah 84111
 801-328-5151 800-678-7077
 FAX 801-328-5155
 www.spectrum-engineers.com
 © 2008 Spectrum Engineers, Inc.

REFERENCE:	EL-104
ISSUE:	ADDENDUM #3
DATE:	2008-12-09
PROJ NO:	20070473
DRAWN BY:	DLM
CHECKED BY:	DEW

PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
LEVEL 3 ATTIC LIGHTING PLAN

SCALE
 1/8" = 1'-0"

EL-104-RV3

GENERAL SHEET NOTES

1. PLANS, IN GENERAL, SHOW CABLE TRAYS IN PLAN AND DO NOT DETAIL CHANGES IN ELEVATION. COORDINATE LAYOUT AND INSTALLATION OF CABLE TRAYS AND SUSPENSION SYSTEM WITH OTHER CONSTRUCTION ELEMENTS. INCLUDE TRANSITIONS, OFFSETS, AND CHANGES IN ELEVATION. COORDINATE ITEMS THAT PENETRATE CEILINGS OR ARE SUPPORTED BY THEM, INCLUDING LIGHT FIXTURE, HVAC EQUIPMENT, FIRE SUPPRESSION SYSTEM AND PARTITION ASSEMBLIES.
2. LOCATE CABLE TRAY ABOVE ACCESSIBLE CEILING TILE AND BELOW PIPING AND DUCT WORK SUCH THAT CEILING TILE CAN BE REMOVED AND TOP OF CABLE TRAY IS ACCESSIBLE. IN GENERAL, LOCATE CABLE TRAY WITHIN 8"-12" ABOVE THE FINISHED CEILING.
3. COORDINATE ACTUAL CABLE TRAY ROUTING WITH MECHANICAL AND OTHER TRADES SO THAT CABLE TRAY IS ACCESSIBLE AND THE CABLE TRAY DOES NOT BLOCK ACCESS TO OTHER EQUIPMENT.
4. COORDINATE LAYOUT OF CABLE TRAY IN COMM. CLOSET WITH THE I.T. CABLING INSTALLER.
5. DO NOT SUPPORT ELECTRICAL CABLES AND RACEWAYS FROM CABLE TRAY. MAINTAIN AT LEAST 12" SEPARATION FROM CABLE TRAY TO POWER RACEWAYS OR CABLES AND LIGHT FIXTURES.
6. WHERE CABLE TRAY PASSES THROUGH FIRE-RATED WALLS, PROVIDE (4) 4" CND SLEEVES THROUGH WALL AND FIRE STOP AFTER CABLES ARE INSTALLED.
7. ROUTE CONDUIT STUBS TO CABLE TRAY SUCH THAT A MAXIMUM CABLE DISTANCE OF 250' IS TO EXCEEDED BETWEEN THE OUTLET AND THE NEAREST COMM. CLOSET.



SPECTRUM ENGINEERS

175 South Main Street, Suite 300
 Salt Lake City, Utah 84111
 801-328-5151 800-678-7077
 FAX 801-328-5155
 www.spectrum-engineers.com
 © 2008 Spectrum Engineers, Inc.

REFERENCE: ET-101

ISSUE: ADDENDUM #3

DATE: 2008-12-09

PROJ NO: 20070473

DRAWN BY: DLM

CHECKED BY: DEW

PROJECT
SNOW COLLEGE LIBRARY

SHEET TITLE
BASEMENT LEVEL TECHNOLOGY PLAN

SCALE
 1/8" = 1'-0"

ET-101-RV3

ADDENDUM

DATE: December 10, 2008
PROJECT NO: 7523
PROJECT: Snow College Library

DIVISION - 15

DRAWINGS

SHEET - MH603

1. Air Handler Schedule: Add note – Air handler shall provide single point connection for electrical. VFD's shall be provide with the unit and factory wired.

SHEET - PP601

1. Plumbing Fixture Schedule: Delete reference to S-1 two compartment sink.
2. Delete the Water Softener Schedule. Install Owner furnished water softener, the softener is a Aquaforce model AF-29XNT-210S.

SPECIFICATIONS

SECTION - 221329

1. Add attached specification section.

SECTION - 221429

1. Add attached specification section.

SECTION - 22300

1. Delete Reference to new water softeners. Install Owner furnished water softener as per the installation section.

SECTION - 224000

1. Change S-1 sink to S-2.

SECTION - 236313

1. Replace paragraph 2.1 with the following:
 - A. All underground steam distribution lines as shown on the contract drawings shall be Granular, Loose-Fill Insulation: Inorganic, nontoxic, nonflammable, sodium potassium aluminum silicate with calcium carbonate filler. Include chemical treatment that renders insulation hydrophobic.
 - 1) Manufacturers.
 - a) American Thermal Products, Inc.
 - 2) Thermal Conductivity (k-Value): 0.60 at 175 deg F (0.087 at 79 deg C) and 0.65 at 300 deg F (0.094 at 149 deg C).
 - 3) Application Temperature Range: 35 to 800 deg F (2 to 426 deg C).
 - 4) Dry Density: 40 to 42 lb/cu. ft. (640 to 672 kg/cu. m).
 - 5) Strength: 12,000 lb/sq. ft. (58 600 kg/sq. m).

SECTION - 236313

1. Add the following paragraph after paragraph 3.1:

LOOSE-FILL INSULATION INSTALLATION

- A. Retain this Article for bare pipe installation requiring insulation.
- B. Do not disturb the bottom of trench, or compact and stabilize it to ensure proper support.
- C. Remove any standing water in the bottom of trench.
- D. Form insulation trench by excavation or by installing drywall side forms to establish the required height and width of the insulation.
- E. Support piping with proper pitch, separation, and clearance to backfill or side forms using temporary supporting devices that can be removed after back filling with insulation.
- F. Place insulation and backfill after field quality-control testing has been completed and results approved.
- G. Apply bitumastic coating to carbon-steel anchors and guides. Pour concrete thrust blocks and anchors. Refer to Division 3 Section "Cast-in-Place Concrete" for concrete and reinforcement.
- H. Wrap piping at expansion loops and offsets with mineral-wool insulation of thickness appropriate for calculated expansion amount.
- I. Pour loose-fill insulation to required dimension agitating insulation to eliminate voids around piping.
- J. Remove temporary hangers and supports.
- K. Cover loose-fill insulation with polyethylene sheet a minimum of 4 mils (0.10 mm) thick, and empty loose-fill insulation bags on top.
- L. Manually backfill 6 inches (150 mm) of clean backfill. If mechanical compaction is required manually backfill to 12 inches (300 mm) before using mechanical-compaction equipment.

SECTION - 236419

1. Paragraph 2.1.C: Systems are limited to R-410a refrigerant in lieu of HCFC-22.

SECTION - 237325

1. Paragraph 1.2.5.: Replace with the following paragraph – "The fans shall be wired for a single point connection. This division shall provide VFD's which shall be factory wired as well. The supply and return fan section shall both be provided with one VFD. This division shall also provide the main disconnect for the air handler and everything downstream including all conduit and wiring per the requirements of the electrical specifications.
2. Paragraph 2.16:
 - A. Change any reference to "RTU" to "AHU".
 - B. Remove requirements for NEMA 3R enclosure. These VFD's will be located indoors.
 - C. Add Mitsubishi to approved manufacturers.
3. Remove paragraphs 2.21, 2.22 and 2.23.

PRIOR APPROVALS

The following manufacturers, trade names and products are allowed to bid on a name brand only basis with the provision that they completely satisfy all and every requirement of the drawings, specifications and all addenda shall conform to the design, quality and standards specified, established and required for the complete and satisfactory installation and performance of the building and all its respective parts.

<u>Item</u>	<u>Manufacturer</u>	<u>Comments</u>
Toilet Seat	Comfort Seats	
Water Cooler	Acorn Aqua	
Waterless Urinals	Sloan	
Manufactured Casings	Commercial Acoustics	
Louvers, Exhaust Fans	Greenheck	
Split System Air Conditioners	Daikin AC	
Custom Air Handling Units	Governair	
Cabinet Unit Heaters	Beacon Morris	
Unit Heaters	Beacon Morris	
Piping Kits	Bell & Gossett	
Packed Expansion Joints	Metraflex	
Venturi	Bell & Gossett	
Steam Condensate Pump	ITT Domestic	
Grilles, Registers & Diffusers	Anemostat	
Louvers	Air Balance	
Flex Duct	Hart & Cooley	
Fan Powered Boxes	Tuttle & Bailey	
Grilles, Registers, Diffusers	Tuttle & Bailey	
Louvers & Vents	Wonder Metals, Air Rite	
Chillers	Carrier	
Louvers & Vents	Pottorff	
Power Ventilators	Twin City	
Flexible Ductwork	Hart & Cooley	
Vibration & Seismic	Mason Industries	
Registers, Grilles, & Ceiling Diffusers	Carnes	
Roof Exhaust Fans	Carnes	
Utility Exhaust Fans	Carnes	
Inline Exhaust Fans	Carnes	
Mixed Flow Fans	Carnes	
Filtered Supply Fans	Carnes	
Louvers	Cesco	
Test & Balance Contractor	Temp-Co. Services L.C.	

SECTION 221329 - SANITARY SEWERAGE PUMPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following sewage pumps and accessories for sanitary drainage piping systems in buildings:
 - 1. Submersible sewage pumps.
 - 2. Sewage pump basins.
- B. Related Sections include the following:
 - 1. Division 22 Section "Sump Pumps" for applications in storm-drainage systems.

1.3 SUBMITTALS

- A. Product Data: For each type and size of sewage pump specified. Include certified performance curves with operating points plotted on curves; and rated capacities of selected models, furnished specialties, and accessories.
- B. Shop Drawings: Diagram power, signal, and control wiring.
- C. Operation and Maintenance Data: For each sewage pump to include in emergency, operation, and maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Product Options: Drawings indicate size, profiles, and dimensional requirements of sewage pumps and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Retain shipping flange protective covers and protective coatings during storage.
- B. Protect bearings and couplings against damage.
- C. Comply with pump manufacturer's written rigging instructions for handling.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 SUBMERSIBLE SEWAGE PUMPS

- A. Submersible, Quick-Disconnect Effluent Pumps: Factory-assembled and -tested, duplex, single-stage, centrifugal, end-suction, submersible, direct-connected effluent pumps complying with UL 778 and with HI 1.1-1.2 and HI 1.3 for submersible sewage pumps and with SWPA's "Submersible Sewage Pumping Systems (SWPA) Handbook" for guide-rail supportsCoordinate first subparagraph and list below with Part 2 "Manufacturers" Article. Retain "Available" for nonproprietary and delete for semiproprietary specifications.

1. Manufacturers:

- a. ABS Pumps, Inc.
- b. Flygt; ITT Industries.
- c. HOMA Pump Technology.
- d. Hydromatic Pumps; Pentair Pump Group (The).
- e. Metropolitan Industries, Inc.
- f. Myers, F. E.; Pentair Pump Group (The).
- g. Zoeller Company.

2. Casing: Cast iron, with open inlet, legs (or guide-rail supports) that elevate pump to permit flow into impeller, and vertical discharge with companion flange for piping connection.

3. Impeller: ASTM A 48/A 48M, Class No. 25 A or higher cast iron; statically and dynamically balanced, closed or semiopen design for clear wastewater; overhung, single suction, and keyed and secured to shaft.

4. Pump and Motor Shaft: Stainless steel, with factory-sealed, grease-lubricated ball bearings and double mechanical seals.

5. Motor: Hermetically sealed, capacitor-start type; with built-in overload protection; lifting eye or lug; and three-conductor, waterproof, power cable of length required and with grounding plug and cable-sealing assembly for connection at pump. Comply with Division 22 Section "Common Motor Requirements for Plumbing Equipment."

- a. Moisture-Sensing Probe: Internal moisture sensor and moisture alarm.
- b. Motor Housing Fluid: Air or oil.

6. Guide-Rail Supports: Include the following for each sewage pump:

- a. Guide Rails: Vertical pipes or structural members, made of galvanized steel or other corrosion-resistant metal, attached to baseplate and basin sidewall or cover.
- b. Baseplate: Corrosion-resistant metal plate, attached to basin floor, supporting guide-rail supports and stationary elbow.
- c. Pump Yoke: Motor-mounted or casing-mounted yokes or other attachments for aligning pump during connection of flanges.

- d. Movable Elbow: Pump discharge-elbow fitting with flange, seal, and positioning device.
- e. Stationary Elbow: Fixed discharge-elbow fitting with flange that mates to movable-elbow flange and support attached to baseplate.
- f. Lifting Cable: Stainless steel; attached to pump and cover at manhole.

2.3 SEWAGE PUMP BASINS

- A. Description: Factory fabricated basin with sump, pipe connections, and separate cover.
- B. Sump: Fabricate watertight, with sidewall openings for pipe connections.
 1. Material: Fiberglass.
 2. Reinforcement: Mounting plates for pumps, fittings, guide-rail supports, and accessories.
 3. Anchor Flange: Same material as or compatible with sump, cast in or attached to sump, in location and of size required to anchor basin in concrete slab.
- C. Cover: Fabricate with openings having gaskets, seals, and bushings; for access to pumps, pump shafts, control rods, discharge piping, vent connections, and power cables.
 1. Material: Cast iron or steel with bituminous coating.
 2. Reinforcement: Steel or cast iron, capable of supporting foot traffic for basins installed in foot-traffic areas.

2.4 FLEXIBLE CONNECTORS

- A. Manufacturers:
 1. Anamet, Inc.
 2. Flex-Hose Co., Inc.
 3. Flexicraft Industries.
 4. Flex-Pression, Ltd.
 5. Flex-Weld, Inc.
 6. Hyspan Precision Products, Inc.
 7. Mercer Rubber.
 8. Metraflex, Inc.
 9. Proco Products, Inc.
 10. Tozen America Corporation.
 11. Unaflex Inc.
- B. Description: **125-psig (860-kPa)** minimum working-pressure rating and ends matching pump connections:
 1. Bronze Flexible Connectors: Corrugated, bronze inner tubing covered with bronze wire braid. Include copper-tube ends or bronze flanged ends, braze-welded to tubing.
 2. Stainless-Steel Flexible Connectors: Corrugated, stainless-steel inner tubing covered with stainless-steel wire braid. Include stainless-steel nipples or flanges, welded to tubing.

2.5 BUILDING AUTOMATION SYSTEM INTERFACE

- A. Provide auxiliary contacts in pump controllers for interface to building automation system. Include the following:
 - 1. On-off status of each pump.
 - 2. Alarm status.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in for plumbing piping to verify actual locations of sanitary drainage and vent piping connections before sewage pump installation.

3.2 INSTALLATION

- A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."
- B. Install sewage pumps according to applicable requirements in HI 1.4.
- C. Install pumps and arrange to provide access for maintenance including removal of motors, impellers, couplings, and accessories.
- D. Set submersible sewage pumps on basin floors. Make direct connections to sanitary drainage piping.
 - 1. Anchor guide-rail supports to basin bottoms and sidewalls or covers. Install pumps so pump and discharge pipe disconnecting flanges make positive seals when pumps are lowered into place.
- E. Install sewage pump basins and connect to drainage and vent piping. Brace interior of basins according to manufacturer's written instructions to prevent distortion or collapse during concrete placement. Set basin cover and fasten to basin top flange. Install cover so top surface is flush with finished floor.
- F. Support piping so weight of piping is not supported by pumps.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in Division 22 Section "Sanitary Waste and Vent Piping." Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to sewage pumps to allow service and maintenance.
- C. Connect sanitary drainage and vent piping to pumps. Install discharge piping equal to or greater than size of pump discharge piping. Install vent piping equal to or greater than size of pump basin vent connection. Refer to Division 22 Section "Sanitary Drainage and Vent Piping."
 - 1. Install flexible connectors adjacent to pumps in discharge piping.

2. Install check and shutoff valves on discharge piping from each pump. Install unions on pumps having threaded pipe connections. Install valves same size as connected piping. Refer to Division 22 Section "General-Duty Valves for Plumbing Piping" for general-duty valves for sanitary waste piping.

- D. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- E. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

3.4 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 1. Complete installation and startup checks according to manufacturer's written instructions.
 2. Verify bearing lubrication.
 3. Disconnect couplings and check motors for proper direction of rotation.
 4. Verify that each pump is free to rotate by hand. If pump is bound or drags, do not operate until cause of trouble is determined and corrected.
 5. Verify that pump controls are correct for required application.
- B. Start pumps without exceeding safe motor power:
 1. Start motors.
 2. Open discharge valves slowly.
 3. Check general mechanical operation of pumps and motors.
- C. Test and adjust controls and safeties.
- D. Remove and replace damaged and malfunctioning components.
 1. Pump Controls: Set pump controls for automatic start, stop, and alarm operation as required for system application.
 2. Set field-adjustable switches and circuit-breaker trip ranges as indicated, or if not indicated, for normal operation.
- E. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project outside normal occupancy hours for this purpose.

3.5 DEMONSTRATION

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

END OF SECTION 221329

SECTION 221429 - SUMP PUMPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following sump pumps and accessories, inside the building, for building storm drainage systems:
 - 1. Submersible sump pumps.
 - 2. Sump pump basins.
- B. Related Sections include the following:
 - 1. Division 22 Section "Sanitary Sewerage Pumps" for application in sanitary drainage systems.

1.3 SUBMITTALS

- A. Product Data: For each type and size of sump pump specified. Include certified performance curves with operating points plotted on curves, and rated capacities of selected models, furnished specialties, and accessories.
- B. Shop Drawings: Diagram power, signal, and control wiring.
- C. Operation and Maintenance Data: For each sump pump to include in emergency, operation, and maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Product Options: Drawings indicate size, profiles, and dimensional requirements of sump pumps and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Retain shipping flange protective covers and protective coatings during storage.
- B. Protect bearings and couplings against damage.

- C. Comply with pump manufacturer's written rigging instructions for handling.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 SUBMERSIBLE SUMP PUMPS

- A. **[Available]** Manufacturers:
 - 1. Bell & Gossett Domestic Pump; ITT Industries.
 - 2. Goulds Pumps; ITT Industries.
 - 3. Zoeller Company.
- B. Description: Factory-assembled and -tested, duplex, single-stage, centrifugal, end-suction, submersible, direct-connected sump pumps complying with UL 778 and HI 1.1-1.2 and HI 1.3 for submersible sump pumps.
- C. Casing: Cast iron; with cast-iron inlet strainer, legs that elevate pump to permit flow into impeller, and vertical discharge with companion flange for piping connection.
- D. Impeller: ASTM A 48/A 48M, Class No. 25 A or higher cast iron; statically and dynamically balanced, semiopen nonclog design, overhung, single suction, keyed and secured to shaft.
- E. Casing: Stainless steel; with stainless-steel inlet strainer, legs that elevate pump to permit flow into impeller, and vertical discharge with companion flange suitable for piping connection.
- F. Impeller: Stainless steel or other corrosion-resistant material.
- G. Casing and Impeller: Cast-iron casing with metal inlet strainer and brass, bronze, or cast-iron impeller.
- H. Casing and Impeller: Cast-iron or plastic casing with inlet strainer and metal or plastic impeller.
- I. Pump and Motor Shaft: Stainless steel, with factory-sealed, grease-lubricated ball bearings.
- J. Motor: Hermetically sealed, capacitor-start type, with built-in overload protection; three-conductor waterproof power cable of length required, and with grounding plug and cable-sealing assembly for connection at pump. Comply with requirements in Division 22 Section "Common Motor Requirements for Plumbing Equipment."
 - 1. Moisture-Sensing Probe: Internal moisture sensor with moisture alarm.
- K. Pump Discharge Piping: Factory or field fabricated, ASTM A 53/A 53M, Schedule 40, galvanized-steel pipe.
- L. Basin Cover: Cast iron or steel with bituminous coating and strong enough to support controls. See Part 2 "Sump Pump Basins" Article for other requirements.

- M. Controls: NEMA 250, Type 1 enclosure, pedestal mounted unless wall mounting is indicated; with three mechanical- or micropressure switches in NEMA 250, Type 6 enclosures; mounting rod; and electric cables. Include automatic alternator to alternate operation of pump units on successive cycles and to operate multiple units if one pump cannot handle load.
1. Float Guide: Pipe or other restraint for floats and rods in basins of depth greater than **60 inches (1500 mm)**.
 2. High-Water Alarm: Cover-mounted, compression-probe alarm, with electric bell; 120-V ac, with transformer and contacts for remote alarm bell.
 3. High-Water Alarm: Rod-mounted, NEMA 250, Type 6 enclosure with mechanical- or micropressure-switch alarm matching control and electric bell; 120-V ac, with transformer and contacts for remote alarm bell.

2.3 SUMP PUMP BASINS

- A. Description: Factory fabricated basin with sump, pipe connections, and separate cover.
- B. Sump: Fabricate watertight, with sidewall openings for pipe connections.
1. Material: Fiberglass.
 2. Reinforcement: Mounting plates for pumps, fittings, and accessories.
 3. Anchor Flange: Same material as or compatible with sump, cast in or attached to sump, in location and of size required to anchor basin in concrete slab.
- C. Cover: Fabricate with openings having gaskets, seals, and bushings, for access to pumps, pump shafts, control rods, discharge piping, vent connections, and power cables.
1. Material: Cast iron or steel with bituminous coating.
 2. Reinforcement: Steel or cast iron, capable of supporting foot traffic for basins installed in foot-traffic areas.

2.4 FLEXIBLE CONNECTORS

- A. Manufacturers:
1. Anamet, Inc.
 2. Flex-Hose Co., Inc.
 3. Flexicraft Industries.
 4. Flex-Pression, Ltd.
 5. Flex-Weld, Inc.
 6. Hyspan Precision Products, Inc.
 7. Mercer Rubber.
 8. Metraflex, Inc.
 9. Proco Products, Inc.
 10. Tozen America Corporation.
 11. Unaflex Inc.
- B. Description: **125-psig (860-kPa)** minimum working-pressure rating and ends matching pump connection:
1. Bronze Flexible Connectors: Corrugated, bronze inner tubing covered with bronze wire braid. Include copper-tube ends or bronze flanged ends, braze welded to tubing.

2. Stainless-Steel Flexible Connectors: Corrugated, stainless-steel inner tubing covered with stainless-steel wire braid. Include stainless-steel nipples or flanges, welded to tubing.

2.5 BUILDING AUTOMATION SYSTEM INTERFACE

- A. Provide auxiliary contacts in pump controllers for interface to building automation system. Include the following:
 1. On-off status of each pump.
 2. Alarm status.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in of plumbing piping to verify actual locations of storm drainage piping connections before sump pump installation.

3.2 SUMP PUMP INSTALLATION

- A. Excavating, trenching, and backfilling are specified in Division 31 Section "Earth Moving."
- B. Install sump pumps according to applicable requirements in HI 1.4.
- C. Install pumps and arrange to provide access for maintenance including removal of motors, impellers, couplings, and accessories.
- D. Set submersible sump pumps on basin floor. Make direct connections to storm drainage piping.
- E. Install sump pump basins and connect to drainage piping. Brace interior of basins according to manufacturer's written instructions to prevent distortion or collapse during concrete placement. Set basin cover and fasten to basin top flange. Install cover so top surface is flush with finished floor.
- F. Support piping so weight of piping is not supported by pumps.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in Division 22 Section "Facility Storm Drainage Piping." Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to sump pumps to allow service and maintenance.
- C. Connect storm drainage piping to pumps. Install discharge piping equal to or greater than size of pump discharge piping. Refer to Division 22 Section "Facility Storm Drainage Piping."
 1. Install flexible connectors adjacent to pumps in discharge piping.
 2. Install check and shutoff valves on discharge piping from each pump. Install unions on pumps having threaded pipe connections. Install valves same size as connected piping.

Refer to Division 22 Section "General-Duty Valves for Plumbing Piping" for general-duty valves for drainage piping.

- D. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."
- E. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

3.4 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 - 1. Complete installation and startup checks according to manufacturer's written instructions.
 - 2. Verify bearing lubrication.
 - 3. Disconnect couplings and check motors for proper direction of rotation.
 - 4. Verify that each pump is free to rotate by hand. If pump is bound or drags, do not operate until cause of trouble is determined and corrected.
 - 5. Verify that pump controls are correct for required application.
- B. Start pumps without exceeding safe motor power:
 - 1. Start motors.
 - 2. Open discharge valves slowly.
 - 3. Check general mechanical operation of pumps and motors.
- C. Test and adjust controls and safeties.
- D. Remove and replace damaged and malfunctioning components.
 - 1. Pump Controls: Set pump controls for automatic start, stop, and alarm operation as required for system application.
 - 2. Set field-adjustable switches and circuit-breaker trip ranges as indicated, or if not indicated, for normal operation.
- E. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project outside normal occupancy hours for this purpose.

3.5 DEMONSTRATION

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

END OF SECTION 221429

SECTION 08 71 00 – DOOR HARDWARE

PART I – GENERAL

1.01 SUMMARY

A. SECTION INCLUDES

1. The work in this section includes furnishing all items of finish hardware as hereinafter specified or obviously necessary for all swinging, sliding, folding and other doors. Except items, which are specifically excluded from this section of the specification or of unique hardware, specified in the same sections as the doors and frames on which they are installed.

B. RELATED DOCUMENTS

1. Related documents, drawings and general provisions of contract, including General and Supplementary Conditions and Division 1 specification sections apply to this section.

C. RELATED SECTIONS

1. 06 20 00 – Finish Carpentry
2. 06 48 16 – Interior Wood Door Frames
3. 08 01 00 – Operations and Maintenance
4. 08 06 71 – Door Hardware Schedule
5. 08 11 13 – Metal Doors and Frames
6. 08 14 13 – Flush Wood Doors
7. 08 14 23 – Clad Wood Doors
8. 08 41 00 – Entrances and Storefronts
9. 08 71 13 – Automatic Door Operators
10. 08 74 00 – Access Control Hardware
11. 28 13 00 – Access Control

1.02 REFERENCES

A. STANDARDS

1. AIA A201 1997 – General Conditions of the Contract
2. ANSI-A250.4 – Steel Doors and Frames Physical Endurance
3. ANSI A156.1 – Butts and Hinges
4. ANSI A156.2 – Bored Locks and Latches
5. ANSI A156.3 – Exit Devices
6. ANSI A156.4 – Door Controls – Door Closers
7. ANSI A156.5 – Auxiliary Locks and Associated Products
8. ANSI A156.6 – Architectural Door Trim
9. ANSI A156.7 – Template Hinge Dimensions
10. ANSI A156.8 – Door Controls – Overhead Holders
11. ANSI A156.13 – Mortise Locks and Latches
12. ANSI A156.15 – Closer Holder Release Devices
13. ANSI A156.16 – Auxiliary Hardware
14. ANSI A156.18 – Material and Finishes
15. ANSI A156.26 – Continuous Hinges
16. UL10C – Positive Pressure Fire Tests of Door Assemblies

B. CODES

1. NFPA 101 – Life Safety Code
2. IBC 2003 – International Building Code
3. ANSI A117.1 – Accessible and Usable Buildings and Facilities
4. ADA – Americans with Disabilities Act

1.03 SUBMITTALS

A. GENERAL REQUIREMENTS

1. Submit copies of finish hardware schedule in accordance with Division 1, General Requirements.

B. SCHEDULES AND PRODUCT DATA

1. Schedules to be in vertical format, listing each door opening, and organized into "hardware sets" indicating complete designations of every item required for each door opening to function as intended. Hardware schedule shall be submitted within two (2) weeks from date the purchase order is received by the finish hardware supplier. Furnish four (4) copies of revised schedules after approval for field and file use. Note any special mounting instructions or requirements with the hardware schedule. Schedules to include the following information:
 - a. Location of each hardware set cross-referenced to indications on drawings, both on floor plans and in door and frame schedule.
 - b. Handing and degree of swing of each door.
 - c. Door and frame sizes and materials.
 - d. Keying information.
 - e. Type, style, function, size, and finish of each hardware item.
 - f. Elevation drawings and operational descriptions for all electronic openings.
 - g. Name and manufacturer of each hardware item.
 - h. Fastenings and other pertinent information.
 - i. Explanation of all abbreviations, symbols and codes contained in schedule
 - j. Mounting locations for hardware when varies from standard.
2. Submit catalog cuts and/or product data sheets for all scheduled finish hardware.
3. Submit separate detailed keying schedule for approval indicating clearly how the owner's final instructions on keying of locks has been fulfilled.

C. SAMPLES

1. Upon request, samples of each type of hardware in finish indicated shall be submitted. Samples are to remain undamaged and in working condition through submittal and review process. Items will be returned to the supplier or incorporated into the work within limitations of keying coordination requirements.

D. TEMPLATES

1. Furnish a complete list and suitable templates, together with finish hardware schedule to contractor, for distribution to necessary trades supplying materials to be prepped for finish hardware.

E. ELECTRONIC HARDWARE SYSTEMS

1. Provide complete wiring diagrams prepared by an authorized factory employee for each opening requiring electronic hardware, except openings where only magnetic hold-open devices are specified. Provide a copy with each hardware schedule submitted after approval.
2. Provide complete operational descriptions of electronic components listed by opening in the hardware submittals. Operational descriptions to detail how each electrical component functions within the opening incorporating all conditions of ingress and egress. Provide a copy with each hardware schedule submitted for approval.
3. Provide elevation drawings of electronic hardware and systems identifying locations of the system components with respect to their placement in the door opening. Provide a copy with each hardware schedule submitted for approval.
4. Prior to installation of electronic hardware, arrange conference between supplier, installers and related trades to review materials, procedures and coordinating related work.

5. The electrical products contained within this specification represent a complete engineered system. If alternate electrical products are submitted, it is the responsibility of the distributor to bear the cost of providing a complete and working system including re-engineering of electrical diagrams and system layout, as well as power supplies, power transfers and all required electrical components. Coordinate with electrical engineer and electrician to ensure that line voltage and low voltage wiring is coordinated to provide a complete and working system.
6. For each item of electrified hardware specified, provide standardized molex plug connectors to accommodate up to twelve (12) wires. Molex plug connectors shall plug directly into through-door wiring harnesses, frame wiring harnesses, electric locking devices and power supplies.

F. OPERATIONS AND MAINTENANCE MANUALS

1. Upon completion of construction and building turnover, furnish two (2) complete maintenance manuals to the owner. Manuals to include the following items:
 - a. Approved hardware schedule, catalog cuts and keying schedule.
 - b. Hardware installation and adjustment instructions.
 - c. Manufacturer's written warranty information.
 - d. Wiring diagrams, elevation drawings and operational descriptions for all electronic openings.

1.04 QUALITY ASSURANCE

A. SUBSTITUTIONS

1. All substitution requests must be submitted before bidding and within the procedures and time frame as outlined in Division 1, General Requirements. Approval of products is at the discretion of the architect and his hardware consultant.

B. SUPPLIER QUALIFICATIONS

1. A recognized architectural door hardware supplier who has maintained an office and has been furnishing hardware in the project's vicinity for a period of at least two (2) years.
2. Hardware supplier shall have office and warehouse facilities to accommodate this project.
3. Hardware supplier shall have in his employment at least one (1) Architectural Hardware Consultant (AHC) who is available at reasonable times during business hours for consultation about the project's hardware and requirements to the owner, architect and contractor.
4. Hardware supplier must be an authorized factory distributor of all products specified herein.

1.05 FIRE-RATED OPENINGS

1. Provide door hardware for fire-rated openings that comply with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed by Underwriter's Laboratories (UL) or Warnock Hersey (WH) for use on types and sizes of doors indicated.
2. Project requires door assemblies and components that are compliant with positive pressure and S-label requirements. Specifications must be cross-referenced and coordinated with door manufacturers to ensure that total opening engineering is compatible with UL10C Standard for Positive Pressure Fire Tests of Door Assemblies.
 - a. Hardware required for fire doors shall be listed with Underwriters Laboratories for ratings specified.
 - b. Certification(s) of compliance shall be made available upon request by the Authority Having Jurisdiction.

1.06 DELIVERY, STORAGE AND HANDLING

A. MARKING AND PACKAGING

1. Properly package and mark items according to the approved hardware schedule, complete with necessary screws and accessories, instructions and installation templates for spotting mortising tools. Contractor shall check deliveries against accepted list and provide receipt for them, after which he is responsible for storage and care. Any shortage or damaged good shall be made without cost to the owner.
2. Packaging of door hardware is the responsibility of the supplier. As hardware supplier receives material from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set and door numbers to match the approved hardware schedule. Two or more identical sets may be packed in same container.

B. DELIVERY

1. The supplier shall deliver all hardware to the project site; direct factory shipments are not allowed unless agreed upon beforehand. Hardware supplier shall coordinate delivery times and schedules with the contractor. Inventory door hardware jointly with representatives of hardware supplier and hardware installer/contractor until each is satisfied that count is correct.
2. No keys, other than construction master keys and/or temporary keys are to be packed in boxes with the locks.
3. At time of hardware delivery, door openings supplier in conjunction with the contractor shall check in all hardware and set up a hardware storage room.

C. STORAGE

1. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of work will not be delayed by hardware losses both before and after installation.

1.07 WARRANTY

- A. All items, except as noted below, shall be warranted in writing by the manufacturer against failure due to defective materials and workmanship for a minimum period of one (1) year commencing on the date of final completion and acceptance. In the event of product failure, promptly repair or replace item with no additional cost to the owner.
1. Mortise locksets: Seven (7) years
 2. Exit Devices: Five (5) years
 3. Door closers: Ten (10) years
 4. Securitron (and approved equals) electrified hardware: Unlimited Lifetime

PART II – PRODUCTS

2.01 MANUFACTURERS

- A. Only manufacturers as listed below shall be accepted. Obtain each type of finish hardware (hinges, latch and locksets, exit devices, door closers, etc.) from a single manufacturer.

2.02 MATERIALS

A. SCREWS AND FASTENERS

1. All required screws shall be supplied as necessary for securing finish hardware in the appropriate manner. Thru-bolts shall be supplied for exit devices and door closers where required by code and the appropriate blocking or reinforcing is not present in the door to preclude their use.

B. HANGING DEVICES

1. HINGES

- a. Hinges shall conform to ANSI A156.1 and have the number of knuckles as specified, oil-impregnated bearings as specified with NRP (non-removable pin) feature, at all exterior reverse bevel doors. Unless otherwise scheduled, supply one (1) hinge for every 30" of door height. Hinges shall be a minimum of 4 1/2" high and 4" wide; heavy weight hinges (.180) shall be supplied at all doors where specified.

- 1) Specified Manufacturer: McKinney
- 2) Approved Substitutes: Hager, Stanley

2. ELECTRIC HINGES

- a. Electric hinges shall be provided with molex standardized plug connectors to accommodate up to twelve (12) wires. Plug connectors shall plug directly into molex through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Provide a mortar guard for each electric hinge specified.

- 1) Specified Manufacturer: McKinney QC Series
- 2) Approved Substitutes: NONE

3. MONITORING SWITCH HINGES

- a. Monitoring switch hinges to be magnetic reed, concealed, adjustable switch type with extra heavy magnet.

- 1) Specified Manufacturer: McKinney MM Series
- 2) Approved Substitutes: Hager EMN Series, Stanley CS Series

4. CONTINUOUS GEARED HINGES

- a. All hinges to be non-handed and completely reversible. Hinge line to be available in concealed flush mount with or without inset, full surface and half surface types as specified in the hardware sets. All hinges to be made of extruded 6060 T6 aluminum alloy with polyacetal thrust bearings, anodized after cutouts are made for bearings. All concealed hinges to be fire-rated for 20, 45 and 90 minutes when incorporated into proper door and frame labeled installations, without necessitating the use of fusible-link pins. All concealed hinges to be available in standard, heavy, and extra heavy duty weights; all full surface and half surface hinges in standard and heavy duty weights as specified in the hardware sets. All hinges to be factory cut for door size.

- 1) Specified Manufacturers: McKinney
- 2) Approved Manufacturers: Pemko, Select

5. CONTINUOUS STAINLESS STEEL HINGES

- a. All hinges to be non-handed and of slim barrel design. Hinges to be made of type 304 stainless steel and shall have a concealed teflon-coated stainless steel pin with twin self-lubricated nylon bearings at each knuckle. Hinges shall be UL list up to and including 3 hours and shall be available with power transfer cutouts when necessary.

- 1) Specified Manufacturers: McKinney MCK-FM300
- 2) Approved Manufacturers: Markar

C. FLUSH BOLTS AND ACCESSORIES

1. All manual and automatic flush bolts to be furnished as specified.

- a. Specified Manufacturer: McKinney
- b. Approved Substitutes: Quality, Rockwood, Trimco

D. CYLINDERS AND KEYING

1. CYLINDERS

2. KEYING

- a. All cylinders shall be by the owner.
- b. Master keys and all high-security or restricted keyway blanks shall be sealed in tamper-proof packaged boxes when shipped from the factory. The boxes shall be shrink wrapped and imprinted to ensure the integrity of the packaging.

3. KEY CABINET

- a. Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall expansion capacity of 150% of the number of locks required for the project.
 - 1) Specified Manufacturer: Telkee
 - 2) Approved Substitutes: Lund

E. LOCKING DEVICES

1. MORTISE LOCKSETS

- a. All locksets shall be ANSI 156.13 Series 1000, Grade 1 Certified. All functions shall be manufactured in a single sized case formed from 12 gauge steel minimum. The lockset shall have a field-adjustable, beveled armored front, with a .125" minimum thickness and shall be reversible without opening the lock body. The lockset shall be 2 3/4" backset with a one-piece 3/4" anti-friction stainless steel latchbolt. The deadbolt shall be a full 1" throw made of stainless steel and have 2 hardened steel roller inserts. All strikes shall be non-handed with a curved lip. To insure proper alignment, all trim, shall be thru-bolted and fully interchangeable between rose and escutcheon designs and shall be the product of one manufacturer.
 - 1) Specified Manufacturer: Sargent 8200 Series

F. EXIT DEVICES

1. CONVENTIONAL DEVICES – PUSH RAIL

- a. All exit devices shall be ANSI A156.3, Grade 1 Certified and shall be listed by Underwriters Laboratories and bear the UL label for life safety in full compliance with NFPA 80 and NFPA 101. Mounting rails shall be formed from a solid single piece of stainless steel, brass or bronze no less than 0.072" thick. Push rails shall be constructed of 0.062" thick material. Painted or anodized aluminum shall not be considered heavy duty and is not acceptable. Lever trim shall be available in finishes and designs to match that of the specified locksets.
 - 1) Specified Manufacturer: Sargent 80 Series
 - 2) Approved Substitutes: Corbin Russwin ED4000/ED5000 Series, Von Duprin 98 Series, Yale 7100/7200 Series

2. ELECTRIFIED DEVICES

- a. Electrified exit devices shall conform to all traditional exit device standards as specified above. All power requirements for exit devices used must utilize a continuous circuit electric hinge for clean design and no visible means of interrupting power to device.
- b. Options for delayed egress exit devices to be specified in the hardware sets. Devices to conform to NFPA 101 - Special Locking Arrangements for delayed egress. Nuisance delay to be available as standard for either zero (0) or two (2) seconds. Internal latchbolt monitoring, and a standard 10-second delay for "Authorized Entry" to be standard features on every device. Delayed egress feature to be available throughout all styles and sizes of exit devices including: Panic and Fire rated Rim, Wide and Narrow Stile, Mortise, Surface Vertical Rod, and Concealed Vertical Rod.

- c. All exit devices, both fire labeled and non-labeled devices, requiring electric dogging shall be held in the "dogged" or retracted position. All exit devices with electric latch retraction shall provide for a remote means of unlocking for momentary or maintained periods of time.
- d. Exit devices with electrified trim shall be fail-secure unless otherwise specified.
- e. Where specified exit devices shall be provided with a switch to monitor push rail or signal remote location and latchbolt monitoring.
- f. Provide an in-line power controller with all electrified exit devices.
 - 1) Specified Manufacturers: Sargent
 - 2) Approved Manufacturers: Corbin Russwin, Von Duprin, Yale

1. SURFACE MOUNTED CLOSERS – HEAVY DUTY

- a. All door closers shall be ANSI 156.4, Grade 1 Certified. All closers shall have aluminum alloy bodies, forged steel arms, and separate valves for adjusting backcheck, closing and latching cycles and adjustable spring to provide up to 50% increase in spring power. Closers shall be furnished with parallel arms mounting on all doors opening into corridors or other public spaces and shall be mounted to permit 180 degrees door swing wherever wall conditions permit. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 - 1) Specified Manufacturer: Norton 7500 Series
 - 2) Approved Substitutes: Corbin Russwin DC6000, Sargent 351 Series, Yale 4400 Series

2. AUTOMATIC DOOR OPERATORS – HEAVY DUTY

- a. All door closers shall be ANSI 156.19, Grade 1 Certified. Units shall have adjustments for door closing force and backcheck, motor assist from 0 to 30 seconds, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay up to 30 seconds. Operator units shall provide conventional door closer opening and closing forces unless the power operator motor is activated by an initiating device with door closer assembly having adjustable spring size, backcheck valve, sweep valve, latch valve, speed control valve, and pressure adjustment valve to control door closing. Operators shall have push and go function to activate power operator or power assist functions. Units shall have a presence detector input to prevent a closed door from opening or a door that is fully opened from closing and shall have a hold open toggle input to allow remote activation for indefinite hold open; door shall close the second time the input is activated. Operators shall have a SPDT relay for interfacing with latching or locking devices. All controlling operator switches shall be of radio-frequency design and not hard-wired.
 - 1) Specified Manufacturer: Norton 6900 Series
 - 2) Approved Substitutes: Besam Power Swing, Sargent MPower 4000 Series

G. DOOR TRIM AND PROTECTIVE PLATES

- 1. Kick plates shall be .050 gauges and two (2) inches less full width of door, or as specified. Push plates, pull plates, door pulls and miscellaneous door trim shall be as shown in the hardware schedule.
 - a. Specified Manufacturer: McKinney
 - b. Approved Substitutes: Quality, Rockwood, Trimco

H. DOOR STOPS AND HOLDERS

1. WALL MOUNTED DOOR STOPS

- a. Where a door is indicated on the plans to strike flush against a wall, wall bumpers shall be provided. Provide convex or concave design as indicated.

- 1) Specified Manufacturers: McKinney
- 2) Approved Substitutes: Quality, Rockwood, Trimco

2. MAGNETIC HOLD-OPENS

- a. Magnetic door holders shall meet or exceed ANSI A156.15 and be UL listed 228 for Door Closer and Holders, with or without integral smoke detectors. Holding force shall be 25 to 40 pounds and shall be fail-safe. Pushpin release that eliminates residual magnetism shall be standard. Provide magnetic hold-opens with triple-voltage coil that can receive 12 VDC, 24 VAC/DC, or 120VAC; or coordinate required voltage with electrical.

- 1) Specified Manufacturers: Rixson
- 2) Approved Substitutes: HES, Sargent

I. GASKETING AND THRESHOLDS

1. Provide continuous weatherseal on exterior doors and smoke, light, or sound seals on interior doors where indicated or scheduled. Provide intumescent seals as required to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies. Provide only those units where resilient or flexible seal strip is easily replaceable and readily available from stocks maintained by manufacturer.

2. Provide threshold units not less than 4" wide, formed to accommodate change in floor elevation where indicated, fabricated to accommodate door hardware and to fit door frames. All threshold units shall comply with the Americans with Disabilities Act (ADA).

- a. Specified Manufacturers: McKinney
- b. Approved Substitutes: Pemko, Reese, Zero

J. SILENCERS

1. Furnish rubber door silencers all hollow metal frames; two (2) per pair and three (3) per single door frame.

K. ELECTRONIC PRODUCTS AND ACCESSORIES

1. INTEGRATED KEYPAD OPERATED PRODUCTS

- a. Provide access control products integrated with locks or exit devices as specified in the hardware groups with nonvolatile memory. Provide keypad operated products with a minimum of 100 user codes and a master code to assign emergency, supervisory and user codes. Provide the ability to print the last fifteen entries via infrared printer. Locking and unlocking of the lever handle shall be done by a motor-driven battery powered unit (solenoids not acceptable) contained completely within the body of the cylindrical lock. The inside lever is always free for egress. Provide LED's on unit to indicate status; unlocked and programming mode.

- 1) Specified Manufacturers: Sargent KP Series
- 2) Approved Manufacturers: Alarm Lock Trilogy Series

2. KEYPADS

- a. Keypads shall be 24VDC and operate a 5-amp DPDT relay to switch any type of fail-safe or fail-secure electric lock or strike and be weather proof, vandal resistant and suitable for mounting on a narrow mullion. The keypad system circuit board shall be a remote unit to allow for increased security. Release time shall be programmable from 1 to 99 seconds. Keypads shall support 2 to 7 digit codes for a minimum of 59 users and shall be locked out for 30 seconds when 16 wrong digits are entered. System shall have user/installer programmable options such as anti-tailgate, anti-door prop, and duress code alarm.

- 1) Specified Manufacturer: Securitron DK26 Series
- 2) Approved Substitutes: Folger Adams

3. KEYSWITCHES

- a. Keyswitches shall be furnished on a stainless steel single gang face plate with a 12/24VDC bi-color LED and an integral backing bracket that shall permit integration with any 1.25" or 1.125" mortise cylinder. Keyswitches shall be available for momentary or maintained action and in narrow stile designs.

- 1) Specified Manufacturers: Securitron MK Series
- 2) Approved Manufacturers: Folger Adams

4. IN-LINE POWER CONTROLLER

- a. Where specified, electrified products shall be supplied with an in-line power controller that enables the hardware to operate from 12 to 32 volts. On board safety features shall include an in-line fuse to protect the hardware and host system from any possible reverse current surges. The controller shall regulate current to provide continuous duty operation without the typical head build up.

- 1) Specified Manufacturers: HES 2005 Smart-Pac II
- 2) Approved Manufacturers: NONE

5. POWER SUPPLIES

- a. Power supplies shall furnish regulated 24VDC and shall be UL class 2 listed. LED's shall monitor zone status (voltage/no voltage) and slide switches shall be provided to connect or disconnect the load from power; 1, 4 or 8 separate output circuit breakers shall be provided to divide the load. Power supplies shall have the internal capability of charging optional 24VDC sealed lead acid batteries in addition to operating the DC load. Power supplies shall be supplied complete requiring only 120VAC to the fused input and shall be supplied in an enclosure. Power supplies shall be provided with emergency release terminals that allow the release of all devices upon activation of the fire alarm system.

- 1) Specified Manufacturer: Securitron BPS
- 2) Approved Substitutes: Folger Adams

2.03 FINISHES

- A. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 or traditional U.S. finishes shown by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Where specified hardware shall have an antimicrobial coating which permanently suppresses the growth of bacteria, algae, fungus, mold and mildew applied. The finish shall control the spread and growth of bacteria, mold and mildew and shall be FDA listed for use in medical and food preparation equipment.

PART III – EXECUTION

3.01 EXAMINATION

- A. Contractor shall ensure that the building is secured and free from weather elements prior to installing interior door hardware. Examine hardware before installation to ensure it is free of defects.

3.02 INSTALLATION

- A. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with the governing regulations.
 - 1. "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute (DHI.)
 - 2. NWWDA Industry Standard I.S.1.7, "Hardware Locations for Wood Flush Doors."
- B. All hardware shall be applied and installed in accordance with best trade practice by an experienced hardware installer. Care shall be exercised not to mar or damage adjacent work.
- C. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.
- D. Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.03 FIELD QUALITY CONTROL

- A. Prior to the installation of hardware, manufacturer's representatives for locksets, closers, and exit devices shall arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Architect and Owner.
- B. The hardware supplier shall do a final inspection prior to building completion to ensure that all hardware was correctly installed and is in proper working order.
- C. The manufacturer's representative shall do a final inspection prior to building completion to ensure that all hardware was correctly installed and is in proper working order.

3.04 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
- B. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore to proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- C. Instruct owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes and usage of any electronic devices.

3.05 PROTECTION

- A. Contractor shall protect all hardware, as it is stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

3.06 HARDWARE SCHEDULE

A. The following schedule is furnished for whatever assistance it may afford the Contractor; do not consider it as entirely inclusive. Should any particular door or item be omitted in any scheduled hardware heading, provide door or item with hardware same as required for similar purposes. Hardware supplier is responsible for handing and sizing all products as listed in the hardware heading. Quantities listed are for each pair of doors, or for each single door.

B. Manufacturer's Abbreviations:

1. AR – Adams Rite
2. MC – McKinney
3. RD - RiteDoor
4. RO – Rockwood
5. RX – Rixson
6. SA – Sargent
7. SN – Securitron

Heading AL-01

Doors: 100C2

2	Continuous Hinge	MCK-12HD MM QC	CLEAR	MC
1	Removable Mullion	650A	28	SA
1	Alarmed Exit Device	AL 8504 862 LC	32D	SA
2	Alarmed Exit Device	AL 8510 862	32D	SA
2	Cylinder	BY OWNER		
2	Closer	351 CPS	EN	SA
2	Spacer Kit	581-2	EN	SA
2	Drop Plate	351-D	EN	SA
1	Weatherstripping	BY DOOR MANUFACTURER		
1	Remote Alarm	BY OTHERS		
1	Threshold	271 A		PE
1	Mortise Keyswitch	MKA		SN

Emergency exit.

Doors are always closed and locked.

Alarm will sound at the door and close to security center when door is opened from the inside.

Free egress at all times.

Mortise keyswitch used to arm and disarm remote alarm.

Heading AL-02

Doors: 100F1, 100G5, 101A2

2	Continuous Hinge	MCK-12HD MM QC	CLEAR	MC
1	Removable Mullion	650A	28	SA
2	Electrified Exit Device	55 8510 862	32D	SA
2	Closer	351 CPS	EN	SA
2	Drop Plate	351-D	EN	SA
2	Spacer Kit	581-2	EN	SA
1	Weatherstripping	BY DOOR MANUFACTURER		
1	Threshold	271 A		PE

Heading AL-03

Doors: 100G6, 101A3

1	Continuous Hinge	MCK-12HD MM QC	CLEAR	MC
1	Exit Device	55 56 8504 862 LC	32D	SA
1	Cylinder	BY OWNER		
1	PowerMatic Operator	6920	689	NO
1	Actuator	662		NO
1	Actuator	580		NO
1	Mortise Keyswitch	MKA	US32D	SN
1	Switch Post	578		NO
1	Power Supply	BPS-24-2		SN
1	Weatherstripping	BY DOOR MANUFACTURER		
1	Threshold	271 A		PE
1	Card Reader	BY OTHERS		

Doors are always closed and locked. Presenting an authorized card at the card reader will retract the latch of the exit device allowing the door to be pulled open. Door will relock.

Free egress at all times.

Mortise keyswitch used to arm and disarm assembly.

Heading AL-04

Doors: 100G4, 101A1

1	Continuous Hinge	MCK-12HD MM	CLEAR	MC
1	Exit Device	55 8510 862	32D	SA
1	Closer	351 CPS	EN	SA
1	Drop Plate	351-D	EN	SA
1	Spacer Kit	581-2	EN	SA
1	Weatherstripping	BY DOOR MANUFACTURER		
1	Threshold	271 A		PE

Heading AL-05

Doors: 100G2

2	Continuous Hinge	MCK-12HD MM	CLEAR	MC
2	Push pull	OP810	32D	MC
2	Closer	351 CPS	EN	SA
2	Drop Plate	351-D	EN	SA
2	Spacer Kit	581-2	EN	SA
1	Weatherstripping	BY DOOR MANUFACTURER		
1	Threshold	271 A		PE

Heading AL-06

Doors: 100G1, 100G3

1	Continuous Hinge	MCK-12HD MM	CLEAR	MC
1	Push pull	OP810	32D	MC
1	Closer	351 CPS	EN	SA
1	Drop Plate	351-D	EN	SA
1	Spacer Kit	581-2	EN	SA
1	Weatherstripping	BY DOOR MANUFACTURER		
1	Threshold	271 A		PE

Heading AL-07

Doors: 200D1

2	Continuous Hinges	MCK-12HD MM	CLE	MC
1	Double Cylinder Deadlock	MS1850S	628	AD
2	Mortise Cylinder	BY OWNER		
1	Bolt Set	4015 X 4016 X 4089	628	AD
2	Closers	351 CPS	EN	SA
2	Drop Plates	351-D	EN	SA
2	Bracket	851-2	EN	SA
1	Threshold	271 A		PE
1	Weatherstrip	BY DOOR MANUFACTURER		

Heading AL-08

Doors: 119E, 200D2, 200H1

1	Continuous Hinges	MCK-12HD MM	CLE	MC
1	Double Cylinder Deadlock	MS1850S	628	AD
2	Mortise Cylinder	BY OWNER		
1	Closers	351 CPS	EN	SA
1	Drop Plates	351-D	EN	SA
1	Bracket	851-2	EN	SA
1	Threshold	271 A		PE
1	Weatherstrip	BY DOOR MANUFACTURER		

Heading 01.0

Doors: 022B, 024B

3	Hinges	T4A3386 4 1/2 X 4 1/2 NRP	32D	MC
1	Exit Device	8810	32D	SA
1	Closer	351 CPS	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Smoke Seal	S88 D		PE
1	Door Bottom	315 CN		PE
1	Threshold	272 A		PE

Heading 02.0

Doors: 025A, 026A, 028A, 210A, 316A, 317A, 318A

6	Hinges	TA2714 4 1/2 x 4 1/2	26D	SA
2	Flush Bolts	555	US26D	RO
1	Storeroom Lockset	LC 8204 OMD	32D	SA
1	Cylinder	BY OWNER		
2	Hold Open Closer	351 PH10	EN	SA
2	Protection Plate	K1050 10" x 2" LDW	US32D	RO
2	Wall Bumper	406	US32D	RO
1	Dust Proof Strike	570	US26D	RO
1	Astragal	355 CV		PE

Heading 03.0

Doors: DS1, 029A, 213A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	SA
1	Entrance Lockset	LC 8205 OMD	32D	SA
1	Cylinder	BY OWNER		
1	Wall Bumper	406	US32D	RO
3	Door Silencers	608	GREY	RO

Heading 03.0 A

Doors: 020A, 106A, 203A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	SA
1	Entrance Lockset	LC 8205 OMD	32D	SA
1	Cylinder	BY OWNER		
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
3	Door Silencers	608	GREY	RO

Heading 04.0

Doors: DS2, (ALT BID OPENINGS DS2 DOORS ON LEVEL 3)

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	SA
1	Passage Latchset	8215 OMD	32D	SA
1	Wall Bumper	406	US32D	RO
1	Sound Seal	S88		RO

Heading 05.0

Doors: 100C1, 100D1

6	Hinges	TA2714 4 1/2 X 4 1/2	32D	MC
1	Removable Mullion	12-980	PC	SA
1	Exit Device	12-8813 ETL LC	32D	SA
1	Exit Device	12-8810	32D	SA
1	Cylinder	BY OWNER		
2	Closer	351 P10	EN	SA
2	Protection Plate	K1050 10" x 2" LDW	US32D	RO
2	Wall Bumper	406	US32D	RO
1	Smoke Seal	PK 55	GREY	RO

Heading 05.0 A

Doors: 101A4, 101A7

6	Hinges	TA2714 4 1/2 X 4 1/2	32D	MC
1	Removable Mullion	980	PC	SA
1	Exit Device	8813 ETL LC	32D	SA
1	Exit Device	8810	32D	SA
1	Cylinder	BY OWNER		
2	Closer	351 P10	EN	SA
2	Protection Plate	K1050 10" x 2" LDW	US32D	RO
2	Wall Bumper	406	US32D	RO
1	Smoke Seal	PK 55	GREY	RO

Heading 06.0

Doors: 003A, 003B, 013A, 017A, 018A, 022A, 022C, 023A, 108A, 109A, 116A, 117A, 118A, 208A, 209A, 310A, 314A, 315A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	MC
1	Storeroom Lockset	LC 8204 OMD	32D	SA
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Smoke Seal	PK-55	GREY	RO

Heading 07.0

Doors: 019A, 021A, 103A, 105A, 204A, 206A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	MC
1	Door Pull	126 X 70C	US32D	RO
1	Push Plate	70C 4 X 16	US32D	RO
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Smoke Seal	S88 D		PE

Heading 08.0

Doors: 102A, 102B, (ALT BID OPENINGS DS3 DOORS ON LEVEL 3)

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	MC
1	Door Pull	126 X 70C	US32D	RO
1	Push Plate	70C 4 X 16	US32D	RO
1	Hold Open Closer	351 PH10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Smoke Seal	S88 D		PE

Heading 09.0

Snow College Library

Doors: 205A, 311A, 312A, 313A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	MC
1	Privacy Set	8265 OMD	32D	SA
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Smoke Seal	S88 D		PE

Heading 10.0

Doors: 100D2

3	Hinges	T4A3386 4 1/2 X 4 1/2 NRP	32D	MC
1	Hinges	T4A3386 4 1/2 X 4 1/2 NRP MM	32D	MC
1	Exit Device	AL 8804 ETL LC	32D	SA
2	Cylinders	BY OWNER		
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Remote Alarm	BY OTHERS		
1	Smoke Seal	S88 D 17'		PE
1	Mortise Keyswitch	MKA		SN

Emergency exit.

Door is always closed and locked.

Alarm will sound at the door and close to security center when door is opened from the inside.

Free egress at all times.

Mortise keyswitch used to arm and disarm remote alarm.

Heading 11.0

Doors: 001B1, 001B2, 200B1, 200B2, 300B1, 300B2

1	Single RiteDoor	D3681 X D8907 AF PKT 90 FM-300 X 998		RD
---	-----------------	--------------------------------------	--	----

Note: Rite Door assembly is to include the following numbers: D3681, D8907 AF PKT 90 With FM-300 Hinges, Exit Device x Pull trim. Assembly is to be complete. Contact factory for pricing.

Heading 12.0

Doors: 001A1, 100A1, 100A2, 100B1, 200A1, 200A2, 300A1

2	Pair RiteDoor	D3681 X D8907 AF PKT 90 FM-300 X 998		RD
---	---------------	--------------------------------------	--	----

Note: Rite Door assembly is to include the following numbers: D3681, D8907 AF PKT 90 With FM-300 Hinges, Exit Device x Pull trim. Assembly is to be complete. Contact factory for pricing.

Heading 13.0

Doors: 100F2, 107A, 110A, 110B, 207A, 207B, 212A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	SA
1	Classroom Lockset	LC 8237 OMD	32D	SA
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Smoke Seal	S88 D		PE

Heading 14.0

Snow College Library

Doors: 119A

2	Spring Hinges	1001 6	26D	MC
1	Balance of Hardware	BY DOOR MANUFACTURER		

Heading 15.0

Doors: 024A, 027A, 027B, 101A5, 101A6

3	Hinges	TA2714 4 1/2 X 4 1/2	32D	MC
1	Exit Device	8813 ETL LC	32D	SA
1	Cylinder	BY OWNER		
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Sound Seal	S88 D		RE

Heading 16.0

Doors: 104A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	SA
1	Mortise Deadbolt	LC 8221	26D	SA
1	Cylinder	BY OWNER		
1	Door Pull	126 X 70C	US32D	RO
1	Push Plate	70C 4 X 16	US32D	RO
1	PowerMatic Operator	6920	689	NO
1	Protection Plate	K1050 10" x 34"	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Door Switch	662		NO
1	Smoke Seal	S88 D 17'		PE

Heading 17.0

Doors: 114A, 115A

3	Hinges	TA2714 4 1/2 x 4 1/2	26D	MC
1	Passage Set	8215 OMD	32D	SA
1	Closer	351 P10	EN	SA
1	Protection Plate	K1050 10" x 2" LDW	US32D	RO
1	Wall Bumper	406	US32D	RO
1	Smoke Seal	S88 D		PE

Heading 18.0

Doors: 001A2, 001B3, 027C, 100B2, 100B3, 100F3, 111A, 112A, 113A, 119B, 119C, 119D, 200A3, 200B3, 300A2

1	Hardware	ALL HARDWARE BY OTHERS		
---	----------	------------------------	--	--

Heading 19.0

Doors: 100AG, 100BG

2	Spring Hinges	1001 6	26D	MC
1	Magnetic Hold Open	998	628	RI
1	Balance of Hardware	BY DOOR MANUFACTURER		

END OF SECTION 08 71 00



Civil Engineer

Great Basin Engineering
Contact: Dave Waldron
5745 South 1475 East, Suite 200
Ogden, UT 84403
(801) 521-0222 FAX (801) 392-7544
dave@gbenorth.com

Landscape Architect

G. Brown Design
Contact: Mathew Winward
610 E. South Temple, Suite 50
Salt Lake City, UT 84102
(801) 575-6056 FAX (801) 575-6166
mwinward@gbrown.design.com

Structural Engineer

Reaveley Engineers
Contact: Catherine Empey
675 East 500 South, Suite 400
Salt Lake City, UT 84105
(801) 486-3853 FAX (801) 485-0911
cempey@reaveley.com

Mechanical Engineer

Van Boerum & Frank
Contact: Neil Spencer
530 South 300 East
Salt Lake City, UT 84111
(801) 520-5149 FAX (801) 910-9917
nspencer@vbfa.com

Electrical Engineer

Spectrum Engineers
Contact: Dave Wesemann, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
dew@spectrum-engineers.com

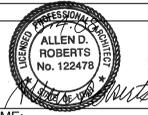
AV Consultant

Spectrum Engineers
Contact: Kurtis Dallinga, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
kdd@spectrum-engineers.com

Library Consultant

Michaels Associates Design Consultants, Inc.
Contact: Andrea Michael
14809 North 73rd Street, Suite 100
Scottsdale, AZ 85260
(480) 998-7476 FAX (480) 998-9390
andrea@madcinc.com

STAMP:



PROJECT NAME:

Snow College Library

**150 College Avenue
Ephraim, Utah 84627**

REVISIONS:

Δ	DECEMBER 9TH, 2008
Δ	DECEMBER 2ND, 2008
Δ	NOVEMBER 25TH, 2008
	100% CD, September 15, 2008
	100% CD Review, August 4, 2008
	ISSUE DATE:

SEPTEMBER 15 2008, 100% CD

ARCHITECT'S PROJECT NUMBER:

B07-051

DFCM PROJECT NUMBER:

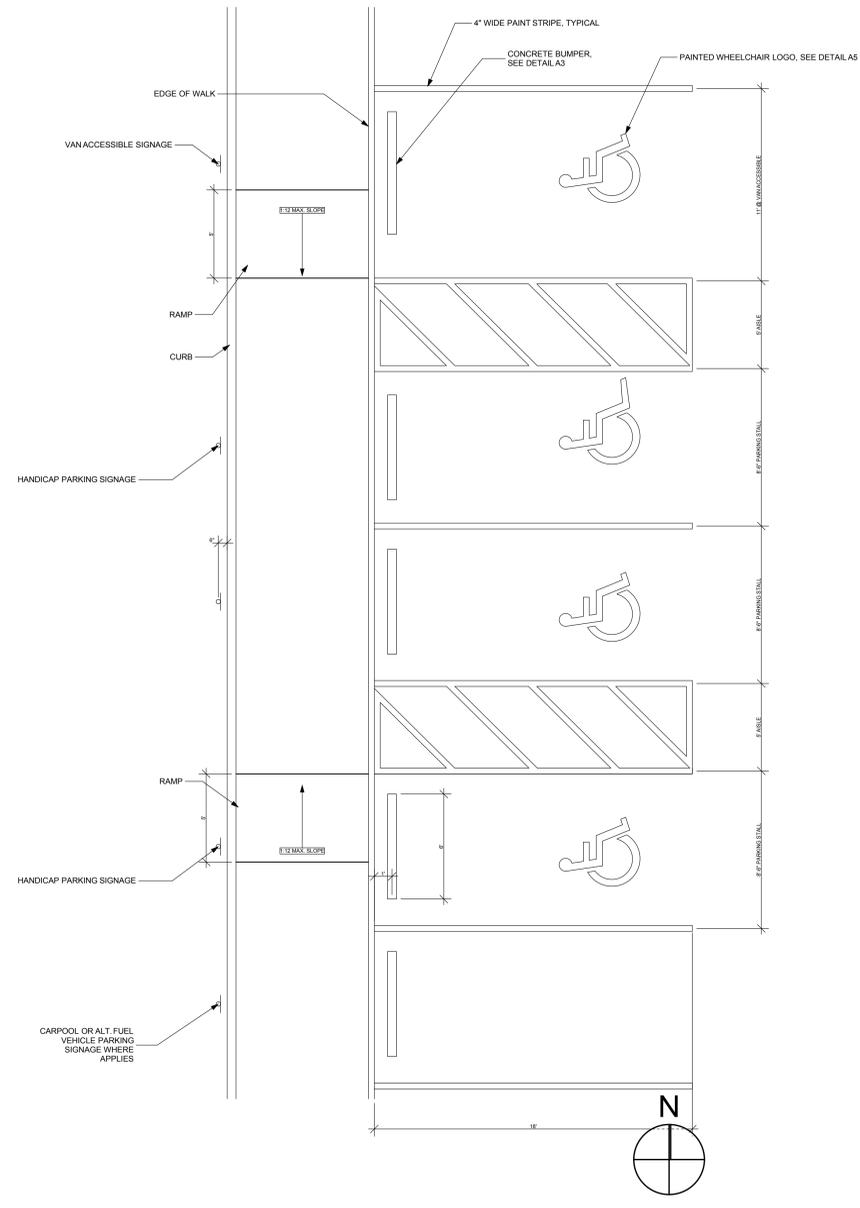
07258700

SHEET TITLE:

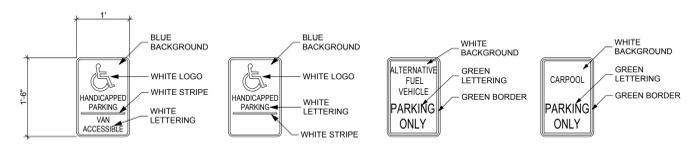
Architectural Site Details

SHEET NUMBER:

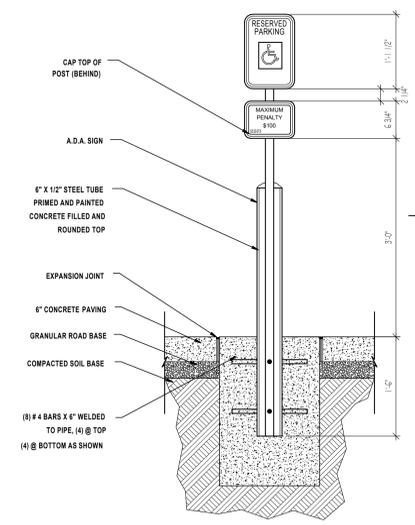
AS104



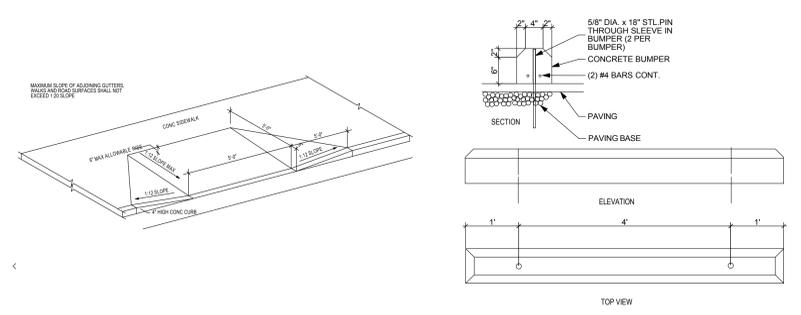
B1 Accessible Parking Enlarged
SCALE: 1/4" = 1'-0"



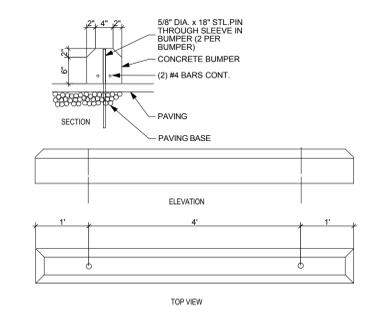
B4 Typical Parking Signage Details
SCALE: 3/4" = 1'-0"



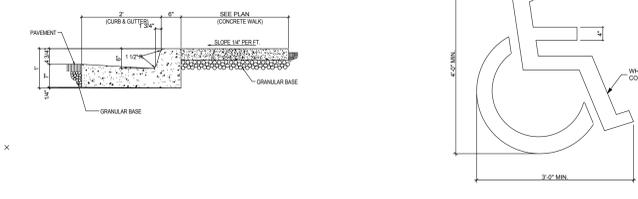
C6 Parking Sign Post Detail
SCALE: 3/4" = 1'-0"



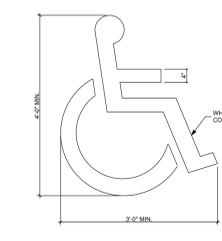
A2 Accessible Ramp Detail
SCALE: 6" = 1'-0"



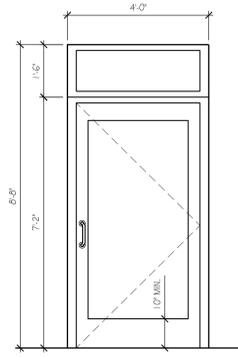
A3 Parking Stall Bumper Details
SCALE: 3/4" = 1'-0"



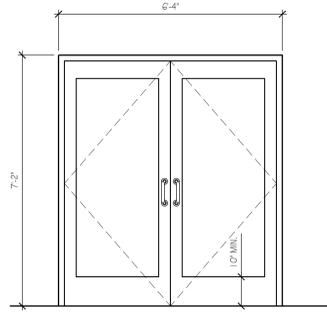
A4 Sidewalk Curb & Gutter Detail
SCALE: 1:21.33



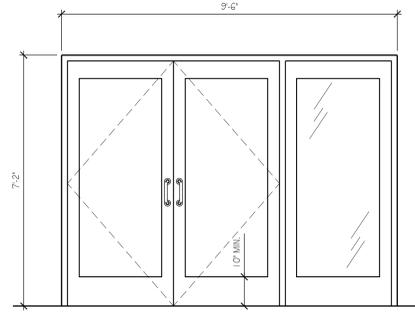
A5 Parking Spot Logo Detail
SCALE: 1:21.33



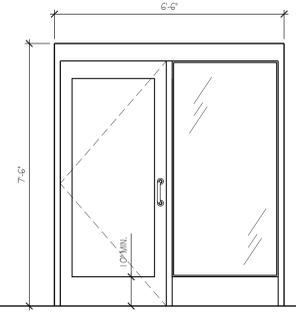
DOOR TYPE L
ALUMINUM STOREFRONT
TERRACE ENTRY



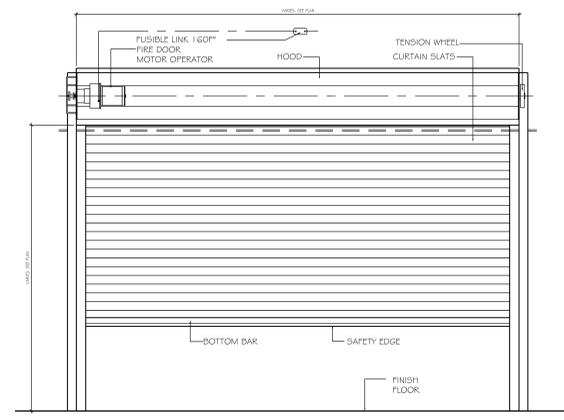
DOOR TYPE M
ALUMINUM STOREFRONT
BACK ENTRY



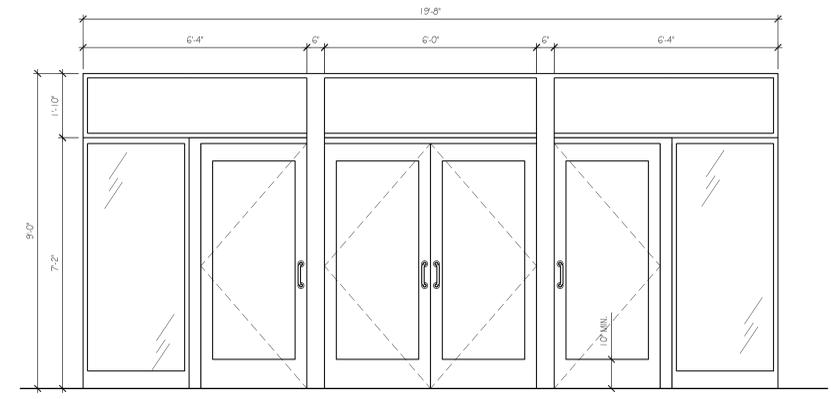
DOOR TYPE N
ALUMINUM STOREFRONT
MAIN ENTRY VESTIBULE



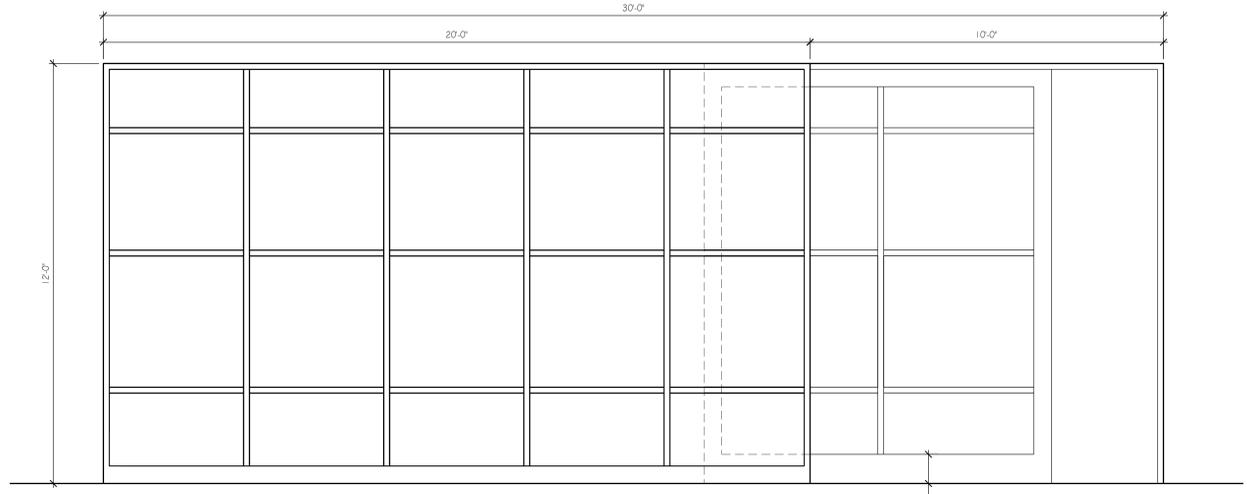
DOOR TYPE O
HOLLOW METAL
STOREFRONT
INTERIOR OFFICE ENTRY



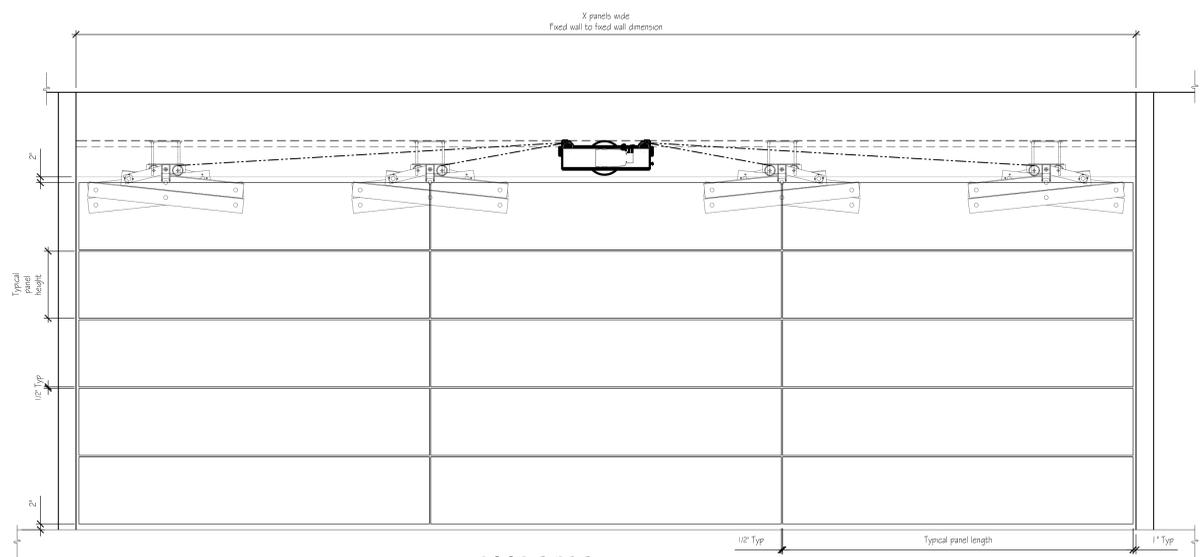
DOOR TYPE P
ROLL DOWN FIRE
GATE



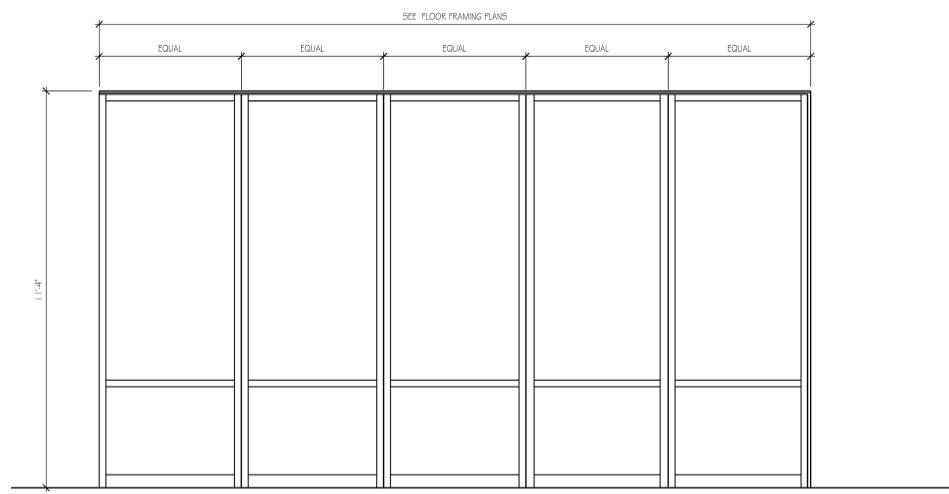
DOOR TYPE Q
ALUMINUM STOREFRONT
VESTIBULE



DOOR TYPE R
ALUMINUM STOREFRONT
SLIDER DOOR
CAFE ENTRANCE



DOOR TYPE T
SKYFOLD DIVIDER
AUDITORIUM



DOOR TYPE S
GLASS PANEL DIVIDER
CAFE

COOPER
ROBERTS
SIMONSEN
ASSOCIATES

crsa
700 North 200 West
Salt Lake City, UT 84103
(801) 355-5915 phone
(801) 355-9885 fax
crsa-us.com

SNOW
COLLEGE



Civil Engineer
Great Basin Engineering
Contact: Dave Waldron
5749 South 1475 East, Suite 200
Ogden, UT 84403
(801) 521-0222 FAX (801) 392-7544
dave@gbenorth.com

Landscape Architect
G. Brown Design
Contact: Matthew Winward
610 E. South Temple, Suite 50
Salt Lake City, UT 84102
(801) 575-6066 FAX (801) 575-6166
mwinward@gbrowndesign.com

Structural Engineer
Reaveley Engineers
Contact: Cameron Empey
675 East 500 South, Suite 400
Salt Lake City, UT 84105
(801) 485-3663 FAX (801) 485-0911
cempey@reaveley.com

Mechanical Engineer
Van Boerum & Frank
Contact: Neil Spencer
330 South 500 East
Salt Lake City, UT 84111
(801) 530-3148 FAX (801) 910-9917
nspencer@vbf.com

Electrical Engineer
Spectrum Engineers
Contact: Dave Wesemann, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
dew@spectrum-engineers.com

AV Consultant
Spectrum Engineers
Contact: Kurtis Dallinga, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
kdd@spectrum-engineers.com

Library Consultant
Michaels Associates Design Consultants, Inc.
Contact: Andrea Michaels
14809 North 73rd Street, Suite 100
Scottsdale, AZ 85260
(480) 998-7476 FAX (480) 998-9390
andrea@mdcinc.com

STAMP:
PROFESSIONAL ENGINEER
ALLEN D. ROBERTS
No. 122478

PROJECT NAME:
Snow College Library
150 College Avenue
Ephraim, Utah 84627

REVISIONS:
 A DECEMBER 9, 2008
 A DECEMBER 2, 2008
 A NOVEMBER 25, 2008
 100% CD, SEPTEMBER 15, 2008
 100% CD, AUGUST 4, 2008

ISSUE DATE:
AUGUST 4, 2008, 100% CD
ARCHITECT'S PROJECT NUMBER:
B07-051
DFCM PROJECT NUMBER:
07258700
SHEET TITLE:

DOOR TYPES
SHEET NUMBER:
AE603

GENERAL NOTES

- A. SLOPE STRUCTURE OF "FLAT" ROOF @ 1/2" = 1'-0" TYPICAL, U.N.O.
- B. SLOPE STRUCTURE OF "SLOPED" ROOF @ 6:12 TYPICAL, U.N.O.
- C. ARROW DIRECTION INDICATES DIRECTION OF SLOPE.
- D. ALL VERTICAL DIMENSIONS TO TOP OF STRUCTURE TYPICAL.
- E. DESIGN TRUSS SYSTEM TO CARRY REQUIRED LOAD OF MECHANICAL EQUIPMENT AND PROVIDE ENGINEERED SUPPORTS FOR SUSPENDED EQUIPMENT AND SYSTEMS.

REFERENCE NOTES

- 1. PARAPET CAP, SEE DETAIL D1/AE507
- 2. SKYLIGHT, ADD ALT. 3
- 3. ROOF DRAIN, SEE DETAIL C5/AE502
- 4. BUILT UP CRICKET, MAINTAIN MINIMUM SLOPE.
- 5. INDICATES AREA TO HAVE NO STRUCTURAL DECK (BELOW GABLE)
- 6. WALL BELOW
- 7. SKYLIGHT
- 8. DOWNSPOUT LOCATIONS TO RECEIVERS - INCLUDE HEAT TAPE IN ALL GUTTERS AND DOWNSPOUTS.
- 9. SNOW GUARD, PLACE OVER WALL LINE BELOW. SEE SPECS
- 10. ROOF ACCESS HATCH
- 11. SCUPPER, SEE DETAIL E2/AE507
- 12. PAVEMENT / PEDISTAL SYSTEM
- 13. LIVE ROOF SYSTEM
- 14. CONDENSOR UNIT
- 15. EXHAUST FANS - SEE MECHANICAL DETAIL I/MH501

COOPER
ROBERTS
SIMONSEN
ASSOCIATES

crsa
700 North 200 West
Salt Lake City, UT 84103
(801) 355-5915 phone
(801) 355-9885 fax
crsa-us.com

SNOW
COLLEGE



State of Utah Department of Administrative Services
DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT
410 South State Street, Salt Lake City, Utah 84143-2010

Civil Engineer
Great Basin Engineering
Contact: Dave Waldron
5745 South 1475 East, Suite 200
Ogden, UT 84403
(801) 521-0222 FAX (801) 392-7544
dave@gbenorth.com

Landscape Architect
G. Brown Design
Contact: Mathew Winward
610 E. South Temple, Suite 50
Salt Lake City, UT 84102
(801) 575-6086 FAX (801) 575-6166
mwinward@gbrowndesign.com

Structural Engineer
Reaveley Engineers
Contact: Cameron Empey
675 East 500 South, Suite 400
Salt Lake City, UT 84105
(801) 486-3883 FAX (801) 485-0911
cemp@reaveley.com

Mechanical Engineer
Van Boerum & Frank
Contact: Neil Spencer
530 South 300 East
Salt Lake City, UT 84111
(801) 598-5149 FAX (801) 910-9917
nspencer@vbfa.com

Electrical Engineer
Spectrum Engineers
Contact: Dave Wesemann, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
dew@spectrum-engineers.com

AV Consultant
Spectrum Engineers
Contact: Kurtis Dillinga, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
kdd@spectrum-engineers.com

Library Consultant
Michaels Associates Design Consultants, Inc.
Contact: Andrea Michaels
14809 North 73rd Street, Suite 100
Scottsdale, AZ 85260
(480) 998-7478 FAX (480) 998-9390
andrea@madcinc.com

STAMP:

PROJECT NAME:
Snow College Library
150 College Avenue
Ephraim, Utah 84627

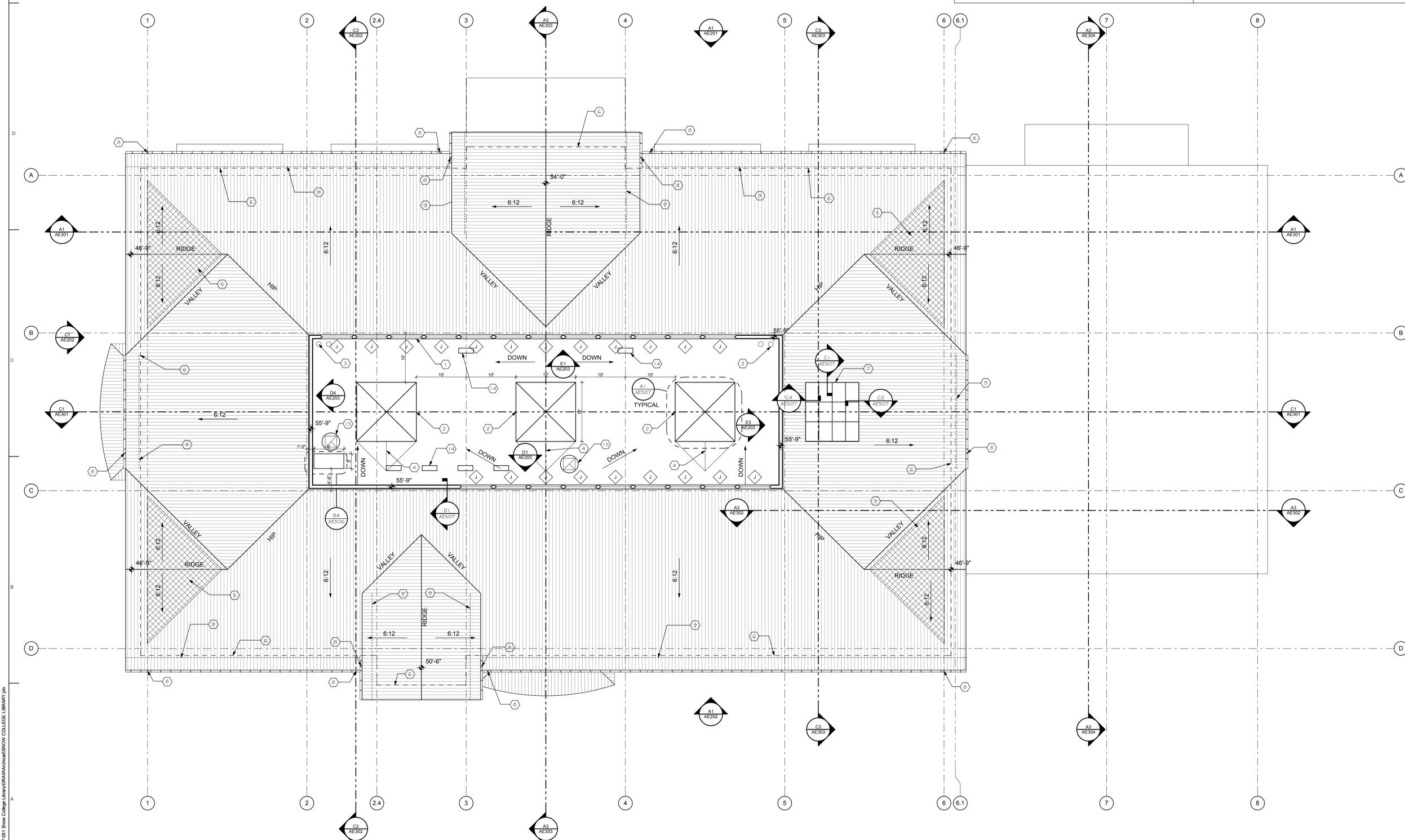
REVISIONS:
▲ DECEMBER 9TH, 2008
▲ DECEMBER 2ND, 2008
▲ NOVEMBER 25TH, 2008
100% CD, September 15, 2008
100% CD Review, AUGUST 4, 2008

ISSUE DATE:
SEPTEMBER 15, 2008, 100% CD
ARCHITECT'S PROJECT NUMBER:
B07-051
DFCM PROJECT NUMBER:
07258700
SHEET TITLE:

ROOF PLAN

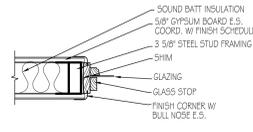
SHEET NUMBER:

AE117

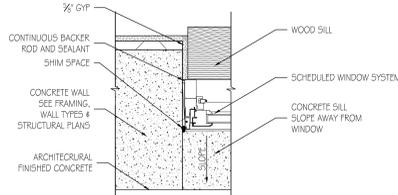


A1 ROOF PLAN
SCALE: 1/8" = 1'-0"

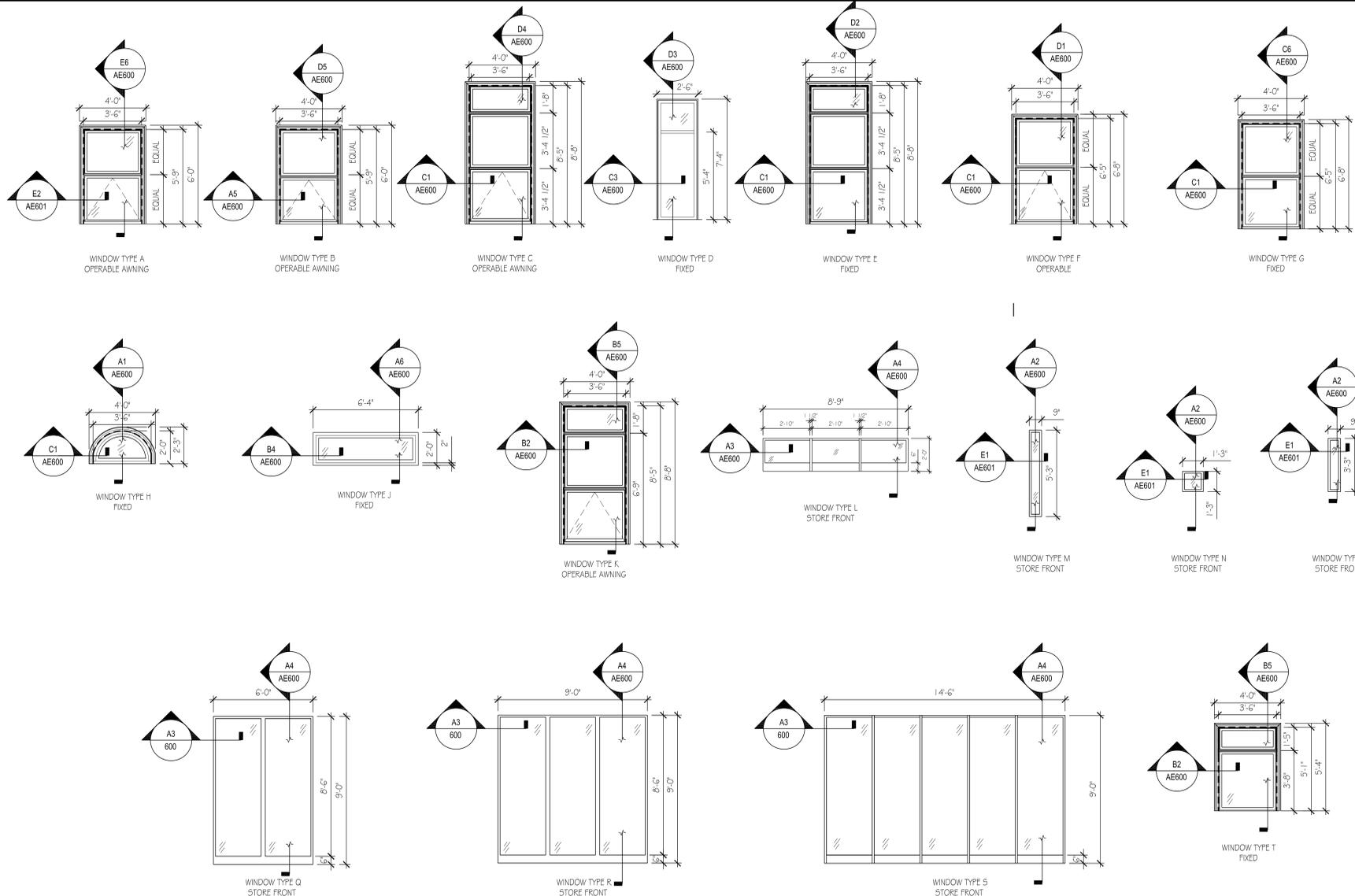
P:\07\051 Snow College Library\DRAWING\Architect\SNOW COLLEGE LIBRARY.dwg
2008-12-08



E1 JAMB TYP. TO M-N-P
SCALE: 1 1/2" = 1'-0"



E2 JAMB TYPE A
SCALE: 1 1/2" = 1'-0"



a1 WINDOW TYPES
SCALE: 1 3/16" = 1'-0"

WINDOW SCHEDULE

BASEMENT

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEET AE600	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
6	A	NORTH EXTERIOR	A	3'-6"	5'-9"	16		D6	A5
9	B	SOUTH EXTERIOR	B	3'-6"	5'-9"	16		D5	A5

BASEMENT INTERIOR WINDOWS

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEET AE600	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
1	L	LIBRARIAN RM # 125	L	8'-9"	2'-0"	C		A4	A3

LEVEL ONE - MAIN LEVEL

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEET AE600	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
12	C	NORTH EXTERIOR	C	3'-6"	8'-5"	16		D4	C1
4	K	NORTH EXTERIOR	K	3'-6"	8'-5"	16		B5	B2
9	C	WEST EXTERIOR	C	3'-6"	8'-5"	16		D4	C1
6	C	SOUTH EXTERIOR	C	3'-6"	8'-5"	16		D4	C1
3	F	SOUTH EXTERIOR	F	3'-6"	8'-5"	16		D2	C1
9	D	SOUTH EXTERIOR	D	2'-6"	7'-4"	16		D3	C3
9	T	SOUTH EXTERIOR	T	3'-6"	9'-1"	16		B5	B2

LEVEL ONE - INTERIOR WINDOWS

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEETS AE600 & AE01	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
1	D	ROOM 111	D	6'-0"	9'-0"	C		A4 / AE600	A3 / AE600
1	R	ROOM 113	R	9'-0"	9'-0"	C		A4 / AE600	A3 / AE600
1	M	CIRCULATION DESK	M	0'-9"	5'-3"	S		A2 / AE600	E1 / AE01
3	N	CIRCULATION DESK	N	1'-3"	1'-0"	S		A2 / AE600	E1 / AE01
1	P	CIRCULATION DESK	P	0'-9"	3'-3"	S		A2 / AE600	E1 / AE01

LEVEL TWO

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEETS AE600	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
12	F	NORTH EXTERIOR	F	3'-6"	6'-5"	G1		D1	C1
12	H	NORTH EXTERIOR	H	3'-6"	2'-0"	G1		A1	C1
6	F	WEST EXTERIOR	F	3'-6"	6'-5"	G1		D1	C1
6	H	WEST EXTERIOR	H	3'-6"	2'-0"	G1		A1	C1
9	D	WEST EXTERIOR	D	3'-0"	7'-4"	G1		D3	C3
14	F	SOUTH EXTERIOR	F	3'-6"	6'-5"	G1		D1	C1
17	H	SOUTH EXTERIOR	H	3'-6"	2'-0"	G1		A1	C1
3	G	SOUTH EXTERIOR	G	3'-6"	6'-5"	G1		C6	C1
10	F	EAST EXTERIOR	F	3'-6"	6'-5"	G1		D1	C1
12	H	EAST EXTERIOR	H	3'-6"	2'-0"	G1		A1	C1

LEVEL TWO - INTERIOR WINDOWS

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEETS AE600	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
1	S	READING 207	S	14'-6"	9'-0"	C		A4 / AE600	A3 / AE600

ATTIC

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEETS AE600	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
3	F	NORTH ELEVATION	F	3'-6"	6'-5"	G1		D1	C1

ROOF - CLERESTORY

QUANTITY (VERIFY)	MARK	LOCATION	WINDOW			GLAZING	TEMPERED	DETAILS SHEETS AE600	
			TYPE	WIDTH	HEIGHT			HEAD & SILL	JAMB
21	J	ROOF	J	6'-4"	2'-0"	G1		A6	B4

SCHEDULE NOTES:

- WHERE WINDOW IS ADJACENT TO AUTOMATIC DOOR COORDINATE WITH AUTOMATIC DOOR MANUFACTURER.
- SOME MULLIONS AT THIS WINDOW ARE NOT TRUE DIVIDED (SEE WINDOW TYPES)

GLASS TYPES:

IG 1" INSULATED GLAZING
TIG TEMPERED INSULATED GLAZING

INTERIOR

3 CLEAR, TEMPERED, INSULATED THICK SINGLE PANE

GENERAL NOTES

- DUE TO MULTIPLE USE, SOME OF THE DETAILS, FRAME TYPES ETC. REFERENCED TO ON THE WINDOW SCHEDULE ARE REVISED AND/OR ROTATED FROM THE DIRECTION SHOWN ON THE FLOOR PLAN. THE CONTRACTOR SHALL COORDINATE WITH WALL TYPES (SHEET XXXX FOR WALL FINISHES.) THE GENERAL INTENT OF DETAILS SHALL. IN ALL CASES, BE FOLLOWED AND THE ARCHITECT CONSULTED SHOULD QUESTIONS ARISE.
- CONTRACTOR TO VERIFY ALL DIMENSIONS AND WINDOW SIZES TO FIT TOUGH OPENINGS AS INDICATED IN WINDOW SCHEDULE
- DIMENSIONS SHOWN ARE WINDOW UNIT SIZES. SEE MANUFACTURER FOR R.O. DIMENSIONS
- ALL WINDOW MULLIONS ARE TRUE DIVIDED LIGHT UNLESS OTHERWISE NOTED.
- PLUMB AND SHIM ALL WINDOW UNITS.
- PROVIDE & FILL ALL ROUGH OPENING VOIDS WITH INSULATION TO ASSIST IN WINDOW PERFORMANCE ON EXTERIOR WALL LOCATIONS.
- PROVIDE BATT INSULATION IN ALL VOIDS BETWEEN ROUGH FRAMING AND WOOD FRAME.

COOPER
ROBERTS
SIMONSEN
ASSOCIATES

crsa
700 North 200 West
Salt Lake City, UT 84103
(801) 355-5915 phone
(801) 355-9865 fax
crsa-us.com

SNOW
COLLEGE



State of Utah-Department of Administrative Services
DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT
410 West 600 South Salt Lake City, Utah 84143-0010

Civil Engineer

Great Basin Engineering
Contact: Dave Waldron
3746 South 1475 East, Suite 200
Cottonwood, UT 84403
(801) 521-0222 FAX (801) 392-7544
dave@gbenorth.com

Landscape Architect

G. Brown Design
Contact: Mathew Winward
615 E. South Temple, Suite 50
Salt Lake City, UT 84102
(801) 575-6066 FAX (801) 575-6166
mwinward@gbrowndesign.com

Structural Engineer

Reaveley Engineers
Contact: Cameron Empey
675 East 500 South, Suite 400
Salt Lake City, UT 84105
(801) 486-3883 FAX (801) 485-0911
cempem@reaveley.com

Mechanical Engineer

Van Boerum & Frank
Contact: Neil Spencer
330 South 300 East
Salt Lake City, UT 84111
(801) 530-7148 FAX (801) 910-9917
nspencer@vbf.com

Electrical Engineer

Spectrum Engineers
Contact: Dave Wesemann, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
dew@spectrum-engineers.com

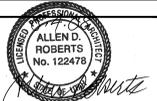
AV Consultant

Spectrum Engineers
Contact: Kurtis Dallinga, PE
175 South Main Street, Suite 300
Salt Lake City, UT 84111
(801) 328-5151 FAX (801) 328-5155
kd@spectrum-engineers.com

Library Consultant

Michaels Associates Design Consultants, Inc.
Contact: Andrea Michaels
14809 North 72nd Street, Suite 100
Scottsdale, AZ 85260
(480) 998-7476 FAX (480) 998-9390
andrea@maddinc.com

STAMP:



PROJECT NAME:

Snow College Library
150 College Avenue
Ephraim, Utah 84627

REVISIONS:

NO.	DATE	DESCRIPTION
1	DECEMBER 9, 2008	
2	DECEMBER 2, 2008	
3	NOVEMBER 25, 2008	
4	100% CD, SEPTEMBER 15, 2008	
5	100% CD, AUGUST 4, 2008	
6	ISSUE DATE:	

SEPTEMBER 15, 2008, 100% CD

ARCHITECT'S PROJECT NUMBER:

B07-051

DFCM PROJECT NUMBER:

07258700

SHEET TITLE:

WINDOW SCHEDULE

&

TYPES

SHEET NUMBER:

AE601