CODE SUMMARY:

NORTHVIEW APARTMENTS - BUILDING ONE - DESCRIPTION OF THE WORK:

THIS PROJECT CONSISTS OF A NEW 35 UNIT APARTMENT BUILDING (3 STORIES) WITH 2 DETACHED GARAGE BUILDINGS.

IBC TABLE 503:
R-2, VA = 12,000 SQ.FT. PER FLOOR AND 3 STORIES IN HEIGHT
BUILDING SHALL BE SPRINKLED PER NFPA 13R

AREA INCREASE:
IBC 506.2 FRONTAGE INCREASE: I = [F/P - .25] W/30 = [676/676 - .25] 30/30 = 75%

ALLOWABLE AREA PER FLOOR = 12,000 + (12,000) .75 = 21,000 SQ.FT.

ACTUAL BUILDING AREAS:
LEVEL 1 = 15,036 SQ.FT.
LEVEL 2 = 14,616 SQ.FT.
LEVEL 3 = 14,956 SQ.FT.
TOTAL BUILDING AREA = 44,608 SQ.FT.

ACTUAL BUILDING HEIGHT = 3 STORIES

GARAGE BUILDING DESCRIPTIONS:

DETACHED GARAGE BUILDINGS ARE CLASSIFIED AS U OCCUPANCIES - WITH A MAX. AREA OF 3,000 SQ.FT. PER IBC 406.3.2

GARAGE BUILDING 1:

FLOOR AREA = 2,976 SQ.FT.
HEIGHT = 12 FEET 6 INCHES

GARAGE BUILDING 2:

FLOOR AREA = 2,880 SQ.FT.
HEIGHT = 12 FEET 6 INCHES

FACILITY INFORMATION:

NAME OF BUILDING: NORTHVIEW APARTMENTS BUILDING 1
ADDRESS OF BUILDING: TBD
OWNER NAME: NORTHVIEW APARTMENTS OF SARTELL, LLC
OWNER CONTACT INFO:
17018 COMMERCIAL PARK ROAD
218-829-0707
STEVEK@KUEPERS.COM

DESIGNER INFORMATION:

NAME OF DESIGN PROFESSIONAL: CHRISTOPHER J. RAIMANN, AIA
FIRE NAME: KUEPERS INC. ARCHITECTS & BUILDERS
DESIGNER CONTACT INFO:
17018 COMMERCIAL PARK ROAD
218-824-2233
CHRISR@KUEPERS.COM

CODE REVIEW INFORMATION:

APPLICABLE CODES:
MINNESOTA STATE BUILDING CODE (MSBC) 2015
MINNESOTA ACCESSBILITY CODE 2015
MINNESOTA ENERGY CODE 2015

IBC TABLE 503:
ALLOWABLE HEIGHT AND BUILDING AREAS - TYPE VA
R-2 = 12,000 SQ.FT. & 3 STORIES

ACTUAL BUILDING AREAS:
BUILDING FOOTPRINT = 15,036 SQ.FT. & 3 STORIES

IBC SECTION 506 BUILDING AREA MODIFICATIONS:
506.2 FRONTAGE INCREASE - SEE CALCULATION IN CODE SUMMARY ABOVE.

ALLOWABLE HEIGHT & BUILDING AREAS AFTER MODIFICATIONS:
R-2 = 21,000 & 3 STORIES

IBC MIXED USE AND OCCUPANCY:
IBC 508.2.1 ACCESSORY OCCUPANCIES - AGGREGATE ACCESSORY OCCUPANCIES SHALL NOT TOTAL MORE THAN 10 PERCENT OF THE AREA OF THE STORY IN WHICH THEY ARE LOCATED.

IBC 508.2.4 SEPARATION OF OCCUPANCIES - NO SEPARATION IS REQUIRED BETWEEN ACCESSORY OCCUPANCIES OR THE MAIN OCCUPANCY.

IBC 509 INCIDENTAL USES:
IBC 509.3 INCIDENTAL USES SHALL NOT OCCUPY MORE THAN 10 PERCENT OF THE BUILDING AREA IN WHICH THEY ARE LOCATED.

IBC SECTION 903 AUTOMATIC SPRINKLER SYSTEM:
IBC 903.2.8 GROUP R - NFPA 13R SYSTEM SHALL BE PROVIDED.

IBC SECTION 903.4 - SPRINKLER SYSTEM SUPERVISION AND ALARMS - ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEMS, PUMPS, TANKS, WATER LEVELS AND TEMPERATURES, CRITICAL AIR PRESSURES AND WATER FLOW SWITCHES ON ALL SYSTEMS SHALL BE ELECTRONICALLY SUPERVISED BY A LISTED FIRE ALARM CONTROL UNIT.

IBC SECTION 903.4.1 MONITORING - ALARM, SUPERVISORY AND TROUBLE SIGNALS SHALL BE DISTINCTLY DIFFERENT AND SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED SUPERVISING STATION OR, WHEN APPROVED BY THE FIRE CODE OFFICIAL, SHALL BE AN AUDIBLE SIGNAL AT A CONTANTLY ATTENDED LOCATION.

IBC SECTION 903.4.2 - AN AUDIBLE ALARM SYSTEM SIGNAL SHALL BE PLACED ON THE EXTERIOR OF THE BUILDING IN AN APPROVED LOCATION AND SHALL BE CONNECTED TO EACH AUTOMATIC SPRINKLER SYSTEM.

IBC TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT:

MECHANICAL EQUIPMENT ROOMS	= 300 GROSS
ASSEMBLY	= 15 NET
BUISNESS AREAS (OFFICE)	= 100 GROSS
EXERCISE AREAS	= 50 GROSS
RESIDENTIAL	= 200 GROSS
LIBRARY (READING)	= 50 NET

DESIGN OCCUPANT LOAD CALCULATIONS:
SEE PLAN DIAGRAMS ON SHEET CR1.2 FOR DETAILS

LEVEL 1 = 118 OCCUPANTS
LEVEL 2 = 74 OCCUPANTS
LEVEL 3 = 76 OCCUPANTS

IBC SECTION MEANS OF EGRESS SIZING

IBC SECTION 1005.3.1 STAIRWAY WIDTH PER OCCUPANT:
LEVEL 1 OCCUPANCY = 118 X .2 = 23.6 INCHES
LEVEL 2 OCCUPANCY = 74 X .2 = 14.8 INCHES
LEVEL 3 OCCUPANCY = 76 X .2 = 15.2 INCHES

IBC SECTION 1006.2 MEANS OF EGRESS ILLUMINATION - THE MEANS OF EGRESS ILLUMINATION LEVEL SHALL NOT BE LESS THAN 1 FOOT-CANDLE AT THE WALKING SURFACE LEVEL.

IBC SECTION 1006.3 EMERGENCY POWER FOR ILLUMINATION - IN THE EVENT OF A POWER FAILURE, AN EMERGENCY ELECTRICAL SYSTEM SHALL AUTOMATICALLY ILLUMINATE THE FOLLOWING AREAS:
1. CORRIDORS, EXIT ENCLOSURES & EXIT PASSAGEWAYS
2. EXTERIOR EGRESS COMPONENTS AT LEVELS OF DISCHARGE UNIT EXIT DISCHARGE IS ACCOMPLISHED
3. INTERIOR EXIT DISCHARGE ELEMENTS
4. EXTERIOR LANDING FOR EXIT DISCHARGE DOORWAYS

THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR.

1006.3.1 ILLUMINATION LEVEL UNDER EMERGENCY POWER - EMERGENCY LIGHTING FACILITIES SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOT-CANDLE AND A MINIMUM, AT ANY POINT, OF 0.1 FOOT-CANDLE MEASEURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL.

IBC SECTION 1007.3 EXIT STAIRWAYS
IN ORDER TO BE CONSIDERED PART OF AN ACCESSIBLE MEANS OF EGRESS, AN EXIT STAIRWAY SHALL HAVE A CLEAR WIDTH OF 48 INCHES MIN. BETWEEN HANDRAILS

EXEPTION 1 - THE CLEAR WIDTH OF48 INCHES IS NOT REQUIRED AT EXIT STAIRWAYS IN BUILDINGS OR FACILITIES EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2

EXCEPTION 4 - AREAS OF REFUGE ARE NOT REQUIRED IN GROUP R-2 OCCUPANCIES.

IBC SECTION 1011 EXIT SIGNS:
WHERE REQUIRED, EXIT AND EXIT ACCESS DOOR SHALL BE MARKED BY AN APPROVED EXIT SIGN THAT IS READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL.

IBC TABLE 1014.3 COMMON PATH OF EGRESS TRAVEL.
THE COMMON PATH OF EGRESS TRAVEL SHALL NOT EXCEED 125 FEET.

IBC SECTION 1015 EXIT AND EXIT ACCESS DOORWAYS:
THE NUMBER OF REQUIRED EXITS IS TWO.

IBC TABLE 1016.1
THE MAXIMUM EXIT ACCESS TRAVEL DISTANCE WITH SPRINKLER SYSTEM INSTALLED THOUGHOUT IN AN R OCCUPANCY IS 250 FEET.

IBC SECTION 1018 CORRIDORS:
CORRIDOR CONSTRUCTION SHALL BE 1/2 HOUR PARTITIONS WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED.

IBC TABLE 2902.1 - MIN. PLUMBING FIXTURES:
RESIDENTIAL - R2 APARTMENT HOUSE:

WATER CLOSETS = 1 PER DWELLING UNIT
LAVATORIES = 1 PER DWELLING UNIT
TUBS OR SHOWERS = 1 PER DWELLING UNIT

OTHER - 1 KITCHEN SINK PER DWELLING UNIT &
1 AUTOMATIC CLOTHES WASHER CONNECTION PER 20 DWELLING UNITS.

DELAYED SUBMITTAL REQUESTS:

HVAC & PLUMBING DRAWINGS
FIRE ALARM / EMERGENCY LIGHTING DRAWINGS & SHOPS
AUTOMATIC SPRINKLER SYSTEM DRAWINGS & SHOPS
ROOF & FLOOR TRUSS - ENGINEERED DRAWINGS

MINNESOTA STATE BUILDING CODE:
MINNESOTA ENERGY CODE 2015
RESIDENTIAL ENERGY CODE CHAPTER 1322

NOTE: BUILDING DESIGN SHALL MEET ALL APPLICABLE PROVISIONS OF THE RESIDENTIAL ENERGY CODE CHAPTER 1322.

REFERENCE STANDARD: ASHRAE 90.1-2010 ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS, PROMULGATED BY THE AMERICAN SOCIETY OF HEATING REFRIGERATING AND AIR CONDITIONING ENGINEERS.

STEARNS COUNTY - CLIMATE ZONE 6A

SECTION 402 BUILDING THERMAL ENVELOPE

TABLE R402.1.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT:

ROOFS, CEILING:	
MIN. R-VALUE	= R-49.0
WALLS, ABOVE GRADE, WOOD FRAMED:	
MIN. R-VALUE (CAVITY)	= R-20.0
SLAB (3.5 FT DEPTH):	
MIN. R-VALUE	= R-10.0
FENESTRATION:	
MAX. U-VALUE	= U-0.32
SHGC	= NR

SECTION 404.4 AIR LEAKAGE (MANDATORY). THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4.

SECTION 403.1 CONTROLS (MANDATORY). AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM.

SECTION 403.2.2 SEALING (MANDATORY). DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR INTERNATIONAL RESIDENTIAL CODE.

SECTION 403.2.3 BUILDING CAVITIES (MANDATORY). BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR PLENUMS.

SECTION R403.5 MECHANICAL VENTILATION (MANDATORY). THE BUILDING SHALL BE PROVIDED WITH A BALANCED MECHANICAL VENTILATION SYSTEM THAT IS +/- 10 PERCENT OF THE SYSTEM'S DESIGN CAPACITY AND MEETS THE REQUIREMENTS OF SECTION 403.5.5

SECTION R403.6 EQUIPMENT SIZING (MANDATORY). HEATING AND COOLING EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL J OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES.

SECTION R404.1 LIGHTING EQUIPMENT (MANDATORY). A MINIMUM OF 75 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS OR A MINIMUM OF 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICACY LAMPS.

No.	Description	Date

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.
Name: Christopher J. Raimann
Signed: _____
Date: 9-14-2016 License #: 46319

KUEPERS INC
ARCHITECTS & BUILDERS
BRAINERD/BAXTER, MN 218-829-0707

Northview Apartments1

Kuepers Inc.

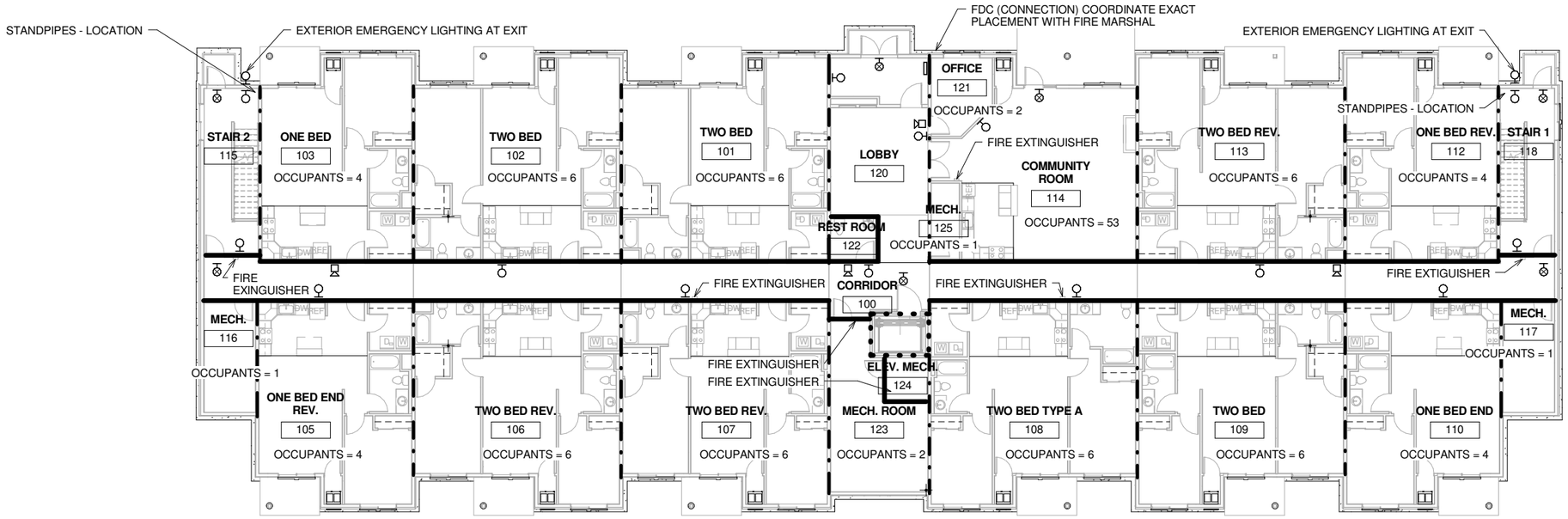
Northview Apartments1

Project number 01-16-1108	Date 9-14-16
Drawn by Author	Checked by Checker

CR1.0
Code Review

Scale 3/32" = 1'-0"

11/16/2016 11:53:22 AM



LEGEND:

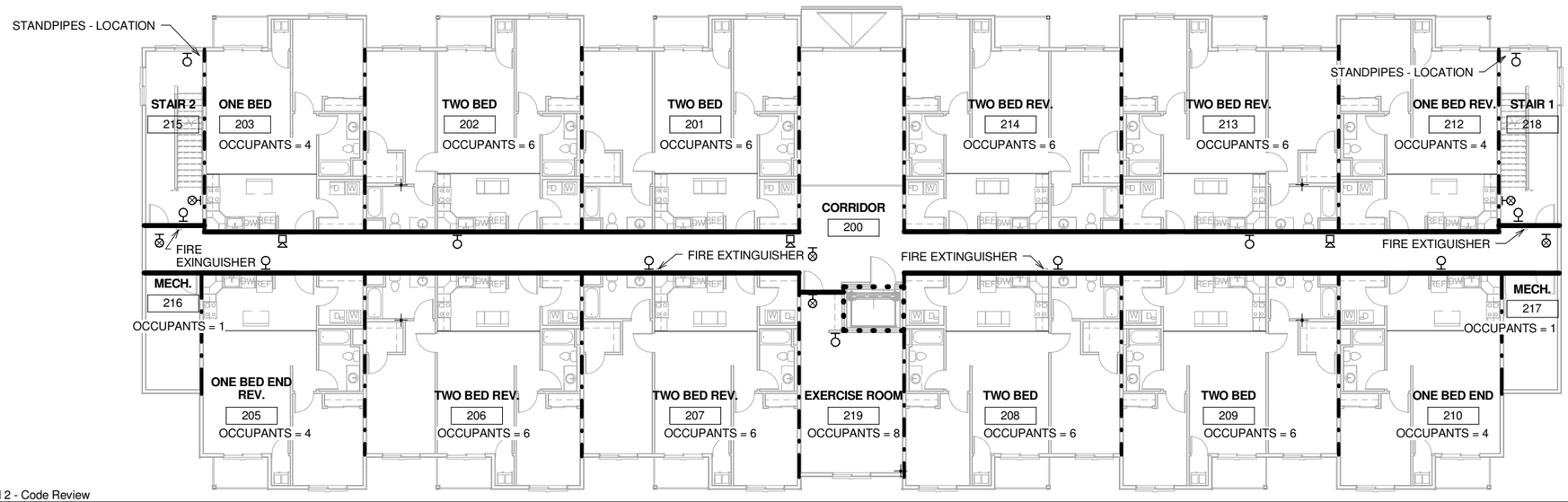
- EMERGENCY EGRESS LIGHTING
- EXIT SIGN
- HORN/STROBE FIRE ALARM
- 1 HR. DWELLING UNIT SEPARATION (FIRE PARTITION) - GA FILE NO. WP 3380
  1 HR. STAIR SHAFT WALL (FIRE BARRIER) - GA FILE NO. WP 3380
  SOUND TEST STC 50 - NRCC TEST NO. TL-93-249
- 1 HR. CORRIDOR WALL (FIRE PARTITION) - GA FILE NO. WP 3243
  1 HR. STAIR SHAFT WALL (FIRE BARRIER) - GA FILE NO. WP 3243
  1 HR. ELEVATOR MECH. ROOM (FIRE BARRIER) - GA FILE NO. WP 3243
- 1 HR. ELEVATOR SHAFT WALL - GA FILE NO. WP 3370
- RADON PIPE

NOTE: ALL 1 HR. RATED EXTERIOR WALLS - IBC TABLE 721.1(2) MATERIAL ITEM NUMBER 16-1.3

GENERAL NOTES:

1. ALL WALLS SEPARATING DWELLING UNITS SHALL BE 1 HR. FIRE PARTITIONS - IBC 708.1
2. EXIT SIGNS SHALL BE PROVIDED AT ALL EXITS - IBC 1011.1
3. FIRE EXTINGUISHERS MUST BE PROVIDED FOR IN CORRIDORS PER NFPA 10 - EVERY 75' MIN.
4. ALL FIRE EXTINGUISHERS LOCATED IN A FIRE RATED WALL ASSEMBLY SHALL HAVE A FIRE RATED CABINET.
5. THE MEANS OF EGRESS SHALL BE ILLUMINATED AT ALL TIMES. THE MAIN SOURCE OF POWER MUST COME FROM THE ELEC. SYSTEM AND SHALL HAVE BACK UP - IBC 1006.1 & 1006.3
6. SEE SHEET A6.1 FOR ATTIC DRAFTSTOPPING LOCATIONS AND ATTIC DOOR DETAIL
7. TYPICAL 1 HR. FLOOR-CEILING ASSEMBLY SYSTEM: GA FILE NO. FC 5514
8. TYPICAL 1 HR. CORRIDOR FLOOR-CEILING ASSEMBLY SYSTEM: IBC TABLE 721.1 ITEM 21-1.1
9. TYPICAL 1 HR. ROOF-CEILING ASSEMBLY SYSTEM: GA FILE NO. RC 2603
10. TYPICAL 1 HR. ROOF-CEILING ASSEMBLY AT DECK CANOPY: GA FILE NO. RC 2602
11. STANDPIPES SHALL BE PROVIDED IN THE ENCLOSED STAIRWELLS PER IBC SECTION 905.3.10. THE STANDPIPES SHALL BE PROVIDED WITH A 1 1/2" FIRE HOSE VALVE AND ONLY NEED TO MEET THE PRESSURE REQUIREMENTS OF THE SPRINKLER SYSTEM, PER SECTION 905.2.1.

1 Level 1 - Code Review
3/32" = 1'-0"



2 Level 2 - Code Review
3/32" = 1'-0"

No.	Description	Date

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.
Name: Christopher J. Raimann
Signed: _____
Date: 9-14-2016 License #: 46319

KUEPERS INC
ARCHITECTS & BUILDERS
BRAINERD/BAXTER, MN 218-829-0707

Northview Apartments1

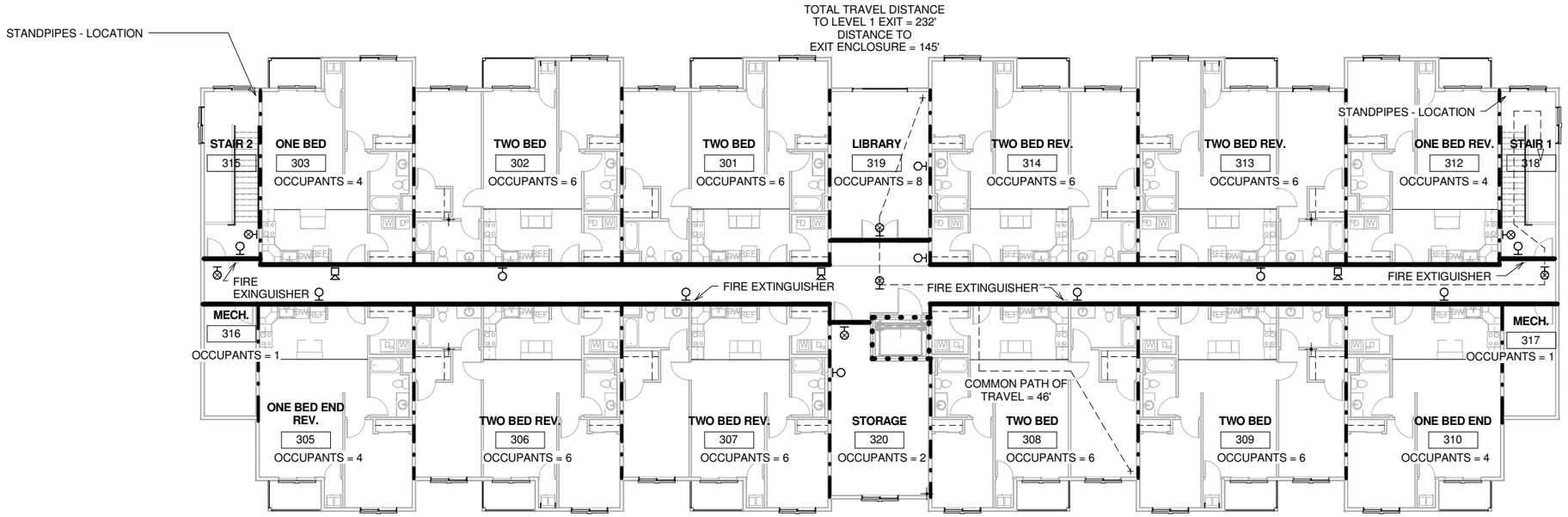
Kuepers Inc.
Northview Apartments1

Project number	01-16-1108	Date	9-14-16
Drawn by	Author	Checked by	Checker

CR1.1
Code Review

Scale 3/32" = 1'-0"

11/16/2016 11:53:24 AM



LEGEND:

- EMERGENCY EGRESS LIGHTING
- EXIT SIGN
- HORN/STROBE FIRE ALARM
- 1 HR. DWELLING UNIT SEPARATION (FIRE PARTITION) - GA FILE NO. WP 3380
  1 HR. STAIR SHAFT WALL (FIRE BARRIER) - GA FILE NO. WP 3380
  SOUND TEST STC 50 - NRCC TEST NO. TL-93-249
- 1 HR. CORRIDOR WALL (FIRE PARTITION) - GA FILE NO. WP 3243
  1 HR. STAIR SHAFT WALL (FIRE BARRIER) - GA FILE NO. WP 3243
  1 HR. ELEVATOR MECH. ROOM (FIRE BARRIER) - GA FILE NO. WP 3243
- 1 HR. ELEVATOR SHAFT WALL - GA FILE NO. WP 3370
- RADON PIPE

NOTE: ALL 1 HR. RATED EXTERIOR WALLS - IBC TABLE 721.1(2) MATERIAL ITEM NUMBER 16-1.3

GENERAL NOTES:

1. ALL WALLS SEPARATING DWELLING UNITS SHALL BE 1 HR. FIRE PARTITIONS - IBC 708.1
2. EXIT SIGNS SHALL BE PROVIDED AT ALL EXITS - IBC 1011.1
3. FIRE EXTINGUISHERS MUST BE PROVIDED FOR IN CORRIDORS PER NFPA 10 - EVERY 75' MIN.
4. ALL FIRE EXTINGUISHERS LOCATED IN A FIRE RATED WALL ASSEMBLY SHALL HAVE A FIRE RATED CABINET.
5. THE MEANS OF EGRESS SHALL BE ILLUMINATED AT ALL TIMES. THE MAIN SOURCE OF POWER MUST COME FROM THE ELEC. SYSTEM AND SHALL HAVE BACK UP - IBC 1006.1 & 1006.3
6. SEE SHEET A6.1 FOR ATTIC DRAFTSTOPPING LOCATIONS AND ATTIC DOOR DETAIL
7. TYPICAL 1 HR. FLOOR-CEILING ASSEMBLY SYSTEM: GA FILE NO. FC 5514
8. TYPICAL 1 HR. CORRIDOR FLOOR-CEILING ASSEMBLY SYSTEM: IBC TABLE 721.1 ITEM 21-1.1
9. TYPICAL 1 HR. ROOF-CEILING ASSEMBLY SYSTEM: GA FILE NO. RC 2603
10. TYPICAL 1 HR. ROOF-CEILING ASSEMBLY SYSTEM AT DECK CANOPY: GA FILE NO. RC 2602
11. STANDPIPES SHALL BE PROVIDED IN THE ENCLOSED STAIRWELLS PER IBC SECTION 905.3.10. THE STANDPIPES SHALL BE PROVIDED WITH A 1 1/2" FIRE HOSE VALVE AND ONLY NEED TO MEET THE PRESSURE REQUIREMENTS OF THE SPRINKLER SYSTEM, PER SECTION 905.2.1.

1 Level 3 - Code Review
3/32" = 1'-0"

No.	Description	Date

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.
Name: Christopher J. Raimann
Signed:
Date: 9-14-2016 License #: 46319

KUEPERS INC
ARCHITECTS & BUILDERS
BRAINERD/BAXTER, MN 218-829-0707

Northview Apartments1

Kuepers Inc.

Northview Apartments1

Project number	01-16-1108	Date	9-14-16
Drawn by	Author	Checked by	Checker

CR1.2

Code Review

Scale 3/32" = 1'-0"

11/16/2016 11:53:26 AM