OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
FOR
READING HOUSING AUTHORITY

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
ACCOM	ACCOMMODATE
ACCORD	ACCORDANCE
AC	ACOUSTIC
ADJ	ADJUSTABLE/ADJACENT
ALT	ALTERNATE
AL	ALUMINUM
AB	ANCHOR BOLTS
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECT(URAL)
ASPH CONC	ASPHALT CONCRETE PAVING
@	AT
BRG	BEARING
B PL	BEARING PLATE
BM	BENCH MARK
BIT	BITUMINOUS
BIT-DP	BITUMINOUS DAMPPROOFING
BLK	BLOCK
BD	BOARD
BOT	BOTTOM
BRK	BRICK
BLDG	BUILDING
CAB	CABINET
CI	CAST IRON
CLG	CEILING
CL	CENTER LINE
CER T	CERAMIC TILE
CIRC	CIRCULATION
CJ	CONTROL JOINT
CLO	CLOSET
COL	COLUMN
COMP	COMPUTER
CONC	CONCRETE
CONF	CONFERENCE
CMU	CONCRETE MASONRY UNITS
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
DEM	DEMOLISH, DEMOLITION
DTL	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DR	DOOR
DN	DOWN
DS	DOWNSPOUT
DF	DRINKING FOUNTAIN
EL	ELEVATION
ELEC	ELECTRIC(AL)
EWC	ELECTRIC WATER COOLER
EC	ELECTRICAL CONTRACTOR
ELEV	ELEVATION, ELEVATOR
ENG	ENGINEER
EPS	EXPANDED POLYSTERENE
EQ	EQUAL
EXIST	EXISTING
EXP JT	EXPANSION JOINT
EXP	EXPOSED
EXT	EXTERIOR
EXTR PS	EXTRUDED POLYSTYRENE
FG BATT	FIBERGLASS BATT
FIN	FINISH
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FRTW	FIRE RESISTANT TREATED WOOD
FLG	FLASHING
FL	FLOOR
FD	FLOOR DRAIN
FTG	FOOTING
GA	GAGE, GAUGE
GALV	GALVANIZED
GL	GLASS
GC	GENERAL CONTRACT(OR)
GTR	GUTTER
GWB	GYPSUM DRYWALL (WALLBOARD)
GWB-X	GWB, TYPE X (FIRE RESISTIVE CLASSIFICATION)
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HC	HOLLOW CORE
HL-CMU	HOLLOW LOADBEARING CMU
HM	HOLLOW METAL STEEL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
ID	INSIDE DIAMETER
INS	INSULATE(D)(ION)
INT	INTERIOR
INV	INVERT
JST	JOIST
JT	JOINT
LAM	LAMINATE(D)(ION)
LES	LEAD EXPANSION SHIELD
LLV	LONG LEG VERTICAL
LIN FT	LINEAL FOOT
MH	MANHOLE
MFR	MANUFACTURER
MO	MASONRY OPENING
MAX	MAXIMUM
MECH	MECHANICAL
MC	MECHANICAL CONTRACTOR
MCP	MELAMINE COATED PARTICLE BOARD
MET/MTL	METAL
MIN	MINIMUM
MLD	MOLDING, MOULDING
MTD	MOUNTED
NA	NOT APPLICABLE
NAT	NATURAL
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO OR #	NUMBER
OC	ON CENTER
OFF	OFFICE
OP PL OF	OPEN PLAN OFFICE
H-STL JST	OPEN WEB STEEL JOISTS
OPG	OPENING
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PART	PARTITION
PNT	PAINT(ED)
PL	PLATE
PC	PLUMBING CONTRACTOR
PLAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PT	PRESSURE TREATED
PVC	POLYVINYL CHLORIDE
RWC	RAIN WATER CONDUCTOR
RECPT	RECEPTION
REINF	REINFORCING
REBAR	REINFORCING BARS
REP	REPRESENTATIVE
REQ	REQUIRED
ROW	RIGHT OF WAY
RF	ROOF
RF DK	ROOF DECKING
RD	ROOF DRAIN
RM	ROOM
RO	ROUGH OPENING
SDO	SALVAGE & DELIVER TO OWNER
SHT	SHEET
SKL	SKYLIGHT
SL	SLATE
SC	SOLID CORE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STL JST	STEEL JOIST
STL STD	STEEL STUD
STO	STORAGE
STR	STRUCTURE/STRUCTURAL
STR STL	STRUCTURAL STEEL
SYS	SYSTEM
TEL	TELEPHONE
TMP	TEMPERED
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TOC	TOP OF CURB
TOF	TOP OF FOOTER
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VB	VAPOR BARRIER
VERT	VERTICAL
VCT	VINYL COMPOSITION TILE
VIF	VERIFY IN FIELD
VWB	VINYL WALL BASE
VWC	VINYL WALL COVERING
WAIT	WAITING
WWF	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
WOL	WOLMANIZED
WD	WOOD

NOTE: NOT ALL ABBREVIATIONS LISTED ARE APPLICABLE TO THIS PROJECT

ANNOTATION SYMBOLS

NORTH ARROW

PROJECT NORTH

LEVEL LINE
OR CONTROL POINT

STAIR OR RAMP
DIRECTIONAL ARROW

ELEVATION

ELEVATION NUMBER

SHEET NUMBER

SECTIONS

SECTION NUMBER
SHEET NUMBER

DETAIL

DETAIL NUMBER
SHEET NUMBER

WINDOW TYPE

DOOR NUMBER

ROOM IDENTIFICATION

ROOM NAME

ROOM NUMBER

CONSTRUCTION NOTES

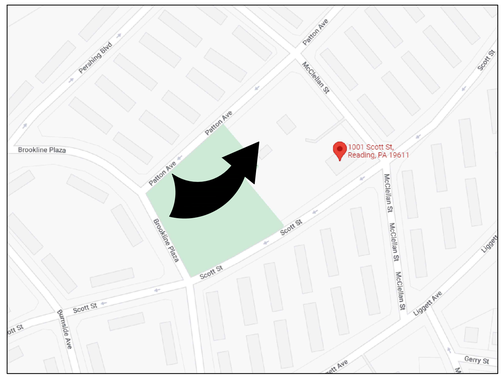
1. REVIEW HARDWARE SCHEDULE, INTERIOR ELEVATIONS, & DETAILS, & PROVIDE FIRE TREATED SOLID WOOD BLOCKING INSIDE FIRE-RATED STUD WALLS & SOLID WOOD BLOCKING INSIDE STUD WALLS WHERE SOLID ANCHORAGE IS REQUIRED.
2. WHERE EXISTING CONSTRUCTION IS CUT & PATCHED, REPAIR ALL ADJACENT SURFACES DISTURBED BY CUTTING & PATCHING & PREPARE TO RECEIVE NEW CONSTRUCTION &/OR NEW SCHEDULED FINISHES. REPAIRS SHALL MATCH EXISTING ADJACENT &/OR SIMILAR SURFACES & MATERIALS. TRANSITIONS BETWEEN NEW & EXISTING CONSTRUCTION SHALL BE SMOOTH & UNNOTICEABLE.
3. ALL FINISHED SURFACES IN THIS PROJECT ARE TO BE PATCHED & REPAIRED TO MATCH ADJACENT OR SIMILAR CONSTRUCTION & PREPARED TO RECEIVE SPECIFIED FINISHES. THIS INCLUDES DAMAGED FLOORING, PLASTER, WOOD TRIM, CASINGS, SILLS & DOORS, WINDOW GLASS & MASONRY. TRANSITIONS BETWEEN NEW REPAIRS & EXISTING CONSTRUCTION SHALL BE SMOOTH & UNNOTICEABLE.
4. ALL MTL THAT COMES INTO CONTACT WITH PT WOOD SHALL BE STAINLESS OR GALV. STEEL. THIS INCLUDES BUT IS NOT LIMITED TO FASTNERS, FLASHING AND JOIST HANGERS. STRUCTURAL STL SHALL BE PRIMED AND PAINTED PRIOR TO CONTACT WITH PT WOOD.
5. REPAIR ANY DAMAGE TO EXISTING OR NEW FIRE-RATED ENCLOSURES, CEILINGS AND WALLS.
6. SEAL AND FIRESTOP ALL PENETRATIONS AND OPENINGS IN ANY FIRE-RATED CONSTRUCTION USING PROPER FIRESTOPPING PRODUCTS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
7. EMERGENCY LIGHTING SYSTEM: PROVIDE A MINIMUM OF ONE FOOT CANDLE OF ILLUMINATION FOR A MINIMUM DURATION OF ONE HOUR AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AND IBC.
8. MAKE CHANGES OR ADDITIONS TO THE EMERGENCY LIGHTING AND EXIT LIGHTING SYSTEMS AS REQUIRED BY THE CODE OFFICIAL. DURING THE JOB SITE INSPECTIONS THE CODE OFFICIAL MAY REQUIRE CHANGES OR ADDITIONS TO THE SYSTEMS.
9. ALL MEANS OF EGRESS TO BE FREE & CLEAR AT ALL TIMES.

HAMMEL ASSOCIATES ARCHITECTS, LLC
Lancaster, PA
(717) 393.3713 FAX (717) 393.8227
WEB: WWW.HAMMELARCH.COM EMAIL: INFO@HAMMELARCH.COM

STRUCTURAL ENGINEER
DURST & TAYLOR STRUCTURAL ENGINEERS
LANCASTER, PA
717.371.3318

MECHANICAL, ELECTRICAL & PLUMBING ENGINEER
GREEN BUILDING ENGINEERS
YORK, PA
717.554.0153

CIVIL ENGINEER
DAUTRICH ENGINEERING
WERNERSVILLE, PA
610.413.0624



LOCATION MAP
NOT TO SCALE

ACTUAL NORTH

PROJECT NORTH

JOINT SEALER SCHEDULE

DRAWING DESIGNATION	SEALANT TYPE	DESCRIPTION OF JOINT CONSTRUCTION AND LOCATION WHERE JOINT SEALER IS TYPICALLY APPLIED. (SEE NOTE BELOW)
ES-1	ONE-PART NONACID-CURING SILICONE SEALANT	EXTERIOR & INTERIOR VERTICAL JOINTS BETWEEN METAL & CONCRETE, UNIT MASONRY MORTAR, OR STONE; INTERIOR & EXTERIOR PERIMETER JOINTS OF METAL & WOOD FRAMES IN EXTERIOR WALLS; & EXTERIOR OVERHEAD JOINTS.
ES-2	MULTI-PART POURABLE URETHANE SEALANT	EXTERIOR & INTERIOR JOINTS IN HORIZONTAL SURFACES OF CONCRETE; BETWEEN METAL & CONCRETE, MORTAR & MASONRY.
ES-3	ONE-PART ACID-CURING SILICONE SEALANT	EXPOSED JOINTS WITHIN GLAZED CURTAIN WALL FRAMING SYSTEM, & ALUMINUM ENTRANCE FRAMING SYSTEM.
ES-4	ONE-PART MILDEW-RESISTANT SILICONE SEALANT	RESTROOMS, LOCKER & SHOWER AREAS
ES-5	TWO-PART URETHANE SEALANT	VERTICAL & HORIZONTAL JOINTS OF CONCRETE, BETWEEN CONCRETE, POOL & CONCRETE DECK.
LS	ACRYLIC-EMULSION SEALANT	INTERIOR JOINTS IN FIELD-PAINTED VERTICAL & OVERHEAD SURFACES AT PERIMETER OF HOLLOW METAL DOOR FRAMES; IN GYPSUM DRYWALL, PLASTER & CONCRETE OR CONCRETE MASONRY; & ALL OTHER INTERIOR JOINTS NOT INDICATED OTHERWISE.
BAS-1	BUTYL-ASPHALT SEALANT, AC-20 IN ACCORDANCE WITH PA. DEPT. TRANSPORTATION TITLE 408 SPECIFICATIONS.	EXTERIOR JOINTS BETWEEN EXISTING & NEW ASPHALT PAVING & ASPHALT PAVING & MASONRY OR CONCRETE.
FSS-1	FOAMED-IN-PLACE FIRE-STOPPING SEALANT	THROUGH PENETRATIONS IN FIRE RESISTANCE RATED FLOOR & WALL ASSEMBLIES INVOLVING MULTIPLE PIPES, CONDUITS & OTHER ITEMS.
FSS-2	ONE-PART FIRE-STOPPING SEALANT	THROUGH PENETRATIONS IN FIRE RESISTANCE RATED FLOOR & WALL ASSEMBLIES INVOLVING SINGLE PIPES, CONDUITS & WHERE JOINT WIDTHS ARE NARROW.

NOTE: INSTALL JOINT SEALANTS IN ACCORDANCE WITH DESCRIPTIONS AND LOCATIONS LISTED, AND IN LOCATIONS IDENTIFIED ON DRAWINGS BY DRAWING DESIGNATIONS LISTED ABOVE.

BUILDING DATA (2018 IBC)

OCCUPANCY:	ASSEMBLY
CONSTRUCTION TYPE:	N/A
BUILDING HEIGHT:	N/A
FIRE ALARM SYSTEM:	EXISTING & MODIFIED FOR NEW LAYOUT
EMERGENCY LIGHTING:	EXISTING & MODIFIED FOR NEW LAYOUT
AUTOMATIC SPRINKLERS:	NO
AUTOMATIC FIRE DETECTION SYSTEM:	NO
FIRE SEPARATION:	N/A

	EXISTING BUILDING AREA:	ADDITION:
ATHLETIC SUPPORT BUILDING	200 SF	0 SF

BUILDING CODE REQUIREMENTS

ALL WORK SHALL CONFORM TO THE FOLLOWING CODE REGULATIONS AND REQUIREMENTS:

1. COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF LABOR & INDUSTRY:
   - A. PENNSYLVANIA UNIFORM CONSTRUCTION CODE: 2021 INTERNATIONAL CODE COUNCIL AND REFERENCED STANDARDS
   - B. 2021 INTERNATIONAL BUILDING CODE CHAPTER 11 AND APPENDIX E; 2018 INTERNTAIONAL EXISTING BUILDING CODE, ACCESSIBILITY PROVISIONS WHICH REFERENCE 2009 ICC/ANSI
   - C. CITY OF READING BUILDING ORDINANCE AND ALL REFERENCED REGULATIONS (BUILDING, EXISTING BUILDING, PLUMBING, ELECTRICAL, MECHANICAL, FUEL GAS, PERFORMANCE, RESIDENTIAL, FIRE, ACCESSIBILITY AND ENERGY CODE WHERE APPLICABLE)

DRAWING INDEX

CS1.1 COVER SHEET

ARCHITECTURAL
DA1.0 SITE PLAN DEMO
A1.0 SITE PLAN
A1.1 FLOOR PLAN , ELEVATION, SECTION
A1.2 DETAILS
A1.3 PLAYGROUND PLAN
A1.4 DOOR SCHEDULE & DETAILS

CIVIL
C1.0 EXISTING PLAYGROUND
C2.0 PROPOSED PLAYGROUND & SITE IMPROVEMENTS
C3.0 CIVIL DETAILS
C4.0 EROSION & SEDIMENTATION CONTROL NOTES AND DETAILS
C4.1 EROSION & SEDIMENTATION CONTROL NOTES AND DETAILS

STRUCTURAL
S0.1 GENERAL NOTES, LEGENDS AND KEY PLAN
S0.2 TYPICAL SECTIONS AND DETAILS
S1.1 GENERATOR PAD & RETAINING WALL GOUNDATION PLAN
S1.2 SPLASH PAD FOUNDATION PLAN
S1.3 CONCESSION BUILDING FOUNDATION / FLOOR PLAN

MECHANICAL + PLUMBING
M-001 HVAC ABBREVIATIONS AND GENERAL INFORMATION
P-001 PLUMBING ABBREVIATIONS AND GENERAL INFORMATION
MP101 FLOOR PLAN - MECHANICAL AND PLUMBING
M-501 HVAC DETAILS
P-501 PLUMBING DETAILS
P-601 PLUMBING SCHEDULES AND ISOMETRIC

ELECTRICAL
E-001 ELECTRICAL SYMBOLS ABBREVIATIONS & GENERAL NOTE
E-101 ENLARGED FLOOR PLAN - CONCESSION
E-102 ENLARGED PLAN - PAVILION
E-103 ENLARGED PLANS
E-200 ELECTRICAL SCHEDULES & POWER RISE
EP100 SITE PLAN

CIVIL
C1.0 EXISTING PLAYGROUND
C2.0 PROPOSED PLAYGROUND AND IMPROVEMENTS
C3.0 CIVIL DETAILS
C4.0 EROSION AND SEDIMENTATION CONTROL AND DETAILS
C4.1 EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

OHTER / MISC
17+1 PAGES PLAYGROUND EQUIPMENT
1 PAGE PAVILION BUILDING

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

2026.09.11
BID SET

REVISIONS

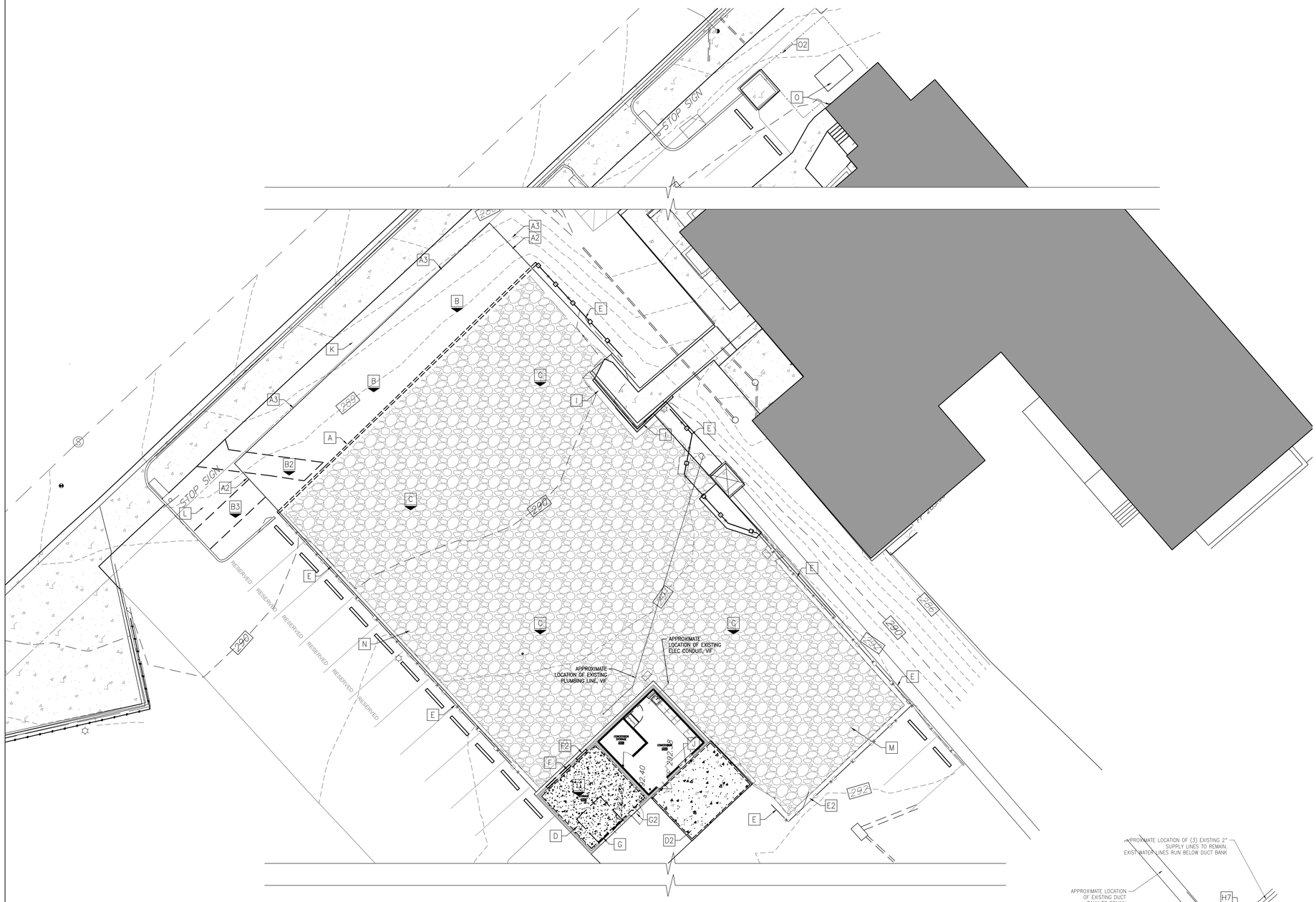
HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

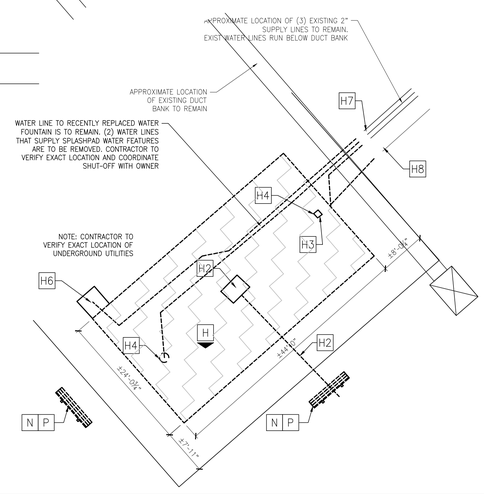
READING
HOUSING AUTHORITY

PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	COVER SHEET		
ISSUE DATE	2026.09.11	SCALE	AS NOTED
FILE NUMBER	2532	DRAWN BY MDI	CHECKED BY TLV

CS1.1





SCHEMATIC DEMOLITION & ALTERATION PLAN

1 / DA1.0 — 3/32"= 1'-0"

DEMOLITION KEYNOTES

- **A** EXTENTS OF EXISTING FENCE TO BE CAREFULLY REMOVED AS INDICATED SHOWN DRAWINGS INCLUDING FOOTERS, PICKET PANELS. TEMPORARY STORE PICKETS FENCE PANEL ON SITE & SALVAGED FOR PARTIAL REUSE. REFER TO PROPOSED PLANS FOR DIRECTION ON REFURBISHED FENCE PANELING. COORDINATE WITH OWNER BEFORE DISCARD FINAL PICKET FENCE PANELS.
- **B** EXISTING AREA TO BE PREPARED FOR EXTENDING PLATGROUND. COMPACT SOIL AS REQUIRED
- **B2** EXISTING CONCRETE PAD & GRAVEL BED TO BE REMOVED. PREPARE AREA FOR PLAYGROUND
- **B3** PREPARE AREA FOR NEW CONCRETE WALK WAY. SAW-CUT CURB AND LEVEL AS REQUIRED
- **C** EXISTING GRAVEL BED TO BE PREPARED AND RE-LEVELED FOR NEW PLAYGROUND EQUIPMENT. COORDINATE FOOTINGS W/ UTILITIES AS REQUIRED.
- **D** EXISTING CONCRETE PAD TO BE PARTIALLY DEMOLISHED & REINSTALLED TO ACCOMODATE NEW UNDERGROUND UTILITIES
- **D2** EXISTING CONCRETE PAD TO BE REPLACED W/ NEW ASPHALT
- **D3** PREPARE AREA FOR NEW SLAB ON GRADE
- **E** EXISTING FENCE TO REMAIN. TOP 2" OF FENCE POST FOUNDATION TO BE REMOVED. UNDERNEATH MAIN FENCE AREA EXISTING CONCRETE AND ASPHALT AT ENTIRE FENCE PERIMETER TO BE CAREFULLY REMOVED, (APPROXIMATE WIDTH OF 24") UP TO WHERE AN EXISTING TRANSITION LINE OCCURS NEAR THE FENCE. SEE IMAGE ON A1.2 ADDITIONAL INFO
- **E2** EXISTING FENCE TO REMAIN. SWING-GATE PANEL TO BE REPLACED W/ PICKET PANEL. EXISTING SLAB TO BE PREPARED FOR NEW DRIVEWAY COATING
- **F** EXISTING CMU WALL TO BE PARTIALLY REMOVED. TOOTH IN ENTIRE JAMB TO PROVIDE CLEAN FINISHED AT JAMB CONDITION. PREPARE OPENING FOR NEW HEADER & OVERHEAD DOOR. PAINT CMU COORDINATE DOOR SILL HEIGHT W/ NEWLY CONSTRUCTED ADJACENT WALKWAY
- **F2** EXISTING CMU WALL TO BE PARTIALLY REMOVED. TOOTH IN ENTIRE JAMB TO PROVIDE CLEAN FINISHED AT JAMB CONDITION. PREPARE OPENING FOR NEW HEADER & HM MANDOOR. PAINT CMU COORDINATE DOOR SILL HEIGHT W/ NEWLY CONSTRUCTED ADJACENT WALKWAY
- **G** EXISTING OVERHEAD DOOR TO BE TEMPORARY REMOVED AND REINSTALLED. PREPARE OPENING FOR NEW CMU WALLS AND HM DOOR
- **G2** VERIFY CONDITIONS IN FIELD: EXISTING MAN DOOR TO REMAIN, HARDWARE TO BE REPLACED TO ACCOMODATE NEW RESTROOM SETS. IF EXISTING FRAME AND DOOR ARE NOT PREPPED TO RECEIVE RESTROOM HARDWARE SETS. REMOVE AND REPLACE DOOR AND FRAME AS REQUIRED AT NO ADDITIONAL COST TO OWNER. IN THAT SCENARIO THE EXISTING DOOR MAY BE REINSTALLED AT OPPOSITE WALL WHERE STORAGE DOOR IS REQUIRED
- **H** EXISTING SPLASH PAD TO BE REMOVED IN ITS ENTIRETY.
- **H2** EXISTING SPLASH PAD DRAIN & COLLECTOR AND PIPE TO BE REMOVED. PREPARE FOR NEW REPLACED DRAIN PIPE
- **H3** EXISTING SPLASH PAD CONTROLS TO BE PARTIALLY REMOVED. REDIRECT LINES & PREPARE FOR NEW SPLASHPAD WATER FEATURE CONTROL PANEL
- **H4** EXISTING WATER FEATURE TO BE REMOVED. BELOW SLAB LINES TO BE PARTIALLY REMOVED TO OUTSIDE OF ASPHALT PAD. PORTION TO REMAIN TO RECONFIGURED FOR NEW WATER FEATURES
- **H5** EXISTING WATER FEATURE TO BE REMOVED. BELOW SLAB LINES TO BE PARTIALLY REMOVED. PORTION TO REMAIN TO RECONFIGURED FOR NEW WATER FEATURE
- **H6** EXISTING DRINKING FOUNTAIN TO REMAIN. SUPPLY LINES TO BE PARTIALLY REMOVED AND REPLACED
- **H7** EXISTING WATER SUPPLY LINES TO REMAIN. PREPARE AREA FOR NEW JUNCTION BOX FOR NEW FUTURE WATER LINES. EXACT LOCATION TO BE VERIFIED IN FIELD. UNDERGROUND DUCT BANK IS PRESENT
- **H8** EXISTING ELEC CONDUIT TO REMAIN. PREPARE AREA FOR NEW JUNCTION BOX FOR NEW FUTURE WATER LINES. EXACT LOCATION TO BE VERIFIED IN FIELD. UNDERGROUND DUCT BANK IS PRESENT
- **I** PREPARE AREA NEAR PLAYGROUND FOR NEW FENCE TO MATCH EXISTING
- **J** CONCESSION WINDOW OPENING TO BE PREPARED FOR NEW TILT-UP WINDOW, VERIFY SIZE IN FIELD
- **K** AREA TO BE PREPARED FOR NEW LIGHT POST
- **L** PREPARE AREA FOR NEW ELEC JUNCTION BOX
- **M** PREPARE AREA FOR NEW PAVILION W/ FOOTERS, CONCEALED ELEC/DATA CONDUITS
- **N** PREPARE AREA FOR NEW SLAB ON GRADE W/ SEATING
- **O** EXISTING REDUNDANT ELEC WIRE TO BE REMOVED. PREPARE AREA FOR NEW EMERGENCY GENERATOR & CONC PAD
- **P** EXISTING PARK BENCHES, INCL FOOTINGS TO BE REMOVED

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE REMOVED
- EXISTING CASEWORK TO BE SALVAGED, SEE KEYNOTES FOR MORE INFORMATION.
- # KEYNOTE
- NOTE APPLIES TO CEILING / OR ABOVE
- NOTE APPLIES TO FLOOR / OR BELOW

GENERAL DEMOLITION AND ALTERATION NOTES:

1. PATCH AND REPAIR ALL DAMAGED SURFACES AFTER NOTED DEMO IS COMPLETE TO MATCH CONSTRUCTION TO REMAIN AND CREATE AN UNNOTICEABLE TRANSITION BETWEEN NEW AND EXISTING CONSTRUCTION.
2. CONTACT ARCHITECT IMMEDIATELY IF EXISTING CONDITIONS VARY FROM WHAT IS SHOWN.
3. REMOVE ALL CONSTRUCTION AS REQUIRED TO EXECUTE NEW WORK EVEN IF NOT SPECIFICALLY NOTED.
4. REMOVE ALL FASTENERS, SUPPORTS AND SIMILAR SYSTEMS.
5. PROVIDE TEMPORARY SHORING TO SUPPORT EXISTING CONSTRUCTION SCHEDULED TO REMAIN AS REQUIRED.
6. ANY PLUMBING, ELECTRICAL OR MECHANICAL EQUIPMENT SCHEDULED TO BE REMOVED THAT IS TIED INTO SYSTEMS THAT ARE TO REMAIN, ARE TO BE REMOVED AND TIED OFF IN A MANNER THAT ALLOWS FOR THE CONTINUOUS OPERATION OF THE SYSTEM.
7. REMOVE ANY EXIST FIRE EXTINGUISHERS AND SALVAGE FOR RELOCATION
8. FOR AREAS NOT DIRECTLY IN SCOPE AREA, BUT RELATED TO, I.E: WHERE RELEVANT WORK IS REQUIRED FOR MEP TIE-INS OR ADJUSTMENTS. TEMPORARY REMOVE AND REINSTALL CEILING AS REQUIRED. PATCH GYPSUM CEILINGS AND WALLS SEAMLESS AT GYPSUM ASSEMBLIES. VERIFY IN FIELD

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

READING
HOUSING AUTHORITY

PROJECT DESCRIPTION

OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

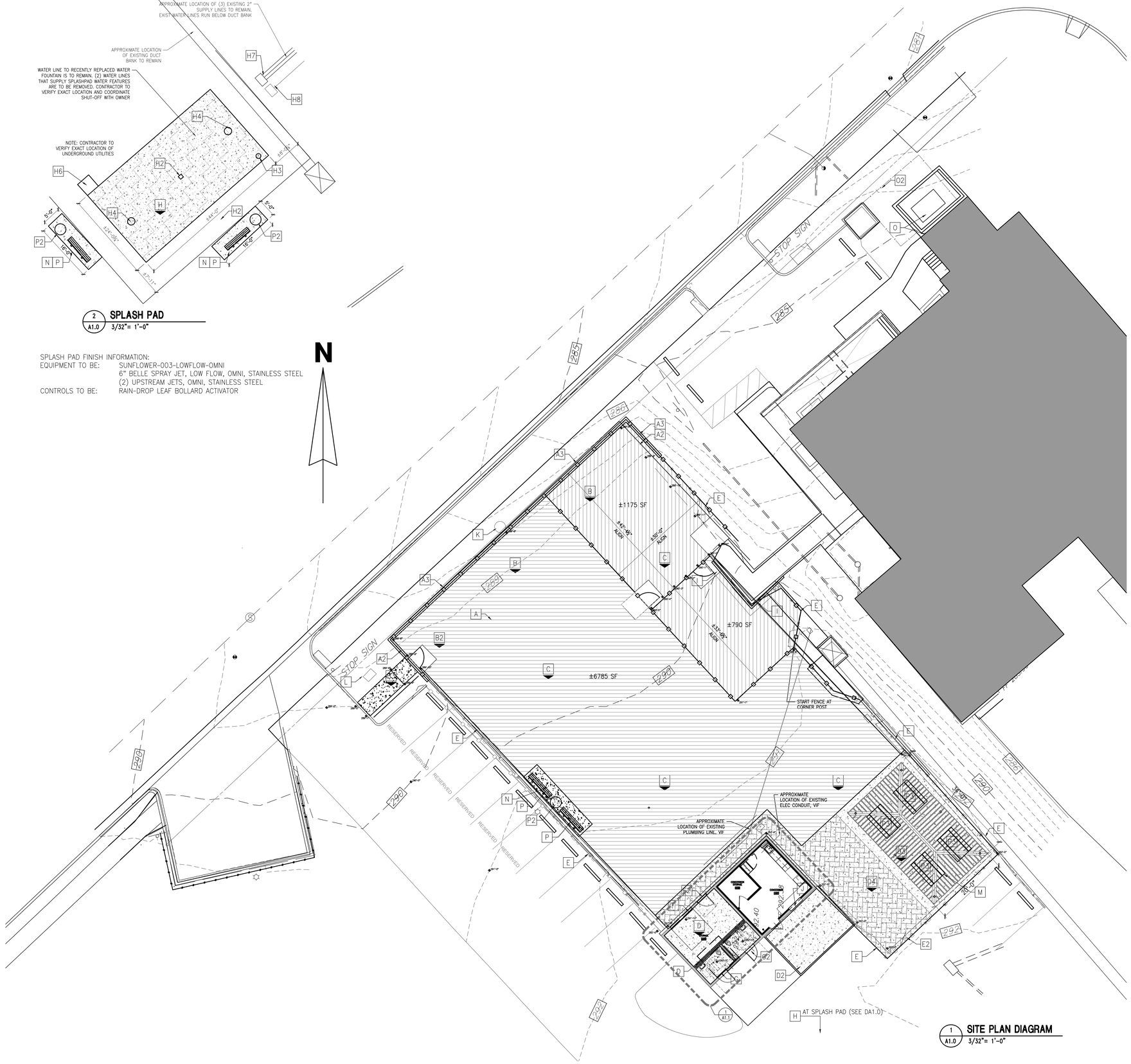
SHEET TITLE	SITE PLAN DEMO		
ISSUE DATE	2026.09.11	SCALE	AS NOTED
FILE NUMBER	2532	DRAWN BY SK	CHECKED BY SK

DA1.0

2 A1.0 **SPLASH PAD**
3/32"= 1'-0"

SPLASH PAD FINISH INFORMATION:

EQUIPMENT TO BE:	SUNFLOWER-003-LOWFLOW-OMNI 6" BELLE SPRAY JET, LOW FLOW, OMNI, STAINLESS STEEL (2) UPSTREAM JETS, OMNI, STAINLESS STEEL
CONTROLS TO BE:	RAIN-DROP LEAF BOLLARD ACTIVATOR



PROPOSED KEYNOTES

- **A** AREA TO BE INCORPORATED INTO PLAYGROUND
- **A2** RELOCATED FENCE POSTS & RETAINING WALL
- **A3** RETAINING WALL & NEW ALUM FENCE TO MATCH EXISTING
- **B** POURED IN PLACE RUBBER & NEW PLAYGROUND ON RE-LEVELED SURFACE
- **B2** POURED IN PLACE RUBBER & NEW PLAYGROUND ON RE-LEVELED SURFACE
- **B3** NEW CONC PAD
- **C** POURED IN PLACE RUBBER & NEW PLAYGROUND ON RE-LEVELED SURFACE
- **D** INTERIOR CONCRETE SLAB REPLACEMENT
- **D2** ASPHALT PAD
- **D3** CONCRETE PAD - COLORED - SMOOTH FINISH
  NOTE: UNDERNEATH PAVILION AND ADJACENT PATIO TO BE SEPARATE POUR, COLOR & FINISH
- **D4** CONCRETE PAD - COLORED - CLEFT/SLATE TEXTURED STAMPED FINISH
  NOTE: UNDERNEATH PAVILION AND ADJACENT PATIO TO BE SEPARATE POUR, COLOR & FINISH
- **E** INSTALL 8" WIDE x 12" HIGH CURB UNDERNEATH EXISTING METAL FENCE. CURB TO EXTEND ±2" ABOVE EXISTING GRADE. VERIFY CONDITIONS WHERE FENCE SLOPES WITH GRADING AND FIELD ADJUST ACCORDINGLY. CONCRETE CURB BECOMES EDGE FOR NEW POURED IN PLACE RUBBER AT PLAYGROUND. RAISED CURB ONLY TO EXTEND ALONG AREA WHERE RUBBER PLAYGROUND IS INTENDED. TRANSITION NEAR PAVILION AND SOUTH ATHLETIC SUPPORT BUILDING TO BE LEVEL W/ ADJACENT AREAS
- **E2** EXISTING FENCE TO REMAIN. SWING GATE TO RECEIVE NEW PICKET INFILL PANEL TO MATCH EXISTING. NEW DRIVEWAY SEAL OVER EXISTING PAD TO REMAIN. INCLUDING RAILING FOOTERS
- **F** TOOTH IN JAMB CONDITIONS, PAINT EXPOSED CMU & HEADER. REINSTALL RELOCATED OVERHEAD DOOR. INSTALL OPERATOR ON EXISTING ROLL-UP DOOR, SEE DOOR HARDWARE FOR SPECIFICATIONS
- **F2** TOOTH IN JAMB CONDITIONS, PAINT EXPOSED CMU & HEADER. NEW HM DOOR & FRAME, PNT.
- **G** INFILL OPENING W/ NEW CMU. TOOTH IN JAMB CONDITIONS AS REQUIRED. INSTALL NEW HEADER TO ACCOMODATE HM, PNT MANDOOR. PAINT DOOR & CMU. SIZE TO MATCH ADJACENT DOOR OPENING
- **G2** VERIFY CONDITIONS IN FIELD: EXISTING DOOR HARDWARE TO BE EXCHANGED FOR NEW RESTROOM LOCKSETS. SEE DOOR HARDWARE FOR MORE INFORMATION. IF EXISTING DOOR AND FRAME CAN NOT ACCOMMODATE NEW HARDWARE CONFIGURATION, REPLACE DOOR & FRAME ENTIRELY. WITH NEW SET OF FRAME & DOOR AT NO ADDITIONAL COST.
  IN THAT CASE THE EXISTING, TO BE REMOVED, DOOR MAY BE REINSTALLED ON OPPOSITE WALL WHERE A STORAGE DOOR IS REQUIRED.
- **H** NEW 6" CONCRETE SPLASH PAD. CUSTOM COLOR PAINTED, SLOPE TO DRAIN W 3-COAT TOPICAL (CLOVERLEAF) SAFE DECK COATING - MULTICOLOR
- **H2** NEW SPLASH PAD DRAIN AND DRAIN PIPE
- **H3** NEW SPLASH PAD CONTROLS. REPLACE PORTION OF CONDUITS BELOW SLAB AND ASPHALT TO ENSURE WATER TIGHT TIE-IN
- **H4** NEW WATER FEATURE. ADJUST 2" WATER SUPPLY LINES AS NEEDED
- **H5** NEW WATER FEATURE. ADJUST 2" WATER SUPPLY LINES AS NEEDED
- **H6** EXISTING DRINKING FOUNTAIN TO REMAIN. SUPPLY LINES TO BE REPLACED FROM JUNCTION BOX
- **H7** NEW JUNCTION BOX FOR NEW WATER SUPPLY LINES TO FEED WATER FEATURE. EXISTING LINES TO BE MODIFIED FOR NEW CONNECTION
- **H8** NEW JUNCTION BOX FOR NEW ELEC LINES TO FEED WATER FEATURE. EXISTING LINES TO BE MODIFIED FOR NEW CONNECTION
- **I** NEW & MODIFIED FENCE NEAR PLAYGROUND. MODIFY TO TIE NEW INTO EXSTING.
- **J** NEW GAS-STRUT WINDOW W/ ALUM INSULATED PANEL & CUSTOM CUT POLYCARBONATE PANEL IN OPENING. SEE A1.2 FOR ADDITIONAL DETAILS
- **K** NEW LIGHT POST
- **L** ELEC JUNTION BOX FOR FUTURE ELEC GATE
- **M** NEW 34X20 PAVILION /W INTEGRAL LIGHTING
- **N** CONC SLAB ON GRADE
- **O** NEW EMERGENCY GENERATOR ON CONC PAD
- **O2** SHADOW BOX WD FENCE 6 FT HT
- **P** PICNIC GROVE BENCHES
  BASIS OF DESIGN: FROG FURNITURE HERITAGE BRO - 8 FT LENGTH ON 14X5 FT CONCRETE PAD. CONCRETE PAD TO EXTEND 5 FT MIN FOR WHEELCHAIR SEATING ON 1 SIDE.
- **P2** TRASH CAN W/ FLAT LID
  BASIS OF DESIGN: FROG FURNITURE JACKSON PB36JACBLA OR ULINE H-2865BL
  ALL TRASH CANS MOUNTED TO 36" DEEP - 12" SONA-TUBE
- **P3** PICNIC GROVE TABLES: BASIS OF DESIGN: (3) BARCO GOLIATH KBM1455-GY + (1) GOLIATH KBM1460-GY ADA

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

LEGEND:

- EXISTING WALL STRUCTURE TO REMAIN. PROVIDE ADDITIONAL FRAMING AND BLOCKING AS REQUIRED BY NEW CONSTRUCTION REQUIREMENT.
- EXISTING CONSTRUCTION TO BE REMOVED
- NOTE APPLIES TO CEILING, OR ABOVE
- # KEYNOTE
- NOTE APPLIES TO FLOOR, OR ABOVE

GENERAL NOTES:

1. ALL DIMENSIONS ARE APPROXIMATE, VERIFY IN FIELD.
2. ALL CIRCUITS FOR NEW LIGHTS AND ELECTRICAL RECEPTACLES TO BE ARC FAULT PROTECTED IN ADDITION TO REQUIRED GROUND FAULTING
3. EXISTING EMERGENCY EXIT SIGNAGE & EGRESS LIGHTING TO REMAIN
4. EXISTING SMOKE DETECTORS AND FIRE DETECTION SYSTEM TO REMAIN. PROVIDE NEW STROBES/ANNUNCIATORS TO TIE IN WITH OPERATION OF EXISTING SYSTEM
5. ANY EXISTING GWB WALL TO REMAIN, THAT RECEIVES MEP UTILITIES ARE TO OPENED TO MINIMUM FOR INSTALLATION PURPOSES. PATCH AND PAINT SEAMLESS
6. ANY MEP SYSTEMS IN CMU AND NEW CONSTRUCTED BATHROOM TO BE INSTALLED RECESSED IN CMU WALL.
7. EXISTING GRADING INDICATERS ARE APPROXIMATES. GENERAL CONTRACTOR TO ESTABLISH BASE POINT AND ADJUST SLOPES EVENLY TO TIE INTO ADJACENT SURFACES.
8. GC TO COORINDATE ALL FOOTERS AND CAST-IN-PLACE FLOORING AND SUBGRADE REQUIREMENTS WITH SUPPLIER / INSTALLER AND ROTATE/SHIFT ACCORDINGLY TO AVOID EXISTING UNDERGROUND UTILITIES
9. ALL EXISTING FENCING TO REMAIN SURROUNDING THE PLAYGROUND IS TO BE PAINTED

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

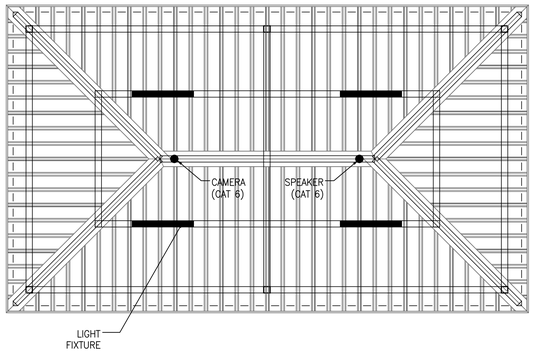
READING
HOUSING AUTHORITY

PROJECT DESCRIPTION

OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	SITE PLAN		
ISSUE DATE	2026.09.11	SCALE	AS NOTED
FILE NUMBER	2532	DRAWN BY SK	CHECKED BY SK

A1.0



8 A1.1 **PAVILION RCP**
1/4" = 1'-0"

PLUMBING FIXTURES AND ACCESSORY SCHEDULE			
ITEM	DESCRIPTION	BASIS OF DESIGN MODEL #	REMARKS: PROVIDE ADA COMPLIANT FIXTURES, TRIM, ACCESSORIES AND INSTALLATION
CH2	COAT HOOK (2 HOOKS)	BOBRICK B-983	MOUNT @ ±4'-0" TO T.O. HOOKS FOR ADA 66" AT NON-ADA LOCATIONS AT ALL DOORS
GB18	GRAB BAR 18"	BOBRICK B-6806X18	CONCEALED FASTENERS
GB36	GRAB BAR 36"	BOBRICK B-6806X36	CONCEALED FASTENERS
GB42	GRAB BAR 42"	BOBRICK B-6806X42	CONCEALED FASTENERS
M	MIRROR	BOBRICK B-2908 2436: 24" W x 36" H (61 x 91cm)	STAINLESS STEEL FRAME
S1	SINK	ACORN 1953-1-DMS-04-M-GT-TPT	W/ VALVE COVER
T	TOILET - WALL MOUNT	ACORN MODEL 2100-W-ADA -1.28GPF-MVCFV-HPS-OFLC -3395-FTA-FVT-TF-CN	STAINLESS STEEL, WALL MOUNT, 1.28GPF, TIME TROL FLUSH VALVE & COVER-ACCESS PANEL, FLOOD-TROL AUTO RESET, W LID & SHIPPING COVER, CONCEALED NUTS, ADA w/ ZURN CARRIER
TPH	TOILET PAPER HOLDER	BOBRICK B-4288	W/ VALVE COVER
HD	TOILET PAPER HOLDER W/ SANITARY NAPKIN DISPOSAL	PINNACLE-PDC-R12	INSTALL ADA HT
FD	FLOOR DRAIN	SEE MEP	SLOPE TO DRAIN
WD	WASTE RECEPTACLE	BOBRICK B-35649	
SD	SOAP DISPENSER	BOBRICK B-26627	SURFACE-MOUNTED FOAM SOAP DISPENSER
ALL ELEC WIRING TO BE INSTALLED INSIDE CMU CELLS			

ROOM FINISH SCHEDULE

– = NOT APPLICABLE

FLOOR REFERENCE	ROOM NUMBER	ROOM NAME / NOTE	(1) FLOOR	(2) BASE	(3) WALL NORTH	(3) WALL SOUTH	(3) WALL EAST	(3) WALL WEST	(4) WALL PAINT	(5) CEILING	CEILING HT	(6) REMARKS
1ST FLOOR	A101	CONCESSION	–	–	–	–	–	–	–	–	–	–
	A102	CONCESSION STORAGE	–	–	–	–	–	–	–	–	–	–
	A103	STORAGE	A	A	A	A	A	A	A	–	–	–
	A104	RESTROOM	A	A	A	A	A	A	A	A	±9'-6"	–
	A105	RESTROOM	A	A	A	A	A	A	A	A	±9'-6"	–
NOTES:												

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

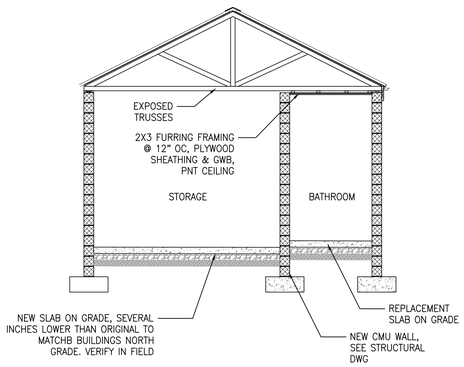
1: FLOOR
A. EPOXY

2: WALL BASE
A: INTEGRAL COVE BASE

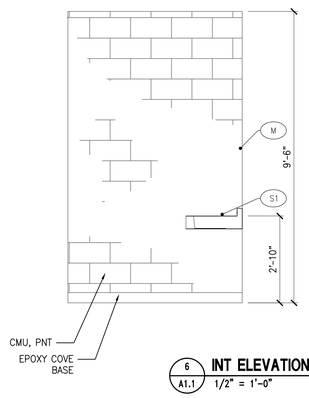
3: WALL FINISH
A: CMU, PNT

4: WALL PAINT
A: EPOXY

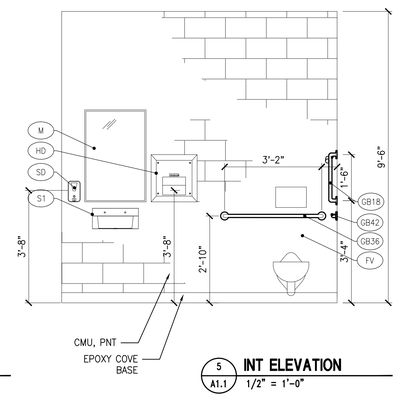
5: CEILING
A: GWB, PNT



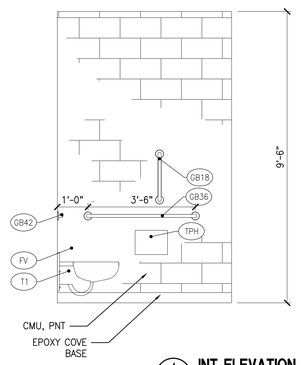
7 A1.1 **SECTION**
1/4" = 1'-0"



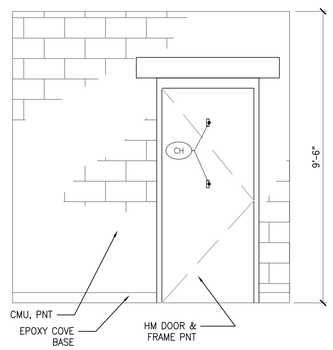
6 A1.1 **INT ELEVATION**
1/2" = 1'-0"



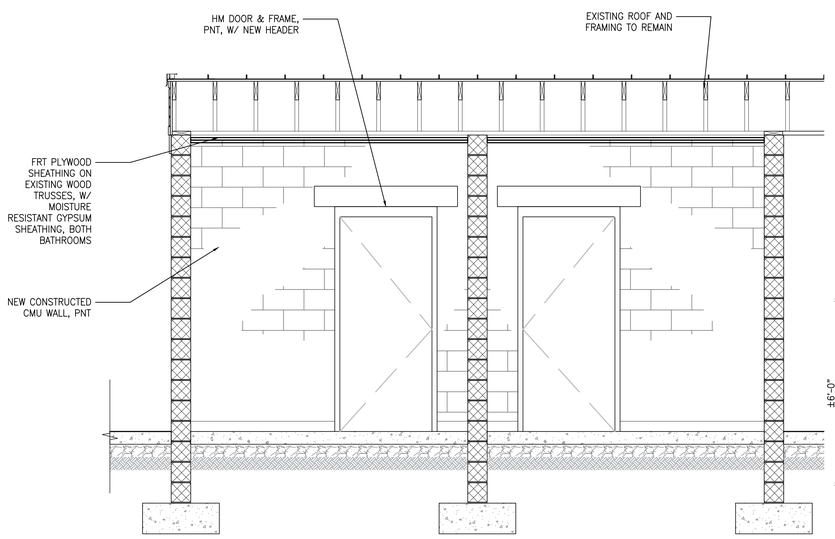
5 A1.1 **INT ELEVATION**
1/2" = 1'-0"



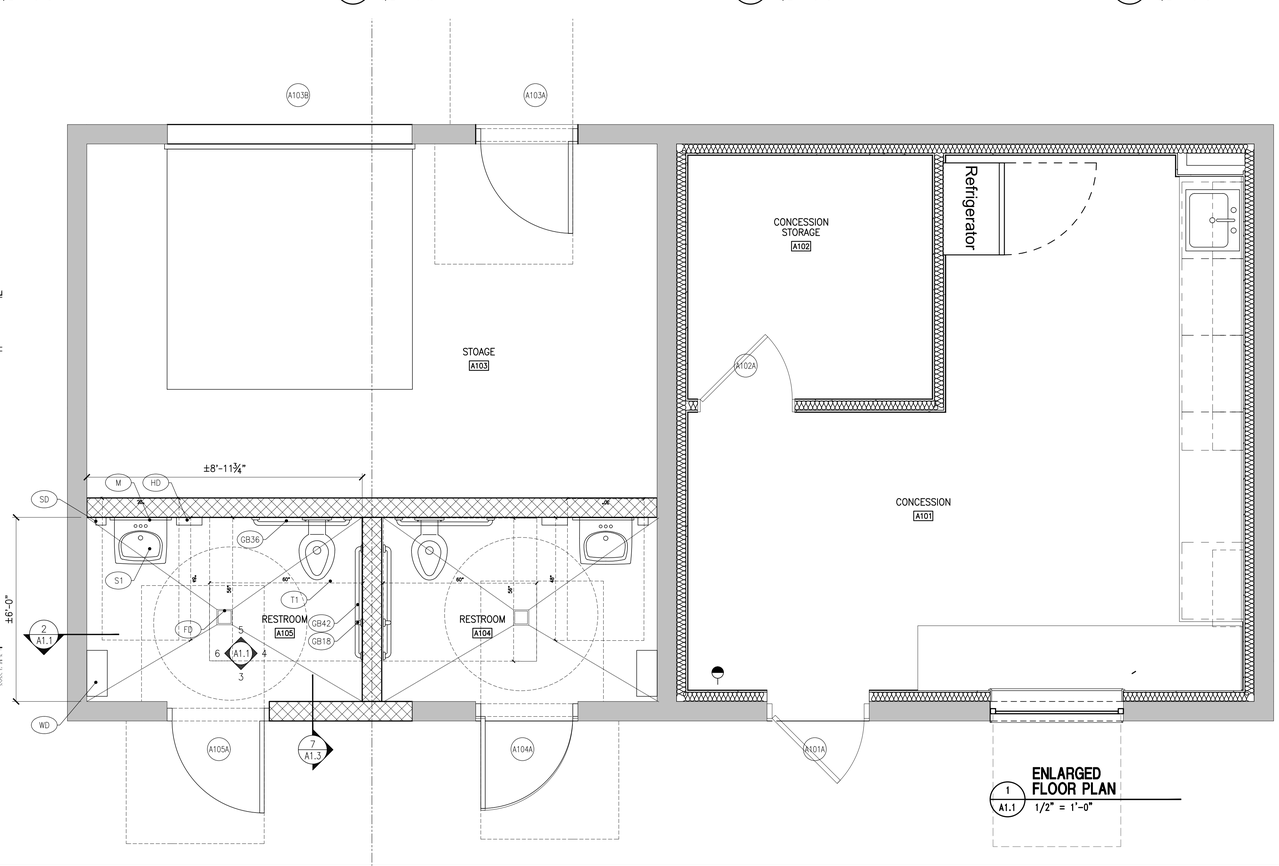
4 A1.1 **INT ELEVATION**
1/2" = 1'-0"



3 A1.1 **INT ELEVATION**
1/2" = 1'-0"



2 A1.1 **SECTION**
1/2" = 1'-0"



1 A1.1 **ENLARGED FLOOR PLAN**
1/2" = 1'-0"

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

READING
HOUSING AUTHORITY

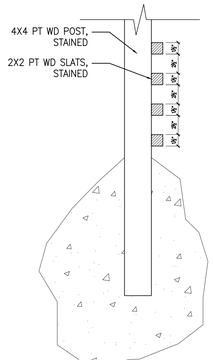
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE FLOOR PLAN, ELEVATION, SECTION

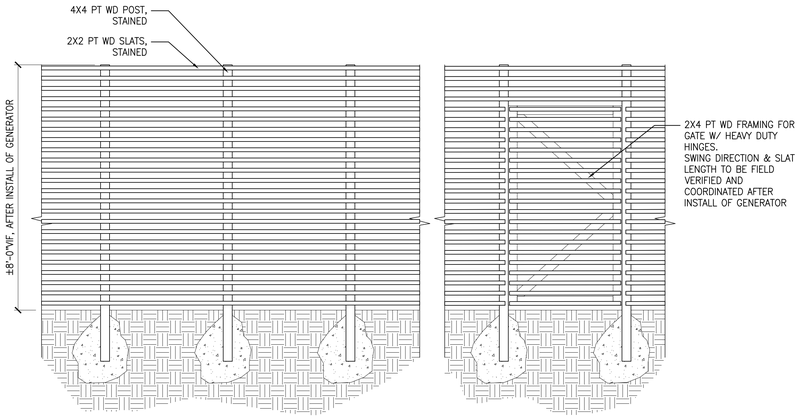
ISSUE DATE 2026.09.11 | SCALE AS NOTED

FILE NUMBER 2532 | DRAWN BY SK | CHECKED BY SK

A1.1



12 A1.2 **GENERATOR FENCING LOUVER DETAIL**
1 1/2" = 1'-0"



11 A1.2 **GENERATOR FENCING LOUVER DETAIL**
1/2" = 1'-0"

Bill of materials

Oakbrook Playground (2)

RHA Reading Housing Authority

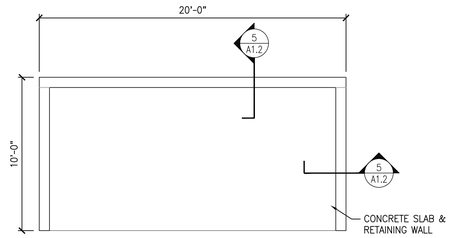
Torrey Cooper
PA
United States

Axis products

	Part number	Qty
Cameras		
AXIS M4348-PLVE	03133-001	1
AXIS P3827-PVE	02450-001	1
AXIS P5654-E Mk II 60HZ	02915-001	1
Audio/visual alerters		
AXIS D4200-VE Network Strobe Speaker	02930-001	1
Accessories		
AXIS T91B57 Pole Mount 100-410 mm	01470-001	1
AXIS T91G61 Wall Mount	5506-951	1
AXIS T94501P Conduit Back Box	01190-001	1

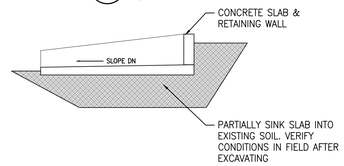
Products and part numbers for installation in: United States

10 A1.2 **ELEC PRODUCTS**
NTS



7 A1.2 **SLAB PLAN**
1/2" = 1'-0"

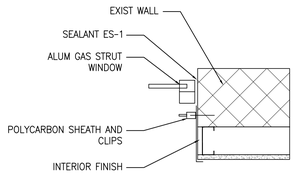
6 A1.2 **SLAB SECTION**
1/2" = 1'-0"

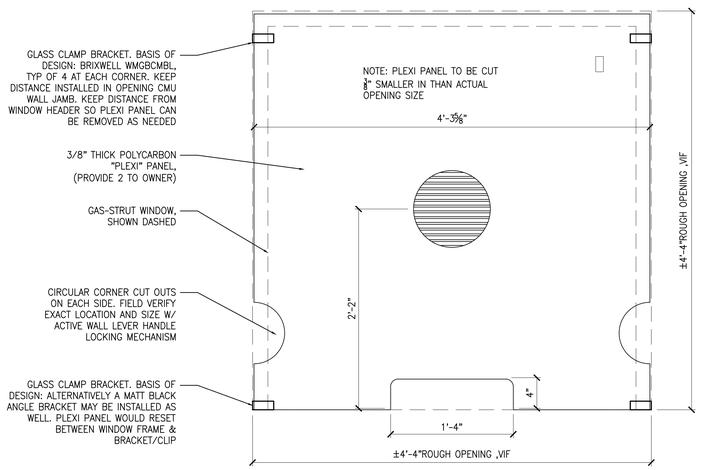


5 A1.2 **SLAB SECTION**
1/2" = 1'-0"

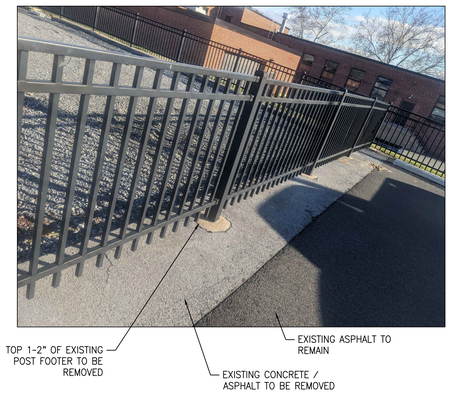
TILT-UP WINDOW IN EXSTING OPENING:

- BASIS OF DESIGN: ACTIV-WALL GAS-STRUT WINDOWS
- ±52"x52" (VERIFY CUSTOM SIZE IN FIELD)
- THERMALLY BROKEN ALUMINUM
- NO SILL
- BLACK SATIN POWDERCOAT FINISH
- INSULATED METAL ALUM PANEL INSTEAD OF GLAZING IN OPENING PANEL COLOR TO BE MATCHING ATAS REGAL BLUE
- CONTRACTOR TO SUPPLY & INSTALL EXTERIOR GRADE 24"X24" FULL COLORED DECAL LOGO INSTALLED CENTERED ON ALUM PANEL
- HANDLE ON INTERIOR SIDE ONLY

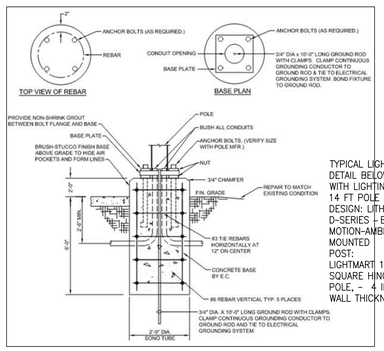




4 A1.2 **LOUVER DETAIL**
1 1/2" = 1'-0"



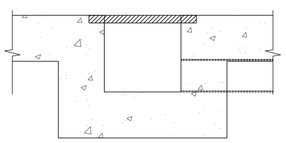
8 A1.2 **FENCE SCOPE**
NTS



TYPICAL LIGHT POLE MOUNTING DETAIL BELOW. FINAL COORDINATION WITH LIGHTING REP & SUPPLIER. 14 FT POLE LIGHT: BASIS OF DESIGN: LITHONIA LIGHTING D-SERIES - BLACK WITH MOTION-AMBIENT SENSOR – POST MOUNTED
POST:
LIGHTMART 14A4SSH125 14 FOOT SQUARE HINGED ALUMINUM LIGHT POLE, - 4 INCH WIDE, 0.125 INCH WALL THICKNESS

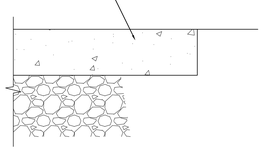
9 A1.2 **LIGHTPOST FOOTER**
NTS

3 A1.2 **SLATE TEXTURED STAMP CONCRETE PATTERN**
NTS



2 A1.2 **DRAIN SLAB DETAIL**
1 1/2" = 1'-0"

SAW-CUT CONTROL JOINTS 1 ¼" DEEP BETEEN 4 AND 12 HOURS AFTER POUR. IN ACCORDANCE W ACI318. DO NOT CONFLICT W/ WATER FEATURES



1 A1.2 **SLAB DETAIL**
1 1/2" = 1'-0"

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

REVISIONS

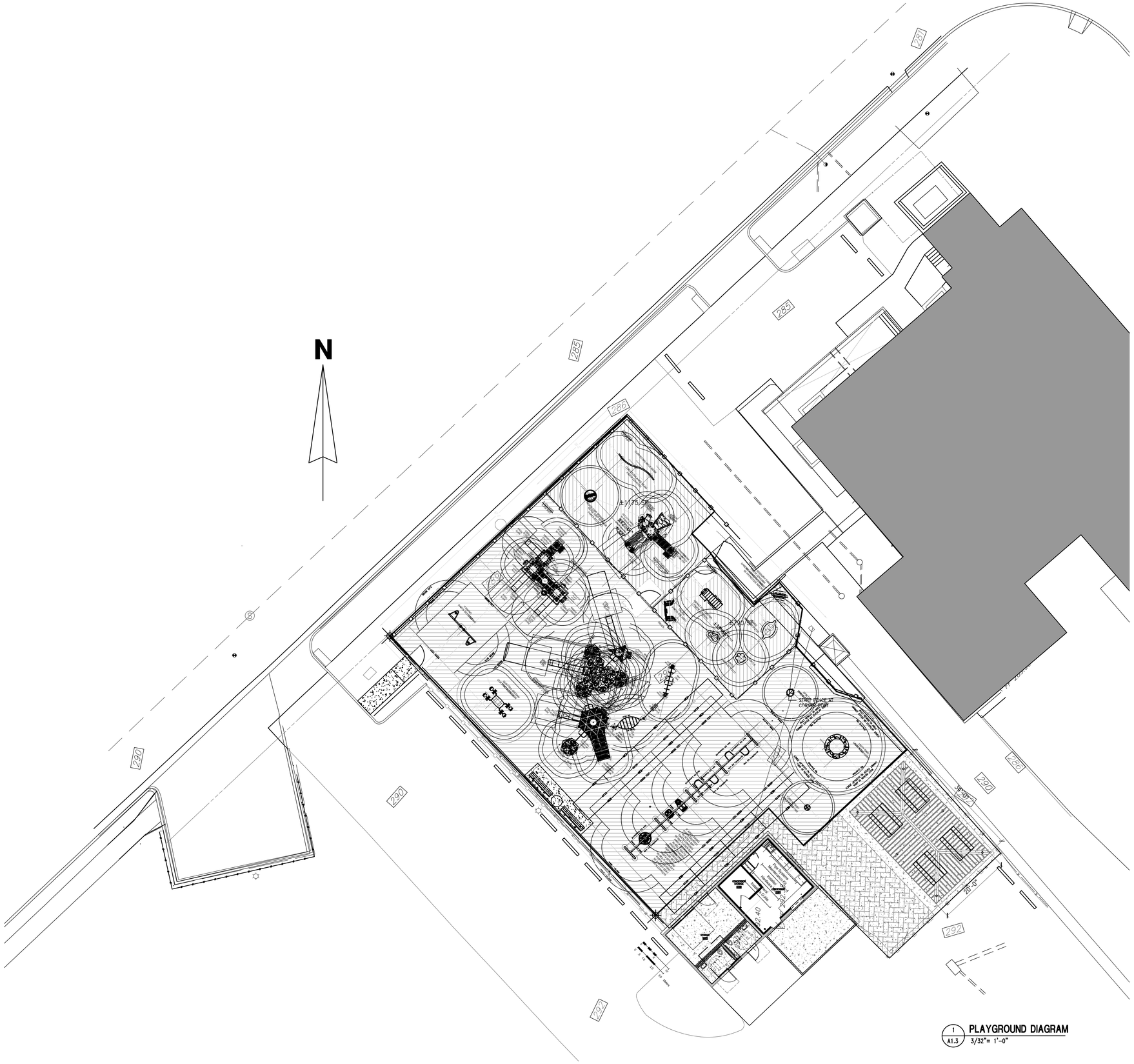
HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

READING
HOUSING AUTHORITY

PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	MISC DETAILS		
ISSUE DATE	2026.09.11	SCALE	AS NOTED
FILE NUMBER	2532	DRAWN BY SK	CHECKED BY SK

A1.2



1 / A1.3 **PLAYGROUND DIAGRAM**
3/32"= 1'-0"

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

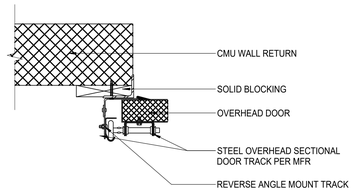
READING
HOUSING AUTHORITY

PROJECT DESCRIPTION

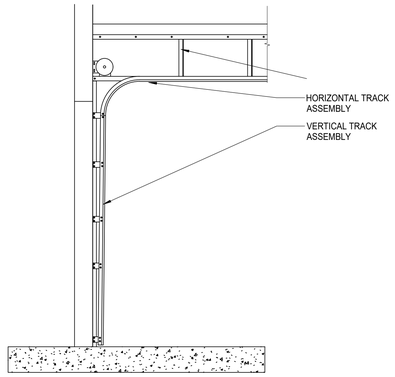
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	PLAYGROUND PLAN		
ISSUE DATE	2026.09.11	SCALE	AS NOTED
FILE NUMBER	2532	DRAWN BY SK	CHECKED BY SK

A1.3

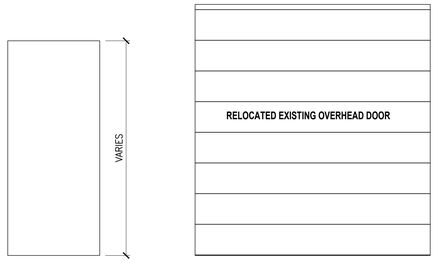


TYPICAL OD JAMB DETAIL
H2 / A1.4 — 1 1/2" = 1'-0"



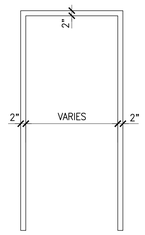
TYPICAL OD HEAD DETAIL
H2 / A1.4 — 1" = 1'-0"

(1) DOOR TYPES



A B

(4) FRAME TYPES



A

AA: 4" HEADER

(2) DOOR MATERIAL & FINISH

A. INS HM, PNT

(4) FRAME MATERIAL & FINISH

A. HM - PNT

(5) DOOR & FRAME LABEL

N/A

(6) HARDWARE GROUPS (NON-FERROUS)

1: RESTROOM:
3 HEAVY DUTY BUTT HINGES
1 RESTROOM MORTISE LOCK WITH LEVER HANDLES
1 SURFACE MOUNTED OVERHEAD STOP
1 WALL STOP
2 KICK PLATE (1 EACH SIDE)
1 GASKET
1 DOOR SWEEP
1 CLOSER
1 DRIP CAP

2: STORAGE
3 HEAVY DUTY BUTT HINGES
1 SURFACE MOUNTED OVERHEAD STOPS
1 STOREROOM LOCKSET WITH LEVER HANDLES
2 KICK PLATES (1 EACH SIDE)
1 GASKET
2 DOOR SWEEPS
1 DRIP CAP

(7) REMARKS

A. EXISTING OVERHEAD DOOR IS TO BE RELOCATED INTO A NEW CONSTRUCTED OPENING ON NORTH WALL OF THE BUILDING. GENERAL CONTRACTOR TO VERIFY EXISTING OVERHEAD DOOR AND CONSTRUCT A NEW OPENING FOR THE EXISTING DOOR THAT IS TO BE RELOCATED.
B. GENERAL CONTRACTOR SHALL INSTALL AUTOMATIC GARAGE DOOR OPENER ON EXISTING RELOCATED OVERHEAD DOOR. BASIS OF DESIGN: OVERHEAD DOOR DESTINY 1200 W/ INTERIOR MOUNT PUSH BUTTONS.
C. EXISTING RESTROOM DOOR IS ALLOWED TO REMAIN IF NEW SPECIFIED HARDWARE CAN BE INSTALLED IN EXISTING DOOR. GENERAL CONTRACTOR TO VERIFY CONDITIONS. GENERAL CONTRACTOR TO PRICE FOR A FULL REPLACEMENT DOOR AS LISTED. IF EXISTING DOOR CAN NOT REMAIN THE REPLACEMENT DOOR SHALL BE INCLUDED IN BID AND AT NO ADDITIONAL COST TO OWNER

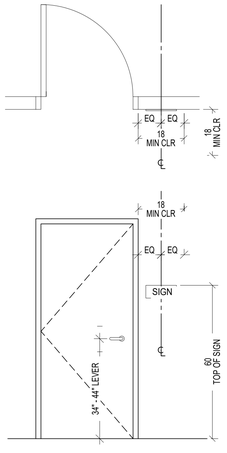
DOOR SCHEDULE

– = NOT APPLICABLE

FLOOR REFERENCE	DOOR NUMBER	DOOR				FRAME		DETAIL			MISC			
		NOTE		(1)	(2)	(4)	(5)						(6)	(7)
		SIZE	THICKNESS	TYPE	MATERIAL & FINISH	FRAME TYPE	MATERIAL & FINISH	HEAD	JAMB	SILL	DOOR & FRAME LABEL	SIGNAGE	HARDWARE GROUP	REMARKS
	101A	EXISTING	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
	102A	EXISTING	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
	103A	3'-0"X7'-0"	1 3/4"	A	A	AA	A	H1	J1	S1	–	A	1	
	103B	8'-0"X8'-0"	ETL	ETL	ETL	ETL	ETL	H2	J2	S2	–	–	–	A,B
	104A	3'-0"X7'-0"	1 3/4"	A	A	A	A	H1	J1	S1	–	A	2	C
	105A	3'-0"X7'-0"	1 3/4"	A	A	A	A	H1	J1	S1	–	A	2	

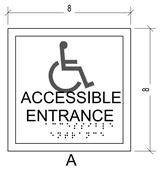
NOTES:
ETR: EXISTING TO REMAIN
ETL: EXSTING TO BE RELOCATED

SIGNAGE INSTALLATION INSTRUCTIONS:

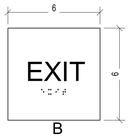


NOTE:
SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. AT DOUBLE DOORS SIGNS SHALL BE MOUNTED ON THE INACTIVE LEAF SIDE.
IF BOTH LEAFS ARE ACTIVE THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR.
WHERE NO WALL SPACE EXISTS ON THE LATCH SIDE OF THE DOOR OR RIGHT SIDE OF DOUBLE DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL.
MOUNTING LOCATION FOR SUCH SIGNAGE SHALL BE SO THAT A PERSON MAY APPROACH WITHIN 3" (76 MM) OF THE SIGNAGE W/O ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR

SIGN SCHEDULE:

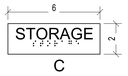


A



B

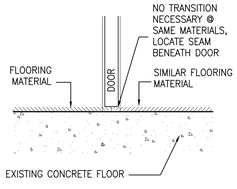
STANDARD TACTILE "EXIT" SIGNS WITH BRAILLE DUPLICATE LOCATED AT EGRESS DOORS



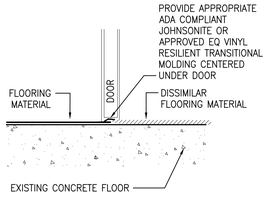
C

NOTES:

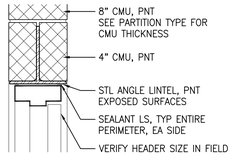
1. ALL SIGNS TO BE ADA COMPLIANT
2. ALL SIGNS TO MATCH EXISTING STANDARD SIGNS, MATERIALS, COLORS, MOUNTING, LETTERING, SPACING, CONFIGURATION ETC
3. MATERIAL BY OWNER
4. ALL SIGNS MUST BE APPROVED BY OWNER BEFORE FABRICATION
5. TYPICAL ROOM SIGNS WITH BRAILLE DUPLICATE, INFORMATION DISPLAYED BASED ON ROOM NAME AND NUMBER AS SHOWN ON ARCHITECTURAL PLANS, CONFIRM WITH OWNER DURING SHOP DRAWING PROCESS.



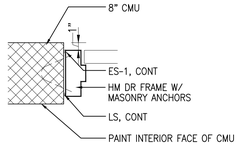
TYPICAL SILL DETAIL
S1 / A1.4 — 1 1/2" = 1'-0"



TYPICAL SILL DETAIL
S2 / A1.4 — 1 1/2" = 1'-0"



TYPICAL DOOR HEAD DETAIL
H1 / A1.4 — 1 1/2" = 1'-0"



TYPICAL DOOR JAM BDETAIL
J1 / A1.4 — 1 1/2" = 1'-0"

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

READING HOUSING AUTHORITY

PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE DOOR SCHEDULE & DETAILS

ISSUE DATE 2026.09.11 | SCALE AS NOTED

FILE NUMBER 2532 | DRAWN BY SK | CHECKED BY SK

A1.4

STRUCTURAL SPECIFICATIONS AND GENERAL CONDITIONS

GENERAL

1. Where these specifications conflict with other project specifications, these specifications shall govern.
2. Durst & Taylor Structural Engineering, LLC will assume no responsibility and/or liability for problems which arise from failure to follow these plans, specifications, and the design intent they convey or for problems which arise from others' failure to obtain and/or follow the Engineer's guidance.
3. All work shall be performed in accordance with local applicable codes and regulations. Appropriate safety measures satisfying local and OSHA requirements shall be provided.
4. Proper temporary bracing of all construction work in progress is the Contractor's responsibility.
5. If during demolition existing conditions do not agree with information shown on the design drawings, the Contractor shall notify the Engineer immediately.
6. The Contractor shall be responsible for the location and protection of all existing utilities during construction and the repair of any damaged facilities.
7. Sections and details shown, while drawn for specific locations, are intended to establish the general types of details to be used throughout.
8. Drawings should not be scaled. Contact the Engineer for clarification of any dimension in question.
9. Anchor bolt layout shall be performed under the direction of a professional land surveyor.
10. All dimensions shall be verified by the Contractor. Layout shall be checked and coordinated between all construction documents and specifications prior to the start of work.
11. Shop drawings prepared by the subcontractors, suppliers, etc. shall be reviewed by the Engineer for conformance with design concept only. Each shop drawing submitted shall be stamped, initialed and dated as being reviewed by the construction manager/general contractor. Work shall not begin without the review by the Engineer.
12. Any engineering design provided by others and submitted for review or record shall bear the stamp and signature of a professional structural engineer registered in the state in which the project is located.

DESIGN DATA

1. Building Code = 2021 International Building Code
2. Roof Load:
   2.1. Dead Load = 15 PSF (includes structure weight)
   2.2. Live Load = 30 PSF
3. Snow Load: (Roof Live Load May Control)
   3.1. Ground Snow Load, Pg = 30 PSF
   3.2. Min. Roof Snow Load = 30 PSF
   3.3. Flat Roof Snow Load, Pf = 25.2 PSF
   3.4. Snow Exposure Factor, Ce = 1.0
   3.5. Snow Load Importance Factor, Is = 1.0
   3.6. Thermal Factor, Ct = 1.2
4. Lateral Soil Load:
   4.1. Soil Unit Weight = 120 PCF
   4.2. At-Rest Pressure = 45 PSF/FT.
   4.3. Active Pressure = 60 PSF/FT.
5. Wind Load:
   5.1. Basic Wind Speed (3-second gust) = 115 MPH
   5.2. Wind Importance Factor, Iw = 1.0
   5.3. Building Category = II
   5.4. Exposure Category = B
   5.5. Internal Pressure Coefficient, GCpi = ±0.18
   5.6. Wind Design Pressure (MWFRS) = 25 PSF (Apply a 0.6 load factor for ASD load combinations and a 1.0 load factor for LRFD load combinations)
   5.7. Wind Pressures (Components & Cladding):
   Building exterior components and cladding shall be designed for the required components and cladding pressures of ASCE 7-16.
6. Earthquake Design Data:
   6.1. Building Category = II
   6.2. Seismic Importance Factor, Ie = I.0
   6.3. Mapped Spectral Response Accelerations:
      6.3.1. Ss = 0.196
      6.3.2. S1 = 0.061
   6.4. Site Class = D (assumed)
   6.5. Spectral Response Coefficients:
      6.5.1. Sds = 0.209
      6.5.2. Sd1 = 0.098
   6.6. Seismic Design Category = B
7. Concrete Design Method:
   7.1. Design per ASD
   7.2. Loads indicated are ASD loads
8. Concrete Masonry Design Method:
   8.1. Design per LRFD
   8.2. Loads indicated are ASD loads

SPECIAL INSPECTION REQUIREMENTS

1. The following types of work require special inspection based on Section 1704 of the 2018 International Building Code. The owner will employ special inspectors who shall provide special inspections for compliance with the construction documents and other references noted. Reports shall be submitted to the Engineer and Building Official on a periodic basis. A final report shall be submitted documenting required special inspections and correction of any discrepancies prior to the end of construction.
   1.1. Soils
      1.1.1. Verify materials below footings are adequate to achieve the design bearing capacity.
      1.1.2. Verify excavations are extended to proper depth and have reached proper material.
      1.1.3. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill with a total depth greater than 12".
      1.1.4. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly.
2. Concrete Construction
   2.1. Periodic inspection of reinforcing steel, including prestressing tendons & placement for compliance with approved Construction Documents and ACI 318, Sections 3.5 and 7.1 - 7.7.
   2.2. Continuous inspection of welding of reinforcing steel in accordance with AWS D1.4 and ACI 318, Section 3.5.2.
   2.3. Continuous inspection of bolts installed in concrete prior to and during placement of concrete where allowable loads have been increased.
   2.4. Periodically verify the use of required concrete design mixtures, in accordance with ACI 318, Chapter 4 and Section 5.2 - 5.4.
   2.5. Verify sampling of fresh concrete to determine slump, air content and temperature when making specimens for strength tests, in accordance with ACI 318, Sections 5.6 and 5.8.
   2.6. Continuous inspection of concrete and shotcrete placement for proper application techniques in accordance with ACI 318, Sections 5.9 and 5.10.
   2.7. Periodic inspection for maintenance of curing temperatures and techniques to ensure compliance with ACI 318, Sections 5.11 - 5.13.
   2.8. Continuous inspection of application of prestressing forces and grouting of bonded prestressing tendons in the seismic-force-resisting system, in accordance with ACI 318, Sections 18.18.4 and 18.20.
   2.9. Periodically inspect erection of precast concrete members to ensure compliance with ACI 318, Chapter 16.
   2.10. Periodic verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete, and prior to removal of shores and forms from beams and structural slabs, in accordance with ACI 318, Section 6.2.
3. Masonry Construction (Level I Inspection)
   3.1. Periodically verify proportions of site-prepared mortar, construction of mortar joints, and location of reinforcement and connectors for compliance with construction documents.
   3.2. Periodically verify size and location of structural elements; type, size, and location of anchors, including masonry anchorage to structural members; and protection of masonry during cold weather (<40°F) or hot weather (>90°F).
   3.3. Periodic inspection of size, grade, and type of reinforcement. Continuous inspection is required for welding of reinforcing bars.
   3.4. Periodic inspection, prior to grouting, to verify clean grout space, placement of reinforcement and connectors, proportions of site-prepared grout, and construction of mortar joints.
   3.5. Continuously verify grout placement to ensure compliance with code and construction document provisions.
   3.6. Continuously verify preparation of any required grout specimens, mortar, specimens, and/or prisms.
   3.7. Periodically verify compliance with required inspection provisions of the construction documents and approved submittals.
4. Structural Steel
   4.1. Welding inspection shall be in compliance with AWS D1.1. The basis for welding inspector qualification shall be AWS D1.1.
   4.2. Periodically verify compliance with framing and connection details on the construction documents.
   4.3. Verify that high-strength bolts, nuts, washers, structural steel, and weld filler materials conform to applicable standards in the construction documents. Verify manufacturer's certificate of compliance or certified mill test reports.
   4.4. Periodically inspect installation of high-strength bolts in accordance with AISC Specifications.
   4.5. Verify pre-installation testing and calibration procedures; that bolted parts are in snug contact; and installation procedure for bolts requiring pre-tensioning.
   4.6. Periodically inspect bolts requiring pre-tensioning when using the turn-of-nut method with matchmarking, the direct tension indicator method, or the alternate design fastener (twist-off bolt) method.
   4.7. Continuously inspect bolts requiring pre-tensioning when using the calibrated wrench method or turn-of-nut method without matchmarking.
   4.8. Verify bolted parts are in snug contact, and monitor installation and tightening on a periodic basis for bolts requiring only snug tight condition.
   4.9. Periodic inspection of welding for single-pass fillet welds <5/16" and floor and deck welds.
   4.10. Continuous inspection of complete and partial penetration groove welds, multi-pass fillet welds, and single-pass fillet welds >5/16".
   4.11. Inspection of Fabricators
      4.11.1. When a fabricator is not registered and approved to perform work without special inspection, or does not have a certificate of compliance, a special inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to approved construction documents. Procedures shall be reviewed for completeness and adequacy relative to the code requirements for the fabricator's scope of work.

CONSTRUCTION PROCEDURES AND SAFETY REQUIREMENTS

1. The contract structural drawings and specifications represent the finished structure. Unless otherwise indicated, they do not indicate the means or methods of construction.
2. Provide all measures necessary to protect the workmen and other persons during construction. Provide all necessary measures to avoid excessive stresses and to hold the structural elements in place during construction. Such measures shall include, but not be limited to, bracing, shoring for construction equipment, shoring for earth banks, forms, scaffolding, planking, safety nets, support and bracing for cranes and hoists, guying, etc.
3. Engage properly qualified persons to determine where and how temporary precautionary measures shall be used. Observation visits to the site by structural engineer's field representative shall not include the items noted above.
4. Supervise and direct the work so as to maintain sole responsibility for all construction means, methods, techniques, sequences, and procedures. Retain the services of a professional structural engineer licensed in the state in which the project is located to design and supervise any scaffolding for workmen, and all shoring of forms and elements of the construction.

FOUNDATION CONSTRUCTION

1. Allowable soil bearing pressure (net) assumed in design is 3000 PSF (pounds per square foot) based on the geotechnical engineering investigation prepared by _____ Project No. _____ dated _____
2. Soil bearing capacity shall be field verified by an approved soil testing agency and documented in writing to the Engineer.
3. If soil of design capacity is not encountered at footing elevations shown, excavate to a depth necessary to attain design capacity and extend foundations as required. Obtain Engineer's approval prior to lowering the foundations.
4. The bottoms of all exterior footings shall extend a minimum of 3'-0" below finished grade unless noted otherwise.
5. Excavate all foundations to reasonable exact outline and depth avoiding over-excavation and cave-in of surrounding material. Bottoms of all foundations shall be dry, soil proof-rolled, and rock surfaces leveled and cleared of loose debris prior to pouring.
6. Neatly level and trim all foundation excavations prior to setting steel.
7. Pipes extending under footings shall be placed before footing is placed and the void produced in laying the pipe shall be filled with 3000 psi concrete.
8. Thoroughly compact all foundation and slab subgrade material prior to placement of stone bases or concrete.
9. Provide weathertight covering for all foundations after excavation; do not expose to rainwater or freezing.
10. Where foundations are formed, backfill edges immediately after form removal.
11. No fill or backfill shall be placed against retaining or foundation walls until grout or concrete has attained design strength and supporting members are in place, unless prior written approval is obtained from the Engineer.
12. All backfill shall be granular material approved by the Engineer and deposited and machine compacted in 8-inch maximum layers. Compaction shall be a minimum of 95% of the maximum dry weight density at the optimum moisture content in accordance with ASTM D1557 (Modified Proctor) as verified by a testing laboratory.
13. All backfill adjacent to retaining structures shall be compacted using hand operated equipment; no heavy equipment shall be allowed within 5 feet of any wall.
14. For all foundation construction that will be exposed to freezing temperatures during construction, the bottom of all footings (interior and exterior) shall extend a minimum of 3'-0" below grade (at no additional cost to the owner). Contractor shall contact the Engineer of Record for approval to lower foundations and obtain concrete pier sizes, if necessary.

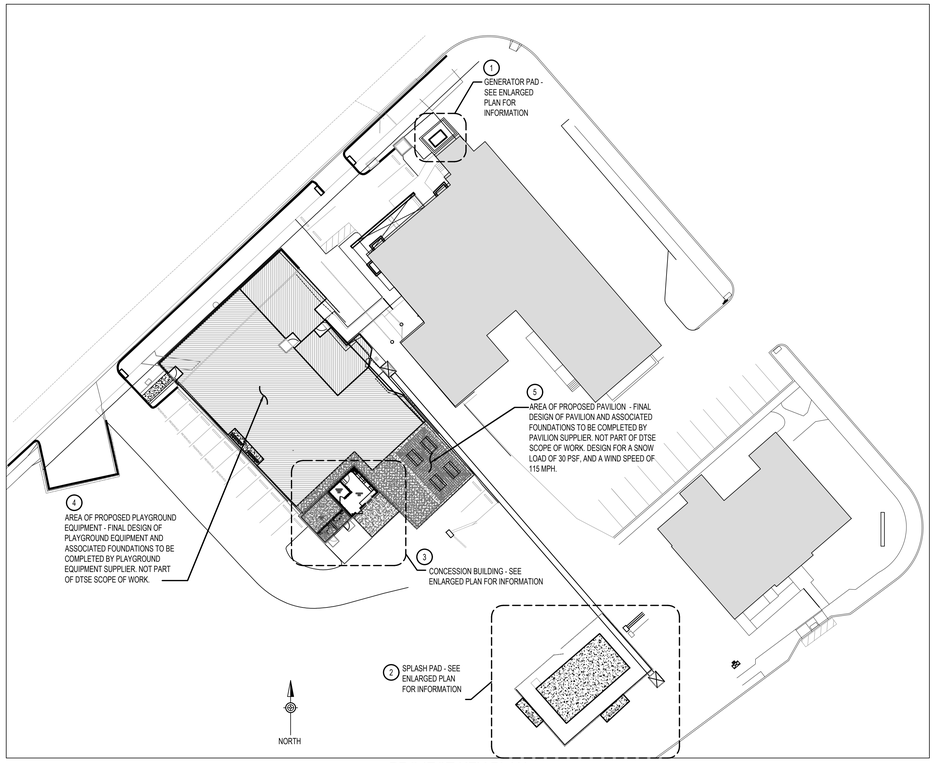
CAST-IN-PLACE CONCRETE CONSTRUCTION

TYPE OF CONSTRUCTION	MIN. 28-DAY COMP. STRENGTH	MAX. W/C RATIO	TYPE 1 PORTLAND CEMENT	SLUMP RANGE
(1) Footings, Interior slabs-on-grade <= 4" thk., & slabs-on-metal deck	3000 PSI	.53	5 BAGS	3" - 6"
(2) Interior slabs-on-grade > 4" thk.	4000 PSI	.45	6 BAGS	3" - 6"
(3) Exterior slabs, walls, beams, columns, piers & grade beams	4500 PSI	.45	6 BAGS	3" - 6"

1. All concrete work shall conform to the requirements of ACI 318, Building Code Requirements for Reinforced Concrete, latest edition and ACI 301, Specifications for Structural Concrete for Buildings, latest edition, including all revisions, except as modified herein.
2. Concrete shall be supplied by a qualified ready-mixed concrete plant in accordance with the following requirements:
   2.1. Entrained Air = 4 to 7% for (all exposed concrete, footings, piers, exterior slabs, and where otherwise noted).
      2.1.1. All concrete exposed to freezing temperature shall be air-entrained, U.N.O.
   2.2. Coarse aggregate shall be AASHTO NO. 57 stone. Maximum aggregate size = 1.5"
   2.3. Submit mix designs to Engineer for approval. No admixtures permitted without Engineer's approval.
   2.4. Chloride containing admixtures are not permitted.
   2.5. Fine aggregate must be natural sand, unless approved by the Engineer.
   2.6. Air-entraining admixtures are not permitted on trowel finished slabs.
   2.7. For Interior Slabs-on-grade <= 4" thick:
      2.7.1. When specified as temperature and shrinkage reinforcement, micro synthetic fibers made from 100% virgin homopolymer polypropelene fibrillated fibers meeting ASTM C1116, Type III shall be added at a minimum rate of 1.5 lb/cu.yd.
      2.7.2. Fibrous reinforcement shall be manufactured by Propex, BASF, Grace, or approved equal.
   2.8. For Interior Slabs-on-grade > 4" thick:
      2.8.1. When specified as temperature and shrinkage reinforcement, cold-drawn steel fibers meeting ASTM A820 criteria shall be added at a minimum rate of 25 lb. / cu. yd. or Macro synthetic fibers made from virgin polyolefin shall have an equivalent diameter between 0.016 in. and 0.05 in. with a minimum aspect ratio (length / equivalent diameter) of 50, and added at a minimum rate of 4 lb. / cu. yd.
      2.8.2. Fibrous reinforcement shall be manufactured by Propex, BASF, Grace, or approved equal.
      2.8.3. Slabs must be laser-screeded, U.N.O.
   2.9. For Slabs-on-metal deck:
      2.9.1. When specified as temperature and shrinkage reinforcement, cold-drawn steel fibers meeting ASTM A820 criteria shall be added at a minimum rate of 25 lb. / cu. yd. or Macro synthetic fibers made from virgin polyolefin shall have an equivalent diameter between 0.016 in. and 0.05 in. with a minimum aspect ratio (length / equivalent diameter) of 50, and added at a minimum rate of 4 lb. / cu. yd.
      2.9.2. Fibrous reinforcement shall be manufactured by Propex, BASF, Grace, or approved equal.
   2.10. For Exterior Slabs <= 5" thick:
      2.10.1. 6x6 W2.9 x W2.9 welded wire reinforcement, U.N.O.
3. At Contractor's option, fly ash, ground granulated blast furnace slag, or other pozzolans may be substituted for Portland cement, up to 25% of the cementitious content. Concrete mixes using these materials must be approved by the Engineer.
4. When concrete arrives at the project with slump below that suitable for placement, as indicated by the Specifications, water may be added only if neither the maximum permissible water-cement ratio nor the maximum slump is exceeded. The water shall be incorporated by additional mixing equal to at least half of the total mixing required. Discharge of the concrete shall be completed within 1-1/2 hours, or before the truck drum has revolved 300 revolutions, whichever comes first, after the introduction of the mixing water to the cement and aggregates or the introduction of the cement to the aggregates. Truck batch slips must include time of batching, total drum revolutions upon arrival at site, and quantity of water (in gallons) per cubic yard available to be added to attain the maximum design water-cement ratio.
5. Reinforcing steel shall be deformed, billet-steel conforming to ASTM A615 - Grade 60. Welding of reinforcing steel must be approved by the Engineer and shall be performed in accordance with the requirements of the AWS Code, D1.4, Structural Welding Code - Reinforcing Steel latest edition and be performed only by qualified welders.
6. When specified, welded wire fabric shall conform to ASTM A185 and supplied in flat sheets only. Bar chairs are required at the recommended spacing for structural slabs.
7. Reinforcing steel splices shall be ACI Class B splices unless indicated otherwise.
8. Provide adequate bolsters, hi-chairs, support bars, etc., to maintain specified clearance for the entire length of all reinforcing bars. Provide accessories which are plastic tipped or galvanized with turned-up ends for reinforcement at all faces of exposed concrete, interior or exterior.
9. Shop drawings for the fabrication and placement of reinforcing steel shall be submitted to and approved by the Engineer before fabrication commences.
10. Concrete shall be placed only after approval of the reinforcement and mix designs by the acting special inspection agency or the Engineer. Contractor is responsible for coordinating inspections prior to concrete placement.
11. Schedule the pouring of foundations on the same day the excavation is completed.
12. Cure all concrete in accordance with accepted ACI Standards and conformance to ACI 308.1, Standard Specification for Curing Concrete, latest edition, for the worst case weather conditions anticipated during the curing period. All concrete construction and procedures shall conform to the requirements of ACI 306.1, Standard Specification for Cold Weather Concreting, latest edition.
13. No aluminum of any type shall be allowed in the concrete work unless coated to prevent aluminum-concrete reaction.
14. Mechanically vibrate concrete. Slabs-on-grade need only be vibrated around floor ducts and other embedded items.
15. Do not place pipes, ducts, reglets or chases in structural concrete or composite floor systems without approval of the structural engineer.
16. Maximum free drop of any concrete = 5'-0".
17. Chamfer all exposed concrete edges a minimum of 3/4" x 3/4".
18. Provide a minimum of concrete cover for reinforcing bars as follows unless noted otherwise on drawings:
   18.1. Footings = 3 inches earth face, 2 inches all others, U.N.O.
   18.2. Concrete walls, beams, and piers = 2 inches earth face, 1-1/2 inches all others, U.N.O.
19. Six (6) test cylinders shall be prepared for every 50 cubic yards of concrete placed on any given day to represent all concrete placed on that day. Two (2) cylinders shall be tested at seven (7) days and two (2) cylinders shall be tested at 28 days for verification of concrete design strength with two (2) cylinders remaining.
20. Concrete Finishes, as defined in Chapter 5 of ACI 301, shall be as follows, U.N.O.:
   20.1. Formed surfaces not exposed to public view: Rough-form finish
   20.2. Formed surfaces exposed to public view: Smooth-form finish
   20.3. Walls as indicated: Rubbed finish
   20.4. Typical interior commercial/industrial floor: Troweled finish
   20.5. Floors to receive ceramic tile, portland cement, terrazzo, etc.: Scratch finish
   20.6. Exterior slabs on grade, walkways, etc.: Non-slip broom finish
21. Provide vertical control joints in concrete walls at a maximum 30'-0" O.C. spacing. Submit a control joint location plan to the Engineer for approval prior to construction. Control joints shall not be placed in concrete shear walls.
22. Concrete submittals required to be reviewed and approved by the Engineer prior to cast-in-place concrete construction include, but are not limited to: Mix designs, Reinforcement Shop Drawings, Control Joint Plans for Walls, and Control Joint Plans for Slabs.
23. Slabs on Grade:
   23.1. Slabs on grade shall be placed in accordance with the requirements of ACI 302.1R.
   23.2. Slab finishing operations shall meet ACI Class 5 floor requirements in accordance with Chapter 8 of ACI 302. Floors receiving a surface hardener must be finished to ACI Class 6 floor requirements.
   23.3. A minimum floor flatness/levelness tolerance meeting ACI FF 35/ FL 25 requirements shall be achieved through placing and finishing the slab per the guidelines set forth in Table 8.15.3 a of ACI 302.1R.
   23.4. Curing of slabs shall begin as soon as finishing operations are complete by either water curing, wet covering, or liquid membrane-forming curing compound in accordance with Chapter 9 of ACI 302.1R for a period of seven (7) days.
   23.5. Sawcut control joints must be completed within 1 to 4 hours of finishing and to a minimum depth of 1/3 the slab thickness (1/4 for slabs with welded wire fabric). Provide joints at a maximum 15'-0" O.C. spacing Submit a sawcut joint location plan to the Engineer for approval.
   23.6. Slab joint sealant shall be a two-component, epoxy resin with a minimum shore A hardness of 80 in accordance with ASTM D 2240.
   23.7. Do not allow construction equipment on newly placed slabs for a minimum of seven (7) days.
   23.8. When strip pouring, allow seven (7) days before placing adjacent slab sections.
   23.9. A slab on grade pre-construction conference involving the Owner, Contractor and Engineer is recommended to review installation procedures and requirements.

CONCRETE MASONRY CONSTRUCTION

1. All concrete masonry shall conform to the requirements of ASTM C90 (Grade N 1) unless noted otherwise. Concrete masonry construction shall conform to the requirements of ACI 530/ASCE 5/TMS 402, building code requirements for Masonry Structures, latest edition and ACI 530.1/ASCE 6/TMS 602, Specifications for Masonry Structures, latest edition, including all supplements.
2. 28 day design compressive strength of masonry (f'm) used is as follows:
   2.1. Standard Masonry = 2,000 psi
   2.2. Ivany = 2,800 psi
3. The Contractor shall be responsible for the temporary bracing of all masonry construction. Bracing shall remain in place until masonry has had sufficient time to gain design strength. Where masonry attaches to floor and/or roof systems, bracing shall remain in place until the diaphragm has been anchored in its final position.
4. Grout lifts for reinforced masonry walls shall not exceed 5 feet in height.
5. All mortar shall conform to ASTM C270. Mortar shall be Type S (2/1/9 mix ratio of cement/lime/sand) with an average 28 day compressive strength of 1800 psi for above grade walls (except Ivany Block). Mortar shall be Type M (4/2/12 mix) with an average 28 day compressive strength of 2500 psi for Ivany walls, walls below grade, or walls exposed to earth.
6. Grout shall conform to the requirements of ASTM C476. Fill grouted cores, bond beams, and wall reinforcement where shown on plans with 3000 psi small aggregate concrete mix with 8"-11" slump. Grout samples shall be tested per the Cast-in-place Concrete Construction specifications.
7. All steel lintels shall be temporarily shored where a height of masonry greater than half the span of the lintel will be placed above the lintel prior to masonry gaining design strength. Shoring shall remain in place until masonry has gained design strength and all required permanent bracing is installed.
8. All steel lintels for exterior masonry shall be galvanized. Lintel sizes, unless indicated otherwise on the drawings, shall be as follows:
   8.1. Clear opening of 3'-4" or less = (1) 5 x 3-1/2 x 5/16 angle (L.L.V.) per 4" of masonry wall thickness with 8" min. end bearing on 16" thick of solid or grouted masonry.
   8.2. Clear opening of 6'-4" or less = (1) 6 x 4 x 3/8 angle (L.L.V.) per 4" of masonry wall thickness with 8" min. end bearing on 16" thick of solid or grouted masonry.
9. Provide vertical control joints in above grade masonry walls so that the distance between joints does not exceed the lesser of 1 1/2 times the overall wall height, or 25 feet. Control joints shall not be placed greater than 8" from a bearing plate or jamb of an opening. A control joint shall be placed at one side of an opening less than 6'-0" wide and at both sides of openings over 6'-0" wide. Provide vertical control joints at intersections of reinforced & unreinforced walls, U.N.O. Submit a shop drawing showing control joint locations to the Engineer for approval prior to construction. Coordinate exact control joint & expansion joint locations with architectural drawings.
10. Horizontal joint reinforcement shall consist of truss type ASTM A82 cold drawn No. 9 gauge galvanized wire steel, located 16" o.c. Cross rods to be welded to side rods at 16" o.c. to form a truss. Lap splices 6" minimum. Provide horizontal reinforcing in the two courses above and below openings and at the top of walls or partitions.
11. Masonry cores below grade shall be grouted solid.
12. Head joints shall be mortared solid the full depth of the face shell. Webs shall be fully mortared at grouted cores.
13. A minimum of one course of masonry shall be grouted solid below transitions in masonry thickness.
14. Cold Weather Masonry Construction shall conform to the requirements of AC1 530.1/ASCE 6/TMS602, latest edition.
15. Masonry stair shafts and elevator shafts shall be grouted solid, unless noted otherwise.
16. Reinforcing steel shall be deformed, billet-steel conforming to ASTM A615 - Grade 60. Welding of reinforcing steel must be approved by the Engineer and shall be performed in accordance with the requirements of the AWS Code, D1.4, Structural Welding Code - Reinforcing Steel latest edition and be performed only by qualified welders. Shop drawings for the fabrication and placement of reinforcing steel shall be submitted to and approved by the Engineer before fabrication commences.
17. Submittals required to be reviewed and approved by the Engineer prior to concrete masonry construction include, but are not limited to: Mix designs, Reinforcement Shop Drawings, Vertical Control Joint Location Plans.
18. Mortar shall be sampled and tested according to ASTM C 270, C 780, and C 1586.



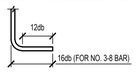
PROJECT KEY PLAN

NTS

CONCRETE REINF. SPLICE LENGTH SCHEDULE

REINF. SIZE	4000 PSI		3000 PSI	
	TOP HORIZ. BARS (IN.)	VERTICAL (IN.) OR BOTTOM HORIZ.	TOP HORIZ. BARS (IN.)	VERTICAL (IN.) OR BOTTOM HORIZ.
#3	15	12	17	13
#4	20	15	23	18
#5	25	19	28	22
#6	29	23	34	26
#7	43	33	49	38
#8	49	37	56	43

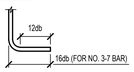
NOTES:
1. TOP HORIZONTAL BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST IN THE MEMBER BELOW THE REINFORCEMENT. BOTTOM HORIZONTAL BARS ARE ALL OTHER HORIZONTAL BARS.
2. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE VALUES ABOVE BY 1.3.
3. FOR EPOXY COATED REINFORCEMENT WITH COVER LESS THAN 3db OR CLEAR SPACING LESS THAN 6db, MULTIPLY VALUES ABOVE BY 1.5. FOR ALL OTHER EPOXY COATED REINFORCEMENT, MULTIPLY VALUES ABOVE BY 1.3.
4. ALL SPLICES ASSUMED TO BE CLASS B SPLICES.
5. WHEN SPLICING BARS OF DIFFERENT SIZES USE SPLICE LENGTH FOR LARGEST BAR.
6. MINIMUM HOOK LENGTH EQUALS 16db FOR NO. 3-8 BARS.
7. SPLICE LENGTHS GIVEN ARE MINIMUM, U.N.O.



MASONRY REINFORCING SPLICE LENGTH SCHEDULE

REINF. SIZE	VERT. OR HORIZ. (IN.)
#3	27
#4	36
#5	45
#6	54
#7	63

NOTES:
1. WHEN SPLICING BARS OF DIFFERENT SIZES USE SPLICE LENGTH FOR LARGEST BAR.
2. MINIMUM HOOK LENGTH EQUALS 16db FOR NO. 3-7 BARS.
3. SPLICE LENGTHS GIVEN ARE MINIMUM, U.N.O.



WALL FOOTING SCHEDULE

MK.	SIZE	REINFORCING
WF2.0	2'-0" WIDE x 1'-0" THK.	(3) #5 CONTINUOUS w/ #3 TRANSVERSE @ 48" O.C.

GENERAL LEGEND

- REINFORCED MASONRY WALL
- METAL STUD WALL IN SECTION
- CAST-IN-PLACE CONCRETE
- "TEXT" - PROPOSED CONDITIONS
- *"Text"* - EXISTING CONDITIONS
- ROOF MOUNTED MECHANICAL UNITS
- 1 / S7.7 — SECTION DESIGNATION / SHEET NUMBER
- A / S7.7 — ELEVATION DESIGNATION / SHEET NUMBER
- A / S7.7 — PLAN DETAIL DESIGNATION / SHEET NUMBER
- MOMENT CONNECTION

LEGEND OF ACRONYMS & ABBREVIATIONS

&	- USE FOR "AND" WHEN APPROPRIATE	H.M.	- HOLLOW METAL
@	- USE FOR "AT" WHEN APPROPRIATE	HORIZ.	- HORIZONTAL
A.C.T.	- ACOUSTICAL CEILING TILE	HVAC	- HEATING/VENTILATION/AIR CONDITIONING
ADDL.	- ADDITIONAL	I.F.	- INSIDE FACE
A.F.F.	- ABOVE FINISHED FLOOR	INSUL.	- INSULATION
ALUM.	- ALUMINUM	INT.	- INTERIOR
ARCH.	- ARCHITECTURAL	L.	- LENGTH
BL.	- BUILDING LINE	L.L.H.	- LONG LEG HORIZONTAL
BLDG.	- BUILDING	L.L.V.	- LONG LEG VERTICAL
BLK.	- BLOCK	MAX.	- MAXIMUM
B.O.F.	- BOTTOM OF FOOTING	MET.	- METAL
BRG.	- BEARING	MFR.	- MANUFACTURER
BTWN.	- BETWEEN	MIN.	- MINIMUM
C.	- CARPET	MISC.	- MISCELLANEOUS
C.I.P.	- CAST-IN-PLACE	N.I.C.	- NOT IN CONTRACT
CL	- CENTERLINE	NO.	- NUMBER
CLG.	- CEILING	O.C.	- ON CENTER
CLR.	- CLEAR	O.F.	- OUTSIDE FACE
CMU	- CONCRETE MASONRY UNIT	PennDOT	- PENNSYLVANIA DEPT. OF TRANSPORTATION
COL.	- COLUMN	PL.	- PLATE
CONC.	- CONCRETE	PLF	- POUNDS PER LINEAL FOOT
CONT.	- CONTINUOUS	PNT.	- PAINT
D. OR DP.	- DEEP	PWD.	- POWDER
d_b	- BAR DIAMETER	PSF	- POUNDS PER SQUARE FOOT
DIA.	- DIAMETER (USE Ø WHEN POSSIBLE)	PSI	- POUNDS PER SQUARE INCH
DIM.	- DIMENSION	RAD.	- RADIUS
DN.	- DOWN	REQ.	- REQUIRED
DWG.	- DRAWING	REINF.	- REINFORCING
EA.	- EACH	RET.	- RETURN
E.F.	- EACH FACE	SC	- SLIP CRITICAL
ENG.	- ENGINEER(S)/ENGINEERING	SECT.	- SECTION
ELEC.	- ELECTRIC/ELECTRICAL	SIM	- SIMILAR
ELEV.	- ELEVATION	SLR.	- SEALER
EQ.	- EQUAL	SPC.	- SPACE
EQUIP.	- EQUIPMENT	S.S.	- STAINLESS STEEL
E.W.	- EACH WAY	STL.	- STEEL
EX.	- EXISTING	T & B	- TOP & BOTTOM
EXT.	- EXTERIOR	THK.	- THICK
F.E.	- FIRE EXTINGUISHER	T.O.F.	- TOP OF FOOTING
F.E./C	- FIRE EXTINGUISHER WITH CABINET	T.O.S.	- TOP OF STEEL
F.F.	- FINISHED FLOOR	T.O.W.	- TOP OF WALL
F.G.	- FINISHED GRADE	TYP.	- TYPICAL
FIB.	- FIBERGLASS	U.N.O.	- UNLESS NOTED OTHERWISE
FIN.	- FINISH (ED)	V.	- VINYL
FLR.	- FLOOR	VAR.	- VARIES
FTG.	- FOOTING	V.C.T.	- VINYL COMPOSITION TILE
GA.	- GAGE OR GAUGE	VERT.	- VERTICAL
GALV.	- GALVANIZED	W.	- WIDE/WIDTH
GYP.	- GYPSUM	W/	- WITH
GPDW.	- GYPSUM DRYWALL	WD.	- WOOD
HGT.	- HEIGHT	W.W.R.	- WELDED WIRE REINFORCING

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

DURST & TAYLOR
Structural Engineering, LLC
1228 Copper Beech Dr. York, PA 17403 | 211 Glenview Road Spring Grove, PA 17403 | 133 Delp Road Lancaster, PA 17601

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

READING HOUSING AUTHORITY

PROJECT DESCRIPTION

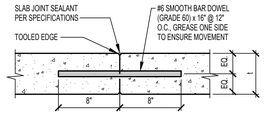
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE: GENERAL NOTES, LEGENDS, AND KEY PLAN

ISSUE DATE: 2026.09.01 | SCALE: AS NOTED

FILE NUMBER: 2532 | DRAWN BY: JEM | CHECKED BY: EDL

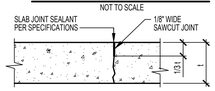
S0.1



NOTES:
1. DOWELS SHOULD BE PLAIN ROUND ASTM A615 GRADE 60.
2. PLACE DOWELS LEVEL AND PARALLEL TO DIRECTION OF SLAB MOVEMENT. PROVIDE SUPPORT FOR DOWELS DURING CONSTRUCTION.

DOWELED CONSTRUCTION JOINT

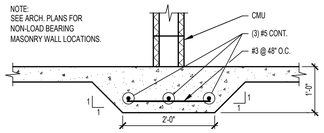
NOT TO SCALE



NOTE:
FOR SLABS WITH W.W.R., SAWCUT CONTROL JOINT SHALL BE 1/4 t DEEP.

SAWCUT CONTROL JOINT

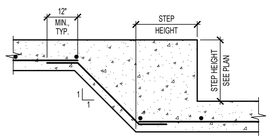
NOT TO SCALE



NOTE:
SEE ARCH. PLANS FOR NON-LOAD BEARING MASONRY WALL LOCATIONS.

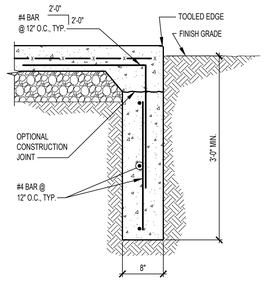
THICKENED SLAB AT NON-LOAD BEARING INTERIOR MASONRY WALL

NOT TO SCALE



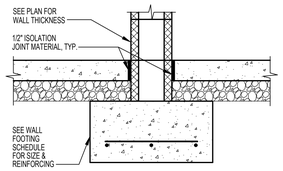
STEP FOOTING

NOT TO SCALE



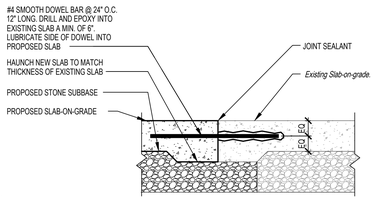
SLAB TURNDOWN

NOT TO SCALE



TYPICAL INTERIOR WALL FOOTING

NOT TO SCALE



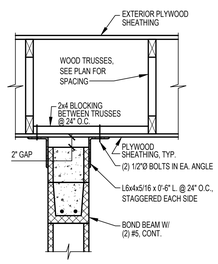
NEW TO EXISTING SLAB JOINT DETAIL

NOT TO SCALE

NOTE:
PROVIDE CONTROL JOINTS AS INDICATED IN PLAN AND IN THE CONCRETE MASONRY CONSTRUCTION SECTION OF THE GENERAL SPECIFICATIONS.

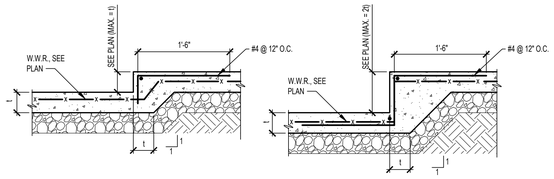
MASONRY WALL CONTROL JOINT

NOT TO SCALE



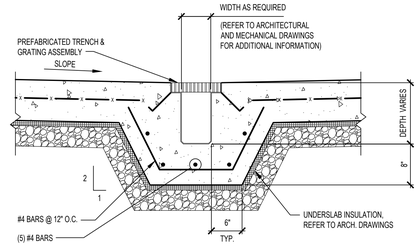
TOP OF NON-LOAD BEARING INTERIOR CMU WALL

NOT TO SCALE



TYPICAL DEPRESSED SLAB DETAILS

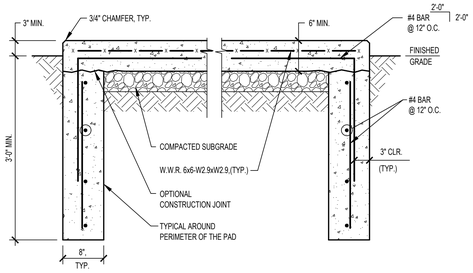
NOT TO SCALE



NOTE:
REFER TO MEP DRAWINGS FOR DRAIN / OUTLET REQUIREMENTS.

TYPICAL TRENCH DRAIN DETAIL

NOT TO SCALE



NOTES:
1. PROVIDE CONCRETE EQUIPMENT PADS WHERE INDICATED ON CIVIL, ARCH., OR MEP DRAWINGS.
2. SEE CIVIL, ARCH, OR MEP DRAWINGS FOR EXACT SIZE OF CONCRETE PADS.

EXTERIOR CONCRETE EQUIPMENT PAD

NOT TO SCALE

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

DURST & TAYLOR
Structural Engineering, LLC
1228 Copper Beech Dr. York, PA 17403
211 Glenview Road Spring Grove, PA 17403
133 Delp Road Lancaster, PA 17601

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

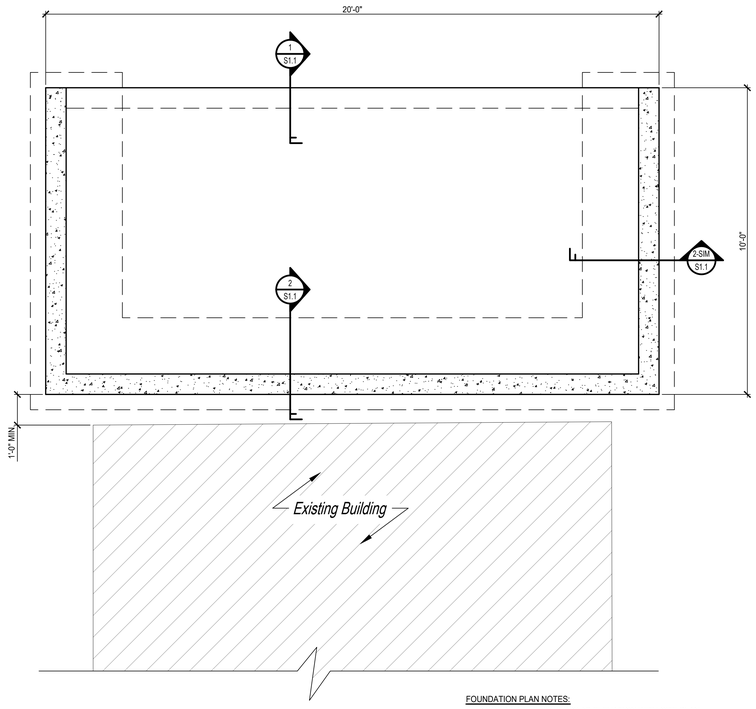
READING
HOUSING AUTHORITY

PROJECT DESCRIPTION

OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	TYPICAL SECTIONS AND DETAILS		
ISSUE DATE 2026.09.01	SCALE AS NOTED		
FILE NUMBER 2532	DRAWN BY JEM	CHECKED BY EDL	

S0.2

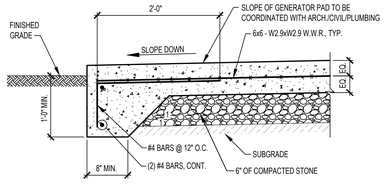


FOUNDATION PLAN NOTES:

1. COORDINATE FINISHED SLAB ELEVATION WITH SITE PLAN.
2. ALL ELEVATIONS NOTED THUS (-X'-X") DESIGNATE TOP OF FOOTING OR PIER ELEVATIONS AND ARE WITH RESPECT TO THE FINISHED FIRST FLOOR ELEVATION.
3. ALL EXTERIOR CONCRETE SLABS SHALL BE 5" THK. AIR ENTRAINED CONCRETE W/6x6 W2.9xW2.9 W.W.R. ON 6" PennDOT 2A COMPACTED STONE, U.N.O. ALL EXTERIOR SLABS SHALL BE TURNED DOWN AROUND PERIMETER AND EXTEND TO (-3'-0") BELOW FINISHED GRADE. SEE SLAB TURNDOWN DETAIL.
4. SEE ARCHITECTURAL DRAWINGS FOR ALL NECESSARY EMBEDDED ITEMS, RAMPS, STAIRS, LANDINGS, AND FINISH DETAILS.
5. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN.
6. CONTRACTOR SHALL VERIFY WALL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO FOUNDATION LAYOUT. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND ENGINEER.

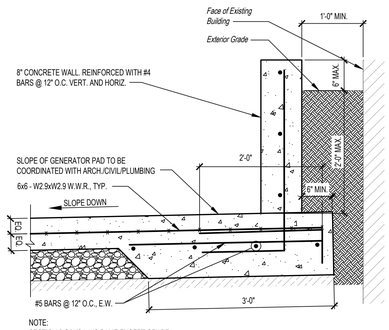
GENERATOR PAD AND RETAINING WALL FOUNDATION PLAN

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



SECTION 1 S1.1

SCALE: 1"=1'-0"



NOTE:
SECTION 2-SIM/S1.1 IS SAME EXCEPT GRADE VARIES AND TOP OF WALL SLOPES.

SECTION 2 S1.1

SCALE: 1"=1'-0"

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

DURST & TAYLOR
Structural Engineering, LLC
1228 Copper Beech Dr. York, PA 17403
211 Glenview Road Spring Grove, PA 17403
133 Delp Road Lancaster, PA 17601

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

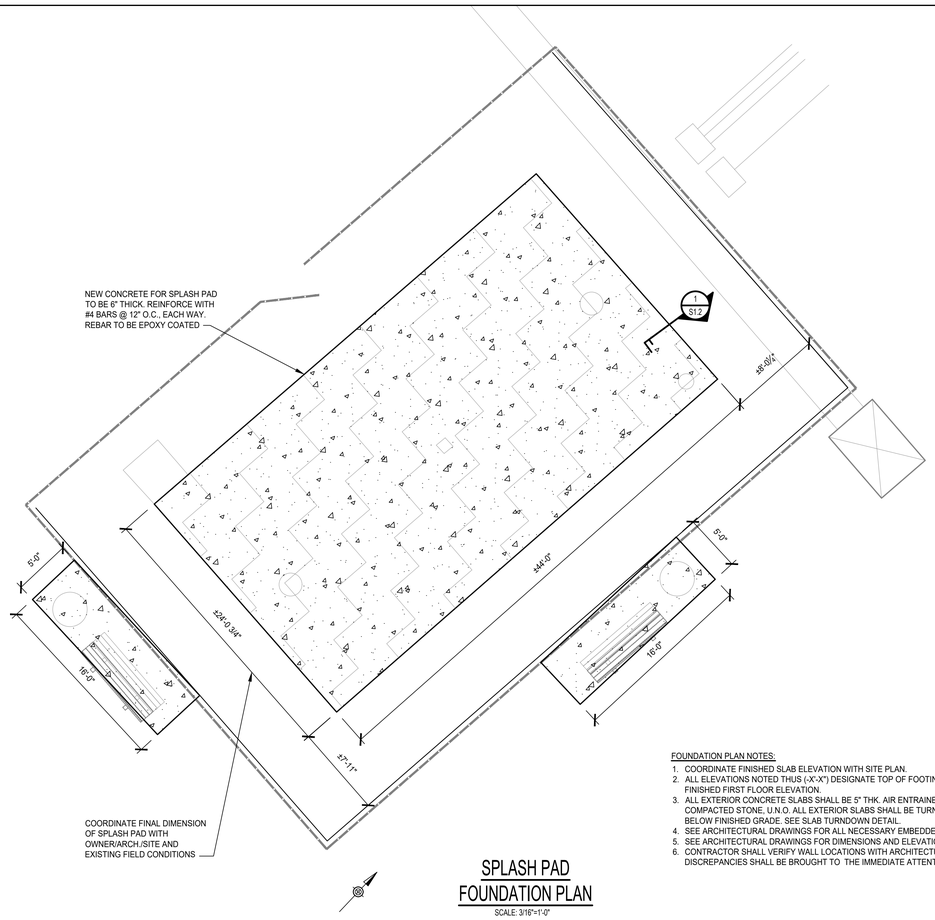
READING
HOUSING AUTHORITY

PROJECT DESCRIPTION

OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	GENERATOR PAD & RETAINING WALL FOUNDATION PLAN		
ISSUE DATE 2026.09.01		SCALE AS NOTED	
FILE NUMBER 2532	DRAWN BY JEM	CHECKED BY EDL	

S1.1

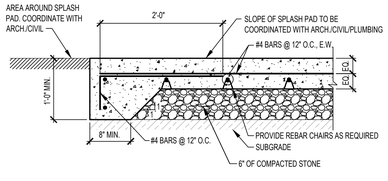


SPLASH PAD FOUNDATION PLAN

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

FOUNDATION PLAN NOTES:

1. COORDINATE FINISHED SLAB ELEVATION WITH SITE PLAN.
2. ALL ELEVATIONS NOTED THUS (X'X-X") DESIGNATE TOP OF FOOTING OR PIER ELEVATIONS AND ARE WITH RESPECT TO THE FINISHED FIRST FLOOR ELEVATION.
3. ALL EXTERIOR CONCRETE SLABS SHALL BE 5" THK. AIR ENTRAINED CONCRETE W/6x6 W2.9xW2.9 W.W.R. ON 6" PennDOT 2A COMPACTED STONE, U.N.O. ALL EXTERIOR SLABS SHALL BE TURNED DOWN AROUND PERIMETER AND EXTEND TO (-3'-0") BELOW FINISHED GRADE. SEE SLAB TURNDOWN DETAIL.
4. SEE ARCHITECTURAL DRAWINGS FOR ALL NECESSARY EMBEDDED ITEMS, RAMPS, STAIRS, LANDINGS, AND FINISH DETAILS.
5. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN.
6. CONTRACTOR SHALL VERIFY WALL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO FOUNDATION LAYOUT. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND ENGINEER.



SECTION

SCALE: 1"=1'-0"

1
S1.2

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

DURST & TAYLOR
Structural Engineering, LLC
1228 Copper Beech Dr. York, PA 17403
211 Glenview Road Spring Grove, PA 17403
133 Delp Road Lancaster, PA 17601

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

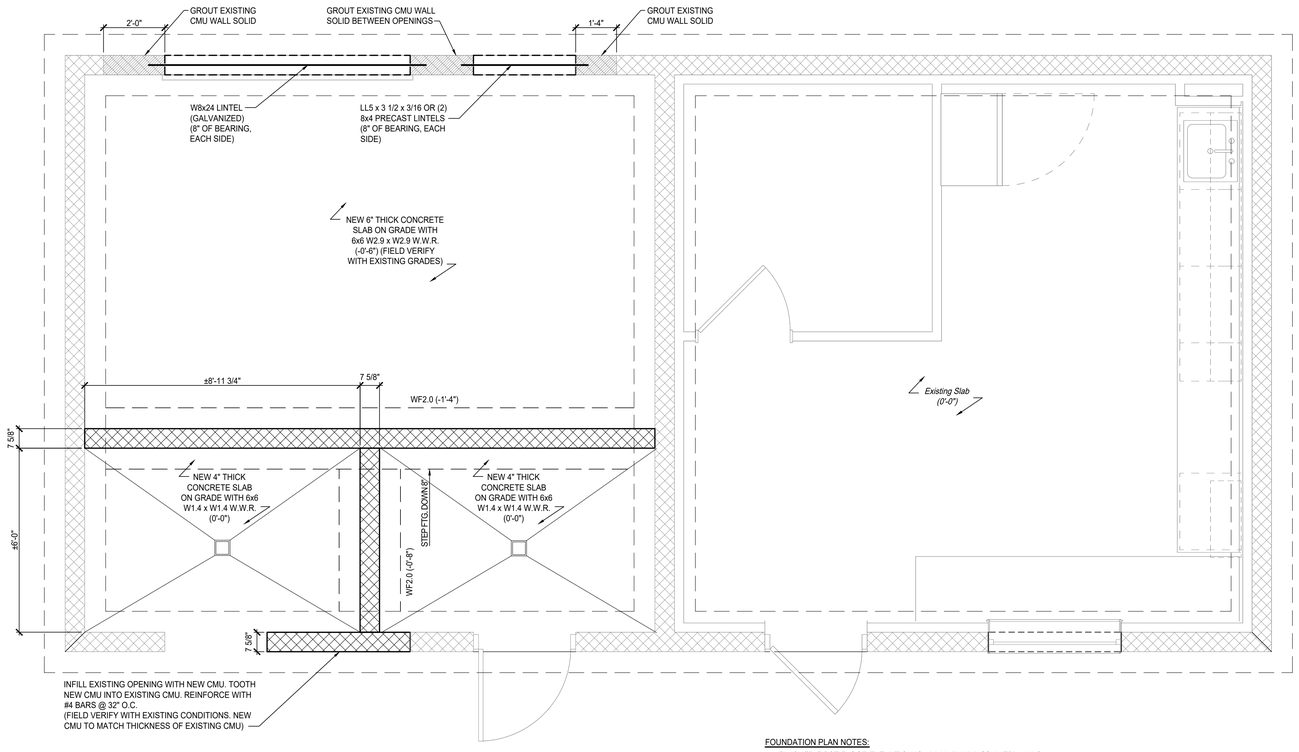
READING
HOUSING AUTHORITY

PROJECT DESCRIPTION

OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	SPLASH PAD FOUNDATION PLAN		
ISSUE DATE 2026.09.01	SCALE AS NOTED		
FILE NUMBER 2532	DRAWN BY JEM	CHECKED BY EDL	

S1.2



ENLARGED CONCESSION BUILDING FOUNDATION / FLOOR PLAN

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

FOUNDATION PLAN NOTES:

1. FINISHED FIRST FLOOR ELEVATION IS 100.00 (0'-0") (ASSUMED), U.N.O.
2. ALL ELEVATIONS NOTED THUS (-X'-X") DESIGNATE TOP OF FOOTING OR PIER ELEVATIONS AND ARE WITH RESPECT TO THE FINISHED FIRST FLOOR ELEVATION.
3. ALL WALL FOOTINGS SHALL BE WF2.0, U.N.O. ALL INTERIOR NON-LOAD BEARING MASONRY WALLS MAY BEAR ON THICKENED SLAB, U.N.O.
4. ALL COLUMNS TO CENTER ON FOOTINGS AND PIERS. U.N.O. ALL WALLS TO CENTER ON WALL FOUNDATIONS. U.N.O.
5. ALL INTERIOR FLOOR SLABS SHALL BE 4" THK. CONCRETE SLAB WITH W.W.R. 6x6 - W1.4 x W1.4 REINFORCEMENT ON 4" OF PennDOT 2A COMPACTED STONE. U.N.O. PROVIDE SAWCUT CONTROL JOINTS AS INDICATED IN THE CAST-IN-PLACE CONCRETE CONSTRUCTION SECTION OF THE GENERAL SPECIFICATIONS. SUBMIT A CONTROL JOINT LOCATION PLAN TO THE ENGINEER FOR REVIEW & APPROVAL.
6. ALL EXTERIOR CONCRETE SLABS SHALL BE 5" THK. AIR ENTRAINED CONCRETE W/6x6 W2.9xW2.9 W.W.R. ON 6" PennDOT 2A COMPACTED STONE. U.N.O. ALL EXTERIOR SLABS SHALL BE TURNED DOWN AROUND PERIMETER AND EXTEND TO (-3'-0") BELOW FINISHED GRADE. SEE SLAB TURNDOWN DETAIL.
7. SEE FOOTING, COLUMN & BASE PLATE, PIER, AND WALL FOOTING SCHEDULES.
8. SEE ARCHITECTURAL DRAWINGS FOR ALL NECESSARY EMBEDDED ITEMS, RAMPS, STAIRS, LANDINGS, AND FINISH DETAILS.
9. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN.
10. CONTRACTOR SHALL VERIFY WALL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO FOUNDATION LAYOUT. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND ENGINEER.

ALL DIMENSIONS, MEASUREMENTS AND PROJECT CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR. REFER ALL DIFFERENCES, IN WRITING, TO THE ARCHITECT FOR CONSIDERATION PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF RECTIFYING WORK NOT APPROVED BY THE ARCHITECT, CAUSED BY LACK OF COORDINATION AND OR NOTIFICATION.

STAMP

DURST & TAYLOR
Structural Engineering, LLC
1228 Copper Beech Dr. York, PA 17403
211 Glenview Road Spring Grove, PA 17403
133 Delp Road Lancaster, PA 17601

REVISIONS

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St.|Suite 102 |Lancaster, PA 17602 |717.393.3713|www.hammelarch.com

READING
HOUSING AUTHORITY

PROJECT DESCRIPTION

OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE	CONCESSION BUILDING FOUNDATION / FLOOR PLAN		
ISSUE DATE	2026.09.01	SCALE	AS NOTED
FILE NUMBER	2532	DRAWN BY JEM	CHECKED BY EDL

S1.3

HEATING, VENTILATION AND AIR CONDITIONING

ABBREVIATIONS

A	
AB	ABOVE
AB CL	ABOVE CEILING
ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AMP	AMPERES
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASME	AMERICAN SOCIETY OF MECH ENG
ATC	AUTOMATIC TEMPERATURE CONTROL
AT ST	AT STRUCTURE
AUTO	AUTOMATIC
B	
BDD	BACK DRAFT DAMPER
BE	BOTTOM ELEVATION
BFG	BELOW FINISHED GRADE
BJ	BETWEEN JOISTS
BLDG	BUILDING
BLW	BELOW
BOD	BOTTOM OF DUCT
BOT	BOTTOM
BTU	BRITISH THERMAL UNIT
C	
C	CONVECTOR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEANOUT
COD	CENTER OF DUCT
CONC	CONCRETE
COND	CONDENSATE/CONDENSING
CONN	CONNECTI/CONNECTION
CONST	CONSTRUCT/CONSTRUCTION
COORD	COORDINATE
CR	STEAM CONDENSATE RETURN
CRACU	COMPUTER ROOM ACU
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CHECK VALVE
CW	COLD WATER
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	
DB	DRY BULB
DEG	DEGREE
DEPT	DEPARTMENT
DIA	DIAMETER
DISC	DISCONNECT
DN	DOWN
DR	DRAIN
DR	DUCT RISER
DS	DUCT SILENCER
DSSU	DUCTLESS SPLIT SYSTEM UNIT
DWG	DRAWING
E	
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EDB	ENTERING DRY BULB TEMPERATURE
EF	EXHAUST FAN
EL	ELEVATION
ELEC	ELECTRIC(AL)
EMER	EMERGENCY
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EWB	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST/EXHAUSTER
(E) OR EXIST	EXISTING
EXP	EXPOSED
F	
F	FAHRENHEIT
FD	FIRE DAMPER
FLA	FULL LOAD AMPERES

FLEX	FLEXIBLE
FLR	FLOOR
FPM	FEET PER MINUTE
FT	FOOT/FEET
FT HD	FEET OF HEAD
FUT	FUTURE
G	
G	GROUND
GA	GAUGE/GAGE
GAL	GALLON
GALV	GALVANIC or GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERAL
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GRD	GRADE
H	
H	HIGH
HC	HEATING (HVAC) CONTRACTOR
HDAG	HEAVY DUTY ARCHITECTURAL GRILLE
HGB	HOT GAS BYPASS
HORIZ	HORIZONTAL
HP	HORSE POWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HR	HOUR
HSTAT	HUMIDISTAT
HT	HEIGHT
HTG	HEATING
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
Hz	HERTZ (FREQUENCY)
I	
ID	INSIDE DIAMETER
IN OR "	INCH
INT	INTERIOR
INV	INVERT(ER)
ISP	INTERNAL STATIC PRESSURE
IWG	INCH WATER GAUGE
K	
KW	KILOWATT
KWH	KILOWATT HOURS
L	
LAT	LEAVING AIR TEMPERATURE
LB or LBS	POUND(S)
LDB	LEAVING DRY BULB TEMPERATURE
LF	LINEAR FEET
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LWB	LEAVING WET BULB TEMPERATURE
LWC	LOW WATER CUT-OFF
LWT	LEAVING WATER TEMPERATURE
M	
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER (ATC)
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MTD	MOUNTED
MTG	MOUNTING
MZ	MULTIZONE
N	
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NC or N/C	NORMALLY CLOSED
NE or N/E	NORMAL/EMERGENCY POWER
NIC	NOT IN CONTRACT
NO	NUMBER
NO or N/O	NORMALLY OPEN
NTS	NOT TO SCALE

O	
OIA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OC	ON CENTER
OPNG	OPENING
P	
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE
PLBG	PLUMBING
PR	PIPE RISER
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE/PRESSURE RELIEF VENT
PSI	POUNDS PER SQUARE INCH
PTR	PRESSURE TEMPERATURE RELIEF
R	
RAD	RADIATION
RD	ROUND
REG	REGISTER
REL	RELIEF AIR
RF	ROOF
RLA	RATED LOAD AMPERES
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
S	
S&C	STUB & CAP
SAN	SANITARY
SHT	SHEET
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SQ	SQUARE
STD	STANDARD
STL	STEEL
STOR	STORAGE
SUSP	SUSPEND(ISUSPENDED
SW	SWITCH
T	
TD	TRANSFER DUCT
TDH	TOTAL DYNAMIC HEAD
TE	TOP ELEVATION
TEMP	TEMPERATURE
THRU	THROUGH
TJ	THROUGH JOISTS
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TYP	TYPICAL
U	
UE	UNDER ELECTRICAL
UG	UNDER GENERAL
UH	UNIT HEATING, UNDER HVAC
UN PL	UNDER FLOOR
UNO	UNLESS NOTED OTHERWISE
UP	UNDER PLUMBING
UV	UNIT VENTILATOR
V	
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER (MANUAL)
VFD	VARIABLE FREQUENCY DRIVE
VI	VIBRATION ISOLATOR
VR	VENT RISER
VTR	VENT THROUGH ROOF
W	
W	WATT
W/	WITH
W/O	WITHOUT
WB	WET BULB
WG	WATER GAUGE
WL	WEATHER LOUVER
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WT	WEIGHT
WTD	WATER TEMPERATURE DROP
WTR	WATER TEMPERATURE RISE
X	
XFMR	TRANSFORMER

GENERAL NOTE: NOT ALL ABBREVIATIONS OR TERMS INDICATED ARE USED ON THESE CONTRACT DOCUMENTS.

AIR DEVICES AND COMPONENTS

SINGLE LINE | DOUBLE LINE

- MITERED ELBOW W/ TURNING VANES
- RADIUS ELBOW
- TRANSITION-CONCENTRIC
- TRANSITION-ECCENTRIC
- MANUAL VOLUME DAMPER
- INCLINED RISE(R) OR DROP(D) ARROW IN DIRECTION OF AIR FLOW
- RECTANGULAR BRANCH TAKE OFF
- ROUND BRANCH TAKE OFF
- DUCT-MOUNTED REHEAT COIL
- FLEXIBLE DUCT
- FLEXIBLE CONNECTION
- DUCT SILENCER
- DUCT ACCESS DOORS
- SUPPLY DIFFUSER
- RETURN REGISTER/ GRILLE
- EXHAUST REGISTER/ GRILLE
- LINEAR DIFFUSER
- FIRE DAMPER (HORIZONTAL/ VERTICAL)
- SMOKE DAMPER
- SMOKE AND FIRE DAMPER
- RADIATION DAMPER
- BACK DRAFT DAMPER
- MOTOR OPERATED DAMPER
- SMOKE DETECTOR (DUCT MOUNTED)
- STATIC PRESSURE SENSOR

GRAPHIC SYMBOLS

- RETURN AIR DESIGNATION
- SUPPLY AIR DESIGNATION
- AREA OF REVISION
- REVISION SEQUENCE NUMBER
- SHEET KEYNOTE
- DEMOLITION KEYNOTE
- POINT OF CONNECTION TO EXISTING SYSTEM
- POINT OF DISCONNECTION FROM EXISTING SYSTEM
- DEMOLISHED ITEM
- EXISTING ITEM

NOTE: LEGENDS ARE GENERAL; NOT ALL SYMBOLS AND/OR DESIGNATIONS MAY APPEAR ON THE DRAWINGS.

PIPING SPECIALTIES

- FLOW DIRECTION
- PIPE ANCHOR
- STUB AND CAP
- PIPE DROP
- PIPE RISE
- PIPE TEE OFF BOTTOM
- CONCENTRIC/ECCENTRIC REDUCER
- UNION (SCREWED)
- UNION (FLANGED)
- PRESSURE/ TEMPERATURE TEST FITTING
- ALIGNMENT GUIDE
- EXPANSION JOINT W/ ALIGNMENT GUIDES
- FLEXIBLE CONNECTOR
- EXPANSION COMPENSATOR
- EXPANSION LOOP
- STRAINER WITH HOSE END BLOW OFF VALVE
- STRAINER
- PUMP (SINGLE LINE)
- STEAM TRAP
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- THREE WAY ATC VALVE
- TWO WAY ATC VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DRAIN VALVE
- GATE VALVE
- GLOBE VALVE
- NEEDLE VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE REGULATOR VALVE
- PRESSURE RELIEF VALVE
- SAFETY RELIEF VALVE
- SHUT OFF VALVE
- SOLENOID VALVE
- STOP CHECK VALVE
- THROTTLE VALVE
- TRIPLE-DUTY VALVE
- DOUBLE CHECK VALVE
- HOT WATER TEMPER VALVE
- THERMOMETER (DIAL TYPE)
- THERMOMETER (STEM TYPE)
- PRESSURE GAUGE WITH NEEDLE VALVE

HVAC GENERAL NOTES

1. ALL WORK AND EQUIPMENT SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, AND REQUIREMENTS, OF ALL AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL MECHANICAL CODE, THE INTERNATIONAL PLUMBING CODE, THE LOCAL FIRE MARSHALL, UNDERWRITERS LABORATORY, IRI, PM, OSHA, AND THE NATIONAL ELECTRICAL CODE. MODIFICATIONS REQUIRED BY THE ABOVE AUTHORITIES IN ORDER TO BRING THE PROJECT INTO CODE REQUIREMENTS SHALL BE MADE AT NO ADDITIONAL COST TO OWNER. IF CONTRACT DOCUMENTS ARE MORE STRINGENT THAN CODE REQUIREMENTS, THE CONTRACT DOCUMENTS SHALL GOVERN.
2. ALL SPECIFICATIONS AND DRAWINGS ARE COMPLIMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. ANY CONFLICTING INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, AND WORK SHALL CEASE ON THAT PORTION OF THE PROJECT UNTIL CLARIFICATIONS ARE ISSUED. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE APPROXIMATE ARRANGEMENT OF THE SYSTEMS. THE CONTRACTOR SHALL FIELD VERIFY EXACT INFORMATION, DIMENSIONS, LOCATIONS AND COORDINATE WORK WITH ALL OTHER TRADES AND EXISTING CONDITIONS. NOT ALL INFORMATION IS SHOWN.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING WORK. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. ALL MATERIAL, WASTE, AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY. MAINTAIN THE CONSTRUCTION PREMISES IN A NEAT AND ORDERLY CONDITION AT THE END OF EACH WORKING DAY.
4. CONTRACTOR SHALL CONFIRM THE REQUIREMENTS FOR PREMIUM TIME OR SPECIAL PROCEDURES WITH THE OWNER.
5. CONTRACTOR SHALL COORDINATE, PREPARE AND SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER FOR THEIR APPROVAL. SHOP DRAWINGS TO BE SUBMITTED INCLUDE: SHEET METAL, DIFFUSERS, GRILLES, REGISTERS, FIRE DAMPERS, AND ALL EQUIPMENT. SHEET METAL SHOP DRAWINGS SHALL BE COORDINATED AND SHOW DUCT ELEVATIONS. PROVIDE RISES, DROPS, AND OFFSETS TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM. AREAS OF POTENTIAL CONFLICT SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.
6. A SET OF MEP RECORD/COORDINATION DRAWINGS SHALL BE MAINTAINED BY THE CONTRACTOR AT THE JOB SITE. ACTUAL LOCATIONS OF ALL EQUIPMENT, PIPING, DUCTWORK,AND ALL OTHER ITEMS INCLUDED IN THIS CONTRACT, AND ALL DEVIATIONS OF THE WORK FROM THAT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE MARKED ON THE RECORD/COORDINATION DRAWINGS. EACH TRADE SHALL REVIEW THE COORDINATION DRAWINGS AND RESOLVE ANY POTENTIAL CONFLICTS WITH OTHER TRADES PRIOR TO INSTALLING ANY PORTION OF THEIR WORK. CONTRACTOR SHALL NOT CORE DRILL, OR CUT CONCRETE SLABS FOR ANY REASON WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE OWNER.
7. WORK SHALL BE EXECUTED IN A GOOD WORKMANLIKE MANNER USING MECHANICS IN THEIR RESPECTIVE TRADES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING THE WORK UNDER THIS CONTRACT. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL DELIVER COMPLETE AND FUNCTIONAL SYSTEMS AS ENCOMPASSED BY THE CONTRACT. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND CODE REQUIREMENTS.
8. IN CASES OF DOUBT AS TO THE WORK INTENDED, OR IN THE EVENT OF NEED FOR EXPLANATION THEREOF, THE CONTRACTOR SHALL REQUEST SUPPLEMENTARY INSTRUCTIONS FROM THE ENGINEER. NO CHANGES ARE TO BE MADE TO THE WORK OF THIS CONTRACT WITHOUT PRIOR KNOWLEDGE AND APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL HOLD THE OWNER AND ITS CONSULTANTS HARMLESS AGAINST ALL CLAIMS AND JUDGMENTS ARISING OUT OF THE CONTRACTORS PERFORMANCE OF THE WORK OF THIS CONTRACT. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK, WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT WITHOUT WRITTEN AUTHORIZATION FROM THE APPROPRIATE AUTHORITY. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.
9. THE GENERAL CONTRACTOR SHALL BRING TO THE ATTENTION OF THE MECHANICAL CONTRACTOR ANY SLAB-TO-SLAB PARTITIONS IN ORDER TO PRESERVE RETURN AIR PATHWAYS. CONTRACTOR SHALL VERIFY PARTITION RATING AND PROVIDE FIRE DAMPER AND ACCESS DOOR WHERE REQUIRED BY CODE.
10. WHEREVER FIRE RATED PARTITIONS ARE PENETRATED FOR WIRE, DUCT OR PIPE PASSAGE, SEAL AROUND PASSAGES WITH CODE APPROVED, LABORATORY TESTED AND LABELED SEALANT OF FIRE RESISTANCE RATING NOT LESS THAN THAT OF PENETRATED ASSEMBLY THAT WILL PREVENT PASSAGE OF FIRE AND SMOKE. INSTALL APPROPRIATELY RATED FIRE, SMOKE OR COMBINATION DAMPERS IN ALL DUCT THAT PENETRATES RATED WALLS WHETHER SHOWN. DRAWING SYMBOLS ARE USED AS AN AIDE, NOT TO DEFINE AN EXACT NUMBER OF PIECES OF EQUIPMENT. PROVIDE A MINIMUM OF 18x18 ACCESS DOOR OR PANEL FOR ACCESS TO ALL FIRE, SMOKE, AND COMBINATION DAMPERS.
11. CONTRACTOR SHALL VERIFY THAT THE LOCATION OF CEILING MOUNTED DIFFUSERS, GRILLES AND REGISTERS SHOWN ON THE DRAWINGS ARE ACCEPTABLE TO THE ARCHITECT PRIOR TO INSTALLATION.
12. ALL NEW LOW PRESSURE RECTANGULAR DUCTWORK SHALL BE 1 INCH W.G. CONSTRUCTION AND ALL NEW MEDIUM PRESSURE RECTANGULAR DUCTWORK SHALL BE 3 INCH W.G. CONSTRUCTION. ALL NEW RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED OF LOCK FORMING GALVANIZED STEEL IN ACCORDANCE WITH THE LATEST EDITION OF THE 'DUCT MANUAL AND SHEET METAL CONSTRUCTION FOR VENTILATING AND AIR CONDITIONING SYSTEMS,' PUBLISHED BY THE 'SHEETMETAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION INC. (SMACNA).' VOLUME DAMPERS SHALL BE PROVIDED IN ALL BRANCH TAKE OFFS. SPIN-INS OR OTHER CONNECTIONS TO INDIVIDUAL AIR DISTRIBUTION DEVICES. ALL 90° ELBOWS SHALL BE RADIUS, OR RECTANGULAR WITH TURNING VANES. DUCTWORK SHALL BE HUNG FROM THE BUILDING STRUCTURE WITH HANGER ASSEMBLIES IN ACCORDANCE WITH "SMACNA" REQUIREMENTS. ALL DUCT, REGARDLESS OF PRESSURE CLASS, SHALL BE SEALED PER SMACNA CLASS 'A' REQUIREMENTS. RUNOUTS TO EQUIPMENT SHALL BE IN SIZES INDICATED AND INCREASED OR REDUCED AT POINT OF FINAL CONNECTION TO EQUIPMENT. WHERE VAVs EXIST, ALL DUCTWORK UPSTREAM SHALL BE MEDIUM PRESSURE. ALL DUCTWORK DOWNSTREAM SHALL BE LOW PRESSURE.
13. RECTANGULAR SUPPLY AND RETURN DUCTWORK SHALL BE INTERNALLY LINED WITH 1 INCH, FIBERGLASS, FIRE=25, SMOKE=50, UNLESS OTHERWISE NOTED. EXTERIOR DUCTWORK SHALL BE INTERNALLY LINED WITH 2", FIBERGLASS, FIRE=25, SMOKE=50, UNLESS OTHERWISE NOTED. EXTERIOR DUCTWORK SHALL BE PAINTED AND SEALED WITH SILVER TAR ROOFING PAINT SEALANT. ADDITIONAL INSULATION MAY BE NEEDED TO MEET THE R- VALUES REQUIRED BY THE LATEST EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE. THE MAIN INTENTION OF THE DUCT LINER IS SOUND ATTENUATION. ENSURE THE CODE REQUIREMENT IS MET. DUCT DIMENSIONS INDICATED ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.
14. ALL FLEXIBLE DUCTWORK SHALL BEAR THE UL 181 LABEL (CLASS 1 AIR DUCT) AND SHALL BE FACTORY INSULATED (1-1/2 INCH, 0.6 LB., FIBERGLASS, FIRE =25, SMOKE=50) ATCO UPC #076-1 OR EQUAL. FLEXIBLE DUCTWORK SHALL COMPLY WITH NFPA 90A, AND NFPA 90B. ALL FLEXIBLE DUCTWORK CONNECTED TO DIFFUSERS SHALL NOT BE LESS THAN THE NECK SIZE OF THE DIFFUSER. MINIMUM FLEXIBLE DUCT BEND RADIUS OR CURVATURE SHALL BE 3 DUCT DIAMETERS. MAXIMUM LENGTH SHALL BE 6-0". NO MORE THAN THE EQUIVALENT OF TWO (2) 90 DEGREE BENDS WILL BE ACCEPTABLE.
15. ALL NEW ROUND SHEET METAL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH FIGURES 3-1 THROUGH 3-5G AND TABLE 3-2 OF THE "SMACNA" MANUAL. SNAP LOCK LONGITUDE SEAMS AND DRAW BAND JOINT CONNECTIONS ARE NOT ACCEPTABLE. INSTALL 1" FIBERGLASS DUCT WRAP ON ALL ROUND SUPPLY DUCTS.
16. ALL FLOOR MOUNTED EQUIPMENT AND APPURTENANCES SHALL HAVE MINIMUM 6" THICK CONCRETE HOUSEKEEPING PAD WHETHER SHOWN .
17. PROVIDE FULL ROOF OPENING SIZE DUCT DROP FROM EACH EXHAUST FAN, RELIEF VENTILATOR, INTAKE PENTHOUSE, RTU, OR OTHER PIECE OF MECHANICAL EQUIPMENT. WITH MOISTURE TRAP. ALL TAKE-OFFS ARE FROM SIDE OF THE DROP.
18. DO NOT INSTALL PIPING, DUCTWORK, OR EQUIPMENT OVER ELECTRICAL EQUIPMENT. PROVIDE REQUIRED CLEARANCES FOR ALL ELECTRICAL EQUIPMENT PER NEC. COORDINATE LOCATIONS OF DUCTWORK, PIPING AND EQUIPMENT ABOVE CEILINGS WITH CABLE TRAYS.
19. CONNECT ALL DUCTS TO MECHANICAL EQUIPMENT BY FLEXIBLE CANVAS DUCT CONNECTORS WITH NOT LESS THAN 3" SPACING BETWEEN DUCT AND EQUIPMENT. COORDINATE WALL, ROOF, FLOOR AND CEILING OPENINGS FOR NEW PIPE, DUCT, AND CONDUIT PENETRATIONS. PROVIDE SLEEVES AROUND PIPES AND DUCTS THROUGH ALL FLOORS, CEILINGS, WALLS, AND PARTITIONS.
20. FIELD VERIFY AND COORDINATE DUCTWORK AND PROVIDE OFFSETS TO ACCOMMODATE DUCTWORK THROUGH OR BETWEEN JOISTS, BETWEEN BEAMS AND EXISTING BUILDING STRUCTURE, WALL STUDS, AND ALL TRADES NOT SPECIFICALLY LISTED AT NO ADDITIONAL COST.
21. EQUIPMENT, APPLIANCES, STRUCTURAL JOISTS, BEAMS, WALLS, CEILINGS, LIGHTING FIXTURES, ELECTRICAL EQUIPMENT, AND OTHER TRADE WORK WHERE SHOWN ARE FOR REFERENCE ONLY. VERIFY AND COORDINATE IN FIELD. REFER TO RESPECTIVE DRAWINGS.
22. ALL AUTOMATIC TEMPERATURE CONTROL SYSTEM WORK AND INSPECTION SHALL BE ACCOMPLISHED BY THIS CONTRACTOR. THERMOSTATS SHALL BE INSTALLED IN CLOSE PROXIMITY TO RETURN AIR INLETS UNDER THIS CONTRACT. STANDARD MOUNTING HEIGHT TO TOP OF THERMOSTAT IS 48" ABOVE FINISHED FLOOR OR AS INDICATED ON THE ARCHITECTURAL DRAWINGS. DO NOT INSTALL THERMOSTATS NEAR DIMMER SWITCHES. WIRING OF ALL MOTORIZED OPERATORS AND THERMOSTATS, REGARDLESS OF VOLTAGE ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THE SYSTEM MUST HAVE A PROGRAMMABLE SCHEDULE.
23. CONTRACTOR SHALL MAKE ALL FINAL EQUIPMENT CONNECTIONS AND PROVIDE THE NECESSARY ADAPTERS, FITTINGS, VALVES, AND DEVICES FOR A COMPLETE OPERABLE SYSTEM. COORDINATE REQUIREMENT FOR PROVISION OF CONTACTORS, AND CONTROL WIRING FOR PROPER FUNCTIONING SYSTEM WITH ELECTRICAL CONTRACTOR. MOTOR STARTERS, AND DISCONNECTS ARE TO BE PROVIDED BY THIS CONTRACTOR FOR INSTALLATION BY OTHERS.
24. CONNECTIONS BETWEEN DISSIMILAR PIPING MATERIALS SHALL BE MADE WITH SUITABLE DIELECTRIC INSULATING UNIONS. ISOLATE COPPER PIPING FROM DISSIMILAR METALS, SUCH AS METAL STUDS AND VENT PIPING.
25. PROVIDE VALVES AND UNIONS TO PERMIT DISCONNECTIONS OF EACH EQUIPMENT FOR REPAIRS.
26. ALL HYDRONIC HEATING, AND CHILLED WATER PIPING SHALL BE INSULATED TO A THICKNESS ENOUGH TO MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE. INSULATE FITTINGS, JOINTS, AND VALVES WITH INSULATION OF LIKE MATERIAL AND THICKNESS AS ADJOINING PIPE. FINISH WITH GLASS CLOTH OR PVC FITTING COVERS IN LOCATIONS WHERE THE PIPING IS EXPOSED. WHERE HIDDEN, FSK OR ASJ JACKETING IS ACCEPTABLE.
27. ALL PRODUCTS LOCATED WITHIN PLENUM AREAS INCLUDING BUT NOT LIMITED TO INSULATION AND ADHESIVE SYSTEMS, SHALL HAVE A COMPOSITE FIRE HAZARD RATING NOT TO EXCEED 25 FLAME SPREAD AND 50 SMOKE DEVELOPED AS DETERMINED BY THE APPLICABLE UL OR ASTM STANDARD. ALL PIPING AND DUCTWORK IN AREAS WITH CEILINGS SHALL BE RUN CONCEALED ABOVE ACOUSTICAL OR PLASTER CEILINGS UNLESS OTHERWISE NOTED.
28. SUPPORT ALL PIPING FROM STRUCTURE WITH UL LISTED HANGERS AND SUPPORTS SUITABLE FOR THE INTENDED INSTALLATION. DESIGN, SELECTION, SPACING, AND APPLICATION OF HANGERS AND SUPPORTS SHALL COMPLY WITH ANSI B31.1 AND MSS SSP-69. SUPPORT FROM CEILING IS NOT PERMITTED.
29. CONNECT 4 EXTEND CONDENSATE DRAIN PIPING FROM EACH SS, DOAS, MBC, SBC, CHILLED WATER OR DX COIL TO INDIRECT WASTE DRAINS ONLY. PROVIDE MINIMUM 1" PIPE SIZE AND 2 PERCENT SLOPE FOR GRAVITY DRAINS AND 1 PERCENT SLOPE FOR PUMPED DRAINS. CONDENSATE PIPING SHALL BE INSULATED WITH A MINIMUM OF 1/2" CLOSED CELL ELASTOMERIC.
30. ALL OPENINGS IN DUCTS, PIPES OR FITTINGS SHALL BE KEPT PLUGGED OR CAPPED UNTIL CONNECTED.
31. ALL PIPING SYSTEMS, VALVES, DAMPERS, AND EQUIPMENT SHALL BE PROPERLY IDENTIFIED. ALL DAMPERS AND VALVES SHALL HAVE THEIR NORMAL (IN OPERATION) POSITION IDENTIFIED, SUCH AS 'NORMALLY OPEN' OR 'NORMALLY CLOSED'. ALL DAMPERS AND VALVES SHALL BE PROVIDED AND INSTALLED WITH EXTENDED STEMS AND, OR HANDLES SO OPERATION OF SUCH DEVICES IS NOT AFFECTED BY INSULATION.
32. INSTALL CEILING MOUNTED 24x24 EGG CRATE RETURN GRILLES IN ALL CLOSED SPACES, WHETHER SHOWN ON THE DRAWINGS. INSTALL PRICE INDUSTRIES RETURN AIR CANOPY, MODEL RAC ON ALL RETURNS PER MANUFACTURERS INSTRUCTIONS.
33. ALL PACKAGED EQUIPMENT SHALL BE INDEPENDENTLY THIRD PARTY LABELED AS A SYSTEM FOR ITS INTENDED USE BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) IN ACCORDANCE WITH OSHA FEDERAL REGULATIONS 29CFR1910.303 AND .399, AS WELL AS NFPA PAMPHLET NO. 70, AND THE NATIONAL ELECTRIC CODE (NEC), ARTICLE 90-7.
34. CLEAN ALL MECHANICAL EQUIPMENT AND DUCTWORK OF ALL CONSTRUCTION DUST AT PROJECT COMPLETION. REPLACE ALL FILTERS PRIOR TO AIR BALANCING. PROVIDE ONE SPARE SET OF FILTERS FOR EACH PIECE OF EQUIPMENT TO OWNER. NEWLY INSTALLED HVAC EQUIPMENT SHALL NOT BE USED AT ANY TIME FOR TEMPORARY CONDITIONING OF THE SPACE DURING CONSTRUCTION.
35. AIR AND WATER BALANCING SHALL BE PERFORMED BY AN AABC CERTIFIED CONTRACTOR. THIS CONTRACTOR SHALL BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER. GPM'S SHALL BE BALANCED WITHIN 10% OF DESIGN. AFTER ALL AIR SYSTEMS ARE INSTALLED, EACH SUPPLY AIR OUTLET SHALL BE AIR BALANCED TO WITHIN 10% OF THE CFM SHOWN WITH AIR PATTERNS SET AS INDICATED ON DRAWINGS (OR WITHIN 10 CFM WHEN BELOW 100 CFM). FAN RPMS AND ZONE DAMPERS SHALL BE ADJUSTED AND SHEAVES SHALL BE REPLACED AS REQUIRED TO ACHIEVE AIR BALANCE. AABC ASHRAE FORMAT AIR BALANCE REPORTS SHALL BE CERTIFIED BY THE BALANCING AGENCY AND SUBMITTED TO THE ENGINEER. SHOULD THE AIR BALANCE REPORT INDICATE UNACCEPTABLE DUCT LEAKAGE, AS DETERMINED BY THE ENGINEER, THEN DUCT LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH AABC STANDARDS. DUCT SHALL BE RESEALED AND/OR REPAIRED AS REQUIRED TO MEET DESIGN REQUIREMENTS. ALL, OR PORTIONS OF THE SYSTEM SHALL BE REBALANCED AS REQUIRED UNTIL ALL SYSTEMS ARE WITHIN THE PERFORMANCE STANDARDS LISTED ABOVE.

MECHANICAL SERIES

NUMBER	NAME
M-001	HVAC ABBREVIATIONS AND GENERAL INFORMATION
M-501	HVAC DETAILS
MP101	GROUND FLOOR - MECHANICAL AND PLUMBING PLAN
MP601	SCHEDULES

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

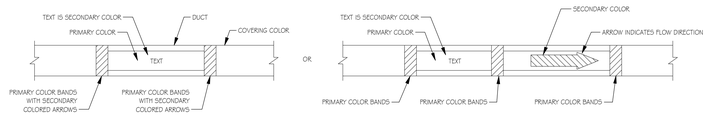
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
HVAC ABBREVIATIONS AND GENERAL INFORMATION

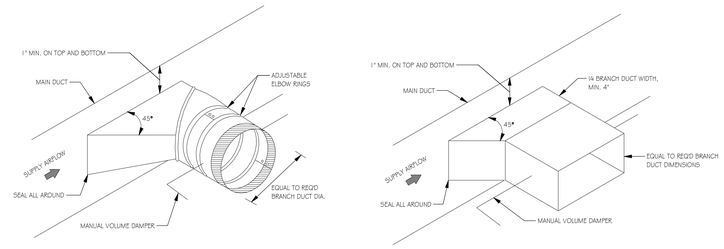
ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	RRO	RRO

M-001



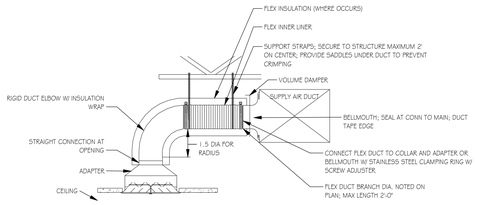
1 DUCTWORK IDENTIFICATION-TYPICAL

NOT TO SCALE



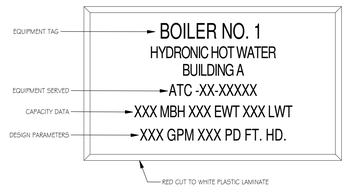
2 BRANCH TAKE-OFF FITTING - TYPICAL

NOT TO SCALE



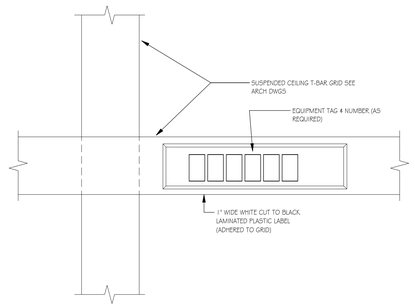
3 DIFFUSER CONNECTION - FLEXIBLE DUCT - TYPICAL

NOT TO SCALE



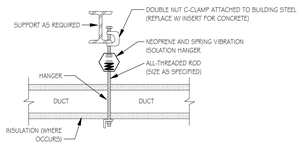
4 EQUIPMENT LABEL - TYPICAL

NOT TO SCALE



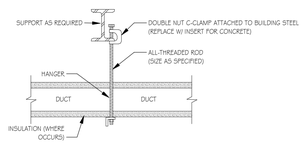
5 EQUIPMENT TAG ON CEILING

NOT TO SCALE



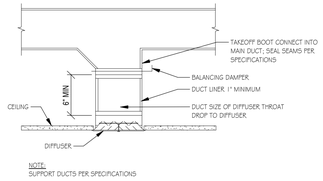
6 DUCT & HANGER ISOLATION SUPPORT

NOT TO SCALE



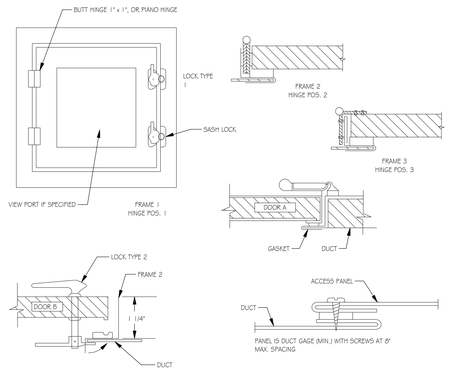
7 DUCT & HANGER SUPPORT

NOT TO SCALE



8 GRILLE/REGISTER CONNECTION RIGID DUCT

NOT TO SCALE



	DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE		
				FRAME	DOOR	BACK
2" W.G. STATIC AND LESS	12" x 12"	2	1-S	24	26	26
	16" x 20"	2	2-S	22	24	26
	24" x 24"	3	2-S	22	22	26
3" W.G. STATIC	12" x 12"	2	1-S	22	22	26
	16" x 20"	2	1-S, 1-T, 1-B	20	20	26
	24" x 24"	3	2-S, 1-T, 1-B	20	20	24
4" W.G. TO 10" W.G.	12" x 12"	2	1-S, 1-T, 1-B	20	20	26
	16" x 20"	3	2-S, 1-T, 1-B	18	18	24
	24" x 24"	3	2-S, 2-T, 2-B	18	18	24
S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM						

9 DUCT ACCESS

NOT TO SCALE

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

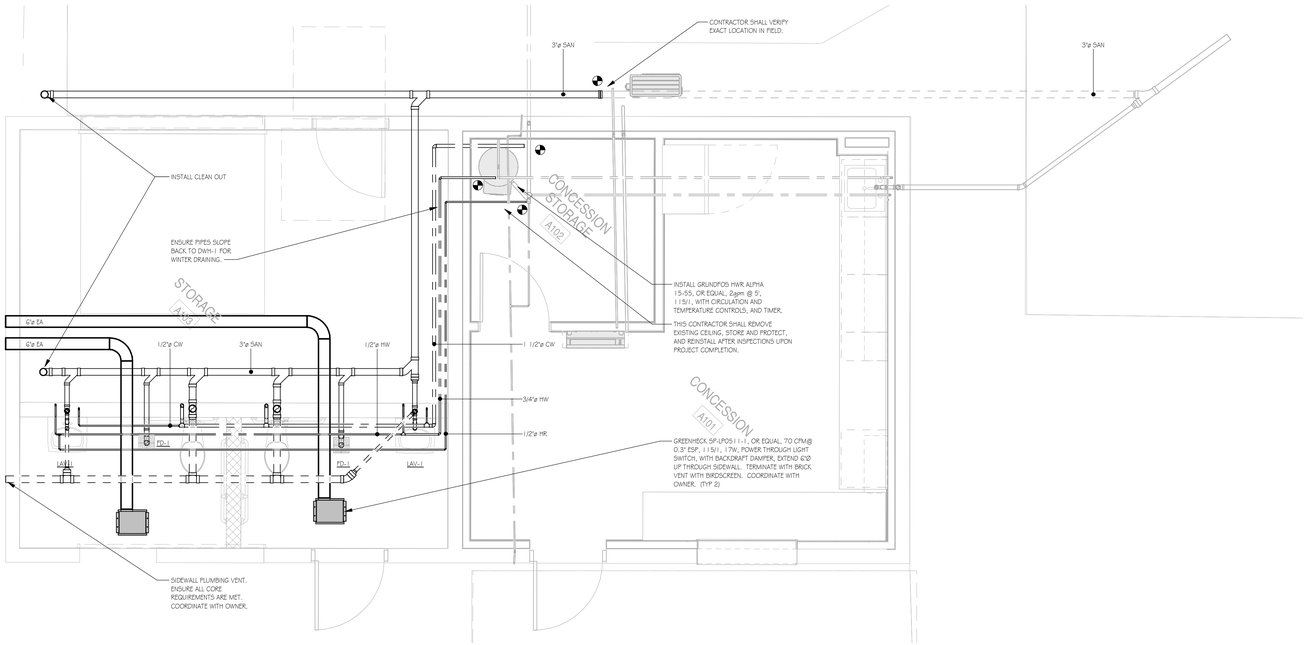
SHEET TITLE
HVAC DETAILS

ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	DRAWN BY	CHECKED BY
2532	RRO	RRO

M-501

GENERAL SHEET NOTES

A. NOTE THAT PIPING IS SHOWN ON THE FLOOR WHERE IT IS INSTALLED, NOT THE FLOOR IT SERVES, UNLESS NOTED OTHERWISE.
B. MAINTAIN SPACE FOR SERVICE AND MAINTENANCE OF EQUIPMENT.
C. PROTECT DRAINS DURING REMAINDER OF CONSTRUCTION PERIOD TO AVOID CLOGGING WITH DIRT AND DEBRIS AND TO PREVENT DAMAGE FROM TRAFFIC AND CONSTRUCTION WORK.
D. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPING AT END OF DAY AND WHEN WORK STOPS.
E. INSTALL ISOLATION VALVES ON EACH BRANCH CONNECTION.
F. INSTALL SANITARY SLOPED AT MAXIMUM SLOPE TO THE SITE INVERT CONNECTION FROM STARTING CONNECTION. MAINTAIN A MINIMUM OF 1/8" FALL PER FOOT, 1/4" FOR PIPING 2" AND SMALLER.
G. USE A MINIMUM OF 2" OR GREATER PIPING BELOW GRADE FOR SANITARY.
H. ROUGH-IN PIPING SERVICES FOR FIXTURES. MOUNT FIXTURES ACCORDING TO CONTRACT DOCUMENTS, LOCAL CODES AND ADA REQUIREMENTS.
I. FURNISH AND INSTALL CLEANOUTS AT THE BASE OF EACH STACK.
J. REFER TO STRUCTURAL DRAWINGS FOR SEISMIC CLASSIFICATION FOR BUILDING. FURNISH AND INSTALL SEISMIC HANGERS AND SUPPORTS AS REQUIRED.



1 ENLARGED FLOOR PLAN - MECHANICAL AND PLUMBING

SCALE: 3/8" = 1'-0"

0 2' 4' 6'

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
FLOOR PLAN - MECHANICAL AND PLUMBING

ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	RRO	RRO

MP101

P L U M B I N G

ABBREVIATIONS

A	
AB	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFLR	ABOVE FLOOD LEVEL RIM
AHU	AIR HANDLING UNIT
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AUTO	AUTOMATIC
AV	ACID VENT
B	
BF	BELOW FLOOR
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
BJ	BETWEEN JOISTS
BLDG	BUILDING
BLW	BELOW
BOT	BOTTOM
BTU	BRITISH THERMAL UNIT
C	
CB	CATCH BASIN
CIB	CAST IRON BOOT
CIP	CAST IRON PIPE
CLG	CEILING
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECT/CONNECTION
CONST	CONSTRUCT/CONSTRUCTION
CONT	CONTINUED/CONTINUATION
COORD	COORDINATE
CW	COLD WATER
D	
DEG	DEGREE
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DISC	DISCONNECT
DN	DOWN
DR	DRAIN
DWG	DRAWING
E	
EC	ELECTRICAL CONTRACTOR
ECO	EXTERIOR CLEANOUT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ENG	ENGINEER
EQUIP	EQUIPMENT
ERD	EXISTING ROOF DRAIN
ETR	EXISTING TO REMAIN
EW	EYE WASH
EWC	ELECTRICAL WATER COOLER
EXIST *or* EXST	EXISTING
EXP	EXPOSED
F	
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFE	FINISH FLOOR ELEVATION
FGE	FINISH GRADE ELEVATION
FLA	FULL LOAD AMPERES
FLR	FLOOR
FLR	FLOOD LEVEL RIM
FS	FLOOR SINK

FT	FOOT/FEET
FUT	FUTURE
FV	FLUSH VALVE
FVXF	FLUSH VALVE TRANSFORMER
G	
GA	GAUGE/GAGE
GAL	GALLON
GALV	GALVANIC *or* GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERAL
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GRD	GRADE
GV	GATE VALVE
H	
H	HIGH
HC	HEATING (HVAC) CONTRACTOR
HDCP	HANDICAPPED (ACCESSIBLE)
HORIZ	HORIZONTAL
HP	HORSE POWER
HT	HEIGHT
HTG	HEATING
HW	HOT WATER
HWR	HOT WATER RECIRCULATION
I	
ID	INSIDE DIAMETER
IN OR "	INCH
INT	INTERIOR
INV	INVERT (ER)
L	
L	LAVATORY
LB *or* LBS	POUND(S)
M	
MAX	MAXIMUM
MB	MOP BASIN
MB (E)	MOP BASIN EXISTING
MBF	MOP BASIN FLOOR
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
N	
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
O	
OC	ON CENTER
OFD	OVERFLOW DRAIN
OPNG	OPENING
P	
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE
PLBG	PLUMBING
PR	PIPE RISER
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE/PRESSURE RELIEF VENT
PSI	POUNDS PER SQUARE INCH

R	
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RF	ROOF
RI	ROUGH-IN
RM	ROOM
RPZ	REDUCED PRESSURE ZONE
RWC	RAINWATER CONDUCTOR
S	
S	SINK
S&C	STUB & CAP
S&W	SOIL AND WASTE
SAN	SANITARY
SF	SQUARE FEET
SH	SHOWER
SHT	SHEET
SP	SUMP PUMP
SPEC	SPECIFICATIONS
SQ	SQUARE
SS	SERVICE SINK
SST	SECONDARY STORM
ST	STORM
STD	STANDARD
STL	STEEL
STOR	STORAGE
SUSP	SUSPEND/SUSPENDED
T	
TEMP	TEMPERATURE
THRU	THROUGH
TJ	THROUGH JOISTS
TMWV	THERMOSTATIC WATER MIXING VALVE
TW	TEMPERED WATER
TYP	TYPICAL
U	
UE	UNDER ELECTRICAL
UG	UNDER GENERAL
UH	UNIT HEATING, UNDER HVAC
UNO	UNLESS NOTED OTHERWISE
UP	UNDER PLUMBING
UR	URINAL
US	UNDERSIDE OF STRUCTURE
V	
V	VENT
VR	VENT RISER
VS	VENT STACK
VTR	VENT THROUGH ROOF
W	
W	WASTE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WM	WATER METER
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WT	WEIGHT
WTD	WATER TEMPERATURE DROP
WTR	WATER

GENERAL NOTE: NOT ALL ABBREVIATIONS OR TERMS INDICATED ARE USED ON THESE CONTRACT DOCUMENTS.

PIPING SPECIALTIES

- PIPE ANCHOR
- STUB AND CAP
- PIPE DROP
- PIPE RISE
- PIPE TEE OFF BOTTOM
- UNION (SCREWED)
- UNION (FLANGED)
- ALIGNMENT GUIDE
- FLEXIBLE CONNECTOR
- EXPANSION LOOP
- STRAINER WITH HOSE END BLOW OFF VALVE
- STRAINER
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DRAIN VALVE
- GATE VALVE
- GLOBE VALVE
- NEEDLE VALVE
- PLUG COCK VALVE
- PRESSURE REDUCING VALVE
- PRESSURE REGULATOR VALVE
- PRESSURE RELIEF VALVE
- PRESSURE GAUGE WITH NEEDLE VALVE
- SAFETY RELIEF VALVE
- SHUT OFF VALVE
- SOLENOID VALVE
- THERMOMETER (DIAL TYPE)
- HOSE BIBB (HB)
- WALL HYDRANT (WH)
- ROOF DRAIN (RD)
- OVERFLOW ROOF DRAIN (ORD)
- FLOOR DRAIN (FD)
- OSD — OPEN SITE DRAIN
- WATER HAMMER ARRESTOR
- CONTINUED

GRAPHIC SYMBOLS

- AREA OF REVISION
- # — REVISION SEQUENCE NUMBER
- # — SHEET KEYNOTE
- # — DEMOLITION KEYNOTE
- POINT OF CONNECTION TO EXISTING SYSTEM
- POINT OF DISCONNECTION FROM EXISTING SYSTEM

NOTE: LEGENDS ARE GENERAL, NOT ALL SYMBOLS AND/OR DESIGNATIONS MAY APPEAR ON THE DRAWINGS.

PLUMBING GENERAL NOTES

A. ROUGH-IN AND CONNECT HOT WATER, COLD WATER, VENT AND SANITARY LINES TO FIXTURES IN ACCORDANCE WITH SIZES INDICATED ON FIXTURE SCHEDULE.
B. ALL DIMENSIONS AND PIPE SIZES ARE IN INCHES, UNLESS NOTED OTHERWISE.
C. FURNISH AND INSTALL 2" MINIMUM SANITARY PIPING BELOW GROUND INSIDE BUILDING REGARDLESS OF SIZE INDICATED ON PLUMBING FIXTURE SCHEDULE.
D. INSTALL ALL PIPING WITHIN BUILDING THERMAL ENVELOPE, ABOVE CEILING UNDER BUILDING INSULATION AND ON BUILDING SIDE OF WALL INSULATION, UNLESS NOTED OTHERWISE.
E. FURNISH AND INSTALL FIRE-RATED ACCESS PANELS WHERE REQUIRED FOR ACCESS TO ALL CONCEALED VALVES, TRAPS OR OTHER EQUIPMENT FURNISHED UNDER THIS CONTRACT WHERE NO OTHER MEANS IS PROVIDED. PROVIDE BEADED EDGE IN PLASTER OF GWP. WALLS AND CEILINGS.
F. INSTALL UNIONS ON PIPING TO PERMIT EASY DISCONNECTING. INSTALL UNIONS AT CONNECTION TO ALL EQUIPMENT.
G. ALL EQUIPMENT AND PIPING 50 POUNDS AND GREATER SHALL BE SUPPORTED FROM TRUSS TOP CORD, UNLESS NOTED OTHERWISE.
H. COORDINATE LOCATION OF ALL PIPING AND DEVICES WITH THE WORK OF OTHER TRADES BEFORE INSTALLATION. WHERE A CONFLICT IN AVAILABLE CLEARANCES OCCURS, OBTAIN CLARIFICATION FROM THE ARCHITECT AND PROVIDE WHATEVER ADDITIONAL PIPING, FITTINGS, ETC. ARE REQUIRED TO INSTALL PLUMBING SYSTEM WITHOUT ANY ADDITIONAL COST TO THE CONTRACT.
I. FURNISH OPERATIONAL, MAINTENANCE AND EMERGENCY INSTRUCTIONS TO THE RESPONSIBLE DESIGNATED MAINTENANCE STAFF BEFORE ANY PART OF THE SYSTEM IS TURNED OVER TO THE OWNER AND SUBMIT WRITTEN CONFIRMATION TO THE ARCHITECT AS TO WHAT INFORMATION WAS GIVEN TO WHOM AND WHEN.
J. TEST INSTALLATION IN ACCORDANCE WITH THE APPROPRIATE CODE REQUIREMENTS FOR EACH SYSTEM TYPE. NOTIFY THE OWNER PRIOR TO TESTING SYSTEM. SUBMIT TESTING REPORTS IN OPERATION AND MAINTENANCE MANUAL.
K. PROVIDE PAINTING AS DETAILED IN THE SPECIFICATIONS.
L. VERIFY MOUNTING HEIGHTS OF EQUIPMENT FIXTURES WITH ARCHITECT BEFORE ROUGH-IN.
M. FOR HANDICAPPED/ACCESSIBLE PLUMBING FIXTURES, CONFIRM EXACT MOUNTING HEIGHT WITH AUTHORITY HAVING JURISDICTION AND ADJUST AS REQUIRED BEFORE INSTALLATION.
N. PROVIDE WATER HAMMER ARRESTORS ON HOT WATER AND COLD WATER PIPING AT EVERY TOILET GROUP. LOCATE IN ACCESSIBLE POSITION FOR SERVICING.
O. ALL VENTS SHALL BE LOCATED A MINIMUM OF 10 FEET AWAY FROM MECHANICAL UNIT OUTSIDE AIR INTAKES AND BUILDING OPENINGS.
P. PROTECT THE OPEN ENDS OF ALL PIPE WITH PROTECTIVE CAPS (ON A DAILY BASIS) TO PREVENT ANY DEBRIS OR DIRT FROM ENTERING THE SYSTEM DURING CONSTRUCTION.
Q. SHOULD THE DRAWINGS DISAGREE WITH ONE ANOTHER OR WITH THE SPECIFICATIONS, THE BETTER QUALITY OR GREATER QUANTITY OF WORK OR MATERIALS SHALL BE PERFORMED OR PROVIDED.

NATURAL GAS SYSTEMS GENERAL NOTES

A. ALL DIMENSIONS AND PIPE SIZES ARE IN INCHES, UNLESS NOTED OTHERWISE.
B. SIZE PRESSURE REGULATOR VALVES BASED ON FLOW, INLET PRESSURE AND OUTLET PRESSURE.
C. LOCATE PIPING CONCEALED WHERE CEILING OCCURS, UNLESS NOTED OTHERWISE. LOCATE SHUT-OFF VALVES, PRESSURE REGULATOR VALVES, UNIONS, SOLENOID VALVES, APPLIANCE REGULATORS, CONNECTORS AND THREADED FITTINGS (WITH RELATED IMMEDIATE PIPING) ABOVE ACCESSIBLE CEILING OR ACCESS PANEL.
D. PAINT EXTERIOR EXPOSED GAS PIPING SAFETY YELLOW.
E. INSTALLATION SHALL BE ACCORDING TO LOCAL CODES AND LOCAL GAS UTILITY REQUIREMENTS.
F. AFTER INSTALLATION, GAS PIPING SHALL BE TESTED AND WITNESSED BY LOCAL AUTHORITY HAVING JURISDICTION AND OWNER'S REPRESENTATIVE BEFORE SERVICE IS TURNED ON.
G. PROVIDE A SUITABLE SHUT-OFF VALVE, APPLIANCE PRESSURE REGULATOR, DRIP LEG AND UNION AT EACH CONNECTION TO EACH PIECE OF GAS FIRED EQUIPMENT.
H. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND THE NATIONAL FUEL GAS CODE.
I. AUTHORITIES HAVING JURISDICTION SHALL BE CONSULTED BEFORE INSTALLATIONS ARE MADE TO VERIFY LOCAL CODES.
J. PLUMBING CONTRACTOR SHALL COORDINATE GAS SERVICE WITH GAS COMPANY. GAS SERVICE SHALL BE SIZED FOR THE CAPACITY OF ALL CONNECTED GAS EQUIPMENT PLUS FUTURE CAPACITY. PLUMBING CONTRACTOR SHALL COORDINATE GAS SERVICE WITH ALL OTHER TRADES TO AVOID CONFLICT. GAS METER LOCATION SHALL BE COORDINATED WITH GAS COMPANY, OWNER AND ARCHITECT.
K. ALL PRESSURE REGULATORS SHALL BE VENTED TO THE OUTDOORS PER MANUFACTURER'S RECOMMENDATION, WHETHER SHOWN OR NOT. EXTEND 1" GAS VENT FROM EACH INDOOR GAS PRESSURE REGULATOR TO OUTSIDE THROUGH ROOF OR WALL, 10 FEET HORIZONTAL DISTANCE FROM ANY BUILDING OPENING AND 7 FEET MINIMUM ABOVE FINISHED ELEVATION AND IN ACCORDANCE WITH LOCAL CODES AND MANUFACTURER'S WRITTEN RECOMMENDATIONS. REVIEW MANIFOLD PIPE SIZES WITH MANUFACTURER, LOCAL AUTHORITY HAVING JURISDICTION AND ENGINEER.
L. PROVIDE EARTHQUAKE VALVE ABOVE GROUND OUTSIDE IN EACH GAS SERVICE MAIN DOWNSTREAM OF GAS METER/SERVICE PRESSURE REGULATOR ASSEMBLY. EARTHQUAKE VALVES SHALL BE LINE SIZE OR SIZED FOR MAX. 0.5 INCH WC PRESSURE DROP, WHICHEVER IS GREATER AND SHALL HAVE MAXIMUM OPERATING PRESSURE OF 60 PSI.
M. LOCAL GAS UTILITY: XXXX

NATURAL GAS LOAD SCHEDULE

TAG	DESCRIPTION	GAS INPUT (CFH)	MIN. GAS PRESSURE (IWC)	MAX. GAS PRESSURE (IWC)	NOTES
	NEW GENERATOR	5888	7"	14"	

NATURAL GAS LOAD SCHEDULE GENERAL NOTES:
A. COORDINATE MOUNTING HEIGHTS AND LOCATIONS FOR ALL EQUIPMENT BEFORE INSTALLATION, REFER TO ARCHITECTURAL DRAWINGS. ROUGH-IN AND INSTALL BARRIER-FREE/ACCESSIBLE EQUIPMENT PER ADA REQUIREMENTS.
B. PROVIDE ALL NEW 0.5 PSIG LOW PRESSURE GAS DISTRIBUTION SYSTEM FROM THE GAS METER, SIZED WITH 0.5 INCH W.C. PRESSURE DROP, NFPA 54-2012 TABLE 6.2(b). USE 5888 CFH AT 0.5 PSIG MAXIMUM BUILDING GAS LOAD.
C. COORDINATE GAS SERVICE RELATED WORK WITH LOCAL GAS UTILITY.

PLUMBING GENERAL PROJECT NOTES

1. ALL WORK AND EQUIPMENT SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, AND RULINGS OF ALL AUTHORITIES HAVING JURISDICTION INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL PLUMBING CODE, THE LOCAL FIRE MARSHALL, UNDERWRITERS LABORATORY, IRI, FM, OSHA, AND THE NATIONAL ELECTRIC CODE. MODIFICATIONS REQUIRED BY THE ABOVE AUTHORITIES IN ORDER TO BRING THE PROJECT INTO CODE REQUIREMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. IF CONTRACT DOCUMENTS ARE MORE STRINGENT THAN CODE REQUIREMENTS, THEN THE CONTRACT DOCUMENTS SHALL GOVERN. CONTRACTOR IS RESPONSIBLE FOR ALL ROUGH-IN, FINAL CONNECTIONS, AND PROPER INSTALLATION OF ALL FIXTURES AND EQUIPMENT. ALL NECESSARY PARTS REQUIRED TO MAKE A FULLY OPERATIONAL SYSTEM WITHIN CODE GUIDELINES SHALL BE INSTALLED, INCLUDING, BUT NOT LIMITED TO TRAPS, VALVES, VACUUM BREAKERS, PRESSURE GAUGES, OR PRESSURE REGULATORS.
2. ALL SPECIFICATIONS AND DRAWINGS ARE COMPLIMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. ANY CONFLICTING INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, AND WORK SHALL CEASE ON THAT PORTION OF THE PROJECT UNTIL CLARIFICATIONS ARE ISSUED.
3. THE BUILDING IN WHICH WORK IS BEING PERFORMED SHALL REMAIN ACCESSIBLE AT ALL TIMES. ALL MATERIAL, WASTE, AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY. MAINTAIN THE CONSTRUCTION PREMISES IN A NEAT AND ORDERLY CONDITION AT THE END OF EACH WORKING DAY. MAKE ALL ARRANGEMENTS TO PAY FOR ALL TEMPORARY UTILITIES NEEDED BY THIS TRADE INCLUDING WATER, WASTE, ELECTRIC, HEATING, AND VENTILATION. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN FOR THE ENTIRE LENGTH OF THIS CONTRACT ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES, AND ALARMS AS REQUIRED BY CODE.
4. CONTRACTOR SHALL CONFIRM THE REQUIREMENTS FOR PREMIUM TIME OR SPECIAL PROCEDURES WITH THE OWNER AND INCLUDE COST IN THIS PROPOSAL. THE CONTRACTOR, BY SUBMITTING HIS PROPOSAL AGREES TO ACCEPT ALL EXISTING SITE CONDITIONS NOT SPECIFICALLY EXCEPTED. ALL EXCEPTIONS SHALL BE PROVIDED IN WRITING TO THE ARCHITECT AND ENGINEER.
5. CONTRACTOR SHALL COORDINATE, PREPARE AND SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER FOR THEIR APPROVAL. SHOP DRAWINGS TO BE SUBMITTED INCLUDE: FIXTURES, VALVES, PUMPS, WATER HEATERS, PIPING, AND ALL EQUIPMENT.
6. A SET OF MEP RECORD/COORDINATION DRAWINGS SHALL BE MAINTAINED IN THE GENERAL CONTRACTORS OFFICE AT THE JOB SITE. ACTUAL LOCATIONS OF ALL EQUIPMENT, PIPING, DUCTWORK, ETC., AND ALL DEVIATIONS OF THE WORK FROM THAT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE MARKED ON THE RECORD/COORDINATION DRAWINGS. EACH TRADE SHALL REVIEW THE COORDINATION DRAWINGS AND RESOLVE ANY POTENTIAL CONFLICTS WITH OTHER TRADES PRIOR TO INSTALLING ANY PORTION OF THEIR WORK. CONTRACTOR SHALL NOT CORE DRILL, OR CUT CONCRETE SLABS FOR ANY REASON WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE STRUCTURAL ENGINEER AND THE OWNER.
7. WORK SHALL BE EXECUTED IN A GOOD WORKMANLIKE MANNER USING MECHANICS IN THEIR RESPECTIVE TRADES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING THE WORK UNDER THIS CONTRACT. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL DELIVER COMPLETE AND FUNCTIONAL SYSTEMS AS ENCOMPASSED BY THE CONTRACT.
8. IN CASES OF DOUBT AS TO THE WORK INTENDED, OR IN THE EVENT OF NEED FOR EXPLANATION THEREOF, THE CONTRACTOR SHALL REQUEST SUPPLEMENTARY INSTRUCTIONS FROM THE ENGINEER. NO CHANGES ARE TO BE MADE TO THE WORK OF THIS CONTRACT WITHOUT PRIOR KNOWLEDGE AND APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL HOLD THE OWNER AND ITS CONSULTANTS HARMLESS AGAINST ALL CLAIMS AND JUDGMENTS ARISING OUT OF THE CONTRACTORS PERFORMANCE OF THE WORK OF THIS CONTRACT THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK, WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT, WITHOUT WRITTEN AUTHORIZATION FROM THE APPROPRIATE AUTHORITY. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.
9. ALL PIPING SHALL BE CONCEALED EITHER ABOVE THE CEILING, OR IN WALLS, OR CHASES UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS INCLUDING POINTS OF CONNECTION PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR IS REQUIRED TO COORDINATE WITH OTHER TRADES AND EXISTING CONDITIONS.
11. EXISTING EQUIPMENT TO REMAIN, BE REUSED OR RELOCATED WITHIN THE BUILDING SPACE WHICH BECOMES DAMAGED OR DOES NOT COMPLY WITH THE SPECIFICATIONS, SHALL BE RESTORED TO LIKE NEW CONDITION AS DETERMINED BY THE ARCHITECT OR ENGINEER. IF EQUIPMENT IS BEYOND RESTORATION, IT SHALL BE REPLACED WITH NEW EQUIPMENT MEETING THE SPECIFICATION REQUIREMENTS.
12. WHEREVER FIRE RATED PARTITIONS ARE PENETRATED FOR WIRE, DUCT OR PIPE PASSAGE, SEAL PASSAGES WITH CODE APPROVED, LABORATORY TESTED AND LABELED SEALANT OF FIRE RESISTANCE RATING NOT LESS THAN THAT OF PENETRATED ASSEMBLY THAT WILL PREVENT PASSAGE OF FIRE AND SMOKE.
13. ALL CUTTING, DRILLING, AND PATCHING OF WALLS, FLOORS AND/OR STRUCTURAL MEMBERS FOR THE INSTALLATION OF PLUMBING SYSTEMS SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. STRUCTURAL MEMBERS SHALL NOT BE MODIFIED IN ANY WAY WITHOUT THE PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
14. SUPPORT ALL PIPING FROM STRUCTURE WITH UL LISTED HANGERS AND SUPPORTS SUITABLE FOR THE INTENDED INSTALLATION. DESIGN, SELECTION, SPACING, AND APPLICATION OF SUPPORTS AND HANGERS SHALL COMPLY WITH ANSI B31.1 AND MSS SP-69.
15. DISSIMILAR PIPING MATERIALS SHALL BE CONNECTED BY SUITABLE DIELECTRIC INSULATING UNIONS. ISOLATE COPPER PIPE FROM DISSIMILAR METALS SUCH AS STEEL STUDS.
16. ALL PRODUCTS LOCATED WITHIN PLENUM AREAS, INCLUDING BUT NOT LIMITED TO INSULATION AND ADHESIVE SYSTEMS, SHALL HAVE A COMPOSITE FIRE HAZARD RATING NOT TO EXCEED 25 FLAME SPREAD AND 50 SMOKE DEVELOPED AS DETERMINED BY THE APPLICABLE UL OR ASTM STANDARDS
17. ALL NEW DOMESTIC WATER PIPING SHALL BE TYPE L HARD DRAWN SEAMLESS COPPER WATER TUBE. COPPER TUBE FITTINGS SHALL BE WROUGHT COPPER JOINT FITTINGS CONFORMING TO ANSI 315.22. SOLDERED COPPER JOINTS SHALL BE SOLDERED WITH LEAD FREE ASTM B32 GRADE 95T TIN-ANTIMONY SOLDER. PVC, CPVC, AND PEX TUBING SHALL BE ACCEPTABLE IN LOCATIONS PERMITTED BY THE CODE.
18. PIPING SYSTEM SHALL BE INSULATED WITH HEAVY-DUTY FIBERGLASS MATERIAL WITH ALL PURPOSE NONCOMBUSTIBLE VAPOR BARRIER JACKET. INSULATION SHALL HAVE MAXIMUM THERMAL CONDUCTIVITY FACTOR (K) OF 0.23 BTU IN/HR FT^2 °F AT 75°F. ADHESIVE SYSTEMS THAT EMPLOY RELEASE PAPER WILL NOT BE ACCEPTABLE. AS AN ACCEPTABLE ALTERNATE TO THE ABOVE INSULATION, THE CONTRACTOR MAY PROVIDE OWENS-CORING "SSL-II" DOUBLE SURE PIPE INSULATION. THICKNESS SHALL BE AS SCHEDULED ON PG.1.
19. ALL NEW DOMESTIC WATER PIPING SHALL HAVE THE OPTION TO BE INSULATED WITH ARMSTRONG FLEXIBLE ELASTOMERIC CLOSED CELL PIPE INSULATION OR APPROVED EQUAL. THE INSULATION SHALL HAVE A MAXIMUM THERMAL CONDUCTIVITY FACTOR (K) OF 0.28 BTU IN/HR FT^2 °F AT 75°F AND A MAXIMUM WATER PERMEABILITY OF 0.15 PERM-INCH. THE PIPE INSULATION BUTT JOINTS AND LONGITUDINAL JOINTS SHALL BE SEALED WITH ARMSTRONG 520 ADHESIVE AND THE ENTIRE INSULATION INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ADHESIVE SYSTEMS THAT EMPLOY RELEASE PAPER WILL NOT BE ACCEPTABLE.
20. FITTINGS, VALVES, AND FLANGES SHALL BE INSULATED WITH THE SAME MATERIALS AND OF THE SAME THICKNESS AS THE ADJOINING PIPE. INSTALL VALVES WITH EXTENDED STEMS TO PREVENT INSULATION INTERFERENCE WITH ACTUATION.
21. WATER METER SHALL BE INSTALLED PER AUTHORITY'S SPECIFICATIONS AND DETAILS. REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY SHALL BE WATTS NO 909-S SERIES OR APPROVED EQUAL. IF IT COMPLIES WITH THESE SPECIFICATIONS EQUIPMENT MANUFACTURED BY CLA-VAL COMPANY, FEBCO, HERSHEY PRODUCTS, INC., OR WATTS REGULATION COMPANY WILL BE ACCEPTABLE. ASSEMBLY SHALL BE COMPLETE WITH STRAINER, DRAIN LINES, INLET, AND OUTLET SHUT-OFF VALVES AND WATT SERIES 'AG' AIR GAP. THE PRESSURE LOSS OVER THE ENTIRE ASSEMBLY SHALL NOT EXCEED 10 PSI AT DESIGN FLOW. THE SIZE OF THE ASSEMBLY SHALL NOT BE SMALLER THAN THE LINE SIZE IN WHICH IT IS INSTALLED. BACKFLOW PREVENTOR ASSEMBLY SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION. PIPE RELIEF OUTLET DISCHARGE TO NEAREST FLOOR DRAIN. DO NOT INSTALL ABOVE FINISHED CEILINGS, UNLESS NOTED OR INDICATED OTHERWISE.
22. DOMESTIC WATER GATE VALVES FOR COPPER PIPING UP TO AND INCLUDING 21/2 INCHES SHALL BE NIBCO NO. S-111 OR APPROVED EQUAL, CLASS 125, 200 PSIG WOG, BRONZE BODY WITH SOLDERED ENDS, RISING STEM, SOLID WEDGE AND SCREWED BONNET. DOMESTIC WATER GATE VALVES FOR COPPER PIPING 3 INCHES AND 4 INCHES SHALL BE CRANE NO. 465-1/2 OR APPROVED EQUAL, 200# WOG CAST IRON OS&Y VALVE WITH CLASS 125 ANSI B16.1 FLAT FACED FLANGED ENDS BRONZE TRIM: STEMS, DISC FACES, SEAT RINGS AND BONNET BUSHINGS CONSTRUCTED OF BRONZE. ALL OF THE ABOVE GATE VALVES SHALL BE USED FOR STOP OR ISOLATION VALVE APPLICATIONS. IN LIEU OF GATE VALVES FOR PIPING 2 1/2 INCHES AND SMALLER, NIBCO 585-70 BALL VALVES MAY BE USED.
23. GLOBE VALVES FOR COPPER PIPING UP TO AND INCLUDING 21/2 INCHES SHALL BE NIBCO NO. S-235 OR APPROVED EQUAL, CLASS 150 300# WOG, BRONZE BODY, BRONZE RISING STEM, UNION BONNET RENEWABLE SEAT AND SOLDERED ENDS. DOMESTIC WATER GLOBE VALVES FOR COPPER PIPING 3 INCHES AND 4 INCHES SHALL BE CRANE NO. 351 OR APPROVED EQUAL, CLASS 125, 200# WOG CAST IRON OS&Y VALVES WITH ANSI B16.1 FLANGED ENDS, YOKE BONNET, RENEWABLE SEAT AND BRONZE TRIM: STEMS DISCS, FACES, SEAT FACES AND BUSHINGS CONSTRUCTED OF BRONZE. ALL OF THE ABOVE GLOBE VALVES SHALL BE USED FOR BALANCING OR THROTTLING VALVE APPLICATIONS.
24. DOMESTIC WATER PRESSURE REDUCING VALVE ASSEMBLIES SHALL BE SELECTED TO PROVIDE STABLE FLOW CONDITIONS WITHOUT CAVITATION OR VALVE CHATTER.
25. SHOCK ARRESTORS SHALL BE LOCATED DOWNSTREAM OF THE DOMESTIC WATER SERVICE VALVE, AT EACH SERVICE TO A GROUP OF FIXTURES, AND OR AS INDICATED ON THE DRAWINGS. SHOCK ARRESTORS SHALL BE AS MANUFACTURED BY PRECISION PLUMBING PRODUCTS OR APPROVED EQUAL AND CONFORM TO THE REQUIREMENTS OF THE PLUMBING AND DRAINING INSTITUTE.
26. PROVIDE STOP VALVES AT ALL FIXTURE AND EQUIPMENT SUPPLIES. ALL EXPOSED FIXTURE CONNECTIONS SHALL BE CHROME PLATED, STAINLESS STEEL OR FITTED WITH CHROME PLATED SLEEVES. PROVIDE VACUUM BREAKERS WHERE REQUIRED BY CODE.
27. ALL DOMESTIC WATER PIPING SYSTEMS SHALL BE DISINFECTED IN ACCORDANCE WITH THE APPLICABLE CODES AND AWWA C651
28. HYDRAULICALLY PRESSURE TEST ALL PIPING AT THE FULL WORKING PRESSURE FOR A MINIMUM PERIOD OF 24-HOURS. STOP-LEAK COMPOUNDS WILL NOT BE ALLOWED. ALL PRESSURIZED WATER PIPING SYSTEMS SHALL BE RATED FOR 150 PSI WORKING PRESSURE. REPAIR ANY LEAKS AND RETEST TO DEMONSTRATE TIGHTNESS.
29. ALL NEW SANITARY, SOIL, WASTE, VENT, AND STORM WATER PIPING SHALL BE SERVICE WEIGHT CAST IRON, BELL AND SPIGOT, PIPE AND FITTINGS, ANSI A.112.5.1 AS MANUFACTURED BY TYLER PIPE AND FOUNDRY CO., U.S. PIPE AND FOUNDRY CO., CENTRAL FOUNDRY OR APPROVED EQUAL. TYLER "TY-SEAL" OR APPROVED EQUAL, NEOPRENE POSITIVE SEAL ELASTOMERIC COMPRESSION TYPE GASKETS SHALL BE USED AT ALL JOINTS. AS AN OPTION, ALL NEW SANITARY, SOIL, WASTE, VENT AND STORM WATER PIPING 4 INCHES AND SMALLER MAY USE HUBLESS SERVICE WEIGHT CAST IRON PIPE, FITTINGS AND JOINTS WITH TYLER "NO-HUB" STAINLESS STEEL CONNECTORS. IN ADDITION, ALL VENT PIPING MAY BE DWV COPPER PIPE AND FITTINGS WITH SOLDERED JOINTS. GASKETS, JOINTS, CONNECTORS, SPECIALTIES AND PIPE SHALL BE MANUFACTURED AND APPROVED BY THE SAME MANUFACTURER. ALL STORM PIPING AND WASTE LINES FROM DRINKING WATER FOUNTAINS SHALL BE INSULATED WITH 1/2 INCH THICK HEAVY DUTY FIBERGLASS MATERIAL WITH ALL PURPOSE NONCOMBUSTIBLE VAPOR BARRIER JACKET. INSULATION SHALL HAVE A MAXIMUM THERMAL CONDUCTIVITY (K) OF 0.23 BTU IN/HR FT^2 °F AT 75°F. ADHESIVE SYSTEMS THAT EMPLOY RELEASE PAPER WILL NOT BE ACCEPTABLE. ALL DRAINAGE PIPE SHALL BE SUPPORTED DIRECTLY ON EACH SIDE OF A JOINT. ALL PIPING SUPPORTS AND RESTRAINTS SHALL BE IN STRICT ACCORDANCE WITH THE DRAINAGE PIPE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION GUIDES. CONTRACTOR MAY USE PVC DWV PIPING WHERE THE CODE PERMITS. PVC MAY NOT BE INSTALLED IN PLENUM AREAS. CONFIRM WITH MC OR ENGINEER THAT AREAS ARE NOT PLENUM TYPE PRIOR TO INSTALLATION.
30. EXCEPT WHERE OTHERWISE INDICATED, HORIZONTAL SANITARY, SEWAGE AND WASTE VENT PIPING SHALL SLOPE AT 1/4 INCH PER FOOT PER PIPES 21/2 INCHES AND SMALLER, PIPES 3 INCHES AND LARGER SHALL SLOPE AT 1/8 PER FOOT. ALL VERTICAL SANITARY SEWER AND STORM WATER PIPING, WHICH TURN 90° AFTER PASSING THROUGH A FLOOR, SHALL BE INSTALLED AS TIGHT AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE.
31. CLEANOUTS SHALL BE PROVIDED IN PIPING AT EACH CHANGE IN DIRECTION, IN ALL HORIZONTAL STRAIGHT RUNS MORE THAN 50 FEET LONG, AND AT ALL OTHER LOCATIONS AS NOTED ON DRAWINGS. ALL CLEANOUTS SHALL BE THE SAME SIZE AS THE PIPE DIAMETER UP TO AND INCLUDING PIPE 4 INCHES IN DIAMETER. FOUR-INCH CLEANOUTS SHALL BE USED FOR ALL PIPE LARGER THAN 4 INCHES, UNLESS NOTED OTHERWISE. ALL CLEAN-OUT LOCATIONS SHALL BE NO MORE THAN 5 FEET ABOVE BASE OF THE HORIZONTAL OFFSET AND BE APPROVED BY THE ARCHITECT. FOR CARPETED AREAS, PROVIDE A PERMANENT IDENTIFYING MARK IN THE CARPET DIRECTLY ABOVE CLEAN-OUT. THE CLEAN-OUT SHALL HAVE A SMOOTH POLISHED BRONZE FINISH WITH THE LETTERS "C.O." CAST IN THE COVER. FOR WALLS, PROVIDE AN ACCESS PANEL WITH CLEARANCE FOR RODDING. THE FLOOR CLEANOUTS SHALL BE ZURN MODEL ZN-1400-T OR APPROVED EQUAL WITH BRONZE PLUG, SQUARE NICKEL BRONZE FRAME AND COVER. THE WALL CLEANOUTS SHALL BE ZURN MODEL ZN-1443-BP OR APPROVED EQUAL WITH BRONZE PLUG AND 7 INCHES X 7 INCHES NICKEL BRONZE COVER. NO SANITARY, SOIL OR WASTE PIPE SHALL EXTEND GREATER THAN 2'-0" TO A DEAD-END.
32. PROVIDE ONE TRAP PRIMER VALVE FOR EACH FLOOR DRAIN WITHOUT A CONSTANT SOURCE OF WATER SUPPLY TO MAINTAIN TRAP SEAL. PRIMER VALVE SHALL BE LOCATED IN AN ACCESSIBLE AREA AND CONNECTED TO THE NEAREST 3/4 INCH COLD WATER LINE SERVING A FIXTURE. PROVIDE FLOAT TYPE BACKWATER VALVE (SIZED FOR ANTICIPATED FLOW RATE) IN ALL OPEN SITE DRAINS AND FLOOR RECEPTORS RECEIVING A/C UNIT CONDENSATE, AND/OR CLEAR WATER WASTE, SUCH AS SPRINKLER FLOW TESTING. ALL HORIZONTAL DRAINAGE PIPING AND TRAPS FROM AN OPEN SITE DRAINER RECEPTORS RECEIVING A/C UNIT CONDENSATE SHALL BE INSULATED. IN LIEU OF TRAP PRIMERS, CONTRACTOR MAY INSTALL TRAP SEALS.
33. ALL GAS PIPING 1/2 INCH AND LARGER SHALL BE A-53 SCHEDULE 40 BLACK STEEL. FOR PIPING 4 INCHES AND LARGER PROVIDE FACTORY MADE IN FULL LINE SIZE ALL WELDED FITTINGS. FOR PIPING 3 INCHES AND SMALLER PROVIDE A CLASS 150 MALLEABLE IRON SCREW JOINT FITTINGS WITH AMERICAN PIPE THREAD STANDARD SCREW THREADS FOR PIPING 3 INCHES AND SMALLER. SCREW JOINTS SHALL BE MADE UP WITH GRAPHITE AND OIL OR APPROVED EQUAL PIPE JOINT COMPOUND. PIPING SMALLER THAN 1/2 INCH SHALL BE TYPE K SOFT DRAWN COPPER ASTM-B88 WITHOUT FITTINGS. GAS PIPING AND VENTS SHALL SLOPE AT 1/4 INCH IN 15 FEET TOWARDS A DRIP LEG. GAS PIPING SHALL BE INSTALLED TO THE REQUIREMENTS OF THE AGA PAMPHLET "INSTALLATION OS GAS PIPING" AND NFPA STANDARDS NO. 54. ANY OTHER TESTS, AS REQUIRED BY LOCAL GAS INSPECTION DEPARTMENT OR GAS COMPANY, SHALL BE PERFORMED.
34. PROVIDE AN AGA APPROVED UL LISTED GAS VALVE REGULATOR AND QUICK-DISCONNECT UNION AT EACH PIECE OF GAS FUEL EQUIPMENT AND AS INDICATED ON THE DRAWINGS. PROVIDE ATMOSPHERIC VENTS FOR GAS REGULATORS IN ACCORDANCE WITH LOCAL CODE AND SUPPLIER'S REQUIREMENTS. VALVES SHALL BE INSTALLED AT AN ACCESSIBLE LOCATION. GAS VALVES 2 INCHES AND SMALLER SHALL BE AGA OR UL APPROVED. VALVES 21/2 INCHES AND LARGER SHALL BE CERTIFIED BY THE MANUFACTURER TO BE SUITABLE FOR GAS SERVICE AND SHALL BE A MINIMUM 125 PSI RATED.
35. ALL PIPING SYSTEMS, VALVES, AND EQUIPMENT SHALL BE PROPERLY IDENTIFIED. ALL VALVES SHALL HAVE THEIR NORMAL (IN OPERATION) POSITION IDENTIFIED, SUCH AS "NORMALLY OPEN" OR "NORMALLY CLOSED".
36. CONNECT & EXTEND CONDENSATE DRAIN PIPING FROM EACH SS, DOAS, MBC, SBC, CHILLED WATER OR DX COIL TO INDIRECT WASTE DRAINS ONLY. PROVIDE MINIMUM 1" PIPE SIZE AND 2 PERCENT SLOPE FOR GRAVITY DRAINS AND 1 PERCENT SLOPE FOR PUMPED DRAINS. CONDENSATE PIPING SHALL BE INSULATED WITH A MINIMUM OF 1/2" CLOSED CELL ELASTOMERIC.
37. ALL PACKAGED EQUIPMENT SHALL BE INDEPENDENTLY THIRD PARTY LABELED AS A SYSTEM FOR ITS INTENDED USE BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) IN ACCORDANCE WITH OSHA FEDERAL REGULATIONS 29CFR1910.303 AND .399, AS WELL AS NFPA PAMPHLET NO. 70, NATIONAL ELECTRIC CODE (NEC), ARTICLE 90-7.
38. THE CONTRACTOR SHALL MAKE ALL FINAL EQUIPMENT AND FIXTURE CONNECTIONS AND PROVIDE THE NECESSARY ADAPTERS, FITTINGS, VALVES, DEVICES, ETC. FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE VALVES AND UNIONS WHERE NEEDED TO PERMIT DISCONNECTIONS OF EACH PIECE OF EQUIPMENT FOR REPAIRS. PLUMBING CONNECTIONS SHOWN ARE NOMINAL. VERIFY EXACT CONNECTION SIZE WITH EACH PIECE OF EQUIPMENT SUPPLIED. FOLLOW FIXTURE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS, AND ROUGH-IN DIMENSIONS. REFER TO CONSULTANT AND ARCHITECTURAL DOCUMENTS FOR ADDITIONAL INFORMATION. COORDINATE WITH THE EQUIPMENT SUPPLIER FOR ADDITIONAL INFORMATION.
39. VERIFY IN THE FIELD, EXACT SIZES AND LOCATIONS OF ALL EXISTING PLUMBING PRIOR TO INSTALLATION OF ANY NEW PLUMBING WORK. PLUMBING CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO ASSURE PROPER INSTALLATION. PLUMBING CONTRACTOR SHALL VERIFY EXISTING INVERTS AND VERIFY THAT ALL FINAL CONNECTIONS CAN BE MADE BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, REPAIR, REPLACEMENT, AND MODIFICATIONS OF EXISTING PIPING WITHIN THE BUILDING AS REQUIRED FOR THE INSTALLATION OF NEW PIPING AND WORK OF OTHER DIVISIONS. PIPING WHICH MUST REMAIN AS PART OF AN ACTIVE SYSTEM AND IS IN CONFLICT WITH THE NEW LAYOUT SHALL BE RELOCATED AT NO ADDITIONAL COST OVER THE CONTRACT AMOUNT. EXISTING PIPING, WHICH IS TO REMAIN AS A PART OF THE NEW ACTIVE SYSTEM SHALL BE PURIFIED, AND PRESSURE TESTED IN THE SAME MANNER AS THE NEW PIPING. THE CONTRACTOR SHALL REPLACE ANY DEFECTIVE PIPING AND REPAIR ANY LEAKS.
40. EXISTING FOUNDATION SHALL NOT BE DISTURBED OR DAMAGED WITHOUT OBTAINING PERMISSION FROM THE ARCHITECT OR STRUCTURAL ENGINEER AND PROPER UNDERPINNING METHODS USED TO PROTECT AFFECTED FOUNDATION COMPONENTS.

PLUMBING SERIES

NUMBER	NAME
MP101	FLOOR PLAN - MECHANICAL AND PLUMBING
P-001	PLUMBING ABBREVIATIONS AND GENERAL INFORMATION
P-001	PLUMBING ABBREVIATIONS AND GENERAL INFORMATION
P-501	PLUMBING DETAILS
P-501	PLUMBING DETAILS
P-601	PLUMBING SCHEDULES AND ISOMETRIC

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

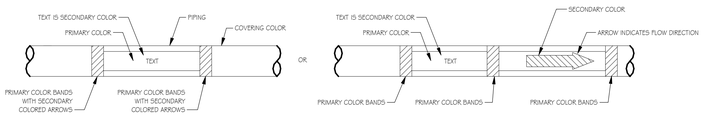
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
PLUMBING ABBREVIATIONS AND GENERAL INFORMATION

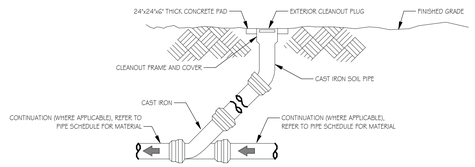
ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	RRO	RRO

P-001



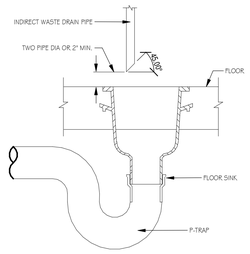
1 PIPING IDENTIFICATION-TYPICAL

NOT TO SCALE



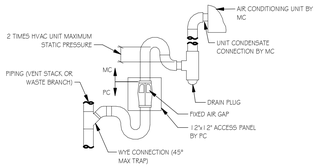
2 EXTERIOR CLEAN OUT

NOT TO SCALE



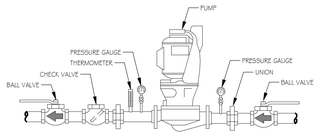
3 INDIRECT WASTE DETAIL-TYPICAL

NOT TO SCALE



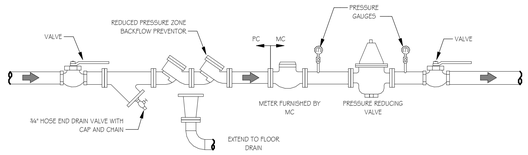
4 FIXED AIR GAP CONNECTION TO A/C UNIT

NOT TO SCALE



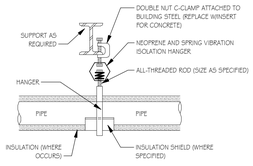
5 CIRCULATION PUMP

NOT TO SCALE



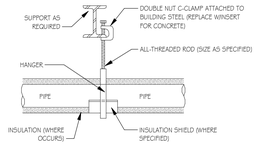
6 MAKE-UP WATER METER-TYPICAL

NOT TO SCALE



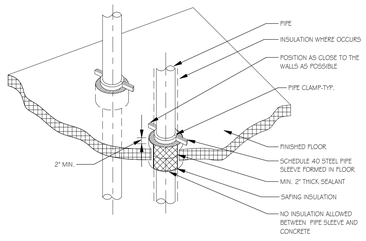
7 PIPE & HANGER ISOLATION SUPPORT - TYPICAL

NOT TO SCALE



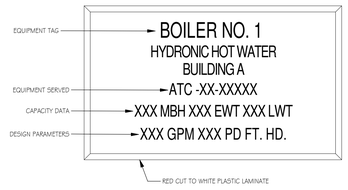
8 PIPE & HANGER SUPPORT - TYPICAL

NOT TO SCALE



9 PIPE SLEEVE AT FLOOR - TYPICAL

NOT TO SCALE



10 EQUIPMENT LABEL - TYPICAL

NOT TO SCALE

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
PLUMBING DETAILS

ISSUE DATE	SCALE	
09.09.2025	AS NOTED	
FILE NUMBER	DRAWN BY	CHECKED BY
2532	RRO	RRO

P-501

PIPING AND FITTING ASSEMBLY SCHEDULE

DESIGNATION	SYSTEM NAME	SYSTEM TEMP RANGE	PRESSURE RANGE	MATERIAL	CONNECTION TYPE	INSULATION MATERIAL	INSULATION THICKNESS				COVERING	COVERING COLOR	IDENTIFICATION PRIMARY COLOR	IDENTIFICATION SECONDARY COLOR	IDENTIFICATION TEXT
							DIA<1"	1"<DIA<2"	2"<DIA<4"	4"<DIA<8"					
—— — ——	DOMESTIC COLD WATER	ABOVE 50 DEGREES AND BELOW 100 DEGREES	20-150 PSI	ABG: CPL, DI BEG: CPL, DI	SLD, FLG, GRV SLD, FLG, GRV	ABG: ELM, FBG BEG: NONE	1/2" --	1" --	1" --	1" --	EXP: PVC, ALM, SST CCL: FSK. TRACER TAPE	EXP: BLACK.	GREEN	WHITE	DOMESTIC COLD WATER
—— — — ——	DOMESTIC HOT WATER	ABOVE 70 DEGREES AND BELOW 130 DEGREES	20-150 PSI	ABG: CPL, DI BEG: CPL, DI	SLD, FLG, GRV SLD, FLG, GRV	ABG: ELM, FBG BEG: NONE	1 1/2" --	2" --	2" --	2" --	EXP: PVC, ALM, SST CCL: FSK. TRACER TAPE	EXP: BLACK.	GREEN	WHITE	DOMESTIC HOT WATER
— — — — —	DOMESTIC HOT WATER RECIRCULATION	ABOVE 70 DEGREES AND BELOW 130 DEGREES	20-150 PSI	ABG: CPL, DI BEG: CPL, DI	SLD, FLG, GRV SLD, FLG, GRV	ABG: ELM, FBG BEG: NONE	1 1/2" --	2" --	2" --	2" --	EXP: PVC, ALM, SST CCL: FSK. TRACER TAPE	EXP: BLACK.	GREEN	WHITE	DOMESTIC HOT WATER RECIRCULATION
—— I-40 ——	DOMESTIC I-40°F WATER	ABOVE 130 DEGREES AND BELOW 150 DEGREES	20-150 PSI	ABG: CPL, DI BEG: CPL, DI	SLD, FLG, GRV SLD, FLG, GRV	ABG: ELM, FBG BEG: NONE	1 1/2" --	2" --	2" --	2" --	EXP: PVC, ALM, SST CCL: FSK. TRACER TAPE	EXP: BLACK.	GREEN	WHITE	DOMESTIC I-40°F WATER
—— I-40R ——	DOMESTIC HIGH TEMP. WATER RECIRCULATION	ABOVE 130 DEGREES AND BELOW 150 DEGREES	20-150 PSI	ABG: CPL, DI BEG: CPL, DI	SLD, FLG, GRV SLD, FLG, GRV	ABG: ELM, FBG BEG: NONE	1 1/2" --	2" --	2" --	2" --	EXP: PVC, ALM, SST CCL: FSK. TRACER TAPE	EXP: BLACK.	GREEN	WHITE	DOMESTIC HOT WATER RECIRCULATION
—— TW ——	TEMPERED HOT WATER	ABOVE 50 DEGREES AND BELOW 100 DEGREES	20-150 PSI	ABG: CPL, DI BEG: CPL, DI	SLD, FLG, GRV SLD, FLG, GRV	ABG: ELM, FBG BEG: NONE	1 1/2" --	2" --	2" --	2" --	EXP: PVC, ALM, SST CCL: FSK. TRACER TAPE	EXP: BLACK.	GREEN	WHITE	TEMPERED HOT WATER
——	SANITARY SEWER	LESS THAN 130 DEGREES	0-20 PSI	ABG: CPD, CIS BEG: CPD, CIS, PVC	SLD, NHB SLD, PSN, GLU	NONE	--	--	--	--	NONE	EXP: BLACK.	GREEN	WHITE	SANITARY SEWER
— — — —	SANITARY VENT	LESS THAN 130 DEGREES	0-20 PSI	ABG: CPD, CIS, GST BEG: CPD, CIS, PVC	SLD, NHB, NPT SLD, PSN, GLU	NONE	--	--	--	--	NONE	EXP: BLACK.	GREEN	WHITE	SANITARY SEWER VENT
—— SD ——	STORM DRAIN	LESS THAN 100 DEGREES	0-20 PSI	ABG: CPD, CIS, GST BEG: CIS, PVC, RCP	SLD, NHB, NPT PSN, GLU, GSK	HORIZONTAL: ELM, FBG VERTICAL: NONE	1 1/2" --	1 1/2" --	1 1/2" --	1 1/2" --	EXP: PVC, ALM, SST CCL: FSK. NONE	EXP: BLACK.	GREEN	WHITE	STORM SEWER
—— ESD ——	EMERGENCY STORM DRAIN	LESS THAN 100 DEGREES	0-20 PSI	ABG: CPD, CIS, GST BEG: CIS, PVC, RCP	SLD, NHB, NPT PSN, GLU, GSK	NONE	--	--	--	--	NONE	EXP: BLACK.	GREEN	WHITE	EMERGENCY STORM SEWER
—— FPM ——	PUMPED FORCE MAIN	LESS THAN 100 DEGREES	0-50 PSI	ABG: GST BEG: PVC	NPT GLU	NONE	--	--	--	--	NONE	EXP: BLACK.	GREEN	WHITE	PUMPED FORCE MAIN
—— GW ——	GREASE WASTE	LESS THAN 180 DEGREES	0-20 PSI	ABG: CPD, CIS BEG: CPD, CIS	SLD, NHB SLD, PSN	NONE	--	--	--	--	NONE	EXP: BLACK.	GREEN	WHITE	GREASE WASTE
—— AW ——	ACID WASTE DRAIN	LESS THAN 130 DEGREES	0-20 PSI	PROPYLENE, POLYPROPYLENE	WLD, FUSED	NONE	--	--	--	--	NONE	EXP: BLACK.	BLUE	WHITE	ACID WASTE DRAIN
—— CA ——	COMPRESSED AIR	LESS THAN 130 DEGREES	0-150 PSI	ALM, BST, CPM, SST	WLD, NPT, SLD, FLG	NONE	--	--	--	--	NONE	EXP: BLACK.	YELLOW	BLACK.	COMPRESSED AIR
—— D ——	DRAIN	LESS THAN 99 DEGREES GREATER THAN 100 DEGREES	0-20 PSI 0-20 PSI	CPL, PVC, GST CPL, GST.	SLD, GLU, NPT SLD, NPT.	ELM, FBG FBG	1/2" 1/2"	1" 1"	1" 1"	1" 1"	EXP: PVC, ALM, SST CCL: FSK. EXP: PVC, ALM, SST CCL: FSK.	EXP: BLACK. EXP: BLACK.	GREEN GREEN	WHITE WHITE	DRAIN DRAIN
—— CD ——	CONDENSATE DRAIN	LESS THAN 100 DEGREES	0-20 PSI	CPD, PVC, GST	SLD, GLU, NPT	ELM, FBG	1/2"	1"	1"	1"	EXP: PVC, ALM, SST CCL: FSK.	EXP: BLACK.	GREEN	WHITE	CONDENSATE DRAIN
—— G ——	NATURAL GAS	LESS THAN 130 DEGREES	0-20 PSI	ABG: BST BEG: POLYETHYLENE	WLD, NPT GLU	NONE	--	--	--	--	NONE	EXP: BLACK.	YELLOW	BLACK.	NATURAL GAS - ##"PSI
—— LP ——	PROPANE GAS	LESS THAN 130 DEGREES	0-20 PSI	ABG: BST BEG: POLYETHYLENE	WLD, NPT GLU	NONE	--	--	--	--	NONE	EXP: BLACK.	YELLOW	BLACK.	NATURAL GAS - ##"PSI
—— GV ——	GAS VENT	LESS THAN 130 DEGREES	0-20 PSI	CPL, BST	SLD, WLD, NPT	NONE	--	--	--	--	NONE	EXP: BLACK.	YELLOW	BLACK.	NATURAL GAS - VENT
—— MU ——	MAKE UP WATER	ABOVE 50 DEGREES AND BELOW 100 DEGREES	20-150 PSI	ABG: CPL, DI BEG: CPL, DI	SLD, FLG, GRV SLD, FLG, GRV	ELM, FBG NONE	--	--	--	--	EXP: PVC, ALM, SST CCL: FSK.	EXP: BLACK.	GREEN	WHITE	MAKE-UP WATER
—— VAC ——	VACUUM (AIR)	LESS THAN 130 DEGREES	0-150 PSI	ALM, CPM, SST	WLD, NPT, SLD, FLG	NONE	--	--	--	--	NONE	EXP: BLACK.	BLUE	WHITE	VACUUM (AIR)
—— HT ——	HEAT TRACED	ABOVE 30 DEGREES AND BELOW 130 DEGREES	20-150 PSI	REFER TO SYSTEM MATERIAL, EXCLUDE PVC	REFER TO SYSTEM CONNECTION	FBG, CLG	1 1/2"	2"	2"	2"	EXP: ALM, SST CCL: FSK.	EXP: SYSTEM COLOR WITH YELLOW STRIP	YELLOW	BLACK.	HEAT TRACED

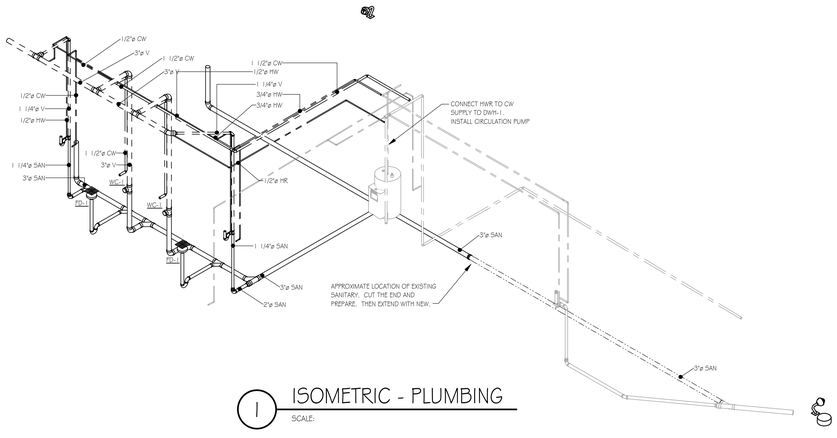
NOTES:
1. ALL PIPING SYSTEM TYPES MAY NOT BE USED ON THESE CONTRACT DOCUMENTS.
2. FOR HEAT TRACED SYSTEMS, INCLUDE IDENTIFICATIONS FOR BOTH HEAT TRACING AND SYSTEM DESIGNATION.
3. WHERE PLASTIC PIPING IS USED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPATIBILITY OF THE INSTALLED PIPING SYSTEM WITH THE BUILDING'S HVAC SYSTEM. WHERE PLENUM RATED MATERIALS ARE REQUIRED BY ANY FEDERAL, STATE, OR MUNICIPAL AUTHORITY'S CONSTRUCTION CODES, PLASTIC PIPING SHALL BE COVERED IN ITS ENTIRETY BY AN APPROVED FIRE RETARDANT INSULATING MATERIAL. FIRE RETARDANT INSULATING SYSTEMS SHALL BE CERTIFIED TO MEET ASTM E-84 AND UL 723 STANDARDS FOR FLAME SPREAD AND SMOKE GENERATION. FIRE RETARDANT INSULATING SYSTEMS SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION.
4. LABEL PIPING EVERY 25', AT EACH CONNECTION TO A TEE AND AT FLOOR PENETRATIONS.
5. COVERING COLOR APPLIES TO EXPOSED INTERIOR PIPING ONLY.
6. DO NOT PAINT PVC PIPE OR JACKET. FURNISH COLORED BANDS ON PVC PIPE. PROVIDE COLORED PVC JACKETS.
7. ALL INSULATION SHALL HAVE A COVERING. DO NOT PAINT INSULATION DIRECTLY.

ABG	ABOVE GROUND	CPD	COPPER TYPE DWV	FLG	FLANGED	PVC	POLYVINYL CHLORIDE
ALM	ALUMINUM	CPL	COPPER TYPE L	FSK	FOIL BACK KRAFT FIBER PAPER	RCP	REINFORCED CONCRETE PIPE
ASK	WHITE KRAFT FIBER PAPER	CPI	COPPER TYPE L	GLU	GLUED	SBS	SEAMLESS BLACK STEEL PIPE, SCH. 80
BEG	BELOW GROUND	CPM	COPPER TYPE M	GRV	GROOVED	SLD	SOLDERED
BRZ	BRAZED	CTL	COPPER TUBING TYPE L	GSK	RUBBER GASKETS	SST	STAINLESS STEEL
BST	BLACK STEEL PIPE	DI	DUCTILE IRON	GST	GALVANIZED STEEL	WLD	WELDED
CCL	CONCEALED	ELM	ELASTOMERIC	NHB	NO HUB FITTINGS		
CIS	CAST IRON-SERVICE WEIGHT	EXP	EXPOSED	NPT	THREADED		
CLG	CELLULAR GLASS	FBG	FIBERGLASS	PSN	PUSH ON		

PLUMBING FIXTURE SCHEDULE

TAG	BASIS OF DESIGN		DESCRIPTION	PIPE CONNECTIONS				ENGINEERING CHARACTERISTICS				COMMENTS
	MANUFACTURER	MODEL		CW	HW	W	V	CWFU	HWFU	COMB FU	WFU	
FD-1	ZURN	Z4155-DF	FLOOR DRAIN			2"		0	0		2	1
LAV-1	ACORN	1953-LC	WALL MOUNTED LAVATORY (ADA)	1/2"	1/2"	1 1/4"	1 1/4"	1.5	1.5	2	1	1,3
WC-1	KOHLER	KINGSTON ULTRA K-84325-0	WALL MOUNTED FLUSH VALVE TYPE WATER CLOSET	1 1/2"	0"	3"	2"	10		10	4	1,10,11,12

1. FINAL FINISH AND COLOR BY ARCHITECT FROM STANDARD COLOR PALETTE. INSTALL DRAIN COOL AT EACH FIXTURE WATER CONNECTION. PROVIDE MEANS FOR WINTERIZATION DRAINING.
2. WITH WATER SUPPLIES, P-TRAP, GRID DRAIN, ADA INSULATION, AND KOHLER SIMPLICE K-596 FAUCET, HAVING 3-FUNCTION PULL DOWN SPRAY HEAD, SINGLE HOLE INSTALLATION
3. WITH WATER SUPPLIES, CARRIER, P-TRAP, GRID DRAIN, ADA INSULATION, 1070 MIXING VALVE, VANDAL RESISTANT WITH INTEGRAL FAUCET SYSTEM. PROVIDE CARRIER. INSTALL AIR CONTROL PUSHBUTTON VALVES, ATMOSPHERIC, METERED. #4 SATIN FINISH.
4. WITH WATER HAMMER ARRESTOR, 1/4 TURN
5. ANTI-SIPHON, AUTO DRAINING
6. WITH ALUMINUM DOME, 3" WATER DAM ON EMERGENCY
7. WITH SERVICE FAUCET, HOSE AND HOSE BRACKET, MOP HANGER, AND STAINLESS STEEL BUMPERGUARD
8. WITH SEAT, GRAB BARS, SHOWER ROD, CURTAIN, VALVE AND HAND-HELD SHOWER, DRAIN, AND RECESSED SOAP DISH. MIXING VALVE SHALL BE ACORN TYPE B AND BE ASSE 1011 COMPLIANT
9. WITH CARRIER, AND SLOAN ROYAL 186-0.125 FLUSH VALVE
10. WITH CARRIER
11. WITH SEAT, AND WATER SUPPLY
12. WITH SLOAN REGAL 111-1.28 FLUSH VALVE



1 ISOMETRIC - PLUMBING
SCALE:

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
PLUMBING SCHEDULES AND ISOMETRIC

ISSUE DATE	SCALE	
09.09.2025	AS NOTED	
FILE NUMBER	DRAWN BY	CHECKED BY
2532	RRO	RRO

P-601

GRAPHIC SYMBOLS

ELECTRICAL:

Symbol	Description
PNL P1	CIRCUIT BREAKER PANELBOARD SEE SCHEDULES AND RISER DIAGRAM
P1-12	PANELBOARD CIRCUIT
	ELECTRIC CIRCUITING
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE
	SPECIAL RECEPTACLE - AS NOTED - VERIFY WITH EQUIPMENT
PT	POKE THRU FLOOR BOX
FB	FLOOR BOX
J	JUNCTION BOX FOR HARD WIRED EQUIPMENT CONNECTION
	BLANK SINGLE GANG DEVICE BOX FOR DATA/TELEPHONE/CATV/COMMUNICATIONS 3/4" CONDUIT WITH PULL CORD TO ACCESSBLE LOCATION PLASTIC BUSHING ON CONDUIT END WIRING, DEVICE(S) AND DEVICE PLATE BY OTHERS

RECEPTACLES & DEVICE BOXES TYPICAL:
120V RECEPTACLES COMMERCIAL- NEMA 5-20R - COMMERCIAL GRADE
120V RECEPTACLES RESIDENTAL - NEMA 5-20R - (KITCHEN, DINING, WASHER, ETC.)
NEMA 5-15R - (LIGHTING, GENERAL POWER, ETC.)
EACH BEING TAMPER-RESISTANT
1' 6" ABOVE FLOOR UNLESS OTHERWISE NOTED
+XX - MOUNTING HEIGHT XX INCHES AFF
C - COUNTER HEIGHT - VERIFY WITH CASEWORK
CLG - CEILING MOUNTED
GFI - GROUND FAULT CIRCUIT INTERRUPTER TYPE
H - MOUNT DEVICE HORIZONTAL
R - RECESSED BOX
S - SURFACE BOX
TP - TAMPERPROOF
USB - INTEGRAL DUAL USP CHARGING PORTS
WP - WEATHERPROOF BOX AND COVER

Symbol	Description
XP/XXA/F## OR NF/YY	SAFETY DISCONNECT SWITCH XP/XXA - # OF POLES AND AMPS RATINGS F## - FUSED AS INDICATED NF- NON-FUSED YY - NEMA RATING OR AS NOTED TO COORD WITH EQUIPMENT SUPPLIER
EWH-1	MECHANICAL EQUIPMENT TAG
S_M	MANUAL MOTOR STARTER - SIZE ACCORDING TO LOAD

LIGHTING:

Symbol	Description
A	LIGHTING FIXTURE WITH TYPE TAG SHAPE OF FIXTURES VARY SEE LIGHTING FIXTURE SCHEDULE
	ELECTRIC CIRCUITING
P1-2	PANEL CIRCUIT NUMBER
EM	PROVIDE FIXTURE WITH INTEGRAL EMERGENCY BATTERY
EMR	PROVIDE FIXTURE WITH REMOTE EMERGENCY BATTERY
ILLUMINATED FACE (TYP.)	EXIT SIGN INTEGERAL BATTERY BACKUP DIRECTION ARROWS AS INDICATED POWER REMOTE HEAD WHERE SHOWN
	EXIT SIGN INTEGERAL BATTERY BACKUP INTEGRAL DUAL EMERGENCY LIGHT HEADS POWER REMOTE HEAD WHERE INDICATED
	DUAL HEAD EMERGENCY LIGHT INTEGRAL BATTERY PACK POWER REMOTE HEAD WHERE INDICATED
	DUAL HEAD EMERGENCY LIGHT POWERED REMOTELY
$	SINGLE POLE SWITCH
$\$_3$	3-WAY SWITCH
$\$_4$	4-WAY SWITCH
$\$_D$	DIMMER SWITCH - LED COMPATABLE
$\$_{D3}$	3-WAY DIMMER SWITCH
$\$_{DOS}$	DIMMING INTEGRAL OCCUPANCY SENSOR SWITCH
$\$_{OS}$	INTEGRAL OCCUPANCY SENSOR SWITCH
$\$_{LV}$	LOW VOLTAGE (0-10VDC) SWITCH
$\$_{DLV}$	DIMMING LOW VOLTAGE (0-10VDC) SWITCH
$\$_T$	TIMER SWITCH
$\$_P$	SINGLE POLE WITH PILOT LIGHT SWITCH
$\$^a$	LOWER CASE LETTER INDICATES SWITCHING SCHEME COORDINATED WITH LIGHT FIXTURES
LCP	LIGHTING CONTROL PANEL
OS	OCCUPANCY SENSOR CONTROL FOR ROOM FIXTURES, CEILING OR WALL MOUNT TYPE TO PROVIDE COVERAGE
PC	PHOTOCELL CONTROL
DC	DAYLIGHTING DIMMING CONTROL
TC	ELECTRONIC TIME CLOCK CONTROL
PP	POWER PACK - 120/277V - 10VDC

ABBREVIATIONS

A	AMPS
AC	ALTERNATING CURRENT
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CB	CIRCUIT BREAKER
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DM	ITEM TO BE DEMO'D/REMOVED
DISC	DISCONNECT
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NON METALLIC TUBING
EX	EXISTING
G	GROUND
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTING
IBC	INTERNATIONAL BUILDING CODE
IMC	INTRMEDIATE METALLIC CONDUIT
IT	INFORMATION TECHNOLOGY
KVA	KILOVOLT AMPERE
KW	KILOWATT
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METALLIC CONDUIT
LTG	LIGHTS/LIGHTING FIXTURES
IECC	INTERNATIONAL ENERGY CONSERVATION CODE
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR OR TYPE METAL CLAD CABLE
MCB	MAIN CIRCUIT BREAKER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
PH	PHASE
PNL	ELECTRICAL PANEL
PVC	POLY VINYL CHLORIDE
REC	RECEPTACLE
RED	ITEM RELOCATED, NEW LOCATION
REL	ITEM TO BE RELOCATED
RM	ROOM
RMC	RIGID METALLIC CONDUIT
RPL	ITEM AT LOCATION TO BE RELPLACED
SW	SWITCH
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
V	VOLTS
VA	VOLT-AMPS
VAC	VOLTS ALTERNATING CURRENT
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE(S) OR WATTS POWER
WP	WEATHER RESISTANT

GENERAL NOTES

THESE ARE TYPICAL AND STANDARD AND ALL MAY NOT PERTAIN TO PROJECT

1. *THE LATEST NATIONAL ELECTRICAL CODE (NEC) IS ADOPTED AS THE ELECTRICAL CODE FOR PA. ALL ELECTRICAL INSTALLATIONS AND EQUIPMENT MUST MEET THE STANDARDS AND REQUIREMENTS SET FORTH IN THAT CODE AND ANY OTHER CODE OR AUTHORITY HAVING JURISDICTION.*

2. *OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES.*

3. *VERIFY ALL ELECTRICAL REQUIREMENTS AND EXACT LOCATIONS OF EQUIPMENT WITH DRAWINGS AND SPECIFICATIONS. CHECK AND VERIFY ALL DIMENSIONS IN THE FIELD.*

4. *COORDINATE THE LOCATIONS OF ALL ELECTRICAL EQUIPMENT, LIGHTING FIXTURES, RACEWAYS, ETC., WITH THE OTHER TRADES, SO AS TO AVOID INTERFERENCE'S WITH DUCTWORK, PIPING, STRUCTURES, ETC.*

   A. MAINTAIN ADEQUATE ACCESS TO ALL JUNCTION, TERMINATION AND PULL BOXES.

   B. MAINTAIN ADEQUATE ACCESS TO ALL EQUIPMENT FOR OPERATIONS, MAINTENANCE AND REPAIRS.

5. ALL MOUNTING HEIGHTS INDICATED ARE TO CENTERLINES OF DEVICES EXCEPT FOR LIGHT FIXTURES AND AS OTHERWISE NOTED OR SPECIFIED. MOUNTING HEIGHTS FOR LIGHT FIXTURES ARE TO BOTTOM OF UNITS.

6. FOUR INCH HIGH CONCRETE "HOUSEKEEPING" PADS FOR ALL FREE STANDING DISTRIBUTION PANELS, FLOOR MOUNTED TRANSFORMERS, UPS UNITS AND MOTOR CONTROL CENTERS (MCC'S) WILL BE PROVIDED BY DIVISION 3 CONTRACTOR. SEE STRUCTURAL DRAWINGS FOR REFERENCE.

7. CONDUIT ROUTINGS SHOWN ARE DIAGRAMMATIC. FOLLOW ROUTINGS SHOWN WHEREVER PRACTICAL. COORDINATE ACTUAL ROUTINGS WITH ALL OTHER TRADES.

8. SUPPORT WALL MOUNTED ELECTRICAL EQUIPMENT (I.E.: PANELBOAROS. TRANSFORMERS, ETC.) BY UNISTRUT CHANNELS SECURED TO FLOOR AND CEILING, UNLESS WALL IS OF MASONRY TYPE WHICH IS OF SUITABLE CONSTRUCTION TO SUPPORT WEIGHT OF EQUIPMENT, OR EXCEPT AS OTHERWISE NOTED OR SPECIFIED.

9. RUN ALL WIRING TO EQUIPMENT OR DEVICES MOUNTED ON THE ROOF, BELOW THE ROOF AND PENETRATE THE ROOF AS CLOSE AS POSSIBLE TO THE EQUIPMENT SERVED. FLASH PENETRATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ROOFING SYSTEM MANUFACTURER AND THE CONTRACT DOCUMENTS.

10. PROVIDE RECESSED ELECTRICAL OUTLET BOXES FOR ALL EQUIPMENT AND DEVICES IN FINISHED AREAS, EXCEPT AS OTHERWISE NOTED OR SPECIFIED. INSTALL CONDUIT CONCEALED IN WALLS, HUNG CEILINGS OR IN FLOOR SLABS. SPLICE BOXES IN NON-ACCESSIBLE LOCATIONS ARE NOT PERMITTED. IN UNFINISHED AREAS (E.G.: MECHANICAL EQUIPMENT ROOMS, ELECTRICAL EQUIPMENT ROOMS, ETC.) OUTLET BOXES MAY BE SURFACE MOUNTED AND CONDUIT RUNS EXPOSED.

11. IN FINISHED AREAS, GANG TOGETHER COMMON ELECTRICAL DEVICES MOUNTED NEXT TO EACH OTHER WITH ONE COMMON COVER PLATE. PROVIDE BARRIER BETWEEN DEVICES OF DIFFERENT VOLTAGES. DO NOT GANG RECEPTACLE OUTLETS WITH COMMUNICATION OUTLETS (I.E.: DATA, TELEPHONE, ETC.)

12. PROVIDE MINIMUM NO. 12 AWG COPPER WIRING FOR POWER AND LIGHTING SYSTEMS, INSTALLED IN 3/4 INCH CONDUIT MINIMUM, EXCEPT AS OTHERWISE NOTED OR SPECIFIED. TYPE MC CABLE IS ACCEPTABLE.

13. DESIGNATIONS ADJACENT TO ELECTRICAL DEVICES SUCH AS LIGHTING FIXTURES, RECEPTACLES, ETC., INDICATE PANEL AND/OR BRANCH CIRCUIT SERVING THAT DEVICE AND ARE TO BE USED AS A GUIDE FOR PROPER CONNECTION OF MULTI-WIRE CIRCUITS AT PANELS.

    DETERMINE THE ARRANGEMENT AND ROUTING OF BRANCH CIRCUITS IN STRICT ACCORDANCE WITH THE FOLLOWING:

    A. BALANCE PHASE LOADS ON PANEL BUSES AS EVENLY AS POSSIBLE.

    B. RUN ALL WIRING IN ELECTRICAL RACEWAYS (TYPE MC ACCEPTABLE) AS REQUIRED PER DRAWINGS, SPECIFICATIONS AND APPLICABLE CODES.

    C. PROVIDE AN ISOLATED NEUTRAL, NOT COMBINED WITH ANY OTHER CIRCUIT, FOR CIRCUIT PROTECTED BY A GROUND FAULT INTERRUPTER TYPE CIRCUIT BREAKER.

    D. FOR 120 AND 277 VOLTS, SINGLE PHASE CIRCUITS PROVIDE INDIVIDUAL NEUTRAL CONDUCTORS FD EACH CIRCUIT. TREAT NEUTRAL CONDUCTORS AS CURRENT CARRYING CONDUCTORS IN ACCORDANCE WITH THE NEC.

    E. BRANCH CIRCUIT CONDUCTORS WITHIN A SINGLE CONDUIT ARE LIMITED TO THREE CIRCUITS OR SIX CURRENT CARRYING CONDUCTORS.

    F. SIZE HOMERUN BRANCH CIRCUIT CONDUCTORS FROM PANELBOARD TO THE FIRST OUTLET IN ACCORDANCE WITH THE FOLLOWING MAXIMUM CIRCUIT LENGTH LIMITS, USING CENTER OF LOAD SERVED AS THE BASIS FOR COMPUTING CIRCUIT LENGTHS:

	#12	#10	#8	#6
120 VOLT (20A CIRCUIT)	65 FT	110 FT	165 FT	260 FT
208 VOLT (20A CIRCUIT)	110 FT	180 FT	290 FT	
277 VOLT (20A CIRCUIT)	150 FT	250 FT	380 FT	

    PROVIDE MINIMUM NO. 12 AWG CONDUCTORS BEYOND THE FIRST OUTLET. EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCREASED PROPORTIONALLY WITH THE BRANCH CIRCUIT CONDUCTORS IN ACCORDANCE WITH NEC 250.122.

14. INSTALL AND WIRE RECEPTACLES AND SINGLE PHASE EQUIPMENT IN ACCORDANCE WITH THE FOLLOWING:

    A. GENERAL LOCATIONS IN ACCORDANCE WITH THE DRAWINGS.

    B. GROUND ALL RECEPTACLES VIA SEPARATE GREEN GROUND CONDUCTOR RUN WITH POWER WIRES TERMINATION AT PANEL GROUND BUS.

    C. PROVIDE GROUND FAULT INTERRUPTER TYPE (GFI) RECEPTACLES IN TOILETS, WASHROOMS AND OTHERWISE INDICATED OR REQUIRED BY CODE.

    D. PROVIDE TAMPER-RESISTANT TYPE RECEPTACLES FOR ALL RESIDENTIAL TYPE CONSTRUCTION. THIS INCLUDES ALL 15 AMP AND 20 AMP RECEPTACLES.

15. INSTALL AND WIRE LIGHTING SYSTEMS IN ACCORDANCE WITH THE FOLLOWING:

    A. CONFORM TO THE LIGHTING FIXTURE LAYOUT AND ARRANGEMENT AS LAYOUT SHOWN ON ARCHITECTURAL REFLECTED CEILING DRAWINGS FOR RECESSED LIGHTING FIXTURES. CONFORM TO THE ON THE ELECTRICAL DRAWINGS FOR SURFACE AND PENDANT LIGHT FIXTURES.

    B. CONNECT LIGHTING FIXTURES AND DEVICES TO THE PANELBOARDS AND CIRCUITS AS INDICATED, VIA THE ROOM AND/OR AREA SWITCH WHERE SWITCHES ARE INDICATED ON THE DRAWINGS, AND DIRECTLY TO PANELBOARDS WHERE SWITCHES ARE NOT INDICATED.

    C. MOUNT EXIT SIGNS SIX INCHES ABOVE DOORS WHERE APPLICABLE. FOR LOCATIONS OTHER THAN ABOVE DOORS MOUNT EXIT LIGHTS EIGHT FEET MAXIMUM ABOVE FINISHED FLOOR OR TWELVE INCHES BELOW CEILING, EXCEPT AS OTHERWISE NOTED.

    D. ALL FIXTURES INSTALLED SUSPENDED CEILINGS MUST BE SUPPORTED FROM THE BUILDING STRUCTURE DIRECTLY. IF WIRE IS USED FOR THIS PURPOSE, NO LESS THAN 2 SEPARATE WIRES OF SIZE NO. 12 (OR LARGER) STEEL MUST BE USED. THESE WIRES MUST EXTEND FROM OPPOSITE CORNERS OF THE FIXTURE WITH EACH WIRE INDEPENDENTLY ATTACHED TO THE BUILDING STRUCTURE.

16. UNLESS OTHERWISE NOTED PROVIDE BRANCH CIRCUIT WIRING FOR 120VAC, SINGLE PHASE MOTORS, ONE THIRD HORSEPOWER AND LESS CONSISTING OF TWO NO. 12 AWG AND ONE NO. 12 AWG GROUND IN 3/4 INCH CONDUIT.

17. SIZE MOTOR BRANCH CIRCUITRY FOR SINGLE SPEED, THREE PHASE MOTORS PER ONE LINE DIAGRAM OR CABLE AND CONDUIT SCHEDULE.

18. ISOLATE ALL WIRING ORIGINATING FROM EMERGENCY POWER SOURCE. (I.E.: DO NOT COMBINE EMERGENCY POWER SYSTEM WIRING WITH ANY OTHER WIRING).

19. PROVIDE EXPANSION FITTINGS IN ALL ELECTRICAL RACEWAY RUNS WHERE THEY CROSS BUILDING EXPANSION LINES.

20. ALL EQUIPMENT SHALL BE WIRED BY THE CONTRACTOR, IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS INSTRUCTIONS, OR SPECIFICATIONS.

21. IN INDUSTRIAL, INDOOR, DRY AREAS PROVIDE NEMA 12 GASKETED ENCLOSURES EXCEPT AS OTHERWISE NOTED OR SPECIFIED.

22. INSTALL ALL CONDUITS ABOVE OTHER TRADES. ROUTE AND SUPPORT ALL CONDUITS TO AVOID PIPING, DUCTWORK, EQUIPMENT. ETC. COORDINATE ALL CONDUIT ROUTINGS WITH ALL TRADES.

23. ADHERE TO THE FOLLOWING GENERAL NOTES FOR WORK IN CLEAN AREAS:

    A. FOR SURFACE MOUNTED EQUIPMENT, SEAL ALL AROUND ENCLOSURE AGAINST THE SUPPORTING SURFACE.

    B. INSTALL ALL CONDUITS AND RACEWAYS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS EXCEPT AS OTHERWISE NOTE OR SPECIFIED:

       1. DO NOT INSTALL ANY CONDUITS EXPOSED UNLESS ABSOLUTELY NECESSARY. IF EXPOSED CONDUITS ARE NECESSARY THEY SHALL BE PVC COATED RIGID STEEL IN CLEAN ROOM AREAS.

       2. CONCEAL ALL CONDUITS IN HUNG CEILINGS AND WALLS, OR RUN UNDER PLATFORMS AND EQUIPMENT.

       3. PROVIDE MINIMUM OF TWO INCHES CLEARANCE BETWEEN EXPOSED CONDUITS AND ALL WALLS, CEILINGS OR OTHER PARALLEL SURFACES.

       4. MINIMIZE LENGTHS OF EXPOSED HORIZONTAL RUNS TO THREE FEET OR LESS. IF LONGER LENGTHS ARE REQUIRED, OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE.

       5. MINIMIZE PENETRATIONS THROUGH WALLS. CEILINGS OR FLOORS. BY ARRANGING CONDUITS INTO GROUPS AND COMBINING WITH PIPING AND TUBING PENETRATIONS, WHERE PRACTICAL.

       6. ROUTE CONDUITS ABOVE HUNG CEILINGS AND DROP VERTICALLY TO INSTRUMENT CLUSTERS OR POINT OF CONNECTION. PENETRATE CEILING AS NEAR TO POINT OF USE AS PRACTICAL.

       7. DO NOT RUN CONDUITS WHERE THEY MAY INTERFERE WITH OPERATIONS AND MAINTENANCE OR RESTRICT ACCESS TO EQUIPMENT AND DEVICES.

       8. SEAL ALL OPENINGS AROUND PENETRATIONS WITH GE-1200 SILICON SEALANT OR EQUIVALENT FROM DOW CORNING.

       9. LOCATE JUNCTION BOXES IN ACCESSIBLE LOCATIONS IN ACCORDANCE WITH CODE. WHERE IT IS ABSOLUTELY NECESSARY TO LOCATE BOXES ABOVE INACCESSIBLE HUNG CEILINGS, OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE TO PROVIDE ACCESS PANELS AS REQUIRED.

       10. AFTER INSTALLATION OF WIRING, INTERNALLY SEAL EACH CONDUIT END AT THE POINT WHERE WIRES EXIT THE CONDUIT.

    C. MINIMIZE SUPPORTS, HANGERS AND MISCELLANEOUS METAL REQUIRED FOR PROPER INSTALLATION OF WORK, BY GROUPING CONDUITS WHEREVER PRACTICAL. USE COMPLETELY CLOSED OR SOLID FLAT STAINLESS STEEL STRUCTURAL MEMBERS ONLY. DO NOT USE UNISTRUT TYPE CHANNEL

    D. PAINT WITH PRIMER, ALL EXPOSED EDGES OF MATERIAL WHICH MAY PARTICULATE, SUCH AS PLASTER AND GYPSUM WALLBOARD, WHICH HAVE BEEN CUT TO FACILITATE ELECTRICAL INSTALLATIONS.

    E. BEFORE COMMENCING WITH WORK IN CLEAN AREAS, SUBMIT THE FOLLOWING FOR APPROVAL.

       1. COMPLETE BILL OF MATERIALS AND CATALOGS CUTS OR SHOP DRAWINGS FOR ALL ELECTRICAL EQUIPMENT, DEVICES, RACEWAYS, CONDUITS AND MISCELLANEOUS MATERIALS TO BE USED.

26. PROVIDE CONTINUOUS WIRING FOR CONTROL AND INSTRUMENTATION SYSTEMS FROM POINT OF ORIGIN TO TERMINALS OF DEVICES AT ENDS OF RUNS (I.E.: SPLICES ARE NOT PERMITTED).

27. PROVIDE PULLBOXES OR PULL FITTINGS AS REQUIRED BY NATIONAL ELECTRICAL CODE. AS A MINIMUM PULL BOXES OR FITTINGS SHALL BE INSTALLED SO THAT THERE SHALL NOT BE MORE THAN 360' BETWEEN PULL POINTS. WHERE FITTINGS ARE PERMITTED, FOR CONDUITS 2 INCH AND LARGER USE APPLETON TYPE "PT", "BIG-BEND" OR EQUIVALENT.

28. BROOM CLEAN ALL WORK AREAS UPON COMPLETION OF WORK EACH DAY.

29. ELECTRICAL DRAWINGS ARE BASED ON PRELIMINARY VENDOR INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ELECTRICAL RATINGS FROM CERTIFIED DRAWINGS OF EQUIPMENT AND SHALL MAKE ANY BRANCH CIRCUIT AND DISTRIBUTION MODIFICATIONS REQUIRED WITHOUT ANY ADDITIONAL COST TO THE OWNER. HE SHALL SUBMIT A SCHEDULE OF SUCH CHANGES FOR APPROVAL BY THE OWNER REPRESENTATIVE. ALL APPROVED CHANGES SHALL BE RECORDED ON "AS-BUILT"" DRAWINGS.

30. EQUIPMENT ILLUSTRATED ON THE DRAWINGS ARE FROM VENDOR CATALOG CUTS WHICH REPRESENT APPROXIMATE MACHINERY SPACE. THE LOCATING DIMENSIONS AND/OR ELEVATIONS ARE ON "HOLD" PENDING RECEIPT OF VENDOR DRAWINGS FROM THE SELECTED EQUIPMENT VENDOR POST-P.O. AWARD AND THE CONTRACTOR MUST REVIEW AND CONFIRM THE EQUIPMENT'S OVERALL DIMENSIONS, ELEVATIONS AND WEIGHTS AS SHOWN ON THE VENDOR DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH EQUIPMENT VENDORS AND REVIEW OF VENDOR DRAWINGS PRIOR TO INSTALLATION OF EQUIPMENT AND/OR FINAL CONNECTION OF UTILITY, POWER & CONTROL SERVICES SYSTEMS TO/FROM EQUIPMENT.

31. CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE HIMSELF WITH FIELD CONDITIONS PRIOR TO STARTING HIS WORK.

32. CONTRACTOR MUST FOLLOW PROPER LOCKOUT/TAGOUT PROCEDURE WHEN ACCESSING ANY ELECTRICAL SERVICE. A LOCKOUT/TAGOUT PERMIT MUST BE OBTAINED FROM THE CONSTRUCTION MANAGER.

33. ALL CABLES INSTALLED IN CABLE TRAYS SHALL BE INSTALLED PER THE NATIONAL ELECTRICAL CODE (NEC). ALL CABLES IN VERTICAL CABLE TRAYS AND WHERE CABLES ARE EXITING TRAYS SHALL BE FASTENED SECURELY TO THE TRAY.

34. THE DESIGNS SHOWN ON THESE DRAWINGS REFLECT DESIGN BASIS EQUIPMENT. GENERAL CONTRACTOR TO VERIFY ALL EQUIPMENT INFORMATION AND DIMENSIONS WITH THE AS-PURCHASED EQUIPMENT VENDOR DRAWINGS/DATA AND FIELD CONDITIONS AND MAKE ALL NECESSARY CHANGES CAUSED BY VARIANCE FROM THE DESIGN BASIS. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EQUIPMENT LOCATIONS AND CONDITIONS AND COORDINATION WITH ALL TRADES, PRIOR TO CONSTRUCTION AND/OR INSTALLATION OF EQUIPMENT, EQUIPMENT SUPPORTS AND SYSTEMS SERVICES TO/FROM EQUIPMENT AS SHOWN/INDICATED.

ELECTRICAL SERIES

NUMBER	SHEET NAME
E-001	ELECTRICAL SYMBOLS ABBREVIATIONS & GENERAL NOTES
E-101	ENLARGED FLOOR PLAN - CONCESSIONS
E-102	ENLARGED PLAN - PAVILION
E-103	ENLARGED PLANS
E-200	ELECTRICAL SCHEDULES & POWER RISER
EP100	SITE PLAN

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

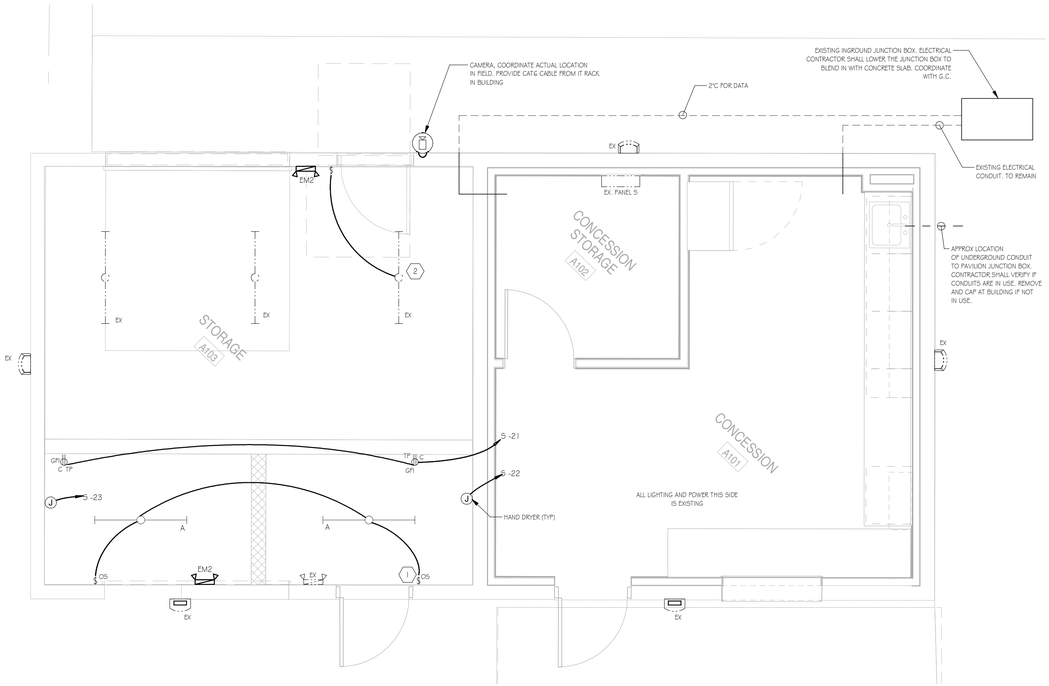
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
ELECTRICAL SYMBOLS ABBREVIATIONS & GENERAL NOTES

ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	SEA	SEA

E-001



1 ENLARGED FLOOR PLAN - CONCESSIONS

SCALE: 3/8" = 1'-0"

0 2' 4' 6'

SHEET KEY NOTES

1. DICONNECT EXISTING SWITCHLEG FROM STORAGE LIGHTS. REUSE EXISTING LOCATION FOR NEW RESTROOM LIGHTING AND CONNECT TO EXISTING BRANCH CIRCUIT.
2. CONNECT EXISTING SWITCHLEG FROM STORAGE LIGHT TO NEW SWITCH LOCATION. LIGHTING SHALL BE CONNETED TO EXISTING LIGHT BRANCH CIRCUIT.
3. PROVIDE NEW CIRCUIT TO PANEL AND USE EXISTING SPARE BREAKER.

Branch Panel: S

Location:
Supply From:
Mounting: Surface
Enclosure:

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating:
Mains Type:
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Trip	Poles	Wire Size	A	B	C	A	B	C	Wire Size	Poles	Trip	Circuit Description	CKT
1	EX LOAD													EX LOAD	2
3															4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19									180 VA		1-#12, 1-#12, 1-#12	1	20 A	Receptacle	20
21	Receptacle	20 A	1	1-#12, 1-#12, 1-#12	360 VA			500 VA			1-#12, 1-#12, 1-#12	1	20 A	Power	22
23	Power	20 A	1	1-#12, 1-#12, 1-#12		500 VA									24
25															26
27															28
29															30
				Total Load:	860 VA		680 VA		0 VA						
				Total Amps:	7 A		6 A		0 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	1000 VA	100.00%	1000 VA		
Receptacle	540 VA	100.00%	540 VA	**Total Conn. Load:**	1540 VA
				Total Est. Demand:	1540 VA
				Total Conn.:	6 A
				Total Est. Demand:	6 A

Notes:

LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUF.	SERIES/NUMBER	MOUNTING	LUMENS	WATTS	COLOR	NOTES
A	4' LINEAR LED	LITHONIA	CVSIT L 48 4000LM LPPT1 MD MVOLT GZ10 40K 80CRI	CEILING	4000	34	40K	-
EM2	EMERGENCY REMOTE HEADS W/ BATTERY BACKUP	LITHONIA	EU2C M6	WALL	N/A	.56	N/A	-

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

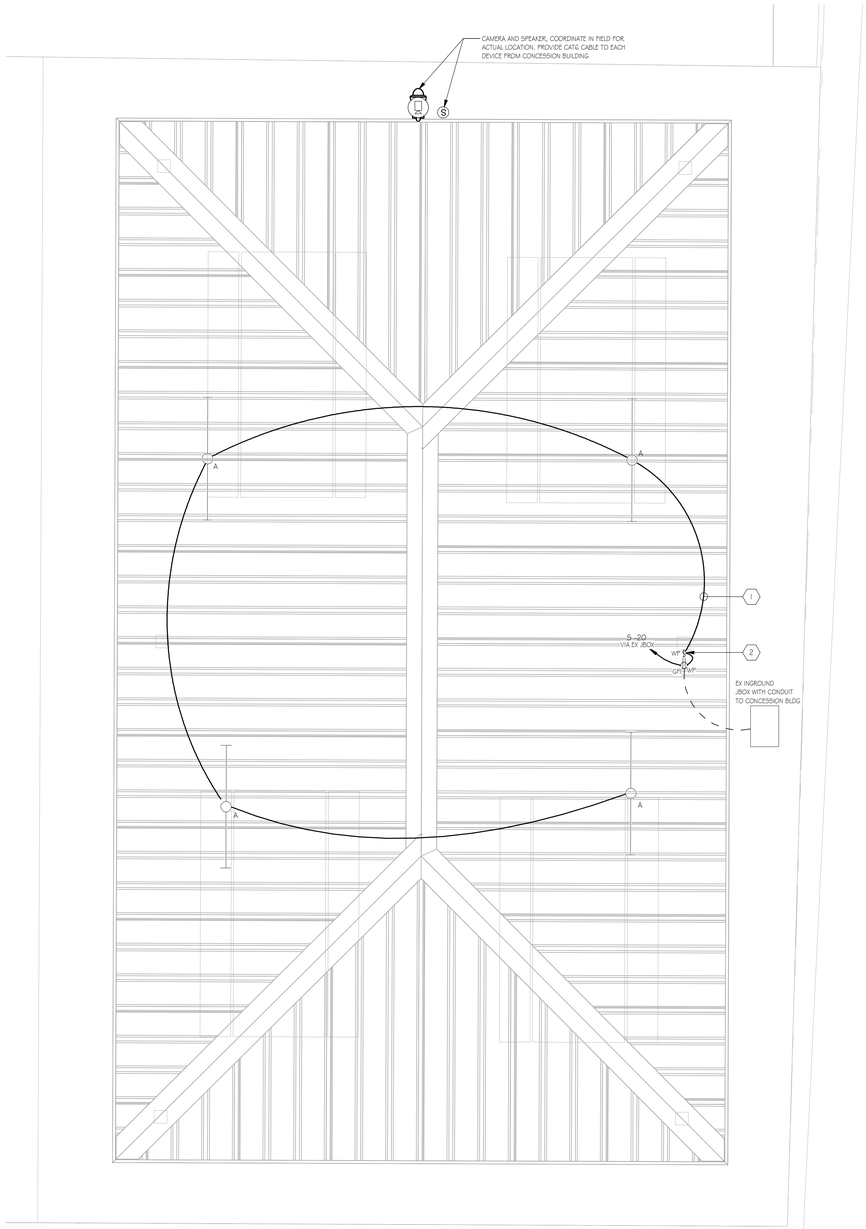
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
ENLARGED FLOOR PLAN - CONCESSIONS

ISSUE DATE	SCALE	
09.09.2025	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	SEA	SEA

E-101



2 ENLARGED PLAN - PAVILION

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

SHEET KEY NOTES

1. ALL CONDUIT INSTALLED THROUGHOUT PAVILION SHALL BE CONCEALED INSIDE BUILDING FRAME. COORDINATE WITH G.C. PRIOR TO INSTALLING.
2. PROVIDE PHOTO-EYE FOR DUSK TO DAWN OPERATION WITH 24 HOUR TIMER TO ESTABLISH OFF TIMES. SINGLE POLE SWITCH SHALL ACT AS A MANUAL OVERRIDE.

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING
HOUSING
AUTHORITY

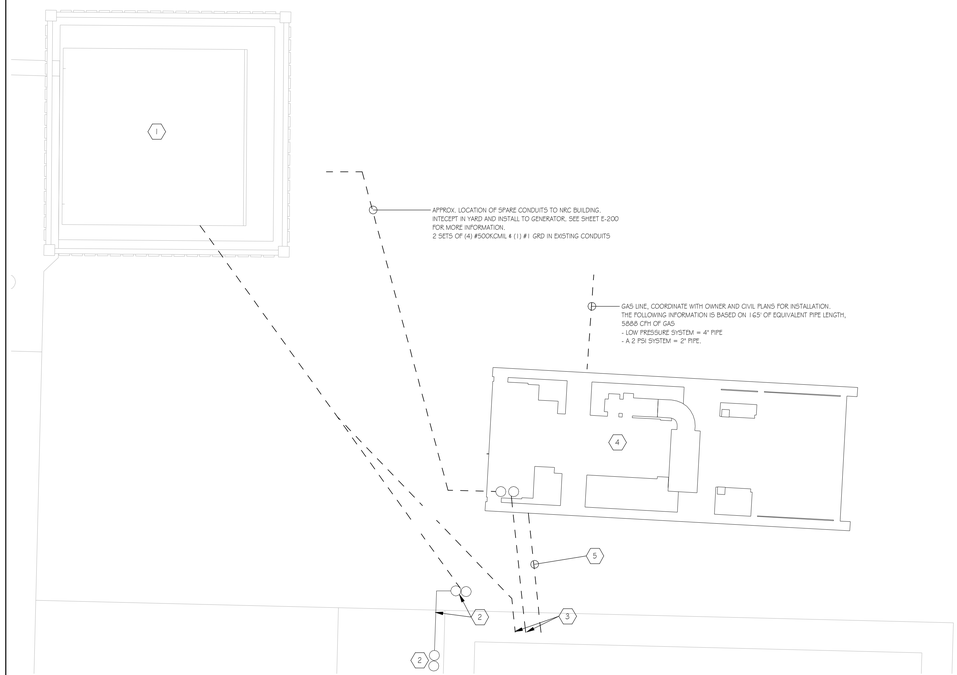
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
ENLARGED PLAN - PAVILION

ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	SEA	SEA

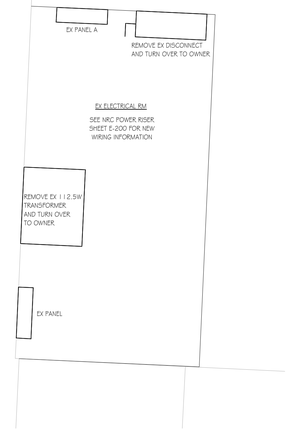
E-102



1 ENLARGED PLAN - TRANSFORMER/GENERATOR AREA

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

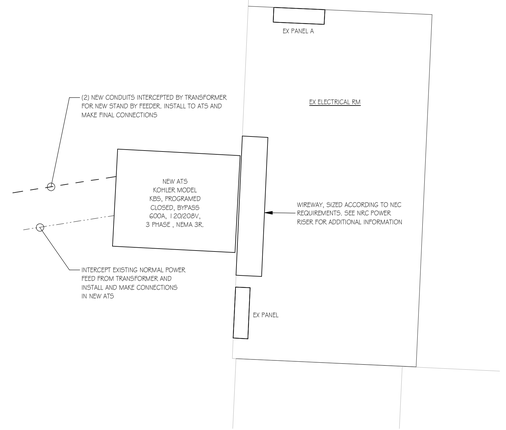
0 1' 2' 4'



4 ELECTRICAL ROOM - NRC - DEMOLITION

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

0 1' 2' 4'



5 ELECTRICAL ROOM - NRC - POWER

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

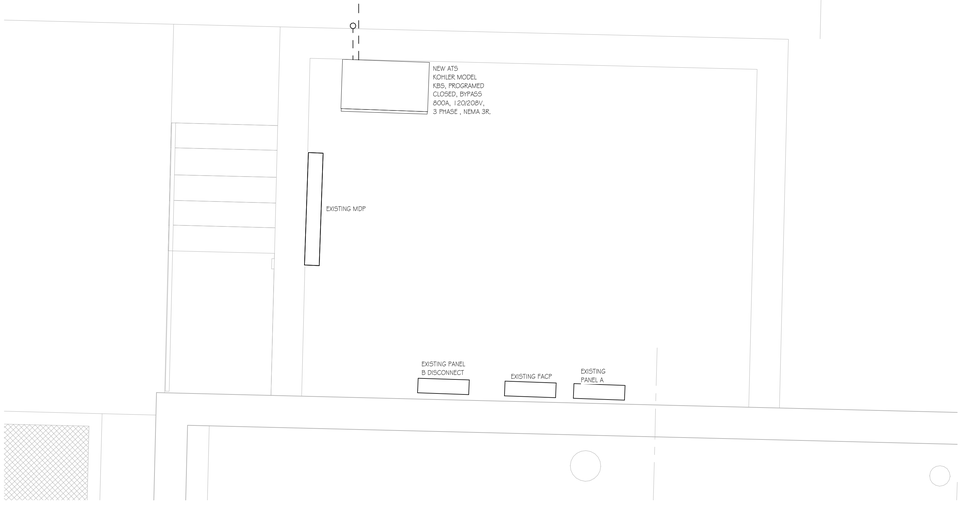
0 1' 2' 4'

SHEET KEY NOTES

1. EXISTING UTILITY TRANSFORMER - SHALL BE REMOVED AND REPLACED WITH NEW 500KVA, 120/208V, 3 PHASE TRANSFORMER. COORDINATE ALL EFFORTS WITH OWNER.
2. REMOVE EXISTING CONDUIT ON WALL, WEATHERHEADS AND CONDUIT PENETRATION THROUGH WALL.
3. INSTALL NEW CONDUITS FROM TRANSFORMER AND GENERATOR UNDERGROUND TO NEW ATS
4. 500KW DUAL FUEL GENERATOR - KOHLER MODEL 500REZXD-SM4002B, WITH (1) 800A BREAKER AND (1) 600A BREAKER, OR APPROVED EQUAL. PAD TO BE PROVIDED BY G.C. ALL STARTUP, TESTING AND TRAINING SHALL BE PROVIDED BY MANUFACTURER UNDER CONTRACTORS CONTRACT. COORDINATE WITH OWNER FOR LOCATION OF E-STOP AND ANNUCIATOR PANEL.
5. INSTALL BATTERY CHARGER CIRCUIT TO A-21, PROVIDE 20A/1P BREAKER (BY SQUARE D), INSTALL BLOCK HEATER CIRCUIT TO A-23,25, PROVIDE 20A/2P BREAKER (BY SQUARE D).

GENERAL NOTES

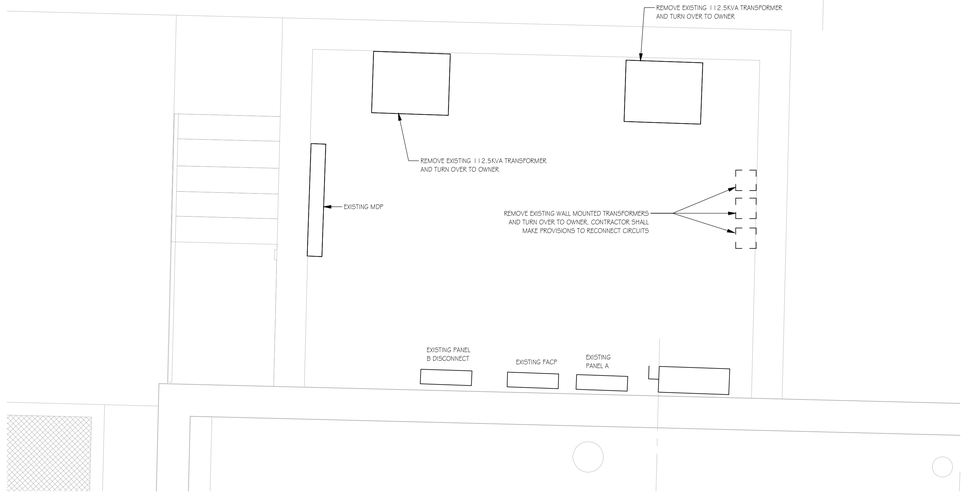
1. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY POWER AND DOWNTIME SHALL BE KEPT AT A MINIMUM. NOTIFY OWNER 7 DAYS PRIOR TO ANY POWER SHUT-DOWN. SEE ARCHITECTURAL SPECIFICATIONS FOR TEMPORARY POWER REQUIREMENTS.



2 ENLARGED FLOOR PLAN - EXISTING ELECTRICAL ROOM

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

0 1' 2' 4'



3 ENLARGED FLOOR PLAN - EXISTING ELECTRICAL ROOM DEMO

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

0 1' 2' 4'

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING
HOUSING
AUTHORITY

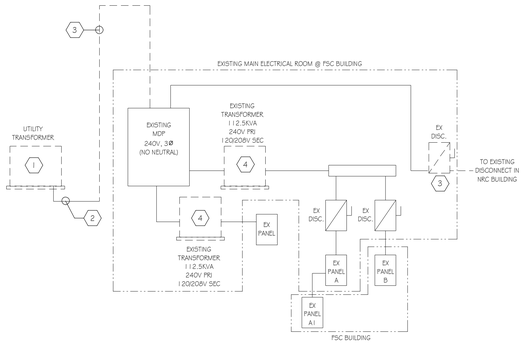
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

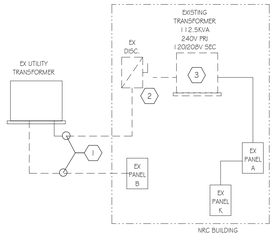
SHEET TITLE
ENLARGED PLANS

ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	SEA	SEA

E-103



FSC BLDG POWER RISER - DEMOLITION



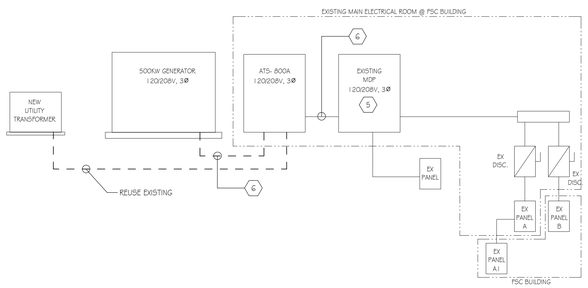
NRC POWER RISER - DEMOLITION

FSC KEY NOTES

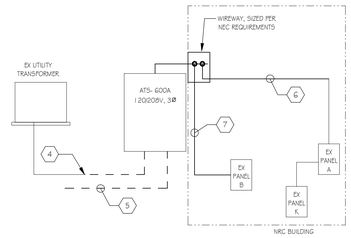
1. COORDINATE WITH UTILITY TO REMOVE EXISTING TRANSFORMER AND REPLACE WITH NEW 120/208V, 3 PHASE.
2. EXISTING UNDERGROUND CONDUITS SHALL REMAIN FOR REUSE.
3. EXISTING CONDUITS UP SIDE OF BUILDING, WEATHERHEADS AND CONDUITS THROUGH WALL CHALL BE REMOVED IN THEIR ENTIRETY.
4. EXISTING TRANSFORMERS SHALL BE REMOVED AND TURNED OVER TO OWNER. MAKE PROVISIONS TO CONNECT EXISTING CONDUITS AND CABLES TO MAKE COMPLETE FEEDER CIRCUIT.
5. CONTRACTOR SHALL CHECK ALL MOTORS THROUGH ALL FACILITIES FOR CORRECT ROTATIONS. RE-LABEL PANELS FOR ANY CHANGES.
6. 2 SETS OF [(4) #500KCMIL 4 (1) #1/0 GRD IN (2) 3 1/2"C]

NRC KEY NOTES

1. INTERCEPT EXISTING FEEDERS AND REMOVE.
2. REMOVE EXISTING DISCONNECT AND TURN OVER TO OWNER.
3. REMOVE EXISTING TRANSFORMER AND TURN OVER TO OWNER.
4. CONNECT TO EXISTING FEEDER AND INSTALL TO NEW ATS.
5. INTERCEPT CONDUITS FROM FSC BUILDING AND INSTALL TO NEW ATS, 2 SETS OF (4) #500KCMIL 4 (1) #1 GRD IN EXISTING CONDUITS
6. (4) #500KCMIL 4 (1) #3 GRD IN 3 1/2"C
7. (4) #3/0 4 (1) #6 GRD IN 2 1/2"C



FSC BLDG POWER RISER - NEW



NRC POWER RISER - NEW

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

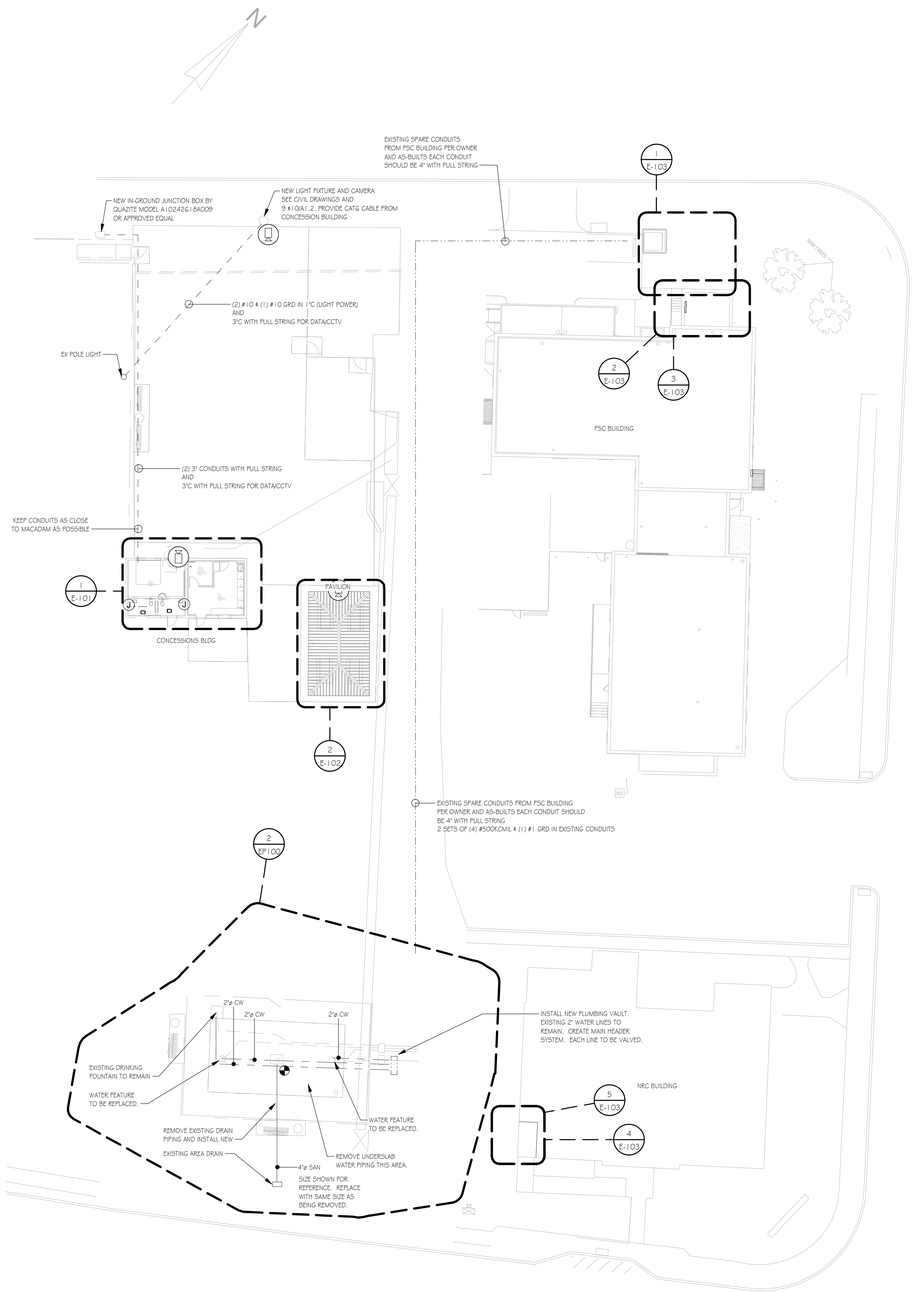
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
ELECTRICAL SCHEDULES & POWER RISER

ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	SEA	SEA

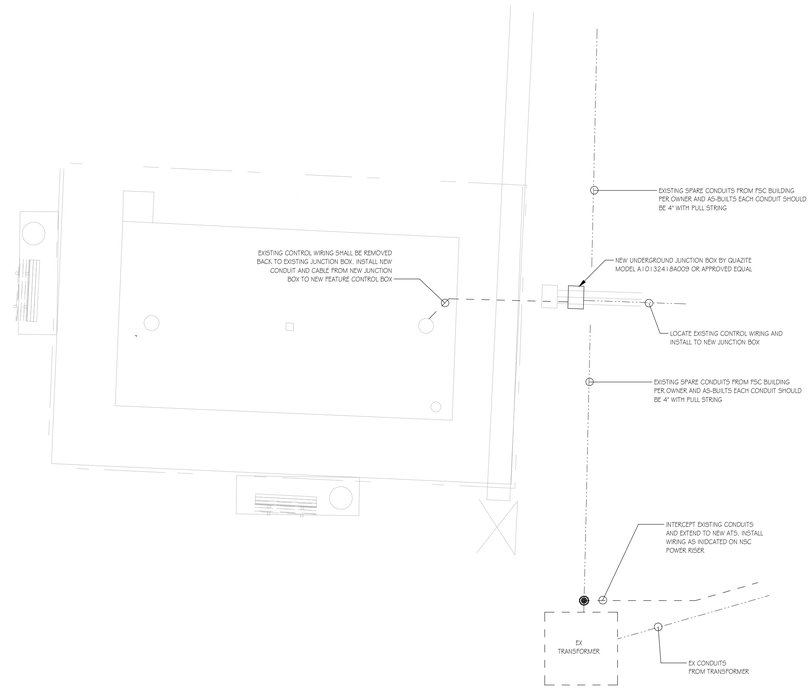
E-200



1 SITE PLAN

SCALE: 1" = 20'-0"

0 20' 40'



2 ENLARGED PLAN - WATER FEATURE - ELECTRICAL

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

0 8' 16' 32'

All dimensions, measurements and project conditions shall be checked and verified in the field by the contractor. Refer all differences, in writing, to the architect for consideration prior to proceeding with the work. The contractor shall bear the cost of rectifying work not approved by the architect, caused by lack of coordination and or notification.

STAMP

GREEN BUILDING ENGINEERS
2548 Brandywine Lane, York, PA 17404
412-841-4901

REVISIONS

No.	Description	Date

HAMMEL ASSOCIATES ARCHITECTS, LLC
25 E. Grant St. | Suite 102 | Lancaster, PA 17602 | 717.393.3713 | www.hammelarch.com

READING HOUSING AUTHORITY

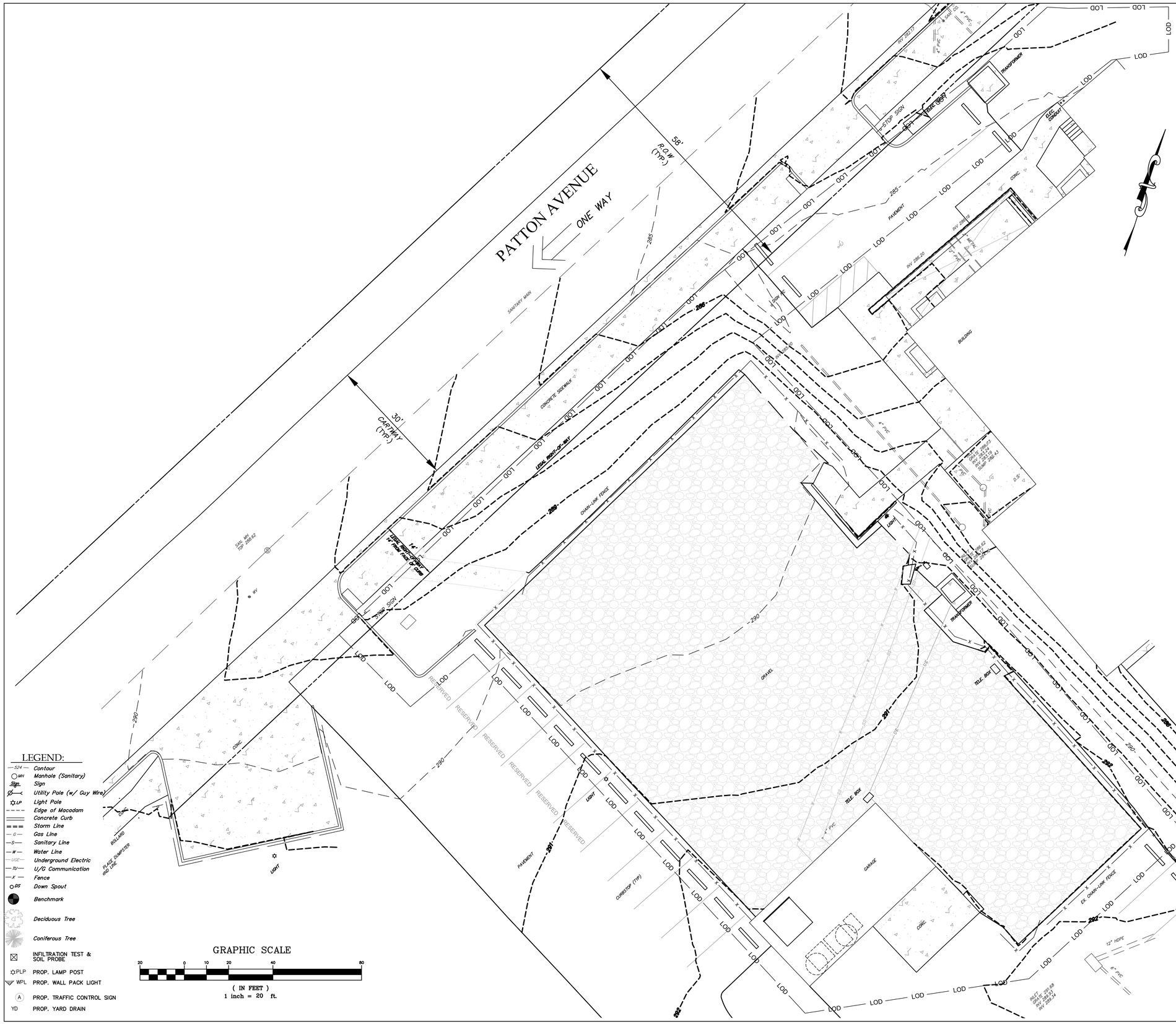
PROJECT DESCRIPTION
OAKBROOK HOMES
OPPORTUNITY HOUSE PLAYGROUND IMPROVEMENTS

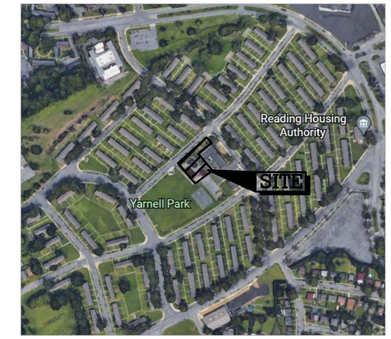
1001 SCOTT STREET
READING, PA 19611

SHEET TITLE
SITE PLAN

ISSUE DATE	SCALE	
09.09.2026	AS NOTED	
FILE NUMBER	**DRAWN BY**	**CHECKED BY**
2532	SEA	SEA

EP100





LOCATION MAP
SCALE = 1" 800'

ZONING REQUIREMENT

R-3 RESIDENTIAL DISTRICT
PERMITTED USE: PUBLIC PARKS AND LOW-RISE APARTMENTS

	REQUIRED	EXISTING
MIN. LOT AREA	5,500 SF	1,091,613.6 SF
MIN. LOT WIDTH	30 FT	N/A FT
MIN. FRONT YARD SETBACK	5 FT.	N/A FT.
MIN. SIDE YARD SETBACK	6 FT.	N/A FT.
MIN. REAR YARD SETBACK	20 FT.	N/A FT.
MAX. BUILDING HEIGHT(PRINCIPAL)	35 FT.	35 FT.
MAX. BUILDING COVERAGE	60%	
MAX. IMPERVIOUS COVERAGE	80%	

PROPERTY OWNER

READING HOUSING AUTHORITY
1301 SCHUYLKILL AVENUE
READING, PA 19611

PROPERTY INFORMATION

1001 SCOTT STREET
READING, PA 19611

DEED REFERENCE: 10880118
PARCEL ID. 18530655246465

LOT AREA: 25.06 ACRES

ADJACENT LAND USES:

THE ADJACENT LAND USE IS ATTACHED SINGLE FAMILY HOMES

STORMWATER ORDINANCE NOTE:

THE PROJECT MEETS THE REQUIREMENTS OF SECTION 505-142 EXEMPTION.

THE FOLLOWING SECTION HAVE BEEN COMPLETED:
SECTION 505-125 GROUNDWATER RECHARGE
SECTION 505-126 WATER QUALITY
SECTION 505-143.A(2) STREAM BANK EROSION

LEGEND:

- 524 Contour
- MH Manhole (Sanitary)
- Sign Sign
- Utility Pole (w/ Guy Wire)
- LP Light Pole
- Edge of Macadam
- Concrete Curb
- Storm Line
- G Gas Line
- S Sanitary Line
- W Water Line
- UGE Underground Electric
- TU U/G Communication
- X Fence
- DS Down Spout
- Benchmark
- Deciduous Tree
- Coniferous Tree
- INFILTRATION TEST & SOIL PROBE
- PLP PROP. LAMP POST
- WPL PROP. WALL PACK LIGHT
- A PROP. TRAFFIC CONTROL SIGN
- YD PROP. YARD DRAIN

NO.	REVISION	DATE	BY
1.	REVISED AS PER BCCD REVIEW COMMENTS DATED 7/22/26	7/29/26	RJD

DAUTRICH ENGINEERING
261 Preston Road
Wernersville, Pennsylvania 19565
Phone 610-413-0824
email: dautrieng@rcn4.net

SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER RANDY JAMES DAUTRICH No. 044847

TITLE
EXISTING PLAYGROUND
PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
OAKBROOK COMMUNITY REC. FIELD IMPROVEMENTS
CITY OF READING BERKS COUNTY PENNSYLVANIA

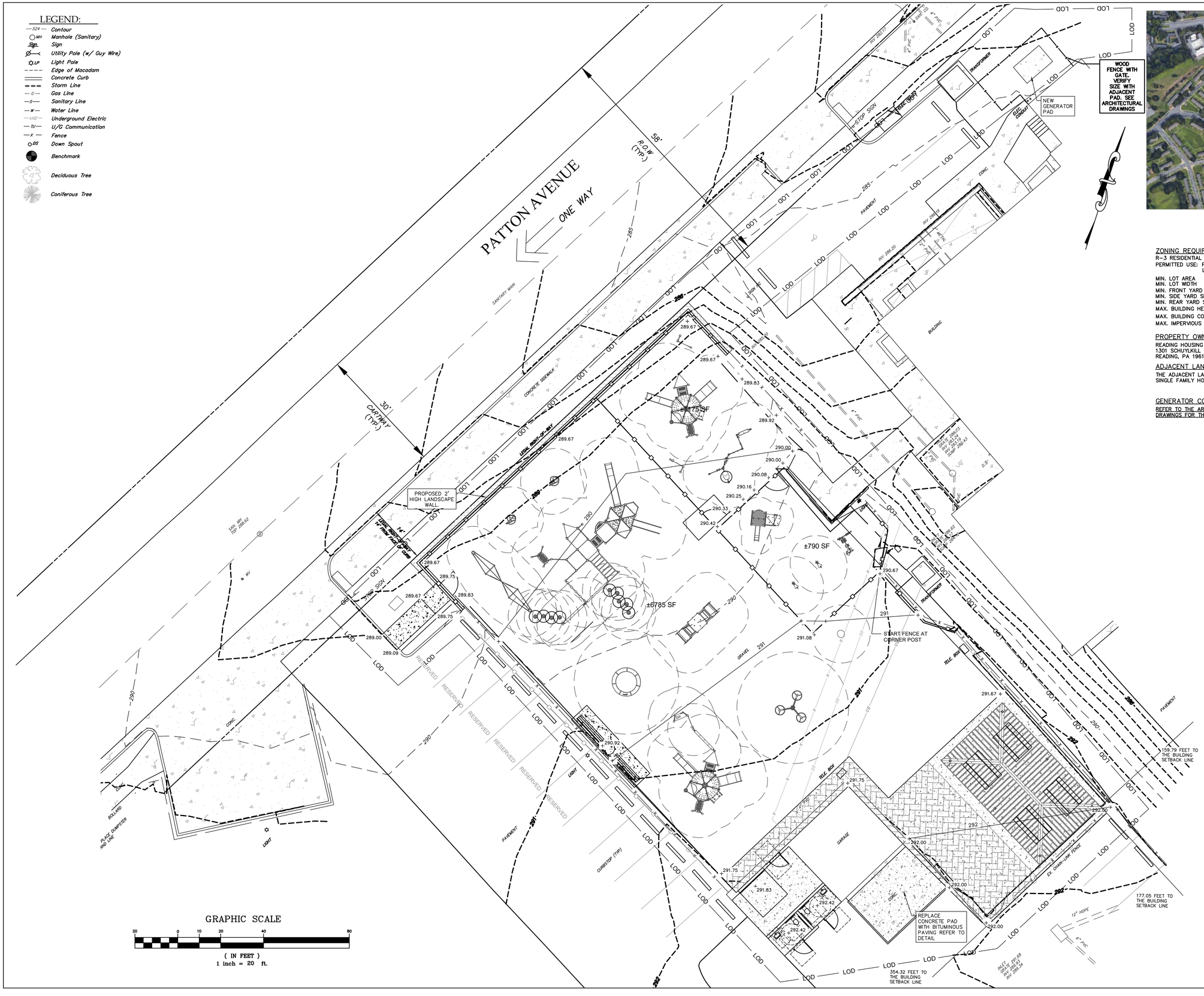
CLIENT
HAMMEL ASSOCIATES ARCHITECTS,LLC
25 EAST GRANT STREET
LANCASTER, PA 17602

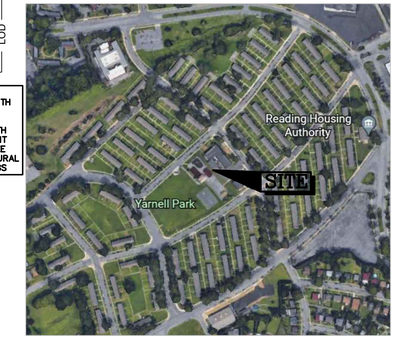
DRAFT: RJD
CHK'D: RJD
DATE: 9/11/26
SCALE: 1"=20'

JOB NO. 2601
SHEET NO. 1 of 5
DWG. NO. C.1.0

LEGEND:

- 524 — Contour
- MH — Manhole (Sanitary)
- Sign — Sign
- Utility Pole (w/ Guy Wire)
- LP — Light Pole
- Edge of Macadam
- Concrete Curb
- Storm Line
- G — Gas Line
- S — Sanitary Line
- W — Water Line
- UGE — Underground Electric
- TU — U/G Communication
- X — Fence
- DS — Down Spout
- Benchmark
- Deciduous Tree
- Coniferous Tree





LOCATION MAP
SCALE = 1" 800'

ZONING REQUIREMENT

R-3 RESIDENTIAL DISTRICT
PERMITTED USE: PUBLIC PARKS AND LOW-RISE APARTMENTS

	REQUIRED	EXISTING
MIN. LOT AREA	5,500 SF	1,091,613.6 SF
MIN. LOT WIDTH	30 FT	N/A FT
MIN. FRONT YARD SETBACK	5 FT.	N/A FT.
MIN. SIDE YARD SETBACK	6 FT.	N/A FT.
MIN. REAR YARD SETBACK	20 FT.	N/A FT.
MAX. BUILDING HEIGHT(PRINCIPAL)	35 FT.	35 FT.
MAX. BUILDING COVERAGE	60%	
MAX. IMPERVIOUS COVERAGE	80%	

PROPERTY OWNER

READING HOUSING AUTHORITY
1301 SCHUYLKILL AVENUE
READING, PA 19611

PROPERTY INFORMATION

1001 SCOTT STREET
READING, PA 19611

DEED REFERENCE: 10880118
PARCEL ID. 18530655246465

LOT AREA: 25.06 ACRES

ADJACENT LAND USES:

THE ADJACENT LAND USE IS ATTACHED SINGLE FAMILY HOMES

GENERATOR CONCRETE PAD NOTE:

REFER TO THE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR THE GENERATOR PAD SIZE.

NO.	REVISION	DATE	BY
1.	REVISED AS PER BCCD REVIEW COMMENTS DATED 7/22/26	7/29/26	RJD

DAUTRICH ENGINEERING
261 Preston Road
Wernersville, Pennsylvania 19565
Phone 610-415-0824
email: dautrieng@ptd.net

SEAL

PROPOSED PLAYGROUND & SITE IMPROVEMENTS
PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
OAKBROOK COMMUNITY REC. FIELD IMPROVEMENTS
CITY OF READING BERKS COUNTY PENNSYLVANIA

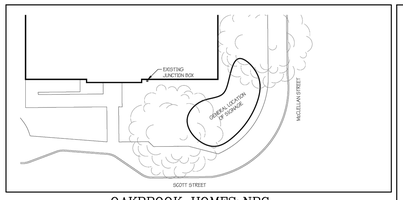
CLIENT
HAMMEL ASSOCIATES ARCHITECTS,LLC
25 EAST GRANT STREET
LANCASTER, PA 17602

DRAFT:	RJD	DATE: 9/11/26
CHK'D:	RJD	SCALE: 1"=20'

JOB NO. 2601

SHEET NO. 2 of 5

DWG. NO. C.2.0



OAKBROOK HOMES: NRC
1001 SCOTT STREET
N.T.S

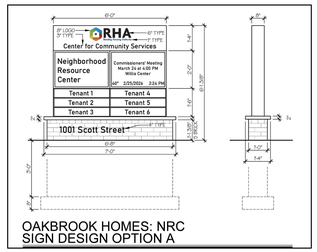
OAKBROOK HOMES NRC GENERAL INFORMATION

SIGN LOCATION:
1001 SCOTT STREET,
READING, PA 19611

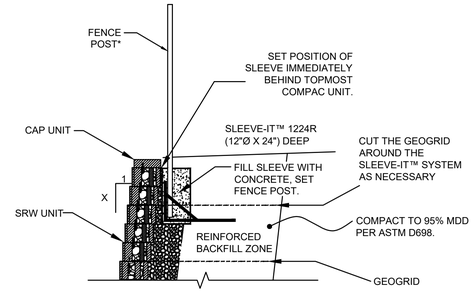
WORK TO BE COMPLETED:
- EXCAVATION FOR, AND POURING OF, NEW MONOLITHIC FOUNDATION
- NEW MASONRY SIGN BASE WITH BRICK VENEER AND CAST STONE CAPS
- ALUMINUM BOX SIGN FOR CENTER NAME W/ POST-MOUNTED ACRYLIC LETTERS
- 6 SMALLER MODULAR TENANT PANELS AND 1 LARGER MODULAR TENANT PANEL
- ELECTRONIC MESSAGE CENTER
- ADDRESS IN POST-MOUNTED ACRYLIC LETTERS

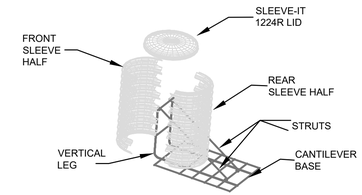
NOTE:

SIGN TO BE INSTALLED UNDER SEPARATE CONTRACT.



OAKBROOK HOMES: NRC
SIGN DESIGN OPTION A



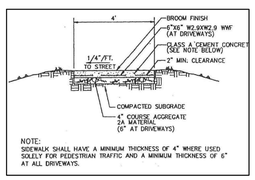


*FENCING SYSTEMS APPROVED FOR USE WITH THE SLEEVE-IT™ 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK - UP TO 8-FT, PRIVACY - UP TO 6-FT (WOODEN, PVC, METAL). POST SIZE 4"X4" MAX.

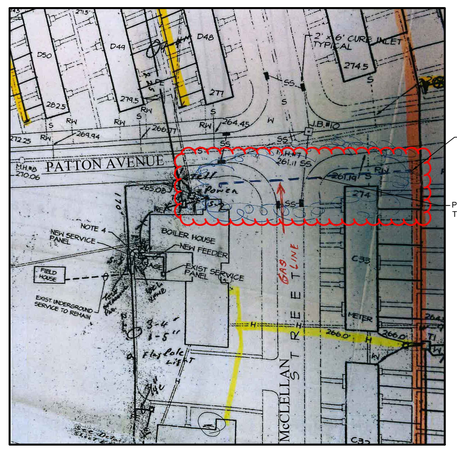
DETAIL OF FENCE POST INSTALLATION USING SLEEVE-IT 1224-R
N.T.S

NOTE: MATCH THE SAME RETAINING WALL MATERIAL AS LOCATED AT WILLIS CENTER FOR ADMINISTRATION: 400 HANCOCK BLVD, READING PA. 19611

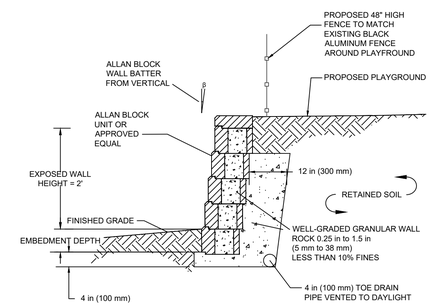
NOTE:
12" TRIPLE RUBBER MATTING WEED SEAL MUST BE INSTALL UNDER ALL FENCING



SIDEWALK DETAIL
NOT TO SCALE



GENERATOR GAS LATERAL PLAN
NOT TO SCALE



RETAINING WALL DETAIL
N.T.S

NOTE: MATCH THE SAME RETAINING MATERIAL AND FENCE AS LOCATED AT WILLIS CENTER FOR ADMINISTRATION: 400 HANCOCK BLVD, READING PA. 19611

NO.	REVISION	DATE	BY
1.	REVISED AS PER BCCD REVIEW COMMENTS DATED 7/22/26	7/29/26	RJD

DAUTRICH ENGINEERING
261 Preston Road
Wernersville, Pennsylvania 19565
Phone 610-413-0824
email: dautrieng@ptd.net

SEAL

CIVIL DETAILS
PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
OAKBROOK COMMUNITY REC. FIELD IMPROVEMENTS
CITY OF READING BERKS COUNTY PENNSYLVANIA

CLIENT
HAMMEL ASSOCIATES ARCHITECTS,LLC
25 EAST GRANT STREET
LANCASTER, PA 17602

DRAFT:	RJD	DATE:	9/11/26
CHK'D:	RJD	SCALE:	N/A

JOB NO. 2601

SHEET NO. 3 of 5

DWG. NO. C.3.0

PAST, PRESENT AND PROPOSED LAND USES

BASED ON HISTORIC AERIAL PHOTOGRAPHY, THE PROJECT AREA WAS PLAYGROUND FOR THE READING HOUSING AUTHORITY. FOR THE LAST FIVE YEARS, THE PROPERTY HAS BEEN USED IN THE SAME CAPACITY. THE PROJECT PROPOSES TO UP DATE THE PLAYGROUND BY ADDING NEW EQUIPMENT, RESTROOMS AND A PAVILION.

SEDIMENT AND EROSION CONTROL NARRATIVE

THE PURPOSE IS TO PREVENT THE ACCELERATED EROSION OF EXPOSED SITE SOILS DURING CONSTRUCTION AND TO RETAIN, ON-SITE, ALL SEDIMENT PRODUCED BY THE PROPOSED CONSTRUCTION. THIS WILL BE ACCOMPLISHED THROUGH THE USE OF FABRIC SILT FENCES, TEMPORARY EROSION CONTROL MEASURES, AND THROUGH THE PROPER PHASING OF EARTHMOVING ACTIVITIES, AND BY THE RAPID STABILIZATION OF ALL DISTURBED AREAS.

SEQUENCE OF CONSTRUCTION

1. ALL EARTH DISTURBANCE ACTIVITY SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED.
2. CLEARLY MARK THE LIMIT OF DISTURBANCE. NO CONSTRUCTION ACTIVITY OR TRAFFIC SHOULD BE PERMITTED OUTSIDE THE LIMIT OF DISTURBANCE OR WITHIN THE INFILTRATION FACILITY AREA.
3. INSTALL STONE CONSTRUCTION ENTRANCE, SILT BARRIERS AND CONCRETE WASHOUTS AS SHOWN ON THE PLAN AND IN THE DETAILS.
4. CLEAR AND GRUB ONLY THE AREAS NECESSARY FOR CONSTRUCTION OF THE IMPROVEMENTS ON THE LOT. THE PROPOSED INFILTRATION BEDS SHALL BE PROTECTED FROM DISTURBANCE DURING CONSTRUCTION.
5. STRIP AND STOCKPILE TOPSOIL AT THE LOCATION SHOWN ON THE PLAN. TOPSOIL STORAGE PILES ARE TO BE COMPLETELY SURROUNDED WITH SILT BARRIER AND SHALL NOT EXCEED 35 FEET WITH SLOPES 2:1 OR FLATTER.
6. BEGIN CONSTRUCTION OF PROPOSED SITE IMPROVEMENTS.
7. CONSTRUCT INSTALL NEW PLAYGROUND EQUIPMENT, RESTROOMS AND PAVILION.
8. ALL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE PROPERLY MAINTAINED. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH RUNOFF EVENT AND AT A MINIMUM ON A WEEKLY BASIS. ALL PREVENTATIVE AND CORRECTIVE MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.
9. AFTER 70% UNIFORM VEGETATIVE COVER HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. UNBLOCK YARD DRAIN. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED.

ANTICIPATED START OF CONSTRUCTION – FALL 2026
ANTICIPATED FINAL STABILIZATION – FALL 2026

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS SHOWN ON THE PLANS.

UNTIL THE SITE IS FULLY STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE PROPERLY MAINTAINED. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL CONTROLS AFTER EACH STORM AND ON A WEEKLY BASIS.

NOTE:
SEDIMENT BARRIERS (I.E., SILT SOCK) SHALL BE INSTALLED BELOW ALL AREAS DISTURBED FOR THE ESTABLISHMENT OF LAWNS AND SHALL BE MAINTAINED UNTIL THE LAWN HAS BEEN PERMANENTLY STABILIZED.

E&S LEGEND

(symbol)	12" COMPOST FILTER SOCK
(symbol)	ROCK CONSTRUCTION ENTRANCE
- L.O.D. -	LIMIT OF DISTURBANCE
(symbol)	SOIL TYPES

THE AREA OF DISTURBANCE = 17,497 SF, 0.4017 AC

NOTE 1: ALL DISTURB AREAS ARE TO BE COVERED WITH S75BN EROSION MAT AS PER DETAIL ON PLAN SHEET C.4.1

SOILS DESCRIPTIONS

SYMBOL	DESCRIPTION	DEPTH TO RESTRICTIVE FEATURE	NATURAL DRAINAGE CLASS	DEPTH TO WATER TABLE	HYDROLOGIC SOIL GROUP	HYDRIC SOIL RATING
UgB	URBAN LAND, 0–8% SLOPES	N/A	N/A	N/A	N/A	NO

SOIL INFORMATION TAKEN FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION DISTRICT, WEB SOIL SURVEY

SOIL LIMITATIONS:

THE DEEPEST EXCAVATION WILL BE FOR THE FOUNDATION FOR THE NEW STEEL COLUMNS. THE DEPTH TO BEDROCK MAY AFFECT HOW THE FOUNDATION IS EXCAVATED. A HYDRAULIC HAMMER MAY HAVE TO BE USED.

THERMAL IMPACT ANALYSIS

THE POTENTIAL FOR THERMAL IMPACTS IS PRESENT DUE TO THE REMOVAL OF PROJECT SITE VEGETATION AND STORM WATER FLOWS OVER SURFACES WITH ELEVATED TEMPERATURES SUCH AS BARE EARTHWORK AREAS AND IMPERVIOUS SURFACES.

POTENTIAL THERMAL IMPACTS TO SURFACE WATERS WILL BE MINIMIZED BY MINIMIZING CLEARING AND RETAINING EXISTING VEGETATION WHERE POSSIBLE. BARE EARTHWORK AREAS/DISTURBED AREAS WILL BE CONTROLLED BY EROSION CONTROL MEASURES. RUNOFF FROM THE MAJORITY OF THE DISTURBED AREAS WILL FLOW TO COMPOST FILTER SOCKS. COMPOST FILTER SOCKS WILL PROVIDE SHEET FLOW THROUGH THE SOCK AND REMOVE SEDIMENT FROM THE RUNOFF. THE DISTURBED AREAS WILL BE RESEEDED AS SOON AS POSSIBLE FOLLOWING CONSTRUCTION. THESE MEASURES WILL MITIGATE THERMAL IMPACTS BY ALLOWING RUNOFF TO SLOW DOWN LEAVING THE SITE THEREBY REDUCING THERMAL IMPACTS FROM THE SITE DURING CONSTRUCTION. ADDITIONALLY, DOWNSTREAM AREAS LOCATED BETWEEN THE RECEIVING SURFACE WATERS AND THE BARE EARTHWORK AREAS AND/OR IMPERVIOUS SURFACES ARE VEGETATED AND/OR WOODED WHICH WILL FURTHER FILTER AND COOL THE RUNOFF PRIOR TO THESE FLOWS ENTERING THE WATERWAY.

THE MAJORITY OF THE IMPERVIOUS SURFACES WILL BE DIRECTED TO THE PROPOSED STORMWATER MANAGEMENT FACILITIES. ANY RUNOFF THAT MAY BE WARMED BY IMPERVIOUS SURFACES WILL BE COOLED AS IT IS CONVEYED TO THE STONE STORAGE AREA BELOW GRADE OR ACROSS THE VEGETATED AREAS. THIS RUNOFF WILL INFILTRATE INTO THE GROUND AND WILL BE COOLED. THE EXISTING CONDITION OF THE PROJECT SITE IS MEADOW. THE PROJECT PROPOSES TO PROTECT AS MUCH EXISTING VEGETATED AREAS AS PRACTICAL. SITE RUNOFF THAT IS NOT COLLECTED BY THE SITE'S STORMWATER MANAGEMENT FACILITIES WILL FLOW OVER EXISTING, STABILIZED VEGETATED AREAS WHICH WILL ALLOW THE RUNOFF TO COOL PRIOR TO ENTERING THE STREAM.

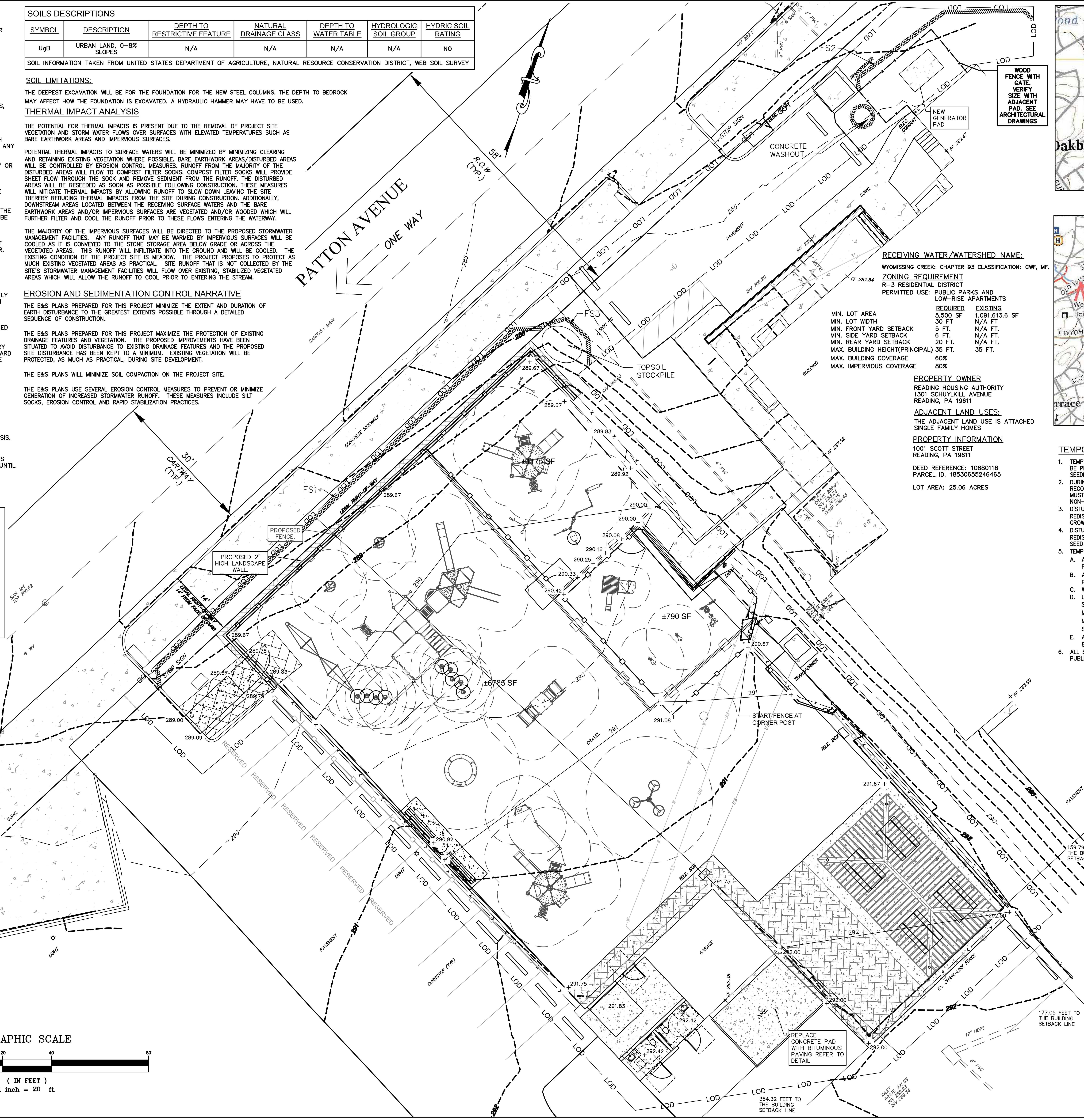
EROSION AND SEDIMENTATION CONTROL NARRATIVE

THE E&S PLANS PREPARED FOR THIS PROJECT MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE TO THE GREATEST EXTENTS POSSIBLE THROUGH A DETAILED SEQUENCE OF CONSTRUCTION.

THE E&S PLANS PREPARED FOR THIS PROJECT MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION. THE PROPOSED IMPROVEMENTS HAVE BEEN SITUATED TO AVOID DISTURBANCE TO EXISTING DRAINAGE FEATURES AND THE PROPOSED SITE DISTURBANCE HAS BEEN KEPT TO A MINIMUM. EXISTING VEGETATION WILL BE PROTECTED, AS MUCH AS PRACTICAL, DURING SITE DEVELOPMENT.

THE E&S PLANS WILL MINIMIZE SOIL COMPACTION ON THE PROJECT SITE.

THE E&S PLANS USE SEVERAL EROSION CONTROL MEASURES TO PREVENT OR MINIMIZE GENERATION OF INCREASED STORMWATER RUNOFF. THESE MEASURES INCLUDE SILT SOCKS, EROSION CONTROL AND RAPID STABILIZATION PRACTICES.



LEGEND:

—524—	Contour
○MH	Manhole (Sanitary)
Sign	Sign
	Utility Pole (w/ Guy Wire)
LP	Light Pole
- - - -	Edge of Macadam
	Concrete Curb
	Storm Line
—G—	Gas Line
—S—	Sanitary Line
—W—	Water Line
—UGE—	Underground Electric
—TU—	U/G Communication
—x—	Fence
○DS	Down Spout
	Benchmark
	Deciduous Tree
	Coniferous Tree
⊠	INFILTRATION TEST & SOIL PROBE
PLP	PROP. LAMP POST
WPL	PROP. WALL PACK LIGHT
(A)	PROP. TRAFFIC CONTROL SIGN
YD	PROP. YARD DRAIN

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

RECEIVING WATER/WATERSHED NAME:

WYOMISSING CREEK: CHAPTER 93 CLASSIFICATION: CWF, MF.

ZONING REQUIREMENT

R–3 RESIDENTIAL DISTRICT
PERMITTED USE: PUBLIC PARKS AND LOW–RISE APARTMENTS

	REQUIRED	EXISTING
MIN. LOT AREA	5,500 SF	1,091,613.6 SF
MIN. LOT WIDTH	30 FT	N/A FT
MIN. FRONT YARD SETBACK	5 FT.	N/A FT.
MIN. SIDE YARD SETBACK	6 FT.	N/A FT.
MIN. REAR YARD SETBACK	20 FT.	N/A FT.
MAX. BUILDING HEIGHT(PRINCIPAL)	35 FT.	35 FT.
MAX. BUILDING COVERAGE	60%	
MAX. IMPERVIOUS COVERAGE	80%	

PROPERTY OWNER

READING HOUSING AUTHORITY
1301 SCHUYLKILL AVENUE
READING, PA 19611

ADJACENT LAND USES:

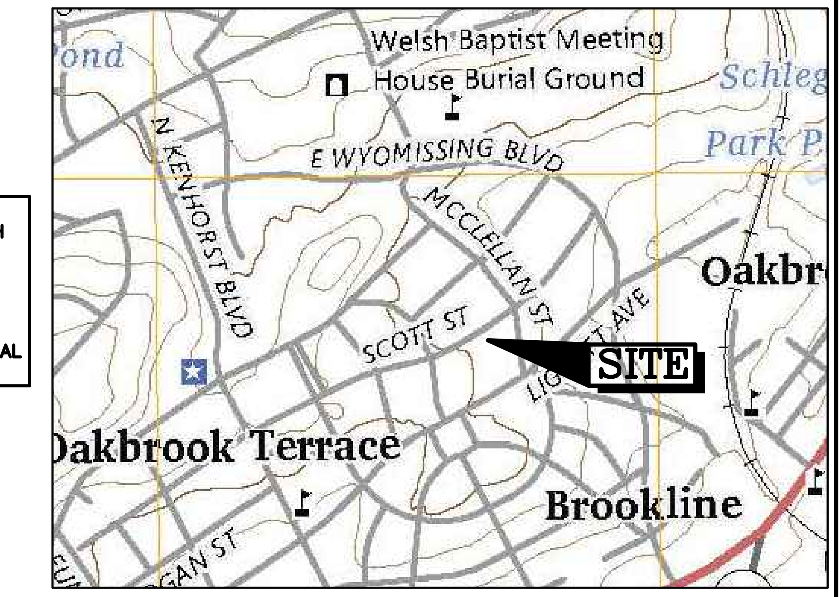
THE ADJACENT LAND USE IS ATTACHED SINGLE FAMILY HOMES

PROPERTY INFORMATION

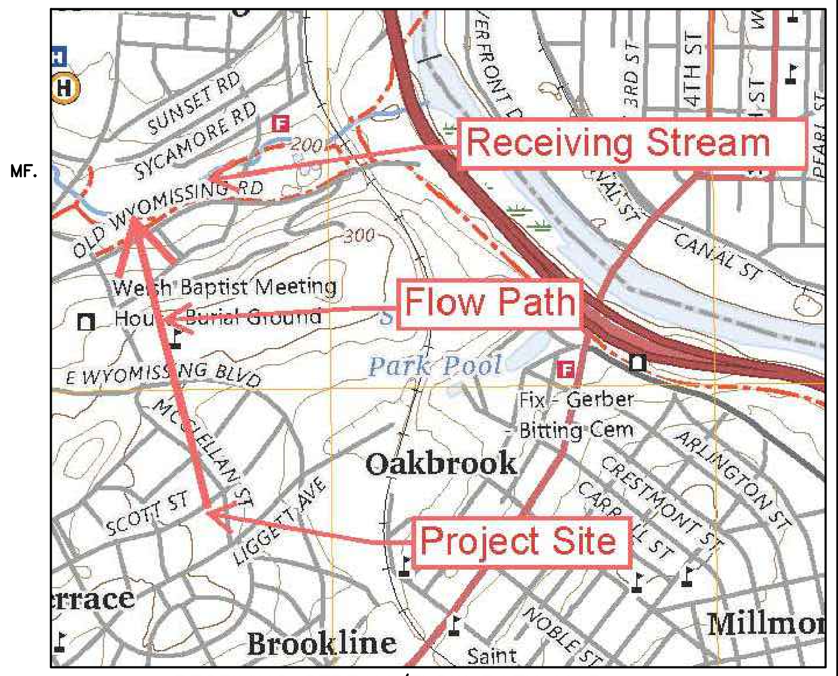
1001 SCOTT STREET
READING, PA 19611

DEED REFERENCE: 10880118
PARCEL ID. 18530655246465

LOT AREA: 25.06 ACRES



READING QUADRANGLE USGS LOCATION MAP
SCALE = 1" 2000'



RECEIVING STREAM/FLOW PATH MAP
SCALE = 1" 2000'

TEMPORARY SEEDING AND MULCHING REQUIREMENTS

1. TEMPORARY SEEDING SHALL BE DONE IN ALL AREAS WHERE NO ACTIVE WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.
2. DURING NON–GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON–GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED AND MULCHED FOLLOWING THE END OF THE NON–GERMINATING PERIODS.
3. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
4. DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE REDISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
5. TEMPORARY SEEDING STEPS:
   A. APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE (40 POUNDS PER 1000 SQUARE FEET)
   B. APPLY 10–10–10 FERTILIZER AT THE RATE OF 500 POUNDS PER ACRE (12.5 POUNDS PER 1000 SQUARE FEET)
   C. WORK THE FERTILIZER AND LIMESTONE INTO THE SOIL.
   D. UTILIZE THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE:

SEASON	RATE	TYPE
MARCH 1 – JUNE 15	1 LB/1000 SF	ANNUAL RYEGRASS
MAY 15 – SEPT 15	1 LB/1000 SF	SUDAN GRASS
SEPT 15 – OCT 15	168 LBS/1 ACRE	WINTER RYE

   E. APPLY HAY OR STRAW MULCH (PER PENNDOT PUBLICATION 408, SECTION 805.2) AT A RATE OF THREE (3) TONS PER ACRE.
6. ALL SEED SHALL BE LABELED, DATED, AND QUALITY CONSISTENT WITH PENNDOT PUBLICATION 408, SECTION 804.2.

RECYCLING OF DISPOSAL OF MATERIALS

ANY OFF–SITE WASTEAND/OR BORROW AREA MUST HAVE AN E&S PLAN REVIEWED AND APPROVED BY THE BCCD PRIOR TO BEING ACTIVATED.

PERMANENT SEEDING AND MULCHING REQUIREMENTS

1. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
2. SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER 1ST, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1ST, DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
3. DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS:
   A. MINIMUM OF 6" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND.
   B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)).
   C. THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES.
   D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING.
   E. ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED WHEREVER POSSIBLE.
   F. SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH 1/2" OF SOIL WITH SUITABLE EQUIPMENT.
   G. APPLY HAY OR STRAW MULCH (PER PENNDOT PUBLICATION 408, SECTION 805.2) AT A RATE OF THREE (3) TONS PER ACRE.
   H. UTILIZE THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE:
   PERMANENT SEEDING FOR NORMAL MOWED LAWNS

SEASON	RATE	TYPE
MARCH 1 TO JUNE 1 AND AUG 15 TO OCT 1	2 LB/1000 SF	KY31 KENTUCKY BLUE GRASS VARIETY AND RED TOP
OCT. 1 TO MARCH 1 AND JUNE 1 TO AUG. 1	2 LB/1000 SF	RED TOP*
MARCH 1 TO JUNE 1 AND AUG 15 TO OCT 1	2.5 LB/1000 SF	KY31 KENTUCKY BLUE GRASS VARIETY (80%) AND ANNUAL RYEGRASS (20%)

   I. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY AT LEAST SIX (6) TONS OF AGRICULTURAL GRADE LIMESTONE AND 10–10–20 FERTILIZER (25 POUNDS/1,000 SQUARE FEET)

NO.	REVISION	DATE	BY
1.	REVISED AS PER BCCD REVIEW COMMENTS DATED 7/22/26	7/29/26	RJD

DAUTRICH ENGINEERING
261 Preston Road
Wernersville, Pennsylvania 19565
Phone 610–413–0624
email: dauteng@ptd.net

SEAL: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER RANDY JAMES DAUTRICH No. 046042

EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS
PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
OAKBROOK COMMUNITY REC. FIELD IMPROVEMENTS
CITY OF READING BERKS COUNTY PENNSYLVANIA

CLIENT
HAMMEL ASSOCIATES ARCHITECTS,LLC
25 EAST GRANT STREET
LANCASTER, PA 17602

DRAFT: RJD DATE: 9/11/26
CHK'D: RJD SCALE: 1" = 20'

JOB NO. 2601
SHEET NO. 4 of 5
DWG. NO. C.4.0

EROSION CONTROL GENERAL NOTES

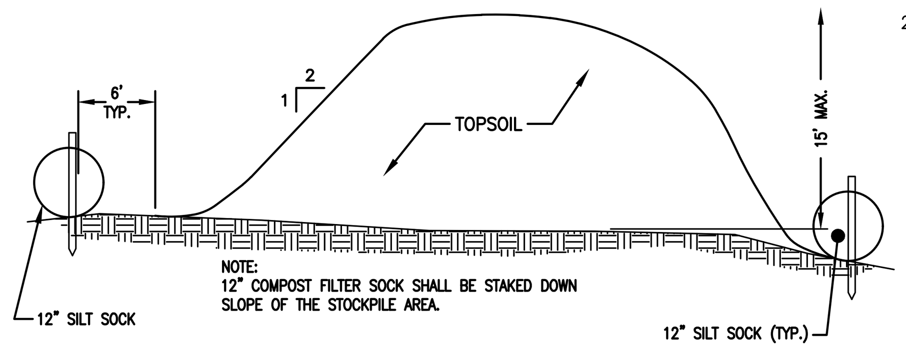
1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON–SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1–800–242–1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT, THE DEPARTMENT OR THE APPROPRIATE REVIEWING AGENCY PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND/OR FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT, THE REGIONAL OFFICE OF THE DEPARTMENT OR THE APPROPRIATE REVIEWING AGENCY.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF–SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP–001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE PROJECT SITE ON TO ANY ROAD.
15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
16. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
18. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES –– 6 TO 12 INCHES ON COMPACTED SOILS –– PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUT SLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
20. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
22. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON–GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON–VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
29. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT, THE DEPARTMENT OR THE APPROPRIATE REVIEWING AGENCY.
30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT OR THE APPROPRIATE REVIEWING AGENCY FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
31. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT OR THE APPROPRIATE REVIEWING AGENCY TO SCHEDULE A FINAL INSPECTION.
33. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT–LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

ADDITIONAL MAINTENANCE NOTES (IF APPLICABLE)

1. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
2. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
3. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS–SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
4. CHANNELS HAVING RIPRAP, RENO MATTRESS, OR GABION LININGS MUST BE SUFFICIENTLY OVER–EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
5. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
6. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
7. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
8. UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS–BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
9. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
10. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS.

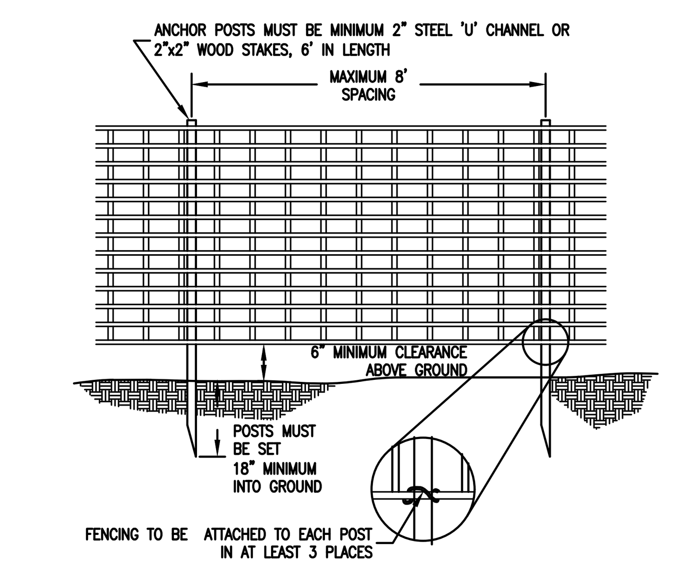
MAINTENANCE PROGRAM NOTES

1. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG. THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION MUST BE NOTED. THE INSPECTION LOG WILL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE UPON REQUEST.
2. POST–STORM EVENT INSPECTIONS SHALL BE CONDUCTED WITHIN 24 HOURS AFTER EACH MEASURABLE STORM EVENT (0.25 INCH OR GREATER) OR THE OCCURRENCE OF SNOWMELT SUFFICIENT TO CAUSE A DISCHARGE. INDICATE THIS MEASURABLE STORM EVENT ON THE PLAN DRAWINGS.
3. THE PROPERTY OWNER IS REQUIRED TO REMEDY ANY DEFICIENCY IDENTIFIED DURING THE INSPECTION PROCESS IN A REASONABLE TIME FRAME. IF A REASONABLE TIME FRAME IS NOT SPECIFIED BY THE INSPECTOR TO REMEDY THE DEFICIENCY, THEN THE TIME FRAME SHALL BE 30 DAYS DEPENDENT UPON WEATHER CONDITIONS. BASED UPON THE DEFICIENCY IDENTIFIED, THE TIME FRAME CAN BE LONGER OR SHORTER THAN 30 DAYS.
4. WHERE BMPS ARE FOUND TO FAIL TO ALLEVIATE EROSION AND SEDIMENTATION POLLUTION, THE CONTRACTOR SHALL INCLUDE THE FOLLOWING INFORMATION:
   A. THE LOCATION AND SEVERITY OF THE BMP'S FAILURE AND ANY POLLUTION EVENTS.
   B. ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON–COMPLIANCE.
   C. THE TIME FRAME TO CORRECT THE NON–COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.
5. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENTATION BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE NEEDED.
6. SEDIMENT SHALL BE REMOVED FROM STORMWATER BMP'S WHEN IT HAS ACCUMULATED TO A DEPTH OF 6 INCHES. COLLECTED SEDIMENT SHALL BE SPREAD ELSEWHERE (IN AREAS UNDER CONSTRUCTION) DURING CONSTRUCTION AND STABILIZATION. SEEDING AND MULCHING OF SLOPES SHALL CONFORM TO THE RECOMMENDATIONS WITHIN OR APPROVED EQUAL. TOPSOIL (MINIMUM 6 INCHES) SHALL BE PLACED PRIOR TO SEEDING.
7. VEGETATION SHALL BE MOWED WHENEVER NECESSARY TO MAINTAIN A PLEASING APPEARANCE AND DISCOURAGE WEED GROWTH. ALL LOCAL REGULATIONS WILL BE COMPLIED WITH.
8. SEEDED AREAS THAT HAVE WASHED AWAY SHALL BE FILLED AND GRADED AS NECESSARY AND THEN RESEEDED. A BURLAP OR STRAW COVER WILL BE APPLIED AT A RATE OF 3 TONS/ACRE TO RETAIN THE SEED UNTIL IT HAS A CHANCE TO ROOT PROPERLY. THIS PROCEDURE SHALL BE REPEATED AFTER EACH SIZEABLE STORM UNTIL NO MORE SIGNS OF EROSION ARE EVIDENT. AT WEEKLY INTERVALS THEREAFTER, INSPECTION AND NECESSARY CLEANING WILL BE DONE. PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE DONE IMMEDIATELY.
9. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED AT COMPLETION OF THE PROJECT AFTER ALL EXPOSED SOIL SURFACES ARE FINISH–GRADED AND STABILIZED.
10. PERMANENT EROSION CONTROL MAINTENANCE WILL CONSIST OF MAINTAINING THE STORMWATER MANAGEMENT BMPS IN ACCORDANCE WITH THE PCSWM PLAN OPERATIONS AND MAINTENANCE NOTES. THE PERMANENT FACILITIES MAINTENANCE WILL BE THE RESPONSIBILITY OF THE LANDOWNER.
11. THE RESPONSIBLE PARTY MUST DOCUMENT EACH SITE INSPECTION ON DEP'S CHAPTER 102 VISUAL SITE INSPECTION REPORT (3800–FM–BCW0271D) OR ALTERNATIVE DOCUMENT OR ELECTRONIC FORM THAT COLLECTS AND RETAINS IDENTICAL INFORMATION. BEGINNING DECEMBER 8, 2025, VISUAL SITE INSPECTION REPORTS MUST BE COMPLETED BY QUALIFIED PERSONNEL.



TYPICAL TOPSOIL STOCKPILE

NOT TO SCALE



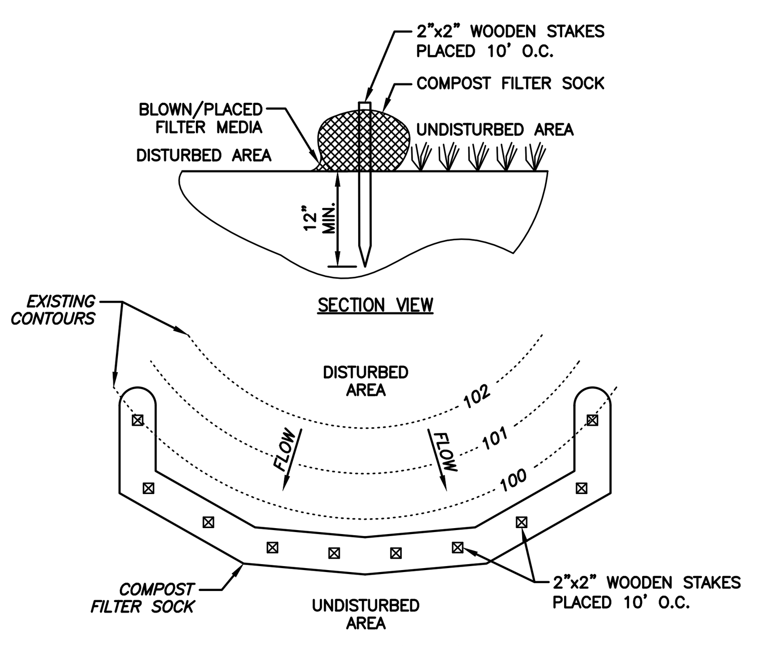
1. PROTECTION BARRIER SHALL BE 4' HIGH, CONSTRUCTED OF DURABLE AND HIGHLY VISIBLE MATERIAL (PLASTIC ORANGE CONSTRUCTION FENCE OR SNOW FENCE MAY BE USED).

2. PROTECTION BARRIERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE WORK AT THE SITE.

3. ADDITIONAL WARNING SIGNS SHOULD ALSO BE PLACED ON THE FENCING AND IN APPROPRIATE AREAS NEAR THE WORK ZONE.

ORANGE CONSTRUCTION FENCING

NOT TO SCALE



1. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
2. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
4. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
5. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
6. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

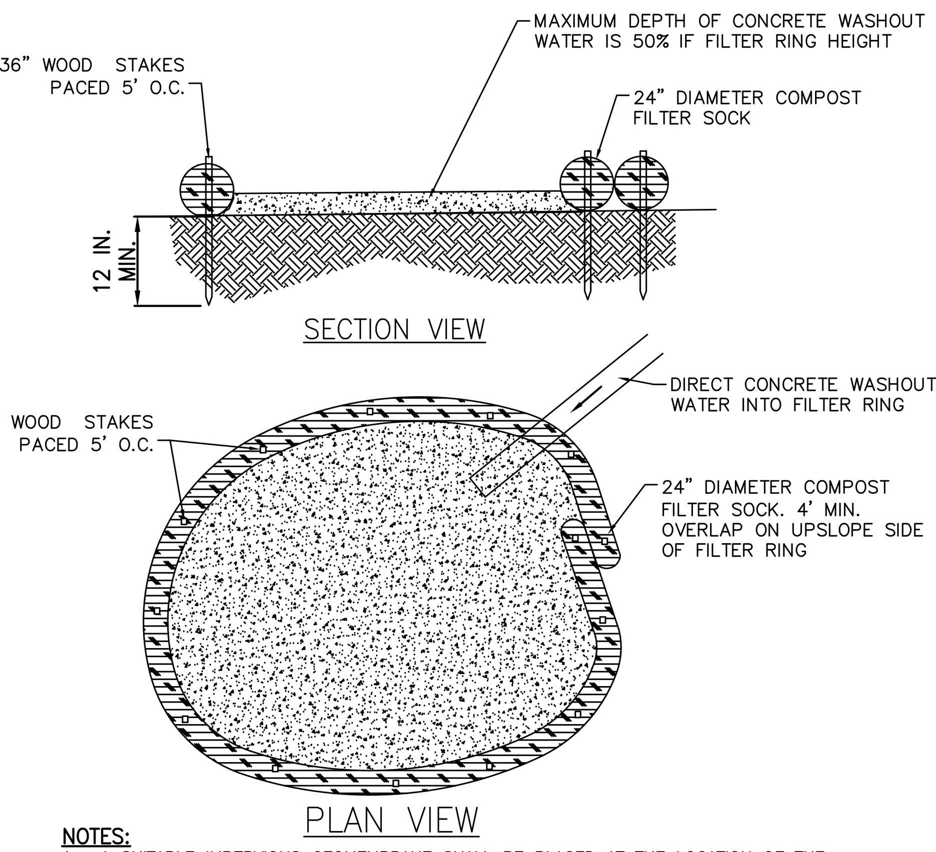
FILTER SOCK CALCULATIONS				
ID	SIZE	SOCK LENGTH	SLOPE LENGTH	SLOPE
FS1	12"	114'	167'	1%
FS2	12"	45'	14'	2%
FS3	12"	17'	10'	20%

COMPOST FILTER SOCK

NOT TO SCALE

EROSION AND SEDIMENTATION CONTROL NOTES

1. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CHESTER COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
2. ALL SLOPES 3H:1V OR STEEPER AS WELL AS ALL DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER SHALL BE STABILIZED WITH E&S BLANKETING.
3. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY DUE TO THE SPW OF THE RECEIVING SECTION OF THE WYOMISSING CREEK. STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.



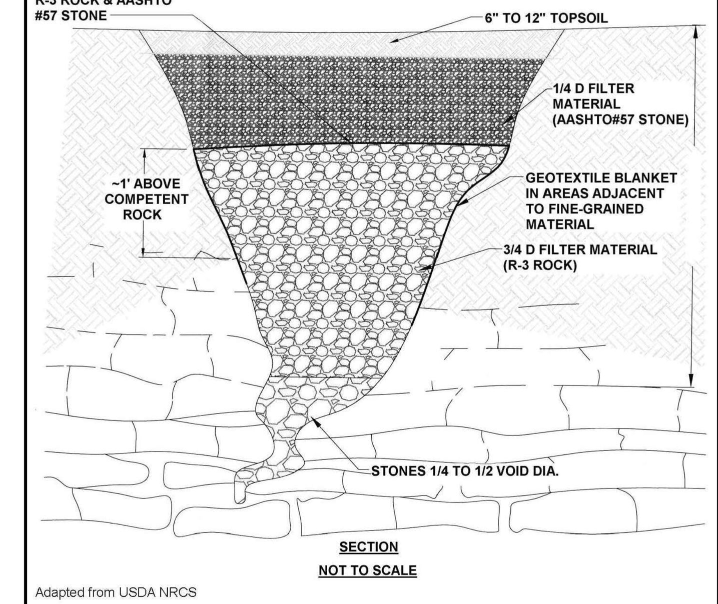
NOTES:

1. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
2. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
3. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
4. CONCRETE WASHOUT RECYCLING, TREATMENT, AND DISPOSAL OF MATERIALS FROM CONCRETE TRUCK CHUTES, HAND MIXERS, AND/OR OTHER EQUIPMENT IS TO BE SEPARATED BY A SCREEN AND PLACED IN AGGREGATE BINS TO BE HARDENED FOR RETURN TO THE READY MIX PLANT ALONG WITH ANY UNUSED CONCRETE. UNUSED WET CONCRETE CANNOT BE DUMPED ON BARE GROUND TO HARDEN ONSITE BECAUSE THIS PRACTICE CAN NEGATIVELY IMPACT GROUNDWATER AND SURFACE WATER.

COMPOST SOCK CONCRETE WASHOUT

NOT TO SCALE

FIGURE 17.2
Sinkhole Repair with a Pervious Cover



Adapted from USDA NRCS

Loose material shall be excavated from the sinkhole and expose solution void(s) if possible. Enlarge sinkhole if necessary to allow for installation of filter materials. OSHA regulations must be followed at all times during excavation.

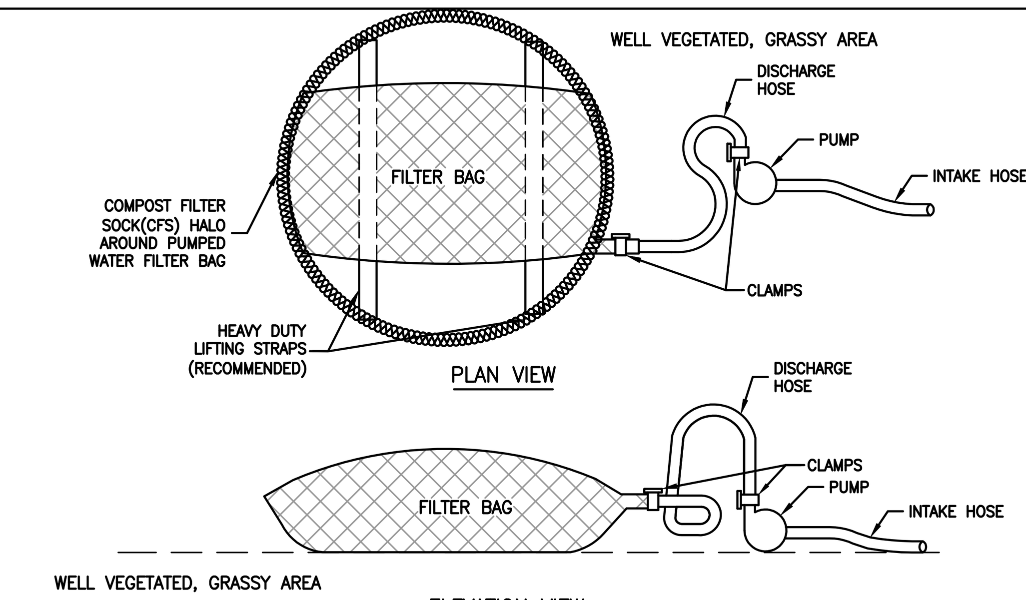
Stones used for the "bridge" and filters shall have a moderately hard rock strength and be resistant to abrasion and degradation. Shale and similar soft and/or non-durable rock are not acceptable.

SINKHOLE REPAIR DETAIL

NOT TO SCALE

SINHOLE NOTE:

IMMEDIATE REPAIR OF ANY SINKHOLES IS REQUIRED



NOTES

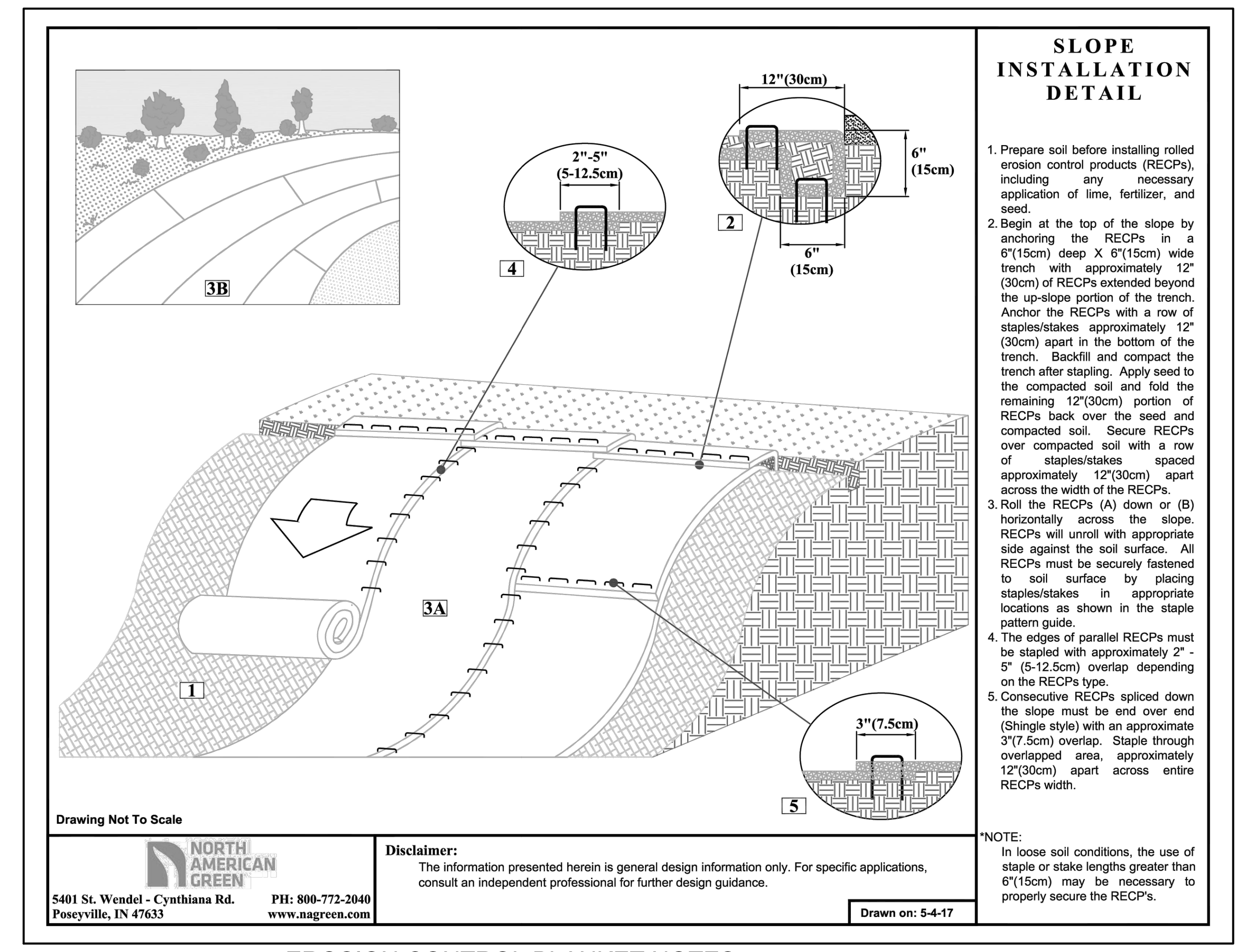
1. LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON–WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D–4884	60 LB/IN
GRAB TENSILE	ASTM D–4632	205 LB
PUNCTURE	ASTM D–4833	110 LB
MULLEN BURST	ASTM D–3786	350 PSI
UV RESISTANCE	ASTM D–4355	70%
AOS % RETAINED	ASTM D–4751	80 SIEVE

2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
3. BAGS SHALL BE LOCATED IN WELL–VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON–ERODIBLE AND NON–POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
4. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.
5. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
6. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
7. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAG

NOT TO SCALE



SLOPE INSTALLATION DETAIL

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12" (30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECPs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the RECPs type.
5. Consecutive RECPs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECPs width.

*NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

Drawing Not To Scale

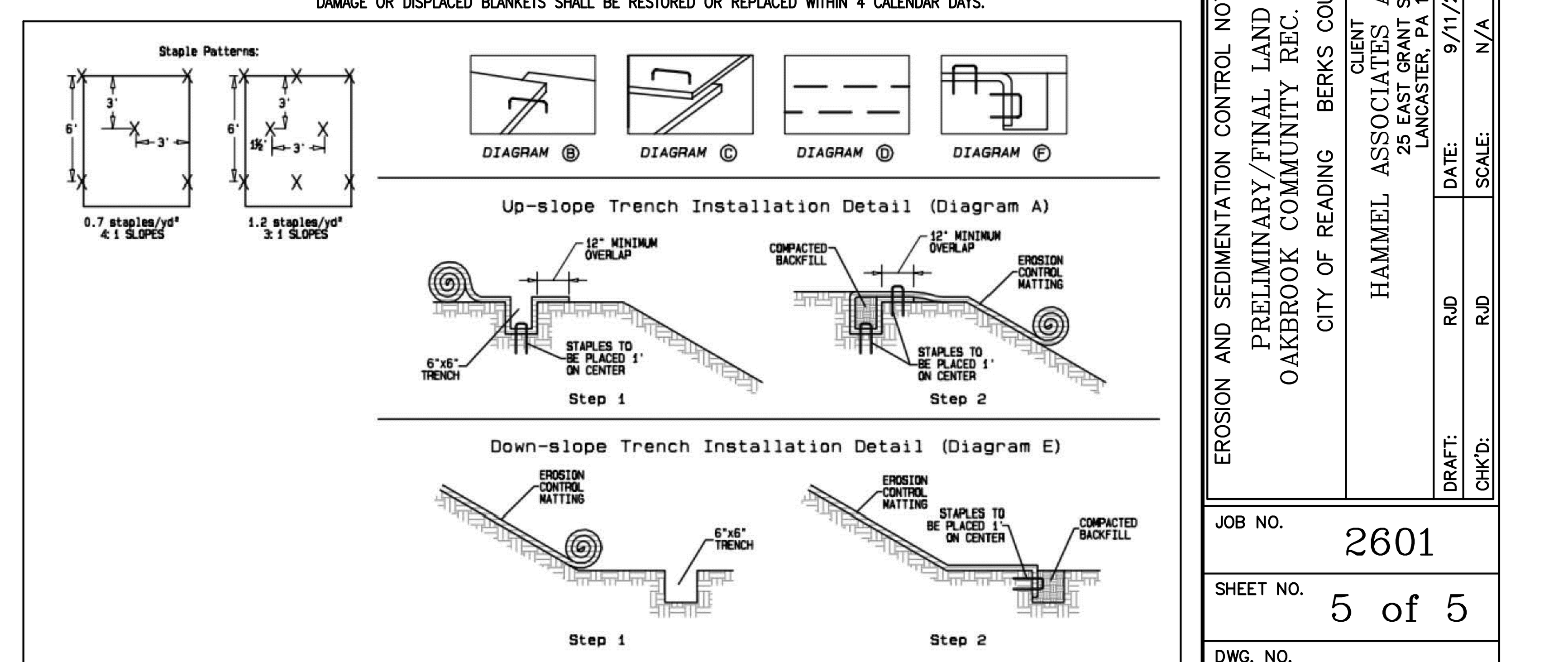
NORTH AMERICAN GREEN
5401 St. Wendel - Cynthiana Rd. Poseyville, IN 47633
PH: 800-772-2040 www.nagreen.com

Disclaimer:
The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 5-4-17

EROSION CONTROL BLANKET NOTES

1. SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
2. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
3. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
4. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
5. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGE OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.



NO.	REVISION	DATE	BY
1.	REVISED AS PER BCCD REVIEW COMMENTS DATED 7/22/26	7/29/26	RJD

DAUTRICH ENGINEERING
261 Preston Road
Wernersville, Pennsylvania 19565
Phone 610–413–0624
email: dauteng@ptd.net

SEAL

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
RANDY JAMES DAUTRICH
ENGINEER
No. 046042

EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS
PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
OAKBROOK COMMUNITY REC. FIELD IMPROVEMENTS
CITY OF READING BERKS COUNTY PENNSYLVANIA

CLIENT
HAMMEL ASSOCIATES ARCHITECTS,LLC
25 EAST GRANT STREET
LANCASTER, PA 17602

DRAFT: RJD DATE: 9/11/26
CHK'D: RJD SCALE: N/A

JOB NO. 2601
SHEET NO. 5 of 5
DWG. NO. C.4.1

Reading Housing Authority Playground

Reading, PA

26-19238A

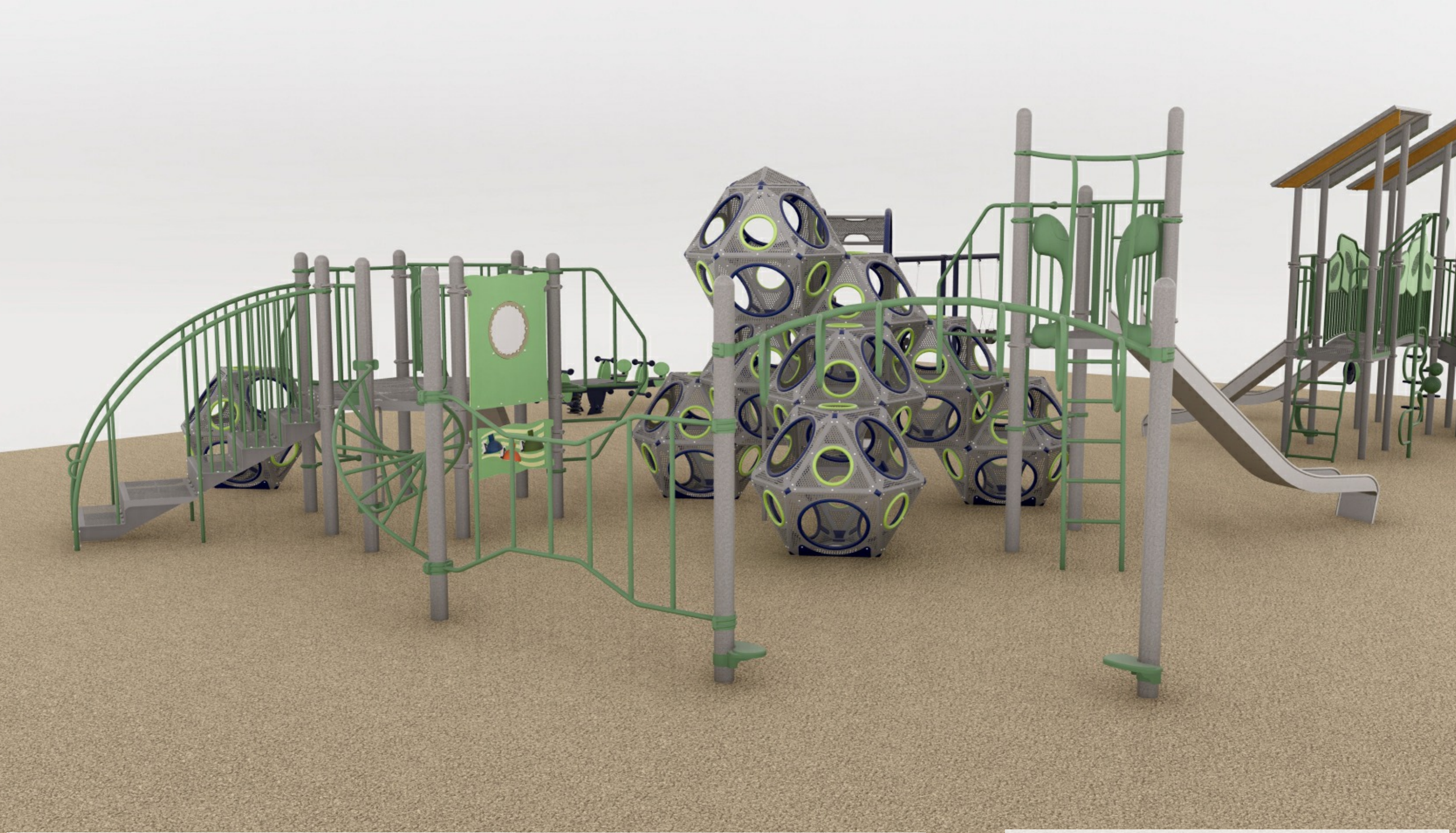
Sales Representative

George Ely Associates
Athletic, Park, & Playground Equipment

Equipment Manufacturer

PLAYWORLD
The world needs play.

POST & COMPONENT	ROTOMOLD PLASTIC	2-COLOR PLASTIC	PLASTISOL
Metallic Gray	Cobalt	Cobalt-Sand	Gray
Cobalt	Green	Lime-Sand	
Blue	Brownstone	Blue-Sand	ROPE
Green	Lime		Black



Reading Housing Authority Playground

Reading, PA

26-19238A

Sales Representative

George Ely Associates

Equipment Manufacturer

PLAYWORLD
The world needs play.

POST & COMPONENT	ROTOMOLD PLASTIC	2-COLOR PLASTIC	PLASTISOL
Metallic Gray	Cobalt	Cobalt-Sand	Gray
Cobalt	Green	Lime-Sand	
Blue	Brownstone	Blue-Sand	ROPE
Green	Lime		Black

Reading Housing Authority Playground

Reading, PA

26-19238A

Sales Representative

George Ely Associates Athletic, Park, & Playground Equipment

Equipment Manufacturer

PLAYWORLD The world needs play.

POST & COMPONENT	ROTOMOLD PLASTIC	2-COLOR PLASTIC	PLASTISOL
Metallic Gray	Cobalt	Cobalt-Sand	Gray
Cobalt	Green	Lime-Sand	
Blue	Brownstone	Blue-Sand	ROPE
Green	Lime		Black

Reading Housing Authority Playground

Reading, PA

26-19238A

Sales Representative

George Ely Associates

Equipment Manufacturer

PLAYWORLD
The world needs play.

POST & COMPONENT	ROTOMOLD PLASTIC	2-COLOR PLASTIC	PLASTISOL
Metallic Gray	Cobalt	Cobalt-Sand	Gray
Cobalt	Green	Lime-Sand	
Blue	Brownstone	Blue-Sand	ROPE
Green	Lime		Black

Reading Housing Authority Playground

Reading, PA

26-19238A

Sales Representative

George Ely Associates

Equipment Manufacturer

PLAYWORLD
The world needs play.

POST & COMPONENT	ROTOMOLD PLASTIC	2-COLOR PLASTIC	PLASTISOL
Metallic Gray	Cobalt	Cobalt-Sand	Gray
Cobalt	Green	Lime-Sand	
Blue	Brownstone	Blue-Sand	ROPE
Green	Lime		Black

Reading Housing Authority Playground

Reading, PA

26-19238A

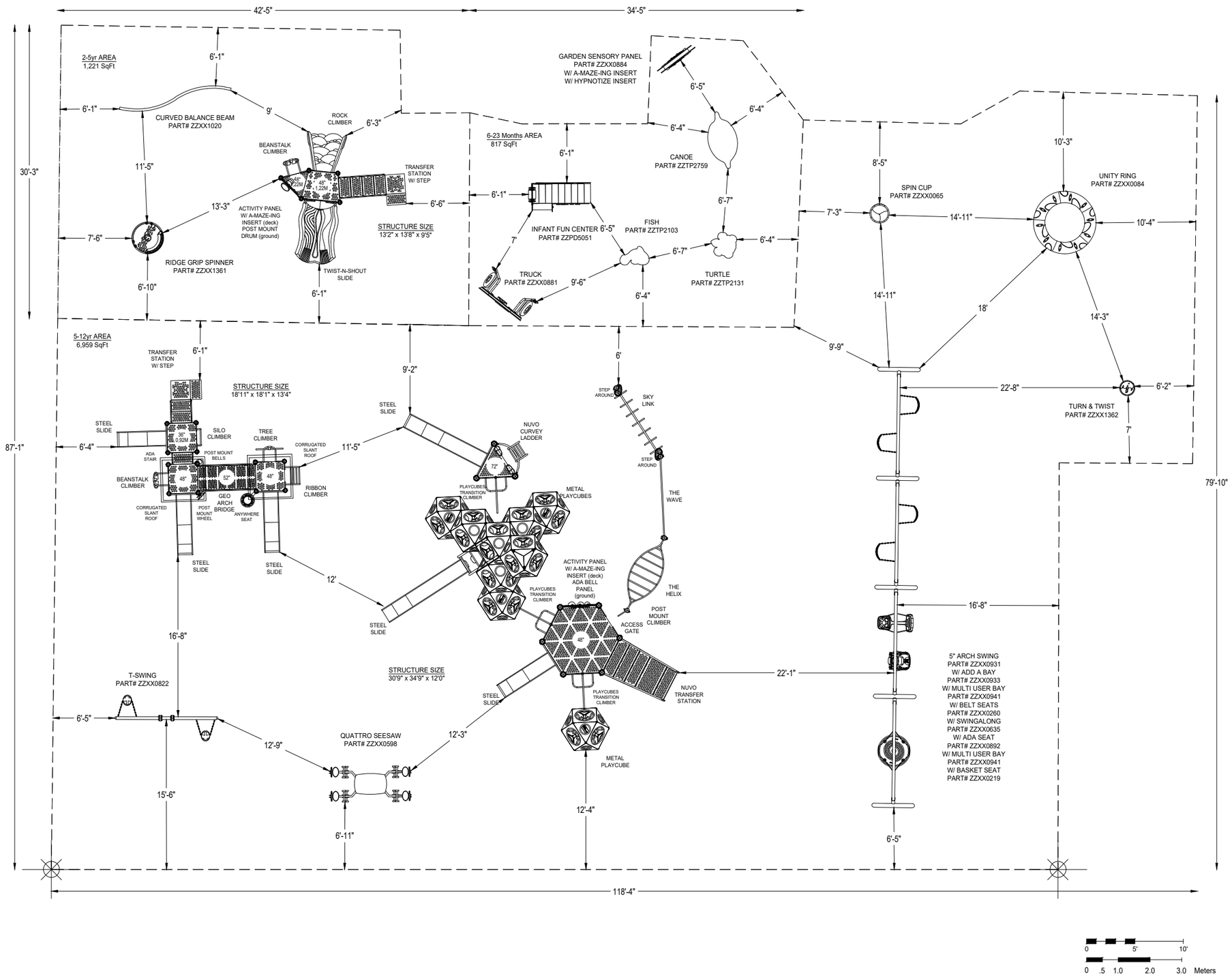
Sales Representative

George Ely Associates

Equipment Manufacturer

PLAYWORLD
The world needs play.

POST & COMPONENT	ROTOMOLD PLASTIC	2-COLOR PLASTIC	PLASTISOL
Metallic Gray	Cobalt	Cobalt-Sand	Gray
Cobalt	Green	Lime-Sand	
Blue	Brownstone	Blue-Sand	ROPE
Green	Lime		Black



*PLAYGROUND SUPERVISION REQUIRED

PLAYWORLD®

GEORGE ELY ASSOCIATES
P.O. Box 396
Carlisle, PA 17013

EQUIPMENT SIZE:
SEE DWG

USE ZONE:
SEE DWG

AREA:
SEE DWG

PERIMETER:
SEE DWG

FALL HEIGHT:
8'6"

USER CAPACITY:
175

AGE GROUP:
2-12

✓ ASTM F1487-25

PROJECT NO:
26-19238A

SCALE:
3/32"=1'-0"

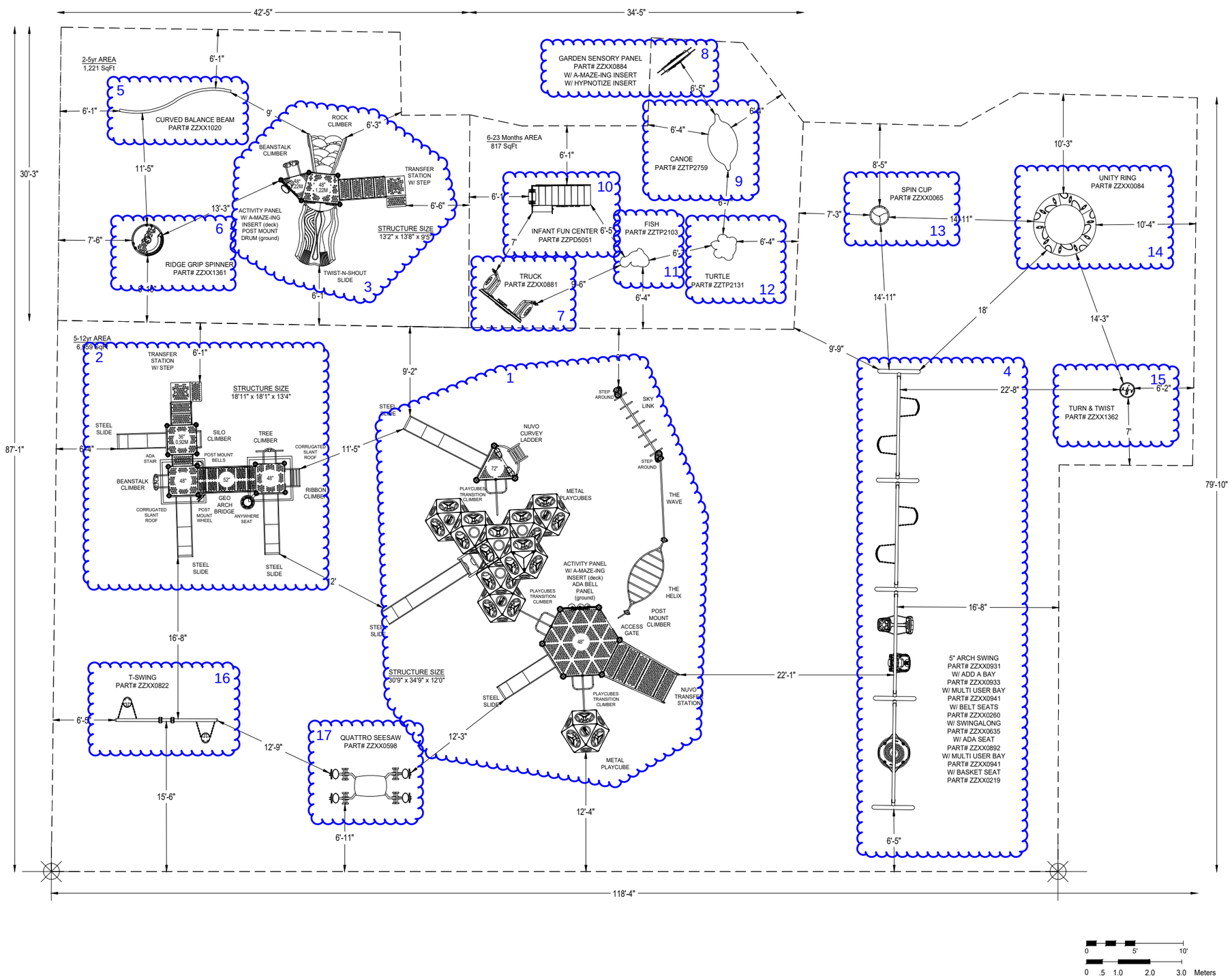
DRAWN BY:
J.HOUSER

Paper Size
B

DATE:
23-JUL-2026

READING HOUSING AUTHORITY PLAYGROUND
READING, PA

DEDUCT ALTERNATES #5



*PLAYGROUND SUPERVISION REQUIRED

PLAYWORLD

GEORGE ELY ASSOCIATES
P.O. Box 396
Carlisle, PA 17013

EQUIPMENT SIZE:
SEE DWG

USE ZONE:
SEE DWG

AREA:
SEE DWG

PERIMETER:
SEE DWG

FALL HEIGHT:
8'6"

USER CAPACITY:
175

AGE GROUP:
2-12

✓ ASTM F1487-25

PROJECT NO:
26-19238A

SCALE:
3/32"=1'-0"

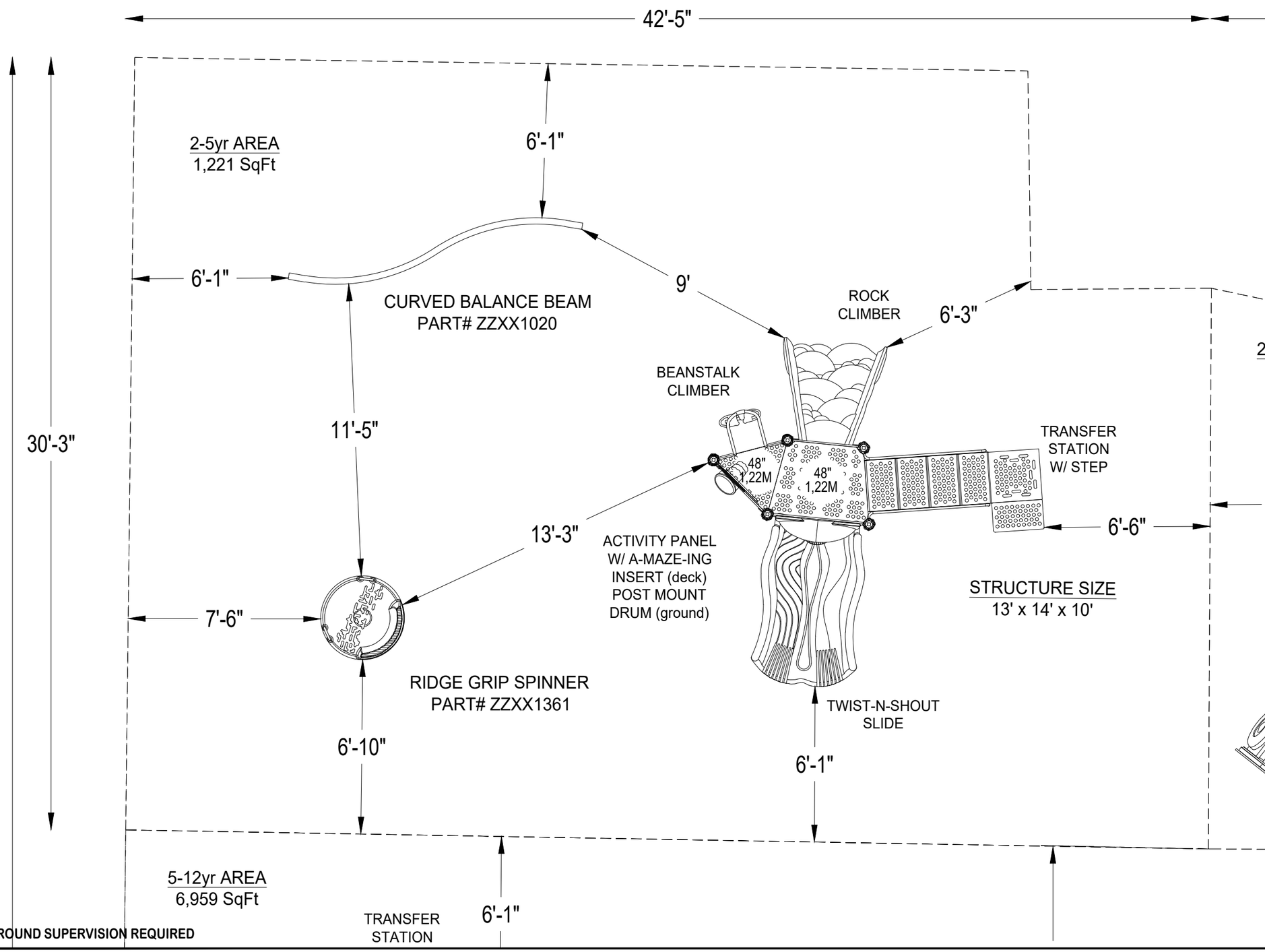
DRAWN BY:
J.HOUSER

Paper Size
B

DATE:
23-JUL-2026

READING HOUSING AUTHORITY PLAYGROUND

READING, PA



*PLAYGROUND SUPERVISION REQUIRED

PLAYWORLD

GEORGE ELY ASSOCIATES
P.O. Box 396
Carlisle, PA 17013

EQUIPMENT SIZE:
SEE DWG

USE ZONE:
SEE DWG

AREA: **SEE DWG**

PERIMETER: **SEE DWG**

FALL HEIGHT:
4'

USER CAPACITY: **25**

AGE GROUP: **2-5**

ADA SCHEDULE	Total Elevated Play Activities: 4		
	Total Ground-Level Play Activities: 3		
	Accessible Elevated Activities	Accessible Ground-Level Activities	Accessible Ground-Level Play Types
Required	2	1	1
Provided	4	3	3

✓ ASTM F1487-25
✓ CPSC #325

PROJECT NO: **26-19238A**

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

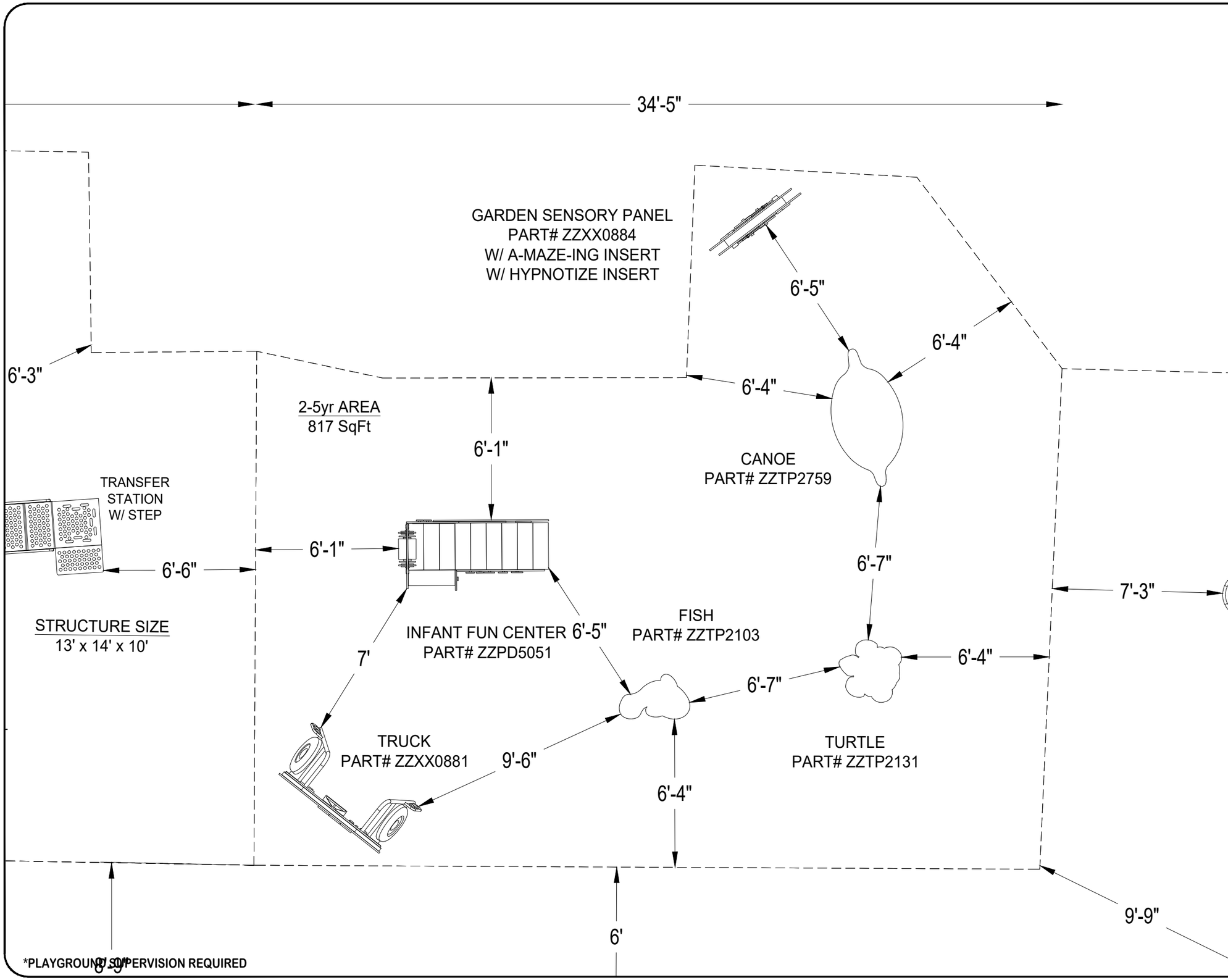
DRAWN BY: **J.HOUSER**

DATE: **21-JUL-2026**

Paper Size **B**

READING HOUSING AUTHORITY PLAYGROUND

READING, PA



PLAYWORLD

GEORGE ELY ASSOCIATES
P.O. Box 396
Carlisle, PA 17013

EQUIPMENT SIZE:
SEE DWG

USE ZONE:
SEE DWG

AREA: **SEE DWG**

PERIMETER: **SEE DWG**

FALL HEIGHT:
1'8"

USER CAPACITY: **18**

AGE GROUP: **2-5**

✓ ASTM F1487-25
✓ CPSC #325

PROJECT NO: **26-19238A**

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

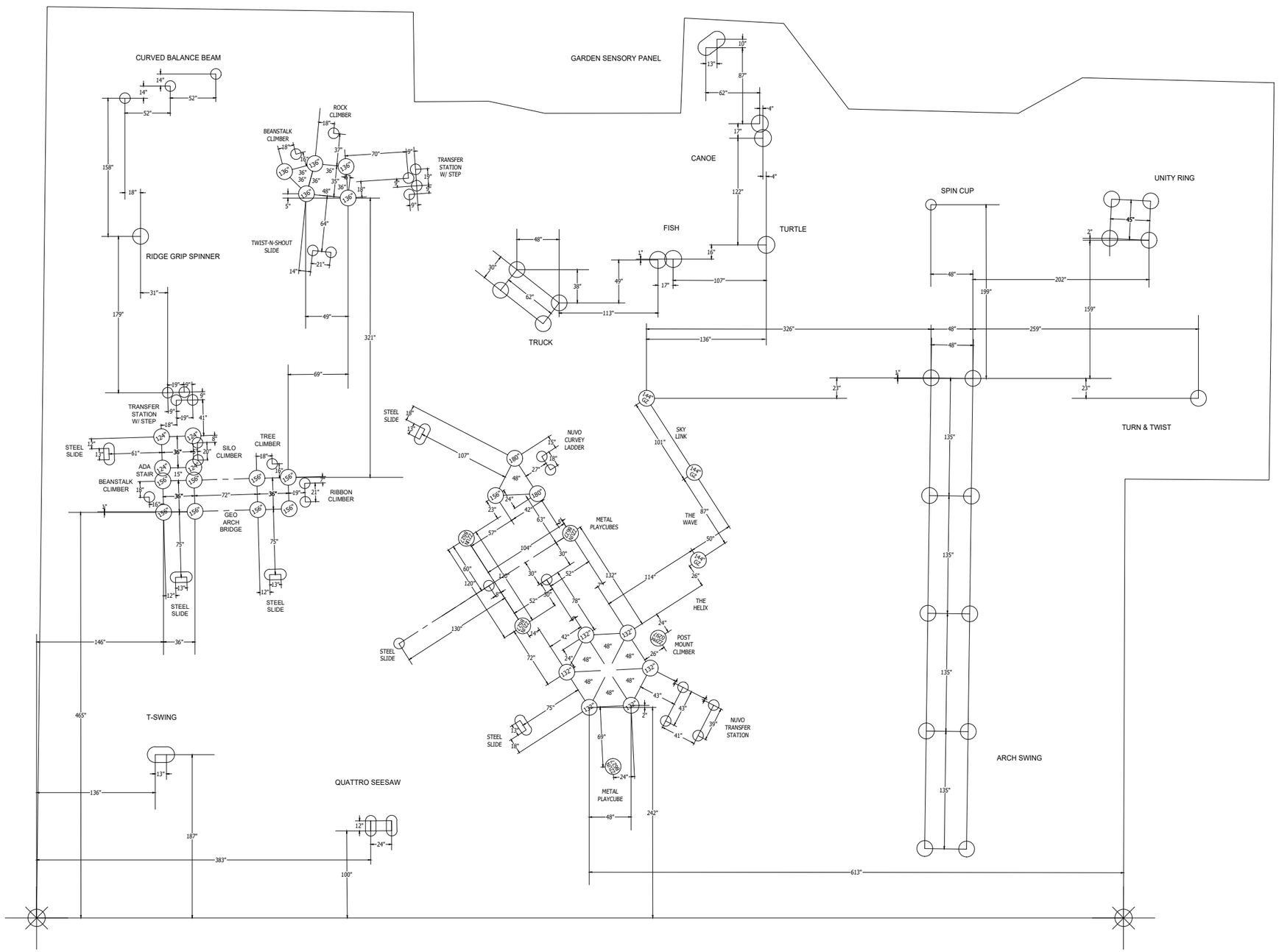
DRAWN BY: **J.HOUSER**

DATE: **21-JUL-2026**

Paper Size **B**

READING HOUSING AUTHORITY PLAYGROUND

READING, PA



***PLAYGROUND SUPERVISION REQUIRED**

PLAYWORLD®

GEORGE ELY ASSOCIATES
P.O. Box 396
Carlisle, PA 17013

FOOTING LEGEND

COMPONENT FOOTING (DETAIL 3)

SPIRAL SLIDE CENTER POST FOOTING (DETAIL1)

136"
SUPPORT POST FOOTING (DETAIL 1 or 4)
(136" INDICATES POST LENGTH)

ZZCH 1850
CANTILEVER, "T" POST, AND COMPONENT POST FOOTING (DETAIL 2)
(ZZCH1850 INDICATES PART NUMBER)

148" GZ
GROUND ZERO POST FOOTING (DETAIL 2)
(148" INDICATES POST LENGTH)

210" SP
SHADE HAT POST FOOTING (DETAIL 5)
(210" INDICATES POST LENGTH)

PROJECT NO:	SCALE:
26-19238A	3/32"=1'-0"
DRAWN BY: J.HOUSER	Paper Size
DATE: 23-JUL-2026	B

READING HOUSING AUTHORITY PLAYGROUND

READING, PA

Reading Housing Authority Playground

Design Number: 26-19238A - Bill Of Material

Ref. No.	Part No.	Description	Quantity
	Posts		
1	ZZCH0018	3.5in OD x 124in STEEL POST W/RIVETED CAP	4
2	ZZCH0028	3.5in OD x 136in STEEL POST W/ RIVETED CAP	5
3	ZZCH0217	3.5in OD x 156in SWAGED STEEL POST	8
4	ZZPM0026	5in OD X 132in STEEL POST W/ RIVETED CAP	6
5	ZZPM0036GZ	5in OD X 144in STEEL POST (GROUND ZERO)	3
6	ZZPM0046	5in OD X 156in STEEL POST W/ RIVETED CAP	1
7	ZZPM0066	5in OD X 180in STEEL POST W/ RIVETED CAP	2
	Decks & Kick Plates		
8	ZZCH0616	SQUARE COATED DECK ASSEMBLY	3
9	ZZCH0617	TRIANGULAR COATED DECK ASSEMBLY	1
10	ZZCH0636	DOUBLE SLIDE COATED DECK ASSEMBLY	1
11	ZZPM0617	TRIANGULAR COATED DECK ASSEMBLY	1
12	ZZPM0619	HEX COATED DECK ASSEMBLY	1
13	ZZUN2290	COATED DECK TO DECK CONNECTION KIT	1
	ADA Items		
14	ZZCH2006	TRANSFER STATION (36in DECK)	1
15	ZZCH2027	TRANSFER STATION W/BARRIERS (48in DECK)	1
16	ZZPM0684	NUVO- 48in TRANSFER STATION	1
17	ZZUN2019	APPROACH STEP FOR TRANSFER STATION	2
	Slides		
18	ZZCH2727	TWIST AND SHOUT (48in DECK)	1
19	ZZCH2909	STAINLESS STEEL SLIDE- 48in DECK	2
20	ZZCH2916	STAINLESS STEEL SLIDE- 36in DECK	1
21	ZZPM2907	STAINLESS STEEL SLIDE- 72in DECK	1
22	ZZPM2909	STAINLESS STEEL SLIDE- 48in DECK	1
23	ZZUN9098	METAL PLAYCUBE - SLIDE AND BARRIERS	1
	Activity Panels		
24	ZZCH4290	POST MOUNTED STEERING WHEEL	1
25	ZZCH4578	ANYWHERE SEAT	1
26	ZZCH4671	CH PANEL FRAME- DECK LEVEL	1
27	ZZPM4671	PM PANEL FRAME- DECK LEVEL	1
28	ZZUN4673	A-MAZE-ING INSERT	3
29	ZZUN4674	HYPONOTIZE INSERT	1
	Audible Activities		
30	ZZCH4556	7in BELL (POST MOUNT)	1
31	ZZCH4558	9in BELL (POST MOUNT)	1
32	ZZCH4649	POST MOUNT DRUM	1
33	ZZPM4409	ACCESSIBLE BELL PANEL	1
	Bridges		
34	ZZCH6967	6ft GEO ARCH BRIDGE	1
	Climbers		
35	ZZCH7439	ROCK CLIMBER (48in DECK)	1

Reading Housing Authority Playground

Design Number: 26-19238A - Bill Of Material

Ref. No.	Part No.	Description	Quantity
36	ZZCH7949	SILO CLIMBER (36in DECK)	1
37	ZZCH8110	BEANSTALK CLIMBER (48in DECK)	2
38	ZZCH8190	TREE CLIMBER (48in DECK)	1
39	ZZCH8290	RIBBON CLIMBER (48in DECK)	1
40	ZZPM7059	72in CURVY CLIMBER	1
41	ZZPM8939	TRANSITION CLIMBER- PLAYMAKER	3
42	ZZUN8627	PLAYCUBE- GROUND LEVEL- METAL	4
43	ZZUN8628	PLAYCUBE- ONE SIDED CONNECTION - METAL	4
44	ZZUN8647	PLAYCUBE- THREE SIDED CONNECTION- METAL	1
45	ZZUN8927	PLAYCUBE- PERF ROOF- METAL	1
46	ZZUN8936	PLAYCUBES- SUPPORT POST- 4 CUBES HIGH- METAL	1
	Stairs and Ladders		
47	ZZCH9168	12in ACCESS STEPPED PLATFORM (DECK TO DECK)	1
	Roofs & Arches		
48	ZZCH9628	SLANT CORRUGATED ROOF	2
	Balance		
49	ZZPM0149	STEP AROUND	2
	Ground Zer0 Climbers		
50	ZZPM0297	POST W/ LADDER CLIMBER (36in OR 48in DECK)	1
51	ZZPM8398	THE HELIX	1
52	ZZPM8399	THE WAVE	1
	Barriers		
53	ZZPM4288	ACCESS GATE	1
	GroundZer0 Overhead Events		
54	ZZPM8450	THE SKY LINK	1
	Additional Tool & Maintenance Kits		
55	ZZUN1471	INSTALLER HARDWARE KIT	1
56	ZZUN9930	PIPE SYSTEMS MAINTENANCE KIT W/ AEROSOL	1
57	ZZXX0678	LABEL KIT- COMPOSITE STRUCTURE - ASTM	1
58	ZZXXGNGUID	GENERAL INSTALLERS GUIDE	1

Reading Housing Authority Playground

Design Number: 26-19238A - Compliance and Technical Data
Reference Document: ASTM F1487

Ref. No.	Part No.	Qty.	Description	Unit ASTM Status	Total Weight (lbs)	Pre-Consumer Recycled Content (lbs)	Post-Consumer Recycled Content (lbs)	CO2e Footprint (kgs)	Users	Install Hours	Concrete (Yds3)	Active Play Events
1	ZZCH0018	4	3.5in OD x 124in STEEL POST W/RIVETED CAP	Certified	155.64			215	0	4.00	0.50	0
2	ZZCH0028	5	3.5in OD x 136in STEEL POST W/ RIVETED CAP	Certified	217.55			293	0	5.00	0.63	0
3	ZZCH0217	8	3.5in OD x 156in SWAGED STEEL POST	Certified	630.48			508	0	4.00	1.00	0
4	ZZCH0616	3	SQUARE COATED DECK ASSEMBLY	Certified	164.58			521	9	3.00	0.00	0
5	ZZCH0617	1	TRIANGULAR COATED DECK ASSEMBLY	Certified	29.90			120	2	1.00	0.00	0
6	ZZCH0636	1	DOUBLE SLIDE COATED DECK ASSEMBLY	Certified	63.86			185	3	1.00	0.00	0
7	ZZCH2006	1	TRANSFER STATION (36in DECK)	N/A				TBD				
8	ZZCH2027	1	TRANSFER STATION W/BARRIERS (48in DECK)	N/A				TBD				
9	ZZCH2727	1	TWIST AND SHOUT (48in DECK)	Certified	183.86			656	4	3.00	0.06	1
10	ZZCH2909	2	STAINLESS STEEL SLIDE- 48in DECK	Certified	261.76			563	4	8.00	0.12	2
11	ZZCH2916	1	STAINLESS STEEL SLIDE- 36in DECK	Certified	115.48			274	2	4.00	0.06	1
12	ZZCH4290	1	POST MOUNTED STEERING WHEEL	Certified	7.83			44	1	0.25	0.00	1
13	ZZCH4556	1	7in BELL (POST MOUNT)	Certified	4.61			41	1	0.25	0.00	1
14	ZZCH4558	1	9in BELL (POST MOUNT)	Certified	6.21			45	1	0.25	0.00	1
15	ZZCH4578	1	ANYWHERE SEAT	Certified	31.10			90	1	0.25	0.00	1
16	ZZCH4649	1	POST MOUNT DRUM	Certified	12.78			167	1	0.50	0.00	1
17	ZZCH4671	1	CH PANEL FRAME- DECK LEVEL	Certified	32.87			163	0	1.00	0.00	0
18	ZZCH6967	1	6ft GEO ARCH BRIDGE	N/A	275.84			881	2	1.50	0.00	1
19	ZZCH7439	1	ROCK CLIMBER (48in DECK)	N/A				TBD				
20	ZZCH7949	1	SILO CLIMBER (36in DECK)	Certified	70.33			129	1	1.50	0.06	1
21	ZZCH8110	2	BEANSTALK CLIMBER (48in DECK)	Certified	154.54			646	4	3.00	0.06	2
22	ZZCH8190	1	TREE CLIMBER (48in DECK)	Certified	73.93			176	2	1.50	0.03	1
23	ZZCH8290	1	RIBBON CLIMBER (48in DECK)	Certified	38.72			110	2	1.50	0.06	1
24	ZZCH9168	1	12in ACCESS STEPPED PLATFORM (DECK TO DECK)	Certified	70.28			277	1	2.00	0.00	0
25	ZZCH9628	2	SLANT CORRUGATED ROOF	Certified	467.74			1,199	0	3.00	0.00	0

Reading Housing Authority Playground

Design Number: 26-19238A - Compliance and Technical Data
Reference Document: ASTM F1487

Ref. No.	Part No.	Qty.	Description	Unit ASTM Status	Total Weight (lbs)	Pre-Consumer Recycled Content (lbs)	Post-Consumer Recycled Content (lbs)	CO2e Footprint (kgs)	Users	Install Hours	Concrete (Yds3)	Active Play Events
26	ZZPD5051	1	INFANT FUN CENTER	N/A	227.50			850	6	2.00	0.00	5
27	ZZPM0026	6	5in OD X 132in STEEL POST W/ RIVETED CAP	Certified	445.26			650	0	6.00	0.72	0
28	ZZPM0036GZ	3	5in OD X 144in STEEL POST (GROUND ZERO)	Certified	241.23			352	0	4.50	0.54	0
29	ZZPM0046	1	5in OD X 156in STEEL POST W/ RIVETED CAP	Certified	87.71			126	0	1.00	0.13	0
30	ZZPM0066	2	5in OD X 180in STEEL POST W/ RIVETED CAP	Certified	201.62			289	0	2.00	0.26	0
31	ZZPM0149	2	STEP AROUND	Certified	16.78			270	2	1.00	0.00	2
32	ZZPM0297	1	POST W/ LADDER CLIMBER (36in OR 48in DECK)	Certified	74.81			131	1	0.50	0.13	1
33	ZZPM0617	1	TRIANGULAR COATED DECK ASSEMBLY	Certified	46.40			169	2	1.00	0.00	0
34	ZZPM0619	1	HEX COATED DECK ASSEMBLY	Certified	228.72			638	8	2.00	0.00	0
35	ZZPM0684	1	NUVO- 48in TRANSFER STATION	Certified	389.40			418	3	4.00	0.12	0
36	ZZPM2907	1	STAINLESS STEEL SLIDE- 72in DECK	Certified	186.00			368	2	4.00	0.06	1
37	ZZPM2909	1	STAINLESS STEEL SLIDE- 48in DECK	Certified	145.30			292	2	4.00	0.06	1
38	ZZPM4288	1	ACCESS GATE	Certified	34.38			92	0	0.50	0.00	0
39	ZZPM4409	1	ACCESSIBLE BELL PANEL	Certified	32.28			275	1	0.50	0.00	1
40	ZZPM4671	1	PM PANEL FRAME- DECK LEVEL	Certified	46.46			205	0	1.00	0.00	0
41	ZZPM7059	1	72in CURVY CLIMBER	Certified	95.53			577	1	2.00	0.06	1
42	ZZPM8398	1	THE HELIX	Certified	85.74			202	2	0.75	0.00	1
43	ZZPM8399	1	THE WAVE	Certified	70.55			183	2	0.75	0.00	1
44	ZZPM8450	1	THE SKY LINK	Certified	55.09			129	2	0.50	0.00	1
45	ZZPM8939	3	TRANSITION CLIMBER- PLAYMAKER	Certified	180.42			700	6	7.50	0.00	3
46	ZZTP2103	1	FISH	N/A	65.90			1,802	2	2.00	0.30	1
47	ZZTP2131	1	TURTLE	N/A	53.80			2,600	2	1.50	0.15	1
48	ZZTP2759	1	CANOE	N/A	148.50			3,379	4	2.00	0.30	1
49	ZZUN1471	1	INSTALLER HARDWARE KIT	N/A	3.90			57	0	0.00	0.00	0

Reading Housing Authority Playground

Design Number: 26-19238A - Compliance and Technical Data
Reference Document: ASTM F1487

Ref. No.	Part No.	Qty.	Description	Unit ASTM Status	Total Weight (lbs)	Pre-Consumer Recycled Content (lbs)	Post-Consumer Recycled Content (lbs)	CO2e Footprint (kgs)	Users	Install Hours	Concrete (Yds3)	Active Play Events
50	ZZUN2019	2	APPROACH STEP FOR TRANSFER STATION	Certified	71.66			144	2	2.00	0.08	0
51	ZZUN2290	1	COATED DECK TO DECK CONNECTION KIT	Certified	0.29			4	0	0.50	0.00	0
52	ZZUN4673	3	A-MAZE-ING INSERT	Certified	43.53			593	6	0.75	0.00	3
53	ZZUN4674	1	HYPONOTIZE INSERT	Certified	14.95			288	2	0.25	0.00	1
54	ZZUN8627	4	PLAYCUBE- GROUND LEVEL- METAL	Certified	1,340.40			4,497	16	10.00	0.48	4
55	ZZUN8628	4	PLAYCUBE- ONE SIDED CONNECTION - METAL	Certified	1,052.76			3,990	16	8.00	0.00	4
56	ZZUN8647	1	PLAYCUBE- THREE SIDED CONNECTION- METAL	Certified	240.41			970	3	2.50	0.00	1
57	ZZUN8927	1	PLAYCUBE- PERF ROOF- METAL	Certified	16.88			105	0	0.50	0.00	0
58	ZZUN8936	1	PLAYCUBES- SUPPORT POST- 4 CUBES HIGH- METAL	Certified	27.78			27	0	1.00	0.03	0
59	ZZUN9098	1	METAL PLAYCUBE - SLIDE AND BARRIERS	Certified	363.23			842	2	3.50	0.06	1
60	ZZUN9930	1	PIPE SYSTEMS MAINTENANCE KIT W/ AEROSOL	N/A				TBD				
61	ZZXX0065	1	SPIN CUP	Certified	57.21			301	1	2.00	0.12	1
62	ZZXX0084	1	UNITY RING	Certified	457.20			3,378	9	2.50	0.52	1
63	ZZXX0218	1	ARCH SWING- HOOPLA SEAT	Certified	46.61			527	3	1.50	0.00	1
64	ZZXX0260	4	BELT SEAT W/SILVER SHIELD CHAIN FOR 8ft TOP RAIL	Certified	35.20			216	4	1.00	0.00	4
65	ZZXX0598	1	QUATTRO SEE-SAW (w/ SEAT BACKS)	Certified	482.67			1,510	6	5.00	0.24	1
66	ZZXX0635	1	SWING ALONG SEAT TO 8ft TOP RAIL	Certified	31.84			341	2	0.50	0.00	1
67	ZZXX0678	1	LABEL KIT- COMPOSITE STRUCTURE - ASTM	N/A	0.04			0	0	0.08	0.00	0
68	ZZXX0822	1	7ft EARLY CHILDHOOD T-SWING	N/A				TBD				
69	ZZXX0881	1	TRUCK	N/A	269.10			764	0	8.00	0.24	0
70	ZZXX0884	1	GARDEN SENSORY WALL FOR 2 INSERTS	N/A	156.90			474	8	1.50	0.12	1
71	ZZXX0892	1	ACCESSIBLE SWING SEAT- 8ft TOP RAIL	N/A	53.80			314	1	0.50	0.00	1
72	ZZXX0931	1	5in OD 2-UNIT STEEL ARCH SWING- 8ft TOP RAIL	Certified	417.00			84	0	3.00	0.48	0

Reading Housing Authority Playground

Design Number: 26-19238A - Compliance and Technical Data
Reference Document: ASTM F1487

Ref. No.	Part No.	Qty.	Description	Unit ASTM Status	Total Weight (lbs)	Pre-Consumer Recycled Content (lbs)	Post-Consumer Recycled Content (lbs)	CO2e Footprint (kgs)	Users	Install Hours	Concrete (Yds3)	Active Play Events
73	ZZXX0933	2	5in OD STEEL ARCH SWING 2-UNIT ADD-A-BAY	Certified	498.60			169	0	4.00	0.48	0
74	ZZXX0941	1	5in OD ARCH SWING ADD-A-BAY (MULTI-USER)	Certified	250.50			191	0	2.00	0.24	0
75	ZZXX1020	1	CURVED BALANCE BEAM	Certified	62.01			91	2	2.00	0.11	1
76	ZZXX1361	1	RIDGE GRIP SPINNER	Certified	122.30			422	3	2.00	0.13	1
77	ZZXX1362	1	TURN N TWIST	N/A				TBD				
78	ZZXXGNGUID	1	GENERAL INSTALLERS GUIDE	N/A				TBD				
				Totals:	**12,346.04**	**1,951**	**3,768**	**42,297**	**175**	**165.08**	**8.73**	**63**
					0 Kg	**0 Kg**	**0 Kg**	**0 Metric Tons**			**0 m3**	

Reading Housing Authority Playground

Design Number: 26-19238A - Compliance and Technical Data
Reference Document: ASTM F1487

Ref. No.	Part No.	Qty.	Description	Unit ASTM Status	Total Weight (lbs)	Pre-Consumer Recycled Content (lbs)	Post-Consumer Recycled Content (lbs)	CO2e Footprint (kgs)	Users	Install Hours	Concrete (Yds3)	Active Play Events

ASTM F1487

The lay-out for this custom playscape, design number 26-19238A, has been configured to meet the requirements of the ASTM F1487 standard. In addition, each of the above components listed as "Certified" have been tested and are IPEMA certified. Components listed as "Not Applicable" do not fall within the scope of the ASTM F1487 standard and have not been tested. IPEMA certification can be verified on the IPEMA website, www.ipema.org. In the interest of playground safety, IPEMA provides a Third Party Certification Service which validates compliance.

2010 ADA Standards for Accessible Design

The lay-out was also designed to meet the 2010 Standards published 15-Sep-2010, by the Department of Justice when installed over a properly maintained surfacing material that is in compliance with ASTM F1951 "Accessibility of Surface Systems Under and Around Playground Equipment" as well as ASTM F1292, "Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment", appropriate for the fall height of the structure.

Installation Times

Installation times are based on one experienced installer. A crew of three experienced individuals can perform the installation within the given time, each member working 1/3 of the given hours. [Eg. Installation Time = 30 hours. For a crew of three, each member will work 10 hours on the installation for a total of 30 hours on the project.]

Carbon Footprint

The CO2e (carbon footprint given in Kilograms and Metric Tons) listed above is a measure of the environmental impact this play structure represents from harvesting raw materials to the time it leaves our shipping dock. Playworld Systems nurtures a total corporate culture that is focused on eliminating carbon producing processes and products, reducing our use of precious raw materials, reusing materials whenever possible and recycling materials at every opportunity. Playworld Systems elected to adopt the Publicly Available Specification; PAS 2050 as published by the British Standards Institute and sponsored by Defra and the Carbon Trust. The PAS 2050 has gained international acceptance as a specification that measures the greenhouse gas emissions in services and goods throughout their entire life cycle.

Pre-Consumer Recycle Content

A measurement, in pounds, that qualifies the amount of material that was captured as waste and diverted from landfill during an initial manufacturing process and is being redirected to a separate manufacturing process to become a different product. E.g. 100% of our Aluminum Tubing is made from captured waste material during the manufacturing process of extruded Aluminum products such as rods, flat bars and H-channels.

Post-Consumer Recycle Content

A measurement, in pounds, that qualifies the amount of material that was once another product that has completed its lifecycle and has been diverted from a landfill as a solid waste through recycling and is now being used in a Playworld Systems' product. E.g. **20% to 40% of the steel in our steel tubing and sheet steel have been diverted from landfills. Automobiles are scrapped and recyclable steel is purchased by the steel mill that produces our raw product.

** The amount of Post-Consumer recycled steel fluctuates daily based on the availability of the recycled steel.

SCALE: NTS

Model #: RHS2034

Design Criteria: Structure shall be designed to meet site specific snow and wind load design criteria using most current applicable building codes. All structural members are ASTM A-500 U.S. grade B steel. Welded connection plates shall be ASTM A-36 hot rolled steel. All fabrication performed to latest AISC standards by AWS Certified welders. All framing connections are done using A325 grade bolts within concealed access openings from above and will later be concealed by the roofing. All roof framing shall be flush against the roof decking to eliminate the possibility of bird nesting.

Tubular Steel Columns and Beams: Standard column dimension shall be 5" x 5" x 3/16" tubular steel welded to 5/8" base plates for surface mounting. Main support beams are 7" x 5" x 3/16" and purlins are 6 "x 3" x 1/8" and 5" x 3" x 1/8". Steel sizes are preliminary and may change due to ongoing review and final engineering.

Roofing: 24 Ga. pre-cut steel Multi-Rib panels with Kynar 500 finish in a variety of colors with white underside. Standard roof slope is a 4/12 pitch with a eave height of 8'-0". Attached to structural framing with exposed self tapping screws painted to match roof color. Matching 24 Ga. trim included.

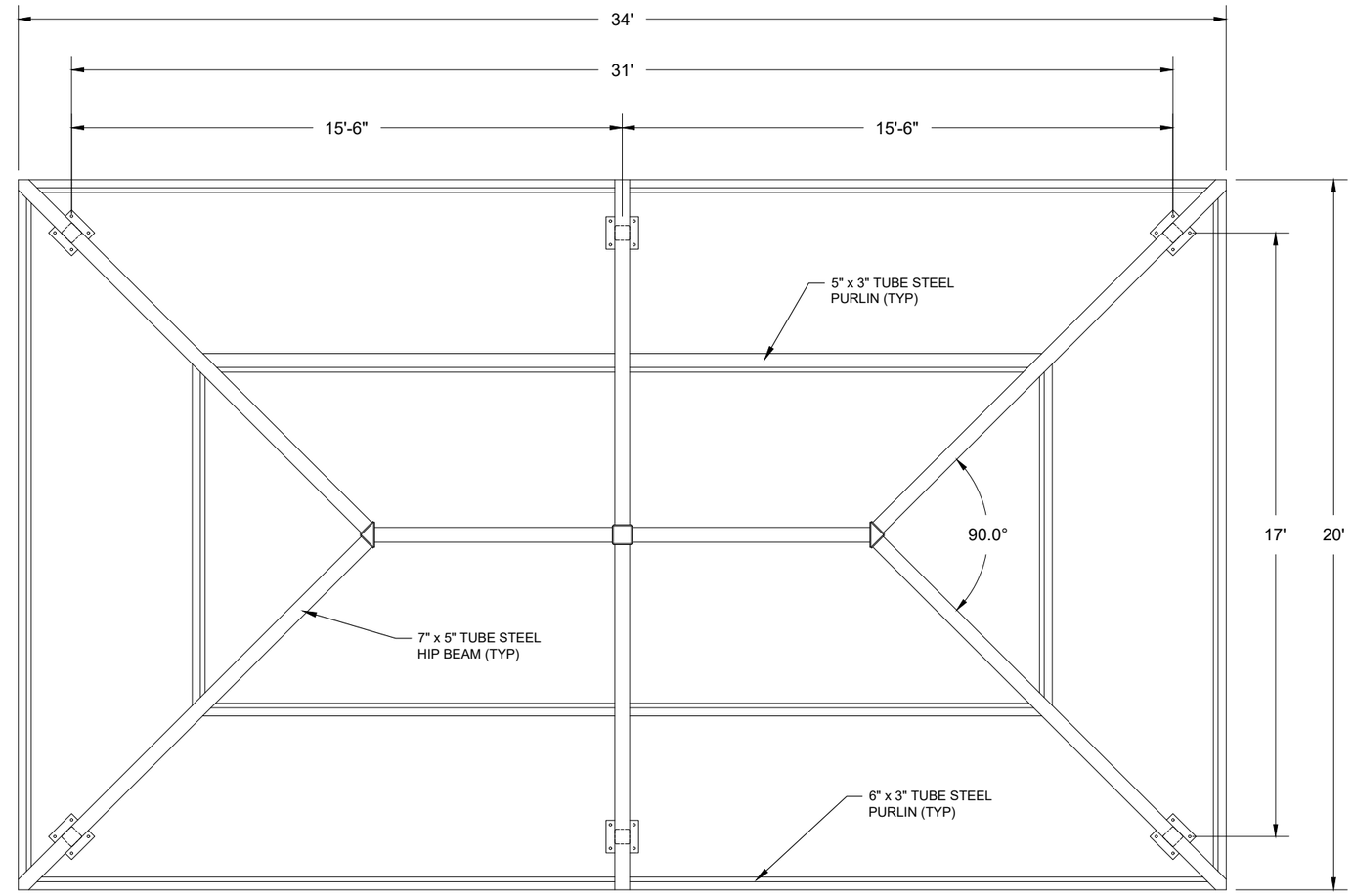
Frame Finish: All steel framework will receive a corrosion protective TGIC Polyester powder coat, electro-statically applied and cured at 400°F. A large selection of standard colors are available.

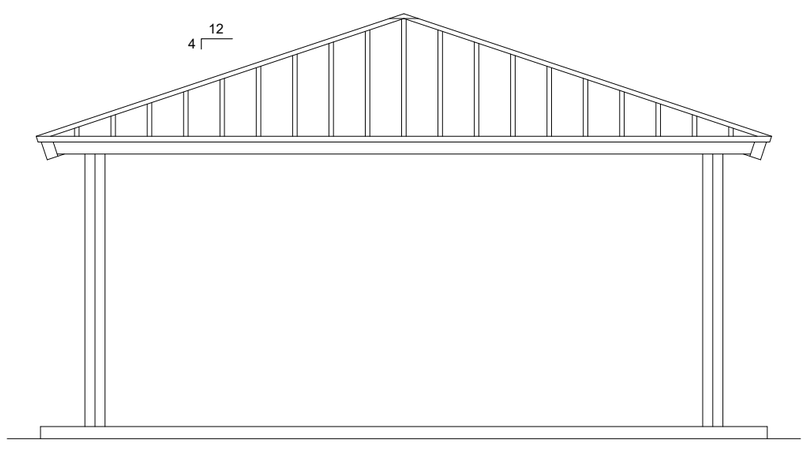
Foundation: All columns need to be anchored to concrete footings (footing design provided separately). Columns can be surface mounted to footings with anchor bolts at or below finish slab elevation or they can be embedded directly into the footing without base plates upon request. Anchor bolts and bracing templates are included. Optional base plate covers are available at an additional cost.

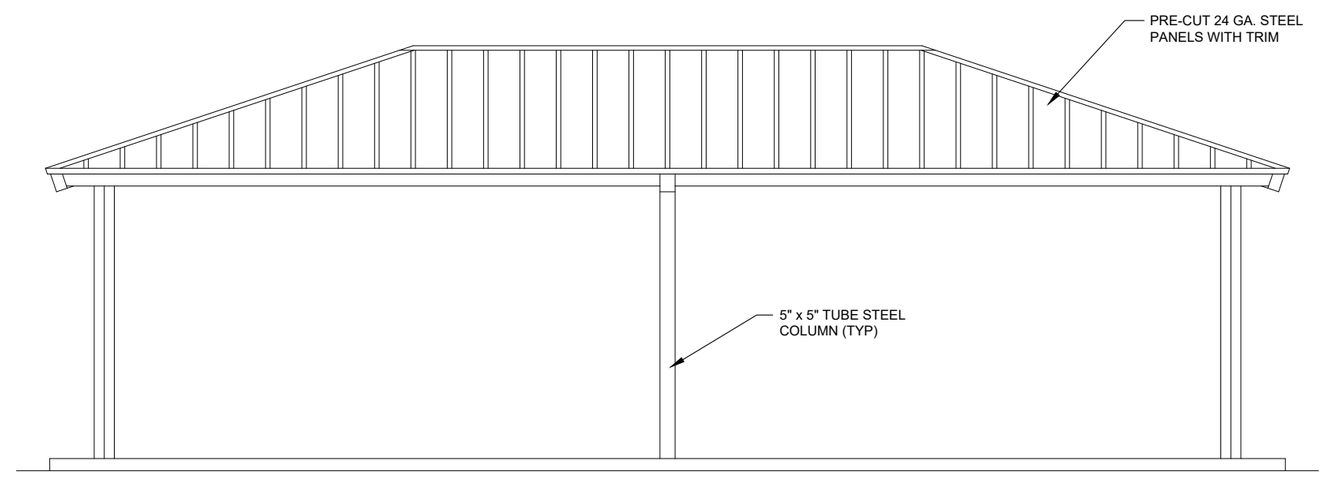
Hardware: All structural hardware and roofing fasteners shall be provided.

Warranty: 10 years against manufacturer defects.

Not Included: Concrete work of any kind, unloading of product and installation.







CFP
CEDAR FOREST PRODUCTS
P.O. BOX 145
WEST OLIVE, MI 49460
800-552-9495
WWW. CEDARFORESTPRODUCTS.COM

PRELIMINARY
NOT FOR CONSTRUCTION

© Copyright 2018 these drawings are the intellectual property of C.F.P. CO. and shall not be copied or disclosed to any unauthorized parties in part or its entirety without our written permission, and they shall not be used for construction unless approved by a C.F.P. Representative.

MODEL NUMBER:	RHS2034	SHOWN WITH STANDARD OPTIONS	
DESCRIPTION:	20x34 Rect Hip Shelter		
Possible Options:	☐ 29ga METAL ROOF ☐ STANDING SEAM ROOF ☐ CEDAR SHINGLES	☐ METAL BASE SHOES ☐ STEEL COLUMNS ☐ CUSTOM ROOF PITCH	☐ LIGHTNING PROTECTION ☐ 2 TIER ROOF ☐ CUPOLA

REVISION DATES	DRAWN BY:	DATE:
REV: REV: REV: REV:	JES	11-1-18
	SHEET: 1 OF 1	