EXHIBIT A – LIO

APPROVAL PLANS

Exhibit A –
LIO Architectural Plans

PFEFFER DEVELOPMENT 716 W 4TH AVE. Renovation

08.27.2013

ANCHORAGE, ALASKA

CIVIL ENGINEER
EBSC ENGINEERING
11301 OLIVE LANE
ANCHORAGE, ALASKA 99515
Ph: 907.222.1085 Fax: 907.222.5210

STRUCTURAL ENGINEER
REID MIDDLETON, INC.
4300 B STREET SUITE 302
ANCHORAGE, ALASKA 99503
Ph: 907.562.3439 Fax: 907.561.5319

MECHANICAL ENGINEER
RSA ENGINEERING, INC.
2522 ARCTIC BOULEVARD, SUITE 200
ANCHORAGE, ALASKA 99503
Ph: 907.276.0521 Fax: 907.276.1751

ELECTRICAL ENGINEER
EIC ENGINEERS
6927 OLD SEWARD HWY
ANCHORAGE, ALASKA 99518
Ph: 907.349.9712 Fax: 907.3499713

DEVELOPER
PFEFFER DEVELOPMENT, LLC
425 G STREET, SUITE 210
ANCHORAGE, ALSKA 99501
Ph: 907.646.4644 Fax: 907.646.4655

CONTRACTOR / TEAM LEAD
CRITERION GENERAL, INC.
2820 COMMERCIAL DRIVE
ANCHORAGE, ALSKA 99501
Ph: 907.277.3200 Fax: 907.272.8544

ARCHITECT
kpb architects
425 G STREET, SUITE 800
ANCHORAGE, ALASKA 99501
Ph: 907.274.7443 Fax: 907.274.7407

GRAPHIC SCALE
20 0 10 20 40
1"= 20' HORIZONTAL

4TH

"H"

"G"

BASIS OF BEARINGS

#230 #499 #264 #231 #232 #345 #347 #346 #1

TRAFFIC LIGHT

SIDEWALK REMOVAL LIMITS
SIDEWALK
REMOVE APPROX. 1800 SF PCC SIDEWALK

SIGN
190.01'
N89°59'07"W
RAILING
S89°59'07"E
100.09'

VENT

DEMOLISH EXISTING STRUCTURE
LEAVE EAST WALL INTACT.

6 STORY
BIULDING
FF ELEV.=97.80'
TO BE RENOVATED

2 STORY
BIULDING
FF ELEV.=97.93'

N00°01'16"E
120.01'

N00°00'44"E
130.06'

130.07'
S00°01'47"W

3A

2

1

6

5

RAMP DOWN

S89°58'13"E
200.03'

REMOVE APPROX. 2000 SF ASPHALT ALLEY

ALLEYWAY ASPHALT REMOVAL LIMITS

EX 8" CI WATER

EX 12" VC SEWER

ABANDON EX WATER SERVICE TO LIO
ABANDON EX SEWER SERVICE TO LIO
ABANDON EX SEWER SERVICE TO ANCHOR PUB
ABANDON EX WATER SERVICE TO ANCHOR PUB

COVERED CAR PORT AREA

11A 7 8 9 10 11 12 7A

40

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
www.kpbarchitects.com

BSC engineering
11301 OLIVE LN. ANCHORAGE AK. 99515
Phone: 222-1085 Fax: 222-5210
www.ebsceingineering.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
716 W. 4th Ave, Anchorage AK 99501

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	07.03.2013
DRAWN	LDM
REVIEWED	ELH

SHEET NAME
EXISTING SITE & DEMO

SHEET NO.
C1.00

GRAPHIC SCALE
10 0 5 10 20
1"= 10' HORIZONTAL

NEW SIDEWALK

TRAFFIC LIGHT

RENOVATED PORTION OF EXISTING 6 STORY BUILDING

NEW PORTION OF BUILDING

2

1

3A

S89°59'07"E
100.09'

130.07'
S00°01'47"W

S89°58'13"E
200.03'

S89°58'13"E
100.07'

TRANSFORMER

DOORWAY

NEW TYPE A CONTROL MANHOLE

NEW TYPE 1 SDMH
& 125 LF CPEP IF EX ROOF
DRAIN NOT SUFFICIENT

NEW 6" PVC SEWER SERVICE TO LIO

NEW 8" PVC WATER SERVICE TO LIO

NEW SINGLE PUMPER
PRIVATE FIRE HYDRANT

NEW 6" PVC WATER
SERVICE TO LIO

RAMP

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
www.kpbarchitects.com

BSC engineering
11301 OLIVE LN. ANCHORAGE AK. 99515
Phone: 222-1085 Fax: 222-5210
www.ebsceningineering.com

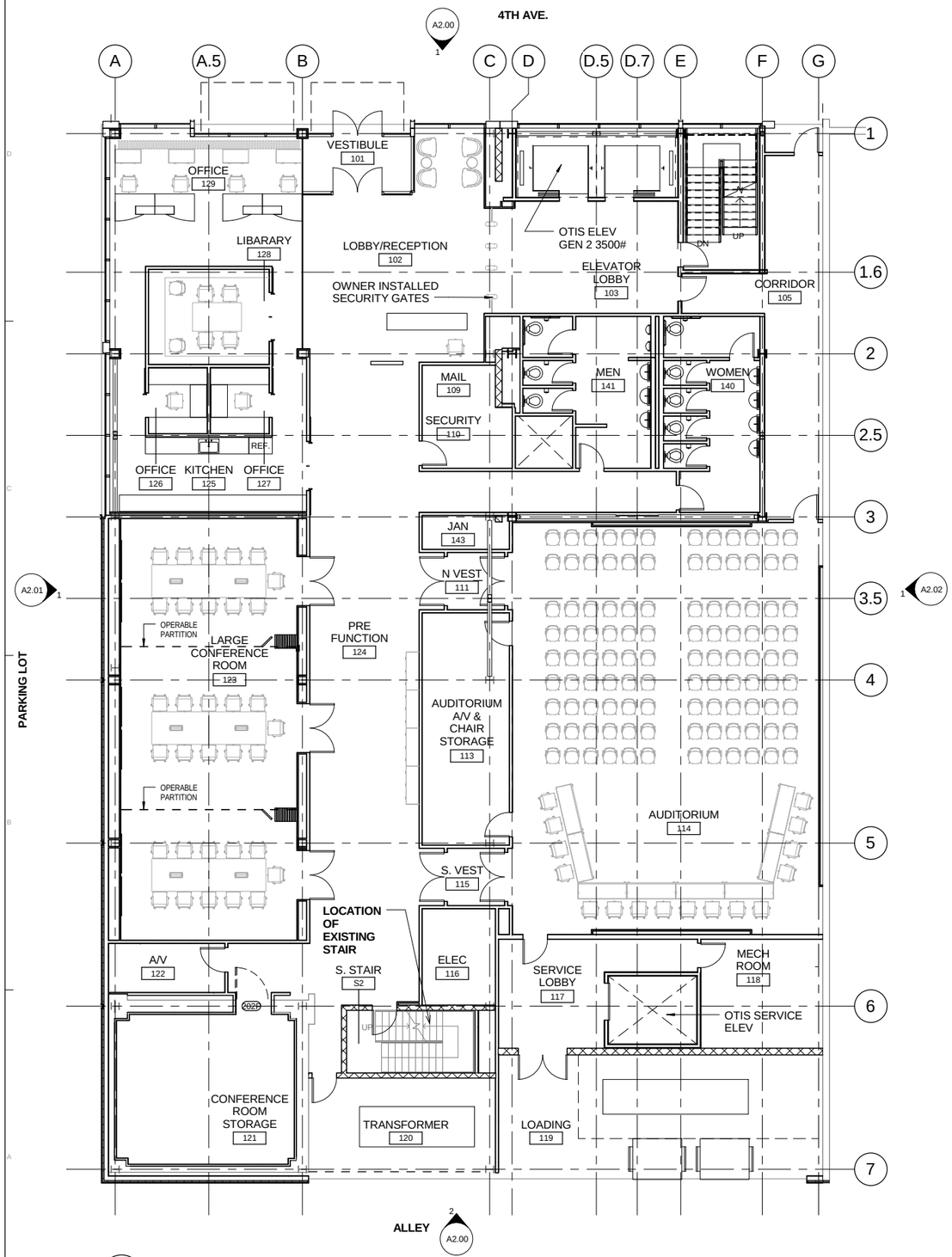
PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
716 W. 4th Ave, Anchorage AK 99501

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	07.03.2013
DRAWN	LDM
REVIEWED	ELH

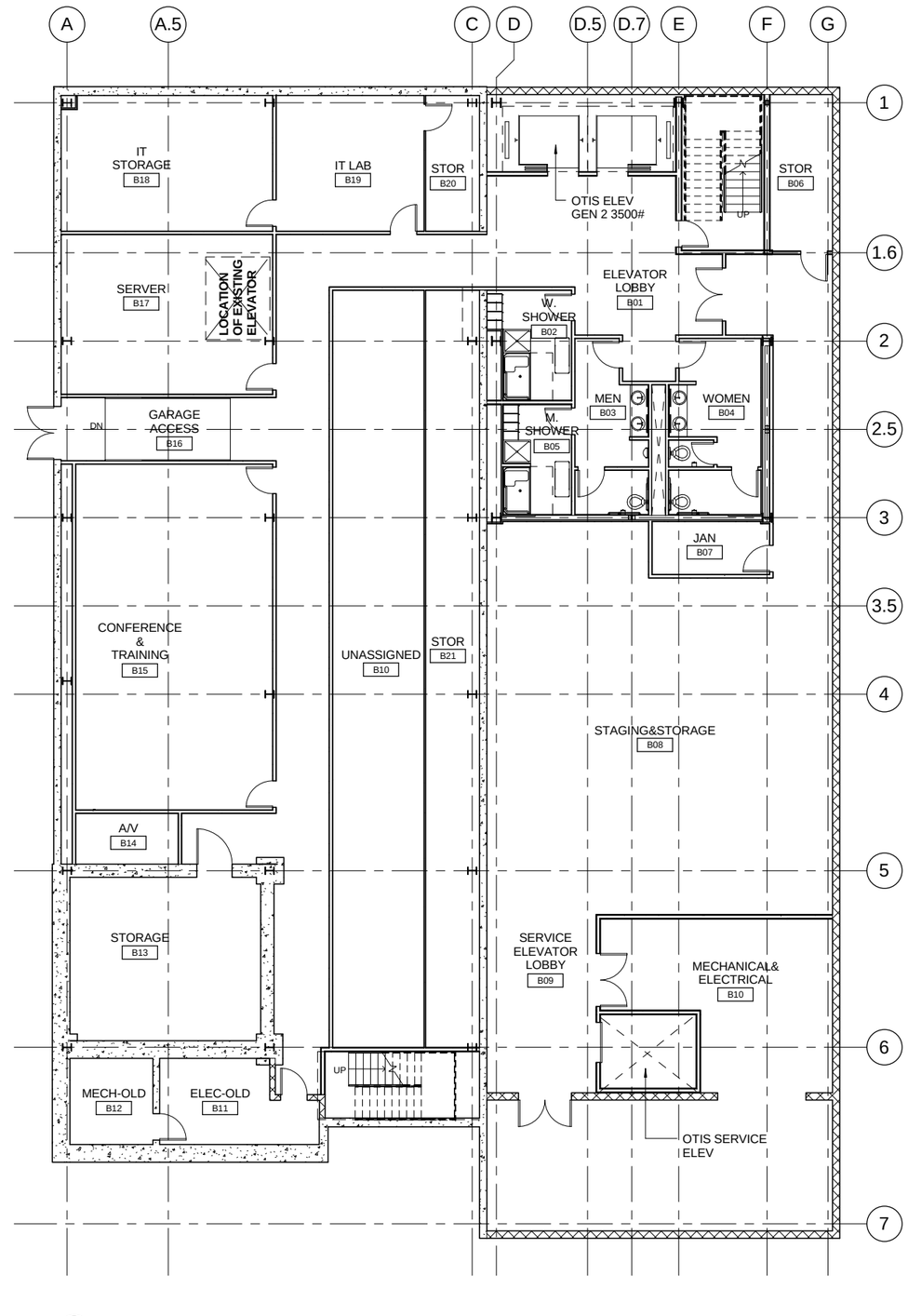
SHEET NAME
PROPOSED SITE PLAN

SHEET NO.
C1.01



2 FLOOR PLAN - LEVEL 1

1/8" = 1'-0"



1 FLOOR PLAN - BASEMENT

1/8" = 1'-0"

FURNITURE NOT IN CONTRACT. OWNER INSTALLED FURNITURE SHOWN

LEASE EXHIBITS - NOT FOR CONSTRUCTION

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

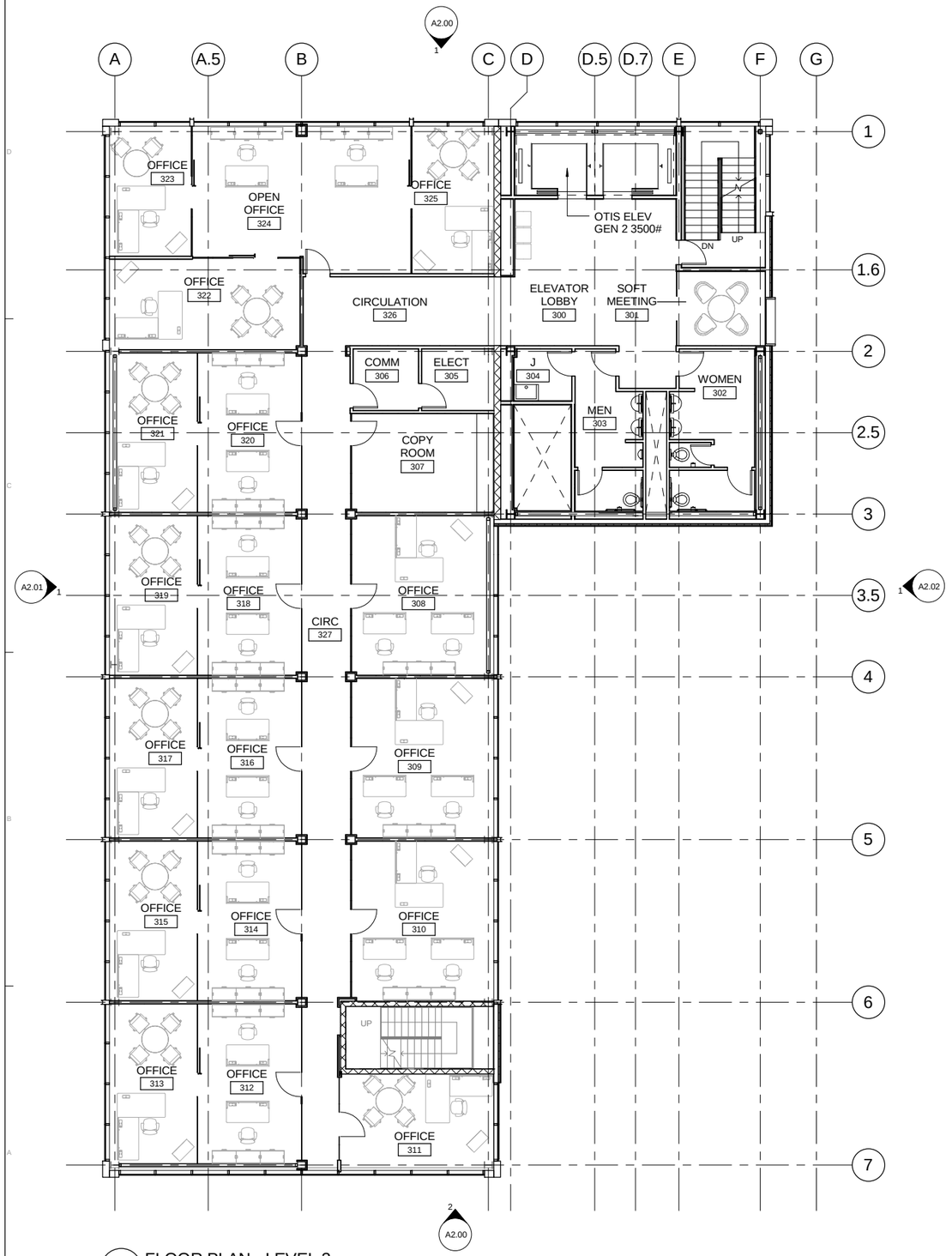
REVISION SCHEDULE

#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	08.27.2013
DRAWN	bk
REVIEWED	mp

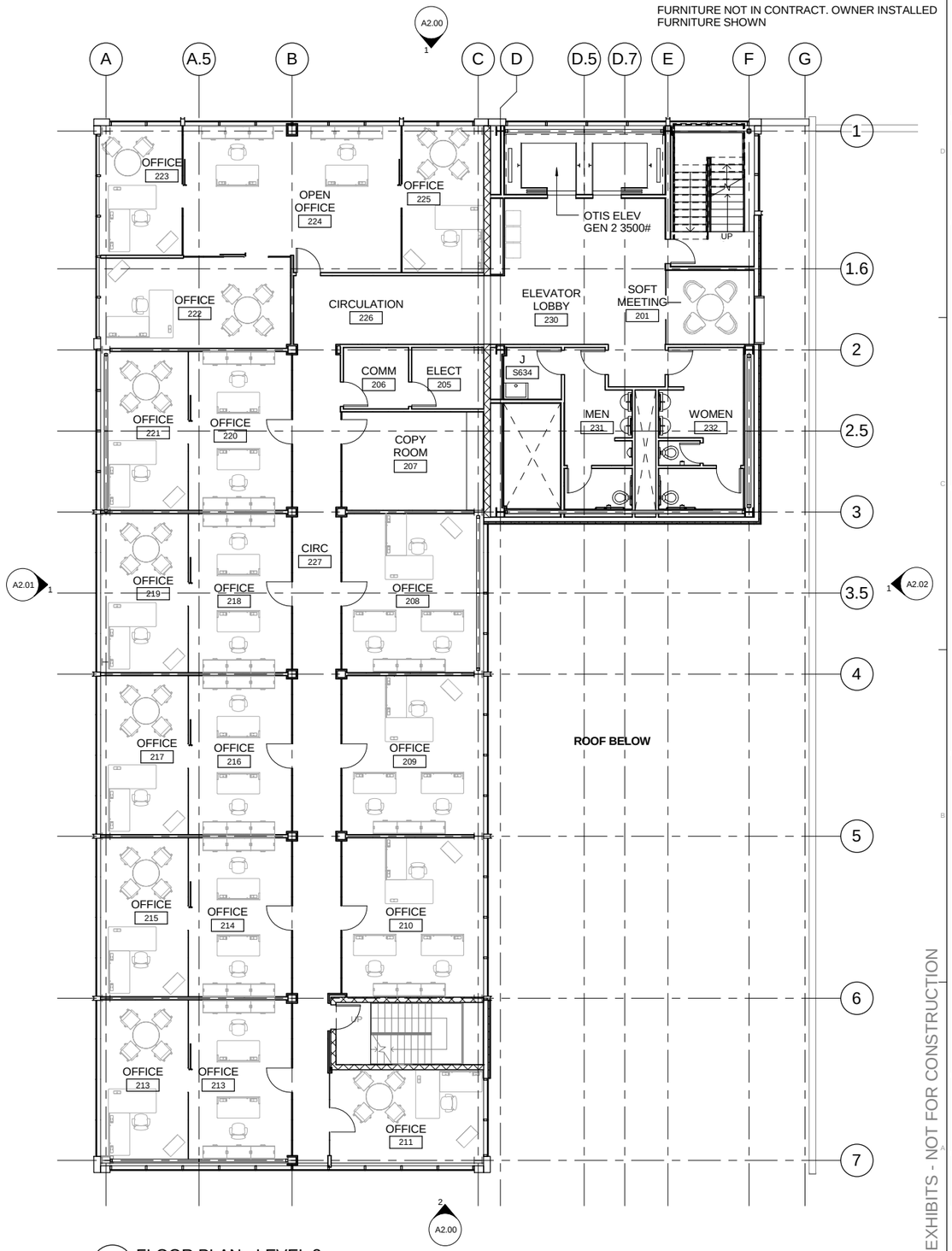
SHEET NAME
FLOOR PLANS - BASEMENT AND LEVEL 1

SHEET NO.
A1.00



2 FLOOR PLAN - LEVEL 3

1/8" = 1'-0"



1 FLOOR PLAN - LEVEL 2

1/8" = 1'-0"

FURNITURE NOT IN CONTRACT. OWNER INSTALLED
FURNITURE SHOWN

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

REVISION SCHEDULE

#	DESCRIPTION	DATE

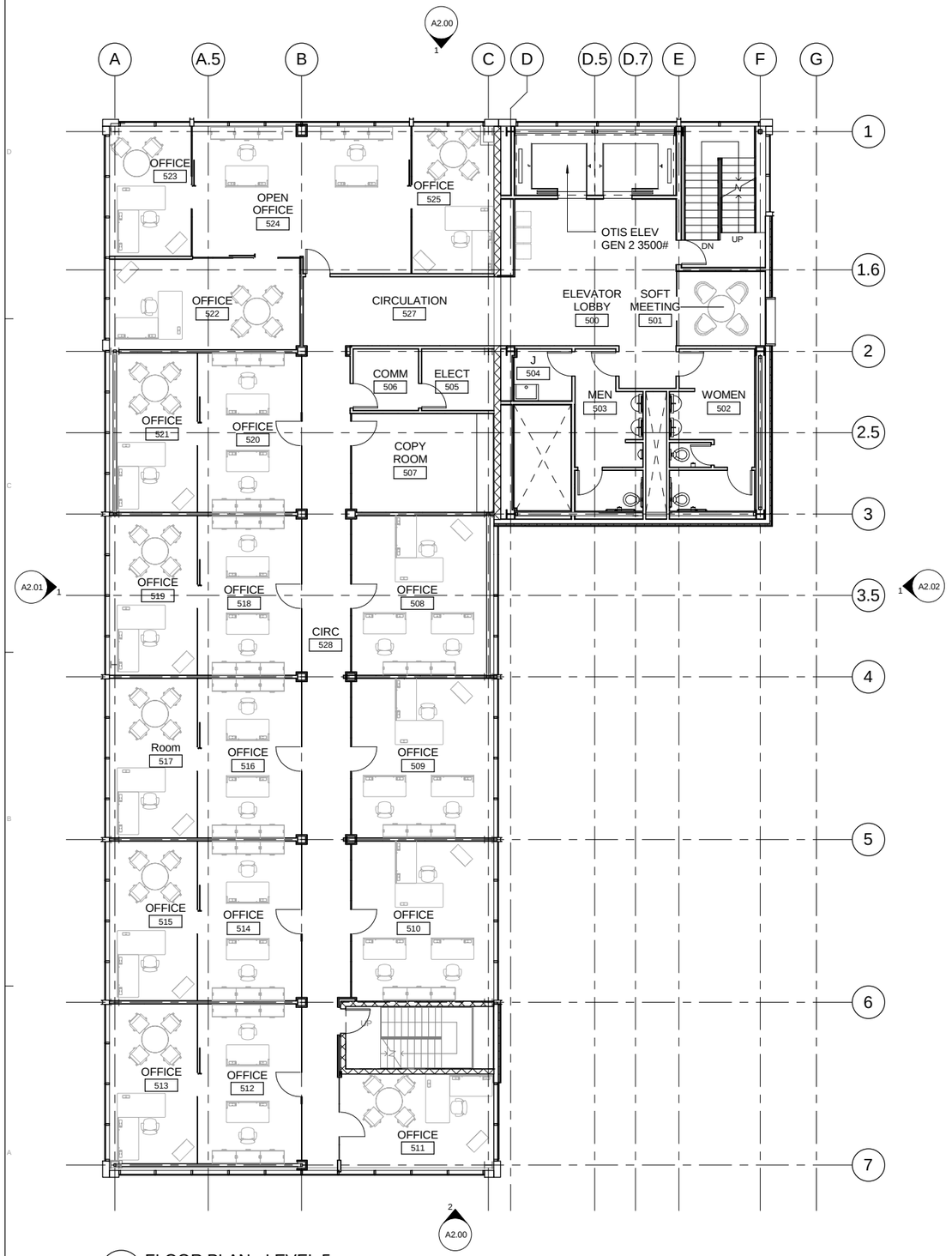
JOB NO.	11076_19
DATE	08.27.2013
DRAWN	Author
REVIEWED	Checker

SHEET NAME
FLOOR PLANS - LEVEL 2 & 3

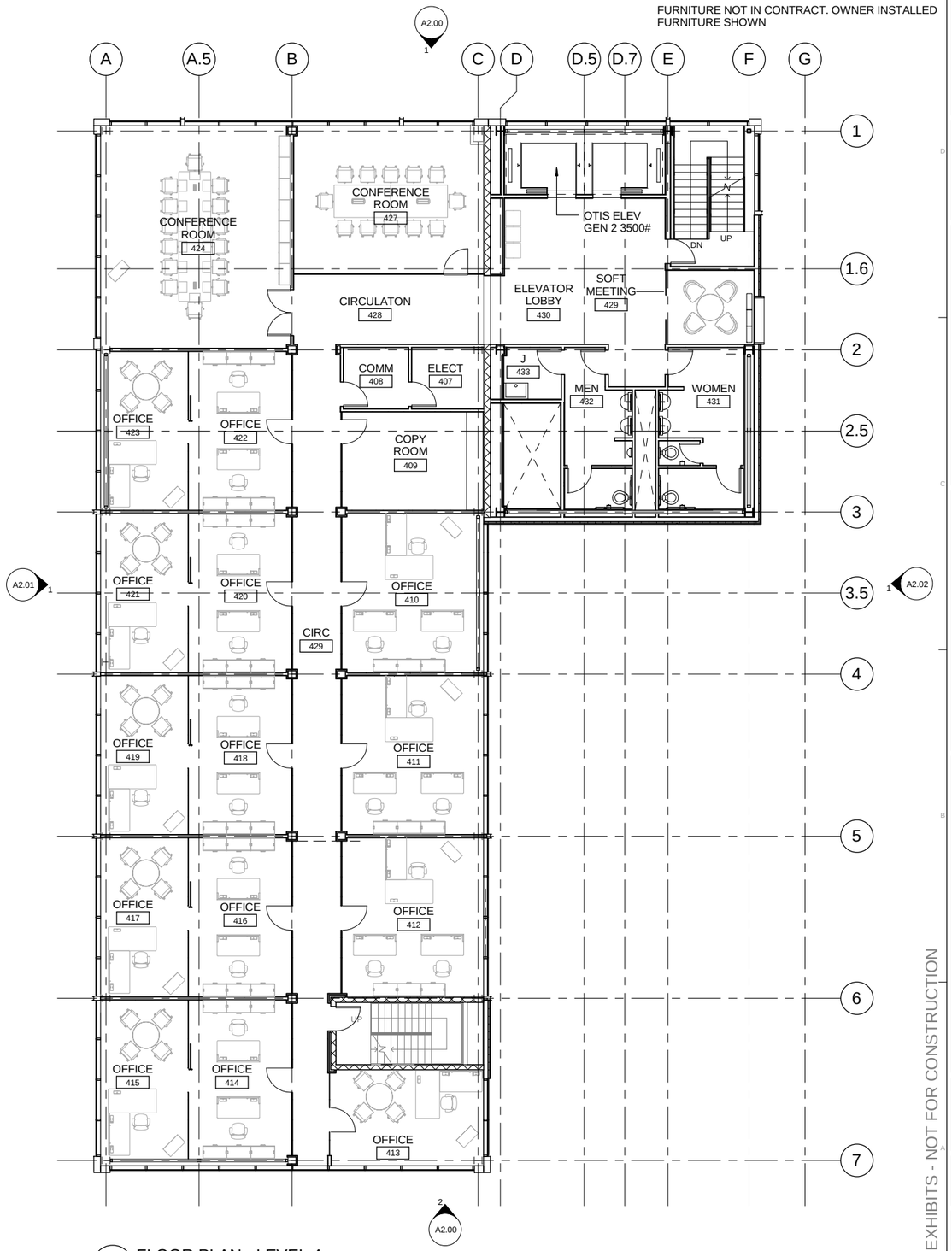
SHEET NO.
A1.01

LEASE EXHIBITS - NOT FOR CONSTRUCTION

FURNITURE NOT IN CONTRACT. OWNER INSTALLED
FURNITURE SHOWN



2 FLOOR PLAN - LEVEL 5
1/8" = 1'-0"



1 FLOOR PLAN - LEVEL 4
1/8" = 1'-0"

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

REVISION SCHEDULE

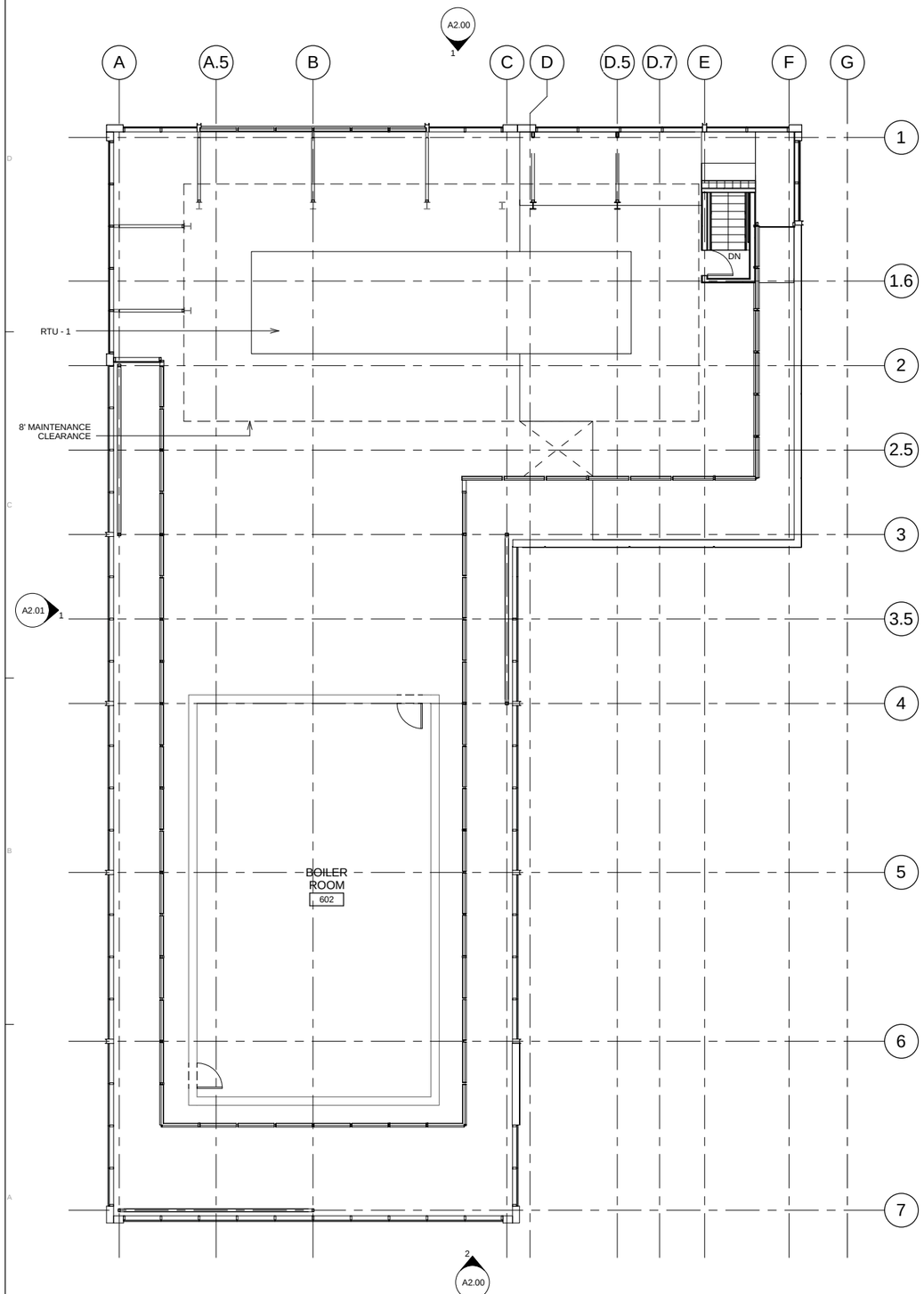
#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	08.27.2013
DRAWN	Author
REVIEWED	Checker

SHEET NAME
FLOOR PLANS - LEVEL 4 & 5

SHEET NO.
A1.02

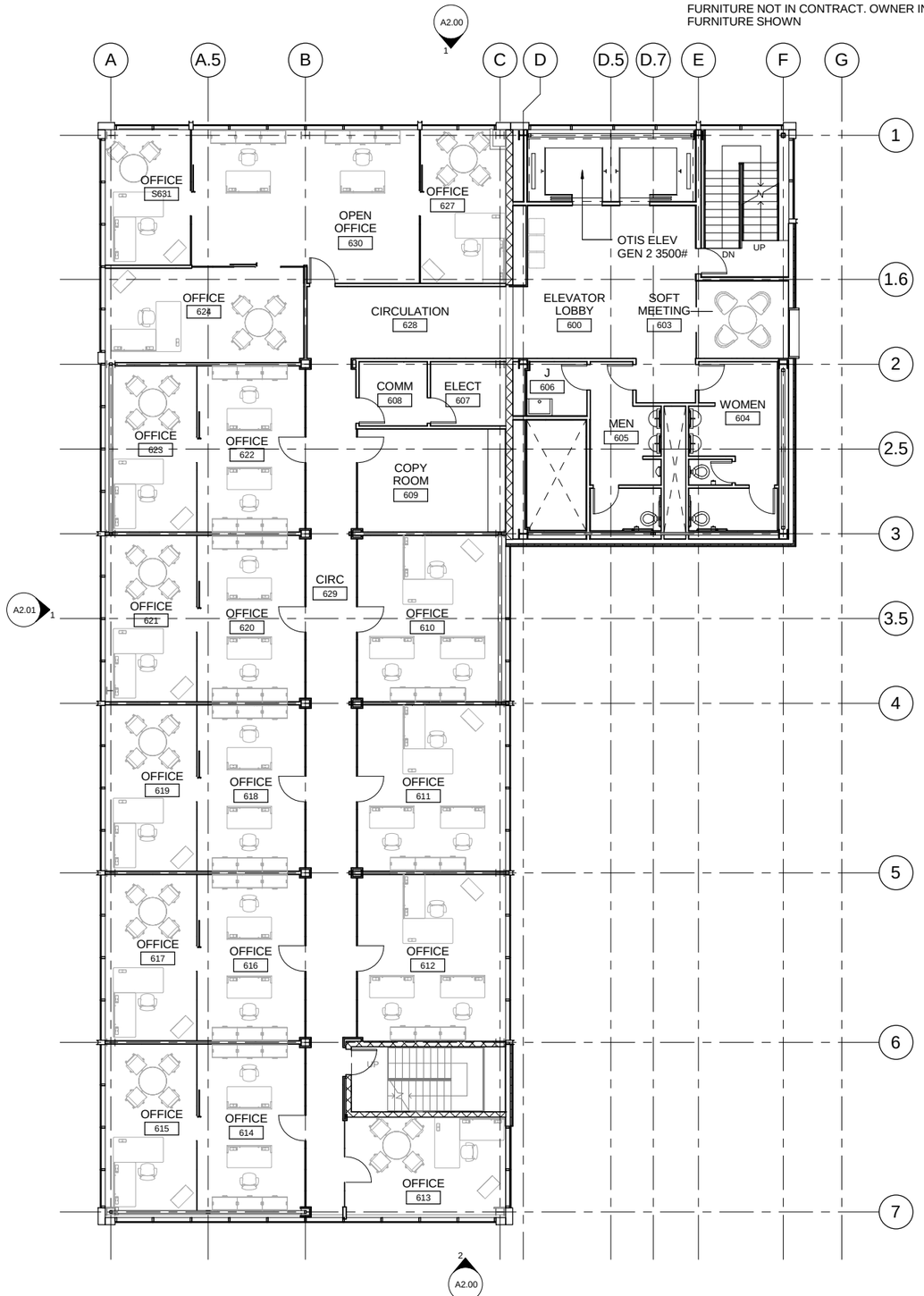
LEASE EXHIBITS - NOT FOR CONSTRUCTION



2 LOWER ROOF & MECANICAL ROOM

1/8" = 1'-0"

FURNITURE NOT IN CONTRACT. OWNER INSTALLED
FURNITURE SHOWN



1 FLOOR PLAN - LEVEL 6

1/8" = 1'-0"

LEASE EXHIBITS - NOT FOR CONSTRUCTION

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

REVISION SCHEDULE

#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	08.27.2013
DRAWN	Author
REVIEWED	Checker

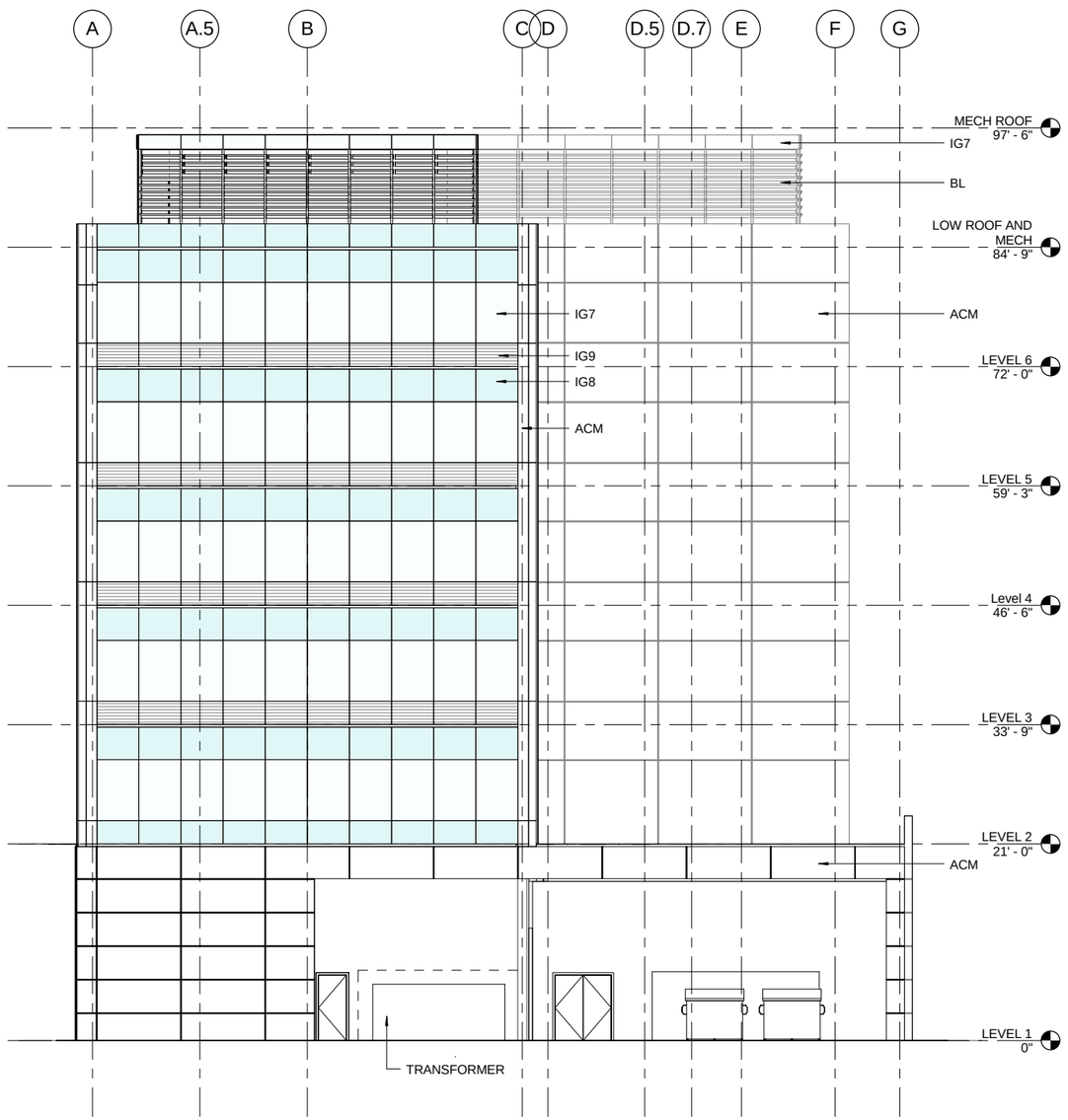
SHEET NAME
FLOOR PLANS - LEVEL 6 & ROOF

SHEET NO.
A1.03

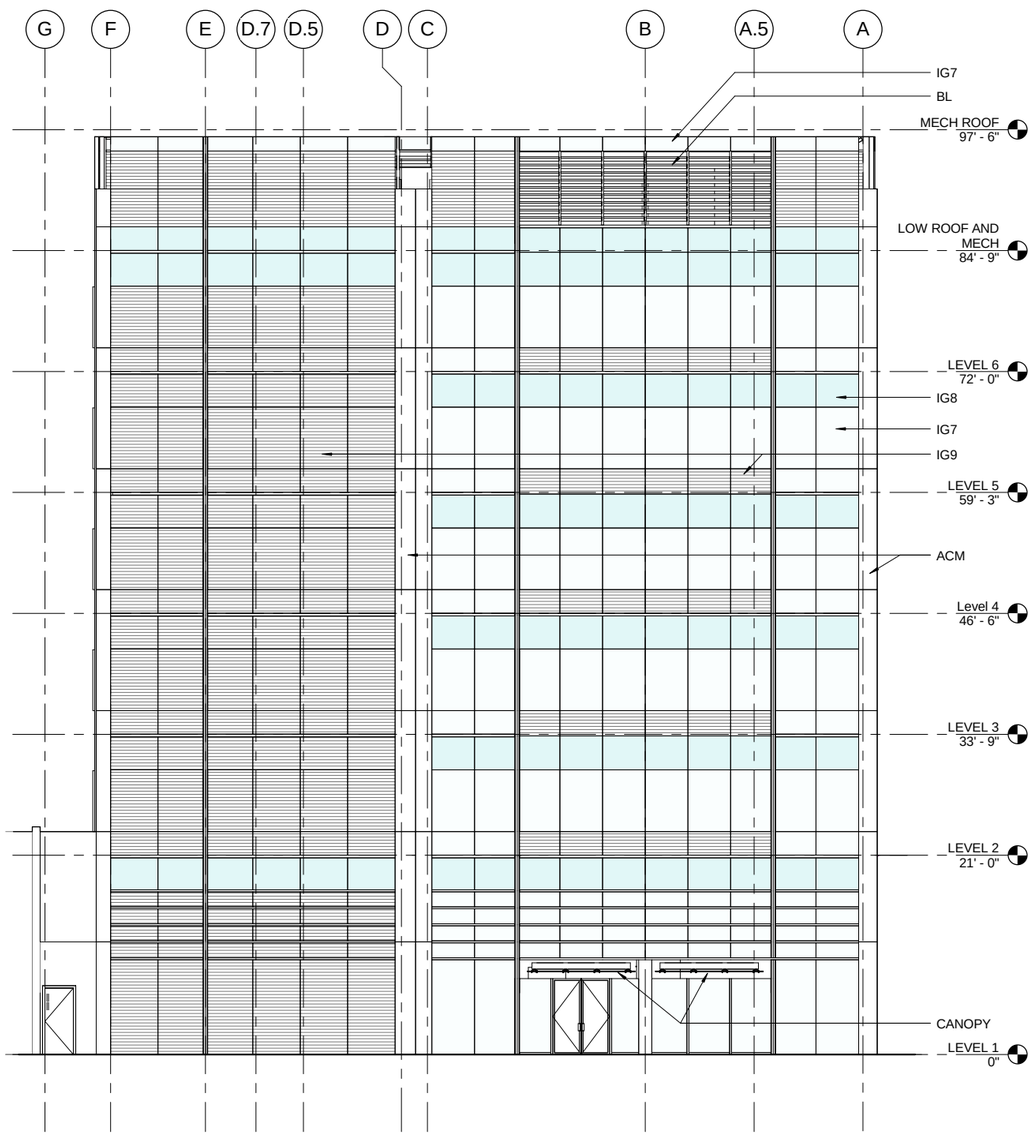
EXTERIOR MATERIAL LEGEND

GLASS		
	IG7	TEMPERED VISION GLASS - PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR
	IG8	OPAQUE SPANDREL GLASS- PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR W/ ICD VISTA RIDGE ON #3 SURFACE
	IG9	FRITTED GLASS GLASS- PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR W/ WHITE 60% HORIZONTAL LINE PATTERN
	BL	KAWNEER VERSOLEIL 6" BLADES IN-LINE WITH CURTAIN WALL SYSTEM
PANELS		
	ACM	NORTHCLAD ACM SYSTEM - COLOR TBD
	CL	NORTHCLAD CL SERIES EXTERIOR COLUMN COVER
CANOPY		
		C.R. LAURENCE 10 7313 SPIDER FITTING POINT-SUPPORTED GLASS AWNING SYSTEM

NOTE* ALL CURTAIN WALL ALUMINUM TO BE CLEAR ANODIZED



2 SOUTH ELEVATION
1/8" = 1'-0"



1 NORTH ELEVATION
1/8" = 1'-0"

LEASE EXHIBITS - NOT FOR CONSTRUCTION

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	08.27.2013
DRAWN	Author
REVIEWED	Checker

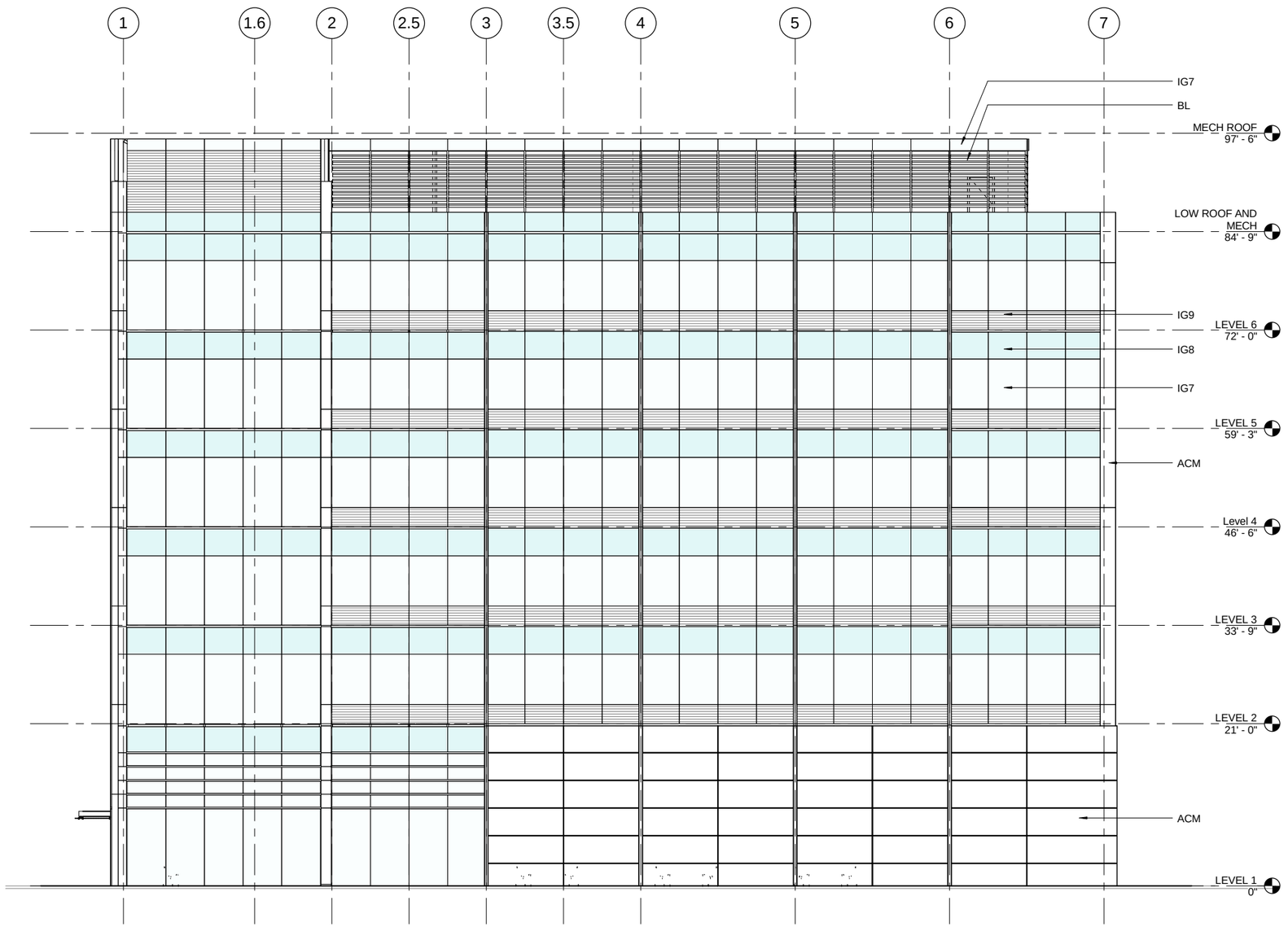
SHEET NAME
EXTERIOR ELEVATIONS - NORTH & SOUTH

SHEET NO.
A2.00

EXTERIOR MATERIAL LEGEND

GLASS		
	IG7	TEMPERED VISION GLASS - PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR
	IG8	OPAQUE SPANDREL GLASS- PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR W/ ICD VISTA RIDGE ON #3 SURFACE
	IG9	FRITTED GLASS GLASS- PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR W/ WHITE 60% HORIZONTAL LINE PATTERN
	BL	KAWNEER VERSOLEIL 6" BLADES IN-LINE WITH CURTAIN WALL SYSTEM
PANELS		
	ACM	NORTHCLAD ACM SYSTEM - COLOR TBD
	CL	NORTHCLAD CL SERIES EXTERIOR COLUMN COVER
CANOPY		
		C.R. LAURENCE 10 7313 SPIDER FITTING POINT-SUPPORTED GLASS AWNING SYSTEM

NOTE* ALL CURTAIN WALL ALUMINUM TO BE CLEAR ANODIZED



1 WEST ELEVATION
1/8" = 1'-0"

LEASE EXHIBITS - NOT FOR CONSTRUCTION

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	08.27.2013
DRAWN	Author
REVIEWED	Checker

SHEET NAME
EXTERIOR ELEVATIONS - WEST

SHEET NO.
A2.01

EXTERIOR MATERIAL LEGEND

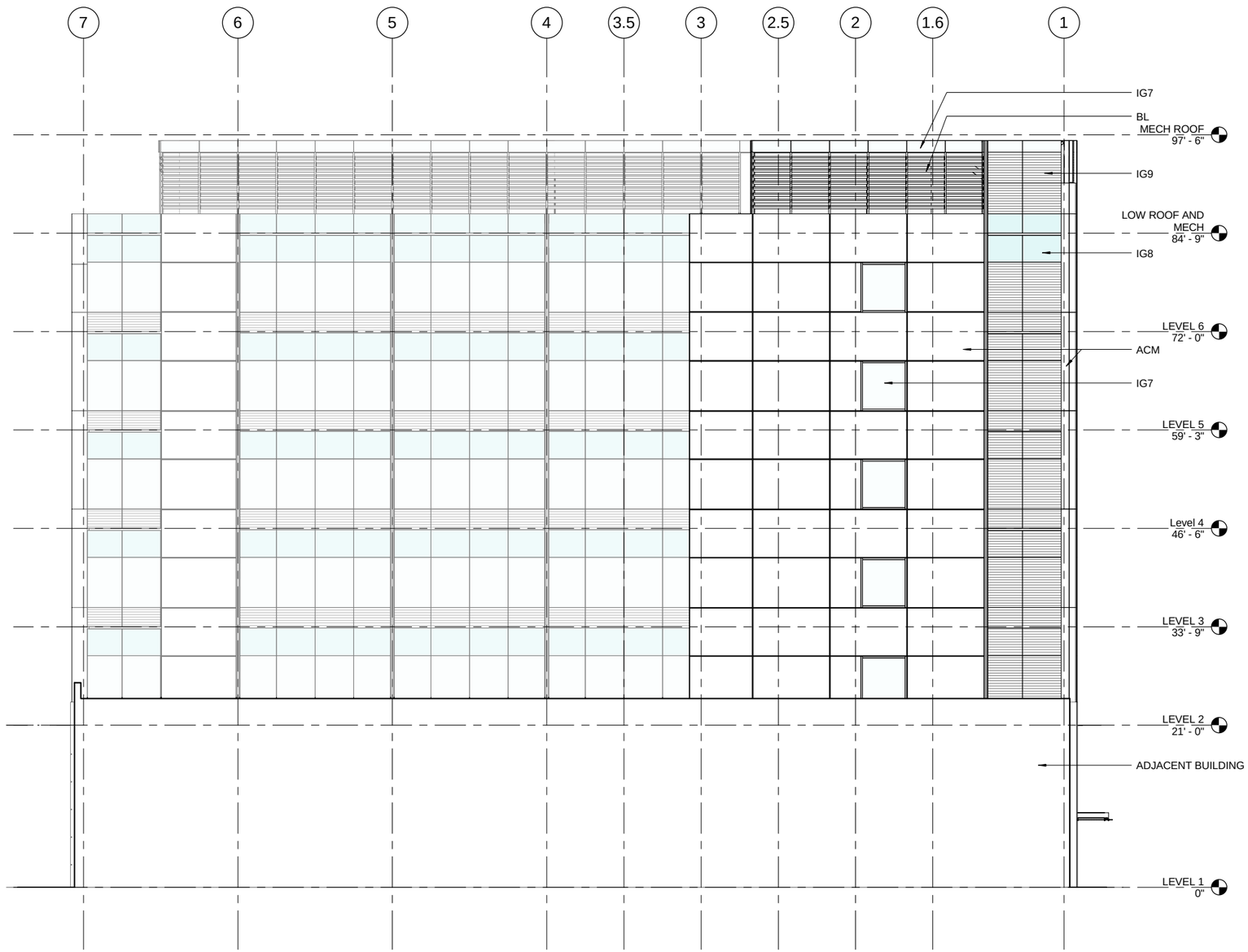
GLASS		
	IG7	TEMPERED VISION GLASS - PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR
	IG8	OPAQUE SPANDREL GLASS- PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR W/ ICD VISTA RIDGE ON #3 SURFACE
	IG9	FRITTED GLASS GLASS- PPG 1/4" SOLARBAN 70 XL(2) SOLEXIA-1/2" AIR GAP-1/4" CLEAR W/ WHITE 60% HORIZONTAL LINE PATTERN
	BL	KAWNEER VERSOLEIL 6" BLADES IN-LINE WITH CURTAIN WALL SYSTEM
PANELS		
	ACM	NORTHCLAD ACM SYSTEM - COLOR TBD
	CL	NORTHCLAD CL SERIES EXTERIOR COLUMN COVER
CANOPY		
		C.R. LAURENCE 10 7313 SPIDER FITTING POINT-SUPPORTED GLASS AWNING SYSTEM

NOTE* ALL CURTAIN WALL ALUMINUM TO BE CLEAR ANODIZED

EXTERIOR WALL OPENING
6' 7" SETBACK FROM PROPERTY LINE @ EAST FACADE
ALLOWABLE (UNPROTECTED, SPRINKLERED) - 25%

TOTAL WALL 3024.6 SQ FT
GLAZING @ STAIR - 565.5 SQ FT (18.8%)- 730 SQ FT
GLAZING @ MEETING ROOMS - 165 SQ FT (5.4%)

TOTAL GLAZING AREA = 24.2 %



1 EAST ELEVATION
1/8" = 1'-0"

LEASE EXHIBITS - NOT FOR CONSTRUCTION

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	08.27.2013
DRAWN	Author
REVIEWED	Checker

SHEET NAME
EXTERIOR ELEVATION - EAST

SHEET NO.
A2.02

Exhibit A –
LIO Civil Narrative

Legislative Information Office, Anchorage, AK
Concept Civil Narrative
07/03/2013

CIVIL NARRATIVE

The proposed project is located within Municipality of Anchorage Grid SW1230 and will occupy Lots 3A and Lot 2 W39.5', Block 40, Original Subdivision. The properties are zoned B2B by the MOA. The two lots combined are approximately 0.71 acres and are currently occupied by a restaurant/bar, 7-story building, and a two-level parking area. As part of this project, the two lots will be combined, the restaurant demolished, and the 6-story office building remodeled and expanded.
It is expected that construction of the new Legislative Information Office (LIO) will also include major sidewalk and alleyway improvements.

Site Demolition

Site preparation will include the following:

- Complete demolition of the existing Anchor Pub, with exception of the east wall.
- Approximately1,800 sf existing sidewalk along 4th Avenue.
- 2,000 sf existing asphalt in alleyway.

Excavation and Backfill

The existing foundation material is suitable for foundation support. Excavation and backfill will follow the recommendations of the geotechnical report that is being prepared for this project by Northern Geotechnical Engineering – Terra Firma Testing.

Water Service

An 8" cast iron pipe (CIP) water main is located in the alley to the south of the properties, approximately 10-feet below the road surface. An existing 6" DIP water service extends into the alley behind the LIO. An existing 4" CIP water service connects the Anchor Pub to the 8"water main in the alley. Both existing services will be abandoned at the main.
A new 6" water service will be connected to the 8" service line entering the new addition. All water system components will be based on the Municipality of Anchorage Standard Specifications and Details.
Water system improvements required for this project will likely include the following:

- Abandon the existing water service connections to the main.
- Installation of 12 lf new 8" service connection to the 8" cast iron main.
- Installation of a new Private Fire Hydrant on property**.** NFPA requires that the FDC is located less than 100' from the nearest fire hydrant.
- Installation of 10.5 lf new 6" water service from the hydrant leg to the structure.

Sanitary Sewer Service

An existing 12" Vitrified Clay (VC) sanitary sewer main is located in the alley, at approximately 8 to 10-feet below grade. AWWU is planning to upgrade the existing sewer pipe in the fall of 2013 using a Cured In Place Pipe (CIPP) rehabilitation method. Coordination with AWWU will be required to inform them which connections will need to be reestablished. All wastewater from this area is treated at the John M. Asplund Wastewater Treatment Facility in Anchorage. All sanitary sewer system components will be based on the Municipality of Anchorage Standard Specifications and Details.
Sewer system improvements for this project will likely include the following:

- Install 4' diameter sewer control manhole on property in loading area.
- Install approximately 28 LF of 6" PVC sewer service.

Storm Water System

Currently, storm water is collected on the roofs of the existing structures and directed to the municipal storm drain system via roof drains.

- Verify current roof drain location and size.
- If size and location is acceptable, connect new structure roof drains to existing roof drain.
- If the size and location of the existing roof drain piping is not acceptable, install an additional 125 lf 12" CPEP in the alleyway and a1 Type 1 Manhole near the south west corner of the LIO. Connect new roof drain to the new manhole.

Site Access

The property will be easily accessible to pedestrians, bicyclists, automobiles, and service/ emergency vehicles. The existing surface lot and underground parking are to remain. Sidewalk and alleyway improvements are planned along 4th Avenue and in the alley to the south of the properties. A loading area is planned on the south side of the building adjacent to the alley to accommodate truck loading, dumpsters and an emergency generator.

Site Access improvements for this project will likely include the following:

- 1,000 sf of heated sidewalk along 4th Avenue
- 2,000 sf asphalt replacement in alley

Geotechnical Considerations

A subsurface investigation of the project site by Northern Geotechnical Engineering – Terra Firma Testing is underway. Four borings are to be drilled and samples taken from various depths to classify the surrounding soils. A geotechnical report will be prepared which will include recommendations for the following:

- Excavation & Fill Placement
- Utilities
- Pavement
- Foundation Design

Required Development Permits

The following is a list of development permits that most likely will be required from the Municipality of Anchorage to construct the new LIO Development.

- Municipality of Anchorage (MOA) Right-of-Way Permit
- MOA Storm Water Site Plan Review
- MOA Grading, Excavation, and Fill Permit
- MOA Building Permit
- AWWU Private System Water & Sewer Service Permits

Exhibit A –
LIO Mechanical Narrative

P R O J E C T N A R R A T I V E

LIO Anchorage State Legislative Office Building Renovation

Design Parameters:

The latest adopted version of the following codes and standards as amended by the Municipality of Anchorage are currently applicable for this project:

International Mechanical Code
International Fuel Gas Code
Uniform Plumbing Code
International Building Code
International Fire Code
NFPA 13
SMACNA – Sheet Metal Design Standards
National Electrical Code
Americans with Disabilities Act (ADA)
ASHRAE/IES Standard 90.1
International Energy Conservation Code

The design parameters listed in this document may be considered a working document as well. As the design progresses the parameters in this document may be revised as a result of changing technology, payback analysis and/or feedback from the owner.

Mechanical & Plumbing Demolition:

All existing mechanical and plumbing systems will be demolished from the building. Remodel work will provide all new plumbing systems from the main AWWU utilities in the alley; and will be installed completely new to support the new building addition and existing structure. All existing heating and ventilation systems will be completely demolished from the building and will be replaced with new efficient systems.

Fire Protection:

As this is a design build project the sprinkler contractor will work with a NICET licensed sprinkler designer to provide design and installation of the sprinkler system. It is anticipated that a standard wet-pipe sprinkler system complying with NFPA 13 will be provided throughout the facility. A dry-pipe sprinkler system may be necessary to protect canopies or overhangs if they are built of combustible construction.

The building height of 110' to the mechanical penthouse level in combination with the available water pressure at the site is very close to needing a fire pump to supply adequate pressure to the sprinkler heads at the top of the building. The need for a fire pump will need to be analyzed by the sprinkler designer to determine if piping can be sized to meet site conditions. Static water pressure is approximately 60 PSI; available flow at the main is 2,436 GPM at 20 PSI residual.

A single sprinkler riser will be acceptable since the building is less than 52,000 square feet per floor. Dry standpipe risers will be located in the stairwell exit enclosure(s). One dry pipe will need to extend through the roof for fire department access.

A suitably sized fire department connection line will be routed from the sprinkler riser to near the building's main entry. Sprinkler piping will need to conform to the requirements of NFPA 13.

Plumbing:

The new water service and sprinkler riser will be located in the basement and first floor mechanical room adjacent to the South alley to support both domestic water and sprinkler systems. The requirement for a fire pump (if necessary) will drive space constraints and locations as the design moves forward.

It is anticipated that a 6" water service will be provided for the building. The domestic water system will be separated from the sprinkler system by a double check back flow prevention device in accordance with requirements of the UPC.

Due to the height of the building a domestic water pressurization pump package will be necessary to provide adequate pressure for plumbing fixtures in the upper floors. A variable speed controlled multiple pump package will be specified to service the upper floors. The basement and lower level floors will operate using city water pressure and will be piped separate from the domestic water booster pump. The domestic water service will also include a backflow preventer. All domestic water piping will be specified to be Copper, CPVC or PEX piping.

The new sanitary sewer service will enter the building from the South alley. The pipe will be 6" diameter and enter the building above the floor level of the basement. The basement plumbing fixtures will drain to a duplex lift station that will pump the sanitary waste up to the level of the incoming sanitary sewer line. The lift station will be located in a dedicated room that is ventilated continuously at 5 air changes per hour. Sanitary piping will be specified to be cast iron no-hub or copper, drain waste and vent (DWV). ABS and PVC can be considered for areas that do not have return air plenums, or noise concerns.

Domestic hot water for the building will be provided using two separate water heaters. One water heater will be located in the first floor area and supply the lower floors that operate using city water pressure. The second water heater will be located in the mechanical penthouse and will serve the fixtures that operate using the domestic water pressure booster pump. Water heaters will be gas fired sealed combustion high efficiency equipment. A hot water recirculation system will be required to provide hot water to plumbing fixtures located on each floor. Water will be stored in the tank at 140 degrees and will be routed through a tempering valve prior to distribution to the rest of the building. The distribution temperature will be adjustable but we recommend a 115-degree temperature. Tempering valves with the appropriate ASSE listing will be utilized at public lavatories.

New plumbing fixtures will be installed throughout the facility. All the existing fixtures will be demolished. The new plumbing fixtures will be specified to include water and energy saving devices and will incorporate vandal resistant features to prevent tampering. New floor drains will be installed where required. All new floor drains will be equipped with trap primers as required by code. In addition to the new restroom groups, each legislative office floor will include a kitchen sink, dishwasher & hydration station and refrigerator. Single stall shower rooms will be provided in the basement for the small locker and exercise equipment areas.

New exterior, frost-proof hose bibbs will be provided for both the new addition and existing portion of the building. Hose bibs will be installed around the exterior of the building at approximately 150' intervals or specifically where needed for clean-up or irrigation for planting. Hot water and cold water hose bibs will be installed in the toilet rooms where Janitor rooms are not located adjacent to the toilet rooms.

New rainleader piping will be installed to support the new roof drains and overflow drains serving the facility. The roof drains and overflow drains will connect at the roof and tie into the primary storm drain lines inside the building; an overflow scupper will be installed where the building storm sewer leaves the building in accordance with Handout Number 39 of the Municipality of Anchorage Building Safety Division.

The existing gas meter bar has several gas meters that serve various buildings on the block. The final location of the gas meter(s) and service to the building(s) that are currently supplied from the South alley will need to be coordinated with Enstar and the various building owners.

Elevator sump pumps will be necessary; current code requires 50 GPM capacity per elevator car. The Municipality of Anchorage is currently preparing a policy that may allow 50 GPM capacity per elevator pit; this will be evaluated during the design process.

Fuel Systems:

New natural gas piping will be provided to supply the boilers, water heater, and the rooftop HVAC unit on the roof. Due to the length of run from the meter location to the roof it is anticipated that a medium pressure gas piping system will be designed to limit the size of the gas piping. The location of the medium pressure gas piping will need to be coordinated with the architecture. Enstar has restrictions on the use of medium pressure gas piping within a building. The gas piping may have to be enclosed in a decorative chase or be routed exposed up the exterior of the building. The gas meter will be provided with a mechanical operated earthquake valve to shut off gas in the event of a significant seismic event.

In addition the gas meter and gas piping that was recently installed for the Verizon generator located on the roof of the building will need to be addressed in the remodel similar to that described above (for new gas piping to the boiler/HVAC system).

The packaged standby generator will be provided and specified by the electrical engineer. The generator will include a double wall subbase fuel storage tank with the unit for fuel storage.

Heating:

The new boiler system will be installed in the existing penthouse mechanical room. The heating system will include two (2) sealed combustion high efficiency-modulating boilers. Two in-line mounted circulating pumps with variable frequency drives will supply heating water to the building.

Depending upon the selected boilers; piping will be either a parallel pipe design, or a primary/secondary piping arrangement with a boiler pump. The hot water supply temperature will be reset based on outside air temperature. The outside air reset schedule will increase supply hot water temperatures during peak heating season operation and decrease hot water supply temperatures to minimum levels during shoulder and summer seasons.

The building will be heated with fintube radiation. The fintube will be located continuously along the perimeter of the building to provide warmth where the heat is lost through the exterior wall. Entryway terminal heat transfer equipment will be cabinet unit heaters; storage rooms and penthouse areas will utilize hydronic unit heaters. Perimeter fintube and the terminal heating units will provide heat to the building during unoccupied hours when the air-handling units are off. Hydronic heating coils will be installed in each of the VAV boxes to provide tempering of supply air and supplemental heating for occupant comfort. Fintube, terminal heating equipment, and heating coils will be oversized to

operate with 140 degree F water to allow the high efficiency boilers to operate at condensing temperatures throughout the year.

A direct return heating system will supply the terminal heating equipment. The piping mains will be routed vertically in the ventilation shaft and tee off at each floor to serve fintube, unit heaters, and VAV box coils. Heating coils and terminal heating equipment will be provided with 2-way valves to take advantage of the variable speed pumps. Isolation valves will be provided at each floor where piping exits the shaft for maintenance and isolation for remodel work.

The primary heating system will utilize water with inhibitors for corrosion protection and stabilization a chemical feed and test station will be incorporated into the design. Glycol water systems are not necessary for the building as the rooftop HVAC unit has gas heat and there will be no heating coils exposed to freezing conditions.

Ventilation:

The ventilation system for the building will consist of a new packaged, gas fired, electric cool, direct expansion HVAC rooftop unit. The air distribution system will be designed to conform to ASHRAE Standard 62.1 to ensure good indoor air quality. CO2 sensors and outside air intake volumetric measurement sensors will be employed to ensure adequate ventilation rates. A post construction, pre-occupancy ventilation purge of the building is planned to remove indoor air contaminants produced by off gassing of new construction materials.

The building ventilation system will be variable air volume (VAV). Medium pressure supply air ductwork will be routed from the rooftop HVAC unit to each floor using a ventilation shaft. A combination fire/smoke damper will be required where the supply duct penetrates the shaft wall. The ventilation shaft will also provide the path for return and relief air back to the rooftop HVAC unit. Return air openings complete with combination fire/smoke dampers and sound lined elbows will be provided above ceiling at each floor to allow return air to transfer into the shaft. The space above the T-Bar ceiling on each floor will be a return air plenum.

Sound control is important between legislative suits. As such the walls will go full height for each of the suites and the corridors. An air transfer opening with a sound lined transfer boot will be located above the ceiling at the entry door of each suite to allow return air to transfer to the space above the corridor ceiling and back to the ventilation shaft.

The VAV system will be sized to cool the building using 55 degree F supply air in the ductwork distribution system. The VAV system supply air temperature will be reset based upon the air temperature required to cool the hottest room. The air

handling unit fan will modulate up or down as needed to meet the required demand load. The fintube radiation will be controlled with the local VAV box and coil in sequence to maintain a comfortable space temperature.

Air distribution will include multiple types of inlet/outlets for the various building areas. Flow bar style diffusers are anticipated for the legislative offices and common areas supply air. A combination of flowbar and 4-way throw diffusers will supply air to the remainder of the spaces. A combination of eggcrate and bar grilles are anticipated for return and exhaust.

The packaged rooftop unit will include relief fans to ensure air turnover during economizer operation. The relief fans will include a variable frequency drive to allow capacity modulation to maintain a +0.05" (adjustable) pressure differential between the indoor and outdoor.

The main restrooms rooms, break rooms, janitor closets and other similar spaces in the facility will be served by a roof mounted variable speed domex exhaust fan. The exhaust fan will be scheduled to operate during the owner's occupied/unoccupied schedule. Ductwork will be slightly oversized to allow the addition of exhaust requirements in the future. This will allow exhaust modifications by simply rebalancing the system.

Communication closets and AV Room areas will be provided with a dedicated cooling exhaust air fan with transfer air duct to maintain space temperature. The exhaust fan will draw air from the occupied space and discharge the air into the return air plenum above the ceiling. A close on rise thermostat will start the exhaust fan when temperature rises above set point and shut off the fan when the set point is achieved. The dedicated exhaust fan will be capable of 24/7 operation allowing cooling of the communication closets when main building air handling units are shut off during unoccupied modes.

The lift station enclosure room located in the basement will include a dedicated exhaust fan that is extended to discharge to the exterior of the building. The fan will be sized to provide a minimum of 5 air changes per hour and will operate continuously.

IT Room Cooling:

The IT room will be provided with two completely redundant cooling systems. Each cooling system will be sized to meet 100% of the cooling load (plus some expansion) to allow back-up should one unit fail. This will also allow one unit to be taken down for service without affecting operation of the IT Room computer equipment.

Each cooling system will be specified to include humidification and dehumidification capability to maintain the space between 30% and 50% relative

humidity. Condensate will be pumped (or drain by gravity if possible) to an indirect waste location in the facility.

Each cooling system will include a remote dry cooler and duplex pump package to provide free cooling when outside air temperatures are suitable. The dry coolers (or a single two circuit dry cooler) will be located in the adjacent parking garage. Glycol piping will extend between the dry cooler(s) and the cooling units in the IT Room to transfer rejected heat from the IT Room to the exterior. During winter operation a cooling coil in the unit provides cooling. During the summer the heat rejected from the operating compressors is rejected to the exterior using the drycooler.

The system will utilize a 50/50 mixture of propylene glycol and water and will include a glycol fill tank and expansion tank. (deleted “air separator.” We don’t typically install air separators on dry coolers)

Snowmelt:

The owner is considering snowmelt for two areas of the building: the front entry/sidewalk, and the South rear entry/loading area. The two areas can be combined and supplied from a single snowmelt boiler located in the first floor mechanical room located at the South end of the building. An alternate approach under consideration will be to provide a heat exchanger and snowmelt pump at each snowmelt location and provide the energy for melting snow from the main boiler system that supplies the building.

If a separate boiler is used it will be a gas fired sealed combustion high efficiency boiler. The boiler will supply heat into a snowmelt piping distribution loop that extends to each of the snowmelt areas. A snowmelt distribution manifold will supply tubing loops at each snowmelt location. Snowmelt tubing will typically be 5/8” diameter located 6” on center (over insulation) but embedded in the slab.

A stand alone Tekmar controller would operate the distribution pumps and enable the boiler in sequence to melt snow in the two locations. A snowmelt sensor located in each of the areas can be employed to automatically start/stop the system and control idle mode between snowfalls.

Insulation:

The building will be designed in accordance with LEED concepts. Insulation for piping, ductwork, and equipment will be in accordance with the International Energy Conservation Code (IECC). Supply air ductwork located in the return air plenum above the ceiling plenum will require insulation. Insulation will also be installed on the air separator, as well as valves/hydronic specialties larger than 2” diameter.

Controls:

A microprocessor based direct digital control (DDC) system will be specified for the facility. The control system will be performance specified by the engineer to meet the sequence of operations listed in the contract documents. The control system will be specified to be a Trane Tracer Building Automation system.

The control system will include a full graphics package to allow point and click access for control of mechanical system.

The boiler system will be specified to include a package boiler controller. The boiler controller will communicate with the building DDC system to provide alarm information only.

The rootop HVAC unit and VAV boxes can be provided complete with Trane Tracer controls to seamlessly integrate into the DDC network. The main building exhaust fan would also be contolled by the DDC system.

Remaining equipment such as unit heaters, cabinet unit heaters, communication closet exhaust fans, will be controlled with standalone electric/electronic controls that do not require connection to the DDC system.

Exhibit A –
LIO Electrical Narrative

Scope of Work Basis of Design

Design and construction of the facilities will comply with the latest publications identified under the References section. In addition the apparatus, equipment, materials, and installation will conform to the standards of the National Electrical Manufactures' Association (NEMA), Underwriters' Laboratories, Inc. (UL)*, the Institute of Electrical and Electronic Engineers (IEEE), the Illuminating Engineers Society (IES), and the Occupational Safety and Health Administration (OSHA). *All electrical devices and equipment will be listed by an acceptable certified testing laboratory.

The design will include calculations supporting the designed fault interrupting capacities, calculations supporting the total connected building load, panel loads and estimated building and panel feeder voltage drops.

The electrical design and construction will include, but is not limited to:

- Main distribution switchboards consisting of metering equipment and overcurrent protection for distribution and branch circuit panels.
- Feeders to distribution and branch circuit panels.
- Branch circuit panels for power, lighting, HVAC, etc.
- Branch circuit wiring systems for equipment, lighting, duplex receptacles, appliances, motors, motor starters, etc., as required.
- Wall switches, duplex receptacles and other wiring devices.
- All hangers, anchors, sleeves, chases, support for fixture, and electrical materials and equipment.
- Interior lighting fixtures, controls complete with all lamps.
- Wiring and connections to all equipment furnished by the owner.
- Exterior lighting and controls.
- Telecommunication system.
- Fire Alarm system with monitoring of sprinkler system.
- Door Access.
- CCTV System.
- Cable TV system.

References

The following electrical codes and standards will be applicable to the electrical design of the facility:

- International Building Code (IBC)
- International Residential Code (IRC)
- Illumination Engineers Society (IES) Lighting Handbook
- NFPA 101 Life Safety Code
- NFPA 70 - NEC National Electrical Code
- NFPA 72, National Fire Alarm Code
- TIA/EIA 568A, Commercial Building Telecommunications Cabling Standard
- TIA/EIA 568B, Commercial Building Telecommunications Wiring Standard
- TIA/EIA 569A, Commercial Building Telecommunications Pathways and Spaces
- TIA/EIA 600, The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
- TIA/EIA-606
- TIA/EIA 607, Commercial Building Grounding and Bonding Requirements for Telecommunications

Design and construction of the facility will comply with the latest publications identified under the References section. In addition the apparatus, equipment, materials, and installation will conform to the standards of the National Electrical Manufactures' Association (NEMA), Underwriters' Laboratories, Inc. (UL)*, the Institute of Electrical and Electronic Engineers (IEEE), the Illuminating Engineers Society (IES), and the Occupational Safety and Health Administration (OSHA).
*All electrical devices and equipment will be listed by an acceptable certified testing laboratory.

Power Distribution

Electrical Service

The current service is a 208V 3 Phase 1200 Amp. It is planned to replace the existing electrical service with a new 2500 Amp 208 Volt or a 1200 Amp 480V 3 phase service depending on which proves more cost effective. Verizon has existing equipment on the roof which must remain functional during the remodel. The load is 200 Amp 208V single phase and includes a natural gas fire generator.

Service Equipment - Main Distribution Switchboard

Service entrance equipment will be dead front construction, equipped with circuit breakers and sized to accommodate 125% of building load. The building loads will be metered at the service entrance equipment. Meter will be digital and equipped with communication port for future remote energy monitoring. The digital meter will provide as minimum voltage and amps each phase, KW/KWH demand, KVA and usage. Meter provided will be equipped with an output connection to transmit the signal to a remote location via telephone lines at a later date. Transient voltage surge suppressor will be provided at the service equipment. Surge suppressor will meet the requirements of IEEE C62.41 and be UL listed and labeled as having been tested in accordance with UL 1449.

Standby Power

A 150 KW standby power generator is planned to be installed on the alley side of the building. Generator to be installed in a weatherproof enclosure. An integral sub base fuel module will be provided in the unit.

A single 600 Amp 4 pole automatic transfer switch with distribution for the elevators, telecommunication equipment in each telecom room, heating equipment, partial lighting and misc power receptacles deemed critical.

Interior Electrical Power Distribution

Complete interior electrical distribution system will be provided as required by the National Electrical Code. Voltage drop will be in accordance to National Electrical recommendation. An electrical room will be provided on each floor. Each floor will be provided with a 480Y/277V lighting panel and two 208Y/120V power panel for receptacles etc.

Panelboards

All panels will be sized for the load served plus 25% spare capacity and 15% space. Only bolt-on circuit breakers will be used. All panels located in finished areas will be recessed and all panels and conduits located in unfinished areas will be surface mounted. Separate electrical rooms will be provided to the greatest extent possible and on each floor of multi-story buildings.

Conduit and Raceways

All interior wiring in the building will be run in conduit. Raceways will be specified of the type suited for the applications and locations. Raceways installed for future systems will include pull wire. To the maximum extent practical, conduit will be installed concealed in all areas except utility spaces.

Conductors
Conductors will be copper. Conductor #12 or smaller will be solid. Conductor #10 or larger will be stranded. All building wiring (line-voltage between 100-600 volts) will have type THHN, or XHHW 75 ^{o} C (167 ^{o} F) insulation and be rated at 600 volts unless some other type is specifically required for a particular application. Power conductors will not be smaller than #12 AWG.

A separate insulated grounding conductor will have green color or marking insulated and be sized and installed per NEC requirements, in all secondary, distribution, feeder and branch circuit conduits.

Branch Circuits for Receptacle and Lighting Circuits
Lighting and convenience outlets will be run on separate circuits. Dedicated circuits for loads greater than 50% of the circuit capacity will be provided.

Circuits for computers and electronic devices will be designed to have a dedicate neutral and the panels and transformers rated accordingly.

Devices
All duplex receptacles will be 20 amp, 125 volt, three pole grounded type specification grade duplex receptacles NEMA 5-20R are acceptable unless type of equipment requires different configuration. Impact resistant plastic plates will be provided for boxes and devices. Ground fault interrupt (GFI) type duplex receptacles will be provided in locations as required by the NEC and provided with weatherproof device plate covers at exterior locations. At least one GFI receptacle will be provided in each restroom and janitor's closet. Arc-fault circuit interrupter protection will be provided in accordance with NEC.

Provide the minimum power outlets required by NEC but not less than a duplex outlet on each wall. In office and administration areas provide double-duplex receptacles at each location and near a data outlet.

Lighting
Exterior Lighting
General
All lighting shall comply with the recommendations of the Illumination Engineering Society of North America (IESNA). All exterior site and area lighting will be LED.

Interior Lighting
General
Illumination levels will be in accordance with the recommendations of the latest Illuminating Engineering Society (IES) Lighting Handbook.

The lighting systems will be designed to provide comfortable visibility conditions having adequate intensities for the safe and effective accomplishment of the tasks to be performed. The finish and color of room surfaces will be coordinated with the lighting system design to reduce glare, increase light utilization, and attain an acceptable brightness ratio recommended by Illuminating Engineering Society (IES) Lighting Handbook. Light sources and fixtures will be selected to provide the most efficient and economical system practicable. Lineal fluorescent and compact fluorescent lighting will be provided as the primary source of illumination. Lighting calculations will be based on the actual finish material reflectance or a maximum of 80% for ceiling, 50% for the wall and 20% for floor whichever is lower. Light fixture schedules including lamp type, voltage, wattage, type of mounting, manufacturer name and catalog number will be provided.

All conference rooms will include 5% dimming ballast.

Refer to architectural reflected ceiling plans and catalog cuts for additional information.

Lighting Control
Control switches for general room lighting will be located at room entrances and other locations for control of lighting fixtures and systems. Typically, rooms with more than one door will have three or four-way switches as required.

Emergency Lighting System
Emergency lighting will be provided per NFPA 101. Emergency lighting will be designed as an integral part of the facility lighting system, and will be incorporated as part of the system lighting fixture. As a minimum, emergency lighting will be provided for building corridors, stairs and common areas.

Exit Signs
Exit signage will conform to NFPA 101. Exit signs will be glass green edge light emitting diode (LED).

Grounding
Provide a building grounding electrode system consisting of a ground ring, metal underground water pipe, building structural steel, concrete encased electrodes, and copper clad steel rod electrodes. A ring ground of #1/0 AWG bare copper buried within the building foundation interconnecting to a 3-meter minimum length ground rods and foundation every interior/exterior corner 2 meters from the building.

All line voltage circuit wiring will contain a separate bare or green insulated grounding conductor. Conduit raceways will not be utilized as the only grounding method. A min #6 AWG copper will be provided from service equipment ground to main telecommunication closet per TIA/EIA 607 requirements.

Other Requirements
Mechanical Connections
Mechanical connections for mechanical equipment. See mechanical narrative.
Provide option to provide power for fire pump as sized by mechanical engineer.

Conference Rooms
Conference rooms will include wall flat screens with network connections, laptop interface, video conferencing and power/telecom under the conference tables.

Lighting in conference room will be dimmable.

Seismic and Testing Requirements
Design, calculations, and testing of all seismic requirements for electrical and communications equipment shall be provided. All electrical equipment shall be tested in accordance with applicable specification for each type of equipment. Testing shall include any required factory testing, field testing, and operating testing. As a minimum, testing shall include, transformers, wiring, switches, light fixtures, circuit breakers, contactors, and head bolt outlets.

Telecommunications (Voice and Data)
Cat 6 horizontal Telecommunication cabling system will be provided with all cables routed back to dedicated telecommunication room on each floor.

Vertical Telecommunication system will include 200 pair copper voice cable and 24 strand fiber optic riser.

Distribution will be design in compliance with ANSI/EIA/TIA standards. The telecommunications system will be complete and include the telephone/data and cable system backboards, punch down blocks, and all associated raceways, cable tray, j-hooks, outlets and cabling.

Equipment racks shall be floor mounted 19 inch wide. Provide minimum 50 foot-candle lighting level and minimum two dedicated 20-ampere 110 volt power branch circuits in the communications room. A wall-mounted telephone near the entry door of each main communications rooms will be provided.

Cable tray will be used for interior distribution of com systems.

Provide 24 port, rack mounted fiber optic patch panel with coupling plates and ST connector ports
Distribution of fiber optic cables throughout the new building will be by others.

Copper cable distribution shall be 4-pair 24 AWG, 100-ohm unshielded twisted pair (UTP) in 1 inch conduit. All copper pairs and fiber optic strands shall be terminated and tested. Copper connectors will be EIA/TIA Cat 6 8-pin/8-position insulation displacement terminations wired per T568B. Fiber optic connectors will be EIA/TIA "SC" type 568SC. A minimum of two 8-pin modular RJ45 type connectors will be provided in each outlet box. In finished areas standard outlet boxes will be 4-11/16 x 4-11/16 double gang electrical box with the faceplate flush with the wall surface. In unfinished areas the outlets shall be surface mounted.

One outlet in each main mechanical and electrical room of the buildings for official communications. Communications outlets will be provided in all private offices, platoon offices, conference rooms. Number of outlets will be per the requirements of the RFP in each area.

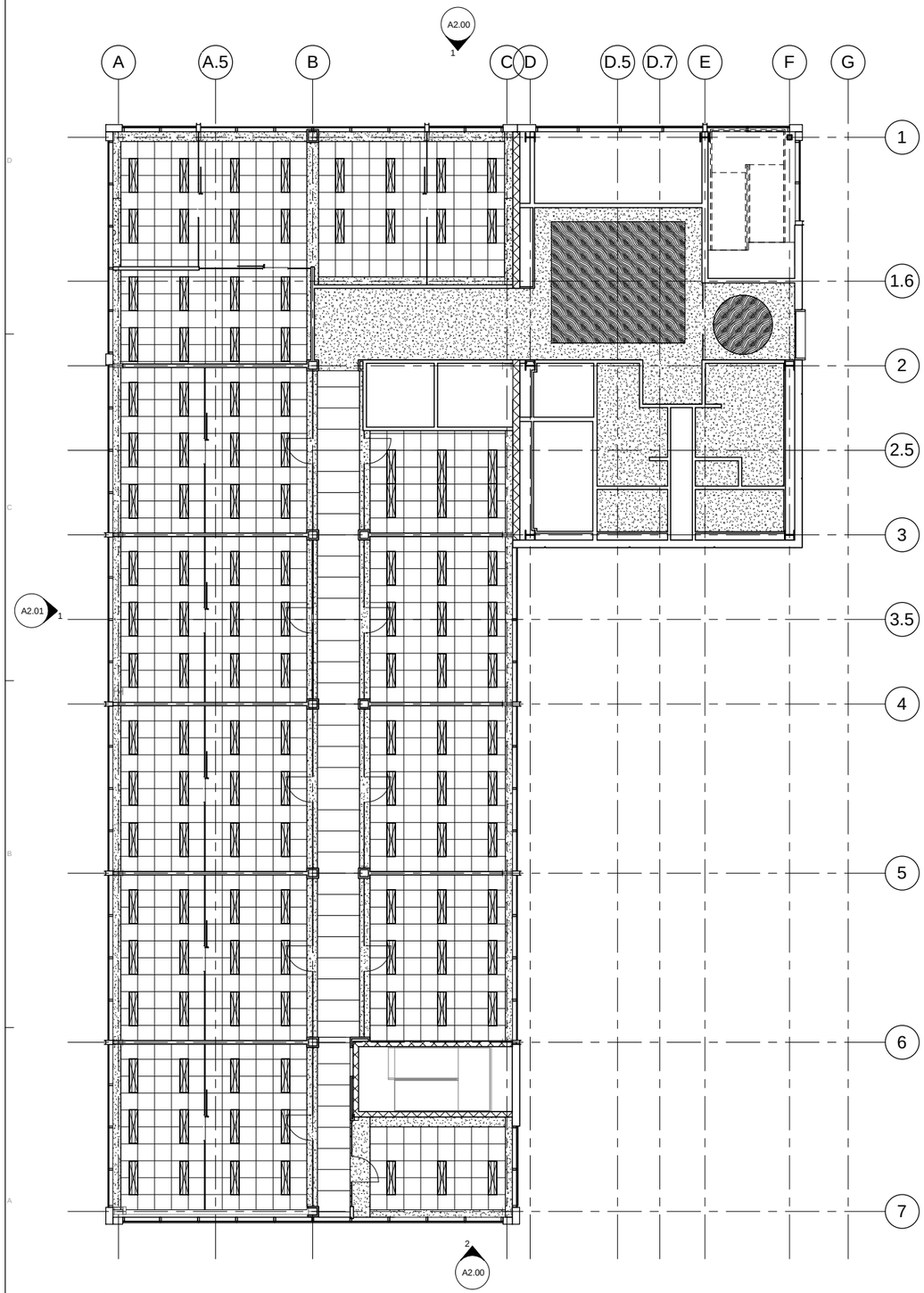
Cable TV (CATV) System
Cable television connection will be provided to all buildings. Service will be coordinated with GCI. Each office suite and conference rooms will include outlets.

Fire Alarm
The building will be equipped with an addressable fire alarm system with a fire alarm panel and dialer panel A remote annunciator will be provided at the building entrance.

Access Control System
Door access control system will be required for approximately 20 doors. System to be compatible with existing State of Alaska systems at other facilities.

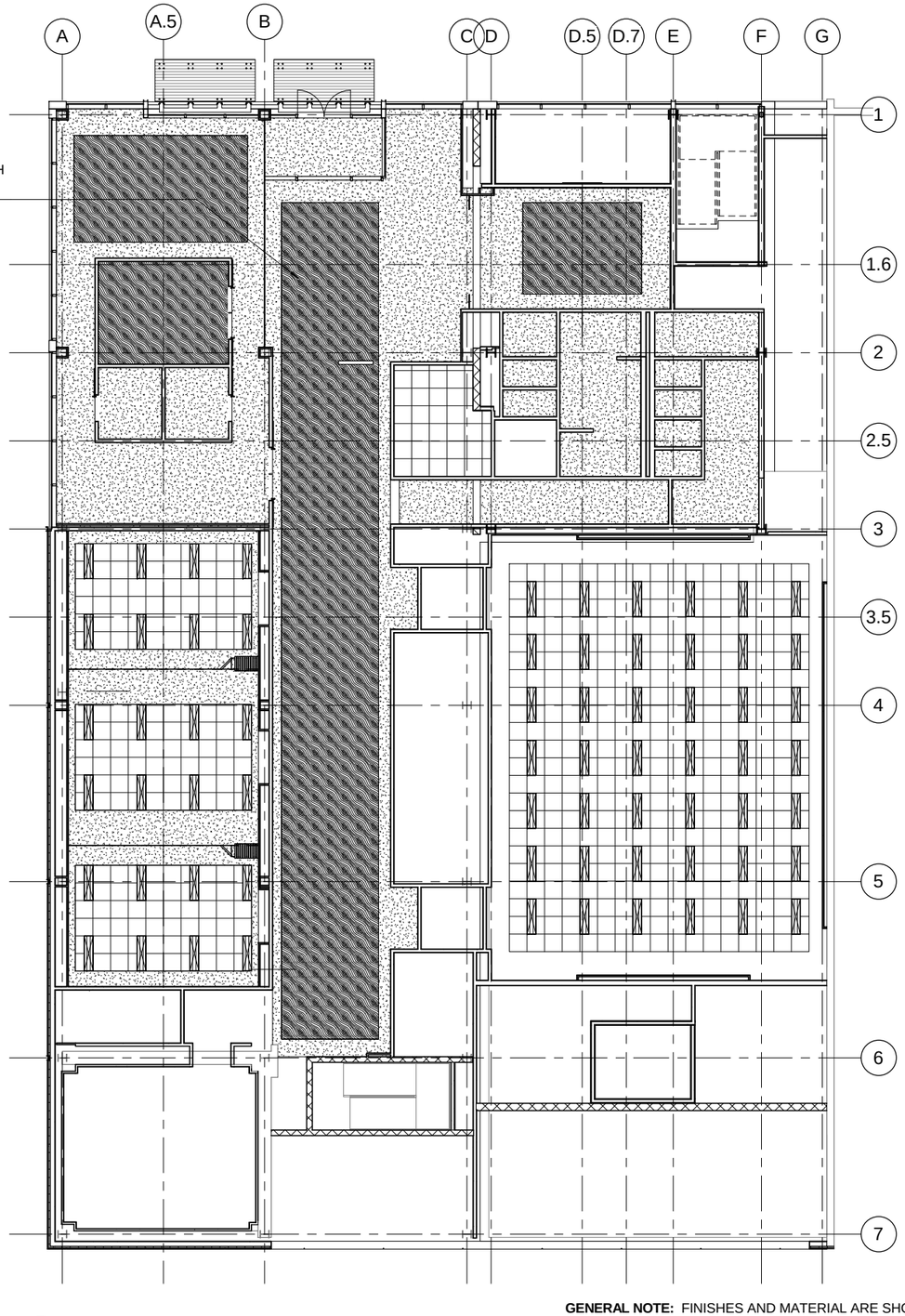
CCTV Security
A CCTV system will be required with an assumed 20 cameras with recording DVR's for a 2 week period.

Exhibit A –
LIO Reflected Ceiling Plans



2 REFLECTED CEILING PLAN - TYPICAL LEVEL
1/8" = 1'-0"

ACCENT / FINISH MATERIALS TO BE SELECTED



1 REFLECTED CEILING PLAN - LEVEL 1
1/8" = 1'-0"

GENERAL NOTE: FINISHES AND MATERIAL ARE SHOWN FOR PRICING PURPOSES ONLY AND ARE SUBJECT TO CONSULTATION WITH LAA ABOUT FINAL PRODUCT SELECTION AND CONFIGURATIONS.

LEASE EXHIBITS - NOT FOR CONSTRUCTION

STAMP

Criterion General, Inc.

kpb architects
architecture planning interior design design-build
425 g street suite 800 anchorage alaska 99501
v 907.274.7443 f 907.274.7407 www.kpbarchitects.com

PFEFFER DEVELOPMENT
716 W 4TH AVE. Renovation
Anchorage AK 99501

REVISION SCHEDULE

#	DESCRIPTION	DATE

JOB NO.	11076_19
DATE	08.27.2013
DRAWN	Author
REVIEWED	Checker

SHEET NAME
REFLECTED CEILING PLANS

SHEET NO.
A1.10

Exhibit A –
LIO Structural Plans Narrative

Legislative Information Office (LIO) Building Renovation

Structural Narrative

08-28-13

Existing Construction

The existing legislative information office building is a 7-story (6-story + 1-story basement) building located in downtown Anchorage, AK. No as-built or original construction drawings are available for this building. All the information below is based on data accumulated in the field and assumptions based on typical construction techniques.

The existing gravity-resisting system starts with concrete on metal deck floors, supported by steel bar-joists. The floor decks are typically 1.5-inch metal deck with concrete topping between 3.5 and 4.5 inches thick for a total average thickness of 5.5-inches. The roof uses the same deck and concrete as the floors. The typical floor and roof framing are steel bar joists spanning in the north-south direction between girders. The joists are 14 to 18-inches deep, spaced at 24-inches on-center, and span 20 to 27-feet. The girders and columns supporting the steel bar joists are steel wide-flange moment frames oriented in the east-west direction and are located in seven lines spaced over the length of the building. The girders are 24-inches deep (W24) and the columns are 14-inches wide (W14).

The exterior walls on the east and west sides are 8-inch thick cast-in-place concrete shear walls for the full height of the building. On the north side, the wall consists of a precast and glazing system. On the south wall, the exterior wall is a panelized exterior system similar to an exterior insulated finishing system (EIFS).

The basement floor is 12-feet below the first floor and is a concrete slab on grade that is 2-feet below the grade of the parking garage on the west side, and 3.5-feet below the basement of the Anchor Bar on the east side. Large grade beams run north-south along the sides of the building supporting the 8-inch concrete walls above and the columns along Grids A & C (east and west sides).

At the southwest corner of the first floor, a concrete vault (used by the previous bank tenant) anchors the corner of the building. The first floor is 21-feet tall, while the other stories are 12.75-feet tall. The roof has two penthouses on top; one toward the north end for the elevator; and one on the south side for the mechanical units. In addition, a cell-phone antenna has recently been added on the roof between the penthouses.

The existing lateral system is separated by direction. In the east-west direction, the lateral system is steel moment frames, with W14 columns and W24 beams at each numbered grid. The connections between the beams and columns are referred to as "Pre-Northridge Welded Unreinforced Flange, Welded Web" connections (Pre-Northridge WUF-W). These connections weld the top and bottom flange, as well as the web, of the beam to the column flange. These welds have exhibited low ductility behavior during past seismic events in California over the last 20 years. These types of connections have now been prohibited by the building code without specialized detailing to make them more ductile. Ductile behavior is

important in buildings, because preventing collapse of buildings after an earthquake is a function of not just the building's strength, but also its ductility.

In the north-south direction, the lateral system is concrete shear walls on the east and west sides. When originally built, these walls were solid for their entire length. In a previous renovation, windows were cut in these walls to bring daylight into the building. No calculations are available for the renovation, so it is unclear whether any strengthening measures were undertaken to verify or enhance the capacity of the perforated shear walls.

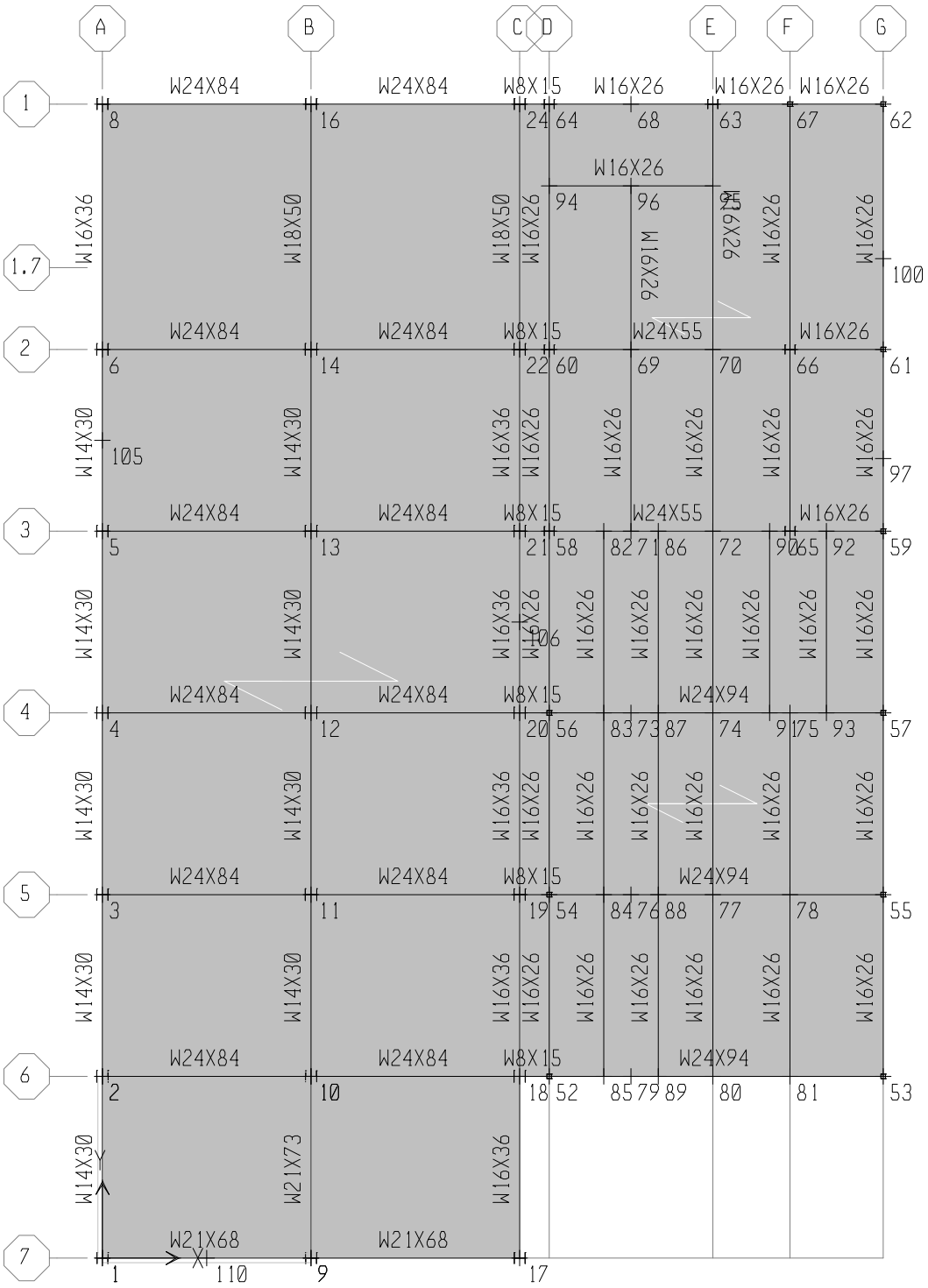
Proposed Renovation

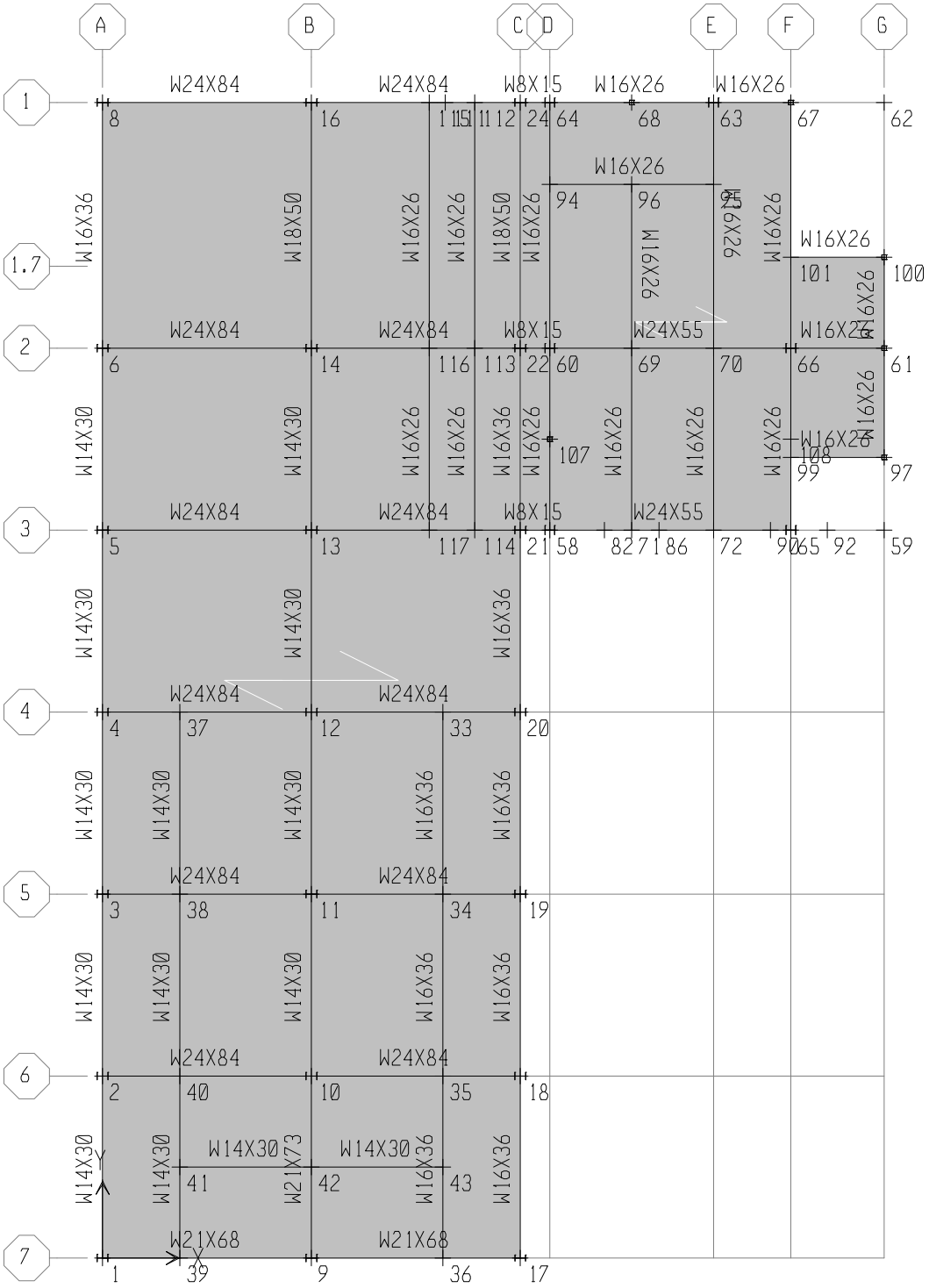
The proposed renovation consists of removing the Anchor Bar from the east side of the building, removing the east and west concrete walls from the existing building, and removing the existing north elevator and stair core (along with the northern penthouse). When these items are removed, the east side addition will be in-filled with a new meeting and hearing space on the basement and first floors, and a six story elevator and stair core on the north end.

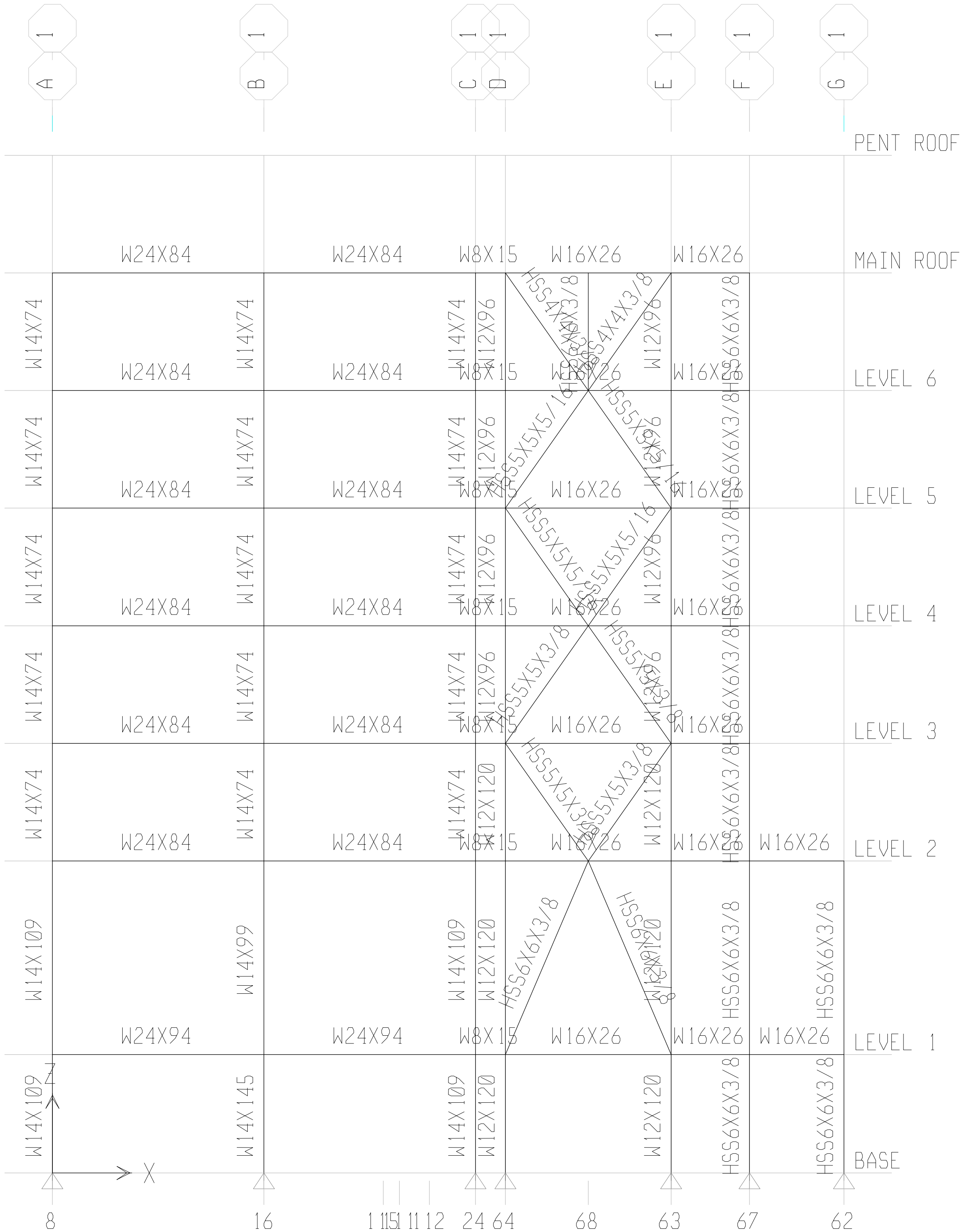
During the demolition process, new shoring will be required along the northern edge of the Anchor Bar (along 4th Ave) and on the eastern side (adjacent to the existing building) to retain the basement and foundation excavation for the new building, which is expected to be 15 to 16 feet deep. This shoring will likely consist of steel piling with lagging between piling and will be permanent.

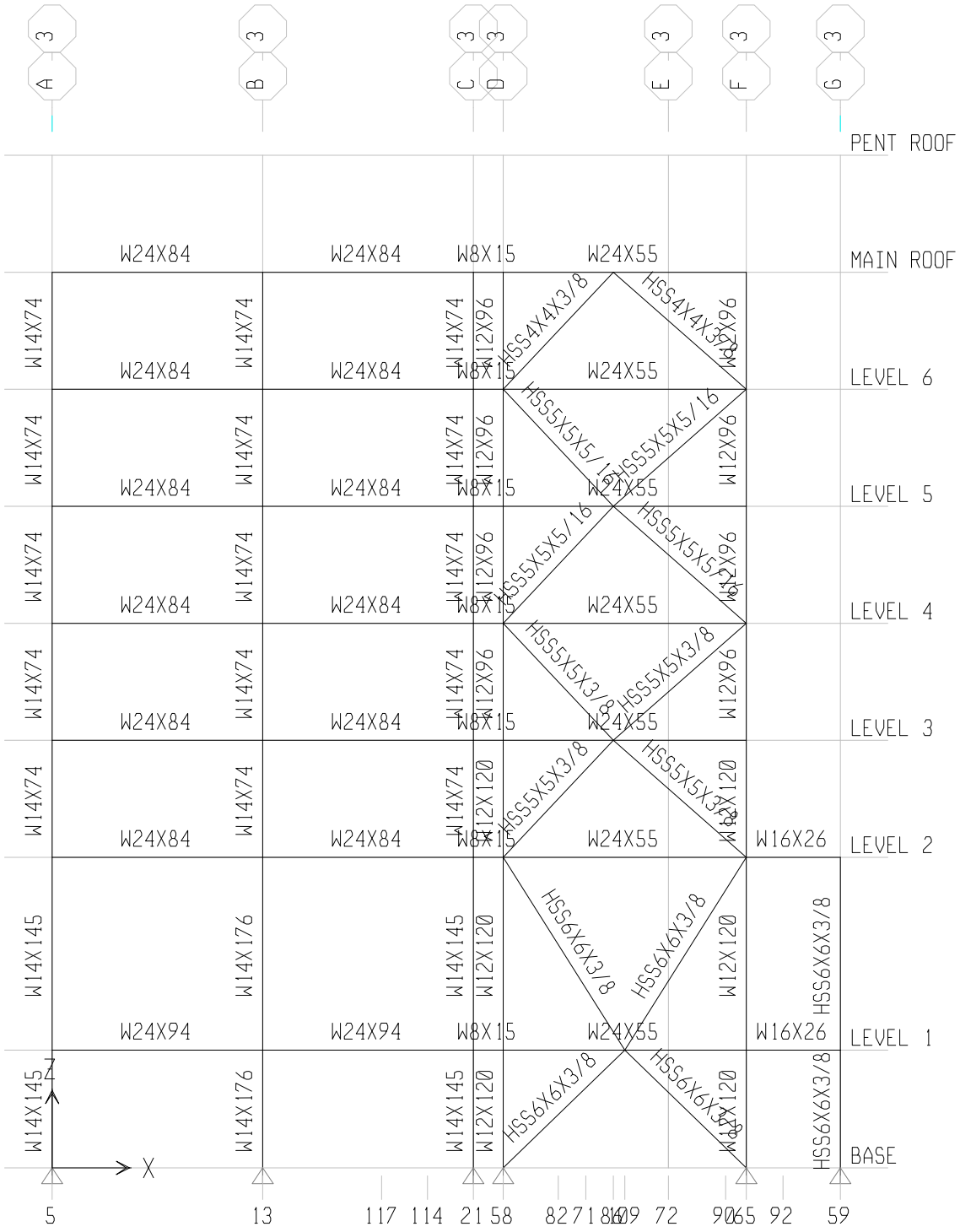
Since the usage and loads in the existing building are not changing, the gravity load resisting system in the existing building is adequate for the new gravity loads and only needs to be modified where the north core stairs and elevator are being removed. The gravity system in the new portion of the building will be tube-steel and wide-flange columns with wide-flange beams. The new floor and roof framing will be concrete on metal deck and supported by wide-flange beams. The foundation of the 6-story tower portion will be a thick concrete mat foundation (approximately 3-feet thick) and with the remainder of the new addition being founded on Isolated concrete footings.

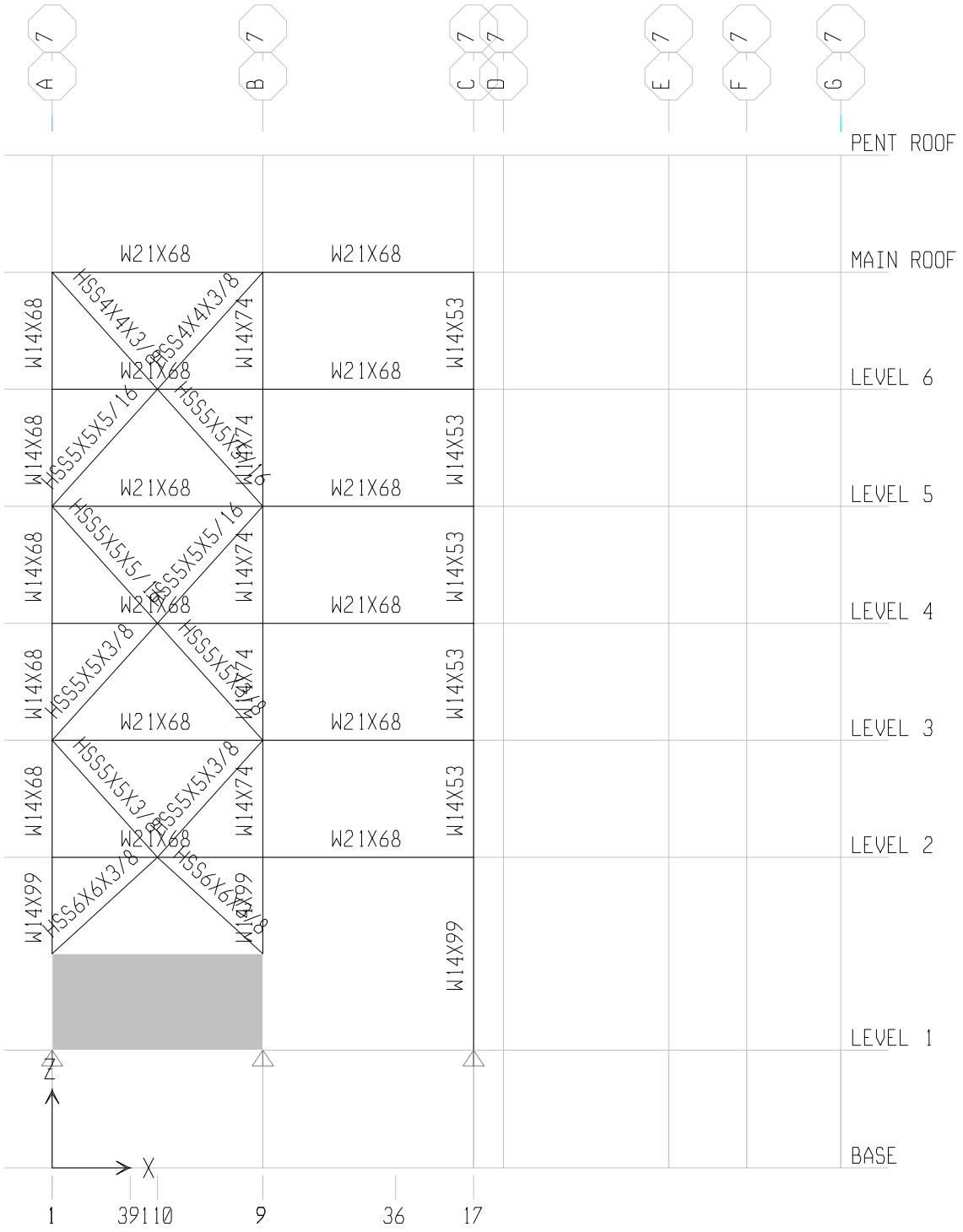
The lateral-load resisting system in the existing building is being completely revised in this renovation. The moment frame connections in the east-west direction are inadequate under current codes, and the concrete walls in the north-south direction are being removed to allow for new curtain wall. To replace the lateral system, new buckling restrained braced frames (BRBF) will be added in both the existing and new portions of the building. Since the entire system is being updated, the new and existing portions of the building will be combined and no seismic joint will be used. BRBF's are an advanced braced frame system that equalizes the braces capacity in both compression and tension, which creates a more balanced response to seismic forces and creates a significantly more ductile response. These braces will be welded and bolted to the existing and new steel frames in three bays in both the north-south and east-west directions.


A
B
C
D
E
F
G
1
1.7
2
3
4
5
6
7
W24X84
W8X15
W16X26
W24X55
W24X94
W16X36
W18X50
W14X30
W21X73
W21X68
W16X26
105
106
110


A
B
C
D
E
F
G
1
1.7
2
3
4
5
6
7
W24X84
W8X15
W16X26
W24X55
W18X50
W21X73
W21X68
W14X30
W16X36
W16X26

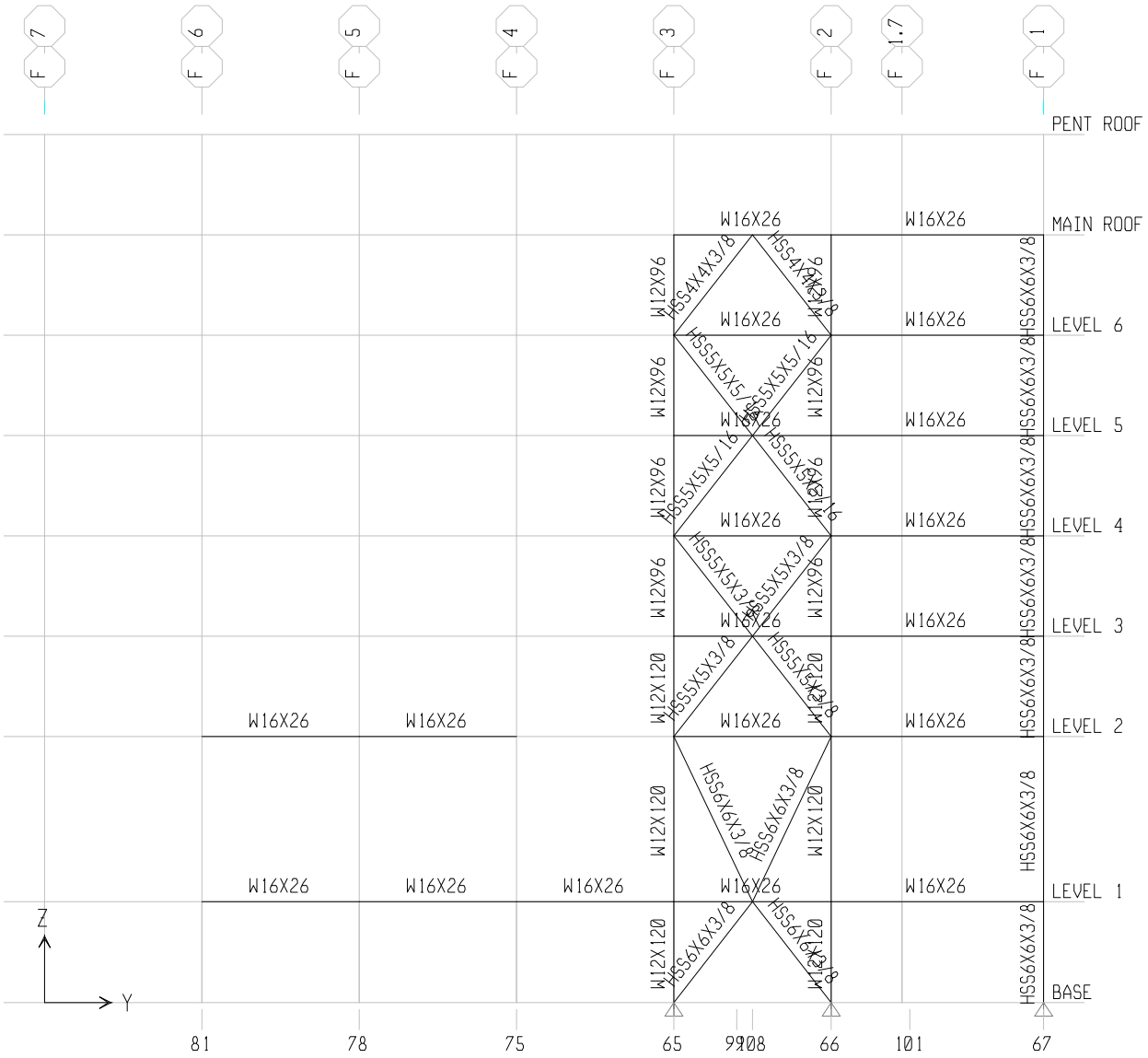

A 1
B 1
C 1
D 1
E 1
F 1
G 1
PENT ROOF
MAIN ROOF
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
BASE
W24X84
W8X15
W16X26
W14X74
W12X96
W12X120
HSS6X6X3/8
HSS4X4X3/8
HSS5X5X5/16
HSS5X5X3/8
W14X109
W14X99
W24X94
W14X145
Z
X
8
16
24
64
68
63
67
62


A 3
B 3
C 3
D 3
E 3
F 3
G 3
PENT ROOF
MAIN ROOF
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
BASE
W24X84
W8X15
W24X55
W14X74
W12X96
HSS4X4X3/8
HSS5X5X5/16
HSS5X5X3/8
W12X120
W16X26
W24X94
W14X145
W14X176
W12X120
HSS6X6X3/8
HSS6X9X3/8
Z
X
5
13
117
114
21
58
82
71
86
109
72
90
65
92
59


A 7
B 7
C 7
D 7
E 7
F 7
G 7
PENT ROOF
MAIN ROOF
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
BASE
W21X68
W14X68
W14X74
W14X53
W14X99
HSS4X4X3/8
HSS5X5X5/16
HSS5X5X3/8
HSS6X6X3/8
Z
X
1
39110
9
36
17


A 7
A 6
A 5
A 4
A 3
A 2
A 1.7
A 1
PENT ROOF
MAIN ROOF
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
BASE
W14X30
W16X36
W14X68
W14X74
W14X99
W14X145
W14X109
HSS4X4X3/8
HSS5X5X5/16
HSS5X5X3/8
HSS6X6X3/8
Z
Y
1
44
2
3
4
5
105
6
8


C 7
C 6
C 5
C 4
C 3
C 2
C 1.7
C 1
PENT ROOF
MAIN ROOF
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
BASE
W16X36
W18X50
W14X53
W14X74
W14X99
W14X145
W14X109
W14X30
HSS4X4X3/8
HSS5X5X5/16
HSS5X5X3/8
HSS6X6X3/8
Z
Y
17
18
19
20
106
21
22
24


F 7
F 6
F 5
F 4
F 3
F 2
F 1.7
F 1
PENT ROOF
MAIN ROOF
LEVEL 6
LEVEL 5
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL 1
BASE
W16X26
W12X96
W12X120
HSS4X4X3/8
HSS5X5X5/16
HSS5X5X3/8
HSS6X6X3/8
HSS6X6X3/16
81
78
75
65
99
108
66
101
67
Z
Y