ADDENDUM NO. 1

PROJECT NAME: **BRACE HALL REMODEL PROJECT**
UNL PROJECT NUMBER: **C008P098**
BID INVITATION NUMBER: **2205-13-7200**

CONSULTANT: Leo A. Daly
ADDRESS: 8600 Indian Hills Drive
Omaha, NE 68114-4039

DATE OF ISSUANCE: September 9, 2013
DATE OF BID OPENING: September 19, 2013

The bid documents dated August 19, 2013 for the above referenced project are amended by this addendum.

NOTICE: This Addendum is issued to all interested prospective bidders as an amendment to the project manual or other parts of the bidding (contract) documents for the above named project. Reference to this Addendum must be included in the Bid proposal. The information contained herein shall be fully incorporated into the contract documents as though originally included therein.

MODIFICATIONS TO THE PROJECT MANUAL:

SECTION 00 21 13 – INSTURCTIONS TO BIDDERS

1. Add the following attached Item:
   22.0 – PRE-CONSTRUCTION AGENDA & INFORMATION/ATTENDANCE LIST– September 4, 2013

MODIFICATIONS TO THE PROJECT MANUAL & DRAWINGS:

1. Add the following attached item(s): LEO A Daly ADDENDUM NO. 1, dated September 6, 2013.

END OF ADDENDUM NO. 001

Facilities Planning & Construction
1901 Y Street
P.O. Box 880605
Lincoln, NE 68588-0605
Phone (402) 472-3131
FAX (402) 472-5908

PRE-BID MEETING AGENDA

Brace Hall Remodel Project

- **WELCOME**
- **SIGN- IN/ATTENDANCE SHEET**
- **INTRODUCTIONS**

UNL Representatives:
Chad A. Lea – Project Manager, UNL FM&P
Lance Perez - Dean of Graduate Studies & Assoc Vice Chancellor for Academic Affairs
Richard Firebaugh – UNL FPC - Code Official
Charlie Griesen – UNL FPC-Utilities
John Ballue – UNL FPC - Project Inspector
Emily Casper– UNL FPC- LS
Blake France – UNL Communications
Jake Olson – UNL FMO/BSM – Manager – Large Improvement Projects
Gregg Turner – FMO/BSM – Facilitator

Project Architects/Engineers
Martin Lane – Leo A. Daly
Erin P. Froschheiser – Leo A. Daly
Mike Brady/ Dan D. - Leo A. Daly
David Carey – Leo A. Daly

New Horizons Enterprises – ACM Abatement/Utl Tunnel Demolition
Heather Piersol – Proj Manager
Dustin Huenink - Project Coordinator

- **PROJECT DESCRIPTION**

The former Brace Lab Building is being renovated to comply with all applicable codes, including Fire/Life Safety Code, Americans with Disabilities Act (ADA) and International Building Code. Work includes demolition; installation of new HVAC, plumbing & electrical systems; replacement of exterior windows and general construction & coordination services.

This project is for Prime General Construction Services.

- **PROJECT SCHEDULE**

Bid Date – Sept 19, 2013
Anticipated Contract Execution/Notice to Proceed Date – Oct 18th/19th, 2013
Project Substantial Competition Date – June 16, 2014
Bldg Occupancy – August 4th, 2014

- **GENERAL INFORMATION FOR BIDDERS:**

Plans/Specifications – Available at A&D Technical Supply Co. - Omaha and Lincoln
Project information & list of plan holders may be viewed on A&D Technical Supply Web Site: http://www.adtechplans.com/

PRE-BID MEETING AGENDA

Morrison Center Addition Project

- **GENERAL INFORMATION FOR BIDDERS**: (cont')

  Bid Submittal - 2:00 PM CDT, Thursday September 19th, 2013.

  Submit to: University of Nebraska – Lincoln
  Business Services – Purchasing Dept.
  1700 Y St.
  Lincoln, NE 68588

  Contractor Questions - All questions to be issued in writing, and answered by addendum; otherwise the work shall be installed as per Contract Documents.
  Last day for submittal of questions – 5:00 PM on Sept 11th, 2013

  Addenda - No addenda have been issued to date.

  Last Date for Issuing Addendum – Sept 13. 2013

  Addenda No. #001 – Sept 16, 2013 - Included Items:
  - Pre-Bid Mtg Agenda
  - Responses to Questions
  - Spec Section/Dwg Updates
  - Spec. Substitutions Request Responses

- **SPECIAL CONDITIONS (**Items that may affect the Contractor's bid.) .

  ACM Abatement
  - Existing floor tile has been abated.
  - Existing steam line asbestos abatement & demolition, in Brace utility tunnels, attic mechanical room, and above ceiling spaces will start Sept 23, and will be completed by Oct 14th. Vertical steam lines may have asbestos in place. Bidders shall provide adequate time in their schedule to accommodate discovery, testing, and abatement of unforeseen ACM.

  Brace Steam Main Valve Construction
  - Existing steam valves will be demolished Sept 23. New Brace steam main valve will be installed & reinsulated Sept 23 & 24. New valve will be flanged for new service connection.

  Job Site Parking
  - No contractor parking on the job site.
  - Parking available through UNL PT&S - Permits Req'd - $50/Mo/per vehicle. Parking will be in Area C – North & West of Stadium Drive Garage, or in Perimeter Lot at 10th & T. Short term parking in Stadium Parking Garage..

  Staging Area/Sensitive Landscape – Limited within job site. Protection required for existing landscaping. Project is surrounded by numerous very old, sensitive trees. Example - Newton Apple Tree. NO CRUSHED ROCK allowed.

  Occupancy and service to adjacent Behlen Lab Bldg, Link, and Dock/Apron.
  - Current functions to be maintained during construction. Link construction & exiting of Behlen during construction will need to be coordinate with UNL.

  Brace & Behlen restrooms **are not** available for contractor use.

- **DESIGN TEAM REVIEW**

- **BRACE INSPECTION/TOUR** – Today at 11:00 AM

#1

University of Nebraska Lincoln

Meeting Attendance

FACILITIES PLANNING & CONSTRUCTION

Purpose: PRE-BID REVIEW MTG.

Project Name: BRACE REMODEL PR2 **Project No.** C008P098

Date: 09/04/13 **Time:** 9:00AM **Location:** 1

Name	Organization	Phone	Fax	E-Mail
CHAD A. LEE	UNL FPC	402/472-1883		clee@unl.edu
Don Petri	Kidwell	402-473-7783		dpetri@kidwell.us.com
Derek Heiss	Haussmann Const.	(402) 416-5072		derekh@haussmannconstruction.com
Drew Boysen	Dickey & Burham	402-610-0268		drew.boysen.dbi@gmail.com
GREG STENNETT	HAMPTON CONST.	402-890-5643		gstennett@hampton1.com
DAVID AUTRY	MEININGER FIRE	402-466-2616		DAVID@MFP-INC.COM
Jon Dybdal	Erich Broer Const	402-438-2165		eb90138@windstream.net
Mike Callaway	Kiewit	402-977-4517		mike.callaway@kiewit.com
Dana Parrott	Middleton	402-610-3847		Dana@middletonElectric.com
DUANE MUNDT	HAMPTON	402-469-8858		DMUNDT@HAMPTON1.COM
Dustin Huenink	New Horizon	402-26-8130		dustin@newhorizons-llc.com
Jason Oberding	J-Tech Const	402 261 3682		Jason@JTechconst.com
Andrew Johnson	Continental Fire Sprinkler Co	402 330 5170		Andrew.Johnson@continental-fire.com
Roderick Hansen	HBS	402 421 1573		rhansen@hbsplc.com
TERIN FROSCHHEISER	LEO A DALY	402-390-4457		epfrosch@leoadaly.com

1901 Y Street / Lincoln, NE 68588-0605

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#2

University of Nebraska Lincoln

Meeting Attendance

FACILITIES PLANNING & CONSTRUCTION

Purpose: PRE-BID REVIEW MTG.

Project Name: BRACE REMODEL PH2 **Project No.** C008P098

Date: 9/04/13 **Time:** 9:00AM **Location:** BEST AUD.

Name	Organization	Phone	Fax	E-Mail
SCOTT D. ELLEY	LUND ROSS	502 3201	—	SCOTTE@LundRoss.com
Bob Boellstorff	Bryant A/C & Htg	467-1111	467-2791	bob boellstorff@bryantlincoln.com
DAN DELLOVECHIO	LEO A DALY	402.390.4463	402.391.8564	DSDellovechio@leoadaly.com

1901 Y Street / Lincoln, NE 68588-0605

(402) 472-3131 / FAX (402) 472-5908

#3

University of Nebraska Lincoln

Meeting Attendance

FACILITIES PLANNING & CONSTRUCTION

Purpose: PRE-BID REVIEW MTG

Project Name: BRACE REMODEL PBV. **Project No.** C008P098

Date: 09/04/13 **Time:** 9:00AM **Location:** BSM AUD.

Name	Organization	Phone	Fax	E-Mail
Stuart Johnson	Sampson	402 434 5934	402.434.5946	Stuart.johnson@Sampson-construction.com
Steve Hiemer	Kingery	402-465-4400	402-465-4529	steveh@kccobuilders.com
Brian Clinton	Cheever	402 477-6745	402 477 2063	bclinton@cheeverconstruction.com
Heather Piersol	New Horizons	402-261-8130	402-261-8136	heather@newhorizons-llc.com
Barry Schmidt	Boyd Jones	402-261-5077	402-553-5398	bschmidt@boydjones.BIZ
Adam S	J-Tech	402-520-5188		adam@J-techconst.com
Tom Santillan	His Plumbing	402-421-1573	402-421-1574	TSantillan@HISPIPE.com
Jason Oran	J-Tech	402 802 6084		joran@jdechconst.com
Jill Sydik	Shanahan	402-610-5436	402-784-2288	jills@smeval.com
Jacob Olson	UNL BSM	402-472-4855		jolson4@unl.edu
Martin Lane	Leo A Daly	402-391-8111		melane@leoadaly.com
David Carey	Leo A Daly	402 391 8111		djcarey@leoadaly.com

1901 Y Street / Lincoln, NE 68588-0605

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ADDENDUM NO. 1
to
Specifications and Drawings
for
University of Nebraska
Brace Hall Renovations

LEO A DALY
PLANNING·ARCHITECTURE·ENGINEERING·INTERIORS

DALY Project No. 003-10126-004
September 6, 2013

for Combined Contract

NOTICE TO ALL BIDDERS: The following Specifications and Drawings for the above referenced project are hereby revised as follows:

GENERAL DIVISION

ITEM NO. G1-1 UNL BRACE LABORATORY RENOVATION PRE-BID RFI RESPONSES
a) RFI Responses are ISSUED with this Addendum.

ITEM NO. G1-2 BRACE-BEHLEN SPRINKLER SYSTEM DRAWINGS
a) 2003 Drawings are ISSUED with this Addendum for reference.

SPECIFICATIONS

ITEM NO. G1-3 SECTION 126100 FIXED AUDIENCE SEATING
a) 2.1 MATERIALS AND FINISHES, Item J, Number 2, Color and Pattern: Maharam, Style: Medium, **Color: 050 Cosmic.**

DRAWINGS

ITEM NO. G1-4 SHEET AD100 – SITE ORIENTATION PLAN AND CONTRACTOR STAGING
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-5 SHEET AD101 – DEMOLITION FLOOR PLANS BASEMENT AND SUB BASEMENT
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-6 SHEET AD102 – DEMOLITION FLOOR PLANS LEVEL 1 AND LEVEL 2
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-7 SHEET AD103 – DEMOLITION FLOOR PLANS LEVEL 3 AND ATTIC LEVEL
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-8 SHEET AE103 – FLOOR PLAN LEVEL 3
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-9 SHEET AE104 – FLOOR PLAN ATTIC
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-10 SHEET AE301 – STRUCTURAL BUILDING SECTION AND STRUCTURAL PLAN – LEVEL 1
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-11 SHEET AE303 – STRUCTURAL BUILDING SECTION CORRIDOR AND STAIRWAYS
a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. G1-12 SHEET AE402 – INTERIOR ELEVATIONS, CASEWORK SECTIONS AND DETAILS

a) Delete 9/AE402, Enlarged Elevation Bio Lab 110.

ITEM NO. G1-13 SHEET AE501 – CASEWORK SECTIONS AND DETAILS

a) This Sheet is REVISED and REISSUED with this Addendum.

MECHANICAL DIVISION

SPECIFICATIONS

ITEM NO. M1-1 SECTION 233300- AIR DUCT ACCESSORIES

a) This Section is REVISED and REISSUED with this Addendum.

DRAWINGS

ITEM NO. M1-2 SHEET MD101 - DEMOLITION FLOOR PLANS BASEMENT AND LEVEL 1 MECHANICAL

a) Condensing units on the exterior of the building located on the north wall between columns 7 & 9 and 9 & 11, change Key Note 9 to Key Note 29.

b) Add Key Note 29 to read as follows: "Remove existing condensing unit completely including refrigerant piping and wiring. Remove mounting brackets from the exterior wall and patch to match existing."

ITEM NO. M1-3 SHEET MD105 – MECHANICAL DEMOLITION PHOTOS

a) Photo 10, Steam valve is to be removed and replaced by the Owner. Contractor to remove piping within Brace as indicated on the drawings and connect new steam pipe to valve.

b) Photo 12, Remove existing domestic water pipe shown in lieu of steam return pipe and cap at main.

ITEM NO. M1-4 SHEET MH101 – FLOOR PLAN LEVEL 1 – HVAC

a) Diffuser and Grille Neck Size Schedule. Change note to read: "Where no grille size is shown, grille shall be type G2 unless shown otherwise.

b) Modify ductwork as shown on attached sketch MH101A

ITEM NO. M1-5 SHEET MH102 – FLOOR PLAN LEVEL 2 – HVAC

a) Diffuser and Grille Neck Size Schedule. Change note to read: "Where no grille size is shown, grille shall be type G2 unless shown otherwise.

b) Modify ductwork as shown on attached sketch MH102A

ITEM NO. M1-6 SHEET MH103 – FLOOR PLAN LEVEL 3 – HVAC

a) Diffuser and Grille Neck Size Schedule. Change note to read: "Where no grille size is shown, grille shall be type G2 unless shown otherwise.

b) Modify ductwork as shown on attached sketch MH103A.

ITEM NO. M1-7 SHEET MH103 – FLOOR PLAN LEVEL 3 – HVAC

a) Diffuser and Grille Neck Size Schedule. Change note to read: "Where no grille size is shown, grille shall be type G2 unless shown otherwise.

ITEM NO. M1-8 SHEET MH201 – MECHANICAL LARGE SCALE PLANS

a) At column lines C & 4 change fan coil FC-1 to FC-2.

ITEM NO. M1-9 SHEET MH202 – MECHANICAL SECTIONS

a) Section 1, see revisions shown on attached sketch MH202A

ITEM NO. M1-10 SHEET MH301 – MECHANICAL DETAILS & SCHEMATICS

a) Detail 6, Single Stage Steam Pressure Reducing Station. Delete one of the two pressure reducing valves and associated piping.

b) Detail 11, Instantaneous Steam Water Heater. Change water heater label SWH-1 to DWH-1 and circulating pump label HWCP-1 to DHWCP-1.

ITEM NO. M1-11 SHEET MH501 - MECHANICAL SCHEDULES

a) Diffuser Register and Grille Schedule. Re-issue schedule, see attached sketch MH501A

b) Steam/Hot Water Heat Exchanger Schedule. Re-issue schedule, see attached sketch MH501B.

c) Split System Heat Pump Schedule. Change model number from Daikin FTXS24/RXS24 to FAQ24PVJU/RZR24PVJU. Provide low ambient control to -10 deg. F. and wired thermostat.

ITEM NO. M1-12 SHEET MP100 – FLOOR PLAN BASEMENT – HVAC PIPING

a) Change note regarding steam and condensate connections to the existing main as follows: "Connect new 3" MPS to steam valve to be installed under a separate contract. .Connect new 1" PC to existing valve. See photos 9 and 10 Sheet MD105.

ELECTRICAL DIVISION

DRAWINGS

ITEM NO. E1-1 SHEET ED100 – ELECTRICAL DEMOLITION PLAN BASEMENT LEVEL

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-2 SHEET EL100 –LIGHTING PLAN BASEMENT

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-3 SHEET EL101 – LIGHTING PLAN LEVEL 1

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-4 SHEET EL102 – LIGHTING PLAN LEVEL 2

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-5 SHEET EL103 – LIGHTING PLAN LEVEL 3

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-6 SHEET EL104 – LIGHTING PLAN ATTIC

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-7 SHEET EL501 – LIGHTING SCHEDULE AND DETAILS

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-8 SHEET EP101 – POWER AND SYSTEMS PLAN LEVEL 1

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-9 SHEET EP102 – POWER AND SYSTEMS PLAN LEVEL 2

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-10 SHEET EP103 – POWER AND SYSTEMS PLAN LEVEL 3

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-11 SHEET FA101 - FIRE ALARM/MASS NOTIFICATION SYSTEM PLAN LEVEL 1

a) Add notification device to Lobby 101A. Add visual notification device to Men 109A and Women 111A.

ITEM NO. E1-12 SHEET FA102 - FIRE ALARM/MASS NOTIFICATION SYSTEM PLAN LEVEL 2

a) Add notification device to Stair 200.

ITEM NO. E1-13 SHEET FA103 - FIRE ALARM/MASS NOTIFICATION SYSTEM PLAN LEVEL 3

a) Add notification device to Stair 300 and Alcove 301A.

ITEM NO. E1-14 SHEET FA104 - FIRE ALARM/MASS NOTIFICATION SYSTEM PLAN LEVEL 4

a) Add notification device to Mechanical 402.

ITEM NO. E1-15 SHEET FL102 - LIFE SAFETY PLAN LEVEL 2

a) This Sheet is REVISED and REISSUED with this Addendum.

ITEM NO. E1-16 SHEET FL103 - LIFE SAFETY PLAN LEVEL 3

a) This Sheet is REVISED and REISSUED with this Addendum.

LEO A DALY
PLANNING•ARCHITECTURE•ENGINEERING•INTERIORS
8600 INDIAN HILLS DRIVE
OMAHA, NE 68114 USA
TEL: 402-391-8111
FAX: 402-391-8564

RECORD MEMORANDUM: RFI Responses
SUBJECT:
University of Nebraska-Lincoln Brace Laboratory Renovation

Month Day Year	Meeting Held At:	Copies To:	Project No.:
September 6, 2013	NA	Bidders	003-10126-004

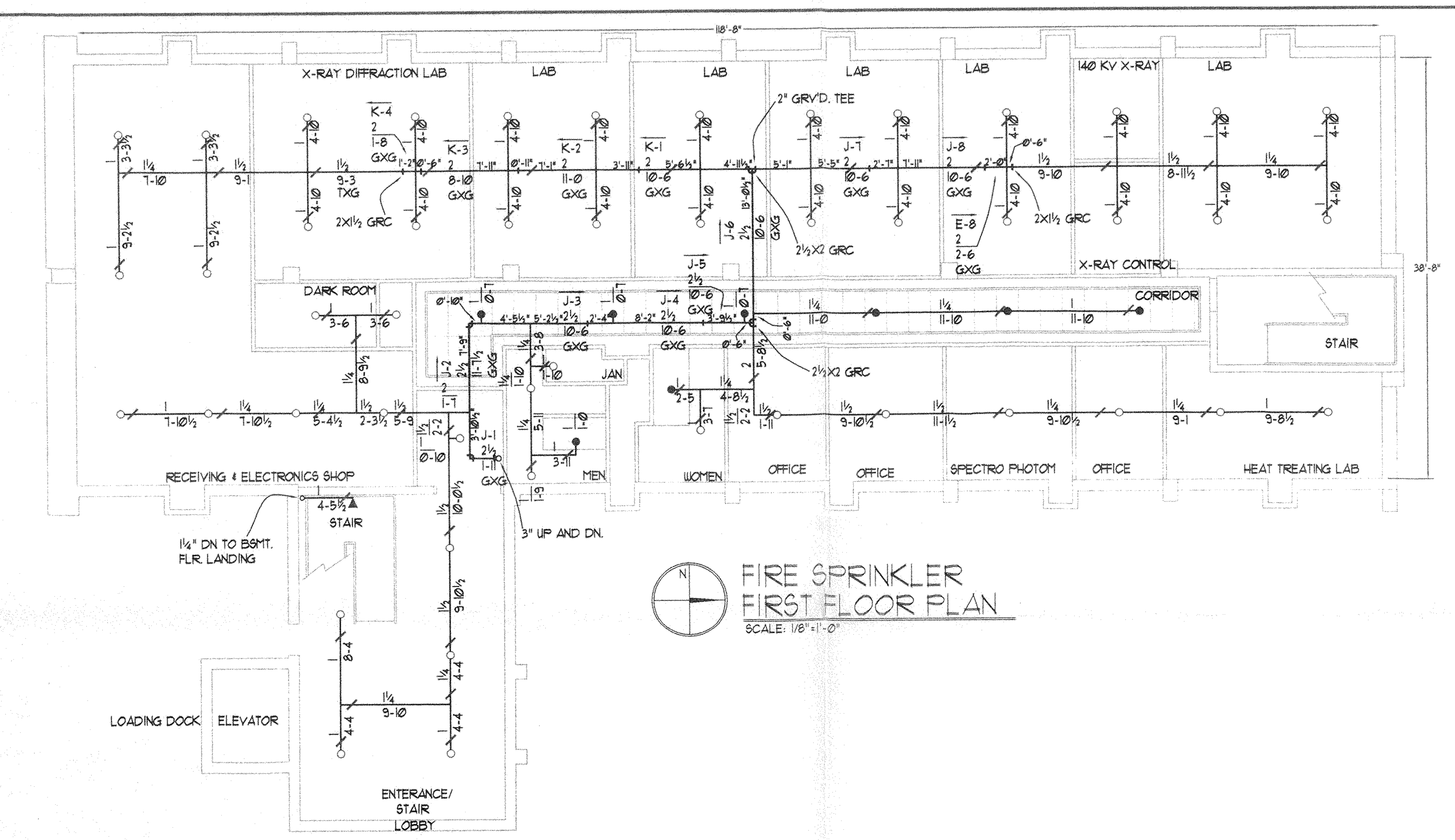
Participants:
Dale Bowder – Leo A Daly
Erin Froschheiser – Leo A Daly
David Carey – Leo A Daly

TOPIC:
UNL Brace Laboratory Renovation Pre-Bid RFI Responses

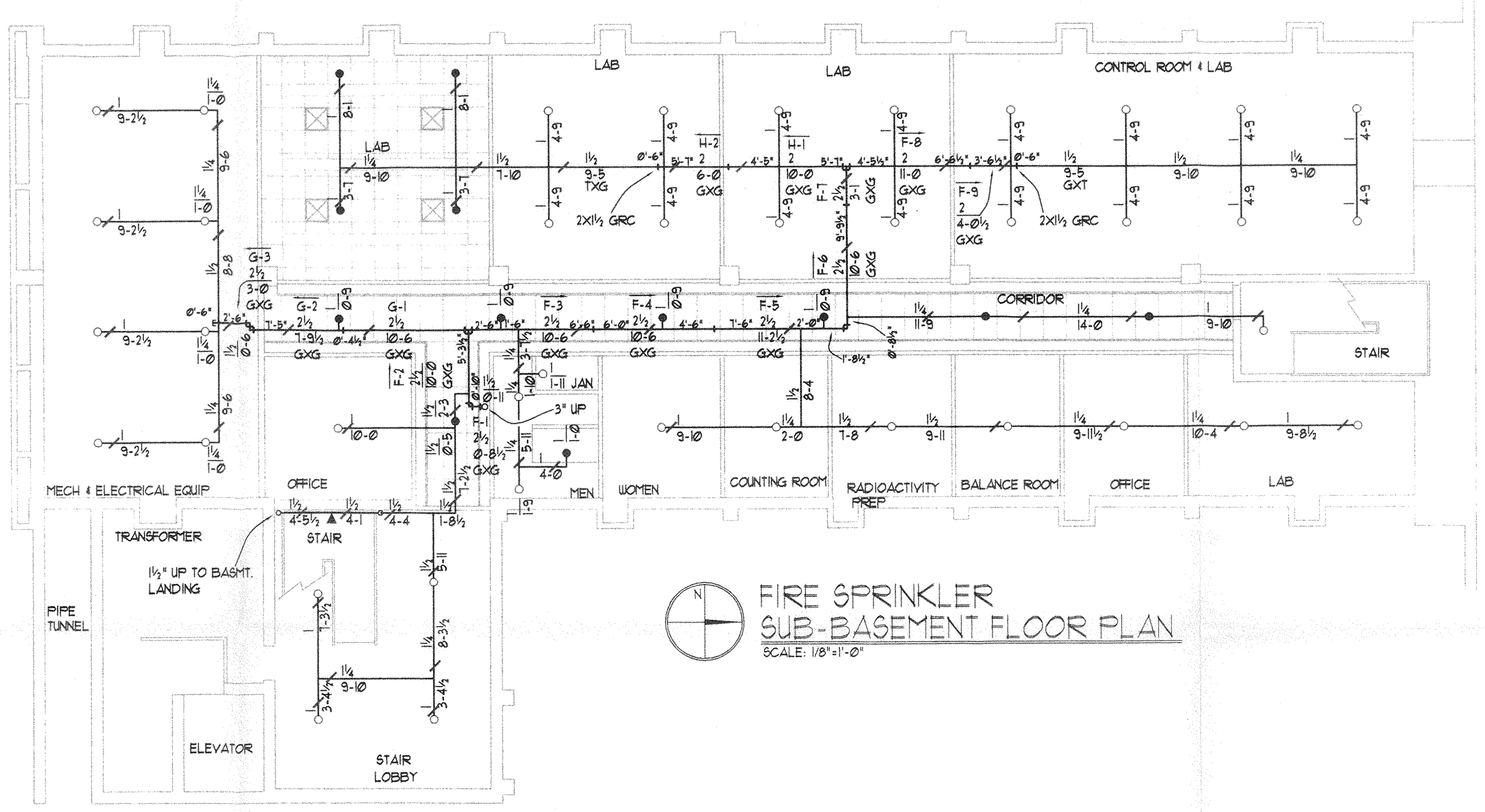
1. What is the existing floor surface in Rooms 104, 104A, 108, 110, 115 and 117.
   DESIGN TEAM RESPONSE: Existing floor surface is carpet, which is to be removed per Bid Documents. Level 1 is a concrete slab. Per Instructions to Bidders, "The Bidder, by making a Bid, represents that: …The Bidder has visited the site, and has become familiar with local conditions under which the work is to be performed…"

2. Are the "As-Built" drawings for the fire sprinklers available?
   DESIGN TEAM RESPONSE: Brace-Behlen Sprinkler System Dwgs are available. PDF file is attached.

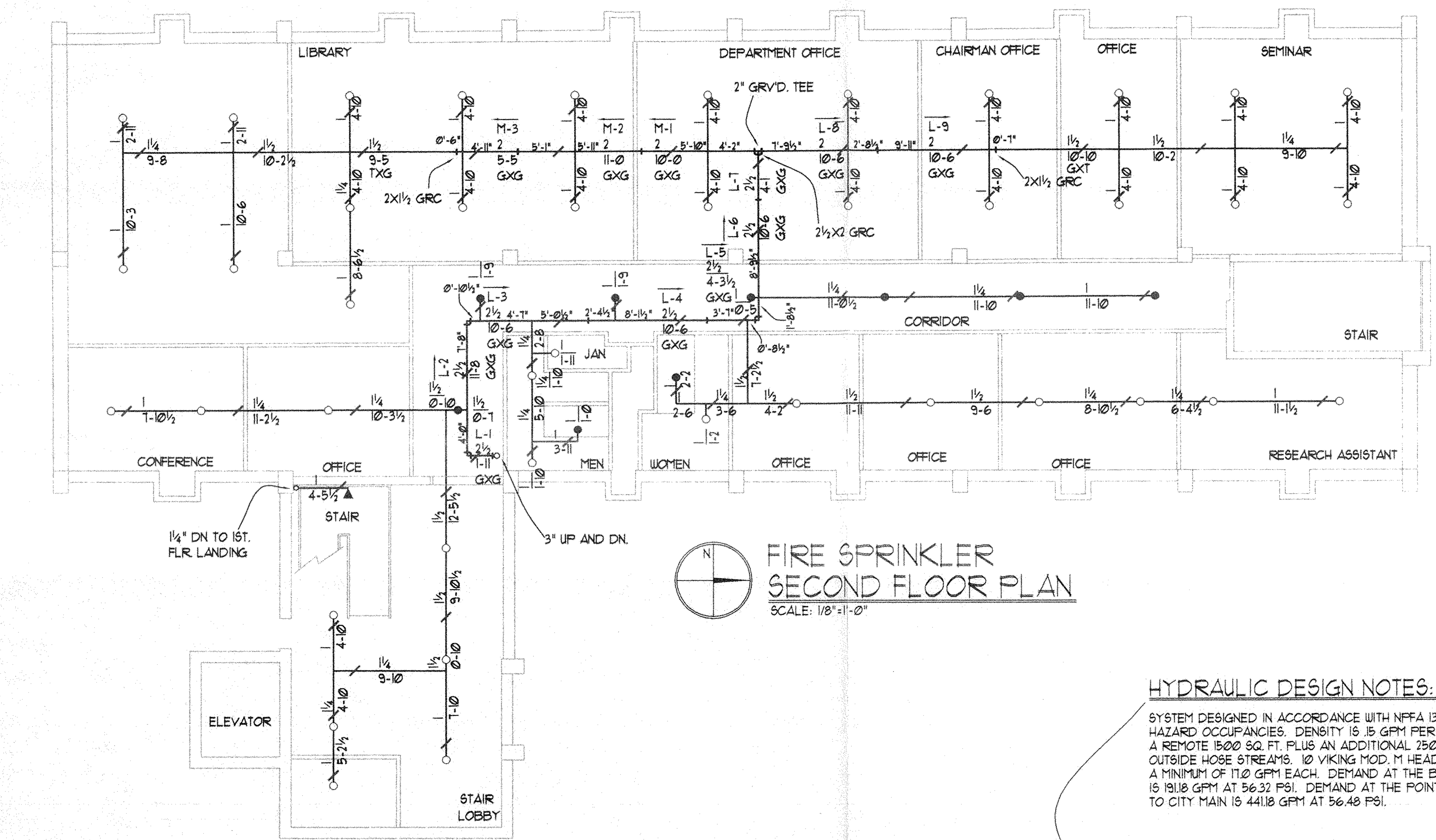
3. There are pipe and fittings currently installed that are not allowed in new project for UNL. Can these materials remain in place?
   DESIGN TEAM RESPONSE: Per direction from UNL Code Authority, the existing Brace Hall Sprinkler systems shall comply with all current UNL Design Guideline Standards.



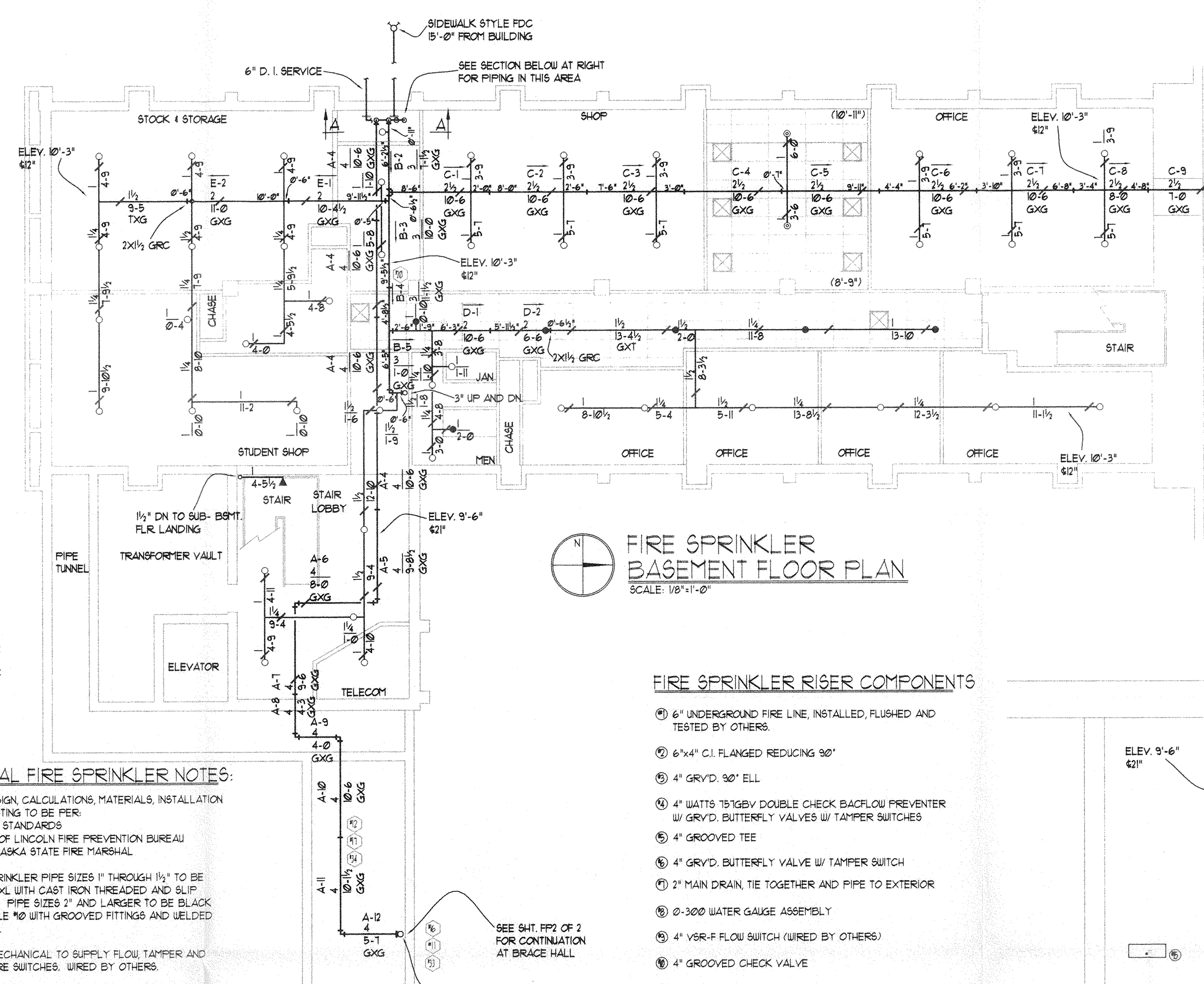
FIRE SPRINKLER FIRST FLOOR PLAN
SCALE: 1/8"=1'-0"



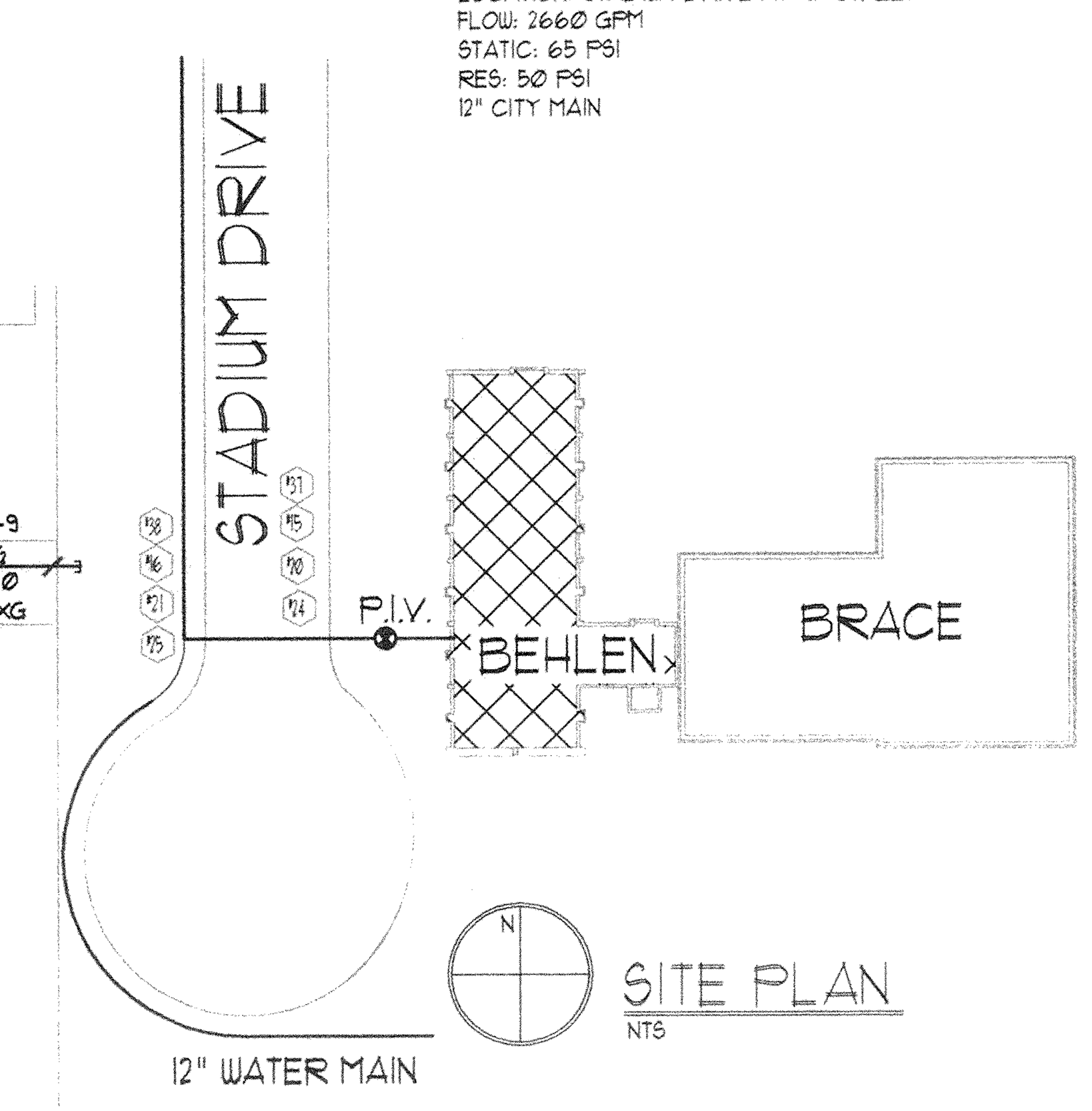
FIRE SPRINKLER SUB-BASEMENT FLOOR PLAN
SCALE: 1/8"=1'-0"



FIRE SPRINKLER SECOND FLOOR PLAN
SCALE: 1/8"=1'-0"



FIRE SPRINKLER BASEMENT FLOOR PLAN
SCALE: 1/8"=1'-0"



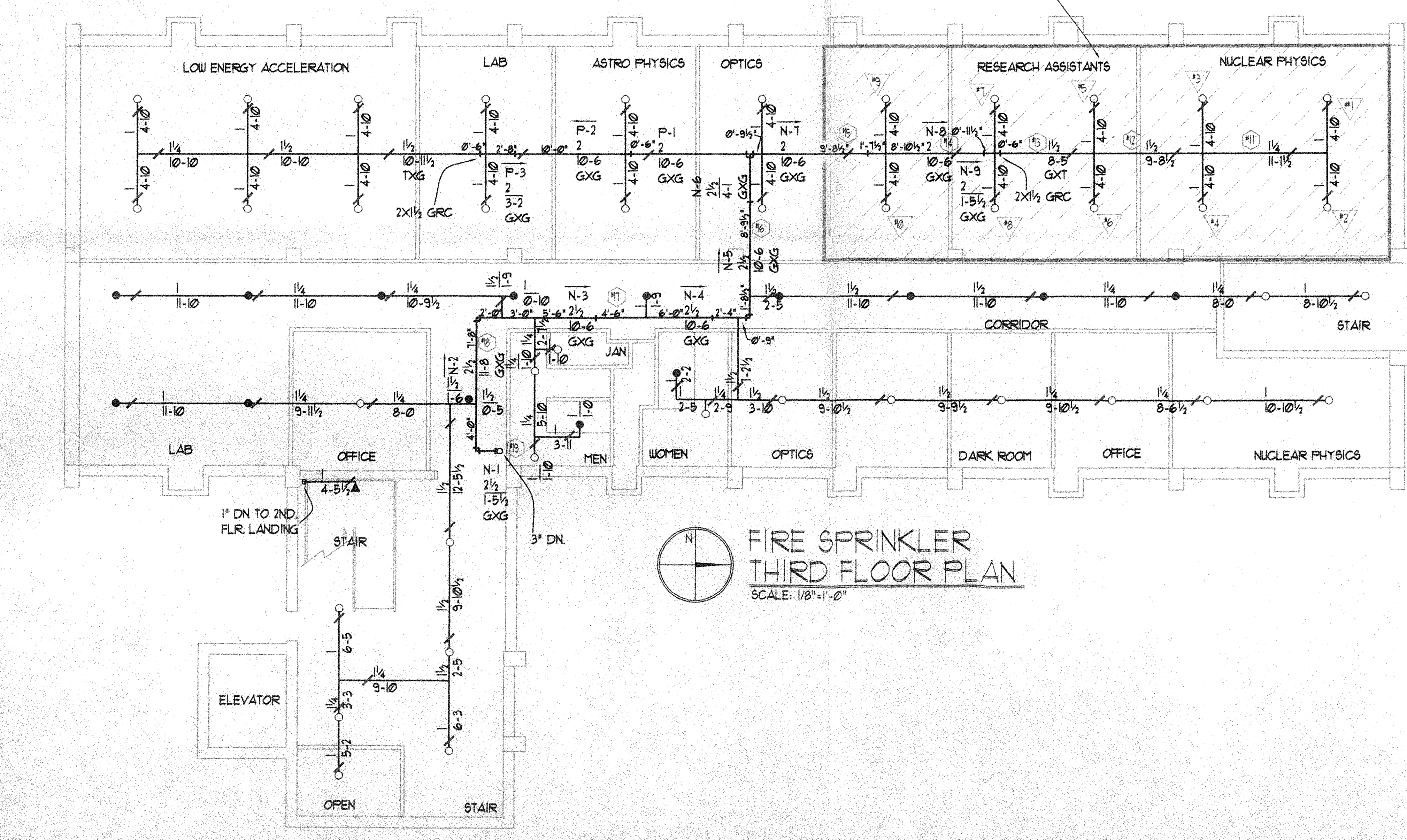
SITE PLAN
NTS

CITY FLOW TEST

CITY FLOW TEST IN NOVEMBER OF 2000
LOCATION: STADIUM DRIVE AT "U" STREET
FLOW: 2660 GPM
STATIC: 65 PSI
RES: 50 PSI
12" CITY MAIN

HYDRAULIC DESIGN NOTES:

SYSTEM DESIGNED IN ACCORDANCE WITH NPFA 13 FOR ORDINARY HAZARD OCCUPANCIES. DENSITY IS .15 GPM PER AQ. FT. OVER A REMOTE 1500 SQ. FT. PLUS AN ADDITIONAL 250 GPM ADDED FOR OUTSIDE HOSE STREAMS. 10 VIKING MOD. M HEADS ARE FLOWING A MINIMUM OF 17.0 GPM EACH. DEMAND AT THE BASE OF THE RISER IS 191.18 GPM AT 56.32 PSI. DEMAND AT THE POINT OF CONNECTION TO CITY MAIN IS 441.18 GPM AT 56.48 PSI.



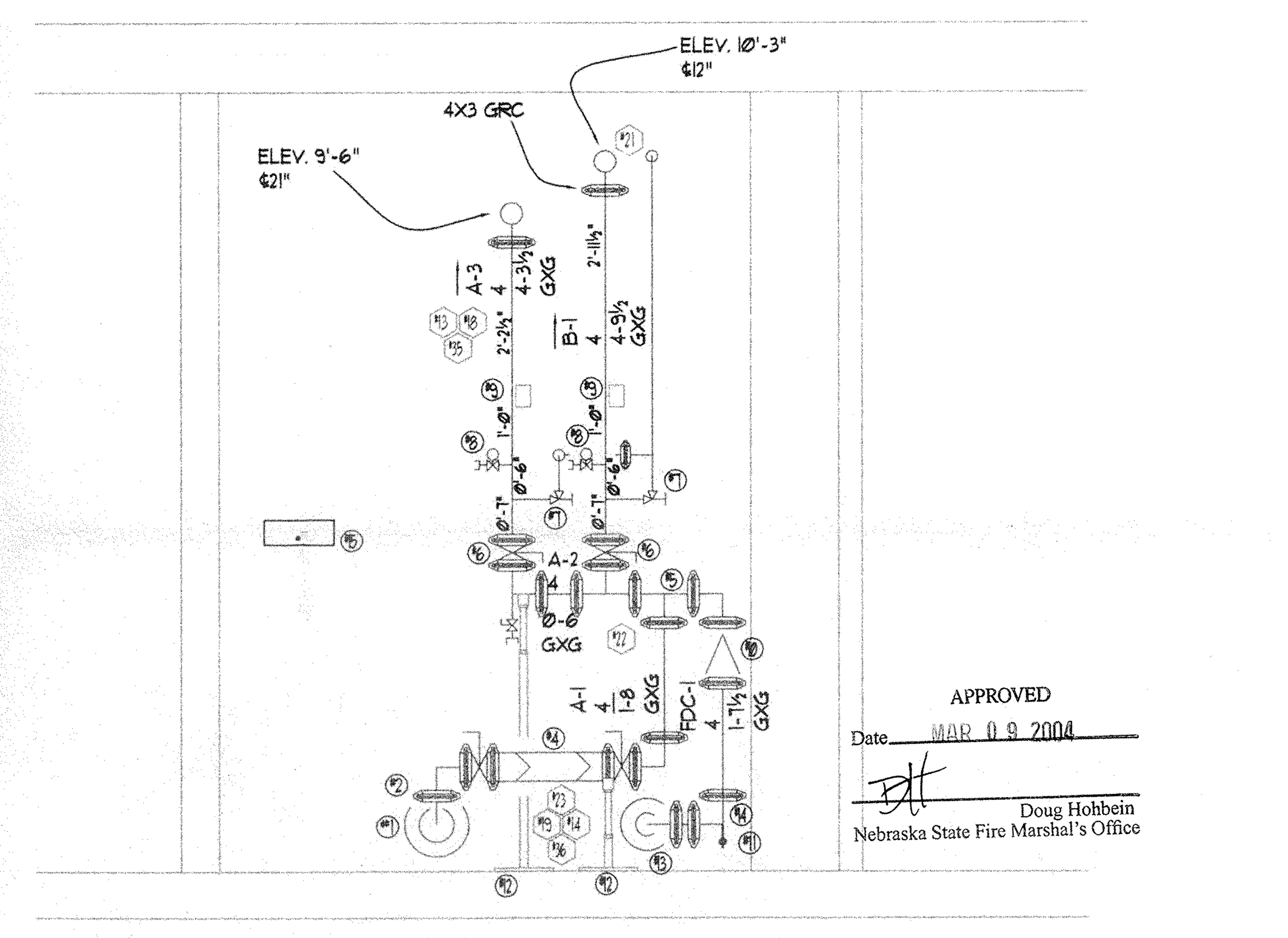
FIRE SPRINKLER THIRD FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL FIRE SPRINKLER NOTES:

1. ALL DESIGN, CALCULATIONS, MATERIALS, INSTALLATION AND TESTING TO BE PER:
   1. NFPA STANDARDS
   2. CITY OF LINCOLN FIRE PREVENTION BUREAU
   3. NEBRASKA STATE FIRE MARSHAL
2. FIRE SPRINKLER PIPE SIZES 1" THROUGH 1½" TO BE ALLIED XL WITH CAST IRON THREADED AND SLIP FITTINGS. PIPE SIZES 2" AND LARGER TO BE BLACK SCHEDULE #10 WITH GROOVED FITTINGS AND WELDED OUTLETS.
3. NIFCO MECHANICAL TO SUPPLY FLOW, TAMPER AND PRESSURE SWITCHES. WIRED BY OTHERS.
4. WELDING TO BE DONE BY NIFCO'S CERTIFIED WELDER. EACH WELD TO HAVE WELDER'S INITIALS STAMPED ADJACENT TO WELD.
   THERE WILL BE NO FIELD WELDING ON THIS PROJECT.
5. HANGERS NOTE: HANGERS INSTALLED PER NFPA 13 1995 SECTIONS 2-6.
6. PENDENT SPRINKLER HEADS LOCATION NEED NOT BE INSTALLED IN THE CENTERLINES OF THE LIFT OUT CEILING TILES.
7. SPRINKLER HEAD CABINET, SPRINKLER HEAD WRENCH AND 3 EXTRA SPRINKLER HEADS OF EACH TYPE SUPPLIED AS REQUIRED PER NFPA 13.
8. ONLY NEW, UNUSED, U.L. LISTED MATERIALS FOR FIRE SPRINKLER INSTALLATIONS TO BE INSTALLED.

FIRE SPRINKLER RISER COMPONENTS

- #1 6" UNDERGROUND FIRE LINE, INSTALLED, FLUSHED AND TESTED BY OTHERS.
- #2 6"x4" C.I. FLANGED REDUCING 90°
- #3 4" GRV'D. 90° ELL
- #4 4" WATTS 757GBV DOUBLE CHECK BACFLOW PREVENTER W/ GRV'D. BUTTERFLY VALVES W/ TAMPER SWITCHES
- #5 4" GROOVED TEE
- #6 4" GRV'D. BUTTERFLY VALVE W/ TAMPER SWITCH
- #7 2" MAIN DRAIN, TIE TOGETHER AND PIPE TO EXTERIOR
- #8 0-300 WATER GAUGE ASSEMBLY
- #9 4" VSR-F FLOW SWITCH (WIRED BY OTHERS)
- #10 4" GROOVED CHECK VALVE
- #11 ½" BALL DRIP
- #12 RISER STANDS (TYPICAL OF 2)
- #13 4" C. I. FLANGED 90°
- #14 4X1 GRV'D. DRAIN ELL
- #15 SPRINKLER HEAD CABINET, WITH 3 HEADS OF EACH TYPE & SPRINKLER HEAD WRENCH.



SECTION "A - A" RISER ASSEMBLY LOOKING WEST
SCALE: 1/2"=1'-0"

APPROVED
Date MAR 0 9 2004
Doug Hohbein
Nebraska State Fire Marshal's Office

SPRINKLER SYMBOL LEGEND

SYMBOL	DESCRIPTION
	HANGER LOCATION
#2(0-6)	HANGER NUMBER & ROD LENGTH
BOB	BOTTOM OF BEAM
AFF	ABOVE FINISHED FLOOR
℄	PIPE CENTERLINE BELOW STRUCTURE
ELE.	PIPE CENTERLINE ABOVE FIN. FLOOR
	PIPE RISE OR DROP
RN	RISER NIPPLE
TOJ	TOP OF JOIST
⊗	ENTRANCE RISER LOCATION
◁	HYDRAULIC CALC. OUTLET NUMBER
⬡	HYDRAULIC CALC. PIPE NUMBER
BL#3	BRANCHLINE FABRICATION NUMBER
	GROOVED COUPLING LOCATION
C-C	CENTER TO CENTER
E-C	END TO CENTER
G-G	GROOVE BY GROOVE
→	DIRECTION OF FLOW
	THREADED UNION
COJ	CUT ON JOB
	GROOVED RED. COUPLING LOCATION
	FIRE HOSE RACK LOCATION

SPRINKLER HEAD LEGEND

SIN#	MFG	MODEL	TYPE	RESPONSE	ORIFICE	NPT	K=	TEMP.	FINISH	ESC.	SYMBOL	QUANTITY
VK302	VIKING	"M"	SSP	QR	1/2	1/2	5.5	155	CHROME	E-1	●	47
VK602	VIKING	"M"	ECP	QR	17/32	3/4	5.5	155	CHROME	E-1	◎	2
VK300	VIKING	"M"	SSU	QR	1/2	1/2	5.5	155	BRASS	-	○	213
VK333	VIKING	"M"	HSW	QR	1/2	1/2	5.5	155	BRASS	-	◀	5
TOTAL THIS SHEET												267

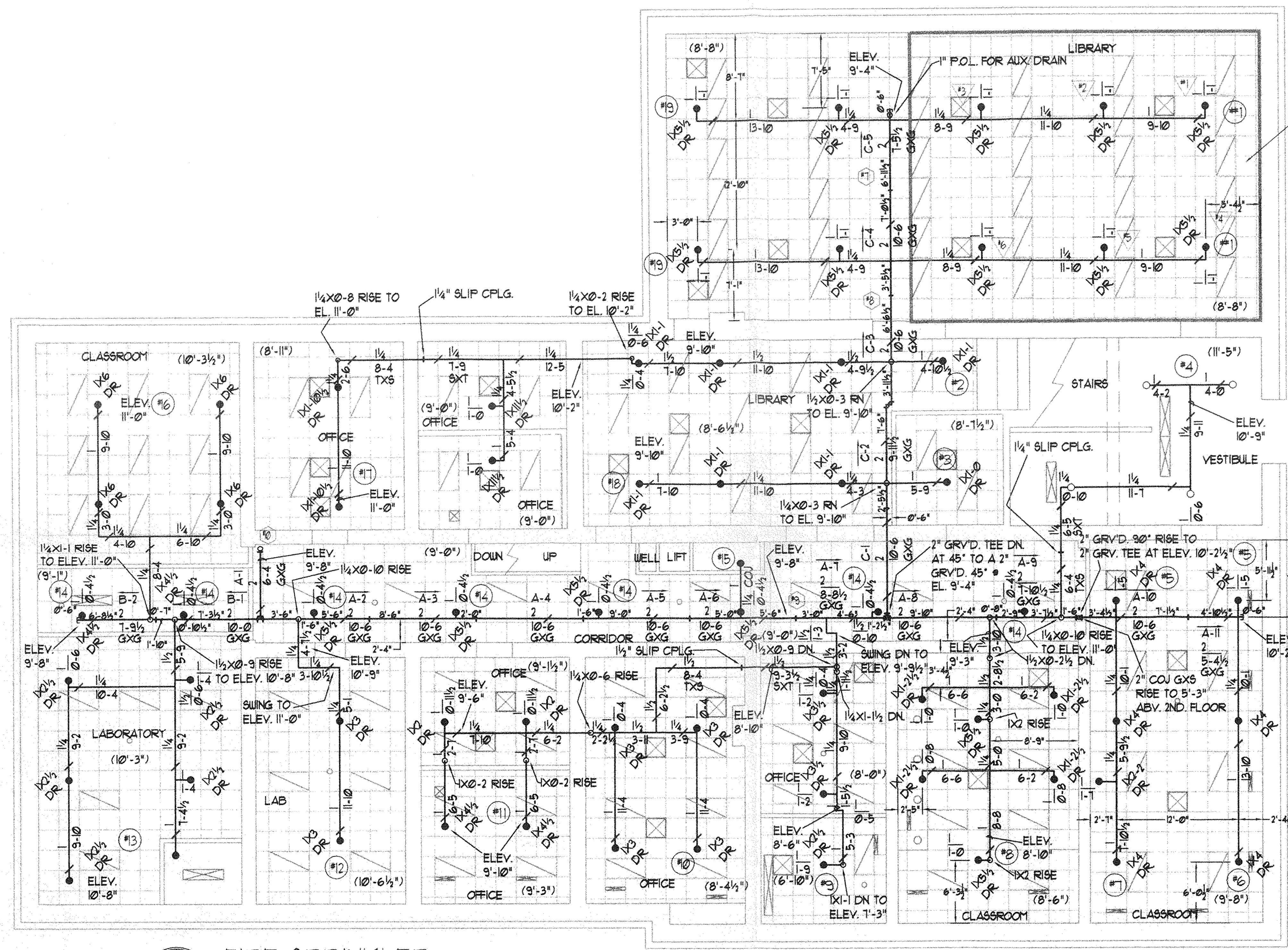
APPROVALS	
CITY OF LINCOLN	
REVISIONS:	DATE:

Nifco Mechanical Systems, Inc.
Fire Sprinkler Systems
531 Sumner Street
Lincoln, NE 68502
Voice: 402.477.0666 Fax: 402.477.2314 Email: nifco@kdsi.net

Job Name: BEHLEN LABORATORY OF PHYSICS
Address: STADIUM DRIVE AND "U" STREETS
UNL CITY CAMPUS LINCOLN, NEBRASKA
Contract With: OWNER

DRAWN BY: MC
CHECKED BY: ML
DATE: 11/24/03
SCALE: 1/8=1-0
TYPE: WET
FILE NO: 03-027
SHEET NO. FP-1 of 2

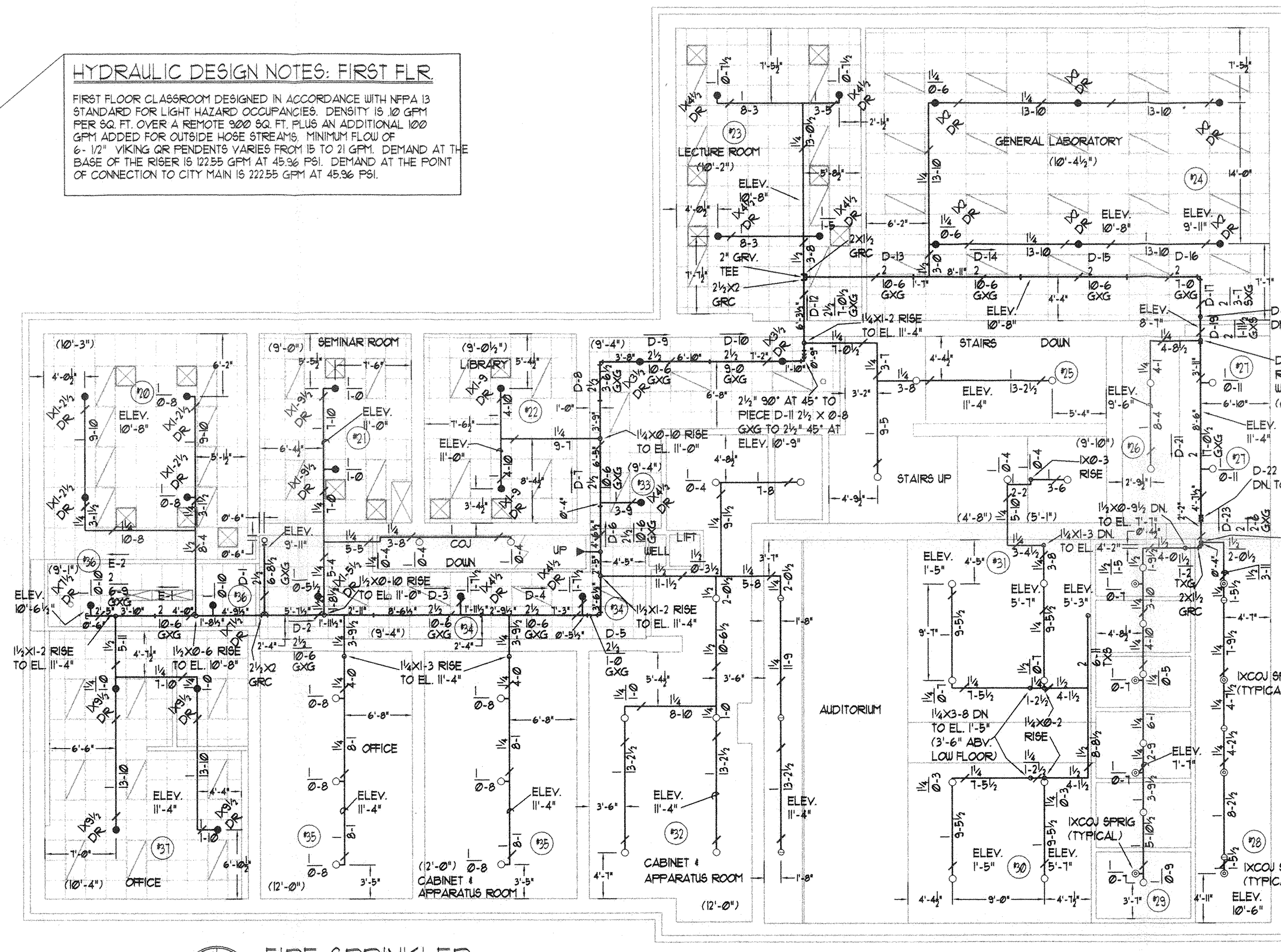
BEHLEN LABORATORY OF PHYSICS



FIRE SPRINKLER
FIRST FLOOR PLAN
SCALE: 1/8"=1'-0"

HYDRAULIC DESIGN NOTES: FIRST FLR.

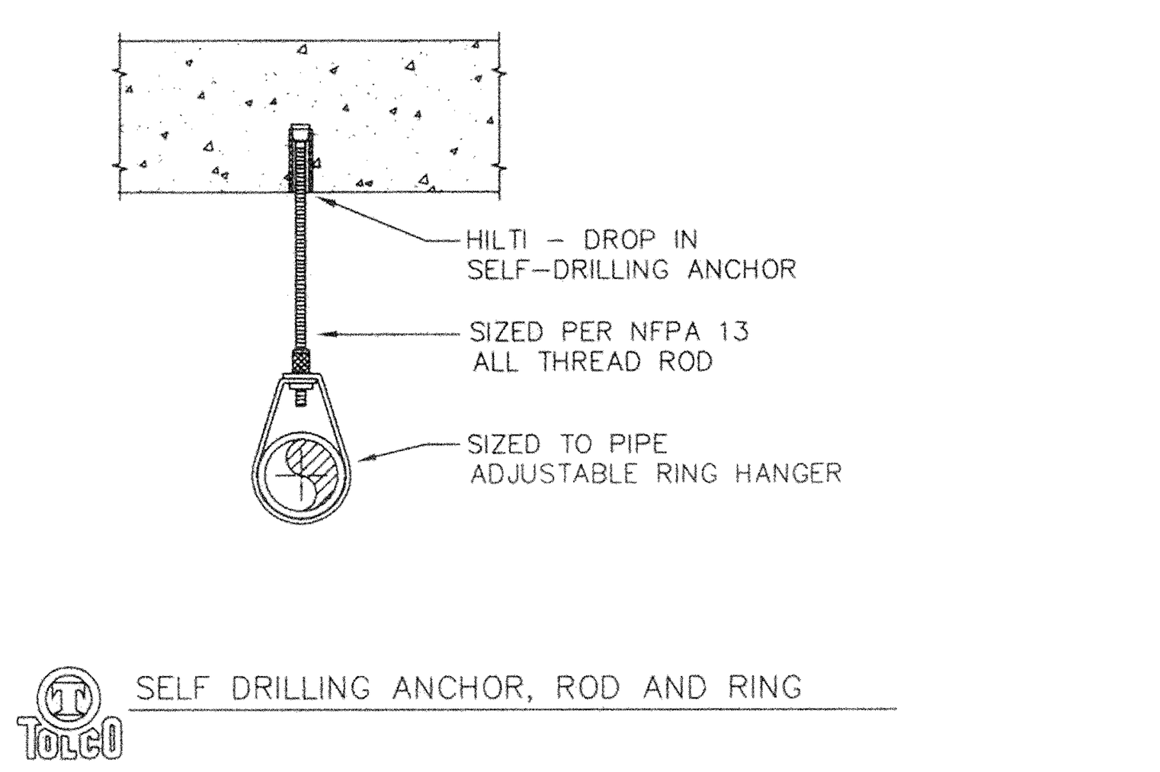
FIRST FLOOR CLASSROOM DESIGNED IN ACCORDANCE WITH NFPA 13 STANDARD FOR LIGHT HAZARD OCCUPANCIES. DENSITY IS .10 GPM PER SQ. FT. OVER A REMOTE 900 SQ. FT. PLUS AN ADDITIONAL 100 GPM ADDED FOR OUTSIDE HOSE STREAMS. MINIMUM FLOW OF 6- 1/2" VIKING QR PENDENTS VARIES FROM 15 TO 21 GPM. DEMAND AT THE BASE OF THE RISER IS 122.55 GPM AT 45.96 PSI. DEMAND AT THE POINT OF CONNECTION TO CITY MAIN IS 222.55 GPM AT 45.96 PSI.



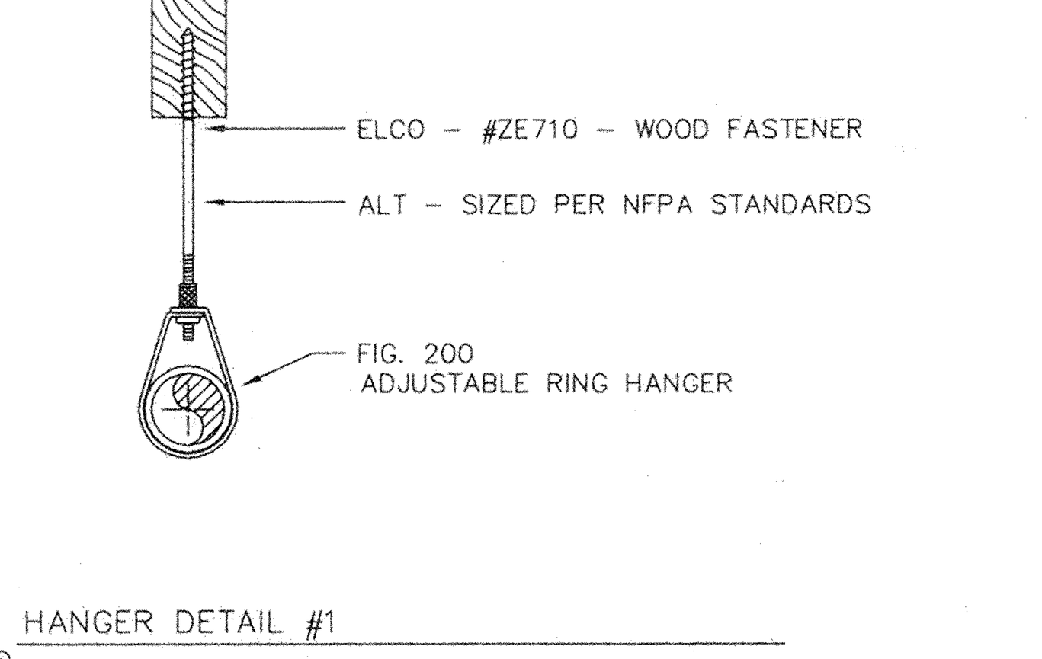
FIRE SPRINKLER
SECOND FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL FIRE SPRINKLER NOTES:

1. ALL DESIGN, CALCULATIONS, MATERIALS, INSTALLATION AND TESTING TO BE PER:
   1. NFPA STANDARDS
   2. NEBRASKA STATE FIRE MARSHAL
2. FIRE SPRINKLER PIPE SIZES 1" THROUGH 2" TO BE ALLIED XL WITH CAST IRON THREADED AND SLIP FITTINGS. PIPE SIZES 2 1/2" AND LARGER TO BE BLACK SCHEDULE #10 WITH GROOVED FITTINGS AND WELDED OUTLETS.
3. WELDING TO BE DONE BY NIFCO'S CERTIFIED WELDER. EACH WELD TO HAVE WELDER'S INITIALS STAMPED ADJACENT TO WELD. THERE WILL BE NO FIELD WELDING ON THIS PROJECT.
4. CITY AUTHORITIES AND INS. CARRIER TO BE INFORMED PRIOR TO ANY SYSTEM CONTROL VALVE CLOSURES.
5. HANGERS NOTE: HANGERS INSTALLED PER NFPA 13 1996 SECTIONS 2-6. TRAPEZE HANGER NOTE: ALL TRAPEZE HANGERS TO BE SIZED ACCORDING TO NFPA #13.
6. ONLY NEW, UNUSED, U.L. LISTED MATERIALS FOR FIRE SPRINKLER INSTALLATIONS TO BE INSTALLED.
7. HYDRAULIC CALCULATIONS RESULTS TO BE POSTED AT RISER LOCATION.
8. FITTER'S TO TEFLON TAPE HEADS INSTALLED IN WELD-O-LETS.
9. OWNER TO INSURE AND GUARANTEE ADEQUATE HEAT THROUGHOUT, WHERE FIRE SPRINKLER PIPING IS PRESENT TO PREVENT FIRE SPRINKLER PIPING FROM FREEZING.
10. UPON COMPLETION, CONTRACTORS MATERIAL AND TEST CERTIFICATE TO BE FORWARDED TO INS. CARRIER AND LOCAL AUTHORITIES HAVING JURISDICTION.
11. NIFCO MECHANICAL SYSTEMS TO PROVIDE ELECTRIC FLOW SWITCH, TAMPER SWITCH, AND 6" 120V ALARM BELL. (WIRED BY OTHERS)
12. NIFCO MECHANICAL TO PROVIDE 1-SPRINKLER HEAD CABINET, SPRINKLER HEAD WRENCH, AND 4 EXTRA SPRINLER HEADS OF EACH TYPE SUPPLIED AS REQUIRED PER NFPA #13.
13. MARK N. LONG NICET LEVEL FOUR-#070035



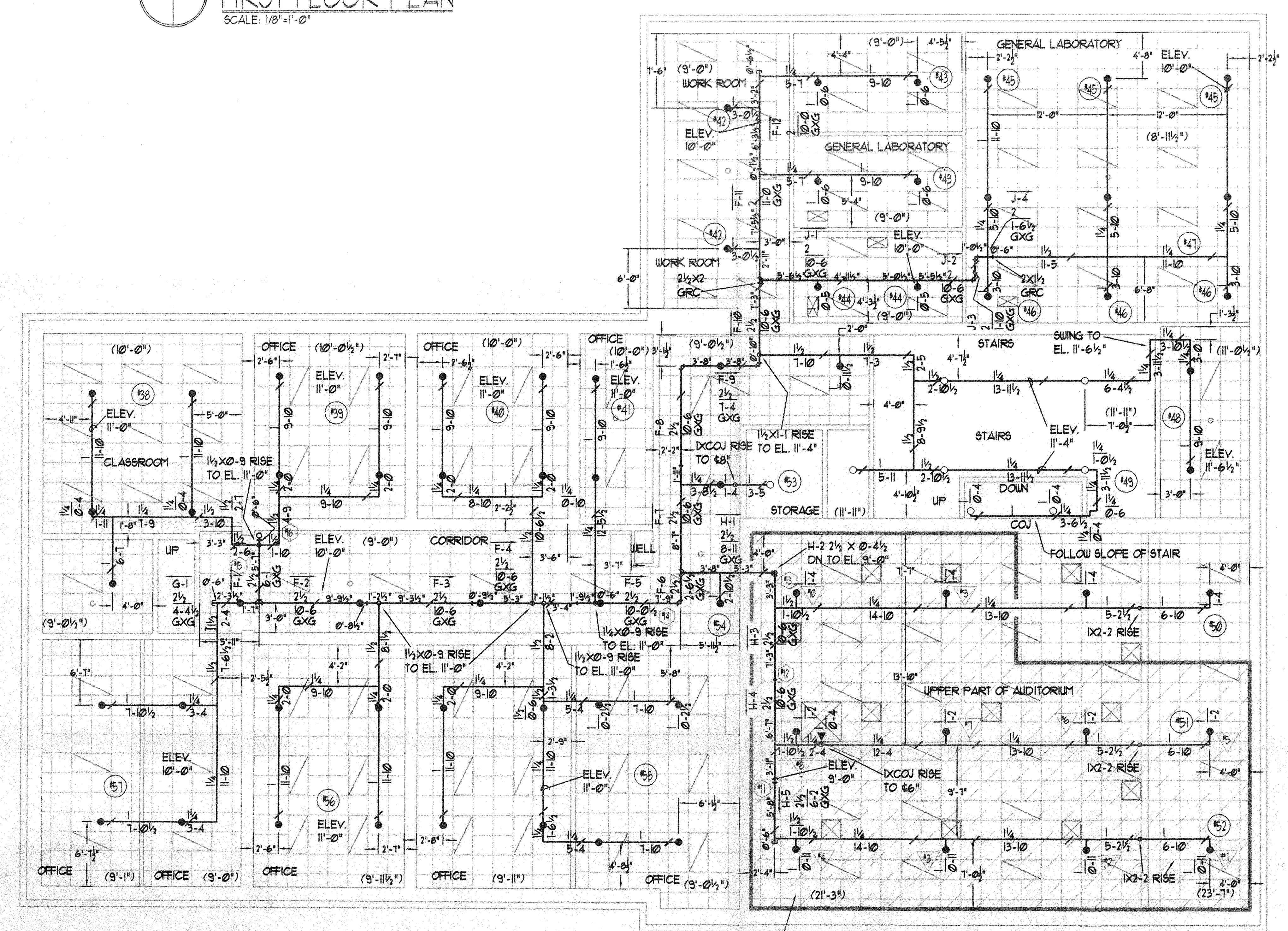
SELF DRILLING ANCHOR, ROD AND RING



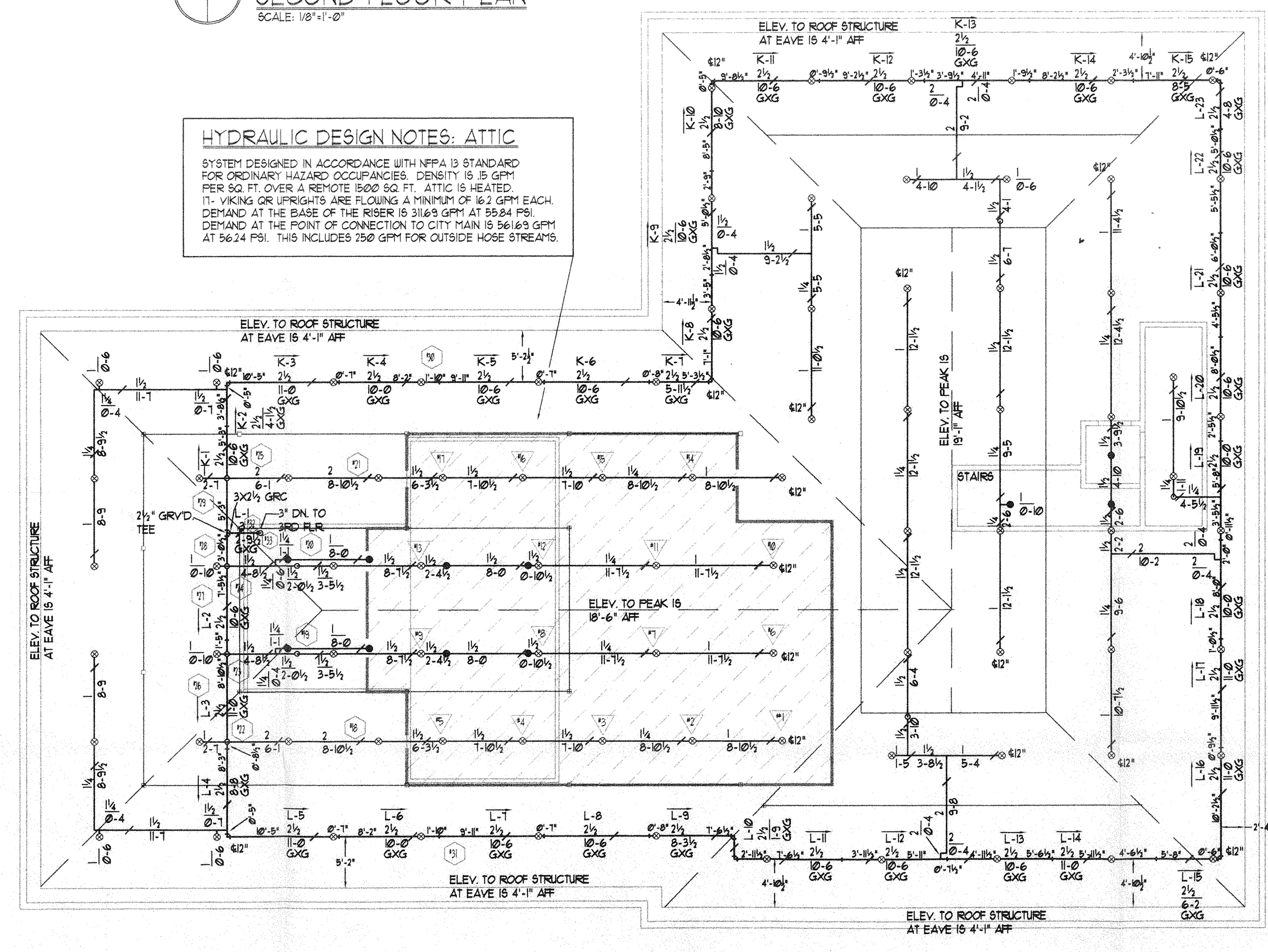
HANGER DETAIL #1

HYDRAULIC DESIGN NOTES: ATTIC

SYSTEM DESIGNED IN ACCORDANCE WITH NFPA 13 STANDARD FOR ORDINARY HAZARD OCCUPANCIES. DENSITY IS .15 GPM PER SQ. FT. OVER A REMOTE 1500 SQ. FT. ATTIC IS HEATED. 17- VIKING QR UPRIGHTS ARE FLOWING A MINIMUM OF 16.2 GPM EACH. DEMAND AT THE BASE OF THE RISER IS 311.69 GPM AT 55.84 PSI. DEMAND AT THE POINT OF CONNECTION TO CITY MAIN IS 561.69 GPM AT 56.24 PSI. THIS INCLUDES 250 GPM FOR OUTSIDE HOSE STREAMS.



FIRE SPRINKLER
THIRD FLOOR PLAN
SCALE: 1/8"=1'-0"



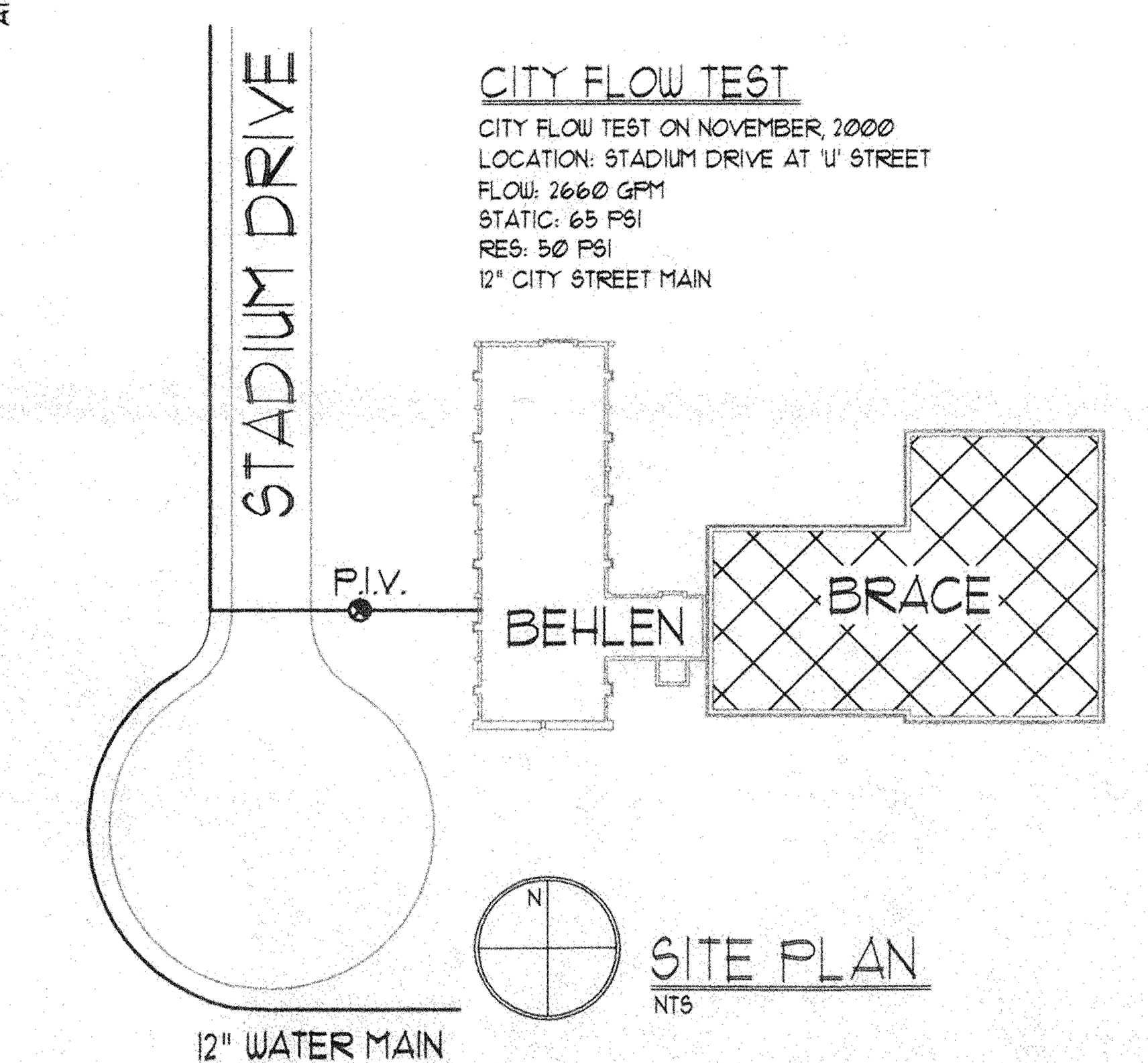
FIRE SPRINKLER
ATTIC FLOOR PLAN
SCALE: 1/8"=1'-0"

HYDRAULIC DESIGN NOTES: 3RD FLR. AUD.

THIRD FLOOR AUDITORIUM DESIGNED IN ACCORDANCEW WITH NFPA 13 STANDARD FOR LIGHT HAZARD OCCUPANCIES. DENSITY IS .10 GPM PER AQ. FT. OVER A REMOTE 1500 SQ. FT. PLUS AN ADDITIONAL 100 GPM ADDED FOR OUTSIDE HOSE STREAMS. MINIMUM FLOW OF 10- 1/2" VIKING QR PENDENTS VARIES FROM 14.82 GPM TO 21.0 GPM. DEMAND AT THE BASE OF THE RISER IS 213.85 GPM AT 60.58 PSI. DEMAND AT THE POINT OF CONNECTION TO CITY MAIN IS 313.85 GPM AT 60.78 PSI.

CITY FLOW TEST

CITY FLOW TEST ON NOVEMBER, 2000
LOCATION: STADIUM DRIVE AT 'U' STREET
FLOW: 2660 GPM
STATIC: 65 PSI
RES: 50 PSI
12" CITY STREET MAIN



SITE PLAN
NTS

SPRINKLER SYMBOL LEGEND

SYMBOL	DESCRIPTION
	HANGER LOCATION
#2(0-6)	HANGER NUMBER & ROD LENGTH
BOB	BOTTOM OF BEAM
AFF	ABOVE FINISHED FLOOR
℄	PIPE CENTERLINE BELOW STRUCTURE
ELE.	PIPE CENTERLINE ABOVE FIN. FLOOR
	PIPE RISE OR DROP
RN	RISER NIPPLE
TOJ	TOP OF JOIST
	ENTRANCE RISER LOCATION
	HYDRAULIC CALC. OUTLET NUMBER
	HYDRAULIC CALC. PIPE NUMBER
BL#3	BRANCHLINE FABRICATION NUMBER
	GROOVED COUPLING LOCATION
C-C	CENTER TO CENTER
E-C	END TO CENTER
G-G	GROOVE BY GROOVE
	DIRECTION OF FLOW
	THREADED UNION
COJ	CUT ON JOB
	GROOVED RED. COUPLING LOCATION
	FIRE HOSE RACK LOCATION

SPRINKLER HEAD LEGEND

SIN#	MFG	MODEL	TYPE	RESPONSE	ORIFICE	NPT	K=	TEMP.	FINISH	ESC.	SYMBOL	QUANTITY
VK302	VIKING	"M"	SSP	QR	1/2	1/2	5.5	155	CHROME	E-1	●	177
VK300	VIKING	"M"	SSU	QR	1/2	1/2	5.5	155	BRASS	SPRIG	◎	8
VK300	VIKING	"M"	SSU	QR	1/2	1/2	5.5	200	BRASS	–	⊗	85
VK300	VIKING	"M"	SSP	QR	1/2	1/2	5.5	155	BRASS	–	⊖	6
VK300	VIKING	"M"	SSU	QR	1/2	1/2	5.5	155	BRASS	–	○	50
VK333	VIKING	"M"	HSW	QR	1/2	1/2	5.5	155	CHROME	E-1	◀	2
TOTAL THIS SHEET												328

APPROVALS
STATE FIRE MARSHAL

REVISIONS: DATE:

Nifco Mechanical Systems, Inc.
Fire Sprinkler Systems
531 Sumner Street
Lincoln, NE 68502
Voice: 402.477.0666 Fax: 402.477.2314 Email: nifco@kdsi.net

Job Name: BRACE HALL PHYSICS LABORATORY
Address: STADIUM DRIVE AND 'U' STREETS
UNL CITY CAMPUS LINCOLN, NEBRASKA
Contract With: OWNER

DRAWN BY: MC
CHECKED BY: ML
DATE: 11/24/03
SCALE: 1/8=1-0
TYPE: WET
FILE NO: 03-027
SHEET NO. FP-2 of 2

BRACE HALL PHYSICS LABORATORY

KEYED DEMOLITION NOTES

1. REMOVE CONC. SIDEWALK AND STEPS.
2. REMOVE EXIST AC UNITS.
3. NEW 4" POURED CONC. SIDEWALK W/ WWF.
4. DO NOT DRIVE OVER AREA INDICATED BY HATCH.
5. NEW 4" POURED CONC. PAD FOR CONDENSING UNIT. SEE MECH.
6. EXISTING WATER SERVICE TO BE ABANDONED. REFER TO MECHANICAL DEMOLITION PLANS FOR EXTENT OF REMOVAL.
7. CONTRACTOR CONSTRUCTION ENTRANCE.
8. INSTALL (2) 6' WIDE DOUBLE SWING GATES AT FENCE LINE FOR ACCESS TO THE SITE. PROVIDE LOCKS FOR THE GATES.
9. REMOVE BROKEN AREAS OF CONCRETE AND PREP FOR NEW CONCRETE INSTALLATION. UNIVERSITY TO DETERMINE WHEN THE CONCRETE IS TO BE REPAIRED.
10. INSTALL NEW DOWNSPOUT TURN-OUTS AND PRECAST CONCRETE SPLASHBLOCKS AT ENDS OF DOWNSPOUTS. FILL IN EXISTING PIPING TO UNDERGROUND.

CONTRACTOR TO WORK AROUND EXISTING SITE LANDSCAPING AND PREVENT DAMAGE TO EXISTING PLANTS.

CONTRACTOR TO PREP AREA NORTH OF BUILDING FOR NEW SIDEWALK FROM THE BASE OF THE FIRE ESCAPE.

1 PHOTO- NORTHEAST ELEVATION WITH ENTRY DOOR
SCALE: NONE

REMOVE EXISTING AC UNITS

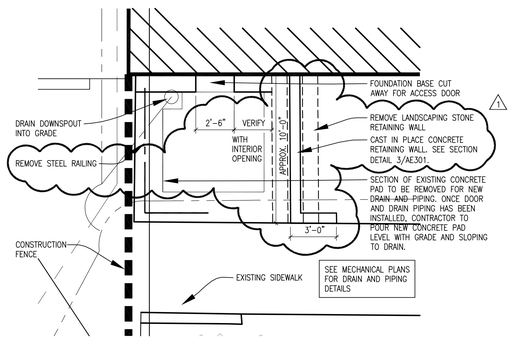
REMOVE EXISTING SIDEWALK

2 PHOTO- NORTH ELEVATION WITH SIDEWALK
SCALE: NONE

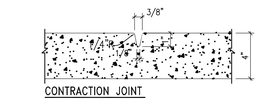
TREE TO BE PROTECTED FROM ALL CONSTRUCTION ACTIVITY

CONTRACTOR STAGING AREA

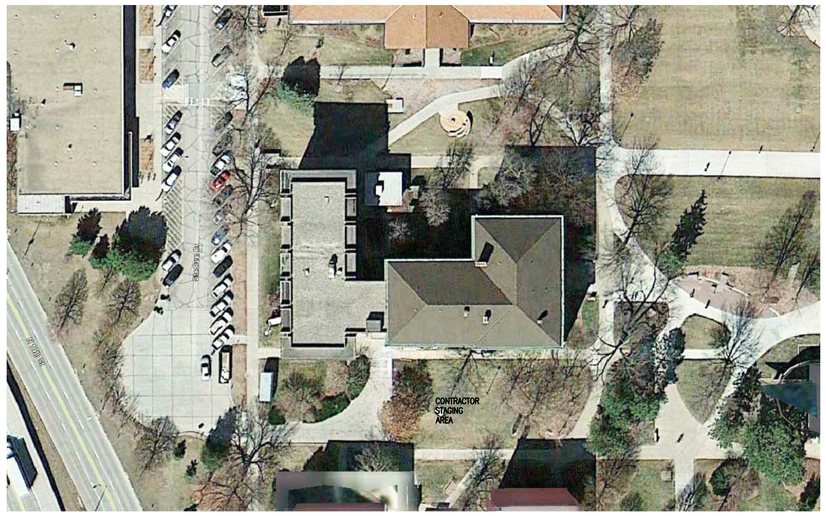
3 PHOTO- SOUTHWEST ELEVATION AT DOCK
SCALE: NONE



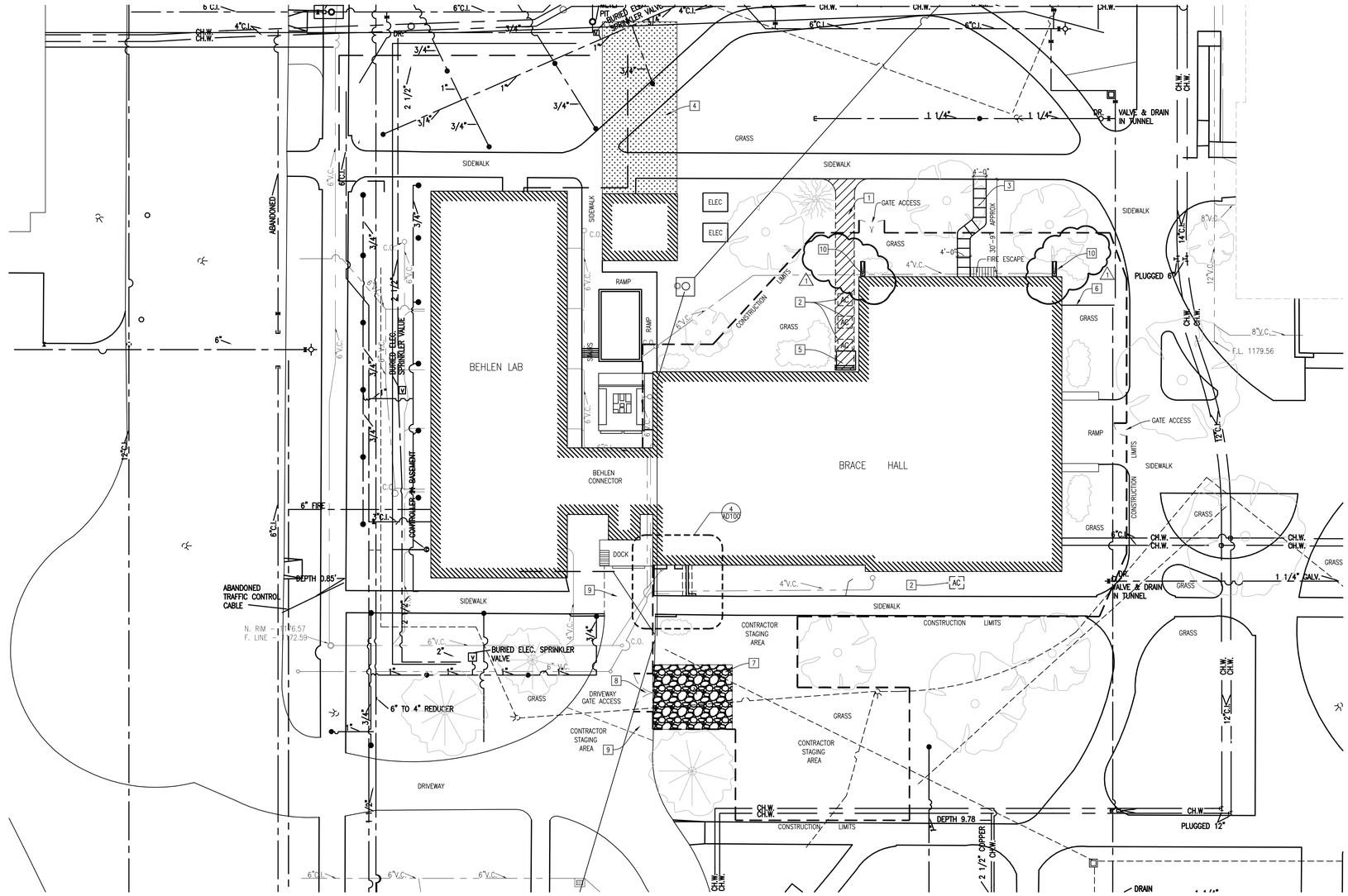
4 ENLARGED PLAN- ACCESS DOOR LOCATION
AD100 SCALE: 1/4" = 1'-0"



2 CONCRETE SIDEWALK JOINTS
AD100 SCALE: NONE



1 OVERHEAD PHOTO- BRACE HALL SITE
AD100 SCALE: NONE



3 SITE ORIENTATION PLAN- BRACE HALL, UNL CAMPUS
AD100 SCALE: 1/16" = 1'-0"

SITE DEMOLITION NOTES

1. HALF-TONE NOTES AND DIMENSIONS ARE PROVIDED FOR INFORMATION ONLY.
2. = = = = DASHED AREAS INDICATE MATERIAL OR EQUIPMENT TO BE REMOVED.
3. EXISTING SURFACES DISTURBED BY NEW CONSTRUCTION SHALL BE PATCHED AND FINISHED TO MATCH ADJACENT SURFACES.
4. SCHEDULING OF WORK SHALL BE AS OUTLINED IN SUPPLEMENTARY CONDITIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING STRUCTURES SURROUNDING THE CONTRACT AREA. DAMAGE TO EXISTING STRUCTURES OR EQUIPMENT SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT [OWNER] PRIOR TO REMOVAL OF MATERIAL OR EQUIPMENT NOT INDICATED ON THE DRAWINGS TO BE REMOVED.
7. EXISTING SURFACE AND RECESSED WALL-MOUNTED EQUIPMENT SHALL BE REMOVED ONLY AS REQUIRED IN ASSOCIATION WITH PARTITION DEMOLITION. WHERE DEMOLITION NECESSITATES REMOVAL OF WALL-MOUNTED EQUIPMENT, SUCH EQUIPMENT SHALL BE SALVAGED, PROTECTED AND REINSTALLED IN A LOCATION AS CLOSE AS POSSIBLE TO THE EXISTING CONDITION. WALL-MOUNTED FURNISHINGS, NOT ASSOCIATED WITH ELECTRICAL, MECHANICAL OR LIFE SAFETY FUNCTIONS OF THE BUILDING, SHALL BE REMOVED ONLY AS REQUIRED IN ASSOCIATION WITH DEMOLITION WORK AND SHALL BE SALVAGED AND TURNED OVER TO THE OWNER.
8. ITEMS SCHEDULED FOR DEMOLITION SHALL BE DISPOSED OF PER SPECIFICATION SECTION 017419 UNLESS NOTED OTHERWISE.
9. PROVIDE ADDITIONAL DEMOLITION AS MAY BE NEEDED FOR NEW CONSTRUCTION AS SHOWN OR SPECIFIED (VERIFY), INCLUDING GENERAL CONSTRUCTION AS NEEDED IN CONJUNCTION WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
10. FOR ADDITIONAL DEMOLITION REQUIREMENTS, SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
11. CONTRACTOR TO PROVIDE PROTECTION OF EXISTING TREES AND LANDSCAPING ON THE SITE. ANYTHING DAMAGED ON THE SITE IS TO BE REPORTED IMMEDIATELY TO THE UNIVERSITY.
12. CONTRACTOR IS TO ERECT CHAIN-LINK CONSTRUCTION FENCING ALONG THE ESTABLISHED CONSTRUCTION LIMITS AREA. CONTRACTOR TO UTILIZE THE DESIGNATED "CONTRACTOR STAGING AREA" FOR EQUIPMENT AND SUPPLIES, AS WELL AS A LAY DOWN AREA.
13. INSTALL PROTECTION FENCE AROUND DRIP LINES OF TREES TO REMAIN. TERMINATE TREE PROTECTION FENCE AT TEMPORARY CHAIN LINK FENCE.
14. FILL ALL ABANDON STORM LINES.

University of Nebraska Lincoln

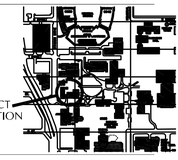
BRACE HALL RENOVATIONS
Stadium Drive and S Street
LINCOLN, NE

UNIVERSITY OF NEBRASKA-LINCOLN
LINCOLN, NE 68508

LEO A DALY
PLANNING, ARCHITECTURE, ENGINEERING, INTERIORS
EST. 1915
8600 Indian Hills Drive
Omaha, NE 68114-4039 USA
Tel 402-391-8111 Fax 402-391-8564

UNL Project #C008P098

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09.06.2013

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DTB
Draw	ABT
Check	DTB

STAMP

BID SET

2' 0 2' 4'
SCALE: 1/4"=1'-0"
8' 0 8' 16'
SCALE: 1/16"=1'-0"

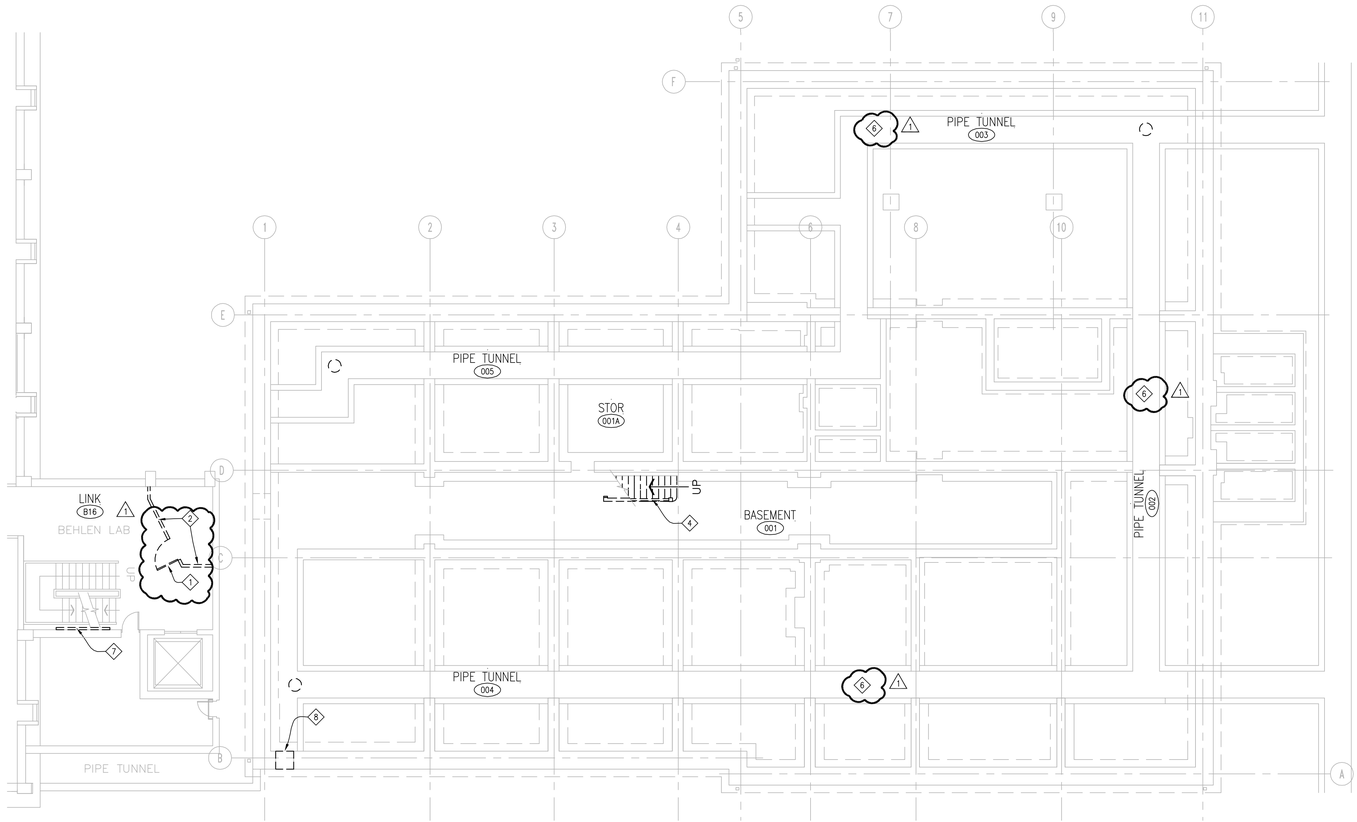
Project No. 003-10126-004
August 19, 2013

SITE ORIENTATION PLAN AND CONTRACTOR STAGING

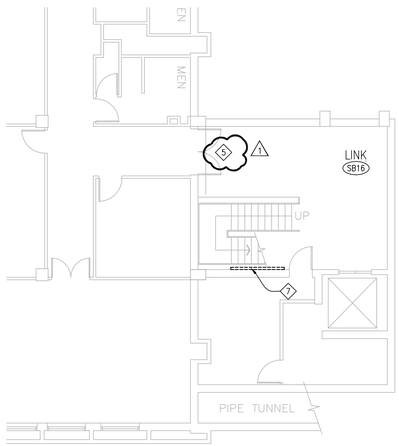
AD100

1 PHOTO- SW EXTERIOR CORNER OF BUILDING
SCALE: NONE

2 PHOTO- SW BASEMENT TUNNEL LOOKING SOUTH
SCALE: NONE



1 DEMOLITION FLOOR PLAN - BASEMENT
AD101 SCALE: 1/8" = 1'-0"



2 DEMOLITION FLOOR PLAN - SUB BASEMENT
AD101 SCALE: 1/8" = 1'-0"

DEMOLITION GENERAL NOTES

1. HALF-TONE NOTES AND DIMENSIONS ARE PROVIDED FOR INFORMATION ONLY.
2. = = = DASHED AREAS INDICATE MATERIAL OR EQUIPMENT TO BE REMOVED.
3. EXISTING SURFACES DISTURBED BY NEW CONSTRUCTION SHALL BE PATCHED AND FINISHED TO MATCH ADJACENT SURFACES.
4. SCHEDULING OF WORK SHALL BE AS OUTLINED IN SUPPLEMENTARY CONDITIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING STRUCTURES SURROUNDING THE CONTRACT AREA. DAMAGE TO EXISTING STRUCTURES OR EQUIPMENT SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT [OWNER] PRIOR TO REMOVAL OF MATERIAL OR EQUIPMENT NOT INDICATED ON THE DRAWINGS TO BE REMOVED.
7. EXISTING SURFACE AND RECESSED WALL-MOUNTED EQUIPMENT SHALL BE REMOVED ONLY AS REQUIRED IN ASSOCIATION WITH PARTITION DEMOLITION. WHERE DEMOLITION NECESSITATES REMOVAL OF WALL-MOUNTED EQUIPMENT, SUCH EQUIPMENT SHALL BE SALVAGED, PROTECTED AND REINSTALLED IN A LOCATION AS CLOSE AS POSSIBLE TO THE EXISTING CONDITION. WALL MOUNTED EQUIPMENT THAT IS PAINTED TO MATCH EXISTING WALLS SHALL BE PAINTED TO MATCH NEW WALL COLOR AS SCHEDULED. WALL-MOUNTED FURNISHINGS, NOT ASSOCIATED WITH ELECTRICAL, MECHANICAL OR LIFE SAFETY FUNCTIONS OF THE BUILDING, SHALL BE REMOVED ONLY AS REQUIRED IN ASSOCIATION WITH DEMOLITION WORK AND SHALL BE SALVAGED AND TURNED OVER TO THE OWNER.
8. ALL EXISTING WALL-MOUNTED CLOCKS SHALL BE REMOVED, SALVAGED AND TURNED OVER TO OWNER.
9. EXISTING CEILING-MOUNTED EQUIPMENT NOT SHOWN ON THE DRAWINGS SHALL BE REMOVED IN CONJUNCTION WITH CEILING REMOVAL WHERE SCHEDULED. UNLESS NOTED OTHERWISE ON ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWINGS, SUCH EQUIPMENT SHALL BE REINSTALLED IN THE NEW CEILING IN THE SAME LOCATION.
10. ITEMS SCHEDULED FOR DEMOLITION SHALL BE DISPOSED OF PER SPECIFICATION SECTION 017419 UNLESS NOTED OTHERWISE.
11. PROVIDE DUST BARRIERS, INCLUDING NEGATIVE PRESSURE EXHAUST SYSTEMS WHERE NEEDED, TO CONTROL DUST AT RENOVATION AREAS FROM ENTERING NON-RENOVATION AREAS.
12. AT EXISTING WALLS TO REMAIN, WHERE NEW ROUGH OPENING AND LINTEL IS INDICATED, PATCH AND REPAIR PLASTER FINISH AS REQUIRED TO ACHIEVE NEW APPEARANCE. PREPARE SURFACE TO RECEIVE NEW FINISH.
13. PROVIDE ADDITIONAL DEMOLITION AS MAY BE NEEDED FOR NEW CONSTRUCTION AS SHOWN OR SPECIFIED (VERIFY), INCLUDING GENERAL CONSTRUCTION AS NEEDED IN CONJUNCTION WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
14. FOR ADDITIONAL DEMOLITION REQUIREMENTS, SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
15. EXIST PANEL DOORS, HARDWARE AND FRAMES SHALL BE SALVAGED FOR INSTALLATION AT NEW LOCATION TO BE COORDINATED BY CONTRACTOR.
16. SECTIONS OF EXIST RAILINGS THAT ARE DAMAGED, OR MISSING GUARDS SHALL BE PATCHED AND REPLACED TO MATCH EXISTING.

KEYED DEMOLITION NOTES

1. REMOVE EXISTING DOOR, FRAME, AND HARDWARE COMPLETE. SALVAGE FOR OWNER.
2. REMOVE EXISTING WALL, AND ASSOCIATED PIPING, FROM FLOOR SLAB TO STRUCTURE COMPLETE.
3. EXISTING PLASTER CEILING TO REMAIN.
4. REMOVE EXISTING WOOD STAIRCASE TO BASEMENT COMPLETE. CONTRACTOR TO TURN OVER ALL MATERIALS REMOVED TO OWNER FOR EITHER SALVAGE OR PROPER DISPOSAL.
5. CONTRACTOR TO USE TEMPORARY DUST PARTITIONS AS REQUIRED IN AREAS DISTURBED DURING CONSTRUCTION.
6. NO ARCHITECTURAL OR INTERIOR WORK THIS AREA OF BUILDING.
7. REMOVE EXISTING WOOD SLAT WALL FINISH.
8. CONTRACTOR TO LOCATE THE FILLED IN OPENING IN THE EXTERIOR BASEMENT WALL AND REMOVE THE NECESSARY MASONRY TO PREP FOR INSTALLATION OF NEW ACCESS DOOR. SEE PHOTO #2 THIS SHEET.

University of Nebraska Lincoln

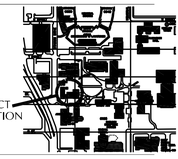
BRACE HALL RENOVATIONS
Stadium Drive and S Street
LINCOLN, NE

UNIVERSITY OF NEBRASKA-LINCOLN
LINCOLN, NE 68508

LEO A DALY
PLANNING ARCHITECTURE ENGINEERING INTERIORS
EST. 1915
8600 Indian Hills Drive
Omaha, NE 68114-4039 USA
Tel 402-391-8111 Fax 402-391-8564

UNL Project #C008P098

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09.06.2013

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DTB
Draw	AHT
Check	DTB

STAMP

BID SET

4' 0 4' 8'
SCALE: 1/8"=1'-0"

N

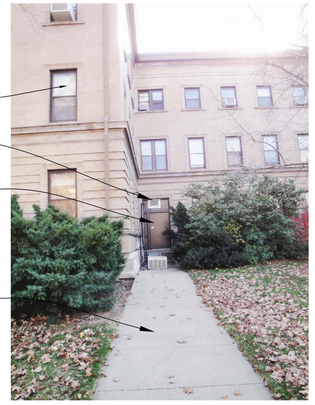
Project No. 003-10126-004
August 19, 2013

DEMOLITION FLOOR PLANS
BASEMENT AND SUB BASEMENT

AD101

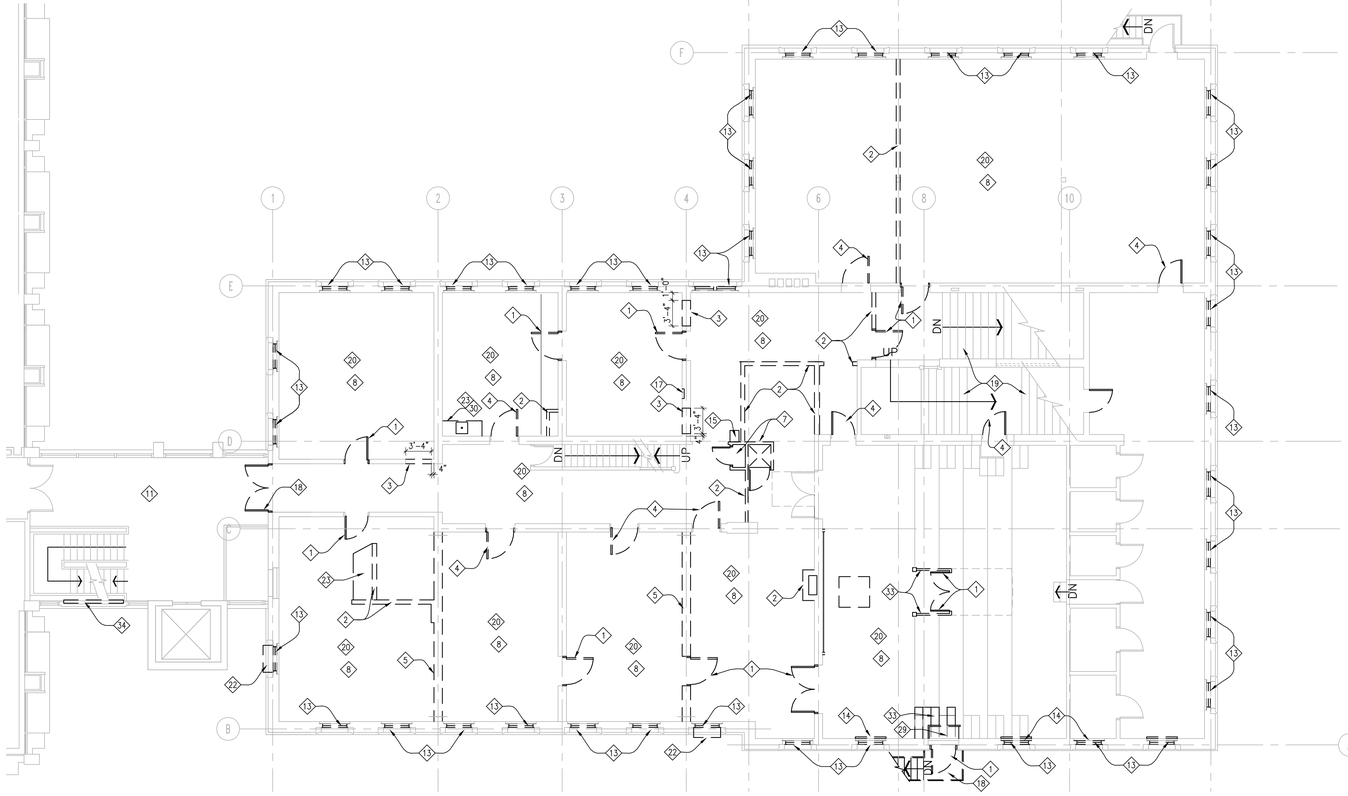
1 PHOTO- EAST ELEVATION WITH ENTRY DOOR
SCALE: NONE

2 PHOTO- SOUTH ELEVATION WITH FIRE ESCAPE
SCALE: NONE

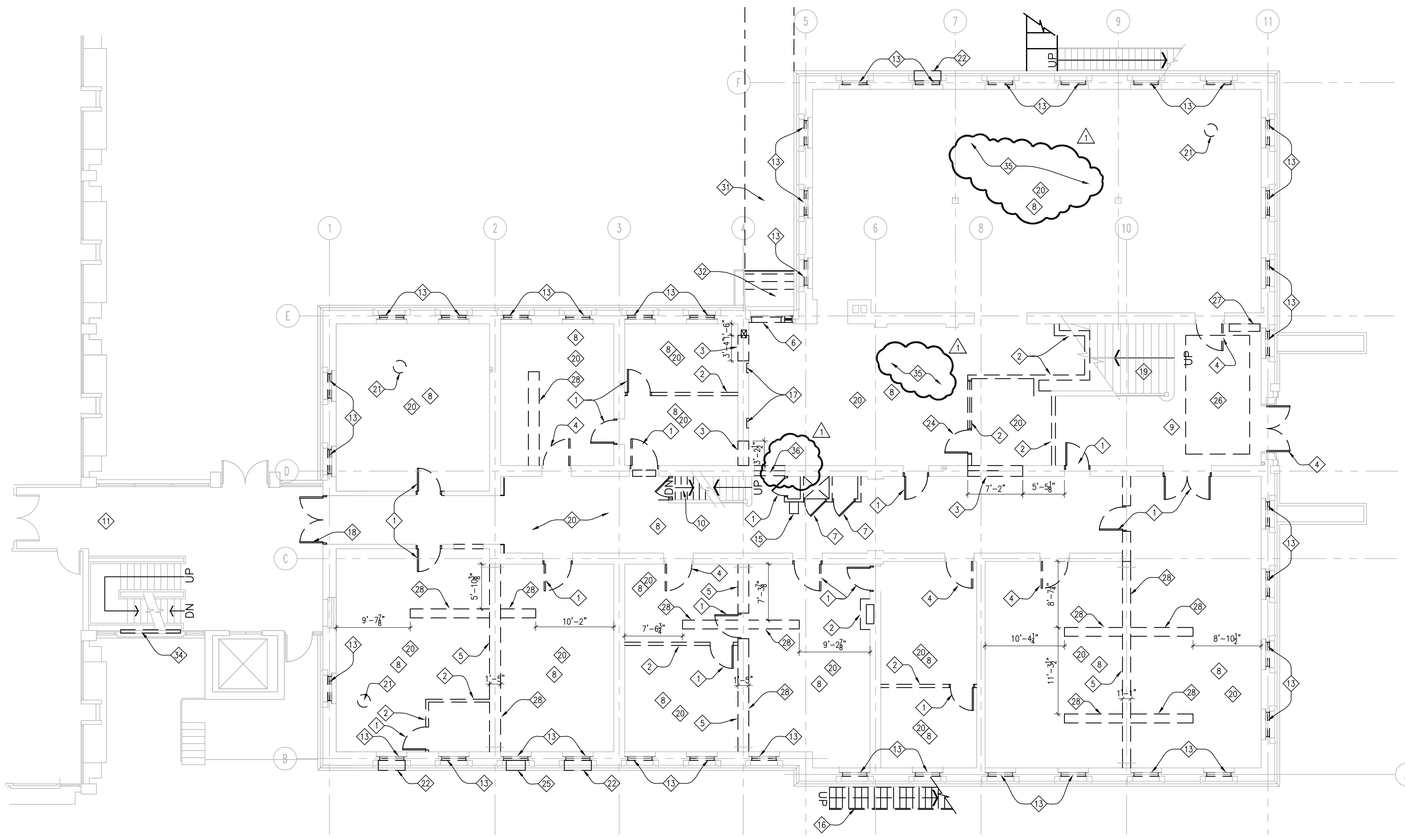


3 PHOTO- NORTH ELEVATION, EXISTING DOOR
SCALE: NONE

4 PHOTO- NORTHEAST CORNER WITH FIRE ESCAPE
SCALE: NONE



1 DEMOLITION FLOOR PLAN - LEVEL 2
AD101 SCALE: 1/8" = 1'-0"



2 DEMOLITION FLOOR PLAN - LEVEL 1
AD101 SCALE: 1/8" = 1'-0"

DEMOLITION GENERAL NOTES

1. HALF-TONE NOTES AND DIMENSIONS ARE PROVIDED FOR INFORMATION ONLY.
2. = = = DASHED AREAS INDICATE MATERIAL OR EQUIPMENT TO BE REMOVED.
3. EXISTING SURFACES DISTURBED BY NEW CONSTRUCTION SHALL BE PATCHED AND FINISHED TO MATCH ADJACENT SURFACES.
4. SCHEDULING OF WORK SHALL BE AS OUTLINED IN SUPPLEMENTARY CONDITIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING STRUCTURES SURROUNDING THE CONTRACT AREA. DAMAGE TO EXISTING STRUCTURES OR EQUIPMENT SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT [OWNER] PRIOR TO REMOVAL OF MATERIAL OR EQUIPMENT NOT INDICATED ON THE DRAWINGS TO BE REMOVED.
7. EXISTING SURFACE AND RECESSED WALL-MOUNTED EQUIPMENT SHALL BE REMOVED ONLY AS REQUIRED IN ASSOCIATION WITH PARTITION DEMOLITION. WHERE DEMOLITION NECESSITATES REMOVAL OF WALL-MOUNTED EQUIPMENT, SUCH EQUIPMENT SHALL BE SALVAGED, PROTECTED AND REINSTALLED IN A LOCATION AS CLOSE AS POSSIBLE TO THE EXISTING CONDITION. WALL MOUNTED EQUIPMENT THAT IS PAINTED TO MATCH EXISTING WALLS SHALL BE PAINTED TO MATCH NEW WALL COLOR AS SCHEDULED. WALL-MOUNTED FURNISHINGS, NOT ASSOCIATED WITH ELECTRICAL, MECHANICAL OR LIFE SAFETY FUNCTIONS OF THE BUILDING, SHALL BE REMOVED ONLY AS REQUIRED IN ASSOCIATION WITH DEMOLITION WORK AND SHALL BE SALVAGED AND TURNED OVER TO THE OWNER.
8. ALL EXISTING WALL-MOUNTED CLOCKS SHALL BE REMOVED, SALVAGED AND TURNED OVER TO OWNER.
9. EXISTING CEILING-MOUNTED EQUIPMENT NOT SHOWN ON THE DRAWINGS SHALL BE REMOVED IN CONJUNCTION WITH CEILING REMOVAL WHERE SCHEDULED. UNLESS NOTED OTHERWISE ON ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWINGS, SUCH EQUIPMENT SHALL BE REINSTALLED IN THE NEW CEILING IN THE SAME LOCATION.
10. ITEMS SCHEDULED FOR DEMOLITION SHALL BE DISPOSED OF PER SPECIFICATION SECTION 017419 UNLESS NOTED OTHERWISE.
11. PROVIDE DUST BARRIERS, INCLUDING NEGATIVE PRESSURE EXHAUST SYSTEMS WHERE NEEDED, TO CONTROL DUST AT RENOVATION AREAS FROM ENTERING NON-RENOVATION AREAS.
12. AT EXISTING WALLS TO REMAIN, WHERE NEW ROUGH OPENING AND LINTEL IS INDICATED, PATCH AND REPAIR PLASTER FINISH AS REQUIRED TO ACHIEVE NEW APPEARANCE. PREPARE SURFACE TO RECEIVE NEW FINISH.
13. PROVIDE ADDITIONAL DEMOLITION AS MAY BE NEEDED FOR NEW CONSTRUCTION AS SHOWN OR SPECIFIED (VERIFY), INCLUDING GENERAL CONSTRUCTION AS NEEDED IN CONJUNCTION WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
14. FOR ADDITIONAL DEMOLITION REQUIREMENTS, SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
15. EXIST PANEL DOORS, HARDWARE AND FRAMES SHALL BE SALVAGED FOR INSTALLATION AT NEW LOCATION TO BE COORDINATED BY CONTRACTOR.
16. SECTIONS OF EXIST RAILINGS THAT ARE DAMAGED, OR MISSING GUARDS SHALL BE PATCHED AND REPLACED TO MATCH EXISTING.

KEYED DEMOLITION NOTES

1. REMOVE EXISTING DOOR, FRAME, AND PANELED CASING, WHERE OCCURRING, COMPLETE. SALVAGE FOR OWNER.
2. REMOVE EXISTING WALL, AND ASSOCIATED PIPING, FROM FLOOR SLAB TO STRUCTURE COMPLETE.
3. REMOVE PORTION OF WALL TO CREATE FINISHED CLEAR OPENING AS DIMENSIONED.
4. REMOVE DOOR AND HARDWARE. SALVAGE FOR OWNER.
5. REMOVE EXIST. FLOOR STRUCTURE ABOVE, PARTITION WALL, AND ASSOCIATED BRACING AND PIPING CHASE FULL-HEIGHT, CAP UTILITIES AS NECESSARY. SHORE AS REQUIRED TO INSTALL NEW COLUMNS AND BEAMS. REFER TO DETAIL 5/AE502.
6. REMOVE EXISTING EXTERIOR DOOR, SIDELITE, TRANSOM, LOUVER AND FRAME COMPLETE.
7. REMOVE EXIST. CLOSET, WALLS, DOORS, SHELVES, RODS AND HARDWARE COMPLETE. SALVAGE AND TURN OVER TO OWNER.
8. REMOVE EXIST. ACOUSTICAL TILE CEILING THROUGHOUT ROOM OR CORRIDOR; SALVAGE ACOUSTICAL TILES/PANELS AND TURN OVER TO OWNER.
9. EXISTING PLASTER CEILING TO REMAIN.
10. REMOVE EXISTING WOOD STAIRCASE TO BASEMENT COMPLETE. CONTRACTOR TO TURN OVER ALL MATERIALS REMOVED TO OWNER FOR EITHER SALVAGE OR PROPER DISPOSAL.
11. CONTRACTOR TO USE TEMPORARY DUST PARTITIONS AS REQUIRED IN AREAS DISTURBED DURING CONSTRUCTION.
12. NO ARCHITECTURAL OR INTERIOR WORK THIS AREA OF BUILDING.
13. REMOVE EXISTING GLAZING; WINDOW FRAMES AND STORM WINDOWS; SEE ENLARGED WINDOW DETAILS SHEET AE310.
14. REMOVE INTERIOR SURFACE FINISH AND FRAMING AT EXISTING WINDOW OPENING. PREP OPENING FOR NEW WINDOW.
15. REMOVE EXISTING DRINKING FOUNTAIN. CAP PIPING AT WALL.
16. REMOVE EXISTING FIRE ESCAPE STAIR STRUCTURE, INCLUDING SUPPORTING FOUNDATIONS COMPLETE.
17. REMOVE PORTION OF BRICK AS REQ'D FOR PAPER TOWEL DISPENSER/WASTE RECEPTACLE.
18. REMOVE EXISTING DOORS, HARDWARE AND FRAME. SALVAGE DOORS TO BE RELOCATED IN CORRIDOR, PER DOOR SCHEDULE.
19. REMOVE EXIST RUBBER TREADS.
20. REMOVE EXISTING FLOORING THROUGHOUT ROOM. PREPARE SURFACE TO RECEIVE NEW FLOORING AS SCHEDULED. THIS INCLUDES REMOVAL OF ALL PROTRUDING NAILS IN ROOMS WHERE HARDWOOD FLOORS EXIST, AND FLOOR COVERING WAS REMOVED AS PART OF ABATEMENT. REPAIR ALL FASTENERS AS REQUIRED.
21. REMOVE MANHOLE COVER AND RING.
22. REMOVE EXISTING WINDOW A/C UNIT. REFER TO MECHANICAL.
23. REMOVE EXISTING MILLWORK
24. REMOVE EXIST DOOR AND INTERIOR WINDOW FRAME.
25. REMOVE EXISTING EXHAUST FAN, REFER TO MECHANICAL.
26. REMOVE AREA OF MOSAIC TILE AS SHOWN. SALVAGE TILES TO REPLACE DAMAGED TILES IN AREA OF MOSAIC TILE TO REMAIN.
27. REMOVE EXISTING PHONES AND PRIVACY SCREENS.
28. REMOVE SECTION OF FLOOR AS SHOWN. REFER TO DETAIL 2/AE502.
29. REMOVE EMERGENCY EXIT PLATFORM AND RAILING COMPLETE.
30. REMOVE EXISTING SINK, CAP PIPING AT WALL.
31. REMOVE EXISTING SIDEWALK COMPLETE.
32. REMOVE EXISTING CONC STAIR COMPLETE.
33. REMOVE OFFSET STEPS AT STAIRWAY.
34. REMOVE EXISTING WOOD SLAT WALL FINISH.
35. CONTRACTOR TO GRIND SMOOTH ANY RAISED AREA ON THE FLOOR SURFACE OF THIS ROOM. PREPARE FLOOR FOR NEW FLOOR FINISH.
36. REMOVE EXISTING RECESSED DISPLAY CASE IN WALL COMPLETE.

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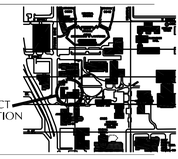
UNL Project #C008P098

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09.06.2013

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DTB
Draw	AHT
Check	DTB

STAMP

BID SET

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

Project No. 003-10126-004
August 19, 2013

DEMOLITION FLOOR PLANS
LEVEL 1 AND LEVEL 2

AD102

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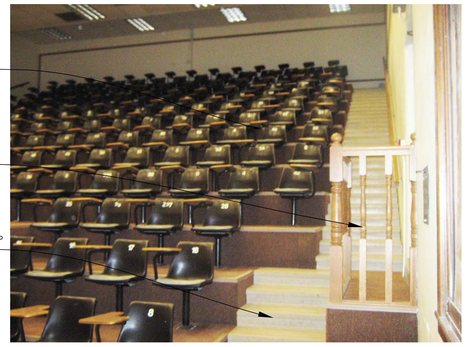
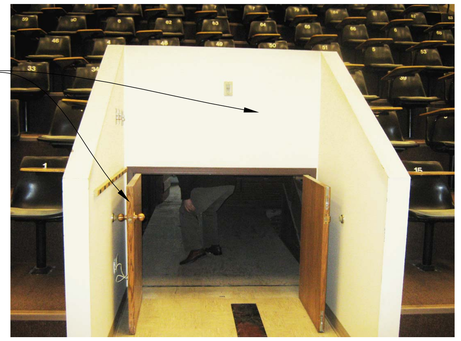
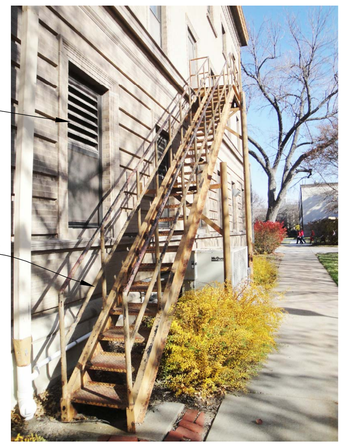


5 PHOTO- SEATING IN MAIN LECTURE HALL
SCALE: NONE

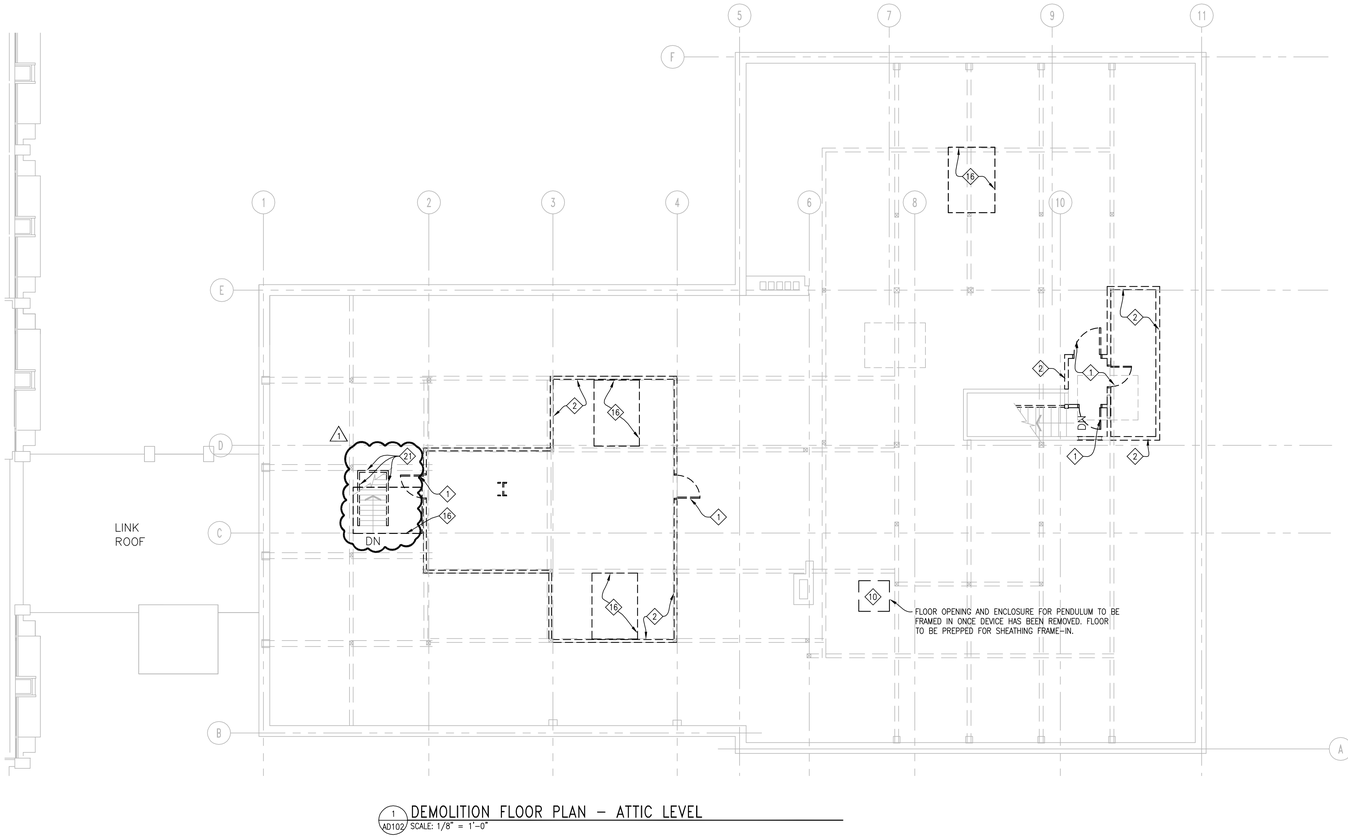
6 PHOTO- MAIN STAIRWAY, EAST ENTRY
SCALE: NONE



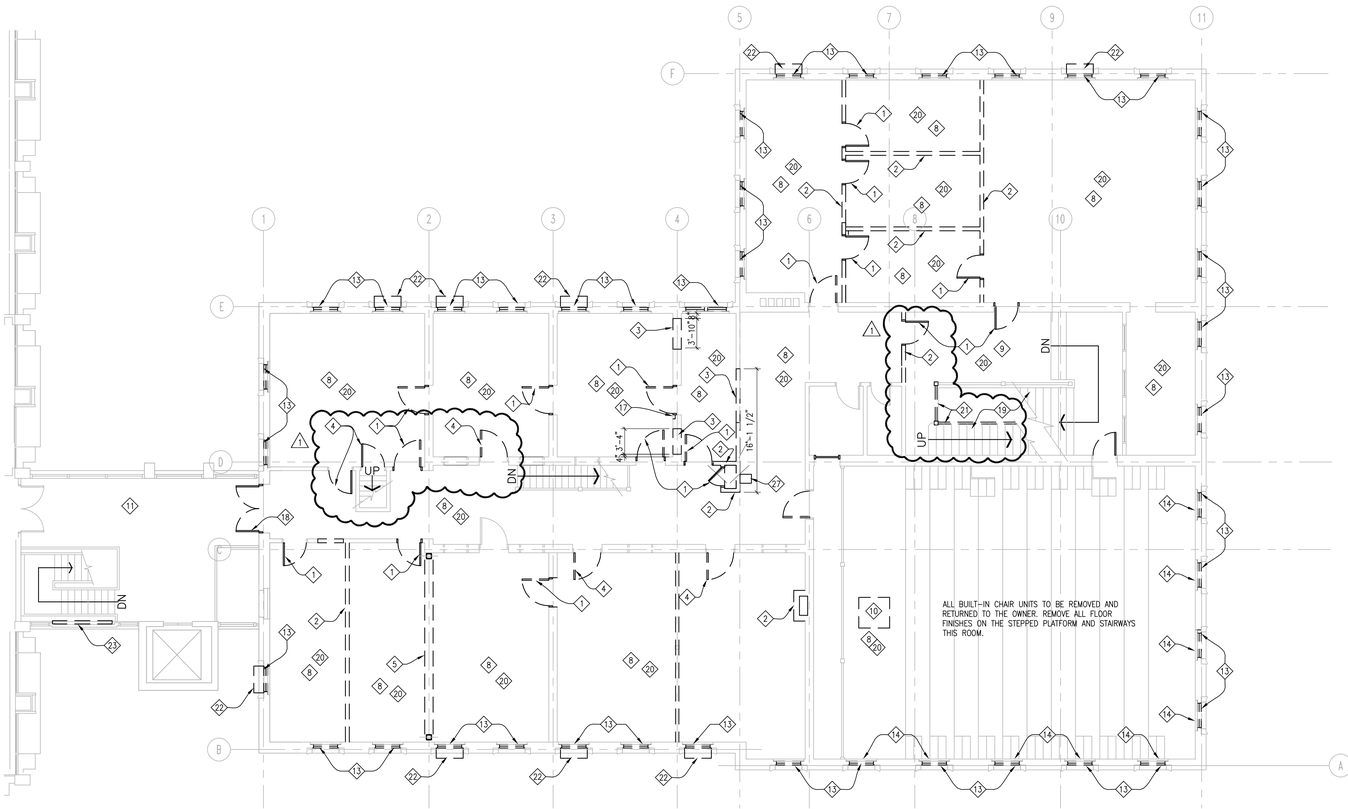
7 PHOTO- STORAGE DOORS IN LECTURE HALL
SCALE: NONE



8 PHOTO- FIRE ESCAPE ON SOUTH SIDE
SCALE: NONE



1 AD102 DEMOLITION FLOOR PLAN – ATTIC LEVEL
SCALE: 1/8" = 1'-0"



2 AD102 DEMOLITION FLOOR PLAN – LEVEL 3
SCALE: 1/8" = 1'-0"

DEMOLITION GENERAL NOTES

REFER TO SHEET AD101

KEYED DEMOLITION NOTES

1. REMOVE EXISTING DOOR, FRAME AND PANELED CASING, WHERE OCCURRING COMPLETE. SALVAGE FOR OWNER.
2. REMOVE EXISTING WALL, AND ASSOCIATED PIPING, FROM FLOOR SLAB TO STRUCTURE COMPLETE.
3. REMOVE PORTION OF WALL TO CREATE FINISHED CLEAR OPENING AS DIMENSIONED.
4. REMOVE EXIST. DOOR AND HARDWARE. SALVAGE FOR OWNER.
5. REMOVE EXIST. FLOOR STRUCTURE ABOVE, PARTITION WALL, AND ASSOCIATED BRACING AND PIPING CHASE FULL-HEIGHT, CAP UTILITIES AS NECESSARY. SHORE AS REQUIRED TO INSTALL NEW COLUMNS AND BEAMS. REFER TO 5/AE502.
6. REMOVE SECTION OF EXTERIOR WALL PANEL INDICATED.
7. REMOVE EXIST. CLOSET, WALLS, DOORS, SHELVES, RODS AND HARDWARE COMPLETE. SALVAGE AND TURN OVER TO OWNER.
8. REMOVE EXIST. ACOUSTICAL TILE CEILING THROUGHOUT ROOM OR CORRIDOR; SALVAGE ACOUSTICAL TILES/PANELS AND TURN OVER TO OWNER.
9. EXISTING PLASTER CEILING TO REMAIN.
10. REMOVE FRAMING FOR PENDULUM OPENING TO STRUCTURE COMPLETE.
11. CONTRACTOR TO USE TEMPORARY DUST PARTITIONS AS REQUIRED IN AREAS DISTURBED DURING CONSTRUCTION.
12. NO ARCHITECTURAL OR INTERIOR WORK THIS AREA OF BUILDING.
13. REMOVE EXISTING GLAZING; WINDOW FRAMES AND STORM WINDOWS; SEE ENLARGED WINDOW DETAILS SHEET AE310.
14. REMOVE INTERIOR SURFACE FINISH AND FRAMING AT EXISTING WINDOW OPENING. PREP OPENING FOR NEW WINDOW.
15. REMOVE EXISTING DRINKING FOUNTAIN. CAP PIPING AT WALL.
16. REMOVE EXISTING ORIGINAL SKYLIGHT AND FRAME COMPLETE. REMOVE SECTION OF ROOF AS REQUIRED FOR NEW MECHANICAL DORMER. REFER TO ROOF PLAN, SHEET AE121.
17. REMOVE PORTION OF BRICK AS REQ'D FOR PAPER TOWEL DISPENSER/WASTE RECEPTACLE.
18. REMOVE EXISTING DOORS, HARDWARE AND FRAME. SALVAGE DOORS TO BE RELOCATED IN CORRIDOR PER DOOR SCHEDULE.
19. REMOVE EXISTING RUBBER TREADS.
20. REMOVE EXISTING FLOORING THROUGHOUT ROOM. PREPARE SURFACE TO RECEIVE NEW FLOORING AS SCHEDULED. THIS INCLUDES REMOVAL OF ALL PROTRUDING NAILS IN ROOMS WHERE HARDWOOD FLOOR EXIST, AND FLOOR COVERING WAS REMOVED AS PART OF ABATEMENT. REPAIR ALL FASTENERS AS REQUIRED.
21. REMOVE EXISTING WOOD RAILING. SALVAGE PARTS FOR REPLACEMENT AT OTHER LOCATIONS AS NECESSARY.
22. REMOVE EXISTING WINDOW A/C UNIT. REFER TO MECHANICAL.
23. REMOVE EXISTING WOOD SLAT WALL FINISH.

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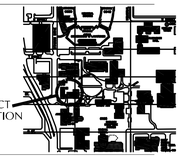
KEY PLAN



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1	ADDENDUM 001	09.06.2013

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Manager	DTB
Design	DTB
Draw	AHT
Check	DTB

STAMP

BID SET

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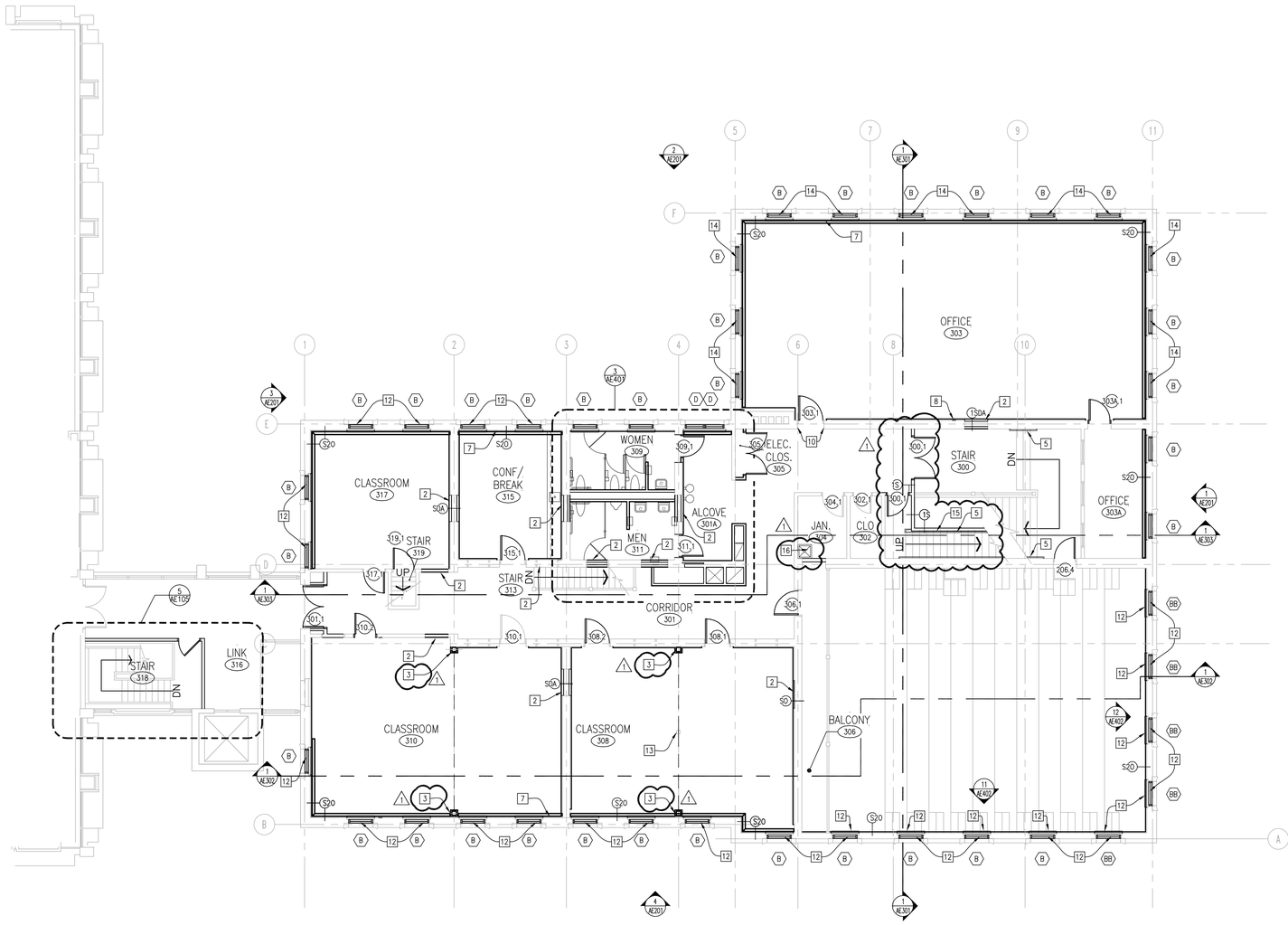
SCALE: 1/8"=1'-0"

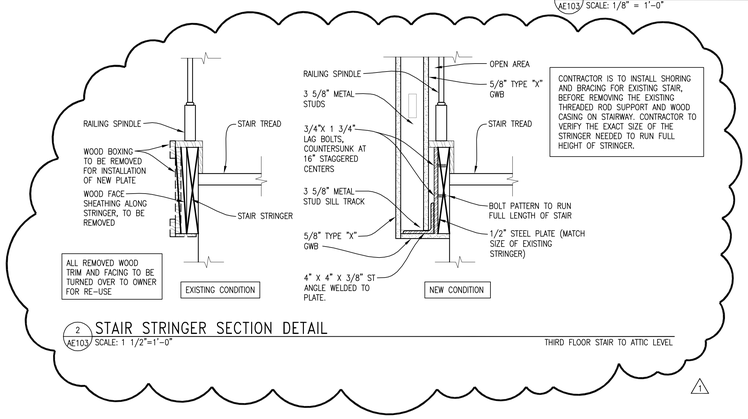
Project No. 003-10126-004
August 19, 2013

DEMOLITION FLOOR PLANS
LEVEL 3 AND ATTIC LEVEL

AD103



1 AE103 FLOOR PLAN – LEVEL 3
SCALE: 1/8" = 1'-0"



2 AE103 STAIR STRINGER SECTION DETAIL
SCALE: 1 1/2"=1'-0"

THIRD FLOOR STAIR TO ATTIC LEVEL

KEYED ARCHITECTURAL NOTES

1. NEW FLOOR FINISH TO WILL NEED TO BE INSTALLED ON AND AROUND THE MANHOLE ACCESS COVER TO THE BASEMENT BELOW. MAINTAIN ACCESS.
2. NEW WALL CONSTRUCTION INFILL. NOTE WALL TYPE, ALIGN WITH FACE OF EXIST PARTITION.
3. NEW FRAMED BOX OUT AT NEW COLUMN. SIM TO DETAIL 3/AE502. 1
4. CONSTRUCT NEW WOOD CASING AT NEW WALL OPENING. WOOD TRIM TO MATCH CASED OPENINGS AT EXISTING OPENINGS.
5. NEW 1½" DIAMETER WOOD HANDRAIL MOUNTED TO EXISTING WALL. HANDRAILS SHALL EXTEND HORIZONTALLY 12" BEYOND TOP RISER AND CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. WHERE EXTENSION IS NOT POSSIBLE, RETURN TO WALL.
6. ALIGN NEW PARTITION FACE WITH EXISTING WALL (TYP. ALL CONDITIONS).
7. FUR OUT WALL AS DESIGNATED ON WALL TYPES.
8. PATCH ALL EXISTING WALLS WHERE ATTACHED WALLS HAVE BEEN REMOVED. INSTALL GWB TO ALIGN WITH THE EXISTING FACE OF EXISTING PLASTER OR GWB AND PAINT TO MATCH.
9. AREA OF PATCHED SUB-FLOOR FOR UTILITY INSTALLATION.
10. HARDWOOD CASED OPENING.
11. NEW EXIT DOOR IN EXISTING FRAME ASSEMBLY.
12. WINDOW TO HAVE BLACK-OUT SHADE UNIT INSTALLED.
13. EXIST COLUMN TO REMAIN.
14. WINDOW TO HAVE LIGHT FILTERING SHADE UNIT INSTALLED.
15. STAIR STRINGER TO BE REINFORCED WITH NEW STEEL PLATE ASSEMBLY. SEE DETAIL 2/AE103.
16. PIPING MAY NOT BE ROUTED IN 1 HOUR RATED STAIR ENCLOSURE. 1

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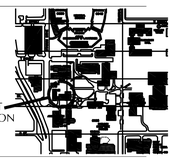

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Manager	DTB
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Draw	AHT
Check	DTB

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Project No. 003-10126-004
August 19, 2013

FLOOR PLAN
LEVEL 3

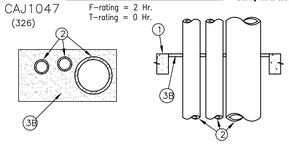
AE103

2 HOUR FIRE RATED THROUGH PENETRATION FIRESTOP FOR MULTIPLE METAL PIPE THROUGH CONCRETE FLOORS OR WALLS USING FYRE-SHIELD.

CAJ1047 (326)

F-rating = 2 Hr.
T-rating = 0 Hr.

Drawing not to scale



① FLOOR OR WALL ASSEMBLY = 4 " THICK CONCRETE, MAX. AREA OF OPENING IS 288 SQ. IN.

② -COPPER PIPE: 4" DIA. (OR SMALLER) REGULAR (OR HEAVIER) COPPER.
-STEEL PIPE: 8" DIA. (OR SMALLER) SCH.40 (OR HEAVIER) STEEL.
-CONDUIT: 4" DIA. (OR SMALLER) EMT OR 6" DIA. (OR SMALLER) STEEL CONDUIT.
-COPPER TUBING: 4" DIA.(OR SMALLER) TYPE L(OR HEAVIER) COPPER.
-IRON PIPE: 8" DIA.(OR SMALLER) CAST OR DUCTILE IRON.
-MAX. NUMBER OF PIPES WITH OPENING IS THREE (3).

③ A) FORMING MATERIAL - (NOT SHOWN) - NOM. 1" THICK POLY-URETHANE BACKER ROD FRICTION FITTED INTO OPENING.
B) NOM. ¼ " FYRE-SHIELD THICKNESS INSTALLED WITHIN OPENING.

NOTE: FOR WALL APPLY FYRE-SHIELD TO BOTH SURFACES OF WALL.

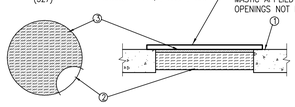
1.

2 HOUR FIRE RATED THROUGH PENETRATION FIRESTOP FOR BLANK OPENINGS THROUGH CONCRETE FLOORS OR WALLS USING FYRE-SIL OR FYRE-SIL S/L

CAJ0011 (327)

F-RATING = 2 HR.
T-RATING = 1 1/2 AND 2 HR.

3/4" FIRE RETARDANT PLYWD, MASTIC APPLIED OVER FLOOR OPENINGS NOT IN USED.



① FLOOR OR WALL ASSEMBLY = MIN. 4-1/2" THICK CONCRETE, MAX. DIAMETER OPENING OF 24 IN.

② A) PACKING MATERIAL - MIN. 3/2 " THICKNESS MINERAL WOOL INSULATION (MIN. 5 PCF).
B) MIN. ½" THICKNESS OF FYRE-SIL OR FYRE-SIL S/L-(FLOORS ONLY) INSTALLED WITHIN OPENING.

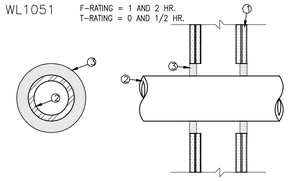
* IF FYRE-SIL IS USED, T-RATING IS 1 HR. IF FYRE-SIL S/L IS USED, T-RATING IS 2 HR.

③ NOM. ½" FYRE-SHIELD THICKNESS INSTALLED WITHIN OPENING.

1 OR 2 HOUR FIRE RATED THROUGH PENETRATION FIRESTOP FOR SINGLE METAL PIPE THROUGH GYPSUM WALLS USING TREMSTOP WBM.

WL1051

F-RATING = 1 AND 2 HR.
T-RATING = 0 AND 1/2 HR.



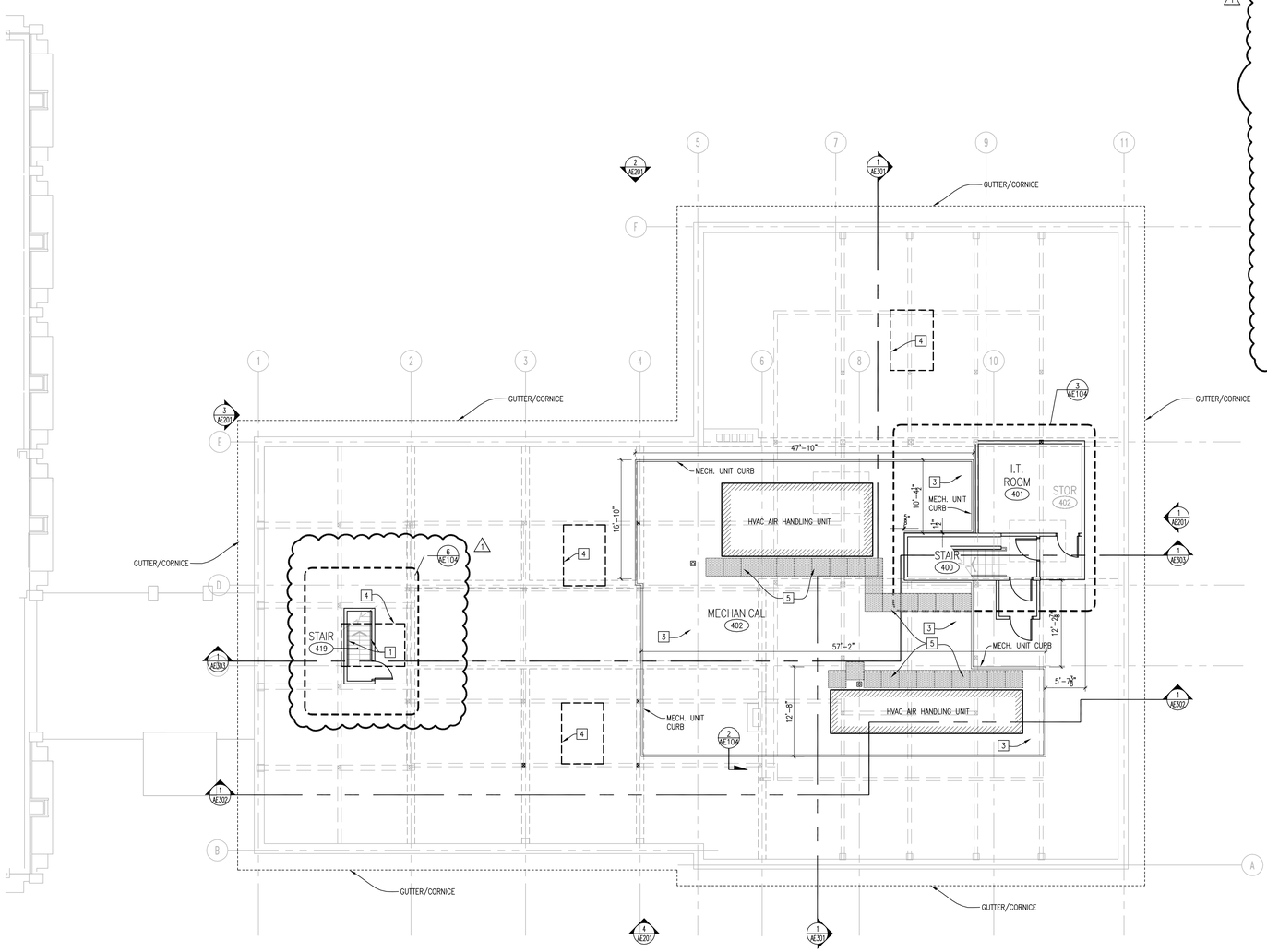
① 1 OR 2 - HOUR FIRE RATED GYPSUM WALLBOARD/STUD ASSEMBLY
② A) STEEL PIPE - 6" DIAM.(OR SMALLER) SCH. 40 (OR HEAVIER) STEEL
B) CONDUIT - 4" DIAM.(OR SMALLER) EMT OR RIGID STEEL
③ TREMSTOPWBM - FILL MAX. 3/4" ANNULUS AT A THICKNESS OF 1½ " (2 HR. F-RATING) OR 3/4" (1 HR. F-RATING).

5 FIREPROOFING DETAILS
AE104 SCALE: 1/2" = 1'-0"

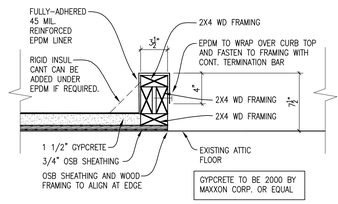
SEE SPECIFICATIONS SECTION 078413 "PENETRATION FIRESTOPPING" FOR ADDITIONAL INFORMATION

FIRESTOPPING GENERAL NOTES

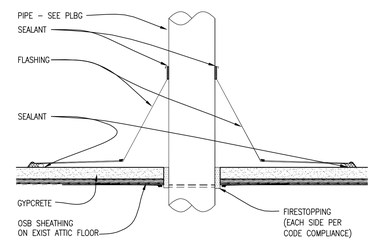
1. ALL PENETRATIONS OF FIRE-RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAILS THAT CONFORM TO UNDERWRITERS LABORATORIES LISTINGS FOR "THROUGH-PENETRATION FIRE STOP SYSTEMS". THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS, FURNISHED BY THE MANUFACTURER OF THE FIRE STOP MATERIAL, WHICH SHOW COMPLETE CONFORMANCE TO THE UL LISTING TO THE ARCHITECT. SUCH DRAWINGS SHALL BE AVAILABLE TO THE CITY INSPECTORS. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION, WITH ALL VARIABLES DEFINED.
2. ILLUSTRATIONS BELOW ARE REPRESENTATIVE AND ARE NOT MEANT TO COVER EVERY POSSIBLE PENETRATION CONDITION FOR THIS PROJECT. GENERAL CONTRACTOR MUST PREPARE AND SUBMIT SHOP DRAWINGS TO BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION. SHOP DRAWINGS TO INDICATE ALL PENETRATION CONDITIONS, PENETRANTS, FIREPROOFING MATERIALS USED, FIRE RATING, AND UL NUMBER.
3. USE OF COMBUSTIBLE PIPING, TUBING, & CONDUIT IS NOT ALLOWED.
4. MULTIPLE TELEPHONE AND TV CABLES MAY PENETERATE THRU FIRE-RATED WALLS WHEN SLEEVED IN METALLIC CONDUIT EXTENDING MIN. 5" ON EACH SIDE OF WALL W/ CONDUIT FIRE-STOPPED AT THE WALL PENETRATION & ENDS OF CONDUIT W/ FIRE-RATED CAULK OR PUTTY.
5. OPENINGS FOR ELECTRICAL BOXES SHALL NOT EXCEED 16 SQUARE INCHES IN AREA, NOR SHALL THE AGGREGATE AREA OF SUCH OPENINGS EXCEED 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF FIRE-RATED WALL AREA. ELECTRICAL BOXES ON OPPOSITE SIDES OF FIRE-RESISTIVE WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24".
6. ALL MATERIALS PENETRATING FIRE-RESISTIVE CONSTRUCTION SHALL BE INSTALLED AND FIRESTOPPED IN STRICT ACCORDANCE W/ TESTS CONDUCTED IN ACCORDANCE W/ UBC SEC. 4302(B), UBC STANDARD NO. 43-1 (ASTM E119), OR UL 1479.



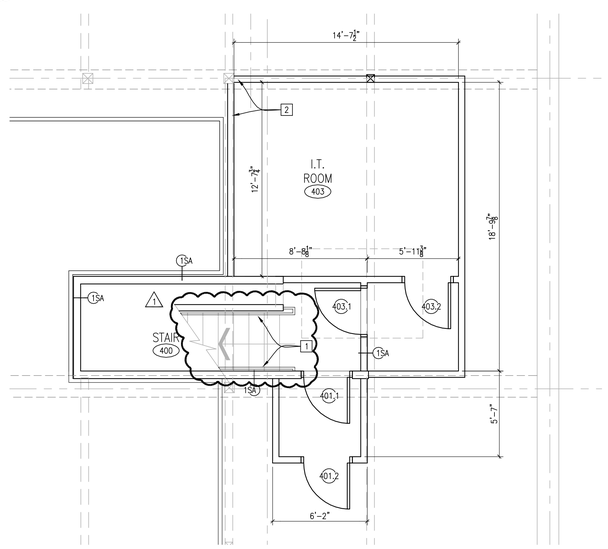
1 FLOOR PLAN - ATTIC
AE104 SCALE: 1/8" = 1'-0"



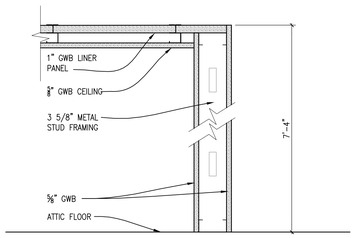
2 CURB SECTION DETAIL- AHU IN ATTIC
AE104 SCALE: 1 1/2"=1'-0"



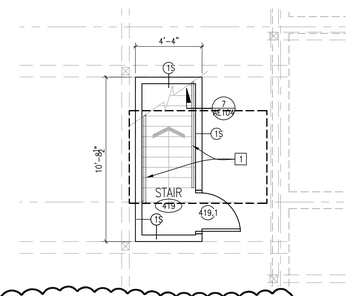
3 TYP AT PIPE PENETRATION THRU ATTIC FLOOR
AE104 SCALE: 1 1/2" = 1'-0"



4 ENLARGED FLOOR PLAN - I.T. ROOM
AE104 SCALE: 1/4" = 1'-0"



7 SECTION AT STAIR
AE104 SCALE: 1/4" = 1'-0"



6 ENLARGED FLOOR PLAN - STAIR
AE104 SCALE: 1/4" = 1'-0"

KEYED ARCHITECTURAL NOTES

1. NEW 1½" DIAMETER WOOD HANDRAIL MOUNTED TO EXISTING WALL. HANDRAILS SHALL EXTEND HORIZONTALLY 12" BEYOND TOP RISER AND CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. WHERE EXTENSION IS NOT POSSIBLE, RETURN TO WALL.
2. ALIGN NEW PARTITION FACE WITH EXISTING WALL/STRUCTURE.
3. EPDM LINER ON GYPCRETE FLOOR LEVELER. SEE DETAIL2/AE104.
4. NEW MECHANICAL OPENING FOR LOUVER DUCTING. SEE MECHANICAL SHEETS.
5. PROVIDE RUBBER "ROOF PAVER" 3/16" FULLY ADHERED AS INDICATED COMPATIBLE WITH MEMBRANE TYPE. COORDINATE EXACT LAYOUT WITH OWNER.

GENERAL ARCHITECTURAL NOTES

1. PATCH AND REPAIR EXISTING GWB AT ENTIRE PERIMETER OF ATTIC. PROVIDE ADDITIONAL GWB UP TO AN ELEVATION OF 8'-0" AFF. PROVIDE LEVEL AND EVEN FINISH FOR BOTH NEW AND EXISTING GWB.

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UNL Project #C008P098

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09.06.2013

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DTB
Draw	AHT
Check	DTB

STAMP

BID SET

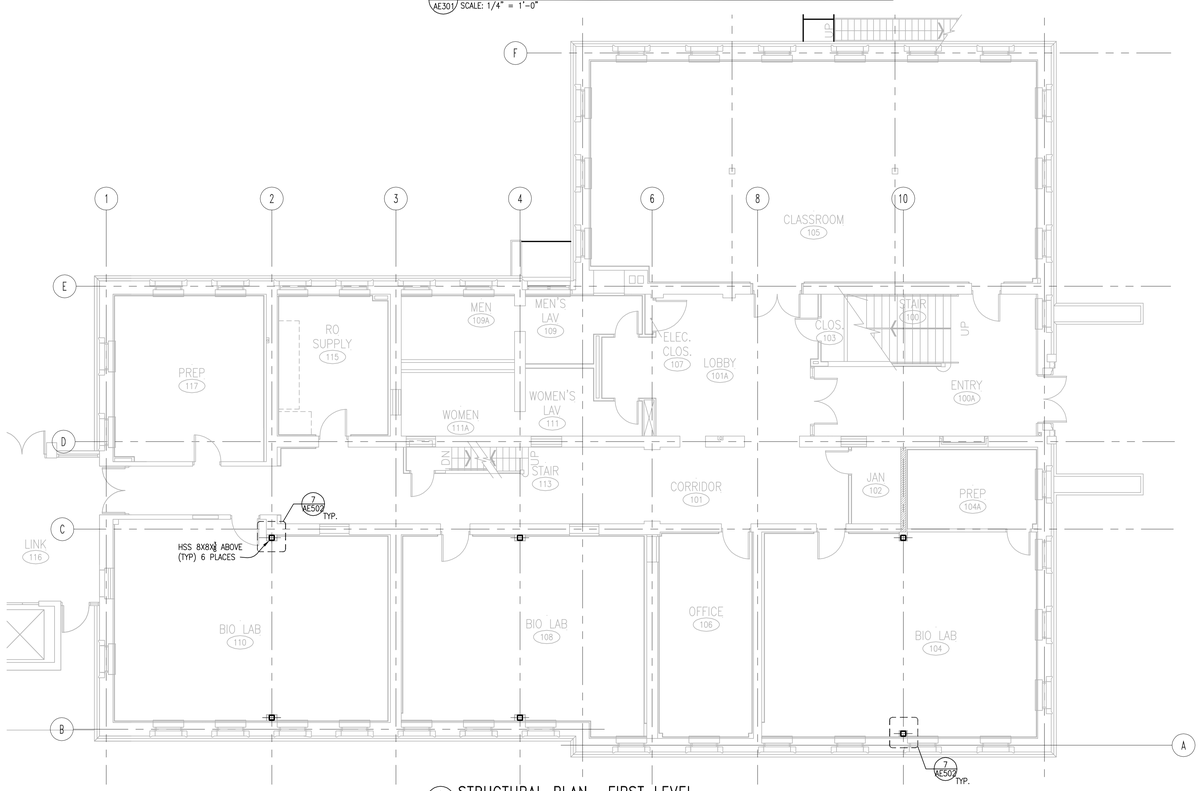
SCALE: 1 1/2"=1'-0"
SCALE: 1/4"=1'-0"
SCALE: 1/8"=1'-0"

Project No. 003-10126-004
August 19, 2013

FLOOR PLAN ATTIC

AE104

1 AE301 LATERAL BUILDING SECTION THRU LECTURE HALL
SCALE: 1/4" = 1'-0"



2 AE301 STRUCTURAL PLAN- FIRST LEVEL
SCALE: 1/8" = 1'-0"

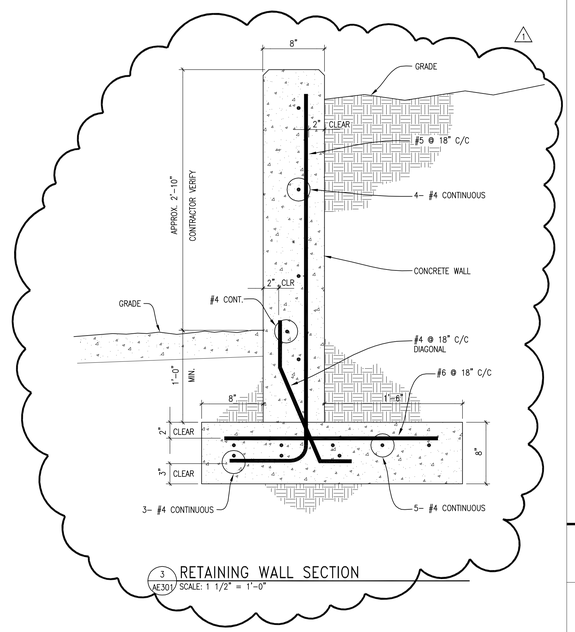
A STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL W SHAPES SHALL BE ASTM A992 (UNLESS NOTED OTHERWISE).
   STRUCTURAL STEEL FOR CHANNELS, ANGLES AND PLATES SHALL BE ASTM A36 (UNLESS NOTED OTHERWISE).
2. STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH "AISC, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS – THIRTEENTH EDITION, 2005".
3. ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4–INCH DIAMETER ASTM A325 BOLTS (BEARING TYPE CONNECTION), UNLESS NOTED OTHERWISE. BOLTS SHALL BE TIGHTENED IN CONFORMANCE WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS OF THE ENGINEERING FOUNDATION.
4. WHEN SLIP CRITICAL CONNECTIONS ARE SPECIFIED USE 3/4–INCH DIAMETER ASTM A325 BOLTS UNLESS NOTED OTHERWISE. BOLTS SHALL BE TIGHTENED BY THE "TURN OF NUT" METHOD OR DIRECT TENSION INDICATING WASHERS CONFORMING TO ASTM F959 AND IN CONFORMANCE WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS OF THE ENGINEERING FOUNDATION.
5. BEAM SIZE FOLLOWED BY A NUMBER IN PARENTHESES ON THE FRAMING PLANS (E.G. W16x26(32)) SHALL BE COMPOSITE, WITH THE INDICATED NUMBER OF 3/4–INCH DIAMETER SHEAR STUDS APPROXIMATELY EQUALLY SPACED. IF NECESSARY, TWO SHEAR STUDS MAY BE PLACED IN ONE DECK FLUTE. THE HEIGHT OF THE STUDS AFTER WELDING SHALL BE ------ INCHES.
6. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B WITH A MINIMUM YIELD STRENGTH OF 46,000 PSI.
7. STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI.
8. STEEL LINTELS, FOR OPENINGS NOT DETAILED, SHALL BE L–x–x–.
9. ALL ANCHOR RODS SHALL BE ASTM F1554, GRADE 36 UNLESS NOTED OTHERWISE.
9. BASE PLATE HOLE AND WASHER SIZES FOR ANCHOR RODS:

ANCHOR ROD SIZE	BASE PLATE HOLE DIAMETER	MIN. WASHER DIAMETER	MIN. WASHER THICKNESS
3/4"ø	1 5/16"ø	2"ø	1/4"
7/8"ø	1 9/16"ø	2 1/2"ø	5/16"
1"ø	1 13/16"ø	3"ø	3/8"
1 1/4"ø	2 1/16"ø	3"ø	1/2"
1 1/2"ø	2 5/16"ø	3 1/2"ø	1/2"
1 3/4"ø	2 3/4"ø	4"ø	5/8"
2"ø	3 1/4"ø	5"ø	3/4"
2 1/2"ø	3 3/4"ø	5 1/2"ø	7/8"

B LIGHTGAGE METAL FRAMING

1. DESIGN: ALL STUDS, JOISTS AND CONNECTIONS, NOT SPECIFICALLY DETAILED ON THE DRAWINGS, SHALL BE DESIGNED FOR THE SPACINGS AND LOADS INDICATED, BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEBRASKA. DESIGN SHALL BE IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS".
2. FIRE–RESISTANCE RATINGS: COMPLY WITH FIRE–RESISTANCE RATINGS AS INDICATED AND AS REQUIRED BY GOVERNING AUTHORITIES AND CODES. PROVIDE MATERIALS, ACCESSORIES, AND INSTALLATION PROCEDURES WHICH HAVE BEEN LISTED BY UL OR TESTED IN ACCORDANCE WITH ASTM E119 FOR THE TYPE OF CONSTRUCTION SHOWN.
3. ALL METAL FRAMING COMPONENTS SHALL BE FORMED FROM STRUCTURAL STEEL SHEET CONFORMING TO THE REQUIREMENTS OF ASTM A446, WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI.
4. ALL METAL FRAMING COMPONENTS SHALL HAVE A GALVANIZED FINISH COMPLYING WITH ASTM A525 FOR A MINIMUM G60 COATING.
5. ALL METAL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR, WHEN REQUIRED, FOR AN ANGULAR FIT TO ABUTTING MEMBERS.
6. SPLICING OF AXIAL LOADED MEMBERS IS NOT PERMITTED.
7. FASTENING OF COMPONENTS SHALL BE WITH SELF–DRILLING SCREWS OR WELDING AS STANDARD WITH MANUFACTURER. SCREWS SHALL BE OF SUFFICIENT SIZE TO INSURE STRENGTH OF THE CONNECTION. ALL WELDS SHALL BE TOUCHED UP WITH A ZINC–RICH PAINT. AT EXTERIOR WALLS THAT ARE PART OF THE BUILDING ENVELOPE, COAT SCREWS WITH BITUMINOUS OR ZINC–RICH PAINT. WIRE TYING OF COMPONENTS IS NOT PERMITTED.
8. FRAMING COMPONENTS MAY BE PREFABRICATED INTO PANELS PRIOR TO ERECTION. FABRICATE PANELS PLUMB, SQUARE, TRUE TO LINE AND BRACED AGAINST RACKING. PERFORM LIFTING OF PREFABRICATED PANELS IN A MANNER TO PREVENT DAMAGE OR DISTORTION.
9. INSTALL FRAMING MEMBERS AS PER MANUFACTURER'S DESIGN AND RECOMMENDATIONS.
10. PROVIDE TEMPORARY BRACING, WHEN REQUIRED, UNTIL ERECTION IS COMPLETE.



3 AE301 RETAINING WALL SECTION
SCALE: 1 1/2" = 1'-0"

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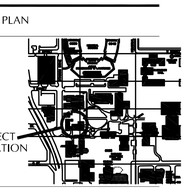
UNL Project #C008P098

KEY PLAN



REVISIONS

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1	ADDENDUM 001	09.06.2013

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DTB
Draw	AHT
Check	DTB

STAMP

BID SET

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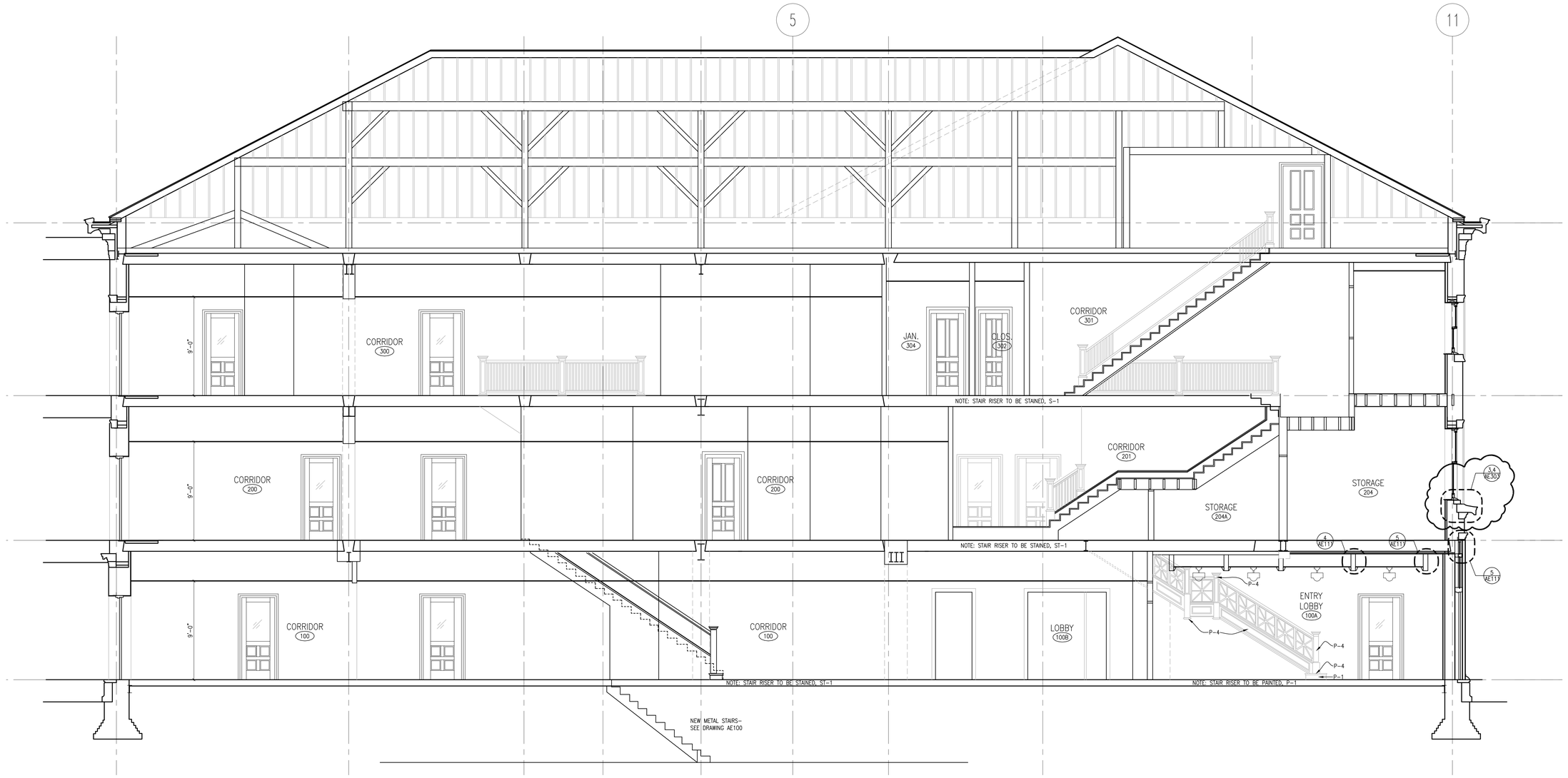
SCALE: 1/4"=1'-0"

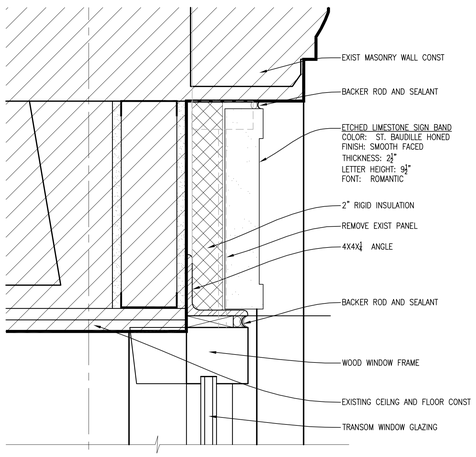
Project No. 003-10126-004
August 19, 2013

STRUCTURAL BUILDING SECTION AND STRUCTURAL PLAN- LEVEL 1

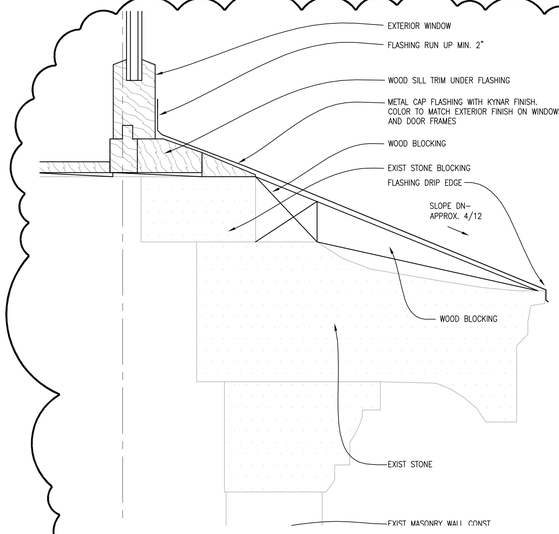
AE301



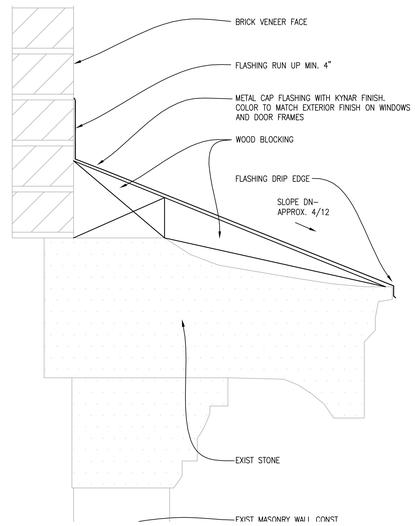
1 AE303 LONGITUDINAL BUILDING SECTION AT CORRIDOR - STAIRS
SCALE: 1/4" = 1'-0"



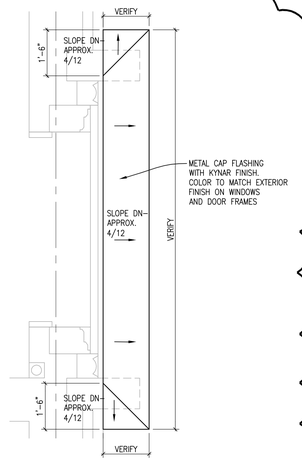
2 AE303 SECTION @ ENTRY SIGNAGE
SCALE: 3" = 1'-0"



3 AE303 SECTION @ ENTRY FACADE/WINDOW SILL
SCALE: 3" = 1'-0"



4 AE303 SECTION @ ENTRY FACADE/BRICK FACE
SCALE: 3" = 1'-0"



5 AE303 PARTIAL PLAN- ROOF OVERHANG
SCALE: 1/2" = 1'-0"

J:\003-10126-004\E Design SD-DD-CD\01 Drawings\05 Architectural\UNLB-AE303.dwg September 06, 2013 - 4:20pm EPFroschheiser

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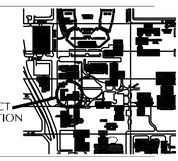

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Manager	DTB
Design	DTB
Draw	AHT
Check	DTB

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

Project No. 003-10126-004
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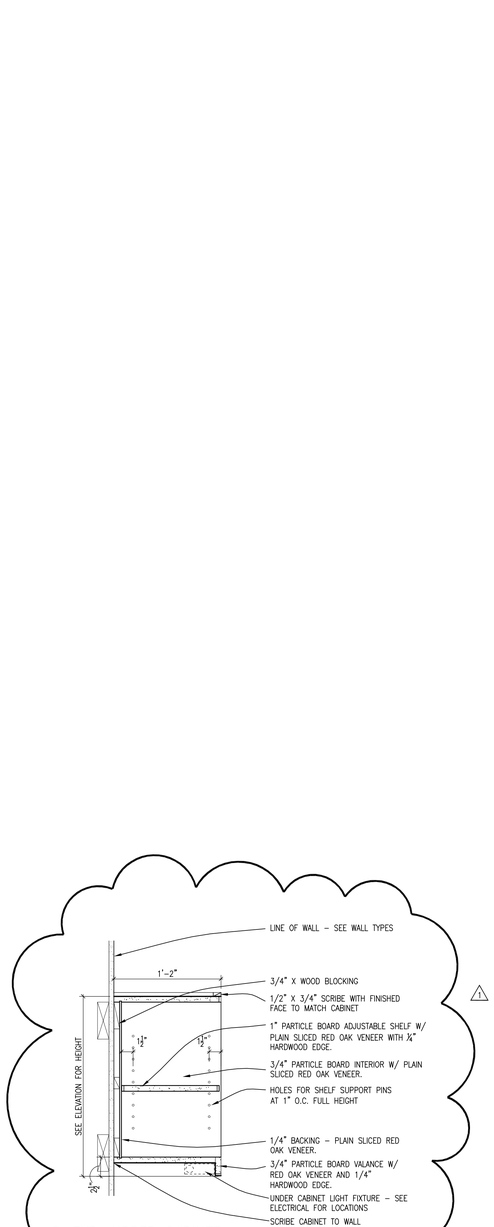
STRUCTURAL BUILDING SECTION
CORRIDOR AND STAIRWAYS

AE303



6 AE501 TYP. UPPER CABINET
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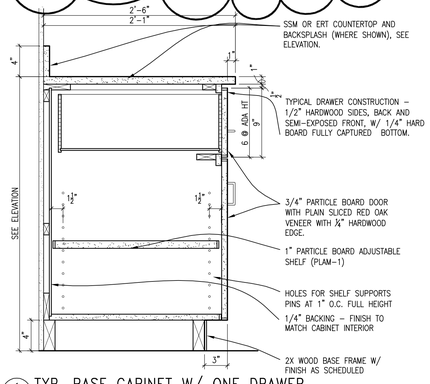

1 AE501 TYP. BASE CABINET W/ ONE DRAWER
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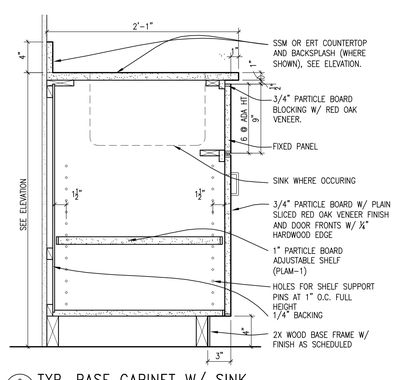

2 AE501 TYP. BASE CABINET W/ SINK
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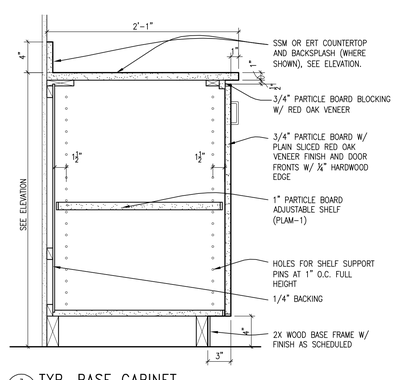
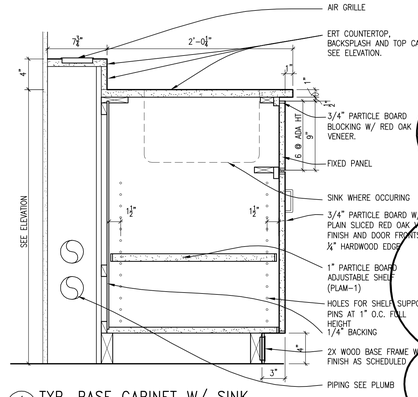


3 AE501 TYP. BASE CABINET
SCALE: 1 1/2"=1'-0"



4 AE501 TYP. BASE CABINET W/ SINK
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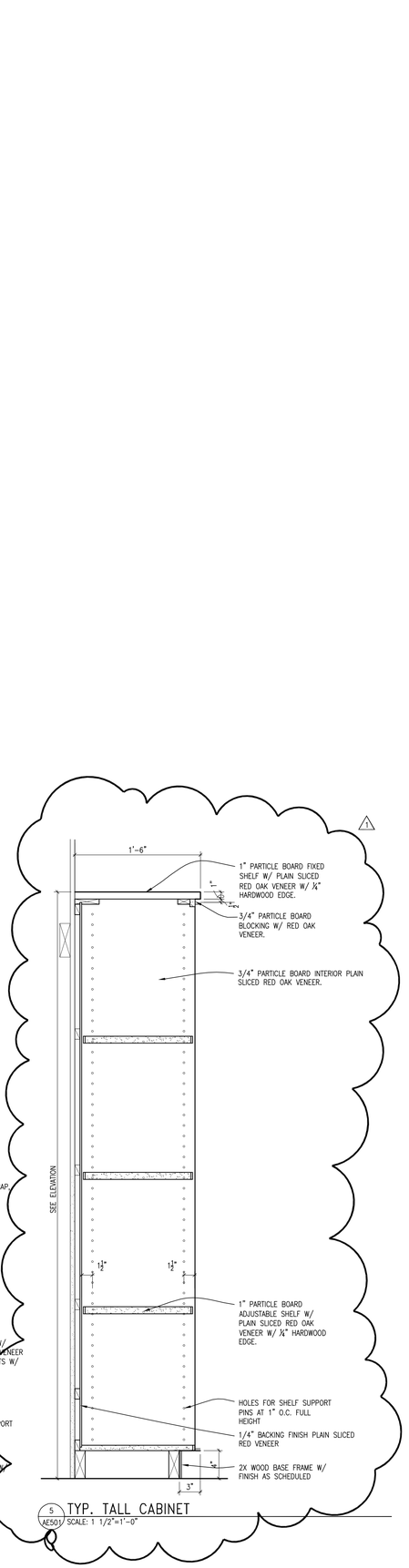

5 AE501 TYP. TALL CABINET
SCALE: 1 1/2"=1'-0"

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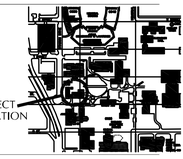

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N

Project No. 003-10126-004
August 19, 2013

CASEWORK SECTIONS AND DETAILS

AE501

SECTION 233300 - AIR DUCT ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
1. Manual volume dampers.
2. Fire dampers.
3. Smoke dampers.
4. Combination fire and smoke dampers.
5. Flange connectors.
6. Turning vanes.
7. Remote damper operators.
8. Duct-mounted access doors.
9. Flexible connectors.
10. Flexible ducts.
11. Duct accessory hardware.
12. Sound attenuators.

B. Related Sections:
1. Division 23 Section "HVAC Gravity Ventilators" for roof-mounted ventilator caps.
2. Division 28 Section "Fire Detection and Alarm" for duct-mounted fire and smoke detectors.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which ceiling-mounted access panels and access doors required for access to duct accessories are shown and coordinated with each other, using input from Installers of the items involved.

C. Operation and Maintenance Data: For air duct accessories to include in operation and maintenance manuals.

1.4 QUALITY ASSURANCE

A. Comply with NFPA 90A, "Installation of Air Conditioning and Ventilating Systems," and with NFPA 90B, "Installation of Warm Air Heating and Air Conditioning Systems."

B. Comply with AMCA 500-D testing for damper rating.

1.5 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Fusible Links: Furnish quantity equal to 10 percent of amount installed.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for acceptable materials, material thicknesses, and duct construction methods unless otherwise indicated. Sheet metal materials shall be free of pitting, seam marks, roller marks, stains, discolorations, and other imperfections.

B. Galvanized Sheet Steel: Comply with ASTM A 653/A 653M.
   1. Galvanized Coating Designation: G90 (Z275).
   2. Exposed-Surface Finish: Mill phosphatized.

C. Stainless-Steel Sheets: Comply with ASTM A 480/A 480M, Type 304, and having a No. 2 finish for concealed ducts and No. 4 finish for exposed ducts.

D. Aluminum Sheets: Comply with ASTM B 209 (ASTM B 209M), Alloy 3003, Temper H14; with mill finish for concealed ducts and standard, 1-side bright finish for exposed ducts.

E. Extruded Aluminum: Comply with ASTM B 221 (ASTM B 221M), Alloy 6063, Temper T6.

F. Reinforcement Shapes and Plates: Galvanized-steel reinforcement where installed on galvanized sheet metal ducts; compatible materials for aluminum and stainless-steel ducts.

G. Tie Rods: Galvanized steel, 1/4-inch (6-mm) minimum diameter for lengths 36 inches (900 mm) or less; 3/8-inch (10-mm) minimum diameter for lengths longer than 36 inches (900 mm).

2.2 MANUAL VOLUME DAMPERS

A. Standard, Steel, Manual Volume Dampers:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Air Balance Inc.; a division of Mestek, Inc.
      b. American Warming and Ventilating; a division of Mestek, Inc.
      c. Flexmaster U.S.A., Inc.
      d. McGill AirFlow LLC.
      e. METALAIRE, Inc.
      f. Nailor Industries Inc.
      g. Pottorff; a division of PCI Industries, Inc.
      h. Ruskin Company.
      i. Trox USA Inc.
      j. Vent Products Company, Inc.
      k. United Enertech.
   2. Standard leakage rating, with linkage outside airstream.
   3. Suitable for horizontal or vertical applications.
   4. Frames:
      a. Hat-shaped, galvanized-steel channels, 0.064-inch (1.62-mm) minimum thickness.
      b. Mitered and welded corners.
      c. Flanges for attaching to walls and flangeless frames for installing in ducts.
   5. Blades:
      a. Multiple or single blade. Single blade dampers shall be less than 14 inches in height.
      b. Opposed-blade design.
      c. Stiffen damper blades for stability.
      d. Galvanized-steel, 0.064 inch (1.62 mm) thick.
   6. Blade Axles: Galvanized steel .

7. Bearings:
    a. Oil-impregnated bronze.
    b. Dampers in ducts with pressure classes of 3-inch wg (750 Pa) or less shall have axles full length of damper blades and bearings at both ends of operating shaft.
8. Tie Bars and Brackets: Galvanized steel.
9. Operator: Locking manual quadrant shall be installed on stand-off bracket for external insulation.

2.3 FIRE DAMPERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Air Balance Inc.; a division of Mestek, Inc.
2. Arrow United Industries; a division of Mestek, Inc.
3. Cesco Products; a division of Mestek, Inc.
4. Greenheck Fan Corporation.
5. McGill AirFlow LLC.
6. METALAIRE, Inc.
7. Nailor Industries Inc.
8. NCA Manufacturing, Inc.
9. PHL, Inc.
10. Pottorff; a division of PCI Industries, Inc.
11. Prefco; Perfect Air Control, Inc.
12. Ruskin Company.
13. Vent Products Company, Inc.
14. Ward Industries, Inc.; a division of Hart & Cooley, Inc.
15. United Enertech.

B. Type: Static; rated and labeled according to UL 555 by an NRTL.

C. Fire Rating: 1-1/2 and 3 hours.

D. Frame: Curtain type with blades outside airstream except when located behind grille where blades may be inside airstream; fabricated with roll-formed, 0.034-inch- (0.85-mm-) thick galvanized steel; with mitered and interlocking corners.

E. Mounting Sleeve: Factory- or field-installed, galvanized sheet steel.
1. Minimum Thickness: 0.052 or 0.138 inch (1.3 or 3.5 mm) thick, as indicated, and of length to suit application.
2. Exception: Omit sleeve where damper-frame width permits direct attachment of perimeter mounting angles on each side of wall or floor; thickness of damper frame must comply with sleeve requirements.

F. Mounting Orientation: Vertical or horizontal as indicated.

G. Blades: Roll-formed, interlocking, 0.034-inch- (0.85-mm-) thick, galvanized sheet steel. In place of interlocking blades, use full-length, 0.034-inch- (0.85-mm-) thick, galvanized-steel blade connectors.

H. Horizontal Dampers: Include blade lock and stainless-steel closure spring.

I. Heat-Responsive Device: Replaceable, 165 deg F (74 deg C) rated, fusible links.

2.4 SMOKE DAMPERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Air Balance Inc.; a division of Mestek, Inc.
2. Cesco Products; a division of Mestek, Inc.

3. Greenheck Fan Corporation.
4. Nailor Industries Inc.
5. PHL, Inc.
6. Ruskin Company.
7. United Enertech.

B. General Requirements: Label according to UL 555S by an NRTL.

C. Smoke Detector: Integral, factory wired for single-point connection.

D. Frame: Multiple-blade type ; fabricated with roll-formed, 0.034-inch- (0.85-mm-) thick galvanized steel; with mitered and interlocking corners.

E. Blades: Roll-formed, horizontal, interlocking, 0.034-inch- (0.85-mm-) thick, galvanized sheet steel. In place of interlocking blades, use full-length, 0.034-inch- (0.85-mm-) thick, galvanized-steel blade connectors.

F. Leakage: Class I .

G. Rated pressure and velocity to exceed design airflow conditions.

H. Mounting Sleeve: Factory-installed, 0.052-inch- (1.3-mm-) thick, galvanized sheet steel; length to suit wall or floor application with factory-furnished silicone calking.

I. Damper Motors: Two-position action.

J. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
1. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
2. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.
3. Permanent-Split-Capacitor or Shaded-Pole Motors: With oil-immersed and sealed gear trains.
4. Spring-Return Motors: Equip with an integral spiral-spring mechanism where indicated. Enclose entire spring mechanism in a removable housing designed for service or adjustments. Size for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 150 in. x lbf (17 N x m).
5. Outdoor Motors and Motors in Outdoor-Air Intakes: Equip with O-ring gaskets designed to make motors weatherproof. Equip motors with internal heaters to permit normal operation at minus 40 deg F (minus 40 deg C).
6. Nonspring-Return Motors: For dampers larger than 25 sq. ft. (2.3 sq. m), size motor for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 300 in. x lbf (34 N x m).
7. Electrical Connection: 115 V, single phase, 60 Hz .

2.5 COMBINATION FIRE AND SMOKE DAMPERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Air Balance Inc.; a division of Mestek, Inc.
2. Cesco Products; a division of Mestek, Inc.
3. Greenheck Fan Corporation.
4. Nailor Industries Inc.
5. Ruskin Company.
6. United Enertech.

B. Type: Static; rated and labeled according to UL 555 and UL 555S by an NRTL.

C. Fire Rating: 1-1/2 and 3 hours.

D. Frame: Multiple-blade type ; fabricated with roll-formed, 0.034-inch- (0.85-mm-) thick galvanized steel; with mitered and interlocking corners.

E. Heat-Responsive Device: Replaceable, 165 deg F (74 deg C) rated, fusible links.

F. Smoke Detector: Integral, factory wired for single-point connection.

G. Blades: Roll-formed, horizontal, interlocking, 0.034-inch- (0.85-mm-) thick, galvanized sheet steel. In place of interlocking blades, use full-length, 0.034-inch- (0.85-mm-) thick, galvanized-steel blade connectors.

H. Leakage: Class I.

I. Rated pressure and velocity to exceed design airflow conditions.

J. Mounting Sleeve: Factory-installed, 0.052-inch- (1.3-mm-) thick, galvanized sheet steel; length to suit wall or floor application with factory-furnished silicone calking.

K. Master control panel for use in dynamic smoke-management systems.

L. Damper Motors: Two-position action.

M. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
   1. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
   2. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.
   3. Permanent-Split-Capacitor or Shaded-Pole Motors: With oil-immersed and sealed gear trains.
   4. Spring-Return Motors: Equip with an integral spiral-spring mechanism where indicated. Enclose entire spring mechanism in a removable housing designed for service or adjustments. Size for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 150 in. x lbf (17 N x m).
   5. Outdoor Motors and Motors in Outdoor-Air Intakes: Equip with O-ring gaskets designed to make motors weatherproof. Equip motors with internal heaters to permit normal operation at minus 40 deg F (minus 40 deg C).
   6. Nonspring-Return Motors: For dampers larger than 25 sq. ft. (2.3 sq. m), size motor for running torque rating of 150 in. x lbf (17 N x m) and breakaway torque rating of 300 in. x lbf (34 N x m).
   7. Electrical Connection: 115 V, single phase, 60 Hz.

2.6 FLANGE CONNECTORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
   1. Ductmate Industries, Inc.
   2. Nexus PDQ; Division of Shilco Holdings Inc.
   3. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Description: Add-on or roll-formed, factory-fabricated, slide-on transverse flange connectors, gaskets, and components.

C. Material: Galvanized steel.

D. Gage and Shape: Match connecting ductwork.

2.7 TURNING VANES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Ductmate Industries, Inc.
2. Duro Dyne Inc.
3. METALAIRE, Inc.
4. SEMCO Incorporated.
5. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Manufactured Turning Vanes for Metal Ducts: Curved blades of galvanized sheet steel; support with bars perpendicular to blades set; set into vane runners suitable for duct mounting.
1. Acoustic Turning Vanes: Fabricate airfoil-shaped aluminum extrusions with perforated faces and fibrous-glass fill.

C. Manufactured Turning Vanes for Nonmetal Ducts: Fabricate curved blades of resin-bonded fiberglass with acrylic polymer coating; support with bars perpendicular to blades set; set into vane runners suitable for duct mounting.

D. General Requirements: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible"; Figures 4-3, "Vanes and Vane Runners," and 4-4, "Vane Support in Elbows."

E. Vane Construction: Single wall for ducts up to 48 inches (1200 mm) wide and double wall for larger dimensions.

2.8 DUCT-MOUNTED ACCESS DOORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. American Warming and Ventilating; a division of Mestek, Inc.
2. Cesco Products; a division of Mestek, Inc.
3. Ductmate Industries, Inc.
4. Flexmaster U.S.A., Inc.
5. Greenheck Fan Corporation.
6. McGill AirFlow LLC.
7. Nailor Industries Inc.
8. Pottorff; a division of PCI Industries, Inc.
9. Ventfabrics, Inc.
10. Ward Industries, Inc.; a division of Hart & Cooley, Inc.
11. United Enertech.

B. Duct-Mounted Access Doors: Fabricate access panels according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible"; Figures 7-2 (7-2M), "Duct Access Doors and Panels," and 7-3, "Access Doors - Round Duct."
1. Door:
a. Double wall, rectangular.
b. Galvanized sheet metal with insulation fill and thickness as indicated for duct pressure class.
c. Vision panel.
d. Hinges and Latches: 1-by-1-inch (25-by-25-mm) butt or piano hinge and cam latches.
e. Fabricate doors airtight and suitable for duct pressure class.
2. Frame: Galvanized sheet steel, with bend-over tabs and foam gaskets.
3. Number of Hinges and Locks:

a. Access Doors Less Than 12 Inches (300 mm) Square: No hinges and two sash locks.
b. Access Doors up to 18 Inches (460 mm) Square: Two hinges and two sash locks.
c. Access Doors up to 24 by 48 Inches (600 by 1200 mm): Three hinges and two compression latches.
d. Access Doors Larger Than 24 by 48 Inches (600 by 1200 mm): Four hinges and two compression latches with outside and inside handles.

2.9 DUCT ACCESS PANEL ASSEMBLIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Ductmate Industries, Inc.
2. Flame Gard, Inc.
3. 3M.

B. Labeled according to UL 1978 by an NRTL.

C. Panel and Frame: Minimum thickness 0.0528-inch (1.3-mm) carbon steel.

D. Fasteners: Carbon steel. Panel fasteners shall not penetrate duct wall.

E. Gasket: Comply with NFPA 96; grease-tight, high-temperature ceramic fiber, rated for minimum 2000 deg F (1093 deg C).

F. Minimum Pressure Rating: 10-inch wg (2500 Pa), positive or negative.

2.10 FLEXIBLE CONNECTORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
1. Ductmate Industries, Inc.
2. Duro Dyne Inc.
3. Ventfabrics, Inc.
4. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Materials: Flame-retardant or noncombustible fabrics.

C. Coatings and Adhesives: Comply with UL 181, Class 1.

D. Metal-Edged Connectors: Factory fabricated with a fabric strip 3-1/2 inches (89 mm) wide attached to 2 strips of 2-3/4-inch- (70-mm-) wide, 0.028-inch- (0.7-mm-) thick, galvanized sheet steel or 0.032-inch- (0.8-mm-) thick aluminum sheets. Provide metal compatible with connected ducts.

E. Indoor System, Flexible Connector Fabric: Glass fabric double coated with neoprene.
1. Minimum Weight: 26 oz./sq. yd. (880 g/sq. m).
2. Tensile Strength: 480 lbf/inch (84 N/mm) in the warp and 360 lbf/inch (63 N/mm) in the filling.
3. Service Temperature: Minus 40 to plus 200 deg F (Minus 40 to plus 93 deg C).

F. Outdoor System, Flexible Connector Fabric: Glass fabric double coated with weatherproof, synthetic rubber resistant to UV rays and ozone.
1. Minimum Weight: 24 oz./sq. yd. (810 g/sq. m).
2. Tensile Strength: 530 lbf/inch (93 N/mm) in the warp and 440 lbf/inch (77 N/mm) in the filling.
3. Service Temperature: Minus 50 to plus 250 deg F (Minus 45 to plus 121 deg C).

2.11 FLEXIBLE DUCTS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
   1. Flexmaster U.S.A., Inc.
   2. McGill AirFlow LLC.
   3. Ward Industries, Inc.; a division of Hart & Cooley, Inc.

B. Insulated, Flexible Duct: UL 181, Class 1, 2-ply vinyl film supported by helically wound, spring-steel wire; fibrous-glass insulation; polyethylene vapor-barrier film.
   1. Pressure Rating: 10-inch wg (2500 Pa) positive and 1.0-inch wg (250 Pa) negative.
   2. Maximum Air Velocity: 4000 fpm (20 m/s).
   3. Temperature Range: Minus 10 to plus 160 deg F (Minus 23 to plus 71 deg C).
   4. Insulation R-value: Comply with ASHRAE/IESNA 90.1 .

2.12 DUCT ACCESSORY HARDWARE

A. Instrument Test Holes: Cast iron or cast aluminum to suit duct material, including screw cap and gasket. Size to allow insertion of pitot tube and other testing instruments and of length to suit duct-insulation thickness.

B. Adhesives: High strength, quick setting, neoprene based, waterproof, and resistant to gasoline and grease.

2.13 DUCT SILENCERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Industrial Noise Control, Inc.
   2. McGill AirFlow LLC.
   3. Ruskin Company.
   4. Vibro-Acoustics.
   5. Industrial Acoustics Co.
   6. SEMCO.
   7. Commercial Acoustics
   8. Rink.

B. General Requirements:
   1. Factory fabricated.
   2. Fire-Performance Characteristics: Adhesives, sealants, packing materials, and accessory materials shall have flame-spread index not exceeding 25 and smoke-developed index not exceeding 50 when tested according to ASTM E 84.
   3. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1.

C. Shape:
   1. Rectangular straight with splitters or baffles.

D. Rectangular Silencer Outer Casing: ASTM A 653/A 653M, G90 (Z275) , galvanized sheet steel, 0.034 inch (0.85 mm) thick.

E. Inner Casing and Baffles: ASTM A 653/A 653M, G90 (Z275) galvanized sheet metal, 0.034 inch (0.85 mm) thick, and with 1/8-inch- (3-mm-) diameter perforations.

F. Connection Sizes: Match connecting ductwork unless otherwise indicated.

G. Principal Sound-Absorbing Mechanism:
   1. Controlled impedance membranes and broadly tuned resonators without absorptive media.
   2. Dissipative type with fill material.
      a. Fill Material: Inert and vermin-proof fibrous material, packed under not less than 5 percent compression.
      b. Erosion Barrier: Polymer bag enclosing fill, and heat sealed before assembly.
   3. Lining: None.

H. Fabricate silencers to form rigid units that will not pulsate, vibrate, rattle, or otherwise react to system pressure variations. Do not use mechanical fasteners for unit assemblies.
   1. Lock form and seal or continuously weld joints.
   2. Suspended Units: Factory-installed suspension hooks or lugs attached to frame in quantities and spaced to prevent deflection or distortion.
   3. Reinforcement: Cross or trapeze angles for rigid suspension.

I. Accessories:
   1. Factory-installed end caps to prevent contamination during shipping.

J. Source Quality Control: Test according to ASTM E 477.
   1. Record acoustic ratings, including dynamic insertion loss and generated-noise power levels with an airflow of at least 2000-fpm (10-m/s) face velocity.
   2. Leak Test: Test units for airtightness at 200 percent of associated fan static pressure or 6-inch wg (1500-Pa) static pressure, whichever is greater.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install duct accessories according to applicable details in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for metal ducts and in NAIMA AH116, "Fibrous Glass Duct Construction Standards," for fibrous-glass ducts.

B. Install duct accessories of materials suited to duct materials; use galvanized-steel accessories in galvanized-steel and fibrous-glass ducts, stainless-steel accessories in stainless-steel ducts, and aluminum accessories in aluminum ducts.

C. Install volume dampers at points on supply, return, and exhaust systems where branches extend from larger ducts. Where dampers are installed in ducts having duct liner, install dampers with hat channels of same depth as liner, and terminate liner with nosing at hat channel.
   1. Install steel volume dampers in steel ducts.
   2. Install aluminum volume dampers in aluminum ducts.

D. Set dampers to fully open position before testing, adjusting, and balancing.

E. Install test holes at fan inlets and outlets and elsewhere as indicated.

F. Install fire and smoke dampers according to UL listing.

G. Install duct access doors on sides of ducts to allow for inspecting, adjusting, and maintaining accessories and equipment at the following locations:
   1. At outdoor-air intakes and mixed-air plenums.
   2. At drain pans and seals.
   3. Downstream from control dampers, backdraft dampers, and equipment.
   4. Adjacent to and close enough to fire or smoke dampers, to reset or reinstall fusible links. Access doors for access to fire or smoke dampers having fusible links shall be pressure relief access doors

and shall be outward operation for access doors installed upstream from dampers and inward operation for access doors installed downstream from dampers.

5. Control devices requiring inspection.
6. Elsewhere as indicated.

H. Install access doors with swing against duct static pressure.

I. Access Door Sizes:
1. One-Hand or Inspection Access: 8 by 5 inches (200 by 125 mm).
2. Two-Hand Access: 12 by 6 inches (300 by 150 mm).
3. Head and Hand Access: 18 by 10 inches (460 by 250 mm).
4. Head and Shoulders Access: 21 by 14 inches (530 by 355 mm).
5. Body Access: 25 by 14 inches (635 by 355 mm).
6. Body plus Ladder Access: 25 by 17 inches (635 by 430 mm).

J. Label access doors according to Division 23 Section "Identification for HVAC Piping and Equipment" to indicate the purpose of access door.

K. Install flexible connectors to connect ducts to equipment.

L. For fans developing static pressures of 5-inch wg (1250 Pa) and more, cover flexible connectors with loaded vinyl sheet held in place with metal straps.

M. Connect terminal units to supply ducts with maximum 12-inch (300-mm) lengths of flexible duct. Do not use flexible ducts to change directions. A straight section of unrestricted duct at least 2 diameters long shall be installed at the inlet.

N. Connect diffusers or light troffer boots to ducts with maximum 60-inch (1500-mm) lengths of flexible duct clamped or strapped in place. Bends in flexible ductwork shall not exceed 45 degrees.

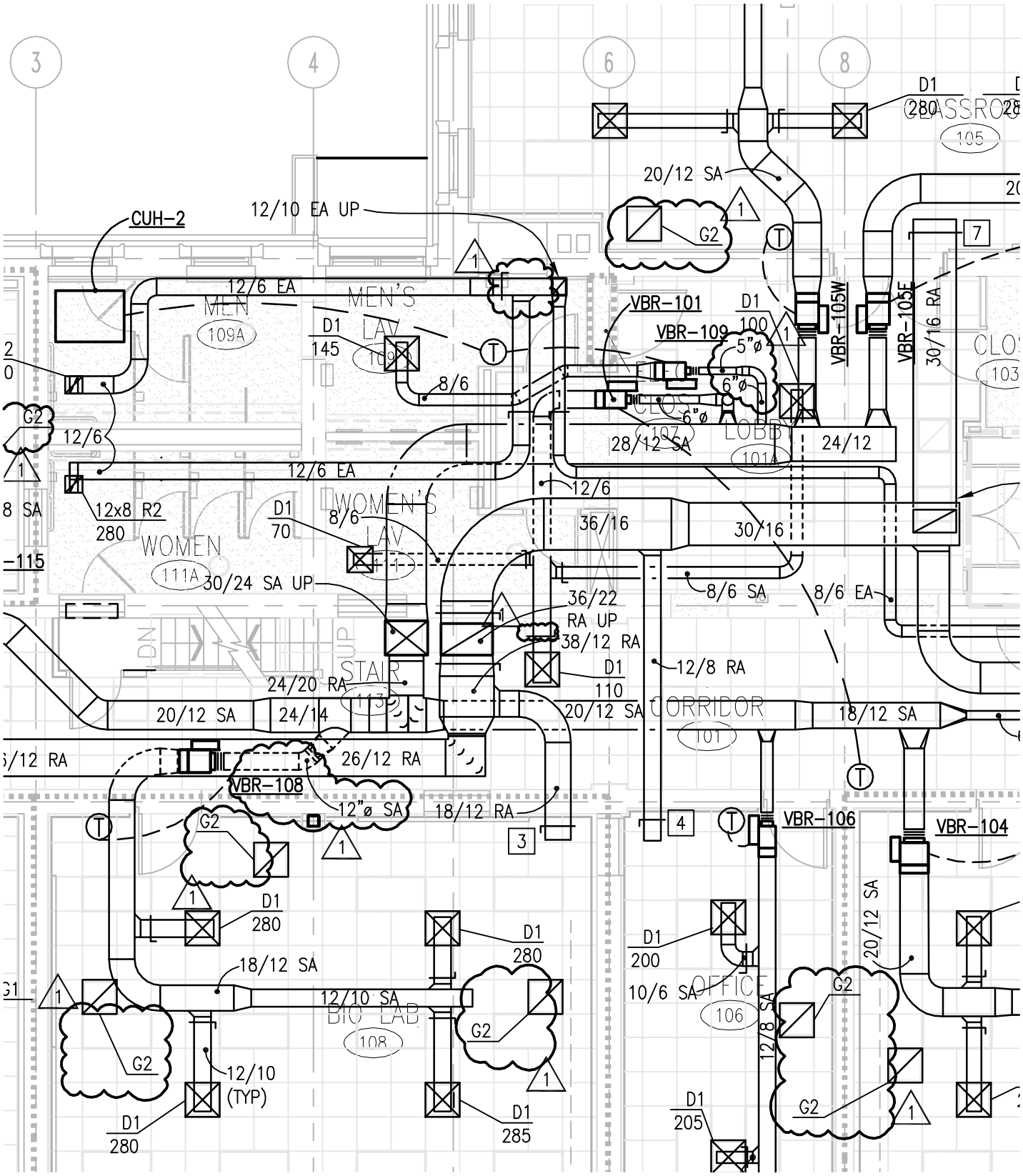
O. Connect flexible ducts to metal ducts with liquid adhesive plus tape .

P. Install duct test holes where required for testing and balancing purposes.

3.2 FIELD QUALITY CONTROL

A. Tests and Inspections:
1. Operate dampers to verify full range of movement.
2. Inspect locations of access doors and verify that purpose of access door can be performed.
3. Operate fire, smoke, and combination fire and smoke dampers to verify full range of movement and verify that proper heat-response device is installed.
4. Inspect turning vanes for proper and secure installation.

END OF SECTION 233300



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BRACE HALL RENOVATION

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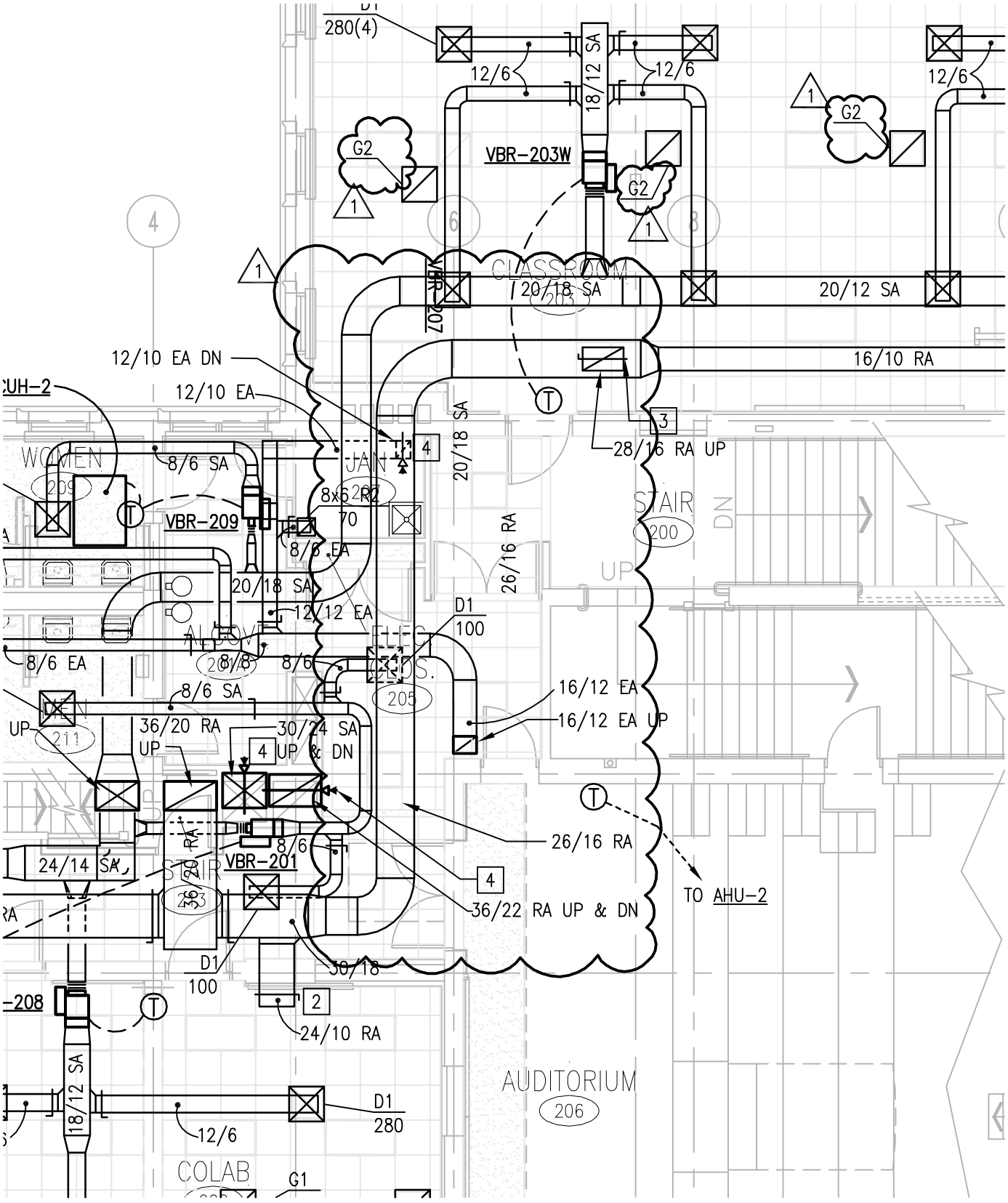
DRAWN BY:	DSJ	DATE:	09.06.2013
CHECKED BY:	MJB	DRAWING:	MH101A



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BRACE HALL RENOVATION

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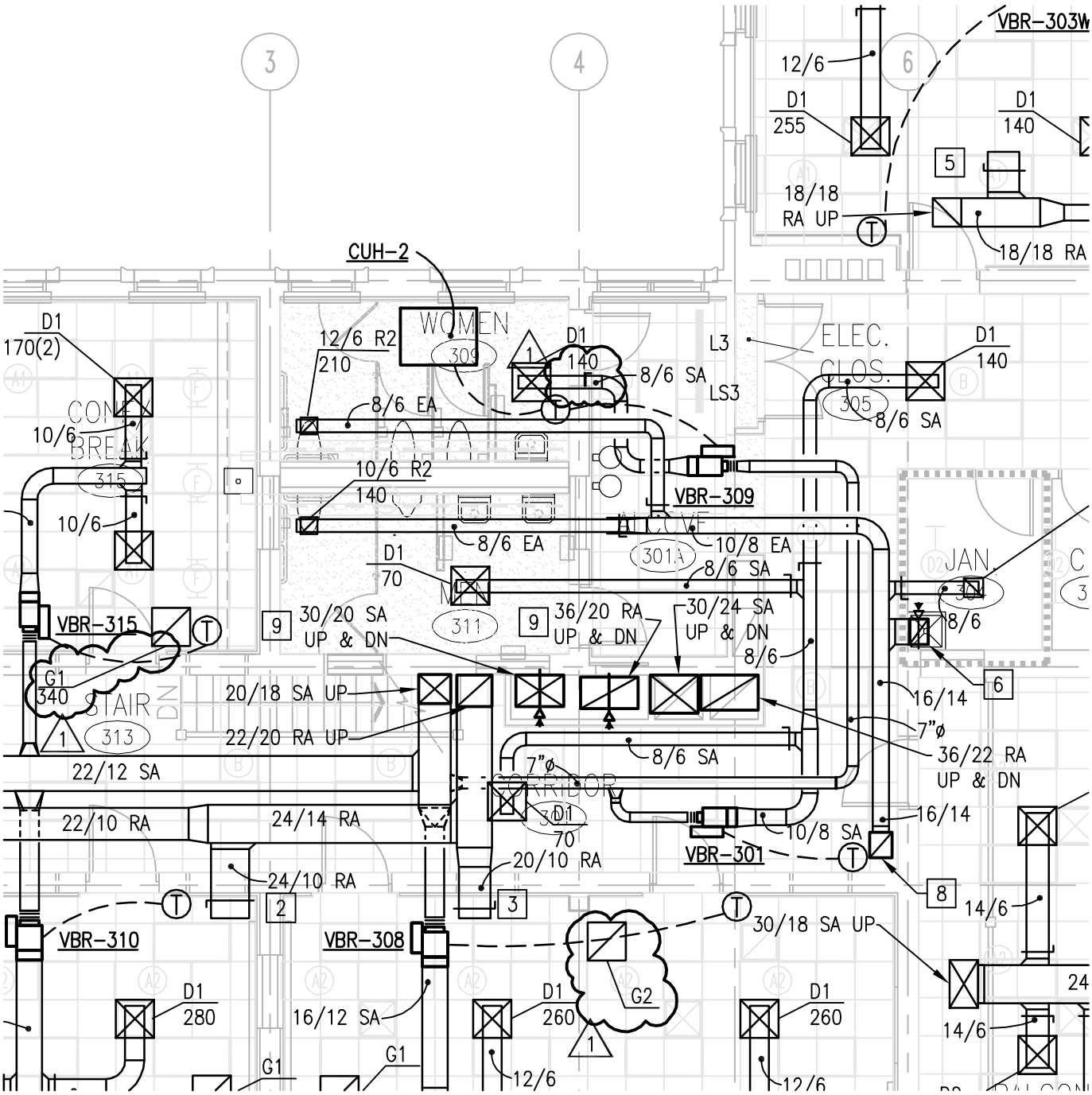
DRAWN BY:	DSJ	DATE:	09.06.2013
CHECKED BY:	MJB	DRAWING:	MH102A



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BRACE HALL RENOVATION

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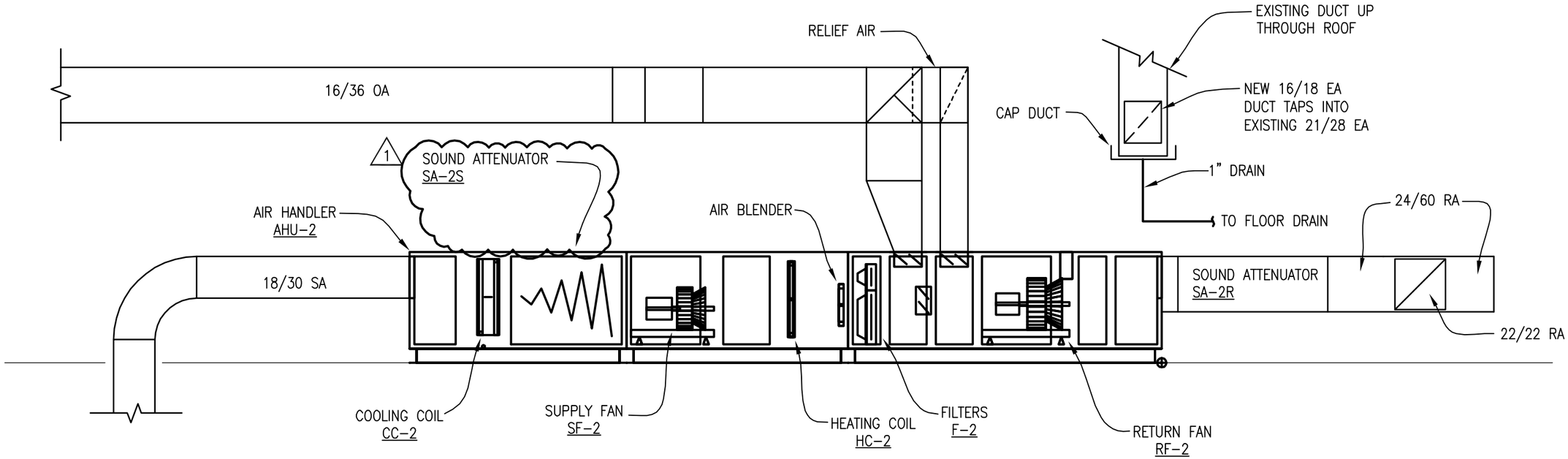
DRAWN BY:	DSJ	DATE:	09.06.2013
CHECKED BY:	MJB	DRAWING:	MH103A



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BRACE HALL RENOVATION

JOB NO. 003-10126-004
DRAWN BY: DSJ
CHECKED BY: MJB

1 ADDENDUM NO. 1
DATE: 09.06.2013
DRAWING: MH202A

DIFFUSER, REGISTER AND GRILLE SCHEDULE

MSDRAG

MARK	SERVES	TYPE	NECK SIZE	FINISH	MAX PD INCH WG	MANUFACTURER AND MODEL NO.
D1	SEE PLANS	STEEL CONST. PERFORATED W/ CURVED BLADE	SEE PLANS	WHITE	0.10	KRUEGER 6500 OR EQUAL WITH O.B.D.
D2	AUDITORIUM	STEEL CONST. LOUVERED DESIGN, ADJUSTABLE	SEE PLANS	WHITE	0.10	KRUEGER 1400A OR EQUAL WITH O.B.D.
R1	SEE PLANS	STEEL CONST. DOUBLE DEFLECTION	SEE PLANS	WHITE	0.10	KRUEGER 880-H OR EQUAL WITH O.B.D.
R2	SEE PLANS	STEEL CONST. FIXED BLADE 30 DEG. DEFLECTION	SEE PLANS	WHITE	0.10	KRUEGER 580-H OR EQUAL WITH O.B.D.
G1	SEE PLANS	STEEL CONST. PERFORATED 24"X24" FACE	SEE PLANS	WHITE	0.10	KRUEGER 6490 OR EQUAL WITH BACKPAN
G2	SEE PLANS	STEEL CONST. PERFORATED 24"X24" FACE	SEE PLANS	WHITE	0.10	KRUEGER 6790 OR EQUAL

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BRACE HALL RENOVATION

JOB NO. 003-10126-004
DRAWN BY: DSJ
CHECKED BY: MJB

1 ADDENDUM NO. 1
DATE: 09.06.2013
DRAWING: MH501A

STEAM/HOT WATER HEAT EXCHANGER SCHEDULE

MSSHWHE

MARK	LOCATION	SERVES	HOT WATER					STEAM		MANUFACTURER AND MODEL NO.
			GPM	EWT °F	LWT °F	MAX PD FT WG	FOULING FACTOR	PSIG	LBS/HR	
HX-1	BASEMENT	GWS	120	120	140	5	0.001	10	1173	BELL & GOSSETT SU 8 4-2 OR EQUAL. 40% PROPYLENE GLYCOL SOLUTION
HX-2	BASEMENT	GWS	120	120	140	5	0.001	10	1173	BELL & GOSSETT SU 8 4-2 OR EQUAL. 40% PROPYLENE GLYCOL SOLUTION
---	---	---	---	---	---	---	---	---	---	---
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DWH-1	BASEMENT	DOMESTIC HW	10	40	120	---	---	10	420	ARMSTRONG FLO-RITE-TEMP 415DW OR EQUAL.
---	---	---	---	---	---	---	---	---	---	---

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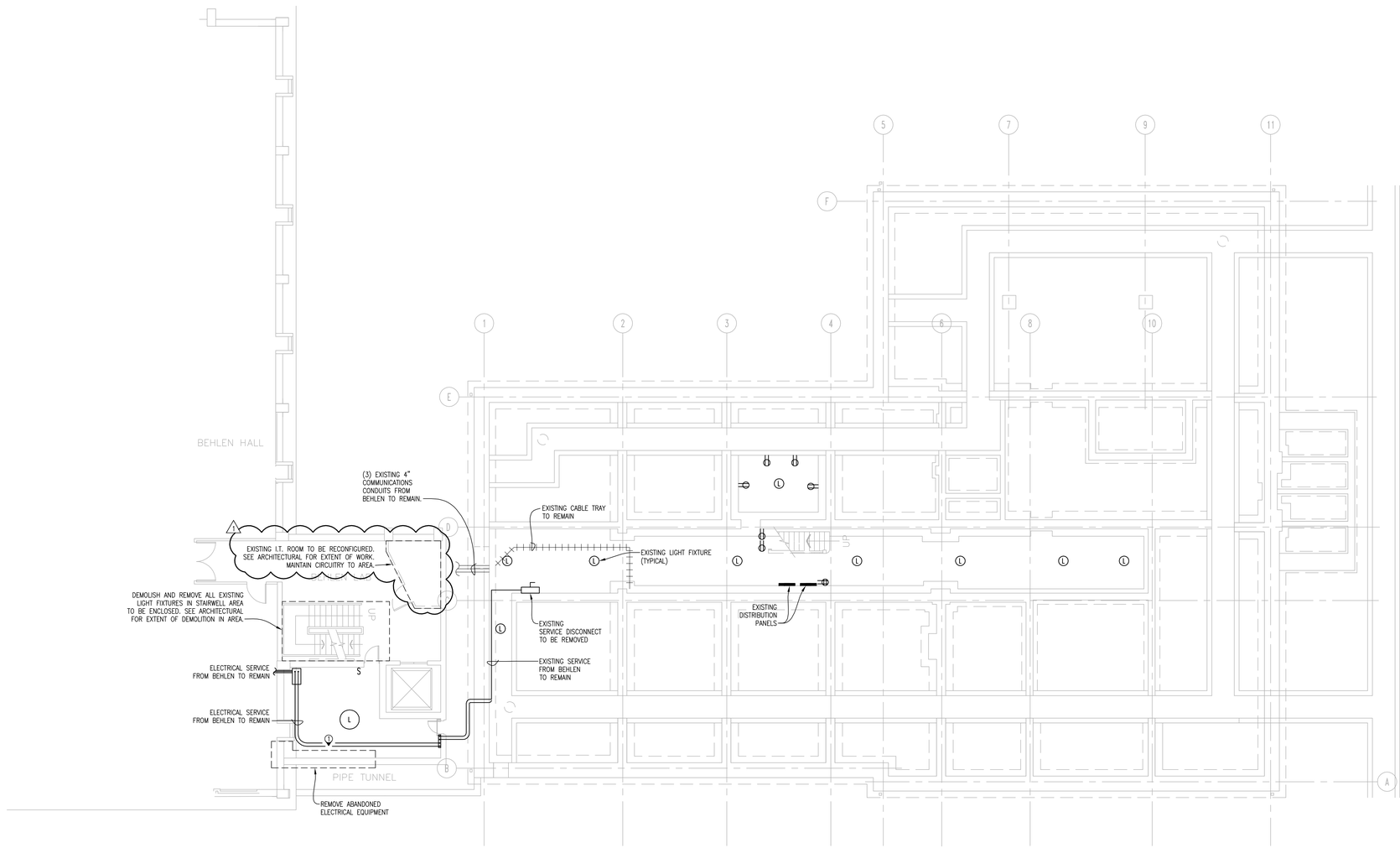
BRACE HALL RENOVATION

JOB NO. 003-10126-004
DRAWN BY: DSJ
CHECKED BY: MJB

1 ADDENDUM NO. 1
DATE: 09.06.2013
DRAWING: MH501B



1 ED100 ELECTRICAL DEMOLITION PLAN – BASEMENT LEVEL
SCALE: 1/8" = 1'-0"

1 PHOTO– SOUTH ELEVATION, SERVICE VAULT
SCALE: NONE

ELECTRICAL DEMOLITION NOTES:

1. REMOVE ALL DEVICES SHOWN ON DEMOLITION PLAN UNLESS OTHERWISE NOTED.
2. ALL ELECTRICAL ITEMS INSTALLED IN WALLS, FLOORS, OR CEILINGS TO BE DEMOLISHED SHALL BE REMOVED IN THEIR ENTIRETY UNLESS OTHERWISE NOTED OR REQUIRED BY OTHER CONDITIONS IN THESE DOCUMENTS. SEE DRAWINGS OF ALL OTHER TRADES FOR EXTENT OF DEMOLITION WORK. ELECTRICAL ITEMS SHALL INCLUDE POWER, LIGHTING, AND SPECIAL SYSTEMS. REFER ALL QUESTIONS OF APPLICABILITY TO THE A/E PRIOR TO BID FOR CLARIFICATION; OTHERWISE, FIELD DECISIONS BY THE A/E SHALL BE BINDING.
3. IT IS NOTED THAT THESE DRAWINGS DEPICT THE GENERAL INTENT OF THE SCOPE OF THE DEMOLITION WORK AND THAT NOT ALL ITEMS OF ELECTRICAL DEMOLITION ARE NECESSARILY SHOWN. THE CONTRACTOR SHALL BE REQUIRED TO FIELD VERIFY AND FIELD DETERMINE THE SCOPE OF THE DEMOLITION WORK PRIOR TO BID. REFER ALL QUESTIONS TO THE A/E PRIOR TO BID FOR CLARIFICATION.
4. PHASING OF ELECTRICAL DEMOLITION SHALL FOLLOW THAT OF THE GENERAL CONTRACTOR. COORDINATE REMOVAL OF ELECTRICAL WORK WITH OTHER CONSTRUCTION ACTIVITIES AND THE REQUIREMENTS OF THE OWNER.
5. THE OWNER SHALL HAVE SALVAGE RIGHTS TO ANY ITEMS THAT ARE TO BE DEMOLISHED. ITEMS SUCH AS SPEAKERS AND CAMERAS AND OTHER ITEMS THAT THE OWNER WISHES TO SALVAGE SHALL BE CAREFULLY REMOVED AND STORED IN A LOCATION AS DIRECTED BY THE OWNER. ALL OTHER ITEMS OF DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
6. WHERE DEMOLITION WORK WILL INTERRUPT CIRCUIT CONTINUITY TO OTHER AREAS OF THE FACILITY THAT ARE TO REMAIN IN OPERATION, THEN RACEWAY AND WIRING SHALL BE INSTALLED TO MAINTAIN THOSE AREAS IN COMPLETE OPERATION. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED. COORDINATE ANY INTERRUPTIONS WITH THE OWNER AT LEAST TWO WEEKS PRIOR AND ACCOMMODATE THE OWNER'S NEEDS AS REQUIRED.
7. ELECTRICAL CIRCUITS THAT ARE TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. CONDUCTORS SHALL BE REMOVED FROM THE ITEM TO BE DEMOLISHED TO THE SOURCE OVERCURRENT DEVICE. RACEWAYS WHICH ARE INSTALLED IN OR BELOW FLOORS OR WITHIN WALLS MAY BE ABANDONED, BUT ALL OVERHEAD OR EXPOSED RACEWAYS SHALL BE REMOVED. EXPOSED RACEWAYS TO BE ABANDONED SHALL BE REMOVED AND SHALL BE CUT OR CHISELED AT LEAST 2" INTO THE WALL OR FLOOR AND THE OPENING GROUTED SMOOTH.
8. WHERE EXISTING DEVICE OR JUNCTION BOXES MUST REMAIN IN EXISTING WALLS OR CEILINGS (SUCH AS FOR CIRCUITS THAT MUST BE MAINTAINED TO OTHER AREAS), THEN THEY SHALL BE FITTED WITH BLANK COVERPLATES.
9. WHERE DISTRIBUTION OR BRANCH CIRCUIT EQUIPMENT (PANELBOARDS, SWITCHBOARDS, ETC.) IS TO BE REMOVED, THEN ALL CIRCUITS WHICH FEED ITEMS TO REMAIN SHALL BE RECONNECTED TO NEW DISTRIBUTION OR BRANCH CIRCUIT EQUIPMENT. REFER ALL QUESTIONS TO THE A/E FOR CLARIFICATION.
10. THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN IN OPERATION THROUGHOUT CONSTRUCTION. AUTOMATIC SMOKE DETECTORS IN THE AREA OF CONSTRUCTION SHALL BE DISCONNECTED AND TEMPORARILY REPLACED WITH HEAT DETECTORS WHEN THE SPACE IS STAFFED BY THE CONTRACTOR IN ACCORDANCE WITH THE APPROVED FIRE SAFETY PROCEDURES OF THE OWNER AND THE LOCAL FIRE MARSHALL, BUT SHALL BE REACTIVATED WHENEVER THE SPACE IS NOT OCCUPIED BY THE CONTRACTOR. AUTOMATIC SMOKE DETECTORS SHALL BE PROTECTED FROM DUST AND DIRT ACCUMULATION BY REMOVING THE DEVICE FROM ITS BASE DURING THOSE TIMES WHEN THE SYSTEM IS ALLOWED TO BE OUT OF OPERATION.
11. IF HAZARDOUS MATERIALS (I.E. ASBESTOS, PCB's, ETC.) ARE ENCOUNTERED AT ANY TIME DURING CONSTRUCTION IN THE WORK AREA, STOP WORK IMMEDIATELY AND CONTACT THE A/E OR THE OWNER.
12. REMOVE CABLING BACK TO SOURCE FOR ALL TEL/DATA OUTLETS BEING REMOVED.

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UNL Project #C008P098

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09/06/13

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

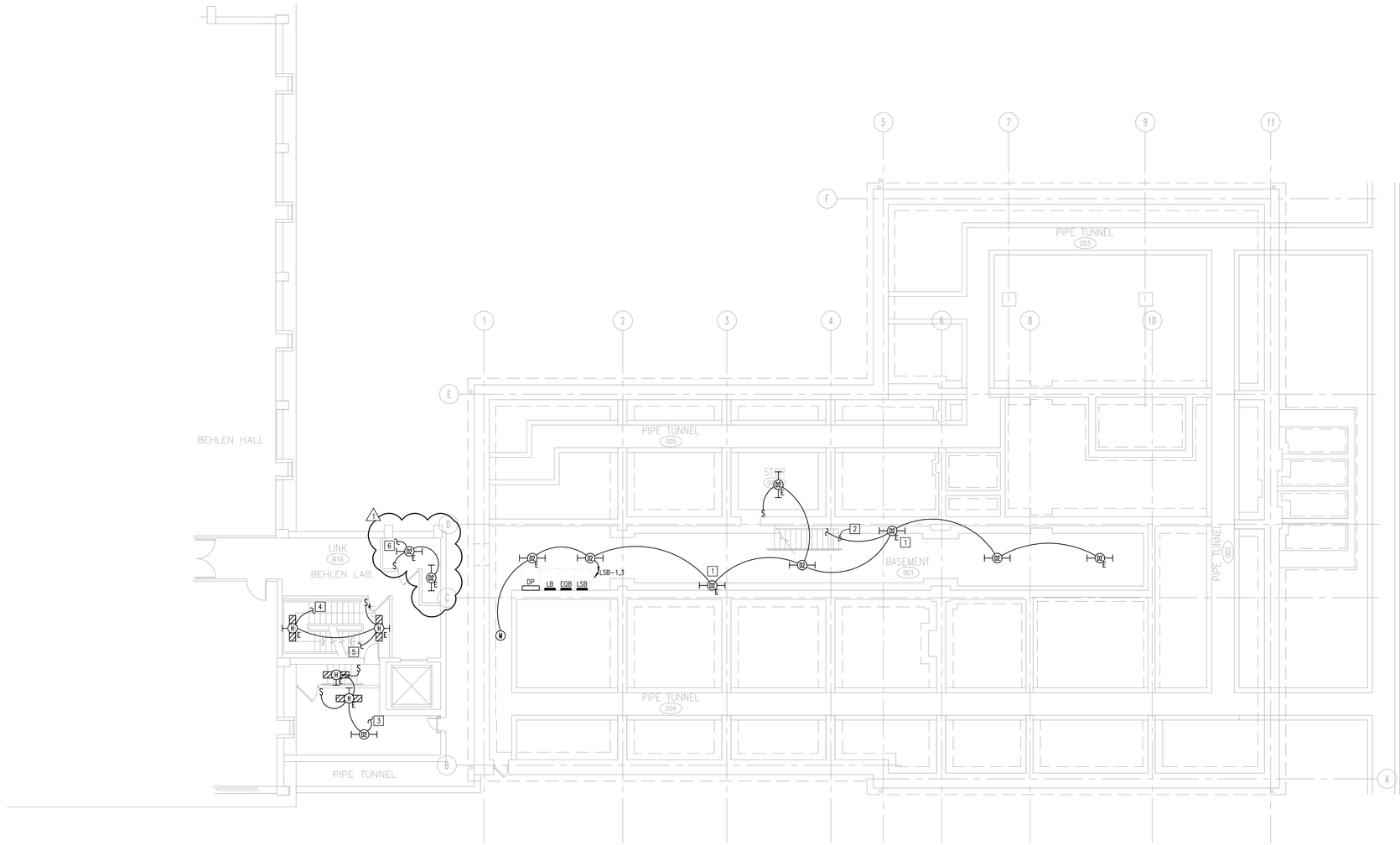
BID SET

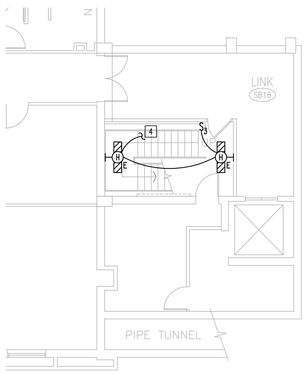
4' 0 4' 8'
SCALE: 1/8"=1'-0"

Project No. 003-10126-004
August 19, 2013

ELECTRICAL
DEMOLITION PLAN
BASEMENT LEVEL

ED100





1 LIGHTING PLAN – BASEMENT
EL100 / SCALE: 1/8" = 1'-0"

2 LIGHTING PLAN – SUB-BASEMENT
EL100 / SCALE: 1/8" = 1'-0"

LIGHTING PLAN KEYED NOTES:

1. WALL MOUNT FIXTURE AT 5' AFF.
2. CONNECT TO FIXTURE '02' ON LEVEL ABOVE
3. CONNECT TO EXISTING CIRCUIT FEEDING THE SERVICE VAULT.
4. CONNECT TO LINK STAIRWELL CIRCUIT ON LEVEL ABOVE.
5. CONNECT TO LINK STAIRWELL CIRCUIT IN SUB-BASEMENT, SEE DRAWING 2 – THIS SHEET, FOR CONTINUATION.
6. CONNECT TO EXISTING CIRCUIT FEEDING IT ROOM IN LINK.

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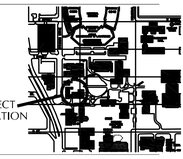
KEY PLAN



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Project No. 003-10126-004
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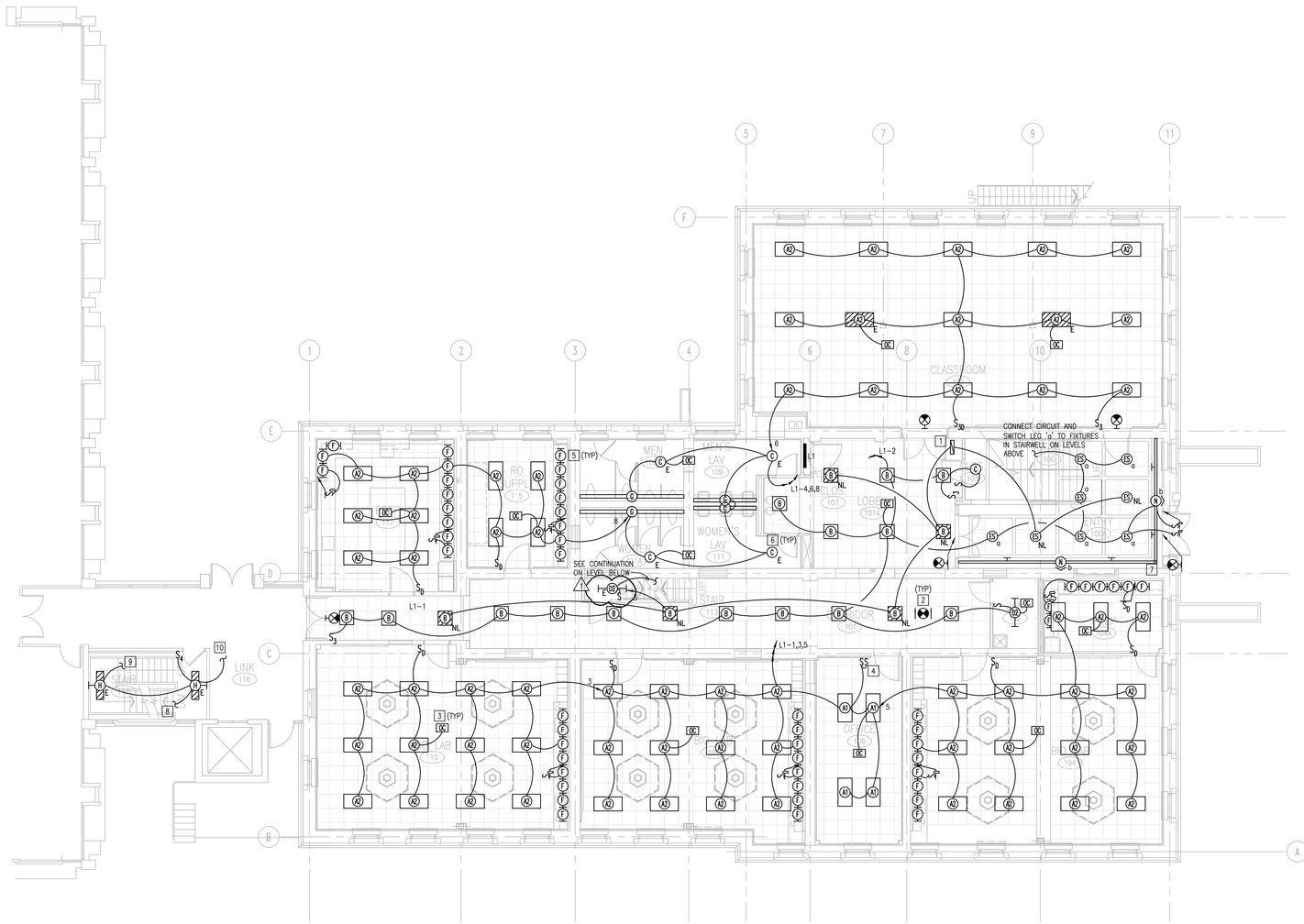
LIGHTING PLAN
BASEMENT

EL100



1 LIGHTING PLAN – LEVEL 1
EL101 SCALE: 1/8" = 1'-0"

LIGHTING PLAN KEYED NOTES:

1. BATTERY INVERTER UNIT. PROVIDE UN-SWITCHED CIRCUITING FROM CIRCUIT LSB-3 TO FIXTURE TYPE 'ES' DESIGNATED AS NIGHT LIGHT.
   PRODUCT NO.: PURE WAVE – PW 12 LC V1 TB
2. CONNECT ALL EXIT LIGHTS TO EMERGENCY LIGHTING CIRCUIT, LSB-3, IN THE BASEMENT.
3. SEE DRAWING 2/EL501 FOR OCCUPANCY SENSOR DETAIL.
4. BI-LEVEL SWITCHING, SEE FIXTURE SCHEDULE, SHEET EL501, FOR DETAILS.
5. UNDER CABINET TASK LIGHT, COORDINATE WITH MILLWORK. SEE LIGHTING FIXTURE SCHEDULE ON SHEET EL501 FOR DETAILS. PROVIDE SEPARATE SWITCH FOR UNDERCABINET FIXTURES, AS SHOWN ON PLANS.
6. FOR FIXTURES DESIGNATED AS 'E' (EMERGENCY) PROVIDE EMERGENCY BATTERY PACK (SEE LIGHTING FIXTURE SCHEDULE, SHEET EL501, FOR DETAILS) AND CONNECT UN-SWITCHED EMERGENCY LIGHTING CIRCUIT, LSB-3 IN THE BASEMENT, TO BATTERY PACK.
7. PROVIDE 90° CORNER ACCESSORY FOR CONTINUOUS RUN FOR FIXTURE N.
8. CONNECT TO LINK STAIRWELL CIRCUIT ON LEVEL ABOVE.
9. CONNECT TO LINK STAIRWELL CIRCUIT ON LEVEL BELOW.
10. CONNECT LINK STAIRWELL CIRCUIT TO EXISTING CIRCUIT SERVING AREA.

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UNL Project #C008P098

KEY PLAN

PROJECT LOCATION

REVISIONS

NO.	DESCRIPTION	DATE
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FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

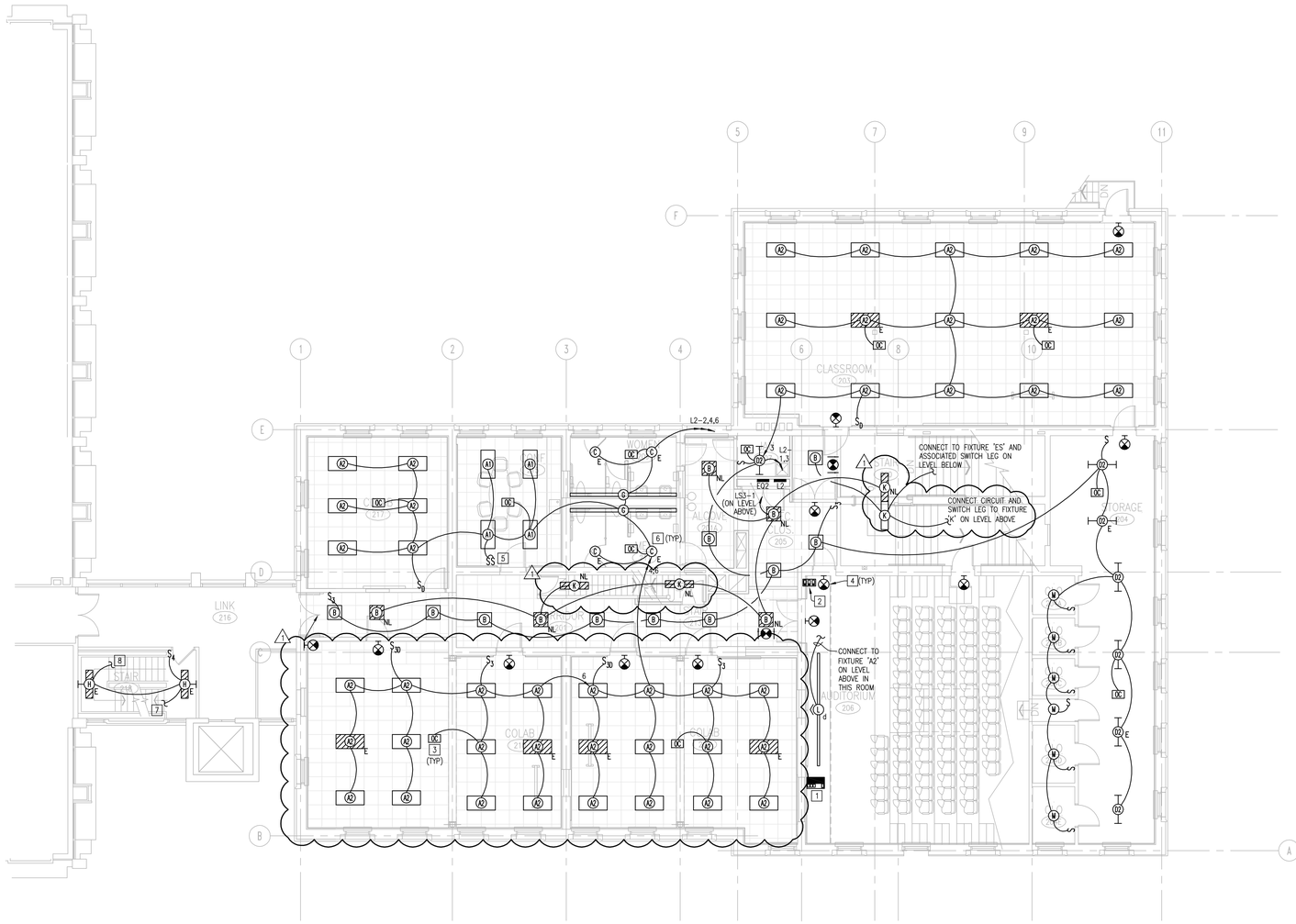
BID SET

4' 0 4' 8'
SCALE: 1/8"=1'-0"

Project No. 003-10126-004
August 19, 2013

LIGHTING PLAN
LEVEL 1

EL101



1 LIGHTING PLAN – LEVEL 2

EL102 SCALE: 1/8" = 1'-0"

LIGHTING PLAN KEYED NOTES:

1. AUDITORIUM LIGHTING CONTROL STATION 1. SEE DRAWING 1/EL501 FOR DETAILS. CONNECT SWITCH LEGS TO LIGHT FIXTURES IN THIS ROOM, AND ON LEVEL ABOVE, AS INDICATED ON PLANS AND DETAILS.
2. AUDITORIUM LIGHTING CONTROL STATION 2. SEE DRAWING 1/EL501 FOR DETAILS. CONNECT SWITCH LEGS TO LIGHT FIXTURES IN THIS ROOM, AND ON LEVEL ABOVE, AS INDICATED ON PLANS AND DETAILS.
3. SEE DRAWING 2/EL501 FOR OCCUPANCY SENSOR DETAIL.
4. CONNECT ALL EXIT LIGHTS TO EMERGENCY LIGHTING CIRCUIT, LS3-1, ON 3RD FLOOR.
5. BI-LEVEL SWITCHING, SEE FIXTURE SCHEDULE, SHEET EL501, FOR DETAILS.
6. FOR FIXTURES DESIGNATED AS 'E' (EMERGENCY) PROVIDE EMERGENCY BATTERY PACK (SEE LIGHTING FIXTURE SCHEDULE, SHEET EL501, FOR DETAILS) AND CONNECT UN-SWITCHED EMERGENCY LIGHTING CIRCUIT, LS3-1 ON 3RD FLOOR, TO BATTERY PACK.
7. CONNECT TO LINK STAIRWELL CIRCUIT ON LEVEL ABOVE.
8. CONNECT TO LINK STAIRWELL CIRCUIT ON LEVEL BELOW.

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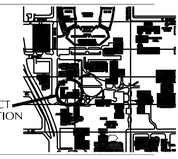
UNL Project #C008P098

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09/06/13

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

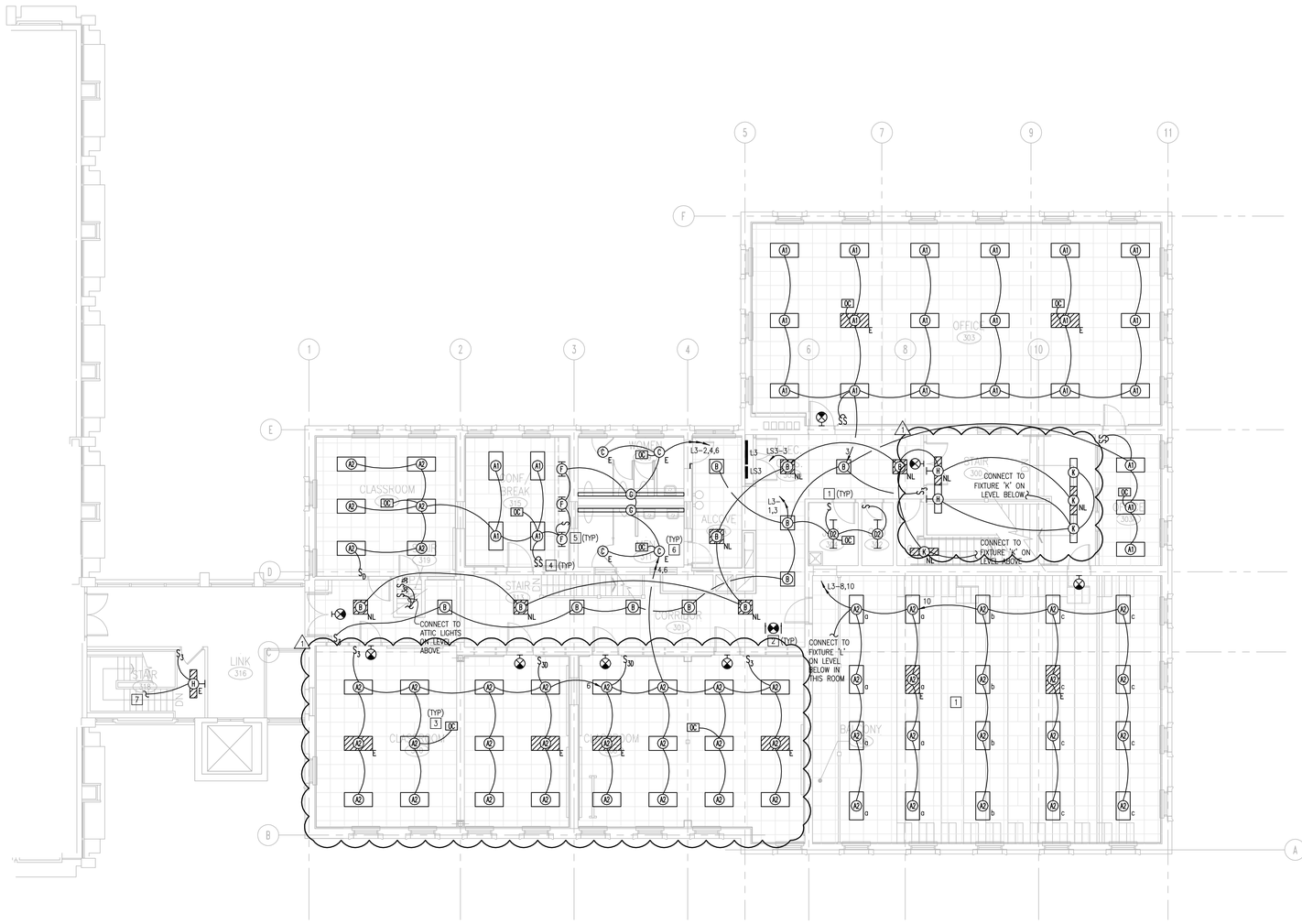
BID SET

4' 0 4' 8'
SCALE: 1/8"=1'-0"

Project No. 003-10126-004
August 19, 2013

LIGHTING PLAN
LEVEL 2

EL102



1 LIGHTING PLAN – LEVEL 3
EL103 SCALE: 1/8" = 1'-0"

LIGHTING PLAN KEYED NOTES:

1. CONNECT LIGHT FIXTURES IN THIS ROOM TO SWITCH LEGS SHOWN ON LEVEL BELOW ON DRAWING 1/EL102.
2. CONNECT ALL EXIT LIGHTS TO EMERGENCY LIGHTING CIRCUIT, LS3-3, ON THIS FLOOR.
3. SEE DRAWING 3/EL501 FOR OCCUPANCY SENSOR DETAIL.
4. BI-LEVEL SWITCHING, SEE FIXTURE SCHEDULE, SHEET EL501, FOR DETAILS.
5. UNDER CABINET TASK LIGHT, COORDINATE WITH MILLWORK. SEE LIGHTING FIXTURE SCHEDULE ON SHEET EL501 FOR DETAILS. PROVIDE SEPARATE SWITCH FOR UNDERCABINET FIXTURES, AS SHOWN ON PLANS.
6. FOR FIXTURES DESIGNATED AS 'E' (EMERGENCY) PROVIDE EMERGENCY BATTERY PACK (SEE LIGHTING FIXTURE SCHEDULE, SHEET EL501, FOR DETAILS) AND CONNECT UN-SWITCHED EMERGENCY LIGHTING CIRCUIT, LS3-3, TO BATTERY PACK.
7. CONNECT TO LINK STAIRWELL CIRCUIT ON LEVEL BELOW.

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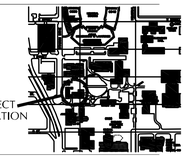


REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09/06/13

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

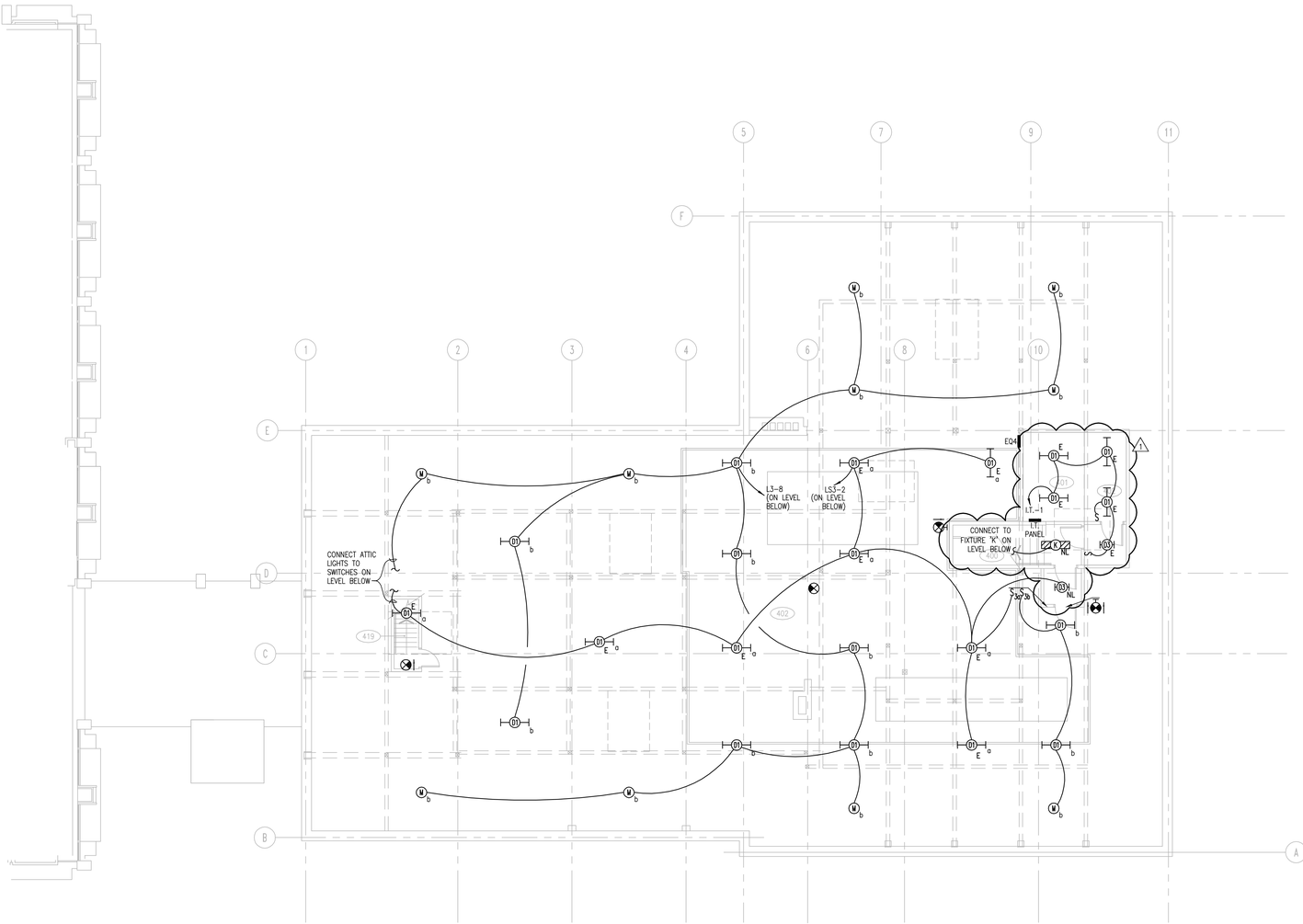
BID SET

4' 0 4' 8'
SCALE: 1/8" = 1'-0"

Project No. 003-10126-004
August 19, 2013

LIGHTING PLAN
LEVEL 3

EL103



1 EL104 LIGHTING PLAN – ATTIC
SCALE: 1/8" = 1'-0"

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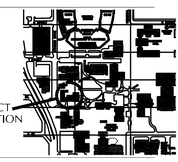
KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09/06/13

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

BID SET

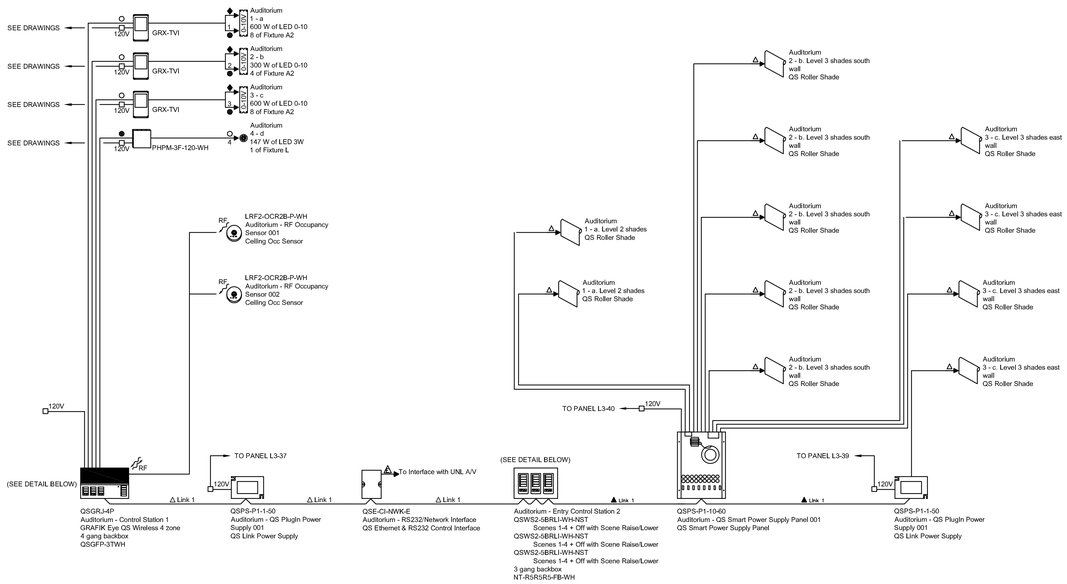
4' 0 4' 8'
SCALE: 1/8"=1'-0"

N

Project No. 003-10126-004
August 19, 2013

LIGHTING PLAN
ATTIC

EL104



1 EL501 ROOM 206 LIGHTING CONTROL SCHEMATIC

SCALE: NONE

Notes on Wiring

QS Control Link

The QS Control Link has a free wiring topology (daisy chain, t-tap, etc.) For illustration purposes the QS Control Link is shown wired in the daisy chain fashion. Additionally, controls have been laid out to ensure appropriate power to each device. Check power requirements before modifying device wiring order.
Use Lutron cable GRX-CBL-346S (4 Conductor Non-Plenum) or GRX-PCBL-346S (4 Conductor Plenum). Otherwise use 2 #18 AWG (1.0 mm sq) and 1 Belden #9461. Use GRX-CBL-46L for links running longer than 50 ft.

EcoSystem Link

The EcoSystem Link has a free wiring topology (daisy, chain, t-tap, home-run etc.) For illustration purposes the Ecosystem Link is shown wired in daisy chain fashion. EcoSystem Link requires Lutron cable C-CBL-216-GR-1 (2 #16 Conductor Non-Plenum) or C-PCBL-216-CL-1 (2 #16 Conductor Plenum rated). Otherwise use 2 #16 AWG by others. EcoSystem Links (E1 and E2) are polarity insensitive. Link length is limited by the wire gauge used for E1 and E2 as follows:

Wire Gauge	Max Loop Length
#18 AWG (1.02mm)	550' (167m)
#16 AWG (1.29mm)	900' (274m)
#14 AWG (1.63mm)	1,400' (426m)
#12 AWG (2.05mm)	2,200' (670m)

DMX Link

DMX Link wiring requires one Belden #9729 (Non-Plenum) or one Beldon #89729 (Plenum) or Dura Flex 22/4 WA cable.

LUTRON.
Lutron Electronics Co. Inc.
7200 Suter Road,Coopersburg, PA 18036
ph: (610) 282-3800 | fax: (610) 282-1146

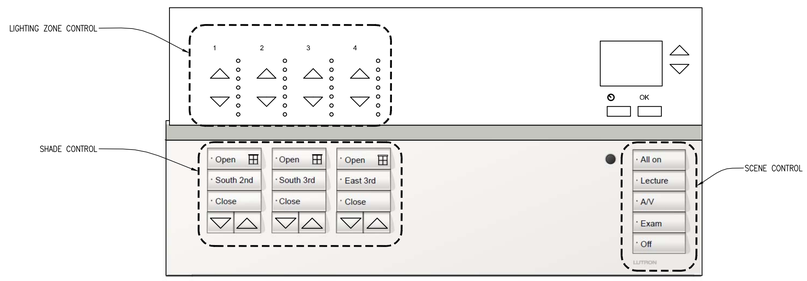
Wire Legend

- △ QS Control Link (Connect wires 1, 2, 3 and 4)*
- ▲ QS Control Link (Connect wires 1, 3 and 4. Do not connect wire 2)*
- △ Total length of QS link must not exceed 2000 ft. For control link less than 500 ft use Lutron cable GRX-CBL-346S or GRX-PCBL-346S. Otherwise use 2 #18 AWG + 2 #22 AWG. For link length between 500 ft to 2000 ft use Lutron cable GRX-CBL-46-L or GRX-PCBL-46L. Otherwise use 2 #12 AWG + 2 #22 AWG .
- ▽ Power Panel Control Link . Use Lutron cable GRX-CBL-46L or GRX-PCBL-46L. Otherwise use 2 #12 AWG + 2 #22 AWG + 1 #18AWG.
- ☐ Input Power 2 #12 AWG (2.5 mm sq) + ground
- ◪ Normal and Emergency Input Power 2 #12 AWG (2.5 mm sq) + ground
- ◶ 3 Phase Input Power, 4 #12 AWG + ground
- ● 2 #12 AWG (2.5 mm sq) + ground
- ○ 3 #12 AWG (2.5 mm sq) + ground
- ◇ EcoSystem Link* Use Lutron cable C-CBL-216-GR-1 or C-PCBL-216-CL-1. Otherwise use 2 #16 AWG.
- ◆ DALI Link
- ◆ 2 #18 AWG
- ⧗ Lutron cable C-CBL-522S or 4 #18 AWG
- ⧗ Lutron cable C-CBL-522S or 3 #18 AWG
- ⚠ DMX Link*
- ⚠ Ethernet Link
- ⚠ Fiber Optics Link
- – – – RF Connection
- ——— Wired Connection

Notes on Power Requirements

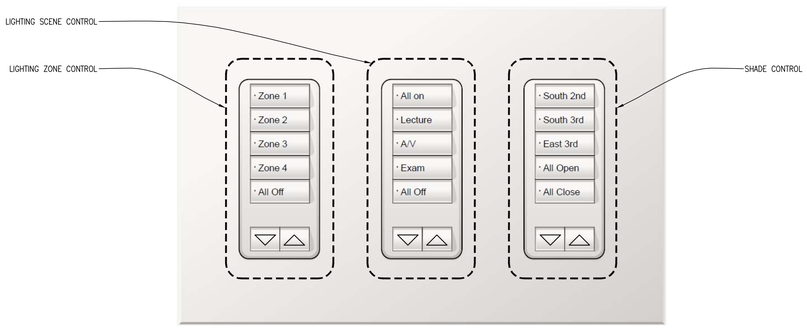
Device Name	Power Supply (PDU)
GRAFIK Eye QS	3
QS ESN (EcoSystem)	30
QS ESN (Switching) QS ESN (0-10V)	14
QS ESN (DALI) QS ESN (Adaptive)	3
QS ESN (Motor Module)	0
Plug-in Power Supply	8
Din Rail Power Supply	22
J-Box Power Supply	8
Quantum Lighting Hub	33 to each link

Device Name	Power Draw (PDU)
seeTouch QS	1
QSM (without wired inputs)	3
QSM (with wired inputs)	3 + add PDUs for each sensor in the PDU column
Wired Occ Sensor on QSM	2
Wired Photo Sensor on QSM	0.5
Wired IR Receiver on QSM	0.5
EcoSystem Keypad on QSM	0.5
Wired Pico on QSM	0.5
Digital I/O Control Interface	3
NWK Control Interface	2
DMX-512 Interface	2
ESN Programming Interface	2



CONTROL STATION 1

* COORDINATE FINAL NAMEPLATE ENGRAVING WITH UNL



CONTROL STATION 2

* COORDINATE FINAL NAMEPLATE ENGRAVING WITH UNL

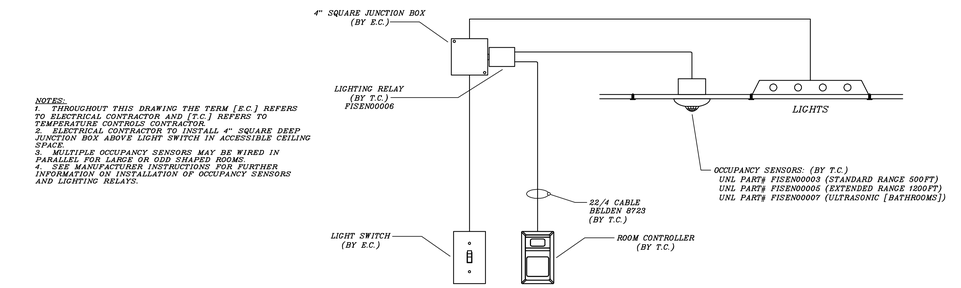
LIGHTING FIXTURE SCHEDULE

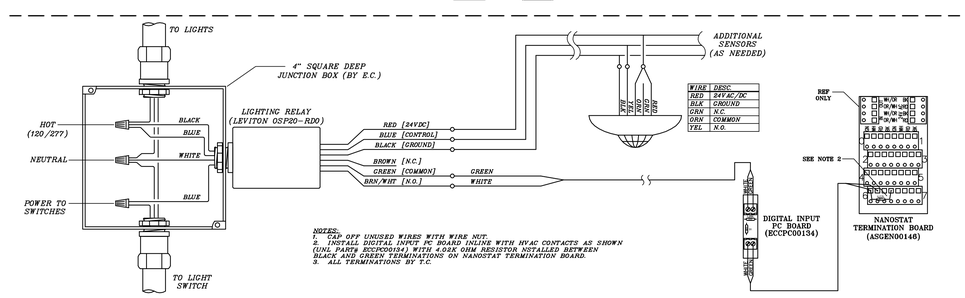
FIX. TYPE	DESCRIPTION	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN CATALOG NUMBER	LAMP NO.	LAMP WATTS	LAMP TYPE	LAMP CCT	MOUNTING C	W	R	P	U	INPUT WATTS	VOLTAGE	REMARKS
A1	2'X4' RECESSED VOLUMETRIC LED BI-LEVEL	LITHONIA	2VTL4 72L ADP D75 LP840 BLD EL14L*	1	75	LED	4000K			•			75	120	
A2	2'X4' RECESSED VOLUMETRIC LED DIMMING	LITHONIA	2VTL4 72L ADP D75 LP840 NX EL14L*	1	75	LED	4000K			•			75	120	
B	2'X2' RECESSED VOLUMETRIC LED	LITHONIA	2VTL2 24L ADP D24 LP840 NX EL14L*	1	24	LED	4000K			•			24	120	
C	8" RECESSED LED DOWNLIGHT LED	GOTHAM	EVO 41/18 BAR 120 EL*	1	35	LED	4100K			•			35	120	
D1	4' INDUSTRIAL LED STRIP	LITHONIA	ZL2 L46 4600L LP840 ** BSL722* WGZ46	1	75	LED	4000K				•		75	120	CHAIN MOUNTING IS ACCEPTABLE **REMOVE LENS/DIFFUSER FOR ADDED LIGHT OUTPUT
D2	4' INDUSTRIAL LED STRIP	LITHONIA	ZL2 L46 4600L LP840 BSL722*	1	75	LED	4000K				•		75	120	CHAIN MOUNTING IS ACCEPTABLE IN BASEMENT SURFACE MOUNT TO CEILING, UNLESS OTHERWISE NOTED
D3	2' INDUSTRIAL LED STRIP	LITHONIA	ZL2 L24 2600L LP840 BSL722*	1	39	LED	4000K				•		75	120	CHAIN MOUNTING IS ACCEPTABLE
F	LED UNDERCABINET LIGHT	LITHONIA	UCLD 24 WH	1	12	LED	3000K					•	12	120	PROVIDE ACCESSORIES, AS NECESSARY, TO ACCOMMODATE FOR CONTINUOUS RUNS, AS SHOWN ON PLANS
G	RECESSED PERIMETER LED	MARK	SPRLED ** FL 41 EDVR 120 FA	1	12	LED	4100K			•			12 W/FT	120	**PROVIDE FIXTURE LENGTH AS SHOWN ON PLANS
H	4' LED WALL BRACKET	LITHONIA	WL4 41L D43 LP840 NX EL14L*	1	43	LED	4000K		•				43	120	
K	4' LED SURFACE VOLUMETRIC	LITHONIA	STL4 40L D40 LP840 NX EL14L* STCR**	1	40	LED	4000K	•					40	120	**PROVIDE ACCESSORIES, AS NECESSARY, TO ACCOMMODATE FOR CONTINUOUS RUNS, AS SHOWN ON PLANS
L	RECESSED LED WALL WASH	SELUX	L36R1 1L35 40 A2 RC 16 WH 120 DML	1	9	LED	4000K			•			9 W/FT	120	
M	GENERAL PURPOSE VAPOR TIGHT LED	LITHONIA	OLVTCM	1	15	LED	4000K	•					15	120	WHERE NECESSARY USE WALL MOUNT UNIT "OLVTMW"
N	WALL MOUNT LED WALL GRAZE	SELUX	L36R1 1L35 40 A5 W ** WH 120 DML	1	9	LED	4000K		•				9 W/FT	120	PROVIDE GRAZING OPTIC IN DIRECTION INDICATED ON PLANS BY ARROW. SEE ARCHITECTURAL DRAWING 5/AE111 MOUNTING DETAILS. **PROVIDE FIXTURE LENGTH AS SHOWN ON PLANS
ES	EXISTING SCHOOLHOUSE FIXTURE	–	–	1	42	42W E26 SPIRAL CFL	4100K		•				42	120	PROVIDE E39 TO E26 SCREW BASE ADAPTER. CONNECT NIGHT LIGHT FIXTURES TO EMERGENCY BATTERY UNIT AS SHOWN ON PLANS.
⊗	LED EXIT SIGN	LITHONIA	LE S 1/2 R 120/277 EL N			LED								120	PROVIDE MOUNTING ACCESSORIES, AS NECESSARY, FOR EACH EXIT SIGN LOCATION

* PROVIDE EMERGENCY BATTERY PACK FOR FIXTURES DESIGNATED WITH "E" OR "NL" ON PLANS, UNLESS OTHERWISE NOTED.

ELECTRICAL LIGHTING FIXTURE SCHEDULE NOTES:

1. LIGHTING FIXTURES SHALL BE FURNISHED AS SPECIFIED IN THE SCHEDULE, OR SHALL BE EQUAL FIXTURES BY OTHER MANUFACTURERS AS DETERMINED BY THE A/E. A/E REVIEW OR APPROVAL PRIOR TO BID WILL NOT BE GIVEN UNLESS SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS. ALL LIGHTING FIXTURES SHALL MEET THE FUNCTIONAL REQUIREMENTS OF THE FIXTURE DESCRIPTION REGARDLESS OF CATALOG NUMBER LISTED.
2. FIXTURES SHALL BE FURNISHED COMPLETE AND WITH ALL NECESSARY ACCESSORIES OR ADDITIONAL COMPONENTS REQUIRED TO MEET THE FUNCTIONAL SPECIFICATION OR TO MEET THE CHARACTERISTICS OF THE CONSTRUCTION IN WHICH THE FIXTURE IS TO BE INSTALLED.
3. COORDINATE FIXTURE MOUNTING REQUIREMENTS WITH THE ARCHITECTURAL CEILING PLANS, ANY EXISTING CONDITIONS, THE WORK OF OTHER TRADES, AND THE GENERAL CONTRACTOR AND PROVIDE FIXTURE TYPES WHICH FIT THE ACTUAL CEILINGS TO BE PROVIDED. FAILURE TO PERFORM THIS REQUIRED COORDINATION SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION, AND ANY CONFLICTS SHALL BE CORRECTED BY THE CONTRACTOR.
4. COORDINATE FIXTURE VOLTAGES WITH THOSE SHOWN ON THE DRAWINGS AND PROVIDE FIXTURES AND ACCESSORIES ACCORDINGLY, REGARDLESS OF VOLTAGE SHOWN IN THE FIXTURE SCHEDULE.
5. MOUNTING INDICATIONS IN THE LIGHTING FIXTURE SCHEDULE ARE DEFINED AS FOLLOWS: C – CEILING SURFACE MOUNTED; W – WALL MOUNTED; R – CEILING RECESSED MOUNTED; P – PENDANT MOUNTED; U – UNDERCABINET MOUNTED.
6. PROVIDE LUMEN OUTPUT AND COLOR TEMPERATURES FOR FIXTURES AS SPECIFIED OR AS REQUIRED FOR ALL TYPES. ALL FIXTURES SHALL BE NEW. ALL FIXTURES AND LED MODULES OF THE SAME TYPE SHALL BE BY THE SAME MANUFACTURER TO MATCH PROPERTIES.
7. PROVIDE WIRE GUARDS ON ALL FIXTURES HAVING EXPOSED LAMPS THAT ARE NOT INSTALLED IN COVES.
8. COORDINATE LOCATIONS OF FIXTURES IN MECHANICAL AND ELECTRICAL ROOMS SO AS TO BEST ILLUMINATE THE SPACE AND TO BEST COORDINATE WITH THE EQUIPMENT IN THE ROOM. CHAIN MOUNTING OF INDUSTRIAL FIXTURES IN THESE AREAS IS ACCEPTABLE. SELECT LIGHTING FIXTURES IN ELECTRICAL AND COMMUNICATIONS ROOMS SHALL BE PROVIDED WITH AN INTEGRAL EMERGENCY BATTERY BALLAST CAPABLE OF OPERATING AT A MINIMUM OF 1400 LUMENS FOR A DURATION OF NO LESS THAN 90 MINUTES.
9. EXIT SIGNS SHALL BE DIE-CAST ALUMINUM WITH RED LETTERS, SHALL BE PROVIDED WITH LED LAMPS, SINGLE OR DUAL FACE AS INDICATED, AND SHALL BE CEILING OR WALL MOUNTED AS INDICATED. PROVIDE AN INTEGRAL EMERGENCY BATTERY BACKUP WITH AUTOMATIC CHARGER AND TEST SWITCH SUITABLE FOR 90 MINUTE MINIMUM EMERGENCY OPERATION.
10. FIXTURES INDICATED WITH AN "E" INDICATES FIXTURE IS EMERGENCY, UNLESS OTHERWISE NOTED, PROVIDE EMERGENCY BATTERY PACK AS INDICATED ON FIXTURE SCHEDULE BY AN ASTERISK (*) AND PROVIDE UN-SWITCHED EMERGENCY BRANCH CIRCUIT WIRING TO EMERGENCY FIXTURES AS SHOWN ON PLANS.
11. FIXTURES INDICATED WITH AN "NL" (NIGHT LIGHT) SHALL REMAIN "ON" AT ALL TIMES. PROVIDE UNSWITCHED BRANCH CIRCUIT WIRING.





2 EL501 UNL OCCUPANCY/LIGHTING CONTROL SCHEMATIC

SCALE: NONE

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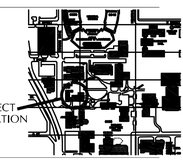
Omaha, NE 68114-4039 USA
Tel 402-391-8111 Fax 402-391-8564

UNL Project #C008P098

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09/06/13

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

BID SET

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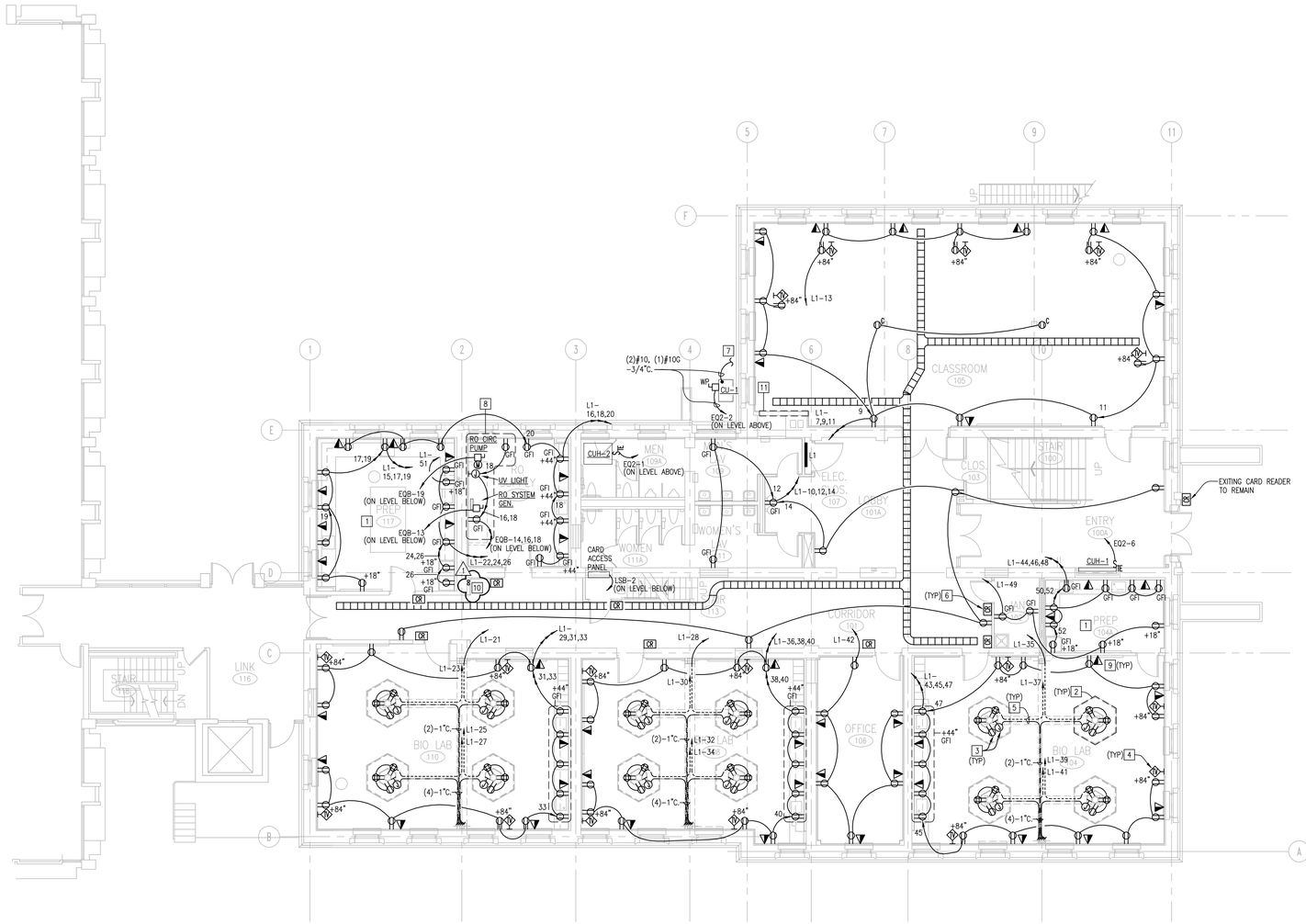
SCALE: 1/8"=1'-0"

Project No. 003-10126-004
August 19, 2013

LIGHTING SCHEDULE AND DETAILS

EL501



1 EP101 POWER AND SYSTEMS PLAN – LEVEL 1

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

POWER AND SYSTEMS PLAN KEYED NOTES:

1. ALL ELECTRICAL AND SYSTEMS OUTLETS IN THIS ROOM MOUNTED AT +44", UNLESS OTHERWISE NOTED.
2. MOUNT ELECTRICAL DEVICES IN PERMANENT LAB FURNITURE. COORDINATE WITH ARCHITECTURAL FOR FINAL LOCATIONS AND MOUNTING. ROUTE ELECTRICAL CONDUITS VIA TRENCH AS SHOWN ON PLANS.
3. PROVIDE TWO SINGLE GANG BOXES, ONE FOR DUPLEX RECEPTACLE AND ONE FOR HDMI OUTLET, AND DOUBLE GANG COVERPLATE FOR POWER AND A/V CONNECTIONS. ROUTE 3/4" CONDUIT FROM HDMI OUTLET, VIA TRENCH, UP TO ACCESSIBLE CEILING.
4. TV OUTLET LOCATION. PROVIDE 4" SQUARE BOX AND 1" CONDUIT STUBBED UP 6" INTO ACCESSIBLE CEILING SPACE. MOUNT OUTLET AND ADJACENT RECEPTACLE AT ELEVATION NOTED ON PLANS.
5. LINE TYPE KEY:
   UNDERGROUND ELECTRICAL ----------
   UNDERGROUND SYSTEMS CONDUIT — — — — —
6. ROUGH-IN LOCATION FOR CARD READER PER ACCESS CONTROL GENERIC ROUGH-IN DETAIL DRAWING ON AE602.
7. TO FC-3 IN ATTIC. SEE SHEET EP104 FOR CONTINUATION OF CIRCUIT.
8. ELECTRICAL CONNECTIONS FOR MECHANICAL AND PLUMBING R.O. EQUIPMENT. COORDINATE PLACEMENT OF OUTLETS AND DEVICES WITH FINAL INSTALLED LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT.
9. TELECOMMUNICATIONS OUTLET LOCATION. PROVIDE 4" SQUARE BOX WITH SINGLE GANG PLASTER RING AND 3/4" CONDUIT TO NEAREST CABLE TRAY. SEE COMMUNICATION ROUGH-IN DETAIL, DRAWING 1/EP502, FOR MORE INFORMATION.
10. (2) 4" CONDUITS FROM BASEMENT UP TO ACCESSIBLE CEILING SPACE ON FIRST FLOOR FOR UNL IT SERVICE PATHWAY FROM BEHLEN – SEE NOTE 11 FOR CONTINUATION OF TELECOMMUNICATIONS SERVICE PATHWAY.
11. TELECOMMUNICATIONS CHASE FROM FIRST FLOOR UP TO ATTIC SPACE – SEE ARCHITECTURAL FOR MORE INFORMATION.

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KEY PLAN

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Manager	DTB
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Draw	DJC
Check	JKN

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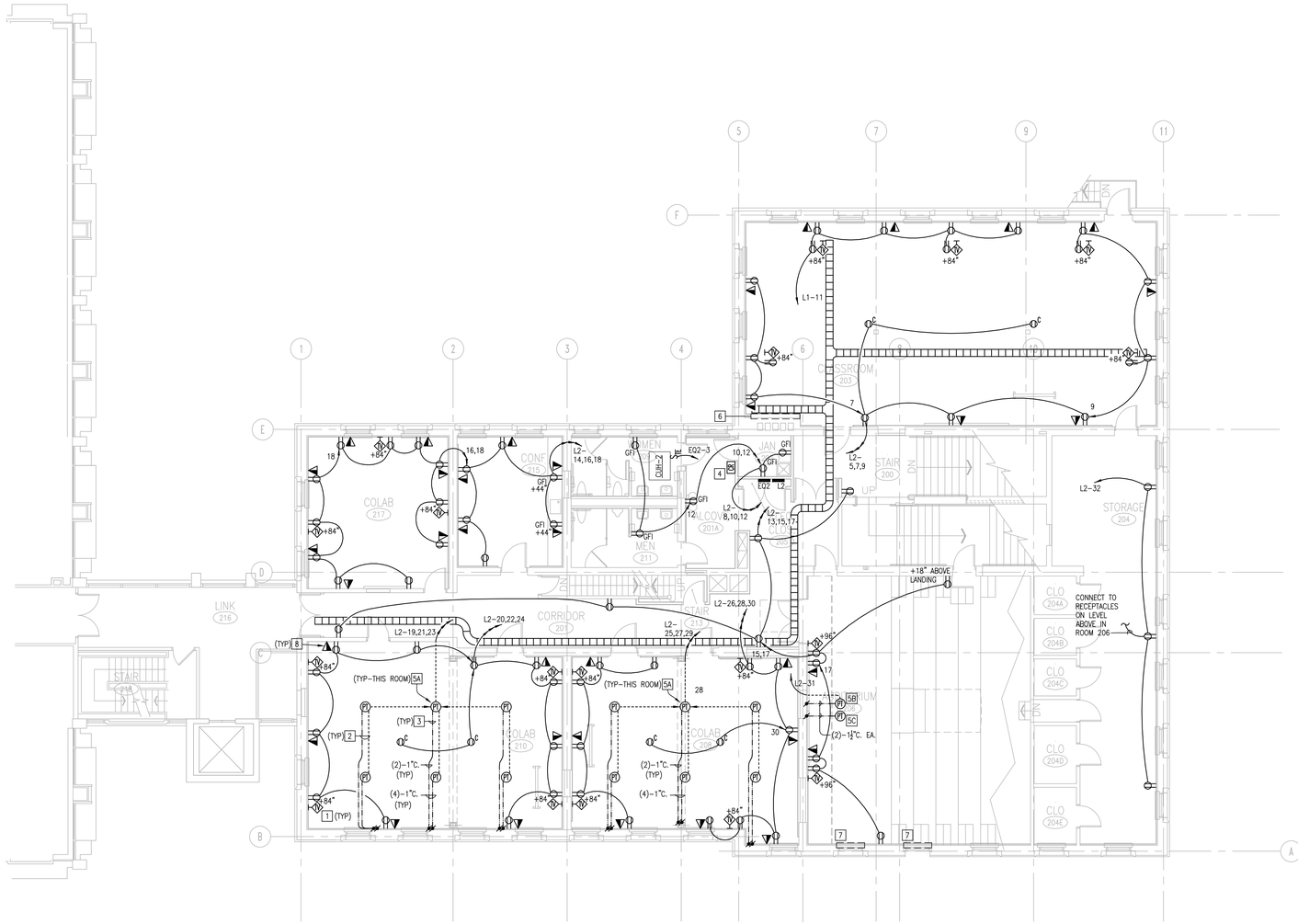
SCALE: 1/8"=1'-0"

Project No. 003-10126-004
August 19, 2013

POWER AND SYSTEMS PLAN
LEVEL 1

EP101



POWER AND SYSTEMS PLAN – LEVEL 2

1 / EP102 SCALE: 1/8" = 1'-0"

POWER AND SYSTEMS PLAN KEYED NOTES:

1. TV OUTLET LOCATION. PROVIDE 4" SQUARE BOX AND 1" CONDUIT STUBBED UP 6" INTO ACCESSIBLE CEILING SPACE. MOUNT OUTLET AND ADJACENT RECEPTACLE AT ELEVATION NOTED ON PLANS.
2. LINE TYPE KEY:
   UNDERGROUND ELECTRICAL ----------
   UNDERGROUND SYSTEMS CONDUIT —·—·—·—·—
3. PROVIDE SYSTEMS CONDUITS TO EACH POKE-THRU DEVICE – (1) FOR DATA AND (1) FOR AUDIO/VISUAL – SIZES INDICATED ON PLANS.
4. ROUGH-IN LOCATION FOR CARD READER PER ACCESS CONTROL GENERIC ROUGH-IN DETAIL DRAWING ON AE602.
5. POKE-THRU DEVICE, WIREMOLD – EVOLUTION SERIES (OR APPROVED EQUAL – SEE SPECIFICATIONS). PROVIDE CONNECTIONS TO DEVICES AS FOLLOWS:
   A. TWO DUPLEX RECEPTACLES, SPACE FOR TWO RJ45 JACKS, SPACE FOR A/V CONNECTIONS (COORDINATE WITH UNL FMP FOR REQUIREMENTS)
   B. TWO DUPLEX RECEPTACLES, SPACE FOR SIX RJ45 JACKS
   C. SPACE FOR A/V CONNECTIONS (COORDINATE WITH UNL FMP FOR REQUIREMENTS)
6. TELECOMMUNICATIONS CHASE FROM FIRST FLOOR UP TO ATTIC SPACE – SEE ARCHITECTURAL FOR MORE INFORMATION.
7. MOTORIZED ROLLER SHADE LOCATION. SEE DRAWING 1/EL501 AND ROLLER WINDOW SHADES SPECIFICATION SECTION 122413 FOR MORE INFORMATION.
8. TELECOMMUNICATIONS OUTLET LOCATION. PROVIDE 4" SQUARE BOX WITH SINGLE GANG PLASTER RING AND 3/4" CONDUIT TO NEAREST CABLE TRAY. SEE COMMUNICATION ROUGH-IN DETAIL, DRAWING 1/EP502, FOR MORE INFORMATION.

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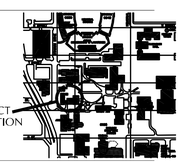
UNL Project #C008P098

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09/06/13

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

BID SET

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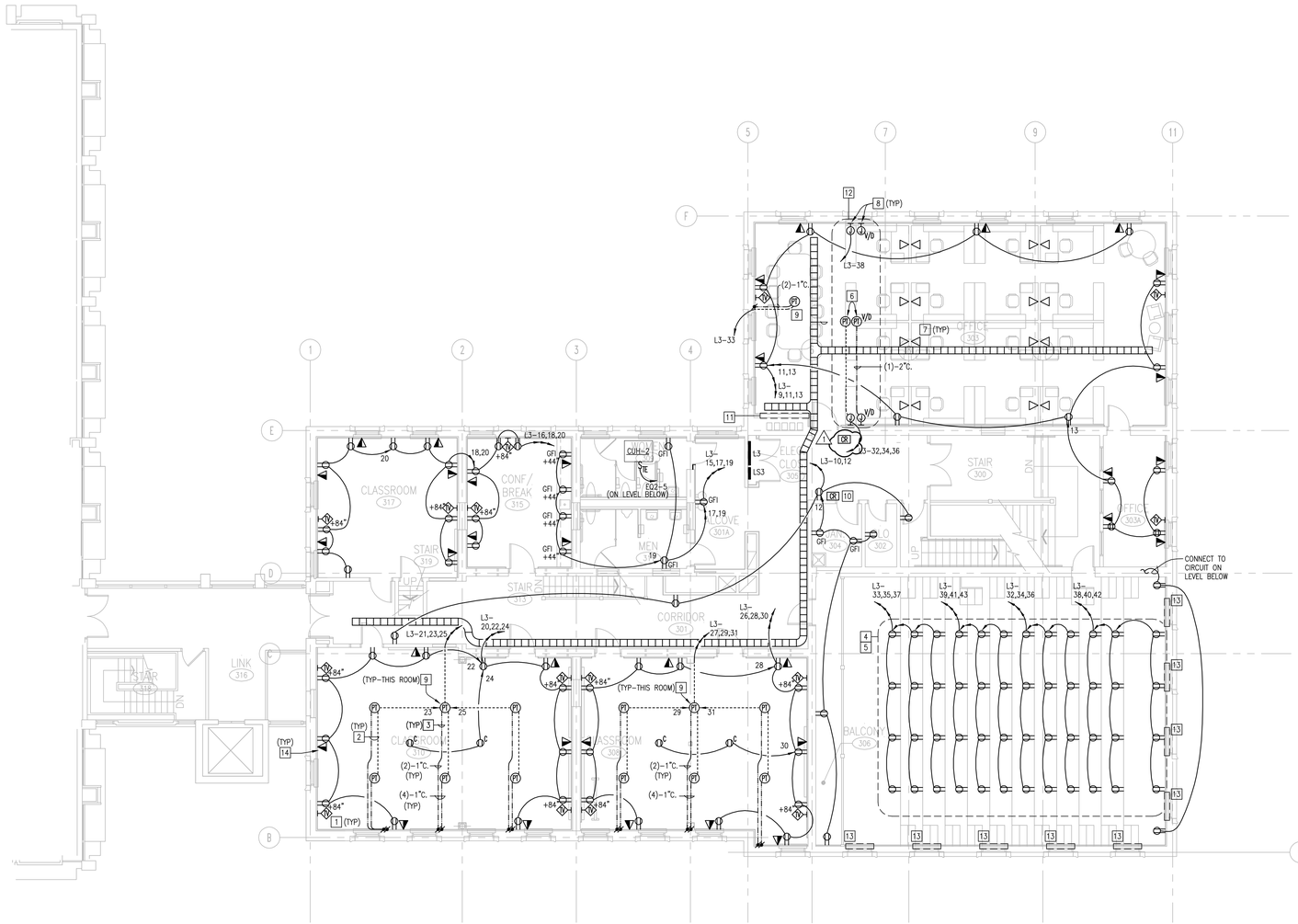
SCALE: 1/8"=1'-0"
N

Project No. 003-10126-004
August 19, 2013

POWER AND SYSTEMS PLAN LEVEL 2

EP102



POWER AND SYSTEMS PLAN – LEVEL 3

EP103 SCALE: 1/8" = 1'-0"

POWER AND SYSTEMS PLAN KEYED NOTES:

1. TV OUTLET LOCATION. PROVIDE 4" SQUARE BOX AND 1" CONDUIT STUBBED UP 6" INTO ACCESSIBLE CEILING SPACE. MOUNT OUTLET AND ADJACENT RECEPTACLE AT ELEVATION NOTED ON PLANS.
2. LINE TYPE KEY:
   UNDERGROUND ELECTRICAL ----------
   UNDERGROUND SYSTEMS CONDUIT ----------
3. PROVIDE SYSTEMS CONDUITS TO EACH POKE-THRU DEVICE – (1) FOR DATA AND (1) FOR AUDIO/VISUAL – SIZES INDICATED ON PLANS.
4. COORDINATE MOUNTING HEIGHT AND LOCATION OF DUPLEX RECEPTACLES IN RISERS WITH AUDITORIUM SEATING.
5. UNDER ALTERNATE NO. 3, AT EACH RISER PROVIDE CONNECTION FROM FLOOR BOX (PROVIDED BY SEATING MANUFACTURER) TO INTEGRAL POWER RACEWAY IN AUDITORIUM FURNITURE IN LIEU OF RISER MOUNTED DUPLEX RECEPTACLES. PROVIDE TWO CIRCUITS TO EACH RISER IN LIEU OF ONE CIRCUIT AS SHOWN UNDER BASE BID. IN ADDITION, UNDER ALTERNATE NO. 3 ADD (12) ADDITIONAL 20A/1P CIRCUIT BREAKERS TO PANEL L3 TO ACCOMMODATE INTEGRAL POWER CIRCUITS.
6. POKE-THRU JUNCTION BOXES FOR POWER AND VOICE/DATA TO SYSTEMS FURNITURE. COORDINATE CONNECTION REQUIREMENTS TO SYSTEMS FURNITURE WITH UNL.
7. TELECOMMUNICATIONS OUTLET FOR WORKSTATION IN SYSTEMS FURNITURE. VERIFY CONNECTION REQUIREMENTS WITH FURNITURE SUPPLIER PRIOR TO INSTALLATION.
8. RECESSED JUNCTION BOXES FOR POWER AND VOICE/DATA TO SYSTEMS FURNITURE. COORDINATE CONNECTION REQUIREMENTS TO SYSTEMS FURNITURE WITH UNL.
9. POKE-THRU DEVICE, WIREMOLD – EVOLUTION SERIES (OR APPROVED EQUAL – SEE SPECIFICATIONS). PROVIDE CONNECTIONS TO DEVICES AS FOLLOWS:
   TWO DUPLEX RECEPTACLES, SPACE FOR TWO RJ45 JACKS,
   SPACE FOR A/V CONNECTIONS (COORDINATE WITH UNL FMD FOR REQUIREMENTS)
10. ROUGH-IN LOCATION FOR CARD READER PER ACCESS CONTROL GENERIC ROUGH-IN DETAIL DRAWING ON AE602.
11. TELECOMMUNICATIONS CHASE FROM FIRST FLOOR UP TO ATTIC SPACE – SEE ARCHITECTURAL FOR MORE INFORMATION.
12. COORDINATE FINAL LOCATION OF FLOOR AND WALL BOXES WITH FINAL LOCATIONS OF SYSTEMS FURNITURE
13. MOTORIZED ROLLER SHADE LOCATION. SEE DRAWING 1/EL501 AND ROLLER WINDOW SHADES SPECIFICATION SECTION 122413 FOR MORE INFORMATION.
14. TELECOMMUNICATIONS OUTLET LOCATION. PROVIDE 4" SQUARE BOX WITH SINGLE GANG PLASTER RING AND 3/4" CONDUIT TO NEAREST CABLE TRAY. SEE COMMUNICATION ROUGH-IN DETAIL, DRAWING 1/EP502, FOR MORE INFORMATION.

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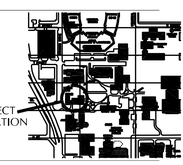
UNL Project #C008P098

KEY PLAN



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 001	09/06/13

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	DJC
Draw	DJC
Check	JKN

STAMP

BID SET

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

N

Project No. 003-10126-004
August 19, 2013

POWER AND SYSTEMS PLAN
LEVEL 3

EP103

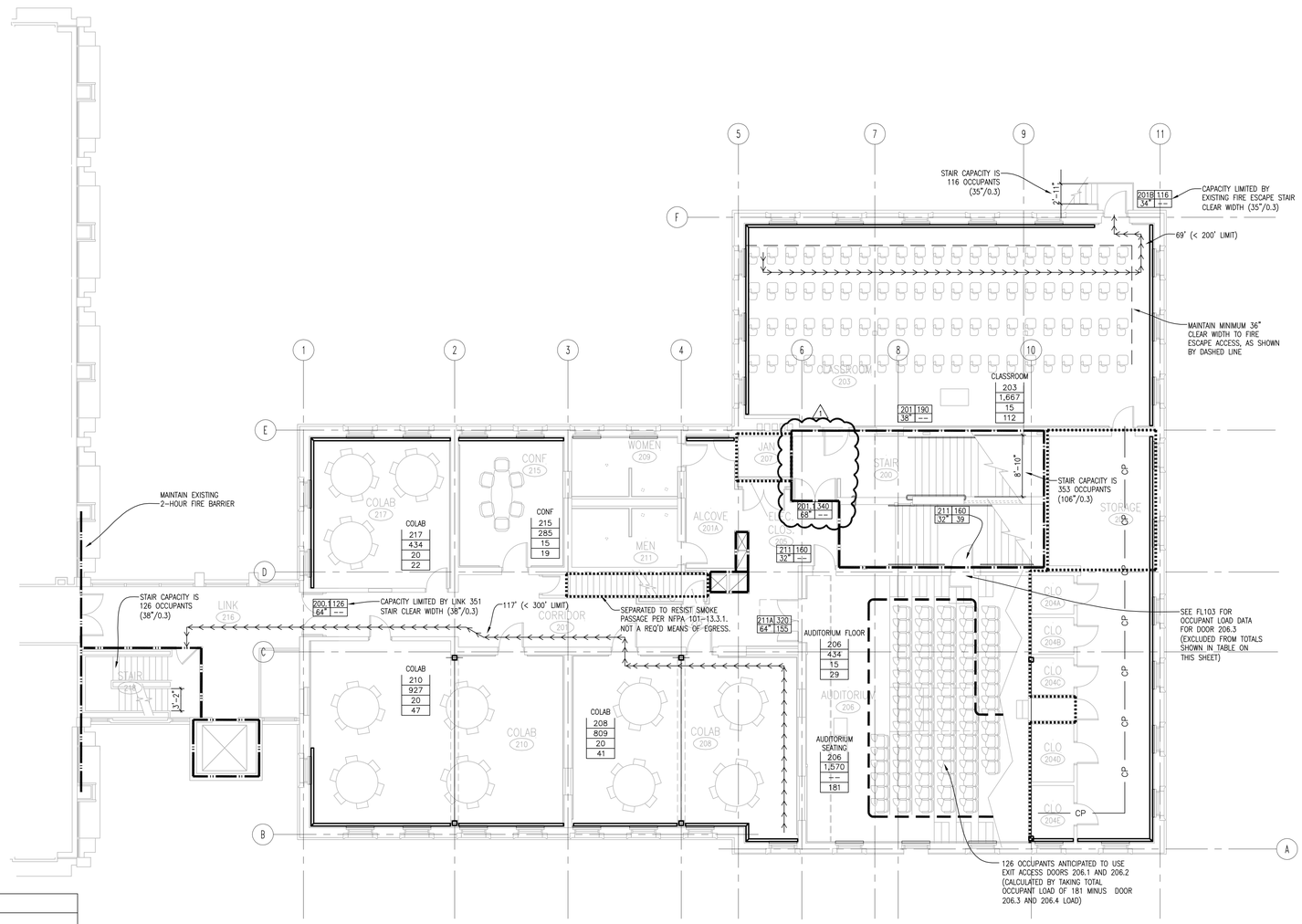
GENERAL NOTES:
1. SEE FL000 FOR GENERAL NOTES.

DOOR TAG LEGEND	
1 | 3 2 | 4	
REFERENCE	DESCRIPTION
1	DOOR NUMBER
2	DOOR OPENING WIDTH
3	DOOR OCCUPANT CAPACITY
4	DOOR OCCUPANT LOAD

ROOM TAG LEGEND	
ROOM NAME 1 2 3 4	
REFERENCE	DESCRIPTION
1	ROOM NUMBER
2	ROOM SQUARE FOOTAGE
3	OCCUPANT LOAD FACTOR (PERSON PER SQUARE FOOTAGE)
4	ROOM LOAD

*NOTE – OCCUPANT LOADS ARE BASED OFF OF ROOM NEW SQUARE FOOTAGES.
*NOTE – SEE SHEET F-602 FOR OCCUPANT LOAD AND EGRESS CALCULATION TABLE.

WALL RATING LEGEND	
SYMBOL	DESCRIPTION
	2-HOUR FIRE BARRIER
	1-HOUR FIRE BARRIER
	SMOKE PARTITION
— CP —	COMMON PATH
— DE —	DEAD END
	TRAVEL DISTANCE



OCCUPANT LOAD & EGRESS CALCULATIONS

NEW MIXED USE ASSEMBLY OCCUPANCY

USE OF SPACE	FLOOR AREA [SQ.FT.]	OCCUPANT LOAD FACTOR [SQ.FT. / PERSON]	OCCUPANT LOAD	REQUIRED EGRESS WIDTH (NOTE 1) [INCHES] (0.2" PER OCCUPANT)	PROVIDED EGRESS WIDTH [INCHES]
BUSINESS USE	3,639	100	37	7.4	--
ASSEMBLY USE (AUDITORIUM)	1,570	N/A	155	31.0	--
ASSEMBLY USE (CONF. AND CLASSROOM)	1,952	15	131	26.1	--
EDUCATIONAL – CLASSROOMS	2,170	20	109	21.8	--
LEVEL TOTAL	7,924	--	432	86.4	(NOTE 2)

1. TOTAL WIDTH PROVIDED BASED ON MULTIPLE ROOMS.
2. TOTAL WIDTH PROVIDED BASED UPON EXIT WIDTH CAPACITY. 204" DOOR CLEAR WIDTH AND 179" STAIR CLEAR WIDTH PROVIDED (596 TOTAL OCCUPANTS ACCOMMODATED BASED UPON CLEAR STAIR WIDTH LIMITATIONS > 432 TOTAL OCCUPANTS ANTICIPATED).

1 FL103 LIFE SAFETY PLAN LEVEL 2

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

OCCUPANCY CLASSIFICATION:
- NON-SEPARATED GROUP A-3, B & S-1 (IBC)
- MIXED, EXISTING ASSEMBLY & BUSINESS W/INCIDENTAL STORAGE (NFPA 101)

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UNL Project #C008P098

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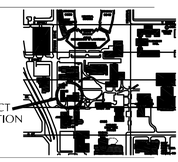

REVISIONS

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1	ADDENDUM 001	09.06.2013

FILE LOG

ACTIVITY	BY
Manager	DTB
Design	
Draw	
Check	

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

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August 19, 2013

LIFE SAFETY PLAN
LEVEL 2

FL102

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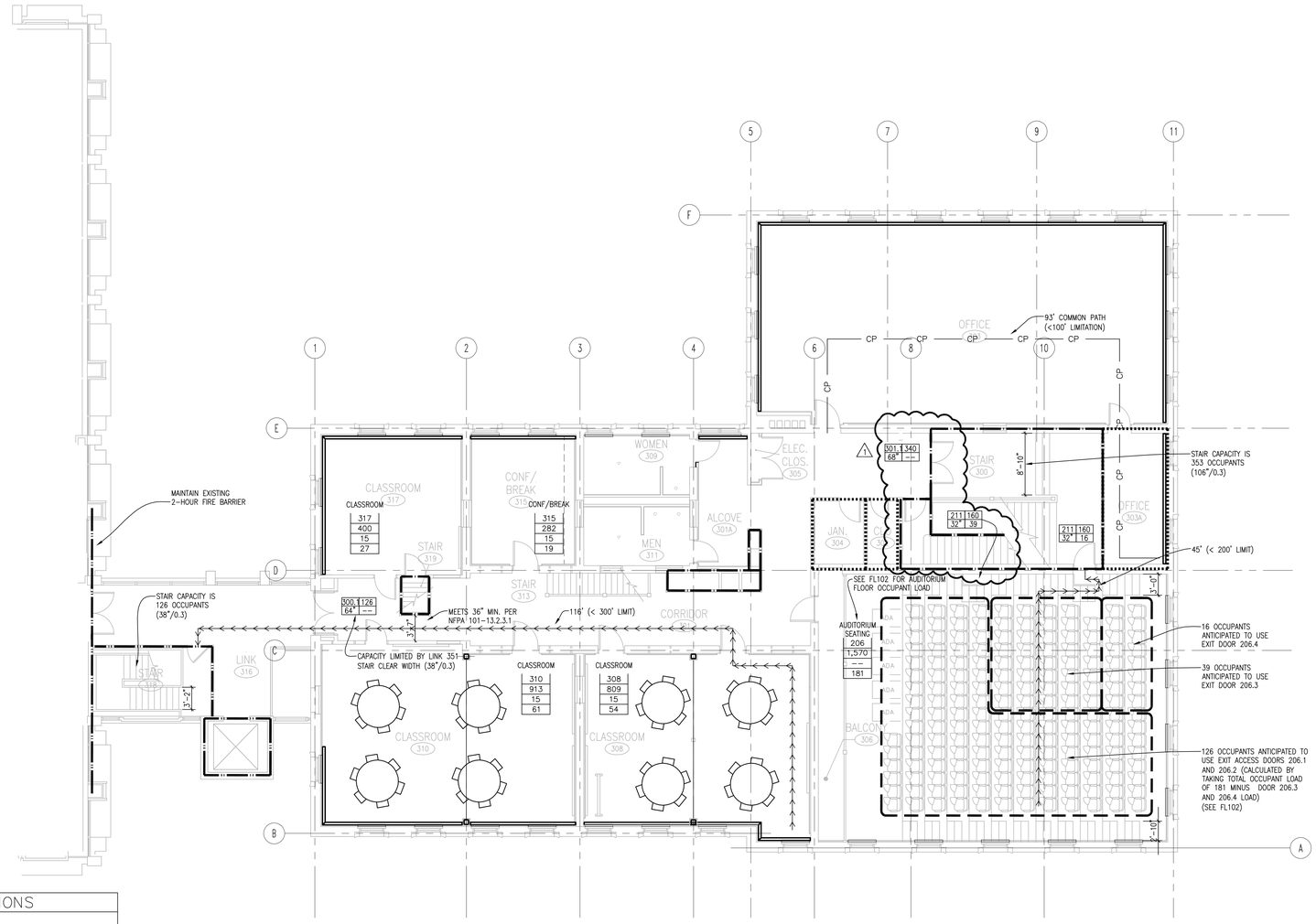
GENERAL NOTES:
1. SEE FL000 FOR GENERAL NOTES.

DOOR TAG LEGEND	
1 / 2 | 3 / 4	
REFERENCE	DESCRIPTION
1	DOOR NUMBER
2	DOOR CLEAR WIDTH
3	DOOR OCCUPANT CAPACITY
4	DOOR OCCUPANT LOAD

ROOM TAG LEGEND	
ROOM NAME / 1 / 2 / 3 / 4	
REFERENCE	DESCRIPTION
1	ROOM NUMBER
2	ROOM SQUARE FOOTAGE
3	OCCUPANT LOAD FACTOR (PERSON PER SQUARE FOOTAGE)
4	ROOM LOAD

*NOTE – OCCUPANT LOADS ARE BASED OFF OF ROOM NEW SQUARE FOOTAGES.
*NOTE – SEE SHEET F-602 FOR OCCUPANT LOAD AND EGRESS CALCULATION TABLE.

WALL RATING LEGEND	
SYMBOL	DESCRIPTION
——II——	2-HOUR FIRE BARRIER
——I——	1-HOUR FIRE BARRIER
▪▪▪▪▪▪▪▪▪▪	SMOKE PARTITION
—— CP ——	COMMON PATH
—— DE ——	DEAD END
→→→→→	TRAVEL DISTANCE



OCCUPANT LOAD & EGRESS CALCULATIONS

NEW MIXED USE ASSEMBLY OCCUPANCY

USE OF SPACE	FLOOR AREA [SQ.FT.]	OCCUPANT LOAD FACTOR [SQ.FT. / PERSON]	OCCUPANT LOAD	REQUIRED EGRESS WIDTH (NOTE 1) [INCHES] (0.2" PER OCCUPANT)	PROVIDED EGRESS WIDTH [INCHES]
BUSINESS USE	4,367	100	44	8.8	--
ASSEMBLY USE (AUDITORIUM)	1,570	N/A	55	11.0	--
ASSEMBLY USE (BREAK ROOM)	282	15	19	3.9	--
EDUCATIONAL – CLASSROOMS	2,122	15	142	28.4	--
LEVEL TOTAL	7,924	--	261	52.2	(NOTE 2)

1. TOTAL WIDTH REQUIRED BASED ON MULTIPLE ROOM.
2. TOTAL WIDTH PROVIDED BASED UPON EXIT WIDTH CAPACITY. 204" DOOR CLEAR WIDTH AND 144" STAIR CLEAR WIDTH PROVIDED (480 TOTAL OCCUPANTS ACCOMMODATED BASED UPON CLEAR STAIR WIDTH LIMITATIONS > 261 TOTAL OCCUPANTS ANTICIPATED).

1 / FL104 LIFE SAFETY PLAN LEVEL 3
SCALE: 1/8" = 1'-0"

OCCUPANCY CLASSIFICATION:
- GROUP B W/INCIDENTAL S-1 (IBC)
- EXISTING BUSINESS W/INCIDENTAL STORAGE (NFPA 101)

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KEY PLAN
PROJECT LOCATION

REVISIONS

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Project No. 003-10126-004
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LIFE SAFETY PLAN
LEVEL 3

FL103