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Neuse River Resource Recovery Facility
NOT TO SCALE

Contract Drawings For

City of Raleigh

Neuse River RRF
Roof Replacements
Filter and Blower Buildings

100% Issued For Construction

HDR Project No. 10444408

8500 Battle Bridge Road
Raleigh, NC 27610

Date: February 6, 2026

PAUL BENSON FORBES
REGISTERED ARCHITECT
13400
02/06/2026
NORTH CAROLINA
CARY, NORTH CAROLINA

NORTH CAROLINA
PROFESSIONAL
SEAL
040012
02/06/2026
ENGINEER
JOSHUA A. HOOKER

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A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	AMPERE
AB	ANCHOR BOLT
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABT	ABOUT
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
ACST	ACOUSTIC
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET, ANALOG INPUT
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALT	ALTERNATE, ALTITUDE
ALUM	ALUMINUM
AM	ACOUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AT	ACOUSTICAL TILE, AMP TRIP
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
AWT	ACOUSTICAL WALL TILE
B TO B	BACK TO BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BITUM	BITUMINOUS
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER, BOLLARD
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF REGISTER
BOT	BOTTOM
BOU	BOTTOM OF UNIT
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNIT
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT-UP
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
BYP	BYPASS
CTOC	CENTER TO CENTER
C&G	CURB AND GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG, CATEGORY
CAV	CAVITY
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CDF	CONTROLLED-DENSITY FILL
CE	CONCRETE EDGE
CER	CERAMIC
CF	CUBIC FEET (FOOT)
CFL	COUNTER FLASHING
CHBD	CHALKBOARD
CHD	CHORD
CHFR	CHAMFER
CHH	COMMUNICATION HANDHOLE
CI	CURB INLET
CIP	CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLG	CEILING

CLKG	CAULKING
CLR	CLEAR
CMH	COMMUNICATION MANHOLE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CON	CONCENTRIC
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CRL	CORROSION-RESISTANT LINING
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CSS	ALUMINUM SERVICE SINK
CT	CERAMIC TILE
CTJ	CONTRACTION JOINT
CTR	CENTER
CTRL	CONTROL
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER, DRAIN
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DI	DROP INLET, DUCTILE IRON, DIGITAL INPUT
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMJ	DOUBLE MECHANICAL JOINT
DMPF	DAMP PROOFING
DN	DOWN
DO	DISSOLVED OXYGEN, DIGITAL OUTPUT, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EHH	ELECTRICAL HANDHOLE
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELBOW, ELEVATION
ELEC	ELECTRICAL
EMBD	EMBEDDED
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER AND EYE WASH
EST	ESTIMATE
EW	EACH WAY, EMERGENCY EYE/FACE WASH
EWC	ELECTRIC WATER COOLER
EWEF	EACH WAY, EACH FACE
EWTB	EACH WAY, TOP AND BOTTOM
EXC	EXCAVATION
EXH	EXHAUST
EXP	EXPANSION, EXPOSED
EXST	EXISTING
EXT	EXTERIOR, EXTERNAL, EXTENSION

F TO F	FACE TO FACE
F&B	FACE AND BYPASS
FAB	FABRICATE
FB	FLOOR BEAM
FBD	FIBERBOARD
FBG	FIBERGLASS
FBM	BOARD FOOT MEASURE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDR	FEEDER
FDTN	FOUNDATION
FE	FLANGED END
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FJT	FLUSH JOINT
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FN	FENCE
FO	FINISHED OPENING
FOB	FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTM	FIRE RETARDANT TREATED MATERIAL
FS	FLOOR SINK, FAR SIDE
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUR	FURRED, FURRING
FURN	FURNITURE, FURNISH
FUT	FUTURE
FV	FACE VELOCITY
FW	FIELD WELD, FIRE WALL
FWD	FORWARD
FWE	FURNISHED WITH EQUIPMENT
FXTR	FIXTURE
G	GRILLE, GROUND
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR, GRADE BREAK
GC	GROOVED COUPLING
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFMU	GROUND FACE MASONRY UNIT
GG	GUTTER GRADE
GJ	GROOVED JOINT
GL	GLASS
GLB	GLASS BLOCK, GLULAM BEAM
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GVL	GRAVEL
GW	GUY WIRE
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIBB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE, HORIZONTAL CENTERLINE
HD	HEAD, HOT DIP
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	HANDHOLE
HID	HIGH-INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH-PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOSE REEL, HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND

ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION, FOR EXAMPLE
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS, IRON ROD
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
KW	KILOWATT
L	ANGLE, LENGTH, LAVATORY, LINTEL
LAD	LADDER
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LCTB	LIQUID CHALK AND TACK BOARD
LDG	LANDING
LDR	LEADER
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPS	LOW-PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVL	LAMINATED VENEER LUMBER
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING, MOMENT CONNECTION
MCB	METAL CORNER BEAD
MCJ	MASONRY CONTROL JOINT
MDMJ	MODIFIED DOUBLE MECHANICAL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MASONRY LINTEL
MLO	MAIN LUGS ONLY
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MRGWB	MOISTURE-RESISTANT GYPSUM WALLBOARD
MS	MOP SINK
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MULL	MULLION
MV	MEDIUM VOLTAGE
MW	MONITORING WELL

N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL, NATIONAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT TO OUT
OA	OUTSIDE AIR, OVERALL
OC	ON CENTER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OF	OUTSIDE FACE, OFFICE FURNISHING
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE
P	PAINT
PA	PUBLIC ADDRESS
PAR	PARALLEL, PARAPET
PB	PANIC BAR, PULL BOX
PBD	PARTICLE BOARD
PC	POINT OF CURVE, PIECE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PE	PLAIN END
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PF	POWER FACTOR
PFMU	PREFACED MASONRY UNIT
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE, PRECAST LINTEL
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNEU	PNEUMATIC
POL	POLISH
POS	POSITIVE, POSITION
PP	POLYPROPYLENE, POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREF	PREFINISHED
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY, PROPOSED
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PST	PRESTRESSED
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE, POINT OF ERTICAL CURVE
PVC-RGS	PVC COATED RGS
PVMT	PAVEMENT
PWD	PLYWOOD
PWJ	PLYWOOD WEB JOIST
PZ	PIEZOMETER
Q	RATE OF FLOW
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY

R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS, REGISTER, RISER
RA	RETURN AIR
RB	RESILIENT BASE, ROCK BERM
RCPT	RECEPTACLE
RD	ROOF DRAIN
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING, RETURN
REV	REVISION, REVERSE
RF	RESILIENT FLOORING
RFG	ROOFING
RFL	REFLECTED, REFLECTOR
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT-OF-WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RVT	RESILIENT VINYL TILE
RY	READY
S	SOUTH, SINK
SA	SUPPLY AIR
SAMU	SOUND-ABSORBING MASONRY UNIT
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT, SILT FENCE
SG	SHEET GLASS, SEALANT GROOVE
SH	SHOWER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SJ	SLAB JOINT
SL	SLOPE, STEEL LINTEL
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPST	SINGLE POLE SINGLE THROW
SPT	SET POINT
SQ	SQUARE
SR	SHORT RADIUS
SS	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL, STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T	TILE, TREAD
TA	TOILET ACCESSORY, TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEF	TROWELED EPOXY FLOORING
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
THK	THICK
THRESH	THRESHOLD
TKBD	TACK BOARD

TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM, TOP OF BERM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL, TOE OF SLOPE
TOW	TOP OF WALL
TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER
TPD	TOILET PAPER DISPENSER
TPG	TOPPING, THROUGH PLATE GIRDER
TR	TRANSOM
TRANS	TRANSITION
TRD	TRENCH DRAIN
TYP	TYPICAL
U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VERTS	VERTICAL REINFORCING
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VS	VERSUS, VAPOR SEAL
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM
WB	WOOD BASE
WC	WATER CLOSET, WATER COLUMN
WD	WOOD, WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE
WH	WALL HYDRANT, WEEP HOLE
WI	WROUGHT IRON
WL	WATER LEVEL
WLD	WELDED
WM	WIRE MESH
WP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WTHP	WATERPROOF, WORKING POINT
WWF	WELDED WIRE FABRIC
XP	EXPLOSION-PROOF
XS	EXTRA STRONG
XSECT	CROSS SECTION
XXS	DOUBLE EXTRA STRONG
YH	YARD HYDRANT
YS	YIELD STRENGTH

GENERAL NOTES

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION, "INC" MAY MEAN INCLUDED OR INCLUDING, AND "REINF" MAY MEAN REINFORCE OR REINFORCING.

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	02/06/2026	100% ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JUSTIN NYLAND
DESIGNED BY	
DRAWN BY	
CHECKED BY	
COR PROJECT NO.	0000006191
HDR PROJECT NO.	10444408

Raleigh

CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

GENERAL ABBREVIATIONS

FILENAME 10444408-00-G.rvt
SCALE NONE

SHEET 00G-002

MATERIALS IN PLAN/SECTION

FILLED REGIONS - MATERIALS

"MATERIAL" FILLED REGIONS ARE DRAFTING HATCH PATTERNS THAT REPRESENTS AN ACTUAL MATERIAL OR PRODUCT.

- MATERIAL - BITUMINOUS PAVING (ASPHALT)
- MATERIAL - CONCRETE - ARCHITECTURE PRECAST WALL PANEL
- MATERIAL - CONCRETE - ARCHITECTURAL PRECAST WALL PANEL
- MATERIAL - CONCRETE - CAST-IN-PLACE
- MATERIAL - CONCRETE - GLASS FIBER REINFORCED
- MATERIAL - CONCRETE - LIGHTWEIGHT
- MATERIAL - CONCRETE - STRUCTURAL
- MATERIAL - EFIS
- MATERIAL - FILL - COURSE - CRUSHED STONE
- MATERIAL - FILL - FINE - GRAVEL
- MATERIAL - FILL - FINE - SAND
- MATERIAL - FILL - MEDIUM - GRAVEL
- MATERIAL - FILTER POINT MAT - PLAN
- MATERIAL - FIREPROOFING - MINERAL WOOL
- MATERIAL - FIREPROOFING - SEALANT
- MATERIAL - FIREPROOFING - SPRAY-APPLIED
- MATERIAL - FLOOR - CARPET - STYLE 1
- MATERIAL - FLOOR - CARPET - STYLE 2
- MATERIAL - FLOOR - TERRAZZO - STYLE 1
- MATERIAL - FLOOR - TERRAZZO - STYLE 2
- MATERIAL - GLAZING
- MATERIAL - GLAZING - SPANDREL
- MATERIAL GRATING - PLAN
- MATERIAL GRATING - SECTION
- MATERIAL - GROUT
- MATERIAL - GYPSUM - PLASTER
- MATERIAL - GYPSUM - WALLBOARD
- MATERIAL - INSULATION - BATTING - SECTION
- MATERIAL - INSULATION - RIGID FOAM
- MATERIAL - MASONRY - BRICK
- MATERIAL - MASONRY - CMU
- MATERIAL - MASONRY - DOLMITE
- MATERIAL - MASONRY - MORTAR
- MATERIAL - MASONRY - STRUCTURAL CLAY TILE
- MATERIAL - METAL - ALUMINUM
- MATERIAL - METAL - CHECKERED PLATE - PLAN
- MATERIAL - METAL - ORNAMENTAL
- MATERIAL - METAL - STEEL
- MATERIAL - PLASTER STUCCO
- MATERIAL - PLASTIC
- MATERIAL - RESILIENT TILE
- MATERIAL - RIPRAP - PLAN AND/OR SECTION
- MATERIAL - SEALANT - ACOUSTICAL
- MATERIAL - SEALANT - FIRE SEALANT
- MATERIAL - SOD - SECTION
- MATERIAL - SOILD - COMPACTED - EARTH
- MATERIAL - SOILD - COMPACTED - FINE
- MATERIAL - SOIL - UNDISTURBED - FINE
- MATERIAL - SOIL - UNDISTURBED - EARTH
- MATERIAL - STONE - CAST
- MATERIAL - STONE - CUT FINISHED
- MATERIAL - SYSTEM - DRAINABLE EXTERIOR INSULATION AND FINISH
- MATERIAL - TERRAZZO - 1
- MATERIAL - TERRAZZO - 2
- MATERIAL - TILE - PORCELAIN
- MATERIAL - WEEP JOINT MORTAR PROTECTION SYSTEM - SECTION
- MATERIAL - WOOD - FINISH - COURSE GRAIN
- MATERIAL - WOOD - FINISH - FINE GRAIN
- MATERIAL - WOOD - FINISH VERTICAL GRAIN
- MATERIAL - WOOD FLOORING
- MATERIAL - WOOD - GLULAM
- MATERIAL - WOOD - MDF
- MATERIAL - WOOD - PARTICLE BOARD
- MATERIAL - WOOD - PLYWOOD
- MATERIAL - WOOD - CONTINUOUS - SECTION
- MATERIAL - WOOD - BLOCKING - SECTION

Filled Regions - Graphics

GRAPHIC FILLED REGIONS ARE DRAFTING HATCH PATTERNS THAT ARE A SIMPLE GRAPHIC PATTERN AND DOES NOT REPRESENT A MATERIAL OR PRODUCT.

- MATERIAL - RESILIENT SHEET
- GRAPHIC - CONTRACT LIMIT - NOT-IN-CONTRACT

Filled Regions - Surface

SURFACE FILLED REGIONS ARE MODELING HATCH PATTERNS THAT RESPRESENT A MATERIAL OR PRODUCT AS RESPRESENTED ON A VERTCIAL OR HORIZONTAL SURFACE.

Ceiling Tiles

- SURFACE - CEILING TILE - 24" x 24"
- SURFACE - CEILING TILE - 24" x 24" - DEMO
- SURFACE - CEILING TILE - 24" x 48"
- SURFACE - CEILING TILE - 24" x 48" - DEMO
- SURFACE - CEILING TILE - 24" x 72"
- SURFACE - CEILING TILE - 24" x 72" - DEMO
- SURFACE - CEILING TILE - 48" x 48"
- SURFACE - CEILING TILE - 48" x 48" - DEMO
- SURFACE - CEILING - ACOUSTICAL TILE - SECTION

Masonry

- SURFACE - MASONRY - BRICK - MODULAR - RUNNING BOND
- SURFACE - MASONRY - CMU - 8" x 16" - RUNNING BOND
- SURFACE - MASONRY - CMU - 8" x 16" - STACKED BOND

Metals

- SURFACE - ENTRANCE GRID - 65 MM

GENERAL SYMBOLOGY

ARROW INDICATES DIRECTION OF TRUE NORTH

LINE INDICATES DIRECTION OF PLAN NORTH

NORTH ARROW

X PLAN
1/4" = 1'-0"

PLAN TITLE ON SHEET

NOTE 1
X / XXX VIEW TITLE
1/4" = 1'-0"
NOTE 2

DETAIL

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.
1. DETAIL NUMBER
2. SHEET WHERE DETAIL IS LOCATED *

SECTION

1. SECTION NUMBER
2. SHEET WHERE SECTION VIEW IS FIRST CUT *

ELEVATION

1. ELEVATION IDENTIFICATION NUMBER
2. SHEET WHERE POINT OF VIEW MARKER CAN BE FOUND *

SECTION, DETAIL, ELEVATION TITLE

DETAIL NUMBER

SHEET WHERE DETAIL IS LOCATED *

DETAIL CALLOUT

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

ARROW INDICATES DIRECTION OF SECTION CUT

SECTION LETTER

SHEET WHERE SECTION IS LOCATED

FULL BUILDING SECTION CUT MARKER

SECTION LETTER

FLAG INDICATES DIRECTION OF SECTION CUT

SHEET WHERE SECTION IS LOCATED

SECTION CUT MARKER

ARROW INDICATES POINT OF VIEW

ELEVATION NUMBER

INTERIOR

EXTERIOR

SHEET WHERE ELEVATION IS LOCATED *

SINGLE ELEVATION OR PHOTO MARKER

ELEVATION NUMBER

ARROW INDICATES POINT OF VIEW ELEVATION

INDICATES SHEET WHERE ELEVATION IS LOCATED

MULTIPLE ELEVATION OR PHOTO MARKER

TARGET ELEVATION

TARGET ELEVATION MARKER

* EXCEPTIONS WHERE THE SHEET NUMBER IS REPLACED BY A DASH (-)

1. FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS.
2. SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.

GENERAL TAGGING

ROOM/SPACE NAME

- XX-XX — ROOM OR SPACE
- XXX — DOOR
- DOOR MARK XXX / XXXX — STAIR XXX / XXXX — FIRE DOOR/STAIR
- A — NEW COLUMN GRID BUBBLE
- A — EXISTING COLUMN GRID BUBBLE
- X — WALL TYPE
- X — CURTAIN WALL
- X — WINDOW TYPE
- X — ACCESSORY, FURNITURE, AND MISCELLANEOUS EQUIPMENT IDENTIFIER
- KEYNOTE NUMBER X — LOUVER TYPE
- ## — SHEET KEYNOTE
- ## — REVISION DELTA

EQUIPMENT IDENTIFICATION

NOTE: THE BELOW EQUIPMENT TAG IS AN EXAMPLE ONLY. MODIFY FIELDS AS REQUIRED PER THE PROJECT STANDARD.

FIGURE	NPWP2023	EXAMPLE
SERVICE ABBREVIATION AREA DESIGNATION	NP	INDICATES NON-POTABLE WATER
EQUIPMENT ABBREVIATION	W	INDICATES PUMP
BUILDING OR STRUCTURE NUMBER	20	BUILDING 20
EQUIPMENT NUMBER	23	PUMP 23

PIPING

NOTE: THE BELOW PIPE TAG IS AN EXAMPLE ONLY. MODIFY FIELDS AS REQUIRED PER THE PROJECT STANDARD.

FIGURE	36"-PLE	EXAMPLE
LINE SIZE	36"	36"
SERVICE	PLE	PLANT EFFLUENT

PIPING (ALTERNATE)

FIGURE	36"-PLE	EXAMPLE
LINE SIZE	36"	36"
SERVICE	PLE	PLANT EFFLUENT

GENERAL LINE STYLES

- 4-HOUR FIRE RATED WALL
- 3-HOUR FIRE RATED WALL
- 2-HOUR FIRE RATED WALL
- 1-HOUR FIRE RATED WALL
- COLUMN GRID LINE
- CENTERLINE
- CONTRACT LIMIT
- ELEVATION LINE
- MATCHLINE
- PROPERTY LINE

SHEET NAMING CONVENTION

AREA DESIGNATION

00	GENERAL
01	CIVIL / SITE ELECTRICAL
10	BOILER BUILDING
20	FILTER BUILDING
97	INSTRUMENTATION
98	GENERAL ELECTRICAL
99	DETAILS, DIAGRAMS, AND SCHEDULES

DISCIPLINE DESIGNATOR & DISCIPLINE ORDER*

G	GENERAL
X	DEMOLITION/HAZAROUS MATERIAL
V	SURVEYING/MAPPING
B	GEOTECHNICAL
C	CIVIL
L	LANDSCAPE
S	STRUCTURAL
A	ARCHITECTURAL
F	FIRE PROTECTION
P	PLUMBING
D	PROCESS
M	MECHANICAL
E	ELECTRICAL
T	TELECOMMUNICATIONS
Y	INSTRUMENTATION & CONTROLS

SHEET TYPE DESIGNATOR

0	GENERAL (SYMBOLS, LEGENDS)
1	PLANS
2	ELEVATIONS
3	SECTIONS
4	LARGE SCALE VIEWS
5	DETAILS
6	SCHEDULES AND DIAGRAMS
7	OTHER VIEWS

EXAMPLE

FILTER BUILDING STRUCTURAL FOUNDATION PLAN, DRAWING 01

2	0						BUILDING OR AREA
BUILDING OR AREA DESIGNATION							
		S	-				STRUCTURAL
DISCIPLINE DESIGNATOR							
				1			PLAN
SHEET TYPE DESIGNATOR							
					0	1	SHEET 01
SHEET NUMBER							
2	0	S	-	1	0	1	EXAMPLE

ARCH SYMBOLS LEGEND

Sheet Number

A-100 — Sheet Number; Discipline Code

Match Lines

MATCHLINE
SEE 1/ A101 — Sheet Number; Position on Sheet

Area Reference

A — Adjacent Area
SEE: (X)X-XXX — Sheet Number; Position on Sheet

Detail - Section

Position on Sheet; 1 SIM; A101; Sheet Number

Detail - Plan/RCP

Position on Sheet; 1 SIM; A101; Sheet Number

Drawing Revisions

3 — Revision Number

Graphic Scale

0 2' 4' 8'

Column Grid Lines

1 2 — Column Grid Line (New)
A B — Column Grid Line (Existing)

Level Datum

LEVEL 01 0' - 0" — Level Name; Level Elevation

Spot Elevation

10' - 0" — Spot Elevation

Spot Coordinates

N 10'-11" E 12'-10" EL 10'-0" — North/East Coordinates; Spot Elevation

Centerline

℄ — Denotes Centerline of an Object

Sheet Keynote

C01 — Sheet Keynote Value; Refer to Sheet Keynote Legend on given sheets

Keynote

00 00 00a1 — Keynote Value; Six-Digit number refers to corresponding specification section. Alpha-numeric suffix is for Architect's internal organization only and has no applicable reference to the project.
Description — Description of Keynoted Item

Room Tag

NAME — Room Name
101A — Room Number

Door Tag

101A — Door Number

Window Tag

A — Window Number as per *Window Diagram* on Sheet A-602

Toilet Accessory Tag

88 — Toilet Accessory per *Toilet Accessory Mounting Diagram* on Sheet A-730.

GENERAL NOTES

1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

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ISSUE	DATE	DESCRIPTION
	02/06/2026	100% ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JUSTIN NYLAND
DESIGNED BY	
DRAWN BY	
CHECKED BY	
COR PROJECT NO.	0000006191
HDR PROJECT NO.	10444408

Raleigh

CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

GENERAL LEGEND

FILENAME 10444408-00-G.rvt
SCALE NONE

SHEET **00G-003**

Autodesk Docs://10444408_Raleigh-NRRRF_Roof_Replace/10444408-00-G.rvt
2/4/2026 4:26:40 PM

APPLICABLE CODES AND STANDARDS

1. 2018 NORTH CAROLINA BUILDING CODE (IBC 2015).
2. AMERICAN CONCRETE INSTITUTE (ACI):
   a. ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
3. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC):
   a. AISC 360-10 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
   b. 2014 RCSC SPECIFICATION FOR HIGH-STRENGTH BOLTS
4. AMERICAN IRON AND STEEL INSTITUTE (AISI):
   a. AISI S100-12 NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
5. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE):
   a. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
6. ASTM INTERNATIONAL (ASTM):
   a. ALL MATERIAL STANDARDS NOTED
7. AMERICAN WELDING SOCIETY (AWS):
   a. AWS D1.1-2015 STRUCTURAL WELDING CODE - STEEL
   b. AWS D1.3-2008 STRUCTURAL WELDING CODE - SHEET STEEL
   c. AWS D1.4-2011 STRUCTURAL WELDING CODE - REINFORCING STEEL
   d. AWS D1.6-2007 STRUCTURAL WELDING CODE - STAINLESS STEEL
8. STEEL DECK INSTITUTE (SDI):
   a. SDI C-2017 STANDARD FOR COMPOSITE STEEL FLOOR DECK - SLABS
   b. SDI RD-2017 STANDARD FOR STEEL ROOF DECK

DESIGN LOADS

1. DEAD LOAD
   ACTUAL WEIGHT OF MATERIALS USED ADDING THE FOLLOWING:
   ALLOWANCE FOR CEILINGS, LIGHTING, PLUMBING, FIRE PROTECTION AND HVAC — 10 psf
   ALLOWANCE FOR ROOFING SYSTEM — 20 psf
2. ROOF LIVE LOAD
   ROOF — 20 psf
3. SNOW LOAD DATA

GROUND SNOW LOAD, Pg	15 psf
FLAT ROOF SNOW LOAD, Pf	12 psf
SNOW EXPOSURE FACTOR, Ce	1.0
SNOW LOAD IMPORTANCE FACTOR, Is	1.1
THERMAL FACTOR, Ct	1.0
DRIFT SURCHARGE LOAD, Pd	33 psf
WIDTH OF SNOW DRIFT, w	8.33 ft

4. WIND DESIGN DATA

ULTIMATE DESIGN WIND SPEED, Vult	121 mph
NOMINAL DESIGN WIND SPEED, Vasd	94 mph
RISK CATEGORY	III
WIND EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT	±0.18
DESIGN WIND PRESSURES FOR COMPONENTS AND CLADDING	
ROOF (ULTIMATE)	+37 / -67 psf

5. EARTHQUAKE DESIGN DATA

RISK CATEGORY	III
SEISMIC IMPORTANCE FACTOR, Ie	1.25
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS	
Ss	0.150 g
S1	0.076 g
SITE CLASS	D
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS	
Sds	0.163 g
Sd1	0.122 g
SEISMIC DESIGN CATEGORY	B

MATERIALS OF CONSTRUCTION

1. STRUCTURAL STEEL

ANGLES AND CHANNELS	ASTM A36	Fy = 36 ksi
PLATES	ASTM A572	Fy = 50 ksi
DEFORMED BAR ANCHORS	ASTM A496 GR 70	Fy = 70 ksi
WELDING ELECTRODES	E70XX	

2. NON-SHRINK AND NON-METALLIC GROUT
   AT 7 DAYS — f'c = 4,000 psi
   AT 28 DAYS — f'c = 8,000 psi

GENERAL CONSTRUCTION NOTES

1. STRUCTURAL DRAWINGS SHOULD NOT BE SCALED. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL.
2. EXISTING BUILDING INFORMATION TAKEN FROM THE FOLLOWING ORIGINAL DESIGN DOCUMENTS: TERTIARY FILTER CONTROL AND CHEMICAL BUILDING BY CONSOER, TOWNSEND, & ASSOCIATES CONSULTING ENGINEERS, DATED 1973.
3. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE OF OPENINGS, BLOCKOUTS, FLOOR DEPRESSIONS, CURBS. DIMENSIONS, ETC. NOT INDICATED ON THE STRUCTURAL DRAWINGS. THE LOCATION AND SIZE OF MECHANICAL AND ELECTRICAL OPENINGS IN SLABS, WALLS AND DECKS SHALL BE COORDINATED BY THE CONTRACTOR. PROVIDE ALL ADDITIONAL FRAMING OR REINFORCING TO ACCOMMODATE OPENINGS AS REQUIRED BY THE APPLICABLE STANDARD DETAILS SHOWN ON THE STRUCTURAL DRAWINGS. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL MEMBERS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
4. WHERE DIMENSIONS ARE PROVIDED FOR OPENINGS, BLOCKOUTS, FLOOR DEPRESSIONS, CURBS, ETC., BUT MAY BE AFFECTED BY THE EQUIPMENT PURCHASED, THE CONTRACTOR SHALL VERIFY THE INFORMATION PROVIDED PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VISIT THE SITE AND GET FAMILIAR WITH EXISTING CONDITIONS, CHECK AND VERIFY EXISTING DIMENSIONS AND TAKE ADDITIONAL MEASUREMENTS AS NEEDED. NOTIFY THE ARCHITECT OF ANY DISCREPANCY BETWEEN ACTUAL CONDITIONS AND INDICATED CONDITIONS. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
6. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED BY NEW WORK.
7. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION UNLESS SPECIFICALLY DETAILED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING AND TEMPORARY BRACING. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKERS DURING CONSTRUCTION.
   A. DO NOT PLACE CONSTRUCTION MATERIALS OR OTHER CONSTRUCTION LOADS ON THE STRUCTURE SUCH THAT THE LOADS PLACED EXCEED THE CAPACITY OF THE STRUCTURE.
   B. TAKE INTO CONSIDERATION THAT FULL STRUCTURAL CAPACITY OF MANY STRUCTURAL MEMBERS IS NOT REALIZED UNTIL STRUCTURAL ASSEMBLY IS COMPLETE; THAT IS, UNTIL SLABS, DECKS, DIAGONAL BRACING AND SHEAR WALLS ARE INSTALLED.
   C. PROVIDE TEMPORARY BRACING AND GUYING TO PROVIDE STABILITY AND RESIST ALL LOADS TO WHICH THE PARTIALLY COMPLETED STRUCTURE MAY BE SUBJECTED INCLUDING ERECTION EQUIPMENT AND ITS OPERATION. ADEQUACY OF TEMPORARY BRACING AND GUYING FOR THIS PURPOSE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

CONCRETE AND REINFORCING

1. LOCATION OF CONSTRUCTION JOINTS OR POUR JOINTS SHALL BE AS INDICATED ON APPROVED SHOP DRAWINGS.
2. ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
3. ALL REINFORCEMENT SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315.
4. PROVIDE MINIMUM CONCRETE COVERING FOR REINFORCEMENT AS FOLLOWS:

CONDITION	CLR COVER
CONCRETE DEPOSITED AGAINST EARTH	3 IN.
FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH:	
REINFORCING #6 OR LARGER	2 IN.
REINFORCING LESS THAN #6	1 1/2 IN.
FORMED SURFACES IN BUILDING INTERIOR:	
BEAMS, GIRDERS, AND COLUMNS	1 1/2 IN.
SLABS, WALLS AND JOISTS:	
REINFORCING #11 OR SMALLER	3/4 IN.
REINFORCING #14 AND #18	1 1/2 IN.

5. CORING OF SLABS, BEAMS, COLUMNS, OR WALLS IS NOT PERMITTED. PROVIDE SLEEVES FOR ALL PENETRATIONS PRIOR TO PLACING CONCRETE.

SCREW ANCHORS

1. ANCHORS SHALL BE ZINC PLATED UNLESS SPECIFICALLY NOTED AS STAINLESS STEEL ON THE PLAN DETAILS. USE STAINLESS STEEL FOR ANCHORS EXPOSED TO WEATHER.
2. INSTALL ANCHORS IN ACCORDANCE WITH THE EVALUATION REPORT AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE THE MINIMUM EMBEDMENT DEPTHS, SPACING, AND EDGE DISTANCE INDICATED IN DOCUMENTS. CONSULT STRUCTURAL ENGINEER FOR DIRECTION WHEN MINIMUM CANNOT BE MET.
3. WHEN INSTALLING DRILLED-IN-ANCHORS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO CONCRETE WITH STRESSING TENDONS (POST-TENSIONED OR PRE-TENSIONED), LOCATE THE TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION AND MAINTAIN AT LEAST 1 INCH CLEAR BETWEEN THE TENDON AND THE ANCHOR. CUTTING A TENDON CAN CAUSE COLLAPSE.

STRUCTURAL STEEL

1. STEEL FRAMING DESIGNATIONS AND SYMBOLS ARE DEFINED IN THE STRUCTURAL STEEL SYMBOL LEGEND.
2. WHERE THE WORK OF OTHER TRADES REQUIRES CUTS OR OPENINGS TO BE MADE IN STRUCTURAL STEEL MEMBERS, APPROVAL SHALL BE OBTAINED FROM THE ENGINEER. SUCH OPENINGS SHALL BE MADE IN THE SHOP AND CLEARLY INDICATED ON THE SHOP DRAWING.
3. THE FOLLOWING PLATE THICKNESSES, WELD SIZES, AND ROD/BOLT DIAMETERS SHALL BE CONSIDERED EQUIVALENT, UNLESS NOTED OTHERWISE:

THICKNESS OR DIAMETER

mm	INCHES	mm	INCHES
5	3/16	16	5/8
6 OR 6.5	1/4	19 OR 20	3/4
8	5/16	22	7/8
9.5 OR 10	3/8	25	1
13	1/2		

4. ALL WELDERS MUST BE QUALIFIED IN THE PROCESS USED AND AWS CERTIFIED.
5. WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED BY AISC OR 3/16", WHICH EVER IS GREATER.
6. E70XX ELECTRODES SHALL BE USED FOR ALL WELDING. THE WELDING OF E7018 OVER E70TG-K2 IS NOT ALLOWED. THE MIXING OF ANY OTHER PROCESSES AND WIRES MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. THE USE OF E70-T4 IS NOT ALLOWED. IN GROOVE WELDS, FCAW FILLER METAL WIRE SHALL BE LIMITED TO 5/64" DIAMETER. SMAW WELDING ELECTRODES SHALL BE LIMITED TO 5/32" DIAMETER.
7. ALL SHOP AND FIELD WELDS SHALL BE PREQUALIFIED WELDS. ANY WELDS BEYOND THE RANGE OR TOLERANCE OR REQUIREMENTS FOR PREQUALIFICATION SHALL BE QUALIFIED BY TEST PER AWS D1.1 CLAUSE 4 PART B. WELDS AT BASE METALS OVER 2" IN THICKNESS ARE NOT ALLOWED AS PREQUALIFIED WELD JOINTS WITHOUT TESTING.
8. A WELDING PROCEDURE SPECIFICATION (WPS) PER AWS D1.1 AND D1.6 SHALL BE DEVELOPED BY THE FABRICATOR/ERECTOR AND APPROVED BY THE STRUCTURAL ENGINEER OR HIS DESIGNEE. THE WPS SHALL INCLUDE THE WELDING PARAMETERS RECOMMENDED BY THE ELECTRODE MANUFACTURER. THE WPS MUST BE SUBMITTED AND APPROVED BEFORE ANY WELDING MAY BEGIN. ALLOW A MINIMUM OF FOUR WEEKS FOR THE REVIEW PROCESS.
9. TO ASSURE THE PROPER AMPERAGE AND VOLTAGE OF THE WELDING PROCESS, THE USE OF A HAND HELD CALIBRATED AMP AND VOLT METER SHALL BE USED. THIS EQUIPMENT SHALL BE USED BY THE FABRICATOR, ERECTOR AND THE INSPECTORS. AMPERAGE AND VOLTAGE SHALL BE MEASURED NEAR THE ARC. TRAVEL SPEED AND ELECTRODE STICK OUT SHALL BE VERIFIED TO BE IN COMPLIANCE WITH THE APPROVED WPS.
10. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED.
11. STAINLESS STEEL SHALL BE TYPE 316L UNLESS NOTED OTHERWISE.

ABBREVIATIONS

@	AT
AB	ANCHOR BOLTS
ADDL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
ARCH	ARCHITECTURAL
BKT	BRACKET
BL	BASE LINE
BM	BEAM
BN	BOUNDARY NAILING
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
CANT	CANTILEVER
CG	CENTER OF GRAVITY
CIP	CAST IN PLACE
CJ	CONSTRUCTION OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTER LINE
CLR	CLEARANCE, OR CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS OR CONTINUED
CTR	CENTER
C TO C	CENTER TO CENTER
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
D	DEAD LOAD
DO	DITTO
DWG	DRAWING
DWL	DOWEL
EA	EACH
EE	EACH END
EF	EACH FACE
EFF	EFFECTIVE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EMB	EMBEDMENT, EMBEDDED
EN	EDGE NAILING
EOS	EDGE OF SLAB
EQ	EQUAL
ES	EACH SIDE
EW	EACH WAY
EXP	EXPANSION
EXIST	EXISTING
EXT	EXTERIOR
FD	FLOOR DRAIN
FDN	FOUNDATION
FLR	FLOOR
FN	FIELD NAILING
FS	FAR SIDE
FT	FEET
FTG	FOOTING
FUT	FUTURE
FV	FIELD VERIFY
GA	GAGE OR GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GR	GRADE
HK	HOOK
HORIZ	HORIZONTAL
HS	HEADED STUD
HSB	HIGH STRENGTH BOLT
HSS	HOLLOW STRUCTURAL SECTION
ID	INSIDE DIAMETER
IF	INSIDE FACE
IJ	ISOLATION JOINT
IN	INCHES
INFO	INFORMATION
INT	INTERIOR
JT	JOINT
K	KIPS
KSF	KIPS PER SQUARE FOOT
L	LIVE LOAD
LE	LEFT END
LF	LINEAR FEET
LLH	LONG LEG HORIZ
LLV	LONG LEG VERT
LOC	LOCATION
LONG	LONGITUDINAL
LWT	LIGHTWEIGHT
MATL	MATERIAL
MAX	MAXIMUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
NWT	NORMALWEIGHT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSL	OUTSTANDING LEG
WWF	WELDED WIRE FABRIC
PAF	POWER ACTUATED FASTENER
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PR	PAIR
PREFAB	PREFABRICATED
PRL	PARALLEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVMT	PAVEMENT
R	RADIUS
RD	ROOF DRAIN
RE	RIGHT END
REF	REFER TO
REV	REVISION
REINF	REINFORCEMENT
REQD	REQUIRED
RO	ROUGH OPENING
SCH	SCHEDULE
SECT	SECTION
SEOR	STRUCTURAL ENGINEER OF RECORD
SEPN	SEPARATION
SF	SQUARE FEET
SIM	SIMILAR
SMS	SHEET METAL SCREW
SOG	SLAB ON GRADE
SOMD	SLAB ON METAL DECK
SPA	SPACING, SPACES
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT SLOTTED HOLES
STD	STANDARD
STIFF	STIFFENER
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
T & B	TOP AND BOTTOM
TEMP	TEMPERATURE
TO	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
W	WIND LOAD
WLD	WELDED
W/O	WITHOUT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

Autodesk Docs://10444408_Raleigh-NRRRF_Roof_Replace/10444408-20-S.rvt
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555 Fayetteville Street, Suite 900
Raleigh, NC 27601
919.232.6600
N.C.B.E.L.S. License Number F-0116

ISSUE	DATE	DESCRIPTION
	02/06/2026	100% ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JUSTIN NYLAND
DESIGNED BY	J. HOOKER
DRAWN BY	N. STEEL
CHECKED BY	E. MARTIN
COR PROJECT NO.	0000006191
HDR PROJECT NO.	10444408

NORTH CAROLINA PROFESSIONAL SEAL 040012 02/06/2026 ENGINEER JOSHUA A. HOOKER

Raleigh

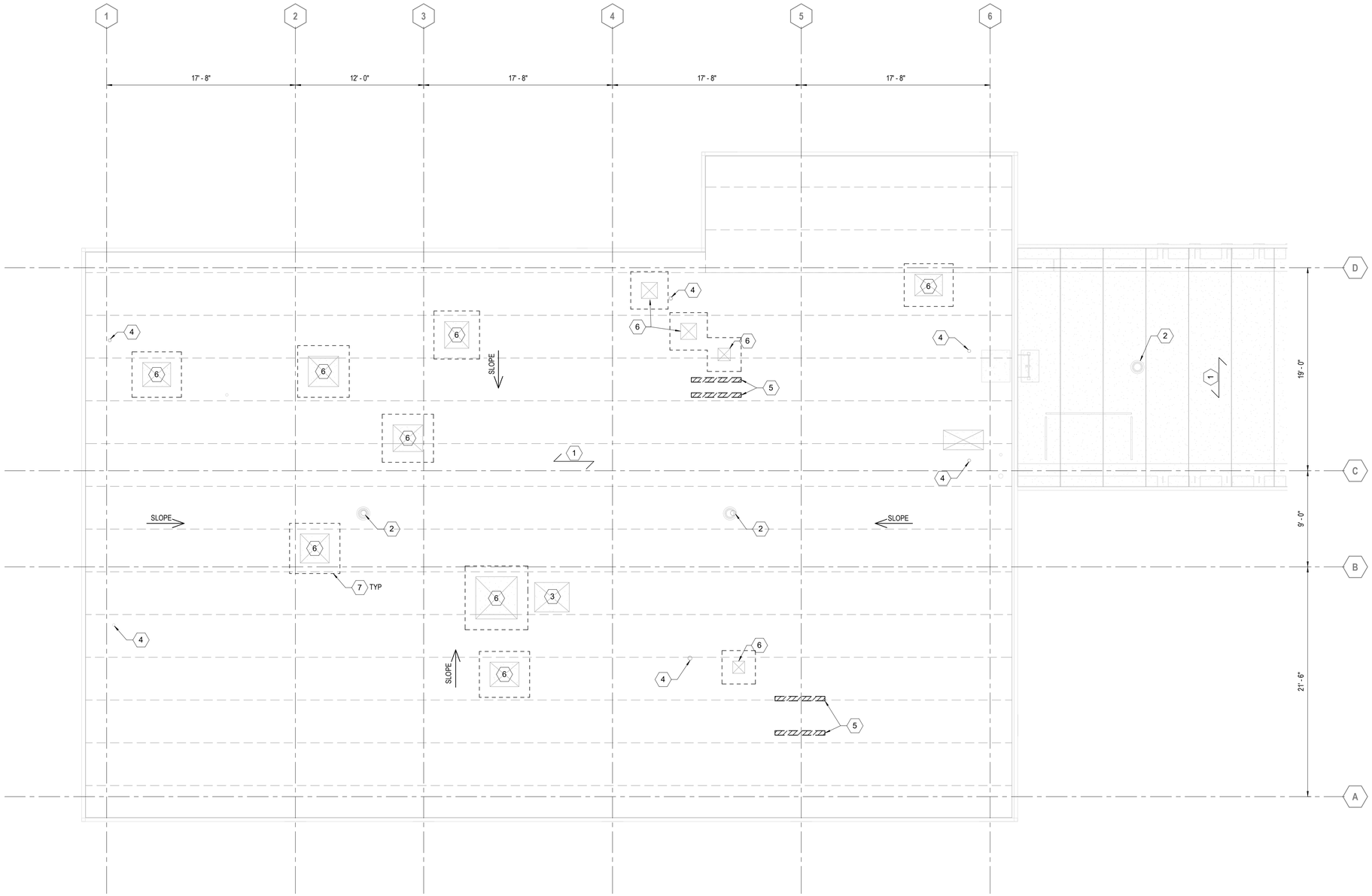
CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

FILTER BUILDING STRUCTURAL NOTES

FILENAME
SCALE NONE

SHEET 20S-001



GENERAL NOTES

1. SEE SHEET 20S-001 FOR STRUCTURAL GENERAL NOTES.
2. ALL EXISTING CONDITIONS TO BE VERIFIED PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES DISCOVERED.
3. SEE ARCH FOR ROOF SLOPE.

KEYNOTES

1. EXISTING 8" HOLLOW CORE PLANK TO REMAIN
2. EXISTING ROOF DRAIN TO REMAIN
3. EXISTING ROOF HATCH TO BE REMOVED. EXISTING ROOF HATCH OPENING TO REMAIN
4. EXISTING PLUMBING VENT TO REMAIN
5. EXISTING ROOF CURB TO BE REMOVED
6. EXISTING PENETRATION COVER AND SUPPORT TO BE REMOVED
7. EXTENT OF EXIST CONC TOPPING REMOVAL, SEE 20S-501

A1 FILTER BUILDING - ROOF DEMO PLAN
3/16" = 1'-0"

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Raleigh

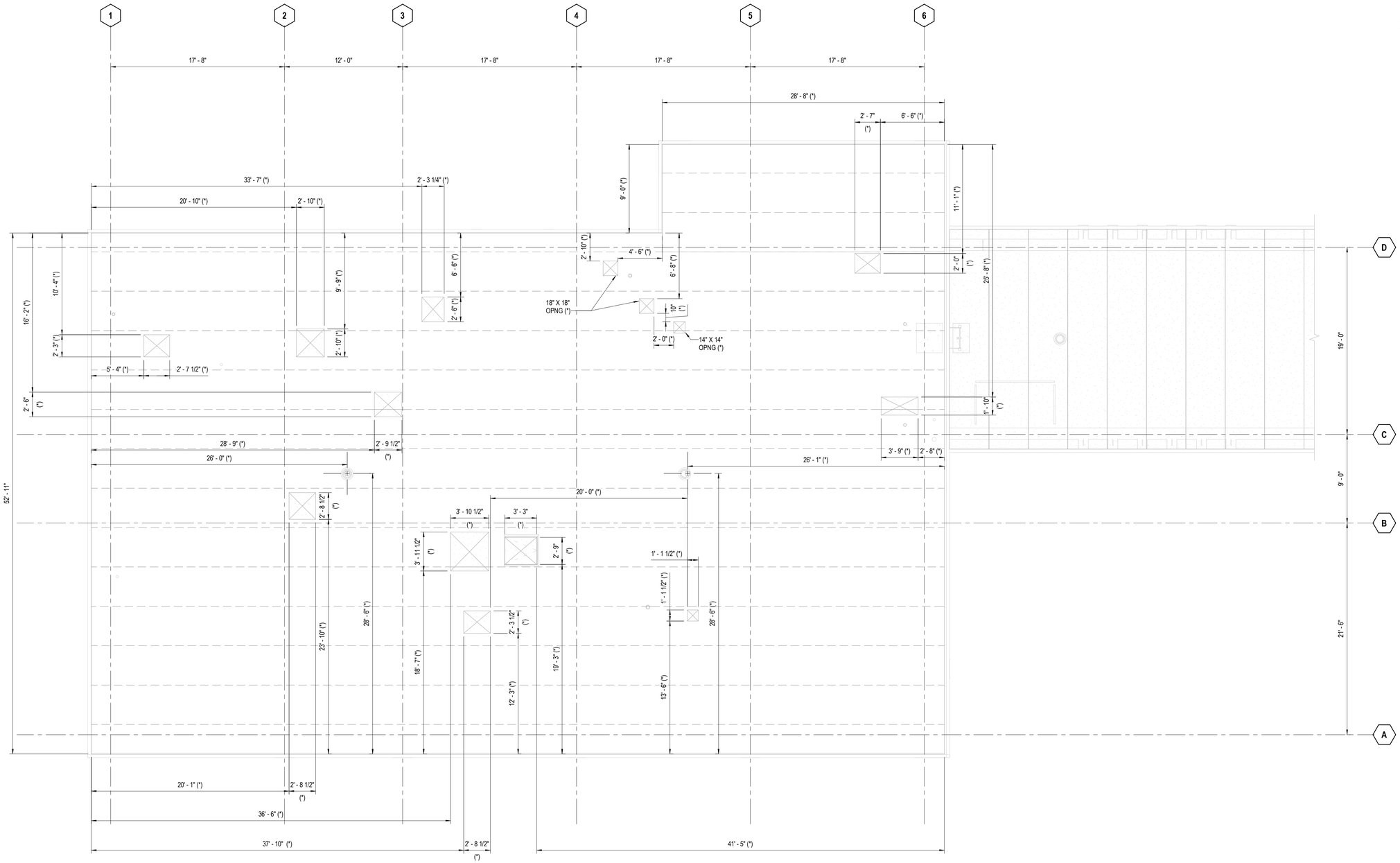
CITY OF RALEIGH,
NORTH CAROLINA

NEUSE RIVER RRF
ROOF REPLACEMENTS

FILTER BUILDING
STRUCTURAL DEMOLITION PLAN

FILENAME
SCALE 3/16" = 1'-0"
0 4' 8' 16'

SHEET
20SD-101



A1 FILTER BUILDING - ROOF DIMENSION PLAN

3/16" = 1'-0"

GENERAL NOTES

1. SEE SHEET 20S-001 FOR STRUCTURAL GENERAL NOTES.
2. (*) INDICATES DIMENSION OR ELEVATION TO BE VERIFIED PRIOR TO CONSTRUCTION. DIMENSIONS ARE TO INSIDE FACE OF PARAPET.
3. THE EXISTING DATA SHOWN IS BASED ON DRAWINGS BY CONSOER, TOWNSEND, & ASSOCIATES CONSULTING ENGINEERS, DATED 1973. ALL DIMENSIONS, OPENING LOCATIONS AND SIZES TO BE FIELD VERIFIED PRIOR TO FABRICATION.

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Raleigh

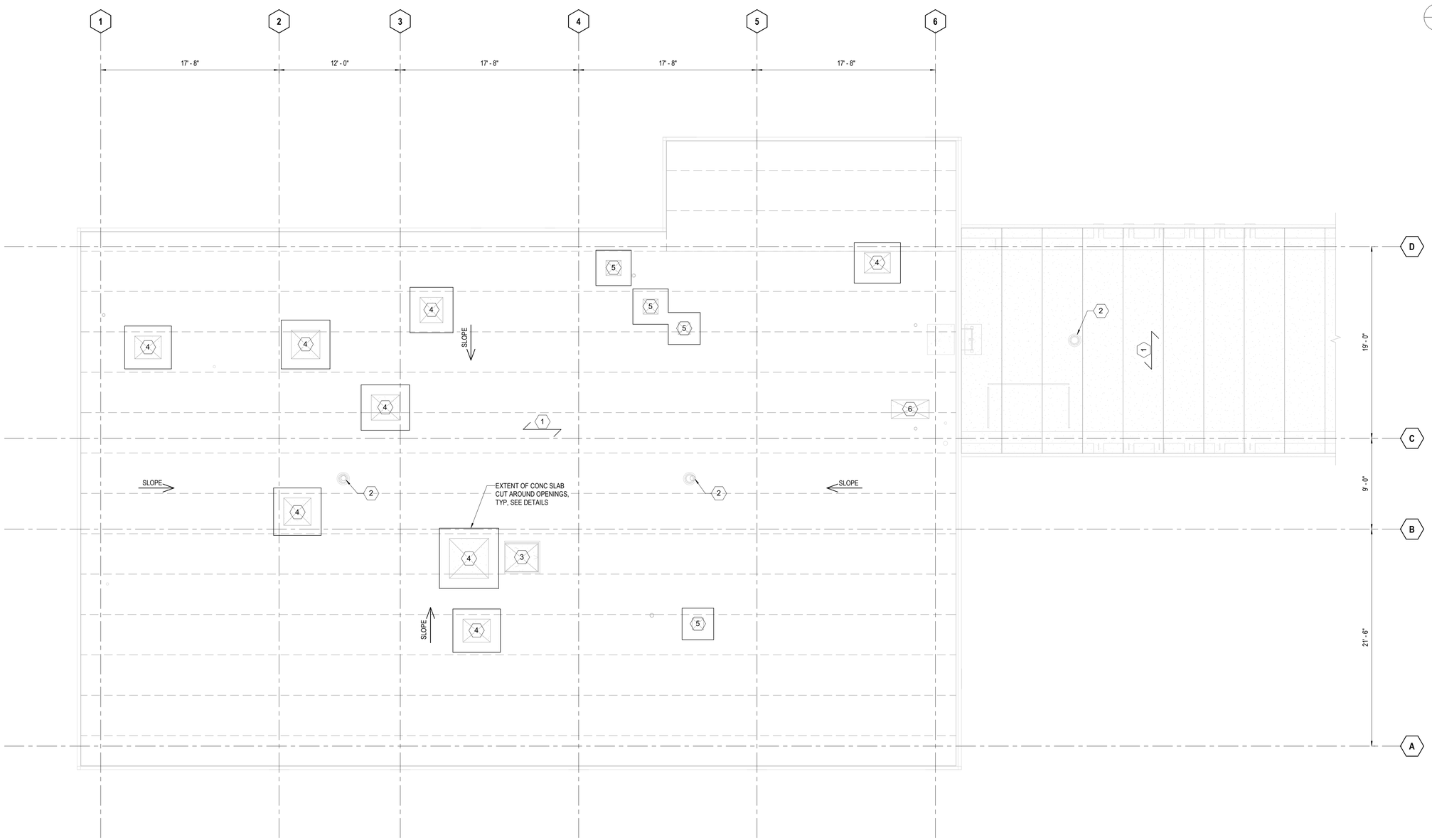
CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

FILTER BUILDING STRUCTURAL ROOF DIMENSION PLAN

FILENAME
SCALE 3/16" = 1'-0"
0 4' 8' 16'

SHEET
20S-101



A1 FILTER BUILDING - ROOF NEW WORK PLAN

3/16" = 1'-0"

GENERAL NOTES

1. SEE SHEET 20S-001 FOR STRUCTURAL GENERAL NOTES.
2. ALL EXISTING CONDITIONS TO BE VERIFIED PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES DISCOVERED.
3. SEE ARCH FOR ROOF SLOPE.

KEYNOTES (##)

1. EXISTING 8" HOLLOW CORE PLANK TO REMAIN
2. EXISTING ROOF DRAIN TO REMAIN
3. EXISTING ROOF HATCH OPENING TO REMAIN, HATCH TO BE REPLACED, SEE ARCH
4. INFILL EXISTING OPENING PER A1/20S-501
5. INFILL EXISTING OPENING PER A3/20S-501
6. EXISTING PENETRATION TO REMAIN

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Raleigh

CITY OF RALEIGH, NORTH CAROLINA

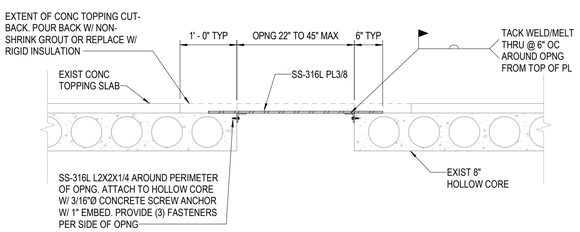
NEUSE RIVER RRF ROOF REPLACEMENTS

FILTER BUILDING STRUCTURAL ROOF NEW WORK PLAN

FILENAME
SCALE 3/16" = 1'-0"

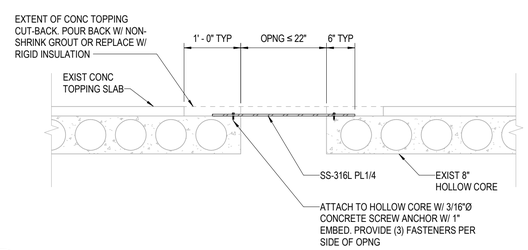
0 4' 8' 16'

SHEET
20S-102



A1 EXISTING OPENING INFILL - LARGE OPNG

NOT TO SCALE



A3 EXISTING OPENING INFILL - SMALL OPNG

NOT TO SCALE

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Raleigh

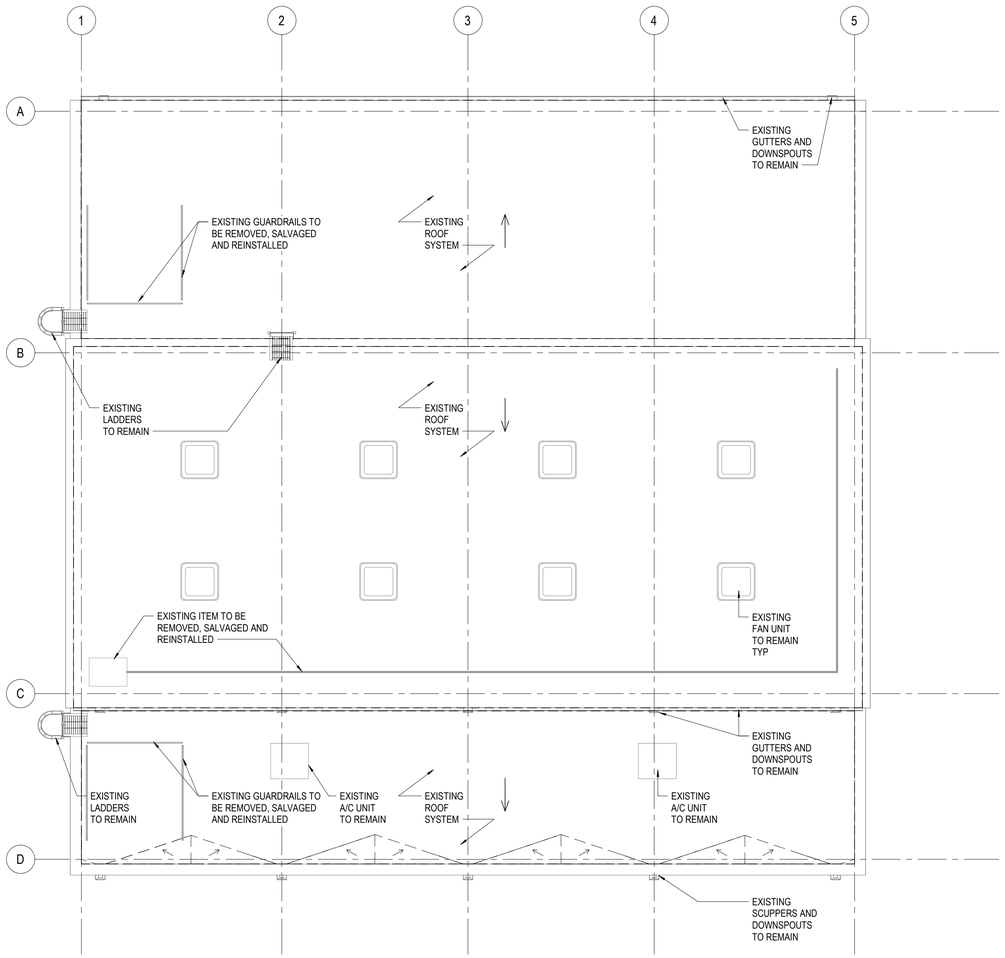
CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

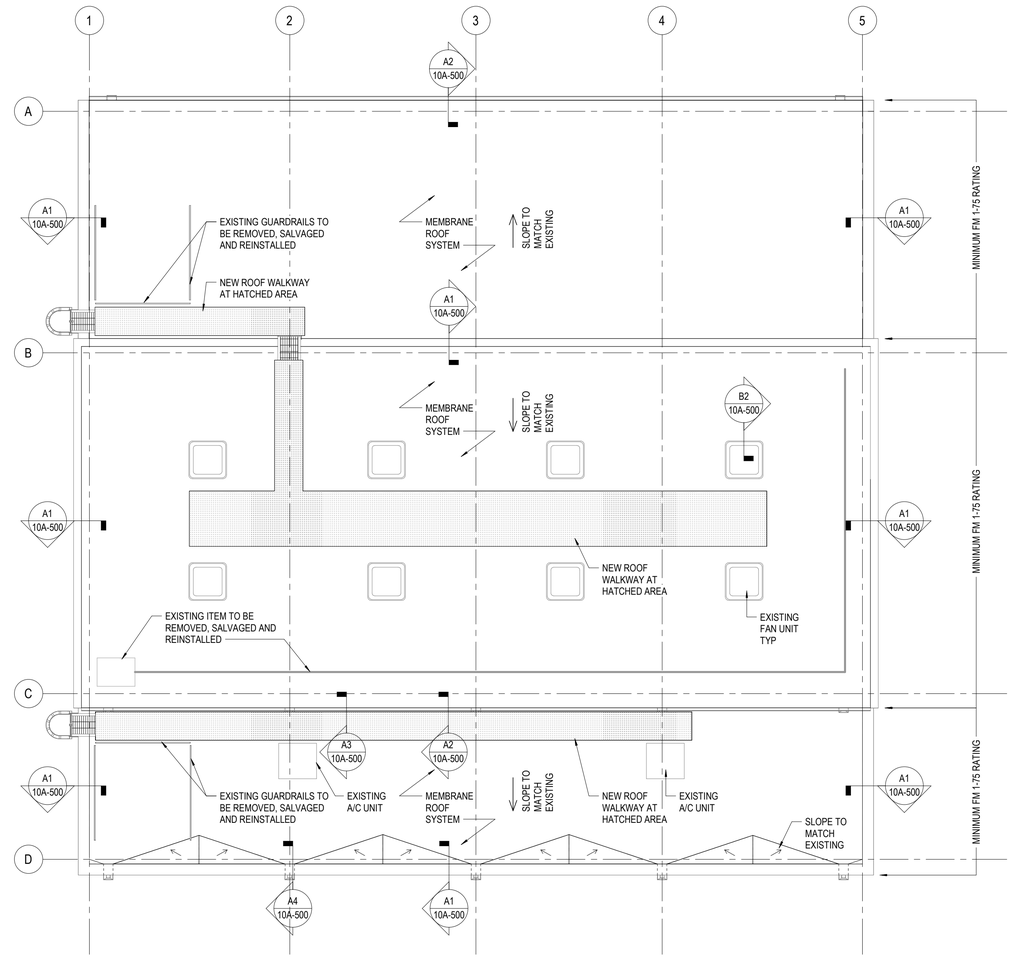
FILTER BUILDING STRUCTURAL DETAILS

FILENAME
SCALE NONE

SHEET
20S-501



A1 ROOF DEMOLITION PLAN
1/8" = 1'-0"



A4 ROOF PLAN
1/8" = 1'-0"

GENERAL NOTES

1. EXISTING ELEMENTS NOT SHOWN SHALL REMAIN. WHERE THE CONTRACTOR IS REQUIRED TO REMOVE ELEMENTS NOT SHOWN IN THE DRAWINGS OR REMOVE ELEMENTS SHOWN IN THE DRAWING TO REMAIN, NOTIFY OWNER IN ADVANCE IN WRITING. EXISTING ELEMENTS THAT ARE REQUIRED TO BE REMOVED TO PERFORM SCOPE OF WORK SHALL BE SALVAGED AND REINSTALLED UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER.
2. PLUMBING VENTS, ROOF DRAINS, SCUPPERS, GUTTERS, DOWNSPOUTS, CONDUCTOR BOXES, COPING, AND SHEET METAL FLASHING ARE TO REMAIN TO THE GREATEST EXTENT POSSIBLE. WHERE THE CONTRACTOR DETERMINES IT IS REQUIRED TO REMOVE OR DEMOLISH THESE ELEMENTS, NOTIFY OWNER IN ADVANCE IN WRITING AND DO NOT PROCEED WITH ADDITIONAL PROPOSED SCOPE WITHOUT OWNER WRITTEN APPROVAL.
3. DEMOLISH EXISTING ROOF SYSTEM IN ITS ENTIRETY INCLUDING BALLAST, MEMBRANE, INSULATION, TERMINATION BARS, COVER BOARD, SUBSTRATE BOARD, SHEATHING, AND VAPOR BARRIER DOWN TO EXISTING STRUCTURAL ROOF DECK AND PARAPETS.
4. INSTALL NEW ROOF SYSTEM WITH SLOPE DIRECTION AND STEEPNESS MATCHING THE EXISTING ROOF. PROVIDE NEW CRICKETS AS REQUIRED TO DIRECT WATER AROUND EXISTING ROOFTOP EQUIPMENT TO REMAIN. INSTALL NEW ROOF SYSTEM WITH INSULATION THICKNESS MATCHING THE EXISTING ROOF.
5. HALFTONE CONTINUOUS LINES INDICATE EXISTING CONSTRUCTION TO REMAIN.
6. BLACK DASHED LINES INDICATE DEMOLITION.
7. BLACK CONTINUOUS LINES INDICATE NEW CONSTRUCTION.
8. ITEMS INDICATED WITH KEY NOTES ARE INTENDED TO ASSIST THE CONTRACTOR IN IDENTIFYING SPECIFIC CONDITIONS. DEMOLITION WORK IS NOT LIMITED TO THE ITEMS INDICATED WITH KEY NOTES.
9. EXISTING DEVICES, ACCESSORIES, ETC. ATTACHED TO PARAPETS, CURBS, AND ROOFS SHALL REMAIN UNLESS OTHERWISE NOTED.
10. DEMOLISH EXISTING CONDUITS AND WIRES MOUNTED TO THE INSIDE FACE OF PARAPETS.
11. DEMOLISH EXISTING LIGHTNING PROTECTION SYSTEM AND SALVAGE FOR REINSTALLATION. REINSTALL EXISTING LIGHTNING PROTECTION SYSTEM TO MATCH EXISTING CONFIGURATION.
12. ALL EXISTING ROOF EQUIPMENT TO REMAIN OPERABLE DURING CONSTRUCTION.

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N.C.B.E.L.S. License Number F-0116

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	02/06/2026	100% ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JUSTIN NYLAND
DESIGNED BY	NICOLE PETERSON
DRAWN BY	NICOLE PETERSON
CHECKED BY	PAUL FORREST
COR PROJECT NO.	0000006191
HDR PROJECT NO.	10444408

PAUL BENSON FORREST REGISTERED ARCHITECT 13400 NORTH CAROLINA CARY, NORTH CAROLINA 02/06/2026

Raleigh

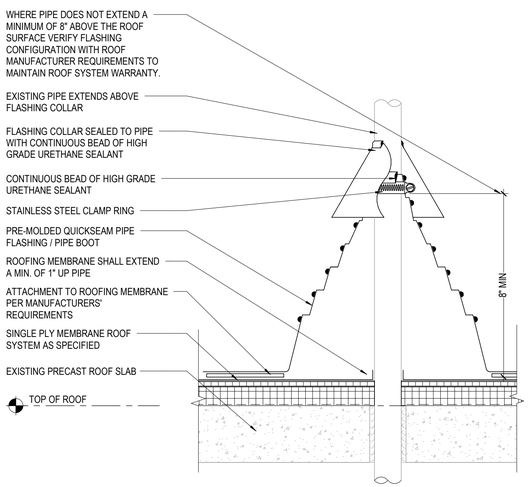
CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

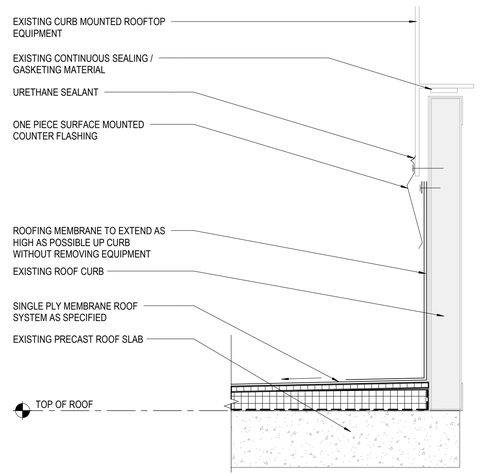
BLOWER BUILDING ROOF PLANS

FILENAME
SCALE 1/8" = 1'-0"
8 4 0 8 16

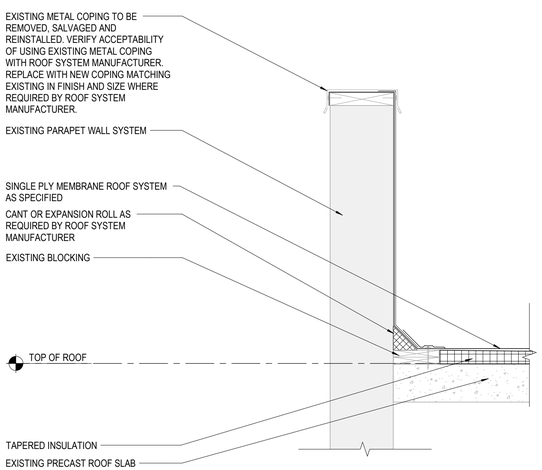
SHEET
10A-151



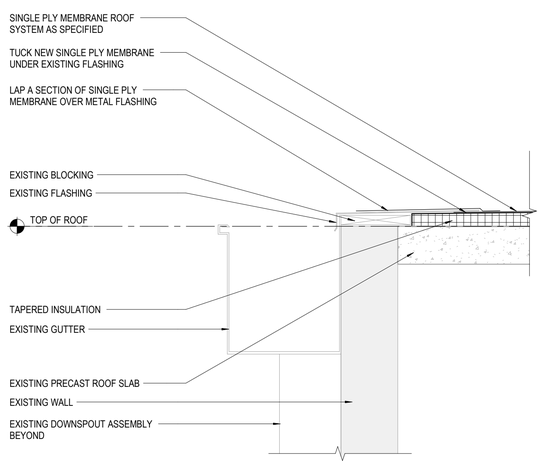
B1 PREMANUFACTURED PIPE FLASHING @ ROOF PENETRATION
1 1/2" = 1'-0"



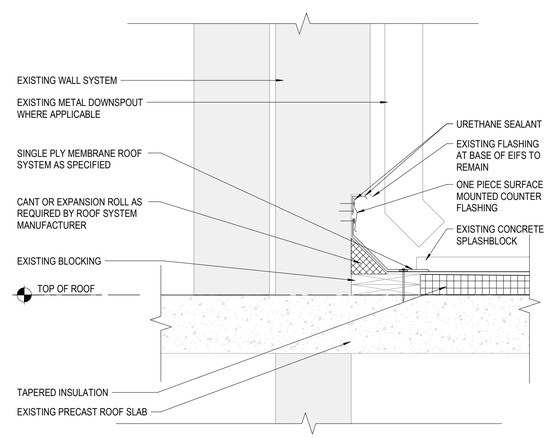
B2 CURB @ ROOFTOP EQUIPMENT
1 1/2" = 1'-0"



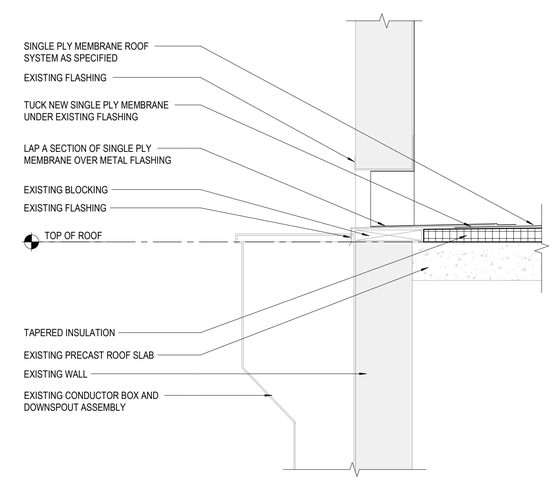
A1 PARAPET
1" = 1'-0"



A2 ROOF EDGE AT GUTTER
1" = 1'-0"



A3 ROOF AT EXTERIOR WALL
1 1/2" = 1'-0"



A4 ROOF AT SCUPPER THROUGH PARAPET
1" = 1'-0"

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2/4/2026 4:29:18 PM

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CHECKED BY	PAUL FORREST
COR PROJECT NO.	0000006191
HDR PROJECT NO.	10444408

PAUL BENSON FORREST
REGISTERED ARCHITECT
13400
02/06/2026
CARY, NORTH CAROLINA

Raleigh

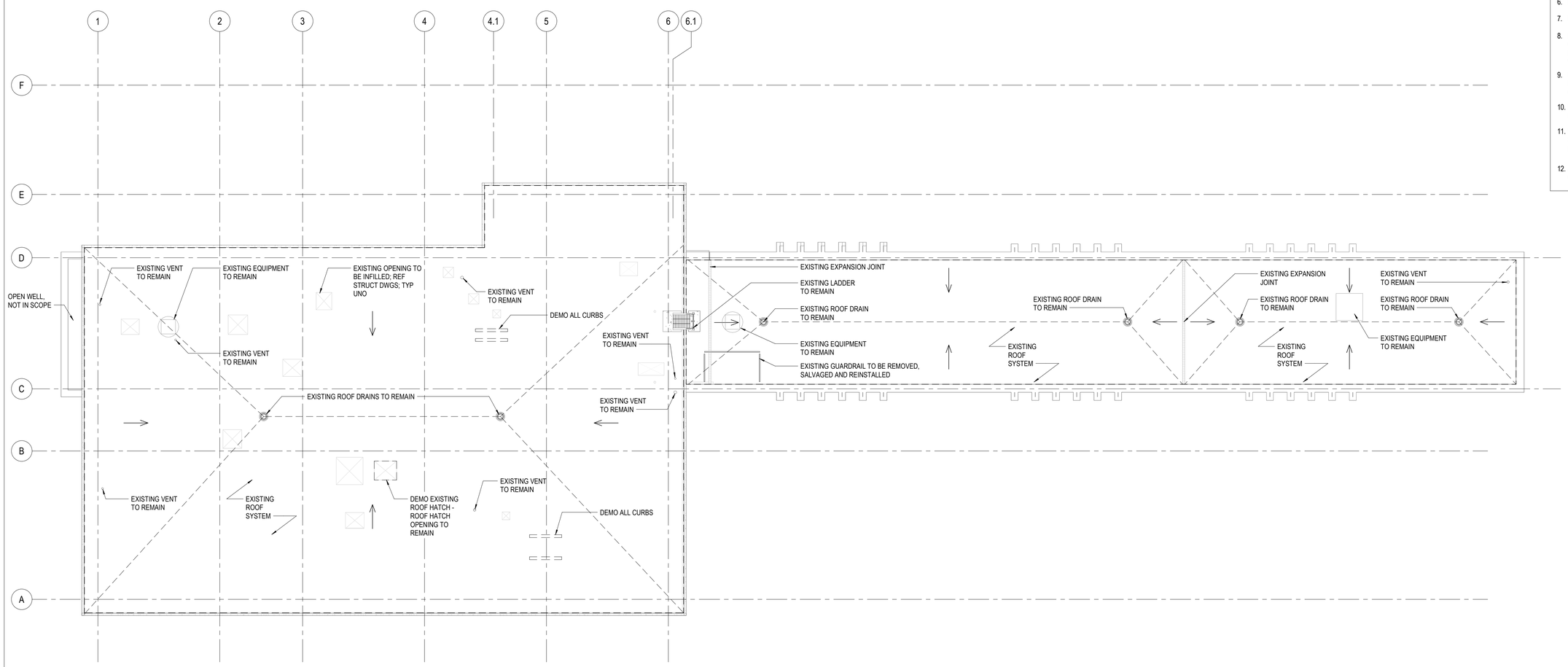
CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

BLOWER BUILDING DETAILS

FILENAME
SCALE As indicated
1 1/2 0 1

SHEET
10A-500



A1 ROOF DEMOLITION PLAN

1/8" = 1'-0"

GENERAL NOTES

1. EXISTING ELEMENTS NOT SHOWN SHALL REMAIN. WHERE THE CONTRACTOR IS REQUIRED TO REMOVE ELEMENTS NOT SHOWN IN THE DRAWINGS OR REMOVE ELEMENTS SHOWN IN THE DRAWING TO REMAIN, NOTIFY OWNER IN ADVANCE IN WRITING. EXISTING ELEMENTS THAT ARE REQUIRED TO BE REMOVED TO PERFORM SCOPE OF WORK SHALL BE SALVAGED AND REINSTALLED UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER.
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4. INSTALL NEW ROOF SYSTEM WITH SLOPE DIRECTION AND STEEPNESS MATCHING THE EXISTING ROOF. PROVIDE NEW CRICKETS AS REQUIRED TO DIRECT WATER AROUND EXISTING ROOFTOP EQUIPMENT TO REMAIN. INSTALL NEW ROOF SYSTEM WITH INSULATION THICKNESS MATCHING THE EXISTING ROOF.
5. HALFTONE CONTINUOUS LINES INDICATE EXISTING CONSTRUCTION TO REMAIN.
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13400
02/06/2026
NORTH CAROLINA
CARY, NORTH CAROLINA

Raleigh

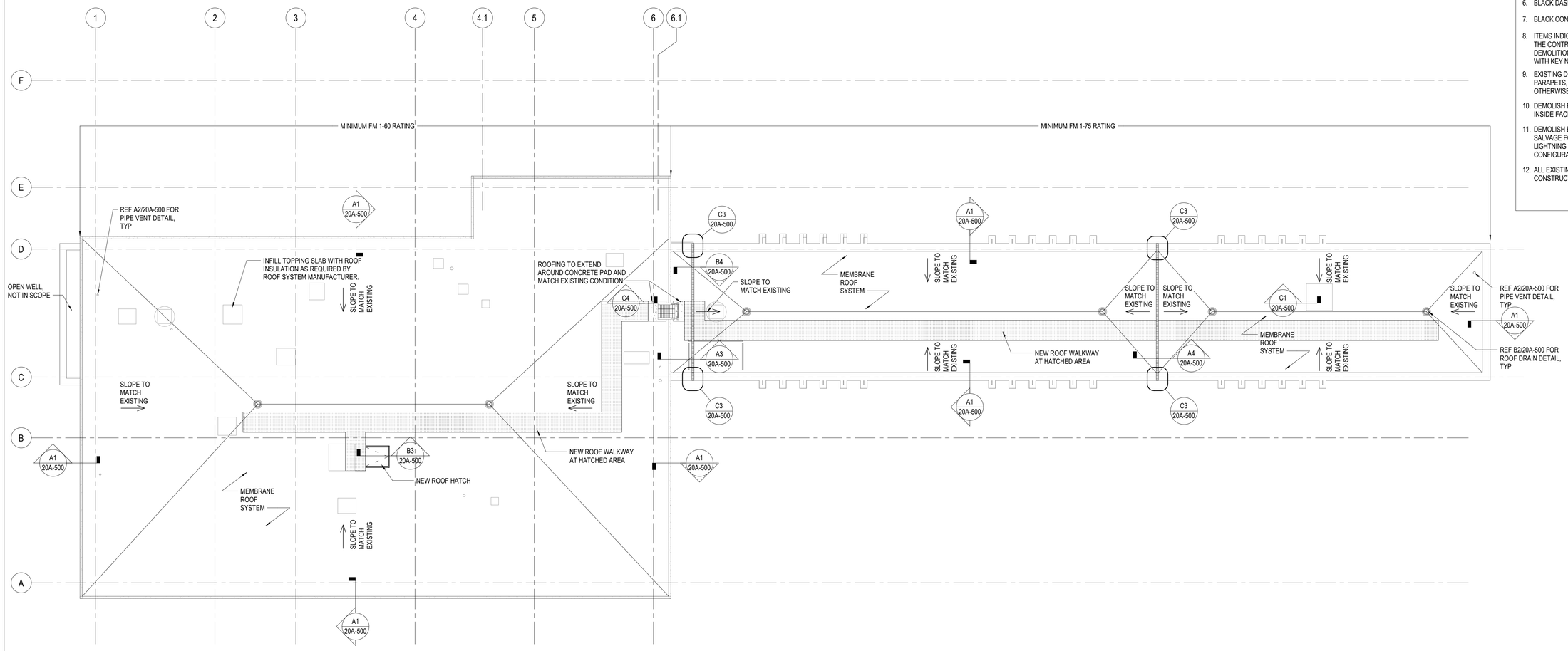
CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

FILTER BUILDING ROOF DEMOLITION PLANS

FILENAME
SCALE 1/8" = 1'-0"
8 4 0 8 16

SHEET
20AD-151



A1 ROOF PLAN

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10. DEMOLISH EXISTING CONDUITS AND WIRES MOUNTED TO THE INSIDE FACE OF PARAPETS.
11. DEMOLISH EXISTING LIGHTNING PROTECTION SYSTEM AND SALVAGE FOR REINSTALLATION. REINSTALL EXISTING LIGHTNING PROTECTION SYSTEM TO MATCH EXISTING CONFIGURATION.
12. ALL EXISTING ROOF EQUIPMENT TO REMAIN OPERABLE DURING CONSTRUCTION.

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HDR Engineering, Inc. of the Carolinas
555 Fayetteville Street, Suite 900
Raleigh, NC 27601
919.232.6600
N.C.B.E.L.S. License Number F-0116

ISSUE	DATE	DESCRIPTION
	02/06/2026	100% ISSUED FOR CONSTRUCTION

PROJECT MANAGER	JUSTIN NYLAND
DESIGNED BY	NICOLE PETERSON
DRAWN BY	NICOLE PETERSON
CHECKED BY	PAUL FORREST
COR PROJECT NO.	0000006191
HDR PROJECT NO.	10444408

PAUL BENSON FORREST
REGISTERED ARCHITECT
13400
02/06/2026
NORTH CAROLINA
CARY, NORTH CAROLINA

Raleigh

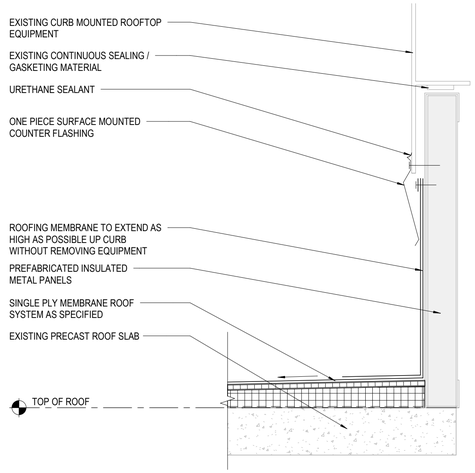
CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

FILTER BUILDING ROOF PLANS

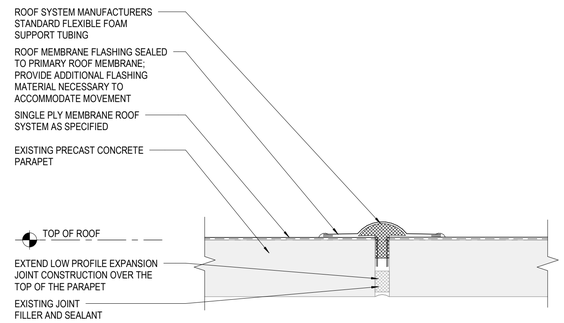
FILENAME
SCALE 1/8" = 1'-0"
8 4 0 8 16

SHEET
20A-151

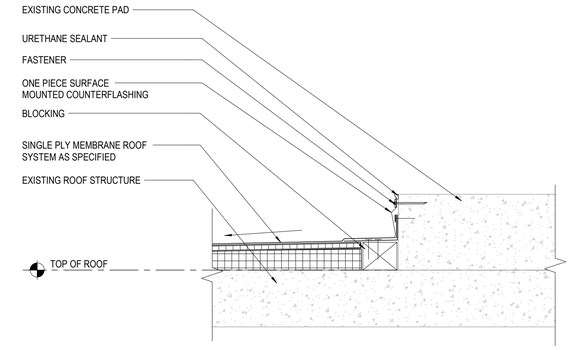


C1 CURB @ ROOFTOP EQUIPMENT
1 1/2" = 1'-0"

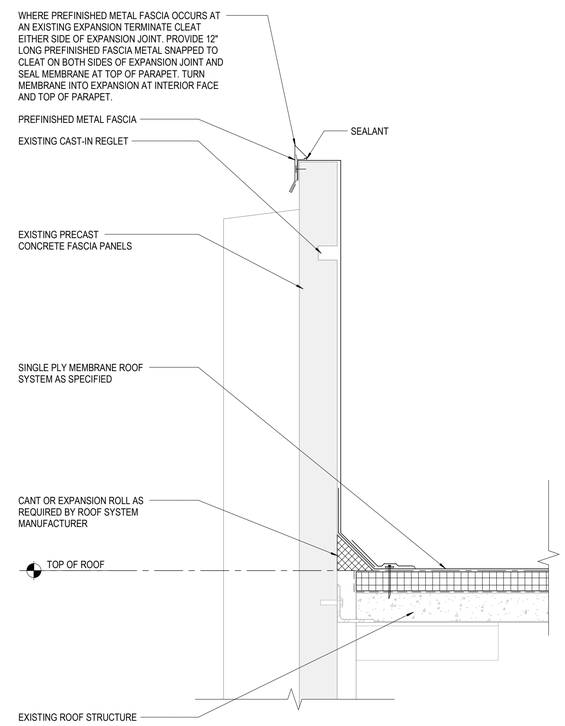
NOTES:
1. CLAMPING RING MUST PROVIDE CONSTANT COMPRESSION ON WATER CUT-OFF MASTIC
2. ROOF MEMBRANE TO EXTEND MIN OF 1/2" FROM CLAMPING RING TOWARD DRAIN



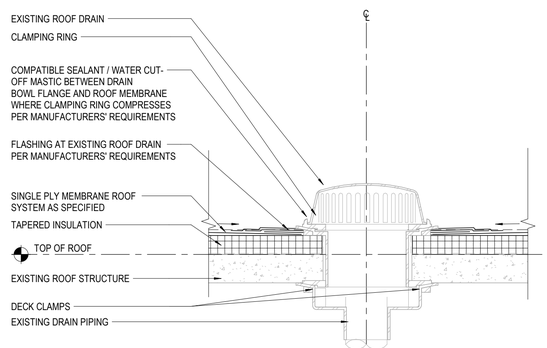
C3 ROOF TO ROOF EXPANSION JOINT
1 1/2" = 1'-0"



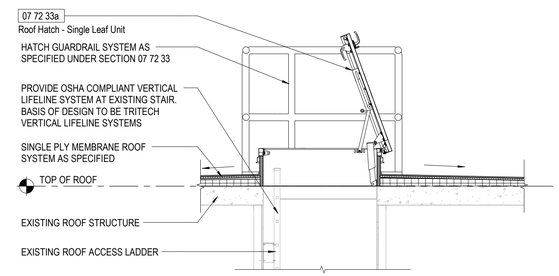
C4 ROOF TO CONCRETE PAD
1 1/2" = 1'-0"



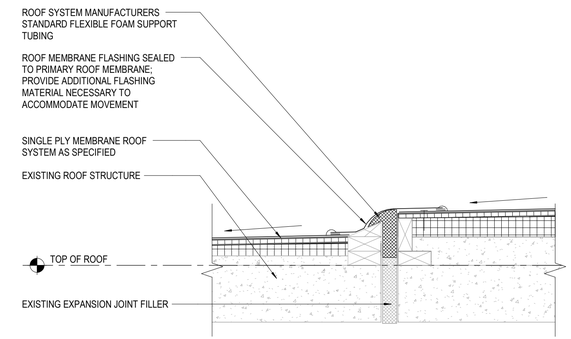
A1 PARAPET
1 1/2" = 1'-0"



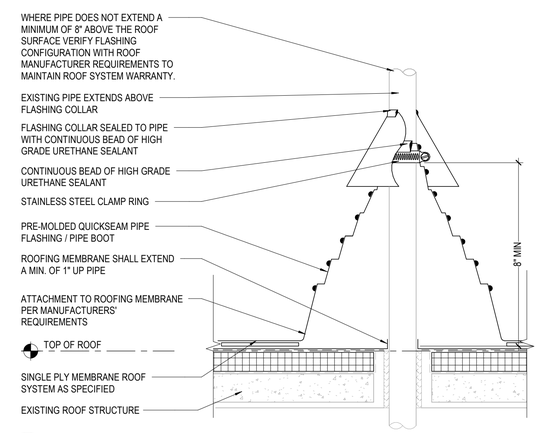
B2 ROOF DRAIN
1 1/2" = 1'-0"



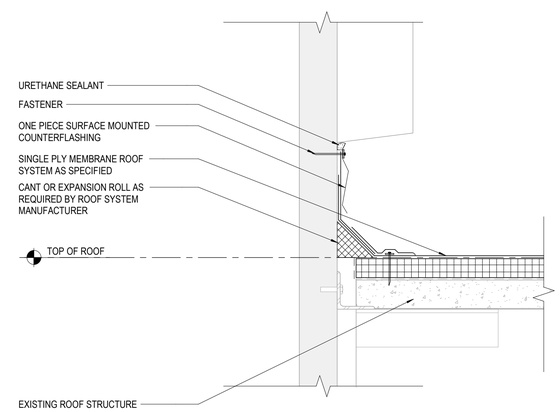
B3 SINGLE LEAF ROOF ACCESS HATCH
1/2" = 1'-0"



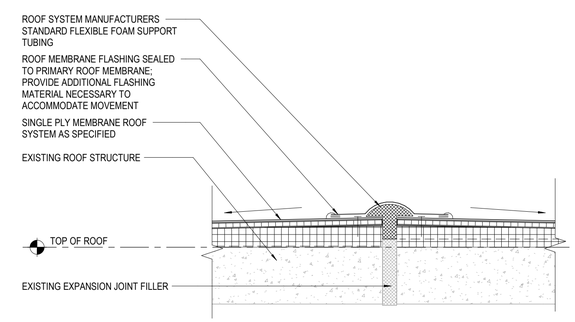
B4 ROOF TO ROOF EXPANSION JOINT
1 1/2" = 1'-0"



A2 PREMANUFACTURED PIPE FLASHING @ ROOF PENETRATION
1 1/2" = 1'-0"



A3 INTERIOR PARAPET
1 1/2" = 1'-0"



A4 ROOF TO ROOF EXPANSION JOINT
1 1/2" = 1'-0"

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PAUL BENSON FORREST REGISTERED ARCHITECT 13400 02/06/2026 NORTH CAROLINA CARY, NORTH CAROLINA

Raleigh

CITY OF RALEIGH, NORTH CAROLINA

NEUSE RIVER RRF ROOF REPLACEMENTS

FILTER BUILDING DETAILS

FILENAME
SCALE As indicated
1 1/2 0 1

SHEET **20A-500**