## SPORTSPARK- PHASE #1 DRAWING LIST

| DRAWING DISCIPLINE | DRAWING # | DRAWING TITLE |
|---|---|---|
| **ARCHITECTURAL (DOB#: 123741512)** | | |
| ARCHITECTURAL | A-001.00 | GENERAL NOTES & PLOT PLAN |
| ARCHITECTURAL | A-050.00 | DEMOLITION FIRST FLOOR PLAN (EAST SIDE) |
| ARCHITECTURAL | A-051.00 | DEMOLITION 2ND FLOOR PLAN |
| ARCHITECTURAL | A-052.00 | DEMLITION FIRST FLOOR REFLECTED CEILING PLAN |
| ARCHITECTURAL | A-053.00 | DEMOLITION 2ND FLOOR RCP |
| ARCHITECTURAL | A-101.00 | CONSTRUCTION FIRST FLOOR PLAN |
| ARCHITECTURAL | A-102.00 | CONSTRUCTION SECOND FLOOR PLAN |
| ARCHITECTURAL | A-103.00 | CONSTRUCTION FIRST FLOOR RCP |
| ARCHITECTURAL | A-104.00 | CONSTRUCTION SECOND FLOOR/POOL RCP |
| ARCHITECTURAL | A-105.00 | FINISH & POWER PLAN FIRST FLOOR (EAST SIDE) |
| ARCHITECTURAL | A-200.00 | INTERIOR ELEVATION POOL |
| ARCHITECTURAL | A-201.00 | INTERIOR ELEVATION POOL |
| ARCHITECTURAL | A-202.00 | INTERIOR ELEVATION MEN'S LOCKER ROOM |
| ARCHITECTURAL | A-203.00 | INTERIOR ELEVATION WOMEN'S LOCKER ROOM |
| ARCHITECTURAL | A-204.00 | INTERIOR ELEV. SINGLE RESTROOM & FAMILY ROOM |
| ARCHITECTURAL | A-205.00 | INTERIOR ELEVATION POOLSIDE LOBBY |
| ARCHITECTURAL | A-301.00 | PARTITIONS TYPE & DETAILS |
| ARCHITECTURAL | A-302.00 | DETAILS |
| ARCHITECTURAL | A-303.00 | DETAILS |
| ARCHITECTURAL | A-304.00 | ADA STANDARDS |
| ARCHITECTURAL | A-600.00 | SCHEDULES: FINISH, FURNITURE, ACCESSORIES, DOORS, WINDOWS |
| | | |
| **MECHANICAL (DOB#: M00253870)** | | |
| MECHANICAL | M-001.00 | MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| MECHANICAL | M-002.00 | MECHANICAL SPECIFICATIONS 1 OF 4 |
| MECHANICAL | M-003.00 | MECHANICAL SPECIFICATIONS 2 OF 4 |
| MECHANICAL | M-004.00 | MECHANICAL SPECIFICATIONS 3 OF 4 |
| MECHANICAL | M-005.00 | MECHANICAL SPECIFICATIONS 4 OF 4 |
| MECHANICAL | M-050.00 | MECHANICAL DEMOLITION FIRST FLOOR EAST PLAN |
| MECHANICAL | M-051.00 | MECHANICAL DEMOLITION SECOND FLOOR EAST PLAN |
| MECHANICAL | M-052.00 | MECHANICAL DEMOLITION SECTIONS |
| MECHANICAL | M-100.00 | MECHANICAL FIRST FLOOR EAST PLAN |
| MECHANICAL | M-102.00 | MECHANICAL SECOND FLOOR EAST PLAN |
| MECHANICAL | M-300.00 | MECHANICAL DETAILS NO. 1 |
| MECHANICAL | M-301.00 | MECHANICAL DETAILS NO. 2 |
| MECHANICAL | M-302.00 | MECHANICAL DETAILS NO. 3 |
| MECHANICAL | M-303.00 | MECHANICAL DETAILS NO.4 |
| MECHANICAL | M-400.00 | MECHANICAL SCHEDULES |
| MECHANICAL | M-500.00 | MECHANICAL RISER DIAGRAM |
| MECHANICAL | M-600.00 | MECHANICAL SECTIONS |
| | | |
| **ELECTRICAL** | | |
| ELECTRICAL | E-001.00 | ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| ELECTRICAL | E-002.00 | ELECTRICAL SPECIFICATIONS |
| ELECTRICAL | E-100.00 | ELECTRICAL FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-102.00 | ELECTRICAL SECOND FLOOR EAST PLAN |
| ELECTRICAL | E-200.00 | LIGHTING FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-202.00 | LIGHTING SECOND FLOOR EAST PLAN |
| ELECTRICAL | E-300.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS |
| ELECTRICAL | E-301.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS 2 |
| ELECTRICAL | E-400.00 | ELECTRICAL PANEL SCHEDULE |
| ELECTRICAL | E-500.00 | ELECTRICAL RISER DIAGRAM |
| | | |
| **PLUMBING (DOB#: M00272294)** | | |
| PLUMBING | P-001.00 | PLUMBING NOTES, SYMBOLS, AND ABBREVIATIONS |
| PLUMBING | P-002.00 | PLUMBING SPECIFICATIONS I |
| PLUMBING | P-003.00 | PLUMBING SPECIFICATIONS II |
| PLUMBING | P-050.00 | PLUMBING FIRST FLOOR EAST - DEMOLITION PLAN |
| PLUMBING | P-100.00 | PLUMBING FIRST FLOOR EAST PLAN |
| PLUMBING | P-300.00 | PLUMBING DETAILS |
| PLUMBING | P-400.00 | PLUMBING SCHEDULES |
| PLUMBING | P-500.00 | PLUMBING RISER DIAGRAM I |
| PLUMBING | P-501.00 | PLUMBING RISER DIAGRAM II |
| | | |
| **FIRE ALARM** | | |
| FIRE ALARM | FA-001.00 | FIRE ALARM NOTES, SYMBOLS, AND ABBREVIATIONS |
| FIRE ALARM | FA-100.00 | FIRE ALARM FIRST FLOOR EAST PLAN |
| FIRE ALARM | FA-102.00 | FIRE ALARM SECOND FLOOR EAST PLAN |
| FIRE ALARM | FA-500.00 | FIRE ALARM RISER DIAGRAM |
| | | |
| | | |
| **ENERGY** | | |
| ENERGY | EN-001.00 | ENERGY COMPLIANCE - LIGHTING COMCHECK |
| ENERGY | EN-002.00 | ENERGY COMPLIANCE - LIGHTING DETAILS |
| ENERGY | EN-003.00 | ENERGY COMPLIANCE - LIGHTING DETAILS 2 |
| ENERGY | EN-004.00 | ENERGY COMPLIANCE - LIGHTING FIRST FLOOR EAST PLAN |
| ENERGY | EN-005.00 | ENERGY COMPLIANCE - LIGHTING SECOND FLOOR EAST PLAN |
| ENERGY | EN-006.00 | ENERGY COMPLIANCE - MECHANICAL COMPLIANCE |
| ENERGY | EN-007.00 | ENERGY COMPLIANCE - MECHANICAL COMPLIANCE 2 |
| | | |
| **STRUCTURAL (DOB: 123878429)** | | |
| STRUCTURAL | S-001.00 | STRUCTURAL NOTES |
| STRUCTURAL | S-002.00 | LOWER ROOF DUNNAGE FRAMING PLAN |
| STRUCTURAL | S-003.00 | STRUCTURAL SECTIONS |
| | | |
| **POOL FILTRATION** | | |
| POOL FILTRATION | PF-001.00 | GENERAL NOTES, SYMBOLS, SCHEDULES AND SPECIFICATIONS |
| POOL FILTRATION | PF-002.00 | DETAILS AND FLOW METER SHCEMATIC |
| POOL FILTRATION | PF-003.00 | POOL FLOW DIAGRAM |
| POOL FILTRATION | PF-004.00 | POOL FILTER ROOM DEMOLITION PLAN |
| POOL FILTRATION | PF-005.00 | POOL FILTER ROOM PLAN |
| | | |

## SPORTSPARK - PHASE #3 DRAWING LIST

| DRAWING DISCIPLINE | DRAWING # | DRAWING TITLE |
|---|---|---|
| **ARCHITECTURAL (DOB# M00451782)** | | |
| ARCHITECTURAL | A001.00 | NOTES, PLOT PLAN |
| ARCHITECTURAL | A002.00 | FIRST FLOOR PLAN |
| ARCHITECTURAL | A003.00 | EGRESS FLOOR PLAN WEST AND NOTES |
| ARCHITECTURAL | A004.00 | ENERGY ANALYSIS 1 |
| ARCHITECTURAL | A005.00 | ENERGY ANALYSIS 2 |
| ARCHITECTURAL | A100.00 | FIRST FLOOR DEMOLITION PLAN WEST |
| ARCHITECTURAL | A101.00 | FIRST FLOOR DEMOLITION PLAN EAST |
| ARCHITECTURAL | A102.00 | FIRST FLOOR CONSTRUCTION PLAN WEST |
| ARCHITECTURAL | A103.00 | FIRST AND SECOND CONSTRUCTION FLOOR PLAN EAST |
| ARCHITECTURAL | A104.00 | ROOF DEMOLITION AND CONSTRUCTION PLAN |
| ARCHITECTURAL | A105.00 | ROOF DETAILS |
| ARCHITECTURAL | A106.00 | FIRST FLOOR REFLECTED CEILING PLAN |
| ARCHITECTURAL | A107.00 | FIRST & SECOND FLOOR REFLECTED CEILING PLAN (EAST) |
| ARCHITECTURAL | A108.00 | ENLARGED FLOOR PLAN |
| ARCHITECTURAL | A109.00 | GYMNASIUM PLAN, NOTES AND DETAILS |
| ARCHITECTURAL | A110.00 | GYMNASIUM ELEVATIONS |
| ARCHITECTURAL | A200.00 | INTERIOR ELEVATIONS |
| ARCHITECTURAL | A201.00 | INTERIOR ELEVATIONS - 2 |
| ARCHITECTURAL | A202.00 | TOILET ACCESSORIES ADA REQUIREMENTS |
| ARCHITECTURAL | A203.00 | RECEPTION DESK, DISPLAY MOUNT DETAILS |
| ARCHITECTURAL | A301.00 | BUILDING ELEVATION & SECTION |
| ARCHITECTURAL | A302.00 | EXTERIOR WALL CLADDING DETAIL |
| ARCHITECTURAL | A600.00 | DOOR SCHEDULE & MISC. DETAILS |
| ARCHITECTURAL | A601.00 | PARTITION TYPES |
| ARCHITECTURAL | A602.00 | H.M. ELEVATIONS AND DETAILS |
| ARCHITECTURAL | A603.00 | FIRE STOPPING , CEILING DETAILS AND MISC. DETAILS |
| ARCHITECTURAL | A700.00 | FLOOR FINISH PLAN (WEST) |
| ARCHITECTURAL | A701.00 | FLOOR FINISH (EAST) & FINISH SCHEDULE |
| ARCHITECTURAL | A702.00 | FINISH LEGEND LIGHTING AND FINISH SCHEDULE |
| ARCHITECTURAL | A703.00 | PLUMBING AND ACCESSORIES SCHEDULE |
| ARCHITECTURAL | A900.00 | SIGNAGE SCHEDULE AND DETAILS |
| | | |
| **MECHANICAL (DOB #: M00438009)** | | |
| MECHANICAL | M-001.00 | MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| MECHANICAL | M-002.00 | MECHANICAL SPECIFICATIONS 1 OF 5 |
| MECHANICAL | M-003.00 | MECHANICAL SPECIFICATIONS 2 OF 5 |
| MECHANICAL | M-004.00 | MECHANICAL SPECIFICATIONS 3 OF 5 |
| MECHANICAL | M-005.00 | MECHANICAL SPECIFICATIONS 4 OF 5 |
| MECHANICAL | M-006.00 | MECHANICAL SPECIFICATIONS 5 OF 5 |
| MECHANICAL | M-051.00 | MECHANICAL SECOND FLOOR EAST - DEMOLITION PLAN |
| MECHANICAL | M-052.00 | MECHANICAL FIRST FLOOR WEST - DEMOLITION PLAN |
| MECHANICAL | M-053.00 | MECHANICAL SECOND FLOOR WEST - DEMOLITION PLAN |
| MECHANICAL | M-054.00 | MECHANICAL ROOM ENLARGED PLAN - DEMOLITION |
| MECHANICAL | M-055.00 | MECHANICAL ROOM #2 ENLARGED PLAN - DEMOLITION |
| MECHANICAL | M-056.00 | MECHANICAL UPPER ROOF EAST - DEMOLITION PLAN |
| MECHANICAL | M-100.00 | MECHANICAL FIRST FLOOR EAST PLAN |
| MECHANICAL | M-101.00 | MECHANICAL FIRST FLOOR WEST PLAN |
| MECHANICAL | M-102.00 | MECHANICAL SECOND FLOOR EAST PLAN |
| MECHANICAL | M-103.00 | MECHANICAL SECOND FLOOR WEST PLAN |
| MECHANICAL | M-104.00 | MECHANICAL UPPER ROOF EAST PLAN |
| MECHANICAL | M-201.00 | MECHANICAL ROOM MER 2 - PART PLAN AND SECTIONS - NEW YORK |
| MECHANICAL | M-300.00 | MECHANICAL DETAILS SHEET No. 1 |
| MECHANICAL | M-301.00 | MECHANICAL DETAILS SHEET No. 2 |
| MECHANICAL | M-302.00 | MECHANICAL DETAILS SHEET No. 3 |
| MECHANICAL | M-303.00 | MECHANICAL DETAILS SHEET No. 4 |
| MECHANICAL | M-304.00 | MECHANICAL DETAILS SHEET No. 5 |
| MECHANICAL | M-400.00 | MECHANICAL SCHEDULES-1 |
| MECHANICAL | M-401.00 | MECHANICAL SCHEDULES-2 |
| MECHANICAL | M-500.00 | MECHANICAL VRF REFRIGERANT PIPING RISER DIAGRAM |
| MECHANICAL | M-501.00 | MECHANICAL DUCT RISER DIAGRAM |
| MECHANICAL | M-600.00 | SYSTEM CONTROL CONTROL DIAGRAM |
| MECHANICAL | M-601.00 | RTU-1 CONTROL DIAGRAM |
| MECHANICAL | M-602.00 | RTU-1 CONTROL POINT LIST AND SEQUENCE OF OPERATION |
| MECHANICAL | M-603.00 | DOAU-2 CONTROL DIAGRAM |
| MECHANICAL | M-604.00 | DOAU-2 CONTROL POINT LIST AND SEQUENCE OF OPERATION |
| MECHANICAL | M-605.00 | VAV'S POINT LIST, CONTROL DIAGRAM & SEQUENCE OF OPERATION |
| MECHANICAL | M-606.00 | AHU-1 CONTROL DIAGRAM |
| MECHANICAL | M-607.00 | AHU-1 CONTROL POINT LIST |
| MECHANICAL | M-608.00 | AHU-1 , EF-3, EF-4 SEQUENCE OF OPERATION & POINTS LIST |
| MECHANICAL | M-609.00 | DOAU-1 CONTROL DIAGRAM, POINTS LIST & SEQUENCE OF OPERATION |
| | | |
| **ELECTRICAL** | | |
| ELECTRICAL | E-001.00 | ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| ELECTRICAL | E-002.00 | ELECTRICAL SPECIFICATIONS |
| ELECTRICAL | E-100.00 | ELECTRICAL FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-101.00 | ELECTRICAL FIRST FLOOR WEST PLAN |
| ELECTRICAL | E-102.00 | ELECTRICAL SECOND FLOOR EAST - WEST PLAN |
| ELECTRICAL | E-103.00 | ELECTRICAL SECOND FLOOR WEST PLAN |
| ELECTRICAL | E-105.00 | ELECTRICAL UPPER ROOF EAST - WEST FLOOR |
| ELECTRICAL | E-201.00 | LIGHTING FIRST FLOOR WEST PLAN |
| ELECTRICAL | E-202.00 | LIGHTING FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-203.00 | LIGHTING SECOND FLOOR EAST PLAN |
| ELECTRICAL | E-300.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS |
| ELECTRICAL | E-301.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS #2 |
| ELECTRICAL | E-400.00 | ELECTRICAL PANEL SCHEDULE |
| ELECTRICAL | E-401.00 | ELECTRICAL PANEL SCHEDULE |
| ELECTRICAL | E-500.00 | ELECTRICAL RISER DIAGRAM |
| | | |

## SPORTSPARK - PHASE #3 DRAWING LIST

| DRAWING DISCIPLINE | DRAWING # | DRAWING TITLE |
|---|---|---|
| **PLUMBING (DOB# M00438050)** | | |
| PLUMBING | P-001.00 | PLUMBING NOTES, SYMBOLS, AND ABBREVIATIONS |
| PLUMBING | P-002.00 | FLOOD INSURANCE RATE MAP |
| PLUMBING | P-003.00 | PLUMBING SPECIFICATIONS I |
| PLUMBING | P-004.00 | PLUMBING SPECIFICATIONS II |
| PLUMBING | P-051.00 | PLUMBING FIRST FLOOR WEST-DEMOLITION PLAN |
| PLUMBING | P-100.00 | PLUMBING FIRST FLOOR EAST PLAN |
| PLUMBING | P-101.00 | PLUMBING FIRST FLOOR WEST PLAN |
| PLUMBING | P-103.00 | PLUMBING SECOND FLOOR WEST PLAN |
| PLUMBING | P-105.00 | PLUMBING ROOF WEST PLAN |
| PLUMBING | P-300.00 | PLUMBING DETAILS |
| PLUMBING | P-400.00 | PLUMBING SCHEDULES |
| PLUMBING | P-500.00 | PLUMBING RISER DIAGRAM I |
| PLUMBING | P-501.00 | PLUMBING RISER DIAGRAM II |
| | | |
| **FIRE ALARM (DOB: 2020-TMFALM-003730 BOTH PH#1 & PH#2)** | | |
| FIRE ALARM | FA-001.00 | FIRE ALARM NOTES, SYMBOLS, AND ABBREVIATIONS |
| FIRE ALARM | FA-100.00 | FIRE ALARM FIRST FLOOR EAST PLAN |
| FIRE ALARM | FA-101.00 | FIRE ALARM FIRST FLOOR WEST PLAN |
| FIRE ALARM | FA-102.00 | FIRE ALARM SECOND FLOOR EAST P LAN |
| FIRE ALARM | FA-103.00 | FIRE ALARM SECOND FLOOR WEST PLAN |
| FIRE ALARM | FA-500.00 | FIRE ALARM RISER DIAGRAM |
| | | |
| **ENERGY** | | |
| ENERGY | EN-001.00 | ENERGY COMPLIANCE - MECHANICAL COMCHECK 1 |
| ENERGY | EN-002.00 | ENERGY COMPLIANCE - MECHANICAL COMCHECK 2 |
| ENERGY | EN-003.00 | ENERGY COMPLIANCE - LIGHTING COMCHECK |
| ENERGY | EN-004.00 | ENERGY COMPLIANCE - LIGHTING DETAILS #1 |
| ENERGY | EN-005.00 | ENERGY COMPLIANCE - LIGHTING DETIALS #2 |
| ENERGY | EN-006.00 | ENERGY COMPLIANCE - LIGHTING FIRST FLOOR PLAN WEST |
| ENERGY | EN-007.00 | ENERGY COMPLIANCE - LIGHTING FIRST FLOOR PLAN EAST |
| ENERGY | EN-008.00 | ENERGY COMPLIANCE - LIGHTING SECOND FLOOR PLAN EAST |
| | | |
| **STRUCTURAL (DOB#: M00451571)** | | |
| STRUCTURAL | S-001.00 | STRUCTURAL NOTES |
| STRUCTURAL | S-100.00 | SECOND FLOOR MECHANICAL ROOM FRAMING PLAN |
| STRUCTURAL | S-101.00 | LOWER ROOF DUNNAGE FRAMING PLAN |
| STRUCTURAL | S-102.00 | UPPER ROOF FRAMING PLAN |
| STRUCTURAL | S-103.00 | EXTERIOR CLADDING SUPPORTING FRAMING PLAN |
| STRUCTURAL | S-200.00 | STRUCTURAL SECTIONS AND DETAILS |
| | | |

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 01.29.21 | ISSUED FOR 100%CD |

ISSUE / REVISION


JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

Ronnette Riley *Architect*
494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECTS

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #1 & PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

PHASE #1 & PHASE #3
DRAWING LIST COVER SHEET

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. |
| | DRAWN BY / OF |

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## SPORTSPARK- PHASE #1 DRAWING LIST

| DRAWING DISCIPLINE | DRAWING # | DRAWING TITLE |
|---|---|---|
| | | |
| **ARCHITECTURAL (DOB#: 123741512)** | | |
| ARCHITECTURAL | A-001.00 | GENERAL NOTES & PLOT PLAN |
| ARCHITECTURAL | A-050.00 | DEMOLITION FIRST FLOOR PLAN (EAST SIDE) |
| ARCHITECTURAL | A-051.00 | DEMOLITION 2ND FLOOR PLAN |
| ARCHITECTURAL | A-052.00 | DEMLITION FIRST FLOOR REFLECTED CEILING PLAN |
| ARCHITECTURAL | A-053.00 | DEMOLITION 2ND FLOOR RCP |
| ARCHITECTURAL | A-101.00 | CONSTRUCTION FIRST FLOOR PLAN |
| ARCHITECTURAL | A-102.00 | CONSTRUCTION SECOND FLOOR PLAN |
| ARCHITECTURAL | A-103.00 | CONSTRUCTION FIRST FLOOR RCP |
| ARCHITECTURAL | A-104.00 | CONSTRUCTION SECOND FLOOR/POOL RCP |
| ARCHITECTURAL | A-105.00 | FINISH & POWER PLAN FIRST FLOOR (EAST SIDE) |
| ARCHITECTURAL | A-200.00 | INTERIOR ELEVATION POOL |
| ARCHITECTURAL | A-201.00 | INTERIOR ELEVATION POOL |
| ARCHITECTURAL | A-202.00 | INTERIOR ELEVATION MEN'S LOCKER ROOM |
| ARCHITECTURAL | A-203.00 | INTERIOR ELEVATION WOMEN'S LOCKER ROOM |
| ARCHITECTURAL | A-204.00 | INTERIOR ELEV. SINGLE RESTROOM & FAMILY ROOM |
| ARCHITECTURAL | A-205.00 | INTERIOR ELEVATION POOLSIDE LOBBY |
| ARCHITECTURAL | A-301.00 | PARTITIONS TYPE & DETAILS |
| ARCHITECTURAL | A-302.00 | DETAILS |
| ARCHITECTURAL | A-303.00 | DETAILS |
| ARCHITECTURAL | A-304.00 | ADA STANDARDS |
| ARCHITECTURAL | A-600.00 | SCHEDULES: FINISH, FURNITURE, ACCESSORIES, DOORS, WINDOWS |
| | | |
| **MECHANICAL (DOB#: M00253870)** | | |
| MECHANICAL | M-001.00 | MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| MECHANICAL | M-002.00 | MECHANICAL SPECIFICATIONS 1 OF 4 |
| MECHANICAL | M-003.00 | MECHANICAL SPECIFICATIONS 2 OF 4 |
| MECHANICAL | M-004.00 | MECHANICAL SPECIFICATIONS 3 OF 4 |
| MECHANICAL | M-005.00 | MECHANICAL SPECIFICATIONS 4 OF 4 |
| MECHANICAL | M-050.00 | MECHANICAL DEMOLITION FIRST FLOOR EAST PLAN |
| MECHANICAL | M-051.00 | MECHANICAL DEMOLITION SECOND FLOOR EAST PLAN |
| MECHANICAL | M-052.00 | MECHANICAL DEMOLITION SECTIONS |
| MECHANICAL | M-100.00 | MECHANICAL FIRST FLOOR EAST PLAN |
| MECHANICAL | M-102.00 | MECHANICAL SECOND FLOOR EAST PLAN |
| MECHANICAL | M-300.00 | MECHANICAL DETAILS NO. 1 |
| MECHANICAL | M-301.00 | MECHANICAL DETAILS NO. 2 |
| MECHANICAL | M-302.00 | MECHANICAL DETAILS NO. 3 |
| MECHANICAL | M-303.00 | MECHANICAL DETAILS NO.4 |
| MECHANICAL | M-400.00 | MECHANICAL SCHEDULES |
| MECHANICAL | M-500.00 | MECHANICAL RISER DIAGRAM |
| MECHANICAL | M-600.00 | MECHANICAL SECTIONS |
| | | |
| **ELECTRICAL** | | |
| ELECTRICAL | E-001.00 | ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| ELECTRICAL | E-002.00 | ELECTRICAL SPECIFICATIONS |
| ELECTRICAL | E-100.00 | ELECTRICAL FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-102.00 | ELECTRICAL SECOND FLOOR EAST PLAN |
| ELECTRICAL | E-200.00 | LIGHTING FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-202.00 | LIGHTING SECOND FLOOR EAST PLAN |
| ELECTRICAL | E-300.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS |
| ELECTRICAL | E-301.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS 2 |
| ELECTRICAL | E-400.00 | ELECTRICAL PANEL SCHEDULE |
| ELECTRICAL | E-500.00 | ELECTRICAL RISER DIAGRAM |
| | | |
| **PLUMBING (DOB#: M00272294)** | | |
| PLUMBING | P-001.00 | PLUMBING NOTES, SYMBOLS, AND ABBREVIATIONS |
| PLUMBING | P-002.00 | PLUMBING SPECIFICATIONS I |
| PLUMBING | P-003.00 | PLUMBING SPECIFICATIONS II |
| PLUMBING | P-050.00 | PLUMBING FIRST FLOOR EAST - DEMOLITION PLAN |
| PLUMBING | P-100.00 | PLUMBING FIRST FLOOR EAST PLAN |
| PLUMBING | P-300.00 | PLUMBING DETAILS |
| PLUMBING | P-400.00 | PLUMBING SCHEDULES |
| PLUMBING | P-500.00 | PLUMBING RISER DIAGRAM I |
| PLUMBING | P-501.00 | PLUMBING RISER DIAGRAM II |
| | | |
| **FIRE ALARM** | | |
| FIRE ALARM | FA-001.00 | FIRE ALARM NOTES, SYMBOLS, AND ABBREVIATIONS |
| FIRE ALARM | FA-100.00 | FIRE ALARM FIRST FLOOR EAST PLAN |
| FIRE ALARM | FA-102.00 | FIRE ALARM SECOND FLOOR EAST PLAN |
| FIRE ALARM | FA-500.00 | FIRE ALARM RISER DIAGRAM |
| | | |
| | | |
| **ENERGY** | | |
| ENERGY | EN-001.00 | ENERGY COMPLIANCE - LIGHTING COMCHECK |
| ENERGY | EN-002.00 | ENERGY COMPLIANCE - LIGHTING DETAILS |
| ENERGY | EN-003.00 | ENERGY COMPLIANCE - LIGHTING DETAILS 2 |
| ENERGY | EN-004.00 | ENERGY COMPLIANCE - LIGHTING FIRST FLOOR EAST PLAN |
| ENERGY | EN-005.00 | ENERGY COMPLIANCE - LIGHTING SECOND FLOOR EAST PLAN |
| ENERGY | EN-006.00 | ENERGY COMPLIANCE - MECHANICAL COMPLIANCE |
| ENERGY | EN-007.00 | ENERGY COMPLIANCE - MECHANICAL COMPLIANCE 2 |
| | | |
| **STRUCTURAL (DOB: 123878429)** | | |
| STRUCTURAL | S-001.00 | STRUCTURAL NOTES |
| STRUCTURAL | S-002.00 | LOWER ROOF DUNNAGE FRAMING PLAN |
| STRUCTURAL | S-003.00 | STRUCTURAL SECTIONS |
| | | |
| **POOL FILTRATION** | | |
| POOL FILTRATION | PF-001.00 | GENERAL NOTES, SYMBOLS, SCHEDULES AND SPECIFICATIONS |
| POOL FILTRATION | PF-002.00 | DETAILS AND FLOW METER SHCEMATIC |
| POOL FILTRATION | PF-003.00 | POOL FLOW DIAGRAM |
| POOL FILTRATION | PF-004.00 | POOL FILTER ROOM DEMOLITION PLAN |
| POOL FILTRATION | PF-005.00 | POOL FILTER ROOM PLAN |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 01.29.21 | ISSUED FOR 100% CD |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-0300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

PHASE #1 DRAWING
LIST COVER SHEET

| | | |
|---|---|---|
| SEAL & SIGNATURE | DATE | 06.10.2019 |
| | JOB NUMBER | 19010 |
| | DWG. No. | |
| | DRAWN BY | OF |

NYC DOB Number

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| A.F.F. | Above Finish Floor | W/ | With |
| AP | Access panel | W.C. | Water Closet |
| ACT | Acoustical Ceiling Tile | W/D | Washer/Dryer |
| ADD'L | Additional | WP | Waterproofing) |
| ADJ | Adjacent, Adjustable | WT | Weight |
| AC | Air Conditioning | WNDW | Window |
| ALUM | Aluminum | WD | Wood |
| & | And | | |
| ∠ | Angle | | |
| ANOD | Anodized | | |
| ARCH, ARCH'T | Architect(ural) | | |
| @ | At | | |
| AXO | Axonometric | | |
| B | Base | | |
| BSMT | Basement | | |
| BM | Beam | | |
| BR | Bedroom | | |
| BTWN | Between | | |
| BLK'G | Blocking | | |
| BD | Board | | |
| B.S.EA. | Board of Standards and Appeals | | |
| BOTT. B.O. | Bottom (of) | | |
| BLDG | Building | | |
| CABT | Cabinet, Cabinetry | | |
| C.H. | Ceiling Height | | |
| CPT | Carpet | | |
| CLG | Ceiling | | |
| CMU | Concrete Masonry Unit | | |
| CTR | Center | | |
| ℄ | Center Line | | |
| CT | Ceramic Tile | | |
| CL | Closet | | |
| CLR | Clear | | |
| COL | Column | | |
| COORD | Coordinate | | |
| CONC | Concrete | | |
| COND | Condition | | |
| CONSTR | Construction | | |
| CONT | Continuous | | |
| CORR | Corridor | | |
| DTL | Detail | | |
| DIA | Diameter | | |
| DIFF | Diffuser | | |
| DIM | Dimension | | |
| DR | Door | | |
| DBL | Double | | |
| DN | Down | | |
| DW | Dish Washer | | |
| DWR | Drawer | | |
| DWG | Drawing | | |
| EA | Each | | |
| EL | Elevation | | |
| ELEV | Elevator | | |
| ELEC | Electrical | | |
| ENCST | Encaustic | | |
| EQ | Equal | | |
| EXG | Existing | | |
| EXT | Exterior | | |
| EXTR | Extruded | | |
| F.O | Face of | | |
| FSTN | Fasten | | |
| FIN | Finish | | |
| FIXT | Fixture | | |
| FL | Floor | | |
| FLG | Flooring | | |
| FLUOR | Fluorescent | | |
| FPRFG | Fire Proof Self-Closing Door | | |
| FRMG | Framing | | |
| FT | Foot or Feet | | |
| FURR | Furring | | |
| GC | General Contractor | | |
| GL | Glass | | |
| GFI | Ground Fault Interrupter | | |
| GWB | Gypsum Wall Board | | |
| HC | Handicapped | | |
| HWR | Hardware | | |
| HWD | Hardwood | | |
| HDR | Handrail | | |
| HT | Height | | |
| HM | Hollow Metal | | |
| INCAND | Incandescent | | |
| INCL | Including | | |
| INT | Interior | | |
| JAN | Janitor | | |
| JT. | Joint | | |
| LAM'D | Laminated | | |
| LT. | Light | | |
| LWT | Lightweight | | |
| LIN | Linear, Linen | | |
| LP | Low Point | | |
| MFR | Manufacturer | | |
| MBR | Master Bedroom | | |
| MAT | Material | | |
| MAX | Maximum | | |
| MC | Medicine Cabinet | | |
| MTL | Metal | | |
| M | Meter | | |
| MICRO | Microwave | | |
| MIN | Minimum | | |
| MIR | Mirror | | |
| MTD | Mounted | | |
| NEC | Necessary | | |
| NOM | Nominal | | |
| N.I.C. | Not in Contract | | |
| N.T.S. | Not to Scale | | |
| O.C. | On center | | |
| OPG | Opening | | |
| OPP | Opposite | | |
| PT, PTD | Paint, Painted | | |
| PNL | Panel | | |
| PARTN, PTN | Partition | | |
| PLAS | Plaster | | |
| P. LAM | Plastic Laminate | | |
| PL | Plate | | |
| PLEXI | Plexiglas | | |
| PLY | Plywood | | |
| QTY | Quantity | | |
| R | Relocated | | |
| RAD | Radius, Radiator | | |
| RECT | Rectangular | | |
| REF | Refrigerator | | |
| RCP | Reflected Ceiling Plan | | |
| REQ'D | Required | | |
| RM | Room | | |
| SCHED | Schedule | | |
| SECT | Section | | |
| SH | Shelf | | |
| SIM | Similar | | |
| S.C. | Solid Core | | |
| SF | Solid Surfacing | | |
| SPEC | Specification | | |
| S.S. | Stainless steel | | |
| ST | Stone | | |
| STL | Steel | | |
| STN | Stain | | |
| STOR | Storage | | |
| STRUCT | Structural, Structure | | |
| SURR | Surround | | |
| SUSP | Suspended | | |
| T | Tile | | |
| TEL | Telephone | | |
| TERR | Terrazzo | | |
| THK | Thick, Thickness | | |
| T.B.D. | To Be Determined | | |
| T&B | Top and Bottom | | |
| T.O. | Top of | | |
| TYP | Typical | | |
| U.O.N. | Unless Otherwise Noted | | |
| U/S | Underside | | |
| VCT | Vinyl Composition Tile | | |
| VERT | Vertical | | |
| VEN | Veneer | | |
| V.I.F. | Verify in Field | | |
| W | Width | | |

## BUILDING DEPARTMENT NOTES

1. THIS ENTIRE CONSTRUCTION IS FOR A SINGLE (A-4) OCCUPANCY.
2. ALL DOORS MUST COMPLY WITH NYC REGULATIONS REGARDING INCOMBUSTIBLE MATERIALS
3. ALL WOOD TO BE USED IN THE CONST. SHALL BE FIRE RETARDANT TREATED WOOD IN ACCORDANCE W/ SECT. 1.23.1, SECTION 10.9.2.6 AND 27-328 OF THE NEW YORK CITY BLDG CODE.
4. FIRESTOPPING SHALL BE AS REQ'D BY NEW YORK CITY BLDG CODE SECT 27-345.
5. ALL INTERIOR FINISHES SHALL COMPLY W/ THE NEW YORK CITY BLDG CODE SECT 27-348.
6. ALL MATERIALS, ASSEMBLIES, FORMS AND METHODS OF CONST AND SERVICE EQUIP SHALL COMPLY W/ THE NEW YORK CITY BLDG CODE SECT 27-130 TO 27-137.
7. ALL ELECTRICAL WORK SHOWN TO BE FILED UNDER SEPARATE APPLICATION BY THE ELECTRICIAN WITH THE BUREAU OF ELECTRICAL CONTROL.
8. ALL WORK MUST COMPLY W/ CHAPTER 11 OF THE 2014 BUILDING CODE, ANSI A117.1/2009 AND ALL CODES ASSOCIATED WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
9. COMMERCIAL PROJECTS SHALL HAVE EXIT LIGHTS AND SIGNS AT ALL EXITS AND AS REQUIRED UNDER STATE AND LOCAL REGULATIONS INCLUDING SECTION C26-607.0.L.L.-16 AND ARTICLES 27-351 AND 27-383 OF THE BUILDING CODE OF NEW YORK CITY.
10. ALL PARTITIONS OF PUBLIC CORRIDORS, HALL PASSAGES, AND OTHER PERMANENT PARTITIONS TO BE OF 1 HOUR FIRE RESISTIVE RATING WITH ¾ HOUR APPROVED TYPE DOOR.
11. HUNG CEILING TO CONFORM WITH SECTION 9.4.10.5 AND 27-348 OF THE CITY OF NEW YORK BUILDING CODE FOR CLASS 1 FIREPROOFING.
12. ALL METAL STUD PARTITIONS TO BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.4.1.4. AND 9.4.1.5. AND SECTION 9.4.3.2. OF NEW YORK CITY BUILDING CODE.
13. THE FOLLOWING, BUT NOT LIMITED TO, ARE SUBJECT TO CONTROLLED INSPECTIONS.

| SPECIAL INSPECTION | | CODE REF. |
|---|---|---|
| A. | FIRE RESISTANT PENETRATIONS & JOINTS | BC 1704.25 |
| **PROGRESS INSPECTION** | | **CODE REF.** |
| A. | ENERGY CODE COMPLIANCE (TR-8) | BC 1049.5 |
| B. | FINAL | IRCNY 101-10 |

## 2014 PLUMBING NOTES

1. ALL PLUMBING WORK TO BE PERFORMED BY LICENSED CONTRACTORS. PLUMBING FIXTURES SHALL COMPLY WITH ALL STATE AND LOCAL REGULATIONS.
2. ALL SHUT-OFF VALVES SHALL BE EXPOSED OR ACCESSIBLE BY ACCESS PANEL.
3. NEW BRANCH PIPING SHALL REPLACE EXISTING BACK TO THE SUPPLY RISER AND WASTE/VENT STACK. NEW SHUT-OFF VALVES SHALL BE WITH DIELECTRIC FITTINGS AS REQUIRED.
4. PLUMBER TO CONFIRM EXISTING WASTE AND VENT LINES ARE FREE OF OBSTRUCTIONS.
5. CHECK VALVES MUST BE FURNISHED ON BRANCH PIPING FOR HOT AND COLD WATER SUPPLY, ADJACENT TO MASTER SHUT-OFF VALVES. CHECK VALVES TO BE QUIET TYPE.
6. PROVIDE NEW MASTER SHUT-OFF VALVES AND BRANCH LINES FOR HOT AND COLD WATER SUPPLY FOR BATHROOMS AND KITCHEN. ALL VALVES MUST BE FULL PORT, OF U.S. MANUFACTURE. ALL NEW COPPER PIPING FROM THE MASTER SHUT-OFF VALVE TO EACH FIXTURE. PROVIDE NEW SHUT-OFF VALVE TO EACH FIXTURE, AS FOLLOWS:
   BATHROOMS:
   HOT WATER MASTER SHUT-OFF VALVE
   COLD WATER MASTER SHUT-OFF VALVE
   HOT WATER SHUT-OFF VALVE AT LAVATORY
   COLD WATER SHUT-OFF VALVE AT LAVATORY
   SHOWER VALVE (TEMP RANGE 110°F TO 120°F
7. FOR ACOUSTICAL PURPOSES ALL HOT AND COLD WATER PIPING IS TO BE INSULATED WITH MINIMUM OF 1/2" WRAPPED INSULATION.
8. ALL HOT AND COLD WATER PIPING AT FIXTURES IS TO BE TERMINATED WITH WATER HAMMER ARRESTORS RISING ABOVE THE FIXTURE.
9. FIXTURE PIPING BETWEEN SHUT-OFF VALVES AND THE FAUCET OR APPLICATION TO BE COPPER TUBING WITH FLARED ENDS AND BRASS BUSHINGS.
10. NO REINFORCED RUBBER HOSE IS TO BE USED. IF NO ALTERNATIVES CAN BE DEMONSTRATED, HIGH PRESSURE "NO BURST" BRAIDED STAINLESS STEEL IS ALLOWED TO CONNECT FIXTURES AND APPLIANCES THAT DO NOT HAVE ACCESS AFTER INSTALLATION .
11. SHOWER REQUIREMENTS:
   a. SHOWER BASES ARE TO BE FITTED TO A NEW LEAD PAN COATED WITH POLYMER MATERIAL ON ALL SIDES.
   b. SECONDARY LAYER OF LATICRETE 9235 TO BE INSTALLED ATOP MORTAR BED ABOVE THE PAN AND EXTEND VERTICALLY UP FULL HEIGHT OF WALLS.
   c. LEAD PAN MUST WRAP UP AND OVER THE CURB AND ALL OTHER PROJECTIONS AND RECESSES.
   e. TO PREVENT TRAPPED WATER, SHOWER DRAINS TO HAVE WASHED GRAVEL PACKED AROUND THE DRAIN COLLAR, WITH SLOTS IN THE ADJUSTABLE DRAIN FITTING.
   f. A WATER TEST MUST BE PERFORMED AT SHOWER BASE FOR A MINIMUM OF 24 HOURS IN DURATION WITH ITS SUCCESS CONFIRMED TO RAND.
12. BRANCH LINE SPRINKLERS TO REMAIN SHUT DOWN DURING DEMOLITION AND NEW CEILING WORK. RAND TO BE NOTIFIED TO OBSERVE IF SPRINKLERS CAN BE RE-ACTIVATED ONCE WORK IS COMPLETED. FIRE WATCH IS TO BE PROVIDED WHEN THE SPRINKLERS ARE NOT OPERATIONAL, AS PER NEW YORK CITY CODE REQUIREMENTS.

## GENERAL NOTES

1. SCOPE OF WORK SHALL NOT BE LIMITED BY THE DRAWINGS, BUT SHALL INCLUDE ANY AND ALL WORK NECESSARY TO FACILITATE THE INTENT OF THE DOCUMENTS.
2. GENERAL CONTRACTOR SHALL CHECK AND VERIFY IN FIELD ALL DIMENSIONS, NOTES AND CONDITIONS SHOWN ON DRAWINGS BEFORE ANY CONSTRUCTION WORK IS STARTED AND SHALL NOTIFY ARCHITECT OF DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS BEFORE PROCEEDING. ALL WORK TO BE DONE IN ACCORDANCE WITH CODE, ARTICLE 19, AND ALL OTHER REGULATIONS OF ALL OTHER AGENCIES HAVING JURISDICTION.
3. ALL DIMENSIONS ARE TO FINISH FACE UNLESS OTHERWISE NOTED.
4. DO NOT SCALE DRAWINGS - WRITTEN DIMENSIONS GOVERN. LARGE SCALE DRAWINGS GOVERN SMALL SCALE.
5. ALL PLAN DIMENSIONS ARE TO THE NEAREST 1/4".
6. GENERAL CONTRACTOR MUST COMPLY WITH ALL RULES AND REGULATIONS OF AGENCIES HAVING JURISDICTION. THIS COMPLIANCE INCLUDES, BUT IS NOT LIMITED TO, ALL CITY, STATE, AND FEDERAL CONSTRUCTION, SAFETY, SANITARY LAWS, STATUTES, CODES AND ORDINANCES AND BUILDING STANDARD SPECIFICATIONS. GENERAL CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND INSPECTIONS NECESSARY FOR PROPER EXECUTION, APPROVALS AND COMPLETION OF WORK.
7. ALL SHUT-OFF VALVES SHALL BE ACCESSIBLE BY ACCESS PANEL.
8. GENERAL CONTRACTOR IS REQUIRED TO COORDINATE ALL WORK AND DELIVERIES WITH BUILDING MANAGEMENT & SECURITY.
9. ALL ELECTRICAL WORK TO BE PERFORMED BY LICENSED CONTRACTORS.
10. ALL CORRESPONDENCE AND PROJECT COMMUNICATION TO BE THROUGH ARCHITECT.
11. EXG FINISHES TO REMAIN, U.O.N. PREP ALL SURFACES AS REQ'D. TO RECEIVE NEW FINISHES. INTERIOR FINISHES SHALL COMPLY WITH THE NEW YORK CITY BUILDING CODE, SECTION 27-348.
12. FIRE SEGREGATION TO COMPLY WITH SECTION 27-339.
13. ROOMS AND SPACES SHALL BE MECHANICALLY VENTILATED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE SUBCHAPTER 12, ARTICLE 7 AND SECTION 5.1.9.2 OF THE BUILDING CODE OF THE CITY OF NEW YORK, HVAC TO BE UNDER SEPARATE AMENDMENT (STATEMENT 'B').
14. FIRE RATED DOORS SHALL BEAR THE LABEL OF THE BOARD OF STANDARD AND APPEALS OR THE M.E.A. DIVISION.
15. PLUMBING FIXTURES SHALL COMPLY WITH ALL STATE AND LOCAL REGULATIONS.
16. NO CHANGE IN EGRESS, USE OR OCCUPANCY.
17. 'PROVIDE' MEANS TO FURNISH AND INSTALL, 'SUPPLIED BY OWNER' MEANS MAIN MATERIAL TO BE SUPPLIED BY OWNER AND CONTRACTOR IS TO INSTALL IT AS DIRECTED, 'NIC' MEANS NOT IN CONTRACT AND WILL BE FURNISHED AND INSTALLED BY OTHERS.
18. CLIENT SITE VISITS ARE TO BE ORGANIZED W/ARCH & G.C.
19. PLUMBING FIXTURES SHALL BE INSTALLED AND PLUMBED TO FULL WORKING ORDER.
20. GENERAL CONTRACTOR TO PROVIDE BLOCKING AT ALL NECESSARY AREAS - INCLUDING AT GRAB BARS, EQUIPMENT, HANGING FURNITURE AND MILLWORK, ACCESSORIES AND APPLIANCES.
21. THE OVERLOADING OF FLOORS WITH BUILDING MATERIALS IS PROHIBITED.
22. CUTTING, TRENCHING, CHANNELING FLOOR OR CEILING, OR CORE DRILLING IS NOT PERMITTED. REVIEW WITH ARCHITECT WHERE NECESSARY.
23. GENERAL CONTRACTOR MUST PROVIDE TWO (2) 10LB FIRE EXTINGUISHERS DURING START OF DEMO AND MUST BE KEPT IN PLAIN SIGHT AND ACCESSIBLE AT ALL TIMES DURING CONSTRUCTION.
24. BUILDING MANAGEMENT IS TO BE NOTIFIED PRIOR TO THE FOLLOWING MILESTONES SO THAT OBSERVATION MAY BE MADE AND RECORDED:
   - WATERPROOFING INSTALLATION
   - LEAKAGE PREVENTION MEASURES
   - FINAL COMPLETION
26. TEMPORARY WORKLIGHTS ON A SINGLE CONTROL ARE TO BE PROVIDED THROUGHOUT THE SPACE. THIS TEMPORARY LIGHTING IS TO BE MAINTAINED ON THE SITE THROUGOUT THE COURSE OF THE ALTERATION UNTIL FINAL LIGHTING HAS BEEN INSTALLED OR TEMPORARY LIGHTING NO LONGER REQUIRED.
27. THE USE OF ANY SOLVENT, SEALANT, FINISHING CHEMICAL WHICH DOES NOT MEET THE REQUIREMENTS OF THE NYC BOARD OF STANDARDS AND APPEALS SHALL NOT BE PERMITTED FOR USE IN THE 100 UNITED NATIONS CONDOMINIUM. ANY ODOR, FUMES, OF OTHER AIRBORNE MATERIAL RESULTING FOR THE CONSTRUCTION PROCEDURES OR MATERIAL FINISHING PROCESSES IS PROHIBITED. THE USE OF SUBSTANCES WHICH RESULT ODORS, FUMES OR AIRBORNE PARTICLES WILL RESULT IN IMMEDIATE SHUTDOWN OF THE JOB SITE.
28.

## TENANT SAFETY NOTES

1. GENERAL:
   a. ALL WORK TO BE DONE IN ACCORDANCE WITH THE NYC BLDG CODE AND ALL OTHER REGULATIONS AND AGENCIES HAVING JURISDICTION.
   b. THE DOOR FRAMES TO EACH ACCESS DOOR TO THE AREA OF WORK AND THE COMMON AREAS SHALL BE COVERED WITH MASONITE PANELS SO AS NOT TO DISTURB THE BUILDING. ALL FLOOR AREAS IN THE AREA OF WORK SHALL BE COVERED W/ MASONITE PANELS TO LIMIT NOISE AND VIBRATIONS.
   c. ANY DAMAGES TO WALL AND FLOOR FINISHES IN ANY OF THE COMMON AREAS OF THE BUILDING AFFECTED BY THE WORK SHALL BE REPAIRED BY GENERAL CONTRACTOR.
   d. GENERAL CONTRACTOR TO PROVIDE REQUIRED TEMPORARY BRACING AND SHORING WHEREVER ANY STRUCTURAL WORK IS INVOLVED.
   e. ALL DEMOLITION, REPAIRS, & ALTERATIONS TO BE DONE IN ACCORDANCE W/ THE NYC BUILDING CODE.
2. MEANS OF EGRESS:
   a. ALL EXG MEANS OF EGRESS FROM THE BLDG TO BE MAINTAINED CLEAR & FREE OF ALL OBSTRUCTIONS SUCH AS BLDG MATERIALS, TOOLS, ETC.
3. FIRE SAFETY:
   a. ALL BLDG MATERIALS STORED AT THE CONSTR. AREA & OR ANY AREA OF THE BLDG ARE TO BE SECURED IN A LOCKED AREA IN AN ORDERLY FASHION. ACCESS TO SUCH AREAS TO BE CONTROLLED BY OWNER AND/OR GENERAL CONTRACTOR.
   b. ALL FLAMMABLE MATERIALS ARE TO BE KEPT TIGHTLY SEALED IN THEIR MFR'S CONTAINERS, TO BE KEPT AWAY FROM HEAT AND IN AN ADEQUATELY VENTILATED SPACE.
   c. ALL ELECTRICAL POWER TO BE SHUT OFF WHERE CONDUIT IS EXPOSED.
   d. ALL ELECTRICAL POWER IN THE CONSTRUCTION AREA TO BE SHUT OFF AFTER WORKING HOURS.
   e. AT ALL TIMES, GENERAL CONTRACTOR TO MAKE SURE THERE IS NO LEAKAGE OF NATURAL GAS OR ANY FLAMMABLE GAS USED IN CONSTRUCTION IN THE BUILDING.
4. DUST CONTROL, WORK HOURS, PROTECTION AND NOISE.
   a. GENERAL CONTRACTOR SHALL MINIMIZE AND CONFINE TO THE IMMEDIATE CONSTRUCTION AREA DEBRIS, DIRT AND DUST FROM PERMEATING OTHER PARTS OF THE BUILDING DURING CONSTRUCTION. ALL MATERIALS AND RUBBISH WILL BE PLACED IN BARRELS OR BAGS BEFORE BEING REMOVED FROM THE AREA OF WORK.
   b. DEBRIS, DUST AND DIRT WILL BE CLEARED FROM THE BUILDING REGULARLY TO AVOID ANY EXCESSIVE ACCUMULATION.
   c. WORK HOURS ARE ESTABLISHED AS STIPULATED IN BID DOCUMENTS. ANY LOUD CONSTRUCTION TASKS ARE TO BE PERFORMED AFTER 10AM. IF AT ANY TIME, THE MANAGING AGENT NOTIFIES GC OF DISTURBANCE CAUSED BY CONSTRUCTION, THE GC SHALL CORRECT THOSE CONDITIONS AS SOON AS POSSIBLE.
5. CONSTRUCTION THAT REQUIRES INTERRUPTION OF HEATING, WATER OR ELECTRICAL SERVICES TO OTHER TENANTS OF THE BUILDING, SHALL BE COORDINATED BETWEEN GENERAL CONTRACTOR AND BUILDING MANAGEMENT & SHALL NOT DELAY SCHEDULE.
6. IF LEAD PAINT IS ENCOUNTERED, IT SHALL BE HANDLED & ABATED BY LICENSED CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE & NYC LAWS, & THE ARCHITECT OR BLDG SUPER NOTIFIED

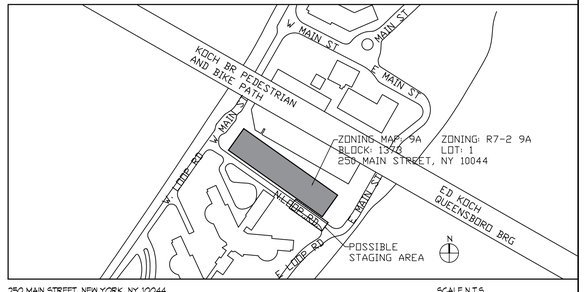
## FEMA FLOOD DATA & USGS GROUNDWATER DATA

1. PER THE FEMA FLOOD INSURANCE RATE MAP, 2013 "PRELIMINARY," AS WELL AS THE 2007 MAP THIS BUILDING IS OUTSIDE OF 0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE
2. GROUND WATER IS NOT OF CONCERN IN THIS PROJECT, AS THE PROPOSED WORK IS CONFINED ENTIRELY TO THE 11th STORY OF THE BUILDING, ABOVE GRADE.

## REQUIRED INSPECTIONS:

FIRESTOPS
FINAL INSPECTION

## PLOT PLAN




250 MAIN STREET, NEW YORK, NY 10044 SCALE N.T.S

BLDG. LOT: 1 BLOCK: 1373 ZONING: R7-2 ZONING MAP: 9A FL ZONE: X HEIGHT: 30'

# NUMBER OF FLOORS: 2 OCCUPANCY: A-4 INDOOR SPORTS CONSTRUCTION CLASS: 1-A 3 HOUR PROTECTED

BIN: 1807395

DOB: PUBLIC STRUCTURE / FEE EXEMPT

## NYCECC 2016 - ENERGY ANALYSIS

TO THE BEST OF MY KNOWLEDGE, BELIEF & PROFESSIONAL JUDGMENT, ALL WORK UNDER THIS APPLICATION IS IN COMPLIANCE WITH THE 2016 NYCECC.

COMMERCIAL - LOCKER ROOM RENOVATION

| WORK ITEMS | PROPOSED DESIGN VALUES | CODE PRESCRIBED VALUE & CITATION |
|---|---|---|
| ENVELOPE SYSTEMS-<br>NEW WINDOWS- FIXED FENESTRATION | SHGC | SHGC MAX = 0.4<br>MAX U VALUE = 0.38 |
| INTERIOR LIGHTING | SEE COMCHECK ON EN DRAWINGS | 0.7 W/SQ FT* A MINIMUM OF 50% OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS |
| MECH & SERVICE WATER HEATING SYSTEMS | SEE COMCHECK ON EN DRAWINGS | |
| CLIMATE ZONES | 4A | |

*NYCECC 2016, INTERIOR LIGHTING POWER ALLOWANCES

## NYCECC NOTE:

1. THIS PROJECT IS EXEMPT FROM THE NEW YORK CITY ENERGY CONSERVATION CODE (NYCECC 101.4.2) SINCE THE PROPERTY IS A CONTRIBUTING BUILDING IN THE PARK AVE HISTORIC DISTRICT, WHICH IS LISTED ON THE STATE AND/OR NATIONAL REGISTERS OF HISTORIC PLACES.

## DRAWING LIST


| | |
|---|---|
| A-001 | COVER SHEET |
| A-050 | DEMO FIRST FLOOR PLAN |
| A-051 | DEMO SECOND FLOOR PLAN |
| A-052 | DEMO FIRST FLOOR RCP |
| A-053 | DEMO SECOND FLOOR RCP |
| A-101 | FIRST FLOOR PLAN |
| A-102 | SECOND FLOOR PLAN |
| A-103 | FIRST FLOOR RCP |
| A-104 | SECOND FLOOR RCP |
| A-105 | FURNITURE & POWER PLAN |
| A-200 | INTERIOR ELEVATIONS |
| A-201 | INTERIOR ELEVATIONS |
| A-202 | INTERIOR ELEVATIONS |
| A-203 | INTERIOR ELEVATIONS |
| A-204 | INTERIOR ELEVATIONS |
| A-205 | INTERIOR ELEVATIONS |
| A-301 | PARTITION TYPES & DETAILS |
| A-302 | DETAILS |
| A-303 | DETAILS |
| A-304 | ADA STANDARDS |
| A-600 | SCHEDULES |


## BUILDING LEGEND

- DENOTES EXG TO REMAIN
- DENOTES EXTENT OF DEMOLITION
- DENOTES NEW WALL CONSTRUCTION
- DENOTES NEW PARTIAL HEIGHT WALL CONSTRUCTION
- HIDDEN
- OVERHEAD
- FURNITURE

## DRAWING SYMBOLS

- Drawing No. / TITLE / SCALE — DRAWING TITLE
- COLUMN LINES
- Drawing No. / Sheet No. — SECTION KEY
- Drawing No. / Sheet No. — INTERIOR ELEVATION
- RM.NAME / #### — ROOM NAME AND NUMBER
- # SF — AREA OF SPACE
- Drawing No. / Sheet No. — DETAIL KEY
- DOOR NUMBER
- WINDOW NUMBER
- PARTITION TYPE
- ACCESSORY NUMBER
- REVISION NUMBER
- FIRE EXTINGUISHER
- DIMENSION
- DATUM, CONTROL ELEVATION
- MAIN ENTRY
- ALTERNATE ENTRY
- NORTH ARROW
- EP — ELECTRICAL PANEL

| | |
|---|---|
| E | DENOTES EXG DEVICE TO REMAIN |
| N | DENOTES NEW DEVICE IN NEW LOCATION |
| R | DENOTES RELOCATION OF EXG DEVICE |
| NE | DENOTES NEW DEVICE IN EXG' LOCATION |
| #" | HEIGHT OF DEVICE |

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Jarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-6300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.


PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

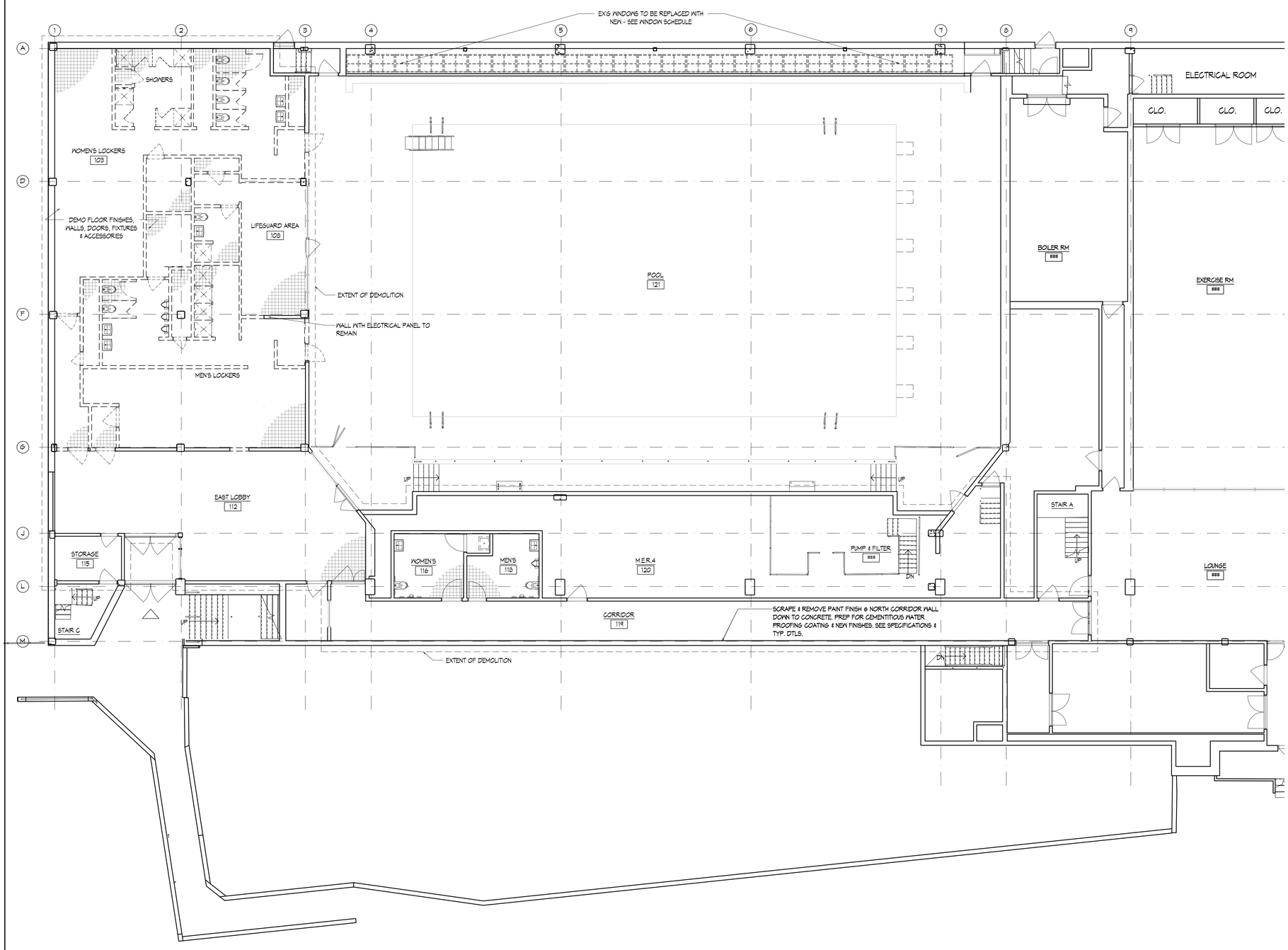
DRAWING

GENERAL NOTES & PLOT PLAN

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-001.00
DRAWN BY
of N.T.S.

NYC DOB Number




1 DEMOLITION FIRST FLOOR PLAN (EAST SIDE)
1/8"=1'-0"

## DEMOLITION PLAN NOTES

1. PROTECT ALL EXG CONDITIONS TO REMAIN.
2. SCOPE OF DEMOLITION & REMOVAL WORK SHALL NOT BE LIMITED BY THESE DWGS BUT SHALL INCLUDE ALL WORK NECESSARY TO FACILITATE CONSTRUCTION.
3. GC TO REMOVE & LEGALLY DISPOSE OF ALL PLUMBING FIXTURES AND MISC. CONSTR. DEBRIS SCHEDULED TO BE DEMOLISHED. CONTACT RIOC FACILITIES DEPARTMENT FOR RIGHT OF FIRST REFUSAL FOR ITEMS BEING REMOVED.
4. REMOVE WALLS, DOORS, ETC. AS INDICATED.
5. NOTIFY ARCHITECT IF FIXTURES OR DEVICES EXIST WHICH ARE NOT NOTED ON THE PLAN.
6. CONTRACTOR TO NOTIFY ARCHITECT OF ALL RISERS, AND PIPING EXPOSED DURING DEMOLITION.
7. ALL DEMO TO BE DONE W/ MINIMAL IMPACT ON WORK ENVIRONMENT. AREAS TO BE LEFT CLEAN AND SAFE AT END OF EACH SHIFT.
8. DEMOLITION OF LOAD-BEARING WALLS ARE PROHIBITED.
9. CONTRACTOR TO SEAL ALL VENTS DURING DEMOLITION.
10. ALL PIPING NOT BEING REUSED, TO BE CAPPED AT RISER.
11. GC SHALL TAKE ALL NECESSARY STEPS IN SHORING THE WORK TEMPORARILY UNTIL ALL PERMANENT WORK IS IN PLACE.
12. 
13. NO CUTTING OR CHANNELING OF BUILDING STRUCTURE IS PERMITTED FOR ANY WORK.
14. ALL TILES & WALL COVERING ON EXG WALLS TO BE REMOVED TO EXPOSE PLASTER WALLS, TYP.
15. GC SHALL HAVE A LICENSED ASBESTOS INSPECTOR PERFORM TESTS ON THE MATERIAL TO BE DEMOLISHED, PRIOR TO CONSTRUCTION. IF THE RESULT OF THIS TEST IS NEGATIVE, THEN THE CONTRACTOR SHALL ISSUE AN ACP-5 FORM TO THE BOARD OF MANAGERS. IF THAT MATERIAL TO BE DEMOLISHED IS CONTAMINATED W/ ASBESTOS, THEN THIS PROJECT WILL REQUIRE FILING W/ THE NYC DOB AND, THEN A LICENSED ASBESTOS ABATEMENT CONTRACTOR SHALL REMOVE THE SUSPECT MATERIAL FROM THE PREMISE.
16. IF GAS SERVICE IS PRESENT IN A WALL SCHEDULED TO BE DEMOLISHED, THE EXISTING RISERS MAY NOT BE ALTERED IN ANY WAY.
17. THERE SHALL BE NO CHOPPING INTO THE CONCRETE FLOOR SLAB, CEILING, COLUMNS, OR SHEAR WALLS FOR ANY REASON.
18. ALL EXG FLOORING TO BE REMOVED DOWN TO SLAB.

AREAS WITH CT FL. FOR DEMO.

## BUILDING LEGEND

- DENOTES EXG TO REMAIN
- DENOTES EXTENT OF DEMOLITION
- DENOTES NEW WALL CONSTRUCTION
- DENOTES NEW PARTIAL HEIGHT WALL CONSTRUCTION
- HIDDEN
- OVERHEAD
- FURNITURE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Oroonoyas Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

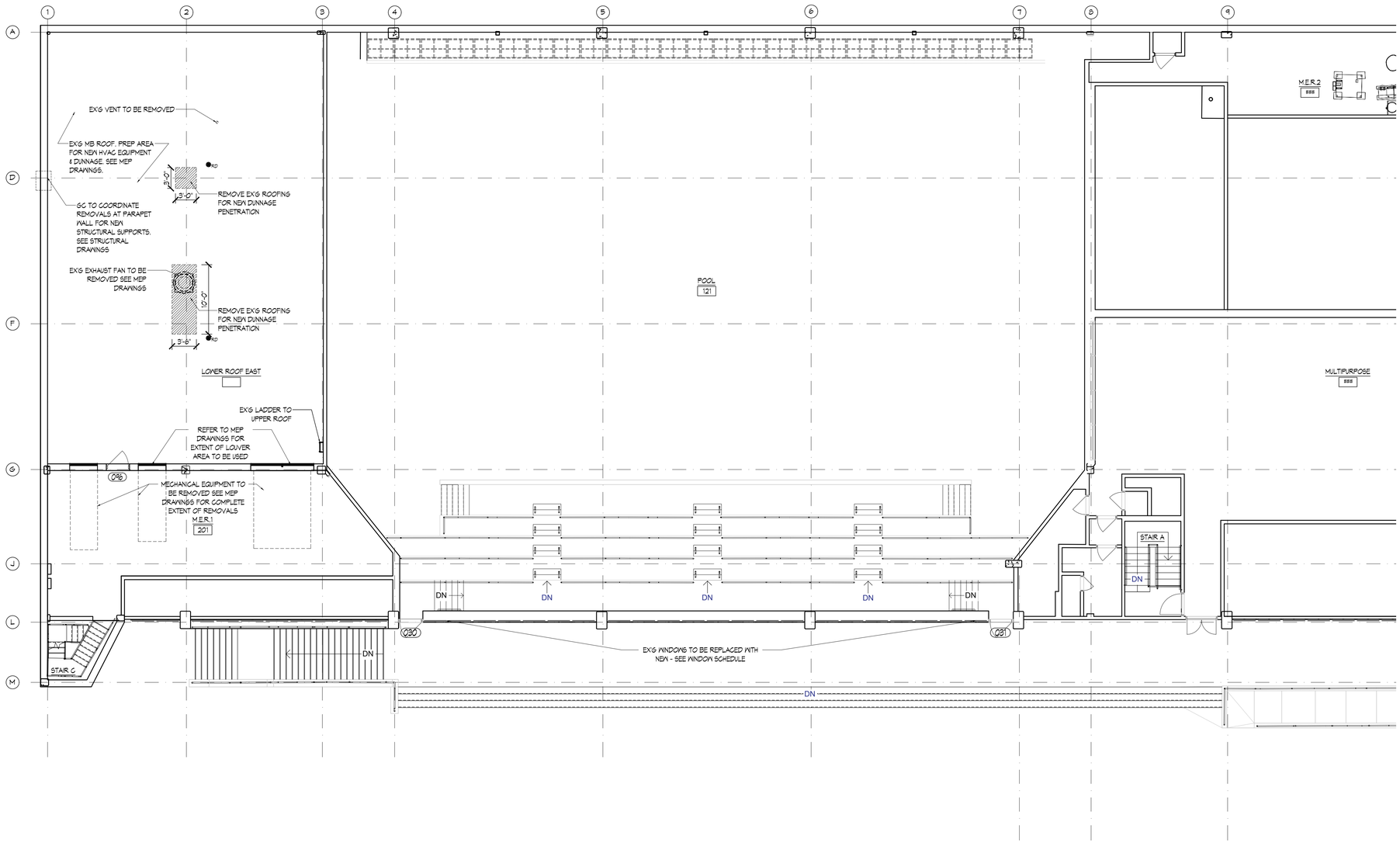
DRAWING

DEMOLITION FIRST FLOOR PLAN (EAST SIDE)

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-050.00
DRAWN BY
1/8" = 1'-0"

NYC DOB Number




1 DEMOLITION SECOND FLOOR PLAN (EAST SIDE)
1/8"=1'-0"

## DEMOLITION PLAN NOTES

1. PROTECT ALL EXG CONDITIONS TO REMAIN.
2. SCOPE OF DEMOLITION & REMOVAL WORK SHALL NOT BE LIMITED BY THESE DWGS BUT SHALL INCLUDE ALL WORK NECESSARY TO FACILITATE CONSTRUCTION.
3. GC TO REMOVE & LEGALLY DISPOSE OF ALL PLUMBING FIXTURES AND MISC. CONSTR. DEBRIS SCHEDULED TO BE DEMOLISHED. CONTACT RIOC FACILITIES DEPARTMENT FOR RIGHT OF FIRST REFUSAL FOR ITEMS BEING REMOVED.
4. REMOVE WALLS, DOORS, ETC. AS INDICATED.
5. NOTIFY ARCHITECT IF FIXTURES OR DEVICES EXIST WHICH ARE NOT NOTED ON THE PLAN.
6. CONTRACTOR TO NOTIFY ARCHITECT OF ALL RISERS, AND PIPING EXPOSED DURING DEMOLITION.
7. ALL DEMO TO BE DONE W/ MINIMAL IMPACT ON WORK ENVIRONMENT. AREAS TO BE LEFT CLEAN AND SAFE AT END OF EACH SHIFT.
8. DEMOLITION OF LOAD-BEARING WALLS ARE PROHIBITED.
9. CONTRACTOR TO SEAL ALL VENTS DURING DEMOLITION.
10. ALL PIPING NOT BEING REUSED, TO BE CAPPED AT RISER.
11. GC SHALL TAKE ALL NECESSARY STEPS IN SHORING THE WORK TEMPORARILY UNTIL ALL PERMANENT WORK IS IN PLACE.
12. 
13. NO CUTTING OR CHANNELING OF BUILDING STRUCTURE IS PERMITTED FOR ANY WORK.
14. ALL TILES & WALL COVERING ON EXG WALLS TO BE REMOVED TO EXPOSE PLASTER WALLS, TYP.
15. GC SHALL HAVE A LICENSED ASBESTOS INSPECTOR PERFORM TESTS ON THE MATERIAL TO BE DEMOLISHED, PRIOR TO CONSTRUCTION. IF THE RESULT OF THIS TEST IS NEGATIVE, THEN THE CONTRACTOR SHALL ISSUE AN ACP-5 FORM TO THE BOARD OF MANAGERS. IF THAT MATERIAL TO BE DEMOLISHED IS CONTAMINATED W/ ASBESTOS, THEN THIS PROJECT WILL REQUIRE FILING W/ THE NYC DOB AND; THEN A LICENSED ASBESTOS ABATEMENT CONTRACTOR SHALL REMOVE THE SUSPECT MATERIAL FROM THE PREMISE.
16. IF GAS SERVICE IS PRESENT IN A WALL SCHEDULED TO BE DEMOLISHED, THE EXISTING RISERS MAY NOT BE ALTERED IN ANY WAY.
17. THERE SHALL BE NO CHOPPING INTO THE CONCRETE FLOOR SLAB, CEILING, COLUMNS, OR SHEAR WALLS FOR ANY REASON.
18. ALL EXG FLOORING TO BE REMOVED DOWN TO SLAB.
19. REPLACE EXISTING WINDOWS TYPE A AT NORTH WALL.
20. PREP FOR NEW FINISHES AT EXTERIOR WALLS.

## BUILDING LEGEND

- DENOTES EXG TO REMAIN
- DENOTES EXTENT OF DEMOLITION
- DENOTES NEW WALL CONSTRUCTION
- DENOTES NEW PARTIAL HEIGHT WALL CONSTRUCTION
- HIDDEN
- OVERHEAD
- FURNITURE

N

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

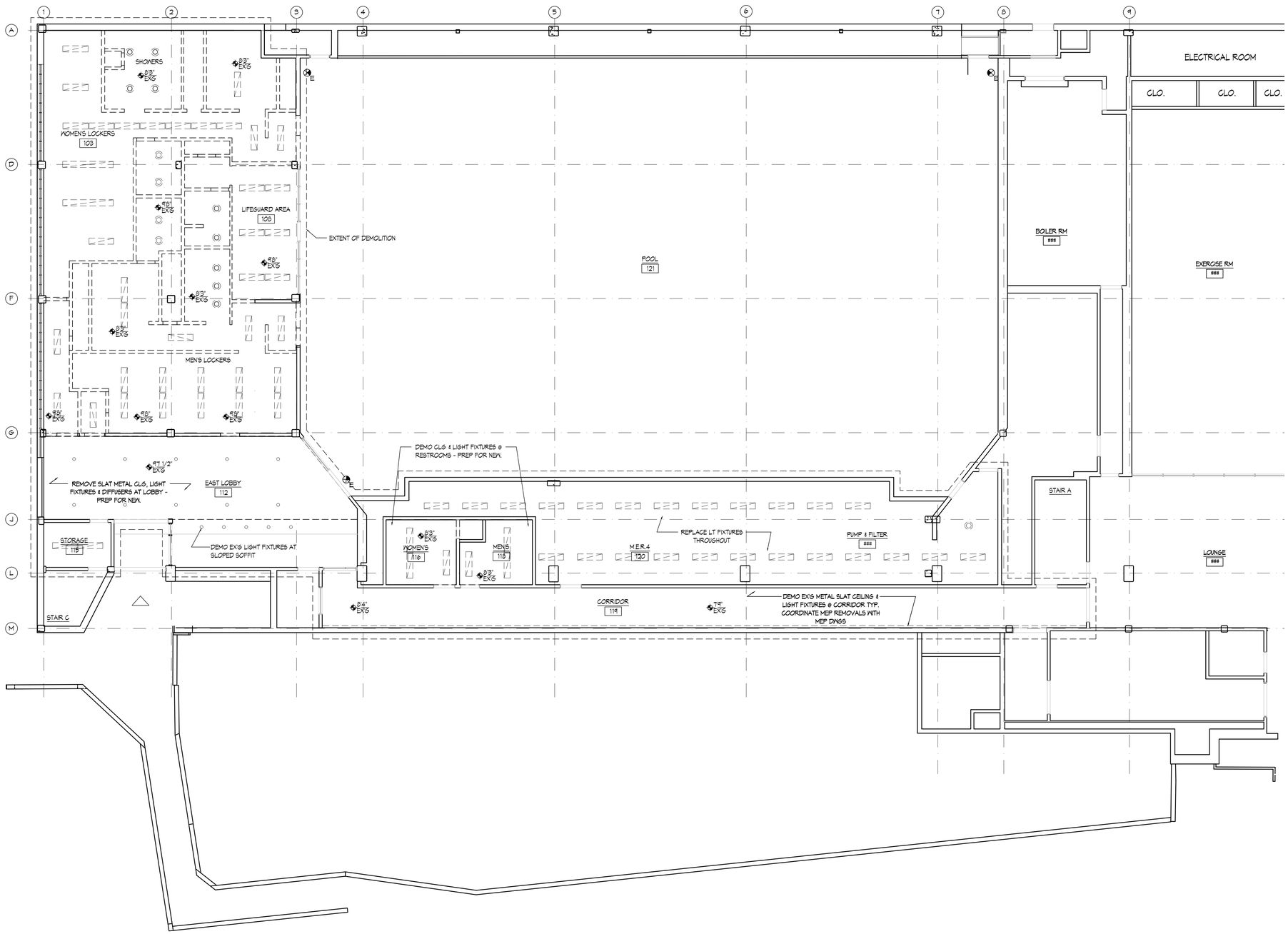
DRAWING

DEMOLITION 2ND FLOOR PLAN

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-051.00
DRAWN BY
1/8" = 1'-0"

NYC DOB Number




1 DEMOLITION FIRST FLOOR REFLECTED CEILING PLAN (EAST SIDE)
1/8"=1'-0"

## DEMOLITION RCP NOTES

1. PROTECT ALL EXG CONDITIONS TO REMAIN.
2. SCOPE OF DEMOLITION & REMOVAL WORK SHALL NOT BE LIMITED BY THESE DWGS BUT SHALL INCLUDE ALL WORK NECESSARY TO FACILITATE CONSTRUCTION.
3. NOTIFY ARCHITECT IF FIXTURES OR DEVICES EXIST WHICH ARE NOT NOTED ON THE PLAN.
4. DEMOLISH ALL EXISTING LIGHT FIXTURES, DIFFUSERS & CEILINGS AT LOCKER ROOMS.
5. REMOVE EXG LIGHT FIXTURES, DUCTS & DIFFUSERS AT POOL CEILING. REMOVE ALL ASSOCIATED CONDUITS/SUPPORTS.
6. PREP FOR REPAIRS OF DAMAGED CEILINGS & FOR NEW FIXTURES THROUGHOUT.
7. EXISTING SKYLIGHTS TO REMAIN. GC TO PROVIDE PROTECTION TO ALL AREAS TO REMAIN ADJACENT TO SCOPE OF REMOVALS.
8. REMOVE LT FIXTURES AS NOTED.
9. ALL CLG MTD FIXTURES TO BE REMOVED.

## DEMO RCP LEGEND

- DEMO EXG SUPPLY GRILLE
- DEMO EXG LT FIXTURE
- DEMO EXG EXHAUST GRILLE
- DEMO EXG LT FIXTURE

- REVISION NUMBER
- FIRE EXTINGUISHER
- DIMENSION
- DATUM, CONTROL ELEVATION
- MAIN ENTRY
- ALTERNATE ENTRY
- NORTH ARROW
- EP ELECTRICAL PANEL
- E EXISTING
- N NEW

## BUILDING LEGEND

- DENOTES EXG TO REMAIN
- DENOTES EXTENT OF DEMOLITION
- DENOTES NEW WALL CONSTRUCTION
- DENOTES NEW PARTIAL HEIGHT WALL CONSTRUCTION
- HIDDEN
- OVERHEAD
- FURNITURE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

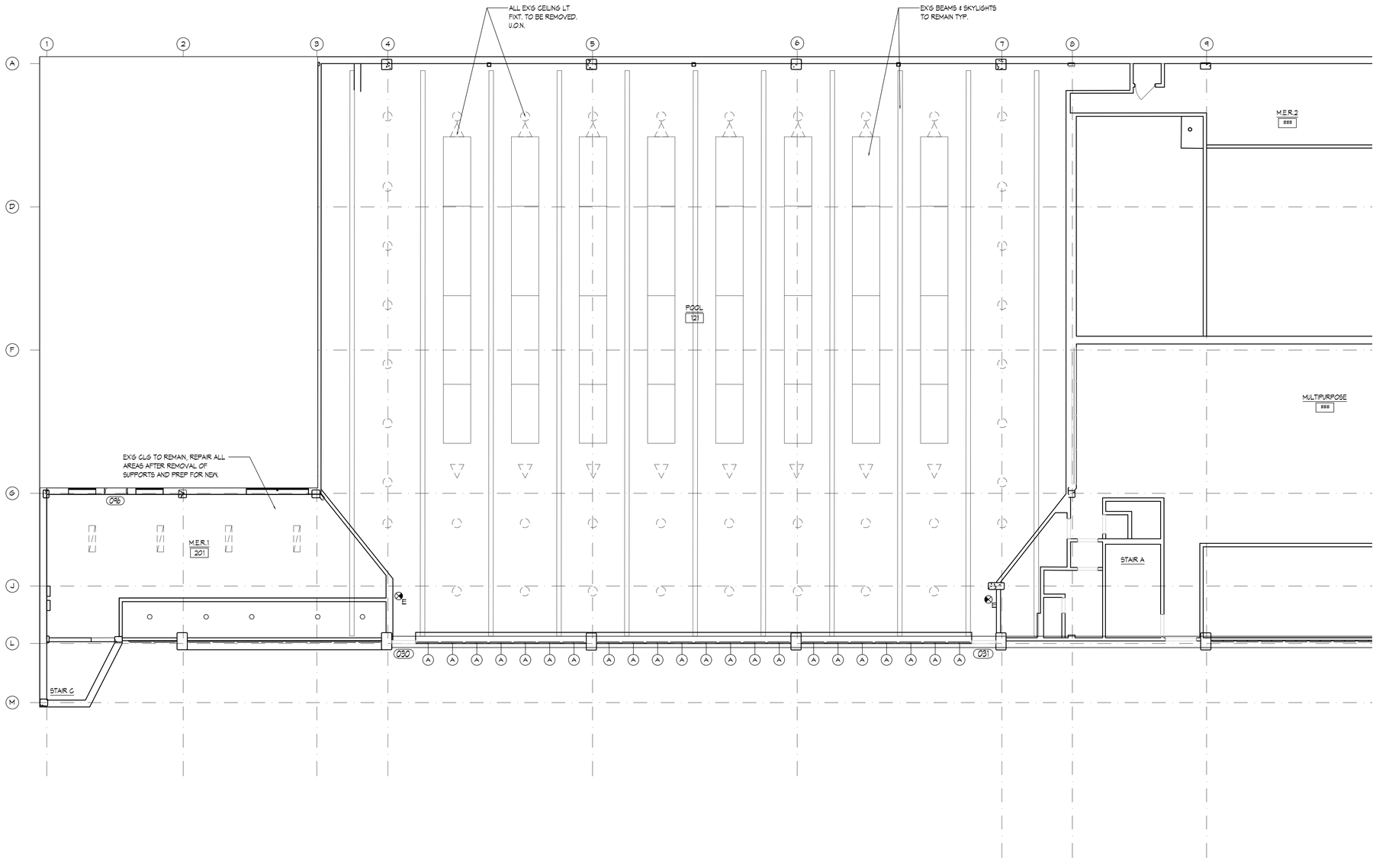
250 Main St.
Roosevelt Island, NY
10044

DRAWING

# DEMOLITION FIRST FLOOR REFLECTED CEILING PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 04.03.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. A-052.00 |
| | DRAWN BY |
| | 1/8" = 1'-0" |

NYC DOB Number




1 DEMOLITION SECOND FLOOR RCP (EAST SIDE)
1/8"=1'-0"

## DEMOLITION RCP NOTES

1. PROTECT ALL EXG CONDITIONS TO REMAIN.
2. SCOPE OF DEMOLITION & REMOVAL WORK SHALL NOT BE LIMITED BY THESE DWGS BUT SHALL INCLUDE ALL WORK NECESSARY TO FACILITATE CONSTRUCTION.
3. NOTIFY ARCHITECT IF FIXTURES OR DEVICES EXIST WHICH ARE NOT NOTED ON THE PLAN.
4. DEMOLISH ALL EXISTING LIGHT FIXTURES, DIFFUSERS & CEILINGS AT M.E.R. ROOM AND POOL AREA.
5. REMOVE EXG LIGHT FIXTURES, DUCTS & DIFFUSERS AT POOL CEILING. REMOVE ALL ASSOCIATED CONDUITS/SUPPORTS.
6. PREP FOR REPAIRS OF DAMAGED CEILINGS & FOR NEW FIXTURES THROUGHOUT.
7. EXISTING SKYLIGHTS TO REMAIN. GC TO PROVIDE PROTECTION TO ALL AREAS TO REMAIN ADJACENT TO SCOPE OF REMOVALS.
8. REMOVE LT FIXTURES AS NOTED.
9. ALL CLG MTD FIXTURES TO BE REMOVED.

## DEMO RCP LEGEND

- DEMO EXG SUPPLY GRILLE
- DEMO EXG LT FIXTURE
- DEMO EXG EXHAUST GRILLE
- DEMO EXG LT FIXTURE

## BUILDING LEGEND

- DENOTES EXG TO REMAIN
- DENOTES EXTENT OF DEMOLITION
- DENOTES NEW WALL CONSTRUCTION
- DENOTES NEW PARTIAL HEIGHT WALL CONSTRUCTION
- HIDDEN
- OVERHEAD
- FURNITURE

N

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

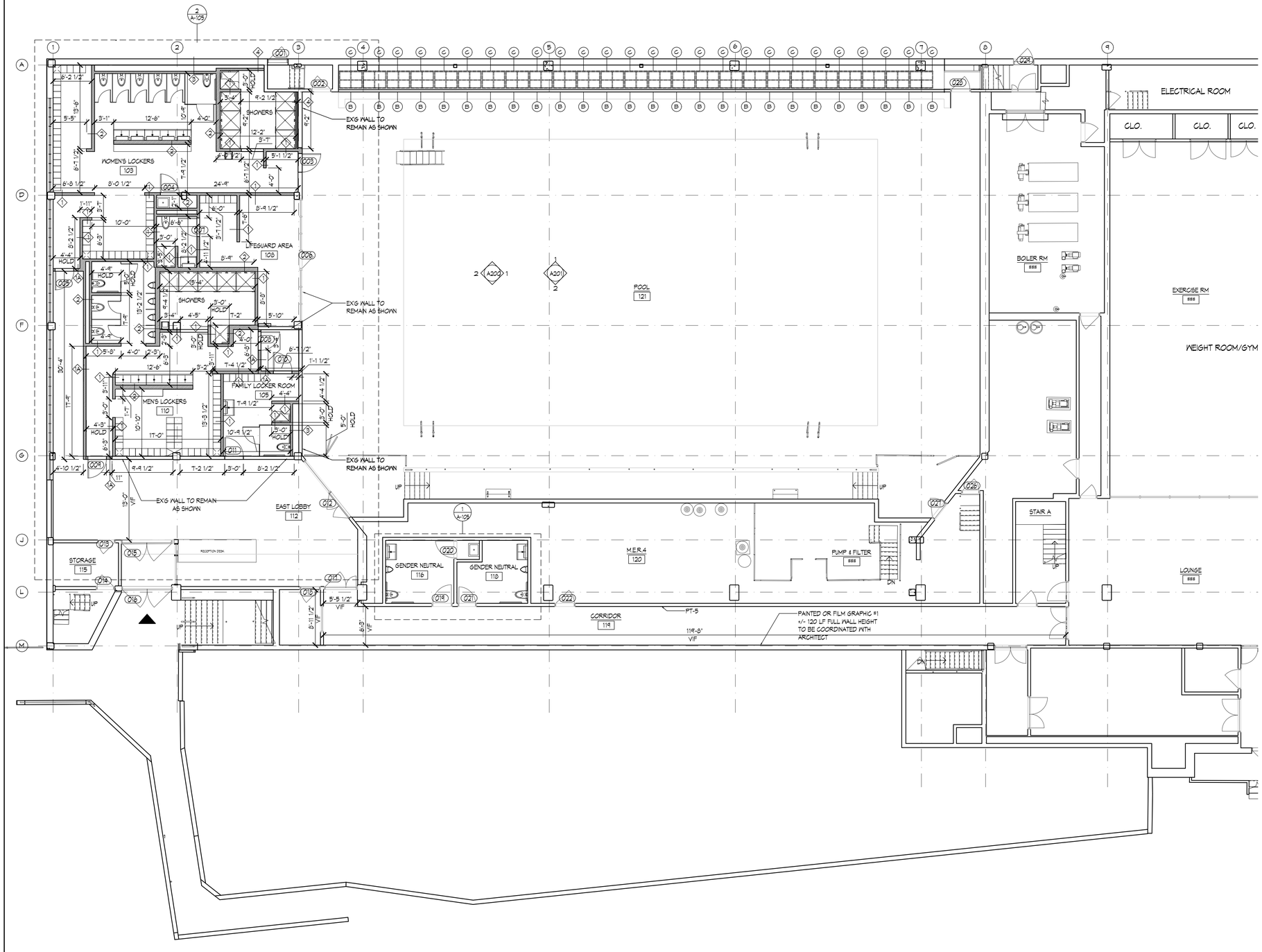
DRAWING

DEMOLITION 2ND FLOOR RCP

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-053.00
DRAWN BY
1/8" = 1'-0"

NYC DOB Number




1 FIRST FLOOR PLAN
1/8"=1'-0"

## CONSTRUCTION PLAN NOTES

1. ALL EXPOSED, EXG SURFACES, INCLUDING WALLS AND CEILINGS, SHOULD BE SKIM COATED TO MATCH SIMILAR QUALITY OF NEW PARTITIONS.
2. SUPPLY COPPER PLUMBING TO EQUIPMENT AS REQUIRED.
3. BURRY ALL WIRING & PATCH EXISTING PLASTER SURFACES WHICH HAVE BEEN CHANNELED FOR ELECTRICAL OR OTHER INVASIVE WORK. PREPARE AND PAINT WALLS TO MATCH EXISTING FINISH WORK.
4. ALL NEW CL TO RECEIVE SH & HANG RODS U.O.N.. ALL CLOSET POLES TO BE MINIMUM OF 1¼" DIA W/ A MINIMUM OF ONE SHELF. U.O.N. HEIGHTS TO BE VERIFIED BY OWNER. PROVIDE INTERMEDIATE SUPPORTS AS REQUIRED.
5. ALL RATED PARTITIONS SHALL EXTEND TO THE SLAB ABOVE. CEILING HEIGHT PARTITIONS SHALL BE BRACED TO THE SLAB ABOVE.
6. PATCH & REPAIR ANY AREAS DAMAGED BY LEAKAGE PRIOR TO NEW FINISHES & CONSTRUCTION.
7. PROVIDE NEW PARTITIONS & FINISHES @ NEW POOL LOCKER ROOMS.
8. PROVIDE NEW LIGHTING & POWER TO ALL POOL LOCKER AREAS, LOBBY, AND CORRIDOR.
9. REPAIR ALL LOOSE MORTAR & CMU BLOCK WALL @ SOUTH POOL AREA.
10. PROVIDE NEW INSULATION & WATER PROOFING @ SOUTH WALL - SEE TYPICAL DETAILS.
11. PROVIDE NEW CEMENTITIOUS WATER PROOFING @ NORTH CORRIDOR WALL.
12. PROVIDE FLUSH ACCESS PANEL W/TILE FIN SIMILAR TO ADJACENT @ ALL PLUMBING CHASES REQUIRING ACCESS - GC TO COORDINATE DIMS & LOCATION FOR ARCH REVIEW.

## BUILDING LEGEND

- DENOTES EXG TO REMAIN
- DENOTES EXTENT OF DEMOLITION
- DENOTES NEW WALL CONSTRUCTION
- DENOTES NEW PARTIAL HEIGHT WALL CONSTRUCTION
- HIDDEN
- OVERHEAD
- FURNITURE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

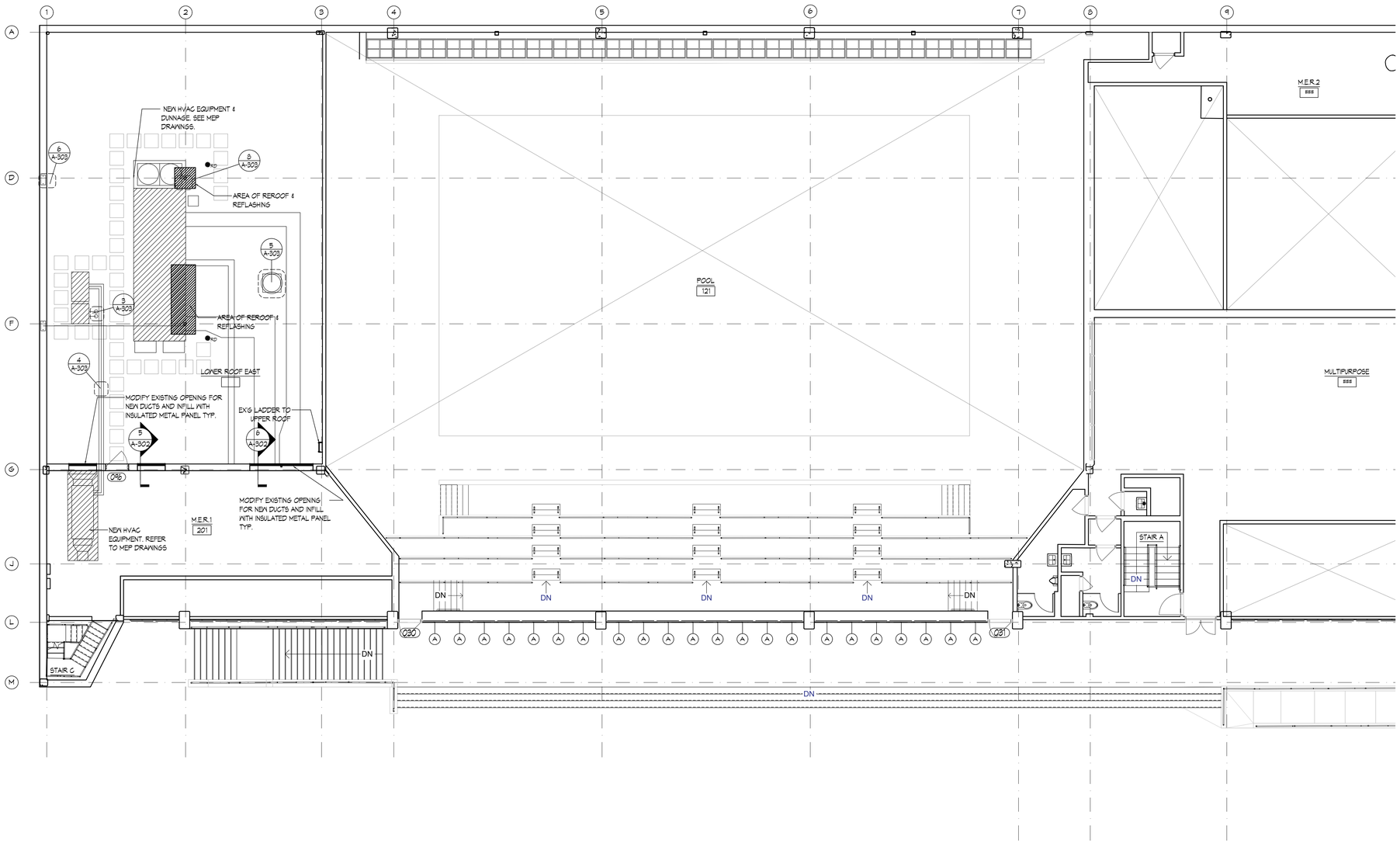
DRAWING

CONSTRUCTION FIRST FLOOR PLAN

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-101.00
DRAWN BY
1/8" = 1'-0"

NYC DOB Number




## CONSTRUCTION PLAN NOTES

GC TO COORDINATE ALL ROOF WORK WITH GARLAND ROOFING MANUFACTURER REPRESENTATIVE.ALL WORK MUST FOLLOW THE MANUFACTURERS REQUIREMENTS, FOR EXISTING ROOF PROTECTION, SHOP DRAWING DEVELOPMENT, SITE KICKOFF MEETING, CONSTRUCTION PROGRESS MEETINGS, AND TESTING REQUIRED TO MAINTAIN THE EXISTING ROOFING WARRANTY.
THE GARLAND COMPANY
Andrew Jones:
(516) 771-5051
ajones@garlandind.com

1. PROVIDE WALKING PADS AS LAID OUT ON PLAN AND AS DIRECTED BY ROOFING MANUFACTURER.
2. COODINATE PIPING AND DUCT SUPPORTS TO MAINTAIN PROPER WATER FLOW TOWARDS DRAINS.

## BUILDING LEGEND

- DENOTES EXS TO REMAIN
- DENOTES EXTENT OF DEMOLITION
- DENOTES NEW WALL CONSTRUCTION
- DENOTES NEW PARTIAL HEIGHT WALL CONSTRUCTION
- HIDDEN
- OVERHEAD
- FURNITURE

1 SECOND FLOOR PLAN
1/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

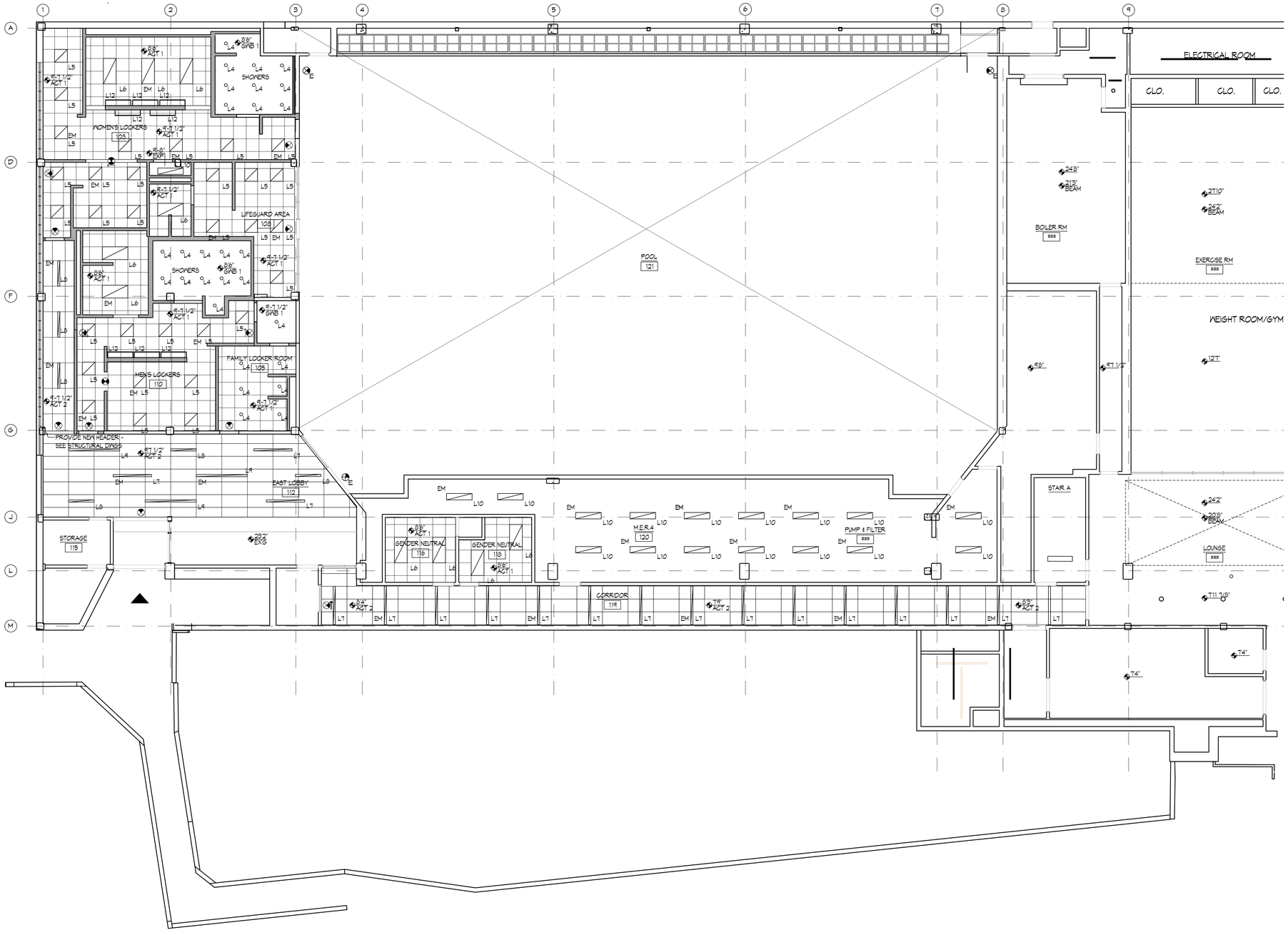
DRAWING

CONSTRUCTION
SECOND FLOOR PLAN

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-102.00
DRAWN BY
1/8" = 1'-0"

NYC DOB Number




1 FIRST FLOOR RCP
1/8"=1'-0"

## CONSTRUCTION RCP NOTES

1. GC TO COORDINATE M/MEP DRAWINGS FOR COMPLETE SCOPE OF WORK @ POOL/POOL LOCKERS.
2. PROVIDE NEW CLGS, LIGHTS AND HVAC GRILLES, DIFFUSERS AND FA EQUIPMENTS THROUGHOUT THE EAST POOL & LOCKER ROOM AREA.
3. PROVIDE EM FIXTURES AS SHOWN ON PLANS.
4. COORDINATE ALL NEW CONTROLS W/MEP DWGS.
5. ALL EXIT SIGNS TO HAVE EMERGENCY BATTERY PACKS AS PER SPECIFICATIONS.
6. GWB CLGS @ LOCKER SHOWER RM & VESTIBULE BETWEEN POOL & MEN'S & FAMILY LOCKER RM TO BE MOISTURE RESISTANT FIBEROCK AQUATOUGH AR PANELS OR APPROVED EQ. PER SPEC.

## RCP LEGEND

- LX — NEW LIGHT FIXTURE
- LX — NEW LIGHT FIXTURE
- EM LX — NEW DESIGNATED EMERGENCY LIGHT FIXTURE
- E — EXISTING EXIT SIGN TO REMAIN
- NEW EXIT SIGN

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

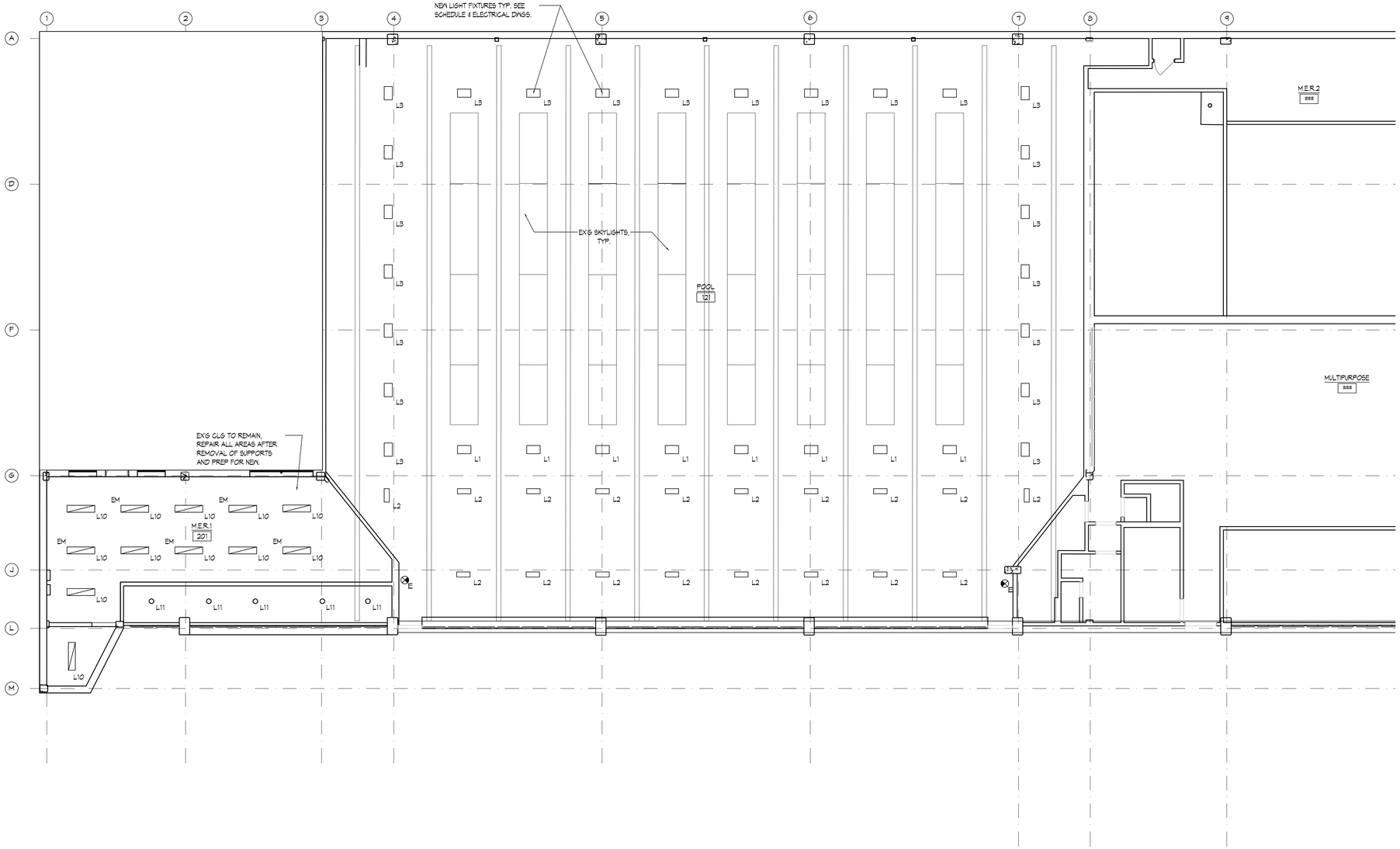
DRAWING

CONSTRUCTION FIRST FLOOR RCP

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-103.00
DRAWN BY
1/8" = 1'-0"

NYC DOB Number




1 2ND FLOOR/POOL RCP
1/8"=1'-0"

RCP LEGEND

- LX — NEW LIGHT FIXTURE
- LX — NEW LIGHT FIXTURE
- EM LX — NEW DESIGNATED EMERGENCY LIGHT FIXTURE
- E — EXISTING EXIT SIGN TO REMAIN
- NEW EXIT SIGN

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

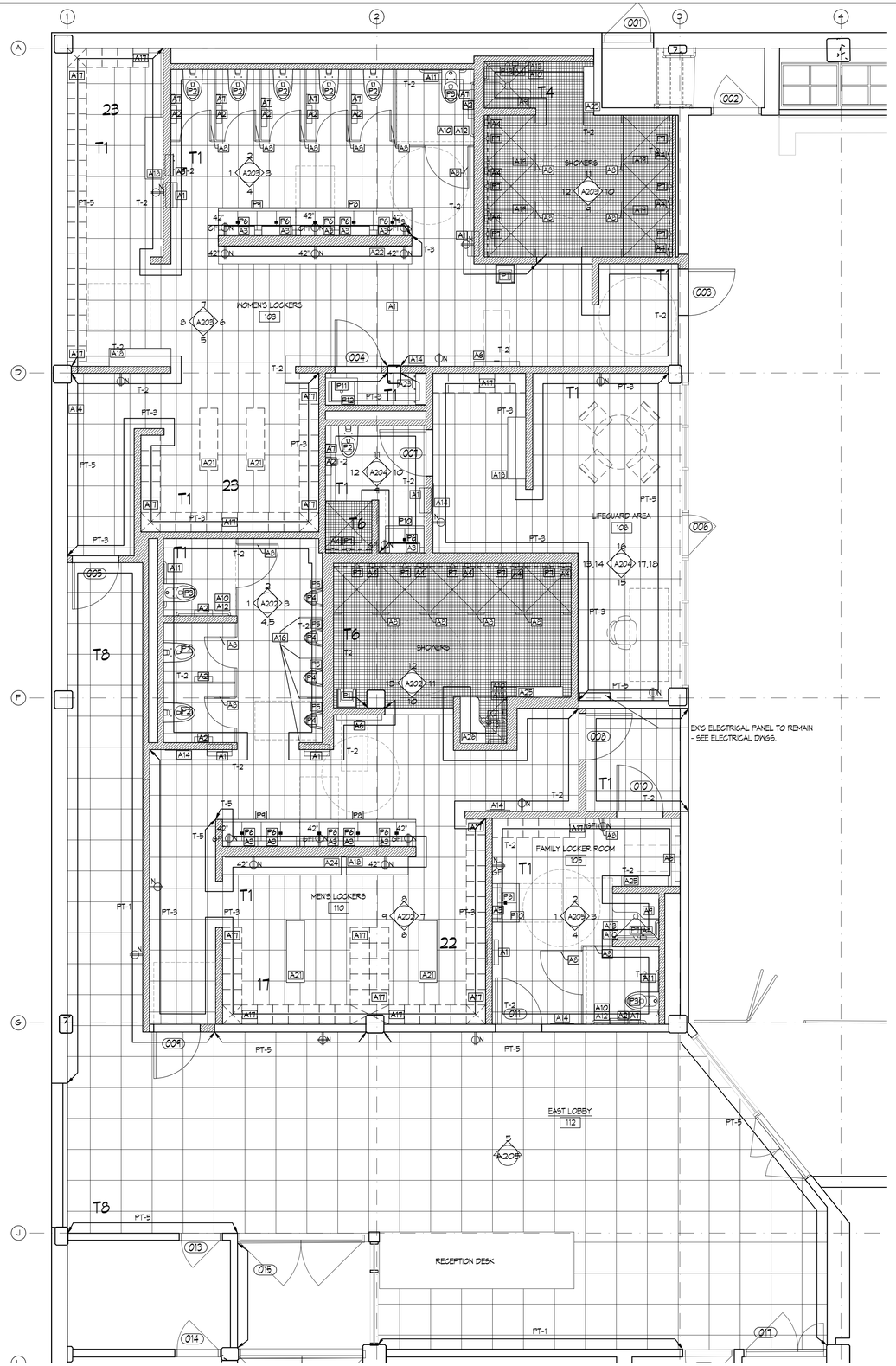
DRAWING

CONSTRUCTION SECOND FLOOR/POOL RCP

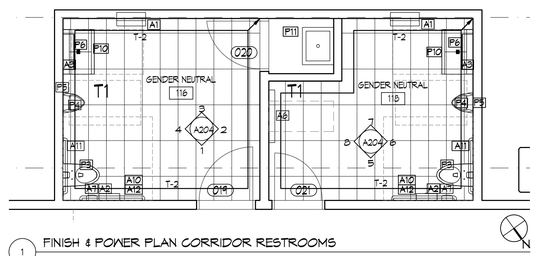
SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-104.00
DRAWN BY
1/8" = 1'-0"

NYC DOB Number




2 FINISH & POWER PLAN POOL LOCKER AREA
1/4"=1'-0"




1 FINISH & POWER PLAN CORRIDOR RESTROOMS
1/4"=1'-0"

## FINISH, FURNITURE & POWER PLAN NOTES

1. FURNITURE NOTED AS N.I.C. TO BE PROVIDED BY OWNER AND INSTALLED BY GC.
2. REFER TO FINISH SCHEDULE & SPECIFICATION FOR COMPLETE FURNITURE INFORMATION.
3. REPAINT ALL EXG WALLS & CLGS TO REMAIN.
4. REPAINT ALL DOORS & FRAMES TO REMAIN - SEE FINISH SCHEDULE.
5. ALL FL FIN'S TO BE COORDINATED W/SPECIFIED FL. FIN. THICKNESS, FL PREP, LEVELING & EASED PITCH TOWARDS NEW AREA FL DRAINS.
6. REFER TO ELEC. DWGS FOR SWITCHING & CIRCUITING OF POWER OUTLETS.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

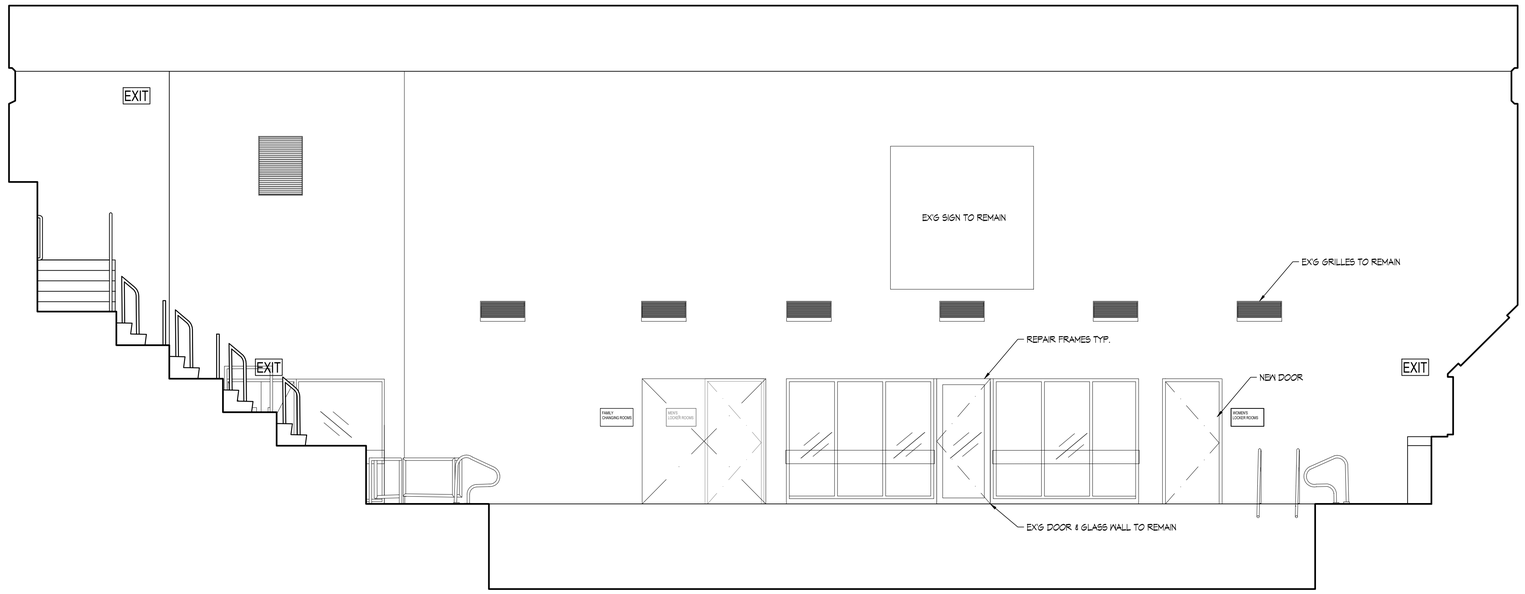
DRAWING

FINISH & POWER PLAN
FIRST FLOOR (EAST SIDE)

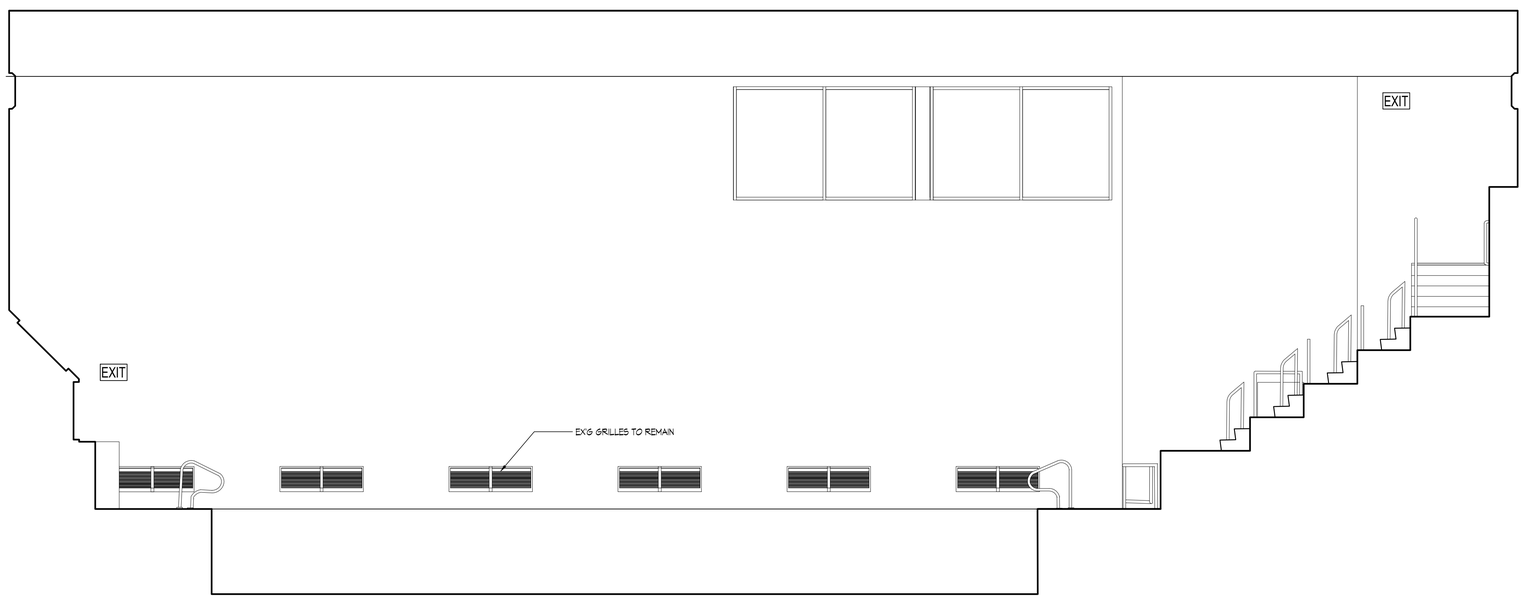
SEAL & SIGNATURE

| | |
|---|---|
| DATE | 04.03.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | A-105.00 |
| DRAWN BY | 1/4" = 1'-0" |

NYC DOB Number




2 POOL INTERIOR ELEVATION - WEST
1/4"=1'-0"




1 POOL INTERIOR ELEVATION - EAST
1/4"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER. SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

# INTERIOR ELEVATION POOL

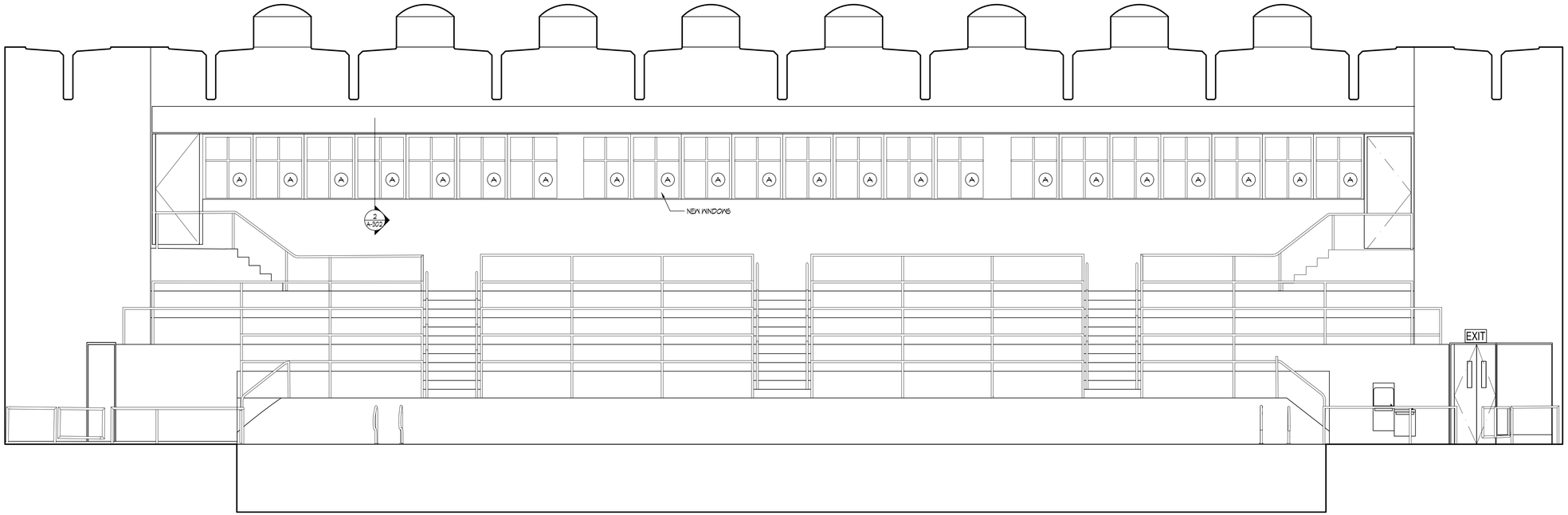
SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-200.00
DRAWN BY

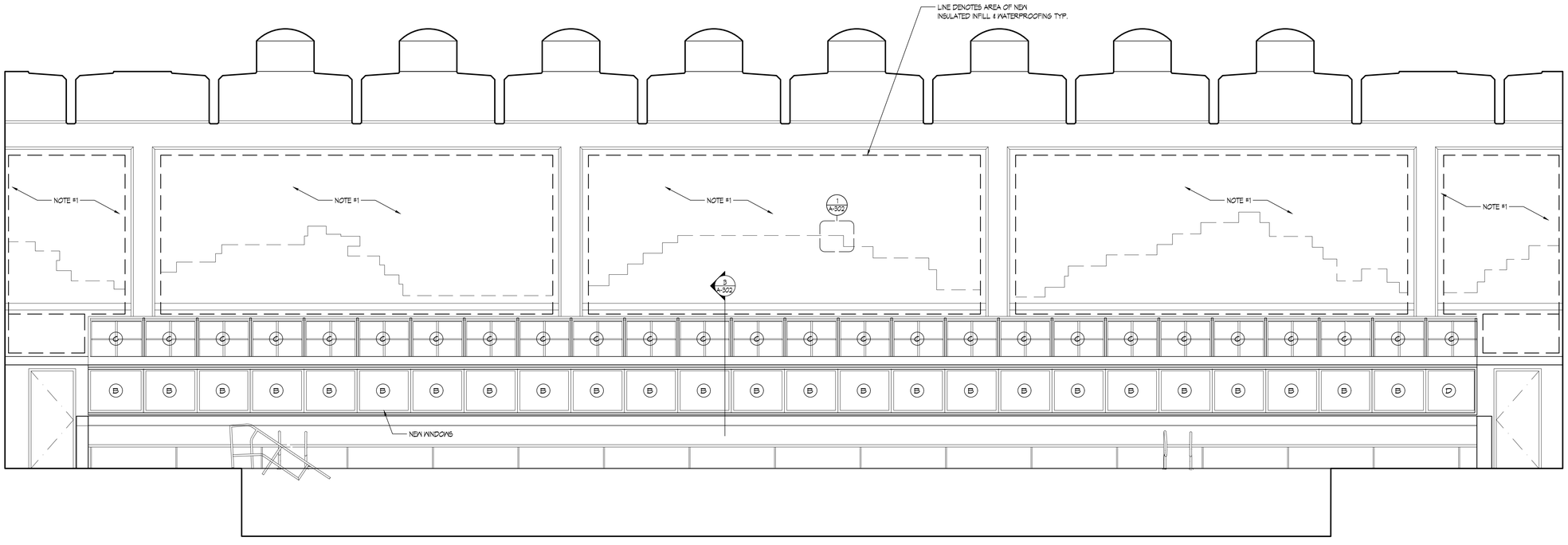
NYC DOB Number

NOTES:

1. REPAIR ALL STEP CRACKING AT SOUTH WALL @ POOL. REPOINT MORTAR & PREP FOR NEW WATER PROOFING & INSULATION. SEE A-302
2. REPLACE WINDOWS AS NOTED. SEE SCHEDULE & SPECIFICATION.




2 POOL INTERIOR ELEVATION - NORTH
1/4"=1'-0"




1 POOL INTERIOR ELEVATION - SOUTH
1/4"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

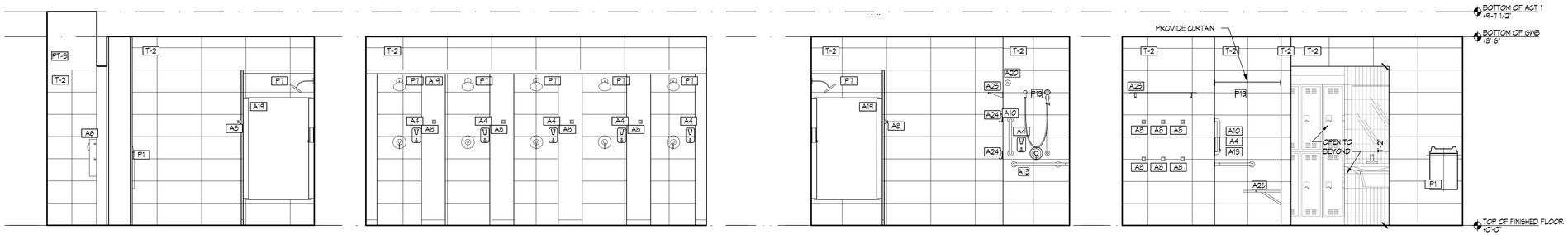
DRAWING

INTERIOR ELEVATION POOL

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-201.00
DRAWN BY

NYC DOB Number

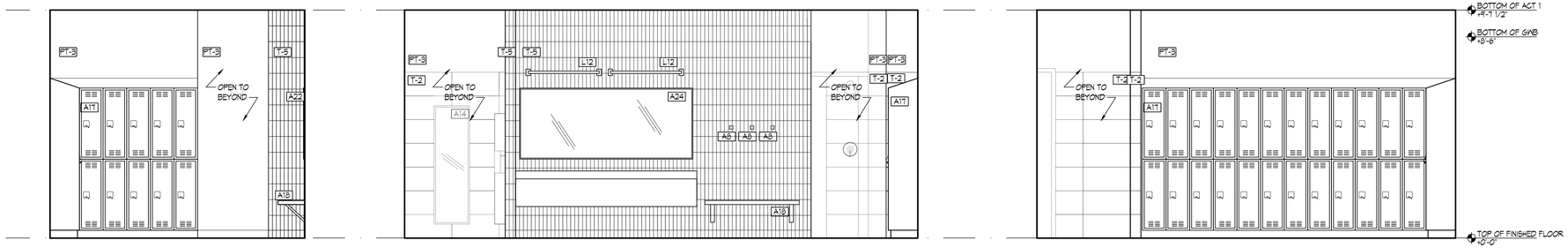



13 MEN'S SHOWER - EAST
3/8"=1'-0"

12 MEN'S SHOWER - SOUTH
3/8"=1'-0"

11 MEN'S SHOWER - WEST
3/8"=1'-0"

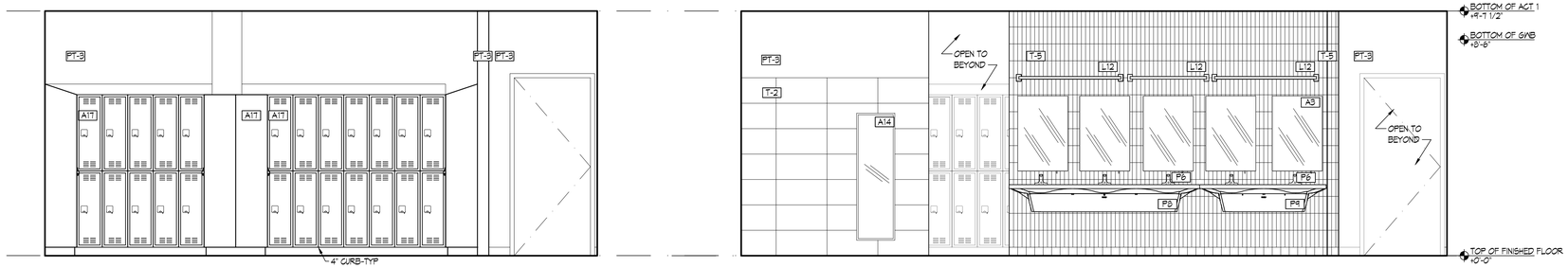
10 MEN'S SHOWER - NORTH
3/8"=1'-0"




9 MEN'S POOLSIDE LOCKER ROOM - EAST
3/8"=1'-0"

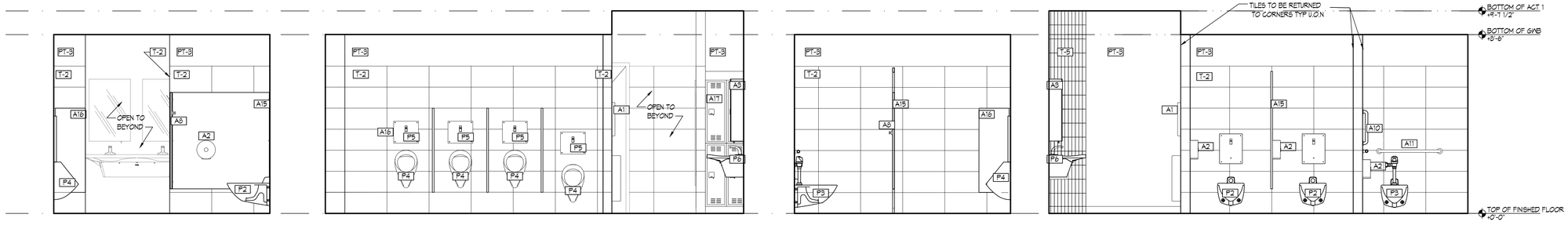
8 MEN'S POOLSIDE LOCKER ROOM - SOUTH
3/8"=1'-0"

7 MEN'S POOLSIDE LOCKER ROOM - WEST
3/8"=1'-0"




6 MEN'S POOLSIDE LOCKER ROOM - NORTH
3/8"=1'-0"

5 MEN'S RESTROOM - NORTH
3/8"=1'-0"




4 MEN'S RESTROOM - NORTH
3/8"=1'-0"

3 MEN'S RESTROOM - WEST
3/8"=1'-0"

2 MEN'S RESTROOM - SOUTH
3/8"=1'-0"

1 MEN'S RESTROOM - EAST
3/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 723-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

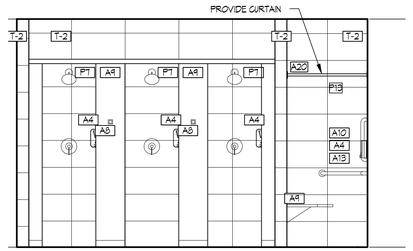
DRAWING

# INTERIOR ELEVATION MEN'S LOCKER ROOM

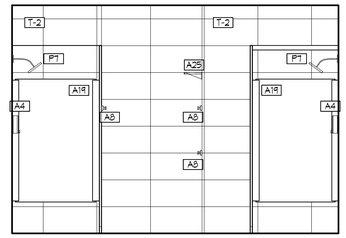
SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-202.00
DRAWN BY

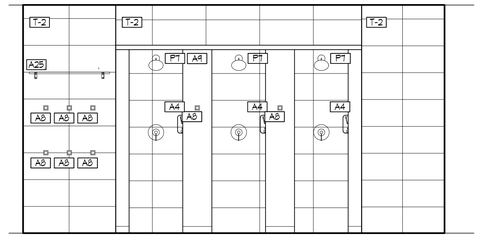
NYC DOB Number



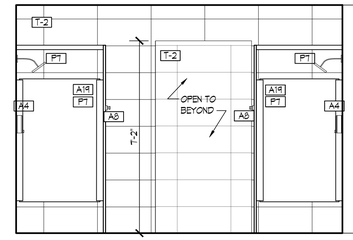

12 WOMEN'S SHOWER - EAST
3/8"=1'-0"



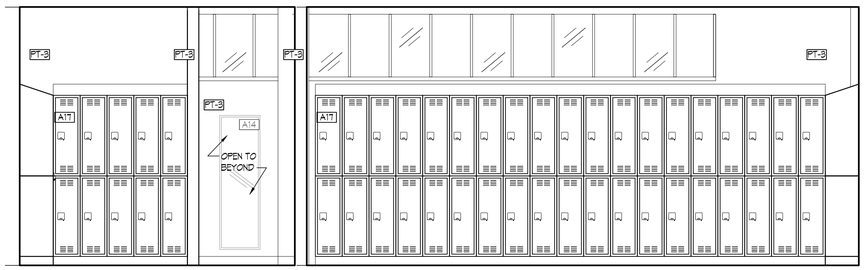

11 WOMEN'S SHOWER - SOUTH
3/8"=1'-0"



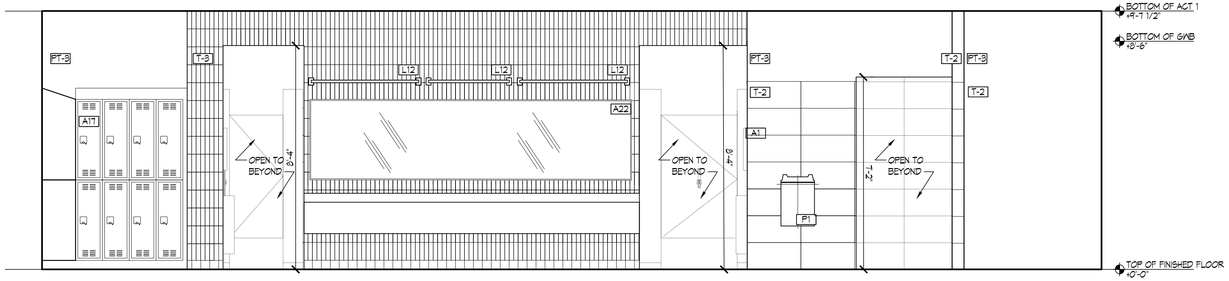

10 WOMEN'S SHOWER - WEST
3/8"=1'-0"



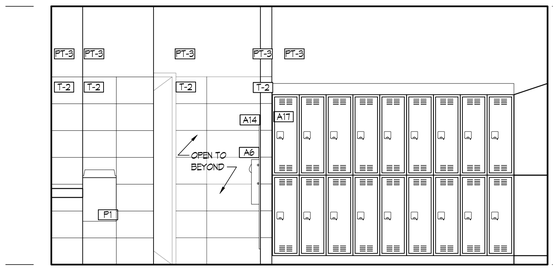

9 WOMEN'S SHOWER - NORTH
3/8"=1'-0"



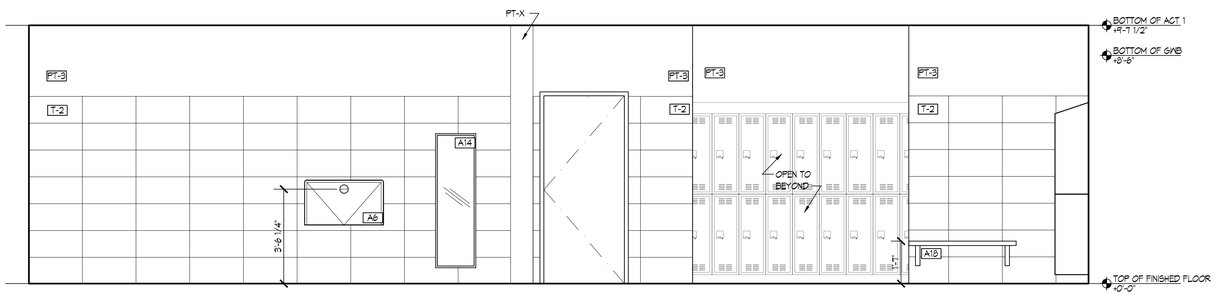

8 WOMEN'S POOLSIDE LOCKER ROOM - EAST
3/8"=1'-0"



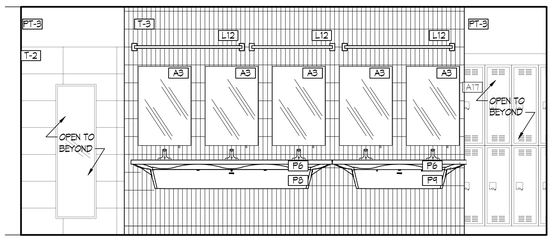

7 WOMEN'S POOLSIDE LOCKER ROOM - SOUTH
3/8"=1'-0"



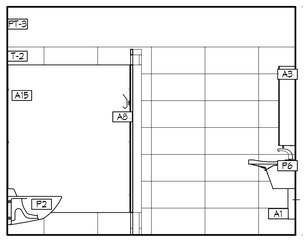

6 WOMEN'S POOLSIDE LOCKER ROOM - WEST
3/8"=1'-0"



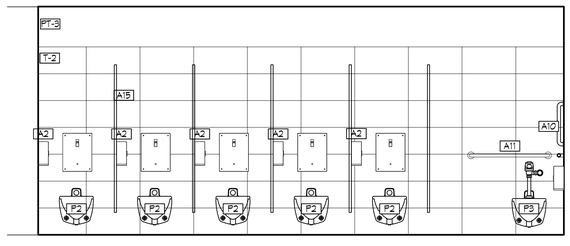

5 WOMEN'S POOLSIDE LOCKER ROOM - NORTH
3/8"=1'-0"



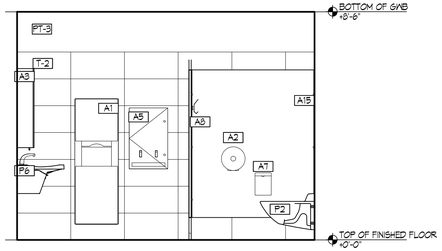

4 WOMEN'S RESTROOM - NORTH
3/8"=1'-0"




3 WOMEN'S RESTROOM - WEST
3/8"=1'-0"




2 WOMEN'S RESTROOM - SOUTH
3/8"=1'-0"




1 WOMEN'S RESTROOM - EAST
3/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameroneng.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

# INTERIOR ELEVATION WOMEN'S LOCKER ROOM

SEAL & SIGNATURE

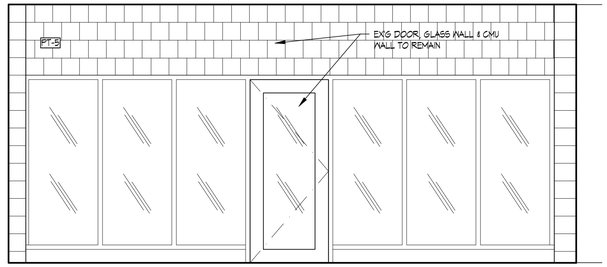
DATE 04.03.2019

JOB NUMBER 19010

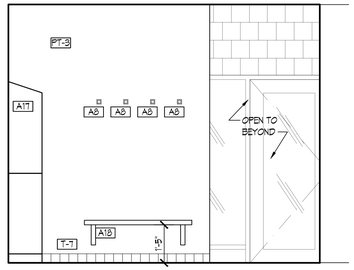
DWG. No. A-203.00

DRAWN BY

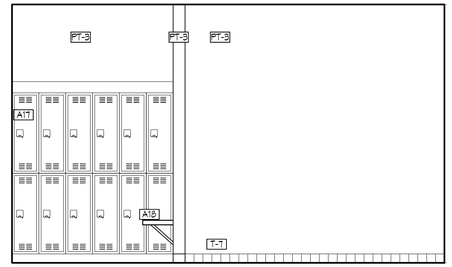
NYC DOB Number



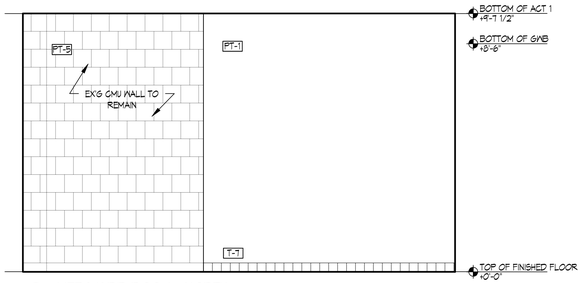

18 LIFEGUARD ROOM - WEST
3/8"=1'-0"



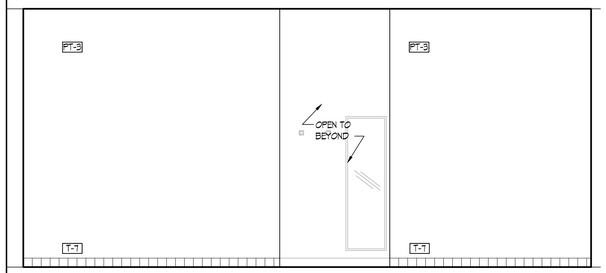

17 LIFEGUARD ROOM - WEST
3/8"=1'-0"



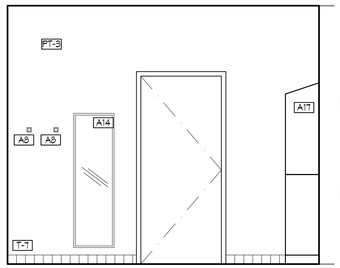

16 LIFEGUARD ROOM - SOUTH
3/8"=1'-0"



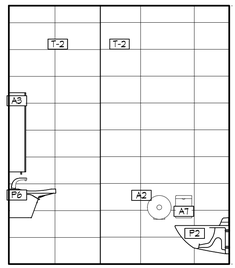

15 LIFEGUARD ROOM - NORTH
3/8"=1'-0"



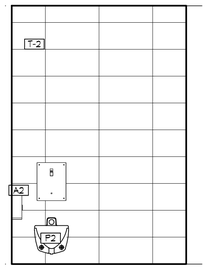

14 LIFEGUARD ROOM - EAST
3/8"=1'-0"



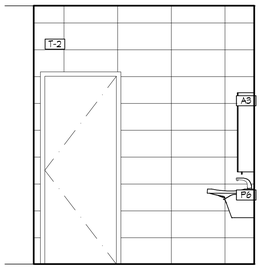

13 LIFEGUARD ROOM - EAST
3/8"=1'-0"



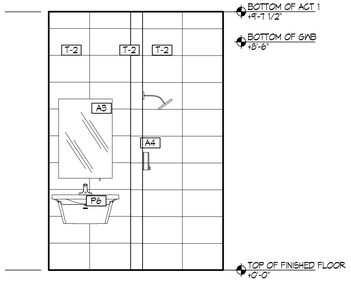

12 LIFEGUARD BATHROOM - EAST
3/8"=1'-0"



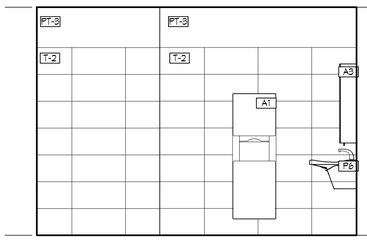

11 LIFEGUARD BATHROOM - SOUTH
3/8"=1'-0"



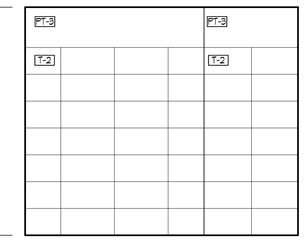

10 LIEGUARD BATHROOM - WEST
3/8"=1'-0"



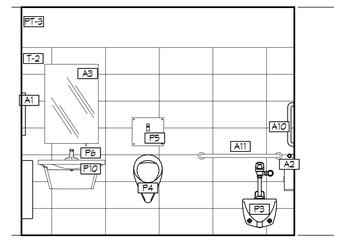

9 LIFEGUARD BATHROOM - NORTH
3/8"=1'-0"



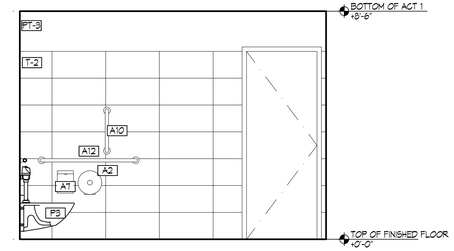

8 GENDER NEUTRAL RESTROOM 118 - SOUTH
3/8"=1'-0"



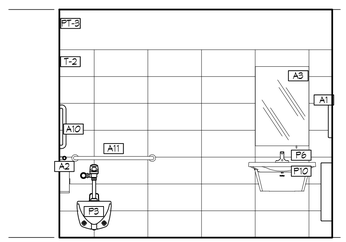

7 GENDER NEUTRAL RESTROOM 118 - EAST
3/8"=1'-0"



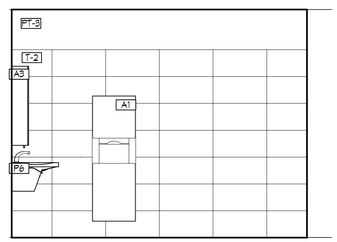

6 GENDER NEUTRAL RESTROOM 118 - WEST
3/8"=1'-0"



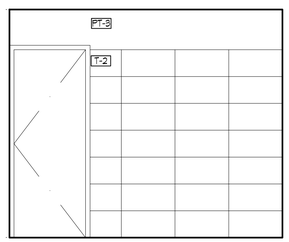

5 GENDER NEUTRAL RESTROOM 118 - NORTH
3/8"=1'-0"



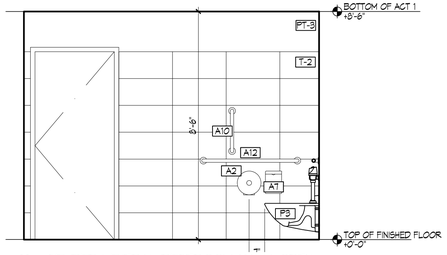

4 GENDER NEUTRAL RESTROOM 116 - EAST
3/8"=1'-0"




3 GENDER NEUTRAL RESTROOM 116 - SOUTH
3/8"=1'-0"




2 GENDER NEUTRAL RESTROOM 116 - WEST
3/8"=1'-0"




1 GENDER NEUTRAL RESTROOM 116 - NORTH
3/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

INTERIOR ELEV.
SINGLE RESTROOM &
FAMILY ROOM

SEAL & SIGNATURE

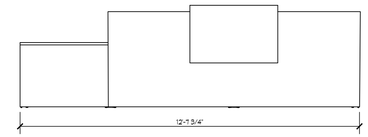
DATE 04.03.2019

JOB NUMBER 19010

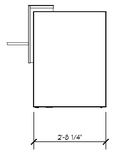
DWG. No. A-204.00

DRAWN BY

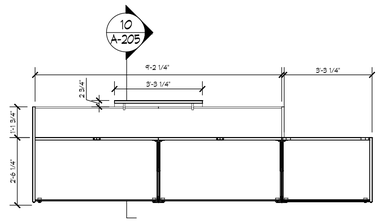
NYC DOB Number



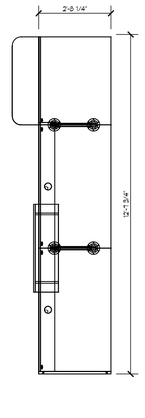

6 MILLWORK ELEVATION - FRONT
3/8"=1'-0"



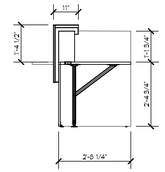

7 SIDE
3/8"=1'-0"



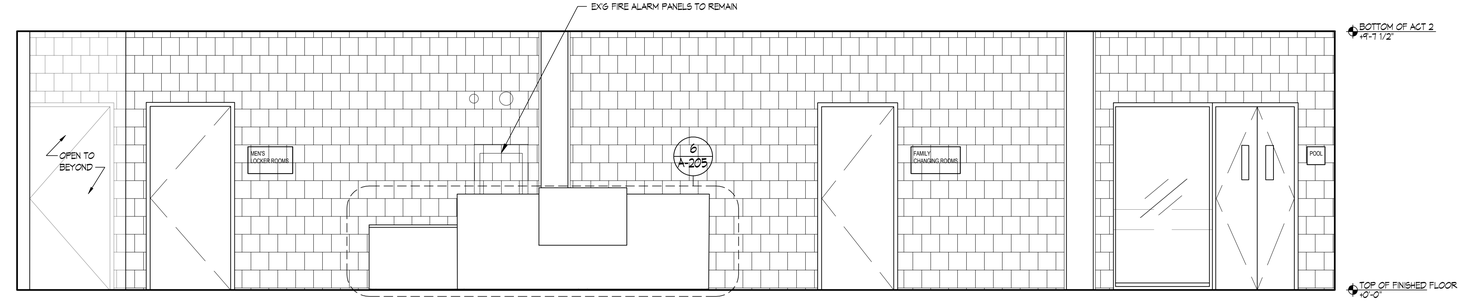

8 BACK
3/8"=1'-0"



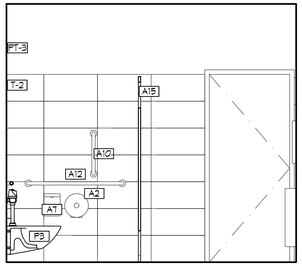

9 TOP
3/8"=1'-0"



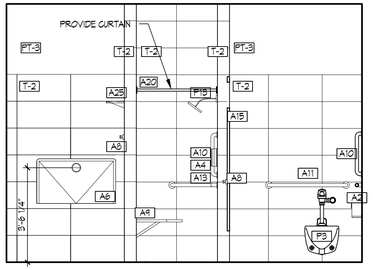

10 SECTION
3/8"=1'-0"



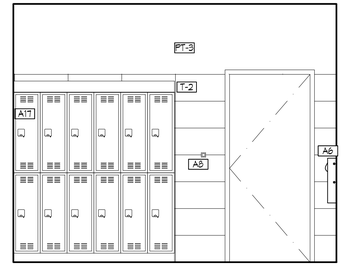

5 LOBBY ELEVATION - SOUTH
3/8"=1'-0"



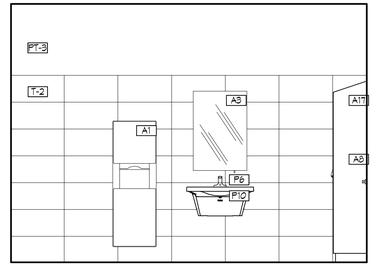

4 FAMILY ROOM - NORTH
3/8"=1'-0"




3 FAMILY ROOM - WEST
3/8"=1'-0"




2 FAMILY ROOM - SOUTH
3/8"=1'-0"




1 FAMILY ROOM - EAST
3/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

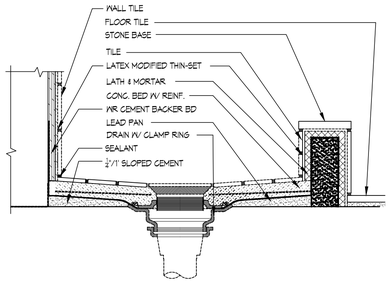
DRAWING

# INTERIOR ELEVATION POOLSIDE LOBBY

SEAL & SIGNATURE

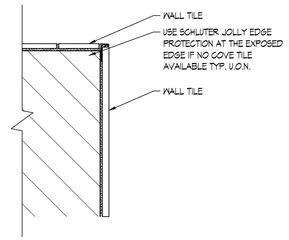
DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-205.00
DRAWN BY

NYC DOB Number

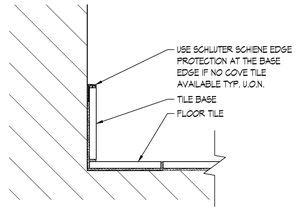



NOTE: CONTRACTOR MUST WATER TEST THE LEAD PAN FOR 48 HRS PRIOR TO INSTALLING ANY FINISH MATERIAL. LEAD PAN MUST WRAP OVER CURB AND EXTEND AT LEAST 8" UP SIDE WALL.

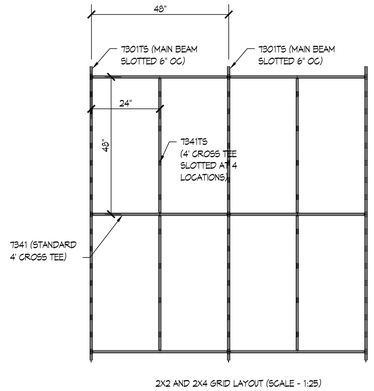
15 TILED SHOWER CURB
3"=1'-0"



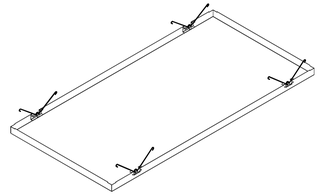

14 OUTSIDE CORNER TILE TRANSITION
3"=1'-0"



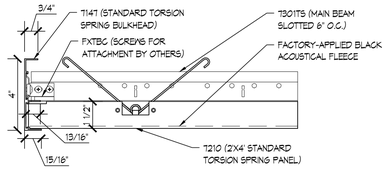

13 TILE BASE
3"=1'-0"



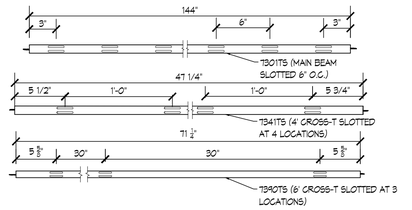

2X2 AND 2X4 GRID LAYOUT (SCALE - 1:25)



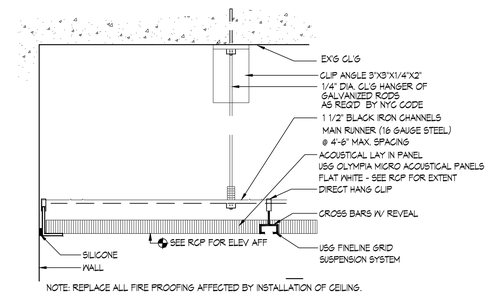
12 METAL CEILING - GRID LAYOUT
3"=1'-0"




9 METAL CEILING - PERIMETER BULKHEAD DETAIL
3"=1'-0"

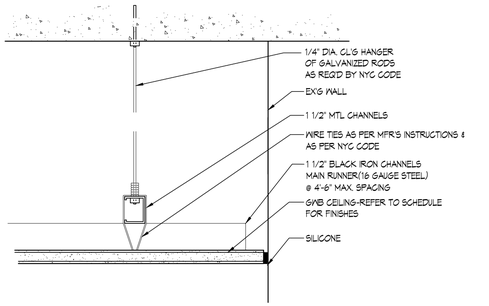



8 METAL CEILING - SLOTTED GRID MEMBERS
3"=1'-0"



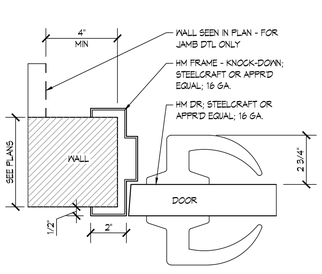

NOTE: REPLACE ALL FIRE PROOFING AFFECTED BY INSTALLATION OF CEILING.

11 GWB CEILING
3"=1'-0"

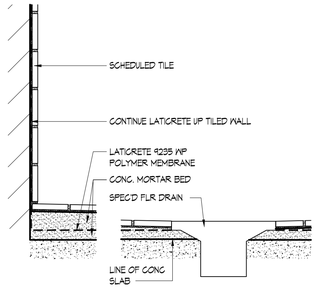



NOTE: USG FIBEROCK AQUA-TOUGH AR INTERIOR PANEL AT WET LOCATIONS

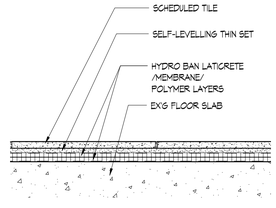
10 ACT CEILING
3"=1'-0"



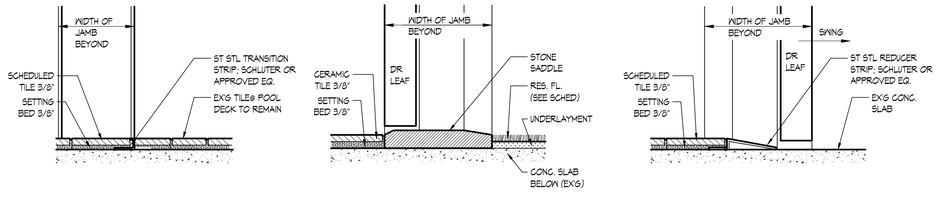

7 DOOR JAMB
3"=1'-0"



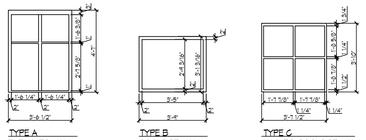

6 TILED WALL & FLOOR TRANSITION & DRAIN
3"=1'-0"



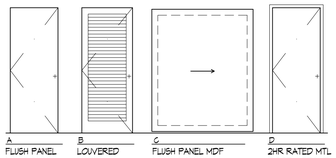

5 WATERPROOF TILE FLOOR
3"=1'-0"



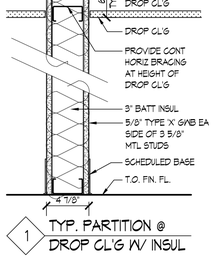

4 FLOOR TRANSITIONS
3"=1'-0"



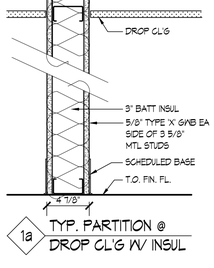

3 WINDOW TYPES A, B, C
1/4"=1'-0"



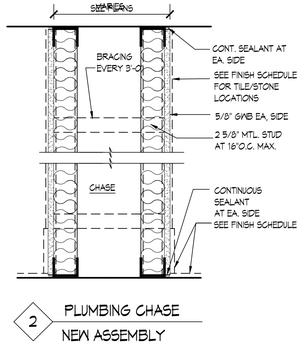

2 DOOR TYPES A, B, C, D
1/4"=1'-0"



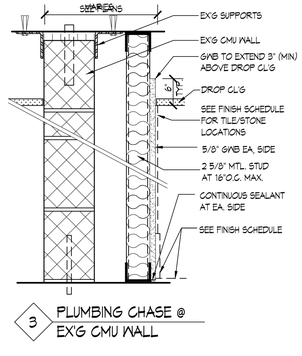

1 TYP. PARTITION @ DROP CL'G W/ INSUL



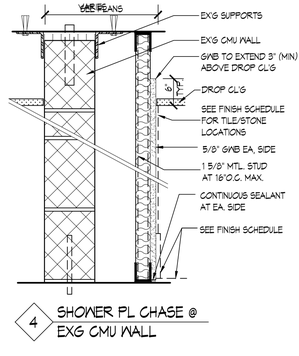

1a TYP. PARTITION @ DROP CL'G W/ INSUL



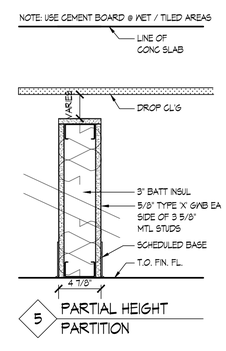

2 PLUMBING CHASE NEW ASSEMBLY




3 PLUMBING CHASE @ EX'G CMU WALL




4 SHOWER PL CHASE @ EXG CMU WALL




5 PARTIAL HEIGHT PARTITION

| NO. | DESCRIPTION |
|---|---|
| 1 | PARTITION SCHEDULE |

1 1/2"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T: 212 594 4015
F: 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

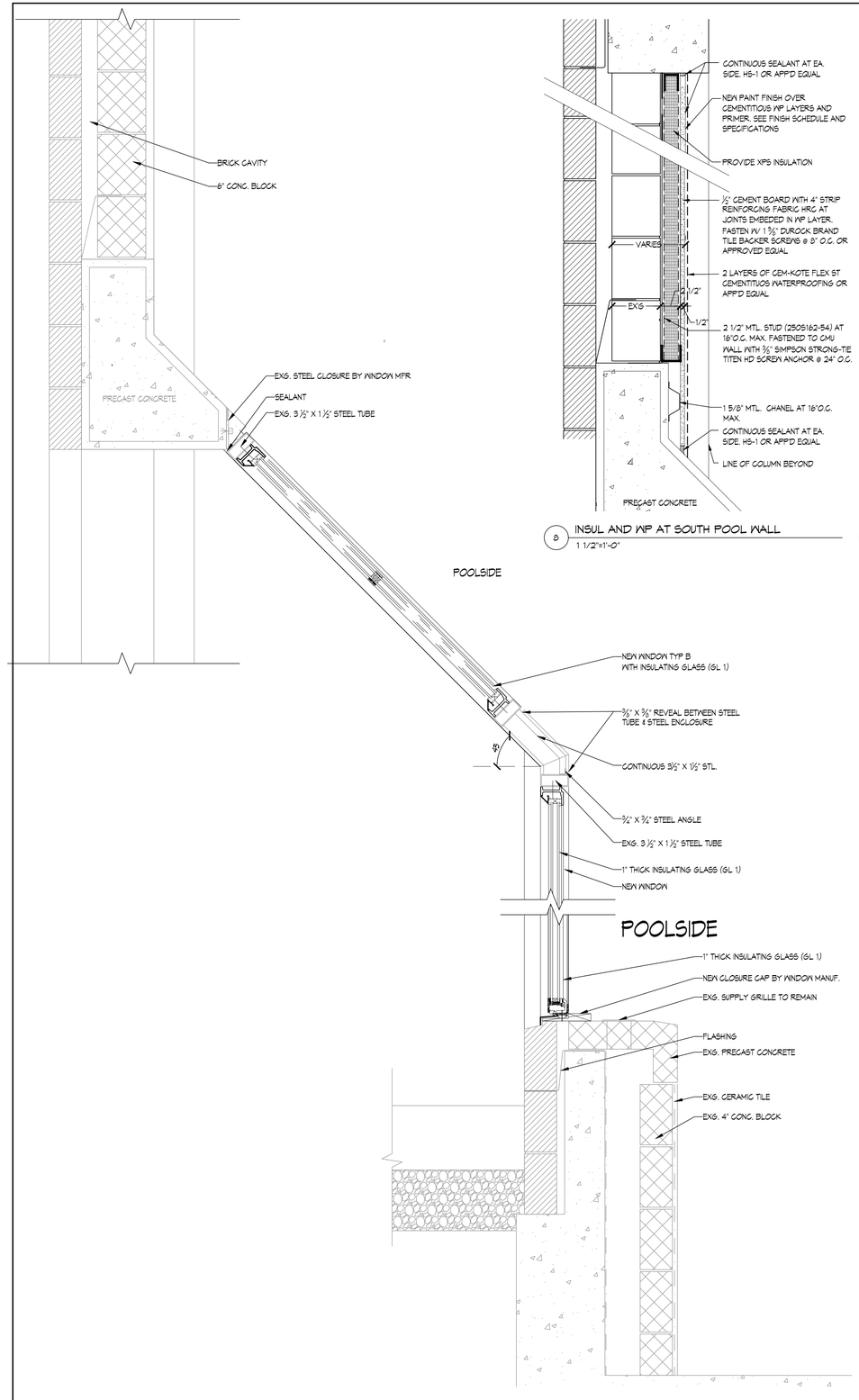
DRAWING

# PARTITIONS TYPE & DETAILS

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 04.03.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | A-301.00 of __ |
| DRAWN BY | |

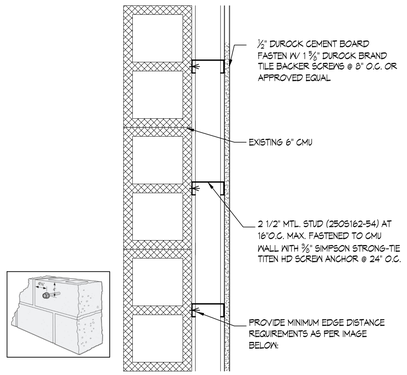
NYC DOB Number




3 POOL WALL SECTION - EXG SOUTH (POOL)
1 1/2"=1'-0"

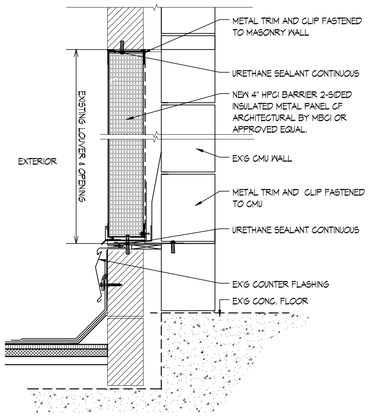



8 INSUL AND WP AT SOUTH POOL WALL
1 1/2"=1'-0"

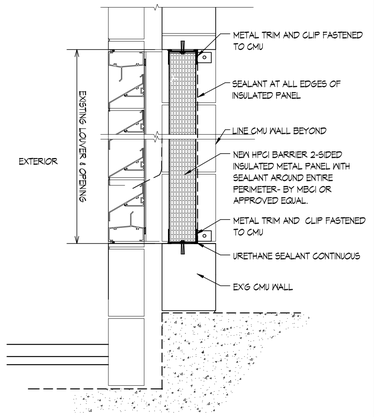



NOTE:
1. USE A STRIP OF REINFORCING FABRIC N/A OVER THE JOINTS BETWEEN THE CEMENT BOARDS.
2. CEM-KOTE FLEX 5T IS NOT AN ARCHITECTURAL PRODUCT - IF AESTHETICS IS IMPORTANT, THEN YOU NEED GOOD GUYS TO MAKE IT STRAIGHT AND EVEN WITHOUT TROWEL MARKS.
3. PRESSURE WASH IT - ABOUT 2,000 PSI. APPLY PRIMER 300 AND THEN TUFF-COTE SNR (SHORT NAP ROLLER) - PDS ARE ATTACHED. TUFF-COTE SNR IS TEXTURED COATING - IT WILL PROVIDE SOME MINOR HIDING OF SUBSTRATE IMPERFECTIONS.

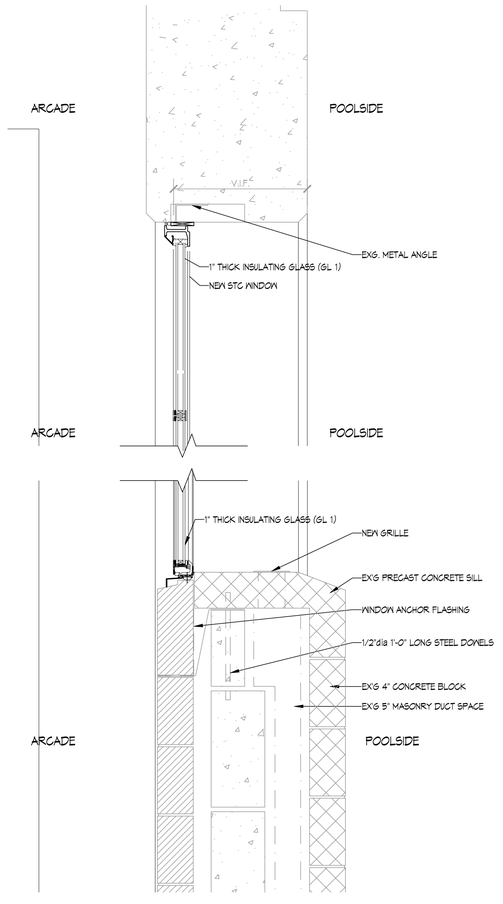
7 INSUL AND WP AT SOUTH POOL WALL
1 1/2"=1'-0"



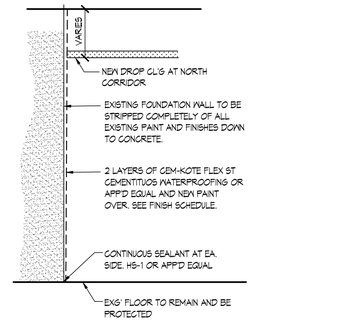

6 NEW INSULATED METAL PANEL
1 1/2"=1'-0"



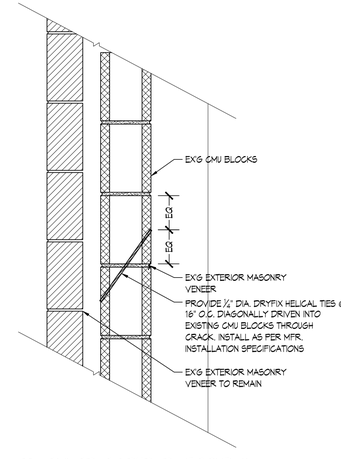

5 INSULATED PANEL BEHIND EXG LOUVER
1 1/2"=1'-0"




2 POOL WALL SECTION - EXG NORTH (BLEACHERS)
1 1/2"=1'-0"




4 WP AT NORTH CONCRETE WALL
1 1/2"=1'-0"




1 CMU CRACK REPAIR AT SOUTH WALL
1 1/2"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

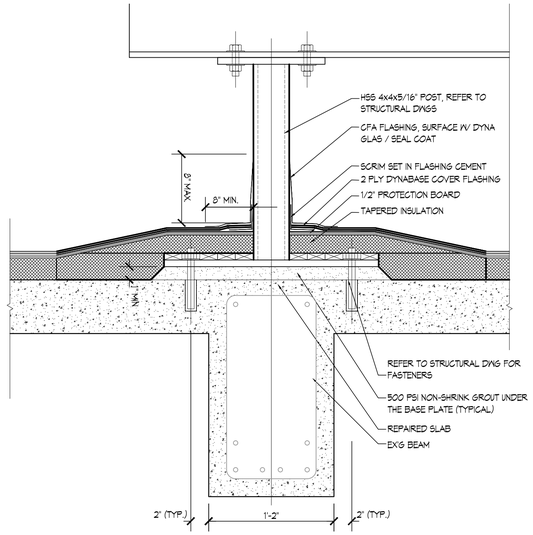
DETAILS

SEAL & SIGNATURE

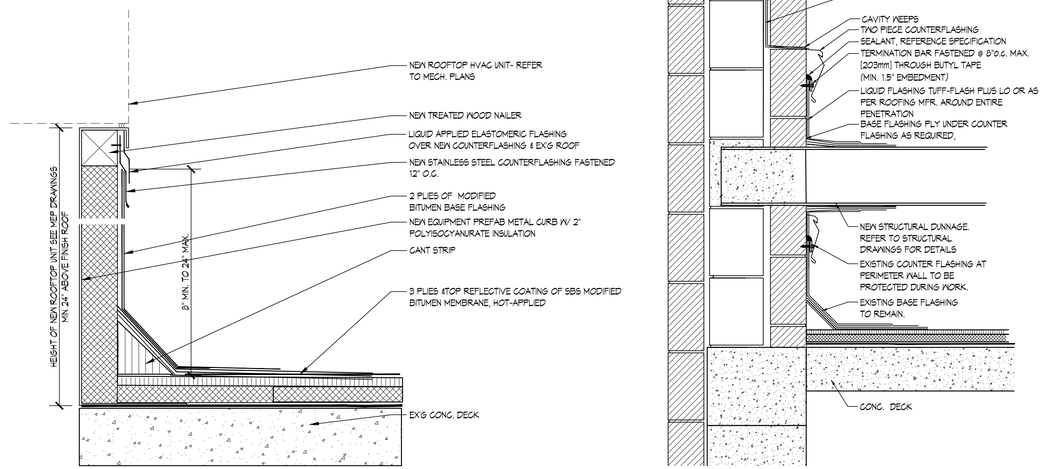
DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-302.00
DRAWN BY

1 1/2" = 1'-0"

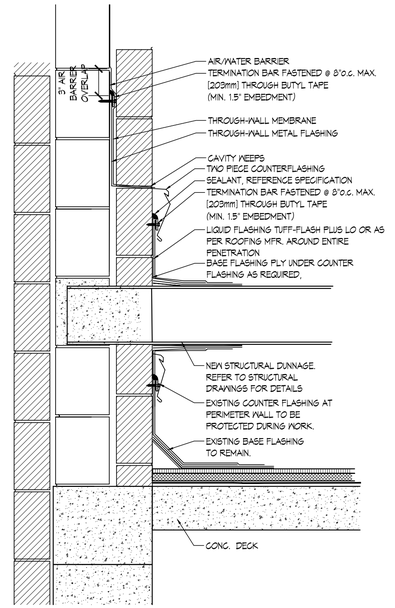
NYC DOB Number



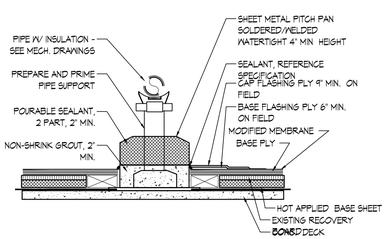

8 ROOF HVAC UNIT SUPPORT
1 1/2"=1'-0"



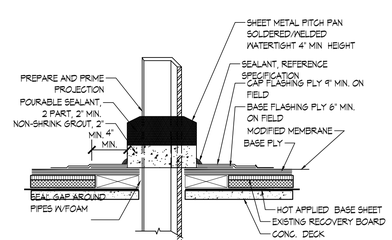

7 DETAIL AT NEW EQUIPMENT CURB TYP.
1 1/2"=1'-0"



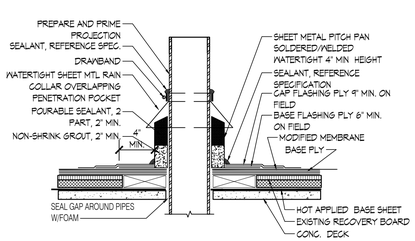

6 FLASHING DTL. AT PARAPET/ STRUCTURAL SUPPORT
1 1/2"=1'-0"



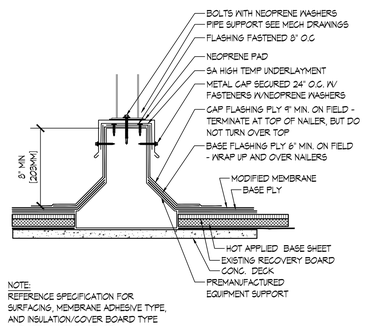

5 PITCH POCKET (PIPE SUPPORT)
1 1/2"=1'-0"




4 PITCH POCKET (STEEL ANGLE)
1 1/2"=1'-0"

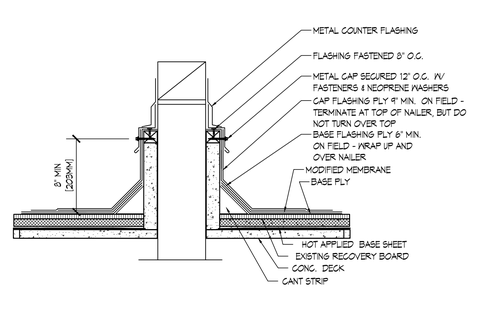



3 PITCH POCKET (PIPE)
1 1/2"=1'-0"




NOTE:
REFERENCE SPECIFICATION FOR SURFACING, MEMBRANE ADHESIVE TYPE, AND INSULATION/COVER BOARD TYPE AND ATTACHMENT METHOD.

2 EQUIP. SUPPORT PREMANUFACTURED - NEW CONSTRUCTION
1 1/2"=1'-0"




1 DTL. AT MECH EQUIP. & DUCT PENETRATION
1 1/2"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

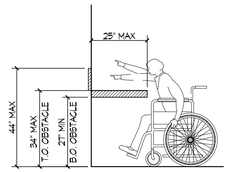
DETAILS

SEAL & SIGNATURE

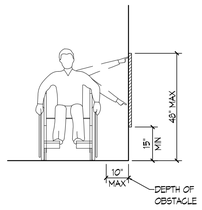
DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-303.00
DRAWN BY

1 1/2" = 1'-0"

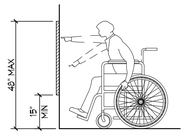
NYC DOB Number



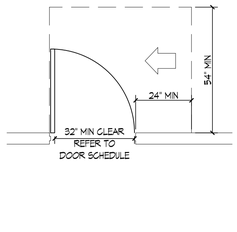

FRONT REACH TO SERVICE OR CONTROL OVER AN OBSTACLE 20"-25" DEEP



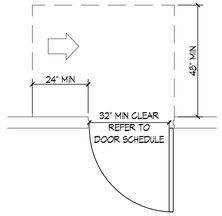

SIDE REACH TO SERVICE OR CONTROL



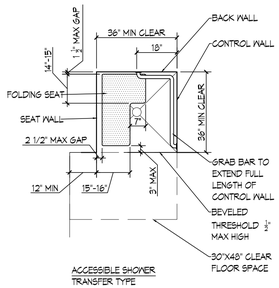

FRONT REACH TO SERVICE OR CONTROL



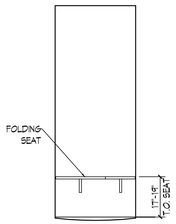

PULL SIDE, LATCH APPROACH
(WITH CLOSER)



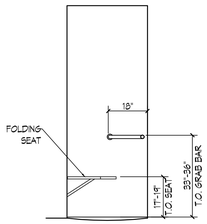

PUSH SIDE, LATCH APPROACH
(WITH CLOSER)



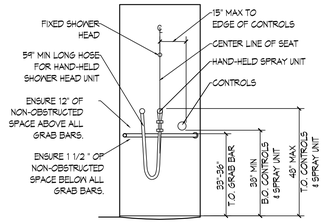

ACCESSIBLE SHOWER
TRANSFER TYPE




SEAT WALL

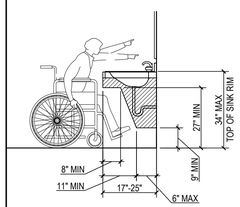



BACK WALL

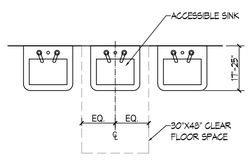



CONTROL WALL

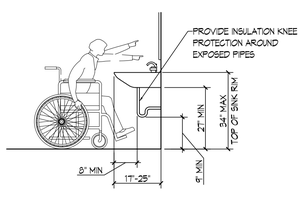
NOTE: SHOWER CONTROLS MAY BE PLACED 1 1/2" ABOVE GRAB BARS.



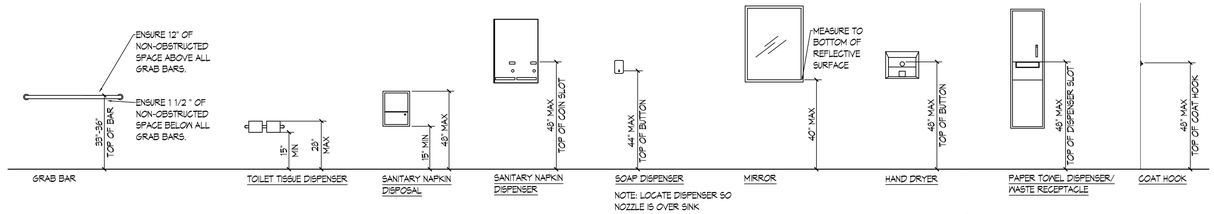

ACCESSIBLE LAVATORY
WITH MILLWORK



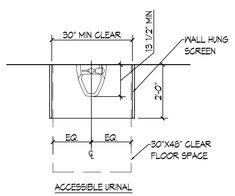

ACCESSIBLE LAVATORY



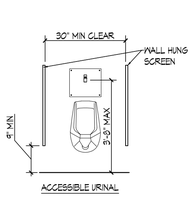

ACCESSIBLE LAVATORY



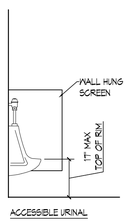

OVER



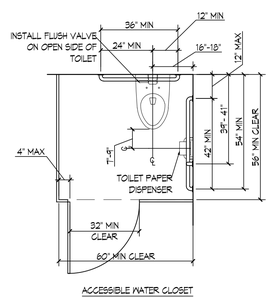

ACCESSIBLE URINAL



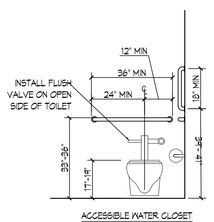

ACCESSIBLE URINAL




ACCESSIBLE URINAL

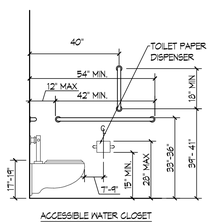



ACCESSIBLE WATER CLOSET
(FRONT ENTRY)



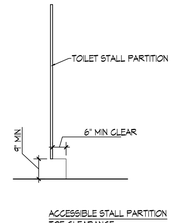

ACCESSIBLE WATER CLOSET

NOTE: ENSURE THAT TOP OF TOILET DIMENSION INCLUDES HEIGHT OF TOILET SEAT




ACCESSIBLE WATER CLOSET

NOTE: ENSURE 12" OF NON-OBSTRUCTED SPACE ABOVE ALL GRAB BARS.
NOTE: ENSURE 1 1/2 " OF NON-OBSTRUCTED SPACE BELOW ALL GRAB BARS.




ACCESSIBLE STALL PARTITION
TOE CLEARANCE

1 ADA STANDARDS
3/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

ADA STANDARDS

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-304.00
DRAWN BY

1 1/2" = 1'-0"

NYC DOB Number

| FINISH LEGEND | | | | | | | |
|---|---|---|---|---|---|---|---|
| TAG | DESCRIPTION | SIZE x THK (IN.) | SERIES | COLOR | FIN. | *SUPPLIER | NOTES |
| T1 | LARGE-FORMAT PORCELAIN FLOOR TILE | 12 x 24 x 3/32 | MAKER | ROPE | NATURE | PORCELANOSA-URBATEK | |
| T2 | LARGE-FORMAT PORCELAIN WALL TILE | 12 x 24 x 3/8 | GRACE NATURAL EXCLUSIVEITY | PURE WHITE | MATTE | LANDMARK CERAMIC | INSTALLED TO 8' HT, EXCEPT @ SHOWER AREAS - SEE ELEV'S |
| T3 | CERAMIC WALL TILES | 2 x 8 | NATURAL HUES | EGGPLANT GH51 | MATTE | DAL TILE | SINK WALL WOMEN'S |
| T4 | CERAMIC MOSAIC TILE | 2 x 2 | NATURAL HUES | EGGPLANT GH51 | ABRASIVE | DALTILE | SHOWER FLOOR WOMEN'S |
| T5 | CERAMIC WALL TILES | 2 x 8 | NATURAL HUES | REAL TEAL GH66 | MATTE | DALTILE | SINK WALL MEN'S |
| T6 | CERAMIC MOSAIC TILE | 2 x 2 | NATURAL HUES | REAL TEAL GH66 | ABRASIVE | DALTILE | SHOWER FLOOR MEN'S, LIFEGUARD |
| T7 | TILE COVEBASE | 6 x 12 | GRACE NATURAL EXCLUSIVITY | PURE WHITE | MATTE | LANDMARK CERAMIC | |
| T8 | PORCELAIN FLOOR TILE | 24 x 24 x 3/32" | CORE | SAND | NATURE | PORCELANOSA | |
| ACT-1 | ACOUSTICAL PANEL CEILING | 24 x 24 | CLIMA PLUS | WHITE | | USG | FINELINE DXF- GRID SYSTEM |
| ACT-2 | ACOUSTICAL METAL PANEL CEILING | 24 x 48 | ILLUSIONS | BLANCO MAT | BLANCO MAT | USG | SD-05 PERFORATION W/ACOUSTICAL BACKING |
| PT-1 | WALL PAINT | | - | TBD | EGGSHELL | BENJAMIN MOORE & CO. | |
| PT-2 | CEILING PAINT | | - | WHITE | FLAT | BENJAMIN MOORE & CO. | |
| PT-3 | WALL PAINT, MILDEW RESISTANT | - | AURA | - | MATTE | BENJAMIN MOORE & CO. | WOMEN'S: DARK PURPLE, 2073-10 MEN'S: NEWBURG GREEN, HC-158 OTHER: WHITE |
| PT-4 | MILLWORK, DOORS AND TRIM | | - | TBD | SEMI-GLOSS | BENJAMIN MOORE & CO. | REFER TO SPECIFICATIONS FOR METAL PAINTS REQUIREMENTS |
| PT-5 | SPECIALTY PAINTS | | - | TBD | PER SPEC | BENJAMIN MOORE & CO. | AT AREAS WITH NEW CEMENTITIOUS WATER PROOFING AND AT MASONRY WALLS- NEW AND EXISTING |
| PT-6 | EXG COLUMNS | | - | VAN DEUSEN BLUE HC-156 | PER SPEC | BENJAMIN MOORE & CO. | AT EXG STRUCTURAL COLUMNS |
| SS-1 | COUNTER SURFACE | | - | GRAY ONYX | | CORIAN SOLID SURFACE | LOCKERROOM COUNTER |
| S-1 | THRESHOLD | | - | | | | BEVELED EDGES ADA COMPLIANT |
| EXP | CEILILNG PAINTED | | | | | | |

*NOTES:
WALLS, STANDARD: EGGSHELL
CEILING: FLAT EXCEPT @ SHOWERS & VESTIBULE OFF POOL (SATIN)
WALLS, WET LOCATION: SEMI-GLOSS
MILLWORK, DOORS, TRIM: SEMI-GLOSS
SPECIALTY PAINTS: SEE SPECIFICATION

PT FIN. TO BE AS FOLLOWS:

PROVIDE NOT LESS THAN TEN (10) COLORS PER PAINT FINISH TYPE TO BE APPROVED BY ARCHITECT. REFER TO SPECIFICATIONS FOR PAINT REQUIREMENTS.
* REFER TO SPECIFICATIONS FOR ALTERNATE COMPANIES

CONTRACTOR TO PROVIDE UP TO 4 ADDITIONAL PT COLORS FOR WALL TRANSITIONS/ACCENT COLORS UPON ARCH/OWNER REQUEST. IN ADDITION TO THOSE COLORS HEREIN SPECIFIED.

| ACCESSORIES SCHEDULE | | | | | | | |
|---|---|---|---|---|---|---|---|
| TAG | ITEM | MANUF | STYLE | PRODUCT NO. | DIM/DESCRIP | QTY | NOTES |
| A1 | PAPER DISPENSER & WASTE RECEPTACLE | BOBRICK | CONTURA | B-43944 | | 8 | |
| A2 | TOILET TISSUE DISPENSER | ASI | - | 0042 | | 13 | |
| A3 | MIRROR W AIR DRYER & SOAP DISPENSER | ASI | VELARE BTM | 0883-1 OR 2 | | 14 | |
| A4 | SHAMPOO SOAP DISPENSER | ASI | - | 0347 | | 15 | |
| A5 | SANITARY VENDOR | ASI | - | 0468 | | 1 | |
| A6 | CHANGING STATION | KOALA | - | KB110-SSWM | | 4 | |
| A7 | SANITARY DISPOSAL | ASI | ROVAL | 20852 | | 10 | |
| A8 | COAT HOOK | BOBRICK | - | B-76117 | | 30 | |
| A9 | ADA TRANSFER SHOWER SEAT | ASI | - | 8208-SC-L | | 2 | L SHAPED LEFT HAND |
| A10 | GRAB BAR 18" | ASI | - | 3700-457 | | 8 | |
| A11 | GRAB BAR 36" | ASI | - | 3700-914 | | 5 | |
| A12 | GRAB BAR 42" | ASI | - | 3700-1067 | | 5 | |
| A13 | GRAB BAR L 18"X30" | ASI | L-SHAPE | 3700-60 | W24" H48" | 3 | |
| A14 | MIRROR FULL-LENGTH | BOBRICK | - | B-290 2472 | W24" H72" | 6 | |
| A15 | TOILET PARTITIONS | SCRANTON | HINY HIDERS | COLOR: CONCRETE FIN: ORANGE PEEL | | 10 STALLS | |
| A16 | URINAL PARTITIONS | SCRANTON | HINY HIDERS | - | W18" | 3 | WALL-HUNG / CONTINUOUS BRACKET |
| A17 | PLASTIC LOCKERS 2 TIER | SCRANTON | TUFFTEC | SANDCASTLE | LxWxH 12x15x72 | 97 | WITH 4" BASE & SLOPE TOP |
| A18 | BENCH WALL-MOUNT | ASI | - | - | W14" L48" | 4 | W WALL BRACKET |
| A19 | SHOWER PARTITIONS | SCRANTON | - | - | | 11 STALLS | W/O BASE |
| A20 | SHOWER CURTAIN ROD | ASI | | 1214 | | 4 | |
| A21 | BENCH FLOOR-MOUNT | SCRANTON | TUFFTEC BENCH | - | | 5 | WITH TUBE PEDESTAL |
| A22 | MIRROR WALL-MOUNT | BOBRICK | - | B-290 | CUSTOM 36"X144" | 1 | |
| A23 | UTILITY SHELF | ADVANCED TABCO | - | K-245 | 8"X24" | 1 | JANITOR'S USE |
| A24 | MIRROR WALL-MOUNT | BOBRICK | - | B-290 | CUSTOM 36"X88" | 1 | |
| A25 | SHELF | BOBRICK | - | B290-36 | 8"X36" | 4 | |
| A26 | ADA TRANSFER SHOWER SEAT | ASI | - | 8208-SC-R | | 1 | L SHAPED RIGHT HAND |

| PLUMBING FIXTURE SCHEDULE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| TAG | ITEM | MANUF | STYLE | PRODUCT NO. | FINISH | DIM/DESCRIP | QTY | NOTES |
| P1 | SPINNER | SUITMATE | 115V 60HZ | - | | | 2 | |
| P2 | TOILET W WALL VALVE | TOTO | - | CT708EV(G) | | | 8 | |
| P3 | TOILET W FLUSHOMETER | TOTO | - | CT708E(G) | | | 5 | |
| P4 | URINAL | TOTO | - | UT104EV | | | 6 | |
| P5 | URINAL FLUSH VALVE | TOTO | - | TEU2LA | | SS | 6 | |
| P6 | FAUCET | SLOAN | - | 5F-2100-4-PLS-B DM-CP-0.5GPM-M LM-IR-FCT | | | 14 | |
| P7 | SHOWER SYSTEM | MOEN | - | 8375EP15 | | | 12 | |
| P8 | SINK | BRADLEY | VERGE | LVSD3 | | | 2 | |
| P9 | SINK | BRADLEY | VERGE | LVSD2 | | | 2 | |
| P10 | SINK | BRADLEY | VERGE | LVSD1 | | | 4 | |
| P11 | MOP SINK | ADVANCED TABCO | - | 9-OP-40DF | SS | DROP-FRONT 195" x 25" x 18" | 2 | WITH S.S. SPLASH GUARDS |
| P12 | SERVICE FAUCET | ADVANCED TABCO | - | K-240 | | | 2 | |
| P13 | ADA SHOWER SYSTEM | MOEN | - | T8346EP15 | CHROME | | 3 | |

| FINISH SCHEDULE | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ROOM NUMBER | ROOM | FLOOR | BASE | WALLS | | | | CEILING | NOTES |
| | | | | NORTH | SOUTH | EAST | WEST | | |
| 103 | LIFEGUARD AREA | T-1 | T-1 | PT-5,PT-3 | PT-3 | PT-3 | PT-3, PT-5 | ACT-1 | PT-5 @ EXG CMU |
| | LIFEGUARD AREA BATHROOM & SHOWERS | T-1, T-6 | T-2 | T-2 | T-2 | T-2 | T-2 | ACT-1 | |
| 103 | WOMEN'S LOCKER ROOM | T-1 | T-2 | T-2 | PT-3 | PT-5 | PT-3 | ACT-1 | |
| | WOMEN'S LOCKER ROOM SHOWERS | T-4 | T-2 | T-2 | T-2 | T-2 | T-2 | GWB-PT2 | |
| | WOMEN'S LOCKER ROOM BATHROOM | T-1 | T-2 | T-3 | T-2 | T-2 | T-2 | ACT-1 | |
| 103-C | JANITOR'S CLOSET | T-1 | T-1 | PT-1 | PT-1 | PT-1 | PT-1 | EXP | |
| 110 | MEN'S LOCKER ROOM | T-1 | T-2 | PT-3 | T-5 | PT-3 | PT-3 | ACT-1 | |
| | MEN'S LOCKER ROOM SHOWERS | T-6 | T-2 | T-2 | T-2 | T-2 | T-2 | GWB-PT2 | |
| | MEN'S LOCKER ROOM BATHROOM | T-1 | T-2 | T-2 | T-2 | T-2 | T-2 | ACT-1 | |
| | POOL TO LOCKER VESTIBULE | T-1 | T-2 | | | | | | |
| 105 | FAMILY LOCKER ROOM | T-1 | T-2 | T-2 | T-2 | T-2 | T-2 | ACT-1 | |
| 112 | EAST LOBBY | T-8 | T-8 | PT-3 | PT-5 | PT-3 | PT-5 | ACT-2 | PT-5 @ EXG CMU |
| 121 | POOL | - | - | - | - | - | - | - | PT- AT UPPER SOUTH WALL |
| 118 | GENDER NEUTRAL BATHROOM | T-1 | T-2 | T-2 | T-2 | T-2 | T-2 | ACT-1 | |
| 116 | GENDER NEUTRAL BATHROOM | T-1 | T-2 | T-2 | T-2 | T-2 | T-2 | ACT-1 | |
| 116-C | JANITOR'S CLOSET | T-1 | T-1 | PT-1 | PT-1 | PT-1 | PT-1 | EXP | |
| 119 | CORRIDOR | EXG | - | PT-5 | PT-5 | PT-5 | PT-5 | ACT2 | PT OR FILM GRAPHIC +/-120LF - FULL HEIGHT OF WALL, BM HC-42 EVERYWHERE ELSE |

| LIGHT SCHEDULE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TAG | TYPE | MANUF | MODEL | FIN | MOUNT | WATTAGE | LAMP | QTY | FIXTURE FOR SALE | NOTES |
| L1 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6M5-50-80-FR-45-WET | FROSTED | 25'-0" | - | LED | 8 | - | POOL AREA |
| L2 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-04K-2M5-50-80-FR-WET | FROSTED | 25'-0" | - | LED | 18 | - | POOL AREA |
| L3 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6M5-50-80-FR-90-WET | FROSTED | 25'-0" | - | LED | 22 | - | POOL AREA |
| L4 | NU4: ROUND DOWNLIGHT | ALPHABET LIGHTING | NU4RD-SW-15LM-35-80-HEAO-X-DIM10-NC-WH-WH-X | WHITE | NC | - | LED | 27 | - | |
| L5 | RECESSED 5/16" GRID LIGHT | DAY-O-LITE | RSRL-D-SI-35-XX-22-G-W-U-DIM10 | BAKED WHITE ENAMEL | RECESSED GRID | - | LED | 31 | - | |
| L6 | RECESSED GRID LIGHT | DAY-O-LITE | RSRL-D-SI-35-80-24-MG-W-U-DIM10 | BAKED WHITE ENAMEL | RECESSED GRID | - | LED | 10 | - | |
| L7 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-80-6-G-W-DIM10 | WHITE | SGF | TW | LED | 18 | - | |
| L8 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-80-4-G-W-DIM10 | WHITE | SGF | TW | LED | 3 | - | |
| L9 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-80-8-G-W-DIM10 | WHITE | SGF | TW | LED | 3 | - | |
| L10 | PENDANT WRAP LIGHT | H.E. WILLIAMS | 39 SERIES 4'-0" PENDANT | N/A | VARIES | - | LED | 29 | - | MECHANICAL SPACES |
| L11 | RETROFIT CAN LIGHT | INTENSE LIGHTING | 6" SS LED REMODEL DOWNLIGHT GEN 4 | WHITE | RETROFIT EXG FIXTURE | - | LED | 5 | - | INCLUDE SS-EZR 6" SSG3 RETROFIT MOUNTING SYSTEM |
| L12 | WALL MTD. VANITY LIGHT | ALW | RLP18M,11MED/90/3500/WH/UNV | WHITE | 7'-0" AFF | 9.2/FT | LED | 8 | - | MTD. 7'-0" AFF |

NOTES:
1. CONTRACTOR IS REQUIRED TO SUBMIT CUT SHEETS FOR ARCHITECT APPROVAL, AS REQUIRED PER SPECIFICATIONS, PRIOR TO ORDERING

| WINDOW SCHEDULE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WINDOW NUMBER | ROOM | TYPE | WINDOW (SIZES ARE NOMINAL) | | | | SILL | | JAMB | HEAD | HARDWARE | REMARKS |
| | | | WIDTH | HEIGHT | FIN | RATING/EGRESS | DWG | MAT | DWG | DWG | FIN | |
| 1 | POOL | A | 3'-6 1/2" | 4'-7" | PT | | | | | | | REPAINT ALL AREAS ADJACENT TO WINDOWS |
| 2 | POOL | B | 3'-4" | 3'-1 3/16" | PT | | | | | | | REPAINT ALL AREAS ADJACENT TO WINDOWS |
| 3 | POOL | C | 3'-7 1/2" | 3'-10" | PT | | | | | | | REPAINT ALL AREAS ADJACENT TO WINDOWS |

NOTES:
REFER TO SPECIFICATION 085113 FOR WINDOWS. WINDOWS B4C MTL FRAMES TO REMAIN SHALL BE RE-PAINTED INCLUDING BUT NOT LIMITED TO SILLS, HEADERS AND ADJACENT SURFACES

| DOOR SCHEDULE | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DOOR NUMBER | ROOM | DOOR | | | | | | | FRAME | | SILL | | HARDWARE | | REMARKS |
| | | SIZE | RATING | TYPE | STATUS | THK | MAT | FIN | MAT | FIN | DWG | MAT | SET | FIN | |
| 1 | POOL | 3'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 2 | POOL | 3'-0" x 6'-10" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 3 | WOMEN'S LOCKERS | 3'-0" x T'-0" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 4 | JAN. CLOSET | 3'-0" x T'-0" | | SINGLE | NEW | | | PT | H.M. | PT | | | | | |
| 5 | WOMEN'S LOCKERS | 3'-0" x T'-0" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 6 | LIFE GUARD STATION | 2'-8" x 6'-10" | | EXG | NEW | | | PT | H.M. | PT | | | | | |
| 7 | LIFEGUARD AREA | 3'-0" x T'-0" | | SINGLE | EXG | | | PT | H.M. | PT | | | | | |
| 8 | MEN'S LOCKERS | 3'-0" x T'-0" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 9 | EAST LOBBY | 3'-0" x T'-0" | 90 MINS | D | EXG | | | PT | H.M. | PT | | | | | |
| 10 | FAMILY LOCKER ROOM | 3'-0" x T'-0" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 11 | FAMILY LOCKER ROOM | 3'-0" x T'-0" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 12 | POOL | 5'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | DOUBLE |
| 13 | STORAGE | 3'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 14 | STAIR C | 2'-8" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 15 | EAST LOBBY (ENTRANCE) | 8'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | DOUBLE |
| 16 | EAST LOBBY (ENTRANCE) | 8'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | DOUBLE |
| 17 | EAST LOBBY | 5'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | DOUBLE |
| 18 | EAST LOBBY | 3'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 19 | GENDER NEUTRAL | 3'-0" x 6'-10" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 20 | JAN. CLOSET | 2'-8" x 6'-10" | | D | EXG | | | PT | H.M. | PT | | | | | |
| 21 | GENDER NEUTRAL | 3'-0" x 6'-10" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 22 | MECHANICAL ROOM | 3'-0" x 6'-10" | 90 MINS | D | NEW | | | PT | H.M. | PT | | | | | |
| 23 | BIKE STORAGE | 5'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | DOUBLE |
| 24 | LOUNGE | 5'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | DOUBLE |
| 25 | STAIR A | 3'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 26 | MECHANICAL ROOM | 3'-0" x T'-2" | 90 MINS | D | EXG | | | PT | H.M. | PT | | | | | |
| 27 | POOL | 2'-8" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 28 | POOL | 3'-0" x 6'-10" | 90 MINS | D | EXG | | | PT | H.M. | PT | | | | | |
| 29 | POOL | 3'-0" x 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 30 | BLEACHERS | 3'0" X 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |
| 31 | BLEACHERS | 3'0" X 6'-10" | - | - | EXG | | | PT | H.M. | PT | | | | | |

NOTES:
REFER TO SPECIFICATION 080671 DOOR HARDWARE SPECIFICATIONS FOR HARDWARE SETS, 081100 FOR DOOR HARDWARE & 081113 FOR HM DOORS & FRAMES.
PROVIDE RATED FRAMES AND DOORS AT RATED WALLS.

NOTES:

1. CONTRACTOR TO FIELD VERIFY & REVIEW COUNTS & DIMENSIONS PRIOR TO SUBMITTALS.
2. GC TO PAINT ALL EXISTING TO REMAIN DOOR AND WINDOW TRIMS TO REMAIN.
3. GC SHALL NOT INSTALL TILES LESS THAN ½ OF A FULL SIZE TILE. TILE INSTALTION TO BE APPROVED BY ARCHITECT
4. GC TO REFER TO SCHEDULES AND INTERIOR ELVATIONS FOR EXTENT OF FINISHES.
5. TILE PATTERN A- BLEND OF T1, T3, T4 @ 4'X4' TR FINISH.
6. TILE PATTERN B- BLEND OF T3, T4, &T5 @ 4'X4' TR FINISH.
7. ALL TILE PATTERNS TO BE SUBMITTED TO ARCHITECT FOR APPROVAL. ALLOW FOR MINIMUM TWELVE (10) COLORWAYS CHANGES.
8. PROVIDE ALL TRIMS AND BASES REQUIRED FOR COMPLETE UNIFORM TRANSITION BETWEEN SURFACES FOR ALL TILES .

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 04.03.20 | BID SET |
| 1 | 09.20.19 | 90% SUBMISSION – NOT FOR CONSTRUCTION |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

SCHEDULES:
FINISH, FURNITURE,
ACCESSORIES,
DOORS, WINDOWS,

SEAL & SIGNATURE

DATE 04.03.2019
JOB NUMBER 19010
DWG. No. A-600.00
DRAWN BY

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

# HVAC GENERAL NOTES (APPLICABLE TO ALL DRAWINGS)

## GENERAL

1. THE TERM "CONTRACTOR", "THIS CONTRACTOR", "HVAC CONTRACTOR" OR ANY TEXT AND DRAWINGS INCLUDED IN THIS CONTRACT DOCUMENT (WHICH INCLUDES DRAWINGS AND SPECIFICATIONS) SHALL BE MEANT AND DIRECTED TO THE CONTRACTOR PERFORMING THE HEATING, VENTILATING AND AIR CONDITIONING (HVAC) WORK IN THIS PROJECT.

2. THE ARCHITECT/ENGINEER FOR THE PROJECT WHO WILL ALSO BE REFERRED TO AS THE ARCHITEDT/ENGINEER OF RECORD WILL BE THE FIRM WHOSE NAME AND ADDRESS IS LISTED IN THE TITLE BLOCK OD THE DESIGN DOCUMENT.

3. ALL WORK SHOWN IN THE CONTRACT DRAWINGS AND INCLUDED IN THE SPECIFICATIONS SHALL BE CONSIDERED AS NEW WORK TO BE PROVIDED (DEFINED AS FURNISHED AND INSTALLED) BY THE HVAC CONTRACTOR. ONLY ITEM SPECIFICALLY INDICATED AS "EXISTING" OR "BY OTHERS" OR "BY OTHER TRADES" SHALL BE EXCLUDED FROM THE WORK PROVIDED BY THE HVAC CONTRACTOR. SYMBOL LIST SHOWING DIFFERENT LINE THICKNESS FOR EXISTING AND NEW COMPONENTS ARE MEANT ONLY FOR CLARITY. UNLESS SPECIFICALLY INDICATED AS "EXISTING" ALL COMPONENTS SHALL BE CONSIDERED TO BE NEW TO BE PROVIDED BY THE HVAC CONTRACTOR.

4. IT SHALL BE EXPRESSLY UNDERSTOOD THAT ALL ITEMS INCLUDED IN THE CONTRACT DOCUMENTS ISSUED BY THE ARCHITEDT/ENGINEERS SHALL BE INCLUDED IN THE BID PRICE OF THE CONTRACTOR UNLESS OTHERWISE, SPECIFIC ADD ALTERNATES ARE LISTED BY THE ARCHTIECT/ENGINEER IN THE DOCUMENTS.

5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN IN WRITING THAT HE HAS ALL THE CONTRACT DOCUMENTS FOR THE PROJECT FORM THE ARCHTIECT/ENGINEER. NO CLAIMS FOR ANY MISSING DOCUMENTATION WILL BE ACCEPTABLE.

6. WHERE INFORMATION IN DIFFERENT PARTS OF THE CONTRACT DOCUMENTS ARE INTERPRETED BY THE CONTRACTOR TO BE DUPLICATED, THE CONTRACTOR SHALL OBTAIN A WRITTEN APPROVAL OF HIS INTERPRETATION FROM THE OWNER BEFORE DELETING THE SCOPE OF WORK HE INTERPRETS AS BEING A DUPLICATION. IN THE ABSENCE OF SUCH WRITTEN APPROVAL, THE CONTRACTOR SHALL NOT EXCLUDE ANY ITEM SHOWN IN DIFFERENT PARTS OF THE CONTRACT.

7. FOR EITHER CONTRACTOR'S INTERPRETATION OF DUPLICATION OR CONTRADICTION AS INDICATED ABOVE, THE OWNER'S DETERMINATION SHALL BE FINAL AND SHALL NOT ENTITLE THE CONTRACTOR TO ANY ADDITIONAL COMPENSATION.

8. ALL WORK SHOWN ON THE CONTRACT DOCUMENTS ARE MEANT TO BE THE FINAL INTENT OF THE WORK. ANY WORK REQUIRED TO MEET THE FINAL INTENT OF THE DESIGN DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING SHALL BE PROVIDED BY THE HVAC CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER:
   a. CUTTING AND PATCHING OF WALLS, FLOORS, CEILING, ROOFS, PARTITIONS;
   b. REMOVAL AND REPLACEMENT OF SUSPENDED CEILINGS, ACCESS PANELS, ACCESS DOORS;
   c. REMOVAL AND REPLACEMENT OF EXISTING ARCHITECTURAL, STRUCTURAL, PLUMBING, ELECTRICAL, FIRE PROTECTION TRADES AND, TELECOMMUNICATION, COMPUTER, SECURITY, PUBLIC ADDRESS, INTERCOM SYSTEMS WHICH INTERFERE WITH THE FINAL INTENT OF THE HVAC WORK.

9. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT. UNLESS AND UNTIL SPECIFIC ITEMS ARE SHOWN IN OTHER TRADE DRAWINGS FOR REMOVAL AND REPLACEMENT FOR THE AREA WHERE THE FINAL HVAC DESIGN INTENT IS SHOWN, ALL WORK REQUIRED FOR OTHER TRADES TO PERFORM THEIR WORK TO ENABLE THE HVAC WORK SHOWN ON THESE DRAWINGS SHALL BE INCLUDED IN THE HVAC CONTRACTOR'S BID.

10. ALL WORK SHOWN ON THE CONTRACT PLANS INCLUDING SCALED DRAWINGS ARE SCHEMATIC AND ARE INTENDED TO CONVEY GENERAL INFORMATION ON THE MAGNITUDE OF WORK AND TO PROVIDE GENERAL ARRANGEMENT OF EQUIPMENT. THE CONTRACT DRAWINGS ARE NOT MEANT TO CONVEY ALL THE FIELD CONDITIONS, ALL BENDS, OFFSETS, ELEVATIONS ACCURATELY AND SHALL NOT BE USED AS THE BASIS TO ESTIMATE THE QUANTITY OF HVAC WORK. THE CONTRACTOR MAY MAKE CHANGES IN THE FORM OF SHOP DRAWINGS IF AND WHEN APPROVED IN WRITING BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

11. THE CONTRACTOR SHALL SEEKING WRITTEN CLARIFICATIONS TO SCOPE OF WORK, VISIT AND CAREFULLY EXAMINE THE SITE OF THE PROPOSED WORK SO AS TO FAMILIARIZE HIMSELF OR HERSELF WITH EXISTING FIELD CONDITIONS, TO VERIFY DIMENSIONS AND TO VERIFY DIFFICULTIES THAT WILL BE ENCOUNTERED DURING THE EXECUTION OF THE WORK AND TO VERIFY EXACT EXTENT OF WORK REQUIRED, PRIOR TO SUBMITTING HIS PROPOSAL. ANY CHANGES RESULTING FROM CONDITIONS ARISING IN THE FIELD ARE TO BE MADE BY THIS CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

12. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.

13. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.

14. WHEREVER THE REQUIREMENTS AND REGULATIONS OF FEDERAL OR MUNICIPAL AUTHORITIES ARE MORE STRINGENT THAN THE REQUIREMENTS INDICATED ON THE DRAWINGS OR SPECIFICATIONS. THEN THESE MORE STRINGENT REQUIREMENTS SHALL TAKE PRECEDENCE OVER THE DRAWINGS OR SPECIFICATIONS AND SHALL BE MADE PART OF THE CONTRACT AT NO ADDITIONAL COST TO THE OWNER. HOWEVER, WHERE THE DRAWING OR SPECIFICATIONS ARE MORE STRINGENT THAN FEDERAL OF LOCAL AUTHORITY REQUIREMENTS AND REGULATIONS, THE MORE STRINGENT SHALL APPLY AND THE WORK SHALL BE INCLUDED IN THE CONTRACT.

15. THE CONTRACTOR SHALL PROVIDE PROTECTION FOR THE GENERAL PUBLIC AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION AREA. ADEQUATE BARRIERS SHALL BE PROVIDED TO EXERCISE CONTROL OF SAFE INGRESS AND EGRESS OF PREMISES. FIRE EXITS SHALL AT NO TIME BE BLOCKED.

16. ALL EXISTING CONSTRUCTION AND EQUIPMENT SHALL BE PROTECTED BY EACH CONTRACTOR DURING THE ENTIRE PERFORMANCE OF THEIR WORK. EXISTING AREAS DISTURBED OR DAMAGED BY CONTRACTORS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

17. ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY DISPOSED OF AWAY FROM THE PREMISES.

18. HVAC AND MECHANICAL SYSTEMS SHALL BE MAINTAINED FULLY OPERATIONAL IN AREAS/SPACES OUTSIDE OF AREA OF WORK DURING CONSTRUCTION.

19. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS TO AVOID CONFLICTS.

20. WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THE CURRENT EDITION OF THE NEW YORK CITY CODES AND ALL LOCAL TOWNSHIP REQUIREMENTS.

21. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.

22. CONTRACTOR TO CONTACT BUILDING MANAGEMENT AND TENANT REGARDING DUCTWORK REMOVAL SCOPE OF WORK TO ENSURE THAT OTHER TENANTS THAT ARE TO STAY OPERATIONAL ARE NOT AFFECTED BY REMOVALS OF THE BASE BUILDING DUCTWORK.

23. COORDINATE WITH BUILDING MANAGEMENT FOR ANY SERVICE INTERRUPTION OF EXISTING SYSTEMS AND GIVE NOTICE AS REQUIRED BY BUILDING RULES AND REGULATIONS

24. THE LOCATION AND ELEVATIONS OF ALL PIPING, PANELS, EQUIPMENT AND/OR DUCTWORK THAT IS IN OR PASSING THROUGH BASE BUILDING SPACES AND/OR TENANT SPACES ARE TO BE COORDINATED WITH BUILDING MANAGEMENT AND INDICATED ON SHOP DRAWINGS BEFORE PROCEEDING WITH WORK

# DEMOLITION NOTES

1. ALL DEMOLITION WORK SHALL BE SCHEDULED AND PHASED SO AS NOT TO INTERFERE WITH THE OPERATION OF THE FACILITY.
2. WHEN DEMOLITION WORK REQUIRES TEMPORARY SHUT DOWN OF AN EXISTING OPERATING SYSTEM, THE DEMOLITION SHALL BE PERFORMED AT SUCH REGULAR TIME OR ON OVERTIME, WHEN DESIGNATED BY THE OWNER, AT NO ADDITIONAL COST.
3. THE OWNER SHALL BE NOTIFIED OF THE ESTIMATED DURATION OF THE SHUTDOWN PERIOD AT LEAST TEN (10) DAYS IN ADVANCE OF THE DATE THE WORK IS TO BE PERFORMED.
4. WORK SHALL BE ARRANGED FOR CONTINUOUS PERFORMANCE, INCLUDING OVERTIME, WHEN APPROVED BY THE OWNER, IF REQUIRED TO ENSURE EXISTING OPERATING SERVICES WILL BE SHUT DOWN ONLY IF ESSENTIAL AND NECESSARY FOR THE WORK.
5. PROVIDE ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR REMOVAL OF ALL DEMOLISHED EQUIPMENT AND MATERIALS FROM THE PREMISES.
6. THE CONTRACTOR SHALL NOT PERFORM ANY DEMOLITION AND REMOVAL WORK UNLESS A SCHEDULE HAS BEEN SUBMITTED AND APPROVED.
7. ALL DIMENSIONS SHOWN ON THE DRAWING SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR.
8. CONTRACTOR SHALL ASSURE THAT DEMOLITION AND INSTALLATION WORK WILL NOT CAUSE ANY DAMAGE TO EQUIPMENT, DUCTWORK, PIPING, ELECTRICAL, PLUMBING OR ANY OTHER EXISTING SERVICES TO REMAIN.
9. CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITH NEW CONSTRUCTION DRAWINGS TO DETERMINE DIMENSIONS AND SCOPE OF WORK TO INSURE THAT NO ITEMS OR SERVICES TO REMAIN ARE DISTURBED OR DAMAGED.
10. CONTRACTOR SHALL PATCH TO MATCH CONSTRUCTION IN ALL AREAS WHERE REMOVALS ARE MADE.

# NYC BUILDLING DEPARTMENT NOTES

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE 2014 BUILDING CODE, CITY OF NEW YORK, AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS.
2. SPECIAL INSPECTIONS ARE REQUIRED FOR MECHANICAL SYSTEMS IN ACCORDANCE WITH THE FOLLOWING CODE SECTIONS:

| | | |
|---|---|---|
| 2.1. | MECHANICAL SYSTEMS | BC 1704.16 |
| 2.2. | MECHANICAL DEMOLITION | BC 1704.20.4 |
| 2.3. | FIRE-RESISTANT PENETRATIONS AND JOINTS | BC 1704.27, BC 1704.25 |

3. IN ADDITION TO SPECIAL INSPECTIONS, THE FOLLOWINGS PROGRESS INSPECTIONS ARE REQUIRED FOR MECHANICAL SYSTEMS IN ACCORDANCE WITH THE FOLLOWING SECTIONS:

| | | |
|---|---|---|
| 3.1. | ENERGY CODE COMPLIANCE INSPECTIONS | BC 110.3.5 |
| 3.2. | SHUTOFF DAMPERS | IB2, IIB2 |
| 3.3. | HVAC AND SERVICE WATER HEATING EQUIPMENT | IB3, IIB3 |
| 3.4. | HVAC AND SERVICE WATER HEATING SYSTEM CONTROLS | IB4, IIB4 |
| 3.5. | HVAC INSULATION AND SEALING | IB5, IIB5 |
| 3.6. | DUCT LEAKAGE TESTING | IB6, IIB6 |
| 3.7. | ELECTRICAL MOTORS | IIC6 |

4. ALL INSPECTIONS AND TESTS SHALL BE MADE IN COMPLIANCE WITH BC 1704.
5. VENTILATION FOR ALL AREAS COMPLIES WITH THE MINIMUM CODE REQUIREMENTS OF MC 401 AND MC 402.
6. CERTIFICATES OF COMPLIANCE (28-116.4) SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
7. ALL HVAC SYSTEMS AND EQUIPMENT COMPLY WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF THE STATE OF NEW YORK (MC 301.2).
8. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE FOLLOWING CODE REFERENCES:

a. DUCT CONSTRUCTION MC 603
b. AIR INTAKES AND OUTLETS MC 401
c. FILTERS MC 605
d. FANS MC 503
e. ELECTRIC WIRING & EQUIPMENT MC 301.7
f. CONTROLS MC 405
g. HEATING CAPACITY MC 312
h. NOISE CRITERIA LEVELS BC 1207
i. PIPING INSULATION MC 604
j. INTAKE, EXHAUSTS, RELIEFS MC 401
k. PLENUMS AND CORRIDORS MC 602, MC 601

8. MINIMUM TEMPERATURE TO BE MAINTAINED DURING HEATING SEASON: BC 1204 - WHEN 13 DEG F OUTSIDE.
9. EQUIPMENT SHALL BE LISTED AND APPROVED AS REQUIRED BY MC 107, MC 102.
10. ALL BUILDING DEPARTMENT FORMS REQUIRED, INCLUDING THOSE REQUIRED FOR SPECIAL INSPECTIONS, PROGRESS INSPECTIONS, CERTIFICATE OF COMPLIANCE, SERVICE EQUIPMENT PERMIT, EQUIPMENT USE PERMIT OR OTHER REASONS WITH REGARD TO THIS PROJECT SHALL BE COMPLETED AND FILED WITH THE NYC BUILDING DEPARTMENT BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER PROVIDED SPECIAL INSPECTORS.
11. CONTRACTOR SHALL OBTAIN AND PROVIDE SERVICE EQUIPMENT PERMITS IN ACCORDANCE WITH SECTION 28-105.2 OF THE BUILDING CODE. SERVICE EQUIPMENT PERMITS SHALL BE REQUIRED FOR THE USE AND OPERATION OF THE EXHAUST FANS.
12. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION DRAWING. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

# SYMBOL LIST AND ABBREVIATIONS

SMOKE DETECTOR
THERMOSTAT
NEW PIPE WITH DIRECTION OF FLOW
ECCENTRIC REDUCER
PIPE DROP
PIPE RISE
PITCH UP IN DIRECTION OF FLOW
PITCH DOWN IN DIRECTION OF FLOW
UNION
CONCENTRIC REDUCER
FLANGED CONNECTION
GATE VALVE
ANGLE GATE VALVE
GLOBE VALVE
DRAIN VALVE (TYPE AS SPECIFIED)
LOCK SHIELD VALVE
CHECK VALVE, SWING OR LIFT
BALL VALVE
THREE-WAY AUTOMATIC CONTROL VALVE
"Y" TYPE STRAINER W.BLOW OFF VALVE AND CAP
MANUAL AIR VENT
VIBRATION ISOLATOR IN HANGAR
THERMOMETER WELL
THERMOMETER END WELL
PRESSURE GAUGE WITH SIPHON
PRESSURE GAUGE ON TEE
HOSE BIB AND CAP

SUPPLY DUCT GOING UP
SUPPLY DUCT GOING DOWN
RETURN DUCT GOING UP
RETURN DUCT GOING DOWN
3-WAY, 2-WAY CEILING SUPPLY DIFFUSER
FLEXIBLE CONNECTION
VOLUME DAMPER
WIRE MESH SCREEN

EXISTING WORK TO REMAIN
EXISTING WORK TO BE REMOVED
12"W x 6"H DUCT SIZE
CONDENSATE DRAIN
EXISTING PIPING GOING DOWN
POINT OF CONNECTION
POINT OF DISCONNECTION
CEILING SUPPLY DIFFUSER
CEILING RETURN / EXHAUST - GRILLE/REGISTER
THERMOSTAT
SECTION DESIGNATION
SHEET NO. WHERE SECTION IS SHOWN

| | |
|---|---|
| A | AMPERAGE |
| A/C | AIR CONDITIONING |
| AC | AIR CONDITIONER |
| ACCU | AIR COOLED CONDENSING UNIT |
| ACU | AIR CONDITIONING UNIT |
| AD | ACCESS DOOR |
| AFD | ADJUSTABLE FLOW DEVICE |
| ASCS | AIR SYSTEM CLEANING SPECIALIST |
| BC | BUILDING CODE |
| BTU | BRITISH THERMAL UNIT |
| CD | CEILING DIFFUSER |
| CFM | CUBIC FEET PER MINUTE |
| CLG | CEILING |
| D | DEPTH |
| dBA | DECIBELS |
| DC | DIRECT CURRENT |
| DH | DEHUMIDIFICATION UNIT |
| DN | DOWN |
| DOAS | DEDICATED OUTDOOR AIR SUPPLY |
| DOAU | DEDICATED OUTDOOR AIR UNIT |
| DX | DIRECT EXPANSION |
| EA | EXHAUST AIR |
| EAT | ENTERING AIR TEMPERATURE |
| EC | ELECTRONICALLY COMMUTATED |
| EF | EXHAUST FAN |
| ESP | EXTERNAL STATIC PRESSURE |
| EXIST | EXISTING |
| FC | FLEXIBLE CONNECTION |
| FLEX | FLEXIBLE |
| FLA | FULL LOAD AMPERAGE |
| FPM | FEET PER MINUTE |
| FT | FEET |
| GA | GAUGE |
| GAL | GALLON |
| GCHWS&R | GLYCOL CHILLED WATER SUPPLY & RETURN |
| GPM | GALLONS PER MINUTE |
| HP | HORSEPOWER |
| HV | HEATING AND VENTILATING |
| KW | KILOWATT |
| H | HEIGHT |
| HR | HOUR |
| HVAC | HEATING, VENTILATION AND AIR CONDITIONING |
| HWS&R | HOT WATER SUPPLY AND RETURN |
| HZ | HERTZ |
| ID | INSIDE DIAMETER |
| IN | INCH OR INCHES |
| INWG | INCHES OF WATER GAUGE |
| L | LENGTH |
| LAT | LEAVING AIR TEMPERATURE |
| LBS | POUNDS |
| LF | LINEAR FEET |
| LRA | LOCKED ROTOR AMPS |
| NADCA | NATIONAL AIR DUCT CLEANERS ASSOCIATION |
| MAX | MAXIMUM |
| MBH | THOUSAND BTU PER HOUR |
| MC | MECHANICAL CODE |
| MCA | MINIMUM CIRCUIT AMPACITY |
| MER | MECHANICAL EQUIPMENT ROOM |
| MFS | MAXIMUM FUSE SIZE |
| MIN | MINIMUM |
| MOP | MAXIMUM OVERCURRENT PROTECTION |
| NC | NOISE CRITERIA |
| NO | NUMBER |
| OA | OUTSIDE AIR |
| OAT | OUTSIDE AIR TEMP |
| OD | OUTSIDE DIAMETER |
| PD | PRESSURE DROP |
| PH | PHASE |
| PSI | POUNDS PER SQUARE INCH |
| QTY | QUANTITY |
| RD | ROOF DRAIN |
| RG | RETURN GRILLE |
| RH | RELATIVE HUMIDITY |
| RLA | RUNNING LOAD AMPS |
| RPM | REVOLUTIONS PER MINUTE |
| RR | RETURN REGISTER |
| SR | SUPPLY REGISTER |
| SQFT | SQUARE FEET |
| TYP | TYPICAL |
| V | VOLTAGE |
| VD | VOLUME DAMPER |
| VFD | VARIABLE FREQUENCY DRIVE |
| W | WIDTH |
| W.M.S. | WIRE MESH SCREEN |
| YR | YEAR |
| Ø | DIAMETER |
| < | LESS THAN |
| > | GREATER THAN |
| # | NUMBER |
| % | PERCENT |
| °F | DEGREES FAHRENHEIT |

| MECHANICAL DRAWING LIST | |
|---|---|
| Sheet Number | Sheet Title |
| M-001.00 | MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS |
| M-002.00 | MECHANICAL SPECIFICATIONS 1 OF 4 |
| M-003.00 | MECHANICAL SPECIFICATIONS 2 OF 4 |
| M-004.00 | MECHANICAL SPECIFICATIONS 3 OF 4 |
| M-005.00 | MECHANICAL SPECIFICATIONS 4 OF 4 |
| M-050.00 | MECHANICAL DEMOLITION FIRST FLOOR EAST PLAN |
| M-051.00 | MECHANICAL DEMOLITION SECOND FLOOR EAST PLAN |
| M-052.00 | MECHANICAL DEMOLITION SECTIONS |
| M-100.00 | MECHANICAL FIRST FLOOR EAST PLAN |
| M-102.00 | MECHANICAL SECOND FLOOR EAST PLAN |
| M-300.00 | MECHANICAL DETAILS SHEET No. 1 |
| M-301.00 | MECHANICAL DETAILS SHEET No. 2 |
| M-302.00 | MECHANICAL DETAILS SHEET No. 3 |
| M-303.00 | MECHANICAL DETAILS SHEET No. 4 |
| M-400.00 | MECHANICAL SCHEDULES |
| M-500.00 | MECHANCIAL RISER DIAGRAM |
| M-600.00 | MECHANICAL SECTIONS |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL NOTES, SYMBOLS AND ABBREVIATIONS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-001.00
DRAWN BY DK
1 OF 17

NYC DOB Number

# HVAC SPECIFICATIONS

A. GENERAL:

1. WORK SHALL CONFORM TO THE REQUIREMENTS OF APPLICABLE GOVERNMENTAL REGULATIONS AND SHALL BEAR APPROVAL CERTIFICATES AS APPLICABLE.
2. WORK SHALL CONFORM TO THE STANDARD OF THE BUILDING AND BE APPROVED BY THE BUILDING'S REPRESENTATIVES BEFORE COMMENCING WORK.
3. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHEN NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN CRATED SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH RESTRICTED SPACES AVAILABLE. ASCERTAIN FROM BUILDING OWNER AT WHAT TIMES OF DAY EQUIPMENT COULD BE MOVED THROUGH THE BUILDING.
4. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATING, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES OF MAGNITUDE WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
5. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK SHALL BE NECESSARY FOR THE PERFORMANCE OF GENERAL WORK. ALL EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS. THIS CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY CHANGES REQUIRED ASED ON EXISTING CONDITIONS FOR PROPER INSTALLATION OF NEW WORK, AND INCLUDE ALL MATERIALS AND LABOR IN HIS BID PRICE. NO ALLOWANCE WILL BE MADE FOR FAILURE TO DO SO.
6. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF THE VENTILATION AND AIR CONDITIONING SYSTEMS. DETAILS OF CONSTRUCTION AND OF WORKMANSHIP WHERE NOT SPECIFICALLY DESCRIBED HEREIN OR INDICATED ON THE DRAWINGS SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE COMPLETE SYSTEMS, LEFT IN GOOD WORKING ORDER, READY FOR OPERATION, INCLUDING NECESSARY LABOR AND MATERIALS, WHETHER OR NOT SPECIFICALLY SHOWN ON THE DRAWINGS OR MENTIONED HEREIN. IT IS NOT THE INTENTION OF THESE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, OBSTRUCTIONS OR STRUCTURAL CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL HIS WORK IN SUCH A MANNER TO AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR WITHOUT FURTHER COST OR INSTRUCTIONS.
7. BEFORE SUBMITTING PROPOSAL BIDDERS SHALL CAREFULLY EXAMINE FIELD CONDITIONS AND CONTRACT DRAWINGS OF ALL TRADES. SUBMISSION OF PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT REQUIRED EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR EXTRA LABOR, EQUIPMENT AND MATERIALS REQUIRED DUE TO DIFFICULTIES WHICH COULD HAVE BEEN FORESEEN, WILL NOT BE RECOGNIZED. VERIFICATION SHALL BE MADE AS TO THE ACTUAL LOCATIONS WHERE NEW DUCT AND PIPE LINE RUNS WILL BE INSTALLED, AS WELL AS CLEARANCES BETWEEN NEW AND EXISTING DUCTWORK, PIPING AND STRUCTURAL MEMBERS. SHOULD THE CONTRACTOR FIND ANY EQUIPMENT OR CONDITION THAT IS NOT IN AGREEMENT WITH THE PLANS, HE SHALL REFER THE MATTER TO THE ENGINEER'S ATTENTION BEFORE PROCEEDING WITH THE DEMOLITION OR CONSTRUCTION.
8. CONTRACTOR SHALL BRING TO THE IMMEDIATE ATTENTION OF THE OWNER ANY CHANGES IN THE SIZE OR LOCATION OF THE MATERIAL OR EQUIPMENT WHICH MAY BE NECESSARY IN ORDER TO MEET FIELD CONDITIONS, OR IN ORDER TO AVOID CONFLICT WITH THE EQUIPMENT OF OTHER SECTIONS. OBTAIN THE OWNER'S APPROVAL BEFORE SUCH DEVIATIONS ARE MADE.
9. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING.
10. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUT DOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO EXISTING PIPING. PROVIDE TEMPORARY PIPING OR DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUT DOWN TIME. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
11. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO A CONDITION ACCEPTABLE TO THE ENGINEER.
12. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS AND WALLS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL.
13. ALL PRESENT MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.
14. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
15. CONTROLLED INSPECTION TO BE PERFORMED BY THIS CONTRACTOR.
16. PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT. SUBMIT TO ARCHITECT FOR APPROVAL.
17. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR TO FURNISH AUTOMATIC CONTROLS, MOTORS AND MOTOR CONTROLLERS.
    a. EACH SINGLE PHASE MOTOR SHALL BE PROVIDED WITH A MANUAL STARTER. MANUAL STARTERS SHALL BE TOGGLE SWITCH TYPE, TRIP FREE AND TRIP INDICATING. FLUSH MOUNTED UNITS SHALL BE PROVIDED WITH STAINLESS STEEL PLATES. ALL MANUAL STARTERS SHALL BE EQUIPPED WITH NEON PILOTS AND SHALL BE EQUAL TO SQUARE D, WESTINGHOUSE OR APPROVED EQUAL.
    b. MAGNETIC STARTERS SHALL BE NEMA STANDARD CONTROLLERS SUITABLE FOR THE USE INTENDED, EQUIPPED WITH NECESSARY AUXILIARY CONTACTS REQUIRED FOR CONTROL TO OPERATE THE SYSTEMS INDICATED. CONTROLLERS SHALL BE PROVIDED WITH A THERMAL OVERLOAD IN EACH MOTOR FEEDER UNDERGROUND LEG, AN EXTERNAL RESET BUTTON AND A HAND-OFF-AUTOMATIC SWITCH, WITH PILOT STATION. CONTROLLERS FOR THREE-PHASE MOTORS SHALL BE MAGNETIC, NON-REVERSING, FULL VOLTAGE, ACROSS-THE-LINE TYPE AND FURNISHED WITH CONTROL TRANSFORMERS.
18. ALL EQUIPMENT HAVING MOVING PARTS SHALL BE ISOLATED FROM THE BUILDING STRUCTURE BY MEANS OF SPRING VIBRATION ISOLATORS. ISOLATION SHALL BE OF THE SAME BRAND AND EQUIPMENT MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED IN THE ISOLATION OF THE EQUIPMENT.
19. DAILY DURING CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL REMOVE ALL RUBBISH AND EXCESS MATERIAL ACCUMULATED AS A RESULT OF HIS OPERATIONS. ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE WIPED CLEAN OF DUST AND DEBRIS BEFORE FINAL ACCEPTANCE BY THE OWNER.
20. BEFORE COMPLETION OF THIS PROJECT, THE MECHANICAL CONTRACTOR SHALL TEST ALL EQUIPMENT. ALL EQUIPMENT SHALL BE OPERATED SUFFICIENTLY LONG TO PROVE TO THE OWNER THAT EACH UNIT PERFORMS SATISFACTORILY AND MEETS THE REQUIREMENTS SPECIFIED.
21. THE MECHANICAL CONTRACTOR SHALL INCLUDE WITH HIS BASE BID AN ADDED ALTERNATE TO PROVIDE COMPLETE SERVICING OF THE MECHANICAL EQUIPMENT WHICH HE HAS INSTALLED FROM THE PERIOD STARTING WITH THE WRITTEN ACCEPTANCE OF THE COMPLETE INSTALLATION FOR THE ONE (1) YEAR WARRANTY UP TO ITS CONCLUSION DATE. SERVICING SHALL CONSIST OF, BUT NOT BE LIMITED TO, LUBRICATION OF UNITS ADJUSTMENTS, CLEANING, FILTER CHANGES AND REPLACEMENT OF CEILING TILES.
22. FOR EXACT LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS REFER TO ARCHITECTURAL PLANS AND DETAILS.
23. OBTAIN FROM THE ENGINEER THE LOCATION OF ANY APPARATUS NOT DEFINITELY LOCATED ON THE DRAWINGS. LOCATE EQUIPMENT AND ACCESSORIES IN SUCH A MANNER AS TO PROVIDE EASY ACCESS FOR PROPER SERVICE AND MAINTENANCE OF ALL EQUIPMENT AND ITEMS REQUIRING MAINTENANCE.
24. REVIEW WITH THE ENGINEER AND THE BUILDING MANAGER ANY CONDITION WHICH PREVENTS ADEQUATE ACCESSIBILITY FOR MAINTENANCE PRIOR TO INSTALLATION OF THE WORK. ALL EQUIPMENT AND/OR ACCESSORIES THAT ARE INSTALLED WITHOUT PROPER ACCESS, IN THE OPINION OF THE BUILDING MANAGER, AND INSTALLED WITHOUT THE BUILDING MANAGER'S AND/OR ENGINEER'S APPROVAL, SHALL BE REMOVED AND REVISED AS DIRECTED BY THE BUILDING MANAGER AND/OR ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
25. THE CONTRACTOR'S WORK SHALL INCLUDE THE COST OF BREAKING DOWN AND REASSEMBLY OF THE NEW EQUIPMENT AS NECESSARY TO FIT THE EQUIPMENT INTO THE BUILDING.
26. THE CONTRACTOR'S WORK SHALL INCLUDE THE HOISTING OF ALL MATERIALS AND EQUIPMENT, AND HE SHALL ASSUME ALL RESPONSIBILITY FOR SUCH HOISTING AND WORK.
27. THIS CONTRACTOR SHALL REPAIR AND RESTORE TO ORIGINAL CONDITION ANY EXISTING EQUIPMENT OR MATERIALS DAMAGED IN THE PROCESS OF INSTALLATION, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVES.
28. THIS CONTRACTOR SHALL BE RESPONSIBLE TO ENGAGE THE SERVICES OF A QUALIFIED PROFESSIONAL ENGINEER TO INITIATE THE NECESSARY CONTROLLED INSPECTIONS AND PERMITS. THIS CONTRACTOR IS TO FILE THE REQUIRED DOCUMENTS WITH THE CITY OF NEW YORK.

B. DEMOLITION AND REMOVAL:

1. GENERAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR TO ERECT AND MAINTAIN BARRIERS TO PROTECT ADJACENT AREAS FROM DUST AND DEBRIS DURING PERIOD OF DEMOLITION AND CONSTRUCTION.
2. ALL EXISTING WORK NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE. IF EXISTING IS DAMAGED, CONTRACTOR SHALL MAKE REPAIRS USING SAME MATERIALS AT THE CONTRACTOR'S COST.
3. CONTRACTOR SHALL COORDINATE WITH BUILDING MANAGER PRIOR TO WORKING ON OR CONNECTING TO BUILDING SYSTEM AND SHALL TAKE PRECAUTIONS AGAINST DAMAGING OR DISRUPTING BUILDING SYSTEMS, WIRING OR CONTROL TUBING FOR THE TENANTS ABOVE OR BELOW. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED AT THE CONTRACTOR'S COST.
4. REMOVE ALL EXISTING DUCTWORK AND AIR TERMINALS. PROVIDE FOR LEGAL REMOVAL AND DISPOSAL OF ALL RUBBISH AND DEBRIS FROM THE BUILDING AND SITE. COORDINATE ALL DEMOLITIONS AND REMOVALS WITH BUILDING MANAGEMENT. PROTECT ALL WORK NOT SLATED FOR DEMOLITION.
5. TAG ALL EQUIPMENT REMOVED. STORE ALL EQUIPMENT SLATED FOR RELOCATION ON THE FLOOR. TURN OVER TO THE BUILDING MANAGEMENT ALL OTHER REMOVED EQUIPMENT. DISPOSE OF EQUIPMENT AND MATERIAL AS REQUIRED BY THE BUILDING MANAGEMENT.

C. CLEANING AND PROTECTION:

1. STORE MATERIALS IN A MANNER THAT WILL MAINTAIN AN ORDERLY, CLEAN APPEARANCE. IF STORED ON SITE IN OPEN OR UNPROTECTED AREAS, ALL EQUIPMENT AND MATERIALS SHALL BE KEPT OFF THE GROUND BY MEANS OF PALLETS OR RACKS, AND COVERED WITH TARPAULINS.
2. INLET AND DISCHARGE OPENINGS OF ALL EQUIPMENT SHALL BE KEPT COVERED UNTIL THE EQUIPMENT IS READY TO RUN.
3. EQUIPMENT AND MATERIAL DAMAGED IS SUBJECT TO REJECTION AND REPLACEMENT.
4. DURING CONSTRUCTION, PROTECT ALL DUCTWORK, PIPING AND EQUIPMENT FROM DAMAGE AND DIRT. CAP THE OPENINGS OF ALL DUCTWORK, PIPING AND EQUIPMENT NOZZLES.
5. AFTER COMPLETION OF PROJECT, CLEAN THE EXTERIOR SURFACES OF THE EQUIPMENT.

D. SCOPE OF WORK:

PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND CONTRACTOR'S SERVICES NECESSARY FOR A COMPLETE SAFE INSTALLATION OF ALL WORK INDICATED IN CONTRACT DOCUMENTS, IN FULL CONFORMITY WITH REQUIREMENTS BUILDING CODES AND OF ALL AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. SECURE CERTIFICATES, PAY ALL FEES AND CHARGES FOR ALL WORK INSTALLED CERTIFYING

   COMPLIANCE WITH CODES OF NEW YORK CITY AND GOVERNING AUTHORITIES. DELIVER

   CERTIFICATES TO OWNER BEFORE FINAL BILLING
2. DEMOLITION AND REMOVAL FROM SITE OF EXISTING A/C UNITS AND DUCTWORK, CEILING

   EXHAUST FANS, UNLESS OTHERWISE NOTED.
3. CLEANING OF EXISTING TO REMAIN DUCTWORK
4. NEW LOW PRESSURE ALUMINUM DUCTWORK AND ACCESSORIES
5. DIFFUSERS, REGISTERS AND GRILLES
6. INSULATION ACOUSTICAL LINING
7. VIBRATION ISOLATION FOR ALL EQUIPMENT
8. MOTORS, STARTERS AND MISCELLANEOUS ELECTRICAL EQUIPMENT
9. NEW DEHUMIDIFICATION SYSTEM FOR SWIMMING POOL
10. NEW DOAS FOR LOCKER ROOM AREA
11. NEW HEAT PUMP SYSTEM FOR LOCKER ROOM AREA
12. SHOP DRAWINGS AND RECORD DRAWINGS.
13. OBTAINING GOVERNMENT APPROVALS AND PERMITS INCLUDING CONTROLLED INSPECTIONS.
14. COMPLETE AUTOMATIC CONTROL SYSTEMS FOR ALL THE UNITS.
15. TESTING AND BALANCING OF SYSTEMS AND FURNISHING BALANCING REPORT.
16. STORING AND PROTECTION OF EQUIPMENT AND/OR APPURTENANCES SPECIFIED HEREIN.
17. CUTTING AND ROUGH PATCHING REQUIRED FOR THE WORK OF THIS TRADE.
18. NEW THERMOSTATS, CONTROL VALVES
19. PIPE HANGERS, VALVES, VIBRATION ISOLATION.
20. TESTING OF NEW PIPING.
21. HYDRONIC HEATING PIPING, VALVES, ACCESSORIES

E. CODES AND REGULATIONS:

1. WORK SHALL MEET OR EXCEED THE LATEST REQUIREMENTS OF NATIONAL, STATE, COUNTY, MUNICIPAL, AND OTHER AUTHORITIES EXERCISING JURISDICTION OVER THE CONSTRUCTION WORK AT THE PROJECT.
2. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS, ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
3. CONTRACTOR SHALL GIVE NECESSARY NOTICES, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, AND OBTAIN ALL NECESSARY PERMITS AND CERTIFICATES, AND APY ALL FEES AND CHARGES CONNECTED THEREWITH. ALL CERTIFICATES SHALL BE DELIVERED TO THE OWNER BEFORE THE WORK IS FINALLY ACCEPTED. ALL EQUIPMENT SHALL HAVE THE REQUIRED N.Y.C. B.S.A.NUMBERS AS REQUIRED BY THE GOVERNING CODES. THE CONTRACTOR SHALL PROVIDE THE CONTROLLED INSPECTION. ALL NEW EQUIPMENT SHALL HAVE MEA NUMBERS WHICH SHALL BE PROVIDED IN WRITING TO THE OWNER.

F. GUARANTEE AND CERTIFICATION:

THE CONTRACTOR SHALL GUARANTEE WORK PERFORMED AND MATERIALS INSTALLED TO BE FREE FROM DEFECTS AND SHALL REPLACE ANY DEFECTIVE MATERIAL OR WORKMANSHIP, FREE OF COST TO THE OWNER, FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE, EVIDENCED BY THE DATE OF FINAL PAYMENT.

G. SUBMITTALS AND RECORD DRAWINGS:

1. PRIOR TO ASSEMBLING OR INSTALLING THE WORK, THE FOLLOWING SHALL BE SUBMITTED FOR APPROVAL.
   a. 3/8" SCALE DRAWINGS INDICATING DUCT LAYOUT.
   b. DUCT CONSTRUCTION STANDARDS AND DETAILS.
   c. 1/4" SCALE DRAWING INDICATING PIPING.
   d. AUTOMATIC CONTROLS DEVICES AND DIAGRAMS WITH SEQUENCE OF OPERATION DESCRIPTION.
   e. CUTS AND TECHNICAL DATA ON EACH EQUIPMENT, LOUVER, DIFFUSER, GRILLE, DAMPER, ACCESS DOOR, THERMOSTAT, VIBRATION ISOLATION EQUIPMENT INSTALLATION DETAIL.
2. DOCUMENTS WILL NOT BE ACCEPTED FOR APPROVAL UNLESS:
   a. FOUR (4) COPIES OF EACH ARE SUBMITTED, ONE (1) OF THESE COPIES BEING OF THE SEPIA TYPE.
   b. DUCTWORK SHOP DRAWINGS SHALL BE FULLY COORDINATED WITH EXISTING FIELD CONDITIONS AND WORK OF OTHER TRADES AND SHALL BE SO STATED ON THE SHOP DRAWINGS.
3. RECORD DRAWINGS: RECORD ALL DEVIATIONS FROM CONTRACT DRAWINGS AND DELIVER TO OWNER MYLAR TRACINGS SHOWING WORK AS ACTUALLY INSTALLED.

H. CONNECTIONS TO EXISTING WORK:

1. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. SUBMIT TO OWNER FOR APPROVAL, DATE SCHEDULE OF NECESSARY TEMPORARY SHUT-DOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS WILL NOT INTERFERE WITH REGULAR OPERATION OF EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL OF THE BUILDING.
2. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED TO ORIGINAL CONDITION.

I. WIRING:

THE RESPONSIBILITY OF THIS TRADE IN CONNECTION WITH ELECTRICAL WORK IS AS FOLLOWS:

1. FURNISH AND DELIVER TO THE SITE ACTUATING DEVICES WHICH REQUIRE ELECTRICAL CONNECTION ONLY (SUCH AS PUSH-BUTTON STATIONS, WALL-MOUNTED ELECTRICAL CONTACTING THERMOSTATS, ETC.), FOR MOUNTING AND CONNECTION BY THE ELECTRICAL TRADE.
2. PROVIDE NECESSARY INFORMATION, SUPERVISION, AND COORDINATION AS REQUIRED TO IMPLEMENT THE WIRING DIAGRAMS AND OTHER INFORMATION FOR WORK OF THE ELECTRICAL TRADE..
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR TO FURNISH AND INSTALL AUTOMATIC CONTROL WIRING BELOW 100 VOLT. WIRING SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AND TO AND LOCAL AND/OR STATE CODES THAT APPLY.

J. MOTORS:

1. ALL MOTOR AND MOTOR CONTROL EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND THE LOCAL PUBLIC UTILITY FURNISHING CURRENT TO THE BUILDING.
2. MOTOR CONTROL:
   a. FURNISH SUITABLE STARTING AND CONTROLLING EQUIPMENT FOR MOTORS FURNISHED AS PART OF THE AIR CONDITIONING SYSTEMS.
   b. FURNISH PUSH BUTTONS AND OTHER DEVICES, INCLUDING PILOT LIGHTS REQUIRED FOR THE MANUAL OR AUTOMATIC ACTUATING OF MOTOR STARTING EQUIPMENT AS NOTED ON THE PLANS. DEVICES INDICATED AS BEING REQUIRED IN STARTER COVERS SHALL BE DELIVERED MOUNTED TO THE PRODUCT. WHERE PLANS INDICATE THAT DEVICES ARE TO MOUNTED SEPARATELY FROM THE MOTOR STARTERS, SUCH DEVICES SHALL BE FURNISHED COMPLETE WITH NEMA CLASS I GENERAL PURPOSE ENCLOSURES.
   c. STARTERS FOR MOTORS 1/2 HP AND LARGER SHALL BE OF THE MAGNETIC CIRCUIT BREAKER TYPE. EACH MAGNETIC STARTER SHALL BE FURNISHED WITH COMBINATION MAGNETIC CIRCUIT BREAKER TYPE OVERLOAD UNITS IN ALL PHASE LEGS FOR THE MOTOR CONTROLLED , AND SHALL PROVIDE EITHER LOW VOLTAGE PROTECTION OR LOW VOLTAGE RELEASE AS DETERMINED BY THE CONTROL WIRING METHOD INTERLOCKED WITH THE HANDLE OF THE DISCONNECT MEANS TO PREVENT OPENING WHEN THE HANDLE IS IN THE CLOSED POSITION.
   d. STARTING EQUIPMENT FOR ALL MOTORS SHALL BE THE PRODUCT OF CUTLER-HAMMER, WESTINGHOUSE, GENERAL ELECTRIC, OR ALLEN BRADLEY.
   e. PILOT LIGHTS SHALL BE NEON TUBE TYPE WITH CANDELABRA BASE AND CLEAR GLASS.
   f. PUSH BUTTONS SHALL BE THE SPRING RELEASE TYPE.
   g. PROVIDE PERMANENT NAMEPLATES MOUNTED ON THE COVER OF EVERY STARTER, SWITCH, OR CIRCUIT BREAKER, REGARDLESS OF ITS LOCATION.
   h. PROVIDE "HANDS-OFF AUTOMATIC," (HOA) STARTERS FOR ALL CYCLING EQUIPMENT.

K. CUTTING AND PATCHING:

ALL CUTTING AND ROUGH PATCHING FOR THE INSTALLATION OF THE NEW WORK SHALL BE INCLUDED. FINISH PATCHING SHALL BE BY THE GENERAL CONTRACTOR.

L. SLEEVES AND OPENINGS:

1. PROVIDE SLEEVES FOR ALL PIPING AND DUCTWORK PASSING THROUGH WALLS.
2. SLEEVES SHALL BE 20 USSG GALVANIZED IRON.
3. SEAL OPENINGS BETWEEN SLEEVES AND PIPE OR PIPE INSULATION, FOR FULL DEPTH OF SLEEVE, WITH MINERAL WOOL OR EQUIVALENT NON-ASBESTOS, NON-COMBUSTIBLE MATERIAL.

M. PIPING FOR HVAC SYSTEMS:

1. GENERAL
   a. NO PIPING SHALL BE LESS THAN 3/4", UNLESS OTHERWISE NOTED
   b. FOR PIPE SIZES NOT INDICATED ON PLANS, SEE MANUFACTURER'S EQUIPMENT CONNECTION DETAILS
   c. PROVIDE FITTINGS FOR CHANGE IN PIPE SIZE FOR FINAL CONNECTION AT EQUIPMENT AS REQUIRED.
   d. PROVIDE UNION CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON EACH SIDE OF ALL VALVES AND IN-LINE EQUIPMENT.
   e. PROVIDE VALVED AND CAPPED CONNECTIONS AT ALL LOW POINTS IN PIPING SYSTEMS REQUIRED FOR DRAINING SYSTEMS.
   f. ALL PIPING BETWEEN STEEL OR BRONZE DIELECTRIC FITTINGS SHALL BE BRAZED USING SILVER SOLDER AND ALL COPPER FITTINGS TO COPPER PIPE SHALL BE BRAZED USING PHSCO, OR APPROVED 99.4% COPPER SOLDER ALLOY.
   g. ALL EQUIPMENT SHALL BE PROVIDED WITH UNIONS FOR EASILY REMOVAL AND FOR SERVICING.
   h. PRESSURE RATING OF STRAINER TO MATCH THAT OF THE VALVES IN THE SAME LINE. PROVIDE DIELECTRIC UNIONS BETWEEN ALL FERROUS AND NON-FERROUS PIPING.
   i. HIGH POINTS OF ALL WATER PIPING SHALL BE PROVIDED WITH MANUAL VENTS, AND ALL LOW POINTS SHALL HAVE DRAIN VALVES WITH HOSE CONNECTIONS FOR COMPLETE DRAINING OF THE LINES, RATED FOR 200 #S.W.P.
   j. PROVIDE DIELECTRIC GASKETS BETWEEN JOINTS OF DISSIMILAR METALS AND SLEEVES AND WASHERS BETWEEN FLANGES, BOLTS AND NUTS.
   k. ALL PIPING SHALL BE LABELED TO INDICATE SIZE, PURPOSE AND DIRECTION OF FLOW IN SUCH A MANNER THAT IT CAN EASILY BE READ FROM THE FLOOR. LETTERS SHALL NOT BE LESS THAN 2".
   l. BALANCE AND ADJUST ALL MANUAL BALANCING VALVES.
   m. PROVIDE MINIMUM PITCH TO INSURE ADEQUATE VENTING AND DRAINAGE.
   n. PROVIDE, AS REQUIRED, AUTOMATIC AIR VENTS, MANUAL AIR VENTS AND RELIEF AIR VENTS.
   o. AVOID ENTRY OF FOREIGN MATTER INTO PIPING DURING CONSTRUCTION. AFTER COMPLETION OF PIPING, FLUSH SYSTEM WITH WATER FOR AN 8 HOUR PERIOD. REMOVE AND CLEAN STRAINERS, AND BLOW OFF ALL PIPING LOW POINTS AT THE END OF THE 8 HOUR PERIOD. REFILL SYSTEM WITH WATER OR, FOR GLYCOL SYSTEMS, REFILL WITH 40% OF ETHYLENE GLYCOL SOLUTION WITH INHIBITORS. COORDINATE AND PROVIDE WATER TREATMENT IN ACCORDANCE WITH THE BUILDING STANDARDS.
   p. MOTORIZED TWO WAY CHILLED WATER VALVES TO BE HONEYWELL OR APPROVED EQUAL, SELECTED BY THE MANUFACTURER AT 150 #S.W.P. AND SUITABLE FOR 110 VOLT PRIMARY SUPPLY AND 24 VOLT CONTROL ACTUATION.
2. COMPLETE WITH:
   a. PIPE
   b. FITTINGS
   c. VALVES
   d. HANGERS, SUPPORTS
   e. ACCESSORIES
3. MATERIALS:
   a. HOT WATER PIPING SHALL BE STEEL SCHEDULE 40, SEAMLESS OR ELECTRIC WELD ASTM-53.
   b. CHILLED WATER PIPING SHALL BE STEEL SCHEDULE 40, SEAMLESS OR ELECTRIC WELD ASTM-53.
   c. REFRIGERATION AND CONDENSATE DRAIN PIPING SHALL BE TYPE "L" COPPER TUBING OF THE SIZE SHOWN ON THE DRAWINGS OR AS RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT INSTALLED. ALL NEW REFRIGERATION PIPING SHALL BE TESTED AS PER THE MANUFACTURER'S REQUIREMENTS.
4. FITTINGS AND VALVES:
   a. STEEL PIPING FITTINGS 2" AND SMALLER SHALL BE 125(250) LB. CAST IRON FITTINGS 2 1/2" AND LARGER SHALL BE 150(250) LB. WSP FLANGED OR BUTT WELDED.
   b. COMPRESSION AND FLARED FITTINGS: CAST BRASS ANSI B16.26. FLANGE GASKETS FOR JOINTS OF DISSIMILAR METALS: ISOLATING GASKETS, SLEEVES AND WASHERS BETWEEN FLANGES, BOLTS AND NUTS.
   c. PROVIDE 1/2" DRAIN VALVE AND CAPPED CONNECTIONS AT LOW POINTS. PROVIDE 3/4" CAPPED CONNECTION FOR DRAINING CONNECTION AT THE LOWEST POINT IN THE SYSTEM AND IN EQUIPMENT ROOM.
   d. TRAP SEAL IN CONDENSATE DRAIN PIPING SHALL BE MINIMUM 1" GREATER THAN THE STATIC PRESSURE IN THE SYSTEM.
   e. STEEL PIPING 2-1/2" AND ABOVE SHALL BE WELDED AND CONFORM TO THE LATEST REVISION OF: B31.1 CODE FOR PRESSURE PIPING CHAPTER V. ANSI 49.1 SAFETY IN WELDING AND CUTTING. API CODE FOR FUEL AND OTHER API GOVERNING PIPING.
   f. WELDERS SHALL BE QUALIFIED PER SECTION IX OF ASME. BOILER AND PRESSURE VESSEL CODE.
   g. STEEL PIPING 2" AND BELOW MAY BE SCREWED ENDS AND THREADED TO CORRECT LENGTHS.
   h. COPPER PIPING EXCEPT CONDENSATE DISCHARGE: (SILVER SOLDER) HIGH TEMPERATURE BRAZING ALLOY CONNECTION.
   i. COPPER PIPING FOR CONDENSATE DISCHARGE PIPING: 95-5 SOLDER JOINT CONNECTIONS.
   j. VALVES SHALL BE SUITABLE FOR THE SERVICE PRESSURE AND TEMPERATURE AND SHALL BE:
      1) GATE VALVE "JENKINS" FIGURE 270 OR APPROVED EQUAL. BRONZE 300 LBS S.W.P., SOLID WEDGE, INSIDE SCREW, RISING SPINDLE
      2) GLOBE VALVE "JENKINS" FIGURE 556. BRONZE, 300 LBS S.W.P., INSIDE SCREW, UNION BONNET, RENEWABLE DISC.
      3) CHECK VALVE "JENKINS" FIGURE 30A. BRONZE, 300 LBS S.W.P., INSIDE SCREW, UNION BONNET.
      4) BALANCING VALVE BELL AND GOSSETT "CIRCUIT SETTER".
      5) STRAINER "MEUILLER STEAM SPECIALTY" MUESSCO NO. 11 OR APPROVED EQUAL. SCREWED ENDS UP TO 2 1/2", 300 LBS S.W.P., FORGED STEEL 8OR CAST STEEL BODY, 316 STAINLESS STEEL OR MONEL SCREEN WITH 1/8" PERFORATIONS
5. PRESSURE RELIEF VALVES:
   a. PRESSURE RELIEF VALVE BODIES SHALL HAVE SCREWED ENDS AND BE CONSTRUCTED OF BRONZE. THE MAIN VALVE IS TO BE MADE OF STAINLESS STEEL IN SIZES ½" TO 1½" AND OF BRONZE IS SIZES 2" TO 3". MANUFACTURER IS TO RECOMMEND LOADING SPRING SIZE BASED UPON APPROVED EQUIPMENT SPECIFICATIONS AND INTENDED APPLICATIONS. SPRINGS ARE TO BE CADMIUM PLATED STEEL. SPRING RATINGS SHALL COVER 5 TO 35 PSIG AND 25 TO 100 PSIG. THE SET PRESSURE SHALL BE ADJUSTABLE BY A STEEL SET SCREW.
   b. PRESSURE RELIEF VALVES SHALL BE OF THE SIZES AND CAPACITIES REQUIRED TO RELIEVE THE FLOW QUANTITIES INDICATED ON THE DRAWINGS IN ACCORDANCE WITH APPLICABLE ASME CODES.
   c. PRESSURE RELIEF VALVES SHALL GENERALLY BE SET FOR 10 PSI HIGHER THAN PRESSURE REDUCING VALVES DISCHARGE PRESSURE OR 10 PSI GREATER THAN THE WATER SYSTEM. PIPE TO DRAIN.
   d. PRESSURE RELIEF VALVES SHALL HAVE BRONZE BODIES WITH PRESSURE RATING IN EXCESS OF THAT ENCOUNTERED IN SERVICE. VALVES SHALL BE AS MANUFACTURED BY J.B. LONERGAN, WATSON McDANIEL, CONSOLIDATED OR APPROVED EQUAL.
6. PRESSURE GAUGES:

   PRESSURE GAUGES SHALL BE PHOSPHOR BRONZE BOURDON TUBE ACTUATED WITH A 4 1/2" CAST ALUMINUM CASE. THE RANGE OF THE GAUGE SHALL BE SUITABLE FOR THE SERVICE INTENDED. ALL PRESSURE GAUGES SHALL BE INSTALLED WITH BRASS GAUGE COCKS. PRESSURE GAUGES SHALL BE TAYLOR, WEKSLER, ASHCRO

N. VALVE TAGS:

1. PROVIDE VALVE TAGS FOR EACH VALVE AND CONTROL DEVICE EXCEPT EQUIPMENT SHUTOFF VALVES LOCATED AT EQUIPMENT.

2. TAGS SHALL BE MINIMUM 2" DIAMETER, NO. 18 BS GAUGE BRASS, STAMPED IDENTIFYING LETTER AND NUMBER FILLED IN WITH BLACK PAINT, FASTENED BY HEAVY BRASS HOOK OR CHAIN.

3. USE DIFFERENT PATTERN TAGS THAN THOSE USED FOR PLUMBING OR SPRINKLER WORK.

O. EXPANSION JOINTS, GUIDES AND ANCHORS:

1. MAKE ADEQUATE PROVISIONS FOR EXPANSION IN ALL PIPING BY MEANS OF LOOPS, BENDS, OR OFFSETS. WHERE PIPE LINES JOIN OR WHERE BRANCHES OCCUR, MAKE PROVISIONS FOR THE EXPANSION OF BOTH LINES.

2. GUIDES:

   a. LOCATE AND CONSTRUCT WHEREVER REQUIRED TO PERMIT FREE AXIAL MOVEMENT ONLY.

   b. A MINIMUM OF TWO GUIDES SHALL BE INSTALLED ON EACH END OF AN EXPANSION JOINT PLUS AT LEAST ONE GUIDE BETWEEN TWO JOINTS.

3. ANCHOR PIPING WHERE NECESSARY TO CONTROL EXPANSION AND PREVENT UNDUE STRAIN ON THE FITTINGS AND APPARATUS.

4. ANCHORS: HEAVY CONSTRUCTION ATTACHED TO PIPE AND FASTENED TO STRUCTURE.

5. PROVIDE NECESSARY STEEL FOR CONNECTION TO STRUCTURE.

P. DUCTWORK AND ACCESSORIES:

1. SHEETMETAL DUCTWORK:

   a. ALL DUCTWORK SHALL BE ALUMINUM; ASTM B209, ALLOY 3003, TEMPER H-14 SHEET FORM WITH STANDARD, ONE-SIDE BRIGHT FINISH FOR DUCTS EXPOSED TO VIEW AND WITH MILL FINISH FOR CONCEALED DUCTS

   b. ALL DUCTWORK SHALL BE FURNISHED, INSTALLED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA LOW PRESSURE AND MEDIUM PRESSURE DUCT CONSTRUCTION STANDARDS MANUALS, USING PRIME SHEETS OF ALUMINUM.

   c. ALL SQUARE ELBOWS SHALL BE PROVIDED WITH TURNING VANES ON MAXIMUM 4" CENTERS. ROUND ELBOWS SHALL HAVE FULL WIDTH RADIUS.

   d. ALL DUCT SYSTEMS SHALL BE TIGHT AND FREE FROM LEAKS AND VIBRATION. ALL JOINTS IN DUCTWORK SHALL BE SEALED AIRTIGHT. THIS INCLUDES ALL SUPPLY, RETURN AND EXHAUST DUCTWORK. DUCT SEALER DURODYNE 5-2C SHALL BE USED AND SHALL BE TESTED FOR AIRTIGHTNESS AFTER INSTALLATION.

   e. SUPPORT HORIZONTAL DUCTS WITH HANGERS SECURED TO STRUCTURAL STEEL ABOVE. INSTALL ADDITIONAL STEEL AS REQUIRED. CONSTRUCTION AS PER SMACNA MANUALS.

   f. PROVIDE ACCESS DOORS AT ALL FIRE AND AUTOMATIC DAMPERS FOR ACCESS. ALL ACCESS DOORS SHALL BE AS PER LATEST SMACNA STANDARDS.

   g. FABRICATION OF ALUMINUM DUCTS: TYPE 3003 ALUMINUM SHEETS SHALL BE USED IN THE CONSTRUCTION OF THE ALUMINUM DUCTS. HANGERS AND BRACES SHALL BE OF GALVANIZED STEEL. DUCT SHALL BE FABRICATED FROM GAGE SELECTED ACCORDING TO THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS, THIRD EDITION-2005. WHERE AN ALUMINUM DUCT IS TO BE JOINED TO A GALVANIZED STEEL DUCT, THE END OF THE GALVANIZED DUCT SHALL BE COATED WITH BLACK ASPHALTUM PAINT BEFORE IT IS CONNECTED TO THE ALUMINUM DUCT. ALL JOINTS AND SEAMS IN SWIMMING POOL EXHAUST DUCTWORK SHALL BE MADE WATERTIGHT BY THE USE OF A SUITABLE SEALANT. LONGITUDINAL SEAMS SHALL NOT BE LOCATED AT BOTTOM OF DUCT.

2. DAMPERS:

   a. ALL BRANCHES AND TAKE-OFFS SHALL BE EQUIPPED WITH VOLUME DAMPERS. VOLUME DAMPERS SHALL BE MANUAL, OPPOSED BLADE TYPE, WITH LOCKING QUADRANT, CONSTRUCTED AS PER SMACNA MANUALS.

   b. SPLITTER DAMPERS: PROVIDE AT DUCT BRANCHES AND WHERE SHOWN ON THE DRAWINGS.

   c. AUTOMATIC DAMPERS SHALL HAVE INTERLOCKING BLADES AND FRAMES.THE DAMPERS SHALL BE DESIGNED AND CONSTRUCTED SO THAT THE BLADES, FRAMES AND LINKAGE MECHANISMS SHALL PRESENT A RIGID ASSEMBLY WITH FREE AND EASY ACTION. DAMPERS SHALL HAVE GALVANIZED STEEL BLADES AND WELDED STEEL FRAMES. DAMPER BEARINGS SHALL BE BRASS. ALL DAMPERS IN DUCTS SHALL HAVE THE TOP AND BOTTOM EDGES AND BOTH ENDS TRIMMED WITH NEOPRENE AND FASTENED IN AN APPROVED MANNER SO AS TO BE PRACTICALLY AIR TIGHT WHEN CLOSED.

3. FIRE SMOKE DAMPERS:

   a. FURNISH AND INSTALL ALL COMBINATION FIRE SMOKE DAMPERS REQUIRED BY THE LOCAL AND STATE RULES AND REGULATIONS, THE NFPA, AND THE LOCAL AUTHORITY. IN GENERAL, DAMPERS ARE REQUIRED WHEREVER DUCTS ENTER OR LEAVE SHAFTS OR PIERCE FIRE RATED CONSTRUCTIONS. DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ABOVE CODE REQUIREMENTS AND SHALL HAVE UL LABELS, AND AS APPROVED BY THE NEW YORK CITY BOARD OF STANDARDS AND APPEALS.

   b. THERE SHALL BE A TIGHT FITTING ACCESS DOOR IN THE DUCT SO LOCATED AND OF SUCH DIMENSIONS THAT EASY ACCESS MAY BE HAD TO EACH FIRE DAMPER. THE FUSIBLE LINK SHALL BE SO LOCATED AS TO BE READILY REMOVED AND SET FROM THE DOOR. THERE SHALL BE TWO OR MORE DOORS IN WIDE DUCTS, WHICH HAVE MORE THAN ONE DAMPER, ONE OPPOSITE EACH DAMPER. UNLESS OTHERWISE INDICATED, ALL FUSIBLE LINKS SHALL BE SELECTED FOR 160 F.

   c. FIRE SMOKE DAMPERS SHALL BE AS MANUFACTURED BY RUSKIN MANUFACTURING Co., OR EQUAL AS APPROVED. MODEL NO. FSD-60, BSA APPROVAL No. 176-82-SM. BSA APPROVAL NO. 176-82-SM.

   d. ALL FIRE SMOKE DAMPER MOTORS SHALL OPERATE AT 120 VOLT AND BE CONTROLLED WITH 24 VOLT WIRING.

4. FIRE DAMPERS:

   a. FURNISH AND INSTALL ALL FIRE DAMPERS REQUIRED BY THE LOCAL AND STATE RULES AND REGULATIONS, THE NFPA, AND THE LOCAL AUTHORITY. IN GENERAL, DAMPERS ARE REQUIRED WHEREVER DUCTS ENTER OR LEAVE SHAFTS OR PIERCE FIRE RATED CONSTRUCTIONS. DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ABOVE CODE REQUIREMENTS AND SHALL HAVE UL LABELS, AND AS APPROVED BY THE NEW YORK CITY BOARD OF STANDARDS AND APPEALS.

   b. THERE SHALL BE A TIGHT FITTING ACCESS DOOR IN THE DUCT SO LOCATED AND OF SUCH DIMENSIONS THAT EASY ACCESS MAY BE HAD TO EACH FIRE DAMPER. THE FUSIBLE LINK SHALL BE SO LOCATED AS TO BE READILY REMOVED AND SET FROM THE DOOR. THERE SHALL BE TWO OR MORE DOORS IN WIDE DUCTS, WHICH HAVE MORE THAN ONE DAMPER, ONE OPPOSITE EACH DAMPER. UNLESS OTHERWISE INDICATED, ALL FUSIBLE LINKS SHALL BE SELECTED FOR 160 F.

   c. FIRE DAMPERS SHALL BE AS MANUFACTURED BY RUSKIN MANUFACTURING CO., OR EQUAL AS APPROVED, MODEL NO. IBD2, STYLE B, BSA APPROVAL NO. 292-71-5A.

5. FLEXIBLE CONNECTIONS:

PROVIDE BETWEEN AIR HANDLING UNITS AND CONNECTING DUCTWORK AND PLENUMS. MATERIAL SHALL BE NEOPRENE FABRIC. INSTALL TO ALLOW MINIMUM MOVEMENT OF 3". PROVIDE BETWEEN INLINE EXHAUST FANS AND CONNECTING DUCTWORK.

   a. FAN CONNECTIONS, BOTH AT INLET AND DISCHARGE, SHALL BE MADE WITH FLEXIBLE MATERIAL SO AS TO PROHIBIT THE TRANSFER OF VIBRATION FROM FANS TO DUCTWORK CONNECTING THERETO. CONNECTIONS SHALL BE MADE OF VINYL AND NEOPRENE CLOTH. ALL VIBRATION ISOLATION CONNECTORS IN DUCT SYSTEM SHALL BE MADE OF AN APPROVED FLAME RETARDANT FABRIC OR SHALL CONSIST OF SLEEVE JOINTS WITH PACKING OF APPROVED MATERIAL HAVING FLAME SPREAD RATING OF NOT OVER 25 AND SMOKE DEVELOPMENT RATING OF NOT OVER 50.

   b. THE FLEXIBLE CONNECTIONS SHALL BE APPROXIMATELY 6 INCHES LONG AND HELD IN PLACE WITH HEAVY METAL BANDS OR DOUBLE HEMLOCK SECURELY ATTACHED TO PREVENT ANY LEAKAGE AT THE CONNECTION POINTS.

   c. FLEXIBLE DUCT CONNECTIONS BETWEEN SUPPLY DUCTS AND SUPPLY DIFFUSER PLENUM ON COMBINATION LIGHTING FIXTURES SHALL BE WIREMOLD TYPE 54, OR THERMAFLEX TYPE A SPIRAL REINFORCED, FLEXIBLE HOSE. CONNECTIONS TO COLLARS ON THE SUPPLY DUCT AND THE DIFFUSER PLENUM SHALL BE SEALED WITH EC-800 SEALER AND CLAMPED WITH IDEAL TYPE 52 CLAMPS.

   d. FLEXIBLE DUCT CONNECTIONS BETWEEN SUPPLY DUCTS AND SUPPLY DIFFUSER PLENUMS SHALL BE THERMAFLEX TYPE G-KM INSULATED DOUBLE AIR SEAL FLEXIBLE AIR DUCT SUITABLE FOR LOW AND MEDIUM PRESSURE SYSTEMS. CONNECTIONS TO THE SUPPLY DUCT AND THE DIFFUSER PLENUM SHALL BE SEALED AND CLAMPED AS REQUIRED.

6. TURNING VANES:

PROVIDE IN ALL MITER ELBOWS FACTORY FABRICATED AIR FOIL TURNING VANES. CONSTRUCTION SHALL BE AS PER SMACNA MANUALS. SECURE TO DUCT IN A RATTLE OR VIBRATION-FREE MANNER.

7. ACCESS DOORS:

PROVIDE IN ACCORDANCE WITH SMACNA DUCT MANUALS, AND WHERE SHOWN ON THE DRAWINGS. ACCESS DOORS SHALL BE INSULATED GASKETED, AND SHALL BE MADE LARGE ENOUGH TO EASILY SERVICE ALL DAMPERS AND CONTROL DEVICES.

8. ELECTRIC DUCT HEATERS

   A. DUCT HEATERS SHALL BE INDEECO:
   1. TYPE TFZU CUSTOM FLANGED HEATER.
   B. APPROVALS – HEATERS AND PANELBOARDS (IF REQUIRED) SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND SHALL BE LISTED BY UNDERWRITERS LABORATORIES FOR ZERO SPACING BETWEEN THE DUCT AND COMBUSTIBLE SURFACES AND FOR USE WITH HEAT PUMPS AND AIR CONDITIONING EQUIPMENT.
   C. HEATING ELEMENTS SHALL CONSIST OF COIL, 80% NICKEL, 20% CHROMIUM, GRADE A RESISTANCE WIRE PRECISELY CENTERED IN A 304 STAINLESS STEEL TUBE FILLED WITH GRANULAR MAGNESIUM OXIDE. A STAINLESS-STEEL FIN IS TO BE HELICALLY WOUND ONTO THE TUBE. ELEMENTS ARE TO BE FURNISHED WITH MOUNTING FLANGES, MAKING THEM INDIVIDUALLY REMOVABLE THROUGH THE TERMINAL BOX.
   D. HEATER FRAMES AND TERMINAL BOXES SHALL BE CORROSION RESISTANT STEEL. UNLESS OTHERWISE INDICATED, THE TERMINAL BOX SHALL BE NEMA 1 CONSTRUCTION AND SHALL BE PROVIDED WITH A HINGED LATCHING COVER AND MULTIPLE CONCENTRIC KNOCKOUTS FOR FIELD WIRING.
   E. ALL HEATERS SHALL BE FURNISHED WITH TRIPLE OVERTEMPERATURE PROTECTION. A DISC TYPE AND LINEAR, AUTOMATIC RESET THERMAL CUTOUT ARE INCLUDED FOR PRIMARY OVERTEMPERATURE PROTECTION. ALL HEATERS MUST ALSO BE FURNISHED WITH A LINEAR TYPE MANUAL RESET THERMAL CUTOUT WITH BACKUP CONTACTORS (AS REQUIRED). FOR SECONDARY OVERTEMPERATURE PROTECTION, HEAT LIMITERS OR OTHER FUSIBLE OVERTEMPERATURE DEVICES ARE NOT ACCEPTABLE.
   F. HEATERS SHALL BE RATED FOR THE VOLTAGE, PHASE AND NUMBER OF HEATING STAGES INDICATED IN THE SCHEDULE. ALL 3-PHASE HEATERS SHALL HAVE EQUAL BALANCED 3-PHASE STAGES. ALL INTERNAL WIRING SHALL BE STRANDED COPPER WITH 105°C INSULATION AND SHALL BE TERMINATED IN CRIMPED CONNECTORS OR BOX LUGS.
   G. TERMINAL BLOCKS SHALL BE PROVIDED FOR ALL FIELD WIRING AND SHALL BE SIZED FOR INSTALLATION OF 75°C COPPER WIRE RATED IN ACCORDANCE WITH NEC REQUIREMENTS.
   H. HEATERS SHALL BE FURNISHED EITHER WITH THE CONTROL OPTION SPECIFIED IN THE SCHEDULE AND DESCRIBED BELOW OR WITH THE SPECIFIC COMPONENTS LISTED IN THE SCHEDULE.
      1. OPTION K – THERMAL CUTOUTS, AIRFLOW SWITCH, CONTACTORS (WHERE REQUIRED), SCR (WITH STEP CONTROLLER IF HEATER DRAWS OVER 96 AMPS 3-PHASE OR 192 AMPS SINGLE PHASE), FUSES (IF OVER 48 AMPS), CONTROL CIRCUIT TRANSFORMER (WHERE REQUIRED) AND BUILT-IN, SNAP-ACTING, DOOR INTERLOCKED DISCONNECT SWITCH.
   I. WHEN SPECIFIED IN THE SCHEDULE OR BELOW, HEATERS SHALL BE SUPPLIED WITH THE FOLLOWING:
      2. PROPORTIONAL ELECTRONIC DUCT THERMOSTAT WITH SET POINT ADJUSTER

Q. INSULATION:

ALL INSULATION (INCLUDING JACKET OR FACING AND ADHESIVE) SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURE ASTM E-84, NFPA 255 AND UL 723 NOT EXCEEDING A "FLAME SPREAD" OF 25 AND "SMOKE DEVELOPED" OF 50.

1. PIPING INSULATION:

   a. INSULATE ALL GLYCOL HOT WATER AND CONDENSATE DRAIN PIPING.

   b. INSULATION FOR PIPING SHALL BE MOLDED FIBERGLASS, MAXIMUM 0.23 K-FACTOR AT 75 DEG. F MEAN TEMPERATURE, 4 LB. DENSITY WITH ALL PURPOSE JACKET. THE VAPOR BARRIER JACKET SHALL BE OF LAMINATED CONSTRUCTION USING ALUMINUM FOIL, REINFORCING, FLAME EXTINGUISHING ADHESIVE AND EMBOSSED KRAFT PAPER. ALL LONGITUDINAL JOINTS SHALL HAVE A 1 1/2" OVERLAP AND AT END JOINTS 3" WIDE STRIPS TO PROVIDE A POSITIVE AND CONTINUOUS VAPOR SEAL BARRIER.

   c. PIPE FITTINGS SHALL BE COVERED WITH THE SAME TYPE AND THICKNESS OF INSULATION AS THE ADJACENT PIPE LINES AND JACKETING. MITERED SEGMENTS OF PIPE INSULATION MAY BE USED WHERE PREMOLDED IS NOT MANUFACTURED.

   d. ENDS OF INSULATION AT SECTIONS OF PIPING WHICH ARE NOT TO BE INSULATED SHALL BE TAPERED TO A NEAT FINISH WITH OWENS CORNING CC-110 INSULATION.

   e. INSULATION THICKNESS SHALL BE AS FOLLOWS:

| | INSIDE | OUTSIDE |
|---|---|---|
| HOT WATER PIPING (100 TO 250 DEG. F) | | |
| PIPING UP TO 2": | 1½" | 2" |
| PIPING 2-1/2" TO 4": | 2" | 3" |
| PIPING 5" AND ABOVE: | 2½" | 3" |
| CONDENSATE PIPING | | ¼" |

   f. FOR INSULATED PIPING EXPOSED TO OUTDOOR WEATHER, OUTER FINISH SHALL BE 0.016 IN THICK WEATHERPROOF ALUMINUM JACKET WITH LOCK SEAMS.

   g. INSULATE ALL REFRIGERANT PIPING WITH 1" THICK CELLULAR PLASTIC INSULATION.

2. DUCT INSULATION

   a. INSULATE ALL NEW SUPPLY AIR DUCTWORK (EXCEPT WHERE ACOUSTICALLY LINED) WITH A 1.5" THICKNESS, 1-1/2 POUND DENSITY, FIBROUS GLASS BLANKET DUCT INSULATION WITH A FACTORY APPLIED FOIL-SCRIM-KRAFT FACING AND MAXIUM K-FACTOR OF 0.25 AT 75F.

   b. APPLY ADHESIVE TO DUCT WITH A 2" OVERLAP OF FACING AT ALL INSULATION JOINT AND SEAMS. ALL JOINTS SHALL BE SEALED WITH "GLASFAB" TO FORM A CONTINUOUS VAPOR BARRIER. SECURE WITH TYING CORD.

   c. DUCT INSULATION SHALL BE OWENS CORNING ALL SERVICE FACED DUCT WRAP, OR APPROVED EQUAL.

   d. INSULATE/REINSULATE ALL EXISTING TO REMAIN SUPPLY AIR DUCTWORK WHERE INSULATION HAS BEEN REMOVED OR IS MISSING.

   e. INSULATE PLENUMS AND DUCTS ASSOCIATED WITH OUTSIDE AIR INTAKES AND THE CONDENSER AIR INTAKES AND DISCHARGES WITH A 1.5" THICK FIBERGLASS BOARD 3 LBS. MIN. DENSITY, THERMAL CONDUCTIVITY 0.23 AT 75°F AND WITH VAPOR BARRIER.

3. INSULATION INSTALLATION:

PRIOR TO APPLYING ANY INSULATION, ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETE AND APPROVED. ALL INSULATION SHALL BE BUTTED FIRMLY. USE 2" LAP STRIPS AT ALL SEAMS SECURED WITH ADHESIVE. NO STAPLES ARE PERMITTED. APPLY COAT OF VAPOR SEAL ADHESIVE WHERE REQUIRED.

R. ACOUSTICAL TREATMENT:

1. WHERE SHOWN ON THE DRAWINGS, LOW PRESSURE DUCTWORK SHALL BE LINED WITH 1" THICK, 1-1/2 POUND MINIMUM DENSITY, NEOPRENE COATED, FLEXIBLE FIBERGLASS DUCT LINER. LINING SHALL COMPLY WITH NFPA 90A AND SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING NOT MORE THAN 50. DUCT SIZES WHERE LINING IS INDICATED ON PLANS ARE MINIMUM INSIDE CLEAR DIMENSIONS REQUIRED.

2. WHERE ACOUSTICAL LINING IS INSTALLED, THE DUCT SHALL BE INCREASED IN SIZE SO THAT THE CLEAR INSIDE LINING DIMENSIONS MATCH THE DUCT SIZES ON THE DRAWINGS.

3. LINING SHALL BE SUITABLE FOR OPERATION UP TO A VELOCITY OF 4000 FPM. ADHERE LINING TO DUCTWORK WITH ADHESIVE OVER 100% OF CONTACT AREA.

S. AIR OUTLETS :

1. SQUARE CEILING DIFFUSERS SHALL BE TITUS MODEL TMS-AA (ALUMINUM WITH STEEL SUPPORT BAR) OF THE SIZES AND MOUNTING TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. THE DIFFUSER SHALL HAVE THREE CONES. ALL CONES SHALL BE ONE PIECE PRECISION DIE-STAMPED; THE BACK CONE SHALL ALSO INCLUDE AN INTEGRALLY DRAWN INLET (WELDED-IN INLETS AND CORNER JOINTS ARE NOT ACCEPTABLE). THE TWO INNER CONES SHALL BE CONSTRUCTED AS A SINGLE, REMOVABLE INNER CONE ASSEMBLY FOR EASY INSTALLATION AND CLEANING. THE INNER CONE ASSEMBLY MUST HAVE A HOLE WITH REMOVABLE PLUG IN THE CENTER TO ALLOW QUICK ADJUSTMENT OF AN OPTIONAL INLET DAMPER WITHOUT REMOVING THE INNER CONE ASSEMBLY. DIFFUSERS SHALL BE CONSTRUCTED OF 0.040 ALUMINUM.

   THE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT 315°F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H.

   THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSIVE ENVIRONMENTS SALT SPRAY TEST WITHOUT CREEPAGE, BLISTERING OR DETERIORATION OF FILM. THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

   THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE SQUARE DIFFUSER. THE DIFFUSER SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-1991.

2. SUPPLY REGISTERS SHALL BE TITUS MODEL CT-541 WITH ½-INCH THICK FIXED BARS AT 15° DEFLECTION, SPACED ½-INCH ON CENTER. LINEAR BAR DIFFUSERS SHALL BE AVAILABLE IN STANDARD ONE-PIECE LENGTHS UP TO 6 FEET AND SHALL HAVE THE SIZES AND MOUNTING TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. DIFFUSER LENGTHS GREATER THAN 6 FEET SHALL BE FURNISHED IN MULTIPLE SECTIONS AND WILL BE JOINED TOGETHER END-TO-END WITH ALIGNMENT STRIPS OR PINS TO FORM A CONTINUOUS APPEARANCE. ALL ALIGNMENT COMPONENTS TO BE PROVIDED BY THE MANUFACTURER.

   THE DIFFUSER CORE SHALL HAVE EXTRUDED ALUMINUM BARS LOCKED INTO A HEAVY EXTRUDED ALUMINUM BORDER. THE DEFLECTION BARS MUST BE FIXED AND PARALLEL TO THE LONG DIMENSION. THE CORE MUST HAVE SUPPORT BARS LOCATED NO MORE THAN 9 INCHES APART AND SHALL BE PARALLEL TO THE SHORT DIMENSION.

   FLOOR MODELS OF THE DIFFUSER SHALL HAVE HEAVY DUTY MOUNTING FRAMES (FRAMES 5, 6 OR 15) AND REMOVABLE CORES FOR EASY ACCESS. THE CORE SUPPORT BARS SHALL BE LOCATED NO MORE THAN 6 INCHES APART AND SHALL BE PARALLEL TO THE SHORT DIMENSION FOR ADDED STRENGTH.

   THE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT 315°F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H.

   THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSIVE ENVIRONMENTS SALT SPRAY TEST WITHOUT CREEPAGE, BLISTERING, OR DETERIORATION OF FILM. THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

   HEAVY GAUGE EXTRUDED ALUMINUM END BORDERS AND MITERED CORNERS SHALL BE AVAILABLE TO CLOSE OFF THE ENDS OF THE DIFFUSERS. OPTIONAL OPPOSED BLADE DAMPER SHALL BE CONSTRUCTED OF HEAVY GAUGE ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE DIFFUSER. OPTIONAL DIRECTIONAL BLADES AND BLANK-OFFS SHALL ALSO BE AVAILABLE. OPTIONAL DIFFUSER CURVING TO A 6-FOOT MINIMUM RADIUS ON MOST MODELS SHALL BE AVAILABLE AS REQUIRED.

   THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE LINEAR BAR DIFFUSER. THE DIFFUSER SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-1991.

3. ALUMINUM RETURN GRILLES AND REGISTERS SHALL BE TITUS MODEL 350F (3/4-INCH BLADE SPACING) OF THE SIZES AND MOUNTING TYPES SHOWN ON THE PLANS AND OUTLET SCHEDULE. THE FIXED DEFLECTION BLADES SHALL BE AVAILABLE PARALLEL TO THE LONG OR SHORT DIMENSION OF THE GRILLE. CONSTRUCTION SHALL BE OF EXTRUDED ALUMINUM WITH A 1-1/4-INCH WIDE BORDER ON ALL SIDES. MINIMUM BORDER THICKNESS SHALL BE 0.040-0.050 INCH. SIZES 24 X 24 INCHES AND SMALLER SHALL BE CONSTRUCTED USING A ROLL-FORMED FRAME.

   CORNERS SHALL BE WELDED WITH FULL PENETRATION RESISTANCE WELDS. SIZES LARGER THAN 24 X 24 INCHES SHALL BE CONSTRUCTED BY USING HEAVY ALUMINUM EXTRUSIONS AND SHALL BE INTERLOCKED AT THE FOUR CORNERS AND MECHANICALLY STAKED TO FORM A RIGID FRAME. SCREW HOLES SHALL BE COUNTER-SUNK FOR A NEAT APPEARANCE.

   DEFLECTION BLADES SHALL BE CONTOURED TO A SPECIFICALLY DESIGNED AND TESTED CROSS-SECTION TO MEET PUBLISHED TEST PERFORMANCE DATA. BLADES SHALL BE FIRMLY HELD IN PLACE BY MULLIONS FROM BEHIND THE GRILLE AND FIXED IN PLACE BY CRIMPING OR WELDING. BLADE DEFLECTION ANGLE SHALL BE AVAILABLE AT 35°.

   OPPOSED BLADE VOLUME DAMPER SHALL BE PROVIDED FROM MANUFACTURER AND SHALL BE CONSTRUCTED OF HEAVY GAUGE ALUMINUM. DAMPER MUST BE OPERABLE FROM THE FACE OF THE GRILLE.

   THE GRILLE FINISH SHALL BE #26 WHITE. THE FINISH SHALL BE AN ANODIC ACRYLIC PAINT, BAKED AT 315° F FOR 30 MINUTES. THE PENCIL HARDNESS MUST BE HB TO H. THE PAINT MUST PASS A 100-HOUR ASTM B117 CORROSIVE ENVIRONMENTS SALT SPRAY TEST WITHOUT CREEPAGE, BLISTERING OR DETERIORATION OF FILM. THE PAINT MUST PASS A 250-HOUR ASTM D870 WATER IMMERSION TEST. THE PAINT MUST ALSO PASS THE ASTM D2794 REVERSE IMPACT CRACKING TEST WITH A 50-INCH POUND FORCE APPLIED.

   THE MANUFACTURER SHALL PROVIDE PUBLISHED PERFORMANCE DATA FOR THE GRILLE. THE GRILLE SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-1991.

4. COLOR OF FINISH ON DIFFUSERS, GRILLES AND REGISTERS SHALL BE AS PER ARCHITECT. SUBMIT
   COLOR SAMPLE OF FINISH TO ARCHITECT FOR APPROVAL.

5. ALL DIFFUSERS ARE TO HAVE A NOISE CRITERIA LESS THAN 30.

T. VIBRATION ISOLATION:

ALL MOTOR DRIVEN MECHANICAL EQUIPMENT SHALL BE MOUNTED ON SPRING ISOLATION SUPPORTS. THE ISOLATION MANUFACTURER SHALL SUPPLY ALL ISOLATION EQUIPMENT. WHERE AIR HANDLING PACKAGE TYPE UNITS ARE FLOOR MOUNTED, ISOLATION UNITS ARE TO BE MOUNTED BETWEEN UNIT AND HEAVY-ANGLE IRON FRAMEWORK. PLATFORM FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR.

PROVIDE VIBRATION ISOLATION FOR PIPING AND DUCTWORK.

1. VIBRATION CONTROL EQUIPMENT SHALL BE BY MASON INDUSTRIES, VIBRATION ELIMINATOR CO., OR VIBRATION MOUNTING AND CONTROLS.

   SPRING ISOLATORS SHALL BE EQUIPPED WITH SOUND DEADENING PADS AND LEVELING BOLTS AND SHALL BE UNHOUSED, FREE STANDING AND STABLE. ISOLATORS SHALL BE DESIGNED AND CONSTRUCTED SO THAT ENDS OF SPRINGS REMAIN PARALLEL DURING DEFLECTION AND ANY HORIZONTAL MOVEMENT OF THE ISOLATION BASE BE LIMITED TO A MAXIMUM OF 1/4". SPRINGS
2. SHALL HAVE A RUNOUT OF AT LEASET 50% OF THE DESIGNED DEFLECTION. WHERE TO FLOOR SUPPORT IS NOT CONSIDERED NECESSARY BY THE ISOLATION MANUFACTURERS, ISOLATORS SHALL
3. BE EQUIPPED WITH NON-SKID RUBBER PADS.

4. FANS SHALL BE MOUNTED ON RUBBER-IN SHEAR VIBRATION HANGERS.

   A/C UNITS SUSPENDED ABOVE CEILING SHALL BE INSTALLED ON SPRING HANGERS.

U. MISCELLANEOUS PROVISIONS:

5. 1. PAINT ALL SUPPORTING STEEL. PATCH EXISTING BEAM FIREPROOFING WHERE STEEL IS EXPOSED.

6. 2. TOUCH UP WITH MATCHING PAINT ALL EQUIPMENT WHERE NECESSARY.

3. PROVIDE CONDENSATE DRAIN PIPING WITH CLEANABLE P-TRAPS. DRAIN SHALL BE FULL SIZE OF THE COIL DRAIN CONNECTIONS, BUT NOT LESS THAN 3/4".

4. SEAL OPENINGS AROUND DUCTS AND PIPE THROUGH FULL HEIGHT WALLS WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL. MAINTAIN INTEGRITY OF SOUND ISOLATION AROUND DUCTS PENETRATING SOUND INSULATED WALLS.

5. PROVIDE A SPARE SET OF FILTERS FOR EACH AIR CONDITIONING UNIT.

V. MECHANICAL VENTILATION NOTES:

1. UPON COMPLETION OF THE VENTILATING SYSTEMS, A TEST SHALL BE CONDUCTED IN THE PRESENCE AND UNDER THE DIRECTION OF A PROFESSIONAL LICENSED ENGINEER OR REGISTERED ARCHITECT QUALIFIED TO CONDUCT SUCH TESTS OR OTHER PERSON HAVING NOT LESS THAN FIVE FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF VENTILATION SYSTEMS, AND QUALIFIED TO CONDUCT SUCH TESTS. THE TESTS SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED.

2. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT OR OTHER QUALIFIED PERSON WHO CONDUCTS THE TEST SHALL FILE A CERTIFICATE AND REPORT OF TEST AS TO WHETHER THE TEST SHOWS THAT THE RATE OF AIR SUPPLY AND EXHAUST COMPLIES WITH THE REQUIREMENTS OF THE PERTAINING TO VENTILATION.

3. A STATEMENT SHALL BE FILED BY THE OWNER THAT THE SYSTEM OF VENTILATING SHALL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE.

4. ALL FIRE DAMPERS TO COMPLY WITH REQUIREMENTS OF BOARD OF FIRE UNDERWRITERS, SEE NFPA NO.90A, RUSKIN, B.S. A. NO.292-71-5A.

5. SYSTEM WILL COMPLY WITH NEW BUILDING CODE MOST RECENT EDITION, RELATING TO THE INSTALLATION OF VENTILATING SYSTEMS.

6. HVAC EQUIPMENT SHALL BE APPROVED BY BOARD OF STANDARDS AND APPEALS AND CONTRACTOR SHALL PROVIDE B.S. A. NUMBER OF EQUIPMENT PURCHASED AND APPROVED FOR INSTALLATION.

7. THE ENTIRE VENTILATION SYSTEM WILL BE INSTALLED IN STRICT ACCORDANCE WITH THE N.Y.C. BUILDING CODE (RS-13) AND THE RULES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

8. CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM ALL REQUIRED CONTROLLED INSPECTIONS SAME SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS.

9. FIRE DAMPERS SHALL BE PROVIDED IN ALL DUCTWORK AS PER RS 13-1 CHAPTER 3. FIRE DAMPERS SHALL BE PROVIDED IN ALL OUTDOOR AIR INTAKE (F.A.I.) OPENINGS AND AS PER RS 13-1.

10. AN EQUIPMENT USE PERMIT SHALL BE FILED BY THE CONTRACTOR FOR ALL AIR CONDITIONING AND VENTILATING SYSTEMS.

11. PROVIDE FLAME AND SMOKE RATED FLEXIBLE CONNECTIONS FOR ALL EXHAUST FANS AND AT MEDIUM PRESSURE SIDE OF VAV BOXES AS PER RS 13-1 CHAPTER 3 OF THE NEW YORK CITY CODE.

12. FIRE DAMPERS SHALL BE INSTALLED IN EXHAUST AND RETURN DUCTWORK IN ACCORDANCE WITH RS 13-1 CHAPTER 2-3.4.3.

W. EQUIPMENT OPERATING INSTRUCTIONS:

1. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS TO THE OWNER ON THE PROPER START-UP, OPERAT

Z. DEHUMIDIFICATION UNIT(CONTINUED):

2. QUALITY AND SAFETY ASSURANCE

2.1. THE SYSTEM SHALL BE ETL LISTED

2.2. THE SYSTEM SHALL BE COMPLETELY ASSEMBLED, WIRED, PIPED, AND TEST-RUN AT THE FACTORY PRIOR TO SHIPPING. ALL CONTROLS SHALL BE FACTORY ADJUSTED TO SATISFY THE DESIGN CONDITIONS. A FACTORY TEST REPORT SHALL BE AVAILABLE, UPON REQUEST

2.3. WHEREVER POSSIBLE, THE SYSTEM SHALL HAVE A MECHANICAL VESTIBULE WHERE THE ELECTRICAL PANEL, COMPRESSOR(S), POOL WATER HEAT EXCHANGER(S), RECEIVER(S) AND MOST OF THE REFRIGERATION CONTROLS ARE OUT OF THE PROCESS AIR STREAM

2.4. THE SYSTEM SHALL HAVE A MICROPROCESSOR CONTROLLER WITH UNIT-MOUNTED REFRIGERANT PRESSURE TRANSDUCERS ON EACH REFRIGERATION CIRCUIT, MULTIPLE TEMPERATURE SENSORS AND AN ETHERNET CONNECTION FOR FACTORY LOGGING AND PARAMETER ADJUSTMENT VIA THE INTERNET. THE REFRIGERANT PRESSURE TRANSDUCERS SHALL BE ACTIVELY USED FOR SYSTEM CONTROL. THE CUSTOMER (OR THEIR AUTHORISED REPRESENTATIVE) SHALL BE PROVIDED ACCESS TO THE ONLINE LOGGING AND PARAMETER ADJUSTMENT INTERFACE. UPON REQUEST, DEMONSTRATION OF THESE CAPABILITIES MUST BE CARRIED OUT AT THE ENGINEER'S OFFICE PRIOR TO BID DAY

2.5. THE SYSTEM SHALL HAVE REMOTE FACTORY START-UP ASSISTANCE CAPABILITY, WHEN CONNECTED TO A NETWORK WITH INTERNET ACCESS

2.6. THE SYSTEM SHALL HAVE 24-7 REMOTE COMPUTER LOGGING CAPABILITY WITH AUTOMATED ALARM NOTIFICATIONS AND SYSTEM PERFORMANCE ALERTS TRANSMITTED VIA E-MAIL TO AUTHORISED USERS, WHEN CONNECTED TO A NETWORK WITH INTERNET ACCESS

2.7. WARRANTY: THE ENTIRE SYSTEM SHALL HAVE A 24-MONTH LIMITED PARTS WARRANTY FROM THE FACTORY SHIP DATE

2.7.1. A 1-YEAR LABOR WARRANTY SHALL BE PROVIDED BY THE MANUFACTURER WHEN THE SYSTEM IS CONNECTED TO THE FACTORY VIA AN INTERNET MONITORING SYSTEM FROM THE DATE OF INITIAL COMMISSIONING

2.8. WHEN CONNECTED TO A NETWORK WITH INTERNET ACCESS, THE SYSTEM SHALL HAVE REMOTE SERVICE CAPABILITY WITH THE ABILITY FOR FIELD SERVICE TECHNICIANS TO RECEIVE SERVICE AND TROUBLE ALERTS BY E-MAIL AND MAKE PARAMETER ADJUSTMENTS VIA A BROWSER INTERFACE ON ANY INTERNET-CAPABLE DEVICE

2.9. THE UNIT SHALL HAVE REAL-TIME AIRFLOW CONTROL USING FLOW SENSORS, VARIABLE SPEED FANS, AND DAMPERS. PROPER AIRFLOW IS MAINTAINED CONTINUOUSLY, EVEN AS FILTERS LOAD, ETC.

3. GENERAL:

THE NATATORIUM CONTROL SYSTEM SHALL INCLUDE:

3.1. MECHCHANICAL PROCESS DEHUMIDIFICATION

3.2. INDOOR CABINET CONFIGURATION

3.3. A PACKAGED HOT WATER HEATING COIL, SIZED AS SPECIFIED BY THE DESIGN ENGINEER TO MEET THE SKIN LOSSES AND OUTDOOR AIR HEATING LOADS

3.4. COAXIAL CONDENSING HEAT EXCHANGER(S) FOR POOL WATER HEATING USING RECLAIMED COMPRESSOR WASTE HEAT

3.5. PURGE AND ECONOMIZER MODES

3.6. MINIMUM EXHAUST AND PURGE EXHAUST FAN(S) WITH ECONOMIZER MODE

3.7. HEAT RECOVERY BETWEEN THE MINIMUM EXHAUST AIR AND OUTDOOR AIR STREAMS BY MEANS OF A GLYCOL RUN-AROUND LOOP

3.8. PROGRAMMABLE MICROPROCESSOR CONTROLLER WITH REMOTE INTERNET LOGGING AND PARAMETER ADJUSTMENT

3.9. REMOTE OPERATOR PANEL(S)

3.10. A SERVICE VESTIBULE WHERE THE COMPRESSOR, REFRIGERATION SPECIALTIES, CONTROL VALVES AND ALL ELECTRONICS ARE OUTSIDE OF PROCESS AIR STREAM

3.11. OUTSIDE AIR MEASURING ELEMENTS

4. SEQUENCE OF OPERATION

THE SYSTEM SHALL BE DESIGNED AND SIZED TO MAINTAIN THE SPECIFIED SPACE CONDITIONS:

4.1. SYSTEM STARTUP

4.1.1. POWER IS TURNED ON OR THE SYSTEM IS RESTARTED

4.1.2. AFTER A SHORT INITIAL DELAY TO ALLOW THE SENSORS TO STABILIZE, THE BLOWER STARTS AND OPERATES CONTINUOUSLY

4.1.3. BASED ON SENSOR FEEDBACK, THE SYSTEM SHALL BEGIN OR RESUME OPERATION BASED ON THE SEQUENCE BELOW

4.2. AIRSIDE CONFIGURATION

4.2.1. THE SYSTEM CONTINUOUSLY DELIVERS THE SPECIFIED SUPPLY AIR VOLUME TO THE NATATORIUM

4.2.2. THE MINIMUM EXHAUST AIR FLOW IS ACTIVELY CONTROLLED TO MEET THE ENGINEER'S SCHEDULE.

4.2.3. THE MINIMUM OUTDOOR AIR FLOW IS ACTIVELY CONTROLLED TO MEET THE ENGINEER'S SCHEDULE.

4.3. DEHUMIDIFICATION MODE

4.3.1. RETURN AIR DEWPOINT IS ABOVE DEWPOINT SETPOINT.

4.3.2. THE COMPRESSOR ENTERS THE COMPRESSOR START SEQUENCE

4.3.3. IF THE SYSTEM CANNOT MAINTAIN THE RELATIVE HUMIDITY BELOW SETPOINT, THE SECOND COMPRESSOR CIRCUIT WILL START

4.3.4. COMPRESSOR WASTE HEAT IS REJECTED INTO A GLYCOL FLUID LOOP WHICH FEEDS THE REHEAT COILS AND THE AIR CONDITIONING AIR-COOLED HEAT EXCHANGER IN PARALLEL.

4.3.5. THE REHEAT COILS ARE FULLY MODULATING (0-100%). THE REHEAT OUTPUT WILL MODULATE TO MAINTAIN THE SPACE TEMPERATURE AT SET POINT YEAR-ROUND

4.4. AIR CONDITIONING MODE

4.4.1. THE RETURN AIR TEMPERATURE IS ABOVE THE ROOM TEMPERATURE SETPOINT

4.4.2. THE COMPRESSOR STARTS, IF NOT ALREADY OPERATING IN DEHUMIDIFICATION MODE

4.4.3. EXCESS COMPRESSOR HOT GAS IS DIVERTED TO A FLUID-COOLED HEAT EXCHANGER. UP TO 100% OF COMPRESSOR HEAT IS REJECTED INTO THE GLYCOL FLUID LOOP WHICH IS PUMPED OUTDOORS TO AN OUTDOOR AIR-COOLED HEAT EXCHANGER FOR 100% HEAT REJECTION AT SUMMER DESIGN AMBIENT CONDITIONS

4.4.4. 100% OF COMPRESSOR HEAT IS REJECTED AT THE OUTDOOR AIR-COOLED HEAT EXCHANGER ON A SUMMER DESIGN DAY. ON OFF-PEAK DAYS, THE AIR REHEAT OUTPUT WILL MODULATE TO MAINTAIN THE SPACE TEMPERATURE AT THE SET POINT

4.4.5. IF THE SYSTEM CANNOT MAINTAIN THE RETURN AIR TEMPERATURE SETPOINT, THE SECOND COMPRESSOR WILL START

4.5. SPACE HEATING MODE

4.5.1. THE RETURN AIR TEMPERATURE IS BELOW THE ROOM TEMPERATURE SETPOINT

4.5.2. THE MICROPROCESSOR SPACE HEATING OUTPUT SIGNAL (0-10 VOLTS) IS SENT TO THE HEATING COIL CONTROLLER. THE SIGNAL OUTPUT WILL REGULATE BASED ON THE RETURN AIR TEMPERATURE

4.6. POOL WATER HEATING MODE

4.6.1. THE RETURN POOL WATER TEMPERATURE IS BELOW THE POOL WATER SETPOINT

4.6.2. IF THE COMPRESSOR IS ALREADY OPERATING DUE TO A DEHUMIDIFICATION OR AIR CONDITIONING DEMAND, THE CONTROL VALVES WILL DIVERT THE COMPRESSOR HOT GAS THROUGH THE COAXIAL HEAT EXCHANGER TO HEAT THE POOL WATER, WITH THE REMAINDER REJECTED AT THE AIR REHEAT COIL OR THE AC HEAT EXCHANGER

4.6.3. IF THERE IS NO PRE-EXISTING DEMAND FOR THE COMPRESSOR TO OPERATE, THE MICROPROCESSOR SENDS A SIGNAL TO THE AUXILIARY POOL WATER HEATER (REMOTE BY OTHERS) TO OPERATE. THE COMPRESSOR WILL NOT OPERATE SOLELY FOR A POOL WATER HEATING DEMAND UNLESS SPECIFICALLY CONFIGURED TO DO SO AT THE CONTROLLER

4.7. PURGE MODE

4.7.1. THIS MODE IS MANUALLY TRIGGERED BY AN OPERATOR WHEN SUPER-CHLORINATING THE POOL. IT CAN BE TRIGGERED AT THE UNIT-MOUNTED OR OPTIONAL REMOTE OPERATOR PANEL(S), THROUGH THE ONLINE VIRTUAL-TECH INTERFACE OR BY THE BACNET CONTROLLER

4.7.2. PURGE MODE HAS AN ADJUSTABLE TIMED DURATION AFTER WHICH THE SYSTEM AUTOMATICALLY RESUMES NORMAL OPERATION

4.7.3. ONCE TRIGGERED BY THE OPERATOR:

4.7.3.1. THE COMPRESSOR(S), IF OPERATING, PUMP DOWN AND CYCLE OFF

4.7.3.2. A SIGNAL FROM THE MICROPROCESSOR SETS THE EXHAUST FAN(S) TO THEIR MAXIMUM CFM

4.7.3.3. THE UNIT-MOUNTED OUTDOOR AIR DAMPERS OPEN FULLY AND THE RETURN AIR DAMPERS CLOSE

4.7.3.4. THE SYSTEM STAYS IN 100% OUTDOOR AIR VENTILATION MODE

4.7.3.5. AFTER THE TIMED PERIOD EXPIRES, ALL DAMPERS AND FANS RETURN TO NORMAL OPERATING SETTINGS AND THE SYSTEM RESUMES NORMAL OPERATION

4.7.3.6. DURING PURGE MODE, THE SYSTEM WILL CONTROL HEATING BASED ON SUPPLY AIR TEMPERATURE

4.8. ECONOMIZER COOLING MODE

4.8.1. THE RETURN AIR TEMPERATURE IS ABOVE THE ROOM TEMPERATURE SETPOINT

4.8.2. THE MICROPROCESSOR WILL COMPARE THE TEMPERATURE OF THE OUTSIDE AIR WITH THE COOLING SETPOINT

4.8.3. WHEN OUTSIDE AIR IS DEEMED SUITABLE BY THE MICROPROCESSOR, IT WILL BE USED AS THE FIRST STAGE OF SENSIBLE COOLING

4.8.4. WHEN OUTSIDE AIR AS DETERMINED TO BE SUITABLE BY THE MICROPROCESSOR, IT WILL BE USED AS THE FIRST SOURCE OF COOLING.

4.8.5. THE SYSTEM WILL SWITCH OVER TO USING THE COMPRESSOR(S) IF OUTSIDE AIR CONDITIONS CANNOT SATISFY THE SPACE COOLING DEMAND

4.9. ECONOMIZER DEHUMIDIFICATION MODE

4.9.1. THE RETURN AIR RELATIVE HUMIDITY IS ABOVE HUMIDITY SETPOINT

4.9.2. THE MICROPROCESSOR WILL COMPARE THE MOISTURE CONTENT OF THE OUTSIDE AIR TO THE DEHUMIDIFICATION SETPOINT

4.9.3. WHEN THE OUTSIDE AIR IS DEEMED SUITABLE BY THE MICROPROCESSOR, IT WILL BE USED AS THE FIRST STAGE OF DEHUMIDIFICATION

4.9.4. WHEN OUTSIDE AIR AS DETERMINED TO BE SUITABLE BY THE MICROPROCESSOR, IT WILL BE USED AS THE FIRST SOURCE OF COOLING.

4.9.5. THE SYSTEM WILL SWITCH OVER TO USING THE COMPRESSOR(S) IF OUTSIDE AIR CONDITIONS CANNOT SATISFY THE SPACE HUMIDITY DEMAND.

4.10. FREEZE PROTECTION

4.10.1. THE SUPPLY AIR TEMPERATURE FALLS BELOW THE FREEZESTAT SETPOINT OR THE FREEZESTAT SENSOR INDICATES A FREEZESTAT CONDITION

4.10.2. EXHAUST FAN(S) ARE STOPPED AND OUTDOOR AIR DAMPER(S) ARE FULLY CLOSED

4.10.3. THE FREEZE PROTECTION PUMP SHALL START AND IT SHALL CIRCULATE WATER THROUGH THE HOT WATER COIL.

4.10.4. WHEN THE FREEZESTAT ALARM IS TRIPPED, IT MUST BE MANUALLY CLEARED BY THE OPERATOR

5. CABINET

5.1. THE SYSTEM SHALL BE DESIGNED AND CONFIGURED FOR INDOOR INSTALLATION WITH A 2" DOUBLE-WALLED CABINET INCLUDING PAINTED INNER LINER

5.1.1. INFILL PANELS AND DOORS SHALL BE CONSTRUCTED WITH 18 GAUGE G90 GALVANIZED STEEL EXTERIOR AND 18 GAUGE MIL ALUMINUM FINISH INTERIOR SUITABLE FOR CHLORINE AND POOL CHEMICAL RESISTANCE.

5.1.2. THE STRUCTURAL BASE FRAME SHALL BE 3/16" STEEL CHANNEL BASE WITH 12-GAUGE STEEL CROSS BRACING.

5.2. CABINET CONSTRUCTION: ALL CABINET 16, 20 AND 24 GAUGE SHEET METAL SHALL BE GALVANIZED G90 STEEL OR GALVALUMETM ALLOY WITH MILL-APPLIED ZINC PHOSPHATE PRIMER FOLLOWED BY AN EXTERIOR GRADE WHITE SILICONE MODIFIED POLYESTER TOP COAT. THE SHEET METAL IS ENGINEERED TO FORM A CABINET WITH MAXIMUM STRENGTH AND RIGIDITY. ALL SEAMS SHALL BE CAULKED WITH SILICONE TO PREVENT AIR AND WATER LEAKAGE OR INFILTRATION

5.2.1. BASE RAILS: THE CABINET SHALL HAVE A BASE FRAME COMPRISED OF 2 LAYERS OF 10 GAUGE MILL GALVANIZED G90 STEEL. LIFTING LUGS SHALL BE PROVIDED ON THE BASE FRAME FOR RIGGING THE SYSTEM

5.2.2. THE CABINET WALLS SHALL BE OF DOUBLE-WALL CONSTRUCTION USING 20 GAUGE PRE-PAINTED STEEL WITH A FULLY PAINTED INNER METAL LINER AND 2 INCHES OF FIBERGLASS INSULATION

5.2.3. THE CABINET FLOOR SHALL BE COMPRISED OF A 16-GAUGE GALVANIZED STEEL PANEL WITH A 20-GAUGE PRE-PAINTED STEEL INNER LINER, 2-INCH DOUBLE WALL ENGINEERED WITH STRUCTURAL BENDING FOR MAXIMUM RIGIDITY AND BE MECHANICALLY FASTENED TO THE BASE FRAME OF THE UNIT

5.2.4. THE CABINET ROOF SHALL BE 20-GAUGE PRE-PAINTED STEEL, 2-INCH DOUBLE WALL ENGINEERED WITH STRUCTURAL BENDING FOR MAXIMUM RIGIDITY AND BE MECHANICALLY FASTENED TO THE BASE WALLS OF THE UNIT

5.2.5. THE CABINETS SHALL BE MECHANICALLY ASSEMBLED WITH STAINLESS STEEL 5/32" SEALED BLIND RIVETS. WHERE BOLTS ARE REQUIRED BRIGHT ZINC PLATED BOLTS SHALL BE USED

5.2.6. ACCESS DOORS SHALL BE SUPPORTED ON MULTIPLE HINGES, HELD SHUT BY COMPRESSION LATCHES FOR QUICK ACCESS. DOORS SHALL BE PROVIDED FOR ENTRANCE TO ALL SECTIONS HOUSING COMPONENTS REQUIRING ROUTINE MAINTENANCE. FULL HEIGHT ACCESS DOORS SHALL HAVE "HOLD BACK" LATCHES TO PREVENT DOOR CLOSURE DURING THE PERFORMANCE OF SERVICE PROCEDURES

5.2.7. ACCESS DOORS SHALL BE MOUNTED ON MULTIPLE COMBINATION HINGE/LATCH MECHANISMS WHICH SWING EITHER DIRECTION 180 DEGREES AND LIFTS OFF. DOORS SHALL BE PROVIDED FOR ENTRANCE TO ALL SECTIONS HOUSING COMPONENTS REQUIRING ROUTINE MAINTENANCE. DOORS SHALL BE SECURED WITH MINIMUM TWO TOOL-OPERATED LATCHES AND SEALED AGAINST THE FRAME WITH RUBBER GASKET MATERIAL.

5.2.8. THE SYSTEM SHALL HAVE NON-CORRODING PROTECTIVE MESH SCREENS COVERING INTERNAL FAN BLADES, PROTECTIVE GRATES COVERING ALL FLOOR ACCESS PORTS

5.3. OUTDOOR AIR INTAKE:

5.3.1. PURGE /ECONOMIZER AND MINIMUM OUTDOOR AIR CONNECTIONS WITH MOTORIZED DAMPERS AND CONTROLS.

5.3.2. MINIMUM OUTDOOR AIR INTAKE WITH AIRFLOW SENSING ELEMENTS.

5.4. INSULATION: THE UNIT SHALL BE INSULATED PER THE FOLLOWING STANDARDS:

5.4.1. ALL EXTERIOR CABINET SECTIONS SHALL BE INSULATED WITH TWO (2) INCH THICK FIBERGLASS INSIDE THE DOUBLE WALLED CABINET

5.4.2. FIRE RESISTANT RATING TO CONFORM TO NFPA STANDARD 90A AND 90B

5.4.3. SOUND ATTENUATION COEFFICIENT SHALL NOT BE LESS THAN 1.02 AT A FREQUENCY OF 1,000 HZ AS PER ASTM STANDARD C423

5.4.4. THERMAL CONDUCTIVITY SHALL NOT EXCEED 0.26 BTU/HR-SQFT-FT AT 75 °F

5.5. CABINET CONFIGURATION SHALL INCLUDE:

5.5.1. A FILTER RACK WITH SEPARATE ACCESS DOORS SHALL BE PROVIDED FOR THE RETURN AIR AND MINIMUM OUTDOOR AIR STREAMS

5.5.2. UNIT SHALL BE EQUIPPED WITH A SECOND OUTDOOR AIR INTAKE ASSEMBLY WITH MOTORIZED 2 POSITION EXTRUDED ALUMINUM, INSULATED, SILICONE SIDE-SEALED DAMPER FOR PURGE AND ECONOMIZER OPERATION

5.5.3. MECHANICAL VESTIBULE: THE UNIT SHALL HAVE THE COMPRESSOR, RECEIVER, SOLENOID VALVES AND THE ELECTRICAL PANEL IN A SEPARATE COMPARTMENT OUT OF THE PROCESSED AIR STREAM. ALL COMPONENTS SHALL BE SERVICEABLE WHILE THE UNIT IS IN OPERATION WITHOUT DISTURBING THE AIRFLOW

5.5.4. ELECTRICAL PANEL: THE UNIT SHALL HAVE A BUILT-IN ELECTRICAL CONTROL PANEL IN A SEPARATE COMPARTMENT IN ORDER NOT TO DISTURB THE AIRFLOW WITHIN THE DEHUMIDIFIER DURING ELECTRICAL SERVICING. ALL ELECTRICAL COMPONENTS SHALL BE MOUNTED ON A 16 GAUGE GALVANIZED SUB-PANEL

5.5.4.1. SUPPLY AIR: 2-INCH MERV 8, 30% PLEATED FILTERS WITH RUST-FREE NON-METALLIC STRUCTURE ON FACE LOADING RACK.

5.5.4.2. EXHAUST AIR: 2-INCH MERV 8, 30% PLEATED FILTERS WITH RUST-FREE NON-METALLIC STRUCTURE.

5.6. FILTERS

WHEREVER POSSIBLE, AIR FILTERS SHALL BE STANDARD SIZED, REPLACEABLE, OFF-THE-SHELF FILTERS INCLUDING:

5.6.1. OUTSIDE AIR: 2-INCH MERV 8, 30% PLEATED FILTERS WITH RUST-FREE NON-METALLIC STRUCTURE

5.6.1.1. OUTSIDE AIR: WASHABLE, ALUMINUM MEDIA TYPE WITH ALUMINUM U-CHANNEL FRAME WRAPPED AROUND THE PERIMETER OF CRIMPED LAYERS OF ALUMINUM MEDIA. THE FRAME IS DESIGNED WITH DRAIN HOLES TO ENSURE REMOVAL OF EXCESS WATER.

5.7. COILS

5.7.1. EVAPORATOR/DEHUMIDIFIER COILS SHALL BE DESIGNED FOR MAXIMUM MOISTURE REMOVAL CAPACITY

5.7.1.1. COILS SHALL BE FULLY DIPPED AND COATED WITH A POLYESTER/ENAMEL COATING FOR MAXIMUM CORROSION PROTECTION. COATING SHALL COMPLY WITH ASTM B117/D1654 AND ASTM D2126 FOR CORROSION RESISTANCE AGAINST COMMON ACIDS, SALT AND GASES

5.7.1.2. COIL SHALL HAVE GALVANIZED CASING AND END PLATES

5.7.1.3. ALUMINUM FIN AND COPPER TUBES MECHANICALLY BONDED TO ASSURE HIGH HEAT TRANSFER.

5.7.2. AIR REHEAT COILS SHALL BE SIZED FOR VARIABLE HEAT TRANSFER INTO THE AIR WITH A CAPACITY OF 100% OF THE COMPRESSORS TOTAL REQUIRED HEAT OF REJECTION

5.7.2.1. COILS SHALL BE FULLY DIPPED AND COATED WITH A POLYESTER/ENAMEL COATING FOR MAXIMUM CORROSION PROTECTION. COATING SHALL COMPLY WITH ASTM B117/D1654 AND ASTM D2126 FOR CORROSION RESISTANCE AGAINST COMMON ACIDS, SALT AND GASES

5.7.2.2. COIL SHALL HAVE GALVANIZED CASING AND END PLATES

5.7.2.3. ALUMINUM FIN AND COPPER TUBE JOINTS MECHANICALLY BONDED TO ASSURE HIGH HEAT TRANSFER

5.8. DRAIN PANS

EACH EVAPORATOR COIL SHALL BE PROVIDED WITH A POSITIVE DRAINING, COMPOUND-SLOPED, BAKED POWDER PAINT COATED ALUMINUM DRAIN PAN WITH FULLY-WELDED CORNERS TO ENSURE ZERO WATER RETENTION

5.9. BLOWERS AND BLOWER MOTORS

5.9.1. SUPPLY BLOWERS:

5.9.1.1. THE COMPLETE BLOWER ASSEMBLY SHALL BE STATICALLY AND DYNAMICALLY BALANCED ON PRECISION ELECTRONIC BALANCERS

5.9.1.1. THE BLOWER ASSEMBLY SHALL BE MOUNTED ON A 1" DEFLECTION SPRING ISOLATED RACK

5.9.1.2. THE FAN INLETS SHALL BE EQUIPPED WITH ACCIDENTAL CONTACT PROTECTION SCREEN

5.9.1.3. MOTOR(S) SHALL BE PREMIUM EFFICIENCY PAINTED CAST IRON CONSTRUCTION TEFC, NEMA MG1-PART 31 INVERTER DUTY 15:1 CONSTANT TORQUE SEVERE DUTY WITH A SERVICE FACTOR 1.25. MOTORS SHALL BE 6 POLE 1200 RPM SYNCHRONOUS SPEED WITH HOA SWITCH WITH MOTOR SAFETIES AGAINST OVERLOADING AT 60 HZ OPERATION DIRECTLY ON MAINS. MOTORS SHALL HAVE DOUBLE LIP SEALS ON BOTH ENDS WITH RE-GREASABLE BEARINGS 254T FRAME AND LARGER WITH POLYUREA GREASE

5.9.2. EXHAUST BLOWERS:

5.9.2.1. THE PACKAGED EXHAUST BLOWER (EF1) SHALL BE SIZED TO MAINTAIN THE NEGATIVE PRESSURE REQUIREMENT IN THE SPACE DURING NORMAL OPERATION AND ITS OPERATION TIED TO THE SYSTEM'S OCCUPANCY SCHEDULER

5.9.2.2. THE BLOWER SHALL BE IMPELLER PLENUM FAN COMPLETE WITH BACKWARD CURVED, THREE-DIMENSIONAL, PROFILED BLADES MADE OF HIGH PERFORMANCE COMPOSITE MATERIAL. THE BLOWER SHALL BE COMPLETELY CORROSION RESISTANT AND BE MAINTENANCE FREE A DIRECT DRIVE VIA A DIRECT CURRENT (DC) ELECTRONIC COMMUTED (EC) MOTOR. THE EC-MOTOR SHALL HAVE ZERO SLIPPAGE DESIGN AND HAVE CONTINUOUSLY VARIABLE SPEED CONTROL WHEN CONNECTED TO THE UNITS CONTROLLER

5.9.2.3. THE FAN ASSEMBLY SHALL BE BALANCED IN CLASS G 6.3 ACC DIN ISO 1940, DYNAMIC ON TWO LEVELS

5.9.2.4. THE FAN ASSEMBLY SHALL BE SUITABLE FOR AMBIENT TEMPERATURES OF -40°C TO MAX. +70°C

5.9.2.5. THERMAL CONTACTS INSTALLED IN THE WINDINGS COMPLIANT WITH THCL 15

5.9.2.6. DRIVE MOTOR IN EXTERNAL ROTOR PRINCIPLE, SEALED IN PROTECTION CLASS IP54 WITH MOISTURE PROTECTION IMPREGNATION OF THE WINDINGS, TOPICAL PROTECTION

5.9.2.7. HIGH CORROSION RESISTANCE DESIGN WITH HIGH QUALITY AND RELIABILITY

5.9.2.8. THE EXHAUST FAN SHALL BE CONTROLLED FROM AN END SWITCH ON THE POWER OPEN OF THE EXHAUST AIR DAMPER

5.9.2.9. THE EXHAUST FAN ASSEMBLY SHALL INCLUDE AIRFLOW MEASURING STATIONS

5.9.3. PURGE BLOWERS:

5.9.3.1. THE VENTILATION/ECONOMIZER/PURGE EXHAUST BLOWER (PEA) SHALL BE UNIT MOUNTED AND SIZED TO PROVIDE FULL EXHAUST FROM THE SPACE WHEN OPERATING WITH EF1

5.9.3.2. THE FAN SHALL BE DIRECT DRIVEN AXIAL FAN MADE OF HIGH-STRENGTH COMPOSITE MATERIAL IN WHICH THE MOTOR AND CONTROLLER AN INTEGRATED. IT INCLUDES FE2OWLET BLADES COMBINED WITH GUIDE VANES AND EC COMMUTATED DIRECT-CURRENT EXTERNAL ROTOR MOTORS PROVIDES MAXIMUM EFFICIENCY THE QUIETEST PERFORMANCE. THE EC MOTOR SHALL HAVE MAINTENANCE-FREE ELECTRONIC CIRCUITRY, A ROTOR WITH PERMANENT MAGNETS, AND AN INTEGRAL CONTROLLER TO PROVIDE THE WINDINGS WITH ELECTRICAL CURRENT SO THAT, THE MOTOR ROTATES CONTINUOUSLY AND QUIETLY. THE FAN IS AERODYNAMICALLY-OPTIMISED, SICKLE-BLADE PROFILE, PATTERNED WITH SERRATED TRAILING EDGE AND WINGLETS ON THE BLADE OUTER EDGE FOR ENERGY AND NOISE-OPTIMISED OPERATION

5.9.3.3. THE FAN ASSEMBLY SHALL BE BALANCED IN CLASS G 6.3 ACC DIN ISO 1940, DYNAMIC ON TWO LEVELS

5.9.3.4. THE FAN ASSEMBLY SHALL BE SUITABLE FOR AMBIENT TEMPERATURES OF -40°C TO MAX. +70°C

5.9.3.5. THERMAL CONTACTS INSTALLED IN THE WINDINGS COMPLIANT WITH THCL 155

5.9.3.6. DRIVE MOTOR IN EXTERNAL ROTOR PRINCIPLE, SEALED IN PROTECTION CLASS IP54 WITH MOISTURE PROTECTION IMPREGNATION OF THE WINDINGS, TOPICAL PROTECTION

5.9.3.7. HIGH CORROSION RESISTANCE DESIGN WITH HIGH QUALITY AND RELIABILITY

5.9.3.8. THE EXHAUST FAN SHALL BE CONTROLLED FROM AN END SWITCH ON THE POWER OPEN AND SPRING RETURN OUTSIDE AIR DAMPER

5.10. DAMPERS

INTERNAL DAMPERS SHALL BE MADE FROM EXTRUDED ANODIZED ALUMINIUM WITH A PARALLEL BLADE CONFIGURATION AND NEOPRENE DOUBLE-SEAL TIPS TO MINIMIZE LEAKAGE. DAMPER BLADES SHALL BE MOUNTED ON STEEL RODS WHICH ROTATE ON NYLON BUSHINGS. ALL DAMPER HARDWARE SHALL BE CORROSION RESISTANT

5.10.1. THE SYSTEM SHALL BE PROVIDED WITH NORMALLY CLOSED OUTSIDE AIR AND EXHAUST AIR DAMPERS EQUIPPED WITH SPRING-RETURN ACTUATORS THE DAMPERS ADJUST BETWEEN 0% TO 100% OPEN POSITION.

5.10.2. THE OUTDOOR AIR AND EXHAUST AIR DAMPERS SHALL BE OF OPPOSED BLADE CONFIGURATION. DAMPERS SHALL HAVE 0.750-INCH INSULATED BLADES MADE FROM EXTRUDED ANODIZED ALUMINIUM WITH NEOPRENE DOUBLE-SEAL TIPS TO MINIMIZE LEAKAGE. DAMPER LEAKAGE SHALL BE LESS THAN 1% OF MAXIMUM FLOW AT 4-INCH WATER COLUMN DIFFERENTIAL. DAMPER BLADES SHALL BE MOUNTED ON STEEL RODS WHICH ROTATE ON NYLON BUSHINGS. ALL DAMPER HARDWARE SHALL BE CORROSION RESISTANT

5.11. MINIMUM OUTSIDE AIRFLOW MEASURING ELEMENTS

5.11.1. THE OUTSIDE AIR SHALL BE MONITORED VIA FACTORY INSTALLED AIR MONITORING STATIONS.

5.11.2. STATIONS SHALL NOT REQUIRE PERIODIC CALIBRATION OR MAINTENANCE.

5.11.3. AIRFLOW MONITOR MEASUREMENT ACCURACY SHALL BE PLUS OR MINUS, 2% OF READING.

5.11.4. MONITORS SHALL BE CONSTRUCTED OF ANODIZED RODS AND MOUNTING BLOCKS SHALL BE 304 STAINLESS STEEL.

5.11.5. SHALL BE PERMANENTLY MOUNTED WITHIN THE UNIT.

5.12. POOL WATER HEATER

COAXIAL HEAT EXCHANGER WITH CORROSION-RESISTANT CUPRO-NICKEL WATER CIRCUIT TUBING

5.12.1. COAXIAL HEAT EXCHANGER WITH CORROSION-RESISTANT CUPRO-NICKEL WATER CIRCUIT TUBING

5.12.2. SELF-PURGING AND SELF-DRAINING COUNTER FLOW DESIGN

5.12.3. WATER CIRCUIT PIPING SHALL CONSIST OF TRANSPARENT BRAIDED PVC HOSE

5.12.4. TERMINATING CONNECTIONS ARE PVC SCHEDULE 40 NPT FITTINGS LOCATED AT THE CABINET WALL FOR EASY CONNECTION

5.12.5. THE MAXIMUM LOOP OPERATING PRESSURE IS 60 PSIG

5.12.6. THE MAXIMUM LOOP OPERATING PRESSURE IS 60 PSIG

5.13. COMPRESSORS

5.13.1. HERMETIC, SCROLL ACTION COMPRESSOR, SUCTION GAS COOLED, SUITABLE FOR REFRIGERANT R-410A

5.13.2. THE COMPRESSOR(S) SHALL BE MOUNTED ON RUBBER-IN-SHEAR ISOLATORS TO LIMIT THE TRANSMISSION OF NOISE AND VIBRATION

5.13.3. THE COMPRESSOR(S) SHALL BE EQUIIPPED WITH REMOVABLE CRANKCASE HEATER(S) FOR LIQUID MIGRATION PROTECTION

5.13.4. THE COMPRESSOR(S) SHALL BE LOCATED OUTSIDE THE CONDITIONED AIR STREAM IN THE SYSTEM'S SERVICE VESTIBULE

5.13.5. THE COMPRESSOR MANUFACTURER MUST HAVE A WHOLESALE OUTLET FOR REPLACEMENT PARTS IN THE NEAREST MAJOR CITY

5.14. REFRIGERATION CIRCUIT

5.14.1. THE SYSTEM SHALL CONSIST OF TWO FACTORY SEALED REFRIGERATION CIRCUITS FOR DEHUMIDIFICATION AND SENSIBLE COOLING. NO SITE REFRIGERATION WORK SHALL BE REQUIRED

5.14.2. EACH REFRIGERATION CIRCUIT SHALL HAVE PRESSURE TRANSDUCERS MONITORING THE REFRIGERANT DISCHARGE (HIGH) AND SUCTION (LOW) PRESSURES. THE REFRIGERATION CIRCUIT SHALL BE ACCESSIBLE FOR DIAGNOSTICS, ADJUSTMENT AND SERVICING WITHOUT THE NEED FOR SERVICE MANIFOLD GAUGES

5.14.3. ALL REFRIGERATION CIRCUITS SHALL HAVE SOLENOID CONTROL VALVES, CHECK VALVES, A LIQUID LINE FILTER-DRIER, LIQUID AND MOISTURE INDICATOR, THERMOSTATIC EXPANSION VALVE AND A PUMP DOWN SOLENOID VALVE

5.14.4. THE SYSTEM SHALL HAVE AN EXTERNALLY ADJUSTABLE BALANCED PORT DESIGN MECHANICAL THERMOSTATIC EXPANSION VALVE. THE VALVE SHALL HAVE A REMOVABLE POWER HEAD

5.14.5. TAMPER PROOF, HERMETICALLY SEALED NON-ADJUSTABLE HIGH AND LOW PRESSURE SWITCHES AND REFRIGERATION SERVICE VALVES SHALL BE INSTALLED USING SCHRADER TYPE VALVES. REFRIGERATION SERVICE VALVES SHALL BE LOCATED OUTSIDE OF THE AIRSTREAM

5.14.6. THE RECEIVER SHALL HAVE TWO REFRIGERANT LEVEL (MAXIMUM AND MINIMUM) INDICATING SIGHT GLASSES

5.14.7. THE SUCTION LINE SHALL BE FULLY INSULATED WITH 0.500-INCH CLOSED CELL INSULATION

5.15. CONTROL PANEL

5.15.1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXTERNAL POWER WIRING AND DISCONNECT SWITCH FUSING. POWER BLOCK TERMINALS SHALL BE PROVIDED

5.15.2. THE SYSTEM SHALL INCLUDE A FACTORY-INSTALLED NON-FUSED DISCONNECT

5.15.3. SHALL BE MOUNTED INSIDE THE SERVICE VESTIBULE OUTSIDE OF THE PROCESS AIR STREAM

5.15.4. BLOWER MOTORS SHALL BE PROTECTED WITH THERMAL TRIP OVERLOADS

5.15.5. THE SYSTEM SHALL HAVE A VOLTAGE MONITOR WITH PHASE PROTECTION

5.15.6. AVAILABLE DRY CONTACTS SHALL INCLUDE:

5.15.6.1. ALARM

5.15.6.2. BLOWER INTERLOCK

5.15.6.3. STAGE 1 & 2 HEATING

5.15.6.4. OUTDOOR AIR DAMPER CONTROL

5.15.6.5. REMOTE EXHAUST FAN #1

5.15.6.6. REMOTE EXHAUST FAN #2

5.15.6.7. OUTDOOR-AIR COOLED EQUIPMENT

5.15.6.8. SYSTEM ON

5.15.6.9. AUXILIARY POOL HEATER 1

5.15.6.10. HEAT RECOVERY

5.15.7. TERMINALS SHALL BE PROVIDED TO SEND 24-VOLT POWER TO THE OUTDOOR AIR COOLED CONDENSER OR FLUID COOLER FAN CONTACTOR

5.15.8. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH UL OR CSA SAFETY ELECTRICAL CODE REGULATIONS AND SHALL BE IN ACC

5.18. AIR CONDITIONING

AIR-COOLED AIR CONDITIONING VIA A FLUID COOLER

5.18.1. THE SYSTEM SHALL BE EQUIPPED WITH AN AIR CONDITIONING MODE WHERE EXCESS COMPRESSOR HEAT IS REJECTED TO A REMOTE OUTDOOR AIR-COOLED HEAT EXCHANGER (AKA DRY COOLER) VIA A SINGLE GLYCOL FLUID LOOP. NO SITE REFRIGERATION WORK SHALL BE REQUIRED. THE SYSTEM SHALL INCLUDE A CIRCULATING PUMP AND EXPANSION TANK. THE PACKAGED FLUID COOLED CONDENSER AND REMOTE OUTDOOR AIR-COOLED

5.18.2. HEAT EXCHANGER SHALL BOTH BE CAPABLE OF REJECTING 100% OF THE COMPRESSOR HEAT REJECTION WITH AN AIR ON TEMPERATURE AT SUMMER DESIGN CONDITIONS

5.18.3. THE SYSTEM SHALL BE PROVIDED WITH A DRY CONTACT RATED FOR 24VAC/5A TO OPERATE THE REMOTE OUTDOOR FLUID COOLER CONTROL

5.18.4. EACH REFRIGERATION CIRCUIT SHALL INCLUDE REFRIGERANT VALVES, A RECEIVER WITH PRESSURE RELIEF VALVE SET AT 650 PSIG, A PRESSURE CONTROL VALVE AND A PRESSURE DIFFERENTIAL VALVE, AND TWO MANUAL SHUTOFF VALVES TO ISOLATE THE OUTDOOR FLUID COOLER

5.18.5. COILS SHALL BE TESTED AT 425 PSIG AND MOUNTED VERTICALLY FOR COMPLETE SURFACE UTILIZATION. COILS SHALL BE COUNTER FLOW AND HAVE ADEQUATE CAPACITY TO DISSIPATE THE TOTAL HEAT REJECTION OF THE SYSTEM AT DESIGN CONDITIONS

5.18.6. THE FAN(S) SHALL BE DIRECT DRIVEN AXIAL FAN(S) WITH DUAL SPEED EXTERNAL ROTOR MOTOR(S) AND INNOVATIVE BIONIC BLADES IN DIE-CAST ALUMINUM MOULDS

5.18.6.1. THE FAN ASSEMBLY SHALL BE BALANCED IN CLASS G 6.3 ACC DIN ISO 1940, DYNAMIC ON TWO LEVELS

5.18.6.2. THE FAN ASSEMBLY SHALL BE SUITABLE FOR AMBIENT TEMPERATURES OF -40°C TO MAX. +70°C

5.18.6.3. THERMAL CONTACTS INSTALLED IN THE WINDINGS COMPLIANT WITH THCL 155

5.18.6.4. DRIVE MOTOR IN EXTERNAL ROTOR PRINCIPLE, SEALED IN PROTECTION CLASS IP54 WITH MOISTURE PROTECTION IMPREGNATION OF THE WINDINGS, TOPICAL PROTECTION

5.18.6.5. HIGH CORROSION RESISTANCE DESIGN WITH HIGH QUALITY AND RELIABILITY

5.19. FACTORY PERFORMANCE TESTING

5.19.1. A.THE SYSTEM SHALL BE THOROUGHLY TESTED UNDER FACTORY TEST CONDITIONS. A COPY OF THE ORIGINAL TEST REPORT SHALL BE AVAILABLE TO THE ENGINEER UPON REQUEST

5.19.2. MICROPROCESSOR CONTROLS SHALL BE FACTORY ADJUSTED AND PRE-SET TO THE DESIGN CONDITIONS DURING TESTING

5.20. PRODUCT DELIVERY, ACCEPTANCE, STORAGE AND HANDLING

5.20.1. PERFORM A THOROUGH PHYSICAL INSPECTION OF THE SYSTEM UPON DELIVERY FROM THE SHIPMENT CARRIER

5.20.2. IDENTIFY AND IMMEDIATELY REPORT ANY PHYSICAL DAMAGE TO MANUFACTURER

5.20.3. IF THE SYSTEM IS TO BE STORED PRIOR TO INSTALLATION, STORE IN A CLEAN, DRY PLACE PROTECTED FROM WEATHER, DIRT, FUMES, WATER, CONSTRUCTION AND PHYSICAL DAMAGE

5.20.4. HANDLE THE SYSTEM CAREFULLY DURING INSTALLATION TO PREVENT DAMAGE

5.20.5. DAMAGED SYSTEMS OR COMPONENTS SHALL NOT BE INSTALLED. CONTACT THE MANUFACTURER FOR RMA INSTRUCTIONS

5.20.6. COMPLY WITH THE MANUFACTURER'S RIGGING AND INSTALLATION INSTRUCTIONS FOR UNLOADING THE SYSTEM AND MOVING IT INTO POSITION

5.21. CONNECTIONS

5.21.1. WHERE INSTALLING PIPING ADJACENT TO THE SYSTEM, ALLOW SPACE FOR SERVICE AND MAINTENANCE

5.21.2. DUCT CONNECTIONS: DRAWINGS INDICATE THE GENERAL ARRANGEMENTS OF THE DUCTS. CONNECT THE SYSTEM TO DUCTS WITH FLEXIBLE DUCT CONNECTORS. COMPLY WITH CODE REQUIREMENTS FOR FLEXIBLE DUCT CONNECTORS

5.21.3. ELECTRICAL CONNECTIONS: COMPLY WITH CODE REQUIREMENTS FOR POWER WIRING, SWITCHES AND MOTOR CONTROLS IN ELECTRICAL SECTIONS

5.22. INSTALLATION

THE AGENCY RESPONSIBLE FOR START-UP SHOULD WORK IN ACCORDANCE WITH THE SPECIFICATIONS AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND ONLY BY WORKERS EXPERIENCED IN THIS TYPE OF WORK

5.23. START

5.23.1. DETAILED INSTRUCTIONS FOR START UP AS PROVIDED BY THE MANUFACTURER MUST BE FOLLOWED

5.23.2. INSTALLING CONTRACTOR MUST CONTACT THE MANUFACTURER PRIOR TO START UP TO CONFIRM START UP PROCEDURES

5.23.3. REMOTE INTERNET ACCESS AND CONTROL MUST BE INITIATED AND CONFIRMED BY THE FACTORY PRIOR TO START UP FOR EXTENDED LABOUR WARRANTY TO BE IN EFFECT

AA. TEXTILE AIR DISPERSION SYSTEM

TEXTILE AIR DISPERSION SYSTEM :

PROVIDE TEXTILE AIR DISPERSION SYSTEM AT THE AREAS SHOWN ON THE FLOOR PLAN

1.1 QUALITY ASSURANCE:

A. BUILDING CODES AND STANDARDS:

1. PRODUCT MUST BE CLASSIFIED BY UNDERWRITER'S LABORATORIES IN ACCORDANCE WITH THE 25/50 FLAME SPREAD / SMOKE DEVELOPED REQUIREMENTS OF NFPA 90-A AND UL 2518.
2. ALL PRODUCT SECTIONS MUST BE LABELED WITH THE LOGO AND CLASSIFICATION MARKING OF UNDERWRITER'S LABORATORIES.

B.DESIGN & QUALITY CONTROL

1. MANUFACTURER MUST HAVE DOCUMENTED DESIGN SUPPORT INFORMATION INCLUDING DUCT SIZING; VENT, ORIFICE, AND/OR NOZZLE LOCATION; VENT, ORIFICE, AND/OR NOZZLE SIZING; LENGTH; AND SUSPENSION. PARAMETERS FOR DESIGN, INCLUDING MAXIMUM AIR TEMPERATURE, VELOCITY, PRESSURE AND TEXTILE PERMEABILITY, SHALL BE CONSIDERED AND DOCUMENTED.

1.2 SUBMITTALS:

A. PRODUCT DATA: SUBMIT MANUFACTURER'S SPECIFICATIONS ON MATERIALS AND MANUFACTURED PRODUCTS USED FOR WORK OF THIS SECTION.

B.BUILDING CODE DATA: SUBMIT UL FILE NUMBER UNDER WHICH PRODUCT IS CLASSIFIED BY UNDERWRITER'S LABORATORIES FOR BOTH NFPA 90-A AND UL 2518. – NO EXCEPTIONS

C. PROVIDE DETAILED DRAWINGS CONFIRMING CONFIGURATION OF TEXTILE DISPERSION SYSTEM (DIAMETER, LENGTHS, AIRFLOW, PRESSURE, AND TEXTILE PERMEABILITY).

D. PROVIDE DETAILED INSTALLATION INSTRUCTIONS FOR COMPONENTS TO BE INSTALLED.

E.PROVIDE WARRANTY AND MAINTENANCE DOCUMENTATION. (MUST BE FULL TERM AND COVER ALL COMPONENTS INCLUDING THREADING, WEBBING, SUPPORT ATTACHMENTS, ZIPPERS, HARDWARE, AS WELL AS PERFORMANCE.

1.3 WARRANTY:

A. MANUFACTURER MUST PROVIDE A 10 YEAR PRODUCT WARRANTY FOR PRODUCTS SUPPLIED FOR THE FABRIC PORTION OF THIS SYSTEM AS WELL AS A DESIGN AND PERFORMANCE WARRANTY. MANUFACTURER'S TERM WARRANTY REQUIRING SPECIFIC FILTRATION, SOFT STARTS COMPONENTS, ANNUAL, BIENNIAL LAUNDERING OR MAINTENANCE OF FABRIC SYSTEMS SHALL NOT BE ACCEPTED.

1.4 DELIVERY, STORAGE AND HANDLING:

A. PROTECT TEXTILE AIR DISPERSION SYSTEM AND HOOPS (IHS) COMPONENTS FROM DAMAGE DURING SHIPPING, STORAGE, AND HANDLING.

B.WHERE POSSIBLE, STORE PRODUCTS INSIDE AND PROTECT FROM WEATHER. WHERE NECESSARY TO STORE OUTSIDE, STORE ABOVE GRADE AND ENCLOSE WITH A VENTED WATERPROOF WRAPPING.

PRODUCTS

2.1 MANUFACTURER:

SUBJECT TO COMPLIANCE WITH REQUIREMENTS, CHOOSE ONE OF THE FOLLOWING:

A. DUCTSOX® CORPORATION OR APPROVED EQUAL

2.2 TEXTILE AIR DISPERSION SYSTEM:

A. HOOPS (IHS) SYSTEM: AIR DIFFUSERS SHALL BE CONSTRUCTED WITH INTERNAL RETENTION SYSTEM.

1. SYSTEM MUST CONSIST OF AN INTERNAL 360 DEGREE HOOP SYSTEM, SPACED 5' ON CENTER. (HALF OR SEMI-CIRCLE HOOPS INSERTED INTO EXTERNAL FABRICATED POCKETS ARE NOT EQUAL.)
2. SYSTEM SHALL BE INSTALLED WITH A ONE ROW SUSPENSION SYSTEM LOCATED 1.5' ABOVE TOP-DEAD-CENTER OF THE TEXTILE SYSTEM.
3. SYSTEM ATTACHMENT TO CABLE OR U-TRACK SHALL BE MADE USING GLIDERS SPACED 12 INCHES.
4. AVAILABLE FOR DIAMETERS FROM 8" – 60".
5. ONE ROW SUSPENSION OPTIONS(MUST SPECIFY IF MULTIPLE ON SAME PROJECT)

A. U-TRACK SUSPENSION HARDWARE TO INCLUDE 8' SECTIONS OF ALUMINUM TRACK, ALUMINUM SPLICE CONNECTORS, TRACK ENDCAPS AND VERTICAL CABLE SUPPORT KITS – CONSISTING OF A LENGTH OF CABLE WITH CABLE CONNECTORS. RADIUS ALUMINUM TRACK MUST BE INCLUDED FOR ALL HORIZONTAL/FLAT RADIUS SECTIONS.

1. U-TRACK SUSPENSION

A. IMPREGNATED STEEL CABLE

2. SUPPORT LENGTHS AVAILABLE IN 5'(STANDARD), 10', 15', & 30'

B.TEXTILE

1. SEDONA-XM

A. TEXTILE CONSTRUCTION: FILAMENT/FILAMENT TWILL POLYESTER TREATED WITH A MACHINE WASHABLE ACTIVE ANTI-MICROBIAL AGENT BY THE FABRIC MANUFACTURER, FIRE RETARDANT IN ACCORDANCE WITH UL 2518. NON-LINTING FILAMENT YARN TO MEET THE REQUIREMENTS OF ISO CLASS 3 ENVIRONMENT. SPRAYED OR APPLIED ANTIMICROBIAL COATING SHALL NOT BE ACCEPTED

B.AIR PERMEABILITY: 2 (+2/-1) CFM/FT2 PER ASTM D737, FRAZIER

C. WEIGHT: 6.8 OZ. /YD2 PER ASTM D3776

D. WARRANTY: 10 YEARS

2. TEXTILE COLOR

A. STANDARD: BLUE, WHITE, TAN, RED, GREEN, SILVER, BLACK

B.CUSTOM

C. TEXTILE SYSTEM FABRICATION REQUIREMENTS:

1. TEXTILE SYSTEM TO BE CONSTRUCTED IN MODULAR LENGTHS (ZIPPERED) WITH PROPER RADIAL SECURING CLIPS ALONG THE LENGTH OF THE SYSTEM.
2. INTEGRATED AIR DISPERSION SHALL BE SPECIFIED AND APPROVED BY MANUFACTURER. (SELECT ONLY THOSE THAT APPLY)

A. LINEAR VENTS -

1. AIR DISPERSION ACCOMPLISHED BY ENGINEERED LINEAR VENT AND PERMEABLE FABRIC. LINEAR VENTS MUST BE SIZED IN 1 CFM PER LINEAR FOOT INCREMENTS (BASED ON .5" SP), STARTING A 1 CFM THROUGH 90 CFM PER LINEAR FOOT. LINEAR VENT IS TO CONSIST OF STRATEGICALLY ENGINEERED SIZED, SPACED AND STAGGERED ORIFICE OPENINGS RATHER THAN A MESH STYLE OR SONIC VENT TO REDUCE MAINTENANCE REQUIREMENTS OF MESH AND SONIC STYLE VENTS. VENTING SHOULD ALSO BE DESIGNED TO MINIMIZE DUSTING ON FABRIC SURFACE.
2. SIZE OF VENT OPENINGS AND LOCATION OF LINEAR VENTS TO BE SPECIFIED BY MANUFACTURE AND APPROVED BY ENGINEER OF RECORD.

B.ADJUSTABLE NOZZLES – LOCATION TO BE DETERMINED BY MANUFACTURER

1. AIR DISPERSION ACCOMPLISHED BY ADJUSTABLE BALL NOZZLES AND PERMEABLE FABRIC. ADJUSTABLE BALL NOZZLES TO HAVE MULTIAXIAL ROTATION TO REDIRECT AIRFLOW TO DESIRED AREA. ADJUSTABLE BALL NOZZLES MUST HAVE THE ABILITY TO COMPLETELY CLOSE OFF AIRFLOW WITHOUT ADDING CAPS OR PLUGS. ADJUSTABLE BALL NOZZLES SHOULD LOCK INTO PLACE ONCE SET, PREVENTING CONSTANT ADJUSTMENT. ADJUSTABLE BALL NOZZLE SHOULD HAVE INSET DESIGN TO BE A CONDENSATION RESISTANT PRODUCT. NO EXCEPTIONS
2. COLORS OF ADJUSTABLE NOZZLES AVAILABLE ARE WHITE AND BLACK. WITH WHITE MATERIAL RECEIVING WHITE ADJUSTABLE NOZZLES AND ALL OTHER MATERIAL COLORS RECEIVING BLACK ADJUSTABLE NOZZLES UNLESS OTHERWISE SPECIFICALLY MENTIONED ON DRAWINGS OR OTHERWISE IN THE SPECIFICATION.
3. QUANTITY AND LOCATION OF ADJUSTABLE BALL NOZZLES TO BE SPECIFIED AND APPROVED BY MANUFACTURER.
3. INLET CONNECTION TO METAL DUCT VIA FABRIC DRAW BAND WITH ANCHOR PATCHES AS SUPPLIED BY MANUFACTURER. ANCHOR PATCHES TO BE SECURED TO METAL DUCT VIA. ZIP SCREW FASTENER – SUPPLIED BY CONTRACTOR, HOSE CLAMP, WORM GEAR, ZIP TIE METHODS NOT ACCEPTABLE.
4. INLET CONNECTION INCLUDES ZIPPER FOR EASY REMOVAL / MAINTENANCE.
5. LENGTHS TO INCLUDE REQUIRED INTERMEDIATE ZIPPERS AS SPECIFIED BY MANUFACTURER.
6. SYSTEM TO INCLUDE ADJUSTABLE FLOW DEVICES TO BALANCE STATIC REGAIN, TURBULENCE, AIRFLOW AND DISTRIBUTION AS NEEDED. FLOW RESTRICTION DEVICE SHALL INCLUDE ABILITY TO ADJUST THE AIRFLOW RESISTANCE FROM 0.06 – 0.60 IN W.G. STATIC PRESSURE. (NONADJUSTABLE DEVICES ARE NOT EQUAL AND WILL NOT BALANCE STATIC REGAIN FOR UNIFORM DISTRIBUTION)
7. END CAP INCLUDES ZIPPER FOR EASY MAINTENANCE.
8. EACH SECTION OF THE TEXTILE SHALL INCLUDE IDENTIFICATION LABELS DOCUMENTING ORDER NUMBER, SECTION DIAMETER, SECTION LENGTH, PIECE NUMBER, CODE CERTIFICATIONS AND OTHER PERTINENT INFORMATION.

D. DESIGN PARAMETERS:

1. TEXTILE AIR DIFFUSERS SHALL BE DESIGNED FROM 0.25" WATER GAGE MINIMUM TO 3.1" MAXIMUM, WITH 0.5" AS THE STANDARD.
2. TEXTILE AIR DIFFUSERS SHALL BE LIMITED TO DESIGN TEMPERATURES BETWEEN 0 DEGREES F AND 180 DEGREES F (-17.8 DEGREES C AND 82 DEGREES C).
3. SYSTEM OVERALL DESIGN; DIAMETER, LENGTH, AIRFLOW, OPERATING STATIC PRESSURE AND DISPERSION SHALL BE DESIGNED OR APPROVED BY THE MANUFACTURER.
4. DO NOT USE TEXTILE DIFFUSERS IN CONCEALED LOCATIONS.
5. USE TEXTILE AIR DISPERSION SYSTEMS ONLY FOR POSITIVE PRESSURE AIR DISTRIBUTION COMPONENTS OF THE MECHANICAL VENTILATION SYSTEM.

INSTALLATION

3.1 INSTALLATION OF TEXTILE AIR DISPERSION SYSTEM:

A. INSTALL CHOSEN SUSPENSION SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER. INSTRUCTIONS FOR INSTALLATION SHALL BE PROVIDED BY THE MANUFACTURER WITH PRODUCT.

3.2 CLEANING AND PROTECTION:

A. CLEAN AIR HANDLING UNIT AND DUCTWORK PRIOR TO THE DUCTSOX SYSTEM UNIT-BY-UNIT AS IT IS INSTALLED. CLEAN EXTERNAL SURFACES OF FOREIGN SUBSTANCE WHICH MAY CAUSE CORROSIVE DETERIORATION OF FACING.

B.TEMPORARY CLOSURE: AT ENDS OF DUCTS WHICH ARE NOT CONNECTED TO EQUIPMENT OR DISTRIBUTION DEVICES AT TIME OF DUCTWORK INSTALLATION, COVER WITH POLYETHYLENE FILM OR OTHER COVERING WHICH WILL KEEP THE SYSTEM CLEAN UNTIL INSTALLATION IS COMPLETED.

C. IF DUCTSOX SYSTEMS BECOME SOILED DURING INSTALLATION, THEY SHOULD BE REMOVED AND CLEANED FOLLOWING THE MANUFACTURERS STANDARD TERMS OF LAUNDRY.

AB. AC UNITS

1. INDOOR VRF - 4 WAY CASSETTE (AC-1-4)

A. CONSTRUCTION
-INSULATED, HIPS CHASSIS WITH A GALVANIZED STEEL FRAME AND FASCIA PANEL CERTIFIED TO UL94 V0.

B. HEAT EXCHANGER
-THE HEAT EXCHANGER SHALL BE MECHANICALLY BONDED FIN TO COPPER TUBE

C. INDOOR FAN
-INDOOR FAN IS A SINGLE TURBO TYPE
-THREE FAN SPEED SETTINGS AND AUTO SETTING

D. CONTROLS
-THE UNIT SHALL BE OPERATED VIA A WIRELESS OR WIRED REMOTE CONTROL WITH -DDC TYPE SIGNAL
-THE UNIT SHALL INTEGRATE WITH THE SAMSUNG NASA CONTROLS NETWORK
-SOLUTION CONTROL WIRING SHALL BE 2 X 16 AWG SHIELDED WIRE

2. INDOOR VRF - DUCTED TYPE UNIT (AC-1-1, AC-1-2)

A. CONSTRUCTION
-THE UNIT SHALL BE CONSTRUCTED OF INSULATED,GALVANIZED STEEL

B. HEAT EXCHANGER
-THE HEAT EXCHANGER SHALL BE MECHANICALLY BONDED FIN TO COPPER TUBE

C. INDOOR FAN
-INDOOR FAN IS A CENTRIFUGAL TYPE WITH A SINGLE FAN MOTOR
-THREE FAN SPEED SETTINGS AND AUTO SETTING
-FAN OUTPUT CAN BE CONFIGURED DURING COMMISSIONING FOR VARIOUS EXTERNAL STATIC PRESSURE RANGES

D. CONTROLS
-THE UNIT SHALL BE OPERATED VIA A WIRELESS OR WIRED REMOTE CONTROL WITH DDC TYPE SIGNAL
-CONTROLS SHALL INTEGRATE WITH A BMS SYSTEM
-CONTROL WIRING SHALL BE 2 X 16 AWG SHIELDED WIRE

E. AIR FILTRATION
-THE UNIT SHALL SHIP WITH BASIC FILTRATION AS STANDARD
-PRESSURE DROP ACROSS THE FILTER MUST BE FACTORED INTO THE TOTAL ESP.

3. DEDICATED OUTDOOR AIR SYSTEM-DOAS (DOAU-1)
-THE SPLIT DOAS SHALL INTRODUCE 100% OUTSIDE AIR TO THE AREA IT SERVES.
-THE INDOOR UNIT UNIT SHALL INCLUDE AN INTEGRAL FILTER RACK.
-DOAS SHALL INCLUDE A MODE CONTROL UNIT (MCU) FOR THE MAIN (COOLING) AND REHEAT COILS.
-INLET TEMPERATURE RANGES SHALL BE AS FOLLOWS:
COOLING:
DB: 50 ~ 125°F
WB: 48 ~ 109°F
HEATING DB: 23 ~ 125°F . THE UNIT SHALL CONTINUE TO PROVIDE REHEAT CAPACITY IN THIS RANGE.
- IF INCOMING OUTSIDE AIR IS SENSED TO BE BELOW 23°F FROM TEMPERATURE SENSOR LOCATED AT THE INLET OF THE UNIT, THE ELECTRICAL COIL SHALL TURN ON TO PRE-HEAT THE INCOMING AIR TO MINIMUM 23°F BEFORE ENTERING THE SPLIT DOAS UNIT.
-DISCHARGE SETTING RANGES SHALL BE: 64.4°F ~109°F. THIS MAY VARY DEPENDING ON THE PIPE LENGTHS, AND INCOMING AIR TEMPERATURE, AND ACTUAL DISCHARGE AIR TEMPERATURE.
-2" DOUBLE SKIN BAKED PU CASING
-THE REHEAT COIL WILL PROVIDE HEATING CAPACITY WHEN OUTSIDE TEMPERATURES ARE UP TO 125°F. REFER TO SIMULATED CAPACITY AND DISCHARGE AIR TEMPERATURES IN DVM PRO DESIGN SOFTWARE.
-INDOOR UNIT OPTION SETTINGS, ADDRESS SETTINGS, AND MCU ADDRESS SETTINGS ARE PROGRAMMED DURING MANUFACTURING TO SIMPLIFY INSTALLATION AND SETUP.
-THE SPLIT DOAS INDOOR UNIT SHALL SHIP WITH A WIRED CONTROLLER IN THE CONTROL PANEL FOR CONFIGURATION AND CONTROL. THIS WIRED CONTROLLER MUST BE ABLE TO BE INSTALLED REMOTELY IF REQUIRED. ONLY 'N' SERIES WIRED CONTROLLERS SHALL BE CONNECTED.
-THE SPLIT DOAS UNIT SHALL USE A VFD TO CONTROL FAN SPEED. THE SPLIT DOAS UNIT SHALL BE PROGRAMMED AND WIRED FOR LOW (L), MEDIUM (M), AND HIGH (H) FAN SPEEDS.
-THE SPLIT DOAS UNIT SHALL HAVE AN ENTHALPY SENSOR IN THE OUTSIDE AIR STREAM, BEFORE THE COOLING COIL. AN ENTHALPY SENSOR IS INCLUDED TO MANAGE THE SYSTEM LOGIC BASED ON INCOMING OUTSIDE AIR.
-THE SPLIT DOAS UNIT SHALL BE CONTROLLED VIA CENTRAL CONTROLS. OPTIONS SHALL ALLOW INTEGRATION TO STANDARD BUILDING MANAGEMENT SYSTEMS.

4. OUTDOOR HEAT PUMP CONDENSING UNIT (ACCU-R-1, ACCU-R-2)

A. CONSTRUCTION
-THE UNIT SHALL BE GALVANIZED STEEL WITH A BAKED ON POWDER COATED FINISH.

B. HEAT EXCHANGER
-THE HEAT EXCHANGER SHALL BE MECHANICALLY BONDED FIN TO COPPER TUBE.
-THE ALUMINUM FINS OF THE HEAT EXCHANGER SHALL HAVE A PROTECTIVE COATING.
-SALT SPRAY TEST METHOD: ASTM B117-18 - THE HEAT EXCHANGER SHOWED NO UNUSUAL RUST OR CORROSION DEVELOPMENT TO 2,280 HOURS.

C. CONTROLS
-CONTROLS SHALL INTEGRATE WITH A BMS SYSTEM WITHOUT ADDITIONAL INTERFACE MODULES CONTROL WIRING SHALL BE 16 AWG X 2 SHIELDED WIRE.

D. REFRIGERANT SYSTEM
-THE COMPRESSORS SHALL BE HERMETICALLY SEALED, INVERTER DRIVEN, DIRECT FLASH INJECTED, DC SCROLL TYPE WITH SOFT-START CAPABILITY.
-FLASH INJECTED COMPRESSORS PROVIDE ADVANCED LOW AMBIENT HEATING PERFORMANCE.
-REFRIGERANT FLOW SHALL BE CONTROLLED BY EEV (ELECTRONIC EXPANSION VALVE) THROUGHOUT THE SYSTEM.
-SUBCOOLING DEVICES IN SYSTEM MAINTAIN CAPACITY AT EXTREME SYSTEM REFRIGERANT PIPE LENGTHS AND MINIMIZE REFRIGERANT NOISE.

E. OTHER FEATURES SHALL INCLUDE:
-ASYMMETRICAL SCROLL DESIGN WITH ROTATING COMPRESSOR OPERATION/PRIORITY (WHERE APPLICABLE).
-ADVANCED OIL RECOVERY CYCLE LOGIC (MAXIMUM DURATION IN COOL MODE: 3 MINUTES, MAXIMUM DURATION IN HEAT MODE: 6 MINUTES, DEFROST CYCLES LASTING OVER 3 MINUTES ARE CONSIDERED OIL RECOVERY CYCLES).
OIL RECOVERY OPERATION SHALL NOT INTERRUPT HEATING OR COOLING OPERATION.
-ADVANCED INTELLIGENT DEFROST LOGIC TO SIGNIFICANTLY REDUCE DEFROST CYCLE FREQUENCY BY MONITORING AIR RESISTANCE ACROSS THE CONDENSER COIL DURING HEATING OPERATION TO DETERMINE DEFROST OPERATION INITIATION TO PREVENT UNNECESSARY DEFROST CYCLES.
-SNOW BLOWING LOGIC TO PREVENT SNOW ACCUMULATION ON IDLE OUTDOOR UNITS CONTINUOUS OPERATION WHILE OUTDOOR UNIT(S) CHANGE BETWEEN HEATING AND COOLING MODES (CONDITIONS APPLY).
-MAXIMUM CURRENT CONTROL OF OUTDOOR UNIT(S) TO LIMIT CURRENT (50% - 100% OF DESIGN CURRENT) ADJUSTABLE AT OUTDOOR UNIT OR CENTRAL CONTROL DEVICE: BACNET GATEWAY (MIM-B17N, MIM-B17BUN)

AC. EXISTING AIR-DISTRIBUTION SYSTEM CLEANING

1. PART 1 - GENERAL

1.1 DUCT CLEANING

1. EMPLOY AN ASCS CERTIFIED BY NADCA ON A FULL-TIME BASIS TO CLEAN ALL THE EXISTING AIR DISTRIBUTION DUCTS, PLENUMS, AND SYSTEM COMPONENTS AS SHOWN ON THE DRAWINGS.

2. PART 2 - EXECUTION

2.1 EXAMINATION

A. EXAMINE EXISTING HVAC AIR-DISTRIBUTION EQUIPMENT, DUCTS, PLENUMS, AND SYSTEM COMPONENTS TO DETERMINE APPROPRIATE METHODS, TOOLS, AND EQUIPMENT REQUIRED FOR PERFORMANCE OF THE WORK.
B. PERFORM "PROJECT EVALUATION AND RECOMMENDATION" ACCORDING TO NADCA ACR 2006.
C. PREPARE WRITTEN REPORT LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF THE WORK.
D. PROCEED WITH WORK ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

2.2 PREPARATION

A. PREPARE A WRITTEN PLAN THAT INCLUDES STRATEGIES AND STEP-BY-STEP PROCEDURES. AT A MINIMUM, INCLUDE THE FOLLOWING:

1. WORK SCHEDULE INCLUDING LOCATION, TIMES, AND IMPACT ON OCCUPIED AREAS.
2. METHODS AND MATERIALS PLANNED FOR EACH HVAC COMPONENT TYPE.
3. REQUIRED SUPPORT FROM OTHER TRADES.
4. EQUIPMENT AND MATERIAL STORAGE REQUIREMENTS.
5. EXHAUST EQUIPMENT SETUP LOCATIONS.

B. USE THE EXISTING SERVICE OPENINGS, AS REQUIRED FOR PROPER CLEANING, AT VARIOUS POINTS OF THE HVAC SYSTEM FOR PHYSICAL AND MECHANICAL ENTRY AND FOR INSPECTION.
C. COMPLY WITH NADCA ACR 2006, "GUIDELINES FOR CONSTRUCTING SERVICE OPENINGS IN HVAC SYSTEMS" SECTION.

2.3 CLEANING

A. COMPLY WITH NADCA ACR 2006.
B. REMOVE VISIBLE SURFACE CONTAMINANTS AND DEPOSITS FROM WITHIN THE HVAC SYSTEM.
C. SYSTEMS AND COMPONENTS TO BE CLEANED:

1. AIR DEVICES FOR SUPPLY AND RETURN AIR.
2. AIR-TERMINAL UNITS.
3. DUCTWORK:

A. SUPPLY-AIR DUCTS, INCLUDING TURNING VANES[ AND REHEAT COILS], TO THE AIR-HANDLING UNIT.
B. RETURN-AIR DUCTS TO THE AIR-HANDLING UNIT.
C. EXHAUST-AIR DUCTS.
D. PARTICULATE COLLECTION:

1. FOR PARTICULATE COLLECTION EQUIPMENT, INCLUDE ADEQUATE FILTRATION TO CONTAIN DEBRIS REMOVED. LOCATE EQUIPMENT DOWNWIND AND AWAY FROM ALL AIR INTAKES AND OTHER POINTS OF ENTRY INTO THE BUILDING.
2. HEPA FILTRATION WITH 99.97 PERCENT COLLECTION EFFICIENCY FOR PARTICLES SIZED 0.3 MICROMETER OR LARGER SHALL BE USED WHERE THE PARTICULATE COLLECTION EQUIPMENT IS EXHAUSTING INSIDE THE BUILDING.

E. CONTROL ODORS AND MIST VAPORS DURING THE CLEANING AND RESTORATION PROCESS.
F. MARK THE POSITION OF MANUAL VOLUME DAMPERS AND AIR-DIRECTIONAL MECHANICAL DEVICES INSIDE THE SYSTEM PRIOR TO CLEANING. RESTORE THEM TO THEIR MARKED POSITION ON COMPLETION OF CLEANING.
G. SYSTEM COMPONENTS SHALL BE CLEANED SO THAT ALL HVAC SYSTEM COMPONENTS ARE VISIBLY CLEAN. ON COMPLETION, ALL COMPONENTS MUST BE RETURNED TO THOSE SETTINGS RECORDED JUST PRIOR TO CLEANING OPERATIONS.
H. CLEAN ALL EXISTING AIR-DISTRIBUTION DEVICES, REGISTERS, GRILLES, AND DIFFUSERS.
I. CLEAN VISIBLE SURFACE CONTAMINATION DEPOSITS ACCORDING TO NADCA ACR 2006 AND THE FOLLOWING:

1. ENSURE THAT A SUITABLE OPERATIVE DRAINAGE SYSTEM IS IN PLACE PRIOR TO BEGINNING WASH-DOWN PROCEDURES.
2. CLEAN EVAPORATOR COILS, REHEAT COILS, AND OTHER AIRSTREAM COMPONENTS.

J. DUCT SYSTEMS:

1. CREATE SERVICE OPENINGS IN THE EXISTING HVAC SYSTEM AS NECESSARY TO ACCOMMODATE CLEANING.
2. MECHANICALLY CLEAN EXISTING DUCT SYSTEMS SPECIFIED TO REMOVE ALL VISIBLE CONTAMINANTS SO THAT THE SYSTEMS ARE CAPABLE OF PASSING THE HVAC SYSTEM CLEANLINESS TESTS (SEE NADCA ACR 2006).

K. DEBRIS REMOVED FROM THE HVAC SYSTEM SHALL BE DISPOSED OF ACCORDING TO APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
L. MECHANICAL CLEANING METHODOLOGY:

1. SOURCE-REMOVAL CLEANING METHODS: THE EXISTING HVAC SYSTEM SHALL BE CLEANED USING SOURCE-REMOVAL MECHANICAL CLEANING METHODS DESIGNED TO EXTRACT CONTAMINANTS FROM WITHIN THE HVAC SYSTEM AND TO SAFELY REMOVE THESE CONTAMINANTS FROM THE FACILITY. NO CLEANING METHOD, OR COMBINATION OF METHODS, SHALL BE USED THAT COULD POTENTIALLY DAMAGE COMPONENTS OF THE HVAC SYSTEM OR NEGATIVELY ALTER THE INTEGRITY OF THE SYSTEM.

A. USE CONTINUOUSLY OPERATING VACUUM-COLLECTION DEVICES TO KEEP EACH SECTION BEING CLEANED UNDER NEGATIVE PRESSURE.
B. CLEANING METHODS THAT REQUIRE MECHANICAL AGITATION DEVICES TO DISLODGE DEBRIS THAT IS ADHERED TO INTERIOR SURFACES OF HVAC SYSTEM COMPONENTS SHALL BE EQUIPPED TO SAFELY REMOVE THESE DEVICES. CLEANING METHODS SHALL NOT DAMAGE THE INTEGRITY OF HVAC SYSTEM COMPONENTS OR DAMAGE POROUS SURFACE MATERIALS SUCH AS DUCT AND PLENUM LINERS.
2. CLEANING MINERAL-FIBER INSULATION COMPONENTS:

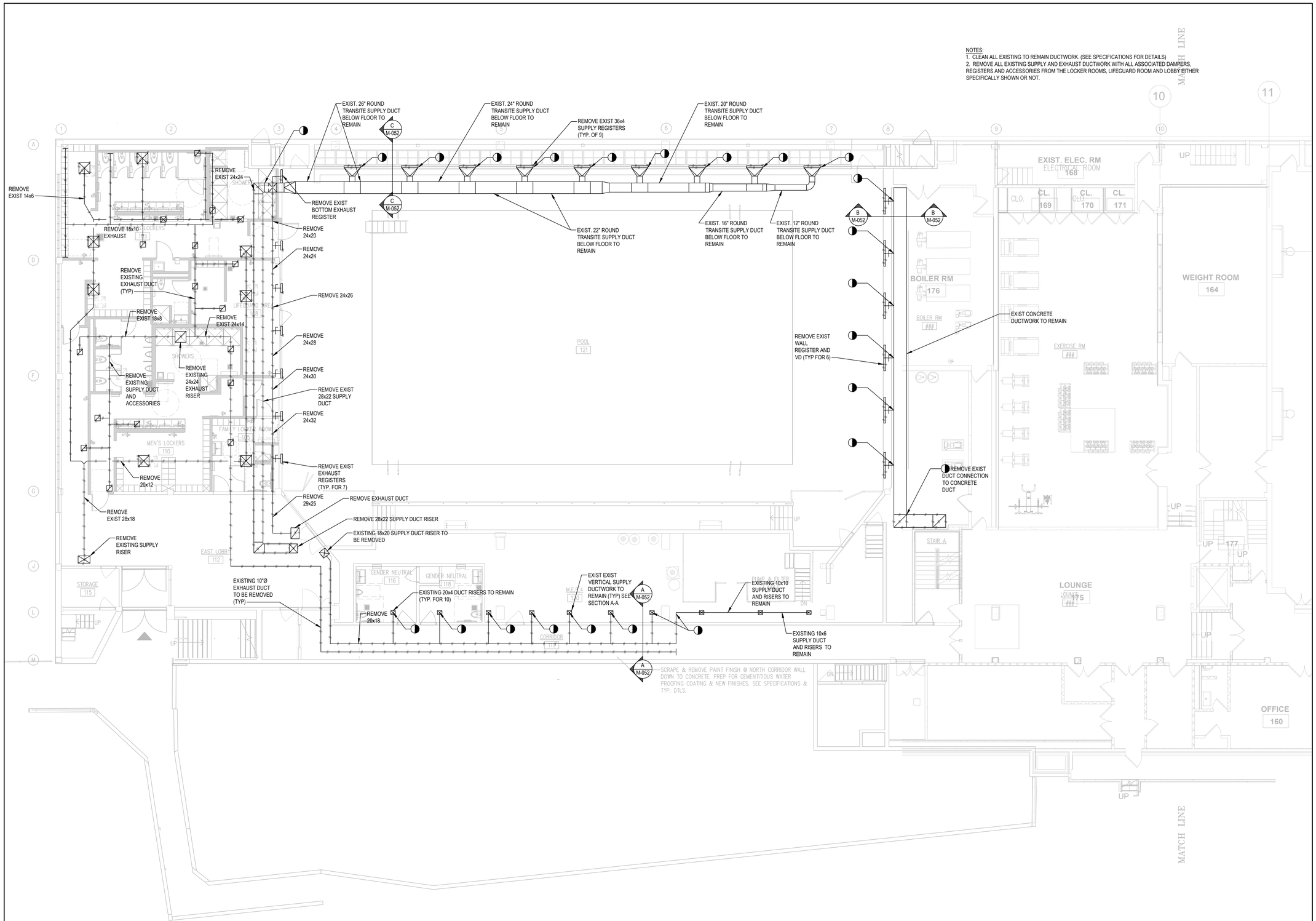
A. FIBROUS-GLASS THERMAL OR ACOUSTICAL INSULATION ELEMENTS PRESENT IN EQUIPMENT OR DUCTWORK SHALL BE THOROUGHLY CLEANED WITH HEPA VACUUMING EQUIPMENT WHILE THE HVAC SYSTEM IS UNDER CONSTANT NEGATIVE PRESSURE AND SHALL NOT BE PERMITTED TO GET WET ACCORDING TO NADCA ACR 2006.
B. CLEANING METHODS USED SHALL NOT CAUSE DAMAGE TO FIBROUS-GLASS COMPONENTS AND WILL RENDER THE SYSTEM CAPABLE OF PASSING THE HVAC SYSTEM CLEANLINESS TESTS (SEE NADCA ACR 2006).
C. FIBROUS MATERIALS THAT BECOME WET SHALL BE DISCARDED AND REPLACED.

M. ANTIMICROBIAL AGENTS AND COATINGS:

1. APPLY ANTIMICROBIAL AGENTS AND COATINGS IF ACTIVE FUNGAL GROWTH IS REASONABLY SUSPECTED OR WHERE UNACCEPTABLE LEVELS OF FUNGAL CONTAMINATION HAVE BEEN VERIFIED. APPLY ANTIMICROBIAL AGENTS AND COATINGS ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS AND EPA REGISTRATION LISTING AFTER THE REMOVAL OF SURFACE DEPOSITS AND DEBRIS.
2. WHEN USED, ANTIMICROBIAL TREATMENTS AND COATINGS SHALL BE APPLIED AFTER THE SYSTEM IS RENDERED CLEAN.
3. APPLY ANTIMICROBIAL AGENTS AND COATINGS DIRECTLY ONTO SURFACES OF INTERIOR DUCTWORK.
4. SANITIZING AGENT PRODUCTS SHALL BE REGISTERED BY THE EPA AS SPECIFICALLY INTENDED FOR USE IN HVAC SYSTEMS AND DUCTWORK.

2.4 CLEANLINESS VERIFICATION

A. VERIFY CLEANLINESS ACCORDING TO NADCA ACR 2006, "VERIFICATION OF HVAC SYSTEM CLEANLINESS" SECTION.
B. VERIFY HVAC SYSTEM CLEANLINESS AFTER MECHANICAL CLEANING AND BEFORE APPLYING ANY TREATMENT OR INTRODUCING ANY TREATMENT-RELATED SUBSTANCE




## 1 M-050.00 MECHANICAL DEMOLITION FIRST FLOOR EAST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

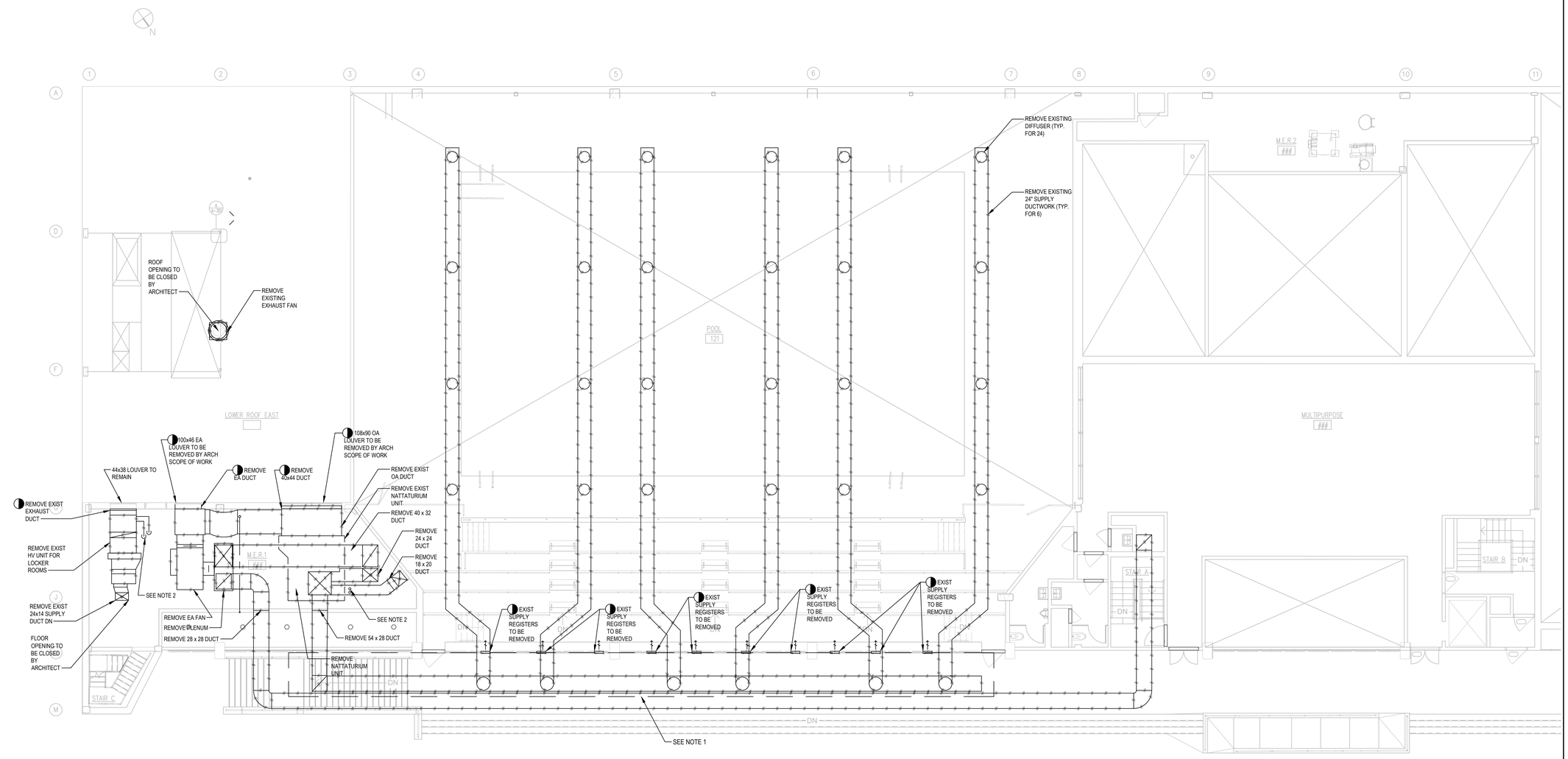
DRAWING

MECHANICAL DEMOLITION
FIRST FLOOR EAST PLAN

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | M-050.00 |
| DRAWN BY | DK |
| | 6 OF 17 |

NYC DOB Number




# 1 MECHANICAL DEMOLITION SECOND FLOOR EAST PLAN
M-051.00

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

NOTES:

1. DUCTWORK IS HIDDEN AND INACCESSIBLE DURING SURVEY. CONTRACTOR TO VERIFY ALL DUCTWORK (EXPOSED AND ENCLOSED) IN FIELD.
2. REMOVE ALL HW PIPING FROM NATTATORIUM UNIT AND LOCKER ROOM UNIT TO BE DEMOLISHED. REMOVE ALL THERMOSTATS, PRESSURE GAUGES, VALVES, AND ACCESSORIES. CAP PIPE AT THE FLOOR OF THE MECHANICAL ROOM.

ASBESTOS REMOVAL NOTES:

1. CONTRACTOR TO CARRY IN COST REMOVAL OF ASBESTOS AND ABATEMENT FOR ALL HOT WATER PIPING INSULATION WITHIN MECHANICAL ROOM (APPROXIMATELY 30FT). ALL POTENTIAL AREAS WITH ACM SHALL BE TESTED AND CONFIRMED PRIOR TO DEMOLITION OF WORK. ACTUAL LENGTH OF PIPING CONTAINING ACM TO BE VERIFIED IN FIELD.
2. THE ASBESTOS ABATEMENT CONTRACTOR AND THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISMANTLING THE HVAC PIPING FOR PROPER REMOVAL AND DISPOSAL OF ALL ACM.
3. COORDINATE ASBESTOS REMOVAL WITH THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR, MECHANICAL CONTRACTOR, PLUMBING CONTRACTOR AND ALL SUBCONTRACTORS HIRED TO PERFORM DEMOLITION.
4. ABATEMENT CONTRACTOR SHALL PREPARE THE WORK AREA IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATORY STANDARDS.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

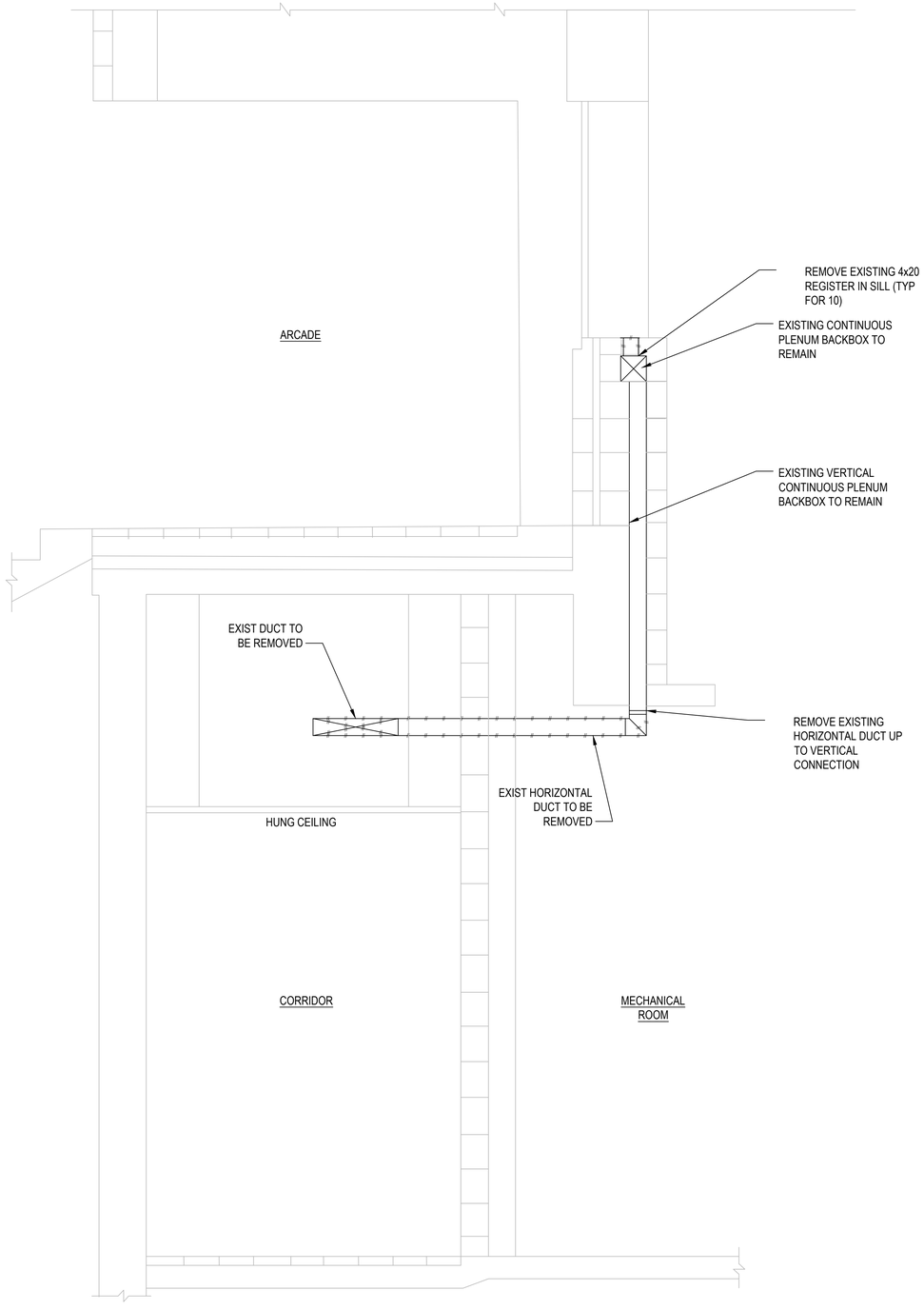
DRAWING

MECHANICAL DEMOLITION SECOND FLOOR EAST PLAN

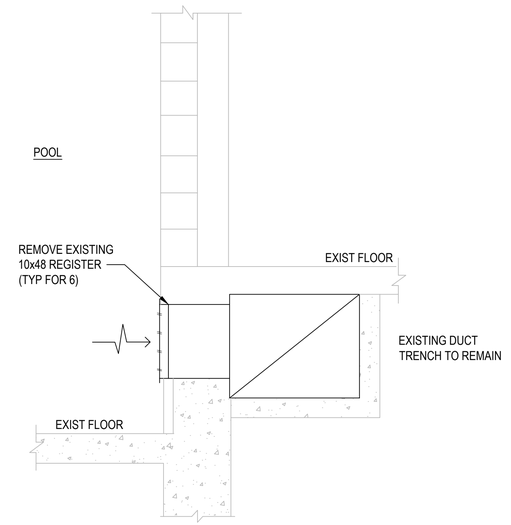
SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | M-051.00 |
| DRAWN BY | DK |
| | 7 OF 17 |

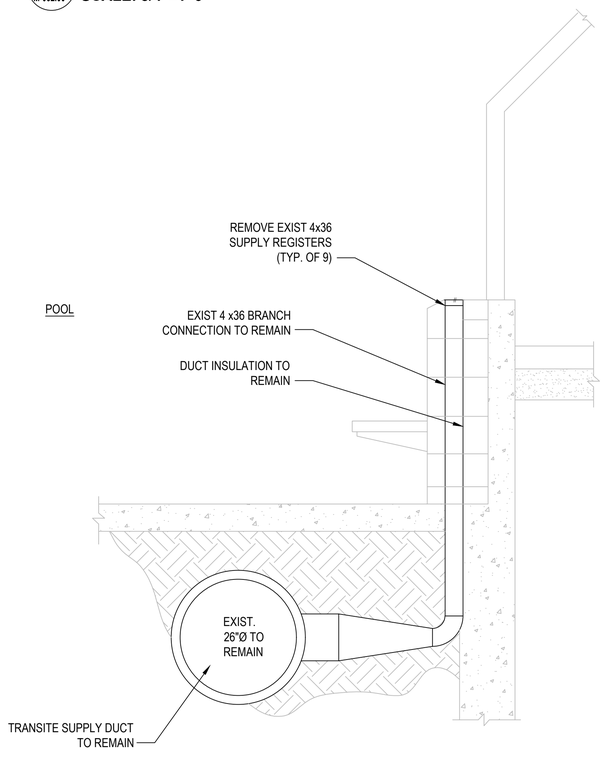
NYC DOB Number




A M-052.00 **SECTION A-A**
**SCALE: 3/4"=1'-0"**




B M-052.00 **SECTION B-B**
**SCALE: 3/4"=1'-0"**




C M-052.00 **SECTION C-C**
**SCALE: 3/4"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

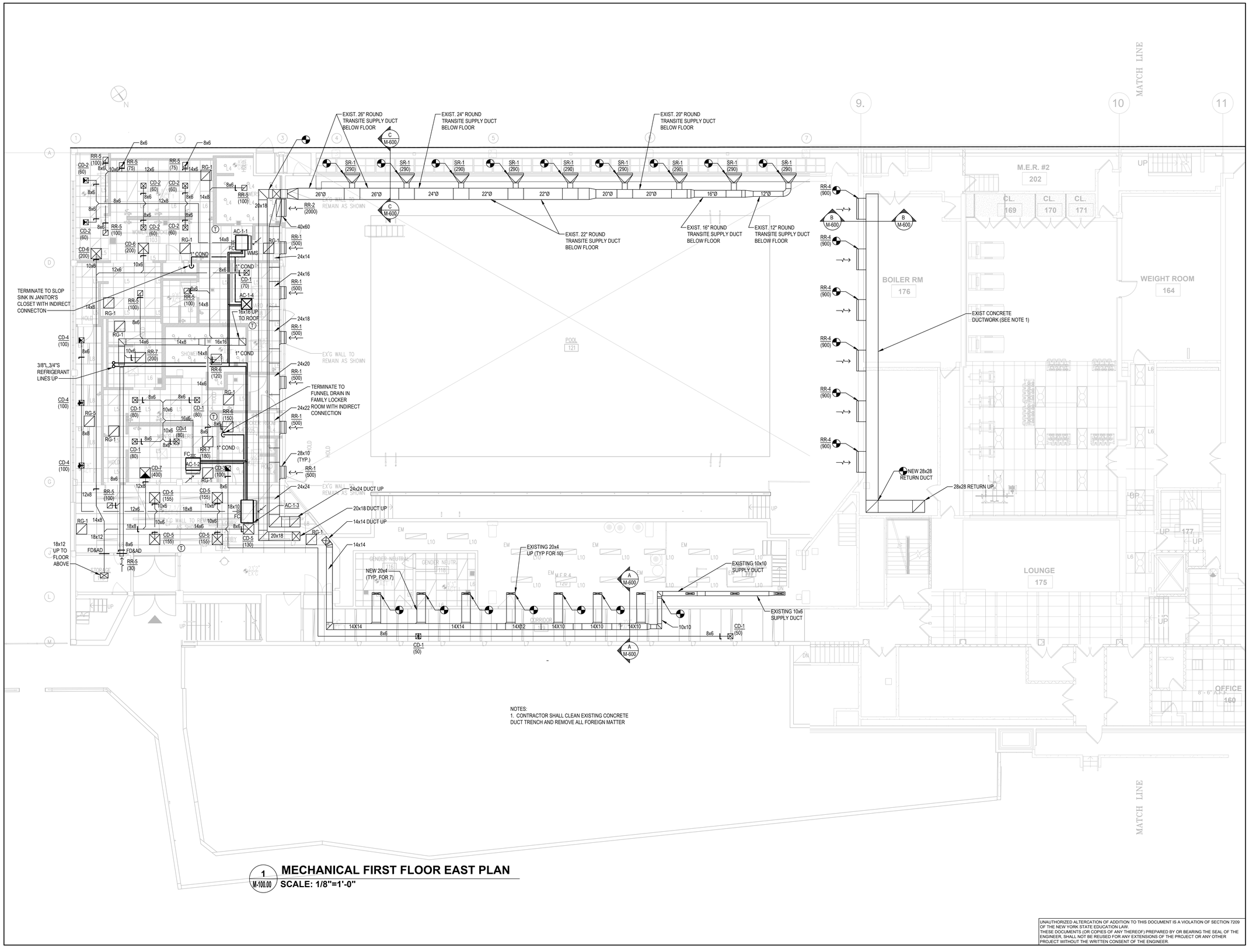
DRAWING

MECHANICAL
DEMOLITION SECTIONS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-052.00
DRAWN BY DK
8 OF 17

NYC DOB Number




NOTES:
1. CONTRACTOR SHALL CLEAN EXISTING CONCRETE DUCT TRENCH AND REMOVE ALL FOREIGN MATTER

## 1 MECHANICAL FIRST FLOOR EAST PLAN
M-100.00 SCALE: 1/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

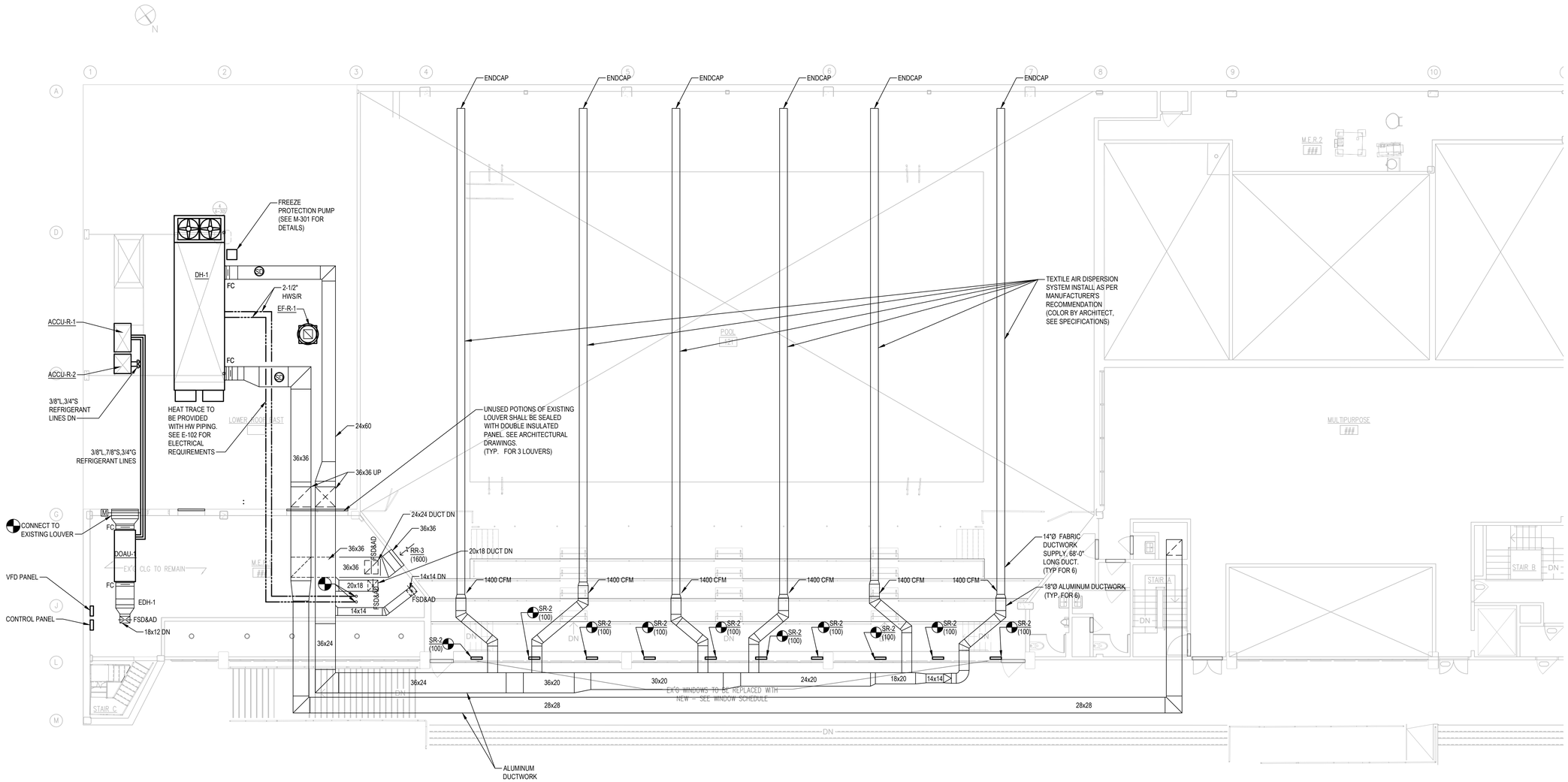
DRAWING

MECHANICAL FIRST FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-100.00
DRAWN BY DK
9 OF 17

NYC DOB Number




## 1 M-102.00 MECHANICAL SECOND FLOOR EAST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

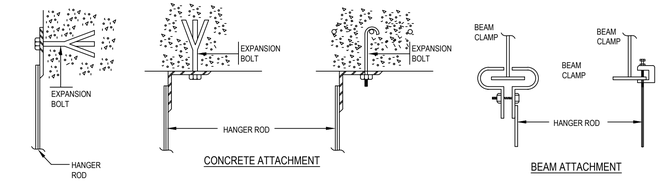
DRAWING

MECHANICAL SECOND FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-102.00
DRAWN BY DK
10 OF 17

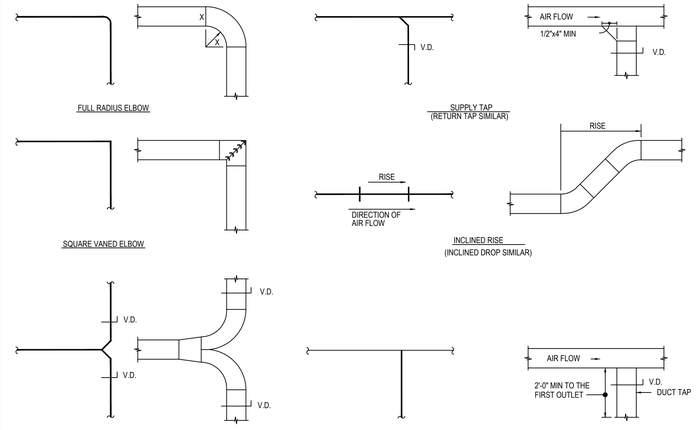
NYC DOB Number



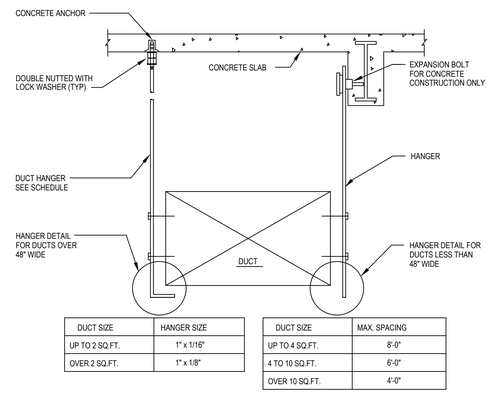

| LONGEST DIMENSION OF DUCT | ROUND HANGERS | MAX SPACING SEE NOTE #4 | STRAP HANGERS | TRAPEZE SHELF ANGLES |
|---|---|---|---|---|
| UP TO 18" | 8"GA.WIRE | 8'-0" | 1"X1/8" | 1" x 1" x 1/8" |
| 19" TO 30" | 1/4" ROD | 8'-0" | 1"X1/8" | 1" x 1" x 1/8" |
| 31" TO 42" | 1/4" ROD | 8'-0" | 1"X1/8"GA. | 1 1/2" x 1 1/2" x 1/8" |
| 43" TO 60" | 3/8" ROD | 4'-0" | ——— | 1 1/2"X 1 1/2" x 1/8" |
| 61" TO 84" | 3/8" ROD | 4'-0" | ——— | 2" x 2" x 1/8" |
| 85" TO 96" | 3/8" ROD | 4'-0" | ——— | 2" x 2" x 3/16" |
| OVER 97" | 3/8" ROD | 4'-0" | ——— | 2" x 2" x 1/4" |

NOTES:
1. ALL DUCT TO BE HUNG FROM BUILDING CONSTRUCTION NOT TO BE SUPPORTED FROM HUNG CEILING.
2. WHEN DUCT AREA EXCEEDS 8 SQ.FT. ANGLE STIFFENERS REQUIRED AROUND CIRCUMFERENCE EVERY 4'-0.
3. FOR DUCT OVER 48"WIDE HANGERS SHALL TURN UNDER DUCT AT LEAST 2"AND SHALL BE FASTENED TO THE BOTTOM AS WELL AS TO THE SIDES OF THE DUCT.
4. FOR DUCTS WITH A CROSS SECTIONAL AREA OF 4 SQ.FT. OR LESS. HANGERS SHALL BE NO MORE THAN 8FT. APART. FOR DUCTS WITH A CROSS SECTIONAL AREA OF MORE THAN 4 SQ.FT. BUT NOT OVER 8 SQ.FT. HANGERS SHALL BE NOT MORE THAN 6 FT. A PART. AND FOR DUCTS WITH A CROSS SECTIONAL AREA OF MORE THAN 8 SQ.FT. HANGERS SHALL BE NOT MORE THAN 4 FT. A PART. THE DISTANCES BETWEEN SHALL BE MEASURED LINEARLY ALONG THE DUCT.

## 1 DUCT HANGING DETAIL
NOT TO SCALE



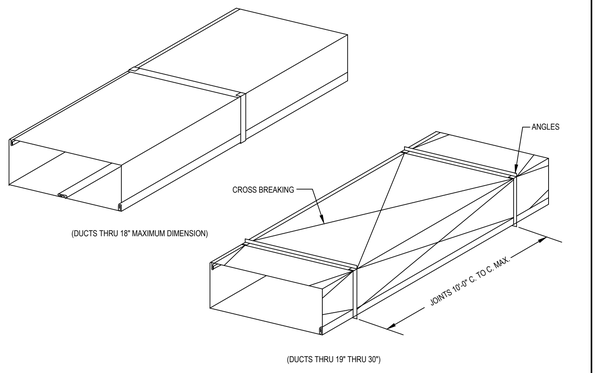

## 2 TYPICAL SUPPLY OR EXHAUST DUCT CONNECTION
NOT TO SCALE



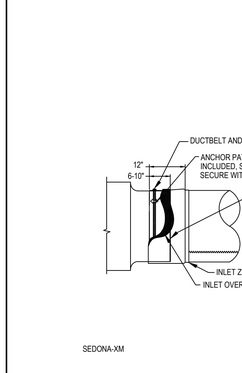

| DUCT SIZE | HANGER SIZE |
|---|---|
| UP TO 2 SQ.FT. | 1" x 1/16" |
| OVER 2 SQ.FT. | 1" x 1/8" |

| DUCT SIZE | MAX. SPACING |
|---|---|
| UP TO 4 SQ.FT. | 8'-0" |
| 4 TO 10 SQ.FT. | 6'-0" |
| OVER 10 SQ.FT. | 4'-0" |

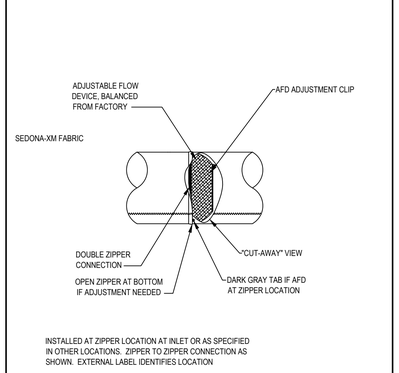
## 3 DUCT HANGING DETAIL SCHEDULE OF SUPPORTS
NOT TO SCALE



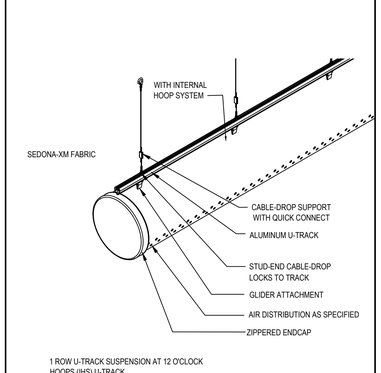

## 4 DUCT CONSTRUCTION DETAIL
NOT TO SCALE



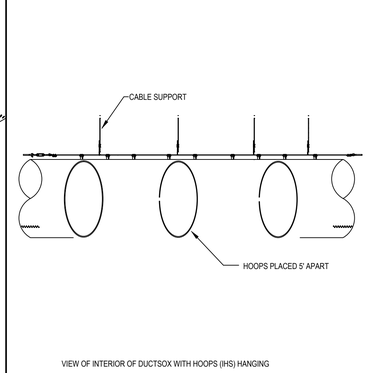

## 5 INLET ATTACHMENT DETAIL
NOT TO SCALE



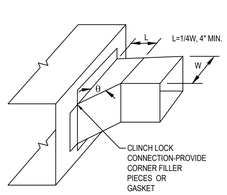

## 6 ADJUSTABLE FLOW DEVICE (AFD)
NOT TO SCALE



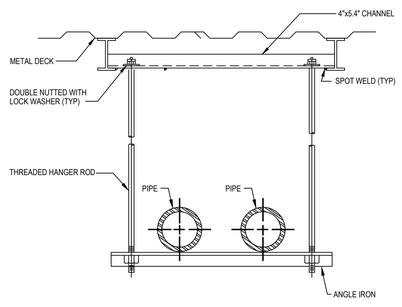

## 7 SUSPENSION DETAIL
NOT TO SCALE



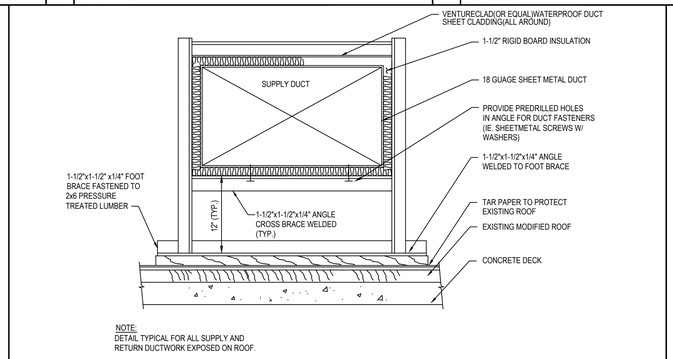

## 8 CUT AWAY VIEW OF HOOPS (IHS)
NOT TO SCALE



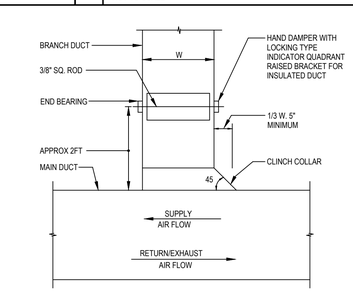

## 9 RECTANGULAR BRANCH CONNECTION DETAIL
NOT TO SCALE




## 10 TRAPEZE HANGER
NOT TO SCALE




## 11 ROOF MOUNTED DUCTWORK DETAIL
NOT TO SCALE




## 12 RECTANGULAR DUCT WITH VOLUME DAMPER
NOT TO SCALE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER. SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

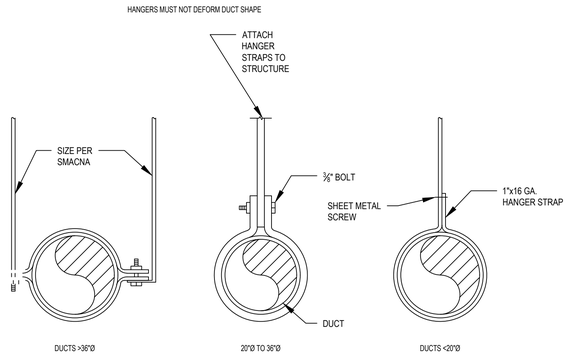
DRAWING

MECHANICAL DETAILS
SHEET No. 1

SEAL & SIGNATURE

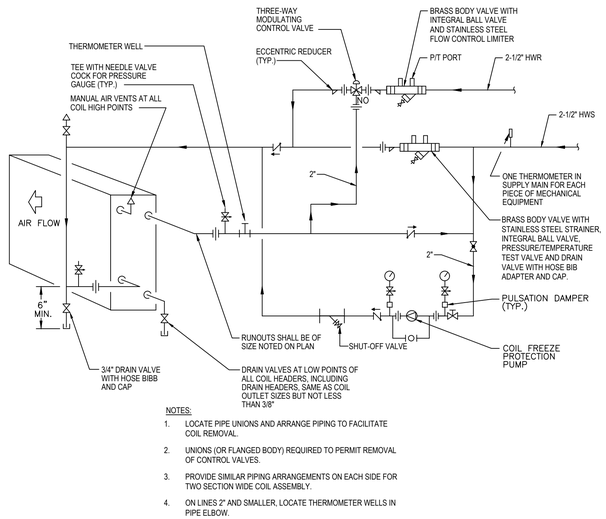
DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-300.00
DRAWN BY DK
11 OF 17

NYC DOB Number




13 ROUND DUCT SUPPORT DETAIL

NOT TO SCALE

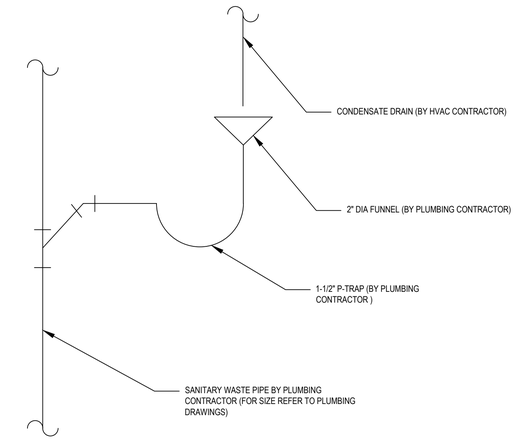



NOTES:

1. LOCATE PIPE UNIONS AND ARRANGE PIPING TO FACILITATE COIL REMOVAL.
2. UNIONS (OR FLANGED BODY) REQUIRED TO PERMIT REMOVAL OF CONTROL VALVES.
3. PROVIDE SIMILAR PIPING ARRANGEMENTS ON EACH SIDE FOR TWO SECTION WIDE COIL ASSEMBLY.
4. ON LINES 2" AND SMALLER, LOCATE THERMOMETER WELLS IN PIPE ELBOW.

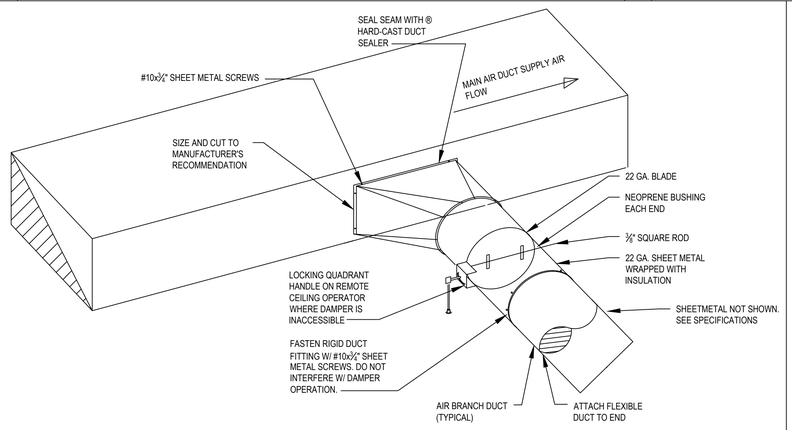
14 HOT WATER COIL CONNECTION WITH FREEZE PROTECTION PUMP FOR DH-1

NOT TO SCALE



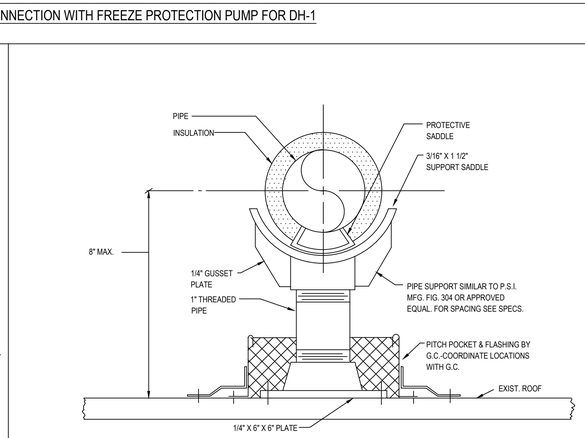

15 FUNNEL DRAING INSTALLATION DETAIL

NOT TO SCALE



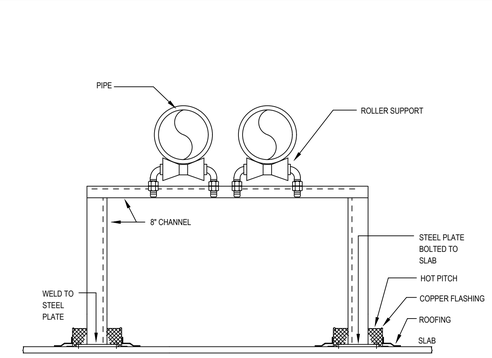

16 SQUARE TO ROUND DUCT CONNECTION DETAIL

NOT TO SCALE



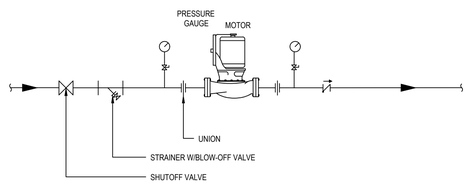

17 ROOF MOUNTED PIPE SUPPORT DETAIL

NOT TO SCALE



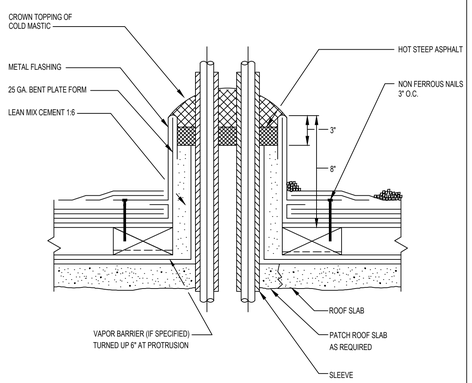

18 PIPING SUPPORT FROM ROOF

NOT TO SCALE




19 IN-LINE PUMP DETAIL

NOT TO SCALE

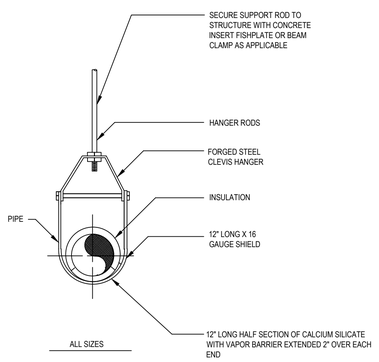



NOTE:

SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR THE ROOF CONSTRUCTION.

20 PIPING THROUGH ROOF

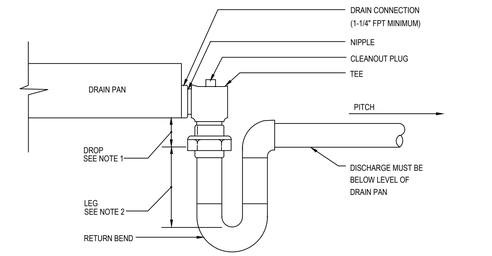
NOT TO SCALE




WHERE STRUCTURAL SLAB DOES NOT PERMIT INSERTS. SUPPORT PIPING FROM STRUCTURE WITH AUXILIARY STEEL IF REQUIRED.

21 WATER PIPING HANGER DETAIL

NOT TO SCALE




NOTES :

1. 1" MIN. DROP REQUIRED USE OF STANDARD FITTINGS SHOWN EXCEEDS THIS MINIMUM.
2. Y + 1" = LEG FOR BLOW-THRU UNIT WHERE Y=DISCHARGE PRESSURE OF FAN. (MIN. 7")
3. ALLOW SUFFICIENT SPACE BELOW DRAIN PAN FOR TRAP.
4. PITCH DRAIN FOR PROPER RUN-OFF AND DISCHARGE TO APPROVED RECEPTACLE.
5. SUPPORT DRAIN LINES TO PREVENT SAG AND CONDENSATE OVERFLOW.
6. MANUALLY PRIME FILL TRAP BEFORE START-UP TO FORM INITIAL DRAIN SEAL.

22 DRAIN PAN WATER SEAL PIPING BLOW-THRU UNIT

NOT TO SCALE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL DETAILS
SHEET No. 2

SEAL & SIGNATURE

DATE 06.10.2019

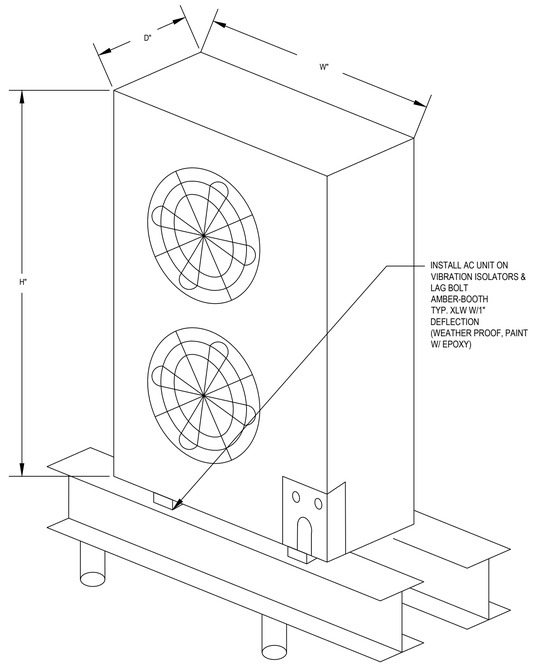
JOB NUMBER 19010

DWG. No. M-301.00

DRAWN BY DK

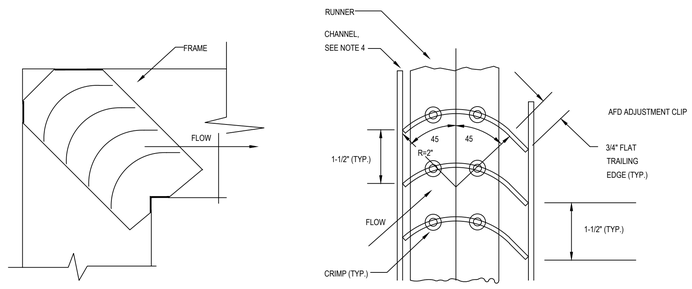
12 OF 17

NYC DOB Number




23 CONDENSING UNIT FRAME DETAIL

NOT TO SCALE

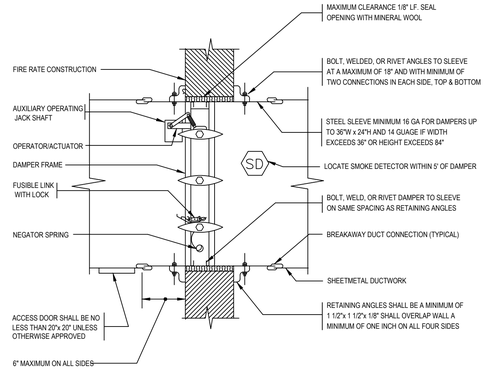



NOTES:

1. MAXIMUM UNSUPPORTED VANE LENGTH 36"
2. VANES AND FRAMES - 24 GAUGE
3. DUCT INLET AND OUTLET DIMENSIONS TO BE EQUAL
4. FOR HIGH VELOCITY APPLICATIONS PROVIDE 18 GAUGE CHANNEL AND TACK WELD VANE EDGES TO CHANNEL, TYPICAL BOTH ENDS
5. FRAMES AND CHANNELS - BOLTED OR TACK WELDED TO ELBOW

24 SINGLE THICKNESS TURNING VANES FOR SQUARE ELBOW

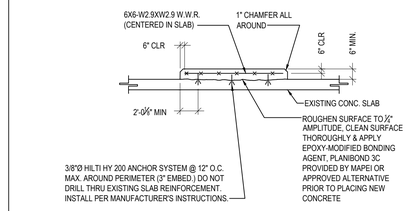
NOT TO SCALE




NOTE: FIRESTAT AND DAMPER MOTOR TO BE OUTSIDE OF AIR STREAM

25 COMBINATION FIRE/SMOKE DAMPER DEATIL

NOT TO SCALE

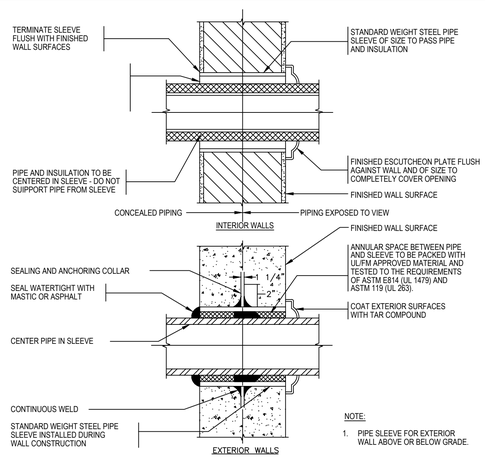



NOTES:

1. COORDINATE PAD SIZE, EMBEDDED UTILITIES, ANCHOR BOLTS & PAD LOCATIONS WITH FINAL EQUIPMENT REQUIREMENTS AND MANUFACTURER'S RECOMMENDATIONS.
2. ALL CONCRETE TO BE BROOMED FINISHED, 4500 PSI, 5-7% AIR ENTRAINED AND MAXIMUM WATER/CEMENT RATIO=0.45.
3. MINIMUM PAD THICKNESS IS 6". PLACE AND FINISH SLAB LEVEL.

26 CONCRETE PAD

NOT TO SCALE

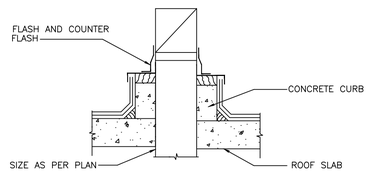



NOTE:

1. PIPE SLEEVE FOR EXTERIOR WALL ABOVE OR BELOW GRADE.

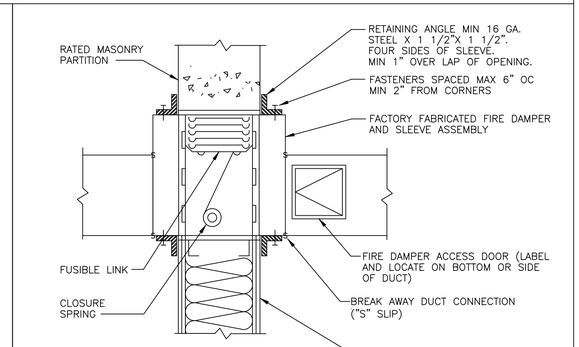
27 PIPE PENETRATIONS DETAIL

NOT TO SCALE




28 ROOF PENETRATION DETAIL

NOT TO SCALE




NOTES:

1. GREENHECK FIRE DAMPER WITH SLEEVE MODEL FD-150X TYPE B(OR EQUAL). UL LISTING R-13317.
2. FASTEN RETAINING ANGLE TO SLEEVE BY: TACK OR SPOT WELDS, No. 10 SHEETMETAL SCREWS, 1/4" BOLTS AND NUTS, 3/16 STEEL POP RIVETS. DO NOT FASTEN ANGLE TO WALL.
3. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS TO OBTAIN UL 555 LISTING.
4. HVAC CONTRACTOR SHALL CUT AND PATCH OPENINGS. HEADS OF MASONRY OPENINGS SHALL BE REINFORCED WITH 5x5x1/4 LINTELS BY HVAC CONTRACTOR.

29 FIRE DAMPER DETAIL

NOT TO SCALE

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

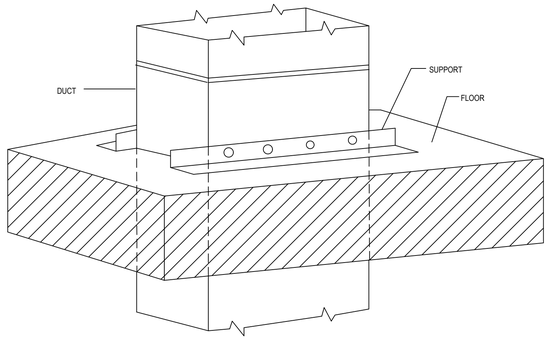
MECHANICAL DETAILS
SHEET No. 3

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-302.00
DRAWN BY DK
13 OF 17

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

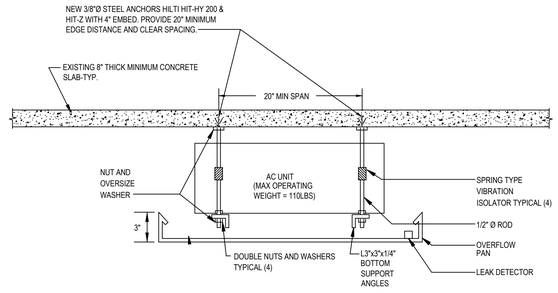



UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, SUPPORT VERTICAL DUCTS BY MEANS OF TWO STEEL ANGLES, SECURED TO DUCT AND RESTING ON FLOOR SLAB OR ADJACENT STRUCTURAL STEEL MEMBER, AT EVERY FLOOR THROUGH WHICH THE DUCT PASSES.

SIZE SUPPORTS AS FOLLOWS:

| MAX. SIDE DIMENSION | SUPPORT ANGLE | SECURE TO DUCT WITH | MIN. BEARING EACH END |
|---|---|---|---|
| 48" | 1-1/2x1-1/2x1/8 | SCREWS | 2" |
| 60" | 1-1/2x1-1x1/4 | SCREWS | 2" |
| 80" | 2x2x1/4 | BOLTS | 2" |
| 100" | 3x3x1/4 | BOLTS | 2" |

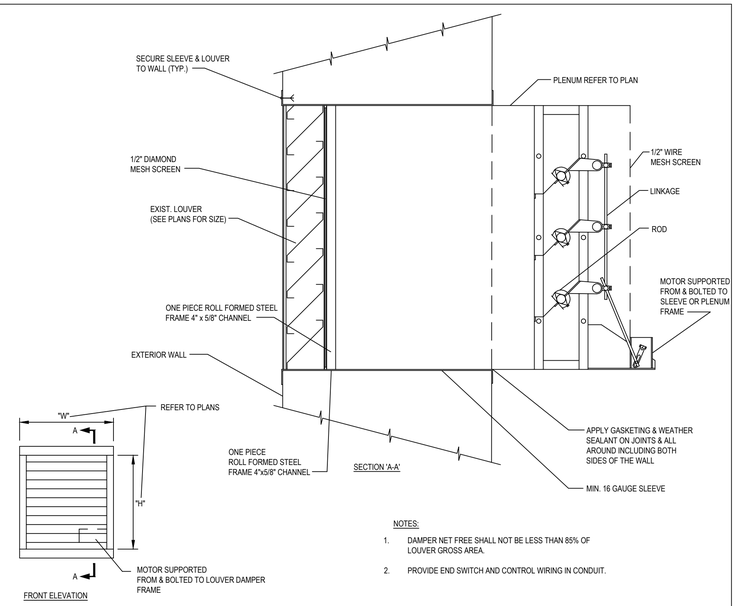
30 DUCT RISER SUPPORTS FROM FLOOR DETAIL
NOT TO SCALE




NOTES:

1. SHOP DRAWINGS DETAILING THE A.C. UNIT HANGING SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
2. LEAK DETECTOR SHALL ALARM LOCALLY ONCE DETECT LEAKING AND SHALL TURN OFF UNIT.

31 AC UNIT SUPPORT DETAIL
NOT TO SCALE




FRONT ELEVATION

NOTES:

1. DAMPER NET FREE SHALL NOT BE LESS THAN 85% OF LOUVER GROSS AREA.
2. PROVIDE END SWITCH AND CONTROL WIRING IN CONDUIT.

32 EXTERIOR WALL LOUVER ASSEMBLY DETAIL
NOT TO SCALE

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL DETAILS
SHEET No. 4

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-303.00
DRAWN BY DK
14 OF 17

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER. SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## DEHUMIDIFYING UNIT

POOLPAK AS STANDARD

| TAG | MODEL | SUB SERIES | SUPPLY AIR BLOWER: SUPPLY AIR FLOW (CFM) | OUTDOOR AIR FLOW (CFM) | ROOM CONDITIONS FDB(°F)/ %RH | NO. OF MOTORS | MOTOR HP | MOTOR FLA (A) | MOTOR DRIVE | UNIT ESP (IN WC) | EXHAUST FANS: EXHAUST AIR FLOW (CFM) | ESP (IN. WG) | NO. OF MOTORS | MOTOR HP | MOTOR FLA (A) | PURGE/ECONOMIZER FANS: PURGE AIR FLOW (CFM) | ESP (IN. WG) | NO. OF MOTORS | MOTOR HP | MOTOR FLA (A) | COMPRESSOR: TYPE | NO. OF COMPRESSORS | REFRIGERANT | MOTOR 1 RLA/LRA (A) | MOTOR 1 RLA/LRA (A) | EVAPORATOR COIL: TOTAL COOLING CAPACITY (MBH) | SENSIBLE CAPACITY (MBH) | MAX AC SENSIBLE CAPACITY (MBH) | MAX AC TOTAL CAPACITY (MBH) | LATENT CAPACITY (LBS/H) | HOT GAS BYPASS REHEAT COIL: TOTAL HEAT REJECTION (MBH) | GLYCOL PUMP: NO. OF MOTORS | MOTOR HP | MOTOR FLA (A) | POOL HEATING: CAPACITY (MBH) | WATER FLOW RATE (GPM) | WATER PRESSURE DROP (PSI) | CONNECTION SIZE | CONNECTION MATERIAL | MAXIMUM CIRCUIT PRESSURE RATING (PSI) | HOT WATER AUXILIARY HEAT: LOCATION | TYPE | CAPACITY (MBH) | ENTERING/ LEAVING FLUID TEMP (°F) | ENTERING/ LEAVING AIR TEMP (°F) | FLUID FLOW RATE (GPM) | FLUID PRESSURE DROP | CONNECTION SIZE (ID) | MAXIMUM CIRCUIT PRESSURE (PSI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DH-1 | PPK-070-PR-X-P4FR2123W2C4AD0 | POOL WATER HEATER | 12,000 | 5,358 | 82/60 | 1 | 15.0 | 42.5 | VFD | 2.0 | 5,893 | 0.5 | 2 | 2.2 | 5.0 | 7,307 | 0.5 | 1 | 5.1 | 10.6 | SCROLL | 2 | R410A | 30.1/225.0 | 33.3/239.0 | 235.5 | 122.3 | 145.1 | 263.8 | 104.8 | 294.4 | 1 | 0.75 | 2.4 | 174 | 30 | 6 | 1-1/2" | PVC | 60.0 | UNIT MOUNTED | HOT WATER | 552 | 180/160.0 | 82/158.6 | 55.8 | 16.8' | 2" | 250 |

NOTES:
1. UNIT TO BE INSTALLED, DUCTED, AND PIPED AS PER MANUFACTURER'S RECOMMENDATIONS.
2. UNIT SHALL BE EQUIPPED WITH INTEGRAL CONTROLS

VALVED AND CAPPED OUTLETS FOR FUTURE CONNECTION

## DEHUMIDIFYING UNIT (CONTINUED)

POOLPAK AS STANDARD

| FLUID COOLED A/C: FLUID FLOW RATE (GPM) | FLUID PRESSURE DROP (PSI) | CONNECTION SIZE OD (IN/OUT) | FLUID SYSTEM FILL (US GAL) | GLYCOL % | INDOOR ELECTRICAL DATA: VOLTAGE | PHASE | HZ | FLA (A) | MCA (A) | MOP (A) | PACKAGED OUTDOOR AIR FLUID COOLER: MODEL | LOCATION | DESIGN AIR ON TEMP | CAPACITY (MBH) | CONNECTION SIZE, IN/OUT (IN OD) | CONNECTION TYPE | OUTDOOR ELECTRICAL DATA: VOLTAGE (V/PH/HZ) | NUMBER OF MOTORS | MOTOR HP | MOTOR FLA (A) | MCA (A) | MOP (A) | FLUID FILL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45.0 | 1.6 | 2" | 40.0 | - | 208 | 3 | 60 | 134.5 | 146.0 | 175.0 | NG-V-12 | LOW ROOF | 95°F | 294.4 | 2 | FLANGE | 208-240/3/60 | 2 | 3.4 | 8.1 | 21 | 35 | 18.0 |

## FAN SCHEDULE

| TAG NO. | MANUFACTURER | MODEL | CFM | E.S.P. | HP | RPM | V/PH/HZ | FLA AMPS | MOTOR DRIVE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| EF-R-1 | GREENHECK | CUE-141-VG | 1,430 | 1.5 | 1 | 1725 | 115/60/1 | 13 | DIRECT DRIVE | SEE NOTES |

NOTES:
1. UL/cUL 705 LISTED - "POWER VENTILATORS"
2. SWITCH, NEMA-4X TOGGLE, SHIPPED WITH UNIT
3. JUNCTION BOX MOUNTED & WIRED
4. UNIT WARRANTY: 1 YR STANDARD
5. PROVIDE VARI-GREEN EC MOTORS

## RETURN GRILLE SCHEDULE

| TAG | SERVICE | MODEL | MODULE SIZE ( IN X IN) | SPACING | DEFLECTION | MATERIAL | BORDER | MANUFACTURER | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| RG-1 | POOL | 350FL | 24X24 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |

NOTES:
1. BORDER TYPES SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE FOR THE ROOM IN WHICH THE AIR DEVICE IS LOCATED
2. SEE PLANS FOR LOCATION AND AIR QUANTITIES FOR EACH OUTLET
3. ALL AIR DEVICES SHALL BE TESTED IN ACCORDANCE WITH ASHRAE STANDARD 702-2006

## DEDICATED OUTSIDE AIR UNIT SCHEDULE

SAMSUNG AS STANDARD

| DX COOLING COIL: TAG | MODEL | LOCATION | SUPPLY AIR FLOW (CFM) | OA CFM (CFM) | TOTAL CAP. (MBH) | EDB/EWB (°F) | LDB/LWB (°F) | PRE-HEAT COIL: HEATING CAP. (MBH) | EDB/EWB (°F) | LAT (DB °F) | SUPPLY FAN: FLOW (CFM) | RPM | ESP (IN) | MOTOR (HP) | MOTOR DRIVE | MOTOR TYPE | ELECTRICAL INFORMATION: VOLTAGE (V/PH/HZ) | MCA (AMPS) | MOP (AMPS) | PHYSICAL DIMENSIONS: WIDTHxHEIGHTxDEPTH (IN) | WEIGHT (LBS) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DOAU-1 | AM120NNDDCV/AA | MER (UPPER EAST) | 1,200 | 1,200 | 88.8 | 95/75 | 56.5/56.2 | 61.8 | 23/21 | 70 | 1,200 | 1,754 | 2.5 | 1.5 | DIRECT DRIVE | VFD | 208/1/60 | 8.86 | - | 37-5/8"x26-9/16"x92-1/8" | 532 | SEE NOTES |

NOTES:
1. PROVIDE THE FOLLOWING ACCESSORIES:
   -Y JOINT FOR MCU PORT TWINNING (LIQUID, 2 REQUIRED)
   -Y JOINT FOR MCU PORT TWINNING (GAS, 2 REQUIRED)
2. UNIT SHALL BE EQUIPPED WITH MODE CONTROL UNIT(MCU) FOR THE COOLING AND RE-HEAT COILS.

## INDOOR VRF EVAPORATOR UNIT SCHEDULE

BASIS OF DESIGN: SAMSUNG

| TAG # | ROOM LOCATION/ SERVICE | MODEL NUMBER | NOMINAL CAPACITY (TONS) | COOLING CAPACITY (BTU/hr) | HEATING CAPACITY (BTU/hr) | CFM | ESP (INWG) | REFRIGERANT | POWER SUPPLY (V/PH/HZ) | NOMINAL RUNNING CURRENT | DIMENSIONS WxHxD (IN) | WEIGHT (LBS.) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AC-1-1 | WOMEN'S LOCKER ROOM | AM015MNMDCH/AA | 1.25 | 15,000 | 17,000 | 353 | 0.6 | R410A | 208-230/1/60 | 0.32 | 34x10x28 | 69.4 | 1,2,3,4,5 |
| AC-1-2 | MEN'S LOCKER ROOM | AM012MNMDCH/AA | 1.0 | 12,000 | 13,500 | 300 | 0.6 | R410A | 208-230/1/60 | 0.26 | 34x10x28 | 69.4 | 1,2,3,4,5 |
| AC-1-3 | LOBBY | AM036MNHDCH/AA | 3.0 | 36,000 | 40,000 | 918 | 0.79 | R410A | 208-230/1/60 | 1.13 | 52x12x28 | 102.5 | 1,2,3,4,5 |
| AC-1-4 | LIFEGUARD OFFICE | AM007NNNDCH/AA | 0.625 | 7,500 | 8,700 | 272 | - | R410A | 208-230/1/60 | 0.17 | 23x10x23 | 26.46 | 1,2,3,4,6 |

NOTES:
1. CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER TO PROVIDE PIPING DIAGRAM FOR APPROVAL
2. SIZE AND INSTALL PIPING AS PER MANUFACTURER'S GUIDELINES
3. PROVIDE BRANCH CONTROLLERS FOR REFRIGERANT PIPING
4. DUCTED TYPE UNITS SHALL HAVE THE FOLLOWING PROVIDED BY THE UNIT MANUFACTURER:
   -HORIZONTAL DISCHARGE AIRFLOW
   -THE INDOOR UNIT SHALL STORE SYSTEM PROGRAMMING INFORMATION, UNIT NAME, AND OTHER DATA
   -ALL INDOOR UNIT ADDRESSING AND OPTION SETTINGS SHALL BE DONE DIGITALLY.
   -THE INDOOR UNIT SHALL HAVE STATIC PRESSURE AND OPTIMIZED COMFORT SETTINGS FOR THE OCCUPANT.
   -THE INDOOR UNIT SHALL HAVE SMART-TUNING FUNCTION THAT CAN PROVIDE OPTIMIZED COMFORT BY ALLOWING THE OCCUPANT TO OFFSET THE FAN CFM CURVE WITH A WIRED REMOTE CONTROLLER TO INCREASE OR DECREASE AIRFLOW.
   -THE INDOOR UNIT SHALL ALLOW SERVICE ACCESS FROM FOUR SIDES (TOP, BOTTOM, LEFT, RIGHT).
   -THE INDOOR UNIT SHALL HAVE AN INTERNAL CONDENSATE PUMP AS STANDARD WITH FLOAT SWITCH (MAXIMUM 29" LIFT FROM BOTTOM OF UNIT). INTERNAL CONDENSATE PUMP SHALL BE CONNECTED TO CONDENSATE DRAIN PIPING. ROUTE CONDENSATE PIPING TO EXISTING SLOP SINK OR NEW FUNNEL DRAIN(PROVIDED BY PLUMBING SCOPE OF WORK) TERMINATE WITH INDIRECT CONNECTION.
   -HIGH-VOLTAGE TERMINAL BLOCK TEMPERATURE SENSOR TO DISABLE UNIT IN THE EVENT OVERHEATING OF POWER CONNECTION.
   -DISCHARGE AIR TEMPERATURE SENSOR WITH TARGET DISCHARGE TEMPERATURE CONTROL CAPABILITY
5. CASSETTE TYPE INDOOR UNITS SHALL HAVE THE FOLLOWING PROVIDED BY THE UNIT MANUFACTURER:
   -ELECTRO-STATIC, WASHABLE, PLEATED FILTERS AS STANDARD (INCLUDED WITH FASCIA PANEL)
   -BUILT IN CONDENSATE PUMP WITH MAXIMUM 29" LIFT FROM THE BOTTOM OF THE UNIT, CHECK VALVE, AND FLOAT SWITCH THAT DISABLES INDOOR UNIT DURING OVERFLOW DETECTION. CONDENSATE PUMP SHALL BE CONNECTED TO CONDENSATE DRAIN PIPING. ROUTE CONDENSATE PIPING TO EXISTING SLOP SINK OR NEW FUNNEL DRAIN(PROVIDED BY PLUMBING SCOPE OF WORK) TERMINATE WITH INDIRECT CONNECTION.
   -KNOCK-OUT FOR OUTSIDE AIR CAPABILITY
   -FASCIA PANEL SHALL HAVE LED INDICATOR LIGHTS AND 4 MOTORIZED LOUVERS WITH INDEPENDENT CONTROL (32°-65°LOUVER CONTROL RANGE)
   -HIGH-VOLTAGE TERMINAL BLOCK TEMPERATURE SENSOR TO DISABLE UNIT IN THE EVENT OVERHEATING OF POWER CONNECTION.
   -WIND-FREE™ FUNCTION WILL CLOSE THE SUPPLY AIR OUTLET LOUVER WHILE IN COOLING MODE TO GENTLY DISPERSE COOL AIR INTO THE SPACE WITHOUT BLOWING DIRECTLY ONTO OCCUPANTS. THE WIND-FREE™ FEATURE IS OPTIONAL AND CAN BE ENABLED USING CENTRAL OR LOCAL CONTROL OPTIONS (MWR-SH11UN, MWR-WE11SN, MWR-WE13UN, AR-EH03U ONLY).
   -UNIT SHALL BE CONFIGURED FOR 2-STAGE OPERATION, COOLING THE SPACE WITH THE LOUVER OPEN (FIXED OR SWING) UNTIL THE ROOM TEMPERATURE NEARS SET TEMPERATURE. ONCE ROOM TEMPERATURE IS NEAR SET TEMPERATURE, WIND-FREE™ OPERATION WILL START AUTOMATICALLY, CLOSING THE LOUVER AND USING THE FACE OF THE FASCIA PANEL TO GENTLY COOL THE SPACE WITH STILL AIR.
   -UNIT PANEL SHALL HAVE AN INTEGRAL HUMIDITY SENSOR THAT WILL OPEN THE LOUVERS FOR STANDARD COOL MODE WHEN SPACE CONDITIONS COULD POTENTIALLY CAUSE CONDENSATION FORMATION ON THE PANEL SURFACE.

## OUTDOOR AIR COOLED CONDENSING UNIT (HEAT PUMP)

BASIS OF DESIGN: SAMSUNG

| NO. | NO. OF UNITS | LOCATION | SERVICE | MODEL # | NOMINAL COOLING CAPACITY (BTU/H) | NOMINAL HEATING CAPACITY (BTU/H) | CONDENSER FAN (CFM) | CONDENSER FAN TYPE (QTY) | OAT (°F) | REFRIGERANT (FACTORY CHARGE) | MOTOR: HP (WATTS) | MOTOR: DRIVE | COMPRESSOR: # | COMPRESSOR: TYPE | ELECTRICAL DATA: VOLTS | PHASE | HZ | FLA | MCA | MFS (A) | EER | IEER | DIMENSIONS WxHxD (IN) | UNIT NET WEIGHT (LBS) | SOUND LEVELS (dBA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACCU-R-1 | 1 | LOW ROOF | DOAU-1 | AM096FXVAFR2AA | 96,000 | 108,000 | 9,182 | PROPELLER(2) | 95 | R410A (16.31 LBS) | (630x2) | DC | 2 | SCROLL | 208 | 3 | 60 | 3 | 37.8 | 50 | 11.0 | 20.7 | 51x67x31 | 632.3 | 61 |
| ACCU-R-2 | 1 | LOCKER ROOM UNITS | AM072FXVAFH2AA | 72,000 | 81,000 | 7,240 | PROPELLER(1) | 95 | R410A (12.13 LBS) | (630) | DC | 1 | SCROLL | 208 | 3 | 60 | 4 | 28 | 35 | 11.0 | 20.2 | 35x67x31 | 405.7 | 60 |

NOTES:
1. CONTRACTOR TO COORDINATE WITH LOCAL UNIT MANUFACTURER TO PROVIDE PIPING DIAGRAM FOR APPROVAL
2. SIZE AND INSTALL PIPING AS PER MANUFACTURER'S GUIDELINES
3. PROVIDE LOW AMBIENT CONTROL FOR 0°F (FAN CYCLING/FAN SPEED)

## SUPPLY REGISTER SCHEDULE

| TAG | SERVICE | MODEL | MODULE SIZE ( IN X IN) | AIRFLOW | MAX PD | THROW (FT) | NC | BLADE SPACING (IN) | BAR THICKNESS (IN) | DEFLECTION | MATERIAL | BORDER | MANUFACTURER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SR-1 | POOL SUPPLY | CT-541 | 36X6 | 290 | 0.02 | 15 | <20 | 1/2 | 1/4 | 15° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| SR-2 | POOL SUPPLY | CT-541 | 20X4 | 100 | 0.02 | 12 | <20 | 1/2 | 1/4 | 15° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |

NOTES:
1. BORDER TYPES SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE FOR THE ROOM IN WHICH THE AIR DEVICE IS LOCATED
2. SEE PLANS FOR LOCATION AND AIR QUANTITIES FOR EACH OUTLET
3. ALL AIR DEVICES SHALL BE TESTED IN ACCORDANCE WITH ASHRAE STANDARD 702-2006
4. NC VALUES ARE BASED UPON A 10 DB ROOM ATTENUATION

## SUPPLY DIFFUSER SCHEDULE

| TAG | SERVICE | MODEL | MODULE SIZE ( IN X IN) | AIRFLOW (CFM) | NECK SIZE (IN) | MAX PD | THROW (FT) | NC | PATTERN | MATERIAL | BORDER | MANUFACTURER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CD-1 | SUPPLY | TMS-AA | 12X12 | 50-80 | 4 | 0.07 | 4 | <20 | 4-WAY | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| CD-2 | SUPPLY | TMS-AA | 12X12 | 60-80 | 4 | 0.07 | 4 | <20 | 3-WAY | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| CD-3 | SUPPLY | TMS-AA | 12X12 | 100 | 5 | 0.09 | 5 | <20 | 2-WAY | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| CD-4 | SUPPLY | TMS-AA | 12X12 | 60-100 | 5 | 0.09 | 5 | <20 | 3-WAY | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| CD-5 | SUPPLY | TMS-AA | 24X24 | 130-155 | 6 | 0.06 | 4 | <20 | 4-WAY | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| CD-6 | SUPPLY | TMS-AA | 24X24 | 200 | 8 | 0.03 | 4 | <20 | 4-WAY | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| CD-7 | SUPPLY | TMS-AA | 24X24 | 400 | 10 | 0.06 | 6 | <20 | 3-WAY | ALUMINUM | BY ARCH | TITUS | SEE NOTES |

NOTES:
1. BORDER TYPES SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE FOR THE ROOM IN WHICH THE AIR DEVICE IS LOCATED
2. SEE PLANS FOR LOCATION AND AIR QUANTITIES FOR EACH OUTLET
3. ALL AIR DEVICES SHALL BE TESTED IN ACCORDANCE WITH ASHRAE STANDARD 702-2006
4. NC VALUES ARE BASED UPON A 10 DB ROOM ATTENUATION

## FREEZE PROTECTION PUMP SCHEDULE

| TAG No. | MANUFACTURER | MODEL | GPM | PRESSURE DROP (FT WG) | WATTS | RPM | ELECTRICAL DATA | WEIGHT (LBS) |
|---|---|---|---|---|---|---|---|---|
| P-1 | BELL & GOSSETT | NRF-36, 3 SPEED | 30 | 8 | 270 | 3300 | 115/1/60 | 13.1 |

NOTES:
1. MAXIMUM WORKING PRESSURE : 150 PSI
2. MINIMUM OPERATING TEMPERATURE : 40°F
3. MAXIMUM OPERATING TEMPERATURE : 225°F
4. PUMP BODY : CAST IRON
5. IMPELLER : NORYL
6. SHAFT : CERAMIC
7. BEARINGS : CARBON
8. PROVIDE 1-1/2 COMPANION FLANGE
9. PUMP TO BE LOCATED OUTDOORS. CONTRACTOR SHALL PROVIDE PROTECTIVE ENCLOSURE.

## ELECTRIC DUCT HEATER SCHEDULE

BASIS OF DESIGN: INDEECO

| TAG | DUCT DIMENSIONS: WIDTH | HEIGHT | AIR FLOW (CFM) | EAT (°F) | LAT (°F) | AIR VELOCITY (FPM) | PD (IN WC) | ELECTRICAL DATA: KW | STAGES | V | PH | HZ | CONTROL VOLTAGE | MODEL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EDH-1 | 32.75" | 20.00" | 1200 | 0 | 26 | 264 | 0.01 | 10 | 2 | 208 | 3 | 60 | 24 | TFZU | SEE NOTES |

NOTES : PROVIDE THE FOLLOWING:
1. NEMA 1 CONTROL ENCLOSURE - ENGINEER TO VERIFY TERMINAL BOX OVERHANG CONFIGURATION AND AIRFLOW DIRECTION.
2. CONTRACTOR TO FIELD VERIFY INSIDE DIMENSIONS FOR COIL SIZING.
3. OPEN COIL 80% NICKEL, 20% CHROMIUM HEATING ELEMENTS.
4. FLANGED MOUNTING.
5. CONTROL OPTION "K", FULL SCR INCLUDING DUCT THERMOSTAT.
6. EXTENDED COLD SECTION TO ACCOMMODATE THICKNESS OF UNIT CASING.
7. MAGNETIC DE-ENERGIZING CONTACTORS.
8. MANUAL THERMAL CUTOUT, AUTOMATIC THERMAL CUTOUT.
9. INTEGRAL DIFFERENTIAL PRESSURE AIRFLOW SWITCH TO DE-ENERGIZE THE HEATER CONTROL CIRCUIT UPON LOSS OF AIRFLOW.
10. FUSES TO PROTECT EACH CIRCUIT IN ANY HEATER DRAWING MORE THAN 48 AMPS.
11. CONTROL CIRCUIT TRANSFORMER, WITH 24 VOLT SECONDARY AS SPECIFIED, INCLUDING ANY OVERCURRENT PROTECTION REQUIRED BY UL / NEC.
12. INTEGRAL, DOOR INTERLOCKED DISCONNECT SWITCH TO PROTECT SERVICE PERSONNEL.
13. STATIC PRESSURE DROP SHALL NOT EXCEED THE VALUES LISTED IN THE SCHEDULE AT THE AIRFLOW INDICATED.
14. MAINTAIN UNIFORM AIRFLOW AS RECOMMENDED BY MANUFACTURER AND UL LISTING REQUIREMENTS.
15. MAINTAIN MINIMUM CLEARANCES REQUIRED BY THE MANUFACTURER AND THE NATIONAL ELECTRIC CODE (NEC).
16. PROVIDE OPTIONAL TEMPERATURE SENSOR

## RETURN REGISTER SCHEDULE

| TAG | SERVICE | MODEL | MODULE SIZE ( IN X IN) | AIRFLOW CFM (CFM/LF) | MAX PD | NC | SPACING | DEFLECTION | MATERIAL | BORDER | MANUFACTURER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RR-1 | POOL | 350FL | 24X10 | 500 | 0.006 | <20 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| RR-2 | POOL | 350FL | 40X60 | 2000 | 0.002 | <20 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| RR-3 | POOL | 350FL | 36X36 | 1600 | 0.002 | <20 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| RR-4 | POOL | 350FL | 48X12 | 900 | 0.008 | <20 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| RR-5 | LOCKER ROOM | 350FL | 6X6 | 30-100 | 0.016 | <20 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| RR-6 | LOCKER ROOM | 350FL | 8X6 | 120-150 | 0.07 | <20 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |
| RR-7 | LOCKER ROOM | 350FL | 8X8 | 180-200 | 0.07 | <20 | 3/4" | 35° | ALUMINUM | BY ARCH | TITUS | SEE NOTES |

NOTES:
1. BORDER TYPES SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE FOR THE ROOM IN WHICH THE AIR DEVICE IS LOCATED
2. SEE PLANS FOR LOCATION AND AIR QUANTITIES FOR EACH OUTLET
3. ALL AIR DEVICES SHALL BE TESTED IN ACCORDANCE WITH ASHRAE STANDARD 702-2006
4. NC VALUES ARE BASED UPON A 10 DB ROOM ATTENUATION

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Jarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-6300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

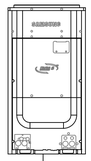
MECHANICAL
SCHEDULES

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-400.00
DRAWN BY DK
15 OF 17

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.



ACCU-R-2
MODEL # AM072FXVAFH2AA

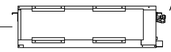
PIPE SIZE : 3/8" / 3/4"
PIPE LENGTH : 26.00FT / 27.18FT / 2

MXJ-YA2512M

PIPE SIZE : 3/8" / 5/8"
PIPE LENGTH : 12.00ft / 12.00ft / 0

MXJ-YA1509M

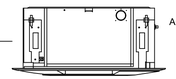
PIPE SIZE : 1/4" / 1/2"
PIPE LENGTH : 13.00FT / 14.31FT / 2



AC-1-1 WOMENS LOCKER ROOM(AM015MNMDCH/AA)

| COOLING CAPACITY | HEATING CAPACITY |
|---|---|
| 15,000 BTU/h | 17,000 BTU/h |

PIPE SIZE : 1/4" / 1/2"
PIPE LENGTH : 3.00FT / 3.00FT / 0



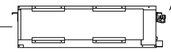
AC-1-4 LIFEGUARD OFFICE(AM007NNNDCH/AA)

| COOLING CAPACITY | HEATING CAPACITY |
|---|---|
| 7,500 BTU/h | 8,700 BTU/h |

PIPE SIZE : 3/8" / 5/8"
PIPE LENGTH : 23.00FT / 23.82FT / 1

MXJ-YA1509M

PIPE SIZE : 1/4" / 1/2"
PIPE LENGTH : 9.00FT / 9.00FT / 0



AC-1-2 MENS LOCKER ROOM(AM012MNMDCH/AA)

| COOLING CAPACITY | HEATING CAPACITY |
|---|---|
| 12,000 BTU/h | 13,500 BTU/h |

PIPE SIZE : 3/8" / 5/8"
PIPE LENGTH : 8.00FT / 8.00FT / 0

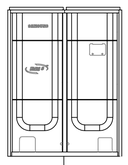


AC-1-3 LOBBY(AM036MNHDCH/AA)

| COOLING CAPACITY | HEATING CAPACITY |
|---|---|
| 36,000 BTU/h | 40,000 BTU/h |

## *VRF SYSTEM PIPING DIAGRAM (BASED ON SAMSUNG)*

NOT TO SCALE



ACCU-R-1
MODEL # AM096FXVAFR2AA

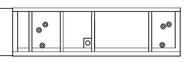
| COOLING CAPACITY | HEATING CAPACITY |
|---|---|
| 96,000 BTU/h | 108,000 BTU/h |

MCU
MCU-S4NEK3N

PIPE SIZE : 3/8" / 7/8" / 3/4"
PIPE LENGTH : 6.00FT / 7.18FT / 2

PIPE SIZE : 1/2" / 3/4"
PIPE LENGTH : 3.28FT / 3.28FT / 0

PIPE SIZE : 1/2" / 3/4"
PIPE LENGTH : 3.28FT / 3.28FT / 0



DOAU-1
MODEL # AM120NNDDCV/AA

| COOLING CAPACITY | HEATING CAPACITY |
|---|---|
| 88,800 BTU/h | 61,800 BTU/h |

## *DEDICATED OUTSIDE AIR SYSTEM PIPING DIAGRAM (BASED ON SAMSUNG)*

NOT TO SCALE

NOTES:

1. FINAL PIPE SIZING SHALL BE BY UNIT MANUFACTURER.
2. ALL EQUIPMENT FACTORY CONTROLS TO MAINTAIN TEMPERATURE SETPOINTS.
3. CONTROLS SHALL INCLUDE THE MINIMUM OF:
   - A. HEATING / COOLING MODE.
   - B. FAN MODE.
   - C. TEMPERATURE SETPOINTS.
   - D. 7 DAY PROGRAMMABLE CONTROLS.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

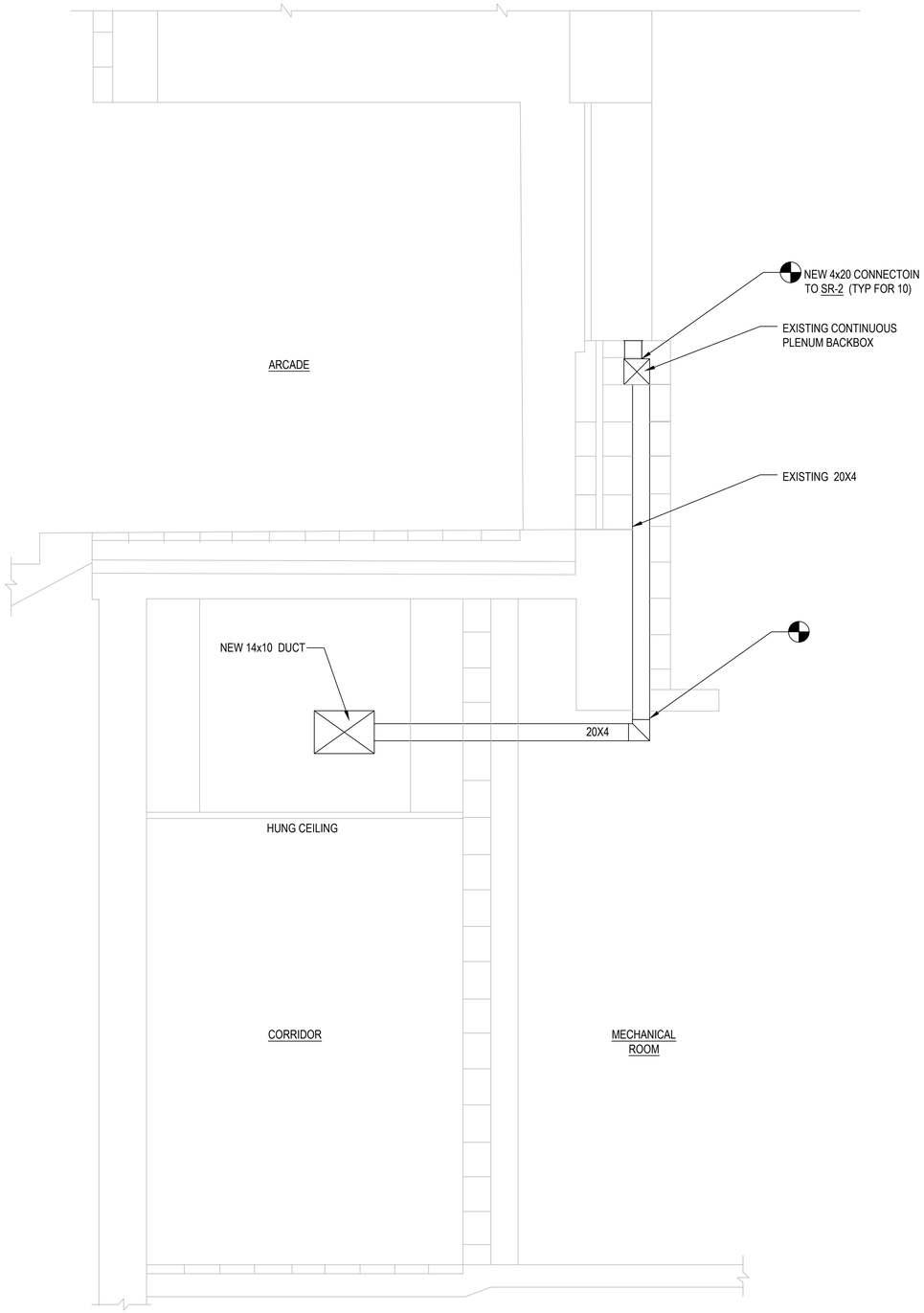
MECHANICAL RISER DIAGRAM

SEAL & SIGNATURE

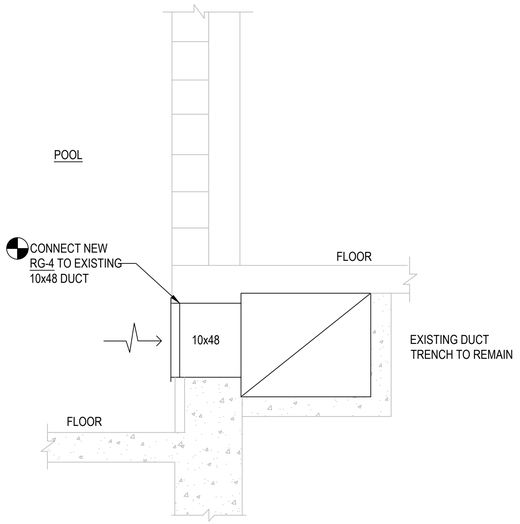
DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-500.00
DRAWN BY DK
16 OF 17

NYC DOB Number

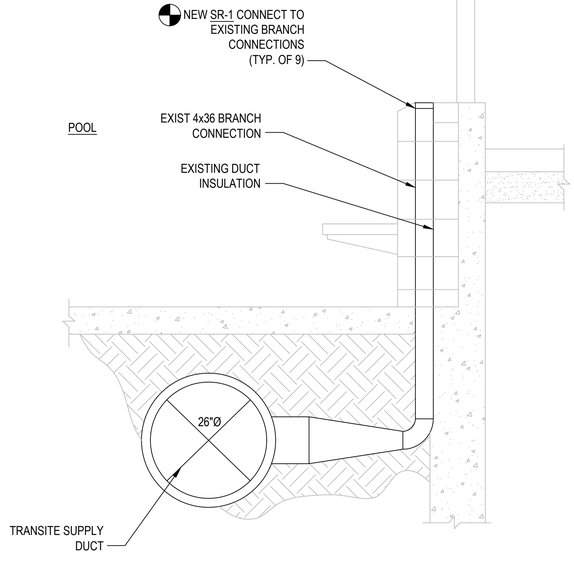

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




A M-100.00 **SECTION A-A**
**SCALE: 3/4"=1'-0"**




B M-100.00 **SECTION B-B**
**SCALE: 3/4"=1'-0"**




C M-100.00 **SECTION C-C**
**SCALE: 3/4"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL SECTIONS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-600.00
DRAWN BY DK
17 OF 17

NYC DOB Number

## GENERAL NOTES:

1. PROVIDE LABOR, MATERIALS, EQUIPMENT AND SERVICE FOR COMPLETE ELECTRICAL SYSTEMS AS SHOWN ON DRAWINGS SPECIFIED AND REQUIRED BY THE NATIONAL ELECTRICAL CODE, AND ANY OTHER LOCAL AND STATE AUTHORITIES. USE NEW, U.L APPROVED EQUIPMENT AND FIELD TEST EQUIPMENT.
2. CONDUCTORS: MINIMUM #12 COPPER 90°, 600V, THHN/THWN INSULATION AND MANUFACTURER COLOR CODED.
3. WORK PERFORMED SHALL BE UNDERTAKEN WITH ABSOLUTE PRECAUTION BEING MAINTAINED TO ENSURE SAFETY OF PERSONNEL AND EQUIPMENT IN AREA IN SUCH MANNER SO AS NOT TO DISTURB NORMAL WORK PROCEDURE. PROVIDE PROTECTIVE SCAFFOLDING, BARRIERS, SIGNS, ETC., SUBJECT TO APPROVAL OF OWNER.
4. PROVIDE LIGHTING FIXTURES AS INDICATED ON DRAWING AND SPECIFIED IN ARCHITECTURAL DRAWINGS. FIXTURES BEAR LABEL OF UNDER-WRITERS LABORATORIES, INSTALLED TRUE AND PLUMB, LEFT CLEAR AND FREE FROM GREASE AND FINGERPRINTS. PROVIDE LIGHTING FIXTURES COMPLETE WITH NECESSARY MOUNTING HARDWARE, LAMPS, BALLAST AND OTHER NECESSARY EQUIPMENT. USE OF CATALOG NUMBERS DESCRIBING TYPE OF FIXTURE DOES NOT NECESSARILY INCLUDE REQUIRED ACCESSORIES FOR COMPLETE INSTALLATION. PROVIDE EVERY ACCESSORY REQUIRED FOR COMPLETE INSTALLATION.
5. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EXACT LOCATION AND DETAILS OF WORK TO BE INSTALLED. SIZES AND LOCATION OF EQUIPMENT AND WIRING MAY BE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON DRAWINGS. FINAL LOCATION OF OUTLETS AND EQUIPMENT SHALL BE AS APPROVED BY ARCHITECT. INSTALL WORK TO CONFORM TO STRUCTURE, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. DO NOT SCALE DRAWINGS , USE FIELD MEASUREMENTS.
6. WORK IS NEW, UNLESS OTHERWISE NOTED.
7. INSTALL CONDUIT EXPOSED IN UNFINISHED AREA AND CONCEALED IN FINISH AREAS.
8. IF ANY DEVIATIONS/VARIATIONS ARE DISCOVERED BETWEEN SPECIFICATIONS AND FLOOR PLANS, OR BETWEEN FLOOR PLANS AND CONNECTION DIAGRAMS, OR BETWEEN ANY DOCUMENTS, ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUANTITY OR HIGHER COST SHALL BE INCLUDED IN BASE BID WITH CREDIT SUBMITTED, SHOULD LESSER AMOUNT BE REQUIRED.
9. PROVIDE WIRING FOR EQUIPMENT FURNISHED BY OTHERS. COORDINATE WITH OTHER TRADES ON DETAILS FOR INSTALLATION. TERM "WIRING", INCLUDES CONDUIT, WIRE, JUNCTION BOXES, DISCONNECTS AND MAKING CONNECTIONS. CHECK ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT TO BE INSTALLED BY OTHERS, PROVIDE PROPER WIRING AND NECESSARY ELECTRICAL ADJUSTMENTS TO EQUIPMENT TO CONFORM TO SPECIFIED REQUIREMENTS OF EQUIPMENT. "CIRCUITRY" IS SYNONYMOUS WITH "WIRING"
10. VERIFY EXACT LOCATION OF EQUIPMENT, SHOWN OR NOT SHOWN, IN FIELD PRIOR TO PERFORMING ANY WORK. SUBMIT LAYOUT FOR APPROVAL.
11. INSTALL CONDUIT RUNS AS CLOSE TO CEILING SLAB AS POSSIBLE. PROVIDE REQUIRED CONDUITS, ELBOWS, FITTINGS, OFFSETS AND PULL BOXES.
12. PROPERLY SUPPORT CONDUIT WITH APPROVED CLAMPS OR FITTINGS. NO CONDUIT SHALL BE SECURED TO, SUPPORTED BY OR HUNG FROM DUCTWORK OR PIPING OR OTHER SUCH ITEMS.
13. PASS RACEWAY OVER WATER OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. INSTALL NO RACEWAY WITHIN 3" OF HOT WATER PIPES OR APPLIANCES, EXCEPT CROSSING WHERE RACEWAY SHALL BE AT LEAST 1" FROM PIPE COVER.
14. AVOID HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS EXCEPT FOR SHORT RUNS WHERE ARCHITECT PERMISSION IS OBTAINED.
15. EXACT LOCATION OF CONDUIT RUNS SHALL BE DETERMINED IN FIELD. LOCATE CONDUIT RUNS TO CLEAR PIPING, DUCTWORK, ACCESS DOORS AND OTHER OBSTRUCTIONS. COORDINATE ROUTING WITH WORK OF OTHER TRADES AND ALTER WHERE NECESSARY TO AVOID INTERFERENCE. INSTALL CONDUIT CONCEALED TO MAXIMUM EXTENT POSSIBLE.
16. SYSTEMS SHALL BE MADE OPERATIONAL AS RENOVATED SPACES ARE ACCEPTED, PROVIDE PERSONNEL, TESTING, SCHEDULING AS REQUIRED. INCLUDE COST IN BID.
17. LOCATIONS OF OUTLETS ARE APPROXIMATE AND FINAL LOCATION SHALL BE AS DIRECTED BY ARCHITECT. VERIFY LOCATIONS BEFORE INSTALLATION. NO EXTRAS WILL BE ALLOWED FOR CHANGES UP TO 10'-0" FROM LOCATION SHOWN ON PLAN PRIOR TO ROUGH-IN.
18. REFER TO MECHANICAL/PLUMBING/FIRE PROTECTION/EQUIPMENT APPROVED SHOP DRAWINGS AND WIRING DIAGRAMS FOR POWER, CONTROL AND ALARM WIRING CONNECTIONS. OBTAIN NECESSARY POWER, CONTROL AND ALARM WIRING REQUIREMENTS FROM MECHANICAL/PLUMBING/FIRE PROTECTION SUB-CONTRACTORS PRIOR TO BID AND INCLUDE IN BID.
19. SEAL PENETRATIONS THROUGH FIRE RATED WALLS, FLOOR OR PARTITIONS TO PREVENT SPREAD OF SMOKE AND FIRE THROUGH THEM. FIRE RATING OF PENETRATION SEAL SHALL BE AT LEAST THAT OF FLOOR OR WALL INTO WHICH IT IS INSTALLED, SO THAT ORIGINAL FIRE RATING OF FLOOR OR WALL IS MAINTAINED AS REQUIRED BY APPLICABLE CODES. FOAM SEALANT SHALL MEET OR EXCEED FIRE TEST AND HOSE STREAM TEST REQUIREMENTS AND SHALL BE UL CLASSIFIED AS WALL OPENING PROTECTIVE DEVICE. SEALANT SHALL BE MANUFACTURED BY 3M OR DOW CORNING AND SHALL HAVE BS & A NUMBER.
20. PROVIDE CIRCUIT DIRECTORY WITH METAL FRAMES AND GLASSINE PAGE ON INSIDE DOOR OF PANELBOARDS. UPON COMPLETION OF WORK, DIRECTORIES SHALL BE TYPEWRITTEN, INDICATING SERVICE CONTROLLED BY EACH CIRCUIT.
21. MAKE FINAL CONNECTIONS FOR MOTORIZED EQUIPMENT OR EQUIPMENT SUBJECT TO VIBRATION, WITH FLEXIBLE RACEWAY.
22. PROVIDE IDENTIFICATION TAGS FOR WIRING AND INSTALL AT EACH END AND IN INTERMEDIATE PULL/JUNCTION BOXES, CABINETS, HOUSINGS, ETC. INDICATE ON TAGS, LEGIBLY, MINIMUM 1/4" HIGH LETTERS, THE POINTS OF ORIGIN AND TERMINATION OF EACH CIRCUIT. INCLUDE DATE OF INSTALLATION.
23. PROVIDE IDENTIFICATION ON EACH WIRING DEVICE FACE PLATE, DISCONNECT SWITCH, PANEL, ETC. IDENTIFICATION OF WIRING DEVICE FACE PLATE SHALL CONSIST OF PANEL DESIGNATION AND CIRCUIT NUMBER OF DEVICE AS CONNECTED. UTILIZE DYMO LABEL OR BROTHER "P-TOUCH" TYPE MATERIAL ADHERED TO FACE. TYPICAL IDENTIFICATION SHALL READ: "LP2-#4" IN PUBLIC SPACES AND GUESTROOMS INSTALL LABEL ON INSIDE OF FACEPLATE.
24. CIRCUIT NUMBERS ON DRAWINGS ARE FOR IDENTIFICATION ONLY AND DO NOT INDICATE POSITION ON PANEL BOARD. CONNECT CIRCUITS WITH LIGHTEST LOADS AND RECEPTACLE CIRCUITS NEAR TOP OF PANEL AND MORE HEAVILY LOADED CIRCUITS NEAR BOTTOM. BALANCE CIRCUITS EVENLY BETWEEN PHASES SO THAT FEEDER WIRES CARRY APPROXIMATELY EQUAL CURRENT. REBALANCE IF NECESSARY, DOCUMENT AND SUBMIT RECORD AS SHOP DRAWING.
25. PROVIDE DRAG LINE WITH EMPTY CONDUIT.
26. WHERE FIXTURES ARE INSTALLED IN COMBUSTION RETARDING HUNG CEILINGS, COORDINATE WITH G.C. TO ENSURE PROPER FIXTURE LOCATION, FIRE RETARDING FIXTURE ENCLOSURE DIMENSIONS AND SCHEDULING OF ELECTRICAL WORK. ASCERTAIN LOCATIONS OF FIRE RETARDING CEILINGS FROM ARCHITECTURAL DRAWINGS AND VERIFY IN FIELD. FIXTURE OUTLET BOXES SHALL BE ACCESSIBLE.
27. WHERE DEVIATION FROM CONTRACT DOCUMENTS REQUIRES A DIFFERENT QUANTITY AND ARRANGEMENT OF EQUIPMENT, WIRING, CONDUIT, AND EQUIPMENT FROM THAT SPECIFIED OR INDICATED ON DRAWINGS, PROVIDE SUCH EQUIPMENT, WIRING, AND CONDUIT AND OTHER ADDITIONAL EQUIPMENT REQUIRED BY SYSTEM, AT NO ADDITIONAL COST TO OWNER. WORK SHALL INCLUDE ANY RELATED CHANGES TO OTHER TRADES.
28. PHASING OF ELECTRICAL WORK SHALL COMPLY WITH "PHASING OF WORK" AS DESCRIBED BY ARCHITECT.
29. PROVIDE BLANK COVERS ON ABANDONED OR UNUSED OUTLETS BOXES.
30. UPON COMPLETION OF ELECTRICAL WORK ADJUST AND TEST CIRCUITS, OUTLETS, SWITCHES, LIGHTS, MOTORS, AND ANY OTHER ELECTRICAL ITEMS. DEFECTIVE ITEMS SHALL BE IMMEDIATELY REPAIRED OR REPLACED WITH NEW EQUIPMENT AND THAT PART OF SYSTEM RETESTED. PERFORM SUCH REPLACEMENT OR REPAIR AT NO ADDITIONAL COST TO OWNER.
31. WHERE DUE TO UNION REGULATIONS OR TRADE AGREEMENTS, ANY WORK SHOWN ON DRAWINGS OR SPECIFIED NOT CONSIDERED ELECTRICAL WORK, ELECTRICAL CONTRACTOR SHALL CUB-CONTRACT WORK IN QUESTION, BUT ASSUME FULL RESPONSIBILITY FOR COMPLETE INSTALLATION.
32. SUBMIT FOR APPROVAL PRIOR TO ACTUAL INSTALLATION, SCALED INSTALLATION SHOP DRAWINGS SHOWING LOCATIONS OF FEEDERS, EQUIPMENT/DEVICES TO BE INSTALLED AND INDICATING EXACT CIRCUITRY, WIRING DEVICES, CONTROL DEVICES AND DIMENSIONED CLEARANCES FROM EXISTING STRUCTURE AND EQUIPMENT. COORDINATE SHOP DRAWINGS WITH OTHER TRADES PRIOR TO SUBMITTAL.

## SPECIAL NOTES:

1. CONTRACTOR SHALL BE FAMILIAR WITH THE CURRENT CONSTRUCTION, BOCK WALLS, DEEP BEAM/CEILING CONSTRUCTION EXPOSED RACEWAYS ETC. PRIOR TO SUBMITTING BID AND COMMENCEMENT OF WORK. ALL CONDUIT/RACEWAYS SHALL BE CONCEALED EXCEPT EXPOSED CONDUIT ROUTING AND LOCATIONS MUST BE APPROVED PRIOR TO INSTALLATION. SUBMIT CONDUIT ROUTING PLAN TO ARCHITECT FOR APPROVAL.
2. INCLUDE AND SUBMIT SEPARATE UNIT PRICE TO FURNISH AND INSTALL THE FOLLOWING:
   a) (2) OF EACH TYPE OF ELECTRICAL DEVICE SHOWN ON PLANS. LOCATION TO BE AS DIRECTED BY OWNER
   b) (2) OF EACH TYPE OF LOW VOLTAGE DEVICE SHOWN ON PLANS. LOCATION TO BE AS DIRECTED BY OWNER
   c) (2) OF EACH TYPE OF ELECTRICAL LIGHTING SHOWN ON PLANS.
   d) (2) OF EACH TYPE OF ELECTRICAL DEVICE SHOWN ON PLANS.
   e) (1) SEPARATE 120V/20A LIGHTING CIRCUIT WITH CONNECTIONS TO (5) OUTLETS/FIXTURES.
   f) (1) SEPARATE 120V/20A POWER CIRCUIT WITH CONNECTIONS TO (5) RECEPTACLES.
   g) (1) DEDICATED 120V/20A POWER CIRCUIT WITH CONNECTION TO (2) RECEPTACLE/EQUIPMENT.

   ALL UNUSED PORTION OF THE ABOVE SHALL BE RETURNED TO OWNER OR BE REDISTRIBUTED AS PER OWNER DIRECTIONS.
3. INCLUDE IN BID TO FURNISH AND INSTALL ALL CONDUIT, OUTLET BOXES AND DRAG LINE FOR THE FOLLOWING SYSTEMS.
   a) ANY LOW VOLTAGE SYSTEM

   REFER TO OWNER VENDORS DRAWINGS FOR ALL REQUIREMENTS AND SIZES.
4. CONTRACTOR SHALL VISIT SITE AND TAKE NOTE OF EXISTING ELECTRICAL INSTALLATION, CONDUIT, FEEDER, LIGHTING FIXTURES, WIRING DEVICES, ETC. AND INCLUDE THE FOLLOWING:
   a) INCLUDE THE COMPLETE DEMOLITION OF THE ELECTRICAL SYSTEM IN THE AREA OF WORK. U.O.N.
   b) MAKE TEMPORARY CONNECTIONS TO ALLOW FOR ACTIVE TENANTS OPERATION WHERE REQUIRED.
   c) SCHEDULE ALL WORK WITH BUILDING MANAGEMENT PRIOR TO POWER DISCONNECTION.
   d) REFER TO ARCHITECTURAL DRAWINGS FOR AREAS OF DEMOLITION AND PHASING.
   e) REFER TO SPECIFICATIONS AND INCLUDED MEP SET OF DOCUMENTS TO INCLUDE FULL SCOPE OF ELECTRICAL WORK.
   f) UNLESS OTHERWISE EXCLUDED IN BID, CONTRACTOR SHALL INCLUDE ALL ELECTRICAL WORK IN HIS SCOPE.
   g) INCLUDE FIELD CIRCUITS TESTING TO VERIFY FEEDS AND CIRCUITS SUPPLYING POWER TO SPORTSPARK'S CURRENTLY OCCUPIED SPACE AS WELL AS THE SPACE IN THESE DRAWINGS.

## BASE BUILDING NOTES:

1. PROVIDE AS-BUILT DRAWINGS, EQUIPMENT USE PERMITS, ELECTRICAL SIGN-OFFS AND FINAL BALANCING REPORTS TO BUILDING MANAGEMENT AT JOB COMPLETION.
2. THE CONTRACTOR IS TO NOTIFY AND SCHEDULE ANY WORK REQUIRING INTERACTION OR SHUT DOWN OF THE BUILDING SYSTEMS.
3. ALL SHUTDOWNS AND TIE-INS ARE TO BE COORDINATED WITH BUILDING MANAGEMENT.
4. INDICATE POINT OF CONNECTIONS FOR ALL SERVICES SHOWN ON PLANS. THESE ITEMS MUST BE IDENTIFIED AS PART OF THE CONSTRUCTION DOCUMENTS.
5. THE LOCATION AND ELEVATIONS OF ALL PIPING, CONDUIT, PANELS, EQUIPMENT AND/OR DUCTWORK THAT IS IN OR PASSING THROUGH BASE BUILDING SPACES AND/OR TENANT SPACES ARE TO BE COORDINATED WITH BUILDING MANAGEMENT AND INDICATED ON SHOP DRAWINGS BEFORE PROCEEDING WITH WORK.
6. ALL WORK TO COMPLY WITH BUILDING ENGINEERING STANDARDS AS DIRECTED BY OWNER REPRESENTATIVE.
7. CONFIRM AND NOTIFY THE BUILDING MANAGEMENT OF ANY WORK THAT WILL AFFECT ADJACENT TENANT AREAS.

THE ELECTRICAL POWER AND LIGHTING SYSTEMS COMPLIES WITH THE REQUIREMENTS OF 2016 NEW YORK CITY ENERGY CONSERVATION CODE (NYCECC).

"TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT THE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2016 NYCECC"

| ELECTRICAL DRAWING LIST | |
|---|---|
| Sheet Number | Sheet Title |
| E-001.00 | ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS |
| E-002.00 | ELECTRICAL SPECIFICATIONS |
| E-100.00 | ELECTRICAL FIRST FLOOR EAST PLAN |
| E-102.00 | ELECTRICAL SECOND FLOOR EAST PLAN |
| E-200.00 | LIGHTING FIRST FLOOR EAST PLAN |
| E-202.00 | LIGHTING SECOND FLOOR EAST PLAN |
| E-300.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS |
| E-301.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS 2 |
| E-400.00 | ELECTRICAL PANEL SCHEDULE |
| E-500.00 | ELECTRICAL RISER DIAGRAM |

## ELECTRICAL ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| AC | AIR CONDITIONER |
| AFF | ABOVE FINISHED FLOOR |
| AWG | AMERICAN WIRE GAUGE |
| BLDG | BUILDING |
| BX | ARMORED CABLE |
| C | CONDUIT |
| CB | CIRCUIT BREAKER |
| CCTV | CLOSED CIRCUIT TELEVISION |
| CKT | CIRCUIT |
| CLG | CEILING |
| CP | CONDENSATE PUMP |
| DN | DOWN |
| DWG | DRAWING |
| EC | ELECTRICAL CONTRACTOR OR EMPTY CONDUIT |
| EF | EXHAUST FAN |
| EM | EMERGENCY |
| EX, E, (E) | EXISTING DEVICE TO REMAIN |
| ER | EXISTING DEVICE IN RELOCATED POSITION |
| FBO | FURNISHED BY OTHERS |
| FL | FLOOR |
| FT | FEET OR FOOT |
| G | GROUND WIRE |
| GC | GENERAL CONTRACTOR |
| GFI | GROUND FAULT INTERRUPTER |
| HP | HORSEPOWER |
| HC | HUNG CEILING |
| KVA | KILOVOLT AMPERES |
| KW | KILOWATTS |
| LV | LOW VOLTAGE |
| MCB | MAIN CIRCUIT BREAKER |
| MCM | THOUSAND CIRCULAR MILS |
| MC | MECHANICAL CONTRACTOR |
| MLO | MAIN LUGS ONLY |
| MTD | MOUNTED |
| N, (N) | NEW DEVICE |
| NC | NORMALLY CLOSED |
| NF | NON-FUSED |
| NIC | NOT IN CONTRACT |
| NL | NIGHT LIGHT |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| P | POLE |
| PB | PULL BOX |
| PH | PHASE |
| PNL | PANEL |
| RE | EXISTING TO BE REMOVED |
| RR | EXISTING TO BE REMOVED AND RELOCATED |
| SW | DISCONNECT SWITCH |
| TC | TIMECLOCK |
| TYP | TYPICAL |
| UON | UNLESS OTHERWISE NOTED |
| V | VOLTS |
| VA | VOLTAMPS |
| VP | VAPOR PROOF |
| W | WATTS |
| WP | WEATHER PROOF |
| JBJ | JUNCTION BOX |

## ELECTRICAL SYMBOL LIST:

NOTE: COORDINATE ALL SYMBOLS WITH ARCHITECTURAL DRAWINGS.

F1 LC1-A EMNL — LIGHTING FIXTURE AND OUTLET BOX.
HALF SHADED OR "NL" ADJACENT TO FIXTURE DENOTES FIXTURE CONNECTED TO EMERGENCY GENERATOR CIRCUIT
'F1' DENOTES FIXTURE TYPE
'a' DENOTES SWITCH CONTROL
'LC1-A' DENOTES LIGHTING CONTACTOR RELAY CONTROL
'EMNL' DENOTES EMERGENCY/NIGHT LIGHT POWERED THROUGH(24HRS), CONNECTED TO CENTRAL BATTERY UNLESS OTHERWISE NOTED.
REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING ARCH. DWGS FOR TYPES AND SPECIFICATIONS.

EXIT LIGHT WITH BATTERY BACKUP AND DIRECTIONAL ARROW AS REQUIRED. REFER TO LIGHTING FIXTURE SCHEDULE FOR VOLTAGE REQUIREMENTS. REFER TO ARCHITECTURAL LIGHTING FIXTURE SCHEDULE FOR ALL OTHER INFORMATION.

ELECTRICAL PANELBOARD (FLUSH WITHIN 6" METAL STUD WALL OR SURFACE MOUNTED AS INDICATED ON SCHEDULES).

(VS) CEILING MOUNTED VACANCY SENSOR WITH POWER SUPPLY/ROOM CONTROLLER.

(DS) CEILING MOUNTED DAYLIGHT SENSOR

(OS) CEILING MOUNTED OCCUPANCY SENSOR

VS WALL MOUNTED VACANCY SENSOR SWITCH W/ OVERRIDE.
B.O.D. MODEL = LUTRON MAESTRO (PROGRAM FOR VACANCY MODE)

OS WALL MOUNTED OCCUPANCY SENSOR SWITCH W/ OVERRIDE.
B.O.D. MODEL = LUTRON MAESTRO (PROGRAM FOR OCCUPANCY MODE)

CP LUTRON 'GRAFIK EYE' LIGHTING CONTROLLER. SEE DETAILS ON E-300.

R EM RELAY FOR EM LIGHTING (MODEL #ELCU-200). SEE DETAILS ON E-300.

RECESSED WALL-MTD DUPLEX CONVENIENCE RECEPTACLE, 1'-6" A.F.F., U.O.N. PROVIDE WHITE PLASTIC COVERS: LEVITON DECORA WHITE
'TV' - TYPE RECEPTACLES INDICATED TO BE HOUSED IN FSR PROJECT WALL BOX 'PWB-200' SERIES.

RECESSED WALL MOUNTED DUPLEX CONVENIANCE RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER. 1'-3" A.F.F., U.O.N., LEVITON DECORA WHITE

RECESSED WALL MOUNTED QUAD CONVENIANCE RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER. 1'-3" A.F.F., U.O.N., LEVITON DECORA WHITE

RECESSED WALL-MTD DUPLEX COMPUTER RECEPTACLE, 1'-6" A.F.F., U.O.N. RECEPTACLE SHALL BE GRAY COLOR CODED. MAXIMUM (4) DUPLEXES PER 20 AMP CIRCUIT; LEVITON DECORA WHITE

RECESSED WALL-MTD QUAD RECEPTACLE, 1'-6" A.F.F., U.O.N.
(2) RECEPTACLES TO BE ON GENERAL CIRCUIT AND (2) RECEPTACLES TO BE GRAY COLOR CODED FOR COMPUTER ON MAXIMUM (4) OUTLETS PER (1) 20 AMP CIRCUIT; LEVITON DECORA WHITE

RECESSED WALL-MTD QUAD RECEPTACLE, 1'-6" A.F.F., U.O.N. ON DEDICATED CIRCUIT; LEVITON DECORA WHITE

RECESSED WALL-MTD DUPLEX RECEPTACLE, 1'-6" A.F.F., U.O.N. ON DEDICATED CIRCUIT; LEVITON DECORA WHITE

(J) RECESSED CEILING POWER JUNCTION BOX

RECESSED VOICE/ DATA OUTLET WITH 1" CONDUIT FROM OUTLET BOX TO 6" ABOVE HUNG CEILING. INSTALLATION AND WIRING BY OTHERS (N.I.C.) TO BE COORDINATED WITH CLIENTS VENDOR

RECESSED WALL MOUNTED TELEPHONE, AT 4'-6" AFF; MINIMUM SIZE 3/4"C (SEE SCHEDULE ON E-100)

$T THERMAL DISCONNECT SWITCH.

NON-FUSED DISCONNECT SWITCH IN NEMA 1 TYPE ENCLOSURE. 3P/60A
'WP' DENOTES WEATHERPROOF
'A' - 20A, 120V, 1PH
'B' - 20A, 208V, 3PH
'C' - 60A, 208V, 3PH
'D' - 30A, 208V, 1PH
'E' - 200A, 208V, 3PH

FUSED DISCONNECT SWITCH IN NEMA 1 TYPE ENCLOSURE. 3P/60A
'WP' DENOTES WEATHERPROOF
'A' - 20A, 120V, 1PH
'B' - 20A, 208V, 3PH

$A TOGGLE DISCONNECT SWITCH, LETTER DESIGNATION IS AS FOLLOWS:
'A' - 20A, 120V, 1PH
'B' - 30A, 208V, 3PH
'C' - 50A, 208V, 1PH
'D' - 40A, 208V, 1PH
'E' - 20A, 208V, 3PH
'F' - 30A, 208V, 1PH
'G' - 50A, 208V, 3PH

GROUND (EARTH).

CONDUIT & WIRE HOMERUN CONCEALED IN CEILINGS OR WALL TO DESIGNATED PANELBOARD. SIZED TO ACCOMMODATE WIRING INDICATED.

HWH HOT WATER HEATER

(M) MOTOR

J CP CEILING POWER JUNCTION BOX FOR CONDENSATE PUMPS

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. E-001.00 |
| | DRAWN BY MR |
| | 1 OF 10 |

NYC DOB Number

## ELECTRICAL SPECIFICATIONS

A. GENERAL

1. PERFORM ALL WORK IN ACCORDANCE WITH THE NEW YORK CITY ELECTRICAL CODE, (2011 EDITION), O.S.H.A., PERTINENT NFPA CODES, THE RULES AND REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION, AND ALL STANDARDS APPLIED BY THE BUILDING MANAGEMENT.

2. OBTAIN ALL PERMITS, FILE DOCUMENTS, PAY ALL FEES AND PERFORM ALL TESTING AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION. PROVIDE OWNER WITH CERTIFICATES OF INSPECTION.

3. DO ALL NECESSARY CUTTING AND ROUGH PATCHING INCLUDING CORE DRILLING OF CONCRETE FLOOR SLAB AND FIRESTOPPING FOR INSTALLATION OF NEW FEEDER CONDUIT AND BRANCH CIRCUITS. FINISH PAINTING AND PATCHING SHALL BE DONE BY OTHERS.

4. THESE DRAWINGS INDICATE THE SIZE AND GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. EXACT LOCATIONS, HEIGHTS, DOOR SWINGS, MOUNTING HEIGHTS, ETC OR ANY DIMENSIONS NOT SHOWN SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND DETAILS.

5. COORDINATE WORK WITH OTHER TRADES INCLUDING THE SPRINKLER, HVAC, PLUMBING, AND GENERAL CONTRACTOR AND/OR EXISTING CONDITIONS. CONFER WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION; AND ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT IN PROPER RELATION TO THE WORK AND EQUIPMENT OF OTHERS, WITH BUILDING CONSTRUCTION AND WITH ARCHITECTURAL FINISH SO THAT IT WILL HARMONIZE IN SERVICE AND APPEARANCE. EXTRA COMPENSATION WILL NOT BE GRANTED FOR MIS-COORDINATED WORK.

6. BIDDERS, BEFORE SUBMITTING A PROPOSAL, SHALL VISIT AND EXAMINE CAREFULLY THE AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE; AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE.

7. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION, AND ANY PORTIONS OF THE WORK WHICH DEVELOP DEFECTS DURING THAT TIME SHALL BE REPLACED OR REPAIRED IN A MANNER SATISFACTORY TO THE ARCHITECT AND/OR OWNER.

8. FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS REQUIRED BY THE OWNER.

9. PREPARE AND FURNISH TO THE OWNER "AS BUILT" PLANS FOR ALL WORK INSTALLED ON DISC'S OR CD's IN AUTOCAD 14 FORMAT OR ON REPRODUCIBLE SEPIAS AS DIRECTED BY THE OWNER.

10. SUBMIT SHOP DRAWINGS TO THE OWNER AND/OR HIS ENGINEER FOR REVIEW COMMENTS BEFORE FABRICATION, PURCHASE, OR INSTALLATION OF ANY EQUIPMENT.

11. ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY LIGHT AND POWER FOR THE NEW CONSTRUCTION AREAS, IN ACCORDANCE WITH ACCEPTED STANDARDS ESTABLISHED BY O.S.H.A. ENERGY COSTS WILL BE BORNE BY THE OWNER.

12. ALL PARTS OF THE WORK AND ASSOCIATED EQUIPMENT SHALL BE TESTED AND ADJUSTED TO WORK PROPERLY AND BE LEFT IN PERFECT OPERATING CONDITION. THIS SHALL INCLUDE MEGGER TESTS BETWEEN PHASES AND BETWEEN EACH PHASE AND GROUND OF ALL EXISTING REUSED FEEDERS, SUBFEEDERS AND PANELBOARDS. CORRECT DEFECTS DISCLOSED BY THESE TESTS WITHOUT ANY ADDITIONAL COST TO THE OWNER. REPEAT TESTS ON REPAIRED OR REPLACED WORK.

13. ALL WORK SHALL BE PERFORMED BY SKILLED LICENSED ELECTRICIANS.

14. ALL WORK AND MATERIALS SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST AMENDMENTS TO THE NEW YORK CITY ELECTRICAL CODE, NATIONAL ELECTRIC CODE, ANY PPLICABLE ENERGY CONSERVATION CODES, AND ALL AUTHORITES HAVING JURISDICTION.

15. PROVIDE MATERIALS AND EQUIPMENT LISTED BY UNDERWRITERS LABORATORIES, INC. EXCEPT IN THOSE CASES WHERE SUCH LISTING IS NOT AVAILABLE, COMPLY WITH THE LATEST APPLICABLE STANDARDS OF ANSI, ASTM, IEEE, AND NEMA.

16. IF SUBSTITUTIONS FOR SPECIFIED EQUIPMENT OR SYSTEMS ARE DESIRED, A LIST MUST BE SUBMITTED WITH THE BASE BID INCLUDING AVAILABILITY AND THE CREDIT OR EXTRA INVOLVED. ALL SUBSTITUTED ITEMS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. IF NO SUCH LIST IS SUBMITTED, IT SHALL BE UNDERSTOOD THAT ALL MATERIALS AND EQUIPMENT WILL BE FURNISHED AS SPECIFIED.

17. "APPROVED EQUAL" MEANS ANY DEVICE, MATERIAL, SYSTEMS OR EQUIPMENT CONSIDERED BY THE ARCHITECT TO BE EQUIVALENT IN QUALITY, CONSTRUCTION, PERFORMANCE, FINISH AND APPEARANCE TO THAT SPECIFIED. "FURNISH" AND INSTALL" MEANS PURCHASE, ARRANGE DELIVERY OF, HANDLING AND INSTALLATION, TEST AND LEAVE READY FOR OPERATION.

18. PROVIDE ALL PANELS, FEEDERS, BRANCH CIRCUIT WIRING AND ALL ACCESSORIES AND SUPPORTS TO CONNECT TO THE EXISTING BUILDING DISTRIBUTION SYSTEM AND PROVIDE A COMPLETE OPERABLE ELECTRICAL SYSTEM. ALL WIRING AND EQUIPMENT TO BE SIZED PER CODE. COORDINATE WITH ALL EQUIPMENT TO PROVIDE POWER SUPPLY OF THE PROPER VOLTAGE, AMPACITY AND ARRANGEMENT.

19. SHORT CIRCUIT INTERRUPTING CURRENT RATINGS OF ALL PANELS, SWITCHES, FUSES AND CIRCUIT BREAKERS SHALL BE SELECTIVELY COORDINATED WITH THE BUILDING DISTRIBUTION SYSTEM. ADDITION OF EQUIPMENT TO THE SYSTEM SHALL BE REEVALUATED AND PROPER SHORT CIRCUIT DEVICES BE PROVIDED TO OBTAIN SHORT CIRCUIT PROTECTION REQUIRED. COORDINATE WITH ALL AGENCIES AND SUBMIT CALCULATION TO SUPPORT EQUIPMENT SELECTED.

20. FOR SHORT CIRCUIT INTERRUPTION AND PROPER SEQUENCE TRIPPING ALL PROTECTIVE DEVICES UNDER OVERLOAD CONDITIONS, THE DEVICE NEAREST TO THE FAULT OR OVERLOAD SHOULD TRIP FIRST.

B. SCOPE OF WORK

1. PROVISIONS FOR TEMPORARY POWER AND LIGHTING.

2. REMOVAL OF ALL EXISTING DEVICES AND WIRING WHICH ARE NOT BEING REUSED.

3. PROVIDE INSTALLATION OF A COMPLETE CONDUIT AND RACEWAY SYSTEM.

4. PROVIDE BRANCH CIRCUIT WIRING FOR LIGHTING, RECEPTACLES AND MECHANICAL EQUIPMENT AND LINE VOLTAGE CONTROL WIRING FOR ALL EQUIPMENT FURNISHED BY OTHERS. U.O.N.

5. PROVIDE WIRING DEVICES (RECEPTACLES, SWITCHES, PLATES, ETC.) AND LIGHTING FIXTURES

6. PROVIDE PANELBOARDS AND ASSOCIATED CIRCUIT BREAKERS.

7. PROVIDE DISCONNECT SWITCHES FUSES AND STARTERS.

C. ALTERATION

1. PERFORM ALL WORK WHEN AND AS DIRECTED. SUBMIT SCHEDULE FOR ACCEPTANCE. ACKNOWLEDGE PHASING OF WORK WHEN OUTLINED BY THE ARCHITECT.

2. REMOVE ALL EXISTING DEVICES AND WIRING NOT SHOWN AS EXISTING TO REMAIN. ALL REMOVED ELECTRICAL RECEPTACLES, ETC. SHALL HAVE ALL THEIR ASSOCIATED WIRING REMOVED BACK TO THEIR SOURCE. ALL CONDUIT MADE OBSOLETE SHALL BE REMOVED IN ITS ENTIRETY. REUSE UPON ARCHITECT APPROVAL.

3. MAINTAIN CONTINUOUS SERVICE ON FEEDERS, CIRCUITS OR PARTIAL CIRCUITS, AND OUTLETS AFFECTED BY THIS WORK, EXCEPT WHERE OWNER GIVES WRITTEN PERMISSION FOR OUTAGE FOR SPECIFIED TIME. ADVISE OWNER THREE WORKING DAYS IN ADVANCE. WHEN THE OWNER AND/OR HIS ENGINEER SPECIFICALLY REQUESTS CERTAIN SPECIAL WORK TO BE DONE ON OVERTIME, INSTALL SUCH WORK ON OVERTIME; AND ONLY THE "PREMIUM" PORTION OF WAGES WILL BE PAID.

4. PROVIDE RECONNECTIONS AND TEMPORARY INSTALLATIONS AS REQUIRED; REMOVE AT JOB COMPLETION.

5. ALL EXISTING PANELS AFFECTED SHALL HAVE THEIR DIRECTORIES CORRECTED FOR NEW WORK, AND EXISTING REMAINING CIRCUITS VERIFIED. REMOVE EXISTING UNUSED OVERCURRENT PROTECTION DEVICES AND PROVIDE NEW DEVICES IN EXISTING PANELBOARDS TO CONFORM WITH THE NEW PANEL SCHEDULES INDICATED ON THE DRAWINGS.

6. MAINTAIN, STORE, CLEAN, AND REINSTALL ALL EXISTING DEVICES (INCLUDING POWER, DATA, FIRE ALARM, HVAC CONTROLS, VOICE, ETC.) INDICATED TO REMAIN. PROVIDE NEW WIRING AS REQUIRED TO MAINTAIN THESE DEVICES AT THEIR CURRENT LOCATION OR NEW LOCATION AS DIRECTED BY THE ARCHITECT.

7. TAKE POSSESSION AND REMOVE FROM THE PREMISES ALL ABANDONED MATERIALS AND EQUIPMENT UNLESS SPECIFIED AS RETURNABLE TO THE OWNER. CAREFULLY REMOVE ALL SUCH EQUIPMENT AND TURN OVER TO OWNER AT LOCATION DESIGNATED BY THE OWNER.

8. PROVIDE BLANK PLATES ON ALL UNUSED OUTLET BOXES. FINISH OF PLATE SHALL BE COORDINATED WITH ARCHITECT

D. CONDUIT AND RACEWAYS

1. ALL WIRING FROM THE PANELBOARD TO THE FIRST CONCEALED JUNCTION BOX IN THE HUNG CEILING, WALL, OR RAISED FLOOR AND EXPOSED (IN DRY LOCATIONS) IS TO BE RUN IN GALVANIZED THINWALL CONDUIT (EMT), 3/4" MINIMUM.

2. WIRING IN WALLS SHALL RUN IN CONCEALED CONDUIT EXCEPT WHERE NOTED. WIRING IN CEILING SHALL RUN IN EXPOSED CONDUIT. CONDUIT INSTALLATION SHALL BE AS FOLLOWS:

| | |
|---|---|
| a) WALLS AND CEILINGS | EMT |
| b) CONCRETE SLABS, MASONRY WALLS, OUTDOORS OR EXPOSED TO DAMAGE | RIGID GALVANIZED STEEL |
| c) WHERE PERMITTED BY CODE | ALUMINUM |

3. ARMORED CABLE (BX) IS PERMISSIBLE FOR CONCEALED POWER WIRING IN CEILING AND WALLS FROM THE FIRST JUNCTION FORWARD AS PERMITTED BY BUILDING STANDARDS.

4. HANGERS, SUPPORTS AND SLEEVES SHALL BE AS ACCEPTABLE TO THE ENGINEER. SUPPORT CONDUIT ON EACH SIDE OF BENDS AND NOT GREATER THAN 10'-0" ON CENTERS.

5. COORDINATE CONDUIT RUNS WITH EXISTING AND NEW WORK. RUN CONDUIT CLEAR OF SHAFTS, OPENINGS, CABLE SLOTS SLEEVES AND EQUIPMENT. DO NOT SUPPORT CONDUITS OR RACEWAYS FROM DUCTWORK OR EQUIPMENT.

6. TERMINATE EACH CONDUIT WITH TWO LOCKNUTS, ONE INSIDE AND ONE OUTSIDE AND A BUSHING. USE ALUMINUM LOCKNUTS FOR ALUMINUM CONDUIT, AND MALLEABLE IRON OR GALVANIZED OR CADMIUM PLATED STEEL FOR STEEL CONDUITS. BUSHINGS SHALL BE THE INSULATED PLASTIC TYPE, TB SERIES 5LO OR AS ACCEPTABLE. WHERE CONDUITS LARGER THAN 2" SIZE ARE TERMINATED LOCKNUTS SHALL BE THE BONDING TYPE TB SERIES L06, OR AS ACCEPTABLE. IF ALUMINUM BONDING LOCKNUTS ARE NOT AVAILABLE USE A BONDING WEDGE IN ADDITION UNDER THE INTERIOR ALUMINUM LOCKNUT.

7. WHERE CONDUITS LANGER THAN 1" SIZE TERMINATE IN CONCENTRIC KNOCKOUTS AND WHERE ALL OF THE KNOCKOUT RINGS HAVE NOT BEEN REMOVED, INSULATED GROUNDED BUSHING SHALL BE USED. INSULATED GROUNDED BUSHINGS SHALL BE CAST, THREADED TYPE EQUIPPED WITH A LUG FOR GROUNDING. UPPER EDGE SHALL HAVE A NYLON RING OR A BAKELITE RING WHICH IS MOLDED INTO THE BUSHING. GROUND LUG SHALL BE SIZED TO TAKE CONDUCTOR SIZED ACCORDING TO CODE WITH A MINIMUM SIZE OF #12 AWG.

8. WHERE ELECTRICAL METALLIC TUBING IS INSTALLED, THE CONNECTORS AND COUPLINGS SHALL BE THE NYLON INSULATED THROAT TYPE AS MANUFACTURED BY THE THOMAS BETTS CO., SERIES 5120 AND 5123 RESPECTIVELY, OR AS ACCEPTABLE. ON TUBING LARGER THAN 1" USE BONDING LOCKNUTS AS DESCRIBED ABOVE FOR RIGID CONDUIT

9. WHERE FLEXIBLE METALLIC CONDUIT IS INSTALLED, CONNECTORS SHALL BE THE "TITE BITE" TYPE WITH NYLON INSTALLED THROATS AS MANUFACTURED BY THE THOMAS BETTS CO., SERIES 3110 OR AS ACCEPTABLE.

10. ALL FINAL CONNECTIONS TO VIBRATING EQUIPMENT OR ELECTRIFIED FURNITURE SYSTEMS SHALL BE MADE WITH FLEXIBLE GALVANIZED STEEL CONDUIT IN LENGTHS NOT EXCEEDING 18 INCHES. IN WET OR DAMP LOCATION USE LIQUID- TIGHT FLEXIBLE METAL CONDUIT.

11. FIRE RATINGS SHALL BE PROVIDED FOR EACH OPENING OF FIRE-RATED SLABS AND PARTITIONS. WHERE SLEEVES OR OTHER TYPES OF OPENINGS ARE PROVIDED FOR PENETRATIONS THROUGH FLOOR SLABS AND FIRE RATED WALLS, IT SHALL BE FILLED WITH AN APPROVED FIRE RESISTANT MATERIAL.

E. CONDUCTORS

1. ALL WIRES AND CABLES FOR CONDUCTORS #2 AWG AND SMALLER FOR BRANCH CIRCUITS IN CONDUIT SHALL BE THHN. ALL WIRE AND CABLE FOR CONDUCTORS AWG #1 AND LARGER SHALL BE THWN. NO WIRE SMALLER THAN #12 AWG SHALL BE USED FOR LIGHTING OR POWER SERVICES. ALL CONDUCTORS SHALL BE COPPER RATED FOR WET AND DRY USE.

2. ALL WIRE AND CABLES IN PULL, SPLICE AND CABLE SUPPORT BOXES, IN PANELS AND POINTS OF TERMINATION SHALL BE BUNDLED AND LACED BY CIRCUITS AND TAGGED USING NYLON TIEWRAP MATERIAL AND USING FLAME RESISTING TAGS OF ADHESIVE MATERIAL. TAGS SHALL IDENTIFY CABLES AND PIECES OF EQUIPMENT SERVED. TAGS SHALL BE TB "TY-RAP" OR "E-Z-CODE" OR AS ACCEPTABLE.

3. ALL #8 AWG WIRE AND LARGER SHALL BE STRANDED. ALL #10 AWG WIRE AND SMALLER SHALL BE SOLID. RATING OF INSULATION SHALL BE 600 VOLTS. CONNECTIONS FOR WIRE #8 AND SMALLER SHALL BE MADE WITH TB "PIGGY PIGTAILS" OR AS ACCEPTABLE.

4. RECESSED LIGHTING FIXTURES IN HUNG CEILING SHALL BE SUPPLIED WITH TYPE THHN INSULATED STRANDED WIRE IN 6 FEET FLEXIBLE METALLIC CONDUIT FORM JUNCTION BOX IN CEILING SERVING MAXIMUM 4 FIXTURES OFF JUNCTION BOX.

5. ALL LOW VOLTAGE CABLING INSTALLED EXPOSED IN HUNG CEILING SHALL BE TEFLON JACKETED AND PLENUM RATED TYPE.

6. FACTORY COLOR CODING FOR WIRE AND CABLE SHALL BE AS FOLLOWS:

   a. 120/208 VOLTS - BLACK, RED, BLUE AND WHITE FOR PHASES A, B, C, AND NEUTRAL, RESPECTIVELY. GROUND WIRE SHALL BE GREEN.

7. VOLTAGE DROP IN WIRING WHEN INSTALLED SHALL BE WITHIN LIMITATIONS OF ALL AGENCIES HAVING JURISDICTION. 120 VOLT BRANCH WIRING IN EXCESS OF 75 FEET AND 277 VOLT BRANCH WIRING IN EXCESS OF 175 FEET TO THE FIRST OUTLET SHALL BE #10 AWG FOR THE ENTIRE LENGTH OF THE BRANCH CIRCUIT. SIZE OF ALL FEEDERS IN EXCESS OF 200 FEET SHALL BE INCREASED TO ACCOMMODATE VOLTAGE DROP.

F. POWER MATERIALS AND WIRING DEVICES

1. FURNISH AND INSTALL ALL BOXES, FITTINGS, DEVICES, RACEWAYS, CONDUCTORS, CONNECTIONS, MOUNTING ACCESSORIES, ADAPTERS AND ALL OTHER MATERIALS, EQUIPMENT AND LABOR NECESSARY FOR A COMPLETE ELECTRICAL INSTALLATION.

2. ELECTRICAL OUTLETS SHALL BE INSTALLED VERTICALLY. THOSE LOCATED ON INTERIOR COLUMNS AND COUNTER BACKSPLASH SHALL BE CENTERED LATERALLY.

3. MOUNTING HEIGHTS OF CONVENIENCE RECEPTACLES SHALL BE AS PER ARCHITECTURAL DRAWINGS. WHERE COUNTER AREAS CONFLICT WITH RECEPTACLES, MOUNT RECEPTACLES VERTICALLY ABOVE BACK SPLASH.

4. USE CAST BOXES FOR EXPOSED WORK; ALL OTHER OUTLET BOXES SHALL BE SHEET STEEL AND GALVANIZED 4 INCHES SQUARE, 1 ½ INCHES DEEP MINIMUM. USE EXTENSION RINGS FOR DEVICES REQUIRING SINGLE GANG OPENING.

5. LOCAL SWITCHES EXCEPT AS OTHERWISE INDICATED SHALL BE ROCKER TYPE 20 AMPERE, 120-277V CAPACITY WITH FULLY ENCLOSED COMPOSITION CASES, SHALL CONFORM TO NEMA STANDARD WD-1 FOR HEAVY DUTY SWITCHES, COMMERCIAL GRADE, AND SHALL BE LEVITON DECORA SERIES OR AS ACCEPTABLE. COORDINATE COLOR WITH ARCHITECT.

6. DUPLEX WALL MOUNTED RECEPTACLES, INCLUDING GFI RECEPTACLES, SHALL BE 2 POLE, 3 WIRE, GROUNDED 20 AMPERE, COMMERCIAL GRADE, LEVITON DECORA SERIES OR AS DIRECTED BY ARCHITECT.

7. OCCUPANCY/VACANCY SENSORS:

   a) CEILING AND SWITCH-BOX MOUNTING UNITS: UNITS RECEIVES CONTROL POWER FROM A CONTACTS IN THAT UNIT IN RESPONSE TO SIGNALS FROM SENSORS.

      1) AUXILIARY POWER AND CONTROL UNITS: MATCHED TO SENSORS WITH SWITCH USED.

      FEATURES AS FOLLOWS:
      a. RELAYS RATED FOR MINIMUM OF 20-A NORMAL BALLAST LOAD OR 12-A TUNGSTEN FILAMENT OR HIGH-INRUSH BALLAST LOAD.
      b. SENSOR POWER SUPPLY: RATED TO SUPPLY THE NUMBER OF CONNECTED SENSORS.

   b) SWITCH-BOX-MOUNTING UNITS: UNIT RECEIVES POWER DIRECTLY FROM SWITCH LEG OF THE 120 OR 277-V AC CIRCUIT IT CONTROLS AND OPERATES INTEGRAL POWER SWITCHING CONTACTS RATED 800W AT 120-V AC, AND 1000W AT 277-V AC MINIMUM.

      1) MANUAL ON/OFF SWITCH: TURNS LIGHTS OFF AUTOMATICALLY REGARDLESS OF ELAPSED TIME DELAY.

   c) OPERATION: MAINTAIN LIGHTS ON WHEN ROOM OR COVERED AREA IS OCCUPIED AND WHEN, SWITCH IS MANUALLY TURNED OFF.

      1) TIME DELAY FOR TURNING LIGHTS OFF: ADJUSTABLE OVER A RANGE FROM 1 TO 15 MINUTES, MINIMUM.

      2) AMBIENT-LIGHT-LEVEL CONTROL: ADJUSTABLE FOR SETTING A LEVEL OF AMBIENT ILLUMINATION ABOVE WHICH SENSOR WILL NOT TURN LIGHTS ON WHEN OCCUPANCY IS SENSED.

   d) PASSIVE-INFRARED TYPE: DETECTS OCCUPANCY BY A COMBINATION OF HEAT AND MOVEMENT IN ZONE OF COVERAGE. EACH SENSOR DETECTS OCCUPANCY ANYWHERE IN AN AREA OF 1000 SQ. FT. (93 SQ. M) BY DETECTING OCCURRENCES OF 6-INCH (150-MM) MINIMUM MOVEMENT OF ANY PORTION OF HUMAN BODY THAT PRESENTS A MINIMUM TARGET OF 36 SQ. IN. (232SQ. CMM.) TO THE SENSOR.

   e) ULTRASONIC TYPE: EMITS A BEAM OF ULTRASONIC ENERGY AND DETECTS OCCUPANCY THROUGH USE OF DOPPLER'S PRINCIPLE IN DISCERNING MOVEMENT IN ZONE OF COVERAGE BY SENSING A CHANGE IN PATTERN OF REFLECTED ULTRASONIC ENERGY.

   f) DUAL-TECHNOLOGY TYPE: USES A COMBINATION OF PASSIVE-INFRARED AND ULTRASONIC DETECTION METHODS TO DISTINGUISH BETWEEN OCCUPIED AND UNOCCUPIED CONDITIONS FOR AREA COVERED. PARTICULAR TECHNOLOGY OR COMBINATION OF TECHNOLOGIES THAT CONTROLS EACH FUNCTION (ON OR OFF) IS DETECTABLE IN THE FIELD BY OPERATING CONTROLS ON UNIT.

   g) MANUFACTURERS SHOULD BE:

      1) LUTRON (SEE DRAWING E400.00 FOR MODEL NUMBERS)
      2) APPROVED EQUAL

G. LIGHTING FIXTURES AND LAMPS

1. NEW LIGHT FIXTURES SHALL BE AS FOLLOWS:

   a. PROVIDE LIGHT FIXTURES AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS.

   b. EMERGENCY AND EXIT LIGHTING FIXTURES SHALL BE PROVIDED WITH BATTERY POWER FOR A MINIMUM OF 90 MINUTES AND VISIBLE TEST SWITCH AND INDICATION LIGHT.

   c. EXIT LIGHTS AND SIGNS SHALL BE PROVIDED WITH 8 INCHES LETTERS AND DIRECTIONAL ARROWS. ATLITE MARATHON SERIES OR EQUAL.

   d. EMERGENCY FIXTURES SHALL BE PROVIDED WITH BATTERY BALLASTS SIMILAR TO UNIVERSAL 8500, LIGHT ALARMS AM7, EMERGI-LITE OR APPROVED EQUAL.

   e. SELF POWERED EMERGENCY FIXTURES SHALL BE RATED FOR 120/277 VOLTS OPERATION AND SHALL BE LIGHT ALARMS SERIES 605P1M OR APPROVED EQUAL.

   f. WALL MOUNTED BATTERY PACK UNITS SHALL BE RATED FOR 120/277 VOLTS OPERATION AND SHALL BE LIGHT ALARMS SERIES 5125N WITH NUMBER OF HEADS AS INDICATED. REMOTE HEADS SHALL BE ELF610, TYPE AS SPECIFIED OR EQUAL.

2. ALL NEW LIGHTING FIXTURES SHALL BE ENERGY SAVING TYPE AND SHALL BE PROVIDED WITH HIGH EFFICIENCY DRIVERS AND CONTROLS AS FOLLOWS:

   a. ALL NEW LIGHTING FIXTURES SHALL BE L.E.D. TYPE.
   b. ELECTRONIC DRIVERS SHALL BE U.L. LISTED AND COMPATIBLE WITH DIMMING CONTROLS.

3. ALL NEW FLUORESCENT LAMPS AND ELECTRONIC BALLASTS SHALL BE HIGH EFFICIENCY ENERGY SAVING TYPE AS FOLLOWS:

   a. LAMPS SHALL BE GENERAL ELECTRIC TYPE F32 T-8 OR TYPE AS SPECIFIED.

   b. ELECTRONIC BALLASTS SHALL BE MOTOROLA, MAGNETEK OR ADVANCE. WITH A MINIMUM BALLAST EFFICIENCY FACTOR (BEF) OF 1.15. AND LOW SOUND RATING.

4. SPLICES IN INTERNAL WIRING WITHIN FIXTURE SHALL BE MADE WITH APPROVED MECHANICAL CONNECTORS, SUITABLE FOR THE TEMPERATURE AND VOLTAGE CONDITIONS TO WHICH THEY ARE SUBJECTED.

5. ALL STEM HANGERS SHALL BE EQUIPPED WITH SUITABLE ALIGNER BOX COVERS OR CANOPIES SO THAT STEMS HANG VERTICALLY IRRESPECTIVE OF THE ANGLE OF THE SURFACE THEY ARE MOUNTED FROM. PROVIDE A FINISH RING TO CONCEAL THE OUTLET BOX. USE AIRPLANE STEEL WIRES WHEN REQUIRED.

6. FIXTURES FOR USE OUTDOORS OR IN AREAS DESIGNATED AS DAMP OR WET LOCATIONS, SHALL BE SUITABLE GASKETED TO PREVENT THE ENTRANCE OF MOISTURE.

7. ONLY SINGLE AND/OR TWO LAMP FLUORESCENT BALLASTS, SHALL BE USED IN ANY ONE LUMINAIRE. EACH BALLAST SHALL BE INDIVIDUALLY/INTERNALLY PROTECTED.

8. BALLASTS FOR COMPACT FLUORESCENT FIXTURES SHALL BE ENERGY SAVING HIGH POWER FACTOR TYPE. BALLASTS SHALL BE CORE AND COIL TYPE, AS MANUFACTURED BY ADVANCE, MAGNETEK OR MOTOROLA. ELECTRONIC BALLAST WITH END OF LAMP LIFE PROTECTION MAY BE SUBSTITUTED UPON APPROVAL.

9. WHERE SO DIRECTED BY THE ARCHITECT, CERTAIN LUMINAIRES SHALL BE TEMPORARILY INSTALLED, CONNECTED AND ADJUSTED FOR MOCK-UP PURPOSES. THIS SHALL BE DONE AT NO COST TO THE OWNER.

10. SUBMIT MANUFACTURERS CERTIFICATION THAT LIGHTING FIXTURES COMPLY WITH THE REQUIREMENTS OF ALL ELECTRIC CODE AUTHORITIES HAVING JURISDICTION AND THAT BALLASTS AND TRANSFORMERS FOR DISCHARGE TYPE LAMPS COMPLY WITH THE LATEST C.B.M. SPECIFICATIONS.

11. SUBMIT PHOTOMETRIC DATA, ESTABLISHED BY AN INDEPENDENT TESTING LABORATORY, IN ACCORDANCE WITH INSTRUCTIONS ISSUED BY THE ARCHITECT.

H. PANELBOARD (CIRCUIT BREAKER)

1. PANELBOARD SHALL BE OF THE ENCLOSED TYPE, FLUSH OR SURFACE MOUNTED AS INDICATED IN SCHEDULE. IN STEEL CABINETS - CODE GAUGE, WITH STEEL TRIM, CONCEALED HINGES, DOORS AND FLUSH TYPE LOCK. ALL LOCKS SHALL BE KEYED ALIKE.

2. ALL BUSSES, INCLUDING NEUTRAL BUS, SHALL BE MINIMUM 98 PERCENT CONDUCTIVITY, HARD-DRAWN COPPER, SILVER OR TIN PLATED JOINTS AND SIZED ON THE BASIS OF 1,000 AMPERES PER SQUARE INCH CROSS-SECTIONAL AREA. BUSSES SHALL BE ARRANGED FOR SEQUENCE PHASING.

3. GROUND BUS SHALL BE MINIMUM 25% OF PHASE CAPACITY. ISOLATION GROUND BUS SHALL BE SIZED FOR 100% OF PHASE CAPACITY. NEUTRAL BUS SHALL BE SIZED 200% WHEN USED WITH A "K" RATED TRANSFORMER.

4. PANELBOARDS SHALL BE EQUIPPED WITH BOLT-ON MOLDED CASE CIRCUIT BREAKERS OF THE TYPE, NUMBER OF POLES, TRIP SIZES AS INDICATED ON SCHEDULES. INTERRUPTING CAPACITY SHALL BE BUILDING STANDARD OR BETTER.

5. CABINET SHALL BE SUFFICIENT SIZE TO ALLOW A GUTTER SPACE OF AT LEAST SIX INCHES ON SIDE TOP AND BOTTOM AND SHALL BE CONSTRUCTED OF CODE GAUGE SHEET STEEL, GALVANIZED FINISHED ELECTRIC GRAY. UNLESS OTHERWISE NOTED.

6. DOORS AND TRIM SHALL BE ONE PIECE SO DESIGNED THAT DOORS WILL OPEN 180 DEGREES. DOORS SHALL BE FASTENED TO TRIMS WITH SEMI-CONCEALED 5 KNUCKLE STEEL WITH NON-FERROUS PINS. TRIMS SHALL BE FASTENED TO BACK BOXES BY MEANS OF SCREWS.

7. PANELS SHALL BE PROVIDED WITH:

   a. 10% LOCKING TABS (MINIMUM (4) PER PANEL. UNUSED TABS SHALL BE TURNED OVER TO THE OWNER.

   b. PROVIDE TIE HANDLES ON ALL MULTI-WIRE BRANCH CIRCUITS (2 AND 2 POLE) AS PER THE DESIRED GROUPING.

   c. GFI BREAKERS IN LIEU OF GFI DEVICES WHERE GFI DEVICES ARE REQUIRED.

   d. ARC FAULT CIRCUIT BREAKERS WHERE REQUIRED.

   e. TYPE HACR RATED BREAKERS TO SERVE MOTOR LOADS AND HVAC EQUIPMENT.

   f. BREAKERS RATED TO MATCH AIC RATING OF DISTRIBUTION SYSTEM.

8. A CIRCUIT DIRECTORY WITH METAL FRAMES AND GLASSINE PAGE SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. UPON COMPLETION OF THE PROJECT, THE DIRECTORIES SHALL BE TYPEWRITTEN, INDICATING THE LOCATION AND SERVICE CONTROLLED BY EACH CIRCUIT. DIRECTORIES TO BE COMPLETELY FILLED IN TO CONFORM TO NEW FINAL ARRANGEMENT OF CIRCUITS.

9. LOADS ON PHASE LEGS OF ALL NEW PANELS SHALL BE BALANCED AT SUPPLY POINT TO WITHIN 10 %. ANY PANEL FOUND WITH UNBALANCED LOADS SHALL HAVE ITS CIRCUITS REARRANGED AS REQUIRED TO BALANCE PHASE LEGS.

J. GROUNDING

1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED TO PROVIDE AN ELECTRICALLY GROUNDING PATH TO THE GROUNDING ELECTRODE IN A CODE APPROVED MANNER.

2. METAL RACEWAYS, METAL ENCLOSURES OF ELECTRICAL DEVICES AND EQUIPMENT, LIGHTING FIXTURES AND OTHER EQUIPMENT SHALL BE COMPLETELY GROUNDED.

3. PROPER HARDWARE REQUIRED FOR COMPLETE GROUNDING SYSTEM SHALL BE INSTALLED BY THE CONTRACTOR. USE EXOTHERMIC WELDING PROCESS FOR INACCESSIBLE CONNECTIONS.

4. USE AN INTERNAL BONDING CONDUCTOR WHERE FLEXIBLE METALLIC CONDUITS ARE INSTALLED.

5. GROUNDING CONDUCTOR SHALL BE RUN WITH THE CIRCUIT CONDUCTORS AND TERMINATED TO AN APPROVED GROUNDING TERMINAL.

K. NAMEPLATES.

1. ALL NEW ELECTRICAL EQUIPMENT AND DISCONNECT SWITCHES SHALL BE PROVIDED WITH NAMEPLATES TO MATCH BUILDING STANDARDS OR AS APPROVED BY THE ENGINEER/ ARCHITECT.

2. PROVIDE LABELS AT LIGHTING FIXTURES AND RECEPTACLES TO MATCH CIRCUITRY. OBTAIN ARCHITECT APPROVAL FOR SUBSTITUTION.

L. TELEPHONE/DATA COMMUNICATIONS SYSTEM

1. ELECTRICAL CONTRACTOR SHALL PROVIDE TELEPHONE/DATA/COMMUNICATIONS OUTLET BOXES WITHOUT COVERPLATES. ALL WALL MOUNTED OUTLET BOXES SHALL BE 2"x4"x 2 1/2"d with CONDUIT TO CEILING.COVER PLATES FOR EACH TYPE OF DEVICE TO BE PROVIDED BY OTHERS.

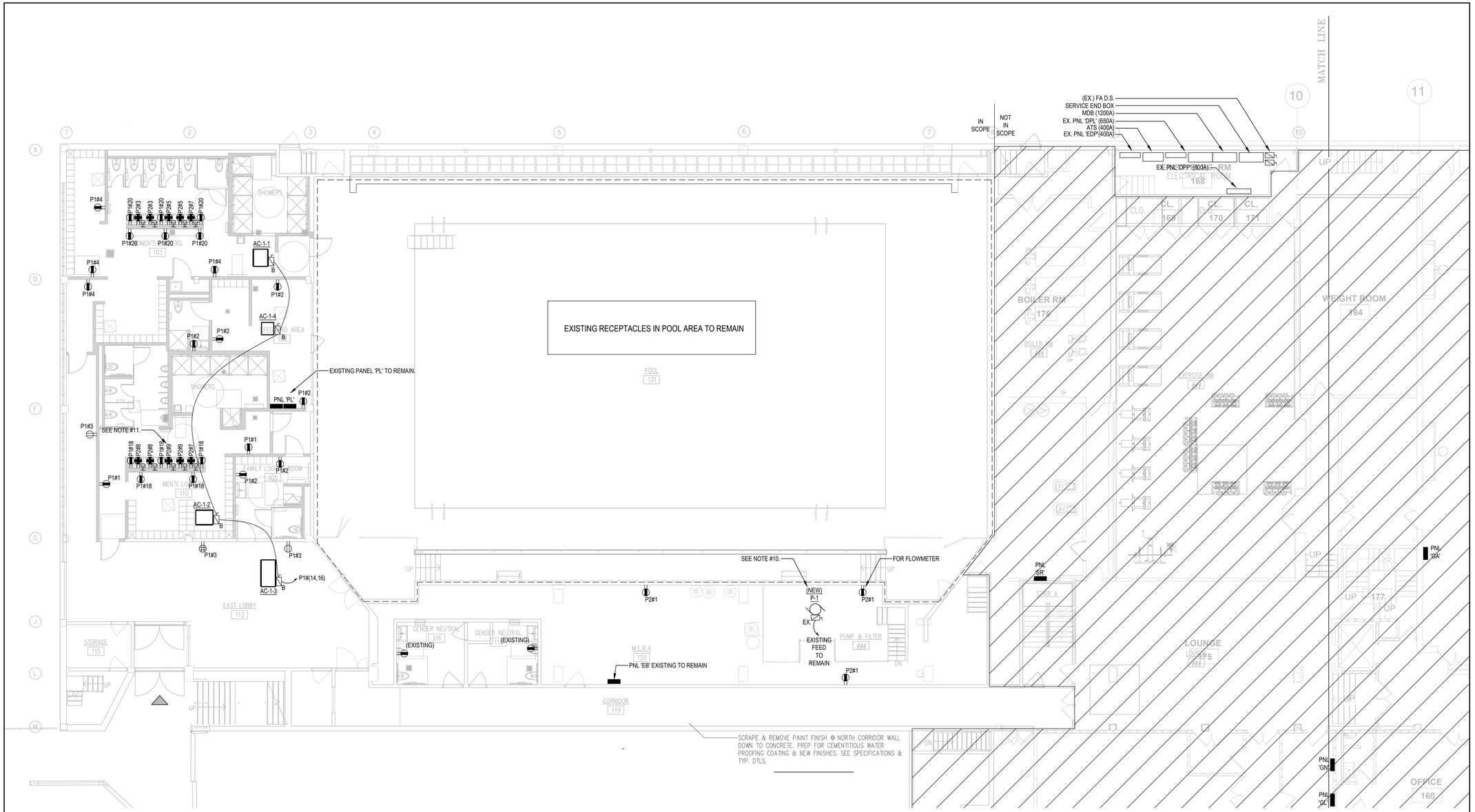
2. ELECTRICAL CONTRACTOR SHALL PROVIDE EMPTY CONDUIT FROM ALL DATA COMMUNICATIONS OUTLET BOXES TO 6" ABOVE HUNG CEILING VIA VERTICAL STUB-UP IN WALLS. (PROVIDE NONE-THRU OUTLETS AND/OR CHASING INTO FLOOR SLAB WHERE REQUIRED). CONDUIT SHALL BE 1" MINIMUM OR AS INDICATED ON CONTRACT DRAWINGS.

3. WHERE THERE IS NO ACCESSIBLE HUNG CEILINGS, CONDUIT SHALL BE PROVIDED TO THE NEAREST ACCESSIBLE CEILINGS AREA OR THROUGH OUT TO ITS ORIGINATION OR FINAL TERMINATION POINT OF SERVICE. DRAG LINES MAY BE SUBSTITUTED AT INTERVALS WITH ACCESS PANELS IN SHEET ROCK CEILINGS IF APPROVED BY THE ARCHITECT.

4. TELEPHONE/DATA COMMUNICATIONS CABLING SHALL BE PROVIDED BY THE OWNER VENDOR OR AS INDICATED OR INSTRUCTED BY THE GENERAL CONTRACTOR.

5. PROVIDE A DRAG LINE IN EACH EMPTY CONDUIT AND LABEL BOTH ENDS.

6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT SIZES FOR TELEPHONE/ DATA WIRING WITH THE OWN




## POWER NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT BREAKER NUMBERS IN RECEPTACLE PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH THE SAME CIRCUIT NUMBERS AND RUN TO BREAKER IN PANELBOARD.

2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- EXISTING PANEL 'PL'-1 (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'PL-2' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'EB' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.

3. BRANCH CIRCUIT RACEWAYS SERVING MOTOR LOADS, PANTRY EQUIPMENT, AND GROUND FAULT INTERRUPTER RECEPTACLES SHALL BE PROVIDED WITH A GROUND CONDUCTOR.

4. RECEPTACLE/POWER CIRCUIT RACEWAY SHALL BE INDEPENDENT FROM LIGHTING CIRCUIT WIRING/RACEWAYS AND ALL OTHER SYSTEM WIRING/RACEWAYS.

7. ALL ELECTRICAL INFRASTRUCTURE AND DEVICES EXISTING TO REMAIN WITHIN POOL AREA, ALL FEEDERS AND EQUIPMENT TO TO BE TRACED BACK TO ELECTRICAL SERVICE ROOM AND MAINTAINED THROUGHOUT CONSTRUCTION.

8. CONTRACTOR TO FIELD VERIFY POWER CONNECTIONS OF ALL EQUIPMENT, DEVICES AND LIGHTING TO REMAIN REQUIRING POWER FEEDS. RE-FEED ALL NECESSARY CIRCUITS TO NEW PANELS.

9. CONTRACTOR TO FIELD VERIFY CONDITIONS OF ALL ELECTRICAL FEEDERS. PROVIDE ADD-ALT FOR ALL MAIN FEEDERS IN THE EVENT THEY ARE DESTROYED BEYOND REPAIR.

10. FILTER PUMP TO BE REPLACED WITH NEW. NEW POOL FILTER PUMP TO MATCH EXISTING PUMP HORSEPOWER RATING. RE-USE EXISTING POWER FEED AND CONNECTION. COORDINATE WITH MECHANICAL AND POOL FILTRATION DRAWINGS. EQUIPMENT TO BE CLARIFIED IN PHASE #2 POOL FILTRATION ISSUANCE.

11. COORDINATE INSTALLATION OF HAND DRYER ('HD') OUTLETS WITH ARCHITECTURAL DETAILS.

## 1 E-100.00 ELECTRICAL FIRST FLOOR EAST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

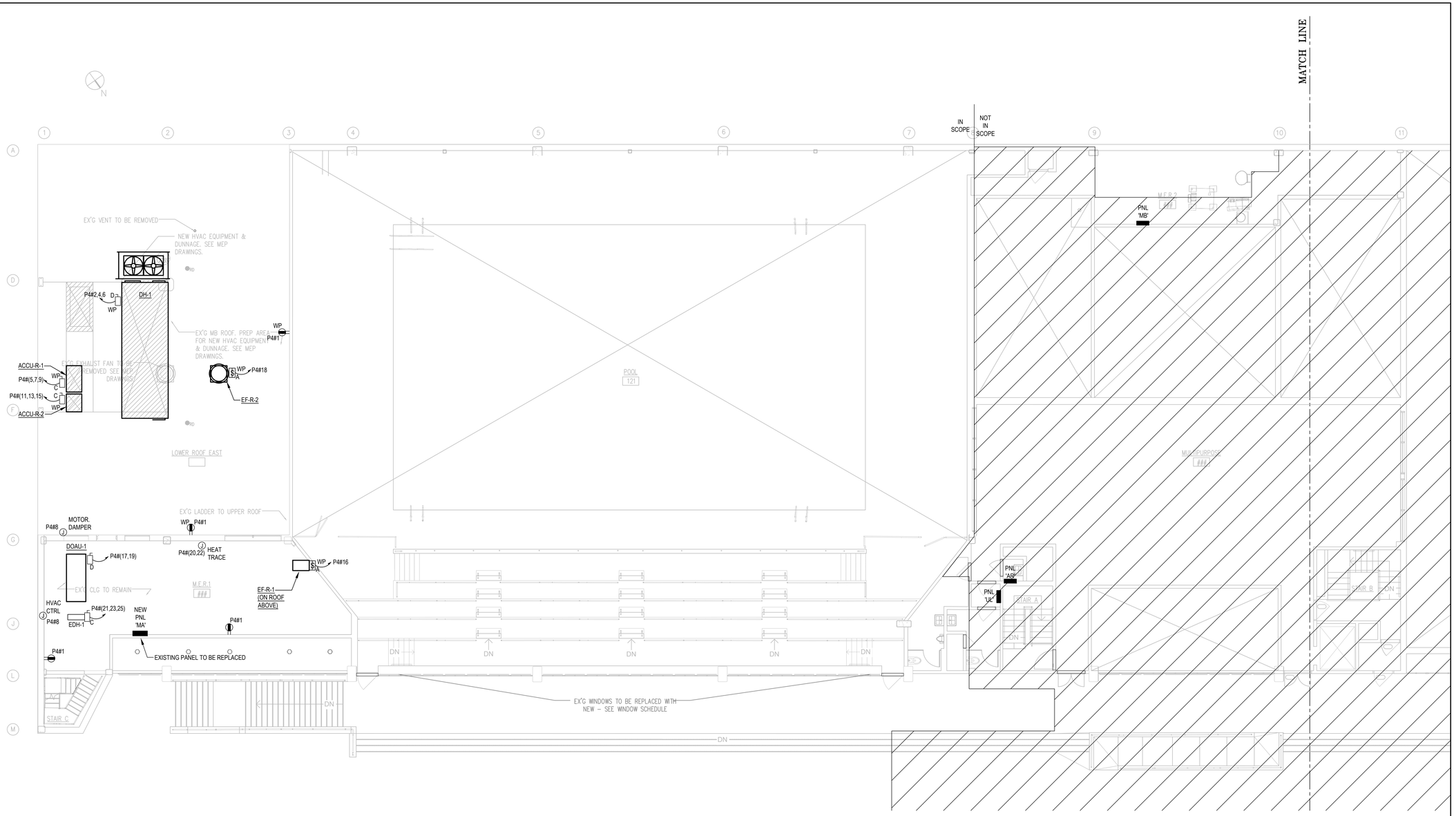
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL FIRST FLOOR EAST PLAN

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | E-100.00 |
| | DRAWN BY | MR |
| | 3 OF 10 | |

NYC DOB Number




1 E-102.00 **ELECTRICAL SECOND FLOOR EAST PLAN**

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

## *POWER NOTES:*

1. CIRCUIT NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT BREAKER NUMBERS IN RECEPTACLE PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH THE SAME CIRCUIT NUMBERS AND RUN TO BREAKER IN PANELBOARD.

2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- EXISTING PANEL 'PL'-1 (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'PL-2' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'EB' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.

3. BRANCH CIRCUIT RACEWAYS SERVING MOTOR LOADS, PANTRY EQUIPMENT, AND GROUND FAULT INTERRUPTER RECEPTACLES SHALL BE PROVIDED WITH A GROUND CONDUCTOR.

4. RECEPTACLE/POWER CIRCUIT RACEWAY SHALL BE INDEPENDENT FROM LIGHTING CIRCUIT WIRING/RACEWAYS AND ALL OTHER SYSTEM WIRING/RACEWAYS.

7. ALL ELECTRICAL INFRASTRUCTURE AND DEVICES EXISTING TO REMAIN WITHIN POOL AREA. ALL FEEDERS AND EQUIPMENT TO TO BE TRACED BACK TO ELECTRICAL SERVICE ROOM AND MAINTAINED THROUGHOUT CONSTRUCTION.

8. CONTRACTOR TO FIELD VERIFY POWER CONNECTIONS OF ALL EQUIPMENT, DEVICES AND LIGHTING TO REMAIN REQUIRING POWER FEEDS. RE-FEED ALL NECESSARY CIRCUITS TO NEW PANELS.

9. CONTRACTOR TO FIELD VERIFY CONDITIONS OF ALL ELECTRICAL FEEDERS. PROVIDE ADD-ALT FOR ALL MAIN FEEDERS IN THE EVENT THEY ARE DESTROYED BEYOND REPAIR.

10. COORDINATE HEAT TRACE LENGTH AND LOCATION WITH MECHANICAL DRAWINGS.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 723-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

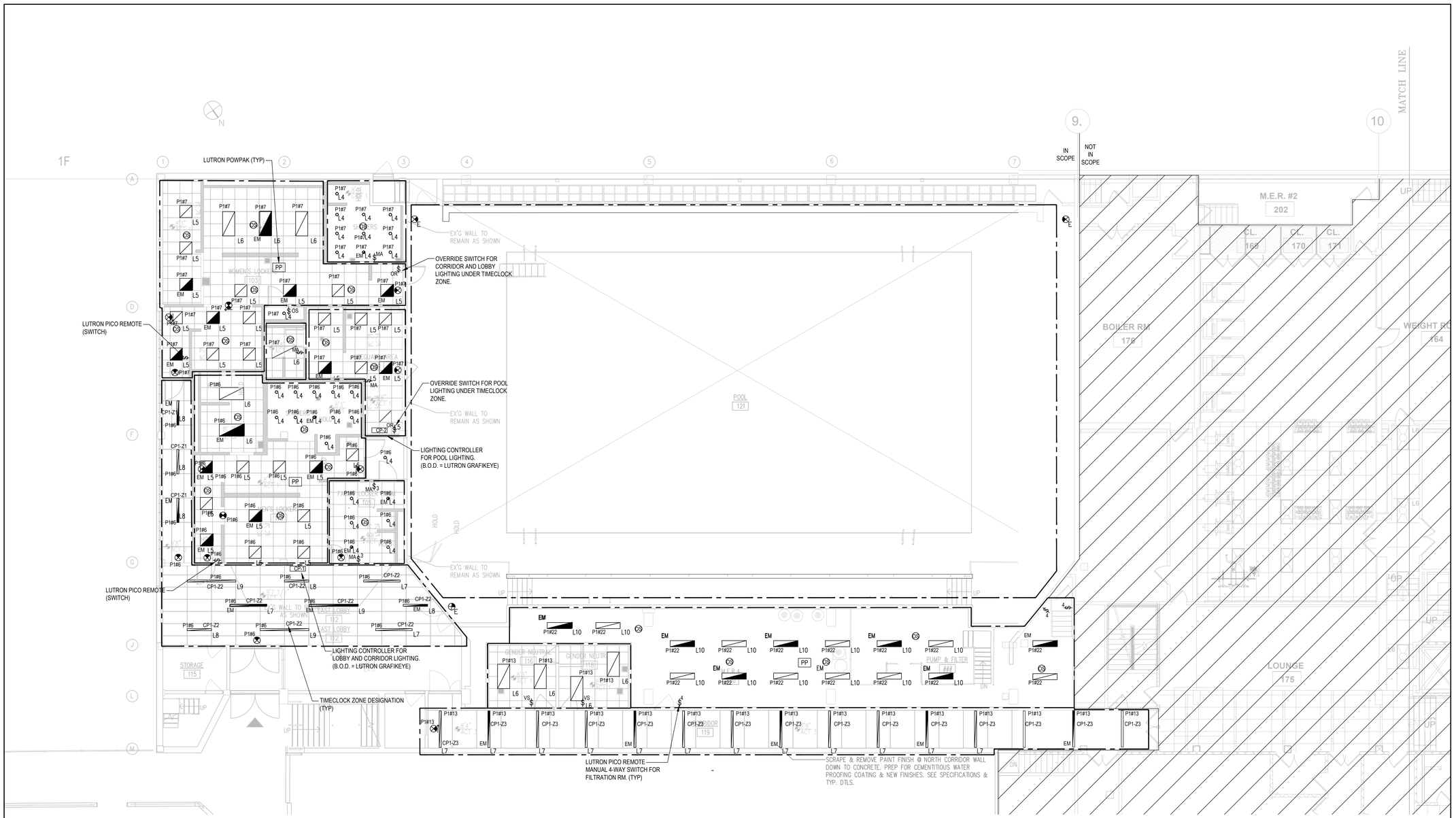
DRAWING

ELECTRICAL SECOND FLOOR EAST PLAN

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | E-102.00 |
| DRAWN BY | MR |
| | 4 OF 10 |

NYC DOB Number




## LIGHTING NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   P1#2- EXISTING PANEL 'P1,' 1 (120/208V) CIRCUIT #2
   P3#3- EXISTING PANEL 'P1,-2' (120/208V) CIRCUIT #2
   P3#2 - NEW PANEL 'ESI' (120/208V) CIRCUIT #2
   P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2
   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. FOR BOTH NEW AND REMOVED LIGHT FIXTURE LAYOUT COORDINATE WITH ARCHITECTURAL DRAWINGS/RCP.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR RECEPTION, CORRIDOR AND POOL LIGHTING ZONES. FOR EACH CONTROL ZONE, PROVIDE EMERGENCY RELAY WITH POWER LOSS SENSING CAPABILITIES FOR ZONES WITH 'EM' TYPE FIXTURES.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP. EXIT SIGNS SHALL BE WIRED AHEAD OF LIGHTING CONTROLS TO BE LIT FOR 24HRS.

| | | SPACE TYPE | FUNCTIONALITY |
|---|---|---|---|
| TIMECLOCK | | -RECEPTION<br>-CORRIDOR<br>-POOL | -(6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL-ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIK EYE CONTROLLER.)<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK FUNCTIONALITY.<br>-TIMECLOCK TO HAVE A MINIMUM 7 DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE.<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | AUTO ON/AUTO OFF | -EAST SIDE LOBBY<br>-MEN'S LOCKER ROOM<br>-WOMEN'S LOCKER ROOM<br>-FAMILY LOCKER ROOM | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | | - CORRIDOR RESTROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH. |

1 E-200.00 **LIGHTING FIRST FLOOR EAST PLAN**

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 723-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

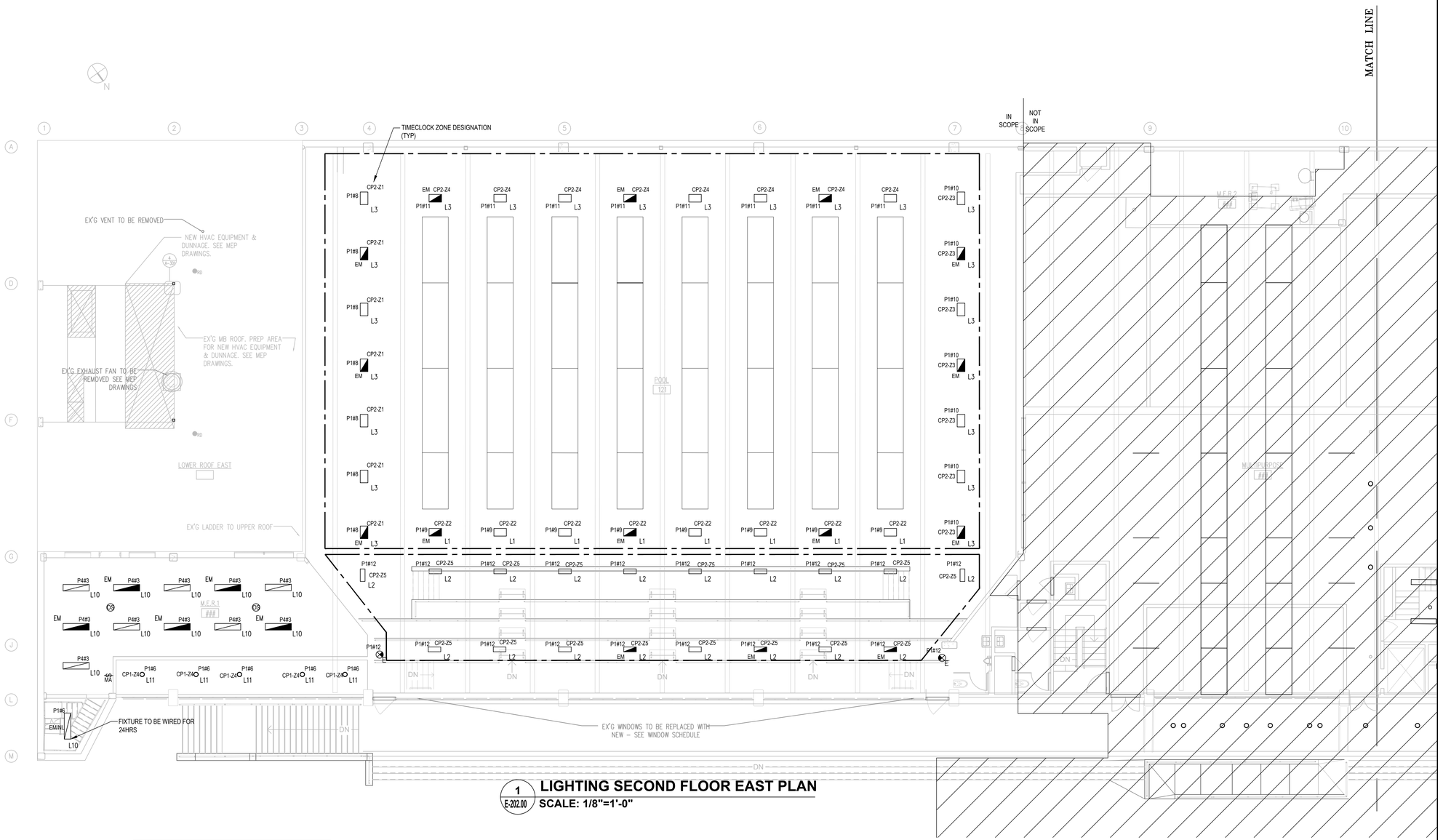
DRAWING

LIGHTING FIRST FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-200.00
DRAWN BY MR
5 OF 10

NYC DOB Number




**1 / E-202.00 LIGHTING SECOND FLOOR EAST PLAN**
**SCALE: 1/8"=1'-0"**

## *LIGHTING NOTES:*

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   P1#2- EXISTING PANEL 'PL-1 (120/208V) CIRCUIT #2
   P2#2- EXISTING PANEL 'PL-2' (120/208V) CIRCUIT #2
   P3#2 - NEW PANEL 'EB' (120/208V) CIRCUIT #2
   P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2
   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING LIGHTING FIXTURES TO BE REMOVED.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR RECEPTION, CORRIDOR AND POOL LIGHTING ZONES. FOR EACH CONTROL ZONE, PROVIDE EMERGENCY RELAY WITH POWER LOSS SENSING CAPABILITIES FOR ZONES WITH 'EM' TYPE FIXTURES.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP. EXIT SIGNS AND NIGHT LIGHT (NL) FIXTURES SHALL BE WIRED AHEAD OF LIGHTING CONTROLS TO BE LIT FOR 24HRS.

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| TIMECLOCK | -RECEPTION<br>-CORRIDOR<br>-POOL | -6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL-ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIKEYE CONTROLLER.)<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK FUNCTIONALITY.<br>-TIMECLOCK TO HAVE A MINIMUM 7-DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE.<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| AUTO ON/AUTO OFF | -MER.1 | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | - CORRIDOR RESTROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH. |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

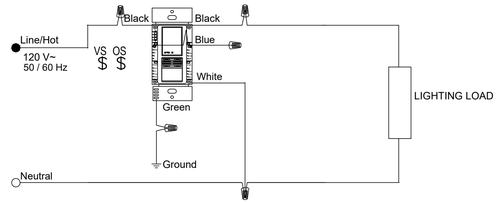
LIGHTING SECOND FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-202.00
DRAWN BY MR
6 OF 10

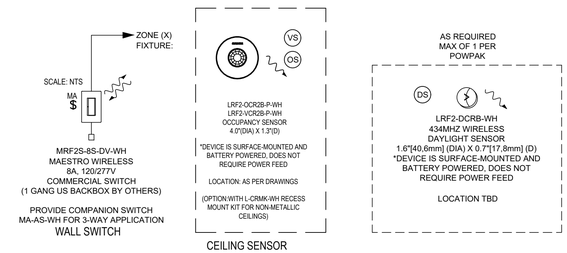
NYC DOB Number

Single Pole Wiring - Single-Circuit (MS-B102)




## 1 LUTRON WALL-MOUNTED OCCUPANCY (SINGLE ROOM CONTROL) (WITH BUILT-IN SENSOR)

SCALE: NTS

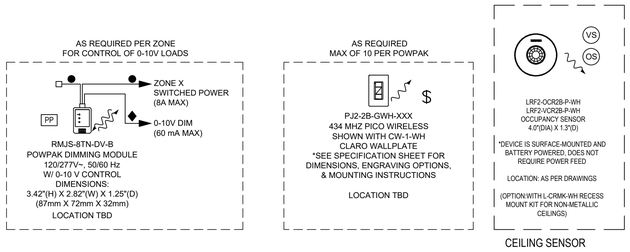



## 2 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) (WITH REMOTE WIRELESS SENSORS)

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.




**THIS APPLICATION APPLIES TO THE MENS LOCKER ROOM, WOMENS LOCKER ROOM AND MER#4 (POOL FILTRATION)**

## 3 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) WITH POWPAK

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.

LIGHT SCHEDULE

| TAG | TYPE | MANUF | MODEL | FIN | MOUNT | WATTAGE | LAMP | QTY | FIXTURE FOR SALE | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| L1 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6MS-50-80-FR-45-WET | FROSTED | 25'-0" | – | LED | 8 | – | POOL AREA |
| L2 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-09K-2MS-50-80-FR-WET | FROSTED | 25'-0" | – | LED | 18 | – | POOL AREA |
| L3 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6MS-50-80-FR-90-WET | FROSTED | 25'-0" | – | LED | 22 | – | POOL AREA |
| L4 | NU4: ROUND DOWNLIGHT | ALPHABET LIGHTING | NU4RD-SW-13LM-35-80-HE40-X-DIM10-NC-WH-WH-X | WHITE | NC | – | LED | 27 | – | |
| L5 | RECESSED 15/16" GRID LIGHT | DAY-O-LITE | RS9L-D-SI-35-XX-22-G-W-U-DIM10 | BAKED WHITE ENAMEL | RECESSED GRID | – | LED | 31 | – | |
| L6 | RECESSED GRID LIGHT | DAY-O-LITE | RS9L-D-SI-35-SO-24-MG-W-U-DIM10 | BAKED WHITE ENAMEL | RECESSED GRID | – | LED | 10 | – | |
| L7 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-6-G-W-DIM10 | WHITE | SGF | 7W | LED | 18 | – | |
| L8 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-4-G-W-DIM10 | WHITE | SGF | 7W | LED | 3 | – | |
| L9 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-8-G-W-DIM10 | WHITE | SGF | 7W | LED | 3 | – | |
| L10 | PENDANT WRAP LIGHT | H.E. WILLIAMS | 39 SERIES 4'-0" PENDANT | N/A | VARIES | – | LED | 29 | – | MECHANICAL SPACES |
| L11 | RETROFIT CAN LIGHT | INTENSE LIGHTING | 6" SS LED REMODEL DOWNLIGHT GEN 4 | WHITE | RETROFIT EX'G FIXTURE | – | LED | 5 | – | INCLUDE SS-EZR 6" SSG3 RETROFIT MOUNTING SYSTEM |
| L12 | WALL MTD. VANITY LIGHT | ALW | RLP1SM.11MED/90/3500/WH/UNV | WHITE | 7'-0" AFF | 9.2/FT | LED | 8 | – | MTD. 7'-0" AFF |

***NOTES:***

1. LIGHTING SCHEDULE IS PROVIDED FOR ENGINEERING PURPOSES TO AID IN THE CIRCUITING AND ELECTRICAL CALCULATIONS. THIS SCHEDULE SHALL NOT BE USED FOR ORDERING OR PRICING PURPOSES. REFER TO ARCHITECT & LIGHTING CONSULTANT DRAWINGS/DOCUMENTS FOR EXACT SPECIFICATION OF ALL FIXTURES.
2. LIGHTING FIXTURES SHALL BE UL LISTED AND APPROVED FOR INSTALLATION WHERE REQUIRED.
3. CONTRACTOR SHALL COORDINATE WITH ARCHITECT, AND OWNER REQUIREMENTS FOR LIGHTING INSTALLATION. PROVIDE MOUNTING DETAILS, HARDWARE AND DEVICES AS REQUIRED FOR COMPLETE INSTALLATION.
4. FIXTURES WITH INTERNAL OR REMOTE TRANSFORMERS/BALLASTS SHALL BE INSTALLED WITH PROPER VENTILATION PER MANUFACTURER SPECIFICATIONS. COORDINATE WITH ARCHITECT ALL MOUNTING AND ACCESS REQUIREMENTS.
5. SUBMIT MANUFACTURER SHOP DRAWINGS FOR ALL FIXTURES FOR ARCHITECT REVIEW. OBTAIN APPROVAL PRIOR TO ORDERING. PROVIDE MARK-UP OF INSTALLATION FOR OWNER AND ARCHITECT REVIEW WHEN REQUESTED.
6. FOR ALL FIXTURES DESIGNATED WITH HALF SHADE OR EM, CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND PROVIDE FIXTURE WITH BATTERY BALLAST AND WIRE AS EMERGENCY FIXTURE. IN THE EVENT FIXTURE IS NOT AVAILABLE WITH BATTERY BALLAST, CONTRACTOR SHALL RETROFIT FIXTURE WITH BODINE EMERGENCY BALLAST SIMILAR TO BODINE B94C OR PROVIDE AN INDEPENDENT BATTERY BACK UP FIXTURE TO PROVIDE EMERGENCY LIGHTING IN ALL PUBLIC AREAS WHERE EMERGENCY FIXTURE IS INDICATED.
7. ALL LED FIXTURES SHALL BE PROVIDED WITH SAME TYPE DRIVERS TO ALLOW FOR SIMILAR DIMMING. CONTRACTOR SHALL COORDINATE LED DRIVERS AND DIMMER SELECTION WITH LIGHTING MANUFACTURER AND ARCHITECT.
8. ALL LED FIXTURES SHALL BE NEMA 410-2015 RATED.

1. **PROVIDE EMERGENCY BATTERY BACK-UP FOR ALL FIXTURES DESIGNATED WITH 'EM' ON ELECTRICAL LIGHTING PLANS.**
2. **ALL FIXTURE SHALL BE PROVIDED WITH 0-10V DIMMING BALLAST U.O.N**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 723-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

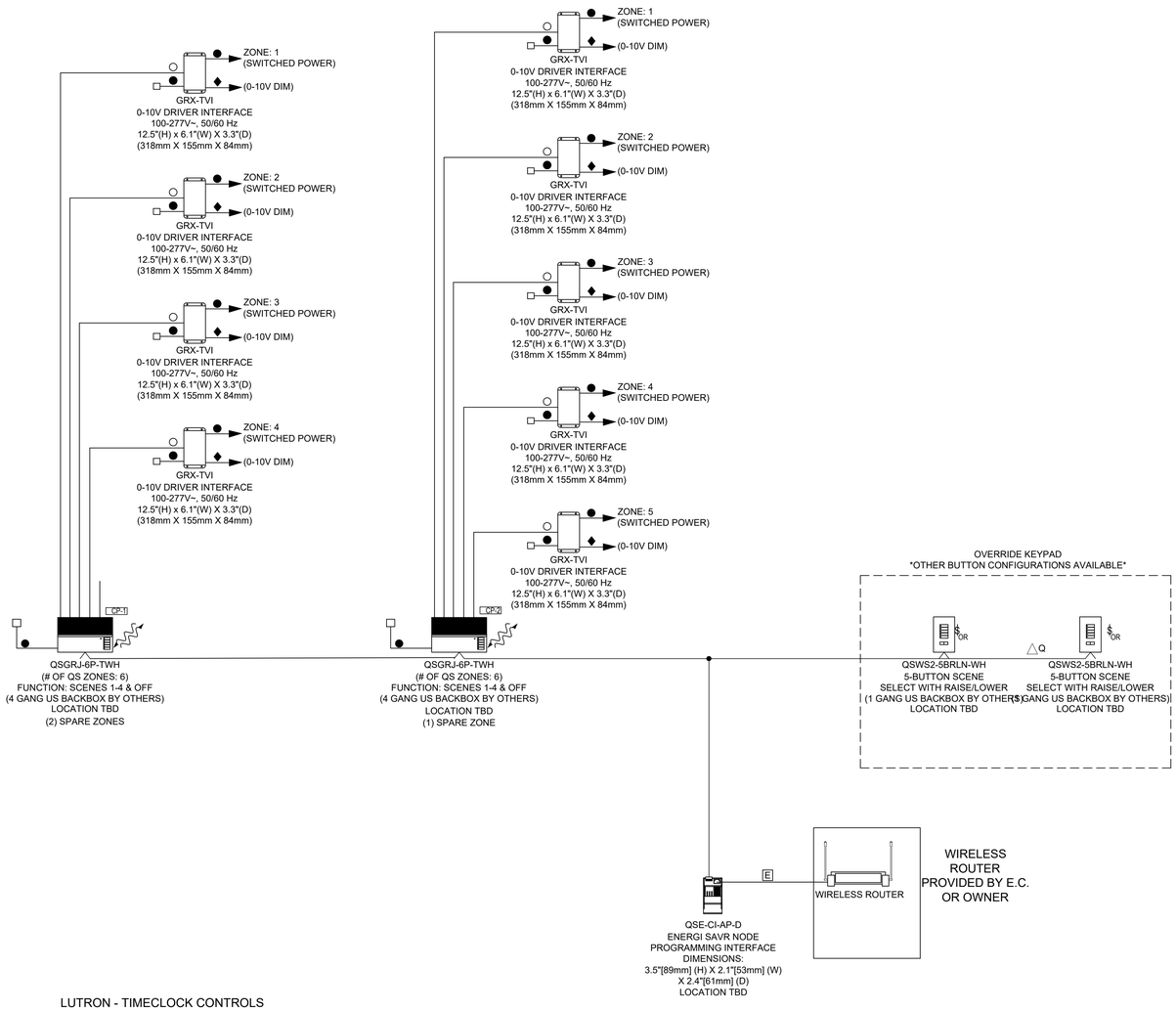
DRAWING

ELECTRICAL DETAILS -
LIGHTING CONTROLS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-300.00
DRAWN BY MR
7 OF 10

NYC DOB Number




LUTRON - TIMECLOCK CONTROLS

## WIRING LEGEND:

△Q QS CONTROL LINK (SEE WIRE DESCRIPTION BELOW)

QS WIRING AS REQUIRED BY CONTROL LINK LENGTH
(REFER TO QS SMART PANEL POWER SUPPLY WIRING GUIDE FOR SHADE WIRING NOTES):

| TOTAL CONTROL LINK LENGTH | WIRE GAUGE | AVAILABLE FROM LUTRON IN ONE CABLE: |
|---|---|---|
| **LESS THAN 500ft (152.4 m)** | POWER (TERMINALS 1&2): 1 PAIR 18 AWG (1.0 mm²) | GRX-CBL-346S (NON-PLENUM) OR GRX-PCBL-346S (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |
| **500ft (152.4 m) TO 2,000ft (610 m)**** | POWER (TERMINALS 1&2): 1 PAIR 12 AWG (4.0 mm²) | GRX-CBL-46L (NON-PLENUM) OR GRX-PCBL-46L (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |

*ALTERNATE DATA-ONLY CABLE: USE APPROVED DATA LINK CABLE (22 AWG [0.5 mm²] TWISTED/SHIELDED) FROM BELDEN (MODEL # 9461).

**TOTAL LENGTH OF THE QS LINK MUST NOT EXCEED 2,000 ft (600 m).

- □ INPUT POWER (NORMAL)
- ● 2 #12AWG (4 mm²)
- ◆ 0-10V SIGNAL: 2 #18AWG (1.0 mm²)
- 1-WAY RF COMMUNICATION
- 2-WAY RF COMMUNICATION

## WIRING NOTES:

### QS LINK RULES

*THE FOLLOWING LINK RULES MUST BE OBSERVED FOR PROPER OPERATION:*

- THIS IS A TOPOLOGY-FREE LINK (T-TAP, HOME-RUN, ETC. IS OK); REFER TO TABLE BELOW FOR WIRE RUN LIMITS.
- IF WIRED DIFFERENTLY THAN WHAT IS SHOWN, POWER DRAW UNIT REQUIREMENTS NEED TO BE CONFIRMED; SEE POWER DRAW UNITS (PDUs) SPECIFICATION SHEET INCLUDED IN THIS SUBMITTAL.
- MAXIMUM OF 512 OUTPUTS (BALLASTS, SHADES, CONTACT CLOSURES, ETC).
- MAXIMUM OF 100 OCCUPANCY SENSORS, 100 DAYLIGHT SENSORS/RADIO SHADOW SENSORS AND 100 KEYPADS.
- MAXIMUM OF 100 QS DEVICES (SUCH AS A GRAFIK EYE® QS, SEETOUCH® QS KEYPAD, SMART PANEL POWER SUPPLY [QSPS-10PNL], ESN, OR QS SHADE / DRAPERY DRIVE UNIT). QUANTUM PROCESSOR COUNTS AS 1 DEVICE PER LINK.
- MAXIMUM OF 100 ZONES - SUCH AS A QS SHADE / DRAPERY DRIVE UNIT, OR A LIGHTING ZONE ON A GRAFIK EYE QS (DOES NOT APPLY TO QUANTUM SYSTEMS).
- THE 10 OUTPUTS ON A QSPS-10PNL CANNOT EXCEED A COMBINED LENGTH OF 2,000 ft (600 m).

CONCEPT DRAWING NOTES:
CONTROL SYSTEM DRAWING IS PROVIDED FOR CONCEPTUAL PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION. EXACT EQUIPMENT REQUIREMENTS, INCLUDING LOCATIONS AND QUANTITIES, SHOULD BE VERIFIED IN ACCORDANCE WITH THE MOST UP-TO-DATE LIGHTING/ELECTRICAL REFLECTED CEILING PLANS, LIGHTING FIXTURE SCHEDULES, PANEL SCHEDULES, CONTROL INTENT AND SPECIFICATIONS. SHADE EQUIPMENT SHOULD BE VERIFIED IN ACCORDANCE WITH ARCHITECTURAL PLANS, SPECIFICATIONS AND WINDOW SCHEDULES/DETAILS.

LED DIMMING REQUIRES AN EXACT MATCH BETWEEN THE LED ARRAY, DRIVER AND CONTROL. LUTRON CANNOT GUARANTEE COMPATIBILITY OR PERFORMANCE WITHOUT TESTING THIS COMBINATION.

TO CONFIRM WHAT PRODUCTS LUTRON HAS AVAILABLE OR WHAT INTERFACES MAY BE REQUIRED, CALL 1-877-DIM-LED8 OR CHECK LUTRON'S PRODUCT COMPATIBILITY MATRIX ON-LINE AT WWW.LUTRON.COM/LED.

TO REQUEST THE TESTING OF AN LED PRODUCT BY LUTRON MANUFACTURERS CAN FILL OUT AN LED EVALUATION REQUEST FORM ON-LINE AT WWW.LUTRON.COM/LED OR CONTACT LEDS@LUTRON.COM.

LUTRON CAN GUARANTEE COMPATIBILITY AND PERFORMANCE OF LUTRON HI-LUME LED DRIVERS USED WITH APPROPRIATE LUTRON CONTROLS. PLEASE REFER TO THE SPECIFICATION SUBMITTAL SHEET FOR FURTHER INFORMATION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING 0-10V CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. PRODUCTS FOLLOWING THE IEC STANDARD 60929 ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING PHASE CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. ELV PRODUCTS PROVIDING HIGH END AND LOW END TRIM ADJUSTMENTS OR LUTRON HI-LUME 1% 2-WIRE DRIVERS ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL DETAILS -
LIGHTING CONTROLS 2

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-301.00
DRAWN BY MR
8 OF 10

NYC DOB Number

## (EXISTING) PANEL SCHEDULE

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | PL SECT. 1 (LFT) | NEW | | EXISTING | | | FLOOR: | 2 | COPPER BUS: | 225 A | | | | |
| LOCATION: | LIFEGUARD AREA | | | VOLTAGE (V): | 120 | 208 | | | A.I.C: | | | | | |
| FEED BY: | N/A | | | PHASE: 3 | WIRE: 4 | | POLES: | 30 | NEMA: | 1 | | | | |
| MAIN: | 225 A | MCB | | MOUNTING: | SURFACE | | | | | | | | | |
| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT | |
| 1 | 20 | Locker Room Outlets | R | 540 | 540 | | | | | R | Locker Room Outlets | 20 | 2 | |
| 3 | 20 | Lobby Outlets | R | | | 540 | 800 | | | R | Locker Room Outlets | 20 | 4 | |
| 5 | 20 | Spare | | | | | | | 700 | L | Locker Room Lighting | 20 | 6 | |
| 7 | 20 | Locker Room Lighting | L | 500 | 1400 | | | | | L | Pool Lighting | 20 | 8 | |
| 9 | 20 | Pool Lighting | L | | | 1800 | 1400 | | | L | Pool Lighting | 20 | 10 | |
| 11 | 20 | Pool Lighting | L | | | | | 1800 | 400 | L | Pool Lighting | 20 | 12 | |
| 13 | 20 | Corridor Lighting | L | 400 | 200 | | | | | M | Locker Room AC Units | 20/2P | 14 | |
| 15 | 20 | Spare | | | | | 200 | | | M | | | 16 | |
| 17 | 20 | Spare | | | | | | | 720 | M | Locker Room Outlets | 20 | 18 | |
| 19 | 20 | Ex. Pool Area GFCI's | R | 540 | 720 | | | | | R | Locker Room Outlets | 20 | 20 | |
| 21 | 20 | Ex. Pool Area GFCI's | R | | | 540 | 100 | | | L | Filtration Rm Lighting | 20 | 22 | |
| 23 | 20 | Ex. Pool Area GFCI's | R | | | | | 540 | | | Spare | 20 | 24 | |
| 25 | 20 | Ex. Lighting | L | 400 | | | | | | | Spare | 20 | 26 | |
| 27 | 20 | Ex. Lighting | L | | | 400 | | | | | Spare | 20 | 28 | |
| 29 | 20 | Ex. Lighting | L | | | | | 400 | | | Spare | 20 | 30 | |
| | | TOTAL: | | 5240 | | 5780 | | 4560 | | | | | | |

**DEMAND CALCULATIONS PER NEC 220:**

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD | |
|---|---|---|---|---|---|
| LIGHTING (L) | 9700 | 125% | 12125 | TOTAL CONNECTED LOAD (VA): | 15580 |
| AC/EQUIP (A) | 0 | 100% | 0 | TOTAL CONNECTED AMPACITY (A): | 43.25 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: | |
| APPLIANCE (AR) | 0 | 100% | 0 | 1. NEW CIRCUITS IN BOLD AND UNDERLINE | |
| CONVEN.(R) | 4760 | 1ST 10K @ 100% REM @ 50% | 0 | | |
| LRGST MOTOR(M) | 720 | 125% | 900 | | |
| MOTOR (M) | 400 | 100% | 400 | | |
| DWELLING (D) | 0 | 23% | 0 | | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): | 13425 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): | 37.26 |

## (EXISTING) PANEL SCHEDULE

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | PL SECT. 2 (RGT) | NEW | | EXISTING | | | FLOOR: | 2 | COPPER BUS: | 225 A | | | | |
| LOCATION: | LIFEGUARD AREA | | | VOLTAGE (V): | 120 | 208 | | | A.I.C: | | | | | |
| FEED BY: | N/A | | | PHASE: 3 | WIRE: 4 | | POLES: | 30 | NEMA: | 1 | | | | |
| MAIN: | 225 A | MCB | | MOUNTING: | SURFACE | | | | | | | | | |
| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT | |
| 1 | 20 | Filter Rm Receptacles | R | 1000 | 2500 | | | | | R | (New) Pool Filter Pump #8 + #10 GND. - 1"C. | 50A/3P | 2 | |
| 3 | 20 | Hand Dryer | R | | | 1000 | 2500 | | | R | | | 4 | |
| 5 | 20 | Hand Dryer | R | | | | | 1000 | 2500 | R | | | 6 | |
| 7 | 20 | Hand Dryer | R | 1000 | 1000 | | | | | R | Hand Dryer | 20 | 8 | |
| 9 | 20 | Hand Dryer | R | | | 1000 | 1000 | | | R | Hand Dryer | 20 | 10 | |
| 11 | | Space | | | | | | | | | Space | | 12 | |
| 13 | | Space | | | | | | | | | Space | | 14 | |
| 15 | | Space | | | | | | | | | Space | | 16 | |
| 17 | | Space | | | | | | | | | Space | | 18 | |
| 19 | | Space | | | | | | | | | Space | | 20 | |
| 21 | | Space | | | | | | | | | Space | | 22 | |
| 23 | 20 | Spare | | | | | | | | | Spare | 20 | 24 | |
| 25 | 20 | Spare | | | | | | | | | Spare | 20 | 26 | |
| 27 | 20 | Spare | | | | | | | | | Spare | 20 | 28 | |
| 29 | 20 | Spare | | | | | | | | | Spare | 20 | 30 | |
| | | TOTAL: | | 5500 | | 5500 | | 3500 | | | | | | |

**DEMAND CALCULATIONS PER NEC 220:**

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD | |
|---|---|---|---|---|---|
| LIGHTING (L) | 0 | 125% | 0 | TOTAL CONNECTED LOAD (VA): | 14500 |
| AC/EQUIP (A) | 0 | 100% | 0 | TOTAL CONNECTED AMPACITY (A): | 40.25 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: | |
| APPLIANCE (AR) | 0 | 100% | 0 | 1. NEW CIRCUITS IN BOLD AND UNDERLINE | |
| CONVEN.(R) | 14500 | 1ST 10K @ 100% REM @ 50% | 5000 | | |
| LRGST MOTOR(M) | 0 | 125% | 0 | | |
| MOTOR (M) | 0 | 100% | 0 | | |
| DWELLING (D) | 0 | 23% | 0 | | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): | 5000 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): | 13.88 |

## (NEW) PANEL SCHEDULE

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | MA | NEW | | EXISTING | | | FLOOR: | 2 | COPPER BUS: | 400 A | | | | |
| LOCATION: | EAST MECH RM | | | VOLTAGE (V): | 120 | 208 | | | A.I.C: | | | | | |
| FEED BY: | N/A | | | PHASE: 3 | WIRE: 4 | | POLES: | 42 | NEMA: | 1 | | | | |
| MAIN: | 400 A | MCB | | MOUNTING: | SURFACE | | | | | | | | | |
| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT | |
| 1 | 20 | East Mechanical Outlets | R | 540 | 15000 | | | | | M | DH-1 4#2/0 + 1#6 - 2" C. | 175/3P | 2 | |
| 3 | 20 | Mech Rm Lighting | R | | | 500 | 15000 | | | M | | | 4 | |
| 5 | | ACCU-R-1 3#8 +1#10 - 1"C. | M | | | | | 4500 | 15000 | M | | | 6 | |
| 7 | 50/3P | | M | 4500 | 1000 | | | | | A | Motorized Damper | 20 | 8 | |
| 9 | | | M | | | 4500 | 1000 | | | A | HVAC Controller | 20 | 10 | |
| 11 | | ACCU-R-2 3#8 +1#10 - 3/4"C. | A | | | | | 3300 | | | Spare | 20 | 12 | |
| 13 | 40/3P | | A | 3300 | 1200 | | | | | A | Indoor AC Units | 20 | 14 | |
| 15 | | | A | | | 3300 | 500 | | | A | EF-R-1 | 20 | 16 | |
| 17 | 20/2P | DOAU-1 3#12 +1#12 - 3/4"C. | A | | | | | 1000 | 1500 | A | EF-R-2 | 20 | 18 | |
| 19 | | | A | 1000 | 1000 | | | | | A | Heat Trace 3#12 +1#12 - 3/4"C. | 20/2P | 20 | |
| 21 | | EDH-1 3#8 +1#10 - 3/4"C | A | | | 3000 | 1000 | | | A | | | 22 | |
| 23 | 40/3P | | A | | | | | 3000 | | | Spare | 20 | 24 | |
| 25 | | | A | 3000 | | | | | | | Spare | 20 | 26 | |
| 27 | 20 | Spare | | | | | | | | | Spare | 20 | 28 | |
| 29 | 20 | Spare | | | | | | | | | Spare | 20 | 30 | |
| 31 | 20 | Spare | | | | | | | | | Spare | 20 | 32 | |
| 33 | | Space | | | | | | | | | Space | | 34 | |
| 35 | | Space | | | | | | | | | Space | | 36 | |
| 37 | | Space | | | | | | | | | Space | | 38 | |
| 39 | | Space | | | | | | | | | Space | | 40 | |
| 41 | | Space | | | | | | | | | Space | | 42 | |
| | | TOTAL: | | 30540 | | 28800 | | 28300 | | | | | | |

**DEMAND CALCULATIONS PER NEC 220:**

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD | |
|---|---|---|---|---|---|
| LIGHTING (L) | 0 | 125% | 0 | TOTAL CONNECTED LOAD (VA): | 87640 |
| AC/EQUIP (A) | 28100 | 100% | 28100 | TOTAL CONNECTED AMPACITY (A): | 243.26 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: | |
| APPLIANCE (AR) | 0 | 100% | 0 | 1. NEW CIRCUITS IN BOLD AND UNDERLINE | |
| CONVEN.(R) | 1040 | 1ST 10K @ 100% REM @ 50% | 0 | | |
| LRGST MOTOR(M) | 19500 | 125% | 24375 | | |
| MOTOR (M) | 39000 | 100% | 39000 | | |
| DWELLING (D) | 0 | 23% | 0 | | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): | 91475 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): | 253.91 |

***ELECTRICAL PANEL NOTES:***

1. EXISTING ACTIVE CIRCUITS SERVING THE FACILITY SHALL REMAIN (RECEPTACLES, HEATERS, LIGHTING ETC.). CONTRACTOR SHALL MAINTAIN ON EXISTING PANEL AS REQUIRED.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

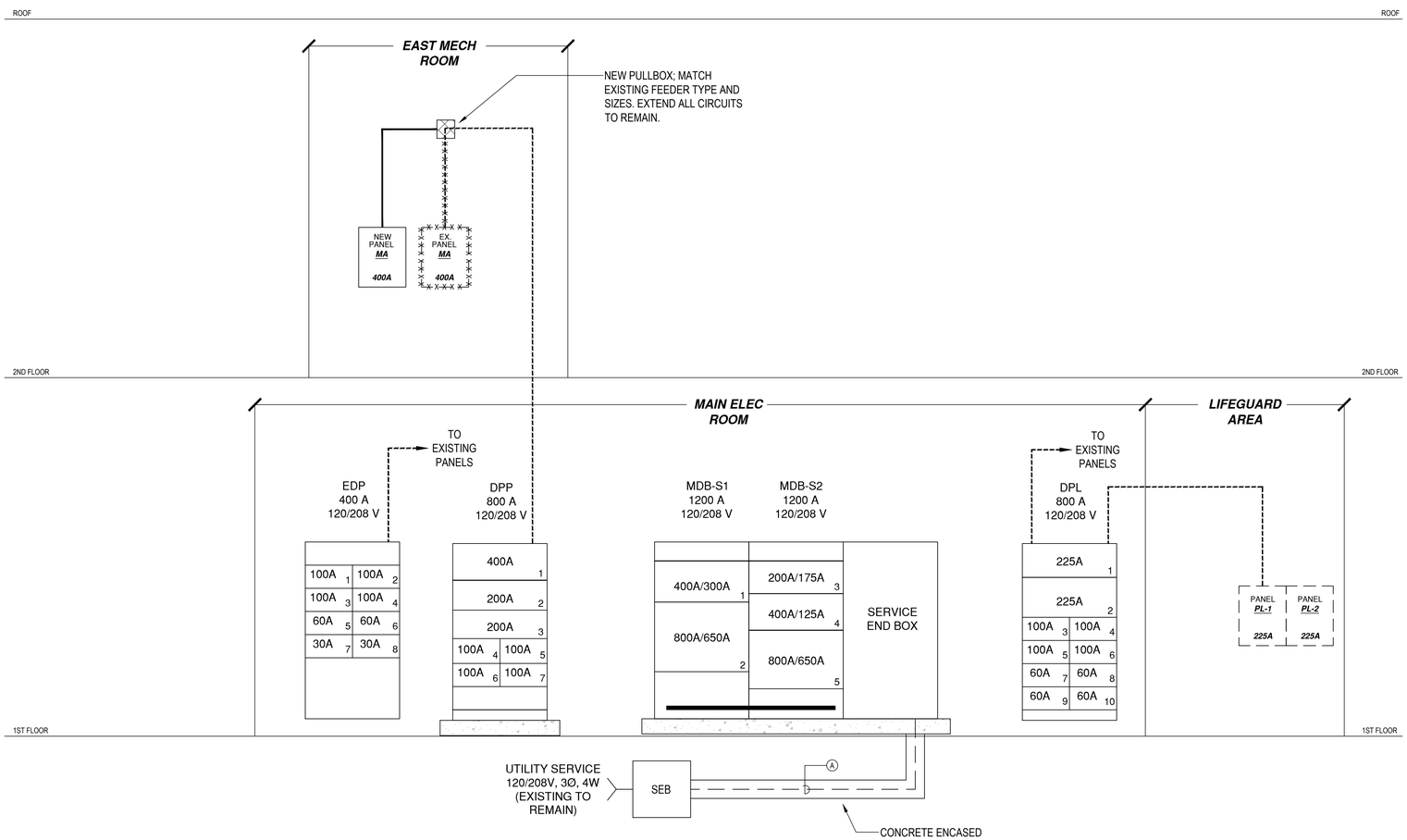
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL PANEL SCHEDULE

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. E-400.00 |
| | DRAWN BY MR |
| | 9 OF 10 |

NYC DOB Number




***LEGEND:***

| | |
|---|---|
| ——— | NEW |
| - - - - - - - - - - | EXISTING |
| ~~- - - - - - - - - -~~ | TO BE REMOVED |

## *ELECTRICAL RISER DIAGRAM NOTES*

1. DISCONNECTION OR POWER OUTAGE TO EXISTING SERVICE OR ANY FEEDERS/PANELS SHALL BE COORDINATED WITH THE TENANT, ARCHITECT AND THE BUILDING. SUBMIT SCHEDULE TO ARCHITECT FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
2. POWER INTERRUPTION OF SECURITY OR SPECIAL SERVICE MUST BE SCHEDULED AND APPROVED BY FACILITIES AND GENERAL CONTRACTOR. ALL SUCH INTERRUPTIONS MUST OBTAIN APPROVAL WITH PERSONNEL AT SITE TO RESTART SYSTEMS.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS OF ALL EXISTING PANELBOARDS AND FEEDERS AND PROVIDE ALL MODIFICATIONS AS REQUIRED BY OTHER AUTHORITIES TO OBTAIN A COMPLETE APPROVED SYSTEM.
4. EXACT ROUTING OF FEEDERS/CIRCUITS IN AREA NOT IN CONSTRUCTION MUST BE FIELD COORDINATED WITH THE ARCHITECT. KEEP DISRUPTION TO A MINIMUM AS PER APPROVED SCHEDULE OF WORK.
5. CONTRACTOR TO CIRCUIT TRACE ALL BRANCH CIRCUITRY PRIOR TO SHUTDOWN OF SERVICE.
6. ALL ELECTRICAL INFRASTRUCTURE EXISTING TO REMAIN WITHIN BRIDGE SANDBLASTING EQUIPMENT ROOM. ALL FEEDERS AND EQUIPMENT TO TO BE TRACED BACK TO ELECTRICAL SERVICE ROOM AND MAINTAINED THROUGHOUT CONSTRUCTION.

## *GENERATOR NOTES*

1. ALL ATS SHALL BE PROVIDED WITH GENERATOR START FEATURE AND SHALL BE PROGRAMMABLE TO ACCEPT SEQUENCE START.
2. CONTRACTOR SHALL COORDINATE WITH EXISTING ELEVATOR VENDOR TO INSTALL APPROPRIATE SENSING AND CONTROL RELAYS. COORDINATE WITH ELEVATOR VENDOR TO PROGRAM ELEVATOR CONTROLS SO THAT (1) ELEVATOR IS OPERABLE IN EACH BANK DURING EMERGENCY OPERATION. ELECTRICAL CONTRACTOR SHALL COORDINATE AND INCLUDE RELAYS AND POWER WIRING FOR INTERFACING.
3. CONTRACTOR TO VERIFY IN FIELD SIZES OF ALL EXISTING WIRES, CIRCUIT BREAKERS, FUSES, ETC. E.C. SHALL MATCH IN KIND FOR ALL EXISTING LOADS TO REMAIN.
4. PROVIDE SEPARATE TERMINAL ON GENERATOR BUSS FOR LOAD BANK TESTING.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL RISER DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

DWG. No. E-500.00

DRAWN BY MR

10 OF 10

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## PLUMBING DEMOLITION NOTES.

1. GENERAL

   1. IT IS THE PURPOSE OF THIS SECTION TO OUTLINE TO THE PLUMBING CONTRACTOR THE GENERAL SCOPE OF THE REMOVAL WORK.

   2. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND EXAMINE CAREFULLY THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND DIFFICULTIES THAT WILL EFFECT THE EXECUTION OF THIS WORK. THE CONTRACTOR SHALL PERFORM THIS, PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PRPOSAL SHALL BE CONSTRUCTED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN UPON SUCH AN EXAMINATION.

2. SCOPE OF WORK.

   1. THIS WORK INCLUDES DISCONNECTION AND REMOVAL OF PLUMBING FIXTURES AND ASSOCIATED PIPING FROM WALLS OR FLOORS, AS INDICATED ON ARCHITECTURAL PLANS, DISCONNECTING PIPING AT STACKS OR RISERS AND CAPPING TO AVOID DEAD ENDS, ALL SYSTEMS AS REQUIRED TO ASSURE CONTINUITY IN CIRCULATING AND SUPPLY LINES.

   2. PERFORM THE WORK AS SCHEDULED BY THE CONTRACTOR. SUBMIT SHUTDOWN SCHEDULE TO OWNER FOR APPROVAL PROIR TO PERFORMING WORK.

   3. ALL FIXTURES, EQUIPMENT, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, RELOCATED, TURNED OVER TO THE OWNER, OR SALVAGED AS DIRECTED.

   4. PROVIDE INTERIM WORK, IF REQUIRED, FOR CONTINUED UNINTERRUPTED SERVICE WHERE EXTENDED SHUTDOWN IS REQUIRED.

   5. THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF DEMOLITION. AT COMPLETION OF THE WORK, THROUGHLY CLEAN PREMISES. REMOVE TOOLS, DEBRIS, ETC.

   6. ALL UNUSED PIPING, HANGERS, AND SUPPORT SHALL BE COMPLETELY REMOVED ALL THE WAY BACK TO CORE RISERS, OR BACK TO THE NEAREST ACTIVE BRANCH MAIN AND CAPPED, SEALED WATER TIGHT, OR AIR TIGHT. ALL THE OPENINGS RESULTING SHALL BE PROPERLY PATCHED, SEALED, AND FIRESTOPPED TO MAINTAIN THE ORIGINAL INTEGRITY OF THE PARTITION'S FIRE RATING.

   7. ANY PIPE NOT SPECIFICALY LABELED TO BE REMOVED SHALL REMAIN, UNLESS OTHERWISE NOTED

## NYC BUILDING DEPARTMENT NOTES

THE PLUMBING SYSTEMS (SANITARY, WASTE, VENT, WATER DISTRIBUTION AND GAS) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE 2014 PLUMBING CODE OF THE CITY OF NEW YORK AS CITED IN ARTICLE 28.

1. THE SANITARY SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH THE GENERAL PROVISIONS OF SECTION PC 701.
2. THE MATERIAL USED IN THE PLUMBING SYSTEMS WILL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC 402, 605, 702, 902, 1102.
3. EQUIPMENT HOOK-UP AND THE JOINING OF PIPING WILL BE IN FULL COMPLIANCE WITH SECTION PC 605.
4. THE INSTALLATION OF FIXTURES WILL BE IN FULL ACCORDANCE WITH SECTION PC 401.
5. TRAPS FOR FIXTURES AND DRAIN LINES WILL BE PROVIDED AND CLEANOUTS INSTALLED IN FULL COMPLIANCE WITH SECTION PC 708, 709 & 1002.
6. VERTICAL AND HORIZONTAL PIPING WILL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND WITH THE FULL COMPLIANCE WITH SECTION PC 308.
7. THE WATER SUPPLY SYSTEM OF THE SUBJECT BUILDING SHALL BE INSTALLED AND MAINTAINED IN FULL COMPLIANCE WITH SECTION PC 601.
8. THE SANITARY DRAINAGE SYSTEM WILL BE SIZED AND INSTALLED IN FULL COMPLIANCE WITH SECTIONS PC 704 AND 710.
9. THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM OF THE SUBJECT BUILDING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC 901.
10. THE STORM DRAINAGE SYSTEM AND PIPING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC 1101.
11. GAS PIPING AND EQUIPMENT WILL BE INSTALLED IN FULL COMPLIANCE WITH THE NYC GAS CODE ADOPTED 2014 WITH LATEST UPDATES.
12. ALL TRENCHING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 306.
13. TEMPORARY TOILET FACILITIES SHALL BE PROVIDED FOR WORKMEN AS PER SECTION 311.
14. FUEL GAS METER AND PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NYC FUEL GAS CODE FGC-401 AND APPENDIX E & F.

## APPLICABLE CODES

| |
|---|
| 2014 NYC BUILDING CODE |
| 2014 NYC PLUMBING CODE |
| 2014 NYC ENERGY CONSERVATION CODE |

## INSPECTIONS, PROGRESS INSPECTIONS, SPECIAL INSPECTIONS AND TESTING OF PLUMBING SYSTEMS

1. THE FOLLOWING INSPECTIONS, TESTS, PROGRESS INSPECTIONS AND SPECIAL INSPECTIONS SHALL BE CONSIDERED PART OF THE CONTRACT WORK.
2. UPON COMPLETION OR PARTIAL COMPLETION OF THE PERMITTED PLUMBING WORK, INSPECTIONS, PROGRESS INSPECTIONS, SPECIAL INSPECTIONS AND TESTS SHALL BE CONDUCTED BY APPROVED AGENCIES OR SPECIAL INSPECTORS QUALIFIED TO CONDUCT SUCH INSPECTIONS AND TESTS. INSPECTIONS AND PROGRESS INSPECTIONS SHALL BE PERFORMED IN COMPLIANCE WITH SECTION BC110 OF THE NEW YORK CITY BUILDING CODE. SPECIAL INSPECTIONS SHALL BE PERFORMED IN COMPLIANCE WITH SECTIONS BC1704 AND BC1707 OF THE NEW YORK CITY BUILDING CODE FOR ALL PLUMBING SYSTEMS REGULATED BY THE NEW YORK CITY PLUMBING CODE, SECTIONS PC 107, PC 312, CHAPTERS 6, 7, 9 AND 11, THE NEW YORK CITY FUEL GAS CODE, SECTIONS FGC 107, AND FGC 406. REFER TO ARTICLE 116 OF CHAPTER 1 OF TITLE 28 OF THE ADMINISTRATIVE CODE FOR ADDITIONAL PROVISIONS RELATED TO INSPECTIONS.
3. SPECIAL INSPECTIONS OF PLUMBING SYSTEMS SHALL INCLUDE THE FOLLOWING AS APPLICABLE TO THE SYSTEM:

   A. VISUAL CERTIFICATION THAT REQUIRED COMPONENTS OF SUCH SYSTEMS ARE COMPLETE IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION GUIDELINES AND THE APPROVED CONSTRUCTION DOCUMENTS.

   B. SUPPORTS, HANGERS, SEISMIC BRACING, AND VIBRATION ISOLATION EQUIPMENT ARE PROPERLY SPACED AND ANCHORED TO SUPPORTING STRUCTURE.

   C. INSTALLATION OF REQUIRED SIGNAGE AND SAFETY INSTRUCTIONS.

   D. ELECTRICAL COMPONENTS ARE INSTALLED AND ELECTRICAL SIGN- OFF ISSUED.

   E. REQUIRED LABELING, OPERATIONAL INSTRUCTIONS AND SAFETY SIGNAGE PROPERLY POSTED.

   F. ALL RELATED SPECIAL INSPECTIONS FOR SUCH SYSTEMS ARE COMPLETE.

4. PROGRESS INSPECTIONS OF PLUMBING SYSTEMS SHALL INCLUDE THE FOLLOWING AS APPLICABLE TO THE SYSTEM:

   A. THROUGH-PENETRATION FIRE STOPPING.

5. TESTS OF PLUMBING SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING NEW YORK CITY BUILDING CODE AND NEW YORK CITY PLUMBING CODE SECTIONS:

   DRAINAGE & VENT WATER TEST PC 312.2

   DRAINAGE & VENT AIR TEST PC 312.3

   DRAINAGE & VENT FINAL TEST PC 312.4

   WATER SUPPLY SYSTEM TEST PC 312.5

   WATER SERVICE PIPE PC 312.5.1

   GRAVITY SEWER TEST PC 312.6

   REGULATORS AND VALVE ASSEMBLIES FGC 406.1.5

   EXPANSION JOINTS FGC 406.3.1

6. THE FOLLOWING IS A LIST OF ALL REQUIRED SPECIAL INSPECTIONS:

| SPECIAL INSPECTION ITEMS: | CODE/SECTION |
|---|---|
| FIRESTOPPING | BC 1704.27 |

7. UPON COMPLETION OF ALL SPECIAL INSPECTIONS, TESTING AND BUILDING DEPARTMENT SIGN-OFF, THE PLUMBING CONTRACTOR SHALL SECURE ALL CERTIFICATES OF COMPLIANCE AND TRANSMIT SAME TO OWNER.

## GENERAL NOTES:

1. ALL MATERIALS, APPARATUS, WORKMANSHIP AND PROCUREMENT OF PERMITS AND CERTIFICATES FOR THESE SYSTEMS SHALL BE IN ACCORDANCE WITH ALL LAWS, RULES AND REGULATIONS OF THE NEW YORK CITY BUILDING CODE, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. EXACT SIZES AND LOCATIONS OF EXISTING PIPING SHALL BE VERIFIED AT THE PROJECT SITE.

## PLUMBING SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| | NEW DOMESTIC COLD WATER PIPING |
| | NEW DOMESTIC HOT WATER PIPING |
| | NEW DOMESTIC HOT WATER RETURN PIPING |
| | EXISTING DOMESTIC COLD WATER PIPING |
| | EXISTING DOMESTIC HOT WATER PIPING |
| | EXISTING DOMESTIC HOT WATER RETURN PIPING |
| I.W. | INDIRECT WASTE PIPING |
| | NEW SANITARY PIPING |
| | NEW UNDERSLAB SANITARY PIPING |
| | EXISTING UNDERSLAB SANITARY PIPING |
| | NEW VENT PIPING |
| | EXISTING VENT PIPING |
| | EXISTING PIPING TO BE DEMOLISHED |
| | BALL VALVE |
| | GATE VALVE |
| | CHECK VALVE |
| FD | NEW FLOOR DRAIN |
| | POINT OF CONNECTION TO EXISTING |
| | DISCONNECT EXISTING |
| | CLEAN OUT DECK PLATE |
| | CLEAN OUT |
| | HOT WATER RETURN BALANCING VALVE |

NOTE: ALL SYMBOLS ARE NOT NECESSARILY SHOWN ON DRAWINGS.

## PLUMBING ABBREVIATIONS

| | | | |
|---|---|---|---|
| AFF | ABOVE FINISHED FLOOR | HW | HOT WATER |
| ATP | AUTOMATIC TRAP PRIMER | HWR | HOT WATER RECIRCULATING |
| APP | APPROVED | IW | INDIRECT WASTE |
| APPROX | APPROXIMATE | MS | MOP SINK |
| ARCH | ARCHITECTURAL | MFR | MANUFACTURER |
| & | AND | MIN | MINIMUM |
| @ | AT | MTG | MOUNTING |
| | | NIC | NOT IN CONTRACT |
| BSMT | BASEMENT | #, NO. | NUMBER |
| BFF | BELOW FINISHED FLOOR | NTS | NOT TO SCALE |
| BLDG | BUILDING | NG | NATURAL GAS |
| | | PC | PLUMBING CONTRACTOR |
| CLG | CEILING | % | PERCENT |
| CFH | CUBIC FEET PER HOUR | Ph | PHASE |
| CO | CLEANOUT | PLBG | PLUMBING |
| CODP | CLEANOUT W/DECK PLATE | | |
| CONN | CONNECTION | QTY | QUANTITY |
| CONT | CONTINUATION | | |
| CW | COLD WATER | RM | ROOM |
| | | REQ | REQUIRED |
| DFU | DRAINAGE FIXTURE UNIT | | |
| DIA, ~ | DIAMETER | SFU | SUPPLY FIXTURE UNIT |
| DN | DOWN | SHT | SHEET |
| DWG | DRAWING | SPEC'S. | SPECIFICATIONS |
| DF | DRINKING FOUNTAIN | SQ.FT | SQUARE FOOT |
| | | SRV | SAFETY RELIEF VALVE |
| EA | EACH | TMV | THERMOSTATIC MIXING VALVE |
| EQ | EQUAL | TYP | TYPICAL |
| EQUIP | EQUIPMENT | | |
| EXIST | EXISTING | VTR | VENT THRU ROOF |
| | | WC | WATER CLOSET |
| FD | FLOOR DRAIN | WCO | WALL CLEANOUT |
| FUD | FUNNEL DRAIN | WM | WATER METER |
| FT | FEET | WTH | WIDTH |
| | | W/ | WITH |
| GC | GENERAL CONTRACTOR | | |
| HWC | HANDICAP WC | | |
| HGT | HEIGHT | | |

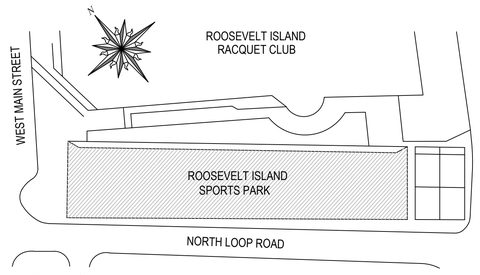
NOTE: ALL ABBREVIATIONS ARE NOT NECESSARILY SHOWN ON DRAWINGS.

## PLUMBING FIXTURE CONNECTION SCHEDULE

| FIXTURE TAG | FIXTURE TYPE | CONNECTIONS | | | | |
|---|---|---|---|---|---|---|
| | | CW | HW | SAN | W | V |
| WC | WATER CLOSET (FLUSH VALVE) | 1-1/4" | - | 4" | - | 2" |
| UR | URINAL | 3/4" | - | 2" | - | 1-1/2" |
| LAV | LAVATORY | 1/2" | 1/2" | - | 1-1/2" | 1-1/2" |
| SH | SHOWER | 1/2" | 1/2" | - | 2" | 1-1/2" |

*SEE ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE SELECTION

| PLUMBING DRAWING LIST | |
|---|---|
| Sheet Number | Sheet Title |
| P-001.00 | PLUMBING NOTES, SYMBOLS AND ABBREVIATIONS |
| P-002.00 | PLUMBING SPECIFICATIONS I |
| P-003.00 | PLUMBING SPECIFICATIONS II |
| DM-050 | PLUMBING FIRST FLOOR EAST - DEMOLITION PLAN |
| P-100.00 | PLUMBING FIRST FLOOR EAST PLAN |
| P-300.00 | PLUMBING DETAILS |
| P-400.00 | PLUMBING SCHEDULES |
| P-500.00 | PLUMBING RISER DIAGRAM I |
| P-501.00 | PLUMBING RISER DIAGRAM II |




250 MAIN STREET
ROOSEVELT ISLAND,
N.Y. 10044
BLOCK No: 1373
LOT No: 1
ZONING MAP: 9A
PRIMARY ZONING: R7-2

1 PLOT PLAN
Scale: NTS

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng ineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING NOTES, SYMBOLS AND ABBREVIATIONS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. P-001.00
DRAWN BY LC
1 OF 9

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

# PLUMBING SPECIFICATIONS SHEET 1

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION AND OR AIA DOCUMENT A105 AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. IN CASE OF CONFLICT BETWEEN THESE GENERAL PROVISIONS AND THE SPECIAL AND GENERAL CONDITIONS THE MORE RESTRICTIVE REQUIREMENTS GOVERN AS DETERMINED BY THE ARCHITECT.

C. THE DRAWINGS ARE SCHEMATIC AND DIAGRAMMATIC AND ARE INTENDED TO BE A GRAPHIC REPRESENTATION OF THE CONTRACT REQUIREMENTS. DUE TO RESTRICTIONS OF SCALE, COMPLETE DETAILS CAN NOT BE SHOWN. IT IS HOWEVER ASSUMED TO REPRESENT A COMPLETE INSTALLATION, COORDINATION WITH OTHER TRADES, AND COORDINATION WITH FIELD CONDITIONS.

D. RISER DIAGRAMS AND SCHEMATIC DIAGRAMS GENERALLY INDICATE EQUIPMENT CONNECTIONS TO BE USED FOR VARIOUS SYSTEMS. PROVIDE ALL WORK SHOWN WETHER OR NOT IT IS DUPLICATED ON THE PLANS.

E. SPECIFICATIONS INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL", "SHALL BE", "FURNISH", "PROVIDE", "A", "AN", "THE", AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

F. EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM TO COMPLETE WITH ALL APPURTENANCES OR ACCESSORIES NECESSARY TO COMPLETE ANY REQUIRED SYSTEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.

G. SPECIFICATIONS AND DRAWINGS ARE COMPLIMENTARY AND ARE TO BE TAKEN TOGETHER FOR A COMPLETE INTERPRETATION OF THE WORK.

H. DRAWINGS OF NECESSITY UTILIZE SYMBOLS AND SCHEMATIC DIAGRAMS TO INDICATE VARIOUS ITEMS OF WORK. NEITHER OF THESE HAVE ANY DIMENSIONAL SIGNIFICANCE NOT DO THEY DELINEATE EVERY ITEM REQUIRED FOR THE INTENDED INSTALLATION.

INSTALL THE WORK IN ACCORDANCE WITH THE DIAGRAMMATIC INTENT EXPRESSED ON THE ELECTRICAL AND MECHANICAL DRAWINGS, AND IN CONFORMITY WITH THE DIMENSIONS INDICATED ON FINAL ARCHITECTURAL AND STRUCTURAL WORKING DRAWINGS AND ON EQUIPMENT SHOP DRAWINGS.

I. CERTAIN DETAILS APPEAR ON THE DRAWINGS WHICH ARE SPECIFIC WITH REGARD TO DIMENSIONING AND POSITIONING OF WORK. THESE DETAILS ARE INTENDED ONLY FOR THE PURPOSE OF ESTABLISHING GENERAL FEASIBILITY. THEY DO NOT OBVIATE FIELD COORDINATION FOR INDICATED WORK.

J. DERIVE INFORMATION AS TO THE GENERAL CONSTRUCTION FROM STRUCTURAL AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

K. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.

L. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

M. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH NON-SHRINKING FIRE PROOF CAULKING OR OTHER NONCOMBUSTIBLE MATERIAL.

L. PROVIDE ALL NECESSARY FLASHING AND COUNTER-FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OF PIPING AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AS REQUIRED.

M. ALL PRESENT MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

N. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

O. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

P. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

2. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMITY WITH THE NEW YORK CITY PLUMBING CODE AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. THE CONTRACT DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLEMENTED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT FOR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

3. SHOP DRAWINGS AND SAMPLES:

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWING SUBMITTED:

1. PROJECT NAME AND LOCATION
2. NAME OF ARCHITECT AND ENGINEER
3. ITEM IDENTIFICATION
4. APPROVAL STAMP OF PRIME CONTRACTOR

THE LOCATION AND ELEVATIONS OF ALL PIPING AND EQUIPMENT THAT IS IN OR PASSING THROUGH BASE BUILDING SPACES AND/OR TENANT SPACES ARE TO BE COORDINATED WITH BUILDING MANAGEMENT AND INDICATED ON SHOP DRAWINGS BEFORE PROCEEDING WITH WORK.

C. SUBMISSIONS:

1. SUBMISSIONS MAY BE SUBMITTED ELECTRONICALLY IN LIEU OF HARD COPIES PROVIDED SUBMITTALS ARE SENT THROUGH THE GENERAL CONTRACTOR AND OR ARCHITECT.

2. HARD COPY SUBMISSIONS 11 IN. X 17 IN. OR SMALLER:
IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.

3. SUBMISSIONS LARGER THAN 11 IN. X 17 IN.:
SUBMIT 4 PRINTS TO THE ARCHITECT.
THE ARCHITECT WILL FORWARD ONE PRINT TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

1. PIPE AND FITTINGS
2. VALVES
3. PLUMBING FIXTURES AND TRIM
4. PIPING LAYOUTS
5. SUPPORTS, HANGERS AND GUIDES
6. INSULATION
7. HI-LOW THERMOSTATIC MIXING VALVES
8. COORDINATED PIPE SLEEVE PLANS

4. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS:

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

5. GENERAL PROVISIONS FOR PLUMBING WORK:

A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

B. DEFINITIONS:

1. "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
2. "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
3. "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
4. "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
5. "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND RELATED ITEMS.
6. "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.
7. "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
8. "SIMILAR TO" OR "EQUAL TO": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

C. QUALITY ASSURANCE

1. QUALITY AND GAUGE OF MATERIALS: NEW, BEST OF THEIR RESPECTIVE KINDS, FREE FROM DEFECTS AND LISTED BY UNDERWRITERS LABORATORIES, INC., OR BEARING THEIR LABEL. MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK.

D. PRODUCT DELIVERY, STORAGE AND HANDLING

1. MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.
2. ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS SHALL BE PERMITTED. CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

E. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC CHROMATE FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. RED LEAD OR ZINC CHROMATE WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD-APPLIED ZINC CHROMATE PRIME COAT SHALL BE UTILIZED FOR STEEL AND IRON WORK.

F. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED. CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

G. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL PLUMBING FIXTURES SHALL BE VERIFIED BY ARCHITECT.

H. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

6. PIPE AND FITTINGS:

A. SANITARY DRAINAGE AND VENT

1. SERVICE WEIGHT HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS WITH LEAD AND OAKUM JOINTS. BELOW GRADE.

2. HUBLESS CAST IRON SOIL PIPE AND FITTINGS WITH EXTRA WIDE HEAVY DUTY GASKETED HUBLESS COUPLINGS FOR FOOD SERVICE APPLICATIONS. ABOVE GRADE.

3. GALVANIZED SCHEDULE 40 STEEL PIPE WITH GALVANIZED THREADED MALLEABLE IRON FITTINGS. EJECTOR AND OR SUMP DISCHARGE PIPING.

B. DOMESTIC WATER

1. TYPE L HARD COPPER TUBING WITH CAST BRONZE OR WROUGHT COPPER FITTINGS AND 95/5 TIN ANTIMONY SOLDER JOINTS.

2. STANDARD WEIGHT RED BRASS PIPE WITH STANDARD WEIGHT CAST BRONZE THREADED FITTINGS.

3. ALL EXPOSED PIPE AND FITTINGS SHALL BE CHROME PLATED BRASS.

4. ALL EXPOSED PIPING PASSING THROUGH WALLS, FLOORS, CEILINGS, AND PARTITIONS SHALL BE PROVIDED WITH CHROME PLATED CAST BRASS ESCUTCHEONS HELD IN PLACE WITH SET SCREWS.

7. VALVES:

1. GATE VALVES
   a. BRONZE RISING STEM, 200 PSI WOG.

2. BALL VALVES
   a. TWO-PIECE BRONZE, END ENTRY, 600 PSI WWP.

3. CHECK VALVES
   a. BRONZE SWING CHECK, THREADED CAP, TEFLON DISC.

8. INSTALLATION OF SLEEVES AND ESCUTCHEONS:

1. PIPING PASSING THROUGH WALLS SHALL HAVE A TRIM OPENING CUT NO GREATER THAN NECESSARY FOR THE INSTALLATION OF A SLEEVE SECURED THEREIN. SLEEVE SHALL BE 1/2" IN DIAMETER LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE PASSING THROUGH AND OF SUFFICIENT LENGTH TO BE FLUSH WITH THE FINISHED WALL SURFACE.

2. SLEEVES IN MASONRY WALLS SHALL BE SCHEDULE 40, STANDARD STEEL PIPE AND IN FRAMED PARTITIONS 20 GAGE SHEET GALVANIZED METAL.

3. ANNULAR SPACES BETWEEN PIPING AND SLEEVES SHALLBE PACKED WITH "THERMAFIBER" AND SEALED TO RETAIN THE FIRE INTEGRITY OF THE WALLS WITH A NON-HARDENING COMPOUND SIMILAR TO UNISEAL OR DUXSEAL AS MANUFACTURED BY JOHNS-MANVILLE CO. "THERMAFIBER" SHALL BE THERMAFIBER SAFING INSULATION AS MANUFACTURED BY UNITED STATES GYPSUM CO.

4. EXPOSED PIPING PASSING THROUGH WALLS OR CEILINGS SHALL BE FITTED WITH CHROMIUM PLATED CAST BRASS ESCUTCHEONS WITH FASTENING SET SCREWS.

9. INSULATION:

A. ALL INSULATION (INCLUDING JACKET, FACING AND ADHESIVE) SHALL CONFORM TO THE LATEST ENERGY CODE & BUILDING CODE. INSULATION SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURES LISTED IN ASTM E-84, NFPA 255 AND UL 273; NOT EXCEEDING A FLAME SPREAD OF 25 AND A SMOKE DEVELOPED OF 50.

B. ALL VALVES AND FITTINGS GREATER THAN 1" SHALL BE INSULATED WITH PRE-MOLDED FIBERGLASS FITTINGS. COLD WATER VALVES AND FITTINGS SHALL BE PROVIDED WITH A VAPOR SEAL.

C. DOMESTIC COLD WATER PIPING (40° F TO 60° F)
PIPE SIZES < 1" = $\frac{1}{2}$" MINIMUM THICKNESS.
PIPE SIZES 1" TO < $1\frac{1}{2}$" = $\frac{1}{2}$" MINIMUM THICKNESS.
PIPE SIZES $1\frac{1}{2}$" TO < 4" = 1" MINIMUM THICKNESS.
PIPE SIZES 4" TO < 8" = 1" MINIMUM THICKNESS.

D. DOMESTIC HOT WATER PIPING (105° F TO 140° F)
PIPE SIZES < 1" = 1" MINIMUM THICKNESS.
PIPE SIZES 1" TO < $1\frac{1}{2}$" = 1" MINIMUM THICKNESS.
PIPE SIZES $1\frac{1}{2}$" TO < 4" = $1\frac{1}{2}$" MINIMUM THICKNESS.
PIPE SIZES 4" TO < 8" = $1\frac{1}{2}$" MINIMUM THICKNESS.

E. ALL PIPING INSULATION SHALL BE ONE-PIECE MOLDED SECTIONAL FIBERGLASS HAVING A NOMINAL 4-POUND DENSITY. ITS THERMAL CONJUNCTIVITY SHALL NOT EXCEED 0.23 AT 75 DEGREES F. MEAN TEMPERATURE. IT SHALL BE SUITABLE FOR USE ON PIPING UP TO 370 DEGREES F.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING SPECIFICATIONS I

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. P-002.00 |
| | DRAWN BY LC |
| | 2 OF 9 |

NYC DOB Number

# PLUMBING SPECIFICATIONS SHEET 2

10. PLUMBING FIXTURES:

A. PROVIDE ALL FIXTURES WITH STOP VALVES AND SUPPLIES AND FIXTURE TRAPS AS REQUIRED.

B. ALL FIXTURES SHALL BE AS SPECIFIED INDICATED ON THE ARCH. DRAWING.

11. PIPING SUPPORTS:

A. SUPPORT ALL PIPING FROM BUILDING CONSTRUCTION BY PROVIDING INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), AND ACCEPTABLE BRACKETS. SUBMIT ALL METHODS FOR REVIEW.

B. PROVIDE TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS FOR GROUPED LINES AND SERVICES.

C. PROVIDE ADDITIONAL FRAMING WHERE BUILDING CONSTRUCTION IS INADEQUATE. SUBMIT FOR REVIEW.

D. SUSPENDED HORIZONTAL PIPING:

1. SUPPORT ALL PIPING INDEPENDENTLY FROM STRUCTURE USING HEAVY IRON-HINGED TYPE HANGERS.
2. PROVIDE ELECTROPLATED SOLID-BAND HANGERS SIMILAR TO AUTO-GRIP, FOR TWO-INCH AND SMALLER PIPE.
3. PROVIDE WALL BRACKETS FOR WALL SUPPORTED PIPING AND PROVIDE PIPE SADDLES FOR FLOOR MOUNTED PIPING.
4. PROVIDE SUPPORTS WITH COPPER LINING FOR UNINSULATED COPPER PIPING.
5. SUSPEND PIPING FROM INSERTS, USING BEAM CLAMPS WITH RETAIN CLAMP OR LOCKNUT, STEEL FISHPLATES, CANTILEVER BRACKETS OR OTHER ACCEPTED MEANS. BEAM CLAMPS SHALL BE SIMILAR TO GRINNEL FIGURES 61, 87, 131, OR 225.
6. SUSPEND PIPING BY RODS WITH DOUBLE NUTS.
7. PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND ACCEPTED WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS.
8. SUPPORT BRANCH FIXTURE WATER PIPING IN CHASES WITH COPPER PLATED METAL BRACKETS, SECURED TO STUDS,

E. PROVIDE 180 DEGREE ARC GALVANIZED METAL COVERING SHIELDS ON HANGERS FOR INSULATED PIPING WITHOUT INCOMPRESSIBLE INSULATING BLOCK ON INSULATION AT HANGERS.

F. MAXIMUM HANGER SPACING AS INDICATED.

1. PIPE 1 INCH AND SMALLER SHALL BE EVERY 8 FEET.
2. PIPE 1-1/4 INCH AND LARGER SHALL BE EVERY 10 FEET.
3. COPPER TUBING 1-1/4 INCH AND SMALLER SHALL BE EVERY 6 FEET.
4. COPPER TUBING 1-1/4 INCH AND LARGER SHALL BE EVERY 10 FEET.
5. CAST IRON: EVERY FIVE FEET AND AT EVERY FITTING OR JOINT.

G. VERTICAL PIPING:

1. PROVIDE SPACING AS INDICATED:
   a. THREADED PIPING SHALL BE EVERY OTHER FLOOR LEVEL, AT A MAXIMUM OF 25 FEET ON CENTERS.
   b. CAST IRON PIPING SHALL BE EVERY FLOOR LEVEL, MAXIMUM 20 FEET ON CENTERS; HUBLESS PIPE IS THE EXCEPTION, REQUIRING A MAXIMUM OF 10 FEET ON CENTERS.
   c. TUBING SHALL BE EVERY FLOOR LEVEL MAXIMUM 10 FEET ON CENTERS.

H. EXPANSION ANCHORS:

1. PROVIDE SMOOTH WALL, NON-SELF-DRILLING INTERNAL PLUG EXPANSION TYPE ANCHORS CONSTRUCTED OF AISC 12L14 STEEL AND ZINC PLATED IN ACCORDANCE WITH FED. SPEC. QQ-A-325 TYPE 1, CLASS 3.
2. DO NOT EXCEED 1/4 OF AVERAGE VALVES FOR A SPECIFIC ANCHOR SIZE USING 2000 PSIG (13,800 KPA) CONCRETE ONLY, FOR MAXIMUM WORKING LOADS.
3. PROVIDE SPACING AND INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. EXPANSION ANCHORS SHALL BE U.L. LISTED AND SIMILAR TO HILTI HDI.

12. TESTS:

A. DOMESTIC WATER PIPING:

1. TEST PIPING HYDROSTATICALLY AT A PRESSURE OF 125 PSI.
2. DURATION OF TEST SHALL BE 2 HOURS WITHOUT A LOSS IN PRESSURE.

B. DRAINAGE AND VENT PIPING:

1. CAP ALL OUTLETS AND FILL PIPING SYSTEM TO OVERFLOWING FROM A POINT AT LEAST 10 FEET ABOVE THE FLOOR.
2. THE WATER LEVEL SHALL REMAIN CONSTANT THROUGHOUT THE TEST DURATION OF 2 HOURS.

C. ARRANGE AND COORDINATE TESTS WITH OWNER 48 HOURS IN ADVANCE NOTIFY ENGINEER AND ARCHITECT OF TEST AND DATE TIME.

13. ACCEPTABLE MANUFACTURERS FOR PLUMBING WORK

A. THE FIRST MANUFACTURER LISTED FOR EACH PRODUCT IS THE PROJECT DESIGN BASIS. THE MANUFACTURER'S LISTED AFTER ARE ACCEPTABLE AND "EQUAL TO" PRODUCTS SPECIFIED FOR THIS PROJECT PROVIDED THAT THEY MEET THE REQUIREMENTS OF THE SPECIFICATIONS, RATINGS, SPACE ALLOCATIONS OR SHOWN ON DRAWINGS.

B. PLUMBING FIXTURES:

1. PLUMBING FIXTURES SHALL BE AS SPECIFIED BY ARCHITECT.

C. HANGERS & SUPPORTS:

1. ANVIL INTERNATIONAL
2. B-LINE COPPER INDUSTRIES
3. GRINNELL COMPANY, CO.

D. ESCUTCHEONS:

1. BRASS CRAFT
2. MCQUIRE MFG.
3. OATEY

E. INSULATION:

1. OWENS CORNING
2. CERTAINTEED
3. GRINNELL

F. WATER HAMMER ARRESTORS & SHOCK ABSORBERS:

1. WATTS
2. SIOUX CHIEF
3. JR SMITH CO.

G. VALVES:

1. APOLLO VALVES
2. MILWAUKEE VALVE
3. NIBCO
4. NORDSTROM
5. McDONALD

H. DRAINS, CARRIERS AND SPECIALTIES:

1. ZURN
   WATER CLOSET CARRIERS MATCHING WITH TOILETS FROM TOTO MODEL # CT708EV (G) & CT708E(G) (AS SPECIFIED BY ARCHITECT): Z1201 & Z1202
   URINAL CARRIERS MATCHING WITH URINALS FROM TOTO MODEL #UT104EV (AS SPECIFIED BY ARCHITECT): Z1221 & Z1222
2. JOSAM
3. JR SMITH MFG. CO.

I. PIPING AND FITTINGS (CAST IRON):

1. CHARLOTTE PIPE
2. U.S. PIPE AND FOUNDARY
3. TYLER PIPE CORPORATION

J. PIPING AND FITTINGS (COPPER):

1. MUELLER INDUSTRIES
2. WIELAND COPPER PRODUCTS
3. CAMBRIDGE-LEE INDUSTRIES

K. PIPING AND FITTINGS (STEEL):

1. U.S. PIPE
2. WHEATLAND TUBE
3. AMERICAN-USA PIPE

L. PIPING AND FITTINGS (DUCTILE IRON):

1. U.S. PIPE
2. CLOW PIPE CO.
3. AMERICAN-USA PIPE

M. PIPE SLEEVES & SEALS:

1. ADVANCE PRODUCTS & SYSTEM
2. COOPER INDUSTRIES
3. FLEXICRAFT

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING
SPECIFICATIONS II

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

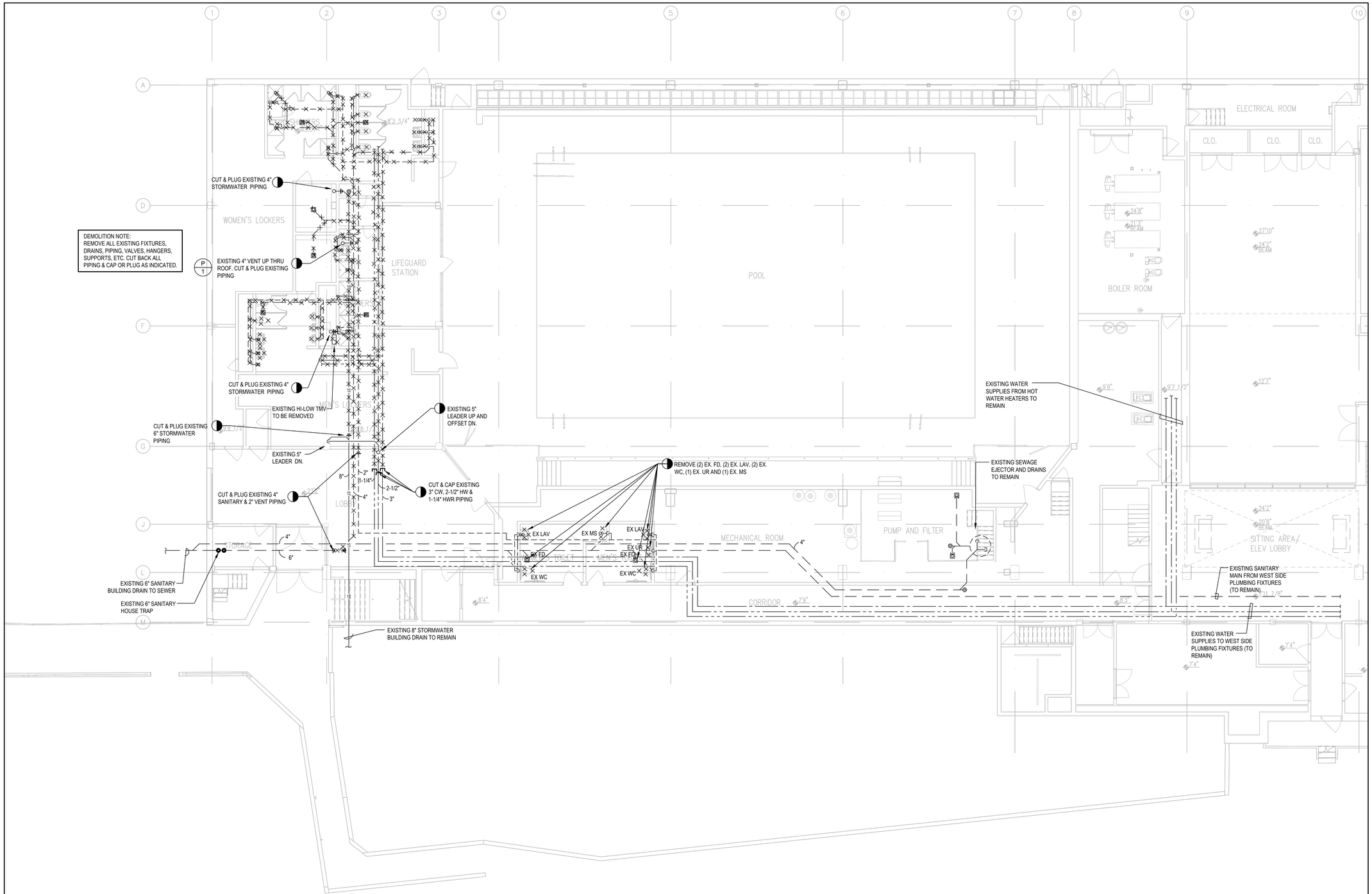
DWG. No. P-003.00

DRAWN BY LC

3 OF 9

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




## 1 P-050.00 PLUMBING FIRST FLOOR WEST - DEMOLITION PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

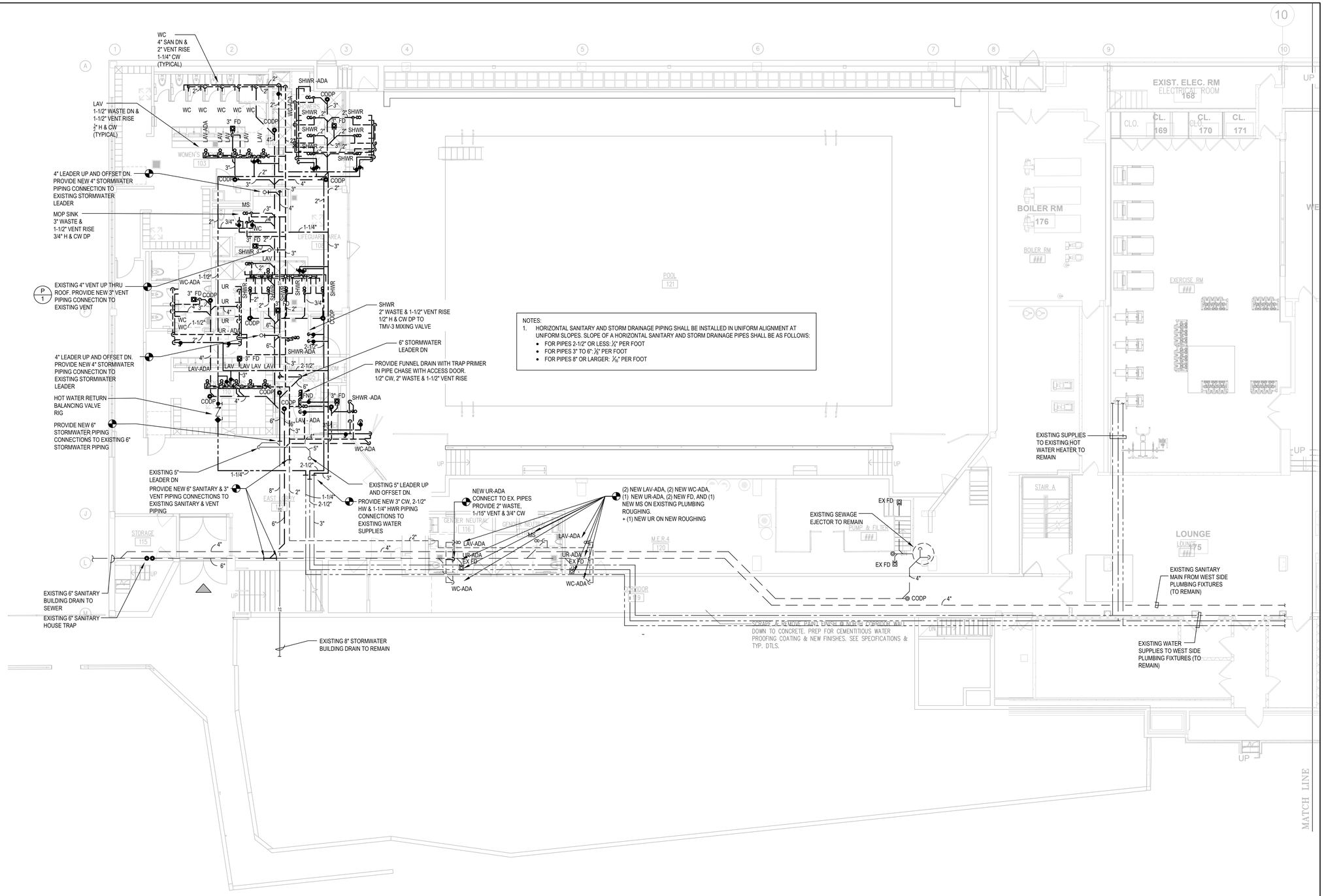
250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING FIRST FLOOR
WEST - DEMOLITION
PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. P-050.00 |
| | DRAWN BY LC |
| | 4 OF 9 |

NYC DOB Number




## 1 P-100.00 PLUMBING FIRST FLOOR EAST PLAN
SCALE: 1/8"=1'-0"

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |


ARCHITECT
Ronnette Riley *Architect*
494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

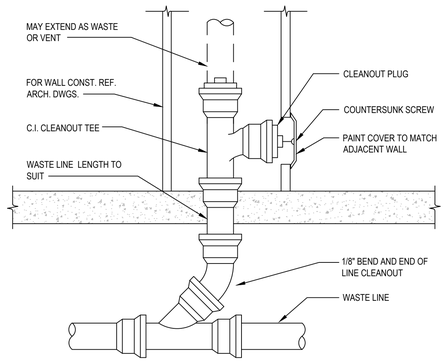
PROJECT
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
250 Main St.
Roosevelt Island, NY
10044

DRAWING
PLUMBING FIRST FLOOR
EAST PLAN

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | P-100.00 |
| | DRAWN BY | LC |
| | | 5 OF 9 |

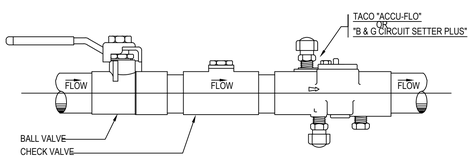
NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.



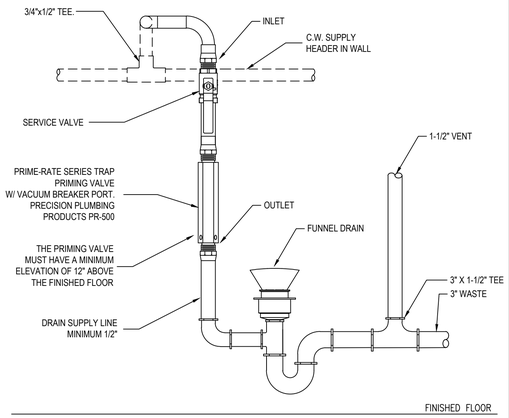

1 TYPICAL WALL CLEANOUT DETAIL

NOT TO SCALE



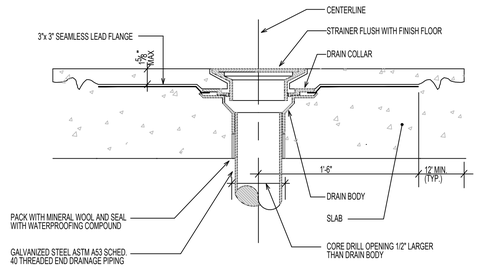

2 HOT WATER RETURN BALANCING VALVE RIG

NOT TO SCALE




3 FUNNEL DRAIN WITH TRAP PRIMER

NOT TO SCALE

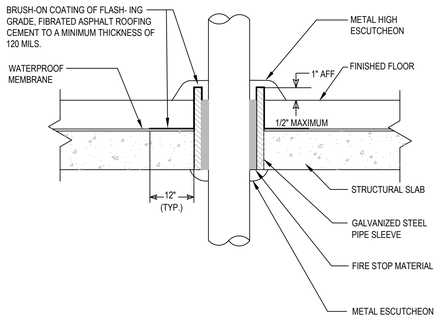



NOTES:

1. WATERPROOF EXISTING FLOOR OF ROOM WHERE FLOOR DRAIN IS TO BE LOCATED USING THOROSEAL SEALANT OR APPROVED EQUAL.

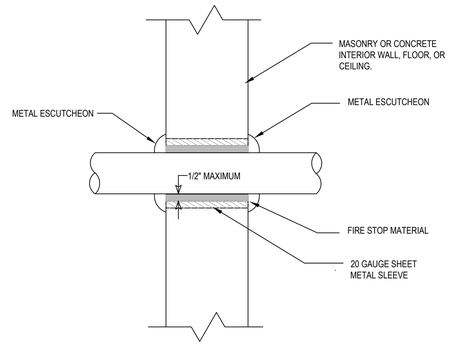
4 TYPICAL FLOOR DRAIN INSTALLATION DETAIL

NOT TO SCALE



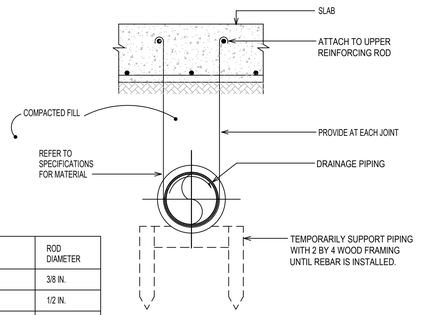

5 PENETRATION THRU WATERPROOFED SLAB

NOT TO SCALE




6 PIPE THRU INTERIOR WALL

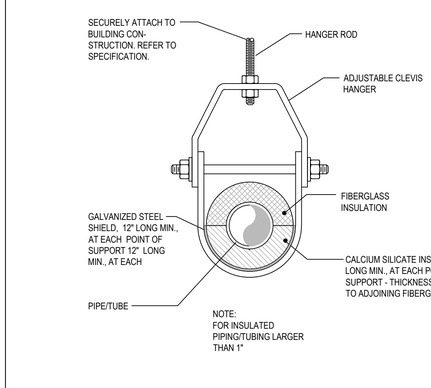
NOT TO SCALE




| PIPE DIAMETER | ROD DIAMETER |
|---|---|
| UP TO 2IN. | 3/8 IN. |
| 2-1/2" - 4IN. | 1/2 IN. |
| 5 AND 6IN. | 5/8 IN. |
| 8 TO 10IN. | 3/4 IN. |
| 12 TO 16IN. | 7/8 IN. |

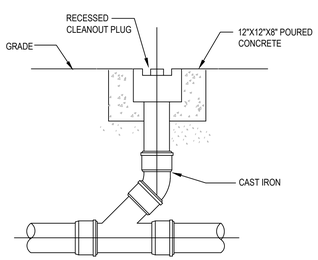
7 UNDERGROUND PIPING SUPPORT BELOW SLAB

NOT TO SCALE



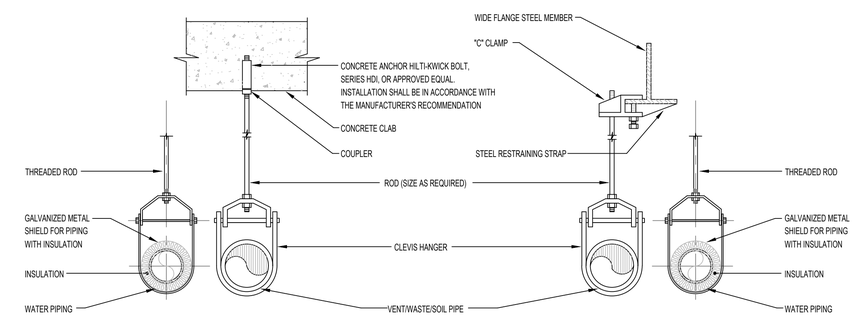

8 ADJUSTABLE CLEVIS PIPE HANGER

NOT TO SCALE




9 CLEANOUT DECK PLATE AT SLAB

NOT TO SCALE

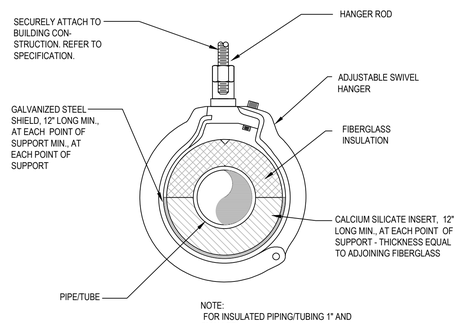



NOTES:

1. CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 1"

10 PIPE HANGER DETAILS

NOT TO SCALE




11 ADJUSTABLE SWIVEL PIPE SUPPORT

NOT TO SCALE

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING DETAILS

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

DWG. No. P-300.00

DRAWN BY LC

6 OF 9

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## VALVE SCHEDULE

| TYPE | PIPE SIZE | PRESS RATE STEAM/WOG | BONNET STEM ASSY | MATERIAL/ BODY STYLE | MILWAUKEE MODEL # |
|---|---|---|---|---|---|
| GATE | 2-1/2" & SMALLER | 125#/200# | UB/NRS | AB/IPS or SE | 105 or 115 |
| GATE | 3" & LARGER | 125#/200# | OS&Y/RS<br>FL/NRS | IBBM/FL<br>IBBM/FL | F2885-M<br>F2882-M |
| GATE | 2-1/2" & SMALLER | 150#/300# | UB/NRS | AB/IPS | 1141 |
| GATE | 3" & LARGER | 250#/500# | OS&Y/RS | IBBM/FL | F-2894 |
| BALL | 2" & SMALLER | 150#/600# | CHROME BALL<br>2 PIECE | AB/IPS | BA-150 |
| BALL | 1" & SMALLER | --- | --- | AB/IPS | McDONALD MFG.<br>FIG 10596 |
| PLUG | 2" & SMALLER | /200# | --- | AB/IPS | NORDSTROM<br>FIG 142 |
| PLUG | 2-1/2" TO 4" | /200# | --- | IBBM | NORDSTROM<br>FIG 115 |
| PLUG | 6" TO 8" | /200# | --- | IBBM | NORDSTROM |
| GLOBE | 2-1/2" & SMALLER | 150#/300# | UB | AB/COMPOSITION DISC | FIG 165<br>590T or |
| CHECK HORIZONTAL SWING | | 125#/200# | SCREWED ENDS<br>SOLDERED ENDS<br>FLANGED ENDS | UP TO 3"<br>UP TO 2"<br>3" & LARGER | 1590T<br>509<br>1509<br>F2974-M |

NOTES: 1. ALL VALVES MILWAUKEE UNLESS OTHERWISE STATED

AB = ALL BRONZE
IBBM = IRON BODY BRONZE MOUNT
RS = RISING STEM
NRS = NON-RISING STEM

UB = UNION BONNET
ISB = INSIDE SCREW
SOB = SCREW OVER BONNET
OS&Y = OUTSIDE SCREW AND YOKE

IPS = IRON PIPE SIZE
FL = FLANGE
SE = SOLDERED/SWEAT ENDS
PIFE = TEFLON

## PLUMBING DRAIN AND SPECIALTIES SCHEDULE

| ID. No. | DESCRIPTION | MANUFACTURER | MODEL No. | SERVICE | REMARKS |
|---|---|---|---|---|---|
| FD | FLOOR DRAIN | J.R. SMITH | 2005 OR APP. EQ. | TLT/SHWR AREAS | CAST IRON, WITH FLASHING COLLAR AND ADJUSTABLE STRAINER AND SLOTTED SEDIMENT BUCKET AND TRAP PRIMER CONNECTION |
| SHWR | SHOWER HEAD FOR SHOWER ROOMS | ZURN | Z7000-16 OR APP. EQ. | SHWR AREAS | SELF-CLEANING BRASS CHROME PLATED SHOWER HEAD, WITH BRONZE BODY INSTITUTIONAL WALL MOUNT WITH HARD CHROME PLATED FINISH, MAXIMUM FLOW RATE 2.5 GPM AT 80 PSI. |
| SHWR | METERING SHOWER CONTROL VALVE | ZURN | Z7130 OR APP. EQ. | SHWR AREAS | DESIGNED FOR TEMPERED WATER SYSTEMS SINGLE PUSH BUTTON ON-OFF CONTROL, WITH ADJUSTABLE METERING FEATURE. |
| ADA SHWR | ADA SHOWER UNIT | ZURN | Z7300-SS-MT-MW-H9 OR APP. EQ. | FAMILY LOCKER ROOM | SINGLE HANDLE PRESSURE BALANCING MIXING TUB AND SHOWER UNIT. ALL EXPOSED TRIM AND HANDLE ARE METAL WITH POLISHED NICKEL CHROME PLATED SURFACE. VALVE SUPPLIED WITH 1.6 GPM @ 80 PSI HAND/WALL UNIT, 60" FLEXIBLE METAL HOSE 24" MOUNTING BAR, SUPPLY ELBOW AND FLANGE. |
| CODP | CLEANOUT DECK PLATE | J.R. SMITH | 4020 OR APP. EQ. | U/G MAINS | DUCO CAST IRON WITH ROUND ADJUSTABLE SCORIATED NICKEL BRONZE TOP. VANDAL PROOF. |
| | | | 4240 OR APP. EQ. | U/G MAINS | DUCO CAST IRON WITH ROUND ADJUSTABLE SCORIATED NICKEL BRONZE TOP. VANDAL PROOF. USE IN PARKING AREA ONLY |
| WCO | WALL CLEANOUT | J.R. SMITH | 4402 OR APP. EQ. | TLT AREAS | DUCO CAST IRON WITH ROUND ADJUSTABLE SCORIATED NICKEL BRONZE TOP. VANDAL PROOF. |

## PIPING MATERIALS SCHEDULE

| PIPING SYSTEM | PIPE MATERIAL | FITTINGS | JOINTS | WORKING PSI |
|---|---|---|---|---|
| SANITARY ABOVE GROUND | HUBLESS CAST IRON | HUBLESS CAST IRON - PLAIN END | C.I.S.P.I. STAINLESS STEEL BAND CLAMP WITH NEOPRENE GASKET | 10 FEET STATIC HEAD |
| SANITARY UNDERGROUND | SERVICE HEAVY CAST IRON | SERVICE HEAVY CAST IRON HUB & SPIGOT | NEOPRENE COMPRESSION GASKET TO ASTM 564 | 10 FEET STATIC HEAD |
| STORM ABOVE GROUND | 3" & SMALLER HUBLESS CAST IRON | HUBLESS CAST IRON - PLAIN 3" & SMALLER | WITH NEOPRENE GASKET 3" & SMALLER C.I.S.P.I. STAINLESS STEEL BAND CLAMP | 10 FEET STATIC HEAD |
| | 4" & LARGER SERVICE WEIGHT CAST IRON | 4" OR LARGER SERVICE WEIGHT CAST IRON HUB & SPIGOT | CAULKED LEAD & OAKUM 4" & LARGER PUSH ON NEOPRENE GASKET, OR | |
| STORM UNDERGROUND | SERVICE WEIGHT CAST IRON | SERVICE WEIGHT CAST IRON HUB & SPIGOT | NEOPRENE COMPRESSION GASKET TO ASTM 564 | 10 FEET STATIC HEAD |
| DOMESTIC COLD WATER UNDERGROUND | IRON CLASS 52 CEMENT LINED DUCTILE | CLASS 52 WITH MECHANICAL CEMENT LINED DUCTILE IRON JOINT ENDS (AWWA STD.) | JOINTS WITH NEOPRENE "O" RING GASKET AWWA STANDARD BOLT ON MECHANICAL | 125 PSIG. HYDROSTATIC |
| DOMESTIC COLD WATER ABOVE GROUND | COPPER TUBING TYPE "L" HARD DRAWN | WROT COPPER WITH SWEAT SOLDER ENDS | 95 % TIN- 5% ANTIMONY SOLDER | 125 PSIG. HYDROSTATIC |
| DOMESTIC HOT WATER & HOT WATER RECIRCULATION | COPPER TUBING TYPE "L" HARD DRAWN | WROT COPPER WITH SWEAT SOLDER ENDS | 95 % TIN- 5% ANTIMONY SOLDER | 125 PSIG. HYDROSTATIC |

NOTES:

1. EXTRA HEAVY CAST IRON SHALL BE USED FOR THE FOLLOWING PIPING INSTALLATIONS:
   A) ALL EXPOSED AREAS UNLESS OTHERWISE INDICTED.
   B) FOR SANITARY AND STORM WATER HOUSE DRAINS.
2. ALL SANITARY/STORM PIPES AND FITTINGS SHALL BE APPROVED TO CIPSI (BEARING THE CIPSI TRADEMARK) & LISTED BY NSF INTERNATIONAL REQUIREMENTS. NO-HUB COUPLINGS SHALL CONFORM TO ASTM C564 AND ASTM A240 AS WELL AS MEET ALL CISPI 310 SPECIFICATIONS.
3. ALL SANITARY/STORM PIPES FROM EJECTOR/STORM SUMP PUMPS SHALL BE THREADED JOINTS AND TESTED TO PRESSURE CAPACITY OF PUMP.

## SLEEVE SCHEDULE

| STORM, SANITARY, GAS & F.S.P (UNINSULATED) THROUGH FLOORS & WALLS | STORM, SANITARY, GAS & F.S.P (UNINSULATED) THROUGH BEAMS | WATER PIPING (INSULATED) |
|---|---|---|
| 1-1/2" - 3" SLEEVE | 1-1/2" - 3" OPENING | 1/2" & 3/4" - 3" SLEEVE |
| 2" - 4" SLEEVE | 2" - 3-1/2" OPENING | 1" - 4" SLEEVE |
| 2-1/2" - 4" SLEEVE | 2-1/2" - 4" OPENING | 1-1/4" - 4" SLEEVE |
| 3" - 5" SLEEVE | 3" - 4-1/2" OPENING | 1-1/2" - 4" SLEEVE |
| 4" - 6" SLEEVE | 4" - 5-1/2" OPENING | 2" & 2-1/2" - 5" SLEEVE |
| 5" - 8" SLEEVE | 5" - 6-1/2" OPENING | 3" - 6" SLEEVE |
| 6" - 8" SLEEVE | 6" - 7-1/2" OPENING | 4" - 8" SLEEVE |
| 8" - 10" SLEEVE | 8" - 9-1/2" OPENING | 5" - 8" SLEEVE |
| 10" - 12" SLEEVE | 10" - 11-1/2" OPENING | 6" - 10" SLEEVE |
| 12" - 15" SLEEVE | 12" - 13-1/2" OPENING | 8" - 12" SLEEVE |
| 15" - 18" SLEEVE | 15" - 16-1/2" OPENING | 10" - 15" SLEEVE |

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING SCHEDULES

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

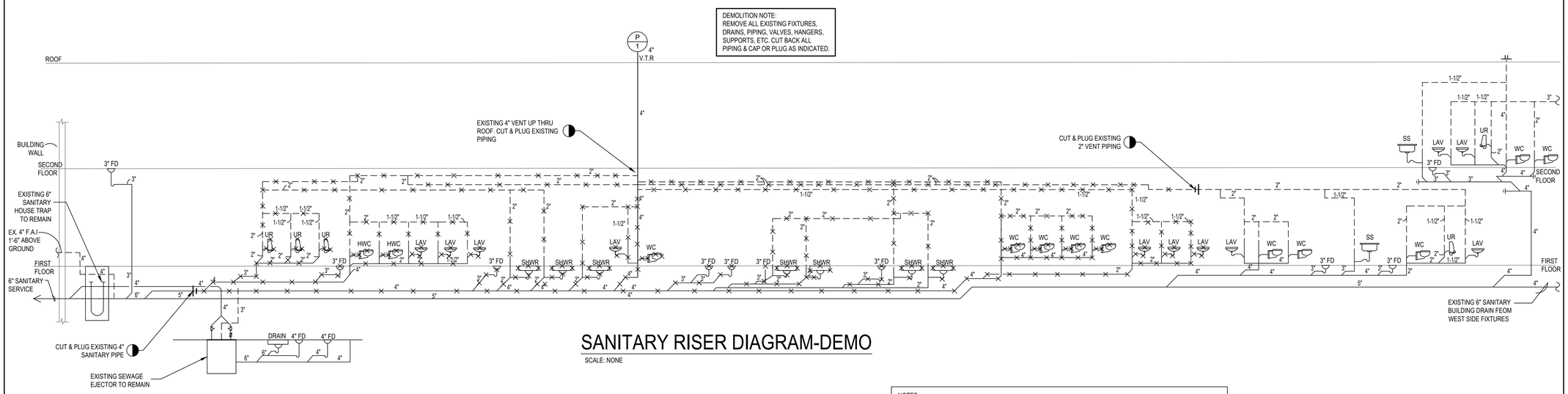
DWG. No. P-400.00

DRAWN BY LC

7 OF 9

NYC DOB Number

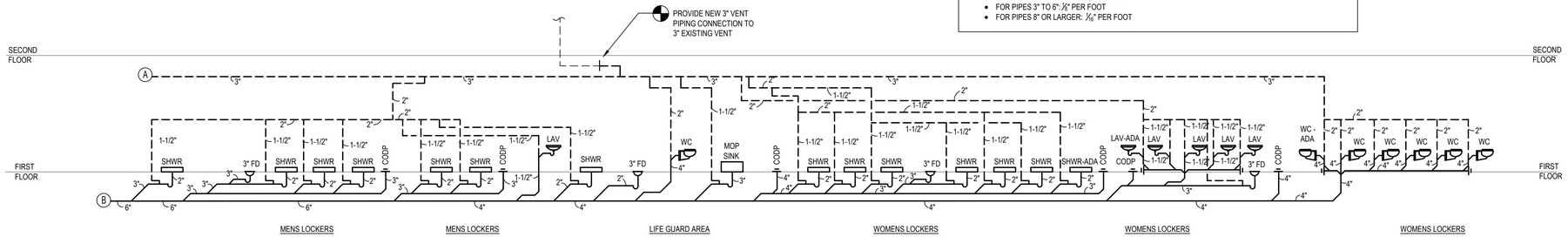

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

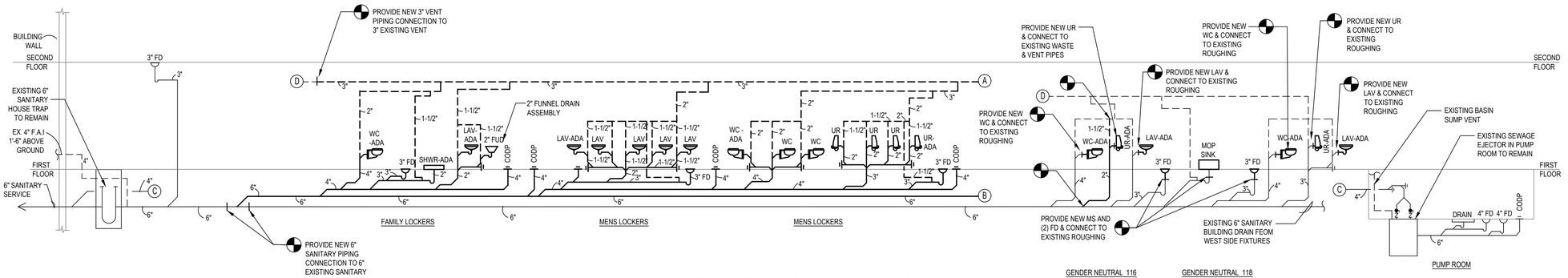



# SANITARY RISER DIAGRAM-DEMO

SCALE: NONE

NOTES:
1. HORIZONTAL SANITARY AND STORM DRAINAGE PIPING SHALL BE INSTALLED IN UNIFORM ALIGNMENT AT UNIFORM SLOPES. SLOPE OF A HORIZONTAL SANITARY AND STORM DRAINAGE PIPES SHALL BE AS FOLLOWS:
   - FOR PIPES 2-1/2" OR LESS: ¼" PER FOOT
   - FOR PIPES 3" TO 6": ½" PER FOOT
   - FOR PIPES 8" OR LARGER: ⅛" PER FOOT




# SANITARY RISER DIAGRAM-NEW WORK

SCALE: NONE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

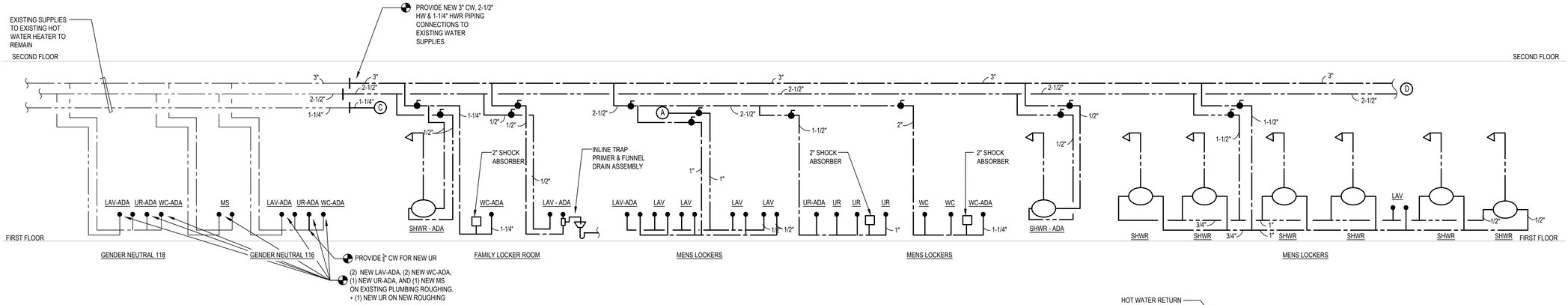
250 Main St.
Roosevelt Island, NY
10044

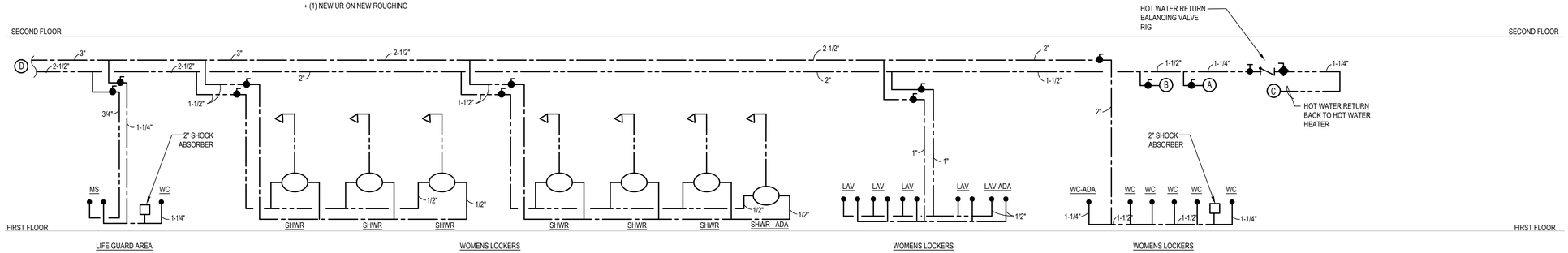
DRAWING

PLUMBING RISER DIAGRAM I

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | P-500.00 |
| | DRAWN BY LC | 8 OF 9 |

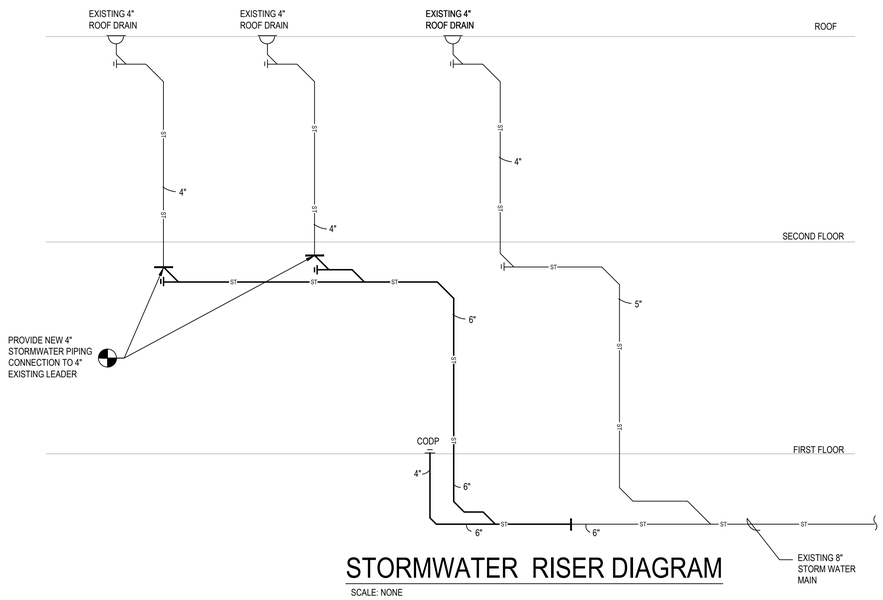
NYC DOB Number




## DOMESTIC WATER RISER DIAGRAM

SCALE: NONE




## STORMWATER RISER DIAGRAM

SCALE: NONE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING RISER DIAGRAM II

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. P-501.00
DRAWN BY LC
9 OF 9

NYC DOB Number

## FIRE ALARM SPECIFICATIONS:

1. CONTRACTOR SHALL CONTACT BUILDING FA VENDOR TO ESTABLISH ALL REQUIREMENTS OF THE INSTALLATION AND TO FIELD VERIFY EXISTING INSTALLATION. CONTRACTOR SHALL INCLUDE IN HIS BID ALL WORK FOR A COMPLETE AND CODE APPROVED SYSTEM.

2. FURNISH AND INSTALL AN ELECTRICALLY SUPERVISED MANUAL AND AUTOMATIC FIRE ALARM SYSTEM TO SERVICE THE PREMISES.

3. CONTRACTOR SHALL INCLUDE IN HIS BID ALL WORK FOR A COMPLETE AND CODE APPROVED SYSTEM.

4. THE FIRE ALARM SYSTEM SHALL BE IN COMPLIANCE WITH THE CURRENT CODES AND ADA GUIDELINES AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   A. STROBE LIGHTS, HORNS, AND COMBINATION HORNS/STROBE UNITS.
   B. MANUAL PULL STATIONS.
   C. AREA SMOKE DETECTORS.
   D. DUCT SMOKE DETECTORS FOR AC UNITS EXCEEDING 2000 CFM.
   E. SHUT DOWN CONTROLS FOR DAMPERS AND AC UNITS WITH DUCT SMOKE DETECTORS.

5. ALL NEW FIRE ALARM SYSTEM DEVICES, WIRING AND INSTALLATION SHALL BE COMPATIBLE WITH ALL APPLICABLE CODES.

6. WIRING-FIRE ALARM CABLES SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. A MINIMUM TEMPERATURE RATING OF 150 DEGREES CELSIUS.
   B. A MINIMUM AVERAGE INSULATION THICKNESS OF 15 MILS.
   C. A MINIMUM AVERAGE JACKET THICKNESS OF 25 MILS.
   D. THE COLOR OF THE CABLE SHALL BE RED.
   E. THE CABLE SHALL BE A TYPE FPLP (PLENUM TYPE).
   F. FIRE ALARM CABLES SHALL BE EXTERNALLY MARKED AS FOLLOWS AS REQUIRED BY UNDERWRITERS LABORATORIES: COMPANY NAME, "TYPE FPLP", SIZE (AWG), TEMPERATURE RATING, THE UL REGISTERED TRADEMARK, AND CERTIFIED FIRE ALARM CABLE"

7. ALL WIRING SHALL BE PROTECTED AGAINST MECHANICAL DAMAGE. ALL CABLES SHALL BE RUN IN RACEWAYS IN OPEN SHAFTS, STAIRWAYS, MECHANICAL ROOMS AND EXTREME TEMPERATURE AND HAZARDOUS LOCATIONS.

8. INSTALLATION:
   8.1. INSTALL THE FIRE ALARM SYSTEM IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND APPLICABLE STANDARDS AND REGULATIONS.
   A. THE SYSTEM SHALL BE PROVIDED COMPLETE WITH ALL OUTLET/JUNCTION BOXES, POWER SUPPLIES, RELAYS, CABINETS, ETC., REGARDLESS OF WHETHER OR NOT SUCH ITEMS ARE FURNISH AS INTEGRAL PARTS OF THE EQUIPMENT.
   B. ALL DEVICES SHALL BE FLUSH MOUNTED, WHERE WALL DEPTH IS NOT ADEQUATE, DEVICES SHALL BE SEMI-FLUSH MOUNTED WITH AN EXTENSION COLLAR TO MATCH THE FINISH PLATE. SURFACE DEVICES WITH FINISHED BOXES SHALL BE PROVIDED UPON ARCHITECT APPROVAL.
   C. GENERAL LOCATION OF DEVICES:
   D. PULL STATIONS — 48" AFF
   E. STROBE LIGHT AND COMBINATION HORNS/STROBE LIGHTS — 80"AFF OR 6" BELOW CEILING WHICHEVER IS LOWER.
   F. CEILING MOUNTED DEVICES UPON ARCHITECT APPROVAL.
   G. SMOKE DETECTORS: ON CEILING
   H. FLAT CEILINGS ON CEILING
   I. OPEN SLAB ON SLAB
   J. COORDINATE WITH ARCHITECT EXACT LOCATION AND COLOR OF ALL DEVICES ON PLAN PRIOR TO ROUGH-IN.

10. SUBMITTALS.
   10.1. FIRE ALARM VENDOR APPROVED CATALOG CUTS ARE REQUIRED FOR THE FOLLOWING:
   A. STROBE LIGHTS, COMBINATION STROBE LIGHT AND HORN/STROBE.
   B. PULL STATIONS.
   C. SMOKE DETECTORS, HEAT DETECTORS, DUCT DETECTORS.
   D. COMPONENTS AND WIRING DETAILS FOR FIRE CONTROL EQUIPMENT FOR FAN SHUTDOWN AND SMOKE CONTROL FUNCTIONS. DOOR RELEASES, ELEVATOR RECALL, ETC.
   E. FIRE ALARM VENDOR RISER DIAGRAM INDICATING ALL FIRE ALARM DEVICES.
   F. FIRE ALARM CONTROL PANEL.

12. ALLOWANCE.
   12.1. CONTRACTOR SHALL INCLUDE IN HIS BID AN ALLOWANCE BASED ON UNIT PRICING TO FURNISH AND INSTALL 5 PERCENT ADDITIONAL DEVICES BY TYPE (MINIMUM 5). ANY PORTION OF THE ALLOWANCE NOT USED AFTER FINAL ACCEPTANCE OF THE SYSTEM SHALL BE CREDITED TO THE OWNER OR TURNOVER TO THE OWNER IN THE ORIGINAL CARTONS.

13. FILING AND FEES.
   A. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND BE RESPONSIBLE FOR ALL INSPECTIONS, TESTING, SUPERVISION AND FILING REQUIRED FOR THE SYSTEM. CONTRACTOR SHALL ARRANGE FOR AND PAY ALL FEES REQUIRED TO PERFORM FIRE DEPARTMENT TESTS AND OBTAIN FIRE DEPARTMENT APPROVALS.
   B. COORDINATE AND PAY ALL COSTS AND FEES ASSOCIATED WITH SOFTWARE REPROGRAMMING, CONNECTIONS TO THE FIRE ALARM SYSTEM AND TESTING.
   C. FIRE ALARM PLANS SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS AND THE FIRE DEPARTMENT UNDER A SEPARATE PW-1 ALT. II APPLICATION AS AN "INSTALLATION OF MANUAL & AUTOMATIC FIRE ALARM SYSTEM WITH SMOKE/SPRINKLER DETECTION AND CENTRAL OFFICE CONNECTION".
   D. FIRE ALARM PLANS SHALL BE APPROVED BY THE FIRE DEPARTMENT PLAN EXAMINER AND A PLAN APPROVAL BE PROVIDED TO THE BUILDING MANAGER.
   E. THE EXPEDITER SHALL VERIFY THAT PLAN APPROVAL ENTRY WAS MADE INTO THE DEPARTMENT OF BUILDINGS COMPUTER SYSTEM BIS AS "PERMIT ENTRIES".
   F. ALL LINE VOLTAGE ELECTRICAL WORK ASSOCIATED WITH THE FIRE ALARM SYSTEM (IF APPLICABLE) SHALL BE FILED FOR WITH THE BUREAU OF ELECTRICAL CONTROL (FORM 16A).
   G. UPON COMPLETION OF THE INSTALLATION, THE CLASS E SYSTEM SHALL BE 100% PRE-TESTED BY THE FIRE ALARM VENDOR AND THE LICENSED ELECTRICAL CONTRACTOR.
   H. IN ACCORDANCE WITH NEW DEPARTMENT OF BUILDINGS AND FIRE DEPARTMENT PROCEDURES, AS-BUILT FIRE ALARM DRAWINGS SHALL BE PREPARED, SIGNED AND SEALED BY THE ENGINEER-OF-RECORD.
   I. A FULLY OPERATIONAL FIRE ALARM SYSTEM SHALL BE THEN INSPECTED BY THE FA VENDOR PRIOR TO THE FIRE DEPARTMENT INSPECTION (NEW PROFESSIONAL CERTIFICATION PROCEDURE EFFECTIVE 12/1/2009).
   J. UPON SATISFACTORY COMPLETION OF THE TESTING, FA VENDOR WILL ISSUE PROPER FORMS AND APPLICATIONS TO THE FIRE DEPARTMENT. PAY A $210.00 PROFESSIONAL CERTIFICATION REVIEW FEE. ENGINEER OF RECORD WILL SIGN AND SEAL AS-BUILT PLANS.
   K. UPON REVIEW OF THE DOCUMENTS SUBMITTED FA VENDOR, FIRE DEPARTMENT WILL ISSUE A LETTER OF APPROVAL, WHICH WILL BE ELECTRONICALLY TRANSMITTED TO THE DEPARTMENT OF BUILDINGS BIS SYSTEM. AT THAT POINT, DEPARTMENT OF BUILDINGS WILL CLOSE OUT THE OPEN APPLICATION.
   L. BUILDINGS DEPARTMENT LETTER OF COMPLETION FOR THE FIRE ALARM APPLICATION SHALL BE POSTED ON THE DOB WEB SITE.
   M. IF THE APPLICATION IS NOT CLOSED OUT WITHIN 1 YEAR FROM THE INITIAL FILING DATE, THE TENANT WILL BE RESPONSIBLE FOR THE DOB FOLDER REINSTATEMENT AND ASSOCIATED COSTS.

15. SERVICE AND REPAIR.
   A. THE CONTRACTOR SHALL PROVIDE COMPLETE SERVICE INCLUDING ALL LABOR AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE AND COMPLETION OF WORK AT NO ADDITIONAL COST TO OWNER.
   B. CERTIFICATION THAT THE ENTIRE SYSTEM HAVE BEEN INSPECTED, TESTED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS, MANUFACTURER RECOMMENDATIONS AND ULI LISTINGS AND ARE IN PROPER WORKING ORDER. CONTRACTOR SHALL USE "FIRE ALARM SYSTEM CERTIFICATION AND DESCRIPTION AS REQUIRED BY NFPA 72.

16. EQUIPMENT OPERATION INSTRUCTIONS:
   16.1. UNIT MANUFACTURER SHALL PROVIDE 16 HOURS OF TRAINING FOR THE USE AND OPERATION OF ALL THE FIRE ALARM EQUIPMENT SHOWN ON THE FIRE ALARM DRAWINGS.

### FIRE ALARM CIRCUIT CLASS AND STYLE

1. FIRE ALARM CIRCUITS SHALL BE WIRED USING NFPA CLASS B STYLE. ANY FIRE ALARM NETWORK CIRCUIT SHALL USE NFPA CLASS X STYLE. ALL AUDIBLE AND VISUAL CIRCUITS SHALL BE CLASS B AND NYC SPLIT A/B. SPLIT A/B CIRCUITS SHALL BE WIRED SO THAT EVERY OTHER DEVICE IS WIRED ON AN ALTERNATE CIRCUIT.

### FIRE ALARM DRAWING LIST

| DRAWING NO. | DRAWING TITLE |
|---|---|
| 1 FA-001.00 | FIRE ALARM NOTES, SYMBOLS, AND ABBREVIATIONS |
| 2 FA-100.00 | FIRE ALARM LOWER EAST FLOOR PLAN |
| 3 FA-102.00 | FIRE ALARM UPPER EAST FLOOR PLAN |
| 4 FA-500.00 | FIRE ALARM RISER DIAGRAM |

## FIRE ALARM SCOPE OF WORK:

1. THESE PLANS AND SPECIFICATIONS ARE FOR A MODIFICATION TO THE EXISTING BASE BUILDING FIRE ALARM SYSTEM AND DEVICES TO SERVE THE AREA OF WORK.

2. THE FOLLOWING SCOPE OF WORK SHALL BE PERFORMED:
   A. PROVIDE AND INSTALL NEW WIRING AND DEVICES TO SERVE THE PREMISES.
   B. PROGRAM EXISTING PANEL OBTAIN SIGN-OFF FROM ALL AGENCIES, DOB, AND FDNY.
   C. SUBMIT THE PROPER CLOSE-OUT DOCUMENTS FOR OWNER RECORDS.

3. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE, FIRE DEPARTMENT RULES AND REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND THE BEST TRADE PRACTICES.

4. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED INSURANCE CERTIFICATES WITH THE DEPARTMENT OF BUILDINGS. OBTAIN ALL REQUIRED PERMITS, AND PAY ALL FEES REQUIRED BY THE GOVERNING NEW YORK CITY AGENCIES.

5. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT REQUIRED FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED IN THE DRAWINGS.

6. THE CONTRACTOR SHALL COORDINATE ALL WORK PROCEDURES WITH THE STIPULATIONS OF LOCAL AUTHORITIES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREA. THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR ALL STRUCTURAL OR REMOVAL TASKS. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR DAMAGE OR INJURIES CAUSED BY OR DURING THE EXECUTION OF THE WORK.

8. THE CONTRACTOR SHALL LAY OUT HIS WORK, AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER TRADES: FIRE ALARM, ELECTRICAL, ETC.

9. FIRE ALARM WORK SHALL BE PERFORMED BY PERSONS LICENSED IN THEIR TRADES, WHO SHALL ARRANGE FOR AND OBTAIN THROUGH THE DEPARTMENT OF BUILDINGS ALL REQUIRED PERMITS, INSPECTIONS AND REQUIRED SIGN OFFS.

10. ELECTRICAL WORK SHALL BE PERFORMED BY PERSONS LICENSED IN THEIR TRADES, WHO SHALL ARRANGE FOR AND OBTAIN THROUGH THE BUREAU OF ELECTRICAL CONTROL ALL REQUIRES PERMITS, INSPECTIONS AND REQUIRES SIGN OFFS.

11. THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING, REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO COMPLETE THE JOB.

12. ALL CONDUIT TO BE ABANDONED SHALL BE REMOVED TO A POINT OF CONCEALMENT AND SHALL BE PROPERLY CAPPED OR PLUGGED. ALL UNUSED WIRING SHALL BE REMOVED.

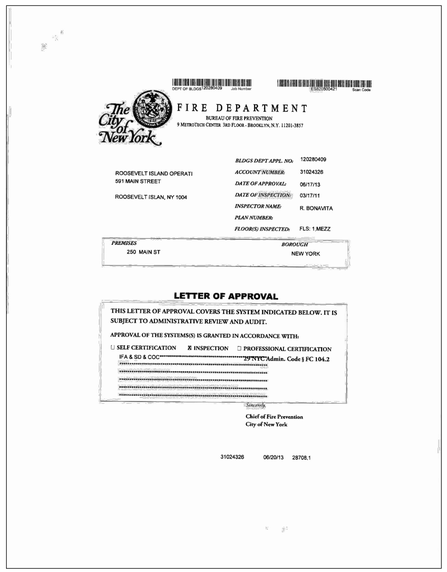
13. ALL RACEWAY WIRING SHALL BE CONCEALED. OBTAIN OWNER PERMISSION FOR EXPOSED RACEWAY/WIRING LOCATIONS.

14. INSTALLATION WILL COMPLY WITH 2014 NYC BUILDING CODE. ELECTRICAL WORK SHALL COMPLY WITH NFPA 70.

| ROOM SPACING FOR CEILING MOUNTED VISIBLE APPLIANCES | | |
|---|---|---|
| MAXIMUM ROOM SIZE | MAXIMUM LENS HEIGHT | MINIMUM REQUIRED LIGHT OUTPUT (cd) |
| 20 X 20 | 10 | 15 |
| 30 X 30 | 10 | 30 |
| 40 X 40 | 10 | 60 |
| 44 X 44 | 10 | 75 |
| BASED ON TABLE 18.5.5.4.1(b) NFPA 72 | | |

| DESIGN CRITERIA FOR AUDIBLE NOTIFICATION DEVICES | | |
|---|---|---|
| AUDIBLE NOTIFICATION DEVICES - DESIGN CRITERIA | AMBIENT LEVEL | DESIGN GOAL |
| BUSINESS OCCUPANCIES | 55DBA | > 70DBA |
| CORRIDORS | 55DBA | > 70DBA |
| MECHANICAL ROOMS | 85DBA | >100DBA |
| BASED ON TABLE A.18.4.3 OF NFPA 72 | | |

FDNY LETTER OF APPROVAL



The City of New York
FIRE DEPARTMENT
BUREAU OF FIRE PREVENTION
9 METROTECH CENTER 3RD FLOOR - BROOKLYN, N.Y. 11201-3857

ROOSEVELT ISLAND OPERATI
501 MAIN STREET
ROOSEVELT ISLAND, NY 1004

BLDG'S DEPT APPL. NO.: 120280409
ACCOUNT NUMBER: 31024326
DATE OF APPROVAL: 06/17/13
DATE OF INSPECTION: 03/17/11
INSPECTOR NAME: R. BONAVITA
PLAN NUMBER:
FLOORS INSPECTED: FLS: 1 MEZZ

PREMISES: 250 MAIN ST
BOROUGH: NEW YORK

LETTER OF APPROVAL

THIS LETTER OF APPROVAL COVERS THE SYSTEM INDICATED BELOW. IT IS SUBJECT TO ADMINISTRATIVE REVIEW AND AUDIT.

APPROVAL OF THE SYSTEM(S) IS GRANTED IN ACCORDANCE WITH:

☐ SELF CERTIFICATION ☒ INSPECTION ☐ PROFESSIONAL CERTIFICATION

FA & SD & CO ..... 28 NYCAdmin. Code § FC 104.2

Sincerely,
Chief of Fire Prevention
City of New York

31024326 06/20/13 28708.1

## TENANT SAFETY NOTES:

1. THIS BUILDING IS CURRENTLY OCCUPIED AND WILL REMAIN OCCUPIED DURING CONSTRUCTION. CONTRACTOR SHALL SAFEGUARD THE SAFETY AND HEALTH OF THE OCCUPANTS DURING CONSTRUCTION.
2. GENERAL: ALL WORK TO BE COMPLETED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE, ARTICLE 19, NEW YORK CITY HOUSING MAINTENANCE CODE, NEW YORK STATE MULTIPLE DWELLING LAW, AND REGULATIONS OF ALL OTHER AGENCIES HAVING JURISDICTION.
3. MEANS OF EGRESS: ALL EXISTING MEANS OF EGRESS FOR TENANTS OF THE BUILDING TO BE MAINTAINED CLEAR AND FREE OF ALL OBSTRUCTIONS SUCH AS BUILDING MATERIALS, TOOLS, ETC.
4. FIRE SAFETY:
   a) FIRE-RATED ASSEMBLIES AND ENCLOSURES SHALL BE MAINTAINED AT ALL TIMES.
   b) ALL BUILDING MATERIALS WHICH ARE STORED AT THE SITE OR ANY AREA OF THE BUILDING ARE TO BE STORED IN A LOCKED AREA. ACCESS TO THE AREA IS TO BE CONTROLLED BY THE OWNER.
   c) ALL MATERIALS TO BE STORED IN AN ORDERLY FASHION.
   d) ALL FLAMMABLE MATERIALS TO BE USED AND STORED IN AN ADEQUATELY VENTILATED SPACE.
   e) ALL FLAMMABLE MATERIALS TO BE KEPT TIGHTLY SEALED IN THEIR RESPECTIVE MANUFACTURER'S CONTAINERS. SUCH MATERIALS ARE TO BE KEPT AWAY FROM HEAT.
   f) ALL ELECTRICAL POWER TO BE SHUT OFF IN THE IMMEDIATE CONSTRUCTION AREA WHERE THERE ARE EXPOSED CONDUITS.
   g) ALL ELECTRICAL POWER IN THE CONSTRUCTION AREA TO BE SHUT OFF AFTER WORKING HOURS.
   h) CONTRACTOR AT ALL TIMES TO ENSURE THAT THERE IS NO NATURAL GAS LEAKAGE IN THE BUILDING, OR ANY FLAMMABLE GAS TO BE USED DURING CONSTRUCTION.
5. DUST CONTROL:
   a) DEBRIS, DIRT, AND DUST TO BE KEPT TO A MINIMUM AND CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
   b) THE CONTRACTOR SHALL PROVIDE TEMPORARY DOORS, PARTITIONS, BARRICADES AND POLYETHYLENE SHEETING AS NECESSARY TO PROTECT AND SEPARATE ANY OCCUPIED AREAS OF WORK. DUST PARTITIONS SHALL BE INSTALLED BY THE GENERAL CONTRACTOR IN ACCORDANCE WITH FIRE PROTECTION AND EGRESS REQUIREMENTS AND IN COMPLIANCE WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. DUST PARTITIONS ARE NOT TO BE REMOVED UNTIL ALL FINISH WORK IS COMPLETED OR APPROVAL IS GRANTED BY THE OWNER.
   c) DEBRIS, DIRT AND DUST TO BE CLEANED UP AND CLEARED FROM THE BUILDING SITE PERIODICALLY TO AVOID EXCESSIVE ACCUMULATION.
   d) CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS MATERIALS.
6. HEALTH REQUIREMENTS: SITE SHALL BE KEPT CLEAN TO MAINTAIN PEST CONTROL AND SANITARY CONDITIONS.
7. NOISE AFTER HOURS:
   a) CONSTRUCTION OPERATION WILL BE CONFINED TO NORMAL WORKING HOURS: 7:30 AM TO 5:00 PM, MONDAY TO FRIDAY, EXCEPT LEGAL HOLIDAYS.
   b) CONTRACTOR MUST OBTAIN WRITTEN PERMISSION FROM ALL AFFECTED PARTIES AND THE CITY/BUILDING MANAGEMENT TO WORK OTHER THAN REGULAR HOURS.
   c) WHERE HOURS OF THE DAY OR DAYS OF THE WEEK IN WHICH CONSTRUCTION WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE NEW YORK CITY NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE MAINTAINED BY THE CONTRACTOR.
   d) CONTRACTOR SHALL INCLUDE IN HIS BID AN ALLOWANCE TO PERFORM WORK AFTER HOURS PERTAINING TO EXCESSIVE NOISE FOR DRILLING, CHOPPING, HAMMERING, ETC. LIST DOLLAR VALUE IN BID OF HOURS BEYOND CONTRACT. OBTAIN BUILDING APPROVAL PRIOR TO PERFORMING SUCH OVERTIME WORK.
8. STRUCTURAL SAFETY: NO STRUCTURAL ELEMENTS SHALL BE REMOVED UNLESS PORTIONS AFFECTED ARE ADEQUATELY SUPPORTED BY EITHER TEMPORARY SHORING OR NEW STRUCTURAL ELEMENTS AS REQUIRED TO PROTECT THE STABILITY AND INTEGRITY OF THE EXISTING STRUCTURE.
9. CONSTRUCTION OPERATIONS WILL NOT INVOLVE INTERRUPTION OF HEATING, WATER OR ELECTRICAL OR OTHER BUILDING SERVICES TO OTHER TENANTS WITHOUT WRITTEN PERMISSION FROM AFFECTED PARTIES.

## SPECIAL NOTES:

1. COORDINATE AND PURCHASE ALL WORK AND WIRING REQUIREMENTS WITH FIRE ALARM VENDOR FOR FINAL CONNECTIONS AND MODIFICATIONS REQUIRED TO THE BUILDING'S CLASS 'E' FIRE ALARM SYSTEM TO ACCOMMODATE NEW DEVICES.
   VENDOR: JOHNSON CONTROLS
   CONTACT: KEVIN BERLINGER (212)372-4236
2. MAINTAIN EXISTING DEVICES DURING CONSTRUCTION. REMOVE ABANDONED DEVICES WHEN NEW DEVICES ARE IN OPERATION. RE-INSTALL EXISTING TEMPORARILY HUNG DEVICES TO WALL AS DIRECTED BY THE ARCHITECT. REMOVE WIRING NOT IN USE.
3. ALL WIRING TO F.A. DEVICES SHALL BE TEFLON COATED APPROVED FOR FIRE ALARM SYSTEM. RUN #14 AWG MINIMUM EXPOSED IN ACCESSIBLE CEILING AREA. OTHERWISE RUN IN 3/4" EMT CONDUIT.
4. ALL SYSTEM WIRING AND SEQUENCE OF OPERATION SHALL BE IN ACCORDANCE WITH N.Y.C. BUILDING CODE AND N.Y.C. FIRE DEPARTMENT REQUIREMENTS FOR THE EXISTING FIRE ALARM SYSTEM.
5. AFTER INSTALLATION OF ALL DEVICES AND COMPONENTS, PERFORM COMPLETE SYSTEM TESTS IN OWNERS AND BUILDING'S REPRESENTATIVE PRESENCE ON ALL FIRE ALARM DEVICES AS FOLLOWS:
   a. TEST ALL DEVICES SERVING THE SPACE ON THE FIRE ALARM SYSTEM INCLUDING BUT NOT LIMITED TO SMOKE DETECTORS, FAN SHUT-DOWN RELAYS, DOOR RELEASE DEVICES, ETC.
   b. VERIFY THAT ALL FIRE ALARM DEVICES UPON ACTIVATION CAUSE APPROPRIATE ANNUNCIATION AT THE FIRE COMMAND STATION AND PROPER SEQUENCE OF OPERATION WITHIN THE TENANT PREMISES.
   c. VERIFY THAT ALL CONTROL POINTS OPERATE PROPERLY WHEN INITIATE EITHER BY AN ALARM DEVICE WITHIN THE SPACE OR FROM THE FIRE COMMAND STATION.
   d. TEST SPEAKER AUDIBILITY THROUGHOUT THE SPACE AND TEST STROBES.
   e. SUBMIT WRITTEN TEST REPORT TO THE OWNER AND TO THE BUILDING FIRE ALARM VENDOR.

### FIRE ALARM CIRCUIT CLASS AND STYLE

1. FIRE ALARM CIRCUITS SHALL BE WIRED USING NFPA CLASS B STYLE. ANY FIRE ALARM NETWORK CIRCUIT SHALL USE NFPA CLASS X STYLE. ALL AUDIBLE AND VISUAL CIRCUITS SHALL BE CLASS B AND NYC SPLIT A/B. SPLIT A/B CIRCUITS SHALL BE WIRED SO THAT EVERY OTHER DEVICE IS WIRED ON AN ALTERNATE CIRCUIT.

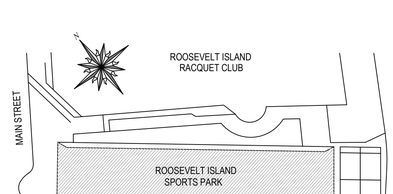
## SYMBOL LIST:

| SYMBOL | DESCRIPTION |
|---|---|
| H | FIRE ALARM HORN STROBE |
| F | FIRE ALARM PULL STATION |
| ST | FIRE ALARM STROBE |
| S | CEILING MOUNTED SMOKE DETECTOR |
| D S | DUCT SMOKE DETECTOR WITH RELAY SHUTDOWN "S" - SUPPLY SIDE "R" - RETURN SIDE |
| F R | RELAY - "F" DENOTES FAN SHUTDOWN - "DR" DENOTES DOOR RELEASE - "GEN" DENOTES GENERATOR |
| FSD | FIRE SMOKE DAMPER WITH INTEGRAL SMOKE DUCT DETECTOR |
| FACP | FIRE ALARM CONTROL PANEL WITH INTEGRAL CST |
| RAP | REMOTE ANNUNCIATOR PANEL |
| | NYC FUSED DISCONNECT SWITCH WITH (2) 20A FUSES AND SOLID NEUTRAL |
| CST | CENTRAL STATION TRANSPONDER (INTERFACE FOR FDNY NOTIFICATIONS) |
| N | NEW |
| E | EXISTING TO REMAIN |
| R | REMOVED DEVICE |
| RE | REPLACE EXISTING WITH NEW |
| RR | REMOVE AND RELOCATE |

## FIRE ALARM LEVEL OF SURVIVABILITY

1. ALL PATHWAYS SHALL COMPLY WITH NFPA 70.

| | PATHWAY SURVIVABILITY CHART | |
|---|---|---|
| | LEVEL 0 | PATHWAY SHALL NOT BE REQUIRED TO HAVE ANY PROVISIONS FOR PATHWAY SURVIVABILITY |
| | LEVEL 1 | PATHWAY IN BUILDINGS THAT ARE FULLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 WITH ANY INTERCONNECTING CONDUCTORS, CABLES, OR OTHER PHYSICAL PATHWAYS INSTALLED IN METAL RACEWAYS. |
| | LEVEL 2 | PATHWAY SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING: |
| | A | 2 HOURS FIRE RATED CIRCUIT INTEGRITY OR FIRE RESISTIVE CABLE |
| | B | 2 HOUR FIRE RATED CABLE SYSTEM (ELECTRICAL CIRCUIT PROTECTIVE SYSTEM) |
| | C | 2 HOUR FIRE RATED ENCLOSURE OR PROTECTED AREA |
| | D | PERFORMANCE ALTERNATIVES APPROVED BY THE AUTHORITY HAVING JUSRIDICTION |
| X | LEVEL 3 | PATHWAY IN BUILDINGS THAT ARE FULLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 AND INCLUDE ONE OR MORE OF THE FOLLOWING |
| | A | 2 HOURS FIRE RATED CIRCUIT INTEGRITY OR FIRE RESISTIVE CABLE |
| | B | 2 HOUR FIRE RATED CABLE SYSTEM (ELECTRICAL CIRCUIT PROTECTIVE SYSTEM) |
| X | C | 2 HOUR FIRE RATED ENCLOSURE OR PROTECTED AREA |
| | D | PERFORMANCE ALTERNATIVES APPROVED BY THE AUTHORITY HAVING JUSRIDICTION |




250 MAIN STREET
ROOSEVELT ISLAND,
N.Y. 10044
BLOCK No: 1373
LOT No: 1
ZONING MAP: 9A
PRIMARY ZONING: R7-2

1 PLOT PLAN
Scale: NTS

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

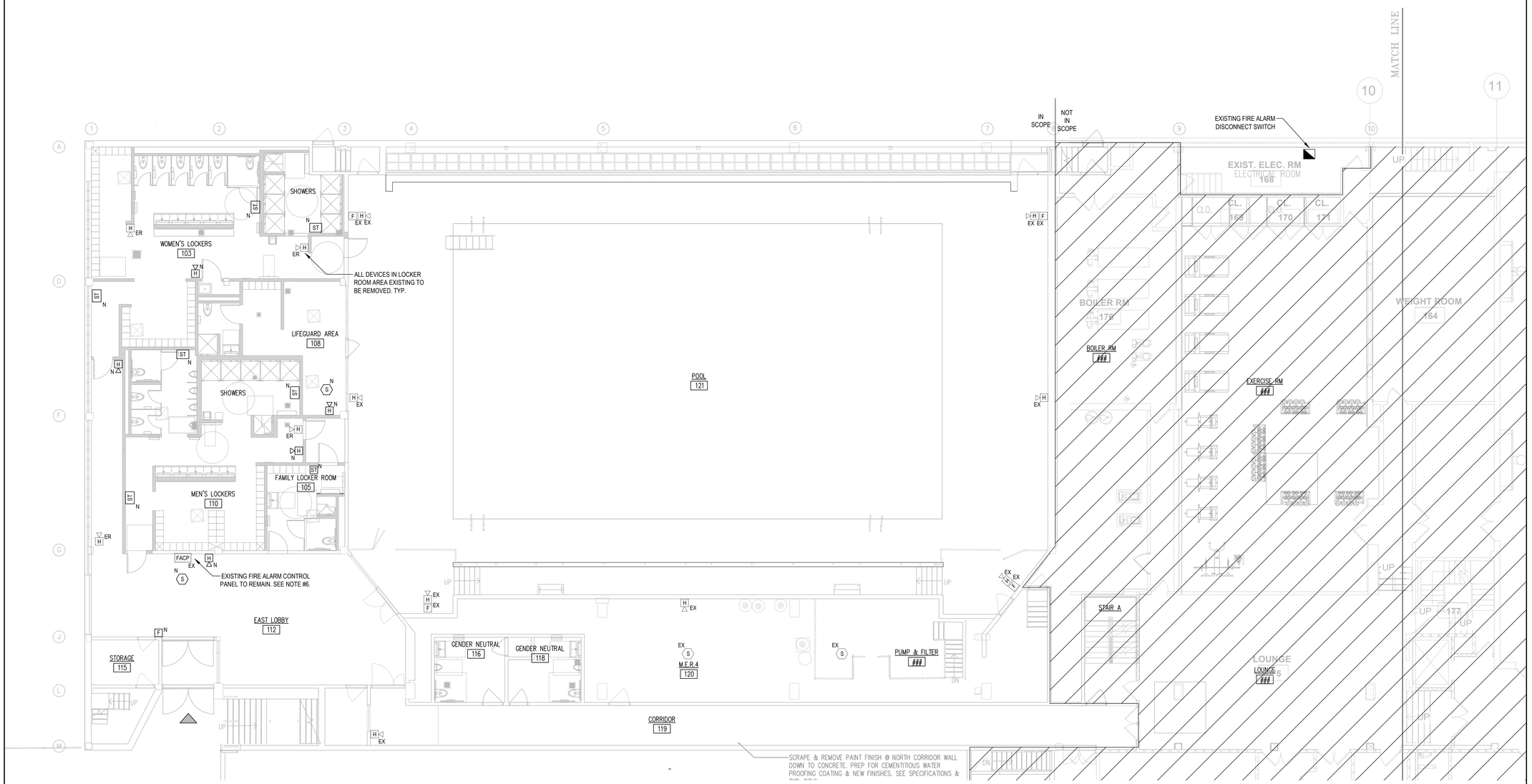
DRAWING

FIRE ALARM NOTES, SYMBOLS AND ABBREVIATIONS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. FA-001.00
DRAWN BY MR
1 OF 4

NYC DOB Number




## FIRE ALARM NOTES:

1. ALL NEW DEVICES SHALL BE INSTALLED IN THE VICINITY AS DIRECTED BY THE ARCHITECT AND SHALL BE CENTERED ON COLUMNS PER ARCHITECTURAL DRAWINGS.

2. OBTAIN DIMENSIONAL DRAWINGS PRIOR TO ROUGH-IN.

3. CEILING DEVICES MAY BE PROVIDED WHERE APPROVED BY THE CODE OFFICIAL AND FILED DRAWINGS/DOCUMENTS.

4. PERFORM DISCONNECTION OF EXISTING DEVICES WHEN DIRECTED BY THE FA VENDOR. PROTECT DURING CONSTRUCTION.

5. 'ER' DESIGNATED DEVICES ARE EXISTING TO BE REMOVED.

6. FIRE ALARM CONTROL PANEL WAS INSTALLED UNDER PREVIOUSLY APPROVED APPLICATION. REFER TO FA-001.00 FOR LETTER OF APPROVAL INFORMATION.

7. COORDINATE ALL FSD'S WITH MECHANICAL DRAWINGS.

**1 / FA-100.00 FIRE ALARM FIRST FLOOR EAST PLAN**
**SCALE: 1/8"=1'-0"**

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

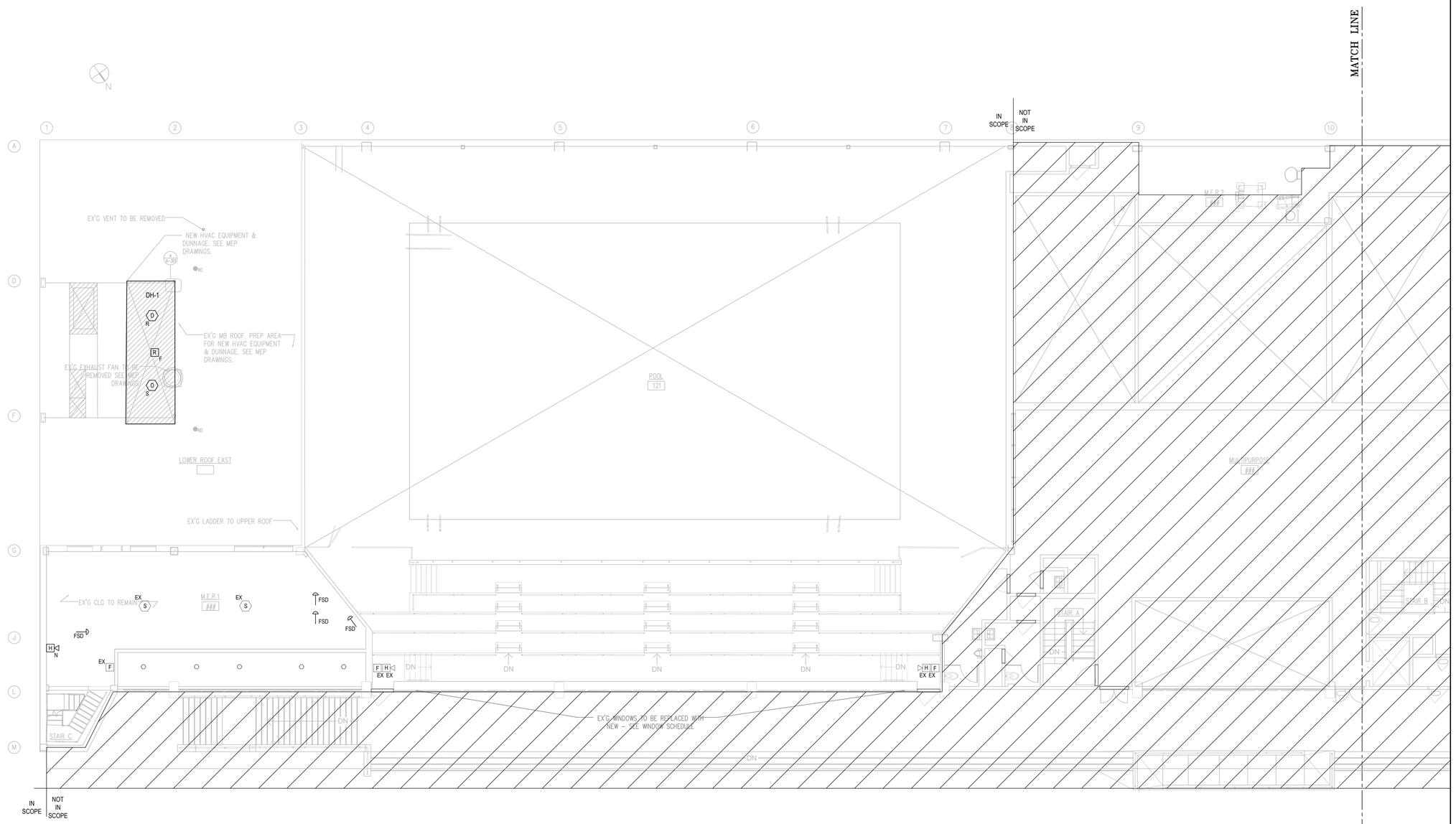
DRAWING

FIRE ALARM FIRST FLOOR EAST PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. FA-100.00 |
| | DRAWN BY MR — 2 OF 4 |

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




## FIRE ALARM NOTES:

1. ALL NEW DEVICES SHALL BE INSTALLED IN THE VICINITY AS DIRECTED BY THE ARCHITECT AND SHALL BE CENTERED ON COLUMNS PER ARCHITECTURAL DRAWINGS.
2. OBTAIN DIMENSIONAL DRAWINGS PRIOR TO ROUGH-IN.
3. CEILING DEVICES MAY BE PROVIDED WHERE APPROVED BY THE CODE OFFICIAL AND FILED DRAWINGS/DOCUMENTS.
4. PERFORM DISCONNECTION OF EXISTING DEVICES WHEN DIRECTED BY THE FA VENDOR. PROTECT DURING CONSTRUCTION.
5. 'ER' DESIGNATED DEVICES ARE EXISTING TO BE REMOVED.
6. FIRE ALARM CONTROL PANEL WAS INSTALLED UNDER PREVIOUSLY APPROVED APPLICATION. REFER TO FA-001.00 FOR LETTER OF APPROVAL INFORMATION.
7. COORDINATE ALL FSD'S WITH MECHANICAL DRAWINGS.

**1 / FA-102.00 FIRE ALARM SECOND FLOOR EAST PLAN**
**SCALE: 1/8"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 723-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

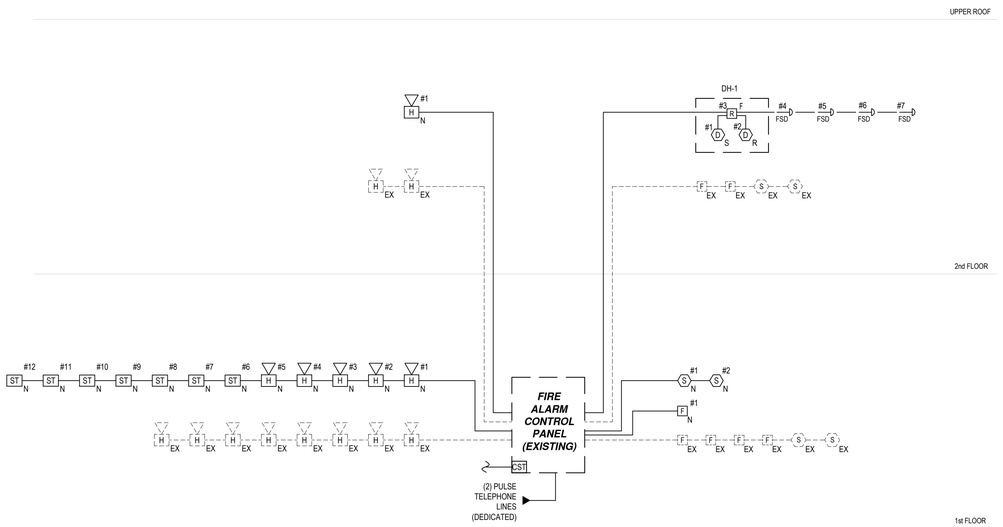
250 Main St.
Roosevelt Island, NY
10044

DRAWING

FIRE ALARM SECOND FLOOR EAST PLAN

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | FA-102.00 |
| | DRAWN BY MR | 3 OF 4 |

NYC DOB Number




## APPROVED CLASS 'TEMPORAL 3' SYSTEM- FIRE ALARM RISER DIAGRAM

N.T.S.

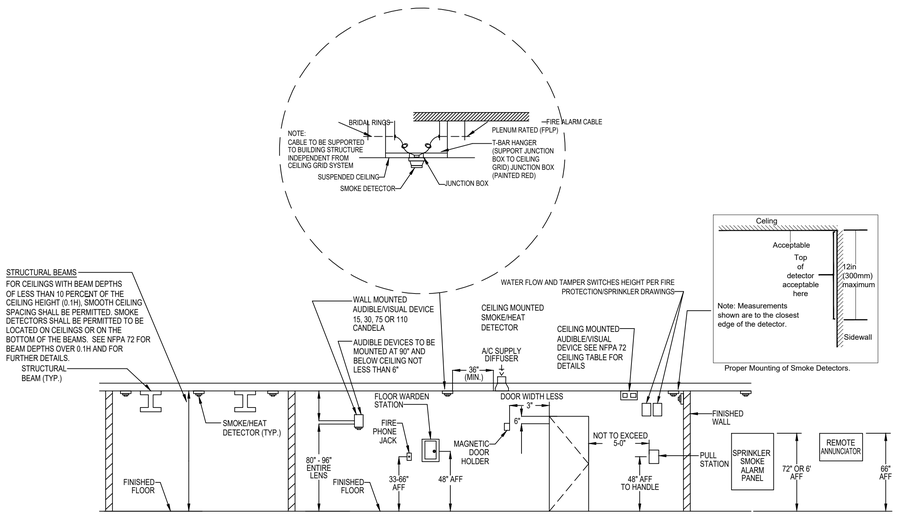
FIRE ALARM RISER NOTES:

1. USE EXISTING FIRE ALARM CONTROL PANEL TO PERFORM THE FIRE ALARM FUNCTIONS AS SPECIFIED HEREIN. EXISTING PANEL MAY BE REUSED IF FOUND TO BE CAPABLE OF SUPPORTING DEVICES AS INDICATED.
2. ALL DEVICES SHALL BE BUILDING STANDARD TYPE OR AS SPECIFIED.
3. SEE PLANS FOR LOCATION AND QUANTITIES OF FIRE ALARM DEVICES. ALL HORN AND STROBES SHALL BE WIRED ON ALTERNATE CIRCUITS.
4. ALL WIRING TO FIRE ALARM DEVICES SHALL BE TEFLON COATED APPROVED FOR FIRE ALARM SYSTEM. RUN #14AWG MINIMUM EXPOSED IN ACCESSIBLE CEILING AREA. OTHERWISE RUN IN 3/4" EMT CONDUIT.
5. ALL SYSTEMS WIRING AND SEQUENCE OF OPERATION SHALL BE IN ACCORDANCE WITH THE LATEST NEW YORK STATE BUILDING CODE AND THE NEW YORK CITY FIRE DEPARTMENT REQUIREMENTS.
6. OBTAIN AND SUBMIT SHOP DRAWINGS FROM FIRE ALARM VENDOR WITH ALL DEVICES AND WIRING DIAGRAMS AS REQUIRED TO OBTAIN IN FIRE ALARM APPROVAL.
7. AFTER INSTALLATION OF ALL DEVICES AND COMPONENTS, PERFORM COMPLETE SYSTEM TESTS IN OWNERS AND BUILDINGS REPRESENTATIVE PRESENCE ON ALL FIRE ALARM DEVICES AS FOLLOWS:
   - A. TEST ALL DEVICES SERVING THE SPACE ON THE FIRE ALARM SYSTEM INCLUDING BUT NOT LIMITED TO SMOKE DETECTORS, FAN SHUT-DOWN RELAYS, DOOR RELEASE DEVICES, ETC.
   - B. VERIFY THAT ALL FIRE ALARM DEVICES UPON ACTIVATION CAUSE APPROPRIATE ANNUNCIATION AT THE FIRE ALARM CONTROL PANEL AND PROPER SEQUENCE OF OPERATION WITHIN THE PREMISES.
   - C. VERIFY THAT ALL CONTROL POINTS OPERATE PROPERLY WHEN INITIATED EITHER BY AN ALARM DEVICE WITHIN THE SPACE OR FROM THE FIRE CONTROL PANEL.
   - D. TEST HORN AUDIBILITY THROUGHOUT THE SPACE AND TEST STROBES.
   - E. SUBMIT WRITTEN TEST REPORT TO THE OWNER AND TO THE FIRE ALARM VENDOR.

***LEGEND:***

EX EXIST. DEVICE/WIRING TO REMAIN

N NEW DEVICE/WIRING TO BE INSTALLED




## STANDARD FIRE ALARM DEVICE MOUNTING HEIGHTS

NOTE:
1. REFER TO FLOOR PLANS FOR LOCATIONS.
2. ALL FINAL MOUNTING HEIGHT MUST COMPLY WITH NFPA 72 AND AUTHORITY HAVING JURISDICTION.
3. ALL INSTALLATION TO BE IN ACCORDANCE WITH MFG. RECOMMENDATIONS AND AS PER APPROVED SHOP DRAWINGS
4. MOUNTING HEIGHTS ARE SHOWN FOR COMPLIANCE WITH NFPA 72. NOT ALL DEVICES SHOWN ARE APPLICABLE TO THIS PROJECT.

MANUAL/AUTOMATIC FIRE ALARM SYSTEM

| | FIRE ALARM PANEL | | | | | | | | ANNUN. | | | | NOTIFICATION | | | | | | | | | | | | | | FIRE SAFETY CONTROL | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | BB | CC | DD | EE | FF | GG | |
| | ACTIVATE AUDIBLE/VISUAL ALARM AT FACP | ACTIVATE AUDIBLE/VISUAL TROUBLE AT FACP | | | | | | | ACTIVATE AUDIBLE/VISUAL ALARM AT REMOTE ANNUNCIATOR | | | | ACTIVATE AUDIBLE ALARM ON ALL FLOORS. | ACTIVATE VISUAL ALARM ON ALL FLOORS. | | | | ACTIVATE CENTRAL OFFICE TRANSMITTER SUPERVISORY | ACTIVATE CENTRAL OFFICE TRANSMITTER MANUAL SIGNAL | ACTIVATE CENTRAL OFFICE TRANSMITTER SMOKE SIGNAL | ACTIVATE CENTRAL OFFICE TRANSMITTER WATERFLOW SIGNAL | ACTIVATE CENTRAL OFFICE TRANSMITTER TROUBLE SIGNAL | | | | ACTIVATE FAN SHUTDOWN | ACTIVATE DOOR RELEASE | ACTIVATE DRY VALVE RELEASE | | | | | | |
| SYSTEM INPUT | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | BB | CC | DD | EE | FF | GG | |
| 1 MANUAL PULLSTATION | ● | | | | | | | | ● | | | | ● | ● | | | | | ● | | | | | | | | ● | | | | | | | 1 |
| 2 AREA SMOKE DETECTOR | ● | | | | | | | | ● | | | | ● | ● | | | | | | ● | | | | | | ● | ● | | | | | | | 2 |
| 3 DUCT SMOKE DETECTOR | ● | | | | | | | | ● | | | | ● | ● | | | | | | ● | | | | | | ● | ● | | | | | | | 3 |
| 4 HEAT DETECTOR | ● | | | | | | | | ● | | | | ● | ● | | | | | | ● | | | | | | ● | ● | | | | | | | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |
| SYSTEM FAULT/TROUBLE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | BB | CC | DD | EE | FF | GG | |
| 1 OPEN CIRCUIT | | ● | | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 1 |
| 2 GROUNDED WIRE | | ● | | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 2 |
| 3 A/C FAILURE | | ● | | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 3 |
| 4 BATTERY FAULT | | ● | | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 4 |
| 5 WIRE TO WIRE SHORT | | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | BB | CC | DD | EE | FF | GG | |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

FIRE ALARM RISER DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

DWG. No. FA-500.00

DRAWN BY MR

4 OF 4

NYC DOB Number

COMcheck Software Version 4.1.1.0

# Interior Lighting Compliance Certificate

**Project Information**

Energy Code: 2016 New York City Energy Conservation Code
Project Title: RIOC - Sportspark
Project Type: Alteration

Construction Site:
250 Main St.
Roosevelt Island, NY 10044

Owner/Agent:
Roosevelt Island Operating Corporation

Designer/Contractor:
Cameron Engineering
1411 Broadway
Suite 610
New York, NY 10018
212-324-4000

**Allowed Interior Lighting Power**

| A Area Category | B Floor Area (ft2) | C Allowed Watts / ft2 | D Allowed Watts (B X C) |
|---|---|---|---|
| 1-Lobby (Common Space Types:Lobby - General) | 700 | 0.90 | 630 |
| 2-Corridor (Common Space Types:Corridor/Transition <8 ft wide) | 800 | 0.66 | 528 |
| 3-Locker Rooms (Common Space Types:Locker Room) | 2500 | 0.75 | 1875 |
| 4-Natatorium (Gymnasium/Fitness Center:Playing Area) | 7000 | 1.20 | 8400 |
| 5-Mech Space (Common Space Types:Electrical/Mechanical) | 2000 | 0.95 | 1900 |
| | | Total Allowed Watts = | 13333 |

**Proposed Interior Lighting Power**

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| Lobby ( Common Space Types:Lobby - General 700 sq.ft.) | | | | |
| LED 1: L7: LED Linear 33W: | 1 | 3 | 42 | 126 |
| LED 2: L8: LED Linear 33W: | 1 | 3 | 20 | 60 |
| LED 3: L9: LED Linear 33W: | 1 | 3 | 56 | 168 |
| Corridor ( Common Space Types:Corridor/Transition <8 ft wide 800 sq.ft.) | | | | |
| LED 4: L7: LED Linear 33W: | 1 | 1 | 42 | 42 |
| Locker Rooms ( Common Space Types:Locker Room 2500 sq.ft.) | | | | |
| LED 5: L6: LED Panel 36W: | 1 | 6 | 36 | 216 |
| LED 6: L5: LED Panel 19W: | 1 | 28 | 19 | 532 |
| LED 7: L4: LED MR 10W: | 1 | 27 | 12 | 324 |
| Natatorium ( Gymnasium/Fitness Center:Playing Area 7000 sq.ft.) | | | | |
| LED 8: L1: Other: | 1 | 8 | 217 | 1736 |
| LED 9: L2: Other: | 1 | 16 | 50 | 800 |
| LED 10: L3: Other: | 1 | 22 | 217 | 4774 |
| Mech Space ( Common Space Types:Electrical/Mechanical 2000 sq.ft.) | | | | |
| LED 11: L4: LED MR 10W: | 1 | 18 | 12 | 216 |
| | | | Total Proposed Watts = | 8994 |



**Interior Lighting PASSES**

**Interior Lighting Compliance Statement**

*Compliance Statement:* The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2016 New York City Energy Conservation Code requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date



COMcheck Software Version 4.1.1.0

# Inspection Checklist

Energy Code: 2016 New York City Energy Conservation Code

Requirements: 100.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| Section # & Req.ID | Plan Review | Complies? | Comments/Assumptions |
|---|---|---|---|
| C103.2 [PR4]† | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C405.2.1 [EL15]† | Lighting controls installed to uniformly reduce the lighting load by at least 50%. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.1 [EL18]† | Occupancy sensors installed in required spaces. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.1, C405.2.2.3 [EL23]† | Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.2.1 [EL22]† | Automatic controls to shut off all building lighting installed in all buildings. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.3 [EL16]† | Daylight zones provided with individual controls that control the lights independent of general area lighting. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.3, C405.2.3.1, C405.2.3.2 [EL20]† | Primary sidelighted areas are equipped with required lighting controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.3, C405.2.3.1, C405.2.3.3 [EL21]† | Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.4 [EL4]† | Separate lighting control devices for specific uses installed per approved lighting plans. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.4 [EL8]† | Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.3 [EL6]† | Exit signs do not exceed 5 watts per face. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C303.3, C408.2.5.2 [FI17]† | Furnished O&M instructions for systems and equipment to the building owner or designated representative. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.4.1 [FI18]† | Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Interior Lighting fixture schedule for values.* |
| C408.2.5.1 [FI16]† | Furnished as-built drawings for electric power systems within 90 days of system acceptance. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.3 [FI33]† | Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)





LIGHTING TOTAL WATTS/TOTAL AREA (LIGHTING POWER DENSITY) FOR THE FACILITY IS 0.42 W/SQ FT. LESS THAN PERMISSIBLE.

THE ALLOWABLE LIMIT FOR THE FACILITY PER 2016 NYC ECC IS 1.19 W/SQ FT.

THE ELECTRICAL POWER AND LIGHTING SYSTEMS COMPLIES WITH THE REQUIREMENTS OF 2016 NYC ENERGY CONVERSATION CODE.

"TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT THE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2016 NYCECC/NYS CODE" FILED UNDER ALTERATIONS.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

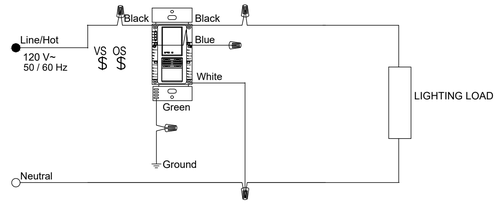
ENERGY COMPLIANCE - LIGHTING COMCHECK

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-001.00
DRAWN BY MR
1 OF 7

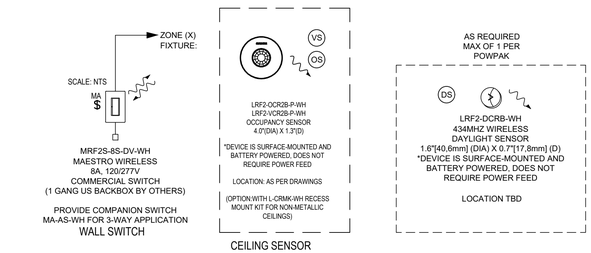
NYC DOB Number

Single Pole Wiring - Single-Circuit (MS-B102)




1 LUTRON WALL-MOUNTED OCCUPANCY (SINGLE ROOM CONTROL) (WITH BUILT-IN SENSOR)

SCALE: NTS

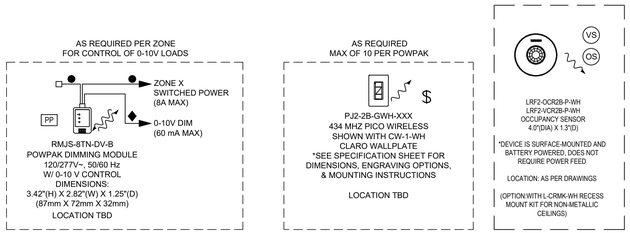



2 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) (WITH REMOTE WIRELESS SENSORS)

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.




**THIS APPLICATION APPLIES TO THE MENS LOCKER ROOM, WOMENS LOCKER ROOM AND MER#4 (POOL FILTRATION)**

3 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) WITH POWPAK

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.

LIGHT SCHEDULE

| TAG | TYPE | MANUF | MODEL | FIN | MOUNT | WATTAGE | LAMP | QTY | FIXTURE FOR SALE | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| L1 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6MS-50-80-FR-45-WET | FROSTED | 25'-0" | – | LED | 8 | – | POOL AREA |
| L2 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-09K-2MS-50-80-FR-WET | FROSTED | 25'-0" | – | LED | 18 | – | POOL AREA |
| L3 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6MS-50-80-FR-90-WET | FROSTED | 25'-0" | – | LED | 22 | – | POOL AREA |
| L4 | NU4: ROUND DOWNLIGHT | ALPHABET LIGHTING | NU4RD-SW-13LM-35-80-HE40-X-DIM10-NC-WH-WH-X | WHITE | NC | – | LED | 27 | – | |
| L5 | RECESSED 15/16" GRID LIGHT | DAY-O-LITE | RS9L-D-SI-35-XX-22-C-W-U-DIM10 | BAKED WHITE ENAMEL | RECESSED GRID | – | LED | 31 | – | |
| L6 | RECESSED GRID LIGHT | DAY-O-LITE | RS9L-D-SI-35-SO-24-MG-W-U-DIM10 | BAKED WHITE ENAMEL | RECESSED GRID | – | LED | 10 | – | |
| L7 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-6-C-W-DIM10 | WHITE | SGF | 7W | LED | 18 | – | |
| L8 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-4-C-W-DIM10 | WHITE | SGF | 7W | LED | 3 | – | |
| L9 | LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-8-C-W-DIM10 | WHITE | SGF | 7W | LED | 3 | – | |
| L10 | PENDANT WRAP LIGHT | H.E. WILLIAMS | 39 SERIES 4'-0" PENDANT | N/A | VARIES | – | LED | 29 | – | MECHANICAL SPACES |
| L11 | RETROFIT CAN LIGHT | INTENSE LIGHTING | 6" SS LED REMODEL DOWNLIGHT GEN 4 | WHITE | RETROFIT EX'G FIXTURE | – | LED | 5 | – | INCLUDE SS-EZR 6" SSG3 RETROFIT MOUNTING SYSTEM |
| L12 | WALL MTD. VANITY LIGHT | ALW | RLP1SM.11MED/90/3500/WH/UNV | WHITE | 7'-0" AFF | 9.2/FT | LED | 8 | – | MTD. 7'-0" AFF |

***NOTES:***

1. LIGHTING SCHEDULE IS PROVIDED FOR ENGINEERING PURPOSES TO AID IN THE CIRCUITING AND ELECTRICAL CALCULATIONS. THIS SCHEDULE SHALL NOT BE USED FOR ORDERING OR PRICING PURPOSES. REFER TO ARCHITECT & LIGHTING CONSULTANT DRAWINGS/DOCUMENTS FOR EXACT SPECIFICATION OF ALL FIXTURES.
2. LIGHTING FIXTURES SHALL BE UL LISTED AND APPROVED FOR INSTALLATION WHERE REQUIRED.
3. CONTRACTOR SHALL COORDINATE WITH ARCHITECT, AND OWNER REQUIREMENTS FOR LIGHTING INSTALLATION. PROVIDE MOUNTING DETAILS, HARDWARE AND DEVICES AS REQUIRED FOR COMPLETE INSTALLATION.
4. FIXTURES WITH INTERNAL OR REMOTE TRANSFORMERS/BALLASTS SHALL BE INSTALLED WITH PROPER VENTILATION PER MANUFACTURER SPECIFICATIONS. COORDINATE WITH ARCHITECT ALL MOUNTING AND ACCESS REQUIREMENTS.
5. SUBMIT MANUFACTURER SHOP DRAWINGS FOR ALL FIXTURES FOR ARCHITECT REVIEW. OBTAIN APPROVAL PRIOR TO ORDERING. PROVIDE MARK-UP OF INSTALLATION FOR OWNER AND ARCHITECT REVIEW WHEN REQUESTED.
6. FOR ALL FIXTURES DESIGNATED WITH HALF SHADE OR EM, CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND PROVIDE FIXTURE WITH BATTERY BALLAST AND WIRE AS EMERGENCY FIXTURE. IN THE EVENT FIXTURE IS NOT AVAILABLE WITH BATTERY BALLAST, CONTRACTOR SHALL RETROFIT FIXTURE WITH BODINE EMERGENCY BALLAST SIMILAR TO BODINE B94C OR PROVIDE AN INDEPENDENT BATTERY BACK UP FIXTURE TO PROVIDE EMERGENCY LIGHTING IN ALL PUBLIC AREAS WHERE EMERGENCY FIXTURE IS INDICATED.
7. ALL LED FIXTURES SHALL BE PROVIDED WITH SAME TYPE DRIVERS TO ALLOW FOR SIMILAR DIMMING. CONTRACTOR SHALL COORDINATE LED DRIVERS AND DIMMER SELECTION WITH LIGHTING MANUFACTURER AND ARCHITECT.
8. ALL LED FIXTURES SHALL BE NEMA 410-2015 RATED.

1. **PROVIDE EMERGENCY BATTERY BACK-UP FOR ALL FIXTURES DESIGNATED WITH 'EM' ON ELECTRICAL LIGHTING PLANS.**
2. **ALL FIXTURE SHALL BE PROVIDED WITH 0-10V DIMMING BALLAST U.O.N**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 723-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

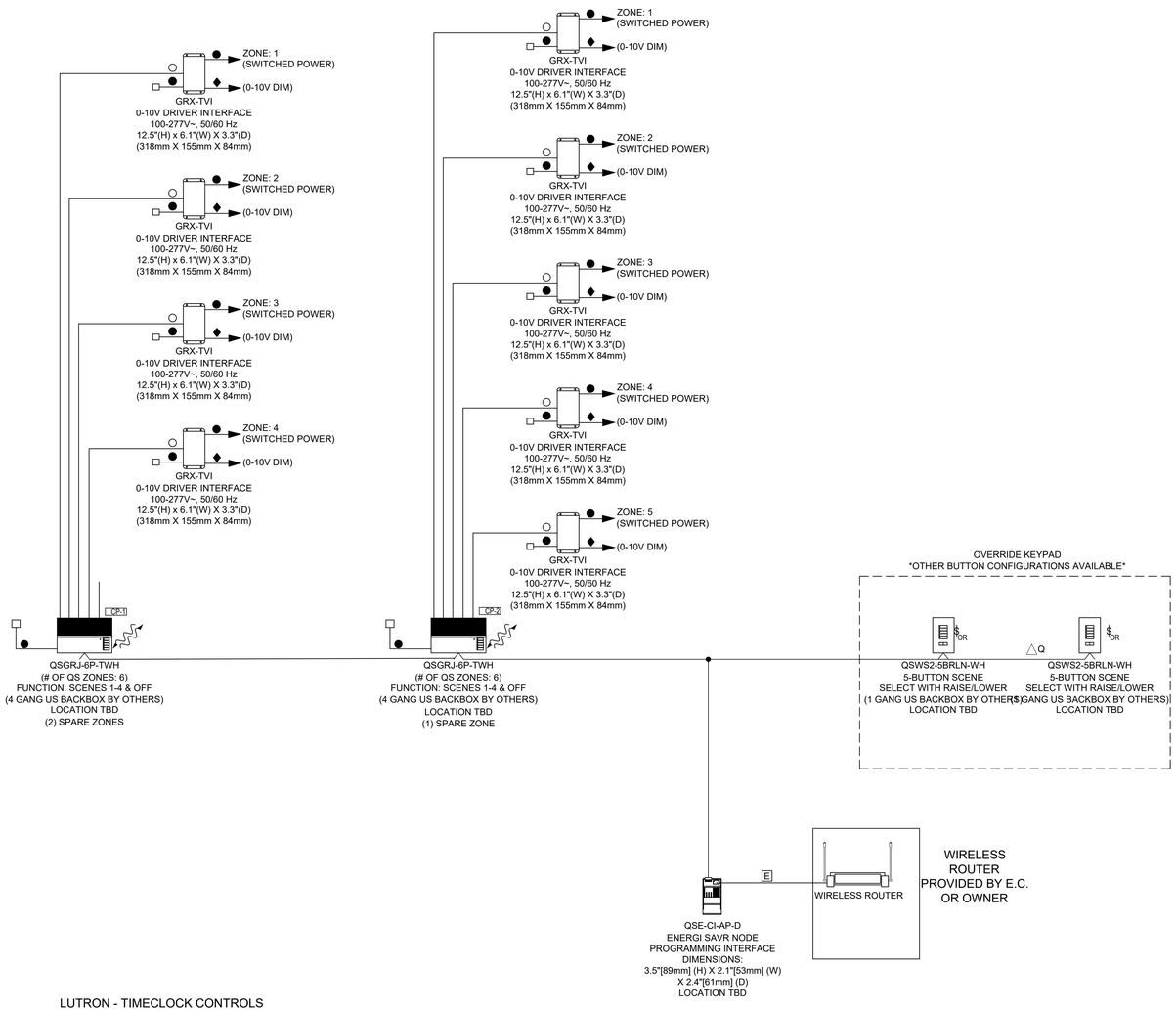
DRAWING

ENERGY COMPLIANCE -
LIGHTING DETAILS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-002.00
DRAWN BY MR
2 OF 7

NYC DOB Number




LUTRON - TIMECLOCK CONTROLS

## WIRING LEGEND:

△Q QS CONTROL LINK (SEE WIRE DESCRIPTION BELOW)

QS WIRING AS REQUIRED BY CONTROL LINK LENGTH
(REFER TO QS SMART PANEL POWER SUPPLY WIRING GUIDE FOR SHADE WIRING NOTES):

| TOTAL CONTROL LINK LENGTH | WIRE GAUGE | AVAILABLE FROM LUTRON IN ONE CABLE: |
|---|---|---|
| LESS THAN 500ft (152.4 m) | POWER (TERMINALS 1&2): 1 PAIR 18 AWG (1.0 mm²) | GRX-CBL-346S (NON-PLENUM) OR GRX-PCBL-346S (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |
| 500ft (152.4 m) TO 2,000ft (610 m)** | POWER (TERMINALS 1&2): 1 PAIR 12 AWG (4.0 mm²) | GRX-CBL-46L (NON-PLENUM) OR GRX-PCBL-46L (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |

*ALTERNATE DATA-ONLY CABLE: USE APPROVED DATA LINK CABLE (22 AWG [0.5 mm²] TWISTED/SHIELDED) FROM BELDEN (MODEL # 9461).

**TOTAL LENGTH OF THE QS LINK MUST NOT EXCEED 2,000 ft (600 m).

- □ INPUT POWER (NORMAL)
- ● 2 #12AWG (4 mm²)
- ◆ 0-10V SIGNAL: 2 #18AWG (1.0 mm²)
- 1-WAY RF COMMUNICATION
- 2-WAY RF COMMUNICATION

## WIRING NOTES:

### QS LINK RULES

*THE FOLLOWING LINK RULES MUST BE OBSERVED FOR PROPER OPERATION:*

- THIS IS A TOPOLOGY-FREE LINK (T-TAP, HOME-RUN, ETC. IS OK); REFER TO TABLE BELOW FOR WIRE RUN LIMITS.
- IF WIRED DIFFERENTLY THAN WHAT IS SHOWN, POWER DRAW UNIT REQUIREMENTS NEED TO BE CONFIRMED; SEE POWER DRAW UNITS (PDUs) SPECIFICATION SHEET INCLUDED IN THIS SUBMITTAL.
- MAXIMUM OF 512 OUTPUTS (BALLASTS, SHADES, CONTACT CLOSURES, ETC).
- MAXIMUM OF 100 OCCUPANCY SENSORS, 100 DAYLIGHT SENSORS/RADIO SHADOW SENSORS AND 100 KEYPADS.
- MAXIMUM OF 100 QS DEVICES (SUCH AS A GRAFIK EYE® QS, SEETOUCH® QS KEYPAD, SMART PANEL POWER SUPPLY [QSPS-10PNL], ESN, OR QS SHADE / DRAPERY DRIVE UNIT). QUANTUM PROCESSOR COUNTS AS 1 DEVICE PER LINK.
- MAXIMUM OF 100 ZONES - SUCH AS A QS SHADE / DRAPERY DRIVE UNIT, OR A LIGHTING ZONE ON A GRAFIK EYE QS (DOES NOT APPLY TO QUANTUM SYSTEMS).
- THE 10 OUTPUTS ON A QSPS-10PNL CANNOT EXCEED A COMBINED LENGTH OF 2,000 ft (600 m).

CONCEPT DRAWING NOTES:
CONTROL SYSTEM DRAWING IS PROVIDED FOR CONCEPTUAL PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION. EXACT EQUIPMENT REQUIREMENTS, INCLUDING LOCATIONS AND QUANTITIES, SHOULD BE VERIFIED IN ACCORDANCE WITH THE MOST UP-TO-DATE LIGHTING/ELECTRICAL REFLECTED CEILING PLANS, LIGHTING FIXTURE SCHEDULES, PANEL SCHEDULES, CONTROL INTENT AND SPECIFICATIONS. SHADE EQUIPMENT SHOULD BE VERIFIED IN ACCORDANCE WITH ARCHITECTURAL PLANS, SPECIFICATIONS AND WINDOW SCHEDULES/DETAILS.

LED DIMMING REQUIRES AN EXACT MATCH BETWEEN THE LED ARRAY, DRIVER AND CONTROL. LUTRON CANNOT GUARANTEE COMPATIBILITY OR PERFORMANCE WITHOUT TESTING THIS COMBINATION.

TO CONFIRM WHAT PRODUCTS LUTRON HAS AVAILABLE OR WHAT INTERFACES MAY BE REQUIRED, CALL 1-877-DIM-LED8 OR CHECK LUTRON'S PRODUCT COMPATIBILITY MATRIX ON-LINE AT WWW.LUTRON.COM/LED.

TO REQUEST THE TESTING OF AN LED PRODUCT BY LUTRON MANUFACTURERS CAN FILL OUT AN LED EVALUATION REQUEST FORM ON-LINE AT WWW.LUTRON.COM/LED OR CONTACT LEDS@LUTRON.COM.

LUTRON CAN GUARANTEE COMPATIBILITY AND PERFORMANCE OF LUTRON HI-LUME LED DRIVERS USED WITH APPROPRIATE LUTRON CONTROLS. PLEASE REFER TO THE SPECIFICATION SUBMITTAL SHEET FOR FURTHER INFORMATION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING 0-10V CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. PRODUCTS FOLLOWING THE IEC STANDARD 60929 ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING PHASE CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. ELV PRODUCTS PROVIDING HIGH END AND LOW END TRIM ADJUSTMENTS OR LUTRON HI-LUME 1% 2-WIRE DRIVERS ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

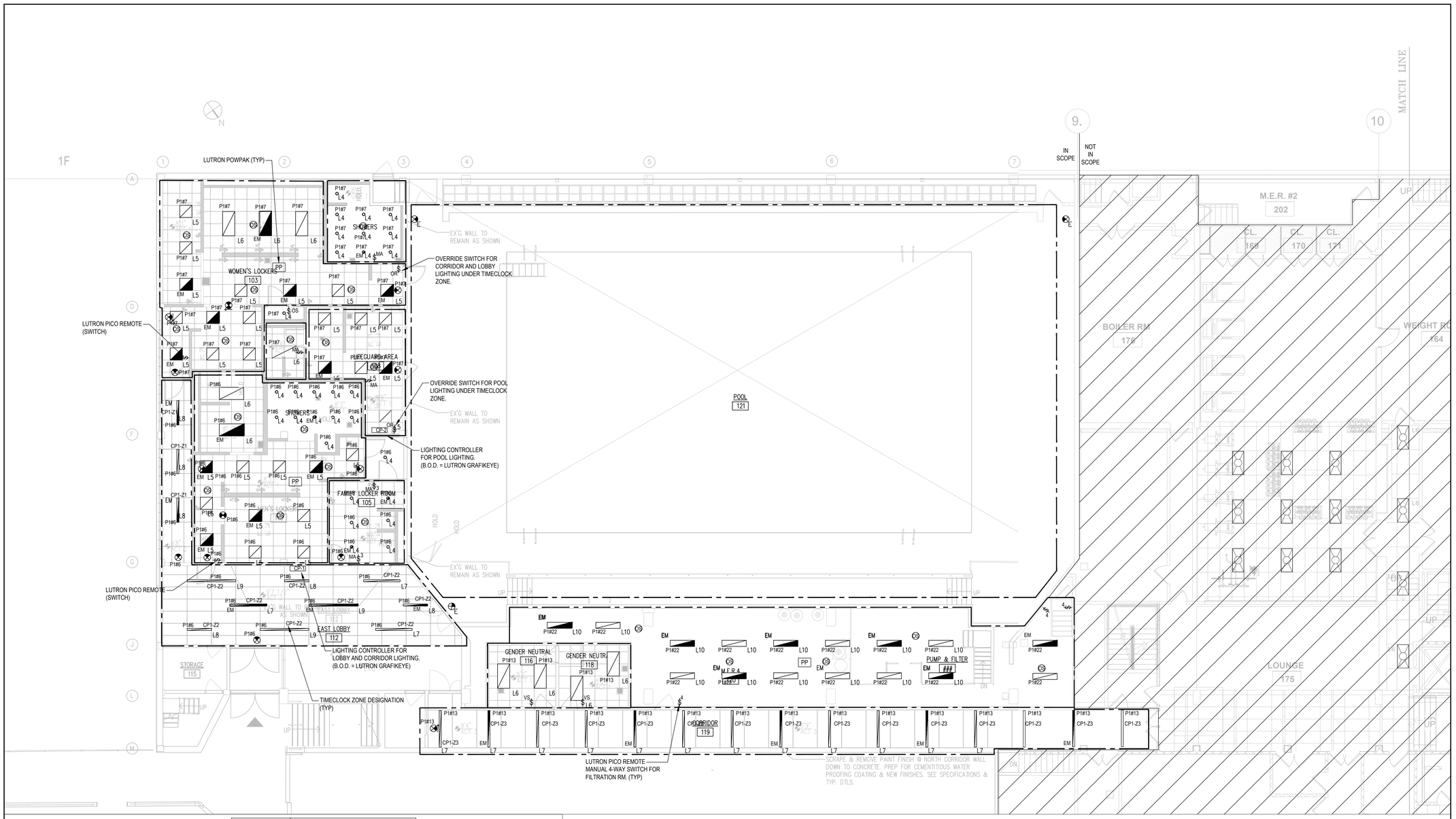
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY COMPLIANCE - LIGHTING DETAILS 2

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. EN-003.00 |
| | DRAWN BY MR / 3 OF 7 |

NYC DOB Number




## *LIGHTING NOTES:*

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   P1#D - EXISTING PANEL 'PL-1' (120/208V) CIRCUIT #2
   P2#D - EXISTING PANEL 'PL-2' (120/208V) CIRCUIT #2
   P3#2 - NEW PANEL 'EB' (120/208V) CIRCUIT #2
   P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2
   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. FOR BOTH NEW AND REMOVED LIGHT FIXTURE LAYOUT COORDINATE WITH ARCHITECTURAL DRAWINGS/RCP.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR RECEPTION, CORRIDOR AND POOL LIGHTING ZONES. FOR EACH CONTROL ZONE, PROVIDE EMERGENCY RELAY WITH POWER LOSS SENSING CAPABILITIES FOR ZONES WITH 'EM' TYPE FIXTURES.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP. EXIT SIGNS SHALL BE WIRED AHEAD OF LIGHTING CONTROLS TO BE LIT FOR 24HRS.

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| TIMECLOCK | -RECEPTION<br>-CORRIDOR<br>-POOL | -6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL-ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIK EYE CONTROLLER.)<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK FUNCTIONALITY.<br>-TIMECLOCK TO HAVE A MINIMUM 7-DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE.<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| AUTO ON/AUTO OFF | -EAST SIDE LOBBY<br>-MEN'S LOCKER ROOM<br>-WOMEN'S LOCKER ROOM<br>-FAMILY LOCKER ROOM | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | - CORRIDOR RESTROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH. |

## 1 EN-004.00 ENERGY COMPLIANCE - LIGHTING FIRST FLOOR EAST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

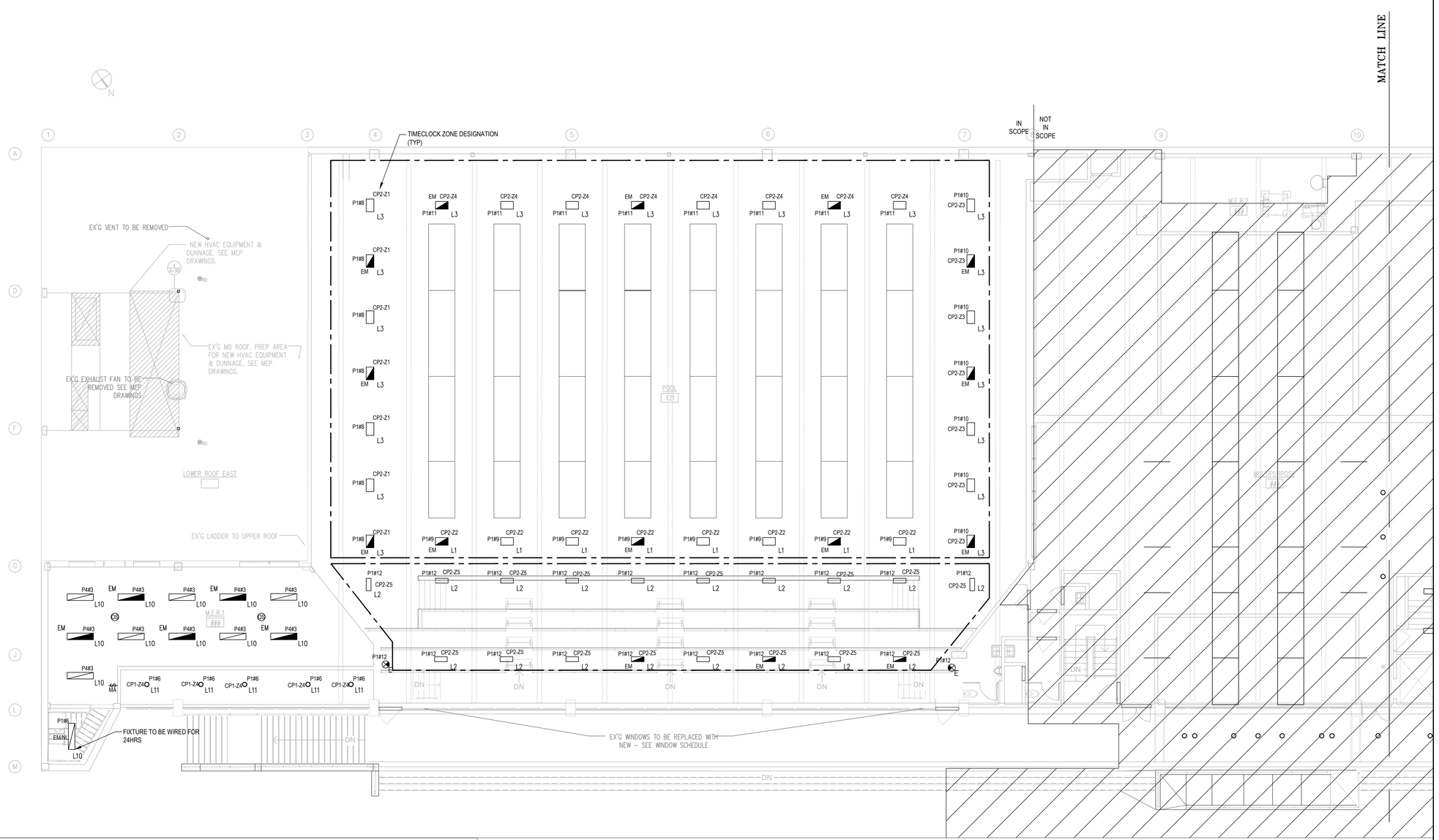
DRAWING

ENERGY COMPLIANCE - LIGHTING FIRST FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-004.00
DRAWN BY MR
4 OF 7

NYC DOB Number




## LIGHTING NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED.
   - P1#3 - EXISTING PANEL 'P1.1' (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'P1.-2' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'ESI' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING LIGHTING FIXTURES TO BE REMOVED.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR RECEPTION, CORRIDOR AND POOL LIGHTING ZONES. FOR EACH CONTROL ZONE, PROVIDE EMERGENCY RELAY WITH POWER LOSS SENSING CAPABILITIES FOR ZONES WITH 'EM' TYPE FIXTURES.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP. EXIT SIGNS AND NIGHT LIGHT (NL) FIXTURES SHALL BE WIRED AHEAD OF LIGHTING CONTROLS TO BE LIT FOR 24HRS.

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| TIMECLOCK | -RECEPTION<br>-CORRIDOR<br>-POOL | -(6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL-ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIKEYE CONTROLLER.)<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK FUNCTIONALITY.<br>-TIMECLOCK TO HAVE A MINIMUM 7-DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE.<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| AUTO ON/AUTO OFF | -MER.1 | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | - CORRIDOR RESTROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>- LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH. |

## 1 EN-005.00 ENERGY COMPLIANCE - LIGHTING SECOND FLOOR EAST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 723-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY COMPLIANCE - LIGHTING SECOND FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-005.00
DRAWN BY MR
5 OF 7

NYC DOB Number

**COMcheck Software Version 4.1.1.0**

# Mechanical Compliance Certificate

## Project Information

| | |
|---|---|
| Energy Code: | 2016 New York City Energy Conservation Code |
| Project Title: | RIOC - Sportspark |
| Location: | New York, New York |
| Climate Zone: | 4a |
| Project Type: | Alteration |

Construction Site:
250 Main St.
Roosevelt Island, NY 10044

Owner/Agent:
Roosevelt Island Operating Corporation

Designer/Contractor:
Cameron Engineering
1411 Broadway
Suite 610
New York, NY 10018
212-324-4000

## Mechanical Systems List

**Quantity** **System Type & Description**

1 ACCU-R-1 (Single Zone):
Split System Heat Pump
Heating Mode: Capacity = 108 kBtu/h,
Proposed Efficiency = 3.30 COP, Required Efficiency = 3.30 COP
Cooling Mode: Capacity = 96 kBtu/h,
Proposed Efficiency = 11.00 EER, Required Efficiency: 11.00 EER + 12.0 IEER
Fan System: None

1 ACCU-R-2 (Single Zone):
Split System Heat Pump
Heating Mode: Capacity = 81 kBtu/h,
Proposed Efficiency = 3.30 COP, Required Efficiency = 3.30 COP
Cooling Mode: Capacity = 72 kBtu/h,
Proposed Efficiency = 11.00 EER, Required Efficiency: 11.00 EER + 12.0 IEER
Fan System: None

## Mechanical Compliance Statement

*Compliance Statement:* The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2016 New York City Energy Conservation Code requirements in *COMcheck* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____



**COMcheck Software Version 4.1.1.0**

# Inspection Checklist

Energy Code: 2016 New York City Energy Conservation Code

Requirements: 100.0% were addressed directly in the *COMcheck* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| Section # & Req.ID | Plan Review | Complies? | Comments/Assumptions |
|---|---|---|---|
| C103.2 [PR2][1] | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Footing / Foundation Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.2.4.5, C403.2.4.6 [FO5][1] | Snow/ice melting system sensors for future connection to controls. Freeze protection systems have automatic controls installed. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Plumbing Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C404.5, C404.5.1, C404.5.2 [PL6][1] | Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.5, C404.5.1, C404.5.2 [PL6][1] | Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.6.3 [PL7][1] | Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.6.3 [PL7][1] | Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.7 [PL8][1] | Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.7 [PL8][1] | Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C402.2.6 [ME41][1] | Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.12.1 [ME65][1] | HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values.* |
| C403.2.12.1 [ME65][1] | HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values.* |
| C403.2.12.3 [ME117][1] | Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.12.3 [ME117][1] | Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.13 [ME71][1] | Unenclosed spaces that are heated use only radiant heat. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.3 [ME55][1] | HVAC equipment efficiency verified. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Mechanical Systems list for values.* |
| C403.2.6.1 [ME59][1] | Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.6.2 [ME115][1] | Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.7 [ME57][1] | Exhaust air energy recovery on systems meeting Table C403.2.7.(1) and C403.2.7(2). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.8 [ME116][1] | Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.9 [ME60][1] | HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.2.9 [ME10][1] | Ducts and plenums sealed based on static pressure and location. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.9.1.3 [ME11][1] | Ductwork operating >3 in. water column requires air leakage testing. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.9.1.3 [ME11][1] | Ductwork operating >3 in. water column requires air leakage testing. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.4.2.3.2.1 [ME121][1] | Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or closed-circuit cooling towers used in conjunction with a separate heat exchanger have heat loss by shutting down the circulation pump on the cooling tower loop. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.4.2.3.2.1 [ME121][1] | Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or closed-circuit cooling towers used in conjunction with a separate heat exchanger have heat loss by shutting down the circulation pump on the cooling tower loop. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.4.4.6 [ME110][1] | Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values.* |
| C403.4.4.6 [ME110][1] | Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values.* |
| C408.2.2.1 [ME53][1] | Air outlets and zone terminal devices have means for air balancing. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C303.3, C408.2.5.3 [FI8][1] | Furnished O&M manuals for HVAC systems within 90 days of system acceptance. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.2 [FI27][1] | HVAC systems and equipment capacity does not exceed calculated loads. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1 [FI47][1] | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1 [FI47][1] | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1.1 [FI42][1] | Heat pump controls prevent supplemental electric resistance heat from coming on when not needed. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.4.1.1 [FI42][1] | Heat pump controls prevent supplemental electric resistance heat from coming on when not needed. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.4.1.2 [FI38][1] | Thermostatic controls have a 5 °F deadband. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1.3 [FI20][1] | Temperature controls have setpoint overlap restrictions. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.2 [FI39][1] | Each zone equipped with setback controls using automatic time clock or programmable control system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.2.1, C403.2.4.2.2 [FI40][1] | Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.1 [FI28][1] | Commissioning plan developed by approved agency. Lighting controls shall be commissioned in accordance with C408.3. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.3.1 [FI31][1] | HVAC equipment has been tested to ensure proper operation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C408.2.3.2 [FI10][1] | HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.5.1 [FI7][1] | Furnished HVAC as-built drawings submitted within 90 days of system acceptance. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.5.3 [FI43][1] | An air and/or hydronic system balancing report is provided for HVAC systems. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.5.4 [FI30][1] | Final commissioning report due to building owner within 30 months (for new buildings > 500,000 ft2) or 18 months (for R-2 and all other buildings) of receipt of certificate of occupancy. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY COMPLIANCE - MECHANICAL COMPLIANCE

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-006.00
DRAWN BY MR
6 OF 7

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

| | | | |
|---|---|---|---|
| Project Title: | RIOC - Sportspark | Report date: | 09/19/19 |
| Data filename: | O:\CENY-19010 RIOC - Sportspark\Calculations\Comcheck\Sportspark Comcheck.cck | Page | 9 of 9 |

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 04.03.20 | BID SET |
| 2 | 10.07.19 | 100% SUBMISSION – ISSUED FOR BID |
| 1 | 09.20.19 | 90% SUBMISSION – ISSUED FOR BID |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY COMPLIANCE -
MECHANICAL
COMPLIANCE 2

| | | |
|---|---|---|
| SEAL & SIGNATURE | DATE | 06.10.2019 |
| | JOB NUMBER | 19010 |
| | DWG. No. | EN-007.00 |
| | DRAWN BY MR | 7 OF 7 |

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## GENERAL STRUCTURAL NOTES

1. ALL NEW WORK SHALL CONFORM WITH THE REQUIREMENTS OF NEW YORK CITY BUILDING CODE, INCLUDING LATEST ADDENDA, AND CONTRACT DOCUMENTS, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-11), AISC MANUAL FOR STEEL STRUCTURES AND ALL OTHER GOVERNING CODES. IN CASE OF CONFLICT, MOST STRINGENT REQUIREMENT SHALL GOVERN.

2. COORDINATE ALL WORK REQUIRED ON THESE DRAWINGS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL/SITE DRAWINGS. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE PER INFORMATION PROVIDED BY THE ORIGINAL STRUCTURAL DRAWINGS OR ARE ASSUMED. THE OWNER, ARCHITECT AND STRUCTURAL ENGINEER ARE NOT RESPONSIBLE FOR ACCURACY OF THE INFORMATION.

3. PROVISIONS SHALL BE MADE FOR PLACEMENT OF MATERIALS IN COLD OR HOT WEATHER.

4. SUBMIT SAMPLES, SHOP DRAWINGS, PRODUCT DATA, TEST REPORTS AND DATA, MANUFACTURER'S NAMES, CERTIFICATIONS AND PROCEDURES FOR ALL SPECIFIED ITEMS AND AS REQUESTED. SHOP DRAWINGS SHALL CONFORM TO THE BEST STANDARDS OF THE CONSTRUCTION INDUSTRY, AND SHALL BE PREPARED BY AND UNDER THE SUPERVISION OF COMPETENT ENGINEERING PERSONNEL. SUBMIT REINFORCING STEEL, SHOP AND ERECTION DRAWINGS INCLUDING APPLICABLE CONNECTION DETAILS, SCHEDULES AND CERTIFIED MILL TEST REPORTS. THE CONTRACTOR SHALL ALLOW FOR 10 WORKING DAYS FOR SHOP DRAWING REVIEW.

5. CONTRACTOR SHALL PATCH AND REPAIR ALL PORTIONS OF THE EXISTING CONDITION, FACILITY TO REMAIN OR ANY EQUIPMENT OR UTILITIES HARMED DURING CONSTRUCTION.

6. BEFORE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL VISIT THE PREMISES OF THE PROPOSED WORK AND SHALL CAREFULLY EXAMINE THE ENGINEERING DRAWINGS, EXISTING CONDITIONS AND LIMITATIONS THEREOF. VERIFICATION SHALL BE MADE AS TO THE ACTUAL LOCATIONS WHERE NEW CONSTRUCTION AND/OR STRUCTURES WILL BE ROUTED, COORDINATING WITH NEW AND EXISTING WORK AND PROVIDING CLEARANCES WITH STRUCTURAL MEMBERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS PRIOR TO THE DEMOLITION AND/OR FABRICATION AND/OR CONSTRUCTION OF ALL ITEMS. DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND ENGINEER PRIOR TO DEMOLITION AND/OR FABRICATION.

7. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT OF THE STRUCTURAL ELEMENTS AND INDICATE THE REQUIRED SIZES AND POINTS OF TERMINATION OF SAME. HOWEVER, IT IS NOT THE INTENTION OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, OBSTRUCTIONS OR STRUCTURAL CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE WORK SHOWN ON THESE DRAWINGS IN FULL COMPLIANCE WITH GOVERNING CODE IN SUCH A MANNER THAT IT WILL CONFORM TO THE STRUCTURAL DESIGN INTENT.

8. THE OWNER RESERVES THE RIGHT TO LET OTHER CONTRACTS IN CONNECTION WITH THE WORK OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS AS REQUIRED TO CONFORM TO THE GENERAL CONSTRUCTION SCHEDULE AND SHALL AFFORD OTHER CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND STORAGE OF THEIR MATERIALS AND EQUIPMENT AND TO EXECUTE THEIR WORK.

9. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND TEMPORARY CONSTRUCTION NECESSARY TO SAFEGUARD ALL PERSONS AND PROPERTY ON OR ADJACENT TO THE SITE. ALL MACHINERY, TOOLS, SERVICE LINES, AND CONDUIT SHALL BE GUARDED, SHIELDED OR BARRICADED TO PROVIDE SAFETY AND PREVENT CONTACT BY WORKERS AND THE PUBLIC IN ACCORDANCE WITH APPLICABLE REQUIREMENTS.

10. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS OBTAINED PROPER INSURANCE AND BONDING.

11. THE CONTRACTOR SHALL COMPLY WITH ALL SAFETY AND HEALTH LAWS AND REGULATIONS INCLUDING, BUT NOT LIMITED TO PROVISIONS, AND REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND/OR THE CONSTRUCTION SAFETY ACT OF 1969, AS AMENDED, INCLUDING CONFINED SPACE ENTRY REQUIREMENTS.

12. ALL DETAILS SHALL BE CONSIDERED TYPICAL AT ALL SAME AND SIMILAR CONDITIONS.

13. STRUCTURAL SCOPE IS LIMITED TO THE FOLLOWING:
    - NEW STEEL DUNNAGE TO SUPPORT NEW LOWER ROOF EQUIPMENT.
    - NEW EXHAUST FAN SLAB OPENING.
    - SLAB INFILL OF EXISTING EXHAUST FAN OPENING

13. STRUCTURAL SCOPE IS LIMITED TO THE FOLLOWING:
    - NEW STEEL DUNNAGE TO SUPPORT NEW LOWER ROOF EQUIPMENT.
    - NEW EXHAUST FAN SLAB OPENING.
    - SLAB INFILL OF EXISTING EXHAUST FAN OPENING

## STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE AND TO THE FOLLOWING MINIMUM YIELD STRENGTH:

| | |
|---|---|
| WIDE FLANGE SECTIONS | ASTM A572 OR A992 50 KSI |
| HOLLOW STRUCTURAL SECTIONS | ASTM A500 GRADE B 46 KSI |
| ANGLES AND CONNECTION MATERIAL | ASTM A36 36 KSI |

2. AISC SPECIFICATIONS FOR "LOAD AND RESISTANCE FACTOR DESIGN (LRFD) FOR STRUCTURAL STEEL IN BUILDINGS" - LATEST EDITION SHALL APPLY, EXCEPT AS MODIFIED BY THE NOTES, SCHEDULES AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS OR ANY RESTRICTIVE REQUIREMENTS OF THE BUILDING CODE.

3. THE FRAME SHALL BE CARRIED UP TRUE AND PLUMB AND TEMPORARY BRACING SHALL BE INTRODUCED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING EQUIPMENT AND OPERATION OF SAME. SUCH BRACING SHALL BE THE RESPONSIBILITY OF THE STEEL CONTRACTOR AND SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY.

4. ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS.

5. ALL WELDED CONNECTIONS SHALL CONFORM TO THE NEW YORK CITY BUILDING CODE. PROVISIONS SHALL BE MADE FOR FIELD INSPECTION AND TESTING OF WELDS. ALL SHOP WELDS SHALL BE TESTED BY ANY OF APPROVED METHODS AND SHALL BE CERTIFIED.

6. ALL BOLT STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, LATEST EDITION: HIGH STRENGTH BOLTS A-325 AND A-490, U.O.N.

7. ALL BOLTS SHALL BE 3/4" Ø MINIMUM ON HOLES 13/16" Ø UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

8. ALL SHOP CONNECTIONS SHALL BE HIGH STRENGTH BOLTED OR WELDED.

9. ALL COLUMN SPLICES, CONNECTIONS OF BEAMS TO COLUMNS, CONNECTION WITHIN THREE FEET OF COLUMNS, CONNECTIONS OF OR TO DIAGONAL MEMBERS, AND ALL BEAMS CARRYING MACHINE LOADS SHALL BE HIGH STRENGTH FRICTION CONNECTIONS. OTHER FIELD CONNECTIONS MAY USE UNFINISHED BOLTS (A307) EXCEPT WHERE SPECIFICALLY SHOWN OTHERWISE IN STRUCTURAL DRAWINGS.

10. IN ADDITION TO MOMENT CONNECTION, PROVIDE AISC STANDARD SHEAR CONNECTIONS FOR ALL GRAVITY AND WIND LOADS.

    A. CONNECTIONS FOR ALL BEAMS MUST BE GOOD FOR REACTIONS FIGURED FROM 1/2" OF TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF "UNIFORM LOAD CONSTANTS" PART 3 (LRFD) MANUAL; UNLESS OTHERWISE NOTED ON THE DRAWINGS.

11. ALL SHEAR CONNECTIONS SHALL BE 3/4" Ø HEADED STUDS AND 4 1/2" LONG, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

12. ALL ENDS OF COLUMNS AT SPLICES AND ALL OTHER BEARING CONNECTIONS SHALL BE MILLED TO COMPLETE TRUE BEARING.

13. PROVISIONS SHALL BE MADE FOR CONNECTIONS OF OTHER TRADES INCLUDING CUTTING AND PUNCHING OF STRUCTURAL MEMBERS, WHERE REQUIRED BY THE DWG. OR FOR WHICH INFORMATION IS FURNISHED PRIOR TO FABRICATION.

14. THE USE OF A CUTTING TORCH IN THE FIELD WILL NOT BE PERMITTED.

15. WELDING ELECTRODES SHALL CONFORM TO E70XX ELECTRODES.

16. CONTRACTOR SHALL PROVIDE STIFFENERS PER CHAPTER K OF AISC SPECIFICATION (LRFD) REGARDING THE NEED FOR COLUMN STIFFENERS.

17. ALL WELDERS TO BE AWS CERTIFIED.

## PARTIAL DEMOLITION NOTES:

1. ALL PARTIAL DEMOLITION NOTED ON S-100 SHALL COMPLY WITH APPLICABLE CODE AND NYCBC 3306.
2. ADJOINING PROPERTY OWNERS SHALL BE NOTIFIED OF UPCOMING DEMOLITION OPERATIONS IN WRITING NOT LESS THAN 10 DAYS PRIOR TO THE SCHEDULED STARTING DATE OF THE DEMOLITION AS PER NYCBC 3306.3.2.
3. NOTIFY DOB VIA PHONE OR ELECTRONICALLY, AT LEAST 24 HOURS, BUT NO MORE THAN 48 HOURS PRIOR TO THE START OF DEMOLITION WORK AS PER NYCBC 3306.3.1.

## SPECIAL AND PROGRESS INSPECTIONS

| DESCRIPTION | CODE REFERENCE |
|---|---|
| STRUCTURAL STEEL-WELDING | BC 1704.3.1 |
| STRUCTURAL STEEL - HIGH STRENGTH BOLTING | BC 1704.3.3 |
| STRUCTURAL STABILITY - EXISTING BUILDINGS | BC 1704.20.1 |
| FINAL INSPECTION | 28-116.2.4.2, BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY 101-10 |

STRUCTURAL SCOPE DESCRIPTION:
- NEW STEEL DUNNAGE TO SUPPORT NEW LOWER ROOF EQUIPMENT.
- NEW EXHAUST FAN SLAB OPENING.
- INFILL OF EXISTING EXHAUST FAN OPENING.

ALT-II OT (DOB# 123741512) AND MECHANICAL (DOB# M00253870) WORK FILED UNDER SEPARATE APPLICATION

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 01.29.21 | ISSUED FOR 100% CD |
| 2 | 05.26.20 | DOB RESUBMISSION – STRUCTURAL |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

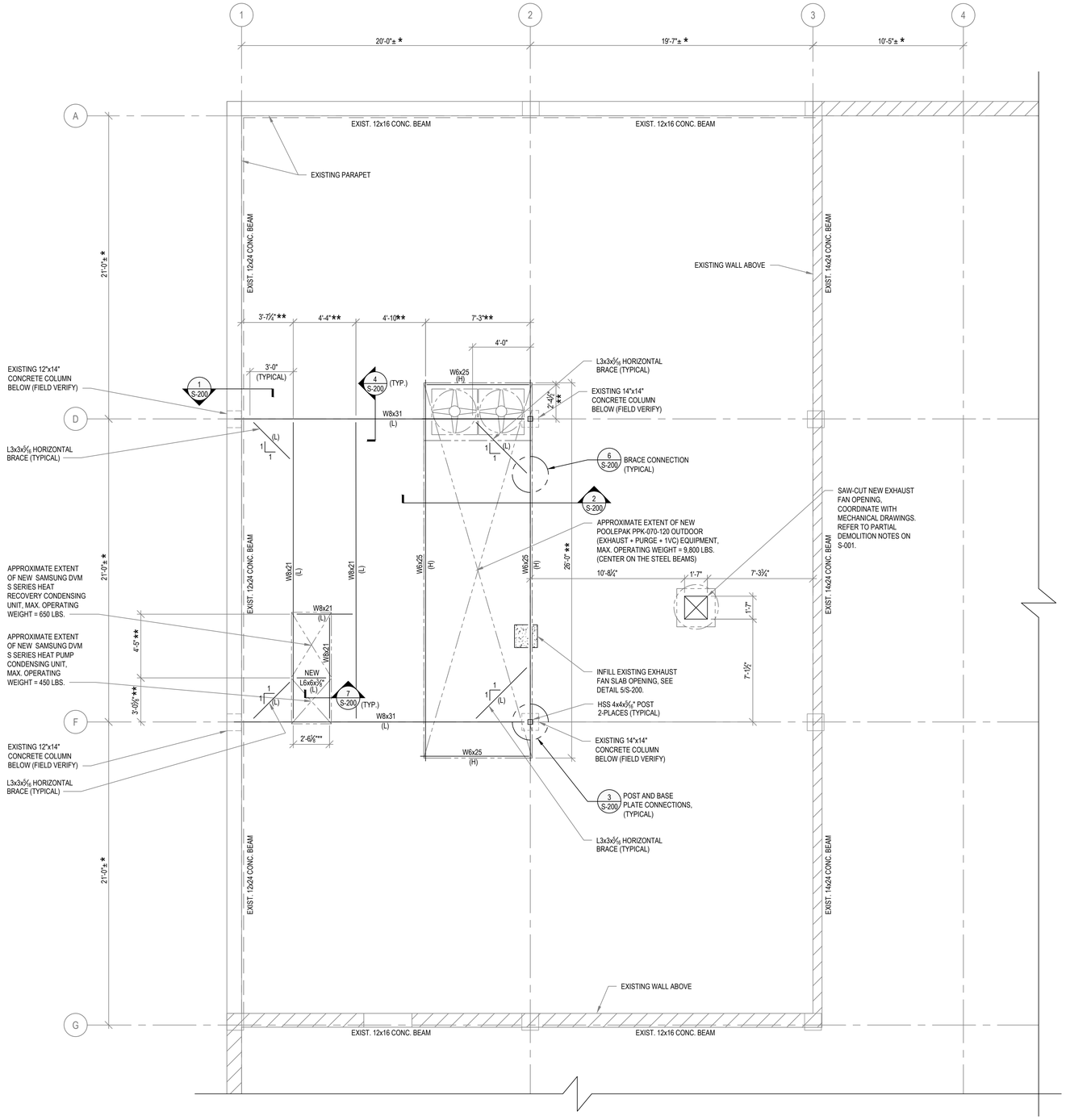
DRAWING

STRUCTURAL NOTES

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. S-001.00 |
| | DRAWN BY E.S. / 1 OF 3 |

NYC DOB Number

ALT-II OT (DOB# 123741512) AND MECHANICAL (DOB# M00253870) WORK FILED UNDER SEPARATE APPLICATION




## LOWER ROOF DUNNAGE FRAMING PLAN

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

## NOTES:

1. EXISTING FLOOR CONSTRUCTION: 2-WAY 8" N.W. CONCRETE SLAB SPANNING OVER CONCRETE COLUMNS AND PERIMETER BEAMS.
2. ALL NEW STEEL BEAMS, PLATES AND CONNECTION ELEMENTS SHALL BE HOT-DIPPED GALVANIZED STEEL.
3. STEEL FABRICATOR TO PROVIDE SSPC-SP 16 SURFACE PREPARATION TO ALL NEW GALVANIZED STEEL BEAMS.
4. ALL FIELD WELDS AND DAMAGED GALVANIZED COATING SHALL BE TOUCHED-UP WITH TWO COATS OF ZINC RICH COMPONENTS AS PER MANUFACTURER'S INSTALLATION SPECIFICATIONS.
5. REFER TO MANUFACTURER'S RECOMMENDATIONS AND CUT-SHEETS TO STIFFEN AND SUPPORT THE NEW EQUIPMENT ON THE NEW STEEL DUNNAGE.
6. ONLY SAWCUT EXISTING SLAB TO CONSTRUCT THE NEW 1'-7"X1'-7" SLAB OPENING AT THE EXACT LOCATION SHOWN ON THIS PLAN.
7. THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC.) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT.
8. THE CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. FAILURE TO NOTIFY ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF UNSATISFACTORY CONDITIONS.
9. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE ARCHITECT.
10. THE CONTRACTOR IS RESPONSIBLE FOR SHORING AND LATERAL BRACING OF ALL EXISTING STRUCTURES PRIOR TO ANY MODIFICATION OF EXISTING STRUCTURES.
11. THE CONTRACTOR MUST PERFORM A SITE VISIT AND REVIEW THE SCOPE OF WORK. ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ARCHITECT AND ENGINEER IMMEDIATELY.
12. DO NOT OVERLOAD ANY AREAS OF EXISTING SLAB WITH REMOVED AND/OR CONSTRUCTION MATERIALS.

STRUCTURAL SCOPE DESCRIPTION:
- NEW STEEL DUNNAGE TO SUPPORT NEW LOWER ROOF EQUIPMENT.
- NEW EXHAUST FAN SLAB OPENING.
- INFILL OF EXISTING EXHAUST FAN OPENING.

## LEGEND:

| | |
|---|---|
| * | INDICATES DIMENSION TO BE VERIFIED IN FIELD. |
| ** | INDICATES NEW EQUIPMENT DIMENSION OR CLEARANCE TO BE VERIFIED WITH MANUFACTURER AND MEP ENGINEER. |
| (V.I.F.) | INDICATES VERIFY IN FIELD |
| CANT. | INDICATES CANTILEVER BEAM |
| T.O.XX | INDICATES TOP OF XX. |
| (H) | INDICATES STEEL BEAM AT HIGHER ELEVATION |
| (L) | INDICATES STEEL BEAM AT LOWER ELEVATION |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 01.29.21 | ISSUED FOR 100% CD |
| 2 | 05.26.20 | DOB RESUBMISSION – STRUCTURAL |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 725-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

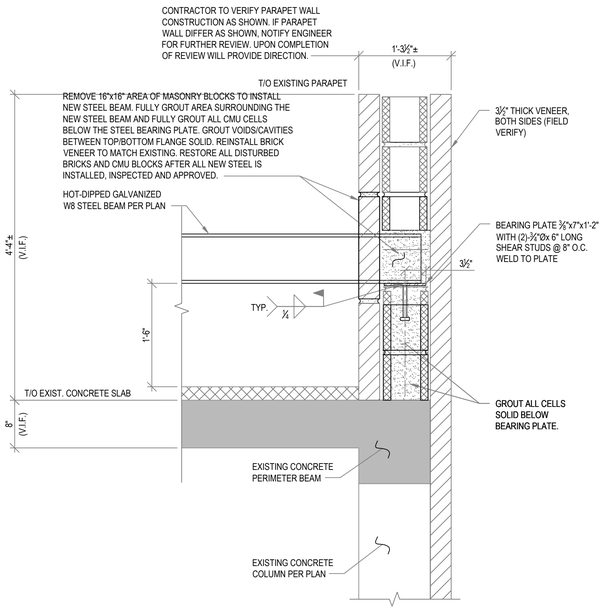
250 Main St.
Roosevelt Island, NY
10044

DRAWING

LOWER ROOF DUNNAGE FRAMING PLAN

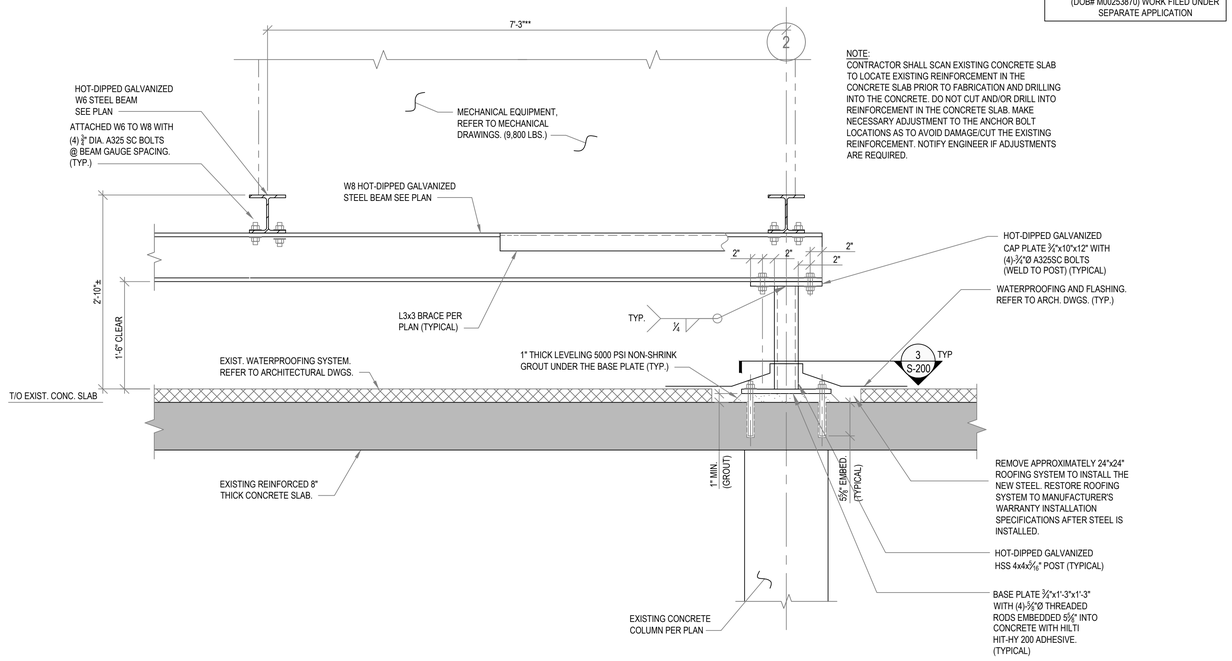
| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. S-100.00 |
| | DRAWN BY E.S. — 2 OF 3 |

NYC DOB Number

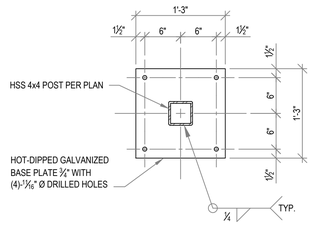



1 S-200 **SECTION**
SCALE: 1"=1'-0"

ALT-II OT (DOB# 123741512) AND MECHANICAL (DOB# M00253870) WORK FILED UNDER SEPARATE APPLICATION.



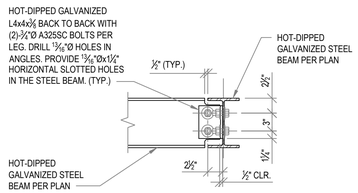

2 S-200 **SECTION**
SCALE: 1"=1'-0"



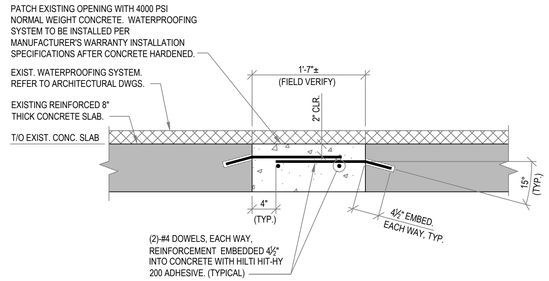

(BASE PLATE TYPICAL 2 PLACES)

NOTE: APPLY TWO COATS OF RICH ZINC PAINTS OVER WELDS, REFER TO NOTE #4 ON DRAWING S-100.

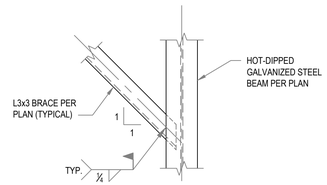
3 S-200 **PLAN BASE PLATE**
SCALE: 1"=1'-0"




4 S-200 **SECTION**
SCALE: 1"=1'-0"

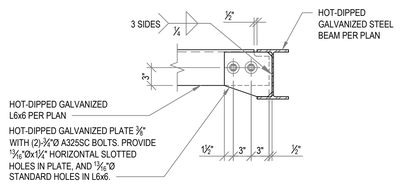



5 S-200 **CONCRETE INFILL SECTION**
SCALE: 1"=1'-0"

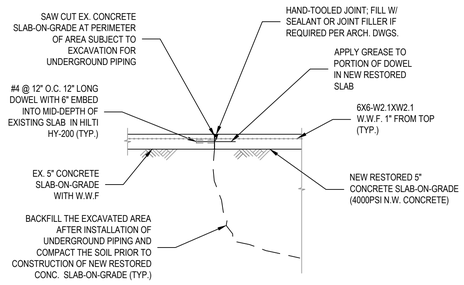



NOTE: APPLY TWO COATS OF RICH ZINC PAINTS OVER WELDS, REFER TO NOTE #4 ON DRAWING S-100.

6 S-200 **BRACING DETAIL**
SCALE: 1"=1'-0"




7 S-200 **SECTION**
SCALE: 1"=1'-0"




8 S-200 **TYP. SLAB ON GRADE REMEDIATION DETAIL**
SCALE: NTS

STRUCTURAL SCOPE DESCRIPTION:
- NEW STEEL DUNNAGE TO SUPPORT NEW LOWER ROOF EQUIPMENT.
- NEW EXHAUST FAN SLAB OPENING.
- INFILL OF EXISTING EXHAUST FAN OPENING.

**LEGEND:**

| | |
|---|---|
| * | INDICATES DIMENSION TO BE VERIFIED IN FIELD. |
| ** | INDICATES NEW EQUIPMENT DIMENSION OR CLEARANCE TO BE VERIFIED WITH MANUFACTURER AND MEP ENGINEER. |
| (V.I.F.) | INDICATES VERIFY IN FIELD |
| CANT. | INDICATES CANTILEVER BEAM |
| T.O.XX | INDICATES TOP OF XX. |
| (H) | INDICATES STEEL BEAM AT HIGHER ELEVATION |
| (L) | INDICATES STEEL BEAM AT LOWER ELEVATION |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 3 | 01.29.21 | ISSUED FOR 100% CD |
| 2 | 05.26.20 | DOB RESUBMISSION – STRUCTURAL |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

STRUCTURAL SECTIONS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. S-200.00
DRAWN BY E.S.
3 OF 3

NYC DOB Number

## GENERAL NOTES

1. DRAWING SPECIFICATIONS ARE PART OF THIS CONTRACT.

2. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL PIPING AND EQUIPMENT AND INDICATE REQUIRED SIZE AND POINTS OF TERMINATION OF THE PIPING AND SUGGEST PROPER ROUTES OF PIPING. HOWEVER, IT IS NOT THE INTENTION OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, OBSTRUCTIONS OR STRUCTURAL CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL HIS WORK IN SUCH A MANNER THAT IT WILL CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR WITHOUT FURTHER CONSTRUCTION OR COST.

3. THE CONTRACTOR SHALL VISIT THE PREMISES OF HIS PROPOSED WORK AND SHALL CAREFULLY EXAMINE THE EXISTING CONDITIONS AND LIMITATIONS THEREOF. VERIFICATION SHALL BE MADE AS TO THE ACTUAL LOCATIONS WHERE NEW PIPE RUNS WILL TIE INTO EXISTING WORK AND CLEARANCES WITH STRUCTURAL MEMBERS. THE CONTRACTOR SHALL INCLUDE ALL COSTS OF ANY KIND WHATSOEVER WHICH ARE INCURRED THROUGH LIMITATIONS OF THE EXISTING CONDITIONS.

4. THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. NO EXTRA PAYMENTS WILL BE AUTHORIZED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO LACK OF COORDINATION WITH OTHER SYSTEMS.

5. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF HIS WORK.

6. THIS CONTRACTOR SHALL FURNISH AND INSTALL ACCESS PANELS AS REQUIRED WHERE ACCESSIBILITY TO COMPONENTS (VALVES, TRAPS, CLEANOUTS, ETC.) IS REQUIRED FOR MAINTENANCE AND/OR SYSTEM OPERATION.

7. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE CODE COMLIANT U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.

8. PROVIDE SHUT-OFF VALVES AT ALL BRANCH PIPING TAKE-OFFS AND AT ALL CONNECTIONS TO EQUIPMENT. PROVIDE UNIONS AT ALL EQUIPMENT CONNECTIONS.

9. PROVIDE DRAINS WITH HOSE ADAPTERS AND CAPS ON PIPING AT ALL LOW POINTS. PROVIDE MANUAL VENTS ON PIPING AT ALL HIGH POINTS.

10. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH ELECTRICAL CONTRACTOR.

11. ALTERNATIVES TO THE SPECIFICATION MAY BE SUBMITTED TO THE OWNER OR THEIR REPRESENTATIVE FOR APPROVAL. IMPLEMENTATION OF ALTERNATIVES MUST BE APPROVED BY OWNER BEFORE WORK IS STARTED.

12. THE CONTRACTOR SHALL FURNISH AND INSTALL A PLUMBING SYSTEM COMPLETE WITH ALL EQUIPMENT, PIPING VALVES, INSULATION, CONTROLS, ACCESSORIES AND ASSOCIATED WORK IN ACCORDANCE WITH THE STATE BUILDING CODE, PLUMBING CODE, FUEL GAS CODE AND ALL AUTHORITIES HAVING JURISDICTION PLUS THESE SPECIFICATIONS.

13. COORDINATE WORK WITH ALL OTHER TRADES AND EXISTING CONDITIONS OF THE JOB SITE AND MAINTAIN REQUIRED CEILING HEIGHTS AND SPACE CONDITIONS.

14. ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES SHALL BE OBTAINED, PAID FOR, AND MADE AVAILABLE AT THE COMPLETION OF THE WORK BY CONTRACTOR.

15. BEFORE AN APPLICATION FOR FINAL ACCEPTANCE OF THE WORK WILL BE CONSIDERED, ALL TESTS DEEMED NECESSARY TO SHOW PROPER EXECUTION OF THE WORK SHALL HAVE BEEN PERFORMED AND COMPLETED IN THE PRESENCE OF AN ENGINEER'S/OWNER'S REPRESENTATIVE. SCHEDULING OF ALL TESTING PROCEDURES SHALL BE ARRANGED TO SUIT THE CONVENIENCE OF THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE.

16. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS, ANY DEFECTIVE MATERIALS OR WORKMANSHIP AS WELL AS DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR THE DURATION OF STIPULATED GUARANTEED PERIODS. THE DURATION OF GUARANTEE PERIODS SHALL BE ONE YEAR.

17. CONNECT NEW WORK TO EXISTING WORK IN A NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED TO ORIGINAL CONDITION.

18. ALL CUTTING, CORE DRILLING, CHASING OF CONCRETE AND OTHER WORK WHICH RESULT IN NOISE OBJECTIONABLE TO ALL AUTHORITIES HAVING JURISDICTION OF THE WORK SHALL BE DONE AT TIME DESIGNED BY THE JURISDICTIONAL AUTHORITIES AT NO EXTRA COST TO THE OWNER.

19. THIS CONTRACTOR SHALL NOT DO ANY CUTTING, CORING OR CHASING THAT MAY IMPAIR THE STRENGTH OF THE BUILDING. NO HOLES, EXCEPT THOSE FOR SMALL SCREWS, MAY BE DRILLED IN BEAMS, OR OTHER STRUCTURAL MEMBERS WITHOUT OBTAINING PRIOR APPROVAL. ALL WORK SHALL BE DONE IN A WORKMANLIKE MANNER BY MECHANICS SKILLED IN THEIR TRADE.

20. PROVIDE THE FOLLOWING:
- SCAFFOLDING, RIGGING, HOISTING.
- RUBBISH REMOVAL.
- OPERATING AND MAINTENANCE INSTRUCTIONS.
- SPARE PARTS AND TOOLS.
- OPERATING, PERFORMANCE AND CODE REQUIRED TESTS.
- ADJUSTING AND BALANCING PLUMBING SYSTEMS.
- IDENTIFICATION: VALVE TAGS, VALVE TAG SCHEDULES.
- HANGER AND SUPPORTS FOR PIPING AND EQUIPMENT.
- EQUIPMENT CATALOG CUTS AND SHOP DRAWINGS FOR APPROVAL TWO (2) COPIES EACH.
- AS BUILT DRAWINGS DRAWINGS AT COMPLETION OF WORK.

21. CONTRACTOR MUST COORDINATE ALL WORK OUTLINED IN THE "PF" DRAWINGS WITH SEPARATE CONTRACT WORK OCCURRING SIMULTANEOUSLY ON THE PREMISES. SEPARATE WORK WILL BE OCCURING IN THE FILTER ROOM, POOL ROOM, LOCKER ROOMS, ETC. AND THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK SPACES, ACCESS, PHASING, ETC. WITH SEPARATE CONTRACT WORK

22. CONTRACTOR TO COORDINATE WITH BUILDING OWNER FOR SCHEDULING AND SHUT DOWN OF POOL. PROVIDE DETAILED CONSTRUCTION SCHEDULE AT TIME OF BID.

## SPECIFICATIONS

1.0 GENERAL

1.1 APPLICABLE STANDARDS, CODES AND PUBLICATIONS

THIS ENTIRE INSTALLATION SHALL BE TESTED AND INSTALLED TO CONFORM, AS A MINIMUM, TO APPLICABLE PROVISIONS OF THE FOLLOWING CODES AND STANDARDS EXCEPT WHERE STRICTER REQUIREMENTS ARE SPECIFIED ELSEWHERE HEREIN OR SHOWN ON THE CONTRACT DRAWINGS:

1.1.1 PLUMBING CODE OF NEW YORK CITY.

1.1.2 UNDERWRITERS' LABORATORIES, INC. (OR OTHER NRTL)

1.1.3 MANUFACTURER LISTING.

1.2 COORDINATION

1.2.1 COORDINATE WITH OTHER TRADES AS NECESSARY TO FACILITATE TIMELY COMPLETION AND AVOID NECESSITY FOR CUTTING AND PATCHING.

1.2.2 FURNISH TO OTHER AFFECTED TRADES ALL NECESSARY INFORMATION, WORKING DRAWINGS OR MATERIALS REQUIRED FOR INSTALLATION AND COMPLETION OF ALL WORK.

1.2.3 COORDINATE THE WORK OF ALL SUBMITTALS FOR THE PURPOSE OF INSURING THAT NO CONFLICT EXISTS WITH THE INSTALLATIONS TO BE MADE BY OTHER ENTITIES, WITH FIELD CONDITIONS AND THE INTENDED OPERATION INCLUDING THE CAPABILITY OF PERFORMING ROUTINE AND MAJOR MAINTENANCE OF ALL COMPONENTS OF THE INSTALLATIONS.

1.3 SUBMITTALS

1.3.1 GENERAL

1.3.1.1. CATALOG CUTS SHALL BE REFERENCED TO THE SPECIFICATIONS SECTION AND LOCATION WHERE THE ITEM IS TO BE USED.

1.3.1.2. INCLUDE ON EACH LAYOUT WORKING DRAWING, A CERTIFICATION THAT ALL RELATED CONDITIONS HAVE BEEN CHECKED WITH ALL TRADES, AND THAT NO CONFLICT EXISTS.

1.3.1.3. SUBMIT TO THE ENGINEER, FOR APPROVAL, A LIST OF ALL MATERIAL AND EQUIPMENT MANUFACTURERS WHOSE PRODUCTS ARE PROPOSED.

1.3.1.4. MAKE ALL SUBMITTALS SUFFICIENTLY IN ADVANCE OF FIELD REQUIREMENTS TO ALLOW AMPLE TIME FOR CHECKING. NO CLAIM FOR EXTENSION OF TIME WILL BE GRANTED BY REASON OF FAILURE IN THIS RESPECT AND NO WORK IN THE FIELD MAY BE STARTED WITHOUT APPROVED SHOP DRAWINGS AND THE ENGINEER'S APPROVAL.

1.3.1.5. APPROVAL OF ANY SUBMITTAL SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF FURNISHING MATERIALS AND SYSTEMS OF PROPER DIMENSIONS, CAPACITIES, SIZES, QUANTITIES, QUALITY AND INSTALLATION DETAILS, TO EFFICIENTLY PERFORM THE REQUIREMENTS AND INTENT OF THE CONTRACT DOCUMENTS.

1.3.1.6. IF THE SUBMITTALS DIFFER FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, MAKE SPECIFIC MENTION OF SUCH DIFFERENCE IN LETTERS OF TRANSMITTAL, WITH A REQUEST FOR SUBSTITUTION, TOGETHER WITH REASONS THEREFORE, SO THAT, IF ACCEPTABLE, SUITABLE ACTION MAY BE TAKEN FOR PROPER ADJUSTMENT. FAILING THIS, THE CONTRACTOR WILL NOT BE RELIEVED OF THE RESPONSIBILITY FOR EXECUTING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

1.3.2 SHOP DRAWINGS - COORDINATION DRAWINGS WITH OTHER TRADES

1.3.2.1. SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE PROPER MATERIALS. APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY.

## SPECIFICATIONS CONT.

1.3.3 CATALOG CUTS AND BROCHURES

1.3.3.1. PIPE AND FITTINGS
1.3.3.2. HANGERS AND SUPPORTS INCLUDING SUPPLEMENTAL STEEL
1.3.3.3. VALVES
1.3.3.4. PUMP AND DRIVE
1.3.3.5. SPILL CONTAINMENT PADS
1.3.3.6. DUCTWORK
1.3.3.7. SYSTEM IDENTIFICATION BANDS
1.3.3.8. FLOWMETER AND TRANSMITTER

1.3.4 POINT-TO-POINT WIRING DIAGRAM FOR FLOW METER, TRANSMITTER AND VFD CONNECTION

1.4 MATERIALS, DELIVERY, STORAGE AND HANDLING

1.4.1. DELIVER AND STORE MATERIALS IN MANUFACTURER'S ORIGINAL UNOPENED PROTECTED PACKAGING

1.4.2. HANDLE IN A MANNER TO PREVENT DAMAGE TO FINISHED SURFACES. WHERE POSSIBLE, MAINTAIN PROTECTIVE COVERINGS UNTIL INSTALLATION IS COMPLETE. REPLACE OR TOUCH-UP DAMAGED SURFACES TO MATCH ADJACENT SURFACES TO SATISFACTION OF BUILDING MANAGER

1.5 INSPECTION

1.5.1. ALL MATERIALS AND EQUIPMENT DELIVERED TO THE SITE WILL BE INSPECTED. MATERIAL AND EQUIPMENT THAT IS DEFECTIVE OR FAILS SHALL NOT BE INSTALLED.

2.0 VALVES

2.1 BALL VALVES

PVC ONE PIECE BODY, PVC BALL, THREADED FPM RINGS
MAKE: HAYWARD
MODEL: TB SERIES
OR APPROVED EQUAL

2.2 BUTTERFLY VALVES

PVC BODY, 316 STAINLESS STEEL STEM, RESILIENT REPLACEABLE EPDM SEAT
MAKE: DOMINION
MODEL: DN100, DN150
OR APPROVED EQUAL

2.3 CHECK VALVE

SWING CHECK STYLE, PVC BODY, EPDM SEALS, NSF APPROVED
MAKE: HAYWARD
MODEL: SW SERIES
OR APPROVED EQUAL

2.4 INLINE STRAINER

Y-STRAINER, STAINLESS STEEL BODY, FLANGED, LEAD-FREE, NSF APPROVED, BALL VALVE DRAIN PORT FOR MAINTENANCE
MAKE: WATTS
MODEL: 77F-CSSI
OR APPROVED EQUAL

2.5 HARDWARE

ALL NUTS, WASHERS, BOLTS AND OTHER MISCELLANEOUS HARDWARE ASSOCIATED WITH POOL VALVES AND PIPING SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED

2.6 VALVE TAGS

2.6.1 STAMPED OR ENGRAVED WITH 1/4-INCH (6.4-MM) LETTERS FOR PIPING SYSTEM ABBREVIATION AND 1/2-INCH (13-MIN) NUMBERS.

2.6.2 TAG MATERIAL: BRASS, 0.032-INCH (0.8-INN) MINIMUM THICKNESS, AND HAVING PREDRILLED OR STAMPED HOLES FOR ATTACHMENT HARDWARE.

2.6.3 FASTENERS: BRASS S-HOOK.

2.6.4 LABEL VALVE TAGS TO CORRESPOND TO EXISTING VALVE SCHEDULE ON WALL CHART IN FILTER ROOM

3.0 EQUIPMENT

3.1 FLOW METER

SADDLE-MOUNTED, DIGITAL PADDLEWHEEL STYLE, INCLUDE SEPARATE WALL MOUNTED DIGITAL LCD DISPLAY. SELECTED MODEL SHALL INCLUDE POWER PLUG FOR CONNECTION TO RECEPTACLE.
MAKE: GF PIPING SYSTEMS
MODEL: SIGNET 2551 MAGMETER
OR APPROVED EQUAL

3.2 FILTER SOCK

PROVIDE FILTER PANEL GRID SIZE (LxW) AND LOCATION AND SIZE OF SUCTION ON THE GRIDS TO ROGER ANDERSON OF IT IT'S WATER, INC. (TEL: 610-269-2062), OR APPROVED EQUAL, FOR COORDINATION ON FILTER SOCK MODEL AND SIZE TO BE PROVIDED.

3.3 PUMP - SEE PUMP SCHEDULE ON THIS SHEET

3.4 VFD

MAKE: NEPTUNE BENSON
MODEL: GREENDRIVE
OR APPROVED EQUAL

3.5 SPILL CONTAINMENT PAD

MAKE: GLOBAL INDUSTRIAL
MODEL: SPILL CONTAINMENT MODULAR PLATFORM
OR APPROVED EQUAL

4.0 IDENTIFICATION

4.1 PIPE MARKERS

FLEXIBLE, VINYL FILM TAPE WITH PRESSURE SENSITIVE ADHESIVE BACKING AND PRINTED MARKINGS. MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED. MARKERS TO BE COLOR CODED AS INDICATED BY SCHEDULE ON THIS SHEET.

5.0 DUCTWORK

5.1 SHEET METAL DUCTWORK

5.1.1 FURNISH, INSTALL AND FABRICATE ALL DUCTWORK IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA LOW PRESSURE AND MEDIUM PRESSURE DUCT CONSTRUCTION STANDARD MANUALS, USING PRIME SHEETS OF STAINLESS STEEL.

5.1.2 CONSTRUCT TS, BENDS, AND ELBOWS WITH A FULL RADIUS THROAT OF NOT LESS THAN 1-1/2 TIMES WIDTH OF DUCT ON CENTERLINE. WHERE NOT POSSIBLE DUE TO LIMITED SPACE AND WHERE RECTANGULAR ELBOWS ARE USED, PROVIDE DOUBLE AIR FOIL TURNING VANES ON MAXIMUM 4" CENTERS. NO SHARP ANGLED FITTINGS (MORE THAN 15 DEGREES) SHALL BE USED.

5.1.3 ALL DUCT SYSTEMS SHALL BE TIGHT AND FREE FROM LEAKS AND VIBRATION. ALL JOINTS IN DUCTWORK SHALL BE SEALED AIRTIGHT WITH APPROPRIATE DUCT SEALERS, WRAPPED WITH DUCT TAPE AND COATED WITH A SECOND COAT OF SEALER. THIS INCLUDES ALL SUPPLY, RETURN AND EXHAUST DUCTWORK. DUCT SEALER 3M No.900 SHALL BE USED AND SHALL BE TESTED FOR AIR TIGHTNESS AFTER INSTALLATION. MAINTAIN A LEAKAGE RATE OF NO GREATER THAN 5%.

5.1.4 DRIVE SLIPS AND SNAP LOCK CONNECTIONS ARE NOT PERMITTED.

5.1.5 DUCTWORK LAYOUTS AND ROUTES AS SHOWN ON THE DRAWING ARE SCHEMATIC; THEREFORE, CHANGES IN DUCT SIZES AND/OR LOCATIONS SHALL BE MADE WHERE NECESSARY TO CONFORM TO SPACE CONDITIONS OR OBTAIN MAXIMUM HEADROOM CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER.

5.2 DIFFUSERS, REGISTERS AND GRILLES

5.2.1. RETURN REGISTER CONSTRUCTION TO BE PRICE 700 SERIES STAINLESS STEEL

5.2.2. ALL DIFFUSERS, REGISTER, GRILLES AND LINEAR SLOTS SHALL HAVE A NOISE CRITERIA LESS THAN 27.

5.2.3. AIR RETURN GRILLES AND REGISTERS SHALL BE PROVIDED WITH FIXED FACE LOUVERS PARALLEL TO THE LONG DIMENSION AND SET AT 45 DEGREE ANGLE. FOR REGISTERS, PROVIDE KEY OPERATED OPPOSED BLADE DAMPERS FIXEDLY ATTACHED TO THE GRILLES.

5.3 DUCTWORK ACCESSORIES

5.3.1. ALL BRANCHES AND TAKE-OFFS SHALL BE EQUIPPED WITH OPPOSED BLADE TYPE VOLUME DAMPERS.

5.3.2. PROVIDE DAMPERS WHERE REQUIRED FOR PROPERLY BALANCING THE SYSTEM, WITH LOCKABLE, MARKED QUADRANT. DAMPERS SHALL BE OF THE SAME MATERIAL AS THE DUCT IN WHICH THEY ARE INSTALLED AND SHALL BE SUPPLIED AT THE JUNCTION OF A MAIN DUCT AND EACH BRANCH DUCT.

5.3.3. IN ACCORDANCE WITH SMACNA STANDARDS, PROVIDE DUCTWORK ACCESS DOORS TO ALLOW ADEQUATE SERVICE ACCESS TO ALL CONCEALED CONTROLS, FUSIBLE LINKS OF DAMPERS, ETC. MINIMUM SIZE SHALL BE 16"x16" (OR MAXIMUM SIZE THAT WILL FIT IN DUCT). PROVIDE ACCESS DOORS WITH AIRTIGHT FOAM GASKETS AND SUITABLE FOR DUCT PRESSURE CLASS. THE DOORS SHALL BE PIANO HINGED AND SHALL HAVE A FLUSH OPERATING CAM LATCH LOCKING DEVICE.

## LEGEND

- EXISTING PIPING
- EXISTING PIPING TO BE REMOVED
- PIPE DOWN OR DROP
- PIPE UP
- VALVE IN PIPE DROP
- REDUCER
- INLINE STRAINER W/ DRAIN VALVE
- BALL VLAVE
- FLOW CONTROL VALVE
- CHECK VALVE
- BUTTERFLY VALVE
- PUMP
- FLOWMETER
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- RECEPTACLE
- POINT OF NEW CONNECTION
- POINT OF DISCONNECTION

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| AFF | ABOVE FINISHED FLOOR | MAX. | MAXIMUM |
| DN | DOWN | MER | MECHANICAL EQUIPMENT ROOM |
| EA. | EACH | MCA | MINIMUM CIRCUIT AMPACITY |
| EFF. | EFFICIENCY | MIN. | MINIMUM |
| EXIST. | EXISTING | No. | NUMBER |
| FLA | FULL LOAD AMPS | P.D. | PRESSURE DROP |
| FPM | FEET PER MINUTE | PH | PHASE |
| FPS | FEET PER SECOND | PRESS. | PRESSURE |
| FT | FEET | PSI | POUNDS PER SQUARE INCH |
| FT WG | FEET WATER GAUGE | RPM | REVOLUTIONS PER MINUTE |
| G.C. | GENERAL CONTRACTOR | SCHED. | SCHEDULE |
| GPH | GALLONS PER HOUR | SS | STAINLESS STEEL |
| GPM | GALLONS PER MINUTE | TEMP. | TEMPERATURE |
| H | HEIGHT | TYP. | TYPICAL |
| HP | HORSEPOWER | V | VOLTS |
| HZ | HERTZ | VEL. | VELOCITY |
| IN. | INCHES | VOL. | VOLUME |
| IN.W.G. | INCHES WATER GAUGE | W | WIDTH |

## CIRCULATION PUMP SCHEDULE

| TAG NO. | LOCATION | PUMP DATA | | | | | ELECTRICAL DATA | MANUFACTURER | MODEL |
|---|---|---|---|---|---|---|---|---|---|
| | | FLOW (GPM) | HEAD (FT OF $H_2$0) | TYPE | HP | RPM | V / PH / HZ | | |
| P-1 | FILTER ROOM | 425 | 50 | CLOSE-COUPLED CENTRIFUGAL | 7.5 | 1725 | 208/3/60 | MARLOW | 3-9SC |

## FLOWMETER SCHEDULE

| TAG NO. | LOCATION | SERVICE | TYPE | PIPE SIZE | POWER | MANUFACTURER | MODEL |
|---|---|---|---|---|---|---|---|
| FM-1 | FILTER ROOM | POOL WATER RETURN FLOW MEASUREMENT | SADDLE FITTING, REMOTE MOUNT DISPLAY | 6" | 24VDC | GF PIPING SYSTEMS | SIGNET 2551 MAGMETER |

NOTES:

1. PROVIDE ACCOMPANYING TRANSMITTER (MODEL: SIGNET 9900) AND TRANSMITTER ENCLOSURE ASSEMBLY
2. INSTALL PER MANUFACTURER'S INSTALLATION REQUIREMENTS

## COLOR CODE SCHEDULE

| PIPING | COLOR | PIPING | COLOR |
|---|---|---|---|
| POTABLE WATER LINE | DARK BLUE | MAIN DRAIN | BLACK |
| FILTERED WATER LINES | AQUA | BACKWASH WASTE LINE | DARK BROWN |
| GUTTER RETURN | OLIVE GREEN | SEWER | DARK GRAY |

NOTES:

1. THE NAME OF THE LIQUID AND ARROWS INDICATING DIRECTION OF FLOW SHALL BE INDICATED ON THE PIPE, IN ACCORDANCE WITH THE NEW YORK STATE SANITARY CODE.
2. WHERE TWO COLORS DO NOT HAVE SUFFICIENT CONTRAST TO EASILY DIFFERENTIATE BETWEEN THEM, A SIX (6) INCH BAND OF CONTRASTING COLOR SHOULD BE PAINTED ON ONE (1) PIPE AT APPROXIMATELY THIRTY (30) INCH INTERVALS.

## DRAWING LIST



| SHEET NUMBER | SHEET NAME |
|---|---|
| PF-001 | GENERAL NOTES, SYMBOLS, SCHEDULES AND SPECIFICATIONS |
| PF-002 | DETAILS AND FLOW METER SCHEMATIC |
| PF-003 | POOL FLOW DIAGRAM |
| PF-004 | POOL FILTER ROOM DEMOLITION PLAN |
| PF-005 | POOL FILTER ROOM PLAN |



UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 01.29.21 | ISSUED FOR 100% CD |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

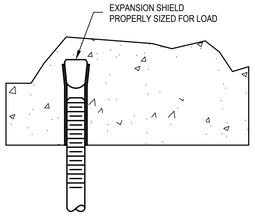
DRAWING

GENERAL NOTES
SYMBOLS SCHEDULES
AND SPECIFICATIONS

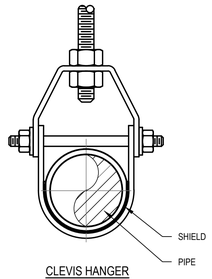
SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. PF-001.00
DRAWN BY NE
1 OF 5

NYC DOB Number




CONCRETE ANCHOR



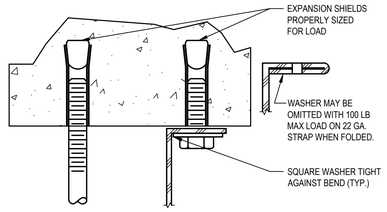

CLEVIS HANGER

## PIPE SUPPORT DETAIL

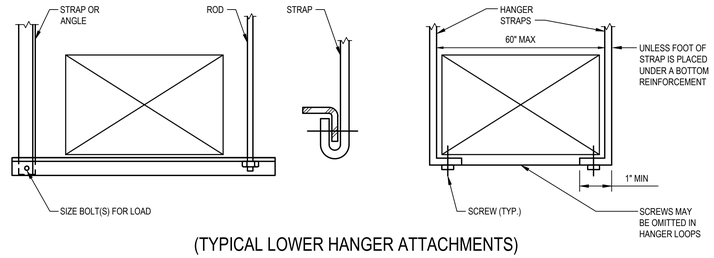
(LOWER ATTACHMENT DEVICES)
SCALE: NONE

NOTES:

1. SIZE HANGER TO ADEQUATELY SUPPORT LOAD.
2. ALL HANGER RODS, ANGLES, BOLTS, STRAPS, SCREWS AND ASSOCIATED PARTS LOCATED IN PUMP HOUSES AND CHLORINATION ROOM SHALL BE 316 STAINLESS STEEL.




(TYPICAL UPPER ATTACHMENT DEVICES)

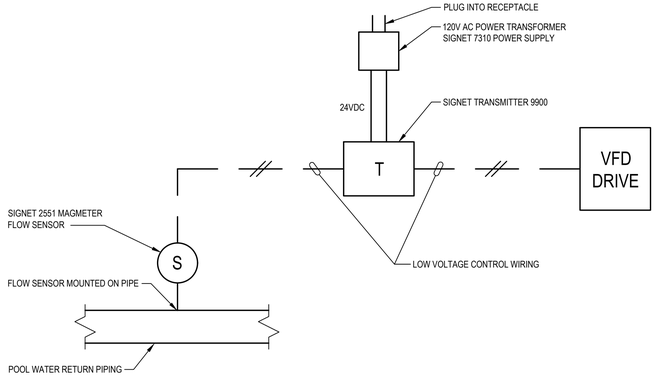



(TYPICAL LOWER HANGER ATTACHMENTS)

NOTE:
HANGER SPACING AND BRACING SHALL BE IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS.

## DUCT SUPPORT DETAIL

SCALE: NONE




## FLOW METER SCHEMATIC

SCALE: NONE

NOTES:

1. PROVIDE CONTROL WIRING IN PVC COATED RIGID CONDUIT
2. WIRE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS . PROVIDE SETUP AND PROGRAMMING

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 01.29.21 | ISSUED FOR 100% CD |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

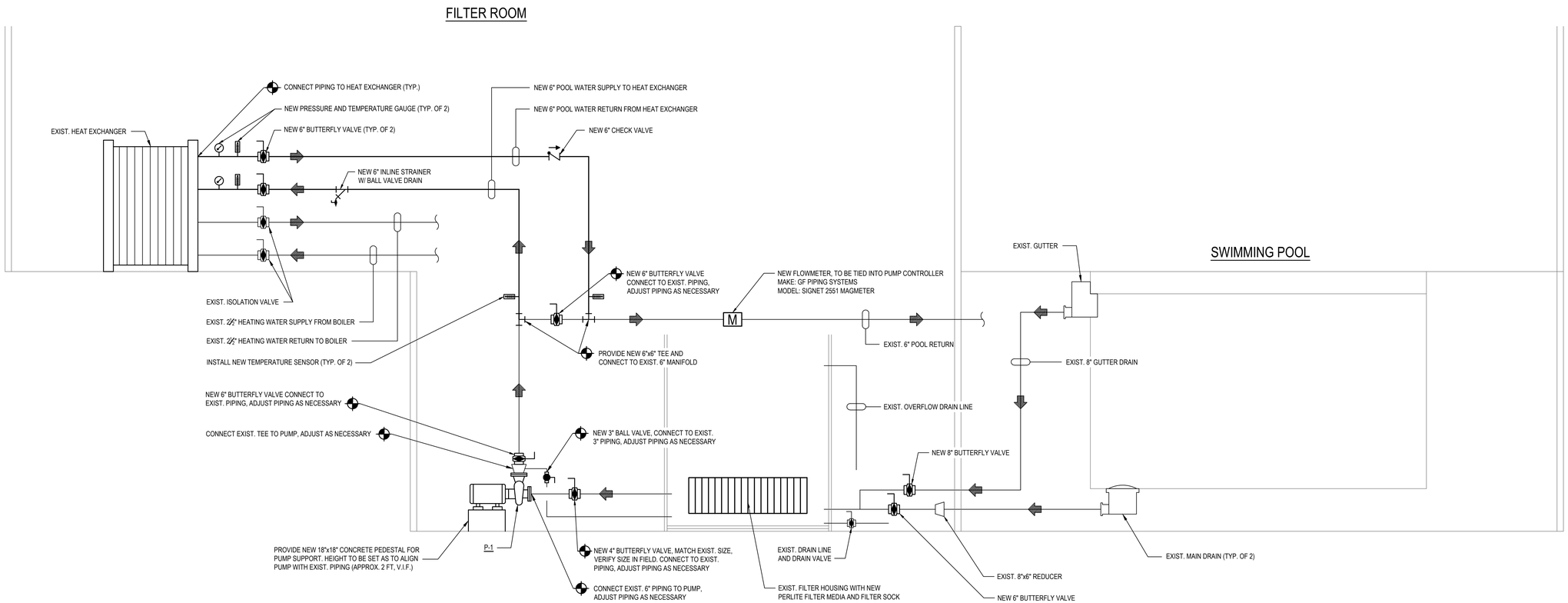
250 Main St.
Roosevelt Island, NY
10044

DRAWING

DETAILS AND FLOW
METER SCHEMATIC

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | PF-002.00 |
| | DRAWN BY | NE |
| | | 2 OF 5 |

NYC DOB Number




## POOL FLOW DIAGRAM

SCALE: NONE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 01.29.21 | ISSUED FOR 100% CD |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

POOL FLOW DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019

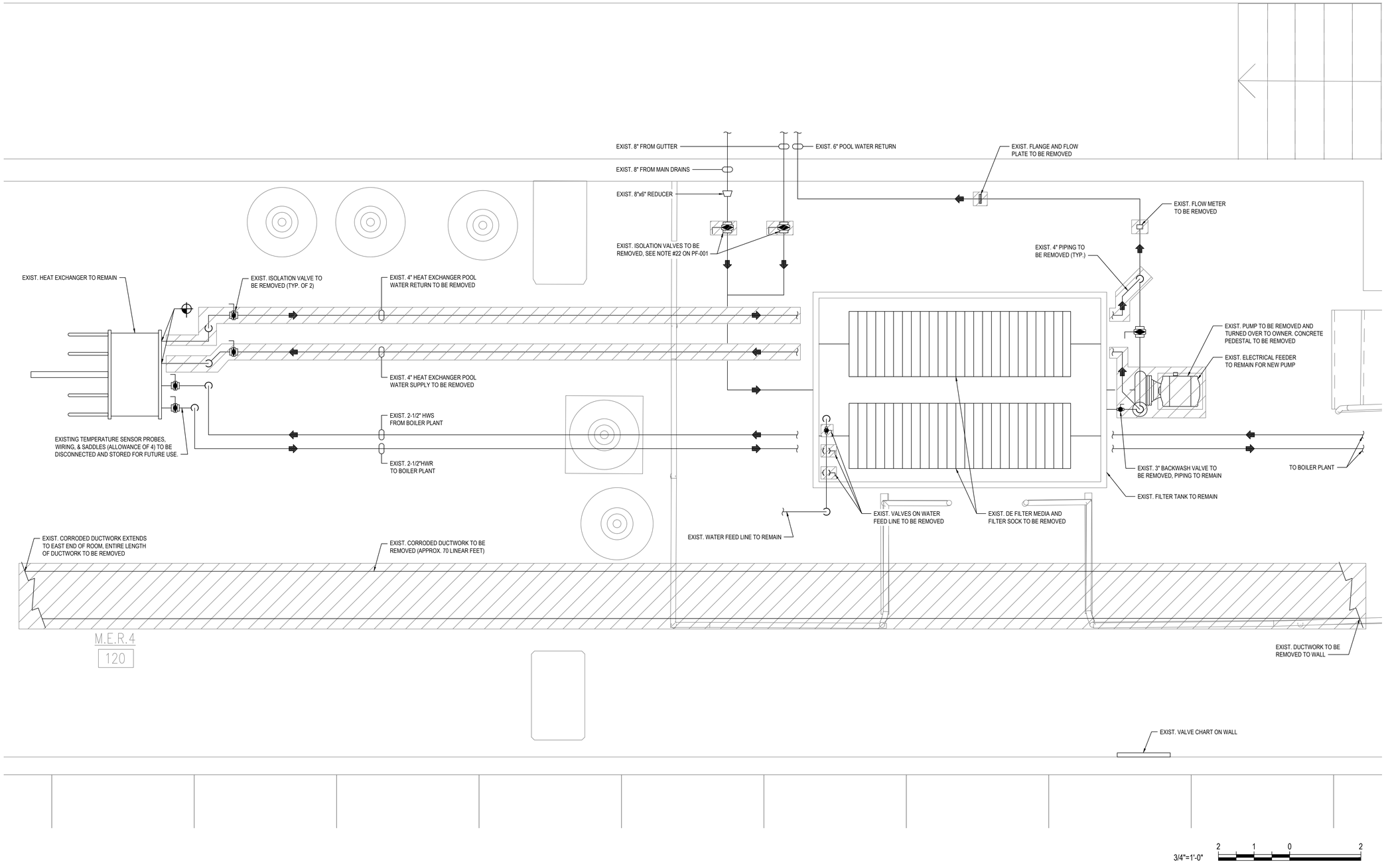
JOB NUMBER 19010

DWG. No. PF-003.00

DRAWN BY NE

3 OF 5

NYC DOB Number




D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 01.29.21 | ISSUED FOR 100% CD |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION


Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

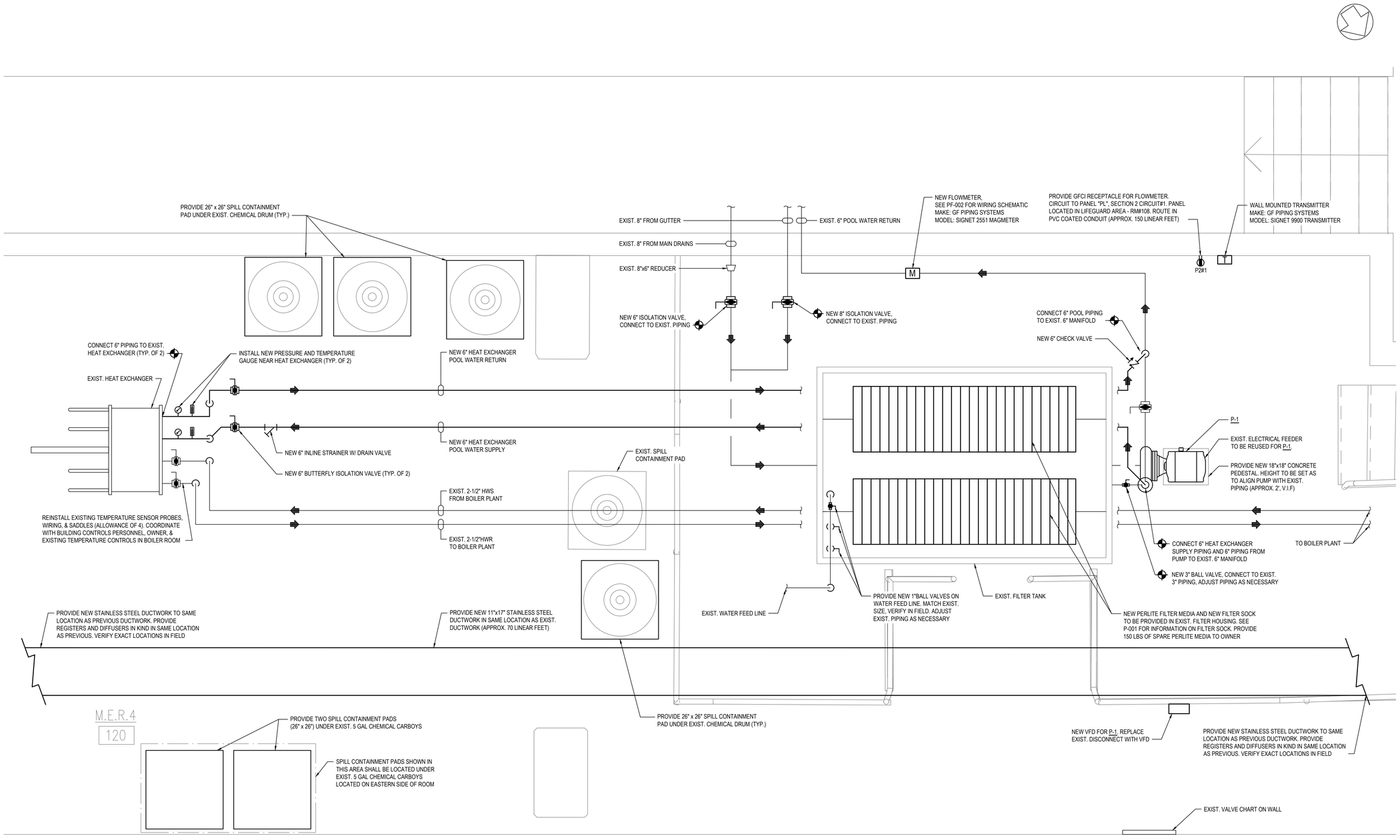
POOL FILTER ROOM DEMOLITION PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. PF-004.00
DRAWN BY NE
4 OF 5

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER. SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




## NOTES:

1. PLACE PIPE TAGS ON POOL PIPING THAT INDICATES FLOW DIRECTION AND IDENTIFIES FLUID BEING CONVEYED. SEE SPECS ON PF-001 FOR MORE INFORMATION.
2. CAP ANY UNUSED PROBES AND REMOVE ANY OLD INSTRUMENTS THAT ARE NO LONGER IN USE (ALLOW 10)
3. ALL REMOVED VALVES FOUND TO BE IN GOOD CONDITION SHALL BE TURNED OVER TO OWNER. COORDINATE WITH OWNER

3/4"=1'-0" 2 1 0 2

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER. SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 01.29.21 | ISSUED FOR 100% CD |
| 1 | 04.03.20 | BID SET |

ISSUE / REVISION

Ronnette Riley *Architect*

494 Eighth Avenue, 15th Floor
New York, NY 10001
T 212 594 4015
F 212 594 2868
www.ronnetteriley.com

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS

250 Main St.
Roosevelt Island, NY
10044

DRAWING

POOL FILTER ROOM PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. PF-005.00 |
| | DRAWN BY NE — 1 OF 5 |

NYC DOB Number

## SPORTSPARK - PHASE #3 DRAWING LIST

| DRAWING DISCIPLINE | DRAWING # | DRAWING TITLE |
|---|---|---|
| | | |
| **ARCHITECTURAL (DOB# M00451782)** | | |
| ARCHITECTURAL | A001.00 | NOTES, PLOT PLAN |
| ARCHITECTURAL | A002.00 | FIRST FLOOR PLAN |
| ARCHITECTURAL | A003.00 | EGRESS FLOOR PLAN WEST AND NOTES |
| ARCHITECTURAL | A004.00 | ENERGY ANALYSIS 1 |
| ARCHITECTURAL | A005.00 | ENERGY ANALYSIS 2 |
| ARCHITECTURAL | A100.00 | FIRST FLOOR DEMOLITION PLAN WEST |
| ARCHITECTURAL | A101.00 | FIRST FLOOR DEMOLITION PLAN EAST |
| ARCHITECTURAL | A102.00 | FIRST FLOOR CONSTRUCTION PLAN WEST |
| ARCHITECTURAL | A103.00 | FIRST AND SECOND CONSTRUCTION FLOOR PLAN EAST |
| ARCHITECTURAL | A104.00 | ROOF DEMOLITION AND CONSTRUCTION PLAN |
| ARCHITECTURAL | A105.00 | ROOF DETAILS |
| ARCHITECTURAL | A106.00 | FIRST FLOOR REFLECTED CEILING PLAN |
| ARCHITECTURAL | A107.00 | FIRST & SECOND FLOOR REFLECTED CEILING PLAN (EAST) |
| ARCHITECTURAL | A108.00 | ENLARGED FLOOR PLAN |
| ARCHITECTURAL | A109.00 | GYMNASIUM PLAN, NOTES AND DETAILS |
| ARCHITECTURAL | A110.00 | GYMNASIUM ELEVATIONS |
| ARCHITECTURAL | A200.00 | INTERIOR ELEVATIONS |
| ARCHITECTURAL | A201.00 | INTERIOR ELEVATIONS - 2 |
| ARCHITECTURAL | A202.00 | TOILET ACCESSORIES ADA REQUIREMENTS |
| ARCHITECTURAL | A203.00 | RECEPTION DESK, DISPLAY MOUNT DETAILS |
| ARCHITECTURAL | A301.00 | BUILDING ELEVATION & SECTION |
| ARCHITECTURAL | A302.00 | EXTERIOR WALL CLADDING DETAIL |
| ARCHITECTURAL | A600.00 | DOOR SCHEDULE & MISC. DETAILS |
| ARCHITECTURAL | A601.00 | PARTITION TYPES |
| ARCHITECTURAL | A602.00 | H.M. ELEVATIONS AND DETAILS |
| ARCHITECTURAL | A603.00 | FIRE STOPPING , CEILING DETAILS AND MISC. DETAILS |
| ARCHITECTURAL | A700.00 | FLOOR FINISH PLAN (WEST) |
| ARCHITECTURAL | A701.00 | FLOOR FINISH (EAST) & FINISH SCHEDULE |
| ARCHITECTURAL | A702.00 | FINISH LEGEND LIGHTING AND FINISH SCHEDULE |
| ARCHITECTURAL | A703.00 | PLUMBING AND ACCESSORIES SCHEDULE |
| ARCHITECTURAL | A900.00 | SIGNAGE SCHEDULE AND DETAILS |
| | | |
| **MECHANICAL (DOB #: M00438009)** | | |
| MECHANICAL | M-001.00 | MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| MECHANICAL | M-002.00 | MECHANICAL SPECIFICATIONS 1 OF 5 |
| MECHANICAL | M-003.00 | MECHANICAL SPECIFICATIONS 2 OF 5 |
| MECHANICAL | M-004.00 | MECHANICAL SPECIFICATIONS 3 OF 5 |
| MECHANICAL | M-005.00 | MECHANICAL SPECIFICATIONS 4 OF 5 |
| MECHANICAL | M-006.00 | MECHANICAL SPECIFICATIONS 5 OF 5 |
| MECHANICAL | M-051.00 | MECHANICAL SECOND FLOOR EAST - DEMOLITION PLAN |
| MECHANICAL | M-052.00 | MECHANICAL FIRST FLOOR WEST - DEMOLITION PLAN |
| MECHANICAL | M-053.00 | MECHANICAL SECOND FLOOR WEST - DEMOLITION PLAN |
| MECHANICAL | M-054.00 | MECHANICAL ROOM ENLARGED PLAN - DEMOLITION |
| MECHANICAL | M-055.00 | MECHANICAL ROOM #2 ENLARGED PLAN - DEMOLITION |
| MECHANICAL | M-056.00 | MECHANICAL UPPER ROOF EAST - DEMOLITION PLAN |
| MECHANICAL | M-100.00 | MECHANICAL FIRST FLOOR EAST PLAN |
| MECHANICAL | M-101.00 | MECHANICAL FIRST FLOOR WEST PLAN |
| MECHANICAL | M-102.00 | MECHANICAL SECOND FLOOR EAST PLAN |
| MECHANICAL | M-103.00 | MECHANICAL SECOND FLOOR WEST PLAN |
| MECHANICAL | M-104.00 | MECHANICAL UPPER ROOF EAST PLAN |
| MECHANICAL | M-201.00 | MECHANICAL ROOM MER 2 - PART PLAN AND SECTIONS - NEW YORK |
| MECHANICAL | M-300.00 | MECHANICAL DETAILS SHEET No. 1 |
| MECHANICAL | M-301.00 | MECHANICAL DETAILS SHEET No. 2 |
| MECHANICAL | M-302.00 | MECHANICAL DETAILS SHEET No. 3 |
| MECHANICAL | M-303.00 | MECHANICAL DETAILS SHEET No. 4 |
| MECHANICAL | M-304.00 | MECHANICAL DETAILS SHEET No. 5 |
| MECHANICAL | M-400.00 | MECHANICAL SCHEDULES-1 |
| MECHANICAL | M-401.00 | MECHANICAL SCHEDULES-2 |
| MECHANICAL | M-500.00 | MECHANICAL VRF REFRIGERANT PIPING RISER DIAGRAM |
| MECHANICAL | M-501.00 | MECHANICAL DUCT RISER DIAGRAM |
| MECHANICAL | M-600.00 | SYSTEM CONTROL CONTROL DIAGRAM |
| MECHANICAL | M-601.00 | RTU-1 CONTROL DIAGRAM |
| MECHANICAL | M-602.00 | RTU-1 CONTROL POINT LIST AND SEQUENCE OF OPERATION |
| MECHANICAL | M-603.00 | DOAU-2 CONTROL DIAGRAM |
| MECHANICAL | M-604.00 | DOAU-2 CONTROL POINT LIST AND SEQUENCE OF OPERATION |
| MECHANICAL | M-605.00 | VAV'S POINT LIST, CONTROL DIAGRAM & SEQUENCE OF OPERATION |
| MECHANICAL | M-606.00 | AHU-1 CONTROL DIAGRAM |
| MECHANICAL | M-607.00 | AHU-1 CONTROL POINT LIST |
| MECHANICAL | M-608.00 | AHU-1 , EF-3, EF-4 SEQUENCE OF OPERATION & POINTS LIST |
| MECHANICAL | M-609.00 | DOAU-1 CONTROL DIAGRAM, POINTS LIST & SEQUENCE OF OPERATION |
| | | |
| **ELECTRICAL** | | |
| ELECTRICAL | E-001.00 | ELECTRICAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| ELECTRICAL | E-002.00 | ELECTRICAL SPECIFICATIONS |
| ELECTRICAL | E-100.00 | ELECTRICAL FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-101.00 | ELECTRICAL FIRST FLOOR WEST PLAN |
| ELECTRICAL | E-102.00 | ELECTRICAL SECOND FLOOR EAST - WEST PLAN |
| ELECTRICAL | E-103.00 | ELECTRICAL SECOND FLOOR WEST PLAN |
| ELECTRICAL | E-105.00 | ELECTRICAL UPPER ROOF EAST - WEST FLOOR |
| ELECTRICAL | E-201.00 | LIGHTING FIRST FLOOR WEST PLAN |
| ELECTRICAL | E-202.00 | LIGHTING FIRST FLOOR EAST PLAN |
| ELECTRICAL | E-203.00 | LIGHTING SECOND FLOOR EAST PLAN |
| ELECTRICAL | E-300.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS |
| ELECTRICAL | E-301.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS #2 |
| ELECTRICAL | E-400.00 | ELECTRICAL PANEL SCHEDULE |
| ELECTRICAL | E-401.00 | ELECTRICAL PANEL SCHEDULE |
| ELECTRICAL | E-500.00 | ELECTRICAL RISER DIAGRAM |
| | | |

## SPORTSPARK - PHASE #3 DRAWING LIST

| DRAWING DISCIPLINE | DRAWING # | DRAWING TITLE |
|---|---|---|
| | | |
| **PLUMBING (DOB# M00438050)** | | |
| PLUMBING | P-001.00 | PLUMBING NOTES, SYMBOLS, AND ABBREVIATIONS |
| PLUMBING | P-002.00 | FLOOD INSURANCE RATE MAP |
| PLUMBING | P-003.00 | PLUMBING SPECIFICATIONS I |
| PLUMBING | P-004.00 | PLUMBING SPECIFICATIONS II |
| PLUMBING | P-051.00 | PLUMBING FIRST FLOOR WEST-DEMOLITION PLAN |
| PLUMBING | P-100.00 | PLUMBING FIRST FLOOR EAST PLAN |
| PLUMBING | P-101.00 | PLUMBING FIRST FLOOR WEST PLAN |
| PLUMBING | P-103.00 | PLUMBING SECOND FLOOR WEST PLAN |
| PLUMBING | P-105.00 | PLUMBING ROOF WEST PLAN |
| PLUMBING | P-300.00 | PLUMBING DETAILS |
| PLUMBING | P-400.00 | PLUMBING SCHEDULES |
| PLUMBING | P-500.00 | PLUMBING RISER DIAGRAM I |
| PLUMBING | P-501.00 | PLUMBING RISER DIAGRAM II |
| | | |
| **FIRE ALARM (DOB: 2020-TMFALM-003730 BOTH PH#1 & PH#2)** | | |
| FIRE ALARM | FA-001.00 | FIRE ALARM NOTES, SYMBOLS, AND ABBREVIATIONS |
| FIRE ALARM | FA-100.00 | FIRE ALARM FIRST FLOOR EAST PLAN |
| FIRE ALARM | FA-101.00 | FIRE ALARM FIRST FLOOR WEST PLAN |
| FIRE ALARM | FA-102.00 | FIRE ALARM SECOND FLOOR EAST PLAN |
| FIRE ALARM | FA-103.00 | FIRE ALARM SECOND FLOOR WEST PLAN |
| FIRE ALARM | FA-500.00 | FIRE ALARM RISER DIAGRAM |
| | | |
| **ENERGY** | | |
| ENERGY | EN-001.00 | ENERGY COMPLIANCE - MECHANICAL COMCHECK 1 |
| ENERGY | EN-002.00 | ENERGY COMPLIANCE - MECHANICAL COMCHECK 2 |
| ENERGY | EN-003.00 | ENERGY COMPLIANCE - LIGHTING COMCHECK |
| ENERGY | EN-004.00 | ENERGY COMPLIANCE - LIGHTING DETAILS #1 |
| ENERGY | EN-005.00 | ENERGY COMPLIANCE - LIGHTING DETIALS #2 |
| ENERGY | EN-006.00 | ENERGY COMPLIANCE - LGHTING FIRST FLOOR PLAN WEST |
| ENERGY | EN-007.00 | ENERGY COMPLIANCE - LIGHTING FIRST FLOOR PLAN EAST |
| ENERGY | EN-008.00 | ENERGY COMPLIANCE - LIGHTING SECOND FLOOR PLAN EAST |
| | | |
| **STRUCTURAL (DOB#: M00451571)** | | |
| STRUCTURAL | S-001.00 | STRUCTURAL NOTES |
| STRUCTURAL | S-100.00 | SECOND FLOOR MECHANICAL ROOM FRAMING PLAN |
| STRUCTURAL | S-101.00 | LOWER ROOF DUNNAGE FRAMING PLAN |
| STRUCTURAL | S-102.00 | UPPER ROOF FRAMING PLAN |
| STRUCTURAL | S-103.00 | EXTERIOR CLADDING SUPPORTING FRAMING PLAN |
| STRUCTURAL | S-200.00 | STRUCTURAL SECTIONS AND DETAILS |
| | | |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 01.29.21 | ISSUED FOR 100% CD |

ISSUE / REVISION

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

PHASE #3 DRAWING
LIST COVER SHEET

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. |
| | DRAWN BY / OF |

NYC DOB Number

## GENERAL NOTES:

THE FOLLOWING NOTES SHALL APPLY THROUGHOUT. EXCEPTIONS ARE SPECIFICALLY NOTED ON EACH DRAWINGS.

1. ALL WORK OF THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE 2014 NEW YORK CITY BUILDING CODE AND REGULATIONS OF OTHER AGENCIES HAVING JURISDICTION ON 2014 NEW YORK CITY BUILDING CODE AND REGULATIONS OF OTHER AGENCIES HAVING JURISDICTION ON

2. DRAWINGS ARE NOT TO BE SCALED. USE DIMENSIONS ONLY. ALL DIMENSIONS AND CONDITIONS SHOWN AND ASSUMED ON THE DRAWINGS MUST BE VERIFIED AT THE SITE BY THE CONTRACTOR BEFORE ORDERING ANY MATERIAL OR DOING NAY WORK. ANY DISCREPANCIES IN THE DRAWINGS AND SPECIFICATIONS SHALL BE REPORTED TO THE ARCHITECT. NO CHANGE IN DRAWINGS OR SPECIFICATIONS IS PERMISSIBLE WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT/ENGINEER. NO WORK SHALL PROCEEDED UNTIL SUCH DISCREPANCY HAS BEEN RECTIFIED.

3. ALL WORK ON THESE DRAWINGS SHALL BE CONSIDERED NEW WORK WHETHER STATED OR NOT EXCEPT WHERE SPECIFICALLY NOTED AS "EXISTING TO REMAIN".

4. COORDINATION OF ALL WORK UNDER THIS CONTRACT SHALL BE MAINTAINED TO ENSURE THE QUALITY AND TIMELY COMPLETION OF THE WORK/PROJECT.

5. THE CONTRACTOR SHALL DISCONNECT AND/OR REMOVE ANY EXISTING PLUMBING, ELECTRICAL, FIXTURES, WIRE CONDUITS, OR OTHER WORK WHICH MIGHT INTERFERE WITH THE WORK OF THIS CONTRACT. AFTER NEW WORK IS COMPLETED, THE DISCONNECTED OR REMOVED ITEMS SHALL BE REINSTALLED BY THE CONTRACTOR AT THE SAME LOCATION OR AR NEW LOCATION AS DIRECTED. FURNISH ALL NECESSARY NEW MATERIALS/HARDWARE FOR COMPLETION OF WORK.

6. THE CONTRACTOR SHALL PATCH AND REPAIR ALL DAMAGED OR EXPOSED SURFACES DUE TO CONTRACT WORK. ALL NEWLY INSTALLED, PATCHED WORK AND ALL AFFECTED AREAS SHALL BE PAINTED. ALL PAINTING WORK SHALL BE PERFORMED TO COVER THE ENTIRE HORIZONTAL OR VERTICAL SURFACE TO THE CLOSEST CORNER IN ALL FOUR DIRECTIONS. COLOR TO MATCH EXISTING CONDITIONS.

7. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW MATERIALS AT NO ADDITIONAL COST TO THE OWNER FOR THE FOLLOWING CONDITIONS:

a. ANY EXISTING WORK THAT HAS BEEN REMOVED OR DAMAGED IN ORDER TO PERFORM THE CONTRACT WORK.

b. TO FURNISH THE WORK OF THIS CONTRACT IN WORKMANLIKE MANNER.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS AND OFF ALIGNMENTS ACCORDING TO CODES AND STANDARDS OF GOOD PRACTICE.

9. THE CONTRACTOR SHALL INCLUDE ALL ASSOCIATED SUPPLEMENTARY WORK TO PROVIDE A COMPLETE AND FINISHED INSTALLATION.

10. WHERE MANUFACTURER'S NAMES AND PRODUCT NUMBERS ARE INDICATED ON DRAWINGS, IT SHALL BE CONSTRUED TO MEAN THE ESTABLISHMENT OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL OTHER PRODUCTS MUST BE SUBMITTED TO THE ARCHITECT FOR APPROVAL BEFORE THEY SHALL BE DEEMED EQUAL.

11. FIRESTOP SHALL BE INSTALLED AT ALL PENETRATIONS OF FIRE RATED CONSTRUCTION AS PER SPECIFICATIONS.

12. SIZE OF MASONRY UNITS AND WOOD MEMBERS ON PLANS, BUILDING ELEVATIONS AND SECTIONS ARE SHOWN AS NOMINAL SIZE.

13. DIMENSIONS ON PLANS ARE INDICATED FROM SURFACE TO SURFACE BETWEEN WALLS, PARTITIONS AND OTHER ITEMS EXCLUSIVE OF FINISHES.

14. PROVIDE GUARDS, RAILS, BARRICADES, FENCES, SIDEWALK SHEDS, CATCH PLATFORMS, DECKING, NIGHT LIGHTING, ETC., AS REQUIRED BY THE 2014 NEW YORK CITY BUILDING CODE, SECTION 3307.3 AND AS REQUIRED TO PROVIDE ADEQUATE PROTECTION. ALSO, COMPLY WITH SECTION S01900 OF THE SPECIFICATION.

15. THE CONTRACTOR SHALL KEEP WORK SITE FREE FROM DEBRIS AND ACCUMULATED REFUSE, AND SHALL HAVE SOLE RESPONSIBILITY FOR PROTECTING ALL DANGEROUS AREAS FROM ENTRY BY UNAUTHORIZED PARTIES. SITE SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY.

16. THE CONTRACTOR SHALL MAINTAIN FREE AND UNOBSTRUCTED ACCESS FROM ALL ADJACENT SPACES INTO THE EXISTING FIRE STAIRS TO OUTSIDE OF THE BUILDING AT ALL TIMES.

17. WHERE INDICATED OR REQUIRED TO PERFORM THE WORK, PACK, PROTECT AND RELOCATE BOOKS, MATERIALS, FURNITURE, CABINETS, ETC. TO DESIGNATED LOCATIONS WITHIN THE BUILDING AND RETURN ITEMS UPON COMPLETION OF WORK OR WHEN DIRECTED BY THE ARCHITECT.

18. THE CONTRACTOR SHALL, UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, SECURE AND PAY FOR REQUIRED INSPECTIONS, PERMITS, FEES, LICENSE AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

19. THERE WILL BE NO CHANGE IN USE, EGRESS OR OCCUPANCY BECAUSE OF THE WORK OF THIS CONTRACT.

20. ADDITIONAL NOTES WHICH ARE APPLICABLE TO THIS PROJECT MAY BE FOUND THROUGHOUT THE CONTRACT DOCUMENTS.

## SUMMARY OF WORK:

THE WORK SHALL BE AS SHOWN AND CALLED FOR IN THE CONTRACT DOCUMENTS AND SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING GENERAL ITEMS OF WORK:

DEMOLISH LOCKER ROOMS, BATHROOM AND SHOWER ROOMS INCLUDING ALL EXISTING CEILING AND LIGHTING. DEMOLISH TOILE ROOMS AT LOBBY AREA IN ITS ENTIRETY. REMOVE CEILING IN LOBBY AND CORRIDOR CONNECTING EAST AND WEST BUILDING. REBUILD LOCKER ROOMS, TOILET AND SHOWER ROOMS. REBUILD NEW TOILETS AT LOBBY AREA. PROVIDE NEW CEILING IN LOBBY AND CORRIDOR. REFURBISH EXISTING STORAGE AND OFFICE AREAS WITH NEWLY PAINTED WALLS, NEW FLOORING AND NEW CEILING AND LIGHTING FIXTURES. INSTALL NEW GYMNASIUM FLOOR. RETROFIT BASKETBALL BACKBOARD SUPPORT. INSTALL METAL PANEL AT EXTERIOR WALL. INSTALL NEW CURTAIN WALL AT ENTRANCE.

## BUILDING DEPARTMENT NOTES:

THE FOLLOWING NOTES SHALL APPLY THROUGHOUT:

1. WORK SHALL BE EXECUTED IN FULL COMPLIANCE WITH THE APPLICABLE PROVISIONS OF ALL LAWS, BY-LAWS, STATUTES, ORDINANCES, CODES, RULES, REGULATIONS AND LAWFUL ORDERS OF PUBLIC AUTHORITIES BEARING ON THE PERFORMANCE AND EXECUTION OF THE WORK.

THIS APPLICATION IS FILED UNDER 2014 CODE FOR COMPLIANCE WITH CHAPTERS 1, 17 & 33 REGARDING ADMINISTRATION, INSPECTION AND SAFETY REQUIRE,REQUIREMENTS

ALTERATIONS ARE DONE IN ACCORDANCE WITH THE CODE APPLICABLE AT THE TIME THIS BUILDING WAS BUILT, WITH THE EXCEPTION THAT PORTIONS OF THE BUILDING REGULATED BY RETROACTIVE CODE PROVISIONS ARE DESIGNED TO COMPLY WITH THE 1968 CODE.

THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY PORTIONS OF THE WORK, IN THE CONTRACT DOCUMENTS THAT ARE AT VARIANCE WITH THE ABOVE.

2. ALL MATERIALS. ASSEMBLIES, FORMS METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL MET THE FOLLOWING REQUIREMENTS:

a. THEY SHALL HAVE BEEN ACCEPTABLE PRIOR TO THE EFFECTIVE DATE OF THE CODE BY THE BOARD OF STANDARDS AND APPEALS.

b. THEY SHALL HAVE BEEN ACCEPTED FOR THE USE UNDER THE PRESCRIBED TEST METHODS BY THE COMMISSIONER.

4. ALL MASONRY UNITS SHALL CONFORM TO THE BUILDING CODE WITH BOARD OF STANDARDS AND APPEALS APPROVAL. MASONRY WALLS AND CONSTRUCTION SHALL CONFORM TO RS 10-2 OF THE BUILDING CODE.

5. THE FOLLOWING SHALL BE MADE UNDER SEPARATE APPLICATION BY THE CONTRACTOR:

STRUCTURAL STABILITY

CHUTES, SCAFFOLDS, HOISTS

6. THE CONTRACTOR IS RESPONSIBLE FOR FILING APPLICATION AND OBTAINING PERMITS FOR SCAFFOLDING, SIDEWALK BRIDGING AND OTHER CONSTRUCTION EQUIPMENT OR PUBLIC PROTECTIVE REQUIRED TO ENSURE SAFETY OF OPERATION AND THE PUBLIC AS PER NYC BUILDING CODE. CHAPTER33, SECTION BC 3307. THE CONTRACTOR IS ALSO RESPONSIBLE FOR OBTAINING LETTER OF COMPLETION. APPLICATION FOR CONSTRUCTION PERMIT SHALL BE PROCESSED THROUGH THE DEPARTMENT OF BUILDING.

7. THESE DRAWINGS HAVE BEEN PREPARED BY OR AT THE DIRECTION OF THE UNDERSIGNED AND TO THE BEST OF THE UNDERSIGNED'S KNOWLEDGE, INFORMATION AND BELIEF MEET THE REQUIREMENTS OF THE BUILDING CODE.

8. ALL WORK SHALL COMPLY WITH ICC 117.1 2003 AND LOCAL LAW 58/87.

9. ALL NEW WORK SHALL COMPLY WITH NEW YORK STATE ENERGY CODE.

| DRAWING NO. | DRAWING NAME |
|---|---|
| A001.00 | NOTES, PLOT PLAN |
| A002.00 | FIRST FLOOR PLAN |
| A003.00 | EGRESS FLOOR PLAN WEST AND NOTES |
| A004.00 | ENERGY ANALYSIS 1 |
| A005.00 | ENERGY ANALYSIS 2 |
| A100.00 | FIRST FLOOR DEMOLITION PLAN WEST |
| A101.00 | FIRST FLOOR DEMOLITION PLAN EAST |
| A102.00 | FIRST FLOOR CONSTRUCTION PLAN WEST |
| A103.00 | FIRST AND SECOND CONSTRUCTION FLOOR PLAN EAST |
| A104.00 | ROOF DEMOLITION AND CONSTRUCTION PLAN |
| A105.00 | ROOF DETAILS |
| A106.00 | FIRST FLOOR REFLECTED CEILING PLAN |
| A107.00 | FIRST & SECOND FLOOR REFLECTED CEILING PLAN (EAST) |
| A108.00 | ENLARGED FLOOR PLAN |
| A109.00 | GYMNASIUM PLAN, NOTES AND DETAILS |
| A110.00 | GYMNASIUM ELEVATION |
| A200.00 | INTERIOR ELEVATIONS |
| A201.00 | INTERIOR ELEVATIONS -2 |
| A202.00 | TOILET ACCESSORIES ADA REQUIREMENTS |
| A203.00 | RECEPTION DESK, DISPLAY MOUNT DETAILS |
| A301.00 | BUILDING ELEVATION & SECTION |
| A302.00 | EXTERIOR WALL CLADDING DETAIL |
| A600.00 | DOOR SCHEDULE & MISC. DETAILS |
| A601.00 | PARTITION TYPES |
| A602.00 | H.M. ELEVATIONS AND DETAILS |
| A603.00 | FIRESTOPPING, CEILING DETAILS AND MISC. DETAILS |
| A700.00 | FLOOR FINISH PLAN (WEST) |
| A701.00 | FIRST AND SECOND FLOOR FINISH (EAST) |
| A702.00 | FINISH SCHEDULE, LIGHTING AND FINISH SCHEDULE |
| A703.00 | PLUMBING AND ACCESSORIES SCHEDULE |
| A900.00 | SIGNAGE SCHEDULE AND DETAILS |

## SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS REQUIRED IN ACCORDANCE WITH CHAPTER 17 AND APPLICABLE SECTIONS OF NYC CONSTRUCTION CODE ARE LISTED IN THE FOLLOWING TABLES: THE CONTRACTOR MUST NOTIFY THE ARCHITECT OR ENGINEER FOR SPECIAL INSPECTIONS AT LEAST 72 HOURS BEFORE THE SPECIFIC WORK COMMENCES. REFER TO MEP AND STRUCTURAL DWGS. FOR ADDTIONAL INSPECTION REQUIREMENTS.

| SPECIAL INSPECTION | 2014 CODE |
|---|---|
| FIRE-RESISTANT PENETRATIONS AND JOINTS | BC 1704.27 |
| MASONRY | BC 1704.5 |
| STRUCTURAL STABILITY - EXISTING BUILDING | BC 1704.20.1 |

| PROGRESS INSPECTION | 2014 CODE |
|---|---|
| ENERGY CODE COMPLIANCE INSPECTIONS | BC 110.3.5 |
| FINAL | BC 28-116.2.4.2 |

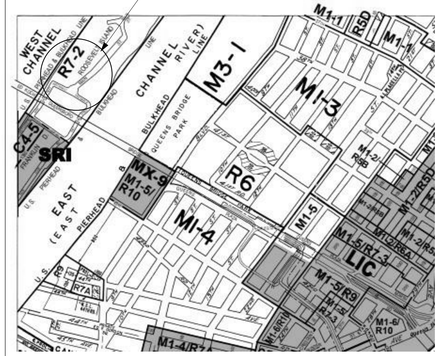
| ENERGY CODE PROGRESS INSPECTION | TABLE REFERENCE IN 1RCNY 5000-01 - h |
|---|---|
| FENESTRATION AND DOOR U-FACTOR AND PRODUCT RATINGS | [1A3], [11A3] |
| FENESTRATION AIR LEAKAGE | [1A4], [11A4] |
| FENESTRATION AREAS | [1A5], [11A5] |

## LOCATION PLAN

250 MAIN STREET, ROOSEVELT ISLAND, NY

N

AREA OF WORK




BLOCK: 1373 LOT: 1
EXISTING USE TO REMAIN (USE GROUP 4 COMMUNITY FACILITY)
ZONE: R7-2 MAP: 9a

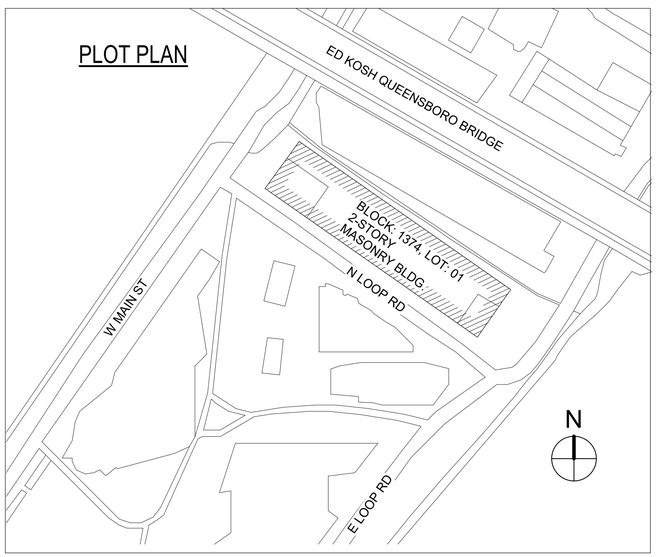
OCCUPANCY CLASSIFICATION: (BC 302) - A-4 INDOOR SPORTING

CONSTRUCTION CLASSIFICATION: 1B-NONCOMBUSTIBLE STRUCTURE (OLD CODE)

EXTERIOR WALL (BEARING): - 3HR
FLOOR CONSTRUCTION - 2 HR
ROOF CONSTRUCTION - 1 1/2 HR
ENCLOSURE OF VERTICAL EXITS, EXIT PASSAGEWAYS, SHAFT - 2 HR
INTERIOR CORRIDOR: 1 HR

GENERAL NOTE:
1. NO CHANGE IN USE, EGRESS OR OCCUPANCY.
2. NO INCREASE TO EXISTING HEIGHT AND FLOOR AREA.

## PLOT PLAN




## ABBREVIATIONS:

A
AB. - ABOVE
A/C - AIR CONDITIONER
A.D. - ACCESS DOOR
ADJ. - ADJACENT
ALUM. - ALUMINUM
APPR'D. - APPROVED
APPROX. - APPROXIMATELY
ARCH. - ARCHITECT
ASPH. - ASPHALT
AUD. - AUDITORIUM
AUX. - AUXILIARY
& - AND
∠ - ANGLE
@ - AT

B
BR - BRICKS
BRK - BRICKS FULL LENGTH
B.R. - BEHIND RADIATORS
B.C. - BRICK COURSE HEIGHT
B.L. - BUILDING LINE
BLD'G. - BUILDING
BLK. - BLOCK
BM. - BEAM
B.S. - BLUE STONE OR BRONZE SADDLE
B.S.&A. - BOARD OF STANDARDS AND APPEALS
B.U.R. - BUILT-UP ROOFING

CAB'T. - CABINET
CL - CENTER LINE
C.I. - CAST IRON
C.J. - CONTROL JOINT
CL'G. - CEILING
COL. - COLUMN
CONT. - CONTINUOUS
CONC. - CONCRETE
C.R. - CLASSROOM
CU.FT. - CUBIC FEET
CU.YD. - CUBIC YARD

D
DEPT. - DEPARTMENT
DEMO - DEMOLITION
DET. - DETAIL
D.H. - DOUBLE HUNG
DIA. - DIAMETER
DIM. - DIMENSION
DN. - DOWN
DO. - DITTO
DR. - DOOR
DWG. - DRAWING

E
E.J. - EXPANSION JOINT
EL. - ELEVATION
EMG. - EXPANDED METAL GUARD
ENT. - ENTRANCE
EQ. - EQUAL
EQUIP. - EQUIPMENT
E.W. - EACH WAY
EXP. - EXPANSION
EXIST. - EXISTING
EXT. - EXTERIOR
E.C. - ELECTRICAL CONDUIT

F
FIN. - FINISH
FL. - FLOOR
FLASH'G. - FLASHING
F.A.I. - FRESH AIR INTAKE
F.P. - FIREPROOFING
FR. - FRAME

G
GA. - GAUGE
GALV. - GALVANIZED
G.C. - GENERAL CONTRACTOR
G.I. - GALVANIZED IRON
GL. - GLASS

H
HDCP - HANDICAPPED
HGT. - HEIGHT
H.M. - HOLLOW METAL
HORIZ. - HORIZONTAL
H.P. - HIGH POINT
H&V - HEATING & VENTILATION

I
I.N.T. - INTERIOR
INCL. - INCLUDING
INSTR. - INSTRUCTOR
INSUL. - INSULATION

L
L.P. - LOW POINT
LT. - LIGHT
L.F. - LINEAR FOOT

M
MAT. - MATERIAL
MAX. - MAXIMUM
MECH. - MECHANICAL
M.H. - MANHOLE
MIN. - MINIMUM
M.O. - MASONRY OPENING
M.S. - MINERAL SURFACED

N
N.D. - NOMINAL DIAMETER
N.I.C. - NOT IN CONTRACT
NO. - NUMBER
NOM. - NOMINAL
N.T.S. - NOT TO SCALE

O
O.A.I. - OUTSIDE AIR INTAKE
O.C. - ON CENTER
O.D. - OUTSIDE DIAMETER
O.G. - OBSCURE GLAZING

P
PAV. - PAVEMENT
PL. - PLASTER
P.L. - PROPERTY LINE
P.P. - PITCH POCKET
PH - PENTHOUSE

R
R. - RADIUS
RAIL'G. - RAILING
RAD. - RADIATOR
R.D. - ROOF DRAIN
REINF. - REINFORCING
RET. - RETAINING
RM. - ROOM

S
S.A.E. - SAME AS EXISTING
S.S. - STAINLESS STEEL
SPEC. - SPECIFICATION
S.F. - SQUARE FEET
STD. - STANDARD
STL. - STEEL
ST.PL. - STEEL PLATE
S.L. - SECURITY LIGHT
STRUCT. - STRUCTURAL
STD.DET. - STANDARD DETAIL
S.Y. - SQUARE YARD

T
TH. - THICKNESS
T.O.S. - TOP OF SLAB
T.W. - TOP OF WALL
TYP. - TYPICAL

U
U.O.N. - UNLESS OTHERWISE NOTED

V
VENT. - VENTILATOR
VERT. - VERTICAL
V.I.F. - VERIFY IN FIELD

W
W/ - WITH
W.H. - WEEPHOLE
W.I. - WROUGHT IRON
W.M. - WIRE MESH
W.P. - WATERPROOFING
WT. - WEIGHT
W.W.F - WELDED WIRE FABRIC

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-6500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

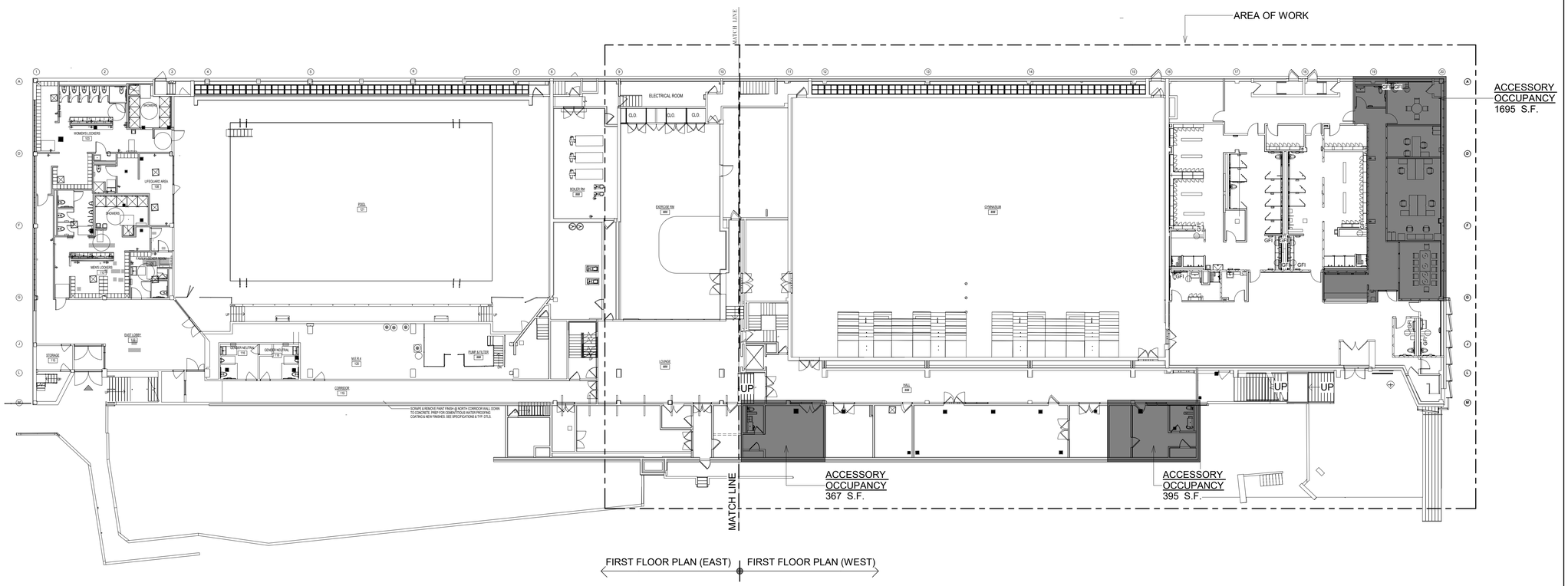
NOTES, PLOT PLAN

SEAL & SIGNATURE

REGISTERED ARCHITECT June L. Daniel 027151 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A001.00 |
| DRAWN BY | OF |

NYC DOB Number




1 FIRST FLOOR PLAN
scale: 1/16" = 1'-0"

N

**REQUIRED TOILET FIXTURES**
**TABLE 403.1**

| OCCUPANCY | DESCRIPTION | WATER CLOSETS URINALS | | LAVATORIES | | DRINKING FOUNTAIN | SERVICE SINK |
|---|---|---|---|---|---|---|---|
| | | MALE | FEMALE | MALE | FEMALE | | |
| A-4 ASSEMBLY | INDOOR SPORTING EVENTS (TOTAL OCCUPANCY : 840 PERSONS) | 1 PER 75 FOR THE FIRST 1,500 = TOTAL: 12 (REQ'D) PROPOSED: 12 | 1 PER 40 FOR THE FIRST 1,500 = TOTAL: 21 (REQ'D) PROPOSED: 21 | 1 PER 200 | 1 PER 150 | 1 PER 1000 PROPOSED: 1 | 1 SERVICE SINK PROPOSED: 1 |

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT


CONSULTANTS


CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

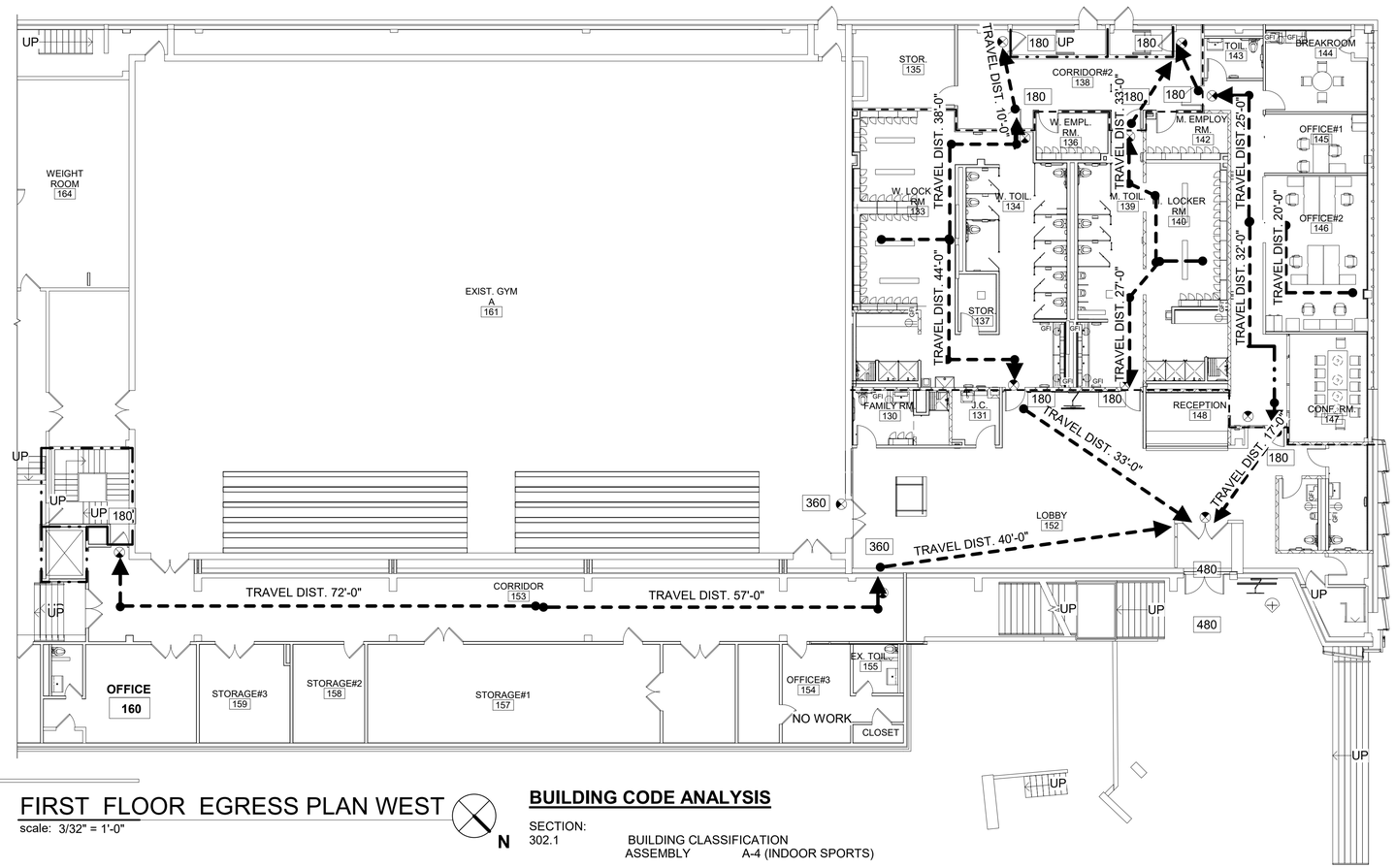
FIRST FLOOR PLAN

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE DANIEL 021131 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A002.00 |
| DRAWN BY | OF |

NYC DOB Number




1 FIRST FLOOR EGRESS PLAN WEST
scale: 3/32" = 1'-0"

N

## EGRESS DRAWING LEGEND

- NO. — MAX. DOOR CAPACITY
- EGRESS START EXIT PATH
- EGRESS END EXIT PATH
- TRAVEL DISTANCE — LENGTH OF TRAVEL DISTANCE
- Room name 101 — ROOM NAME AND NUMBER
- 1-HR RATED PARTITION
- 2-HR RATED PARTITION

## MAXIMUM FLOOR AREA ALLOWANCE PER OCCUPANT (TABLE 1004.1.1)

### FIRST FLOOR WEST

| ROOM | ROOM NAME | AREA | OCCUPANCY |
|---|---|---|---|
| 130 | FAMILY RM. | 100 SF | 3 |
| 133 | W. LOCKER RM | 500 SF | 42 |
| 136 | W. EMPL. RM. | 100 SF | 7 |
| 140 | M. LOCKER RM | 300 SF | 21 |
| 142 | M. EMPLOY. RM. | 100 SF | 8 |
| 144 | BREAKROOM | 200 SF | 4 |
| 145 | OFFICE#1 | 100 SF | 1 |
| 146 | OFFICE#2 | 400 SF | 6 |
| 147 | CONF. RM. | 200 SF | 10 |
| 148 | RECEPTION | 100 SF | 1 |
| 154 | OFFICE#3 | 200 SF | 2 |
| 158 | STORAGE#2 | 200 SF | 1 |
| 160 | OFFICE | 300 SF | 2 |
| 161 | EXIST. GYM A | 8300 SF | 550 |
| 162 | VEST. | 100 SF | 658 |
| | | 11100 SF | |

## BUILDING CODE ANALYSIS

SECTION:
302.1 BUILDING CLASSIFICATION
ASSEMBLY A-4 (INDOOR SPORTS)

SECTION:
508.2 ACCESSORY OCCUPANCY

508.2.1 AREA LIMITATION REQUIRED:
AGGREGATE ACCESSORY OCCUPANCIES SHALL NOT OCCUPY MORE THAN 10 PERCENT OF THE BUILDING AREA OF THE STORY IN WHICH THEY ARE LOCATED.
TOTAL BUILDING AREA (FIRST FLOOR):41,945 SF
10% X 41,945 SF = 4,195
TOTAL ACCESSORY OCCUPANCY AREA: 2,457 SF <4,195 SF OK
(REFER TO DWG. A003.00 FOR AREA CALCULATION.)

SECTION
708.12.1 SMOKE VENT ENCLOSED EXIT ENCLOSURE. 3 1/2 % OF SHAFT AREA NO LESS THAN 72 SQ. IN.

7.19.1.1 NON COMBUSTIBLE CONSTRUCTION
FLAME SPREAD INDEX NOT GREATER THAN 25 A SMOKE DEVELOPMENT INDEX NOT GREATER THAN 50.

| TABLE1004.1.1 | |
|---|---|
| MAX. FLOOR AREA ALLOWANCE PER OCCUPANT | |
| AREA | FLOOR AREA IN SF / OCCUPANT |
| GYMNASIUM | 15 NET |
| SWIMMING POOLS RINK AND POOL | 50 NET |
| DECKS | 15 NET |

SECTION:
1018.2 CORRIDOR WIDTH: 44"
1018.4 DEAD END: 20'-0 LENGTH
TABLE 1021.1 MIN. NO. OF EXIT FOR OCCUPANT LOAD

| | MIN. NUMBER OF EXIT (PER STORY) |
|---|---|
| 1-500 | 2 |

| TABLE 1028.7 | |
|---|---|
| EXIST ACCESS TRAVEL DISTANCE | |
| OCCUPANCY | NON-SPRINKLERED |
| A (ASSEMBLY) | PRIMARY 100<br>SECONDARY 150 |

## EGRESS WIDTH PER OCCUPANT SERVED (1005.1)

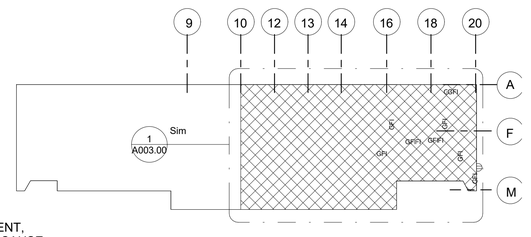
| STAIRWAYS (Inches Per Occupancy) | OTHER COMPONENTS (Inches Per Occupant) |
|---|---|
| 0.3 | 0.2 |

2020 NYCECC ENERGY CODE NOTE:
1. REFER TO ENGINEERING DRAWINGS FOR INTERIOR LIGHTING , MECHANICAL SERVICE AND WATER HEATING SYSTEM REQUIREMENTS.

"TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE EXEMPT FROM THE NYCECC BECAUSE THE SCOPE OF WORK DOES NOT INCREASE THE ENERGY USAGE OF THE BUILDING. THE EXISTING STRUCTURE IS WITHOUT FRAMING CAVITIES AND NO NEW FRAMING CAVITIES ARE CREATED (NYCECC 101.2.5).

JUNE DANIEL
NAME

SIGN AND SEAL




2 KEY PLAN 1 FIRST FLOOR
scale: 1/64" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com

COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
EGRESS FLOOR PLAN WEST AND NOTES

SEAL & SIGNATURE

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A003.00
DRAWN BY OF

NYC DOB Number

COMcheck Software Version 4.1.5.1

# Envelope Compliance Certificate

**Project Information**

| | |
|---|---|
| Energy Code: | 2020 New York City Energy Conservation Code |
| Project Title: | RIOC - Sportspark |
| Location: | New York, New York |
| Climate Zone: | 4a |
| Project Type: | Alteration |
| Vertical Glazing / Wall Area: | 2% |

Construction Site:
250 Main Street
Roosevelt Island, NY, NY 10044

Owner/Agent:
Roosevelt Island Operating corporation

Designer/Contractor:
June Daniel Architect
64 Hilton Avenue
Hempstead, NY 11550
juenbradshaw@jdarchitect.net

| Building Area | Floor Area |
|---|---|
| 1-Gymnasium : Nonresidential | 192 |

**Envelope Assemblies**

| Post-Alteration Assembly | R-Value Cavity | R-Value Cont. | Proposed U-Factor | Proposed SHGC | Max. Allowed U-Factor | Max. Allowed SHGC |
|---|---|---|---|---|---|---|
| SOUTH | | | | | | |
| Exterior Wall 1: Concrete Block:8", Solid Grouted,Medium Density , Furring: None, [Bldg. Use 1 - Gymnasium] | --- | 10.0 | 0.082 | --- | 0.099 | --- |
| Window 1: Metal Frame:Fixed, 95' above-grade, Other, Fixed, < 95' above-grade, < 95' above-grade, [Bldg. Use 1 - Gymnasium] | --- | --- | 0.300 | 0.360 | 0.300 | 0.357 |
| Window 2: Curtain Wall:Fixed, Other, Fixed, < 95' above-grade, < 95' above-grade, [Bldg. Use 1 - Gymnasium] | --- | --- | 0.300 | 0.360 | 0.360 | 0.357 |
| Door 2: Glass (> 50% glazing):Metal Frame, Entrance Door, Entrance Door, Entrance Door, [Bldg. Use 1 - Gymnasium] | --- | --- | 0.380 | 0.360 | 0.680 | 0.357 |

(a) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

**Envelope PASSES**

**Envelope Compliance Statement**

*Compliance Statement:* The proposed envelope alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2020 New York City Energy Conservation Code requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspe

JUNE DANIEL — Name - Title
Signature
1/14/2021 — Date



COMcheck Software Version 4.1.5.1

# Inspection Checklist

Energy Code: 2020 New York City Energy Conservation Code

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| Section # & Req.ID | Plan Review | Complies? | Comments/Assumptions |
|---|---|---|---|
| C103.2 [PR1][1] | Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C402.4.1 [PR10][1] | The vertical fenestration area <= 30 percent of the gross above-grade wall area. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C402.4.1 [PR11][1] | The skylight area <= 3 percent of the gross roof area. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C402.4.2 [PR14][1] | In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights >15 ft, and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.5.2 [PR36][1] | Electrical meters for tenant spaces in covered buildings. Each covered tenant space in a new building shall be equipped with a separate meter or sub-meter to measure the electrical consumption of such space when let or sublet. See section details and Section 28-311.2 of the Administrative Code. As new covered tenant spaces are created, they shall be equipped with meters or sub-meters as provided in this section | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



| Section # & Req.ID | Plan Review | Complies? | Comments/Assumptions |
|---|---|---|---|
| C405.10 [PR38][1] | New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C402.1 [PR17][1] | PTAC/PTHP penetration through thermal envelope - When penetrations from mechanical equipment listed in Table C403.2.3(3) exceeds 1 percent of the opaque above-grade wall area, the penetration area is represented as an envelope wall assembly of similar type having size equal to penetration area and proposed U-0.5. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



| Section # & Req.ID | Footing / Foundation Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C303.2.1 [FO6][1] | Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



| Section # & Req.ID | Framing / Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C303.1.3 [FR12][1] | Fenestration products rated in accordance with NFRC. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C303.1.3 [FR13][1] | Fenestration products are certified as to performance labels or certificates provided. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C402.4.3 [FR10][1] | Vertical fenestration SHGC value. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope Assemblies table for values.* |
| C402.4.3, C402.4.3.4 [FR8][1] | Installed vertical fenestration U-factor and SHGC consistent with label specifications and as reported in plans and COMcheck reports. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope Assemblies table for values.* |
| C402.5.1 [FR16][1] | The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C402.6 [FR18][1] | Applications for construction document approval includes thermal bridge documentation inlcuding: 1) Clear field thermal bridges; 2) Point thermal bridges, 3) Linear thermal bridges. See section language for details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C402.5.2, C402.5.4 [FR18][1] | Factory-built fenestration and doors are labeled as meeting air leakage requirements. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C402.5.7 [FR17][1] | Vestibules are installed on all building entrances. Doors have self-closing devices. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Existing door is being replaced and existing vestibules not removed. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C402.5.5, C403.2.4.3 [ME3][1] | Stair and elevator shaft vents have motorized dampers that automatically close. Refernece section C403.7.7 for operational details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.7.7 [MES8][1] | Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed. Reference section language for operational details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



| Section # & Req.ID | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C405.6 [EL26][1] | Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.7 [EL27][1] | Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.8.2, C405.8.2.1 [EL28][1] | Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.9 [EL29][1] | Total voltage drop across the combination of feeders and branch circuits <= 5%. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



| Section # & Req.ID | Insulation Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C303.1 [IN10][1] | Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C303.2 [IN7][1] | Above-grade wall insulation installed per manufacturer's instructions. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C303.2.1 [IN14][1] | Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C105 [IN6][1] | Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Envelope Assemblies table for values.* |
| C402.2.6 [IN18][1] | Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C402.5.1.1 [IN1][1] | All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY ANALYSIS 1

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A004.00 |
| DRAWN BY | OF |

NYC DOB Number

| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C402.5.6 [FI37][1] | Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway. | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | **Exception:** Requirement does not apply. |
| C402.5.8 [FI26][3] | Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing. | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | **Exception:** Requirement does not apply. |
| C408.1.1 [FI57][1] | Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated. | ☐Complies<br>☐Does Not<br>☐Not Observable<br>☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |
|---|---|---|---|---|---|





SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY ANALYSIS 2

SEAL & SIGNATURE

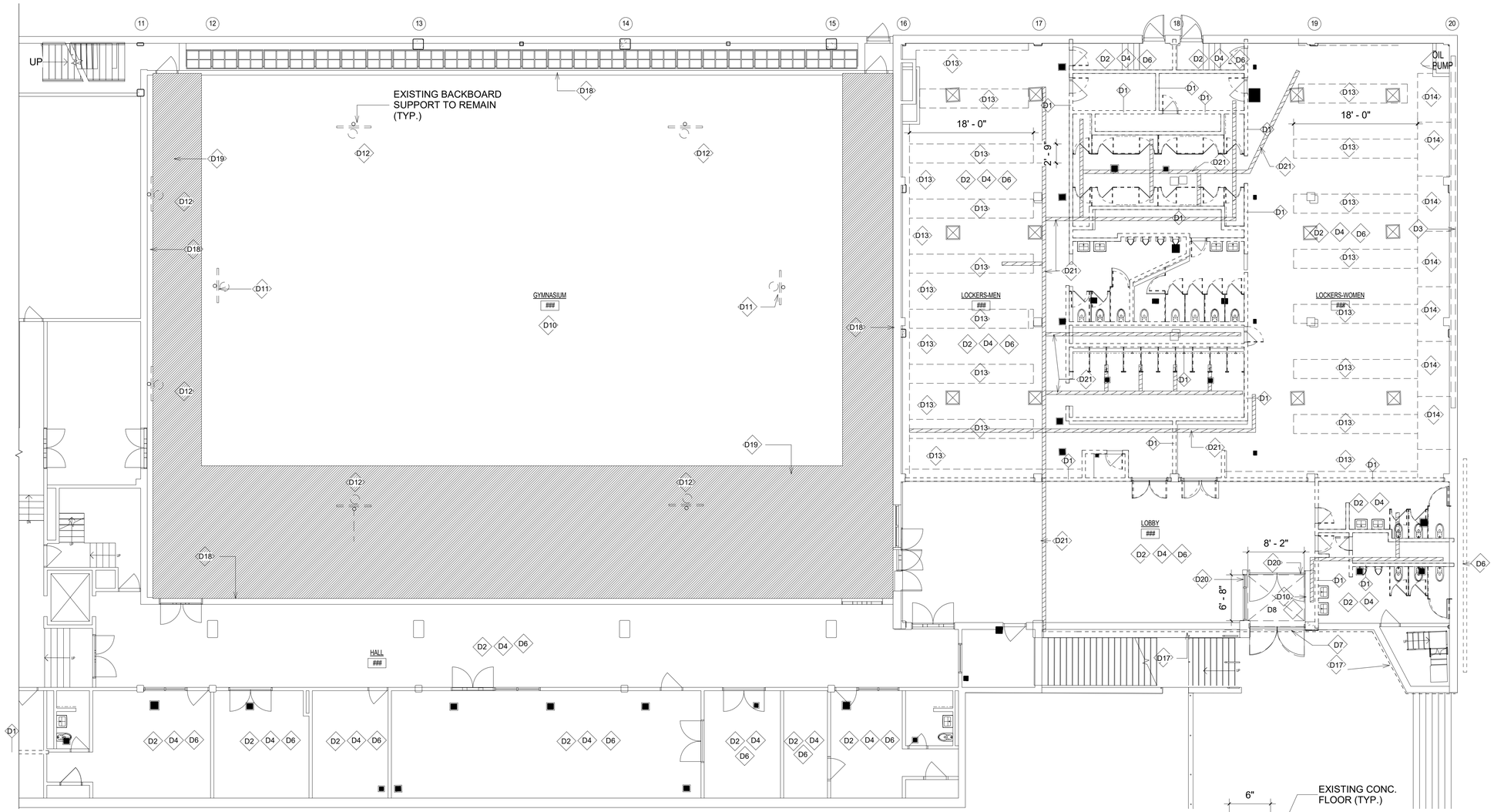
DATE 1/29/2021

JOB NUMBER 19010

DWG. No. A005.00

DRAWN BY OF

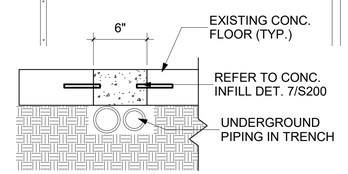
NYC DOB Number




## 1 FIRST FLOOR DEMOLITION PLAN

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

N




## 3 TRENCH PATCH DETAIL

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

### DEMOLITION NOTES LEGEND

| SYMBOL | KEY # & DESCRIPTION OF WORK |
|---|---|
| D1 | DEMOLISH ALL PARTITIONS. REMOVE ALL EXIST. DOORS, DOOR FRAMES IN ITS ENTIRETY WHERE NOTED ON PLAN |
| D2 | REMOVE ENTIRE CEILING AND MISC. CEILING SUPPORT IN ITS ENTIRETY TO THE EXTENT INDICATED IN DOCUMENTS. |
| D3 | REMOVE WINDOWS IN ITS ENTIRETY. REMOVE INTEGRAL METAL SILL AND FLASHING. TEMPORARY SECURE OPN'G. TO PROTECT OPN'G. |
| D4 | REMOVE FINISH FLOORING IN ITS ENTIRETY TO EXPOSE EXISTING SUBSTRATE. |
| D5 | DEMOLISH PORTION OF STRUCTURAL WALL FOR NEW OPENING |
| D6 | SCRAPE AND REMOVE FINISHES AT EXISTING WALLS AND PLASTER CEILING. PREPARE EXISTING WALL AND PLASTER CEILINGS TO RECEIVE NEW FINISHES. |
| D7 | REMOVE STOREFRONT WINDOW WALL IN ITS ENTIRETY. APPROX. 8'-0" X 22'-0" HIGH. |

| SYMBOL | KEY # & DESCRIPTION OF WORK |
|---|---|
| D8 | REMOVE ENTRANCE MAT IN ITS ENTIRETY. DEMOLISH 1" DEPTH OF EXISTING CONCRETE SLAB FOR NEW ENTRANCE MAT. |
| D9 | REMOVE BIKE RACK AND SALVAGE FOR REINSTALLATION |
| D10 | PREPARE EXISTING MASONRY WALL FOR NEW FINISH. REMOVE DIRT, GREASE,MILDEW FROM SURFACE. |
| D11 | CAREFULLY REMOVE GLASS BACKBOARDS. EXISTING BACKSTOP STRUCTURE TO REMAIN. UNINSTALL EXISTING MANUAL HOIST IN ITS ENTIRETY INCLUDING MANUAL WINCH, AIRCRAFT CABLE AND SINGLE SHEAVE SWIVEL EYE PULLEYS WHERE NECESSARY. |
| D12 | REMOVE FIBERGLASS/WOOD BACKBOARD. EXISTING BACKBOARD STRUCTURE TO REMAIN. REFER TO NOTE D11 FOR ADDITIONAL SCOPE OF WORK. |
| D13 | REMOVE EXIST. BUILT-IN LOCKERS. DEMOLISH 6" HIGH CONC. PADS. PREPARE SURFACE FOR NEW FINISHES. |
| D14 | REMOVE EXIST. DRESSING CUBICLE IN ITS ENTIRETY. |

| SYMBOL | KEY # & DESCRIPTION OF WORK |
|---|---|
| D15 | REMOVE 1" PIPE RAILING AND SLEEVE IN ITS ENTIRETY. |
| D16 | REMOVE GLASS PANELS AND H.M. FRAME IN ITS ENTIRETY. |
| D17 | REMOVE BUILT-UP PAINT FROM EXISTING MASONRY SURFACE W/ PROSOCO "HEAVY DUTY PAINT STRIPPER" OR APPROVED EQUAL. APPROX. 720 SF |
| D18 | CLEAN GYMNASIUM MASONRY WALLS AND PREPARE SURFACE TO RECEIVE NEW MASONRY FINISH AND SEALER. REMOVE CRACKED AND DAMAGED MASONRY. SCRAPE GROUT JOINTS WHERE NECESSARY. APPROX. 10,000 SF OF WALL SURFACE. |
| D19 | SAND TOP OF EXISTING SYNTHETIC FLOORING TO REMOVE EXISTING FINISH AND PREPARE FLOORING FOR NEW FINISH. APPROX. 3,000 SF. |
| D20 | REMOVE PAINT AND PREPARE ALL EXISTING H.M. FRAME AT VESTIBULE GLASS PARTITION FOR NEW PAINT FINISH |
| D21 | DEMOLISH 6" WIDE EXIST. CONC. SLAB TO REMOVE AND INSTALL NEW PLUMBING PIPING. APPORX. 200 SF . REFER TO PATCH DET. 3/A100. |

### DEMOLITION GENERAL NOTES:

1. DEMOLISH ALL WALLS IN ITS ENTIRETY WHERE NOTED ON PLAN. CONTRACTOR TO REMOVE FINISHES TO EXPOSE SUBSTRATE. CONTRACTOR TO PREPARE SUBSTRATE TO RECEIVE NEW FINISHES.

2. WHERE NOTED ON PLAN, CONTRACTOR TO REMOVE ALL EXISTING FLOORING, INCLUDING VCT, CARPET, ETC. ALL ADHESIVE USED TO SECURE FLOORING SHALL BE REMOVE. .

3. UPON COMPLETION OF DEMOLITION OF WALLS AND CEILINGS,ANY FIREPROOFING DAMAGED MUST BE REPLACED TO INSURE THE INTEGRITY OF THE STRUCTURE.

4. REFER TO MEP DRAWINGS FOR CAP OFF, TIE-INS TO EXISTING MEP SERVICES.

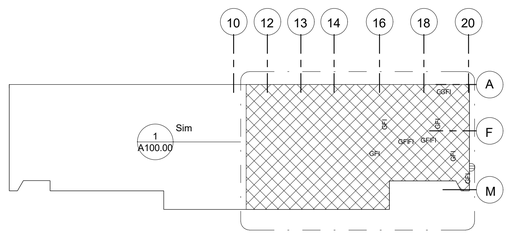
5. FIELD VERIFY EXTENT OF DEMOLITION WORK. ACTUAL DEMOLITION WORK VARIES FROM EXTENT INDICATED ON PLAN.

6. REFER TO SPECIFICATION FOR DEMOLITION, ALTERATION AND REPAIR NOTES.

7. SCRAPE AND REMOVE FRIABLE WALL FINISHES. PREPARE EXIST WALLS FOR NEW FINISH.

8. REMOVE PAINT AND PREPARE ALL EXISTING HIM. DOOR AND FRAME FOR NEW PAINT FINISH.

9. REMOVE EXIST. CONC. FLOOR SLAB AS REQUIRED FOR ALL MEP WORK AND PATCH FLOOR.




## 2 KEY PLAN 2 FIRST FLOOR

scale: 1/64" = 1'-0"

N

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012-State of New York
www.Cameroneengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

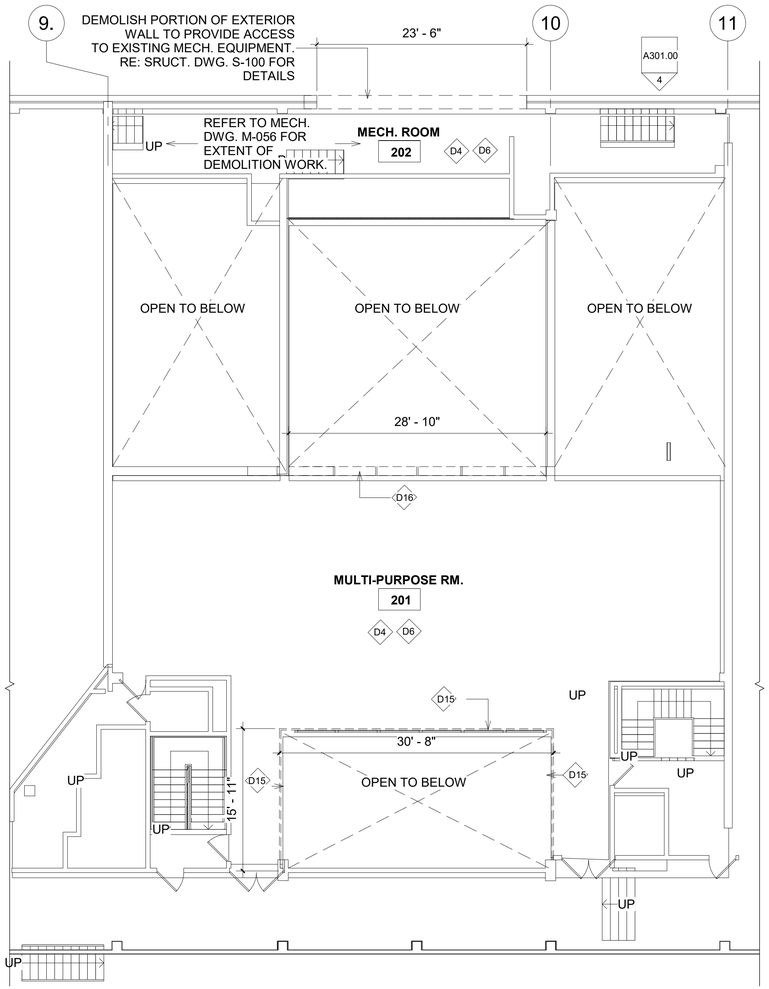
FIRST FLOOR DEMOLITION PLAN WEST

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 027157 STATE OF NEW YORK

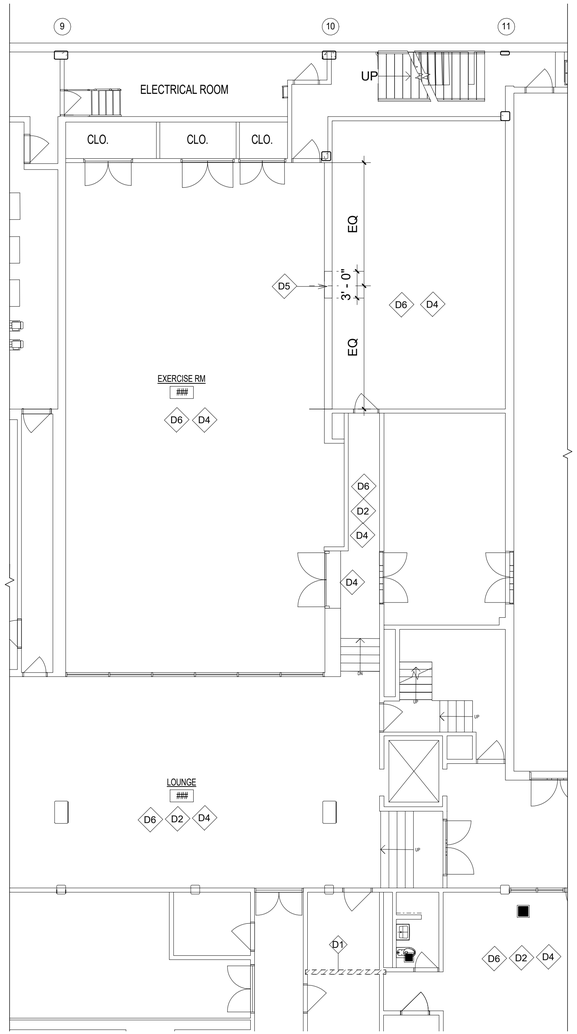
| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A100.00 |
| DRAWN BY | OF |

NYC DOB Number



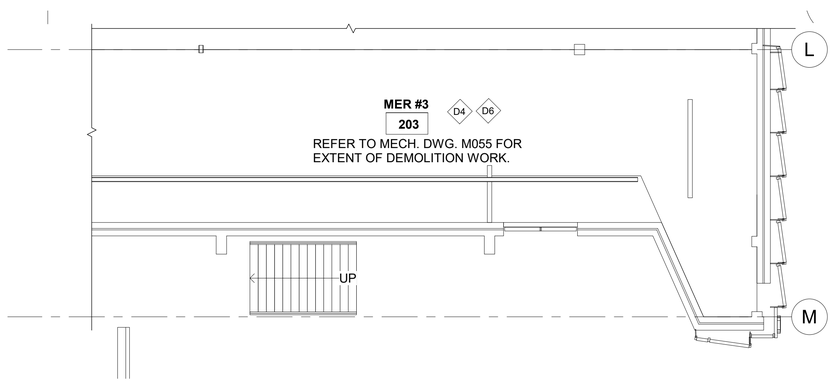

## 1 SECOND FLOOR PLAN EAST DEMOLITION

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




## 2 FIRST FLOOR DEMOLITION PLAN EAST

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

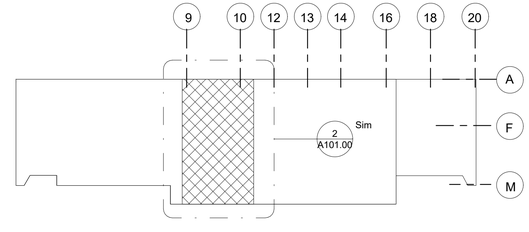



## 5 SECOND FLOOR PLAN WEST DEMOLITION

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

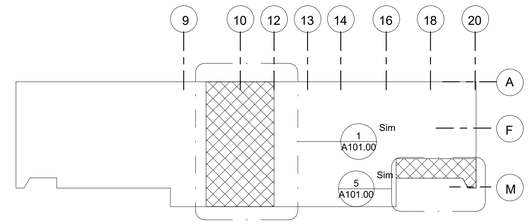
## DEMOLITION GENERAL NOTES:

1. DEMOLISH ALL WALLS IN ITS ENTIRETY WHERE NOTED ON PLAN. CONTRACTOR TO REMOVE FINISHES TO EXPOSE SUBSTRATE. CONTRACTOR TO PREPARE SUBSTRATE TO RECEIVE NEW FINISHES.
2. WHERE NOTED ON PLAN, CONTRACTOR TO REMOVE ALL EXISTING FLOORING, INCLUDING VCT, CARPET, ETC. ALL ADMESIVE USED TO SECURE FLOORING SHALL BE REMOVE. .
3. UPON COMPLETION OF DEMOTIITON OF WALLS AND CEILINGS,ANY FIREPROOFING DAMAGED MUT BE REPLACED TO INSURE THE INTEGRITY OF THE STRUCTURE.
4. REFER MEP DRAWINGS FOR CAP OFF, TIE-INS TO EXISTING MEP SERVICES.
5. FIELD VERIFY EXTENT OF DEMOLITION WORK. ACTUAL DEMOLTION WORK VARIES FROM EXTENT INDICATED ON PLAN.
6. REFER TO SPECIFICATION FOR DEMOLITOIN, ALTERATION AND REPAIR NOTES.
7. SCRAPE AND REMOVE FRIABLE WALL FINISHES. PREPARE EXIST WALLS FOR NEW FINISH.




## 6 KEY PLAN 3 FIRST FLOOR

scale: 1/64" = 1'-0"




## 7 KEY PLAN 1 SECOND FLOOR

scale: 1/64" = 1'-0"

## DEMOLITION NOTES LEGEND

| SYMBOL | KEY # & DESCRIPTION OF WORK |
|---|---|
| D1 | DEMOLISH ALL PARTITIONS, REMOVE ALL EXIST. DOORS, DOOR FRAMES IN ITS ENTIRETY WHERE NOTED ON PLAN |
| D2 | REMOVE ENTIRE CEILING AND MISC. CEILING SUPPORT IN ITS ENTIRETY TO THE EXTENT INDICATED IN DOCUMENTS. |
| D3 | REMOVE WINDOWS IN ITS ENTIRETY. REMOVE INTEGRAL METAL SILL AND FLASHING. TEMPORARY SECURE OPN'G. TO PROTECT OPN'G. |
| D4 | REMOVE FINISH FLOORING IN ITS ENTIRETY TO EXPOSE EXISTING SUBSTRATE. |
| D5 | DEMOLISH PORTION OF STRUCTURAL WALL FOR NEW OPENING |
| D6 | SCRAPE AND REMOVE FINISHES AT EXISTING WALLS AND PLASTER CEILING. PREPARE EXISTING WALL AND PLASTER CEILINGS TO RECEIVE NEW FINISHES. |
| D7 | REMOVE STOREFRONT WINDOW WALL IN ITS ENTIRETY. APPROX. 8'-0" X 22'-0" HIGH. |

| SYMBOL | KEY # & DESCRIPTION OF WORK |
|---|---|
| D8 | REMOVE ENTRANCE MAT IN ITS ENTIRETY. DEMOLISH 1" DEPTH OF EXISTING CONCRETE SLAB FOR NEW ENTRANCE MAT. |
| D9 | REMOVE BIKE RACK AND SALVAGE FOR REINSTALLATION |
| D10 | PREPARE EXISTING MASONRY WALL FOR NEW FINISH. REMOVE DIRT, GREASE,MILDEW FROM SURFACE. |
| D11 | CAREFULLY REMOVE GLASS BACKBOARDS. EXISTING BACKSTOP STRUCTURE TO REMAIN. UNINSTALL EXISTING MANUAL HOIST IN ITS ENTIRETY INCLUDING MANUAL WINCH, AIRCRAFT CABLE AND SINGLE SHEAVE SWIVEL EYE PULLEYS WHERE NECESSARY. |
| D12 | REMOVE FIBERGLASS/WOOD BACKBOARD. EXISTING BACKBOARD STRUCTURE TO REMAIN. REFER TO NOTE D11 FOR ADDITIONAL SCOPE OF WORK. |
| D13 | REMOVE EXIST. BUILT-IN LOCKERS. DEMOLISH 6" HIGH CONC. PADS. PREPARE SURFACE FOR NEW FINISHES. |
| D14 | REMOVE EXIST. DRESSING CUBICLE IN ITS ENTIRETY. |

| SYMBOL | KEY # & DESCRIPTION OF WORK |
|---|---|
| D15 | REMOVE 1" PIPE RAILING AND SLEEVE IN ITS ENTIRETY. |
| D16 | REMOVE GLASS PANELS AND H.M. FRAME IN ITS ENTIRETY. |
| D17 | REMOVE BUILT-UP PAINT FROM EXISTING MASONRY SURFACE W/ PROSOCO "HEAVY DUTY PAINT STRIPPER" OR APPROVED EQUAL. APPROX. 720 SF |
| D18 | CLEAN GYMNASIUM MASONRY WALLS AND PREPARE SURFACE TO RECEIVE NEW MASONRY FINISH AND SEALER. REMOVE CRACKED AND DAMAGED MASONRY. SCRAPE GROUT JOINTS WHERE NECESSARY. APPROX. 10,000 SF OF WALL SURFACE. |
| D19 | SAND TOP OF EXISTING SYNTHETIC FLOORING TO REMOVE EXISTING FINISH AND PREPARE FLOORING FOR NEW FINISH. APPROX. 3,000 SF. |
| D20 | REMOVE PAINT AND PREPARE ALL EXISTING H.M. FRAME AT VESTIBULE GLASS PARTITION FOR NEW PAINT FINISH |
| D21 | DEMOLISH 6" WIDE EXIST. CONC. SLAB TO REMOVE AND INSTALL NEW PLUMBING PIPING. APPORX. 200 SF . REFER TO PATCH DET. 3/A100. |

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

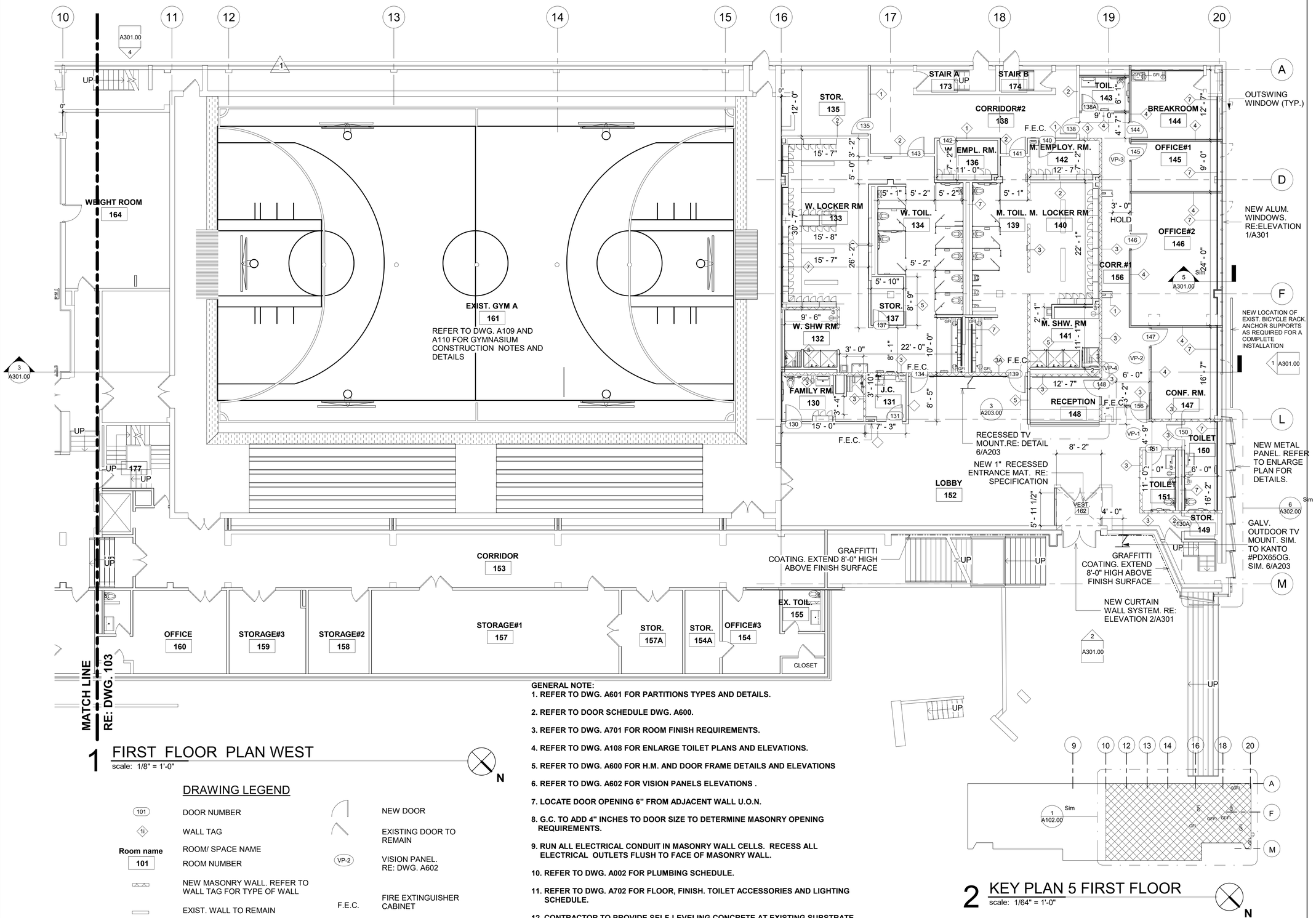
FIRST FLOOR DEMOLITION PLAN EAST

SEAL & SIGNATURE

REGISTERED ARCHITECT 027353 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A101.00 |
| DRAWN BY | OF |

NYC DOB Number




1 FIRST FLOOR PLAN WEST

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

N

## DRAWING LEGEND

| | |
|---|---|
| 101 | DOOR NUMBER |
| 1i | WALL TAG |
| Room name 101 | ROOM/ SPACE NAME / ROOM NUMBER |
| | NEW MASONRY WALL. REFER TO WALL TAG FOR TYPE OF WALL |
| | EXIST. WALL TO REMAIN |
| | NEW GYP. BD WALL . REFER TO WALL TAG FOR TYPE OF WALL |
| | NEW DOOR |
| | EXISTING DOOR TO REMAIN |
| VP-2 | VISION PANEL. RE: DWG. A602 |
| F.E.C. | FIRE EXTINGUISHER CABINET |
| GFI | GFI OUTLET LOCATED 4'-0" A.F.F. |

**GENERAL NOTE:**

1. REFER TO DWG. A601 FOR PARTITIONS TYPES AND DETAILS.
2. REFER TO DOOR SCHEDULE DWG. A600.
3. REFER TO DWG. A701 FOR ROOM FINISH REQUIREMENTS.
4. REFER TO DWG. A108 FOR ENLARGE TOILET PLANS AND ELEVATIONS.
5. REFER TO DWG. A600 FOR H.M. AND DOOR FRAME DETAILS AND ELEVATIONS
6. REFER TO DWG. A602 FOR VISION PANELS ELEVATIONS .
7. LOCATE DOOR OPENING 6" FROM ADJACENT WALL U.O.N.
8. G.C. TO ADD 4" INCHES TO DOOR SIZE TO DETERMINE MASONRY OPENING REQUIREMENTS.
9. RUN ALL ELECTRICAL CONDUIT IN MASONRY WALL CELLS. RECESS ALL ELECTRICAL OUTLETS FLUSH TO FACE OF MASONRY WALL.
10. REFER TO DWG. A002 FOR PLUMBING SCHEDULE.
11. REFER TO DWG. A702 FOR FLOOR, FINISH. TOILET ACCESSORIES AND LIGHTING SCHEDULE.
12. CONTRACTOR TO PROVIDE SELF-LEVELING CONCRETE AT EXISTING SUBSTRATE AT AREAS OF EXTENSIVE DEMOLITION.
13. CONTRACTOR TO PATCH ALL EXISTING WALLS TO RECEIVE NEW PAINT FINISH. REFER TO SPEC. SECTION 09200 FOR PATCHING REQUIREMENTS.




2 KEY PLAN 5 FIRST FLOOR

scale: 1/64" = 1'-0"

N

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION DESIGNATION SHEET ALL OTHER REV. 1 5/21/2019 PLAN CHANGES BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING

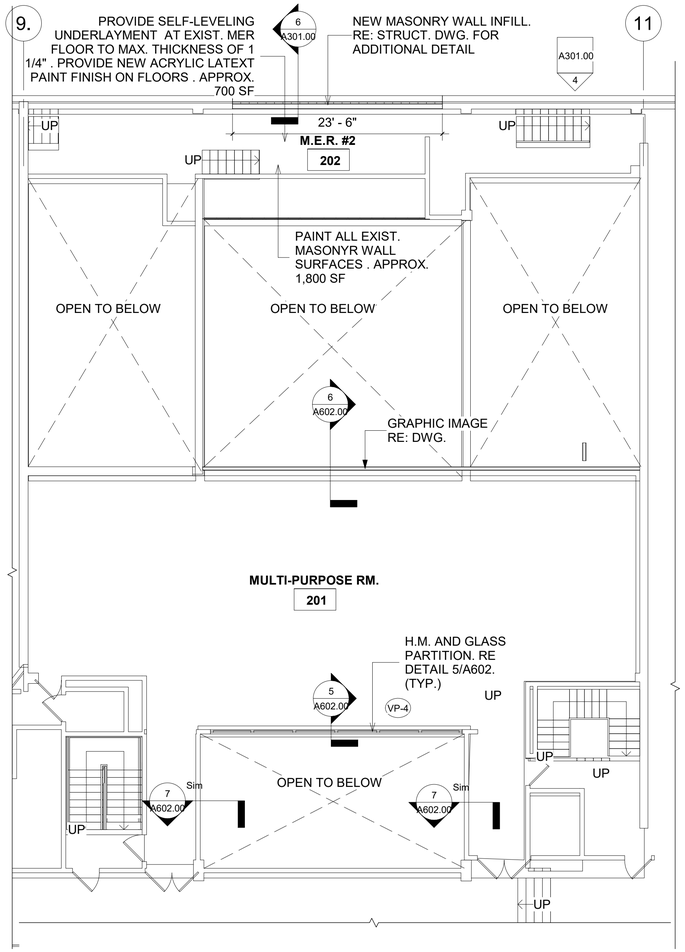
FIRST FLOOR CONSTRUCTION PLAN WEST

SEAL & SIGNATURE

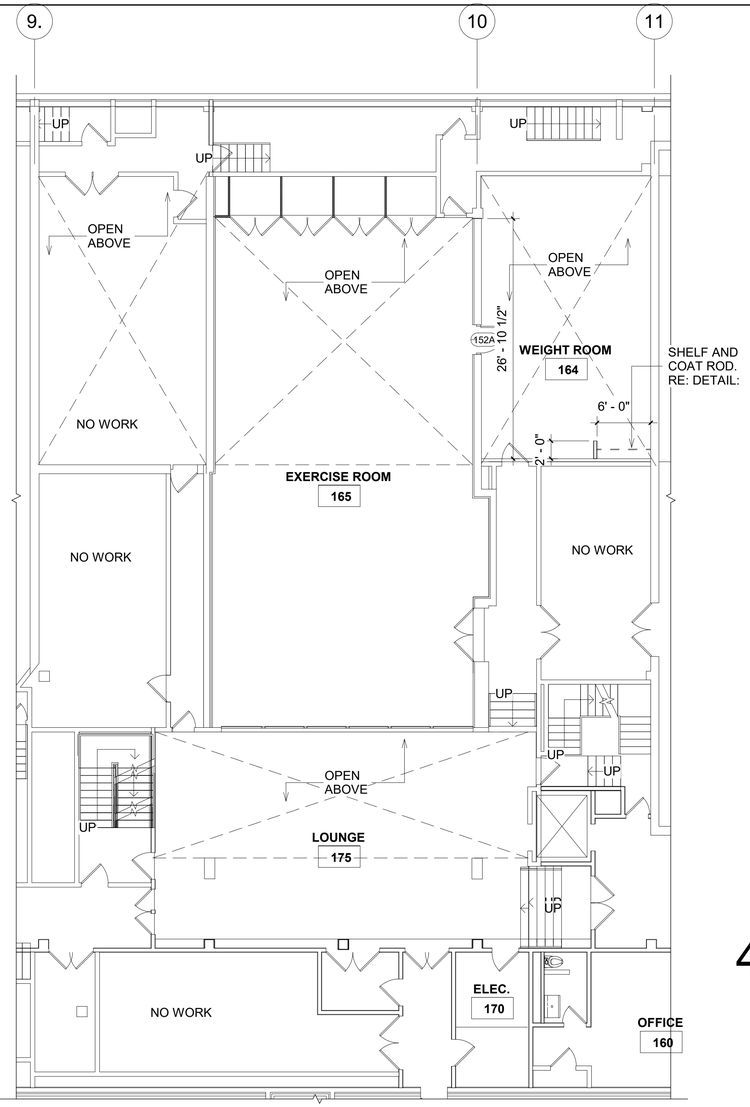
REGISTERED ARCHITECT JUNE DANIEL 027757 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A102.00 |
| DRAWN BY | OF |

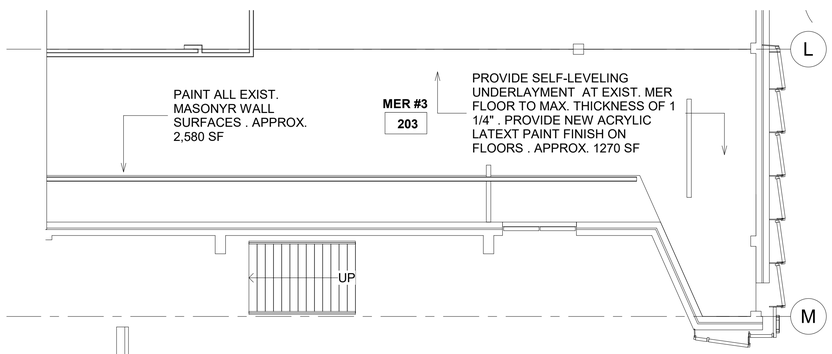
NYC DOB Number




1 SECOND FLOOR PLAN (EAST)
scale: 1/8" = 1'-0"



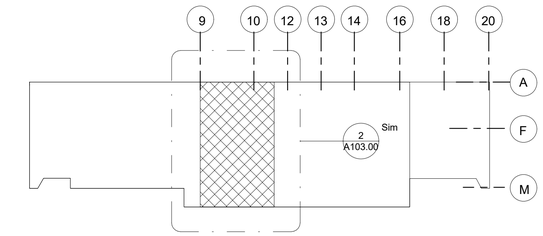

2 FIRST FLOOR PLAN (EAST)
scale: 1/8" = 1'-0"



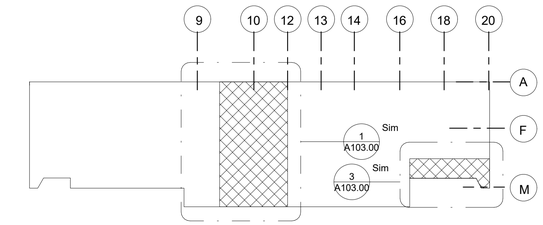

3 SECOND FLOOR PLAN WEST)
scale: 1/8" = 1'-0"

**GENERAL NOTE:**

1. REFER TO DWG. A601 FOR PARTITIONS TYPES AND DETAILS.
2. REFER TO DOOR SCHEDULE DWG. A600.
3. REFER TO DWG. A701 FOR ROOM FINISH REQUIREMENTS.
4. REFER TO DWG. A108 FOR ENLARGE TOILET PLANS AND ELEVATIONS.
5. REFER TO DWG. A600 FOR H.M. AND DOOR FRAME DETAILS AND ELEVATIONS
6. REFER TO DWG. A602 FOR VISION PANELS ELEVATIONS .
7. LOCATE DOOR OPENING 6" FROM ADJACENT WALL U.O.N.
8. G.C. TO ADD 4" INCHES TO DOOR SIZE TO DETERMINE MASONRY OPENING REQUIREMENTS.
9. RUN ALL ELECTRICAL CONDUIT IN MASONRY WALL CELLS. RECESS ALL ELECTRICAL OUTLETS FLUSH TO FACE OF MASONRY WALL.
10. REFER TO DWG. A002 FOR PLUMBING SCHEDULE.
11. REFER TO DWG. A702 FOR FLOOR, FINISH. TOILET ACCESSORIES AND LIGHTING SCHEDULE.
12. CONTRACTOR TO PROVIDE SELF-LEVELING CONCRETE AT EXISTING SUBSTRATE AT AREAS OF EXTENSIVE DEMOLITION.
13. CONTRACTOR TO PATCH ALL EXISTING WALLS TO RECEIVE NEW PAINT FINISH. REFER TO SPEC. SECTION 09200 FOR PATCHING REQUIREMENTS.




4 KEY PLAN 6 FIRST FLOOR
scale: 1/64" = 1'-0"




5 KEY PLAN 3 SECOND FLOOR
scale: 1/64" = 1'-0"

## DRAWING LEGEND

| | |
|---|---|
| 101 | DOOR NUMBER |
| 1\| | WALL TAG |
| Room name 101 | ROOM/ SPACE NAME<br>ROOM NUMBER |
| | NEW MASONRY WALL. REFER TO WALL TAG FOR TYPE OF WALL |
| | EXIST. WALL TO REMAIN |
| | NEW GYP. BD WALL . REFER TO WALL TAG FOR TYPE OF WALL |
| | NEW DOOR |
| | EXISTING DOOR TO REMAIN |
| VP-2 | VISION PANEL. RE: DWG. A602 |
| F.E.C. | FIRE EXTINGUISHER CABINET |
| GFI | GFI OUTLET LOCATED 4'-0" A.F.F. |

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

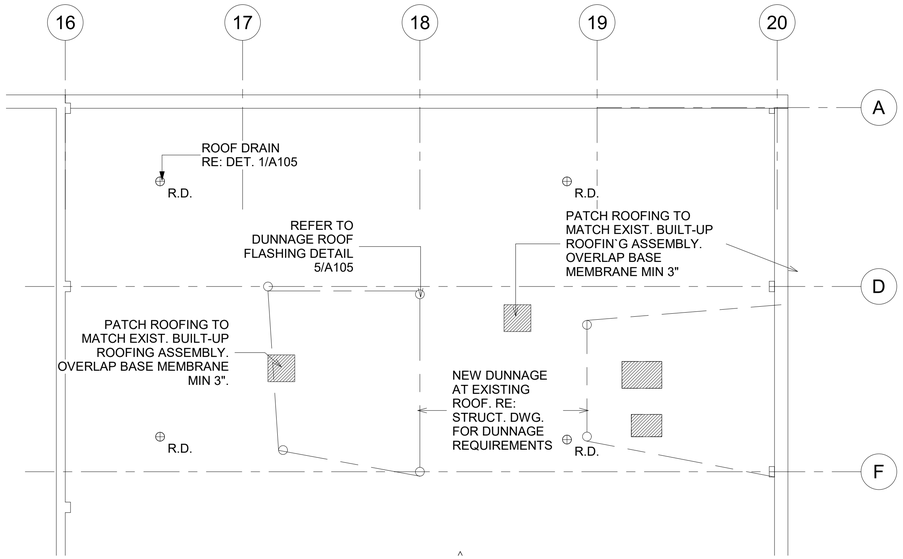
FIRST AND SECOND CONSTRUCTION FLOOR PLAN EAST

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 027153 STATE OF NEW YORK

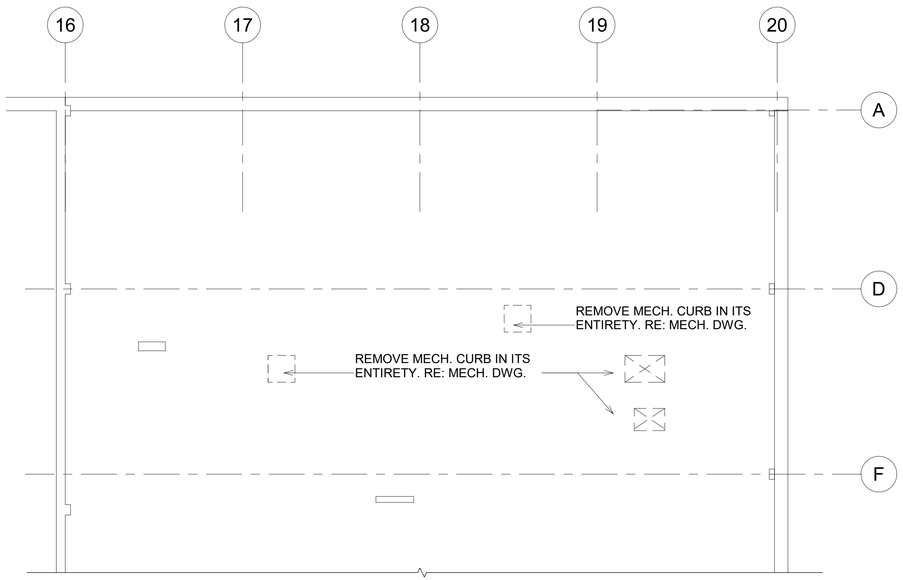
| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A103.00 |
| DRAWN BY | OF |

NYC DOB Number



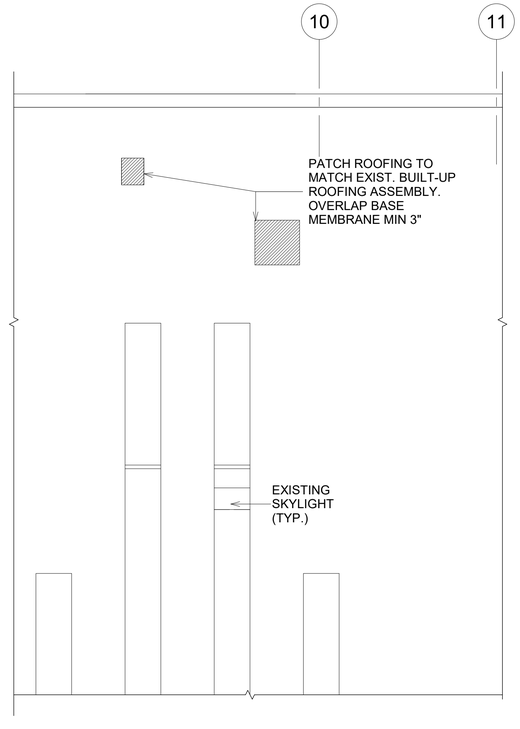

## 1 LOWER ROOF WEST

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



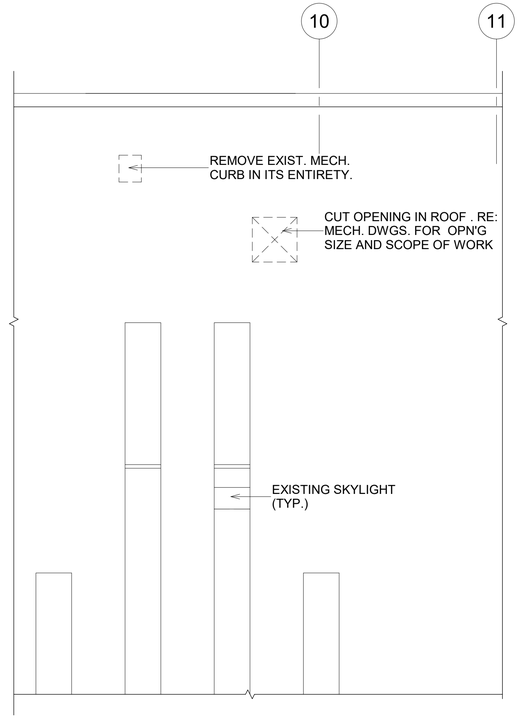

## 3 LOWER ROOF WEST DEMOLITION PLAN

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



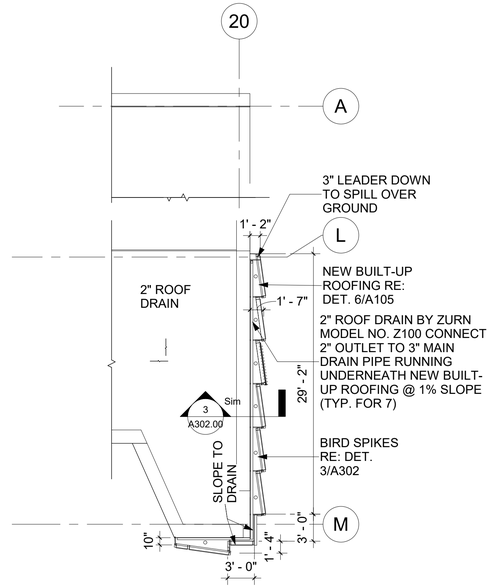

## 2 UPPER ROOF EAST

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




## 4 UPPER ROOF EAST DEMOLITION PLAN

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

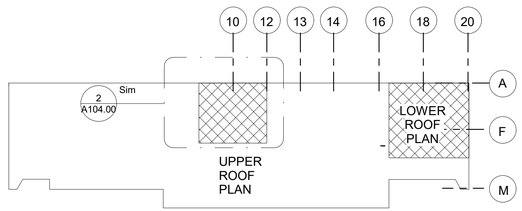



## 6 UPPER ROOF WEST

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

GEENRAL NOTE:

1. REFER TO DWG. A105 ROOF DETAILS FOR ADDITIONAL INFORMATION.




## 5 ROOF KEY PLAN

scale: 1/64" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

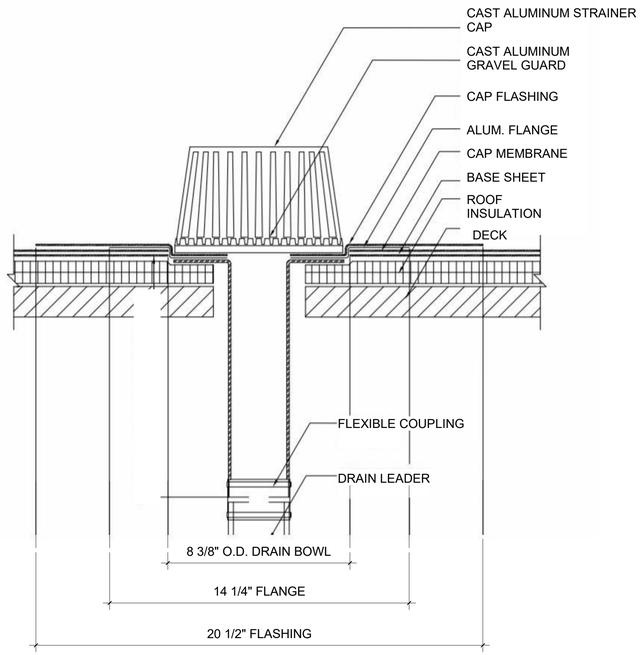
ROOF DEMOLITION AND CONSTRUCTION PLAN

SEAL & SIGNATURE

REGISTERED ARCHITECT
OF NEW YORK

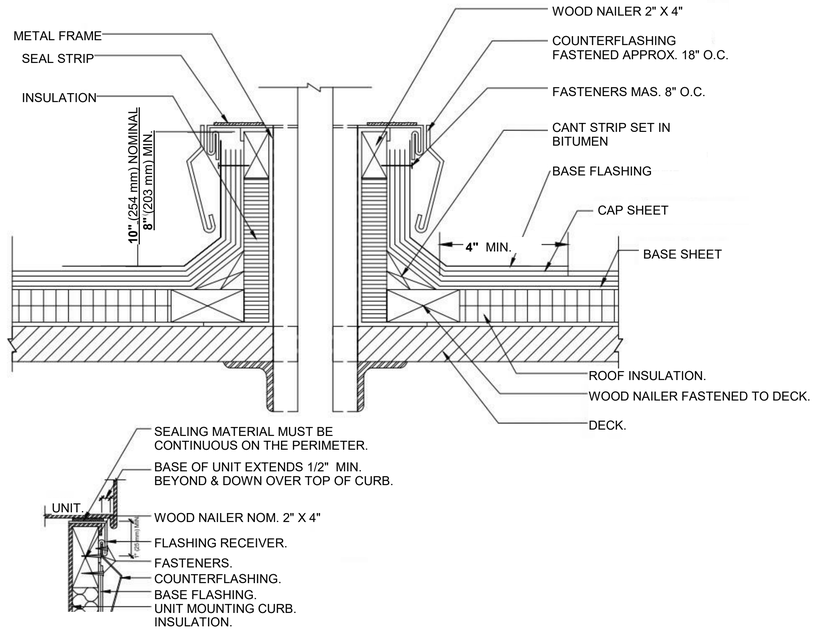
| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A104.00 |
| DRAWN BY | OF |

NYC DOB Number



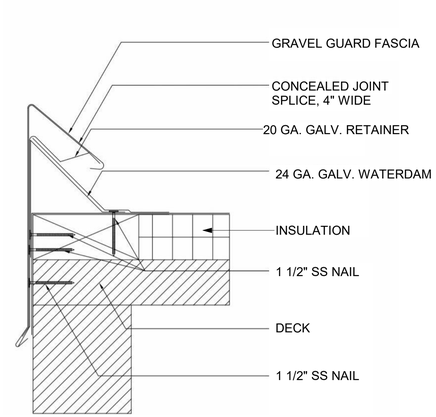

## 1 ROOF DETAIL 6

scale: 3/4" = 1'-0"



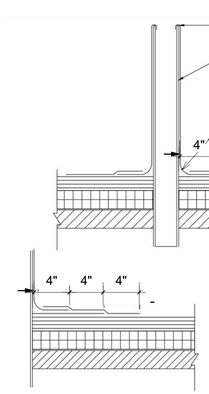

## 2 ROOF DETAILS

scale: 3/4" = 1'-0"




## 3 ROOF DETAIL 5

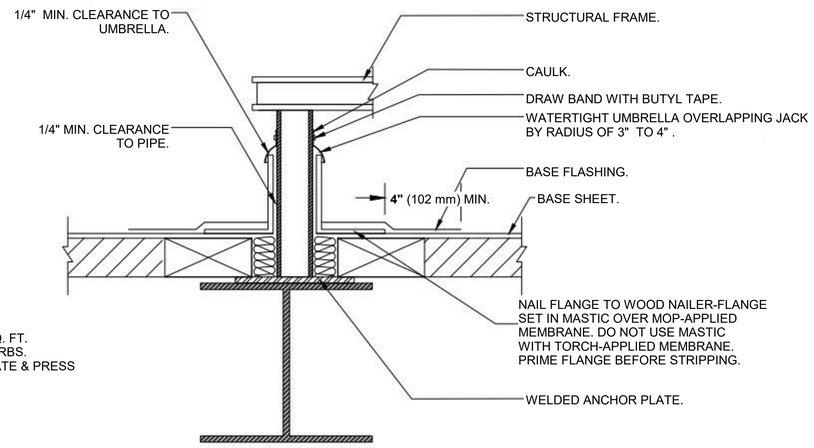
scale: 1/2" = 1'-0"




NOTE:
1. SHEET LEAD MIN. OF 2-1/2 LBS (1.13 KG) PER SQ. FT.
2. MIN. 18" CLEARANCE FROM PIPES, WALLS & CURBS.
3. TORCH BITUMEN MEMBRANE TO A MOLTEN STATE & PRESS PRIMED FLANGE WHILE IS STILL MOLTEN.

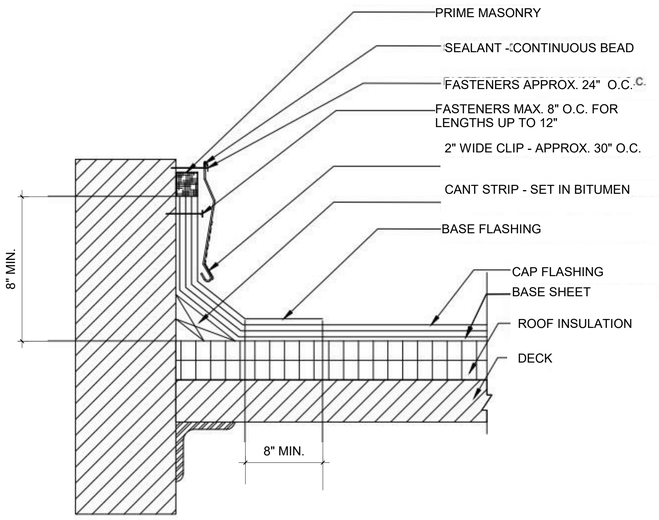
## 4 ROOF DETAILS 2

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




## 5 ROOF DETAILS 3

scale: 1" = 1'-0"




## 6 ROOF DETAILS 4

scale: 1" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initialed 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

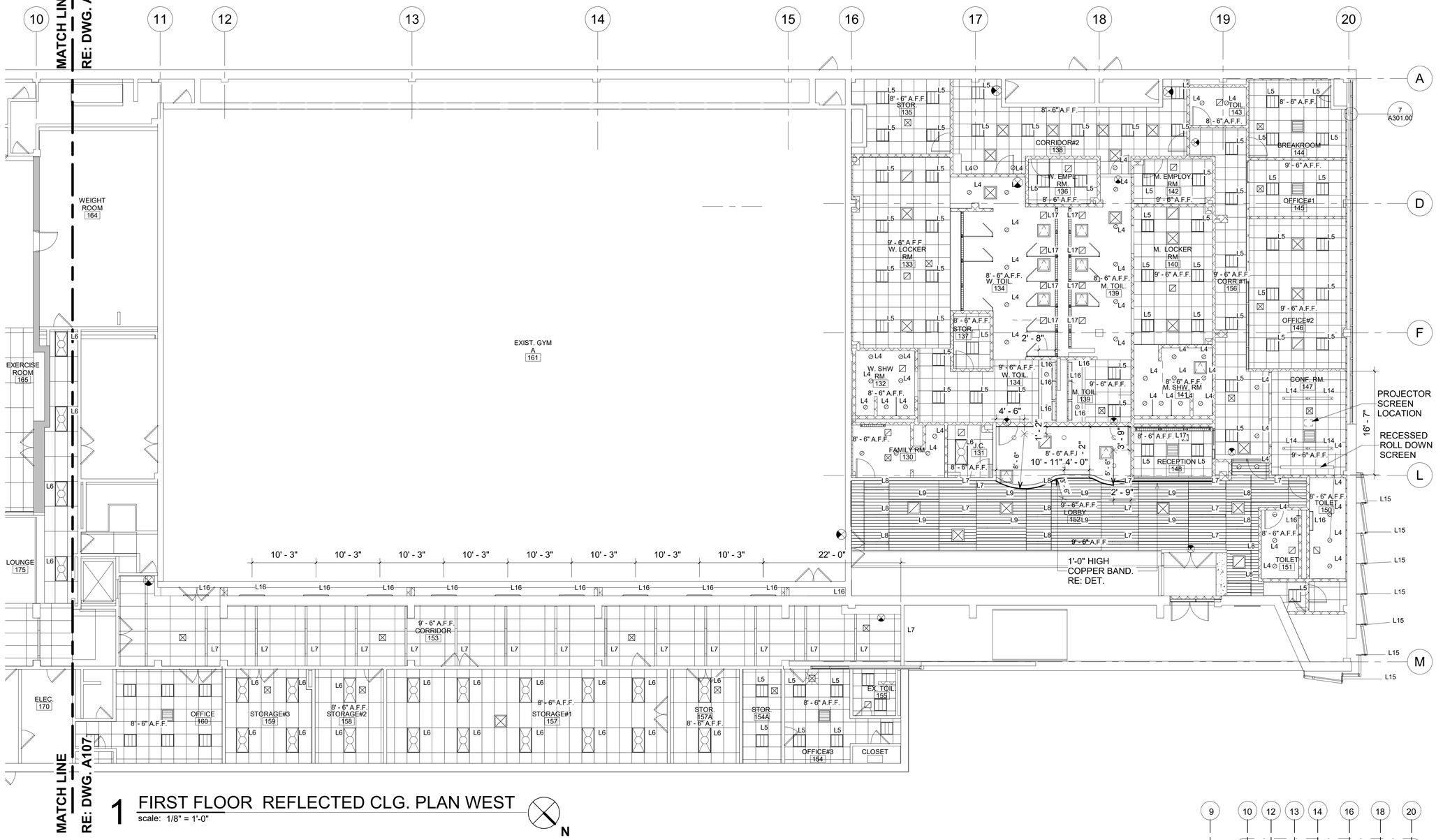
DRAWING

ROOF DETAILS

SEAL & SIGNATURE

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A105.00
DRAWN BY OF

NYC DOB Number




# 1 FIRST FLOOR REFLECTED CLG. PLAN WEST

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

N

REFLECTED CEILING PLAN LEGEND

(ACT-1 ) 2'-0" X 2'-0" ACOUTICAL CEILIING TILE

NO CEILING / BOTTOM OF SLAB

(ACT -2) 2'-0" X 4'-0" ACOUSTICAL CEILING TILE

(ACT -3) 2'-0" WIDE WOOD VENEER PANELS - 6" SLATS

GYB CEILING 8'-6" AFF. RE:

LIGHTING FIXTURE LEGEND

L4 COMPACT LED DOWNLIGHT

L5 RECESSED 2 X 2 INDIRECT LED

L6 6'-0" RECESSED 2 X 2 INDIRECT LED

L7 LINEAR RECESSED LIGHT 6'-0" L

L8 LINEAR RECESSED LIGHT 4'-0" L

L9 LINEAR RECESSED LIGHT 8'-0" L

L12 WALL MTD. VANITY LIGHT

L13 3'-0 PENDANT DISK LIGHT

L14 4'-0 PENDANT INDIRECT LIGHT

L15 (4) 8'-0" ACCENT LINEAR LED

L16 4'-0" WALL MTD. LIGHT FIXTURE. 8'-6" A.F.F.

L17 4'-0" WALL MTD. LIGHT FIXTURE. 8'-6" A.F.F.

SUPPLY DIFFUSER

RETURN DIFFUSER

CEILING CASSETTE

1'-0" X 1'-0" ACCESS DOOR.

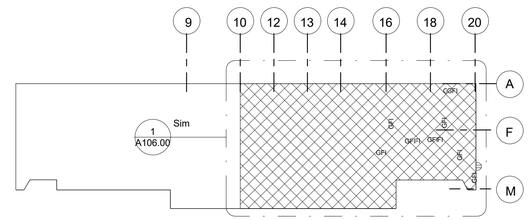
SPRINKLER. REFER TO SPRINKLER DWG. FOR DETAILS

GENERAL NOTES:

1. REFER TO DWG. A702 FOR LIGHTING SCHEDULE .

2. REFER TO DWG. A603 FOR CEILING DETAILS.

3. INSTALL SUSPENDED CEILING GRID WITH EQUAL SIZE PANELS AT EACH SIDE OR END OF THE INDIVIDUAL SPACES U.O.N.. NO PANEL SHALL BE LESS THAN 4" WIDE.




# 2 KEY PLAN 7 FIRST FLOOR

scale: 1/64" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT


CONSULTANTS


CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

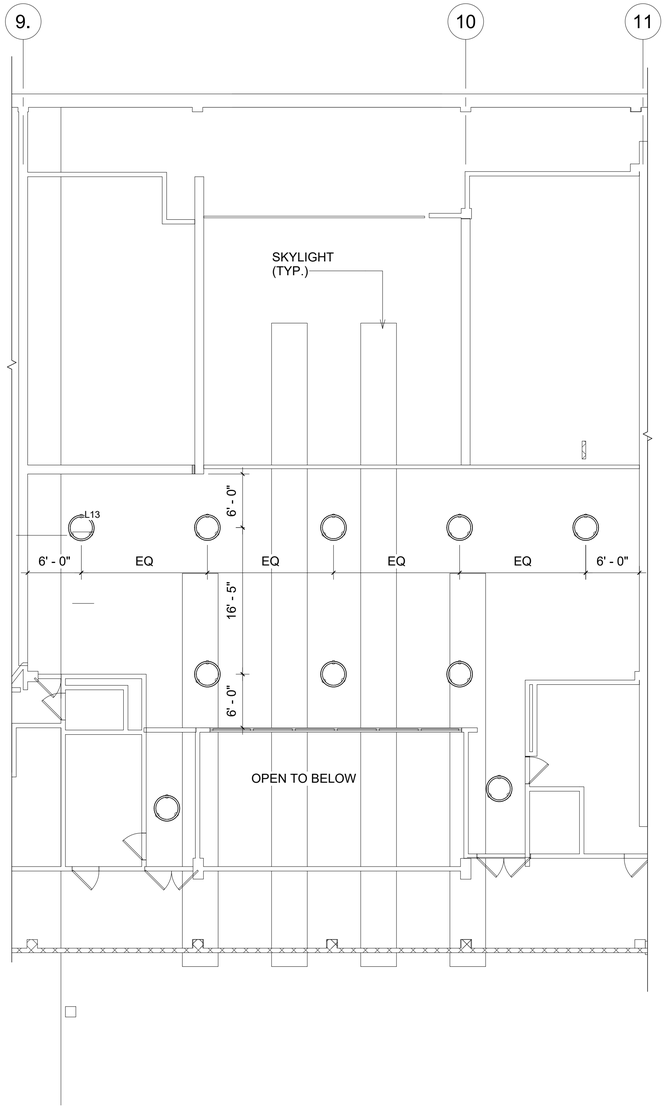
FIRST FLOOR REFLECTED CEILING PLAN

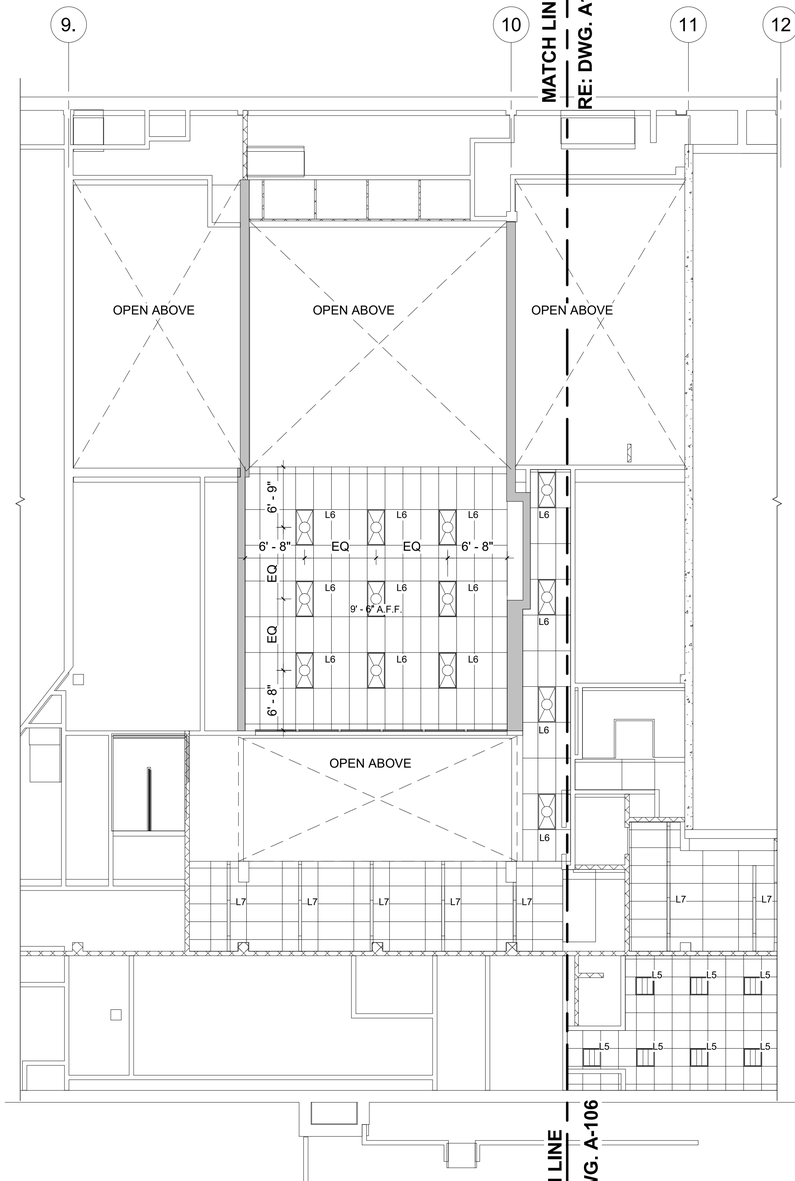
SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 027151 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A106.00 |
| DRAWN BY | OF |

NYC DOB Number




REFLECTED CEILING PLAN LEGEND

- (ACT-1 ) 2'-0" X 2'-0" ACOUTICAL CEILIING TILE
- NO CEILING / BOTTOM OF SLAB
- (ACT -2) 2'-0" X 4'-0" ACOUSTICAL CEILING TILE
- (ACT -3) 2'-0" WIDE WOOD VENEER PANELS - 6" SLATS
- GYB CEILING 8'-6" AFF. RE:

## 1 SECOND FLOOR PLAN (EAST)

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

## 2 FIRST FLOOR PLAN (EAST)

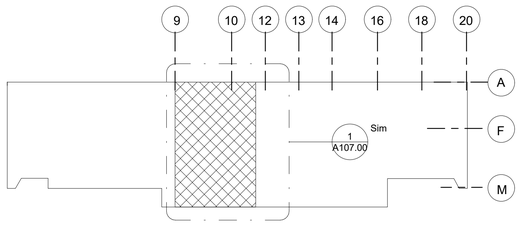
scale: 1/8" = 1'-0"

LIGHTING FIXTURE LEGEND

- L4 COMPACT LED DOWNLIGHT
- L5 RECESSED 2 X 2 INDIRECT LED
- L6 6'-0" RECESSED 2 X 2 INDIRECT LED
- L7 LINEAR RECESSED LIGHT 6'-0" L
- L8 LINEAR RECESSED LIGHT 4'-0" L
- L9 LINEAR RECESSED LIGHT 8'-0" L
- L12 WALL MTD. VANITY LIGHT
- L13 3'-0 PENDANT DISK LIGHT
- L14 4'-0 PENDANT INDIRECT LIGHT
- L15 (4) 8'-0" ACCENT LINEAR LED
- L16 4'-0" WALL MTD. LIGHT FIXTURE. 8'-6" A.F.F.
- L17 4'-0" WALL MTD. LIGHT FIXTURE. 8'-6" A.F.F.
- SUPPLY DIFFUSER
- RETURN DIFFUSER
- CEILING CASSETTE
- 1'-0" X 1'-0" ACCESS DOOR.
- SPRINKLER. REFER TO SPRINKLER DWG. FOR DETAILS

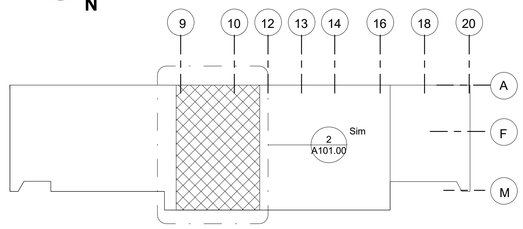
GENERAL NOTES:

1. REFER TO DWG. A702 FOR LIGHTING SCHEDULE .
2. REFER TO DWG. A603 FOR CEILING DETAILS.
3. INSTALL SUSPENDED CEILING GRID WITH EQUAL SIZE PANELS AT EACH SIDE OR END OF THE INDIVIDUAL SPACES U.O.N.. NO PANEL SHALL BE LESS THAN 4" WIDE.




## 4 KEY PLAN 2 SECOND FLOOR

scale: 1/64" = 1'-0"




## 3 KEY PLAN 4 FIRST FLOOR

scale: 1/64" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

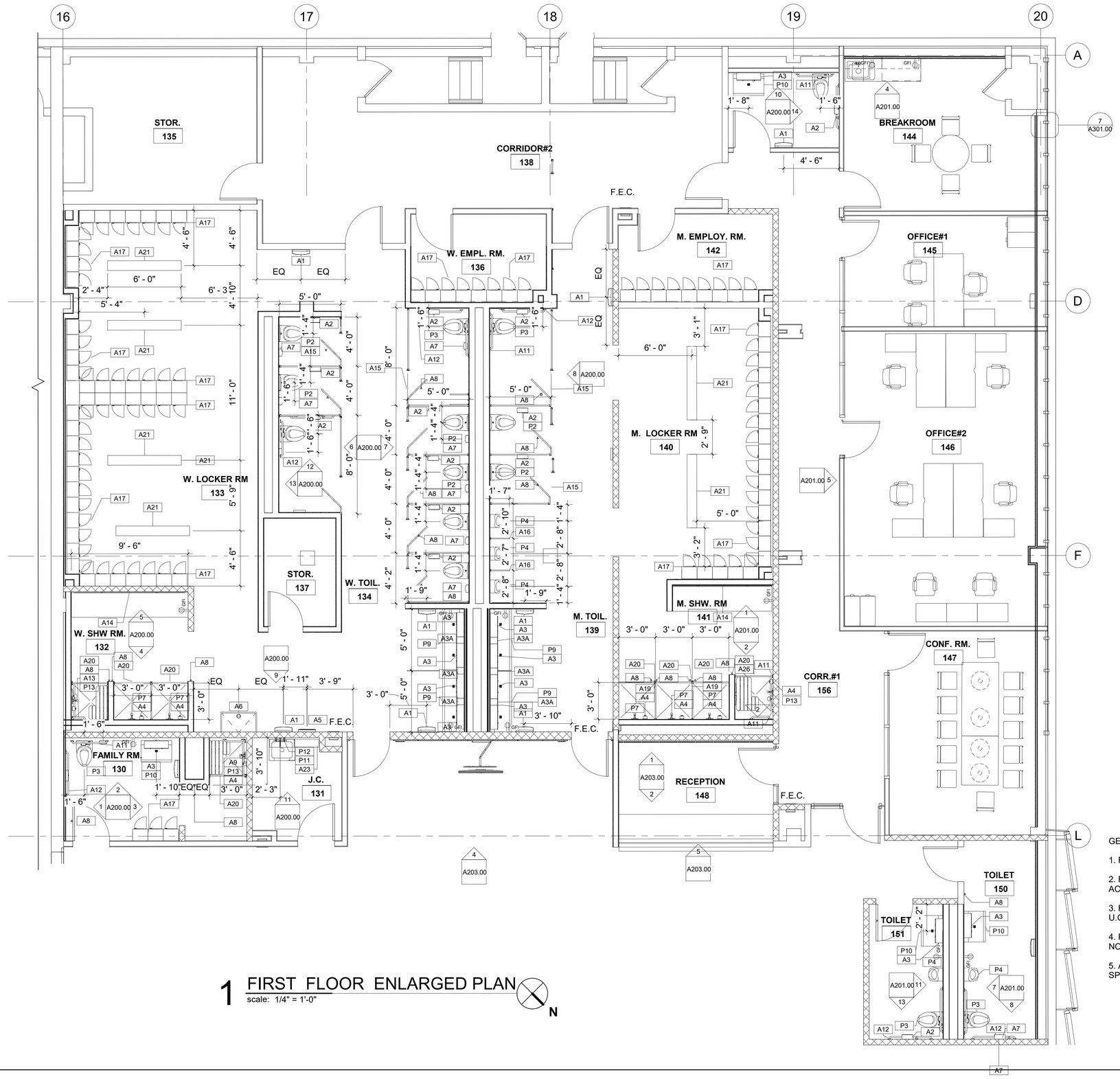
FIRST & SECOND FLOOR REFLECTED CEILING PLAN (EAST)

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 027757 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A107.00 |
| DRAWN BY | OF |

NYC DOB Number




1 FIRST FLOOR ENLARGED PLAN
scale: 1/4" = 1'-0"

N

| ACCESSORIES SCHEDULE 2 | |
|---|---|
| TAG | DESCRPT |
| A1 | PAPER DISPENSER & WASTE RECEPTACLE |
| A2 | TOILET TISSUE DISPENSER |
| A3 | MIRROR W AIR DRYER & SOAP DISPENSER |
| A3A | SYSTEM FILLER MODULE |
| A4 | SHAMPOO SOAP DISPENSER |
| A5 | SANITARY VENDOR |
| A6 | CHANGING STATION |
| A7 | SANITARY DISPOSAL |
| A8 | COAT HOOK |
| A9 | ADA TRANSFER SHOWER SEAT |
| A10 | GRAB BAR 18" |
| A11 | GRAB BAR 36" |
| A12 | GRAB BAR 42" |
| A13 | GRAB BAR L 18" X 30" |
| A14 | MIRROR FULL - LENGTH |
| A15 | TOILET PARTITION- CEILING MOUNTED |
| A16 | URINAL PARTITONS |
| A17 | PLASTIC LOCKERS 1 - TIER W/ SLOPE TOP |
| A18 | N/A |
| A19 | SHOWER PARTITIONS |
| A20 | SHOWER CURTAIN ROD |
| A21 | BENCH FLOOR - MOUNT |
| A22 | N/A |
| A23 | UTILITY SHELF |
| A24 | N/A |
| A25 | N/A |
| A26 | ADA TRANSFER SHOWER SEAT |

| PLUMBING SCHEDULE 1 | |
|---|---|
| TAG | DESCRPT. |
| P1 | NOT USED |
| P2 | TOILET W WALL VALVE |
| P3 | TOILET W FLUSHOMETER |
| P4 | URINAL |
| P5 | URINAL FLUSH VALVE |
| P6 | FAUCET |
| P7 | SHOWER SYSTEM |
| P8 | SINK |
| P9 | SINK |
| P10 | SINK |
| P11 | MOP SINK |
| P12 | SERVICE FAUCET |
| P13 | ADA SHOWER SYSTEM |

GENERAL NOTES:

1. REFER TO DWG. A200 AND A201 FOR INTERIOR ELEVATIONS.

2. REFER TO COMPLETE PLUMBING FIXTURE SCHEDULE AND TOILET ACCESSORIES SCHEDULE ON DWG. A702.

3. REFER TO A202 FOR TYPICAL MOUNTING HEIGHTS REQUIRMENTS U.O.N.

4. FURNITURE NOTED ON PLAN FOR REFERENCE ONLY. FURNITURE NOT INCLUDED IN SCOPE OF WORK.

5. ALL LOCKERS INCLUDED IN SCOPE OF WORK. REFER TO SPECIFICATION FOR DETAILS.

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

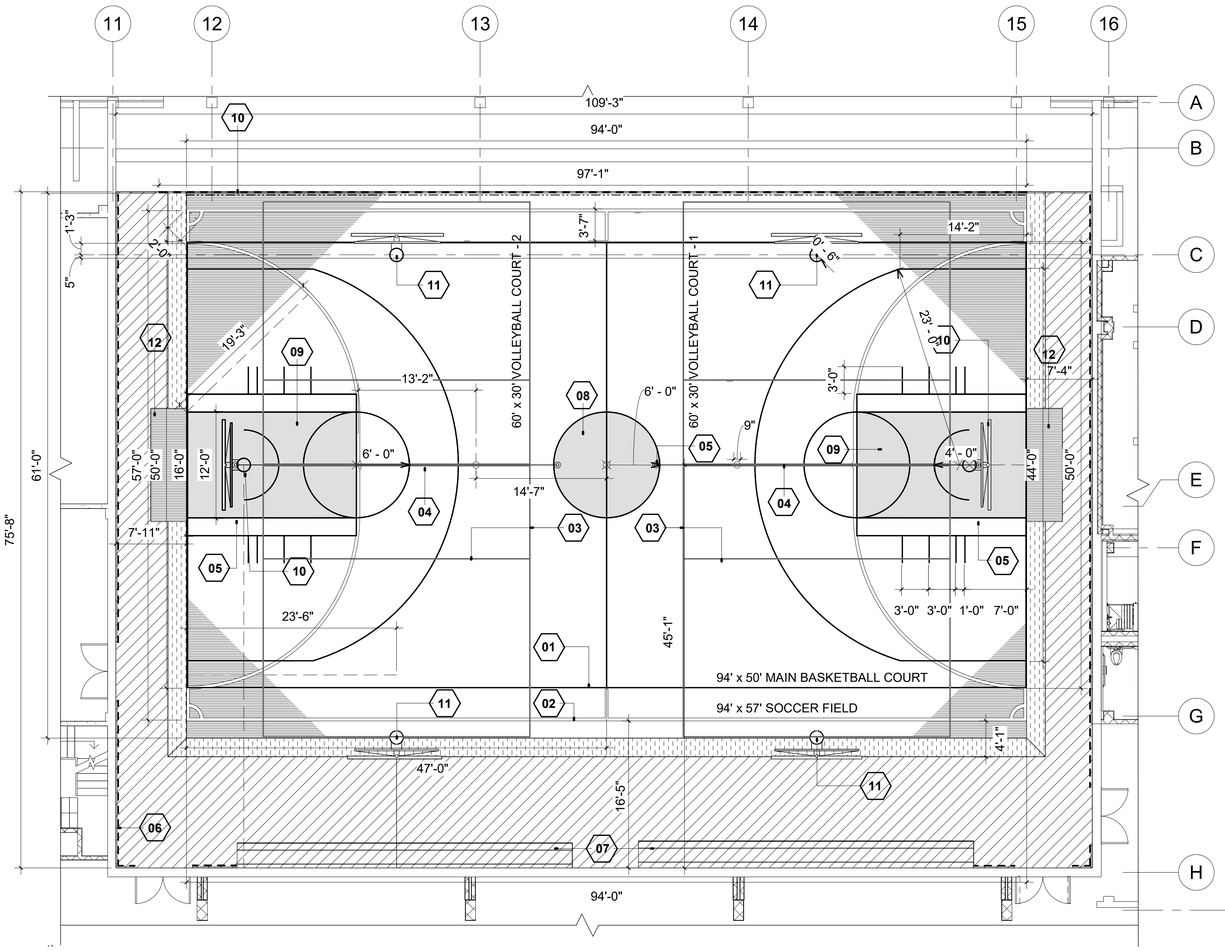
ENLARGED FLOOR PLAN

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 027157 STATE OF NEW YORK

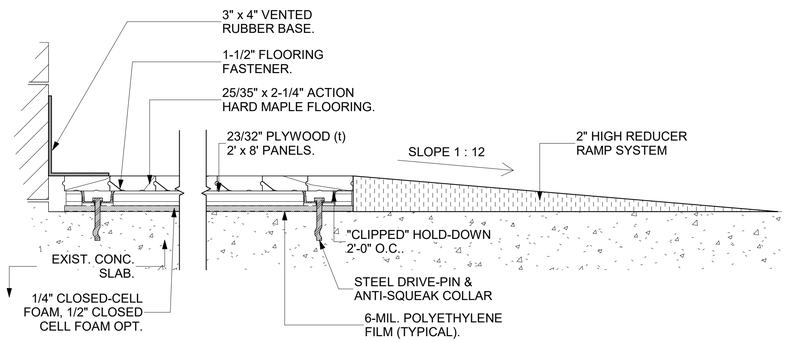
| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A108.00 |
| DRAWN BY | OF |

NYC DOB Number



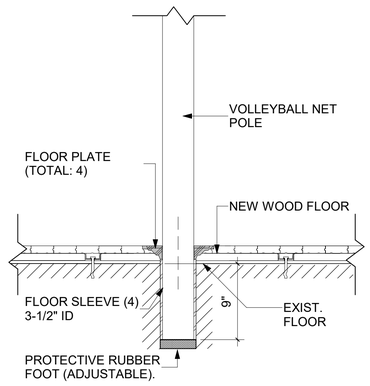

## 1 FIRST FLOOR PLAN - GYMNASIUM

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




## 2 NEW GYM FLOOR - ANCHORFLEX

scale: 3" = 1'-0"




## 3 VOLLEYBALL NET POLE/FLOOR DETAIL

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

| CONTRACTOR PROVIDED AND INSTALLED ITEMS | | | | |
|---|---|---|---|---|
| ITEM NO. | DESCRIPTION | SIZE | SPEC. SECTION | QTY. |
| 01 | BASKETBALL FLOOR MARKINGS - 2" WIDE. | - | 095900 | 1 |
| 02 | SOCCER FLOOR MARKINGS - 4" WIDE. | - | 095900 | 1 |
| 03 | VOLLEYBALL FLOOR MARKINGS - 2" WIDE. | - | 095900 | 1 |
| 04 | VOLLEYBALL FLOOR MARKINGS - 4" WIDE | - | 095900 | 2 |
| 05 | VOLLEYBALL STANDARDS FLOOR PLATE/BASE PAD. | - | 114800 | 4 |
| 06 | EXIST. WALL MATS TO BE PROTECTED/REUSED. | - | EXIST. | |
| 07 | EXIST. BLEACHERS TO REMAIN IN SAME LOCATION | - | EXIST. | 2 |
| 08 | 6'-0" RADIUS GRAPHIC IMAGE - TO BE SELECTED BY CLIENT | - | 095900 | 1 |
| 09 | COLOR INSERT MARKINGS - 12'-0" X 19'-0" | - | 095900 | 2 |
| 10 | 10'-0" FIXED HEIGHT - NEW GLASS 72" X 48" RECTANGULAR BACKBOARDS ATTACHED TO EXISITING BACKSTOP STRUCTURE. | - | 114800 | 4 |
| 11 | 8'-0" - 10'-0" STEEL HEIGHT ADJUSTER TO EXISTING BACKSTOP STRUCTURE. NEW GLASS 72" X 48" RECTANGULAR BACKBOARDS. ATTACH NEW ELECTRIC WINCH TO BACKSTOP STRUCTURE | | 114800 | 4 |
| 12 | YOUTH 12'-0" X 6'-6" PORTABLE SOCCER GOAL AND NET | | 114800 | 2 |
| | | | | |

| GAME-LINE COLOR CHART | | |
|---|---|---|
| SPORT | COLOR | WIDTH |
| VOLLEYBALL | TBD | 2" |
| SOCCER | TBD | 4" |
| BASKETBALL | TBD | 2" |

## CONSTRUCTION NOTES

| SYMBOL | KEY# & DESCRIPTION OF WORK |
|---|---|
| "00" | **CONTRACTOR PROVIDED & INSTALLED ITEMS.** REFER TO CONTRACTOR PROVIDED & INSTALLED ITEMS SCHEDULE ON THIS SHEET . |
| | **NEW FLOOR PAINT FINISH** NEW FLOOR PAINT FINISH ON EXIST. GYMNASIUM SYNTHETIC FLOORING. EXPOSED AREA ONLY. APPROX. 2,000 SF |
| | **NEW GYM WOOD FLOORING.** NEW GYM WOOD FLOORING. LAY OVER EXIST. VINYL FLOOR. RE: DET. 2/A109. APPROX. 5,800 SF |
| | **REDUCER RAMP** NEW RAMP SYSTEM TO LEVEL EXIST. FLOOR & NEW WOOD FLOORING. RE: DET. 2/A109. REFER TO SPECIFICATION SECTION 095900. APPROX. 400 SF |
| 09 | **COLOR INSERT MARKINGS/GRAPHIC IMAGE.** COLOR INSERT MARKINGS/GRAPHIC IMAGE/LOGO. APPROX. 600 SF. |
| 05 | **VOLLEYBALL STANDARDS.** VOLLEYBALL STANDARDS FLOOR PLATE/BASE PAD. RE: DET. 3/A107 |
| 10 / 11 | **RECTANGULAR BACKBOARD.** FIXED/ TELESCOPIC RECTANGULAR BACKBOARD ATTACHED TO ROOF SLAB. 6'-0" x 3'-6". REFER TO SCHEDULE FOR DETAILS |
| 06 | **EXIST. WALL MATS** EXIST. WALL MATS TO REMAIN. ADD ALTERNATE: NEW WALL MATS. APPROX. 240 LF. |
| | **VENTED RESILIENT BASE.** 3" X 4" VENTED RESILIENT BASE AT SOUTH GYM WALL ONLY.RE: DET. 2/A109. |

## GENERAL CONSTRUCTION PLAN NOTES:

1. REFER TO CONTRACTOR PROVIDED & INSTALLED ITEMS SCHEDULE ON THIS DRAWING FOR KEY ITEMS INDICATED ON FLOOR PLAN.
2. GYMNASIUM'S FLOORING SHALL BE WOOD FLOOR ON CONCRETE SLAB AS PER SPECS. REFER TO WOOD FLOOR DETAIL 2 ON DWG. A109.
3. ALL FLOOR MARKINGS SHALL CONFORM TO NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS.
4. REFER TO DWG. A603 FOR FIRESTOPING DETAIL.

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

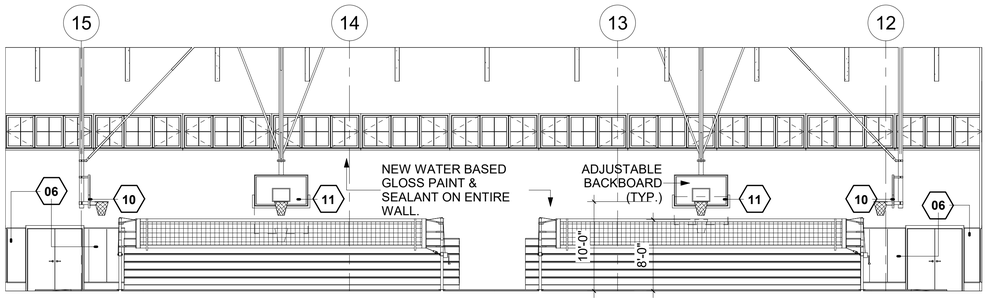
DRAWING

GYMNASIUM PLAN, NOTES AND DETAILS

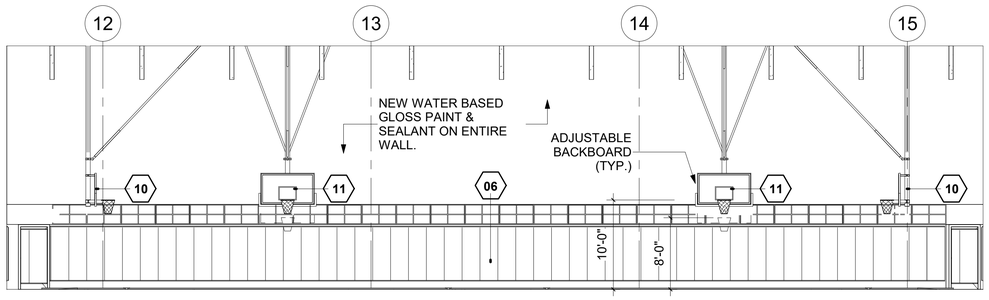
SEAL & SIGNATURE

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A109.00
DRAWN BY OF

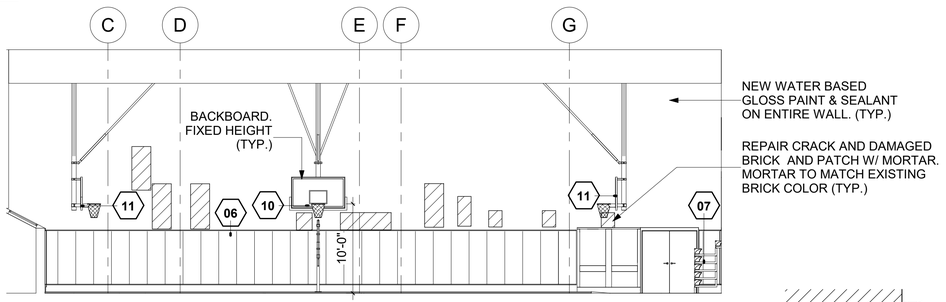
NYC DOB Number



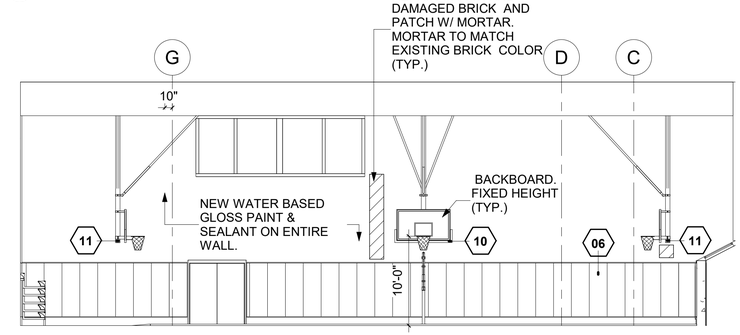

## 1 GYM - BLEACHERS
scale: 1/8" = 1'-0"



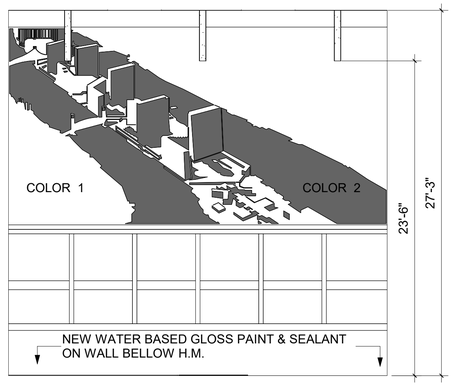

## 2 GYM - EXTERIOR WALL
scale: 1/8" = 1'-0"



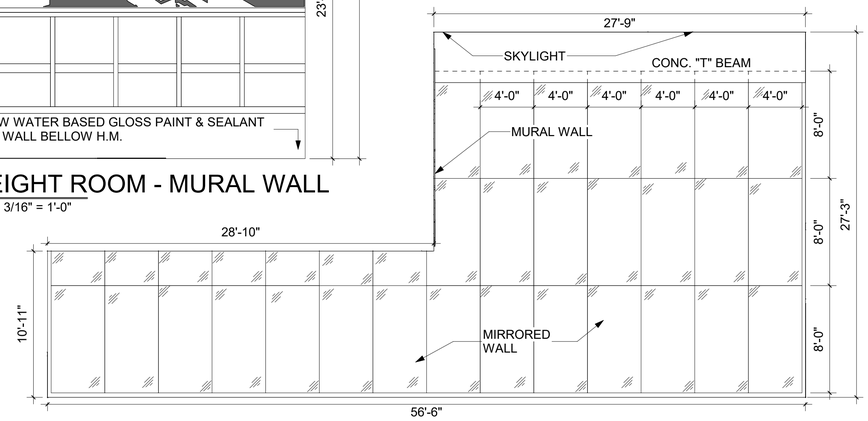

## 3 GYM - LOBBY ENTRANCE WALL
scale: 1/8" = 1'-0"



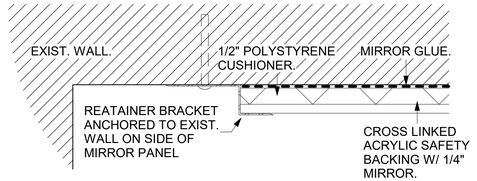

## 4 GYM - STORAGE ROOM
scale: 1/8" = 1'-0"



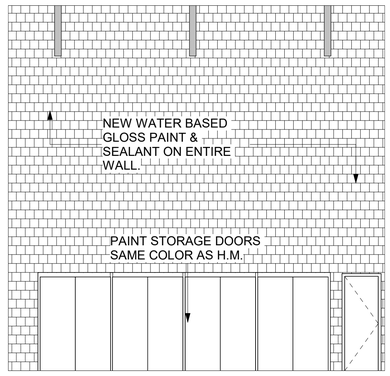

## 5 WEIGHT ROOM - MURAL WALL
scale: 3/16" = 1'-0"



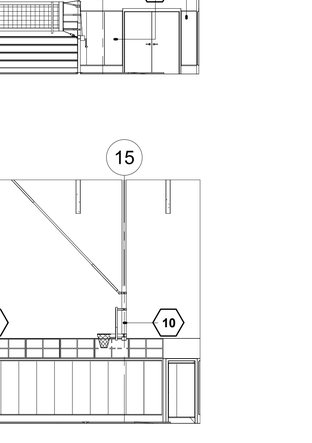

## 6 WEIGHT ROOM - SIDE WALL
scale: 3/16" = 1'-0"



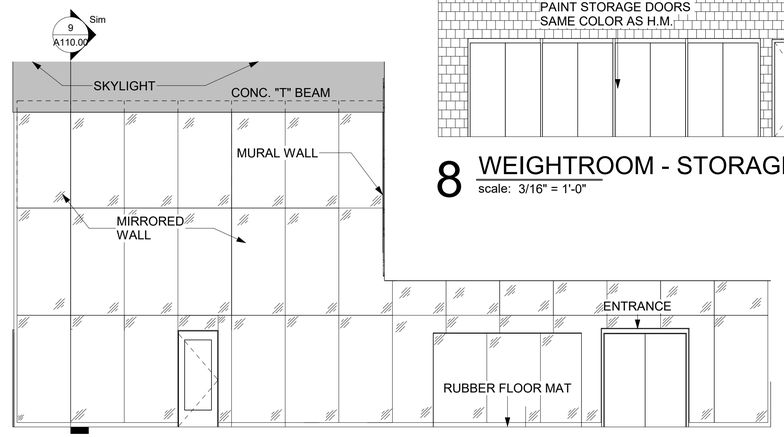

## 7 MIRROR RETAINER BRACKET
scale: 6" = 1'-0"




## 8 WEIGHTROOM - STORAGE
scale: 3/16" = 1'-0"




## 9 DETAIL 'J' TRIM
scale: 3" = 1'-0"




## 10 WEIGHT ROOM - ENTRANCE WALL
scale: 3/16" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

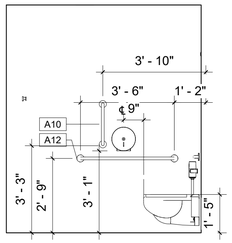
GYMNASIUM ELEVATIONS

SEAL & SIGNATURE

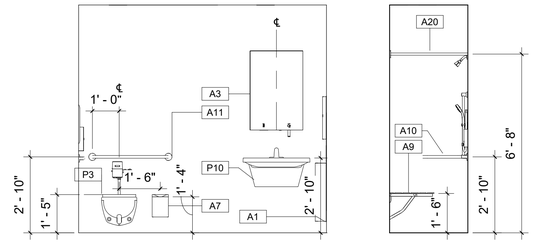
REGISTERED ARCHITECT JUNE DANIEL 027251 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A110.00 |
| DRAWN BY | OF |

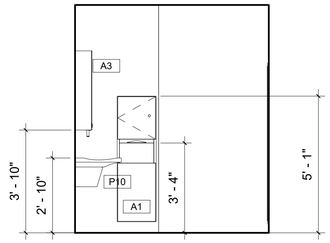
NYC DOB Number



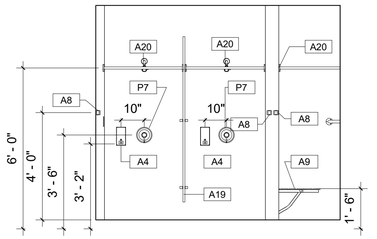

## 1 LAVATORY 1A
scale: 3/8" = 1'-0"



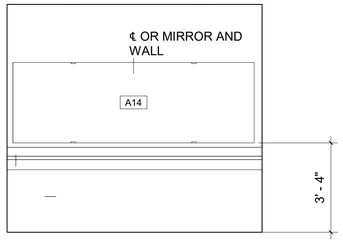

## 2 LAVATORY - 2A
scale: 3/8" = 1'-0"



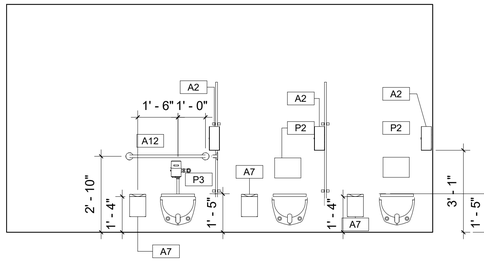

## 3 LAVATORY - 2B
scale: 3/8" = 1'-0"



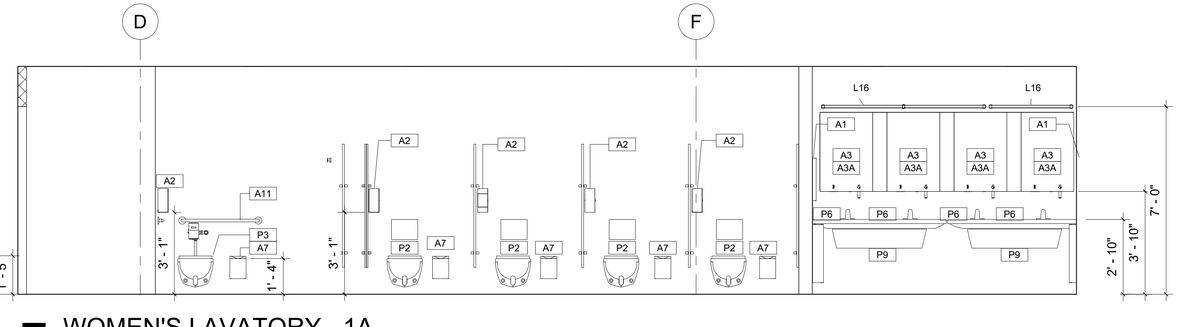

## 4 WOMEN'S SHOWER -1A
scale: 3/8" = 1'-0"



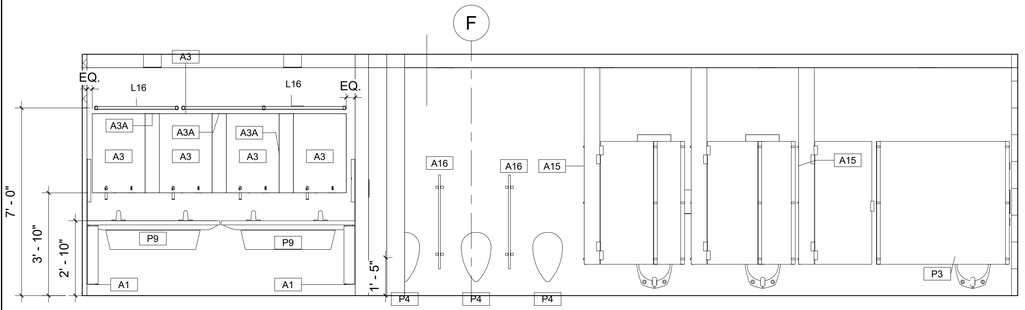

## 5 W. SHOWER
scale: 3/8" = 1'-0"



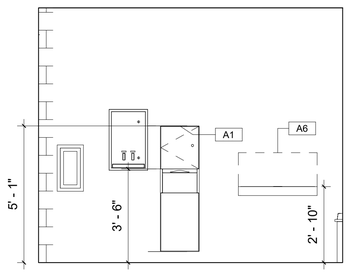

## 6 WOMEN'S TOILET/STALL
scale: 3/8" = 1'-0"



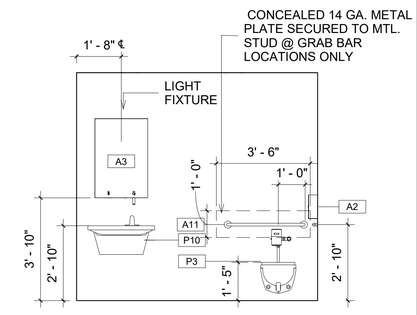

## 7 WOMEN'S LAVATORY - 1A
scale: 3/8" = 1'-0"



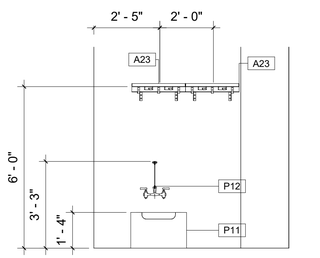

## 8 MEN'S LAVATORY - 1A
scale: 3/8" = 1'-0"



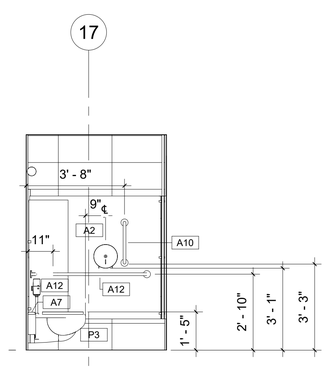

## 9 WOMEN'S LAVATORY-1B
scale: 3/8" = 1'-0"



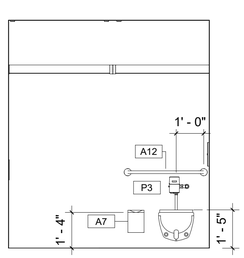

## 10 LAVATORY -1A
scale: 3/8" = 1'-0"



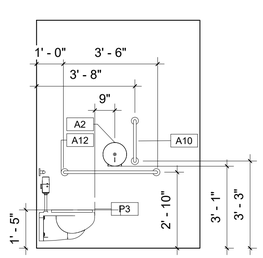

## 11 J.C. ELEVATION
scale: 3/8" = 1'-0"




## 12 TOILET ELEV. 1
scale: 3/8" = 1'-0"




## 13 TOILET ELEV. 2
scale: 3/8" = 1'-0"




## 14 LAVATORY -1B
scale: 3/8" = 1'-0"

GENERAL NOTES:

1. REFER TO ENLARGE FLOOR PLAN DWG. A108 FOR PLUMBING FIXTURE AND TOILET ACCESSORIES LOCATIONS. U.O.N.

2. REFER TO PLUMBING FIXTURE SCHEDULE AND TOILET ACCESSORIES SCHEDULE ON DWG. A703.

3. REFER TO A202 FOR TYPICAL MOUNTING HEIGHTS REQUIRMENTS U.O.N.

4. REFER TO DWG. A702 FOR LIGHTING FIXTURE SCHEDULE.

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

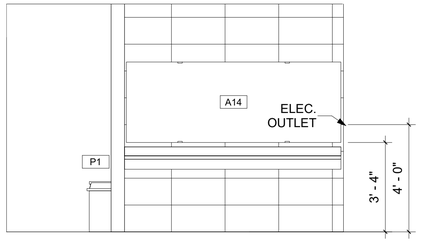
DRAWING

INTERIOR ELEVATIONS

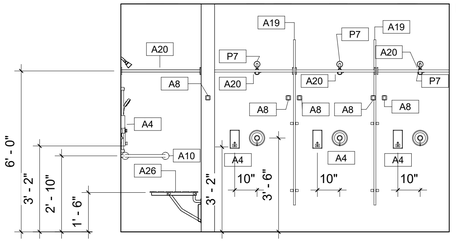
SEAL & SIGNATURE

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A200.00
DRAWN BY OF

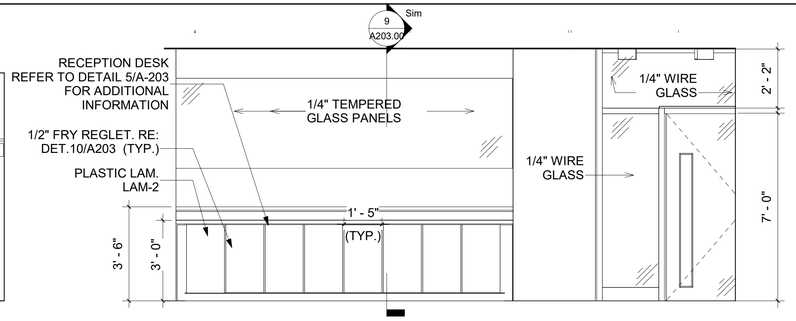
NYC DOB Number



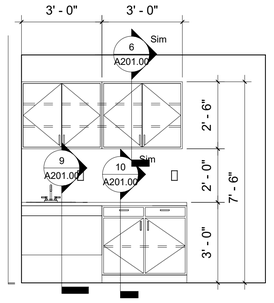

## 1 MEN'S SHOWER
scale: 3/8" = 1'-0"



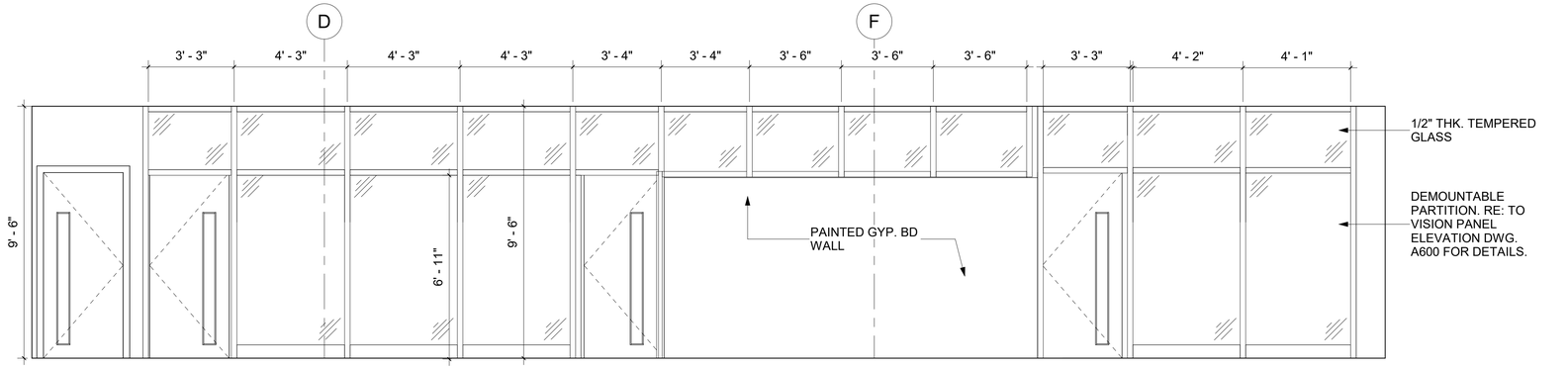

## 2 MEN'S SHOWER - 1A
scale: 3/8" = 1'-0"



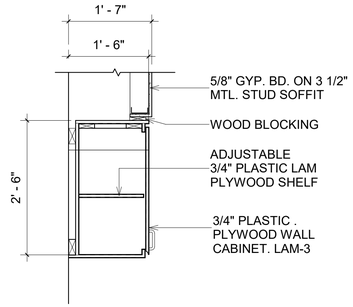

## 3 RECEPTION DESK
scale: 3/8" = 1'-0"



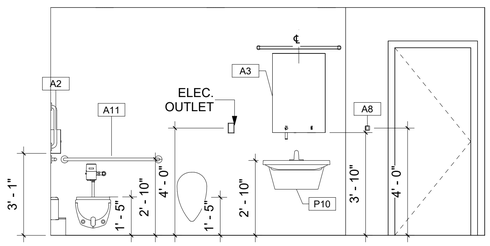

## 4 BREAK ROOM ELEVATION
scale: 3/8" = 1'-0"



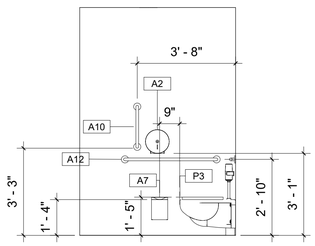

## 5 CORRIDOR ELEVATION
scale: 3/8" = 1'-0"



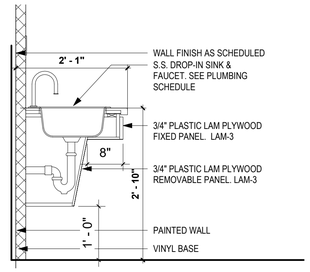

## 6 WALLL CABINET
scale: 3/4" = 1'-0"



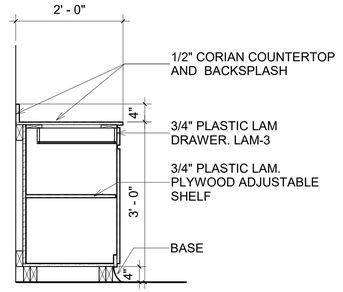

## 7 TOILET ELEVATION 1
scale: 3/8" = 1'-0"



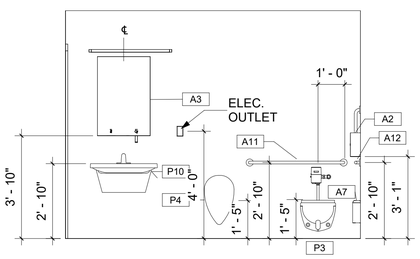

## 8 TOILET ELEVATION 2
scale: 3/8" = 1'-0"



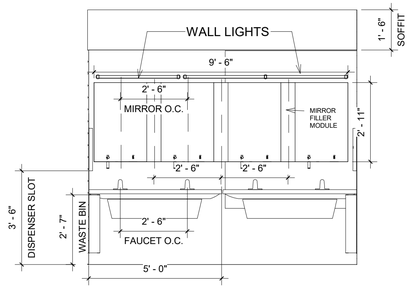

## 9 MILLWORK SECTION
scale: 3/4" = 1'-0"



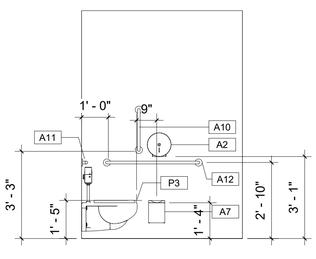

## 10 BASE CABINET
scale: 3/4" = 1'-0"




## 11 TOILET ELEVATION 3
scale: 3/8" = 1'-0"




## 12 ACCESSIBLE SINK ELEVATION
scale: 3/8" = 1'-0"




## 13 TOILET ELEVATION 4
scale: 3/8" = 1'-0"

GENERAL NOTES:

1. REFER TO ENLARGE FLOOR PLAN DWG. A108 FOR PLUMBING FIXTURE AND TOILET ACCESSORIES LOCATIONS. U.O.N.

2. REFER TO PLUMBING FIXTURE SCHEDULE AND TOILET ACCESSORIES SCHEDULE ON DWG. A703.

3. REFER TO A202 FOR TYPICAL MOUNTING HEIGHTS REQUIRMENTS U.O.N.

4. REFER TO DWG. A702 FOR LIGHTING FIXTURE SCHEDULE.

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

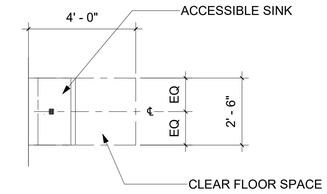
DRAWING

INTERIOR
ELEVATIONS -2

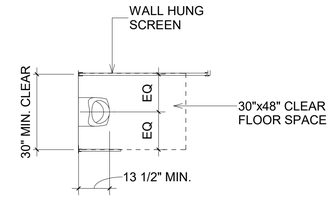
SEAL & SIGNATURE

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A201.00 |
| DRAWN BY | OF |

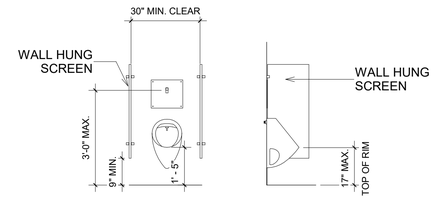
NYC DOB Number



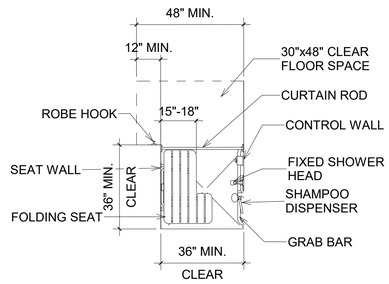

## 7 ACCESSIBLE LAVATORY
scale: 3/8" = 1'-0"



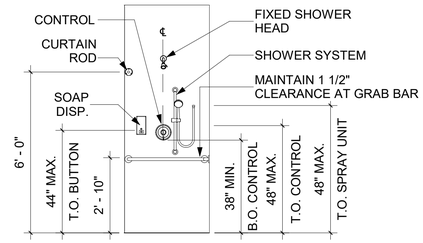

## 4 ACCESSIBLE URINAL
scale: 3/8" = 1'-0"



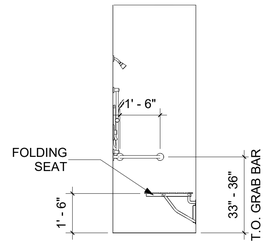

## 1 ACCESIBLE URINAL ELEVATION
scale: 3/8" = 1'-0"



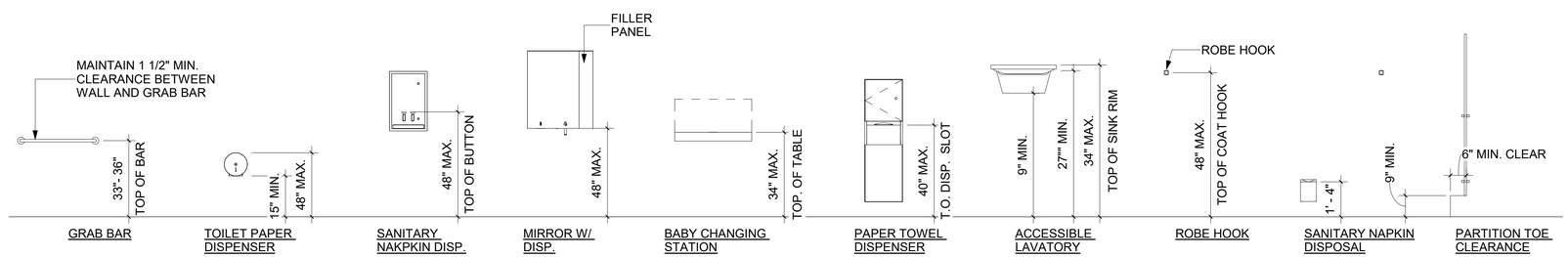

## 8 ACCESSIBLE SHOWER
scale: 3/8" = 1'-0"

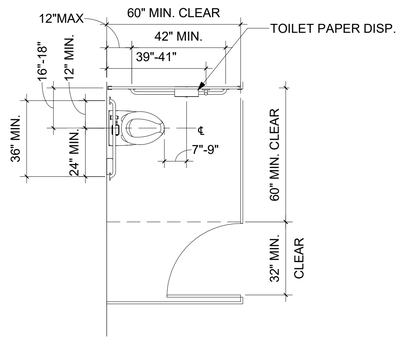



## 5 SHOWER ELEVATION
scale: 3/8" = 1'-0"

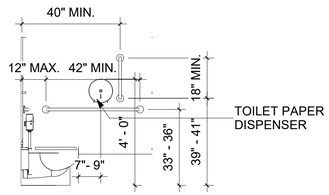



## 2 SHOWER ELEVATION 1
scale: 3/8" = 1'-0"

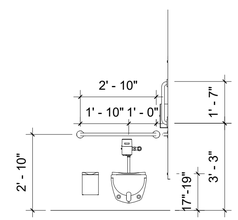



## 9 ACCESSIBLE WATER CLOSET
scale: 3/8" = 1'-0"




## 6 WATER CLOSET ELEVATION
scale: 3/8" = 1'-0"




## 3 WATER CLOSET ELEVATION 1
scale: 3/8" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

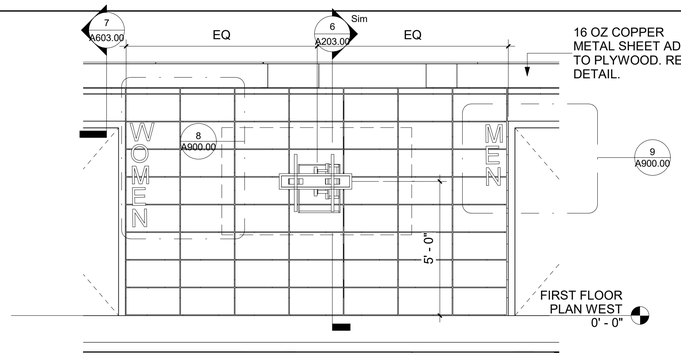
TOILET ACCESSORIES ADA REQUIREMENTS

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 026151 STATE OF NEW YORK

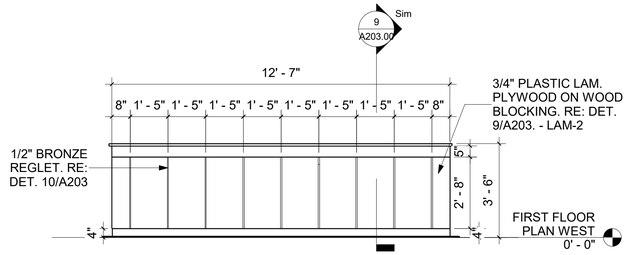
DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A202.00
DRAWN BY OF

NYC DOB Number



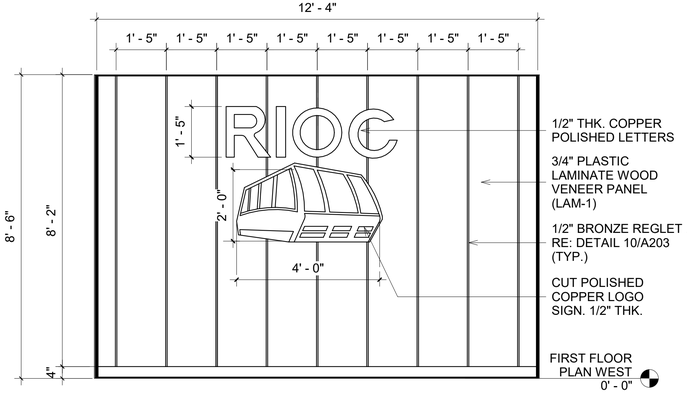

## 4 RECESSED DISPLAY MOUNT

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



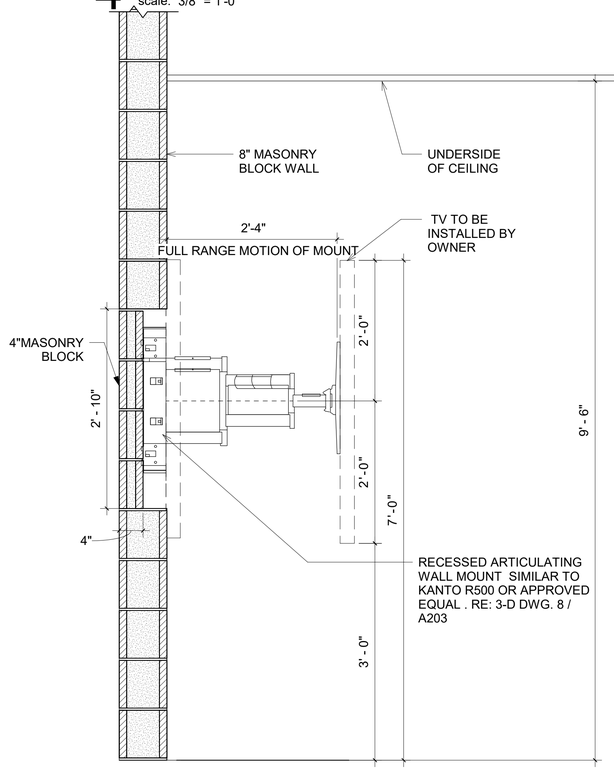

## 5 RECEPTION DESK ELEVATION

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

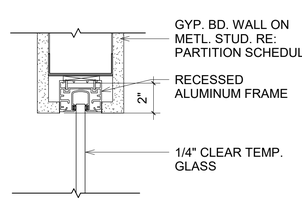



## 1 RECEPTION AREA WALL

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

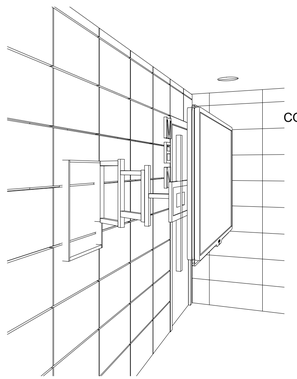



## 6A RECESSED MOUNT SECTION



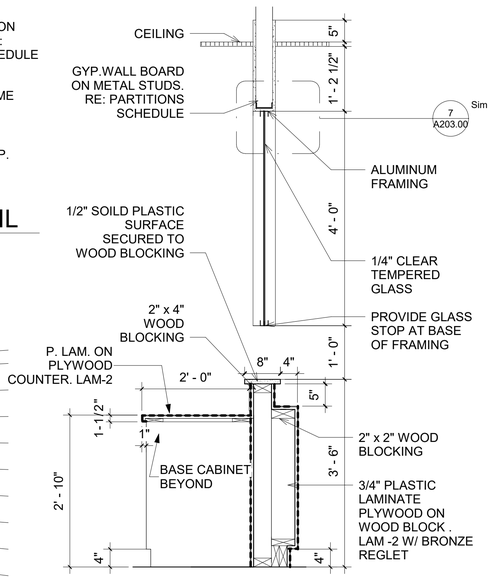

## 7 HEAD/JAMB DETAIL

scale: 3" = 1'-0"



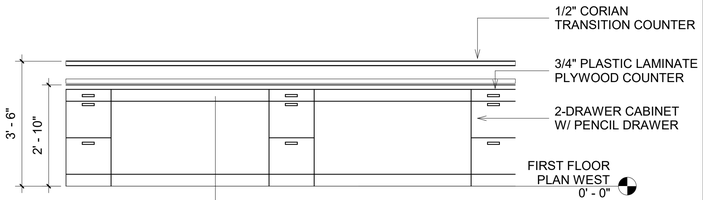
## 8 DISPLAY MOUNT 3-D

scale:



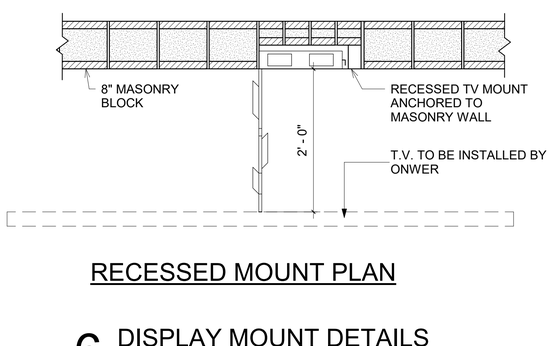

## 9 RECEPTION DESK DETAIL

scale: 3/4" = 1'-0"




## 2 RECEPTIN DESK INTERIOR

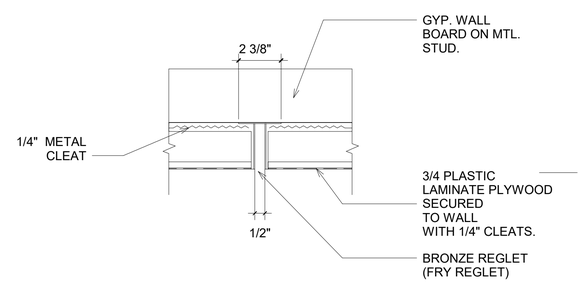
scale: 1/2" = 1'-0"




## RECESSED MOUNT PLAN

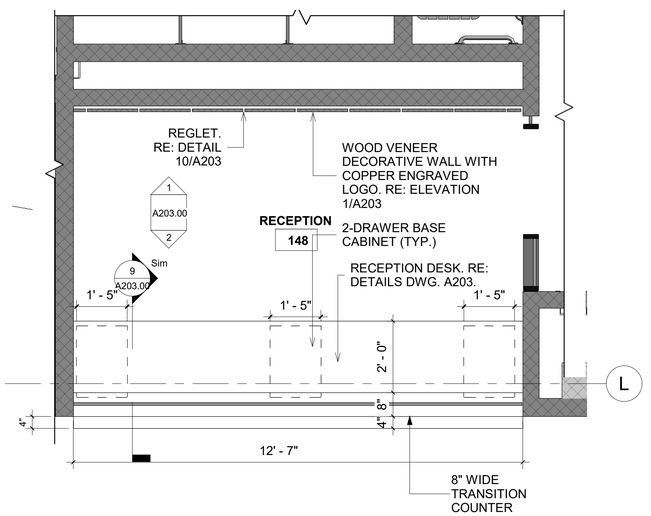
## 6 DISPLAY MOUNT DETAILS

scale: 1" = 1'-0"




## 10 RECEPTION DETAIL 2

scale: 3" = 1'-0"




## 3 RECEPTION AREA PART PLAN

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

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

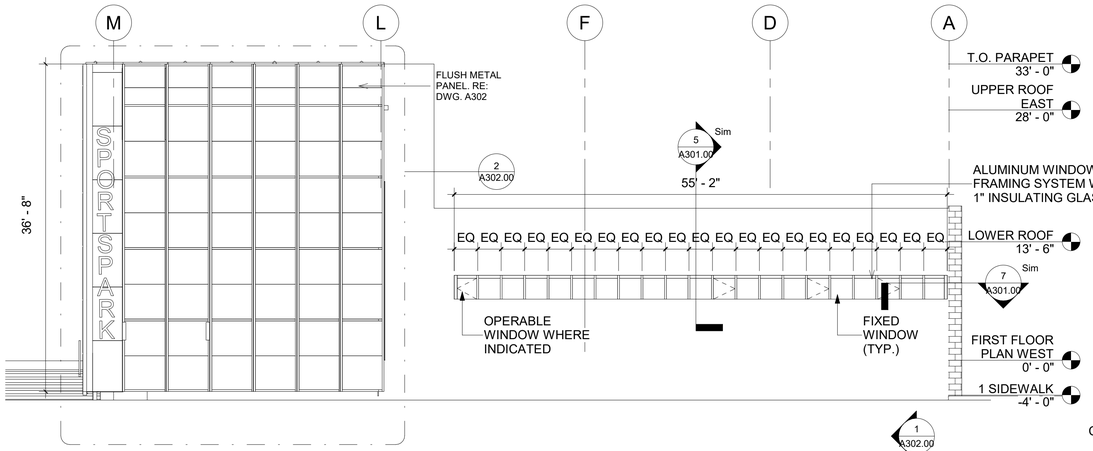
DRAWING

RECEPTION DESK, DISPLAY MOUNT DETAILS

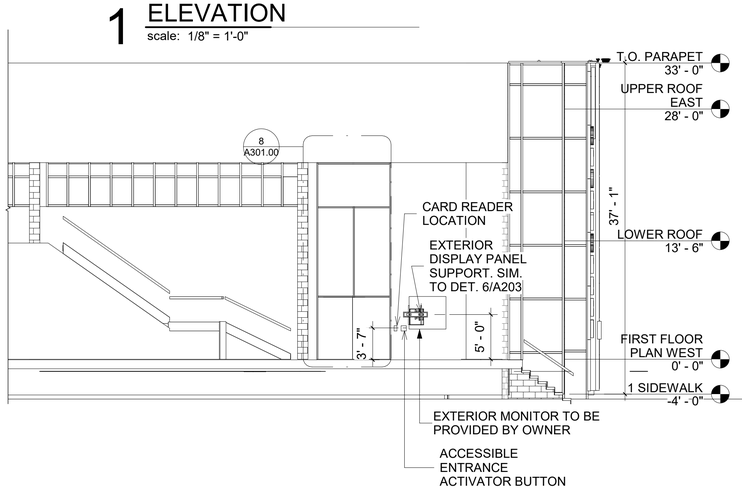
SEAL & SIGNATURE

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A203.00
DRAWN BY OF

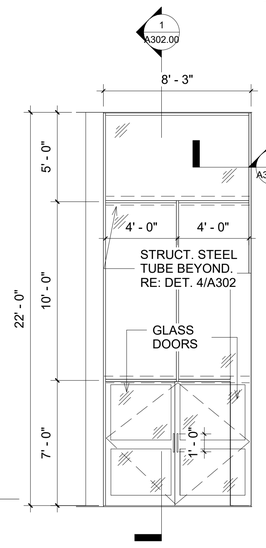
NYC DOB Number



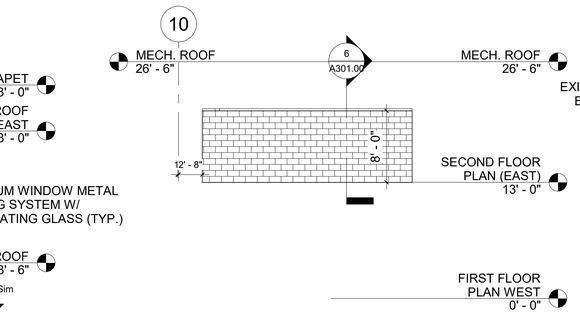

## 1 ELEVATION
scale: 1/8" = 1'-0"



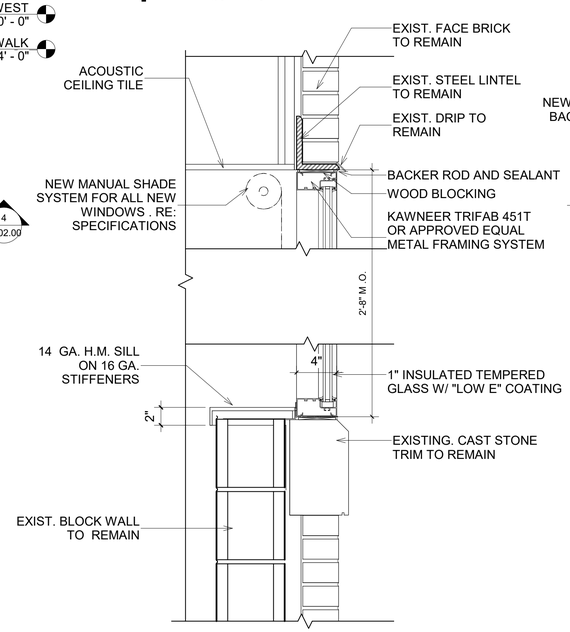

## 2 ELEVATION 2
scale: 1/8" = 1'-0"



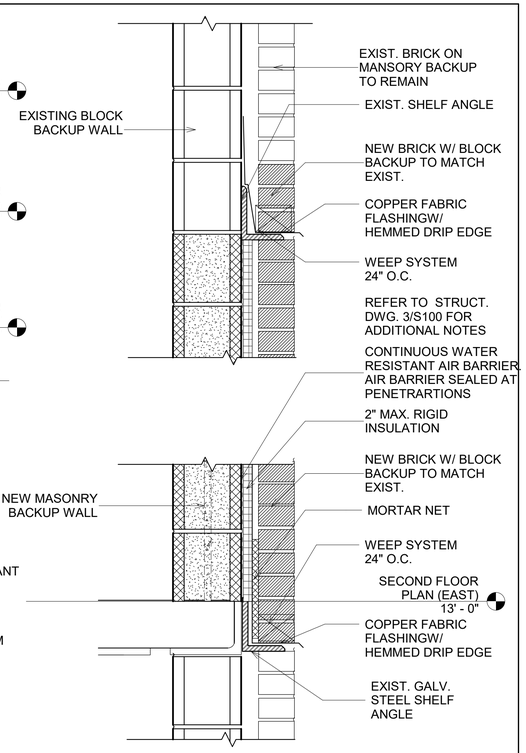

## 8 CURTAIN WALL ELEV.
scale: 1/4" = 1'-0"



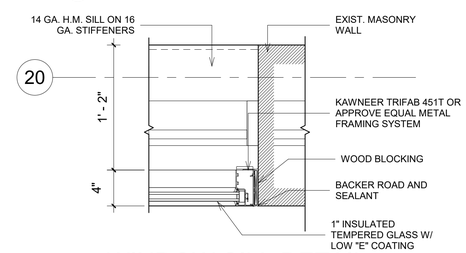

## 4 EXTERIOR ELEVATION 2
scale: 1/8" = 1'-0"



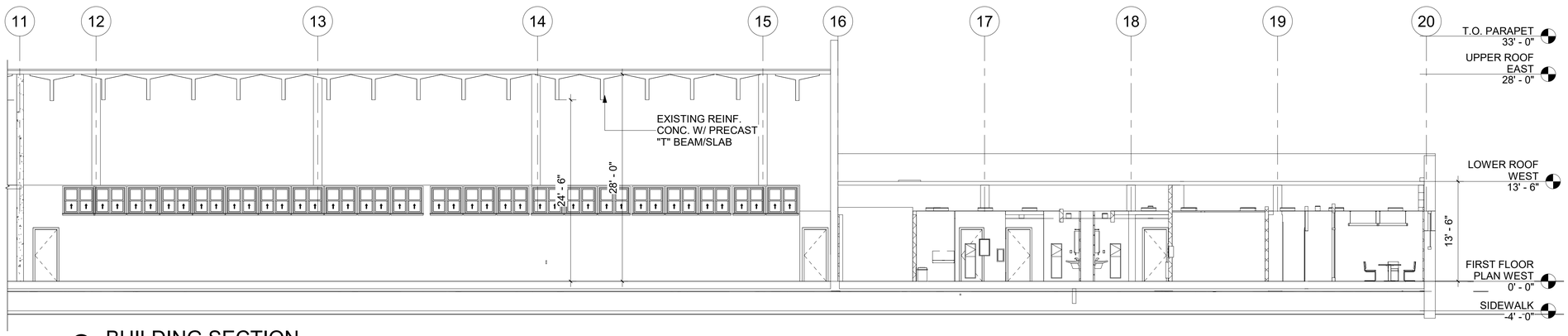

## 5 SECTION @ WINDOW
scale: 1 1/2" = 1'-0"




## 6 SECTION @INFILL
scale: 1 1/2" = 1'-0"




## 7 WINDOW SILL DETAIL
scale: 1 1/2" = 1'-0"




## 3 BUILDING SECTION
scale: 1/8" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

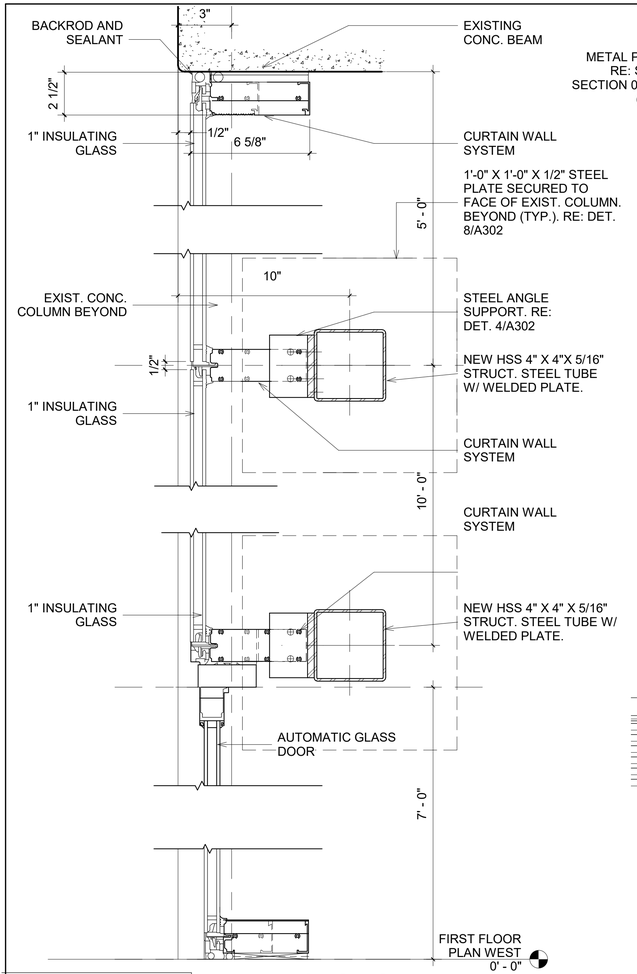
BUILDING ELEVATION & SECTION

SEAL & SIGNATURE

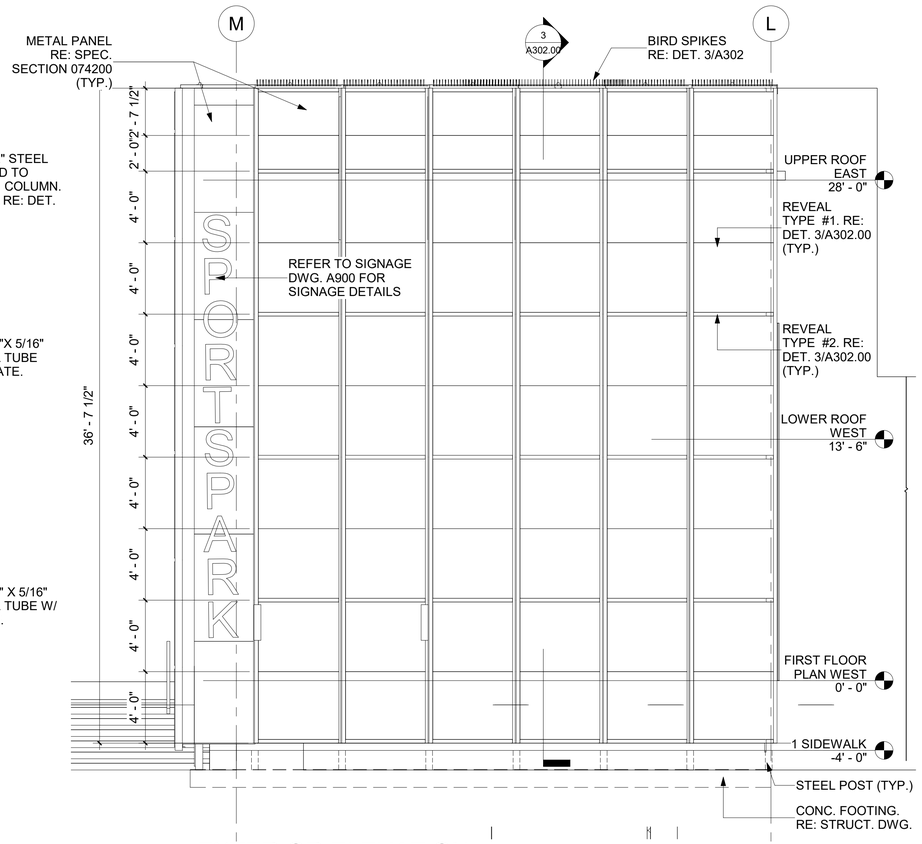
REGISTERED ARCHITECT J. DANIEL 021351 STATE OF NEW YORK

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A301.00
DRAWN BY OF

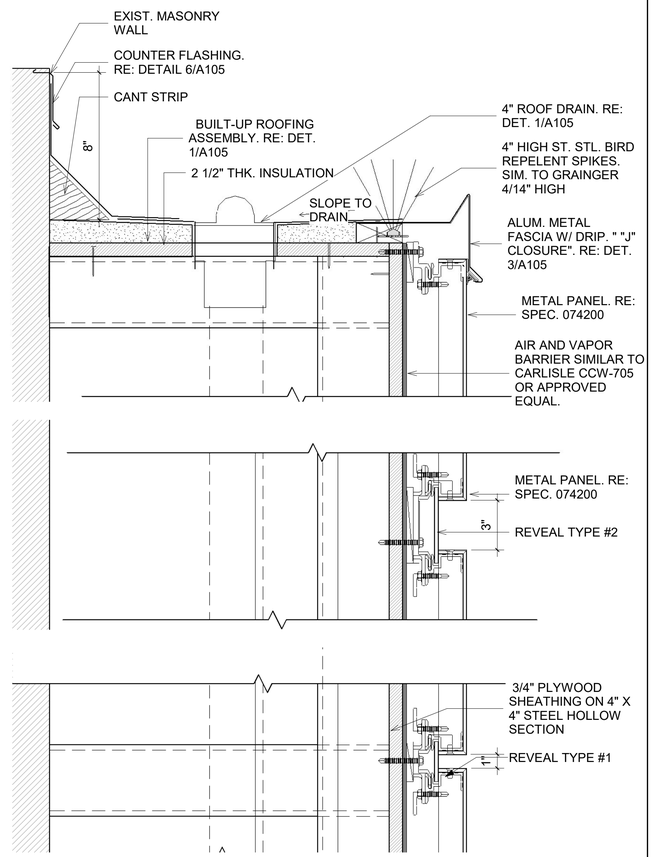
NYC DOB Number



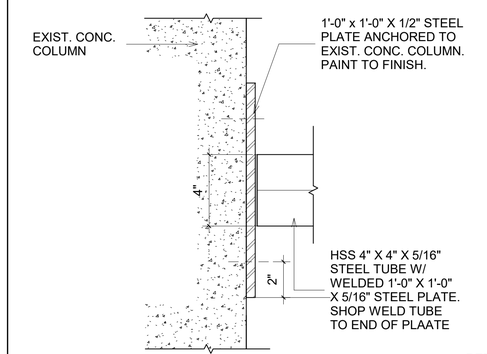

## 1 CURTAIN WALL SECTION
scale: 3" = 1'-0"



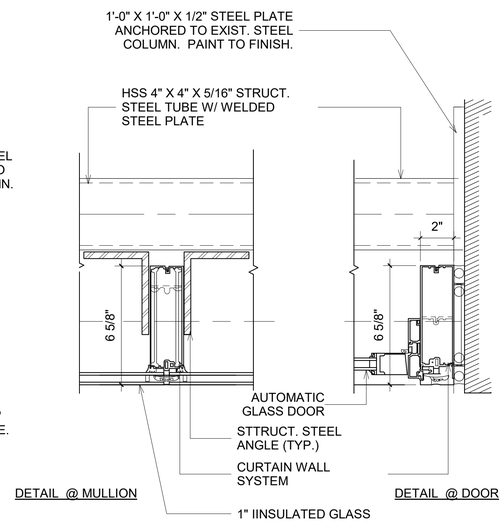

## 2 EXTERIOR ELEVATION
scale: 1/4" = 1'-0"



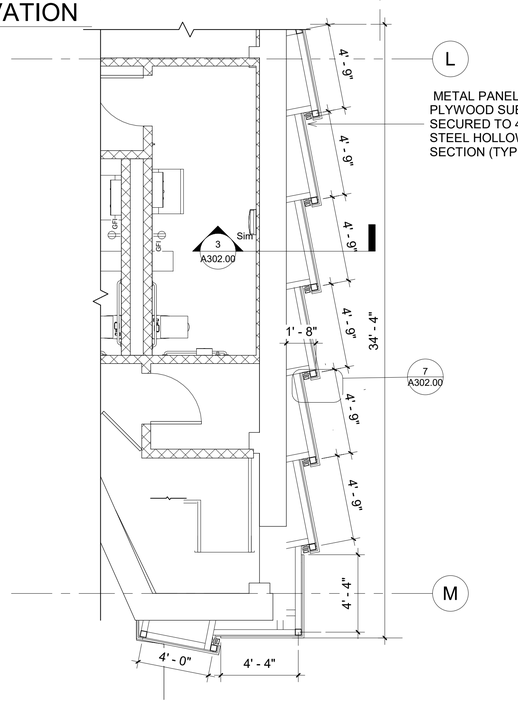

## 3 METAL PANEL SECTION
scale: 3" = 1'-0"



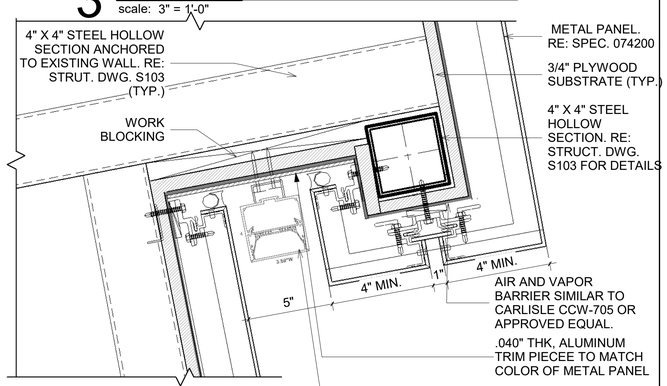

## 8 CURTAIN WALL SECTION
scale: 3" = 1'-0"




## 4 CURTAIN WALL PLAN DETAIL
scale: 3" = 1'-0"




## 6 EXTERIOR CLADDING PLAN DETAIL
scale: 1/4" = 1'-0"




## 7 PLAN DETAIL
scale: 3" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

EXTERIOR WALL CLADDING DETAIL

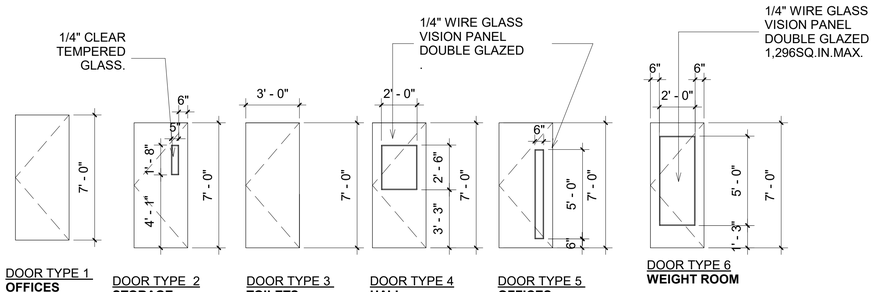
SEAL & SIGNATURE

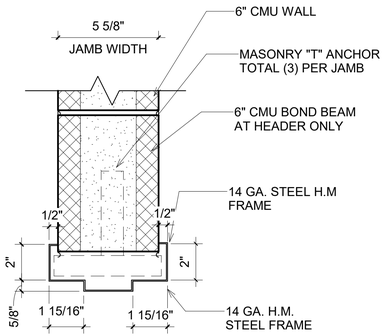
| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A302.00 |
| DRAWN BY | OF |

NYC DOB Number

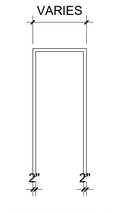
## FIRST FLOOR DOOR SCHEDULE

| MARK | LEVEL | LOCATION | DOOR TYPE | THICKNESS | FRAME MATERIAL | FRAME TYPE | DOOR SIZE | HARDWARE SET NUMBER | FIRE RATING | THRESHOLD TYPE | HEAD/JAMB DETAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 130 | FIRST FLOOR PLAN WEST | FAMILY RM. | TYPE # 3 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 2 | - | 01 | 1/A600 |
| 131 | FIRST FLOOR PLAN WEST | J.C. | TYPE # 3 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 3 | - | 01 | 1/A600 |
| 134 | FIRST FLOOR PLAN WEST | W. LOCKER RM. | TYPE # 1 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 4 | 1-HR | 01 | 1/A600 |
| 135 | FIRST FLOOR PLAN WEST | STORAGE | TYPE # 2 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 5 | - | 03 | 1/A600 |
| 137 | FIRST FLOOR PLAN WEST | STOR. | TYPE # 1 | 0' - 1 3/4" | H.M. | TYPE-A | 34" x 84" | 5 | - | NONE | 1/A600 |
| 138 | FIRST FLOOR PLAN WEST | CORRIDOR#2 | TYPE # 4 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 6 | 1-HR | 03 | 1/A600 |
| 139 | FIRST FLOOR PLAN WEST | M. LOCKER RM. | TYPE # 1 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 4 | 1-HR | 01 | 1/A600 |
| 140 | FIRST FLOOR PLAN WEST | M. EMPLOYEE RM. | TYPE # 1 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 1 | - | 03 | 1/A600 |
| 141 | FIRST FLOOR PLAN WEST | M. TOIL. | TYPE # 3 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 4 | 1-HR | 01 | 1/A600 |
| 142 | FIRST FLOOR PLAN WEST | W. EMPLOYEE RM. | TYPE # 1 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 1 | - | 03 | 1/A600 |
| 143 | FIRST FLOOR PLAN WEST | W. TOIL. | TYPE # 3 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 4 | 1-HR | 01 | 1/A600 |
| 144 | FIRST FLOOR PLAN WEST | BREAKROOM | TYPE # 2 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 1 | - | NONE | 4/A600 |
| 145 | FIRST FLOOR PLAN WEST | OFFICE#1 | TYPE # 5 | 0' - 1 3/4" | STL. | TYPE-A | 36" x 84" | 1 | - | NONE | 5/A600 |
| 146 | FIRST FLOOR PLAN WEST | OFFICE#2 | TYPE # 5 | 0' - 1 3/4" | STL. | TYPE-A | 36" x 84" | 1 | - | NONE | 5/A600 |
| 147 | FIRST FLOOR PLAN WEST | CONF. RM | TYPE # 5 | 0' - 1 3/4" | STL. | TYPE-A | 36" x 84" | 1 | - | NONE | 5/A600 |
| 148 | FIRST FLOOR PLAN WEST | RECEPTION | TYPE # 5 | 0' - 1 3/4" | H.M. | TYPE-B | 36" x 84" | 1 | - | 03 | 1/A600 |
| 150 | FIRST FLOOR PLAN WEST | TOILET | TYPE # 3 | 0' - 1 3/4" | H.M. | TYPE-A | 34" x 84" | 2 | - | 01 | 1/A600 |
| 151 | FIRST FLOOR PLAN WEST | TOILET | TYPE # 3 | 0' - 1 3/4" | H.M. | TYPE-A | 36" x 84" | 2 | - | 01 | 1/A600 |
| 152A | FIRST FLOOR PLAN WEST | WEIGHT ROOM | TYPE #6 | 0' - 1 3/4" | H.M. | TYPE-A | Door-Passage-Single-Full_Lite | 1 | - | 03 | 1 |
| 156 | FIRST FLOOR PLAN WEST | CORR.#1 | TYPE # 5 | 0' - 1 3/4" | H.M. | TYPE-C | 36" x 84" | 1 | 1-HR | 02 | 1/A600 |

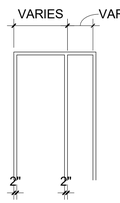


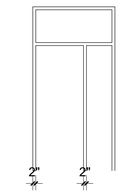

1 HEAD AND JAMB DETIAL 2
scale: 3" = 1'-0"



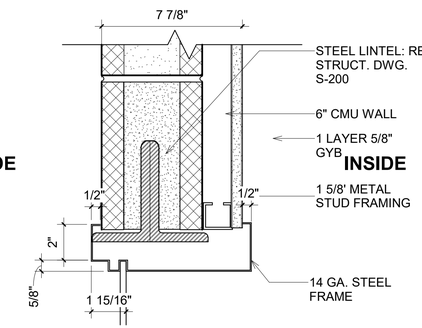

FRAME TYPE - A
ELEVATION



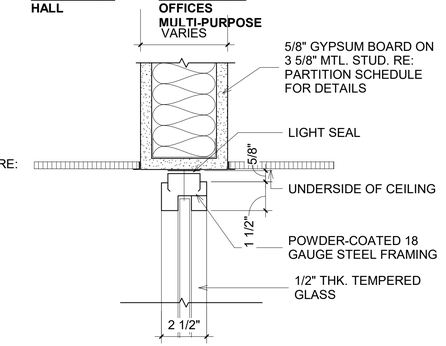

FRAME TYPE - B
ELEVATION

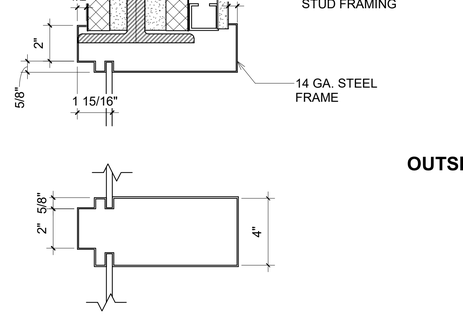


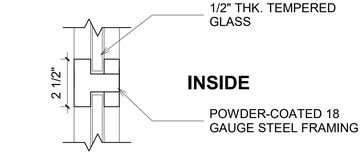

FRAME TYPE - C
ELEVATION



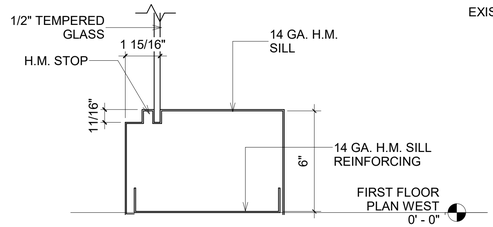

5 HEAD DETAIL 5
scale: 3" = 1'-0"



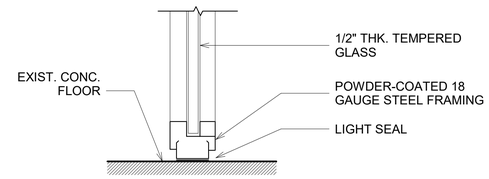



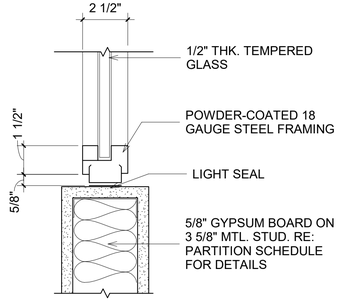

6 MULLION DETAIL
scale: 3" = 1'-0"



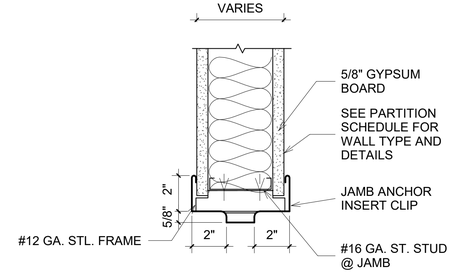

13 H.M. SECTION @ RECEPTION
scale: 3" = 1'-0"



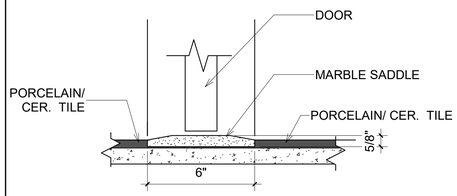

11 SILL DETAIL 1
scale: 3" = 1'-0"



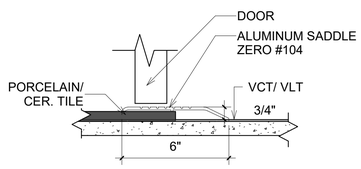

12 SILL DETAIL 2/ JAMB DETAIL
scale: 3" = 1'-0"



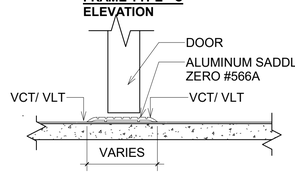

2 HEAD AND JAMB DETAIL 4
scale: 3" = 1'-0"



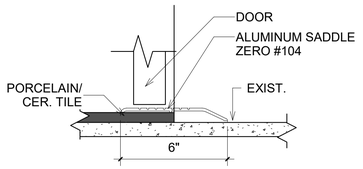

7 THRESHOLD 01
scale: 3" = 1'-0"




8 THRESHOLD 02
scale: 3" = 1'-0"




9 THRESHOLD 03
scale: 3" = 1'-0"




10 THRESHOLD 4
scale: 3" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com COPYRIGHT


PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

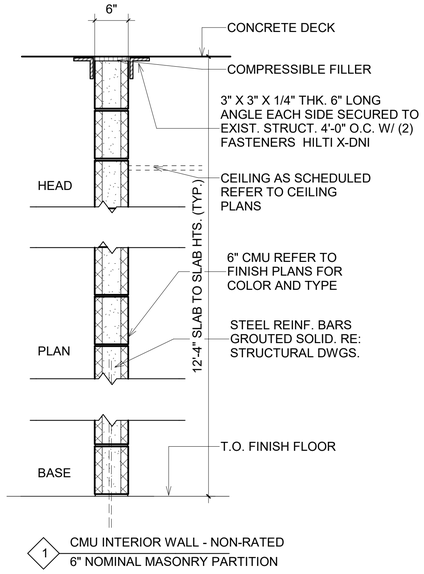
DRAWING

DOOR SCHEDULE & MISC. DETAILS

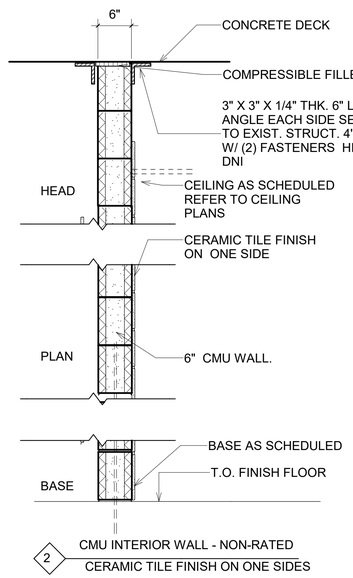
SEAL & SIGNATURE

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A600.00
DRAWN BY OF

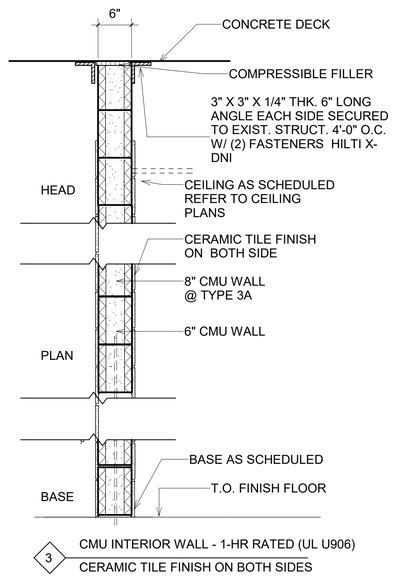
NYC DOB Number




1 CMU INTERIOR WALL - NON-RATED
6" NOMINAL MASONRY PARTITION

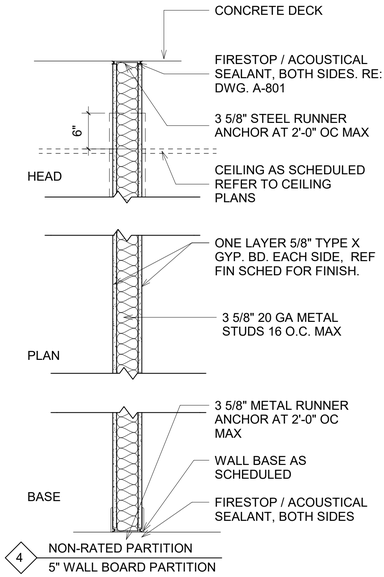



2 CMU INTERIOR WALL - NON-RATED
CERAMIC TILE FINISH ON ONE SIDES

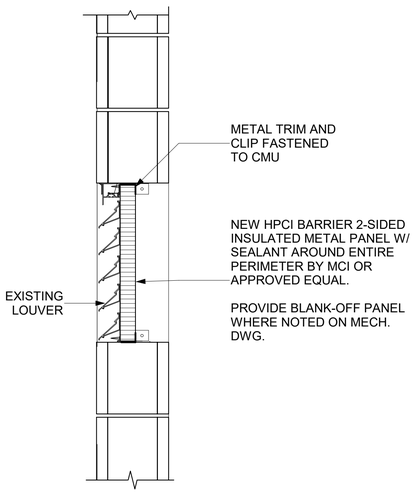



3 CMU INTERIOR WALL - 1-HR RATED (UL U906)
CERAMIC TILE FINISH ON BOTH SIDES

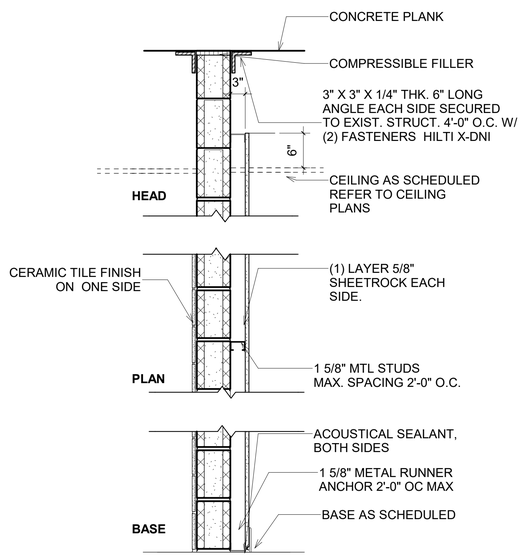
3A CMU INTERIOR WALL - 1-HR RATED (UL U906)
8" BLOCK @ TYPE 3A



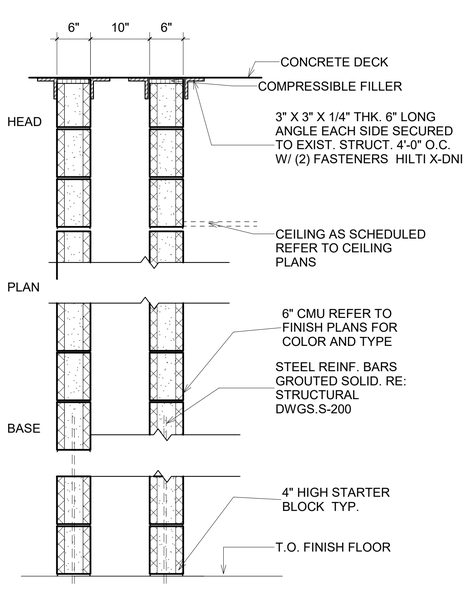

4 NON-RATED PARTITION
5" WALL BOARD PARTITION



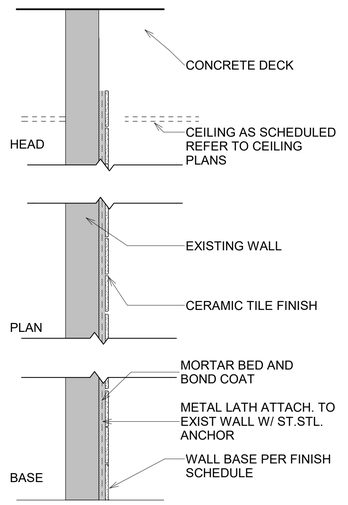

1 BLANK-OFF PANEL DETAIL
scale: 1 1/2" = 1'-0"




5 NON-RATED PARTITION
WALL BOARD ON ONE SIDE . CERAMIC TILE ON ONE SIDE




6 CMU CHASE PARTITION - NON-RATED




7 EXISTING WALL WITH CERAMIC TILE
5" WALL BOARD PARTITION

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

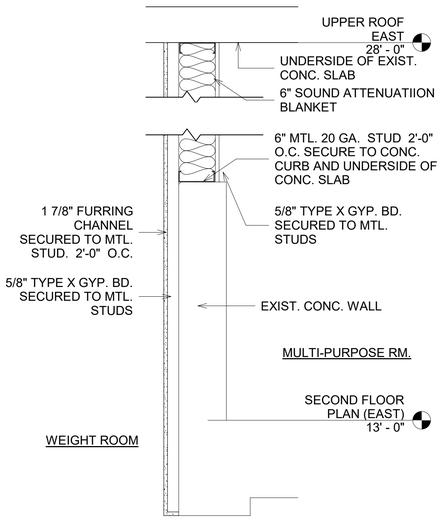
PARTITION TYPES

SEAL & SIGNATURE

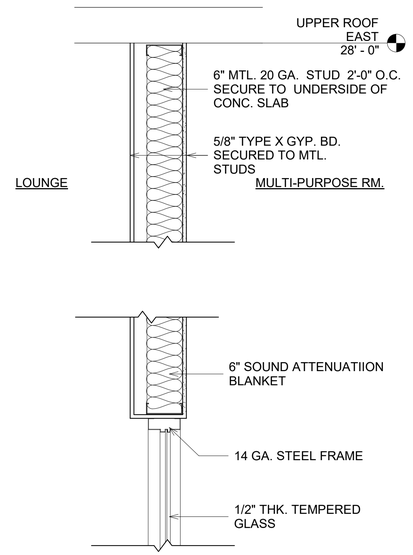
REGISTERED ARCHITECT JUNE L. DANIEL 027757 STATE OF NEW YORK

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A601.00
DRAWN BY OF

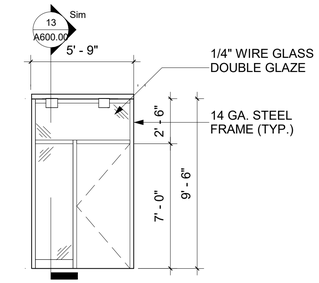
NYC DOB Number



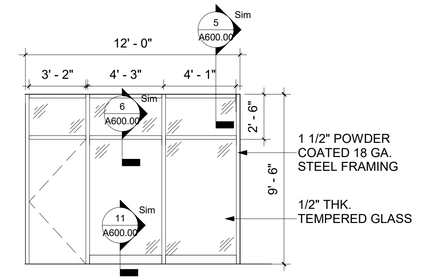

6 SECTION 2
scale: 1" = 1'-0"



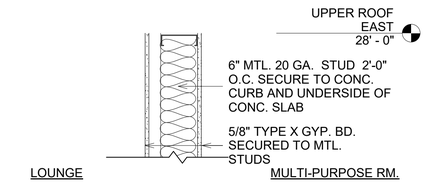

5 FINAL SECTION 1
scale: 1" = 1'-0"

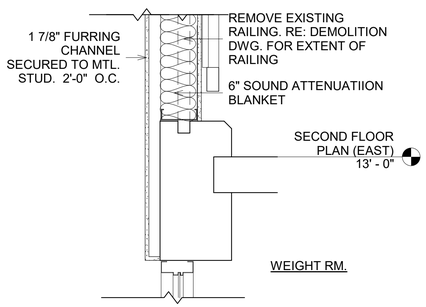



1 VP-1 ENTRANCE
scale: 1/4" = 1'-0"

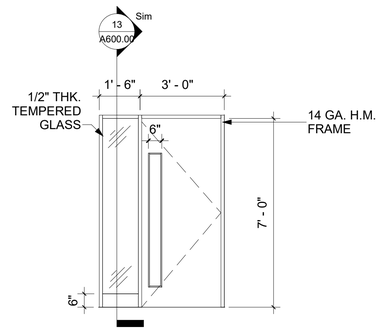



2 VP-2 CONF. RM.
scale: 1/4" = 1'-0"

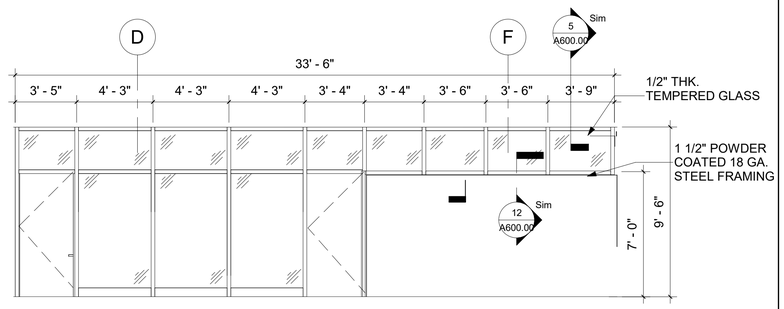



7 SECTION 1
scale: 1" = 1'-0"




4 RECEPTION AREA (VP-4)
scale: 3/8" = 1'-0"




3 VP-3 OFFICE ELEVATION
scale: 1/4" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

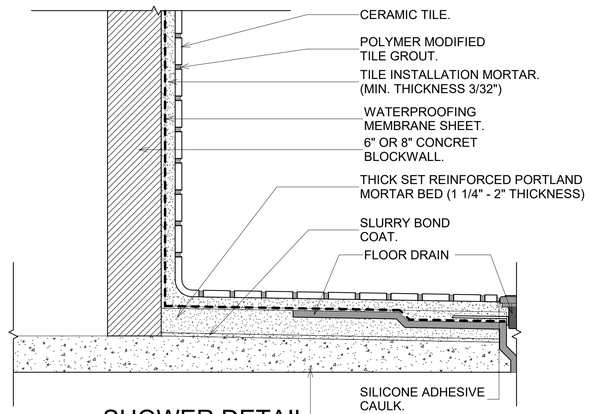
CONSULTANTS
CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

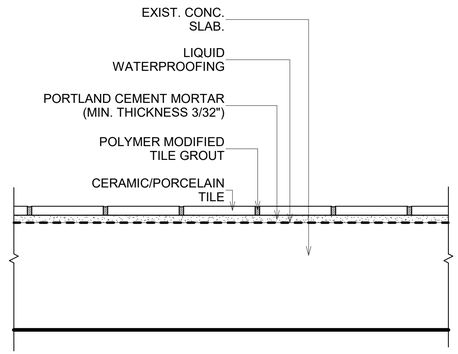
DRAWING
H.M. ELEVATIONS AND DETAILS

SEAL & SIGNATURE
DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A602.00
DRAWN BY OF

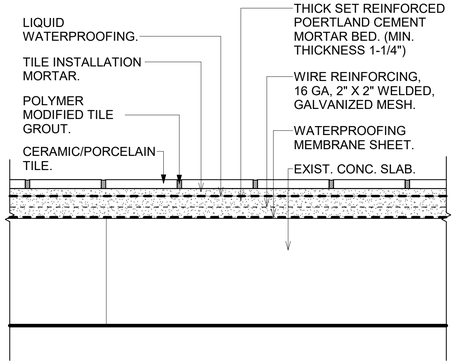
NYC DOB Number



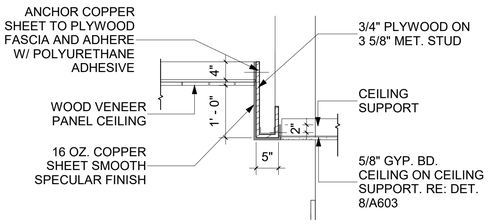

## 1 SHOWER DETAIL
scale: 1 1/2" = 1'-0"



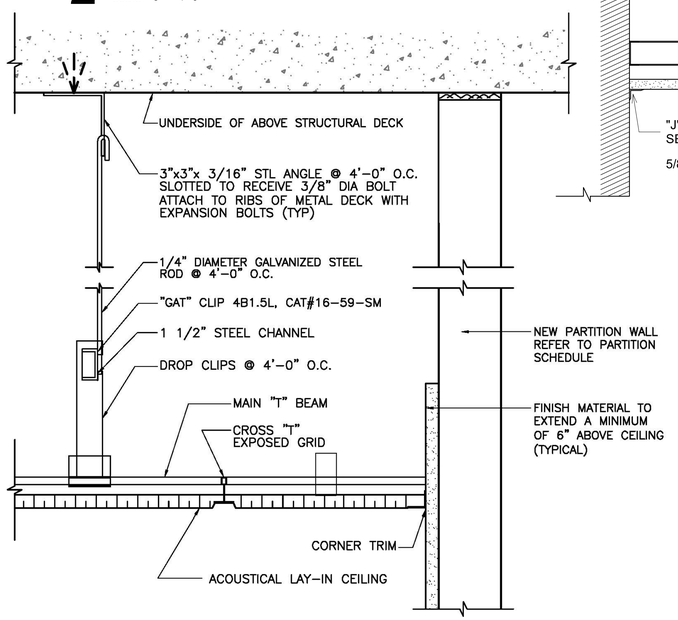

## 6 FLOOR DETAIL - THIN SET
scale: 3" = 1'-0"



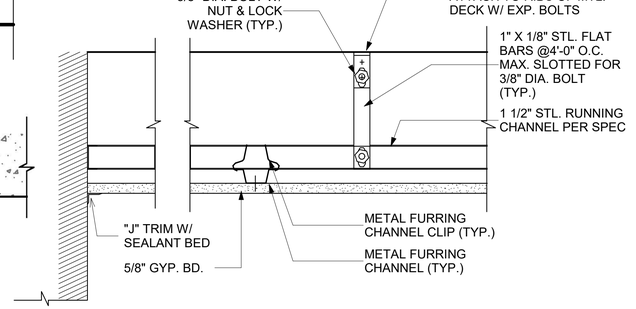

## 2 FLOOR DETAIL - THICK SET
scale: 3" = 1'-0"



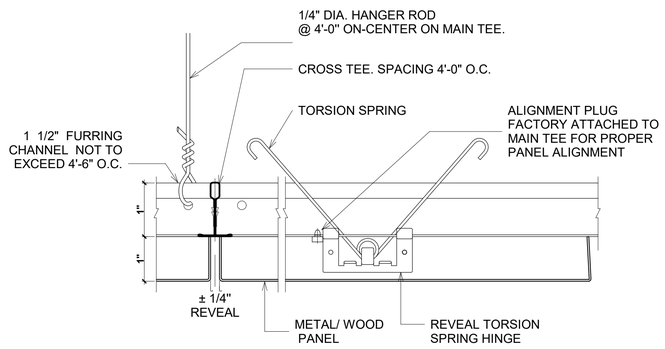

## 7 COPPER FASCIA DETAIL
scale: 3/4" = 1'-0"




## 3 ACOUSTICAL TILE CEILING DETAIL
scale: 1/2" = 1'-0"

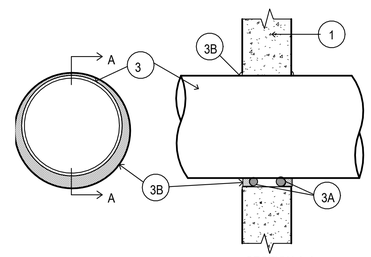



## 8 GYP. BD. CEILING DETAILS
scale: 3" = 1'-0"




## 4 WOOD/ METAL CEILING DETAIL
scale: 6" = 1'-0"

SYSTEM NO. W-L-1131
2 HR RATING




SECTION A-A

1. WALL ASSEMBLY - CONCRETE BLOCK. MAX. DIAM. OF OPENING IS 22".

2. THROUGH-PENETRATION - METALLIC PIPE, CONDUIT, TUBING.

A. STEEL PIPE - NOM. 20" DIA. OR SMALLER SCHEDULE 10 HEAVIER STEEL PIPE

B. IRON PIPE - NOM 20 " DIAM OR SMALLER CAST OR DUCTILE IRON PIPE.

B. CONDUIT - NOM. 4" DIAM （OR SMALLER）OR STEEL CONDUIT.

C. COPPER TUBING - NOM. 2" DIAM （OR SMALLER）TYPE L （OR HEAVIER）COPPER TUBING.

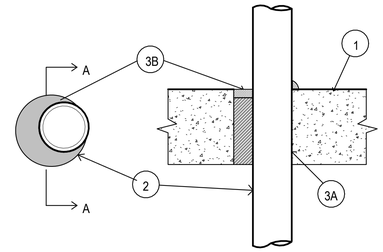
D. COPPER PIPE - NOM. 2" DIA （OR SMALLER）REGULAR （OR HEAVIER）COPPER PIPE

3. FIRESTOP SYSTEM

A. PACKING MATERIAL - FOAM BACKER ROD FIRMLY PACKED INTO OPENING AS A PERMANENT FORM, PACKING MATERIAL TO BE RECESSED FORM BOTH SURFACES OF WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

B. FILL, VOID OR CAVITY MATERIAL - CAULK MIN 1/2" THICKNESS OR FILL MATERIAL APPLIED WITHIN THE ANNUSUL, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN PIPE AND WALL, A MIN. 1/4" DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE WALL/PIPE INTERFACE ON BOTH SURFACE OF WALL

SYSTEM NO. C-AJ-239
2 HR RATING




SECTION A-A

1. FLOOR ASSEMBLY - MIN. 6" THICK HOLLOW-CORE PRECAST CONCRETE UNITS.

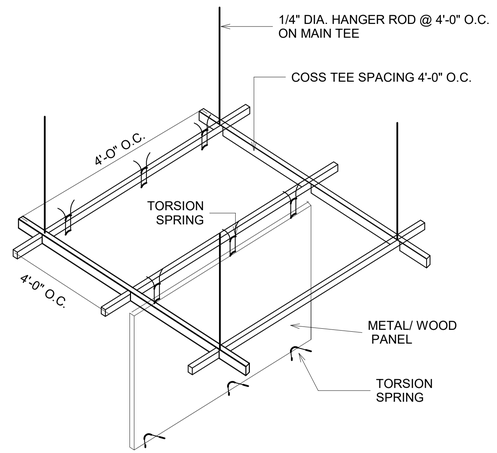
2. THROUGH-PENETRATION - ONE NON-METALLIC PIPE. THE ANNULAR SPACE BETWEEN THE PIPE AND PERIPHERY OF OPENING SHALL BE MI. 0 TO MAX. 1 5/8". PIPE TO BE RIGID SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

A. POLYVINYL CHLORIDE （PVC）PIPE - NOM. 2" DIAM. （OR SMALLER）SCHEDULE 40 SOLID CORE OR CELLULAR CORE PVC PIPE FOR USE IN CLOSED OR VENTED PIPING SYSTEM.

3. FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

A. PACKING MATERIAL - MIN. 4" THICKNESS OF MIN 4 PC MINERAL WOOL BATH INSULATION FIRMLY PACKED INTO OPNG. AS A PERMANENT FORM. PACKING MATERIAL TO BE FLUSH WITH BOTTOM OF FLOOR.

B. FILL, VOID OR CAVITY MATERIAL CAULK - MIN. 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH W/TOP SURFACE OF FLOOR OR WITH BOTH SURFACES OF WALL ASSEMBLY. AT POINT OF CONTACT , 1/2IJN. DIAM. BEAD OF CAULK APPLIED AT INTERFACE OF PIPE AND PERIPHERY OF OPENING O TOP SURFACE OF FLOOR OR BOTH SURFACE OF WALL. FOR PVC PIPE INSTALLED WITH AN ANNULAR SPACE OF 0 TO /8" SEALANT DEPTH MAY BE REDUCED TO 1/4".




## 5 WOOD/ METAL CEILING DETAIL 2
scale: 1/2" = 1'-0"

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

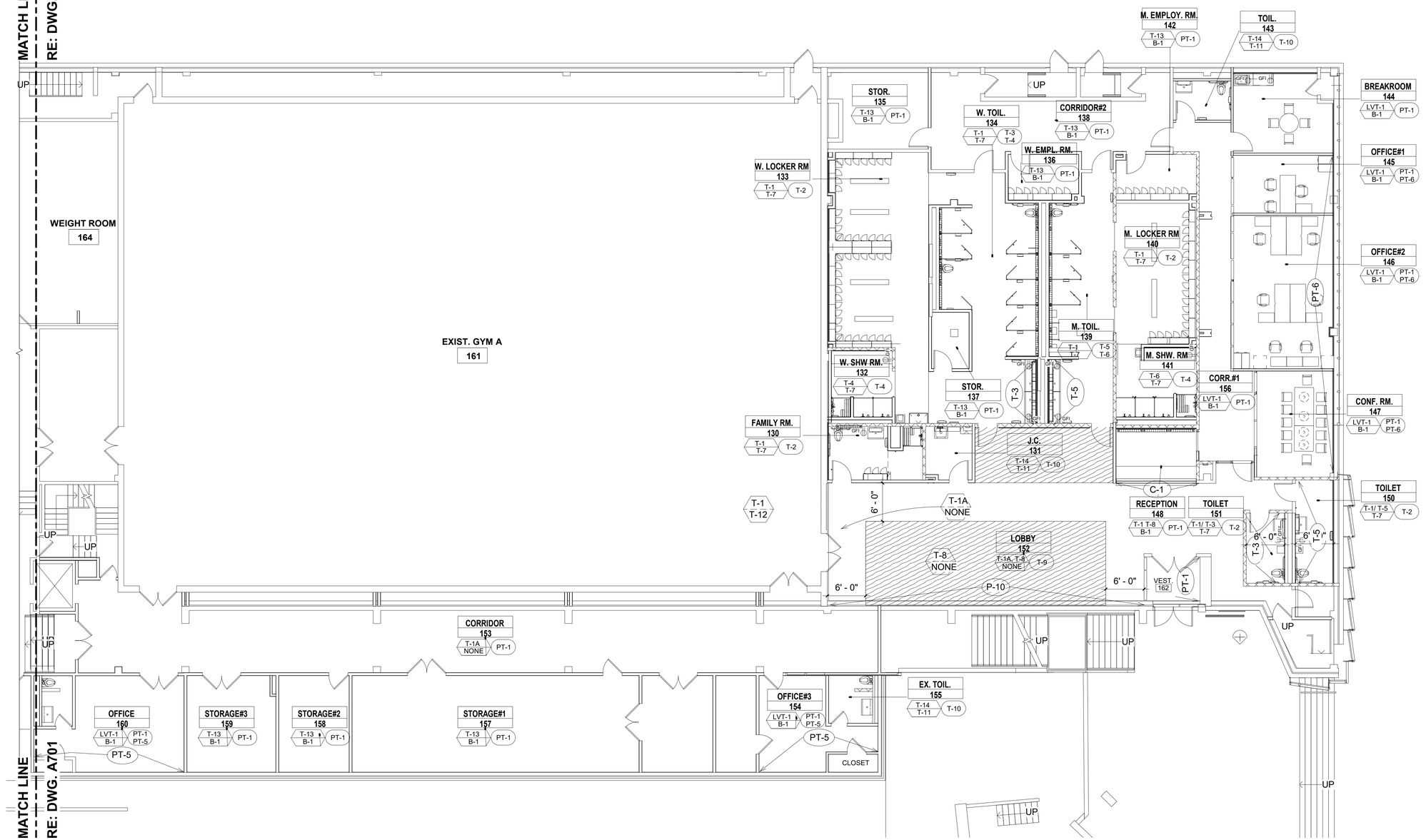
FIRESTOPPING, CEILING DETAILS AND MISC. DETAILS

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE S. DANIEL 027157 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A603.00 |
| DRAWN BY | OF |

NYC DOB Number




1 FIRST FLOOR FINISH PLAN (WEST)

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

| FINISH LEGEND | | | | | |
|---|---|---|---|---|---|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
| X-1 / X-1 | FLOOR TYPE<br>WALL BASE TYPE | R001 | ROOM DESIGNATION SIGNAGE<br>ID# & LOCATION | | |
| C-1 | WALL FINISH TYPE | MI-01 | MISCELLANEOUS SIGNAGE<br>ID# & LOCATION | | |
| P-# | ACCENT WALL FINISH TYPE AND EXTENT | | ACCENT FLOOR AREA | | |
| | | | | | |
| | | | | | |

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

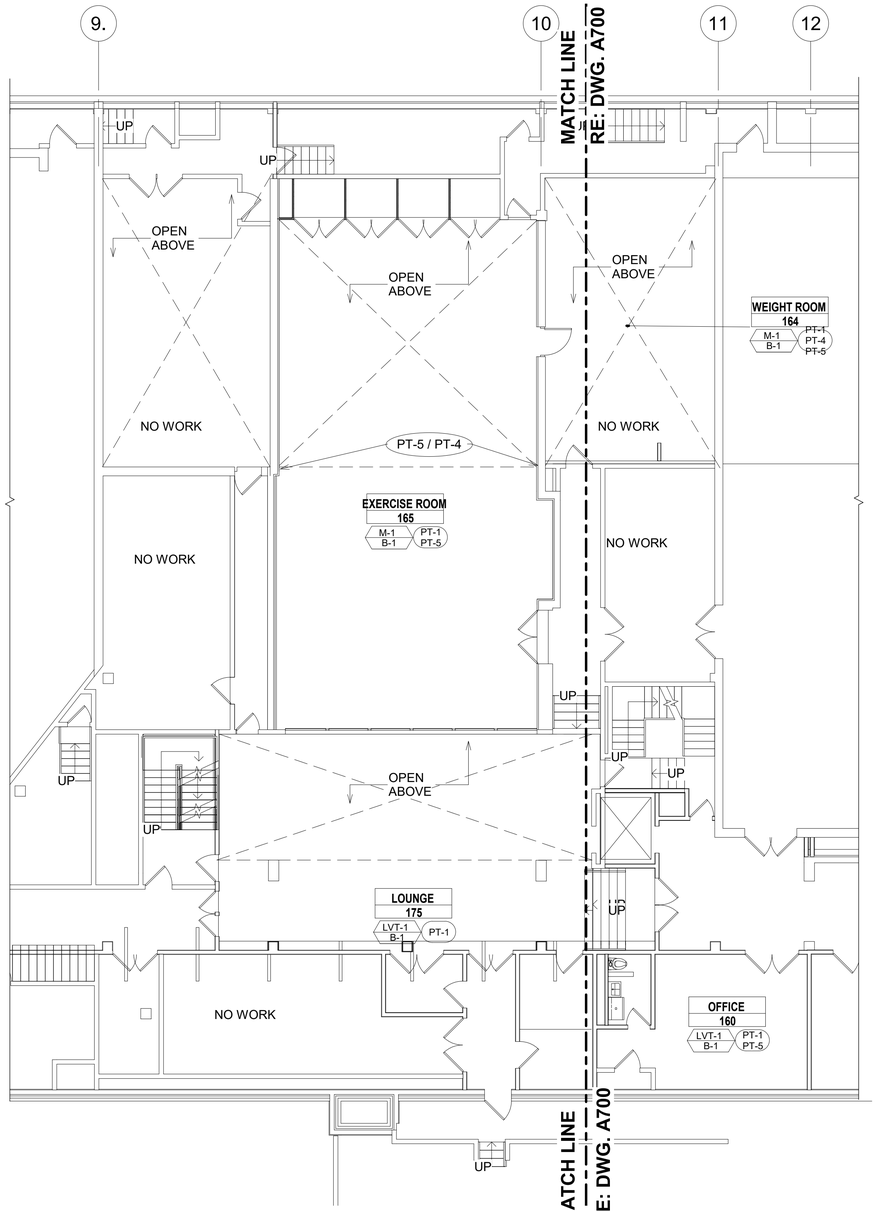
FLOOR FINISH
PLAN (WEST)

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 027757 STATE OF NEW YORK

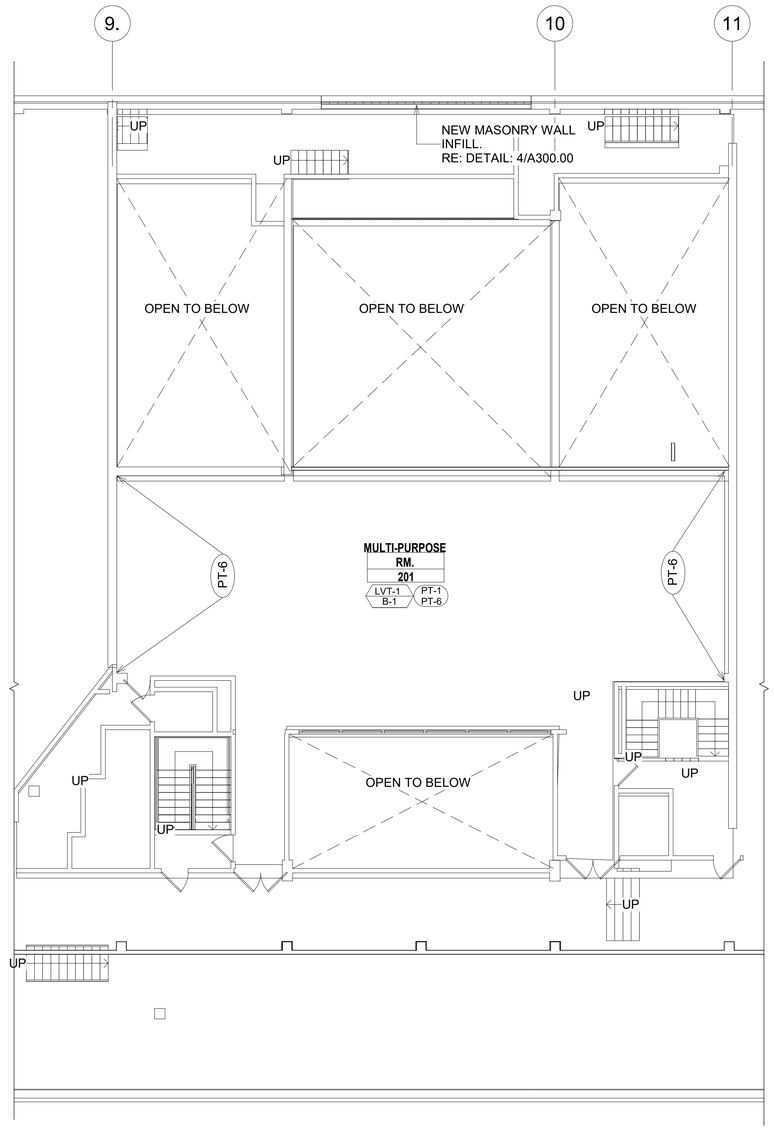
| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A700.00 |
| DRAWN BY | OF |

NYC DOB Number




1 FIRST FLOOR PLAN FINISH PLAN (EAST)

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




2 SECOND FLOOR PLAN (EAST) FINISH FLOOR PLAN

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

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

FIRST AND SECOND FLOOR FINISH (EAST)

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE DANIEL 021151 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A701.00 |
| DRAWN BY | OF |

NYC DOB Number

## FINISH SCHEDULE

| TAG | DESCRIPTION 2 | SIZE x THICKNESS | SERIES | COLOR | FINISH | MANUF | COMMENTS |
|---|---|---|---|---|---|---|---|
| ACT-1 | ACOUSTICAL PANEL CEILING | 24" X 24" | CLIMA PLUS | WHITE | WHITE | USG | FINELINE DXF - GRID SYSTEM |
| ACT-2 | ACOUSTICAL PANE CEILING | 24" X 48" | CLIMA PLUS | WHITE | WHITE | USG | FINELINE DXF - GRID SYSTEM |
| ACT-3 | WOOD CEILING | 24" X 96" | WOODWORKS | CONSTANTS CHERRY (CCY) | MATTE | ARMSTRONG | 6" PANEL WIDTH |
| B-1 | COVEBASE | 4" X 0.125" | BASEWORKS | DARK BROWN (44) | RUBBER | TARKETT | |
| EXP | CEILING PAINTED | - | - | - | - | - | |
| LAM-1 | POLISHED COPPER | 48" X 96" X 1/25" | DECO METALS LAMINATE | COPPER (M9426) | POLISHED | FORMICA | |
| LAM-2 | LAMINATE FOR RECPTION DESK | - | DECO LAMINATE | WINDSOR MAHONGANY (7039) | 78 FINE GRAIN FNISH WITH AEON | WILSONART | |
| LAM-3 | LAMINATE FOR BREAK ROOM | 8" X 10" | DECO LAMINATE | CEMENT (D503) | MATTE | WILSONART | |
| LVT-1 | LUXURY VINYL TILE | 12" X 24" X 1/8" | NATURAL CREATIONS CLASSICS | BUCKHEAD OAK CABIN (TP-102) | UV - CURED POLYURETHANE | ARMSTRONG | |
| M-1 | RUBBER MAT | - | RECOIL FITNESS FLOORING | RECOIL 375 RED BISQUE COLBALT | MATTE | ROPPE | |
| PT-1 | WALL PAINT | | OFF-WHITE COLOR COLLECTIONS | MUSLIN OC-12 | EGGSHELL | | |
| PT-2 | WALL PAINT | - | HISTORIC COLOR COLLECTION | NEWBURG GREEN (HC-158) | EGGSHELL | BENJAMIN MOORE | |
| PT-3 | WALL PAINT | - | COLOR PREVIEW COLLECTION | DARK PURPLE (2073-10) | EGGSHELL | BENJAMIN MOORE | |
| PT-4 | WALL PAINT | - | CLASSIC COLLECTION | RENDEZVOUS BAY (726) | EGGSHELL | BENJAMIN MOORE | |
| PT-5 | WALL PAINT | - | HISTORIC COLOR COLLECTION | MARLBORO BLUE (HC-153) | EGGSHELL | BENJAMIN MOORE | |
| PT-6 | WALL PAINT | - | COLOR PREVIEW COLLECTION | PERSIMMON (2088-40) | EGGSHELL | | |
| PT-7 | CEILING PAINT | - | | WHITE | - | BENJAMIN MOORE | |
| PT-8 | WALL PAINT, MILDEW RESISTANT | | | | - | BENJAMIN MOORE | |
| PT-9 | HOLLOW METAL DOOR AND TRIM | | CLASSIC COLOR COLLECTION | MUSLIN OC-12 | EGGSHELL | BENJAMIN MOORE | |
| PT-10 | SPECIALTY PAINT | | HISTORIC COLOR COLLECTION | BOOTHBAY GRAY( HC-165) | EGGSHELL | BENJAMIN MOORE | |
| PT-11 | EXG COLUMNS | | | | - | BENJAMIN MOORE | |
| S-1 | THRESHOLD | | | | | | |
| SS-1 | COUNTER SURFACE | | | | | | |
| T-1 | LARGE-FORMAT PORCELAIN FLOOR TILE | 12 " X 24" X 15/32" | MAKER | ROPE | NATURE | PORCELANOSA-URBATEK | |
| T-1A | LARGE-FORMAT PORCELAIN FLOOR TILE | 24 " X 24" X 15/32" | - | STUC BEIGE NATURE | MATTE | PORCELANOSA-URBATEK | STRAIGTH EDGE |
| T-2 | LARGE-FORMAT PORCELAIN WALL TILE | 12 " X 24" X 7/20" | GRACE NATURAL EXCLUSIVEITY | PURE WHITE | NATURE | LANDMARK CERAMICS | STACKED BOND |
| T-2A | LARGE-FORMAT PORCELAIN WALL TILE | 12 " X 24" X 7/20" | GRACE NATURAL EXCLUSIVEITY | PURE WHITE | POLISHED | LANDMARK CERAMICS | STACKED BOND |
| T-3 | CERAMIC WALL TILES | 2" X 8" X 5/16" | NATURAL HUES | EGG PLANT (QH51) | MATTE | DAL TILE | STACKED BOND - SINK WALL WOMEN |
| T-4 | CERAMIC MOSAIC TILE | 2" X 2" X 5/16" | NATURAL HUES | EGG PLANT (QH51) | ABRASIVE | DAL TILE | SHOWER FLOOR WOMEN |
| T-5 | CERAMIC WALL TILE | 2" X 8" X 5/16" | NATURAL HUES | REAL TEAL (QH66) | MATTE | DAL TILE | STACKED BOND - SINK WALL MEN |
| T-6 | CERAMIC MOSAIC TILE | 2" X 2" X 5/16" | NATURAL HUES | REAL TEAL (QH66) | ABRASIVE | DAL TILE | SHOWER FLOOR MEN |
| T-7 | TILE COVEBASE | 6 X 12 X 5/16" | GRACE NATURAL EXCLUSIVEITY | PURE WHITE | MATTE | LANDMARK CERAMICS | |
| T-8 | PORECELAIN FLOOR TILE | 23" X 23" X13/32" | - | ASSUAN BROWN | MATTE | PORCELANOSA-URBATEK | |
| T-9 | LARGE-FORMAT PORCELAIN WALL TILE | 12" X 24" X 5/16" | - | STU BEIGE POLISHED | POLISHED | DAL TILE | |
| T-10 | GLAZED CERAMIC WALL TILE | 4" X 4" X 5/16" | CLASSIC | MATTE URBAN PUTTY (0761) | MATTE | DAL TILE | |
| T-11 | TILE COVEBASE | 4" X 6" X 5/16" | CLASSIC | MATTE URBAN PUTTY (0761) | MATTE | DALTILE | |
| T-13 | VINYL COMPOSITION FLOOR TILE | 12" X 12" X 1/8" | STANDARD EXCELON | TAUPE(51901) | IMPERIAL | ARMSTRONG | |
| T-14 | PORECELAIN FLOOR TILE | 6" X 6" X 5/16" | VOLUME 1.0 | INTENSITY PEBBL (VL72) | MATTE | DALTILE | |

## FIRST FLOOR FINISH SCHEDULE

| ROOM NO. | ROOM NAME | FLOOR FINISH | BASE FINISH | WALL FINISH | Ceiling Finish | COMMENT |
|---|---|---|---|---|---|---|
| 130 | FAMILY RM. | T-1 | T-7 | T-2 | PAINTED GYPSUM BOARD | |
| 131 | J.C. | T-14 | T-11 | T-10 | ACT-2 | |
| 132 | W. SHW RM. | T-4 | T-7 | T-4 | PAINTED GYPSUM BOARD | |
| 133 | W. LOCKER RM | T-1 | T-7 | T-2 | ACT-1 | |
| 134 | W. TOIL. | T-1 | T-7 | T-3 T-4 | PAINTED GYPSUM BOARD | |
| 135 | STOR. | T-13 | B-1 | PT-1 | ACT-1 | |
| 136 | W. EMPL. RM. | T-13 | B-1 | PT-1 | ACT-1 | |
| 137 | STOR. | T-13 | B-1 | PT-1 | ACT-1 | |
| 138 | CORRIDOR#2 | T-13 | B-1 | PT-1 | ACT-1 | |
| 139 | M. TOIL. | T-1 | T-7 | T-5 T-6 | PAINTED GYPSUM BOARD | |
| 140 | M. LOCKER RM | T-1 | T-7 | T-2 | ACT-1 | |
| 141 | M. SHW. RM | T-6 | T-7 | T-4 | PAINTED GYPSUM BOARD | |
| 142 | M. EMPLOY. RM. | T-13 | B-1 | PT-1 | ACT-1 | |
| 143 | TOIL. | T-14 | T-11 | T-10 | PAINTED GYPSUM BOARD | |
| 144 | BREAKROOM | LVT-1 | B-1 | PT-1 | ACT-1 | |
| 145 | OFFICE#1 | LVT-1 | B-1 | PT-1 PT-6 | ACT-1 | |
| 146 | OFFICE#2 | LVT-1 | B-1 | PT-1 PT-6 | ACT-1 | |
| 147 | CONF. RM. | LVT-1 | B-1 | PT-1 PT-6 | ACT-1 | |
| 148 | RECEPTION | T-1 T-8 | B-1 | PT-1 | ACT-1 | |
| 149 | STOR. | T-13 | B-1 | PT-1 | PAINTED GYPSUM BOARD | |
| 150 | TOILET | T-1/ T-5 | T-7 | T-2 | PAINTED GYPSUM BOARD | |
| 151 | TOILET | T-1/ T-3 | T-7 | T-2 | PAINTED GYPSUM BOARD | |
| 152 | LOBBY | T-1A, T-8 | NONE | T-9 | ACT-3 | |
| 153 | CORRIDOR | T-1A | NONE | PT-1 | ACT-2 | |
| 154 | OFFICE#3 | LVT-1 | B-1 | PT-1 PT-5 | ACT-1 | |
| 154A | STOR. | T-11 | B-1 | PT-1 | ACT-1 | |
| 155 | EX. TOIL. | T-14 | T-11 | T-10 | ACT-1 | |
| 156 | CORR.#1 | LVT-1 | B-1 | PT-1 | ACT-1 | |
| 157 | STORAGE#1 | T-13 | B-1 | PT-1 | ACT-2 | |
| 157A | STOR. | T-13 | T12 | PT-1 | ACT-2 | |
| 158 | STORAGE#2 | T-13 | B-1 | PT-1 | ACT-2 | |
| 159 | STORAGE#3 | T-13 | B-1 | PT-1 | ACT-2 | |
| 160 | OFFICE | LVT-1 | B-1 | PT-1 PT-5 | ACT-1 | |
| 161 | EXIST. GYM A | M-1 | B-1 | PT-1 PT-4 PT-5 | EXIST. | |
| 162 | VEST. | PAINT/FLOOR MAT | NONE | PT-1 | PAINTED PLASTER | |
| 164 | WEIGHT ROOM | M-1 | B-1 | PT-1 PT-4 PT-5 | ACT-2 | |
| 165 | EXERCISE ROOM | M-1 | B-1 | PT-1 PT-5 | ACT-2 | |
| 169 | CL. | EXIST. | EXIST. | EXIST. | EXIST. | |
| 170 | CL. | EXIST. | EXIST. | EXIST. | EXIST. | |
| 170 | ELEC. | EXIST. | EXIST. | EXIST. | EXIST. | |
| 171 | CL. | EXIST. | EXIST. | EXIST. | EXIST. | |
| 173 | STAIR A | EXIST. | EXIST. | EXIST. | EXIST. | |
| 174 | STAIR B | EXIST. | EXIST. | EXIST. | EXIST. | |
| 175 | LOUNGE | LVT-1 | B-1 | PT-1 | ACT-2 | |
| 176 | BOILER RM | EXIST. | EXIST. | EXIST. | EXIST. | |
| 201 | MULTI-PURPOSE RM. | LVT-1 | B-1 | PT-1 PT-6 | | |

## LIGHTING FIXTURE SCHEDULE

| LIGHT TAG | TYPE | MANUFACT | MODEL NO. | FINSH. | MOUNT | WATTAGE | LAMPS |
|---|---|---|---|---|---|---|---|
| L1 | NOT USED | N/A | N/A | N/A | N/A | N/A | N/A |
| L2 | NOT USED | N/A | N/A | N/A | N/A | N/A | N/A |
| L3 | NOT USED | N/A | N/A | N/A | N/A | N/A | N/A |
| L4 | SQUARE DOWNLIGHT | LITHONIA LIGHTING | LDN6SSSQ 35/10 LS9WR | WHITE | RECESSED | 10W | LED |
| L5 | 2'-0" X 2'-0" RECESSED LED | DAY-O-LITE | HML-D-SI-35-SO-22-G-W-DIM10 | WHITE | RECESSED | 28W | LED |
| L6 | 2'-0" X 4'-0" RECESSED LED | LITHONIA LIGHTING | 2TL4 30L MPL MVOLT EZ-LP835 | WHITE | RECESSED | 25W | LED |
| L7 | 6'-0" RECESSED LINEAR LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-6-G-W-DIM-10 | WHITE | RECESSED | 20W | LED |
| L8 | | | | WHITE | RECESSED | | LED |
| L9 | 4"-0" RECESSED LINEAR LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-4-G-W-DIM-10 | WHITE | RECESSED | 20W | LED |
| L10 | NOT USED | N/A | N/A | N/A | N/A | N/A | N/A |
| L11 | NOT USED | N/A | N/A | N/A | N/A | N/A | N/A |
| L12 | WALL MTD. VANITY LIGHT | ALW | RLP1SM11MED/90/3500/WH/UNV | WHITE | 7'-0" A.F.F. | 9.2/ FT | LED |
| L13 | 3'-0" DIA. PENDANT RING LIGHT | DAY-O-LITE | COML-24-DP-35-SO-3-ACM-WHITE-DIM10 | WHITE | PENDANT 8'-6" A.F.F. | 113.7W | LED |
| L14 | 4'-0" PENDANT LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-3-PD-W-DIM-10 | WHITE | PENDANT 8'-6" A.F.F. | 13.1W | LED |
| L15 | 8'-0" LED WALL MTD. | SAYLITE | CWLL96L90W9800LDMV40KSA-E | WHITE | WALL MTD. | 90W | LED WET LOCATION |
| L16 | 4'-0" WALL MTD. LED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-LO-3-WM-W-DIM-10 | WHITE | WALL MTD. | 36W | LED |
| L17 | 8'-0" COVE LIGHT | DAY-O-LITE | JBL-2-35-SO-8-F-W-DIM10 | WHITE | COVE LIGHT | 27.5 | LED |

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING

# FINISH SCHEDULE, LIGHTING AND FINISH SCHEDULE

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE L. DANIEL 027351 STATE OF NEW YORK

| | |
|---|---|
| DATE | 1/29/2021 |
| JOB NUMBER | 19010 |
| DWG. No. | A702.00 |
| DRAWN BY | OF |

NYC DOB Number

## ACCESSORIES SCHEDULE

| Mark | TAG | DESCRPT | MANUF. | STYLE | PRODUCT NO | DIM/ DESCRP. | NOTES |
|---|---|---|---|---|---|---|---|
| A1 | A1 | PAPER DISPENSER & WASTE RECEPTACLE | BOBRICK | CONTUR A | B-43944 | - | - |
| A2 | A2 | TOILET TISSUE DISPENSER | ASI | - | 0042 | - | |
| A3 | A3 | MIRROR W AIR DRYER & SOAP DISPENSER | ASI | VELARE | 0663 - 1 OR 2 | - | |
| A3A | A3A | SYSTEM FILLER MODULE | ASI | - | 0663 - 1 OR 2 | - | |
| A4 | A4 | SHAMPOO SOAP DISPENSER | ASI | - | 0347 | - | |
| A5 | A5 | SANITARY VENDOR | ASI | - | 0468 | - | |
| A6 | A6 | CHANGING STATION | KOALA | - | KB110-55WM | - | |
| A7 | A7 | SANITARY DISPOSAL | ASI | ROVAL | 20852 | - | |
| A8 | A8 | COAT HOOK | BOBRICK | - | B-76717 | - | |
| A9 | A9 | ADA TRANSFER SHOWER SEAT | ASI | - | 8206-L | - | L- SHAPED LEFT HAND |
| A10 | A10 | GRAB BAR 18" | ASI | - | 3700-457 | - | |
| A11 | A11 | GRAB BAR 36" | ASI | | 3700-457 | - | |
| A12 | A12 | GRAB BAR 42" | ASI | - | 3700-014 | - | |
| A13 | A13 | GRAB BAR L 18" X 30" | ASI | L-SHAPE | 3700-60 | W24" , LEN. 48" | |
| A14 | A14 | MIRROR FULL - LENGTH | BOBRICK | - | B-290 2472 | W 24" H 72" | |
| A15 | A15 | TOILET PARTITION- CEILING MOUNTED | SCRANTON | HINDY HIDERS | COLOR : CONCRETE FN: ORANGE PEEL | - | |
| A16 | A16 | URINAL PARTITONS | SCRANTON | HINY HIDERS | COLOR : CONCRETE FN: ORANGE PEEL | W18" | WALL-HUNG / CONTINUOUS BRACKET |
| A17 | A17 | PLASTIC LOCKERS 1 - TIER W/ SLOPE TOP | SCRANTON | TUFFTEC | SAND | LXWXH 12X15X72 | WITH 4" BASE & SLOPE TOP |
| A18 | A18 | N/A | N/A | - | - | - | |
| A19 | A19 | SHOWER PARTITIONS | SCRANTON | HINDY HIDERS | COLOR : CONCRETE FN: ORANGE PEEL | 76" HIGH | |
| A20 | A20 | SHOWER CURTAIN ROD | ASI | - | 1214 | - | |
| A21 | A21 | BENCH FLOOR - MOUNT | SCRANTON | TUFFTEC BENCH | - | - | WITH TUBE PEDESTAL |
| A22 | A22 | N/A | N/A | - | - | | |
| A23 | A23 | UTILITY SHELF | ADVANCED TABCO | - | K-245 | 12" X 36" | JANITORS USE |
| A24 | A24 | N/A | N/A | - | - | | |
| A25 | A25 | N/A | N/A | - | - | | |
| A26 | A26 | ADA TRANSFER SHOWER SEAT | BOBRICK | - | 8206-SC-R | | L SHAPED RIGHT HAND |

## PLUMBING SCHEDULE

| TAG | DESCRPT. | MANUF. | STYLE 1 | PRODUCT NO | FINAL FINISH | DIM/ DESCRP | NOTES |
|---|---|---|---|---|---|---|---|
| P1 | NOT USED | N/A | - | - | - | - | |
| P2 | TOILET W WALL VALVE | TOT | - | CT708EV(G) | - | - | |
| P3 | TOILET W FLUSHOMETER | TOTO | - | CT708E(G) | - | | |
| P4 | URINAL | TOTO | - | UT104E(V) | - | | |
| P5 | URINAL FLUSH VALVE | TOTO | | TEU2LA | - | - | |
| P6 | FAUCET | SLOAN FAUCET | - | SF-2100-4-PLG-B | - | - | |
| P7 | SHOWER SYSTEM | MOEN COMERCIAL | - | 8375EP15 | | | |
| P8 | SINK | BRADLEY | VERGE | LVSD3 | | | |
| P9 | SINK | BRADLEY | VERGE | LVSD2 | | | |
| P10 | SINK | BRADLEY | VERGE | LVSD1 | | | |
| P11 | MOP SINK | ADVANCED TABCO | - | 9OP-40DF | SS | DROP-FRONT | WITH S.S. SPLASH GUARDS |
| P12 | SERVICE FAUCET | ADVANCED TABCO | - | K-240 | SS | | |
| P13 | ADA SHOWER SYSTEM | MOEN | | T8346EP15 | CHROME | | |

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

# PLUMBING AND ACCESSORIES SCHEDULE

SEAL & SIGNATURE

REGISTERED ARCHITECT JUNE DANIEL 027315 STATE OF NEW YORK

DATE 1/29/2021

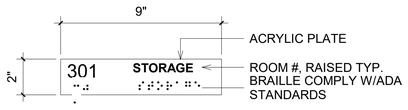
JOB NUMBER 19010

DWG. No. A703.00

DRAWN BY OF

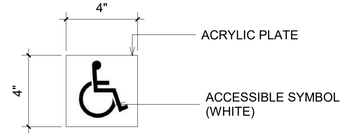
NYC DOB Number

TYPE S1: EXTERIOR SIGN




S2a — STAFF ONLY ROOMS
PLATE COLOR: BLUE. TEXT COLOR: WHITE

TYPE S2: ROOM ID. SIGNAGE (LARGE)

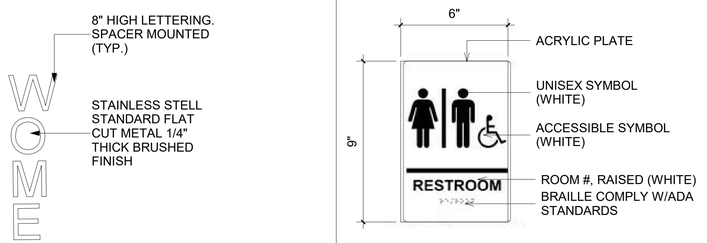



S3 — ADA SIGN
PLATE COLOR TBD.

TYPE S3: ADA SIGN

SIGNAGE SCHEDULE FIRST FLOOR

| ROOM NUMBEER | ROOM NAME | SIGNAGE TYPE | SIGNAGE TEXT |
|---|---|---|---|
| 130 | FAMILY RM. | S5 | RESTROOM |
| 131 | J.C. | S2A | JANITOR'S CLOSET |
| 133 | W. LOCKER RM | S4, S3 | WOMEN |
| 135 | STOR. | S2A | STORAGE |
| 136 | W. EMPL. RM. | S2A | W. EMPLOYEES |
| 137 | STOR. | S2A | STORAGE |
| 139 | M. TOIL. | S7, S3 | MEN |
| 142 | M. EMPLOY. RM. | S2A | M. EMPLOYEES |
| 143 | TOIL. | S5 | RESTROOM |
| 150 | TOILET | S5 | RESTROOM |
| 151 | TOILET | S5 | RESTROOM |

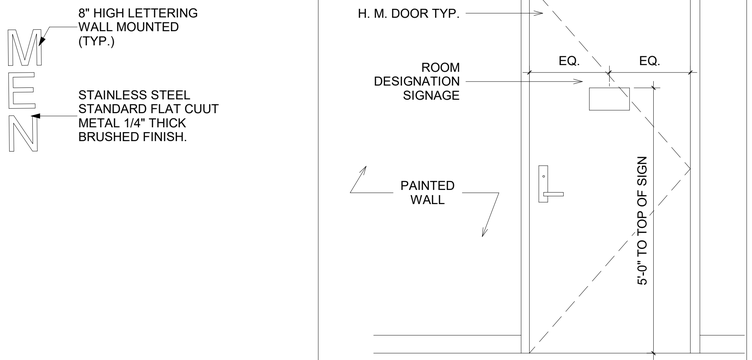



TYPE S4: INTERIOR SIGN (LARGE)




S5 — ADA COMPLIED TOILET
PLATE COLOR: BLACK. TEXT COLOR: WHITE

TYPE S5: ROOM ID. SIGNAGE (LARGE)




TYPE S7: INTERIOR SIGN (LARGE)




EL-1 — ROOM DESIGNATION SIGNAGE
TYP. MOUNTING LOCATION

TYPE EL-1: ROOM DESIGNATION SIGNAGE

SEPARATELY BOUND SPECIFICATIONS ARE PART OF THE ARCHITECTURAL CONTRACT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 NewYork, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

# SIGNAGE SCHEDULE AND DETAILS

SEAL & SIGNATURE

DATE 1/29/2021
JOB NUMBER 19010
DWG. No. A900.00
DRAWN BY OF

NYC DOB Number

# HVAC GENERAL NOTES (APPLICABLE TO ALL DRAWINGS)

## GENERAL

1. THE TERM "CONTRACTOR", "THIS CONTRACTOR", "HVAC CONTRACTOR" OR ANY TEXT AND DRAWINGS INCLUDED IN THIS CONTRACT DOCUMENT (WHICH INCLUDES DRAWINGS AND SPECIFICATIONS) SHALL BE MEANT AND DIRECTED TO THE CONTRACTOR PERFORMING THE HEATING, VENTILATING AND AIR CONDITIONING (HVAC) WORK IN THIS PROJECT.

2. THE ARCHITECT/ENGINEER FOR THE PROJECT WHO WILL ALSO BE REFERRED TO AS THE ARCHITECT/ENGINEER OF RECORD WILL BE THE FIRM WHOSE NAME AND ADDRESS IS LISTED IN THE TITLE BLOCK OD THE DESIGN DOCUMENT.

3. ALL WORK SHOWN IN THE CONTRACT DRAWINGS AND INCLUDED IN THE SPECIFICATIONS SHALL BE CONSIDERED AS NEW WORK TO BE PROVIDED (DEFINED AS FURNISHED AND INSTALLED) BY THE HVAC CONTRACTOR. ONLY ITEM SPECIFICALLY INDICATED AS "EXISTING" OR "BY OTHERS" OR "BY OTHER TRADES" SHALL BE EXCLUDED FROM THE WORK PROVIDED BY THE HVAC CONTRACTOR. SYMBOL LIST SHOWING DIFFERENT LINE THICKNESS FOR EXISTING AND NEW COMPONENTS ARE MEANT ONLY FOR CLARITY. UNLESS SPECIFICALLY INDICATED AS "EXISTING" ALL COMPONENTS SHALL BE CONSIDERED TO BE NEW TO BE PROVIDED BY THE HVAC CONTRACTOR.

4. IT SHALL BE EXPRESSLY UNDERSTOOD THAT ALL ITEMS INCLUDED IN THE CONTRACT DOCUMENTS ISSUED BY THE ARCHITEDT/ENGINEERS SHALL BE INCLUDED IN THE BID PRICE OF THE CONTRACTOR UNLESS OTHERWISE, SPECIFIC ADD ALTERNATES ARE LISTED BY THE ARCHTIECT/ENGINEER IN THE DOCUMENTS.

5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN IN WRITING THAT HE HAS ALL THE CONTRACT DOCUMENTS FOR THE PROJECT FORM THE ARCHTIECT/ENGINEER. NO CLAIMS FOR ANY MISSING DOCUMENTATION WILL BE ACCEPTABLE.

6. WHERE INFORMATION IN DIFFERENT PARTS OF THE CONTRACT DOCUMENTS ARE INTERPRETED BY THE CONTRACTOR TO BE DUPLICATED, THE CONTRACTOR SHALL OBTAIN A WRITTEN APPROVAL OF HIS INTERPRETATION FROM THE OWNER BEFORE DELETING THE SCOPE OF WORK HE INTERPRETS AS BEING A DUPLICATION. IN THE ABSENCE OF SUCH WRITTEN APPROVAL, THE CONTRACTOR SHALL NOT EXCLUDE ANY ITEM SHOWN IN DIFFERENT PARTS OF THE CONTRACT.

7. FOR EITHER CONTRACTOR'S INTERPRETATION OF DUPLICATION OR CONTRADICTION AS INDICATED ABOVE, THE OWNER'S DETERMINATION SHALL BE FINAL AND SHALL NOT ENTITLE THE CONTRACTOR TO ANY ADDITIONAL COMPENSATION.

8. ALL WORK SHOWN ON THE CONTRACT DOCUMENTS ARE MEANT TO BE THE FINAL INTENT OF THE WORK. ANY WORK REQUIRED TO MEET THE FINAL INTENT OF THE DESIGN DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING SHALL BE PROVIDED BY THE HVAC CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER:
   a. CUTTING AND PATCHING OF WALLS, FLOORS, CEILING, ROOFS, PARTITIONS;
   b. REMOVAL AND REPLACEMENT OF SUSPENDED CEILINGS, ACCESS PANELS, ACCESS DOORS;
   c. REMOVAL AND REPLACEMENT OF EXISTING ARCHITECTURAL, STRUCTURAL, PLUMBING, ELECTRICAL, FIRE PROTECTION TRADES AND, TELECOMMUNICATION, COMPUTER, SECURITY, PUBLIC ADDRESS, INTERCOM SYSTEMS WHICH INTERFERE WITH THE FINAL INTENT OF THE HVAC WORK.

9. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT. UNLESS AND UNTIL SPECIFIC ITEMS ARE SHOWN IN OTHER TRADE DRAWINGS FOR REMOVAL AND REPLACEMENT FOR THE AREA WHERE THE FINAL HVAC DESIGN INTENT IS SHOWN, ALL WORK REQUIRED FOR OTHER TRADES TO PERFORM THEIR WORK TO ENABLE THE HVAC WORK SHOWN ON THESE DRAWINGS SHALL BE INCLUDED IN THE HVAC CONTRACTOR'S BID.

10. ALL WORK SHOWN ON THE CONTRACT PLANS INCLUDING SCALED DRAWINGS ARE SCHEMATIC AND ARE INTENDED TO CONVEY GENERAL INFORMATION ON THE MAGNITUDE OF WORK AND TO PROVIDE GENERAL ARRANGEMENT OF EQUIPMENT. THE CONTRACT DRAWINGS ARE NOT MEANT TO CONVEY ALL THE FIELD CONDITIONS, ALL BENDS, OFFSETS, ELEVATIONS ACCURATELY AND SHALL NOT BE USED AS THE BASIS TO ESTIMATE THE QUANTITY OF HVAC WORK. THE CONTRACTOR MAY MAKE CHANGES IN THE FORM OF SHOP DRAWINGS IF AND WHEN APPROVED IN WRITING BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

11. THE CONTRACTOR SHALL SEEKING WRITTEN CLARIFICATIONS TO SCOPE OF WORK, VISIT AND CAREFULLY EXAMINE THE SITE OF THE PROPOSED WORK SO AS TO FAMILIARIZE HIMSELF OR HERSELF WITH EXISTING FIELD CONDITIONS, TO VERIFY DIMENSIONS AND TO VERIFY DIFFICULTIES THAT WILL BE ENCOUNTERED DURING THE EXECUTION OF THE WORK AND TO VERIFY EXACT EXTENT OF WORK REQUIRED, PRIOR TO SUBMITTING HIS PROPOSAL. ANY CHANGES RESULTING FROM CONDITIONS ARISING IN THE FIELD ARE TO BE MADE BY THIS CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

12. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.

13. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.

14. WHEREVER THE REQUIREMENTS AND REGULATIONS OF FEDERAL OR MUNICIPAL AUTHORITIES ARE MORE STRINGENT THAN THE REQUIREMENTS INDICATED ON THE DRAWINGS OR SPECIFICATIONS, THEN THESE MORE STRINGENT REQUIREMENTS SHALL TAKE PRECEDENCE OVER THE DRAWINGS OR SPECIFICATIONS AND SHALL BE MADE PART OF THE CONTRACT AT NO ADDITIONAL COST TO THE OWNER. HOWEVER, WHERE THE DRAWING OR SPECIFICATIONS ARE MORE STRINGENT THAN FEDERAL OF LOCAL AUTHORITY REQUIREMENTS AND REGULATIONS, THE MORE STRINGENT SHALL APPLY AND THE WORK SHALL BE INCLUDED IN THE CONTRACT.

15. THE CONTRACTOR SHALL PROVIDE PROTECTION FOR THE GENERAL PUBLIC AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION AREA. ADEQUATE BARRIERS SHALL BE PROVIDED TO EXERCISE CONTROL OF SAFE INGRESS AND EGRESS OF PREMISES. FIRE EXITS SHALL AT NO TIME BE BLOCKED.

16. ALL EXISTING CONSTRUCTION AND EQUIPMENT SHALL BE PROTECTED BY EACH CONTRACTOR DURING THE ENTIRE PERFORMANCE OF THEIR WORK. EXISTING AREAS DISTURBED OR DAMAGED BY CONTRACTORS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

17. ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY DISPOSED OF AWAY FROM THE PREMISES.

18. HVAC AND MECHANICAL SYSTEMS SHALL BE MAINTAINED FULLY OPERATIONAL IN AREAS/SPACES OUTSIDE OF AREA OF WORK DURING CONSTRUCTION.

19. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS TO AVOID CONFLICTS.

20. WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THE CURRENT EDITION OF THE NEW YORK CITY CODES AND ALL LOCAL TOWNSHIP REQUIREMENTS.

21. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.

22. CONTRACTOR TO CONTACT BUILDING MANAGEMENT AND TENANT REGARDING DUCTWORK REMOVAL SCOPE OF WORK TO ENSURE THAT OTHER TENANTS THAT ARE TO STAY OPERATIONAL ARE NOT AFFECTED BY REMOVALS OF THE BASE BUILDING DUCTWORK.

23. COORDINATE WITH BUILDING MANAGEMENT FOR ANY SERVICE INTERRUPTION OF EXISTING SYSTEMS AND GIVE NOTICE AS REQUIRED BY BUILDING RULES AND REGULATIONS

24. THE LOCATION AND ELEVATIONS OF ALL PIPING, PANELS, EQUIPMENT AND/OR DUCTWORK THAT IS IN OR PASSING THROUGH BASE BUILDING SPACES AND/OR TENANT SPACES ARE TO BE COORDINATED WITH BUILDING MANAGEMENT AND INDICATED ON SHOP DRAWINGS BEFORE PROCEEDING WITH WORK

# DEMOLITION NOTES

1. ALL DEMOLITION WORK SHALL BE SCHEDULED AND PHASED SO AS NOT TO INTERFERE WITH THE OPERATION OF THE FACILITY.

2. WHEN DEMOLITION WORK REQUIRES TEMPORARY SHUT DOWN OF AN EXISTING OPERATING SYSTEM, THE DEMOLITION SHALL BE PERFORMED AT SUCH REGULAR TIME OR ON OVERTIME, WHEN DESIGNATED BY THE OWNER, AT NO ADDITIONAL COST.

3. THE OWNER SHALL BE NOTIFIED OF THE ESTIMATED DURATION OF THE SHUTDOWN PERIOD AT LEAST TEN (10) DAYS IN ADVANCE OF THE DATE THE WORK IS TO BE PERFORMED.

4. WORK SHALL BE ARRANGED FOR CONTINUOUS PERFORMANCE, INCLUDING OVERTIME, WHEN APPROVED BY THE OWNER, IF REQUIRED TO ENSURE EXISTING OPERATING SERVICES WILL BE SHUT DOWN ONLY IF ESSENTIAL AND NECESSARY FOR THE WORK.

5. PROVIDE ALL SCAFFOLDING, RIGGING, HOISTING AND SERVICES NECESSARY FOR REMOVAL OF ALL DEMOLISHED EQUIPMENT AND MATERIALS FROM THE PREMISES.

6. THE CONTRACTOR SHALL NOT PERFORM ANY DEMOLITION AND REMOVAL WORK UNLESS A SCHEDULE HAS BEEN SUBMITTED AND APPROVED.

7. ALL DIMENSIONS SHOWN ON THE DRAWING SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR.

8. CONTRACTOR SHALL ASSURE THAT DEMOLITION AND INSTALLATION WORK WILL NOT CAUSE ANY DAMAGE TO EQUIPMENT, DUCTWORK, PIPING, ELECTRICAL, PLUMBING OR ANY OTHER EXISTING SERVICES TO REMAIN.

9. CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITH NEW CONSTRUCTION DRAWINGS TO DETERMINE DIMENSIONS AND SCOPE OF WORK TO INSURE THAT NO ITEMS OR SERVICES TO REMAIN ARE DISTURBED OR DAMAGED.

10. CONTRACTOR SHALL PATCH TO MATCH CONSTRUCTION IN ALL AREAS WHERE REMOVALS ARE MADE.

# NYC BUILDLING DEPARTMENT NOTES

1. ALL WORK SHALL COMPLY WITH THE APPLICABLE SECTIONS OF THE 2014 BUILDING CODE, CITY OF NEW YORK, AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS.

2. SPECIAL INSPECTIONS ARE REQUIRED FOR MECHANICAL SYSTEMS IN ACCORDANCE WITH THE FOLLOWING CODE SECTIONS:

| | | |
|---|---|---|
| 2.1. | MECHANICAL SYSTEMS | BC 1704.16 |
| 2.2. | FIRE-RESISTANT PENETRATIONS AND JOINTS | BC 1704.27 |
| 2.3. | HEATING SYSTEMS | BC 1704.25 |
| 2.4. | MECHANICAL DEMOLITION | BC 2704.20.4 |
| 2.5. | ENERGY CODE COMPLIANCE INSPECTION (SEE BELOW) | BC 110.3.5 |

3. IN ADDITION TO SPECIAL INSPECTIONS, THE FOLLOWINGS PROGRESS INSPECTIONS ARE REQUIRED FOR MECHANICAL SYSTEMS IN ACCORDANCE WITH THE FOLLOWING SECTIONS:

| | | |
|---|---|---|
| 3.1. | SHUTOFF DAMPERS | IB2, IIB2 |
| 3.2. | HVAC AND SERVICE WATER HEATING EQUIPMENT | IB3, IIB3 |
| 3.3. | HVAC AND SERVICE WATER HEATING SYSTEM CONTROLS | IB4, IIB4 |
| 3.4. | HVAC INSULATION AND SEALING | IB5, IIB5 |
| 3.5. | ELECTRICAL MOTORS | IIC6 |

4. ALL INSPECTIONS AND TESTS SHALL BE MADE IN COMPLIANCE WITH BC 1704.

5. VENTILATION FOR ALL AREAS COMPLIES WITH THE MINIMUM CODE REQUIREMENTS OF MC 401 AND MC 402.

6. CERTIFICATES OF COMPLIANCE (28-116.4) SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.

7. ALL HVAC SYSTEMS AND EQUIPMENT COMPLY WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF THE STATE OF NEW YORK (MC 301.2).

8. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE FOLLOWING CODE REFERENCES:

a. DUCT CONSTRUCTION MC 603
b. AIR INTAKES AND OUTLETS MC 401
c. FILTERS MC 605
d. FANS MC 503
e. ELECTRIC WIRING & EQUIPMENT MC 301.7
f. CONTROLS MC 405
g. HEATING CAPACITY MC 312
h. NOISE CRITERIA LEVELS BC 1207
i. PIPING INSULATION MC 604
j. INTAKE, EXHAUSTS, RELIEFS MC 401
k. PLENUMS AND CORRIDORS MC 602, MC 601

8. MINIMUM TEMPERATURE TO BE MAINTAINED DURING HEATING SEASON: BC 1204 - WHEN 13 DEG F OUTSIDE.

9. EQUIPMENT SHALL BE LISTED AND APPROVED AS REQUIRED BY MC 107, MC 102.

10. ALL BUILDING DEPARTMENT FORMS REQUIRED, INCLUDING THOSE REQUIRED FOR SPECIAL INSPECTIONS, PROGRESS INSPECTIONS, CERTIFICATE OF COMPLIANCE, SERVICE EQUIPMENT PERMIT, EQUIPMENT USE PERMIT OR OTHER REASONS WITH REGARD TO THIS PROJECT SHALL BE COMPLETED AND FILED WITH THE NYC BUILDING DEPARTMENT BY THE CONTRACTOR.

10. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER PROVIDED SPECIAL INSPECTORS.

11. CONTRACTOR SHALL OBTAIN AND PROVIDE SERVICE EQUIPMENT PERMITS IN ACCORDANCE WITH SECTION 28-105.2 OF THE BUILDING CODE. SERVICE EQUIPMENT PERMITS SHALL BE REQUIRED FOR THE USE AND OPERATION OF THE EXHAUST FANS.

12. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION DRAWING. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

# SYMBOL LIST AND ABBREVIATIONS

SD — SMOKE DETECTOR
T — THERMOSTAT
NEW PIPE WITH DIRECTION OF FLOW
ECCENTRIC REDUCER
PIPE DROP
PIPE RISE
PITCH UP IN DIRECTION OF FLOW
PITCH DOWN IN DIRECTION OF FLOW
UNION
CONCENTRIC REDUCER
FLANGED CONNECTION
GATE VALVE
ANGLE GATE VALVE
GLOBE VALVE
DRAIN VALVE (TYPE AS SPECIFIED)
LOCK SHIELD VALVE
CHECK VALVE, SWING OR LIFT
BALL VALVE
THREE-WAY AUTOMATIC CONTROL VALVE
"Y" TYPE STRAINER W.BLOW OFF VALVE AND CAP
MANUAL AIR VENT
VIBRATION ISOLATOR IN HANGAR
THERMOMETER WELL
THERMOMETER END WELL
PRESSURE GAUGE WITH SIPHON
PRESSURE GAUGE ON TEE
HOSE BIB AND CAP

SUPPLY DUCT GOING UP
SUPPLY DUCT GOING DOWN
RETURN DUCT GOING UP
RETURN DUCT GOING DOWN
FC — FLEXIBLE CONNECTION
FC
VD — VOLUME DAMPER
VD
M — MOTORIZED DAMPER
FD/AD — FIRE DAMPER WITH ACCESS DOOR
W.M.S — WIRE MESH SCREEN
SQUARE TO ROUND TRANSITION

EXISTING WORK TO REMAIN
EXISTING WORK TO BE REMOVED
12x6 — 12"W x 6"H DUCT SIZE
CD — CONDENSATE DRAIN
EXISTING PIPING GOING DOWN
(100) — AIR VOLUME, 100 CFM
POINT OF CONNECTION
POINT OF DISCONNECTION
CEILING SUPPLY DIFFUSER
CEILING RETURN / EXHAUST - GRILLE/REGISTER
THERMOSTAT
SECTION DESIGNATION
SHEET NO. WHERE SECTION IS SHOWN

| | |
|---|---|
| A | AMPERAGE |
| A/C | AIR CONDITIONING |
| AC | AIR CONDITIONER |
| ACCU | AIR COOLED CONDENSING UNIT |
| ACU | AIR CONDITIONING UNIT |
| AD | ACCESS DOOR |
| AFD | ADJUSTABLE FLOW DEVICE |
| ARCH. | ARCHITECT |
| ASCS | AIR SYSTEM CLEANING SPECIALIST |
| BC | BUILDING CODE |
| BDD | BACK DRAFT DAMPER |
| BTU | BRITISH THERMAL UNIT |
| CAP. | CAPACITY |
| CD | CEILING DIFFUSER |
| C TO C | CENTER TO CENTER |
| CFM | CUBIC FEET PER MINUTE |
| CLG | CEILING |
| CLR | CLEAR |
| CO2 | CARBON DIOXIDE DETECTOR |
| COP | COEFFICIENT OF PERFORMANCE |
| D | DEPTH |
| dBA | DECIBELS |
| DB | DRY BULB |
| DC | DIRECT CURRENT |
| DH | DEHUMIDIFICATION UNIT |
| DN | DOWN |
| DP | DEW POINT |
| DOAS | DEDICATED OUTDOOR AIR SUPPLY |
| DOAU | DEDICATED OUTDOOR AIR UNIT |
| DX | DIRECT EXPANSION |
| EA | EXHAUST AIR |
| EAT | ENTERING AIR TEMPERATURE |
| ECM | ELECTRONICALLY COMMUTATED MOTOR |
| EF | EXHAUST FAN |
| EDB | ENTERING DRY BULB |
| EER | ENERGY EFFICIENCY RATIO |
| EMBED. | EMBEDDED |
| EPE | ENVIRONMENTAL PROTECTION AGENCY |
| ESP | EXTERNAL STATIC PRESSURE |
| EXIST, (E) | EXISTING |
| EWB | ENTERING WET BULB |
| EWT | ENTERING WATER TEMPERATURE |
| FAI | FRESH AIR INTAKE |
| FC | FLEXIBLE CONNECTION |
| FLEX | FLEXIBLE |
| FL | FLOOR |
| FLA | FULL LOAD AMPERAGE |
| FPI | FINS PER INCH |
| FPM | FEET PER MINUTE |
| FPT | FEMALE PIPE THREAD |
| FT | FEET |
| GA | GAUGE |
| GAL | GALLON |
| GPM | GALLONS PER MINUTE |
| COND. | CONDENSER |
| HC | HEATING COIL |
| HP | HORSEPOWER |
| HV | HEATING AND VENTILATING |
| KW | KILOWATT |
| H | HEIGHT |
| HR | HOUR |
| HVAC | HEATING, VENTILATION AND AIR CONDITIONING |
| HWS&R | HOT WATER SUPPLY AND RETURN |
| HZ | HERTZ |
| ID | INSIDE DIAMETER |
| IEER | INTEGRATED ENERGY EFFICIENCY RATIO |
| IN | INCH OR INCHES |
| INWG | INCHES OF WATER GAUGE |
| L | LENGTH |
| LAT | LEAVING AIR TEMPERATURE |
| LBS | POUNDS |
| LDB | LEAVING DRY BULB |
| LF | LINEAR FEET |
| LWB | LEAVING WET BULB |
| LWT | LEAVING WATER TEMPERATURE |
| CONC. | CONCRETE |
| LRA | LOCKED ROTOR AMPS |
| NADCA | NATIONAL AIR DUCT CLEANERS ASSOCIATION |
| MAX | MAXIMUM |
| MBH | THOUSAND BTU PER HOUR |
| MC | MECHANICAL CODE |
| MCA | MINIMUM CIRCUIT AMPACITY |
| MER | MECHANICAL EQUIPMENT ROOM |
| MFS | MAXIMUM FUSE SIZE |
| MIN | MINIMUM |
| MOP | MAXIMUM OVERCURRENT PROTECTION |
| NC | NOISE CRITERIA |
| NO | NUMBER |
| OA | OUTSIDE AIR |
| OAT | OUTSIDE AIR TEMP |
| OD | OUTSIDE DIAMETER |
| PD | PRESSURE DROP |
| PH | PHASE |
| PRESS. | PRESSURED |
| PSI | POUNDS PER SQUARE INCH |
| QTY | QUANTITY |
| REFRIG. | RERIGERANT |
| RA | RETURN AIR |
| RECOV. | RECOVERED |
| RD | ROOF DRAIN |
| RF | RETURN FAN |
| RG | RETURN GRILLE |
| RH | RELATIVE HUMIDITY |
| RLA | RUNNING LOAD AMPS |
| RL | REFRIGERANT LIQUID |
| RPM | REVOLUTIONS PER MINUTE |
| RR | RETURN REGISTER |
| RS | REFRIGERANT SUCTION |
| RTU | ROOFTOP UNIT |
| SR | SUPPLY REGISTER |
| SQ | SQUARE |
| SQFT | SQUARE FEET |
| TYP | TYPICAL |
| V | VOLTAGE |
| VAV | VARIABLE AIR VOLUME |
| VD | VOLUME DAMPER |
| VEL. | VELOCITY |
| VFD | VARIABLE FREQUENCY DRIVE |
| W | WIDTH |
| WB | WET BULB |
| W.M.S. | WIRE MESH SCREEN |
| WWR | WELDED WIRED REINFORCEMENT |
| YR | YEAR |
| Ø | DIAMETER |
| < | LESS THAN |
| > | GREATER THAN |
| # | NUMBER |
| % | PERCENT |
| °F | DEGREES FAHRENHEIT |

| Sheet List Table | |
|---|---|
| Sheet Number | Sheet Title |
| M-001.00 | MECHANICAL NOTES SYMBOLS AND ABBREVIATIONS |
| M-002.00 | MECHANICAL SPECIFICATIONS 1 OF 5 |
| M-003.00 | MECHANICAL SPECIFICATIONS 2 OF 5 |
| M-004.00 | MECHANICAL SPECIFICATIONS 3 OF 5 |
| M-005.00 | MECHANICAL SPECIFICATIONS 4 OF5 |
| M-006.00 | MECHANICAL SPECIFICATIONS 5 OF 5 |
| M-051.00 | MECHANICAL SECOND FLOOR EAST - DEMOLITION PLAN |
| M-052.00 | MECHANICAL FIRST FLOOR WEST - DEMOLITION PLAN |
| M-053.00 | MECHANICAL SECOND FLOOR WEST - DEMOLITION PLAN |
| M-054.00 | MECHANICAL ROOM ENLARGED PLAN - DEMOLITION |
| ,MECHANICAL ROOM | ,MECHANICAL ROOM |
| M-056.00 | MECHANICAL UPPER ROOF EAST - DEMOLITION PLAN |
| M-100.00 | MECHANICAL FIRST FLOOR EAST PLAN |
| M-101.00 | MECHANICAL FIRST FLOOR WEST PLAN |
| M-102.00 | MECHANICAL SECOND FLOOR EAST PLAN |
| M-103.00 | MECHANICAL SECOND FLOOR WEST PLAN |
| M-104.00 | MECHANICAL UPPER ROOF EAST PLAN |
| M-201.00 | MECHANICAL ROOM MER-2 - PART PLAN AND SECTIONS - NEW WORK |
| M-300.00 | MECHANICAL DETAILS SHEET No. 1 |
| M-301.00 | MECHANICAL DETAILS SHEET No. 2 |
| M-302.00 | MECHANICAL DETAILS SHEET No. 3 |
| M-303.00 | MECHANICAL DETAILS SHEET No. 4 |
| M-304.00 | MECHANICAL DETAILS SHEET No. 5 |
| M-400.00 | MECHANICAL SCHEDULES-1 |
| M-401.00 | MECHANICAL SCHEDULES-2 |
| M-500.00 | MECHANICAL VRF REFRIGERANT PIPING RISER DIAGRAM |
| M-501.00 | MECHANICAL DUCT RISER DIAGRAM |
| M-600.00 | SYSTEM CONTROL CONTROL DIAGRAM |
| M-601.00 | RTU-1 CONTROL DIAGRAM |
| M-602.00 | RTU-1 CONTROL POINT LIST AND SEQUENCE OF OPERATION |
| M-603.00 | DOAU-2 CONTROL DIAGRAM |
| M-604.00 | DOAU-2 CONTROL POINT LIST AND SEQUENCE OF OPERATION |
| M-605.00 | VAV'S POINT LIST, CONTROL DIAGRAM & SEQUENCE OF OPERATION |
| M-606.00 | AHU-1 CONTROL DIAGRAM |
| M-607.00 | AHU-1 CONTROL POINT LIST AND SEQUENCE OF OPERATION |
| M-608.00 | EF-3, EF-4, AHU-1/ACCU-R-3 & FLOOD DETECTOR CONTROL DRAWINGS |
| M-609.00 | DOAU-1 CONTROL DIAGRAM, POINTS LIST & SEQUENCE OF OPERATATION |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
MECHANICAL NOTES SYMBOLS AND ABBREVIATIONS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-001.00
DRAWN BY D.K.
1 OF 37

NYC DOB Number

# HVAC SPECIFICATIONS

A. GENERAL:

1. WORK SHALL CONFORM TO THE REQUIREMENTS OF APPLICABLE GOVERNMENTAL REGULATIONS AND SHALL BEAR APPROVAL CERTIFICATES AS APPLICABLE.
2. WORK SHALL CONFORM TO THE STANDARD OF THE BUILDING AND BE APPROVED BY THE BUILDING'S REPRESENTATIVES BEFORE COMMENCING WORK.
3. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHEN NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN CRATED SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH RESTRICTED SPACES AVAILABLE. ASCERTAIN FROM BUILDING OWNER AT WHAT TIMES OF DAY EQUIPMENT COULD BE MOVED THROUGH THE BUILDING.
4. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATING, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES OF MAGNITUDE WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
5. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK SHALL BE NECESSARY FOR THE PERFORMANCE OF GENERAL WORK. ALL EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS. THIS CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY CHANGES REQUIRED ASED ON EXISTING CONDITIONS FOR PROPER INSTALLATION OF NEW WORK, AND INCLUDE ALL MATERIALS AND LABOR IN HIS BID PRICE. NO ALLOWANCE WILL BE MADE FOR FAILURE TO DO SO.
6. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF THE VENTILATION AND AIR CONDITIONING SYSTEMS. DETAILS OF CONSTRUCTION AND OF WORKMANSHIP WHERE NOT SPECIFICALLY DESCRIBED HEREIN OR INDICATED ON THE DRAWINGS SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE COMPLETE SYSTEMS, LEFT IN GOOD WORKING ORDER, READY FOR OPERATION, INCLUDING NECESSARY LABOR AND MATERIALS, WHETHER OR NOT SPECIFICALLY SHOWN ON THE DRAWINGS OR MENTIONED HEREIN. IT IS NOT THE INTENTION OF THESE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, OBSTRUCTIONS OR STRUCTURAL CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL HIS WORK IN SUCH A MANNER TO AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR WITHOUT FURTHER COST OR INSTRUCTIONS.
7. BEFORE SUBMITTING PROPOSAL BIDDERS SHALL CAREFULLY EXAMINE FIELD CONDITIONS AND CONTRACT DRAWINGS OF ALL TRADES. SUBMISSION OF PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT REQUIRED EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR EXTRA LABOR, EQUIPMENT AND MATERIALS REQUIRED DUE TO DIFFICULTIES WHICH COULD HAVE BEEN FORESEEN, WILL NOT BE RECOGNIZED. VERIFICATION SHALL BE MADE AS TO THE ACTUAL LOCATIONS WHERE NEW DUCT AND PIPE LINE RUNS WILL BE INSTALLED, AS WELL AS CLEARANCES BETWEEN NEW AND EXISTING DUCTWORK, PIPING AND STRUCTURAL MEMBERS. SHOULD THE CONTRACTOR FIND ANY EQUIPMENT OR CONDITION THAT IS NOT IN AGREEMENT WITH THE PLANS, HE SHALL REFER THE MATTER TO THE ENGINEER'S ATTENTION BEFORE PROCEEDING WITH THE DEMOLITION OR CONSTRUCTION.
8. CONTRACTOR SHALL BRING TO THE IMMEDIATE ATTENTION OF THE OWNER ANY CHANGES IN THE SIZE OR LOCATION OF THE MATERIAL OR EQUIPMENT WHICH MAY BE NECESSARY IN ORDER TO MEET FIELD CONDITIONS, OR IN ORDER TO AVOID CONFLICT WITH THE EQUIPMENT OF OTHER SECTIONS. OBTAIN THE OWNER'S APPROVAL BEFORE SUCH DEVIATIONS ARE MADE.
9. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING.
10. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUT DOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO EXISTING PIPING. PROVIDE TEMPORARY PIPING OR DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUT DOWN TIME. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
11. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO A CONDITION ACCEPTABLE TO THE ENGINEER.
12. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS AND WALLS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL.
13. ALL PRESENT MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.
14. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
15. CONTROLLED INSPECTION TO BE PERFORMED BY THIS CONTRACTOR.
16. PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT. SUBMIT TO ARCHITECT FOR APPROVAL.
17. THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR TO FURNISH AUTOMATIC CONTROLS, MOTORS AND MOTOR CONTROLLERS.
    a. EACH SINGLE PHASE MOTOR SHALL BE PROVIDED WITH A MANUAL STARTER. MANUAL STARTERS SHALL BE TOGGLE SWITCH TYPE, TRIP FREE AND TRIP INDICATING. FLUSH MOUNTED UNITS SHALL BE PROVIDED WITH STAINLESS STEEL PLATES. ALL MANUAL STARTERS SHALL BE EQUIPPED WITH NEON PILOTS AND SHALL BE EQUAL TO SQUARE D, WESTINGHOUSE OR APPROVED EQUAL.
    b. MAGNETIC STARTERS SHALL BE NEMA STANDARD CONTROLLERS SUITABLE FOR THE USE INTENDED, EQUIPPED WITH NECESSARY AUXILIARY CONTACTS REQUIRED FOR CONTROL TO OPERATE THE SYSTEMS INDICATED. CONTROLLERS SHALL BE PROVIDED WITH A THERMAL OVERLOAD IN EACH MOTOR FEEDER UNDERGROUND LEG, AN EXTERNAL RESET BUTTON AND A HAND-OFF-AUTOMATIC SWITCH, WITH PILOT STATION. CONTROLLERS FOR THREE-PHASE MOTORS SHALL BE MAGNETIC, NON-REVERSING, FULL VOLTAGE, ACROSS-THE-LINE TYPE AND FURNISHED WITH CONTROL TRANSFORMERS.
18. ALL EQUIPMENT HAVING MOVING PARTS SHALL BE ISOLATED FROM THE BUILDING STRUCTURE BY MEANS OF SPRING VIBRATION ISOLATORS. ISOLATION SHALL BE OF THE SAME BRAND AND EQUIPMENT MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED IN THE ISOLATION OF THE EQUIPMENT.
19. DAILY DURING CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL REMOVE ALL RUBBISH AND EXCESS MATERIAL ACCUMULATED AS A RESULT OF HIS OPERATIONS. ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE WIPED CLEAN OF DUST AND DEBRIS BEFORE FINAL ACCEPTANCE BY THE OWNER.
20. BEFORE COMPLETION OF THIS PROJECT, THE MECHANICAL CONTRACTOR SHALL TEST ALL EQUIPMENT. ALL EQUIPMENT SHALL BE OPERATED SUFFICIENTLY LONG TO PROVE TO THE OWNER THAT EACH UNIT PERFORMS SATISFACTORILY AND MEETS THE REQUIREMENTS SPECIFIED.
21. THE MECHANICAL CONTRACTOR SHALL INCLUDE WITH HIS BASE BID AN ADDED ALTERNATE TO PROVIDE COMPLETE SERVICING OF THE MECHANICAL EQUIPMENT WHICH HE HAS INSTALLED FROM THE PERIOD STARTING WITH THE WRITTEN ACCEPTANCE OF THE COMPLETE INSTALLATION FOR THE ONE (1) YEAR WARRANTY UP TO ITS CONCLUSION DATE. SERVICING SHALL CONSIST OF, BUT NOT BE LIMITED TO, LUBRICATION OF UNITS ADJUSTMENTS, CLEANING, FILTER CHANGES AND REPLACEMENT OF CEILING TILES.
22. FOR EXACT LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS REFER TO ARCHITECTURAL PLANS AND DETAILS.
23. OBTAIN FROM THE ENGINEER THE LOCATION OF ANY APPARATUS NOT DEFINITELY LOCATED ON THE DRAWINGS. LOCATE EQUIPMENT AND ACCESSORIES IN SUCH A MANNER AS TO PROVIDE EASY ACCESS FOR PROPER SERVICE AND MAINTENANCE OF ALL EQUIPMENT AND ITEMS REQUIRING MAINTENANCE.
24. REVIEW WITH THE ENGINEER AND THE BUILDING MANAGER ANY CONDITION WHICH PREVENTS ADEQUATE ACCESSIBILITY FOR MAINTENANCE PRIOR TO INSTALLATION OF THE WORK. ALL EQUIPMENT AND/OR ACCESSORIES THAT ARE INSTALLED WITHOUT PROPER ACCESS, IN THE OPINION OF THE BUILDING MANAGER, AND INSTALLED WITHOUT THE BUILDING MANAGER'S AND/OR ENGINEER'S APPROVAL, SHALL BE REMOVED AND REVISED AS DIRECTED BY THE BUILDING MANAGER AND/OR ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
25. THE CONTRACTOR'S WORK SHALL INCLUDE THE COST OF BREAKING DOWN AND REASSEMBLY OF THE NEW EQUIPMENT AS NECESSARY TO FIT THE EQUIPMENT INTO THE BUILDING.
26. THE CONTRACTOR'S WORK SHALL INCLUDE THE HOISTING OF ALL MATERIALS AND EQUIPMENT, AND HE SHALL ASSUME ALL RESPONSIBILITY FOR SUCH HOISTING AND WORK.
27. GENERAL CONTRACTOR SHALL PROVIDE MEP/ARCHITECTURAL COORDINATION DRAWINGS FOR ALL WORK ABOVE CEILING AND TOILET WALLS.
28. THIS CONTRACTOR SHALL REPAIR AND RESTORE TO ORIGINAL CONDITION ANY EXISTING EQUIPMENT OR MATERIALS DAMAGED IN THE PROCESS OF INSTALLATION, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVES.
29. THIS CONTRACTOR SHALL BE RESPONSIBLE TO ENGAGE THE SERVICES OF A QUALIFIED PROFESSIONAL ENGINEER TO INITIATE THE NECESSARY CONTROLLED INSPECTIONS AND PERMITS. THIS CONTRACTOR IS TO FILE THE REQUIRED DOCUMENTS WITH THE CITY OF NEW YORK.

B. DEMOLITION AND REMOVAL:

1. GENERAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR TO ERECT AND MAINTAIN BARRIERS TO PROTECT ADJACENT AREAS FROM DUST AND DEBRIS DURING PERIOD OF DEMOLITION AND CONSTRUCTION.
2. ALL EXISTING WORK NOT INDICATED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE. IF EXISTING IS DAMAGED, CONTRACTOR SHALL MAKE REPAIRS USING SAME MATERIALS AT THE CONTRACTOR'S COST.
3. CONTRACTOR SHALL COORDINATE WITH BUILDING MANAGER PRIOR TO WORKING ON OR CONNECTING TO BUILDING SYSTEM AND SHALL TAKE PRECAUTIONS AGAINST DAMAGING OR DISRUPTING BUILDING SYSTEMS, WIRING OR CONTROL TUBING FOR THE TENANTS ABOVE OR BELOW. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED AT THE CONTRACTOR'S COST.
4. REMOVE ALL EXISTING DUCTWORK AND AIR TERMINALS. PROVIDE FOR LEGAL REMOVAL AND DISPOSAL OF ALL RUBBISH AND DEBRIS FROM THE BUILDING AND SITE. COORDINATE ALL DEMOLITIONS AND REMOVALS WITH BUILDING MANAGEMENT. PROTECT ALL WORK NOT SLATED FOR DEMOLITION.
5. TAG ALL EQUIPMENT REMOVED. STORE ALL EQUIPMENT SLATED FOR RELOCATION ON THE FLOOR. TURN OVER TO THE BUILDING MANAGEMENT ALL OTHER REMOVED EQUIPMENT. DISPOSE OF EQUIPMENT AND MATERIAL AS REQUIRED BY THE BUILDING MANAGEMENT.

C. CLEANING AND PROTECTION:

1. STORE MATERIALS IN A MANNER THAT WILL MAINTAIN AN ORDERLY, CLEAN APPEARANCE. IF STORED ON SITE IN OPEN OR UNPROTECTED AREAS, ALL EQUIPMENT AND MATERIALS SHALL BE KEPT OFF THE GROUND BY MEANS OF PALLETS OR RACKS, AND COVERED WITH TARPAULINS.
2. INLET AND DISCHARGE OPENINGS OF ALL EQUIPMENT SHALL BE KEPT COVERED UNTIL THE EQUIPMENT IS READY TO RUN.
3. EQUIPMENT AND MATERIAL DAMAGED IS SUBJECT TO REJECTION AND REPLACEMENT.
4. DURING CONSTRUCTION, PROTECT ALL DUCTWORK, PIPING AND EQUIPMENT FROM DAMAGE AND DIRT. CAP THE OPENINGS OF ALL DUCTWORK, PIPING AND EQUIPMENT NOZZLES.
5. AFTER COMPLETION OF PROJECT, CLEAN THE EXTERIOR SURFACES OF THE EQUIPMENT.

D. SCOPE OF WORK:

PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND CONTRACTOR'S SERVICES NECESSARY FOR A COMPLETE SAFE INSTALLATION OF ALL WORK INDICATED IN CONTRACT DOCUMENTS, IN FULL CONFORMITY WITH REQUIREMENTS BUILDING CODES AND OF ALL AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. SECURE CERTIFICATES, PAY ALL FEES AND CHARGES FOR ALL WORK INSTALLED CERTIFYING

   COMPLIANCE WITH CODES OF NEW YORK CITY AND GOVERNING AUTHORITIES. DELIVER

   CERTIFICATES TO OWNER BEFORE FINAL BILLING
2. DEMOLITION AND REMOVAL FROM SITE OF EXISTING A/C UNITS AND DUCTWORK, CEILING

   EXHAUST FANS, UNLESS OTHERWISE NOTED.
3. CLEANING OF EXISTING TO REMAIN DUCTWORK
4. NEW LOW PRESSURE DUCTWORK AND ACCESSORIES
5. DIFFUSERS, REGISTERS AND GRILLES
6. INSULATION ACOUSTICAL LINING
7. VIBRATION ISOLATION FOR ALL EQUIPMENT
8. MOTORS, STARTERS AND MISCELLANEOUS ELECTRICAL EQUIPMENT
9. NEW ROOFTOP UNIT FOR GYMNASIUM.
10. NEW DOAU-2 FOR LOCKER ROOM AREA
11. NEW AIR HANDLING UNIT (VAV SYSTEM)
12. NEW HEAT PUMP SYSTEM FOR LOCKER ROOM AREA
13. NEW UNIT HEATERS
14. SHOP DRAWINGS AND RECORD DRAWINGS.
15. OBTAINING GOVERNMENT APPROVALS AND PERMITS INCLUDING CONTROLLED INSPECTIONS.
16. COMPLETE AUTOMATIC CONTROL SYSTEMS FOR ALL THE UNITS.
17. TESTING AND BALANCING OF SYSTEMS AND FURNISHING BALANCING REPORT.
18. STORING AND PROTECTION OF EQUIPMENT AND/OR APPURTENANCES SPECIFIED HEREIN.
19. CUTTING AND ROUGH PATCHING REQUIRED FOR THE WORK OF THIS TRADE.
20. NEW THERMOSTATS, CONTROL VALVES
21. PIPE HANGERS, VALVES, VIBRATION ISOLATION.
22. TESTING OF NEW PIPING.
23. HYDRONIC HEATING PIPING, VALVES, ACCESSORIES

E. CODES AND REGULATIONS:

1. WORK SHALL MEET OR EXCEED THE LATEST REQUIREMENTS OF NATIONAL, STATE, COUNTY, MUNICIPAL, AND OTHER AUTHORITIES EXERCISING JURISDICTION OVER THE CONSTRUCTION WORK AT THE PROJECT.
2. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS, ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
3. CONTRACTOR SHALL GIVE NECESSARY NOTICES, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, AND OBTAIN ALL NECESSARY PERMITS AND CERTIFICATES, AND APY ALL FEES AND CHARGES CONNECTED THEREWITH. ALL CERTIFICATES SHALL BE DELIVERED TO THE OWNER BEFORE THE WORK IS FINALLY ACCEPTED. ALL EQUIPMENT SHALL HAVE THE REQUIRED N.Y.C. B.S.A.NUMBERS AS REQUIRED BY THE GOVERNING CODES. THE CONTRACTOR SHALL PROVIDE THE CONTROLLED INSPECTION. ALL NEW EQUIPMENT SHALL HAVE MEA NUMBERS WHICH SHALL BE PROVIDED IN WRITING TO THE OWNER.

F. GUARANTEE AND CERTIFICATION:

THE CONTRACTOR SHALL GUARANTEE WORK PERFORMED AND MATERIALS INSTALLED TO BE FREE FROM DEFECTS AND SHALL REPLACE ANY DEFECTIVE MATERIAL OR WORKMANSHIP, FREE OF COST TO THE OWNER, FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE, EVIDENCED BY THE DATE OF FINAL PAYMENT.

G. SUBMITTALS AND RECORD DRAWINGS:

1. PRIOR TO ASSEMBLING OR INSTALLING THE WORK, THE FOLLOWING SHALL BE SUBMITTED FOR APPROVAL.
   a. 3/8" SCALE DRAWINGS INDICATING DUCT LAYOUT.
   b. DUCT CONSTRUCTION STANDARDS AND DETAILS.
   c. 1/4" SCALE DRAWING INDICATING PIPING.
   d. AUTOMATIC CONTROLS DEVICES AND DIAGRAMS WITH SEQUENCE OF OPERATION DESCRIPTION.
   e. CUTS AND TECHNICAL DATA ON EACH EQUIPMENT, LOUVER, DIFFUSER, GRILLE, DAMPER, ACCESS DOOR, THERMOSTAT, VIBRATION ISOLATION EQUIPMENT INSTALLATION DETAIL.
2. DOCUMENTS WILL NOT BE ACCEPTED FOR APPROVAL UNLESS:
   a. FOUR (4) COPIES OF EACH ARE SUBMITTED, ONE (1) OF THESE COPIES BEING OF THE SEPIA TYPE.
   b. DUCTWORK SHOP DRAWINGS SHALL BE FULLY COORDINATED WITH EXISTING FIELD CONDITIONS AND WORK OF OTHER TRADES AND SHALL BE SO STATED ON THE SHOP DRAWINGS.
3. RECORD DRAWINGS: RECORD ALL DEVIATIONS FROM CONTRACT DRAWINGS AND DELIVER TO OWNER MYLAR TRACINGS SHOWING WORK AS ACTUALLY INSTALLED.

H. CONNECTIONS TO EXISTING WORK:

1. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. SUBMIT TO OWNER FOR APPROVAL, DATE SCHEDULE OF NECESSARY TEMPORARY SHUT-DOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS WILL NOT INTERFERE WITH REGULAR OPERATION OF EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL OF THE BUILDING.
2. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED TO ORIGINAL CONDITION.

I. WIRING:

THE RESPONSIBILITY OF THIS TRADE IN CONNECTION WITH ELECTRICAL WORK IS AS FOLLOWS:

1. FURNISH AND DELIVER TO THE SITE ACTUATING DEVICES WHICH REQUIRE ELECTRICAL CONNECTION ONLY (SUCH AS PUSH-BUTTON STATIONS, WALL-MOUNTED ELECTRICAL CONTACTING THERMOSTATS, ETC.), FOR MOUNTING AND CONNECTION BY THE ELECTRICAL TRADE.
2. PROVIDE NECESSARY INFORMATION, SUPERVISION, AND COORDINATION AS REQUIRED TO IMPLEMENT THE WIRING DIAGRAMS AND OTHER INFORMATION FOR WORK OF THE ELECTRICAL TRADE.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR TO FURNISH AND INSTALL AUTOMATIC CONTROL WIRING BELOW 100 VOLT. WIRING SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AND TO AND LOCAL AND/OR STATE CODES THAT APPLY.

J. MOTORS:

1. ALL MOTOR AND MOTOR CONTROL EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND THE LOCAL PUBLIC UTILITY FURNISHING CURRENT TO THE BUILDING.
2. MOTOR CONTROL:
   a. FURNISH SUITABLE STARTING AND CONTROLLING EQUIPMENT FOR MOTORS FURNISHED AS PART OF THE AIR CONDITIONING SYSTEMS.
   b. FURNISH PUSH BUTTONS AND OTHER DEVICES, INCLUDING PILOT LIGHTS REQUIRED FOR THE MANUAL OR AUTOMATIC ACTUATING OF MOTOR STARTING EQUIPMENT AS NOTED ON THE PLANS. DEVICES INDICATED AS BEING REQUIRED IN STARTER COVERS SHALL BE DELIVERED MOUNTED TO THE PRODUCT. WHERE PLANS INDICATE THAT DEVICES ARE TO MOUNTED SEPARATELY FROM THE MOTOR STARTERS, SUCH DEVICES SHALL BE FURNISHED COMPLETE WITH NEMA CLASS I GENERAL PURPOSE ENCLOSURES.
   c. STARTERS FOR MOTORS 1/2 HP AND LARGER SHALL BE OF THE MAGNETIC CIRCUIT BREAKER TYPE. EACH MAGNETIC STARTER SHALL BE FURNISHED WITH COMBINATION MAGNETIC CIRCUIT BREAKER TYPE OVERLOAD UNITS IN ALL PHASE LEGS FOR THE MOTOR CONTROLLED , AND SHALL PROVIDE EITHER LOW VOLTAGE PROTECTION OR LOW VOLTAGE RELEASE AS DETERMINED BY THE CONTROL WIRING METHOD INTERLOCKED WITH THE HANDLE OF THE DISCONNECT MEANS TO PREVENT OPENING WHEN THE HANDLE IS IN THE CLOSED POSITION.
   d. STARTING EQUIPMENT FOR ALL MOTORS SHALL BE THE PRODUCT OF CUTLER-HAMMER, WESTINGHOUSE, GENERAL ELECTRIC, OR ALLEN BRADLEY.
   e. PILOT LIGHTS SHALL BE NEON TUBE TYPE WITH CANDELABRA BASE AND CLEAR GLASS.
   f. PUSH BUTTONS SHALL BE THE SPRING RELEASE TYPE.
   g. PROVIDE PERMANENT NAMEPLATES MOUNTED ON THE COVER OF EVERY STARTER, SWITCH, OR CIRCUIT BREAKER, REGARDLESS OF ITS LOCATION.
   h. PROVIDE "HANDS-OFF AUTOMATIC," (HOA) STARTERS FOR ALL CYCLING EQUIPMENT.

K. CUTTING AND PATCHING:

ALL CUTTING AND ROUGH PATCHING FOR THE INSTALLATION OF THE NEW WORK SHALL BE INCLUDED. FINISH PATCHING SHALL BE BY THE GENERAL CONTRACTOR.

L. SLEEVES AND OPENINGS:

1. PROVIDE SLEEVES FOR ALL PIPING AND DUCTWORK PASSING THROUGH WALLS.
2. SLEEVES SHALL BE 20 USSG GALVANIZED IRON.
3. SEAL OPENINGS BETWEEN SLEEVES AND PIPE OR PIPE INSULATION, FOR FULL DEPTH OF SLEEVE, WITH MINERAL WOOL OR EQUIVALENT NON-ASBESTOS, NON-COMBUSTIBLE MATERIAL.

M. PIPING FOR HVAC SYSTEMS:

1. GENERAL
   a. NO PIPING SHALL BE LESS THAN 3/4", UNLESS OTHERWISE NOTED
   b. FOR PIPE SIZES NOT INDICATED ON PLANS, SEE MANUFACTURER'S EQUIPMENT CONNECTION DETAILS
   c. PROVIDE FITTINGS FOR CHANGE IN PIPE SIZE FOR FINAL CONNECTION AT EQUIPMENT AS REQUIRED.
   d. PROVIDE UNION CONNECTIONS AT EACH PIECE OF EQUIPMENT AND ON EACH SIDE OF ALL VALVES AND IN-LINE EQUIPMENT.
   e. PROVIDE VALVED AND CAPPED CONNECTIONS AT ALL LOW POINTS IN PIPING SYSTEMS REQUIRED FOR DRAINING SYSTEMS.
   f. ALL PIPING BETWEEN STEEL OR BRONZE DIELECTRIC FITTINGS SHALL BE BRAZED USING SILVER SOLDER AND ALL COPPER FITTINGS TO COPPER PIPE SHALL BE BRAZED USING PHSCO, OR APPROVED 99.4% COPPER SOLDER ALLOY.
   g. ALL EQUIPMENT SHALL BE PROVIDED WITH UNIONS FOR EASILY REMOVAL AND FOR SERVICING.
   h. PRESSURE RATING OF STRAINER TO MATCH THAT OF THE VALVES IN THE SAME LINE. PROVIDE DIELECTRIC UNIONS BETWEEN ALL FERROUS AND NON-FERROUS PIPING.
   i. HIGH POINTS OF ALL WATER PIPING SHALL BE PROVIDED WITH MANUAL VENTS, AND ALL LOW POINTS SHALL HAVE DRAIN VALVES WITH HOSE CONNECTIONS FOR COMPLETE DRAINING OF THE LINES, RATED FOR 200 #S.W.P.
   j. PROVIDE DIELECTRIC GASKETS BETWEEN JOINTS OF DISSIMILAR METALS AND SLEEVES AND WASHERS BETWEEN FLANGES, BOLTS AND NUTS.
   k. ALL PIPING SHALL BE LABELED TO INDICATE SIZE, PURPOSE AND DIRECTION OF FLOW IN SUCH A MANNER THAT IT CAN EASILY BE READ FROM THE FLOOR. LETTERS SHALL NOT BE LESS THAN 2".
   l. BALANCE AND ADJUST ALL MANUAL BALANCING VALVES.
   m. PROVIDE MINIMUM PITCH TO INSURE ADEQUATE VENTING AND DRAINAGE.
   n. PROVIDE, AS REQUIRED, AUTOMATIC AIR VENTS, MANUAL AIR VENTS AND RELIEF AIR VENTS.
   o. AVOID ENTRY OF FOREIGN MATTER INTO PIPING DURING CONSTRUCTION. AFTER COMPLETION OF PIPING, FLUSH SYSTEM WITH WATER FOR AN 8 HOUR PERIOD. REMOVE AND CLEAN STRAINERS, AND BLOW OFF ALL PIPING LOW POINTS AT THE END OF THE 8 HOUR PERIOD. REFILL SYSTEM WITH WATER OR, FOR GLYCOL SYSTEMS, REFILL WITH 40% OF ETHYLENE GLYCOL SOLUTION WITH INHIBITORS. COORDINATE AND PROVIDE WATER TREATMENT IN ACCORDANCE WITH THE BUILDING STANDARDS.
   p. MOTORIZED TWO WAY CHILLED WATER VALVES TO BE HONEYWELL OR APPROVED EQUAL, SELECTED BY THE MANUFACTURER AT 150 #S.W.P. AND SUITABLE FOR 110 VOLT PRIMARY SUPPLY AND 24 VOLT CONTROL ACTUATION.
2. COMPLETE WITH:
   a. PIPE
   b. FITTINGS
   c. VALVES
   d. HANGERS, SUPPORTS
   e. ACCESSORIES
3. MATERIALS:
   a. HOT WATER PIPING SHALL BE STEEL SCHEDULE 40, SEAMLESS OR ELECTRIC WELD ASTM-53.
   b. REFRIGERATION AND CONDENSATE DRAIN PIPING SHALL BE TYPE "L" COPPER TUBING OF THE SIZE SHOWN ON THE DRAWINGS OR AS RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT INSTALLED. ALL NEW REFRIGERATION PIPING SHALL BE TESTED AS PER THE MANUFACTURER'S REQUIREMENTS.
4. FITTINGS AND VALVES:
   a. STEEL PIPING FITTINGS 2" AND SMALLER SHALL BE 125(250) LB. CAST IRON FITTINGS 2 1/2" AND LARGER SHALL BE 150(250) LB. WSP FLANGED OR BUTT WELDED.
   b. COMPRESSION AND FLARED FITTINGS: CAST BRASS ANSI B16.26. FLANGE GASKETS FOR JOINTS OF DISSIMILAR METALS: ISOLATING GASKETS, SLEEVES AND WASHERS BETWEEN FLANGES, BOLTS AND NUTS.
   c. PROVIDE 1/2" DRAIN VALVE AND CAPPED CONNECTIONS AT LOW POINTS. PROVIDE 3/4" CAPPED CONNECTION FOR DRAINING CONNECTION AT THE LOWEST POINT IN THE SYSTEM AND IN EQUIPMENT ROOM.
   d. TRAP SEAL IN CONDENSATE DRAIN PIPING SHALL BE MINIMUM 1" GREATER THAN THE STATIC PRESSURE IN THE SYSTEM.
   e. STEEL PIPING 2-1/2" AND ABOVE SHALL BE WELDED AND CONFORM TO THE LATEST REVISION OF: B31.1 CODE FOR PRESSURE PIPING CHAPTER V. ANSI 49.1 SAFETY IN WELDING AND CUTTING. API CODE FOR FUEL AND OTHER API GOVERNING PIPING.
   f. WELDERS SHALL BE QUALIFIED PER SECTION IX OF ASME. BOILER AND PRESSURE VESSEL CODE.
   g. STEEL PIPING 2" AND BELOW MAY BE SCREWED ENDS AND THREADED TO CORRECT LENGTHS.
   h. COPPER PIPING EXCEPT CONDENSATE DISCHARGE: (SILVER SOLDER) HIGH TEMPERATURE BRAZING ALLOY CONNECTION.
   i. COPPER PIPING FOR CONDENSATE DISCHARGE PIPING: 95-5 SOLDER JOINT CONNECTIONS.
   j. VALVES SHALL BE SUITABLE FOR THE SERVICE PRESSURE AND TEMPERATURE AND SHALL BE:
      1) GATE VALVE "JENKINS" FIGURE 270 OR APPROVED EQUAL. BRONZE 300 LBS S.W.P., SOLID WEDGE. INSIDE SCREW, RISING SPINDLE
      2) GLOBE VALVE "JENKINS" FIGURE 556. BRONZE, 300 LBS S.W.P., INSIDE SCREW, UNION BONNET, RENEWABLE DISC.
      3) CHECK VALVE "JENKINS" FIGURE 30A. BRONZE, 300 LBS S.W.P., INSIDE SCREW, UNION BONNET.
      4) BALANCING VALVE BELL AND GOSSETT "CIRCUIT SETTER".
      5) STRAINER "MEULLER STEAM SPECIALTY" MUESSCO NO. 11 OR APPROVED EQUAL. SCREWED ENDS UP TO 2 1/2", 300 LBS S.W.P., FORGED STEEL 8OR CAST STEEL BODY, 316 STAINLESS STEEL OR MONEL SCREEN WITH 1/8" PERFORATIONS
5. PRESSURE RELIEF VALVES:
   a. PRESSURE RELIEF VALVE BODIES SHALL HAVE SCREWED ENDS AND BE CONSTRUCTED OF BRONZE. THE MAIN VALVE IS TO BE MADE OF STAINLESS STEEL IN SIZES ½" TO 1½" AND OF BRONZE IS SIZES 2" TO 3". MANUFACTURER IS TO RECOMMEND LOADING SPRING SIZE BASED UPON APPROVED EQUIPMENT SPECIFICATIONS AND INTENDED APPLICATIONS. SPRINGS ARE TO BE CADMIUM PLATED STEEL. SPRING RATINGS SHALL COVER 5 TO 35 PSIG AND 25 TO 100 PSIG. THE SET PRESSURE SHALL BE ADJUSTABLE BY A STEEL SET SCREW.
   b. PRESSURE RELIEF VALVES SHALL BE OF THE SIZES AND CAPACITIES REQUIRED TO RELIEVE THE FLOW QUANTITIES INDICATED ON THE DRAWINGS IN ACCORDANCE WITH APPLICABLE ASME CODES.
   c. PRESSURE RELIEF VALVES SHALL GENERALLY BE SET FOR 10 PSI HIGHER THAN PRESSURE REDUCING VALVES DISCHARGE PRESSURE OR 10 PSI GREATER THAN THE WATER SYSTEM. PIPE TO DRAIN.
   d. PRESSURE RELIEF VALVES SHALL HAVE BRONZE BODIES WITH PRESSURE RATING IN EXCESS OF THAT ENCOUNTERED IN SERVICE. VALVES SHALL BE AS MANUFACTURED BY J.B. LONERGAN, WATSON McDANIEL, CONSOLIDATED OR APPROVED EQUAL.
6. PRESSURE GAUGES:

   PRESSURE GAUGES SHALL BE PHOSPHOR BRONZE BOURDON TUBE ACTUATED WITH A 4 1/2" CAST ALUMINUM CASE. THE RANGE OF THE GAUGE SHALL BE SUITABLE FOR THE SERVICE INTENDED. ALL PRESSURE GAUGES SHALL BE INSTALLED W

N. VALVE TAGS:

1. PROVIDE VALVE TAGS FOR EACH VALVE AND CONTROL DEVICE EXCEPT EQUIPMENT SHUTOFF VALVES LOCATED AT EQUIPMENT.

2. TAGS SHALL BE MINIMUM 2" DIAMETER, NO. 18 BS GAUGE BRASS, STAMPED IDENTIFYING LETTER AND NUMBER FILLED IN WITH BLACK PAINT, FASTENED BY HEAVY BRASS HOOK OR CHAIN.

3. USE DIFFERENT PATTERN TAGS THAN THOSE USED FOR PLUMBING OR SPRINKLER WORK.

O. EXPANSION JOINTS, GUIDES AND ANCHORS:

1. MAKE ADEQUATE PROVISIONS FOR EXPANSION IN ALL PIPING BY MEANS OF LOOPS, BENDS, OR OFFSETS. WHERE PIPE LINES JOIN OR WHERE BRANCHES OCCUR, MAKE PROVISIONS FOR THE EXPANSION OF BOTH LINES.

2. GUIDES:

   a. LOCATE AND CONSTRUCT WHEREVER REQUIRED TO PERMIT FREE AXIAL MOVEMENT ONLY.

   b. A MINIMUM OF TWO GUIDES SHALL BE INSTALLED ON EACH END OF AN EXPANSION JOINT PLUS AT LEAST ONE GUIDE BETWEEN TWO JOINTS.

3. ANCHOR PIPING WHERE NECESSARY TO CONTROL EXPANSION AND PREVENT UNDUE STRAIN ON THE FITTINGS AND APPARATUS.

4. ANCHORS: HEAVY CONSTRUCTION ATTACHED TO PIPE AND FASTENED TO STRUCTURE.

5. PROVIDE NECESSARY STEEL FOR CONNECTION TO STRUCTURE.

P. DUCTWORK AND ACCESSORIES:

1. SHEETMETAL DUCTWORK:

   a. ALL DUCTWORK SHALL BE FURNISHED, INSTALLED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA LOW PRESSURE AND MEDIUM PRESSURE DUCT CONSTRUCTION STANDARDS MANUALS, USING PRIME SHEETS OF ALUMINUM.

   b. ALL SQUARE ELBOWS SHALL BE PROVIDED WITH TURNING VANES ON MAXIMUM 4" CENTERS. ROUND ELBOWS SHALL HAVE FULL WIDTH RADIUS.

   c. ALL DUCT SYSTEMS SHALL BE TIGHT AND FREE FROM LEAKS AND VIBRATION. ALL JOINTS IN DUCTWORK SHALL BE SEALED AIRTIGHT. THIS INCLUDES ALL SUPPLY, RETURN AND EXHAUST DUCTWORK. DUCT SEALER DURODYNE 5-2C SHALL BE USED AND SHALL BE TESTED FOR AIRTIGHTNESS AFTER INSTALLATION.

   e. SUPPORT HORIZONTAL DUCTS WITH HANGERS SECURED TO STRUCTURAL STEEL ABOVE. INSTALL ADDITIONAL STEEL AS REQUIRED. CONSTRUCTION AS PER SMACNA MANUALS.

   f. PROVIDE ACCESS DOORS AT ALL FIRE AND AUTOMATIC DAMPERS FOR ACCESS. ALL ACCESS DOORS SHALL BE AS PER LATEST SMACNA STANDARDS.

2. DAMPERS:

   a. ALL BRANCHES AND TAKE-OFFS SHALL BE EQUIPPED WITH VOLUME DAMPERS. VOLUME DAMPERS SHALL BE MANUAL, OPPOSED BLADE TYPE, WITH LOCKING QUADRANT, CONSTRUCTED AS PER SMACNA MANUALS.

   b. SPLITTER DAMPERS: PROVIDE AT DUCT BRANCHES AND WHERE SHOWN ON THE DRAWINGS.

   c. AUTOMATIC DAMPERS SHALL HAVE INTERLOCKING BLADES AND FRAMES.THE DAMPERS SHALL BE DESIGNED AND CONSTRUCTED SO THAT THE BLADES, FRAMES AND LINKAGE MECHANISMS SHALL PRESENT A RIGID ASSEMBLY WITH FREE AND EASY ACTION. DAMPERS SHALL HAVE GALVANIZED STEEL BLADES AND WELDED STEEL FRAMES. DAMPER BEARINGS SHALL BE BRASS. ALL DAMPERS IN DUCTS SHALL HAVE THE TOP AND BOTTOM EDGES AND BOTH ENDS TRIMMED WITH NEOPRENE AND FASTENED IN AN APPROVED MANNER SO AS TO BE PRACTICALLY AIR TIGHT WHEN CLOSED.

3. FIRE DAMPERS:

   a. FURNISH AND INSTALL ALL FIRE DAMPERS REQUIRED BY THE LOCAL AND STATE RULES AND REGULATIONS, THE NFPA, AND THE LOCAL AUTHORITY. IN GENERAL, DAMPERS ARE REQUIRED WHEREVER DUCTS ENTER OR LEAVE SHAFTS OR PIERCE FIRE RATED CONSTRUCTIONS. DAMPERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ABOVE CODE REQUIREMENTS AND SHALL HAVE UL LABELS, AND AS APPROVED BY THE NEW YORK CITY BOARD OF STANDARDS AND APPEALS.

   b. THERE SHALL BE A TIGHT FITTING ACCESS DOOR IN THE DUCT SO LOCATED AND OF SUCH DIMENSIONS THAT EASY ACCESS MAY BE HAD TO EACH FIRE DAMPER. THE FUSIBLE LINK SHALL BE SO LOCATED AS TO BE READILY REMOVED AND SET FROM THE DOOR. THERE SHALL BE TWO OR MORE DOORS IN WIDE DUCTS, WHICH HAVE MORE THAN ONE DAMPER, ONE OPPOSITE EACH DAMPER. UNLESS OTHERWISE INDICATED, ALL FUSIBLE LINKS SHALL BE SELECTED FOR 160 F.

   c. FIRE DAMPERS SHALL BE AS MANUFACTURED BY RUSKIN MANUFACTURING CO., OR EQUAL AS APPROVED, MODEL NO. IBD2, STYLE B, BSA APPROVAL NO. 292-71-5A.

4. FLEXIBLE CONNECTIONS:

PROVIDE BETWEEN AIR HANDLING UNITS AND CONNECTING DUCTWORK AND PLENUMS. MATERIAL SHALL BE NEOPRENE FABRIC, INSTALL TO ALLOW MINIMUM MOVEMENT OF 3". PROVIDE BETWEEN INLINE EXHAUST FANS AND CONNECTING DUCTWORK.

a. FAN CONNECTIONS, BOTH AT INLET AND DISCHARGE, SHALL BE MADE WITH FLEXIBLE MATERIAL SO AS TO PROHIBIT THE TRANSFER OF VIBRATION FROM FANS TO DUCTWORK CONNECTING THERETO. CONNECTIONS SHALL BE MADE OF VINYL AND NEOPRENE CLOTH. ALL VIBRATION ISOLATION CONNECTORS IN DUCT SYSTEM SHALL BE MADE OF AN APPROVED FLAME RETARDANT FABRIC OR SHALL CONSIST OF SLEEVE JOINTS WITH PACKING OF APPROVED MATERIAL HAVING FLAME SPREAD RATING OF NOT OVER 25 AND SMOKE DEVELOPMENT RATING OF NOT OVER 50.

b. THE FLEXIBLE CONNECTIONS SHALL BE APPROXIMATELY 6 INCHES LONG AND HELD IN PLACE WITH HEAVY METAL BANDS OR DOUBLE HEMLOCK SECURELY ATTACHED TO PREVENT ANY LEAKAGE AT THE CONNECTION POINTS.

c. FLEXIBLE DUCT CONNECTIONS BETWEEN SUPPLY DUCTS AND SUPPLY DIFFUSER PLENUM ON COMBINATION LIGHTING FIXTURES SHALL BE WIREMOLD TYPE 54, OR THERMAFLEX TYPE A SPIRAL REINFORCED, FLEXIBLE HOSE. CONNECTIONS TO COLLARS ON THE SUPPLY DUCT AND THE DIFFUSER PLENUM SHALL BE SEALED WITH EC-800 SEALER AND CLAMPED WITH IDEAL TYPE 52 CLAMPS.

d. FLEXIBLE DUCT CONNECTIONS BETWEEN SUPPLY DUCTS AND SUPPLY DIFFUSER PLENUMS SHALL BE THERMAFLEX TYPE G-KM INSULATED DOUBLE AIR SEAL FLEXIBLE AIR DUCT SUITABLE FOR LOW AND MEDIUM PRESSURE SYSTEMS. CONNECTIONS TO THE SUPPLY DUCT AND THE DIFFUSER PLENUM SHALL BE SEALED AND CLAMPED AS REQUIRED.

5. TURNING VANES:

PROVIDE IN ALL MITER ELBOWS FACTORY FABRICATED AIR FOIL TURNING VANES. CONSTRUCTION SHALL BE AS PER SMACNA MANUALS. SECURE TO DUCT IN A RATTLE OR VIBRATION-FREE MANNER.

6. ACCESS DOORS:

PROVIDE IN ACCORDANCE WITH SMACNA DUCT MANUALS, AND WHERE SHOWN ON THE DRAWINGS. ACCESS DOORS SHALL BE INSULATED GASKETED, AND SHALL BE MADE LARGE ENOUGH TO EASILY SERVICE ALL DAMPERS AND CONTROL DEVICES.

Q. INSULATION:

ALL INSULATION (INCLUDING JACKET OR FACING AND ADHESIVE) SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURE ASTM E-84, NFPA 255 AND UL 723 NOT EXCEEDING A "FLAME SPREAD" OF 25 AND "SMOKE DEVELOPED" OF 50.

1. PIPING INSULATION:

   a. INSULATE ALL HOT WATER, REFRIGERANT AND CONDENSATE DRAIN PIPING.

   b. INSULATION FOR PIPING SHALL BE MOLDED FIBERGLASS, MAXIMUM 0.23 K-FACTOR AT 75 DEG. F MEAN TEMPERATURE, 4 LB. DENSITY WITH ALL PURPOSE JACKET. THE VAPOR BARRIER JACKET SHALL BE OF LAMINATED CONSTRUCTION USING ALUMINUM FOIL, REINFORCING, FLAME EXTINGUISHING ADHESIVE AND EMBOSSED KRAFT PAPER. ALL LONGITUDINAL JOINTS SHALL HAVE A 1 1/2" OVERLAP AND AT END JOINTS 3" WIDE STRIPS TO PROVIDE A POSITIVE AND CONTINUOUS VAPOR SEAL BARRIER.

   c. PIPE FITTINGS SHALL BE COVERED WITH THE SAME TYPE AND THICKNESS OF INSULATION AS THE ADJACENT PIPE LINES AND JACKETING. MITERED SEGMENTS OF PIPE INSULATION MAY BE USED WHERE PREMOLDED IS NOT MANUFACTURED.

   d. ENDS OF INSULATION AT SECTIONS OF PIPING WHICH ARE NOT TO BE INSULATED SHALL BE TAPERED TO A NEAT FINISH WITH OWENS CORNING CC-110 INSULATION.

   e. INSULATION THICKNESS SHALL BE AS FOLLOWS:

| HOT WATER PIPING (100 TO 250 DEG. F) | |
|---|---|
| PIPING UP TO 2": | 1½" |
| PIPING 2-1/2" TO 4": | 2" |
| CONDENSATE PIPING | ½" |

   f. FOR INSULATED PIPING EXPOSED TO OUTDOOR WEATHER, OUTER FINISH SHALL BE 0.016 IN THICK WEATHERPROOF ALUMINUM JACKET WITH LOCK SEAMS.

   g. INSULATE ALL REFRIGERANT PIPING WITH 1" THICK CELLULAR PLASTIC INSULATION.

2. DUCT INSULATION

   a. INSULATE ALL NEW SUPPLY AIR DUCTWORK (EXCEPT WHERE ACOUSTICALLY LINED) WITH A 1.5" THICKNESS, 1-1/2 POUND DENSITY, FIBROUS GLASS BLANKET DUCT INSULATION WITH A FACTORY APPLIED FOIL-SCRIM-KRAFT FACING AND MAXIUM K-FACTOR OF 0.25 AT 75F.

   b. APPLY ADHESIVE TO DUCT WITH A 2" OVERLAP OF FACING AT ALL INSULATION JOINT AND SEAMS. ALL JOINTS SHALL BE SEALED WITH "GLASFAB" TO FORM A CONTINUOUS VAPOR BARRIER. SECURE WITH TYING CORD.

   c. DUCT INSULATION SHALL BE OWENS CORNING ALL SERVICE FACED DUCT WRAP, OR APPROVED EQUAL.

   d. INSULATE/REINSULATE ALL EXISTING TO REMAIN SUPPLY AIR DUCTWORK WHERE INSULATION HAS BEEN REMOVED OR IS MISSING.

   e. INSULATE PLENUMS AND DUCTS ASSOCIATED WITH OUTSIDE AIR INTAKES AND THE CONDENSER AIR INTAKES AND DISCHARGES WITH A 1.5" THICK FIBERGLASS BOARD 3 LBS. MIN. DENSITY, THERMAL CONDUCTIVITY 0.23 AT 75°F AND WITH VAPOR BARRIER.

3. INSULATION INSTALLATION:

PRIOR TO APPLYING ANY INSULATION, ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETE AND APPROVED. ALL INSULATION SHALL BE BUTTED FIRMLY. USE 2" LAP STRIPS AT ALL SEAMS SECURED WITH ADHESIVE. NO STAPLES ARE PERMITTED. APPLY COAT OF VAPOR SEAL ADHESIVE WHERE REQUIRED.

R. ACOUSTICAL TREATMENT:

1. WHERE SHOWN ON THE DRAWINGS, LOW PRESSURE DUCTWORK SHALL BE LINED WITH 1" THICK, 1-1/2 POUND MINIMUM DENSITY, NEOPRENE COATED, FLEXIBLE FIBERGLASS DUCT LINER. LINING SHALL COMPLY WITH NFPA 90A AND SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING NOT MORE THAN 50. DUCT SIZES WHERE LINING IS INDICATED ON PLANS ARE MINIMUM INSIDE CLEAR DIMENSIONS REQUIRED.

2. WHERE ACOUSTICAL LINING IS INSTALLED, THE DUCT SHALL BE INCREASED IN SIZE SO THAT THE CLEAR INSIDE LINING DIMENSIONS MATCH THE DUCT SIZES ON THE DRAWINGS.

3. LINING SHALL BE SUITABLE FOR OPERATION UP TO A VELOCITY OF 4000 FPM. ADHERE LINING TO DUCTWORK WITH ADHESIVE OVER 100% OF CONTACT AREA.

S. AIR OUTLETS :

SQUARE CEILING DIFFUSERS:

THE DIFFUSERS SHALL BE: ANEMOSTAT, MODEL PG PARAGON PLAQUE CEILING DIFFUSERS. THE DIFFUSER SIZES SHALL BE NOMINAL 24" x 24" OR 12" x 12", AS SCHEDULED, WITH MINIMUM 18" OR 9" SQUARE APPEARANCE PANELS.

THE DIFFUSERS SHALL BE CONSTRUCTED OF STEEL, AND SHALL BE DESIGNED TO INTEGRATE WITH THE SPECIFIED CEILING SYSTEM TYPE. THE DIFFUSER SHALL CONSIST OF A BACK PAN AND A REMOVABLE, HEAVY GAUGE APPEARANCE PANEL ATTACHED TO THE BACK PAN VIA (4) POSITIVE LOCKING POSTS. THE APPEARANCE PANEL SHALL HAVE AERODYNAMIC, RIGID, HEMMED EDGES AROUND THE PERIMETER AND SHALL BE A SINGLE PIECE CONSTRUCTION. THE PANEL SHALL BE FLAT, SMOOTH, AND SHALL BE FREE OF ANY WELDING OR FORMING BLEMISHES.

THE HORIZONTAL AIR DISCHARGE PATTERN SHALL BE 360° TYPE. BLANK-OFF BAFFLES SHALL BE PROVIDED TO OBTAIN 1,2,OR 3 WAY BLOW PATTERNS AS SCHEDULED. THE SIZE AND ELEVATION OF THE APPEARANCE PANEL SHALL BE AS SCHEDULED FOR ANEMOSTAT'S TYPE A OR C MODELS.

PROVIDE VOLUME CONTROL, MODEL VD BUTTERFLY TYPE DAMPERS AS SCHEDULED. DAMPERS SHALL BE ADJUSTABLE FROM THE FACE.

DIFFUSER FINISH SHALL BE COLOR AS SELECTED BY THE ARCHITECT).

PROVIDE PUBLISHED PERFORMANCE DATA DETERMINED IN ACCORDANCE WITH THE LATEST ANSI/ASHRAE STANDARDS FOR THROW, PRESSURE, AND SOUND.

ROUND SUPPLY AND RETURN DIFFUSERS:

ANEMOSTAT C-27 AIR DIFFUSERS AS MANUFACTURED BY ANEMOSTAT PRODUCTS DIVISION AT EACH POINT INDICATED ON THE PLANS. THESE AIR DIFFUSERS ARE TO CONSIST OF FOUR EXPANDING AND DIVERGING HOLLOW CONES WITH CLOSED BEADS. THE CONES SHALL BE ARRANGED TO PROVIDE A MINIMUM OF THREE AIR PATHS, WHICH SHALL SIMULTANEOUSLY DIFFUSE THE AIR IN THE OCCUPIED ZONE WITHIN THE LIMITS OF 20 TO 50 FPM, AND ASPIRATE ROOM AIR INTO THE PASSAGEWAYS IN A VOLUME EQUAL TO 20 TO 30 PERCENT OF THE SPECIFIED DISCHARGE VOLUME.

TURNING THE SMALLEST CONE SHALL RAISE OR LOWER THE NEXT TO LARGEST CONE TO CHANGE THE AIR DISCHARGE PATTERN FROM HORIZONTAL TO DOWNWARD PROJECTION DISCHARGE. THE INNER ASSEMBLY SHALL BE REMOVABLE FROM THE OUTER CONE AFTER RELEASE OF A SPRING LOCK BY A TWIST OF THE INNER CONES.

THE AIR DIFFUSER SHALL BE STEEL, PAINTED ARCTIC WHITE.

RETURN / EXHAUST GRILLES AND REGISTERS :

RETURN / EXHAUST GRILLES & REGISTERS SHALL BE ANEMOSTAT MODEL 30 (3/4" BLADE SPACING) FIXED BLADE, NON-ADJUSTABLE GRILLES, MANUFACTURED FROM (STEEL, ALUMINUM, STAINLESS STEEL) AS SCHEDULED. PROVIDE SIZES AND MOUNTING TYPES AS SCHEDULED. FOR SURFACE MOUNTING APPLICATIONS, COUNTERSUNK MOUNTING HOLES SHALL BE PROVIDED IN THE BORDER, WITH OVAL HEAD SCREWS ALSO PROVIDED BY THE GRILLE MANUFACTURER.

BLADES SHALL BE ON 3/4" SPACING, AND SHALL RUN HORIZONTAL OR VERTICAL (SHORT OR LONG DIMENSION) AS SHOWN. BLADES SHALL BE POSITIONED AT 0° OR 45° DEFLECTION ANGLES, AND HELD RIGIDLY FIXED IN PLACE BY REAR MULLIONS WELDED TO THE GRILLE FRAME. CORNERS SHALL BE WELDED OR STAKED FOR NEAT, UNIFORM MITERED CORNERS.

WHERE SCHEDULED, INCLUDE STEEL, ALUMINUM, OR STAINLESS STEEL OPPOSED BLADE VOLUME CONTROL DAMPERS.

PROVIDE A CUSTOM COLOR AS SELECTED BY THE ARCHITECT.

HEAVY DUTY STEEL EXHAUST / RETURN GRILLES & REGISTERS:

ANEMOSTAT, MODEL HD3 (3/4" BLADE SPACING) AS SCHEDULED. PROVIDE SIZES AND MOUNTING TYPES AS SCHEDULED. FOR SURFACE MOUNTING APPLICATIONS, COUNTERSUNK MOUNTING HOLES SHALL BE PROVIDED IN THE BORDER, WITH OVAL HEAD SCREWS ALSO PROVIDED BY THE GRILLE MANUFACTURER. THE GRILLES SHALL CONSIST OF A MINIMUM 16 GAUGE STEEL OUTER BORDER OR FRAME WITH BLADES RUNNING HORIZONTAL OR VERTICAL (SHORT OR LONG DIMENSION) AS SHOWN. MINIMUM 13 GAUGE STEEL FRONT BLADES SHALL PENETRATE THROUGH MINIMUM 13 GAUGE STEEL SUPPORT MULLIONS, SPACED 6" CENTERS MAXIMUM. SUPPORT MULLIONS SHALL BE ARC WELDED AT THE FRAME TO PROVIDE A HEAVY, IMPACT RESISTANT ASSEMBLY. BLADES SHALL BE FIXED AT A 0° DEFLECTION ANGLE. CORNERS SHALL BE WELDED OR STAKED FOR NEAT, UNIFORM MITERED CORNERS. ALUMINUM DESIGNS / ASSEMBLIES ARE NOT APPROVED WITHOUT INDEPENDENT TEST RESULTS VERIFYING IMPACT RESISTANCE EQUIVALENT TO STEEL CONSTRUCTION. WHERE SCHEDULED, INCLUDE STEEL OR ALUMINUM OPPOSED BLADE VOLUME CONTROL DAMPERS. PROVIDE A CUSTOM COLOR AS SELECTED BY THE ARCHITECT.

STAINLESS LINEAR BAR GRILLES:

MODEL SSB AS MANUFACTURED BY ANEMOSTAT, THE GRILLES SHALL CONSIST OF A (FLANGED) OUTER FRAME, AND CORE CONFIGURATION AS SCHEDULED. CORE BARS SHALL BE (1/4") WIDE, FIXED ON (1/2") CENTERS, WITH A (0")/(15") DEGREE DEFLECTION ANGLE. THE CORE ASSEMBLY SHALL BE WELDED TO THE OUTER FRAME. THE GRILLE SHALL BE INSTALLED USING (FACE SCREWS). IT SHALL BE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO PROVIDE APPROPRIATE DUCT SUPPORTS, ANGLES, AND STRAPS TO INSTALL THE GRILLES AS DETAILED. GRILLE LENGTHS SHALL BE PROVIDED UP TO 6' AS A SINGLE ASSEMBLY WITHOUT JOINTS, AND UP TO 18" IN HEIGHT AS A
SINGLE CORE. LONGER CONTINUOUS RUNS SHALL BE CONSTRUCTED FROM MULTIPLE UNITS, AND ALIGNED WITH ALIGNMENT HARDWARE FROM THE GRILLE MANUFACTURER.

GRILLES SHALL BE CONSTRUCTED FROM (316) STAINLESS STEEL AND SHALL BE ALL WELDED.

FINISH SHALL BE SATIN POLISH.

T. VIBRATION ISOLATION:

ALL MOTOR DRIVEN MECHANICAL EQUIPMENT SHALL BE MOUNTED ON SPRING ISOLATION SUPPORTS. THE ISOLATION MANUFACTURER SHALL SUPPLY ALL ISOLATION EQUIPMENT. WHERE AIR HANDLING PACKAGE TYPE UNITS ARE FLOOR MOUNTED, ISOLATION UNITS ARE TO BE MOUNTED BETWEEN UNIT AND HEAVY-ANGLE IRON FRAMEWORK. PLATFORM FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR.

PROVIDE VIBRATION ISOLATION FOR PIPING AND DUCTWORK.

1. VIBRATION CONTROL EQUIPMENT SHALL BE BY MASON INDUSTRIES, VIBRATION ELIMINATOR CO., OR VIBRATION MOUNTING AND CONTROLS.

2. SPRING ISOLATORS SHALL BE EQUIPPED WITH SOUND DEADENING PADS AND LEVELING BOLTS AND SHALL BE UNHOUSED, FREE STANDING AND STABLE. ISOLATORS SHALL BE DESIGNED AND CONSTRUCTED SO THAT ENDS OF SPRINGS REMAIN PARALLEL DURING DEFLECTION AND ANY HORIZONTAL MOVEMENT OF THE ISOLATION BASE BE LIMITED TO A MAXIMUM OF 1/4". SPRINGS SHALL HAVE A RUNOUT OF AT LEASET 50% OF THE DESIGNED DEFLECTION. WHERE TO FLOOR SUPPORT IS NOT CONSIDERED NECESSARY BY THE ISOLATION MANUFACTURERS, ISOLATORS SHALL

3. BE EQUIPPED WITH NON-SKID RUBBER PADS.

4. FANS SHALL BE MOUNTED ON RUBBER-IN SHEAR VIBRATION HANGERS.

   A/C UNITS SUSPENDED ABOVE CEILING SHALL BE INSTALLED ON SPRING HANGERS.

U. MISCELLANEOUS PROVISIONS:

5. 1. PAINT ALL SUPPORTING STEEL. PATCH EXISTING BEAM FIREPROOFING WHERE STEEL IS EXPOSED.

6. 2. TOUCH UP WITH MATCHING PAINT ALL EQUIPMENT WHERE NECESSARY.

3. PROVIDE CONDENSATE DRAIN PIPING WITH CLEANABLE P-TRAPS. DRAIN SHALL BE FULL SIZE OF THE COIL DRAIN CONNECTIONS, BUT NOT LESS THAN 3/4".

4. SEAL OPENINGS AROUND DUCTS AND PIPE THROUGH FULL HEIGHT WALLS WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL, MAINTAIN INTEGRITY OF SOUND ISOLATION AROUND DUCTS PENETRATING SOUND INSULATED WALLS.

5. PROVIDE A SPARE SET OF FILTERS FOR EACH AIR CONDITIONING UNIT.

V. MECHANICAL VENTILATION NOTES:

1. UPON COMPLETION OF THE VENTILATING SYSTEMS, A TEST SHALL BE CONDUCTED IN THE PRESENCE AND UNDER THE DIRECTION OF A PROFESSIONAL LICENSED ENGINEER OR REGISTERED ARCHITECT QUALIFIED TO CONDUCT SUCH TESTS OR OTHER PERSON HAVING NOT LESS THAN FIVE FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF VENTILATION SYSTEMS, AND QUALIFIED TO CONDUCT SUCH TESTS. THE TESTS SHALL SHOW COMPLIANCE WITH THE CODE REQUIREMENTS FOR VENTILATION AND THE PROPER FUNCTIONING OF ALL OPERATING DEVICES OPERATING DEVICES BEFORE THE SYSTEM IS APPROVED.

2. THE LICENSED PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT OR OTHER QUALIFIED PERSON WHO CONDUCTS THE TEST SHALL FILE A CERTIFICATE AND REPORT OF TEST AS TO WHETHER THE TEST SHOWS THAT THE RATE OF AIR SUPPLY AND EXHAUST COMPLIES WITH THE REQUIREMENTS OF THE PERTAINING TO VENTILATION.

3. A STATEMENT SHALL BE FILED BY THE OWNER THAT THE SYSTEM OF VENTILATING SHALL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING NORMAL OCCUPANCY OF THE STRUCTURE AS PROVIDED IN THE APPLICABLE SECTIONS OF THE CODE.

4. ALL FIRE DAMPERS TO COMPLY WITH REQUIREMENTS OF BOARD OF FIRE UNDERWRITERS, SEE NFPA NO.90A, RUSKIN, B.S. A. NO.292-71-5A.

5. SYSTEM WILL COMPLY WITH 2014 NYC BUILDING CODE MOST RECENT EDITION, RELATING TO THE INSTALLATION OF VENTILATING SYSTEMS.

6. HVAC EQUIPMENT SHALL BE APPROVED BY BOARD OF STANDARDS AND APPEALS AND CONTRACTOR SHALL PROVIDE B.S. A. NUMBER OF EQUIPMENT PURCHASED AND APPROVED FOR INSTALLATION.

7. THE ENTIRE VENTILATION SYSTEM WILL BE INSTALLED IN STRICT ACCORDANCE WITH THE N.Y.C. BUILDING CODE AND THE RULES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

8. CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM ALL REQUIRED CONTROLLED INSPECTIONS SAME SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS.

9. FIRE DAMPERS SHALL BE PROVIDED IN ALL DUCTWORK AS PER REQUIREMENTS OF 2014 NYC CODE.

10. AN EQUIPMENT USE PERMIT SHALL BE FILED BY THE CONTRACTOR FOR ALL AIR CONDITIONING AND VENTILATING SYSTEMS.

11. PROVIDE FLAME AND SMOKE RATED FLEXIBLE CONNECTIONS FOR ALL EXHAUST FANS AND AT MEDIUM PRESSURE SIDE OF VAV BOXES AS PER RS 13-1 CHAPTER 3 OF THE 2014 NYC CODE.

12. FIRE DAMPERS SHALL BE INSTALLED IN EXHAUST AND RETURN DUCTWORK IN ACCORDANCE WITH REQUIREMENTS OF 2014 NYC CODE.

W. EQUIPMENT OPERATING INSTRUCTIONS:

1. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS TO THE OWNER ON THE PROPER START-UP, OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

2. THESE INSTRUCTION SHALL BE TYPED ON 8 1/2" X 11" PAPER AND BOUND IN THREE-RING BINDERS WITH CLEAR ACETATE COVERS. THE CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTION TO THE OWNER.

3. UNIT MANUFACTURER SHALL PROVIDE 16 HOURS OF TRAINING FOR THE USE AND OPERATION OF ALL THE HVAC EQUIPMENT SHOWN ON THESE DRAWINGS.

X. TESTING AND BALANCING:

1. GENERAL:

   a. WORK OF THIS SECTION INCLUDES ALL LABOR AND SERVICES NECESSARY FOR COMPLETING THE INSPECTION, TESTING, INITIAL START-UP AND BALANCING OF ALL EQUIPMENT, AIR AND WATER SYSTEMS OF THE HVAC WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

   b. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT AIR AND WATER BALANCE TESTING COMPANY, SPECIALIZING IN, AND WHOSE BUSINESS IS LIMITED TO, TESTING AND BALANCING OF HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS. THE BALANCING CONTRACTOR SELECTED SHALL MEET ALL REQUIREMENTS NECESSARY FOR MEMBERSHIP IN THE ASSOCIATED AIR BALANCE COUNCIL.

   c. BALANCING CONTRACTOR SHALL TEST AND BALANCE ALL AIR AND WATER SYSTEMS AS FURTHER SPECIFIED HEREIN. ALL WORK BY THIS CONTRACTOR SHALL BE UNDER THE DIRECT SUPERVISION OF A QUALIFIED TEST AND BALANCE ENGINEER EMPLOYED BY THEM. ALL INSTRUMENTS USED BY THIS CONTRACTOR SHALL BE ACCURATELY CALIBRATED AND MAINTAINED IN GOOD WORKING ORDER.

2. AIR SYSTEMS:

   a. REQUEST FROM BUILDING ENGINEER TIME FOR TESTING TO BE PERFORMED. REQUEST THAT BUILDING SYSTEMS BE SET 100% CAPACITY. BALANCE AIR FLOW TO ALL OUTLETS TO PROVIDE AIR QUANTITIES NOTED. SUBMIT A DETAILED CERTIFIED BALANCING REPORT, SHOWING INSTRUMENTS USED, SUCTION AND DISCHARGE STATIC PRESSURE OF AIR HANDLERS AND EXHAUST FANS, SUPPLY, RETURN AND OUTSIDE AIR TEMPERATURES AND ACTUAL VERSUS DESIGN AIR QUANTITIES FROM DIFFUSERS, GRILLES, REGISTERS, ETC. AFTER ADJUSTMENTS.

   b. THE QUANTITY OF AIR DISCHARGED BY EACH OUTLET SHALL BE WITHIN 10% OF THE AMOUNT SHOWN ON THE DRAWINGS.

   c. THE QUANTITY OF AIR DISCHARGED BY EACH AIR HANDLING SYSTEM SHALL BE WITHIN 5% OF THE TOTAL OF THE ASSOCIATED OUTLETS.

3. WATER SYSTEMS:

   a. PROVIDE NECESSARY PIPING AND CONNECTIONS FOR BALANCING ALL WATER SYSTEMS. OPERATE WATER SYSTEMS AT FULL FLOW AND PERFORM NECESSARY ADJUSTMENTS AND BALANCING TO DELIVER WATER QUANTITIES TO ALL SYSTEM COMPONENTS AS SCHEDULED ON THE DRAWINGS.

   b. SUBMIT FLOW TEST DATA FOR WATER SYSTEMS, INCLUDING GPM, TEMPERATURES AND PRESSURE DROPS.

   c. STRAINERS SHALL BE CLEANED AT COMPLETION OF FLOW TEST. AFTER THE ENTIRE SYSTEM HAS BEEN ADJUSTED, OPERATE THE SYSTEM UNDER CONDITIONS, MAKING ALL ADDITIONAL ADJUSTMENTS UNTIL ALL PERFORMANCE REQUIREMENTS ARE MET.

   d. AFTER THE HOT WATER PIPING IS INSTALLED AND BEFORE ANY INSULATION IS APPLIED OR THE PIPING IS CONNECTED TO THE MAIN HOT WATER SYSTEM, THE CONTRACTOR SHALL PERFORM A DRY PIPE TEST WITH NITROGEN TO 400 PSIG AND TEST FOR LEAKS. THE PRESSURE SHALL BE MAINTAINED WHILE VISUAL INSPECTION IS WITNESSED BY THE BUILDING ENGINEER, AND THE PIPING UNDER TEST, SHALL HOLD ITS PRESSURE FOR A PERIOD FOR A MINIMUM PERIOD OF TWO (2) HOURS. CAULKING OF LEAKING JOINTS SHALL NOT BE PERMITTED. GAUGES AND ANY OTHER SUCH EQUIPMENT OR APPARATUS THAT TESTS MAY DAMAGE SHALL NOT BE SUBJECT TO THE ABOVE TEST.

Y. AUTOMATIC CONTROLS:

MECHANICAL CONTRACTOR TO RETAIN THE SERVICES OF A QUALIFIED AUTOMATIC CONTROLS CONTRACTOR. THE INTENT OF THIS SECTION IS TO DESCRIBE THE COMPLETE FUNCTIONAL CONTROL OF ALL MECHANICAL EQUIPMENT, SYSTEMS AND DEVICES OF THE PROJECT. THIS CONTRACTOR IS TO FURNISH AND INSTALL AS REQUIRED ELECTRIC/ELECTRONIC CONTROLS, ALL NECESSARY COMPONENTS, CONTROL WIRING, INTERLOCK WIRING, WIRING CONTACTORS, THERMOSTATS, RELAYS, P.E.S, CONTROL TRANSFORMERS, STARTERS, ALARMS, CONTROL VALVES, ETC. TO ACHIEVE THE DESIRED CONTROL OPERATION FOR THE AIR CONDITIONING SYSTEMS.

Z. ROOFTOP UNIT (RTU-1):

1. GENERAL:

   AIR COOLED PACKAGED UNIT SHALL INCLUDE COMPRESSOR(S), EVAPORATOR AND CONDENSER COILS WITH FAN(S), REFRIGERATION PIPING, ELECTRICAL COMPONENTS AND ENCLOSING CABINET. THE UNITS SHALL BE FACTORY ASSEMBLED, INTERNALLY WIRED, FULLY REFRIGERANT CHARGED WITH R410A (EXCEPT FOR UNIT WHICH EVAPORATOR SECTION AND CONDENSER SECTION ARE SHIPPED LOOSELY AND COMBINED AT FIELD - REFRIGERANT CHARGE WILL BE FIELD SUPPLIED AND CHARGED) AND ARE DESIGNED FOR OUTDOOR ROOFTOP INSTALLATION ON A ROOF O CURB. THE UNITS SHALL BE CAPABLE TO OPERATE UP TO 115°F AMBIENT TEMPERATURE WITHOUT FAILURE.

2. CABINET

   THE UNIT CABINET SHALL BE CONSTRUCTED FROM HEAVY GAUGE GALVANIZED STEEL WITH EPOXY PAINTED FOR EXCELLENT FINISHED, WEATHERABILITY AND CORROSION RESISTANCE UP TO 1000 HOURS SALT SPRAY TEST ACCORDING TO ASTM B-117. EVAPORATOR SECTION SHALL BE OF 1 INCH THICK DOUBLE SKIN PANELS WITH INJECTED POLYURETHANE FOAM INSULATION WITH DENSITY 2.5LBS/FT$^3$ SANDWICHED BETWEEN GALVANIZED STEEL. HINGED ACCESS DOORS SHALL BE PROVIDED FOR EASY SERVICE AND MAINTENANCE OF UNIT INTERNAL PARTS. UNIT BASE SHALL BE WATERTIGHT WITH HEAVY GAUGE SHEET METAL OR FORMED CHANNELS FOR RECESS AND CURB OVERHANG. UNIT LIFTING LUGS SHALL ACCEPT CHAINS OR CABLES FOR RIGGING. L

7. CONDENSER COIL

CONDENSER COIL SHALL BE AIR COOLED WITH INTEGRAL SUB-COOLING CIRCUIT, CONSTRUCTED FROM STAGGERED ROW OF 3/8"OD INNER GROOVED SEAMLESS COPPER TUBE, MECHANICALLY BONDED TO ALUMINUM FINS (ALUMINUM COATED FIN/HYDROPHILIC FIN FOR HEAT PUMP MODELS) WITH GALVANIZED COIL PLATES. THE COIL SHALL BE FACTORY LEAK AND PRESSURE TESTED TO 650PSIG (45 BAR) UNDER WATER.

8. CONDENSER FAN AND MOTOR

CONDENSER FAN SHALL BE DIRECT DRIVEN PROPELLER TYPE DISCHARGING AIR VERTICALLY UPWARD. CONDENSER FANS SHALL BE CONSTRUCTED OF CORROSION RESISTANT BLADES AND ARE STATICALLY AND DYNAMICALLY BALANCED. CONDENSER FAN MOTORS SHALL BE OF OPEN AIR OVER (OPAO) ENCLOSURE, 6-POLES WITH CLASS H INSULATION AND WIRED TO UNIT CONTROL PANEL. THE CONDENSER FAN ASSEMBLY SHALL BE PROVIDED WITH HEAVY GAUGE AND RUST RESISTANT STEEL WIRE FAN GUARD.

9. FILTERS, HIGH EFFICIENCY MERV 8

UNITS SHALL BE PROVIDED WITH 2" THICK DISPOSABLE HIGH EFFICIENCY PLEATED FILTERS HAVING AVERAGE DUST SPOT EFFICIENCY OF 25-35% IN ACCORDANCE WITH ASHRAE52-76.

10. ELECTRICAL CONTROL PANEL

THE UNIT MOUNTED CONTROL PANEL ENCLOSURE SHALL BE CONSTRUCTED FROM HEAVY GAUGE GALVANIZED STEEL WITH EPOXY PAINTED FOR EXCELLENT FINISHED, WEATHERABILITY AND CORROSION RESISTANCE. THE ENCLOSURE SHALL CONFORM TO IP54. HINGED AND LOCK TYPE ACCESS DOOR SHALL BE PROVIDED FOR EASY ACCESS AND SECURITY. THE CONTROL PANEL SHALL BE COMPLETELY FACTORY WIRED AND SHALL INCLUDE STANDARD IEC DOL (NON UL) WITH FIXED SPEED COMPRESSOR, EVAPORATOR FAN MOTOR AND CONDENSER FAN MOTOR CIRCUIT BREAKER AND CONTACTORS, COMPRESSOR AND EVAPORATOR FAN MOTOR THERMAL OVERLOAD RELAYS, ANTI-RECYCLING TIME DELAY, FUSE, POWER AND CONTROL CIRCUIT TERMINAL BLOCKS AND FEATURES 115V OR 24V CONTROLS WITH 460V/3PH/60HZ, 208V/3PH/60HZ, 230V/3PH/60HZ OR 575V/3PH/60HZ POWER SUPPLY WITH EARTH. THE UNITS CONTROL PANEL IS FULLY WIRED READY TO ACCEPT THE MAIN POWER SUPPLY (EXCEPT FOR UNIT WHEREBY EVAPORATOR AND CONDENSER SECTION IS SHIPPED LOOSELY, SIMPLE WIRING CONNECTION SHALL BE FULFILLED AT FIELD)

11. DB DIRECTOR / MICRO DB DIRECTOR CONTROL

THE UNIT SHALL BE PROVIDED WITH DB DIRECTOR / MICRO DB DIRECTOR CONTROL SYSTEM WITH THE FOLLOWING FEATURES:
- THE CONTROL ALGORITHM AND PARAMETERS SHALL BE STORED IN FLASH MEMORY AND EPROM OF THE CONTROLLER AND SHALL RETAIN EVEN IN THE EVENT OF POWER FAILURES, WITHOUT REQUIRING EXTERNAL BACKUP BATTERY
- USER INTERFACE WITH DISPLAY
- TEMPERATURE CONTROLLED
- CONFIGURABLE BY USER
- ALARM STATUS/DISPLAY
- ANALOG INPUT/OUTPUT DISPLAY
- DIGITAL INPUT/OUTPUT STATUS
- REMOTE START/STOP INPUT
- GENERAL ALARM OUTPUT
- SELF-DIAGNOSTICS
- SECURITY PASSWORD ACCESS WITH MULTIPLE ACCESS LEVEL FOR ADVANCED SETTINGS
- UNIT STATUS DISPLAY

12. DEFROST CONTROLS

ADAPTIVE DEMAND DEFROST SHALL BE PROVIDED TO PERMIT DEFROST WHEREVER COIL ICING CONDITIONS BEGIN TO SIGNIFICANTLY REDUCE UNIT CAPACITY

13. BUILT-IN BMS COMMUNICATION

MODBUS RTU / BACNET MSTP COMMUNICATION PROTOCOL IS BUILT-IN TO THE MAIN CONTROLLER AND COMES AS A STANDARD FEATURE FOR MICRO DB DIRECTOR. FOR DB DIRECTOR CONTROLLER, BACNET IP, MODBUS IP OR MODBUS RTU COMES AS A STANDARD IN BUILT FEATURE.

14. PRESSURE TRANSDUCERS ON SUCTION AND DISCHARGE LINE

PRESSURE TRANSDUCERS ARE PROVIDED AS STANDARD IN SUCTION AND DISCHARGE LINES OF EACH SYSTEM. THE OPERATING PRESSURE READING WILL BE DISPLAYED ON THE CONTROLLER USER INTERFACE.

AA. AIR HANDLING UNIT (AHU-1):

1. CABINET

A. CABINET SHALL BE UNPAINTED NON-WEATHERIZED AND CONSTRUCTED OF SCRATCH RESISTANT HEAVY DUTY GALVANIZED G90 STEEL.
A. CABINET SHALL BE MODULAR IN CONSTRUCTION, SHIPPED AS A SELF-CONTAINED UNIT ON A SINGLE SKID FROM THE MANUFACTURER. UNITS SHALL BE ABLE TO SHIP IN TWO SECTIONS, ON SEPARATE SKIDS, DEPENDING ON UNIT SIZE OR IF ORDERED AS SECTIONAL SHIPMENT IN ORDER TO FACILITATE RIGGING AND PLACEMENT.
B. CABINET ACCESS PANELS SHALL FIT INTO RECESSED POCKETS WITHIN THE CABINET STRUCTURE AND HELD IN PLACE WITH SCREWS. RECESSED AREAS WILL BE LINED WITH FLEXIBLE GASKET TO MINIMIZE AIR LEAKAGE.
C. PANELS SHALL ALLOW ACCESS TO KEY INTERNAL COMPONENTS TO FACILITATE INSTALLATION, MAINTENANCE AND SERVICING OF THE UNIT.
D. ACCESS TO HIGH AND LOW SIDE SCHRADER FITTINGS FOR REFRIGERANT PRESSURES, WHILE UNIT IS OPERATIONAL, SHALL BE MADE THROUGH HOLES PROVIDED IN THE CONDENSING SECTION CORNER POSTS.
E. ALL DUCT FLANGES SHALL BE FACTORY-INSTALLED ON EACH CABINET SECTION PRIOR TO SHIPMENT.
F. CABINET AND REMOVABLE PANELS SHALL BE LINED WITH BIO-BASED ½", 2LB/FT3 DENSITY FIBERGLASS THERMAL/ACOUSTIC INSULATION WHICH MEETS NFPA 90A AND 90B/ASTM-C1071 TYPE 1/ASTM G 21/ CAN ULC S102-M88 / CAN CGSB-51.11-92 REQUIREMENTS. INSULATION SHALL BE CERTIFIED AS A LOW EMITTING PRODUCT BY THE GREENGUARD ENVIRONMENTAL INSTITUTE. INSULATION SHALL BE COMPOSED OF MORE THAN 60% RECYCLED POST-CONSUMER GLASS CONTENT. INSULATION SHALL NOT PROMOTE OR SUPPORT THE GROWTH OF MOLD, FUNGI OR BACTERIA.

2. REFRIGERANT CIRCUIT

A. A. EACH REFRIGERANT CIRCUIT SHALL BE PROVIDED WITH HIGH AND LOW-SIDE SCHRADER ACCESS VALVES, SIGHT GLASS WITH INTEGRAL MOISTURE INDICATOR VISIBLE FROM CABINET EXTERIOR, FILTER-DRIER, MAXIMUM OPERATING PRESSURE (MOP) EXPANSION VALVE WITH EXTERNAL EQUALIZER LINE, MANUAL RESET HIGH AND AUTO-RESET LOW PRESSURE SAFETY SWITCHES.
B. B. EACH REFRIGERANT CIRCUIT WILL BE FACTORY LEAK TESTED, EVACUATED, AND CHARGED WITH R-410A REFRIGERANT PRIOR TO SHIPMENT. NO FIELD PIPING, BRAZING, EVACUATION OR REFRIGERANT CHARGING SHALL BE REQUIRED FOR SINGLE PACKAGE INSTALLATIONS.
C. C. EACH SECTION (12 THROUGH 35 TONS) IS TO BE PROVIDED WITH RESEALABLE REFRIGERANT FITTINGS IN ORDER TO PRESERVE THE FACTORY REFRIGERANT CHARGE AND TO FACILITATE ASSEMBLY OF SPLIT SECTIONS WITHOUT LOSS OF THE REFRIGERANT CIRCUIT INTEGRITY.
D. C. RESEALABLE REFRIGERANT FITTINGS (3 THROUGH 10 TONS) - EACH SECTION IS TO BE PROVIDED WITH RESEALABLE REFRIGERANT FITTINGS IN ORDER TO PRESERVE THE FACTORY REFRIGERANT CHARGE AND TO FACILITATE ASSEMBLY OF SPLIT SECTIONS WITHOUT LOSS OF THE REFRIGERANT CIRCUIT INTEGRITY.

3. COMPRESSORS

A. EACH COMPRESSOR SHALL BE HIGH-EFFICIENCY, HEAVY DUTY, SINGLE-SPEED, SUCTION-COOLED HERMETIC SCROLL TYPE, OPERATING AT 3450 RPM ON 60HZ. THE COMPRESSOR SHALL CONTAIN INTERNAL OVERLOAD PROTECTION.
B. COMPRESSOR SHALL UTILIZE INTERNAL SPRING VIBRATION ISOLATORS AND EXTERNAL RUBBER IN SHEAR (RIS) MOUNTING TO MINIMIZE SOUND AND VIBRATION TRANSMISSION.
C. UNITS WITH MULTIPLE COMPRESSORS SHALL HAVE SEPARATE INDEPENDENT REFRIGERANT CIRCUITS.
D. COMPRESSOR ACOUSTIC COVER - EACH COMPRESSOR SHALL BE PROVIDED WITH A REMOVABLE COMPRESSOR COVER USING 1.2-2# DENSITY ACOUSTICAL FIBERGLASS SURROUNDED BY A TOUGH, DURABLE, WEATHER-PROOF, FLAME RESISTANT COVERING.

4. EVAPORATOR COIL SECTION

A. THE DIRECT EXPANSION EVAPORATOR COIL SHALL BE CONFIGURED FOR DRAW-THRU AIRFLOW DESIGN FOR UNIFORM AIR DISTRIBUTION ACROSS THE COIL FACE. IT SHALL BE MADE WITH HEAVY WALL SEAMLESS COPPER TUBES MECHANICALLY EXPANDED INTO TEMPERED ALUMINUM FINS WITH DRAWN SELF-SPACING COLLARS. COIL END SHEETS SHALL BE HOT-DIPPED GALVANIZED. ALL COILS SHALL BE FACTORY LEAK CHECKED UNDER PRESSURE. DUAL CIRCUIT UNITS SHALL UTILIZE INTERLACED EVAPORATOR COILS.
B. EVAPORATOR COIL SECTION SHALL BE EQUIPPED WITH A DOUBLE SLOPED 304 STAINLESS STEEL DRAIN PAN WITH MINIMUM 1" IPS CONDENSATE DRAIN CONNECTIONS. CONDENSATE SHALL BE REMOVABLE FROM EITHER SIDE OF THE UNIT. DRAIN PAN SHALL EXTEND TO THE ENTIRE LENGTH AND WIDTH OF THE EVAPORATOR COIL.
C. EVAPORATOR SECTION AIR PATH SHALL BE AS SHOWN ON PROJECT DRAWINGS.

5. AIR-COOLED CONDENSING SECTION

A. THE CONDENSER WILL BE OUTDOOR WITH PROPELLER FANS.
B. CONDENSING SECTION AIR PATH SHALL BE AS SHOWN ON PROJECT DRAWINGS.

6. BLOWER / MOTOR ASSEMBLIES

A. THE EVAPORATOR AND CONDENSER CENTRIFUGAL BLOWER ASSEMBLIES SHALL BE BELT DRIVEN WITH DOUBLE WIDTH, DOUBLE INLET HOUSING AND FORWARD-CURVED TAB LOCKED BLADES MOUNTED ON A SOLID KEYED SHAFT. THE HUB SHALL BE PRECISION MACHINED AND INCORPORATE A KEYWAY AND A LOCKING SCREW.
B. THE SHAFT SHALL BE HARDENED STEEL, PRECISION GROUND AND POLISHED. SHAFTS SHALL INCLUDE A KEYWAY FOR THE WHEEL HUB AND THE PULLEY. ALL SHAFTS SHALL BE COATED FOR CORROSION PROTECTION.
C. BEARINGS SHALL BE SIZED FOR AN L50 LIFE OF 200,000 HOURS OF SERVICE PER AFBMA STANDARDS. BEARINGS SHALL BE MOUNTED IN A RUBBER INTER-LINER FITTED INTO A SPIDER BRACKET FOR 3 THROUGH 15 TON EVAPORATOR BLOWERS. THESE BEARINGS SHALL BE PERMANENTLY LUBRICATED AND SEALED. ALL 12 THROUGH 35 TON CONDENSER BLOWERS AND 20 THROUGH 35 TON EVAPORATOR BLOWERS SHALL HAVE PILLOW BLOCK BEARINGS. ALL PILLOW BLOCK BEARINGS SHALL INCLUDE RE-LUBRICATION FITTINGS.
D. ALL WHEELS ARE TO BE BALANCED, BOTH STATICALLY AND DYNAMICALLY, TO AN ACCURACY GRADE OF G = 6.3 IN ACCORDANCE TO DIN ISO 1940-1 AND ANSI S2.19-1989.
E. THE MOTOR SHALL HAVE AN ADJUSTABLE BASE FOR TENSIONING OF BELTS AND A LOCKING MECHANISM TO PREVENT THE MOTORS FROM SHIFTING.
F. THE BLOWER FIXED PULLEY SHALL BE CAST IRON, KEYED TO THE SHAFT, AND THE MOTOR SHEAVE SHALL HAVE AN ADJUSTABLE PITCH IN ORDER TO ALLOW FOR FIELD ADJUSTMENT OF BLOWER SPEED IN ORDER TO MATCH THE SYSTEM AIRFLOW REQUIREMENTS.
G. BLOWER MOTORS SHALL BE OPEN DRIP PROOF, T FRAME HAVING CLASS B INSULATION, NEMA B DESIGN AND HAVING A 1.15 SERVICE FACTOR. MOTORS 1 HP AND LARGER SHALL BE PREMIUM EFFICIENCY. MOTOR SHALL HAVE INTERNAL OVERLOAD PROTECTION AND PERMANENTLY LUBRICATED BALL BEARINGS. MOTORS SHALL BE RIGIDLY MOUNTED TO AN ADJUSTABLE MOTOR FRAME.

7. ELECTRICAL SYSTEM

A. THE ELECTRICAL SYSTEM SHALL CONFORM TO NATIONAL ELECTRIC CODE (NEC) REQUIREMENTS.
B. UNIT SHALL HAVE A SINGLE ELECTRICAL CONTROL PANEL. A SINGLE POINT POWER CONNECTION SHALL BE PROVIDED THROUGH THE SIDE OF THE CONDENSING SECTION CABINET FOR SELF-CONTAINED UNITS. SEPARATE POWER SUPPLIES SHALL BE PROVIDED THROUGH THE SIDES FOR EACH SECTION WHEN THE SYSTEM IS INSTALLED AS A SPLIT SYSTEM. POWER SHALL BE CONNECTED TO FACTORY INSTALLED TERMINAL BLOCKS.
C. ALL ELECTRICAL COMPONENTS (BLOWER MOTORS, COMPRESSOR(S), ELECTRIC HEAT STAGES, ETC.) SHALL HAVE INDIVIDUAL DEFINITE PURPOSE CONTACTORS.
D. A LOW-VOLTAGE TRANSFORMER, WITH PROTECTION, SHALL BE PROVIDED TO SUPPLY 24 VAC TO THE CONTROL CIRCUIT.
E. A TERMINAL STRIP SHALL BE FACTORY INSTALLED INTERNAL TO THE CONTROL BOX AND BE CLEARLY LABELED FOR THERMOSTAT AND INTERLOCK WIRING CONNECTIONS.
F. EACH COMPONENT SHALL BE SAFETY AGENCY LISTED AS REQUIRED. ALL ELECTRICAL COMPONENTS SHALL BE LABELED TO CO-ORDINATE WITH THE UNIT WIRING DIAGRAM PROVIDED.

8. EVAPORATOR AIR FILTRATION

A. EVAPORATOR AIR FILTERS SHALL BE NOMINAL 2" DEPTH PLEATED, THROWAWAY TYPE PANEL FILTERS CONSISTING OF COTTON AND SYNTHETIC OR SYNTHETIC ONLY MEDIA WITH GALVANIZED EXPANDED METAL BACKING AND MOISTURE RESISTANT ENCLOSING FRAME. THE FILTER SHALL BE CLASSIFIED FOR FLAMMABILITY BY UNDERWRITERS LABORATORIES, INC. AS CLASS 2.
B. THE FILTER MEDIA SHALL HAVE AN EFFICIENCY OF MERV [11] BASED ON ASHRAE TEST STANDARD 52.2.

AB. DEDICATED OUTSIDE AIR UNIT (DOAU-2):

PART 1 - GENERAL

1.1 SUMMARY

A. THIS SECTION INCLUDES PACKAGED HEATING AND COOLING UNITS CAPABLE OF SUPPLYING UP TO 100 PERCENT OUTDOOR AIR.

1.2 SUBMITTALS

A. THE MANUFACTURER ASSUMES NO LIABILITY FOR THE USE OR RESULTS OF USE OF THIS DOCUMENT. THIS SPECIFICATION IS TO BE REVIEWED BY THE ENGINEER TO CONFIRM REQUIREMENTS OF THE PROJECT AND BUILDING CODES ARE MET.
B. AS THE MANUFACTURER CONTINUES PRODUCT DEVELOPMENT, IT RESERVES THE RIGHT TO CHANGE DESIGN AND SPECIFICATIONS WITHOUT NOTICE.

1.3 SEISMIC DESIGN

A. SHOULD PROJECT BE LOCATED WITHIN A SEISMIC ZONE REQUIRING SPECIAL PROVISIONS FOR SUPPORT AND RESTRAINT OF EQUIPMENT, COMPONENTS, AND PIPING, SEE SECTION 23 00 01 - SEISMIC, WIND, AND FLOOD LOAD DESIGN FOR ADDITIONAL REQUIREMENTS.

1.4 WIND LOAD DESIGN

A. REFER TO SECTION 23 00 01, SEISMIC, WIND, FLOOD LOAD DESIGN FOR ADDITIONAL REQUIREMENTS.
B. MIAMI DADE RATED UP TO ±150PSF PER TAS 201, 202 & 203 PAIRED WITH 20" CURB OR SHORTER.

1.5 QUALITY ASSURANCE

A. ALL MODELS SHALL BE ETL LISTED AND COMPLY WITH SAFETY STANDARDS UL 1995, AND CSA STD. C22.2, NO. 236-11. UNITS OUTFITTED WITH INDIRECT FIRED HEATERS SHALL ALSO COMPLY WITH ANSI Z83.8-2013, AND CSA 2.6-2013.

1.6 WARRANTY

A. ALL UNITS SHALL BE PROVIDED WITH THE FOLLOWING STANDARD WARRANTIES:

1. 10-YEAR (NON-PRORATED) PARTS WARRANTY COVERING THE ENTIRE UNIT WHEN ACCOMPANIED BY A COMPANY PROVIDED SERVICE PLAN. 5-YEAR (NON-PRORATED) PARTS WARRANTY COVERING THE ENTIRE UNIT OTHERWISE.
2. 25-YEAR (NON-PRORATED) PARTS WARRANTY FOR SS HEAT EXCHANGER ON INDIRECT FIRED UNITS.

B. THIS WARRANTY SHALL NOT APPLY IF:

1. THE EQUIPMENT IS NOT INSTALLED BY A QUALIFIED INSTALLER PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHIPPED WITH THE PRODUCT.
2. THE EQUIPMENT IS NOT INSTALLED IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.
3. THE EQUIPMENT IS MISUSED OR NEGLECTED, OR NOT MAINTAINED PER THE MANUFACTURER'S MAINTENANCE INSTRUCTIONS.
4. THE EQUIPMENT IS NOT OPERATED WITHIN ITS PUBLISHED CAPACITY.
5. THE INVOICE IS NOT PAID WITHIN THE TERMS OF THE SALES AGREEMENT.

C. THE MANUFACTURER SHALL NOT BE LIABLE FOR INCIDENTAL AND CONSEQUENTIAL LOSSES AND DAMAGES POTENTIALLY ATTRIBUTABLE TO MALFUNCTIONING EQUIPMENT. SHOULD ANY PART OF THE EQUIPMENT PROVE TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP WITHIN THE 10 YEAR PERIOD, UPON EXAMINATION BY THE MANUFACTURER, SUCH PART WILL BE REPAIRED OR REPLACED BY MANUFACTURER AT NO CHARGE. THE BUYER SHALL PAY ALL LABOR COSTS INCURRED IN CONNECTION WITH SUCH REPAIR OR REPLACEMENT. EQUIPMENT SHALL NOT BE RETURNED WITHOUT MANUFACTURER'S PRIOR AUTHORIZATION AND ALL RETURNED EQUIPMENT SHALL BE SHIPPED BY THE BUYER, FREIGHT PREPAID TO A DESTINATION DETERMINED BY THE MANUFACTURER.

PART 2 - PRODUCTS

2.1 GENERAL

A. SUPPLY SINGLE ZONE ONE PIECE PACKAGED UNITS THAT ARE COMPLETE AS PER THE FOLLOWING SPECIFICATION, DELIVER ALL CAPACITIES SCHEDULED, AND CONFORM TO DESIGN INDICATED HEREIN. ALTERNATE LAYOUTS OR DIMENSIONAL CHANGES WILL NOT BE ACCEPTED.

2.2. CABINET

A. UNIT(S) SHALL BE CONSTRUCTED OF MINIMUM 20GA. G-90 GALVANIZED STEEL RIVETED TOGETHER VIA STRUCTURAL POP-RIVETS. ALL METAL SHALL BE CNC BENT FOR PRECISE ASSEMBLY.

1. RIGGING PROVISIONS: THE UNIT SHALL HAVE A STRUCTURAL BASE CONSTRUCTED OF MINIMUM 14GA. G-90 GALVANIZED STEEL, AND INCLUDE FULL SIZED FORK POCKETS AND LIFTING POINTS ON ALL FOUR SIDES.
2. ROOF CONSTRUCTION: THE LIDS SHALL BE FABRICATED BY FORMING A DOUBLE-STANDING, SELF-LOCKING SEAM THAT REQUIRES NO ADDITIONAL SUPPORT. ROOF SHALL BE PITCHED TO ALLOW FOR PROPER DRAINAGE.
3. EXTERIOR WALL CONSTRUCTION: ALL EXTERIOR WALLS SHALL CONSIST OF A DOUBLE WALL, G-90 GALVANIZED STEEL CONSTRUCTION INSULATED WITH 2IN. THICK, FOIL-FACED, R13 CLOSED CELL FOAM.
4. SERVICE ACCESS DOORS: ALL DOOR JAMBS SHALL BE GASKETED AROUND THEIR PERIMETER, AND ALLOW FOR DOORS TO BE MOUNTED VIA REMOVABLE, SPRING ACTUATED, STAINLESS STEEL HINGES WITH STAINLESS STEEL RIVETS, AND SELF-COMPRESSING LATCHES. EACH COMPARTMENT SHALL HAVE REMOVABLE ACCESS PANELS TO ALLOW FOR EASE OF SERVICE AND MAINTAINABILITY. ELECTRICAL CABINET ACCESS DOORS SHALL HAVE A DOOR HOLD INSTALLED TO PROP DOORS OPEN. ALL DOORS SHALL HAVE STAINLESS STEEL LATCHES WHICH ARE PAD LOCKABLE. ELECTRICAL CABINET DOORS SHALL BE OUTFITTED WITH SCHEMATIC/MANUAL POUCHES FORMED INTO THE DOOR, ALONG WITH WIRING DIAGRAM ATTACHED TO THE INDOOR OF THE DOOR FROM THE FACTORY.

B. ENTIRE INTERIOR AND EXTERIOR CASING SHALL BE CONSTRUCTED OF MINIMUM 20 GA G90 GALVANIZED STEEL WITH NO PAINTING, AND SHALL HAVE SURPASSED A SALT SPRAY CORROSION TEST AS PER ASTM B 117.

C. ENTIRE UNIT SHALL BE MIAMI-DADE WIND RATED UP TO ±150PSF PER TAS 201, 202 & 203 ON ANY UNITS UTILIZING A 20" OR SHORTER FACTORY PROVIDED ROOF CURB.

2.3 AIR FLOW CONFIGURATION

A. UNIT SHALL BE CONFIGURABLE FOR BOTH DOWN (VERTICAL) DISCHARGE THROUGH BASE OF UNIT, OR SIDE DISCHARGE THROUGH THE CABINET. UNIT SHALL ALSO BE CONFIGURABLE TO BOTH DOWN (VERTICAL) RETURN OR SIDE RETURN INTO THE CABINET.

B. UNIT INTAKE AIRFLOW CONFIGURATION SHALL BE THROUGH USE OF A FRESH/OUTDOOR AND RETURN AIR DAMPER.

1. DAMPER: SHALL EXCEED AMCA CLASS 1A STANDARD FOR LOW LEAKAGE. DAMPER ASSEMBLY SHALL BE A SINGLE ASSEMBLY, AND OUTFITTED WITH AN INTEGRAL BIRD SCREEN AND LOUVER/GUTTER SYSTEM TO DIVERT ANY DRAINAGE THROUGH THE BASE OF THE UNIT – INTAKE AIR HOOD NOT REQUIRED.
2. ACTUATOR: A SINGLE DIRECT DRIVE DAMPER ACTUATOR SHALL BE USED WITH SPRING RETURN TO ENSURE THAT THE OUTDOOR AIR SECTION CLOSES WHEN NOT POWERED.

2.4. SUPPLY AIR BLOWER AND MOTOR

A. ALL SUPPLY FANS SHALL BE DIRECT DRIVE (BELT-DRIVEN NOT ACCEPTABLE) VARIABLE SPEED PLENUM FANS.
B. BLOWER MOTOR: MOTOR SHALL BE A PREMIUM EFFICIENCY MOTOR AVAILABLE AS:

1. OPEN DRIP PROOF (ODP) OR TOTALLY ENCLOSED FAN COOLED (TEFC) MOTOR DRIVEN BY A VARIABLE FREQUENCY DRIVE.
2. ELECTRONICALLY COMMUTATED MOTOR (ECM).

C. FANS TO BE SELECTED AT OR NEAR EFFICIENCY PEAK. (SUBMIT FAN CURVES.)

D. BLOWER AND MOTOR ASSEMBLY SHALL BE DYNAMICALLY BALANCED. THE ENTIRE BLOWER AND MOTOR ASSEMBLY SHALL BE MOUNTED ON RUBBER VIBRATION ISOLATORS. WHEELS BALANCED AS PER AMCA 204+96, BALANCE QUALITY AND VIBRATION LEVELS FOR FANS.

2.5. REFRIGERATION SYSTEM

A. UNIT SHALL UTILIZE A VARIABLE SPEED INVERTER DUTY SCROLL COMPRESSOR WITH THE FOLLOWING FEATURES:

1. MODULATION: COMPRESSOR SHALL BE CAPABLE OF COMPRESSOR SPEED MODULATION FROM 15%-100% ON 8, 10, & 12.5 TON UNITS, AND 25%-100% ON 15, 20, 22, 25, & 30 TON UNITS.
2. REFRIGERANT: UNIT SHALL BE FACTORY CHARGED WITH R410A REFRIGERANT.
3. VIBRATION ISOLATION: COMPRESSOR SHALL BE MOUNTED ON RUBBER VIBRATION ISOLATORS TO REDUCE TRANSMISSION OF VIBRATION TO THE BUILDING STRUCTURE.
4. INTERNAL OVERLOAD PROTECTION: COMPRESSOR SHALL INCLUDE INTERNAL THERMAL OVERLOAD PRODUCTION TO PROTECT AGAINST EXCESSIVE MOTOR TEMPERATURES.
5. CRANKCASE HEATER: COMPRESSOR SHALL INCLUDE A CRANKCASE HEATER TO PROTECT AGAINST LIQUID FLOOD-BACK AND ELIMINATION OF OIL FOAMING ON STARTUP. THE CRANKCASE HEATER MUST REMAIN POWERED WHEN COMPRESSOR IS NOT IN OPERATION.
6. OIL MANAGEMENT: UNIT SHALL UTILIZE BOTH PASSIVE AND ACTIVE OIL RETURN MANAGEMENT USING OIL LEVEL SENSOR AND SCHEDULED OIL BOOSTS.
7. MONITORED ENVELOPE: UNIT SHALL MONITOR ALL CRITICAL REFRIGERATION POINTS TO ENSURE COMPRESSOR DOES NOT OPERATE OUTSIDE OF SAFE OPERATING ENVELOPE.
8. THROTTLING LOGIC: UNIT SHALL ALLOW FOR HIGH HEAD PRESSURE MONITORING THROTTLE MODE FOR HIGH AMBIENT OPERATION, AND LOW SUCTION PRESSURE THROTTLE MODE FOR LOW CAPACITY OPERATION OR ANY CONDITIONS RESULTING IN LOW SUCTION PRESSURE.
9. PUMP-DOWN: ACTIVE PUMP-DOWN MODE WITH DISCHARGE LINE CHECK VALVE TO PROTECT AGAINST LIQUID MIGRATION INTO COMPRESSOR DURING IDLE TIMES.
10. DEFROST MODE IN OPTIONAL HEAT PUMP: WHEN OUTDOOR COILS ARE DEEMED AT RISK OF FREEZING, THE UNIT SHALL SIMULTANEOUSLY TURN ON AUXILIARY HEAT WHILE RUNNING THE HEAT PUMP IN "COOLING" MODE TO HELP DEFROST OUTDOOR COILS AS NEEDED WHILE STILL MAINTAIN DESIRED LEAVING AIR TEMPERATURES.

B. THE UNIT SHALL BE OUTFITTED WITH THE FOLLOWING:

1. INDOOR COIL: INDOOR COIL SHALL BE A HIGH EFFICIENCY 5-7 ROW COIL DESIGN WITH ALUMINUM FINS MECHANICALLY BONDED TO COPPER TUBES. COIL IS STAGGERED TO INCREASE TURBULENCE, REDUCE THE COIL BYPASS FACTOR, AND ULTIMATELY THE TIME THE AIR STAYS WITHIN THE COIL.
2. ELECTRONIC EXPANSION VALVE: EACH REFRIGERATION CIRCUIT WILL BE OUTFITTED WITH AN ELECTRONIC EXPANSION VALVE METERING DEVICE WHICH CAN BE THROTTLED FROM 0-100% OPEN TO ALLOW FOR PRECISE SUPERHEAT CONTROL.
3. INDOOR COIL DRAIN PAN: THE INDOOR COIL SHALL BE OUTFITTED WITH A SLOPED STAINLESS STEEL DRAIN PAN. THIS PAN SHALL BE INSULATED ALONG THE ENTIRE BASE TO PREVENT CONDENSATION, AND OUTFITTED WITH A SAFETY OVERFLOW SWITCH WHICH WILL AUTOMATICALLY SHUT DOWN COOLING OPERATION PRIOR TO WATER OVERFLOWING THE DRAIN PAN IN THE EVENT OF A DRAIN CLOG. THE ENTIRE DRAIN PAN SHALL BE 20 GA STAINLESS STEEL CONSTRUCTION AND WRAP BENEATH THE ENTIRE COIL WITH FLASHING ON ENTERING SIDE OF COIL TO ENSURE CAPTURE OF ALL CONDENSATE. DRAIN PAN DISCHARGE PIPE SHALL ALSO BE STAINLESS STEEL CONSTRUCTION. DRAIN PAN SHALL BE PITCHED TO EXCEED ASHRAE 62.1 STANDARD.
4. BASE OF THE CONDENSING COIL CABINET SHALL BE PITCHED AWAY FROM THE UNIT AS A SAFETY TO ENSURE ALL DRAINING EXITS AWAY FROM THE CURB.
5. OPTIONAL HOT GAS REHEAT COIL: THE UNIT SHALL INCLUDE AN OPTIONAL COPPER TUBE AND ALUMINUM FIN HOT GAS REHEAT COIL MOUNTED DOWNSTREAM OF THE INDOOR COIL. THIS COIL SHALL BE CONTROLLED VIA FULLY MODULATING HOT GAS REHEAT VALVE TO PROVIDE PRECISE REHEAT TEMPERATURE CONTROL. THIS COIL SHALL INCLUDE THE ADDITION OF AN EVAPORATIVE COIL LEAVING CONDITION SENSOR TO MAINTAIN A COIL DEW POINT. THIS ALSO PREVENTS OPERATION OF A DEHUMIDIFICATION CALL WHEN INTAKE DEW POINT CONDITIONS ARE FOUND TO BE BELOW SPACE DEW POINT CONDITIONS, PREVENTING WASTED ENERGY.
6. OUTDOOR (CONDENSER) COIL: OUTDOOR COIL SHALL BE A HIGH EFFICIENCY COIL DESIGN WITH ALUMINUM FINS MECHANICALLY BONDED TO COPPER TUBES. THE COIL SHALL BE DOWNWARD SLOPED TO PROTECT COIL FROM HAIL DAMAGE. OPTIONAL HAIL GUARDS MAY ALSO BE OUTFITTED TO THE OUTDOOR COIL FOR ADDED PROTECTION FROM HAIL BOUNCING OFF OF THE ROOF OF THE UNIT UP THE COIL.
7. OUTDOOR FANS: THE OUTDOOR COIL SHALL HAVE A VERTICAL DISCHARGE OUTFITTED WITH QUIET, EFFICIENT, FULLY MODULATING ELECTRONICALLY COMMUTATED MOTOR (ECM) CONDENSING FANS. THESE FANS SHALL MODULATE TO MAINTAIN A TEMPERATURE DIFFERENTIAL BETWEEN OUTSIDE AIR AND THE OUTDOOR COIL.

C. TO HELP MITIGATE ANY LONG-TERM POTENTIAL FOR LEAKS OR HARDWARE FAILURES, THE UNIT SHALL BE OUTFITTED WITH THE FOLLOWING PROTECTION MEASURES:

1. SUCTION LINE ACCUMULATOR FOR ADDED PROTECTION AGAINST LIQUID ENTERING SUCTION LINE OF COMPRESSOR.
2. BI-FLOW, LOW PRESSURE DROP, FILTER DRIER.
3. ELECTRONIC EXPANSION VALVE (EEV) FOR PRECISE SUPERHEAT CONTROL. EEV SHALL OPEN PARTIALLY ALLOWING SYSTEM PRESSURE EQUALIZATION PRIOR TO ACTIVATION OF THE COMPRESSOR.
4. ON OPTIONAL HEAT PUMP UNITS, USE OF A SINGLE 3-WAY REHEAT VALVE TO PREVENT OBSTRUCTIONS DUE TO VALVE FAILURE.
5. PROTECTIVE RUBBER SLEEVES INSTALLED ON ALL DISTRIBUTION LINES OF INDOOR COIL TO PREVENT WEAR FROM RUBBING.
6. ALL REFRIGERATION PORTS SHALL BE SHORT-STUB ASSEMBLY AND ANY ACCESS PORT WITH A TRANSDUCER OR SWITCH IS MOUNTED VERTICALLY TO MITIGATE RISK OF BENT/CRACKED STUB JOINTS.
7. REFRIGERATION CIRCUIT SHALL BE MECHANICALLY CNC PRE-BENT TUBING WHEREVER POSSIBLE WITH MINIMAL BRAZED JOINTS TO MINIMIZE POINTS FOR POTENTIAL REFRIGERATION LEAKS.
8. FACTORY TESTED FOR LEAKS VIA HIGH PRESSURE NITROGEN DECAY AND HELIUM TRACER GAS TESTING.
9. SUCTION LINE TEMPERATURE SENSOR FAILURE DETECTION.
10. PREVENTATIVE FAILURE ALERTS THROUGH A MANUFACTURER PROVIDED, CLOUD BASED, CELLULAR REMOTE MONITORING SYSTEM.

2.6. HEATING SYSTEM

A. THE GAS BURNER SHALL BE AN INDIRECT-FIRED, PUSH-THROUGH TYPE, USING (NATURAL) (LP) GAS AT AN INLET-SUPPLY PRESSURE TO THE UNIT OF 7"W.C. MINIMUM NAT. GAS, (11"W.C. MINIMUM LP GAS). BURNER SHALL BE A TUBULAR IN-SHOT FIRED DESIGN CAPABLE OF USING NATURAL OR LP TYPE GAS. EACH BURNER IGNITION SHALL BE OF THE DIRECT-SPARK DESIGN WITH REMOTE FLAME SENSING AT INLET OF THE LAST FIRING TUBE OF THE GAS MANIFOLD.

B. DIRECT-SPARKING SEQUENCE SHALL LAST THROUGH THE COMPLETE DURATION OF THE TRIAL FOR IGNITION PERIOD FOR GUARANTEED LIGHT-OFF. BURNER SHALL ALWAYS BE LIT AT MAXIMUM GAS FLOW AND COMBUSTION AIRFLOW FOR GUARANTEED LIGHT-OFF. EACH BURNER IGNITION MODULE SHALL HAVE LED INDICATORS FOR TROUBLESHOOTING AND A SET OF EXPOSED P

5. SENSIBLE ONLY ENERGY TRANSFER MEDIA SHALL BE CONSTRUCTED IN THE SAME FASHION AS THE ENTHALPY TRANSFER MEDIA WITH THE EXCEPTION OF THE DESICCANT COATING PROCESS REQUIRED FOR ENTHALPY WHEELS.

C. COATINGS AND DESICCANT.

1. DESICCANT SHALL BE EITHER SILICA GEL OR MOLECULAR SIEVE AND PERMANENTLY BONDED TO THE ENERGY TRANSFER MEDIA WITHOUT THE USE OF BINDERS OR ADHESIVES, WHICH MAY DEGRADE DESICCANT PERFORMANCE. DESICCANTS NOT PERMANENTLY BONDED ARE NOT ACCEPTABLE DUE TO POTENTIAL DELAMINATION OR EROSION OF THE DESICCANT FROM THE ENERGY TRANSFER MEDIA.
2. DESICCANT SHALL BE NON-MIGRATING NOR SHALL IT DISSOLVE OR DELIQUESCE IN THE PRESENCE OF WATER OR HIGH HUMIDITY.
3. ENERGY TRANSFER MEDIA SHALL BE CAPABLE OF REPEATED WASHINGS WITHOUT SIGNIFICANT DEGRADATION OF THE DESICCANT BOND AS DOCUMENTED BY AN INDEPENDENT THIRD PARTY.

D. REMOVABLE ENERGY TRANSFER SEGMENTS.

1. WHEELS 25" IN DIAMETER AND GREATER SHALL BE PROVIDED WITH REMOVABLE ENERGY TRANSFER SEGMENTS.
2. SEGMENTS SHALL BE REMOVABLE WITHOUT THE USE OF TOOLS TO FACILITATE MAINTENANCE AND CLEANING.

E. SEALS.

1. ALL DIAMETER AND PERIMETER SEALS SHALL BE PROVIDED AS PART OF THE CASSETTE ASSEMBLY AND SHALL BE FACTORY SET.
2. SEALS SHALL BE NON-CONTACT NYLON PILE BRUSH SEAL ORIENTATED IN A LABYRINTH STYLE CONFIGURATION.
3. DIAMETER SEALS SHALL BE FULLY ADJUSTABLE AND EASILY ACCESSIBLE.
4. PERIMETER SEALS SHALL BE PERMANENTLY MOUNTED TO THE WHEEL RIM AND NOT REQUIRE ADJUSTMENT. SEALS THAT MOUNT TO THE FRAME ARE NOT ACCEPTABLE.

F. DRIVE SYSTEM.

1. THE WHEEL DRIVE MOTOR SHALL BE AN UNDERWRITERS LABORATORY RECOGNIZED COMPONENT AND SHALL BE MOUNTED IN THE CASSETTE FRAME AND SUPPLIED WITH A SERVICE CONNECTOR OR JUNCTION BOX.
2. THREE PHASE MOTORS SHALL BE SUITABLE FOR USE IN BOTH STANDARD AND INVERTER RATED APPLICATIONS.
3. WHEELS 52" AND SMALLER SHALL USE A URETHANE STRETCH BELT FOR WHEEL RIM DRIVE WITHOUT THE NEED FOR EXTERNAL TENSIONERS.
4. WHEELS 58" AND LARGER SHALL USE A URETHANE NON-STRETCH BELT WITH INTEGRAL CORD AND CONSTANT TENSIONER.
5. WHEEL DRIVE SYSTEM SHALL NOT REQUIRE PERIODIC ADJUSTMENT.

G. MAINTENANCE.

1. ENERGY RECOVERY SEGMENTS SHALL BE CLEANABLE OUTSIDE OF THE CABINET WITH DETERGENT OR ALKALINE COIL CLEANER AND WATER.
2. ENERGY TRANSFER SEGMENTS SHALL BE CAPABLE OF SUBMERSION IN A CLEANING SOLUTION. SUBMERSION SHALL BE CAPABLE OF RESTORING LATENT PERFORMANCE TO WITHIN AHRI CERTIFIED PERFORMANCE LIMITS.

H. PURGE.

1. A MECHANICAL PURGE SHALL BE AVAILABLE AS AN OPTIONAL ACCESSORY AS TO AVOID EXCESSIVE FAN POWER.
2. WHEN REQUIRED THE MECHANICAL PURGE SECTOR SHALL BE FACTORY INSTALLED AND FIELD ADJUSTABLE.
3. PURGE SETTINGS SHALL BE CALCULATED USING AHRI CERTIFIED DATA AND ADJUSTED PER THE WHEEL MANUFACTURERS SELECTION SOFTWARE.
4. PURGE SHALL BE CAPABLE OF LIMITING EXHAUST AIR TRANSFER RATIO (EATR) VALUES TO 0.4% THROUGH PROPER FAN AND PURGE ADJUSTMENT.

2.8 FILTERS

A. PROVIDE FILTERS AS PART OF UNIT. ALL FILTERS SHALL BE FURNISHED AND INSTALLED TO MEET THE PERFORMANCE REQUIREMENTS SET FORTH IN THE SCHEDULE AND AS SPECIFIED UNDER ANOTHER SECTION OF THIS WORK.

B. ALL FILTERS SHALL BE INSTALLED ON TRACKS FOR EASY REMOVAL FROM THE UNIT.

C. UP TO 3 LAYERS OF OUTDOOR AIR FILTRATION INSTALLED. UNIT SHALL SHIP WITH A 2" WASHABLE METAL MESH OUTDOOR AIR FILTER. MIXED AIR SHALL HAVE OPTIONAL 2" MERV-8 AND MERV-13 FILTERS , 4" MERV-15 OR 4" MERV-17 HEPA FILTER BANKS FACTORY INSTALLED.

D. UNIT SHALL HAVE AN OPTIONAL ADJUSTABLE PRESSURE DIFFERENTIAL SENSOR FOR THE FILTER BANK TO ALERT IN THE EVENT OF A CLOGGED FILTER.

2.9 ELECTRICAL

A. ALL CONTROLS SHALL BE PRE-WIRED AND HOUSED IN AN INSULATED ELECTRICAL CABINET WITHIN THE UNIT TO PROTECT AGAINST RISK OF CONDENSATION.

B. ALL DIRECT FIRED AND COOLING ONLY UNITS SHALL BE PROVIDED WITH SINGLE POINT ELECTRICAL CONNECTION.

C. UNIT SHALL BE PROVIDED WITH A DOOR SAFETY SWITCH THAT DE-ENERGIZES THE SUPPLY FAN WHEN THE DOOR IS OPENED.

D. UNIT SHALL BE PROVIDED WITH A FACTORY MOUNTED AVERAGING SUPPLY AIR TEMPERATURE SENSOR TO ALLOW FOR ACCURATE DISCHARGE TEMPERATURE READINGS WITHIN UNIT WHEN A DOWNSTREAM SENSOR IS NOT INSTALLED. FIELD MOUNTED AND WIRED DISCHARGE AIR SENSORS WILL NOT BE ACCEPTED.

E. UNIT SHALL BE PROVIDED WITH A FACTORY MOUNTED AVERAGING INTAKE AIR TEMPERATURE SENSOR TO ALLOW FOR ACCURATE INTAKE TEMPERATURE READING REGARDLESS OF HOW THE OA/RA DAMPERS ARE POSITIONED.

F. THE ELECTRICAL CABINET SHALL BE OUTFITTED WITH THE FOLLOWING:

1. LED ELECTRICAL CABINET SERVICE LIGHT WITH AUTOMATIC ACTIVATION UPON DOOR SWITCH.
2. COLOR WIRING SCHEMATICS, LAMINATED TO THE INTERIOR WALL OF THE CABINET DOORS.
3. FACTORY MOUNTED DISCONNECT WITH UNIT BOTTOM KNOCKOUTS.
4. A LED BACKLIT, LCD HUMAN-MACHINE INTERFACE (HMI) SHALL BE MOUNTED WITHIN THE UNIT'S CONTROL CABINET TO ALLOW FOR ALL SET POINTS CONFIGURATION AND REFRIGERATION SYSTEM MONITORING AT THE UNIT.
5. UP TO 4 ADDITIONAL SPACE MOUNTED HMIS AVAILABLE. ADDITIONAL HMIS SHALL ALLOW FOR FULL PROGRAMMING CAPABILITIES AND ARE OUTFITTED WITH INTEGRAL TEMPERATURE AND HUMIDITY SENSORS. ADDITIONAL HMIS SHALL BE CAPABLE OF BEING INDIVIDUALLY AVERAGED FOR SPACE TEMPERATURE/HUMIDITY READINGS. ALL HMIS SHALL BE WIRED USING STANDARD CAT5/6 CABLES.
6. OPTIONAL 120V, 15A UNIT POWERED OR UNPOWERED CONVENIENCE OUTLET.

G. ALL SENSORS SHALL BE WIRED BACK TO THE MAIN CONTROL BOARD THAT CONTINUOUSLY MONITORS ALL CRITICAL COMPONENTS AND MAKES DECISIONS BASED ON PRE-DETERMINED LOGIC TO ACCURATELY CONTROL THE FOLLOWING:

1. PID LOGIC TO CONTROL HEATER MODULATION ENSURING PRECISE DISCHARGE/SPACE TEMPERATURE CONTROL.
2. PID LOGIC TO CONTROL COMPRESSOR SPEED TO PROVIDE PRECISE CONTROL OVER EVAPORATIVE COIL TEMPERATURES, LEAVING DEW POINT, AND DISCHARGE/SPACE TEMPERATURES.
3. PID LOGIC FOR OUTDOOR FAN MODULATION TO MAINTAIN AN OPTIMAL OUTDOOR COIL TEMPERATURE.
4. PID LOGIC FOR ELECTRONIC EXPANSION VALVE (EEV) POSITION TO MAINTAIN A PRECISE SUPERHEAT TEMPERATURE.
5. PID LOGIC FOR MODULATING REHEAT VALVE TO LIMIT SUPPLY AIR TEMPERATURE AND RELATIVE HUMIDITY BASED OFF OF SPACE OR DISCHARGE CONDITIONS.

2.9. CONTROLS

A. UNIT SHALL BE OUTFITTED WITH A CONTROL BOARD TO ALLOW FOR FULL CONTROL OF THE ENTIRE UNIT.

B. PROVIDE AIR FLOW SWITCH ON THE SUPPLY FAN SYSTEM TO SENSE AIR FLOW WITH AVAILABLE SET OF CONTACTS FOR CONNECTION TO BMS FOR AIRFLOW ALERTS.

C. ALL UNIT CONTROLS SHALL BE COMPATIBLE WITH BACNET AND LONWORKS BASED BUILDING MANAGEMENT SYSTEMS.

D. ALL UNITS SHALL BE OUTFITTED WITH CASLINK CLOUD BASED MONITORING, WHICH MONITORS EVERY POINT OF OPERATION. PROVIDES CONFIGURABLE AUTOMATED FAULT ALERT E-MAILS, AND REMOTE CONTROL CAPABILITIES.

E. INTEGRATED CELLULAR MODULE TO PROVIDE REMOTE CONNECTION TO MONITORING SERVICES TO VIEW BOTH REAL TIME AND HISTORICAL UNIT OPERATION. DATA SHALL BE STORED A MINIMUM OF 3 YEARS ON THE CLOUD. DATA SAMPLE RATE SHALL BE A MAXIMUM OF 60 SECONDS.

F. TEMPERATURE CONTROL SYSTEM

1. LOW-AMBIENT COOLING: UNIT IS FACTORY OUTFITTED WITH LOGIC ALLOWING FOR LOW-AMBIENT OPERATION OF THE DX SYSTEM DOWN TO 15F OUTDOOR TEMPERATURES PURELY THROUGH SOFTWARE UTILIZING THE STANDARD FACTORY MODULATING COMPONENTS.
2. DISCHARGE TEMP CONTROL (HEATING)
UNIT MODULATES THE BURNER FLAME (CURRENT SUPPLY IN THE CASE OF ELECTRIC HEATING) TO ACCURATELY MAINTAIN THE DESIRED DISCHARGE TEMPERATURE SET POINT AND COMPENSATE FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING HEATING PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS.
3. DISCHARGE TEMP CONTROL (COOLING)
UNIT MODULATES THE COMPRESSOR FREQUENCY TO ACCURATELY MAINTAIN THE DESIRED DISCHARGE TEMPERATURE SET POINT AND COMPENSATE FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING PROPRIETARY COOLING PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS.
4. DISCHARGE TEMP CONTROL (HEAT PUMP)
UNIT MODULATES THE COMPRESSOR FREQUENCY TO ACCURATELY MAINTAIN THE DESIRED DISCHARGE TEMPERATURE SET POINT AND COMPENSATE FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING HEATING PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS. MINIMUM AND MAXIMUM DISCHARGE SET POINTS CAN BE SET TO LIMIT THE TEMPERATURE ENTERING THE SPACE. WHEN AMBIENT TEMPERATURES DROP BELOW A USER CONFIGURABLE MINIMUM OUTDOOR AIR TEMPERATURE SET POINT, OR THE UNIT IS NOT ABLE TO MAINTAIN A USER CONFIGURABLE MINIMUM DISCHARGE TEMP FOR 5 MINUTES TIME, THE HEAT PUMP WILL INITIATE ITS BACKUP HEAT SOURCE. INITIATION OF BACKUP HEATER OPERATION SHALL ENSURE DISCHARGE TEMPS ARE MAINTAINED PRIOR TO DISABLING HEAT PUMP TO MAKE SURE DISCHARGE TEMPS ARE NEVER IMPACTED DURING CHANGEOVER. AN OPTIONAL ADDITIONAL HMI OR ROOM THERMOSTAT CAN BE USED TO DETERMINE THE SPACE TEMPERATURE. IN THE CASE THAT NO TEMPERATURE SENSOR IS AVAILABLE IN THE SPACE, THE UNIT WILL USE AN INTERNAL RETURN TEMPERATURE SENSOR.
5. DISCHARGE HUMIDITY CONTROL (DEHUMIDIFICATION)
UNIT MODULATES THE COMPRESSOR FREQUENCY TO ACCURATELY MAINTAIN A DESIRED EVAPORATIVE COIL DEW POINT MEASURED VIA A COIL MOUNTED TEMPERATURE SENSOR BETWEEN THE EVAPORATIVE AND HOT GAS REHEAT COILS. A FULLY MODULATING HOT GAS REHEAT VALVE SHALL UTILIZE EXCESS WASTE HEAT FROM THE CONDENSING SECTION FEED THE HOT GAS REHEAT COIL WITH THE PRECISE AMOUNT OF HEAT NEEDED TO ACCURATELY REHEAT THE AIRSTREAM IN ORDER TO MAINTAIN A DESIRED DISCHARGE TEMPERATURE COMPENSATING FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING PROPRIETARY DEHUMIDIFICATION PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS.
6. SPACE TEMP CONTROL (HEATING)
UNIT MODULATES THE BURNER FLAME (CURRENT SUPPLY IN THE CASE OF ELECTRIC HEATING) TO ACCURATELY MAINTAIN THE DESIRED SPACE TEMPERATURE SET POINT AND COMPENSATE FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING HEATING PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS. MINIMUM AND MAXIMUM DISCHARGE SET POINTS CAN BE SET TO LIMIT THE TEMPERATURE ENTERING THE SPACE. AN OPTIONAL ADDITIONAL HMI OR ROOM THERMOSTAT CAN BE USED TO DETERMINE THE SPACE TEMPERATURE. IN THE CASE THAT NO TEMPERATURE SENSOR IS AVAILABLE IN THE SPACE, THE UNIT WILL USE AN INTERNAL RETURN TEMPERATURE SENSOR.
7. SPACE TEMP CONTROL (COOLING)
UNIT MODULATES THE COMPRESSOR FREQUENCY TO ACCURATELY MAINTAIN THE DESIRED SPACE TEMPERATURE SET POINT AND COMPENSATE FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING COOLING (HEATING WHEN IN HEAT PUMP MODE) PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS. MINIMUM AND MAXIMUM DISCHARGE SET POINTS CAN BE SET TO LIMIT THE TEMPERATURE ENTERING THE SPACE. AN OPTIONAL ADDITIONAL HMI OR ROOM THERMOSTAT CAN BE USED TO DETERMINE THE SPACE TEMPERATURE. IN THE CASE THAT NO TEMPERATURE SENSOR IS AVAILABLE IN THE SPACE, THE UNIT WILL USE AN INTERNAL RETURN TEMPERATURE SENSOR.
8. SPACE TEMP CONTROL (HEAT PUMP)
UNIT MODULATES THE COMPRESSOR FREQUENCY TO ACCURATELY MAINTAIN THE DESIRED SPACE TEMPERATURE SET POINT AND COMPENSATE FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING HEATING PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS. MINIMUM AND MAXIMUM DISCHARGE SET POINTS CAN BE SET TO LIMIT THE TEMPERATURE ENTERING THE SPACE. WHEN AMBIENT TEMPERATURES DROP BELOW A USER CONFIGURABLE MINIMUM OUTDOOR AIR TEMPERATURE SET POINT, OR THE UNIT IS NOT ABLE TO MAINTAIN A USER CONFIGURABLE MINIMUM DISCHARGE TEMP FOR 5 MINUTES TIME, THE HEAT PUMP WILL INITIATE ITS BACKUP HEAT SOURCE. INITIATION OF BACKUP HEATER OPERATION SHALL ENSURE DISCHARGE TEMPS ARE MAINTAINED PRIOR TO DISABLING HEAT PUMP TO MAKE SURE DISCHARGE TEMPS ARE NEVER IMPACTED DURING CHANGEOVER. AN OPTIONAL ADDITIONAL HMI OR ROOM THERMOSTAT CAN BE USED TO DETERMINE THE SPACE TEMPERATURE. IN THE CASE THAT NO TEMPERATURE SENSOR IS AVAILABLE IN THE SPACE, THE UNIT WILL USE AN INTERNAL RETURN TEMPERATURE SENSOR.
9. SPACE HUMIDITY CONTROL (DEHUMIDIFICATION)
UNIT MODULATES THE COMPRESSOR FREQUENCY TO ACCURATELY MAINTAIN A DESIRED EVAPORATIVE COIL DEW POINT MEASURED VIA A COIL MOUNTED TEMPERATURE SENSOR BETWEEN THE EVAPORATIVE AND HOT GAS REHEAT COILS. A FULLY MODULATING HOT GAS REHEAT VALVE SHALL UTILIZE EXCESS WASTE HEAT FROM THE CONDENSING SECTION FEED THE HOT GAS REHEAT COIL WITH THE PRECISE AMOUNT OF HEAT NEEDED TO ACCURATELY REHEAT THE AIRSTREAM IN ORDER TO MAINTAIN A DESIRED SPACE TEMPERATURE COMPENSATING FOR FLUCTUATIONS IN ENTERING AIR TEMPERATURE, AIR VOLUME AND % OF OA USING PROPRIETARY DEHUMIDIFICATION PID CONTROLS DESIGNED SPECIFICALLY FOR THE DOAS.
10. ADVANCED TOTAL UNIT ECONOMIZER: THE CONTROL SYSTEM IS OUTFITTED STANDARD, WITHOUT NEED FOR ANY ADDITIONAL HARDWARE, WITH AN ADVANCED TOTAL UNIT ECONOMIZER WHICH WILL TAKE MAXIMUM ADVANTAGE OF AS MUCH ENERGY AVAILABLE IN THE OUTDOOR AIR CONDITIONS IN ORDER TO RUN THE COMPRESSOR THE MINIMUM AMOUNT REQUIRED AT ANY GIVEN INCOMING AIR CONDITIONS. IF THE OUTDOOR ENTHALPY (TEMPERATURE AND RELATIVE HUMIDITY) PERMITS, THE UNIT WILL BE CAPABLE OF COMPLETELY MODULATING AND SHUTTING OFF COMPRESSOR TO PROVIDE "FREE" COOLING AND DEHUMIDIFICATION AS THE OUTDOOR AIR CONDITIONS ALLOW.

G. ACTIVATION CONTROLS:

1. ACTIVATE BASED ON INTAKE (HEATING)
UNIT WILL ACTIVATE HEATING WHEN THE INTAKE TEMPERATURE DROPS BELOW THE DESIRED SET POINT.
2. ACTIVATE BASED ON INTAKE (COOLING)
UNIT WILL ACTIVATE COOLING WHEN THE INTAKE TEMPERATURE RISES ABOVE THE DESIRED SET POINT.
3. ACTIVATE BASED ON INTAKE (DEHUMIDIFICATION)
UNIT WILL ACTIVATE DEHUMIDIFICATION WHEN THE INTAKE CONDITIONS RISE ABOVE THE DESIRED INTAKE SET POINT, WITH ACTIVATION SET POINTS CONFIGURED TO A DEW POINT, RELATIVE HUMIDITY OR A COMBINATION OF DEW POINT/RELATIVE HUMIDITY.
4. ACTIVATE BASED ON SPACE (HEATING)
UNIT WILL ACTIVATE HEATING WHEN THE SPACE TEMPERATURE DROPS BELOW THE DESIRED SET POINT.
5. ACTIVATE BASED ON SPACE (COOLING)
UNIT WILL ACTIVATE COOLING WHEN THE SPACE TEMPERATURE RISES ABOVE THE DESIRED SET POINT.
6. ACTIVATE BASED ON SPACE (DEHUMIDIFICATION)
UNIT WILL ACTIVATE DEHUMIDIFICATION WHEN THE SPACE SET POINT RISES ABOVE THE DESIRED SPACE SET POINT, WITH ACTIVATION SET POINTS CONFIGURED TO A DEW POINT, RELATIVE HUMIDITY OR A COMBINATION OF DEW POINT/RELATIVE HUMIDITY.
7. ACTIVATE BASED ON BOTH (HEATING)
UNIT WILL ACTIVATE HEATING WHEN THE SPACE AND INTAKE TEMPERATURE DROP BELOW THE DESIRED SET POINT.
8. ACTIVATE BASED ON BOTH (COOLING)
UNIT WILL ACTIVATE COOLING WHEN THE SPACE AND INTAKE TEMPERATURE RISE ABOVE THE DESIRED SET POINT.
9. ACTIVATE BASED ON BOTH (DEHUMIDIFICATION)
UNIT WILL ACTIVATE DEHUMIDIFICATION WHEN THE SPACE AND INTAKE SET POINT RISE ABOVE THE DESIRED SPACE AND INTAKE SET POINT, WITH ACTIVATION SET POINTS CONFIGURED TO A DEW POINT, RELATIVE HUMIDITY OR A COMBINATION OF DEW POINT/RELATIVE HUMIDITY.
10. ACTIVATE BASED ON EITHER (HEATING)
UNIT WILL ACTIVATE HEATING WHEN THE SPACE OR INTAKE TEMPERATURE DROPS BELOW THE DESIRED SET POINT.
11. ACTIVATE BASED ON EITHER (COOLING)
UNIT WILL ACTIVATE COOLING WHEN THE SPACE OR INTAKE TEMPERATURE RISES ABOVE THE DESIRED SET POINT.
12. ACTIVATE BASED ON EITHER (DEHUMIDIFICATION)
UNIT WILL ACTIVATE DEHUMIDIFICATION WHEN THE SPACE OR INTAKE SET POINT RISES ABOVE THE DESIRED SPACE OR INTAKE SET POINT, WITH ACTIVATION SET POINTS CONFIGURED TO A DEW POINT, RELATIVE HUMIDITY OR A COMBINATION OF DEW POINT/RELATIVE HUMIDITY.
13. ACTIVATE BASED ON STAT (HEATING)
UNIT WILL ACTIVATE HEATING WHEN THE SPACE THERMOSTAT SENDS A 24V SIGNAL TO W AND G ON THE MAIN CONTROL BOARD. UNIT WILL MODULATE TO MAINTAIN A CONSTANT DISCHARGE HEAT SET POINT.
14. ACTIVATE BASED ON STAT (COOLING)
UNIT WILL ACTIVATE COOLING WHEN THE SPACE THERMOSTAT SENDS A 24V SIGNAL TO Y AND G ON THE MAIN CONTROL BOARD. UNIT WILL MODULATE TO MAINTAIN A CONSTANT DISCHARGE COOL SET POINT.

2.10. VARIABLE FREQUENCY DRIVES

A. PROVIDE VARIABLE FREQUENCY DRIVE FOR THE COMPRESSOR AS PART OF THE AC UNIT. VFD SHALL BE FURNISHED AND INSTALLED TO MEET THE PERFORMANCE SET FORTH IN THE SCHEDULE AND AS SPECIFIED UNDER ANOTHER SECTION OF THIS WORK.

1. ACCESSORIES TO BE FURNISHED AND MOUNTED BY THE DRIVE MANUFACTURER AND CONTAINED IN A SINGLE ENCLOSURE. (THE USE OF MORE THAN ONE ENCLOSURE IS NOT ACCEPTABLE).

B. PROVIDE VARIABLE FREQUENCY DRIVE FOR SPEED CONTROL ON ALL NON-ECM DIRECT DRIVE SUPPLY FANS.

C. ALL VFDS SHALL PROVIDE THE FOLLOWING INHERENT PROTECTIONS:

1. PHASE PROTECTION
2. BROWNOUT PROTECTION
3. OVERLOAD/OVERHEAT PROTECTION
4. SOFT STARTS TO PROTECT BEARINGS/HARDWARE.
5. LOW & HIGH VOLTAGE & OVER-TORQUE PROTECTIONS.

PART 3 - EXECUTION

3.1 EXAMINATION

A. EXAMINE AREAS AND CONDITIONS UNDER WHICH PACKAGED UNITS ARE TO BE INSTALLED. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN MANNER ACCEPTABLE TO INSTALLER.

3.2 INSTALLATION

A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, DRAWINGS, WRITTEN SPECIFICATIONS, MANUFACTURER'S INSTALLATION MANUAL AND ALL APPLICABLE BUILDING CODES.

3.3 CONNECTIONS

A. PIPING INSTALLATION REQUIREMENTS ARE SPECIFIED IN OTHER DIVISION 23 SECTIONS. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF PIPING, FITTINGS, AND SPECIALTIES. INSTALL PIPING TO ALLOW SERVICE AND MAINTENANCE.

B. DUCT INSTALLATION REQUIREMENTS ARE SPECIFIED IN OTHER DIVISION 23 SECTIONS. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF DUCTS.

C. ELECTRICAL: CONFORM TO APPLICABLE REQUIREMENTS IN DIVISION 26 SECTIONS.

3.4 SYSTEM STURT UP

A. SYSTEM START UP IS PERFORMED BY A FACTORY TRAINED SERVICE TECHNICIAN

AC. AC UNITS

1. INDOOR VRF - 4 WAY CASSETTE
A. CONSTRUCTION
-INSULATED, HIPS CHASSIS WITH A GALVANIZED STEEL FRAME AND FASCIA PANEL CERTIFIED TO UL94 V0.

B. HEAT EXCHANGER
-THE HEAT EXCHANGER SHALL BE MECHANICALLY BONDED FIN TO COPPER TUBE

C. INDOOR FAN
-INDOOR FAN IS A SINGLE TURBO TYPE
-THREE FAN SPEED SETTINGS AND AUTO SETTING

D. CONTROLS
-THE UNIT SHALL BE OPERATED VIA A WIRELESS OR WIRED REMOTE CONTROL WITH
-DDC TYPE SIGNAL

2. INDOOR VRF - DUCTED TYPE UNIT
A. CONSTRUCTION
-THE UNIT SHALL BE CONSTRUCTED OF INSULATED,GALVANIZED STEEL

B. HEAT EXCHANGER
-THE HEAT EXCHANGER SHALL BE MECHANICALLY BONDED FIN TO COPPER TUBE

C. INDOOR FAN
-INDOOR FAN IS A CENTRIFUGAL TYPE WITH A SINGLE FAN MOTOR
-THREE FAN SPEED SETTINGS AND AUTO SETTING
-FAN OUTPUT CAN BE CONFIGURED DURING COMMISSIONING FOR VARIOUS EXTERNAL STATIC PRESSURE RANGES

D. CONTROLS
-THE UNIT SHALL BE OPERATED VIA A WIRELESS OR WIRED REMOTE CONTROL WITH DDC TYPE SIGNAL
-CONTROLS SHALL INTEGRATE WITH A BMS SYSTEM
-CONTROL WIRING SHALL BE 2 X 16 AWG SHIELDED WIRE

E. AIR FILTRATION
-THE UNIT SHALL SHIP WITH BASIC FILTRATION AS STANDARD
-PRESSURE DROP ACROSS THE FILTER MUST BE FACTORED INTO THE TOTAL ESP.

AD. FREEZE PROTECTION PUMP (P-1)

THE CONTRACTOR SHALL FURNISH AND INSTALL IN-LINE CIRCULATING PUMPS AS ILLUSTRATED ON THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

1. THE PUMP SHALL BE OF THE HORIZONTAL, SYSTEM LUBRICATED TYPE SPECIFICALLY DESIGNED AND GUARANTEED FOR QUIET OPERATION.
2. PUMPS TO BE SUITABLE FOR 225°F OPERATION AT 150 PSIG WORKING PRESSURE.
3. THE PUMPS SHALL HAVE A CERAMIC SHAFT SUPPORTED BY CARBON BEARINGS. BEARINGS ARE TO BE LUBRICATED BY THE CIRCULATING FLUID.
4. MOTOR STATOR TO BE ISOLATED FROM CIRCULATING FLUID THROUGH USE OF STAINLESS STEEL CAN. ROTOR TO BE SHEATHED IN STAINLESS STEEL.
5. MOTORS SHALL BE NON-OVERLOADING AT ANY POINT ON THE PUMP CURVE. PUMP MOTOR TO HAVE BUILT-IN THERMAL PROTECTION.
6. PUMP SHALL BE AVAILABLE WITH 3-SPEED, THERMALLY PROTECTED MOTOR COVERING A WIDE RANGE OF HYDRAULIC CAPABILITIES.
7. THE PUMP MANUFACTURER SHALL BE ISO-9001 CERTIFIED.

AE. HOT WATER UNIT HEATER

UNIT:

SELF-CONTAINED, FACTORY ASSEMBLED, PRE-WIRED UNIT CONSISTING OF CABINET WITH AIR DEFLECTION LOUVERS SUPPLY FAN, MOTOR, AND CONDENSER.

COATING:

ELECTROSTATICALLY APPLIED BAKED ON GREY-GREEN CORROSION RESISTANT, POLYESTER POWDER COAT PAINT THAT MEETS THE FOLLOWING TESTS:
1. 500 HOURS OF SALT SPRAY AS DEFINED IN ASTM B117.
2. ADHESION/CROSSHATCH TAPE TESTS AS DEFINED IN ASTM D3359, METHOD B, RATING 5B.
3. WILL NOT CRACK OR PEEL WHEN TEST PANEL IS BENT AROUND A 1/8 INCH ARBOR.

CONDENSER:

CONDENSER COILS ARE OF THE EXTENDED SURFACE TYPE OF SERPENTINE DESIGN, UTILIZING ALUMINUM FINS AND DLP-TYPE COPPER TUBES. TUBES ARE MECHANICALLY BONDED TO THE COLLARS OF THE FINS. THE CONDENSERS ARE WARRANTED FOR OPERATION AT STEAM OR HOT WATER PRESSURES UP TO 150 POUNDS PER SQUARE INCH GAUGE AND/OR TEMPERATURES UP TO 375°F. ALL COILS ARE LEAK TESTED AT 165 TO 200 PSIG, AIR UNDER WATER. FINS ARE CONTINUOUS ACROSS THE WIDTH AND DEPTH OF THE CONDENSER AND ARE VERTICALLY ORIENTED TO MINIMIZE THE COLLECTION OF DIRT AND DUST.

COILS ARE OF SERPENTINE DESIGN WITH HORIZONTAL TUBES, VERTICAL FINS AND SIDE SUPPLY AND RETURN. ALL TUBE BENDS ARE BRAZED. ALL TUBES HAVE INDIVIDUAL EXPANSION BENDS. COPPER TUBES ARE 5/8" O.D. WITH 0.028" WALL THICKNESS.

MOTOR:
SINGLE MOTOR WITH A SUPPLY VOLTAGE OF 208/60/1 AND HORSEPOWER OF 1/60 AS INDICATED ON THE EQUIPMENT SCHEDULE AND MANUFACTURED IN ACCORDANCE WITH NEMA STANDARDS FOR CONTINUOUS FAN DUTY TYPE APPLICATIONS. MUST BE TOTALLY ENCLOSED AND SINGLE PHASE MOTORS WILL HAVE BUILT IN THERMAL OVERLOAD PROTECTION. WILL BE MOUNTED TO THE UNIT WITH RUBBER VIBRATION ABSORBING MATERIAL. THE ENTIRE LENGTH OF THE LINE VOLTAGE MOTOR LEADS WILL BE SHIELDED AND TERMINATE IN A FACTORY SUPPLIED JUNCTION BOX MOUNTED ON THE UNIT OR INTEGRAL TO THE MOTOR.

FAN/FAN GUARDS:
FANS AMCA RATED DIRECT DRIVE, ALUMINUM BLADE, STEEL HUB PROPELLER WILL BE STATICALLY AND DYNAMICALLY BALANCED. UNIT SHALL BE EQUIPPED WITH A SAFETY FAN GUARD.

AIR DEFLECTORS
THE UNIT SHALL BE FURNISHED WITH HORIZONTAL AIR DEFLECTORS. THE DEFLECTORS ARE ADJUSTABLE TO ALMOST ANY DESIRED POSITION FOR DOWNWARD, STRAIGHT OR UPWARD AIRFLOW.

SEQUENCE OF OPERATION

1. GENERAL
A. PROVIDE A NEW OPEN PROTOCOL (LATEST VERSION OF NIAGARA) BASED BMS SYSTEM, INCLUDING A NEW FRONT END WORKSTATION WITH A WEB-BASED INTERFACE FOR REMOTE LOGIN CAPABILITIES. PROVIDE NEW CONTROLLERS AND CONTROL DEVICES TO ACHIEVE THE SEQUENCE OF OPERATIONS FOR PHASE 3. CONNECT THE EXISTING EQUIPMENT FOR PHASE 1 AND THE EXISTING HW SYSTEM INCLUDING BOILERS AND PUMPS TO THE NEW BMS SYSTEM.
2. INITIAL PHASE

A. VERIFY EXISTING EQUIPMENT ON SITE TO DETERMINE THE REQUIRED BMS INTERFACE OF THE EQUIPMENT.
B. CONNECT TO THE FOLLOWING EXISTING EQUIPMENT THROUGH A BACNET/MODBUS INTERFACE AND MONITOR ALL AVAILABLE POINT AND ALARMS FROM THE MANUFACTURER'S CONTROLLER
1. DEHUMIDIFYING UNIT
2. VRF MASTER CONTROLLER
3. DEDICATED OUTSIDE AIR UNIT

3. EXISTING HOT WATER PLANT

A. VERIFY EXISTING EQUIPMENT ON SITE TO DETERMINE THE REQUIRED BMS INTERFACE OF THE EQUIPMENT.
B. CONNECT TO THE FOLLOWING EXISTING EQUIPMENT THROUGH A BACNET/MODBUS INTERFACE AND MONITOR ALL AVAILABLE POINT AND ALARMS FROM THE MANUFACTURER'S CONTROLLER
1. BOILERS 1 THRU 3 (ADDITIONAL HARDWIRED POINTS - BOILER STATUS, COMMON ALARM IF AVAILABLE)
2. HOT WATER PUMPS (P-1, P-1A, P-2, P-2A, P-3, P-3A, & P-4) (ADDITIONAL HARDWIRED POINTS - PUMP STATUS, COMMON ALARM IF AVAILABLE)

C. PROVIDE STRAP-ON TEMPERATURE SENSORS ON THE INLETS AND OUTLETS OF THE FOLLOWING HEAT EXCHANGERS. PROVIDE A FIELD COORDINATED HOT WATER HIGH/LOW TEMPERATURE ALARM:
1. BUILDING HEAT EXCHANGER (HRX-1)
2. DOMESTIC WATER HEAT EXCHANGER (HRX-2)

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORD

AF. EXISTING AIR-DISTRIBUTION SYSTEM CLEANING

1. PART 1 - GENERAL
1.1 DUCT CLEANING
A. EMPLOY AN ASCS CERTIFIED BY NADCA ON A FULL-TIME BASIS TO CLEAN ALL THE EXISTING AIR DISTRIBUTION DUCTS, PLENUMS, AND SYSTEM COMPONENTS AS SHOWN ON THE DRAWINGS.
2. PART 2 - EXECUTION
2.1 EXAMINATION
A. EXAMINE EXISTING HVAC AIR-DISTRIBUTION EQUIPMENT, DUCTS, PLENUMS, AND SYSTEM COMPONENTS TO DETERMINE APPROPRIATE METHODS, TOOLS, AND EQUIPMENT REQUIRED FOR PERFORMANCE OF THE WORK.
B. PERFORM "PROJECT EVALUATION AND RECOMMENDATION" ACCORDING TO NADCA ACR 2006.
C. PREPARE WRITTEN REPORT LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF THE WORK.
D. PROCEED WITH WORK ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
2.2 PREPARATION
A. PREPARE A WRITTEN PLAN THAT INCLUDES STRATEGIES AND STEP-BY-STEP PROCEDURES. AT A MINIMUM, INCLUDE THE FOLLOWING:
1. WORK SCHEDULE INCLUDING LOCATION, TIMES, AND IMPACT ON OCCUPIED AREAS.
2. METHODS AND MATERIALS PLANNED FOR EACH HVAC COMPONENT TYPE.
3. REQUIRED SUPPORT FROM OTHER TRADES.
4. EQUIPMENT AND MATERIAL STORAGE REQUIREMENTS.
5. EXHAUST EQUIPMENT SETUP LOCATIONS.
B. USE THE EXISTING SERVICE OPENINGS, AS REQUIRED FOR PROPER CLEANING, AT VARIOUS POINTS OF THE HVAC SYSTEM FOR PHYSICAL AND MECHANICAL ENTRY AND FOR INSPECTION.
C. COMPLY WITH NADCA ACR 2006, "GUIDELINES FOR CONSTRUCTING SERVICE OPENINGS IN HVAC SYSTEMS" SECTION.
3. THOROUGHLY CLEAN EXISTING CONCRETE TRENCH FROM DUST AND ALL FOREIGN MATTER.
2.3 CLEANING

A. COMPLY WITH NADCA ACR 2006.
B. REMOVE VISIBLE SURFACE CONTAMINANTS AND DEPOSITS FROM WITHIN THE HVAC SYSTEM.
C. SYSTEMS AND COMPONENTS TO BE CLEANED:
1. AIR DEVICES FOR SUPPLY AND RETURN AIR.
2. AIR-TERMINAL UNITS.
3. DUCTWORK:
A. SUPPLY-AIR DUCTS, INCLUDING TURNING VANES[ AND REHEAT COILS], TO THE AIR-HANDLING UNIT.
B. RETURN-AIR DUCTS TO THE AIR-HANDLING UNIT.
C. EXHAUST-AIR DUCTS.
D. PARTICULATE COLLECTION:
1. FOR PARTICULATE COLLECTION EQUIPMENT, INCLUDE ADEQUATE FILTRATION TO CONTAIN DEBRIS REMOVED. LOCATE EQUIPMENT DOWNWIND AND AWAY FROM ALL AIR INTAKES AND OTHER POINTS OF ENTRY INTO THE BUILDING.
2. HEPA FILTRATION WITH 99.97 PERCENT COLLECTION EFFICIENCY FOR PARTICLES SIZED 0.3 MICROMETER OR LARGER SHALL BE USED WHERE THE PARTICULATE COLLECTION EQUIPMENT IS EXHAUSTING INSIDE THE BUILDING.
E. CONTROL ODORS AND MIST VAPORS DURING THE CLEANING AND RESTORATION PROCESS.
F. MARK THE POSITION OF MANUAL VOLUME DAMPERS AND AIR-DIRECTIONAL MECHANICAL DEVICES INSIDE THE SYSTEM PRIOR TO CLEANING. RESTORE THEM TO THEIR MARKED POSITION ON COMPLETION OF CLEANING.
G. SYSTEM COMPONENTS SHALL BE CLEANED SO THAT ALL HVAC SYSTEM COMPONENTS ARE VISIBLY CLEAN. ON COMPLETION, ALL COMPONENTS MUST BE RETURNED TO THOSE SETTINGS RECORDED JUST PRIOR TO CLEANING OPERATIONS.
H. CLEAN ALL EXISTING AIR-DISTRIBUTION DEVICES, REGISTERS, GRILLES, AND DIFFUSERS.
I. CLEAN VISIBLE SURFACE CONTAMINATION DEPOSITS ACCORDING TO NADCA ACR 2006 AND THE FOLLOWING:
1. ENSURE THAT A SUITABLE OPERATIVE DRAINAGE SYSTEM IS IN PLACE PRIOR TO BEGINNING WASH-DOWN PROCEDURES.
2. CLEAN EVAPORATOR COILS, REHEAT COILS, AND OTHER AIRSTREAM COMPONENTS.
J. DUCT SYSTEMS:
1. CREATE SERVICE OPENINGS IN THE EXISTING HVAC SYSTEM AS NECESSARY TO ACCOMMODATE CLEANING.
2. MECHANICALLY CLEAN EXISTING DUCT SYSTEMS SPECIFIED TO REMOVE ALL VISIBLE CONTAMINANTS SO THAT THE SYSTEMS ARE CAPABLE OF PASSING THE HVAC SYSTEM CLEANLINESS TESTS (SEE NADCA ACR 2006).
K. DEBRIS REMOVED FROM THE HVAC SYSTEM SHALL BE DISPOSED OF ACCORDING TO APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
L. MECHANICAL CLEANING METHODOLOGY:
1. SOURCE-REMOVAL CLEANING METHODS: THE EXISTING HVAC SYSTEM SHALL BE CLEANED USING SOURCE-REMOVAL MECHANICAL CLEANING METHODS DESIGNED TO EXTRACT CONTAMINANTS FROM WITHIN THE HVAC SYSTEM AND TO SAFELY REMOVE THESE CONTAMINANTS FROM THE FACILITY. NO CLEANING METHOD, OR COMBINATION OF METHODS, SHALL BE USED THAT COULD POTENTIALLY DAMAGE COMPONENTS OF THE HVAC SYSTEM OR NEGATIVELY ALTER THE INTEGRITY OF THE SYSTEM.
M. USE CONTINUOUSLY OPERATING VACUUM-COLLECTION DEVICES TO KEEP EACH SECTION BEING CLEANED UNDER NEGATIVE PRESSURE.
N. CLEANING METHODS THAT REQUIRE MECHANICAL AGITATION DEVICES TO DISLODGE DEBRIS THAT IS ADHERED TO INTERIOR SURFACES OF HVAC SYSTEM COMPONENTS SHALL BE EQUIPPED TO SAFELY REMOVE THESE DEVICES. CLEANING METHODS SHALL NOT DAMAGE THE INTEGRITY OF HVAC SYSTEM COMPONENTS OR DAMAGE POROUS SURFACE MATERIALS SUCH AS DUCT AND PLENUM LINERS.
2. CLEANING MINERAL-FIBER INSULATION COMPONENTS:
O. FIBROUS-GLASS THERMAL OR ACOUSTICAL INSULATION ELEMENTS PRESENT IN EQUIPMENT OR DUCTWORK SHALL BE THOROUGHLY CLEANED WITH HEPA VACUUMING EQUIPMENT WHILE THE HVAC SYSTEM IS UNDER CONSTANT NEGATIVE PRESSURE AND SHALL NOT BE PERMITTED TO GET WET ACCORDING TO NADCA ACR 2006.
P. CLEANING METHODS USED SHALL NOT CAUSE DAMAGE TO FIBROUS-GLASS COMPONENTS AND WILL RENDER THE SYSTEM CAPABLE OF PASSING THE HVAC SYSTEM CLEANLINESS TESTS (SEE NADCA ACR 2006).
Q. FIBROUS MATERIALS THAT BECOME WET SHALL BE DISCARDED AND REPLACED.
R. ANTIMICROBIAL AGENTS AND COATINGS:
1. APPLY ANTIMICROBIAL AGENTS AND COATINGS IF ACTIVE FUNGAL GROWTH IS REASONABLY SUSPECTED OR WHERE UNACCEPTABLE LEVELS OF FUNGAL CONTAMINATION HAVE BEEN VERIFIED. APPLY ANTIMICROBIAL AGENTS AND COATINGS ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS AND EPA REGISTRATION LISTING AFTER THE REMOVAL OF SURFACE DEPOSITS AND DEBRIS.
2. WHEN USED, ANTIMICROBIAL TREATMENTS AND COATINGS SHALL BE APPLIED AFTER THE SYSTEM IS RENDERED CLEAN.
3. APPLY ANTIMICROBIAL AGENTS AND COATINGS DIRECTLY ONTO SURFACES OF INTERIOR DUCTWORK.
4. SANITIZING AGENT PRODUCTS SHALL BE REGISTERED BY THE EPA AS SPECIFICALLY INTENDED FOR USE IN HVAC SYSTEMS AND DUCTWORK.

2.4 CLEANLINESS VERIFICATION

S. VERIFY CLEANLINESS ACCORDING TO NADCA ACR 2006, "VERIFICATION OF HVAC SYSTEM CLEANLINESS" SECTION.
H. VERIFY HVAC SYSTEM CLEANLINESS AFTER MECHANICAL CLEANING AND BEFORE APPLYING ANY TREATMENT OR INTRODUCING ANY TREATMENT-RELATED SUBSTANCE TO THE HVAC SYSTEM, INCLUDING BIOCIDAL AGENTS AND COATINGS.
I. PERFORM VISUAL INSPECTION FOR CLEANLINESS. IF NO CONTAMINANTS ARE EVIDENT THROUGH VISUAL INSPECTION, THE HVAC SYSTEM SHALL BE CONSIDERED CLEAN. IF VISIBLE CONTAMINANTS ARE EVIDENT THROUGH VISUAL INSPECTION, THOSE PORTIONS OF THE SYSTEM WHERE CONTAMINANTS ARE VISIBLE SHALL BE RE-CLEANED AND SUBJECTED TO RE-INSPECTION FOR CLEANLINESS.
J. ADDITIONAL VERIFICATION:
1. PERFORM SURFACE COMPARISON TESTING OR NADCA VACUUM TEST.
2. CONDUCT NADCA VACUUM GRAVIMETRIC TEST ANALYSIS FOR NONPOROUS SURFACES.
E. PREPARE A WRITTEN CLEANLINESS VERIFICATION REPORT. AT A MINIMUM, INCLUDE THE FOLLOWING:
1. WRITTEN DOCUMENTATION OF THE SUCCESS OF THE CLEANING.
2. SITE INSPECTION REPORTS INCLUDING NOTATION ON AREAS OF INSPECTION, AS VERIFIED THROUGH VISUAL INSPECTION.
3. SURFACE COMPARISON TEST RESULTS IF REQUIRED.
4. GRAVIMETRIC ANALYSIS (NONPOROUS SURFACES ONLY).
5. SYSTEM AREAS FOUND TO BE DAMAGED.

2.5 RESTORATION

A. RESTORE AND REPAIR DUCTS, PLENUMS, AND COMPONENTS ACCORDING TO NADCA ACR 2006, "RESTORATION AND REPAIR OF MECHANICAL SYSTEMS" SECTION.
B. RESTORE SERVICE OPENINGS CAPABLE OF FUTURE REOPENING. INCLUDE LOCATION OFSERVICE OPENINGS IN PROJECT CLOSEOUT REPORT.
C. REPLACE DAMAGED INSULATION
D. ENSURE THAT CLOSURES DO NOT HINDER OR ALTER AIRFLOW.
E. NEW CLOSURE MATERIALS, INCLUDING INSULATION, SHALL MATCH OPENED MATERIALS AND SHALL HAVE REMOVABLE CLOSURE PANELS FITTED WITH GASKETS AND FASTENERS.

AG. AUTOMATIC TEMPERATURE CONTROL

I. AUTOMATIC TEMPERATURE CONTROL
A. WORK INCLUDED
I. FURNISH A NEW BUILDING MANAGEMENT SYSTEM (BMS) IN ACCORDANCE WITH THIS SPECIFICATION SECTION INCLUDING ALL WEB-STATIONS, SOFTWARE, NETWORK SWITCHES, ROUTERS, NETWORK CONTROLLERS, DDC CONTROLLERS, AND INPUT/OUTPUT DEVICES ETC.
II. THE LATEST VERSION OF THE TRIDIUM BASED NIAGARA AX FRAMEWORK SHALL BE INSTALLED AT THE BMS FRONT END. THE BMS SYSTEM SHALL BE FULLY OPEN, REPROGRAMMABLE, AND ADJUSTABLE AT THE JACE NETWORK CONTROLLERS. III. SUBMITTALS:
1. SHOP DRAWINGS WITH SCHEMATIC FLOW DIAGRAMS SHOWING ALL HVAC SYSTEMS WITH PUMPS, FANS, COILS, VALVES, DAMPERS, SENSING DEVICES, SAFETIES, ETC. AS SPECIFIED
2. SEQUENCE OF OPERATIONS
3. POINT TO POINT WIRING DIAGRAMS
4. BMS NETWORK ARCHITECTURE DRAWING SHOWING ALL PRIMARY ETHERNET COMMUNICATION WIRE AND SECONDARY COMMUNICATION.
5. VALVE SCHEDULE INDICATING CLOSEOFF, CV, VALVE SIZE, SERVICE, MODULATING OR 2-POSITION ETC.
6. BILL OF MATERIAL FOR EACH SYSTEM
7. PRODUCT DATA SHEETS
B. QUALITY ASSURANCE:
I. THE BMS CONTRACTOR MUST BE A FACTORY BRANCH OFFICE OF THE MANUFACTURER OR A FACTORY AUTHORIZED INSTALLING CONTRACTOR WITH 20 YEARS EXPERIENCE WITH A SINGLE MANUFACTURER.
II. COMPLY WITH ALL LOCAL CODES AND REGULATIONS INCLUDING UL, THE LOCAL BUILDING CODE ETC. III. ALL BMS SOFTWARE, PRIMARY AND SECONDARY DDC CONTROLLERS SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER. IV.BMS CONTRACTOR MUST BE AN INDEPENDENT BMS CONTRACTOR, NOT AFFILIATED WITH A MECHANICAL CONTRACTOR.
C. ONLY APPROVED BMS MANUFACTURER / INSTALLER (OTHER CONTRACTORS SHALL NOT BE ACCEPTED) :
I. BASIS OF DESIGN: SIEMENS (TRIDIUM NIAGARA) BY ENVIRONET SYSTEMS - CONTACT THOMAS HALL (646-276-5053) THALL@ENVIRONETSYSTEMS.COM
II. SIEMENS III. JOHNSON CONTROLS
D. SYSTEM DESCRIPTION
I. THE BMS SHALL BE DESIGNED IN STRICT ACCORDANCE WITH ASHRAE'S LATEST BACNET STANDARD, TO PROVIDE INTEROPERABILITY BETWEEN DIFFERENT BUILDING SUBSYSTEMS.
E. BMS NETWORK ARCHITECTURE:
I. THE BMS SHALL NETWORK SERVERS, WORK-STATION, ROUTERS, PRIMARY CONTROL PANEL(S) AND SECONDARY CONTROL PANELS AS REQUIRED FOR ALL MONITORING AND CONTROL AS SPECIFIED.
II. BMS WORK-STATION:
1. INCLUDE WORK-STATION SOFTWARE TO ALLOW WEB-BROWSER ACCESS VIA THE INTERNET FOR A MINIMUM OF 10 CONCURRENT USERS VIA OWNER FURNISHED DSL LINE.
2. WORK-STATION SHALL ALLOW FULL NAVIGATION OF THE BMS SYSTEM, DISPLAY GRAPHICS, ALARM MANAGEMENT ETC.
3. WORKSTATION SHALL INCLUDE COLOR PRINTER, MONITOR, DUAL CORE INTEL® 3.5 GHZ PROCESSOR WITH 4GB OF RAM, MICROSOFT WINDOWS XP 32-BIT SP3 OR MICROSOFT WINDOWS 7 OPERATING SYSTEM.
III. BMS SOFTWARE & GRAPHICS:
1. WEB-STATION SHALL REQUIRE SECURE USERNAME AND PASSWORD LOGIN.
2. PROVIDE A SYSTEM GRAPHIC PAGE ON THE WEB-STATION FOR EACH HVAC SYSTEM WITH ALL MONITORING AND CONTROL POINTS AS SPECIFIED.
3. THE BMS CONTRACTOR SHALL PROVIDE A GRAPHIC REPRESENTATION OF EACH FLOOR PLAN AND EACH SYSTEM, SHOWING DEVICES AND ALARMS INDICATED ON THE INPUT/OUTPUT SUMMARY.
4. THE BMS SHALL PROVIDE GRAPHICAL SUMMARY PAGES FOR EQUIPMENT AND THEIR CRITICAL POINTS, SUCH AS FOR VAV BOXES AND AC UNITS.
5. ALL EQUIPMENT GRAPHICS SHALL BE DYNAMIC
6. THE FLOOR GRAPHICS SHALL INCLUDE UNIQUE COLOR CODES FOR TEMPERATURE VARIATIONS FROM SETPOINT.
7. THE GRAPHIC INTERFACE SHALL BE SIMPLE POINT AND CLICK NAVIGATION AND ALLOW SCHEDULE CHANGES, SETPOINT CHANGES, ALARM ACKNOWLEDGEMENT, TREND CONFIGURATION, ETC.
IV. ALARMS
1. THE BMS SHALL PROVIDE THE PROGRAMMING REQUIRED TO SETUP ALARMS AT THE WORKSTATION AND THROUGH EMAIL. REQUIRED ALARMS, ALARM PRIORITY LEVEL, AND GROUPING OF ALARMS SHALL BE REVIEWED WITH OWNER PRIOR TO SETUP.
2. INCLUDE PROGRAMMING FOR A MINIMUM OF (30) EMAIL ALARMS.
a. IP CONNECTION SHALL BE PROVIDED BY TENANT.
V. MESSAGE DELIVERY ASSURANCE SYSTEM (MDAS)
1. FOR THE DURATION OF THE (1) YEAR WARRANTY PERIOD, THE BMS SHALL PROVIDE A MDAS.
a. THE MDAS SHALL PROVIDE AUTOMATED 24/7 EMAIL AND VOICE ALARM DELIVERY REQUIRING ACKNOWLEDGEMENT.
b. ESCALATION PROTOCOL AND RESPONSE SHALL BE IMPLEMENTED WHICH SHALL REQUIRE ALL ALARMS TO CONTINUOUSLY BE ESCALATED TO EACH EMAIL RECIPIENT AND VOICE MESSAGE RECIPIENT UNTIL THE ALARM IS ACKNOWLEDGED.
c. WEB BASED CUSTOMER ACCESS SHALL BE PROVIDED TO VIEW ALARM HISTORY AND ACKNOWLEDGEMENT HISTORY, AND MAKE CLIENT CHANGE REQUESTS
d. MDAS SHALL ALARM IF CLIENT BMS SYSTEM LOSES ABILITY TO SEND EMAIL ALARMS.
e. MDAS SHALL VERIFY CONTINUOUS CONNECTIVITY WITH THE INTERNET TO SEND EMAIL OR PHONE ALARM MESSAGES.
2. IF THE BMS IS NOT ABLE TO PROVIDE MESSAGE DELIVERY ASSURANCE, THEY SHALL ENGAGE THE SERVICES OF A CERTIFIED NOC CENTER TO RECEIVE, ROUTE AND ESCALATE ALARMS FOR THE (1) YEAR WARRANTY PERIOD.
VI. PROGRAMMING
1. BMS SHALL INCORPORATE ALL CUSTOM PROGRAMMING REQUIRED TO MEET THE SEQUENCE OF OPERATION.
VII. PRIMARY NETWORK:
1. THE PRIMARY NETWORK SHALL BE ETHERNET BASED AND CONNECT THE WORKSTATION, WEB-STATION AND PRIMARY CONTROL PANELS IN A PEER TO PEER NETWORK.
2. THE NETWORK CONTROLLER SHALL OPERATE ON THE IP LEVEL AND PROVIDE THE SUPERVISORY CONTROL FUNCTIONS OVER THE LOCAL DDC CONTROLLERS CONNECTED.
3. EACH NETWORK CONTROLLER SHALL BE INSTALLED IN A SEPARATE NETWORK CONTROL PANEL, WITH A SEPARATE POWER SOURCE.
a. COMBINING MULTIPLE NETWORK CONTROLLERS IN A SINGLE PANEL IS NOT ACCEPTABLE
4. THE NETWORK CONTROLLER SHALL BE CAPABLE OF CALENDAR FUNCTIONS, SCHEDULING, AND ALARM MONITORING AND ROUTING.
5. THE NETWORK CONTROLLER SHALL BE CAPABLE OF DISPLAYING COLOR GRAPHICS AND ALARMS.
6. THE NETWORK CONTROLLER SHALL EMPLOY A MODULAR I/O DESIGN TO ALLOW EXPANSION. INPUT AND OUTPUT CAPACITY IS TO BE PROVIDED THROUGH PLUG-IN MODULES OF VARIOUS TYPES. IT SHALL BE POSSIBLE TO COMBINE I/O MODULES AS DESIRED TO MEET THE I/O REQUIREMENTS FOR INDIVIDUAL CONTROL APPLICATIONS.
7. EACH NETWORK CONTROLLER SHALL RESIDE ON THE TENANT'S IP NETWORK INFRASTRUCTURE. RD PARTY EQUIPMENT.
8. PRIMARY CONTROL PANELS SHALL PROVIDE PORTS FOR SECONDARY BMS PANELS AND INTEGRATION TO 3
9. PRIMARY CONTROL PANELS SHALL HAVE A MINIMUM 32 MB RAM, 1MB OF FLASH, AND 16K EPROM OR EEPROM WITH 72-HOUR BATTERY BACKUP OF RAM AND CLOCK FUNCTIONS.
VIII. SECONDARY NETWORK
1. EACH SECONDARY CONTROLLER SHALL OPERATE STAND-ALONE, CAPABLE OF ALL MONITORING AND CONTROL OF EQUIPMENT INDEPENDENTLY OF OTHER CONTROLLERS WITH ALL PROGRAMMING, INPUTS AND OUTPUTS AS REQUIRED FOR THE SYSTEM SERVED.
2. ALL SECONDARY CONTROLLERS SHALL BE ETHERNET BASED AND SHALL COMMUNICATE THROUGH BACNET IP.
3. SECONDARY CONTROLLERS SHALL HAVE BUILT IN DIGITAL OUTPUTS WITH THREE POSITION MANUAL OVERRIDE SWITCHES TO ALLOW SELECTION OF THE ON, OFF, OR AUTO OUTPUT STATE.
F. PRODUCTS:
I. CONTROL PANELS:
1. PANELS SHALL BE WALL MOUNTED LOCATED ADJACENT TO THE SYSTEM SERVED.
2. COMMON KEY FOR ALL PANELS ON THE PROJECT
3. PANELS SHALL BE CONSTRUCTED OF FURNITURE QUALITY STEEL OR EXTRUDED ALUMINUM ALLOY. TOTALLY ENCLOSED WITH HINGED DOORS. NEMA 1 RATED MINIMUM OR AS NEEDED FOR PANEL LOCATION (EX. OUTDOOR NEMA 3)
II. TEMPERATURE SENSORS:
1. ALL SENSORS SHALL BE RTD OR THERMISTOR SPECIFIED ACCURACY BELOW. SENSORS SHALL INCLUDE ALL MOUNTING HARDWARE FOR THE APPLICATION - WELLS, SUNSHIELD, WALL OR DUCT MOUNTING BRACKET ETC.
2. ACCURACY: +/- 1 DEG F
3. SPACE SENSORS FOR VAV BOXES SHALL HAVE A SETPOINT ADJUSTMENT SLIDER. ALL SPACE SENSORS SHALL BE ADJUSTABLE AT THE BMS AND AT THE SENSOR.
III. CURRENT SWITCHES FOR MOTOR STATUS
1. CURRENT SENSING RELAY WITH CURRENT TRANSFORMERS, ADJUSTABLE AND SET TO 175% OF RATED MOTOR CURRENT.
IV. LEAK DETECTOR:
1. LEAK DETECTOR SHALL HAVE ADJUSTABLE HEIGHT WATER DETECTION PROBES, GREEN LED FOR 24VAC POWER INDICATION, RED LED FOR ALARM INDICATION AND SPDT ALARM CONTACTS. THE ENCLOSURE SHALL BE WEATHERPROOF.
V. AIR FLOW MEASURING STATIONS
1. HIGH SENSOR DENSITY, HIGH PERFORMANCE THERMAL DISPERSION AIR FLOW MEASURING STATIONS.
2. GOLD ANODIZED TUBE, HIGH SPEED MICROPROCESSOR BASED DESIGN ARCHITECTURE
3. ACCURACY: +- 2% OF READING
4. +- .25% REPEATABILITY OF FLOW RATE
5. ACCEPTABLE MFR: EBRTON GOLD GT X116-P
VI. DAMPER ACTUATOR:
1. ALL DAMPER ACTUATORS SHALL BE ELECTRIC DIRECT MOUNT WHERE POSSIBLE.
2. DAMPER ACTUATORS SHALL HAVE SUFFICIENT POWER TO OVERCOME LINKAGE, AIR PRESSURE AND LOUVER FRICTION. DAMPERS SHALL OPERATE SMOOTHLY THRU THE ENTIRE STROKE. ACTUATORS SHALL BE SIZED FOR 150% OF THE DESIGN DAMPER TORQUE.
3. ACTUATORS SHALL OPERATE ON 24 OR 120VAC FOR 2-POSITION APPLICATION. OUTSIDE AIR AND FAN INTERLOCK DAMPERS SHALL SPRING CLOSED FOR FAIL-SAFE OPERATION.
4. MODULATING ACTUATORS SHALL ACCEPT 4-20MA OR 0-10VDC SIGNAL.
VII. AUTOMATIC VALVES:
1. ALL AUTOMATIC CONTROL AND ISOLATION VALVES SHALL BE OF THE ELECTRONIC TYPE, UNLESS OTHERWISE SPECIFIED, QUIET IN OPERATION, AND SHALL BE ARRANGED TO SPRING RETURN FAIL SAFE, IN A NORMALLY OPEN OR NORMALLY CLOSED POSITION AS REQUIRED. CONTROL VALVES SHALL BE FULLY PROPORTIONING AND ISOLATION VALVES SHALL BE 2-POSITION. VALVES TO HAVE ADJUSTABLE OPERATING RANGES AND STARTING POINTS TO PROVIDE FLEXIBILITY OF ADJUSTMENT IN SEQUENCING AND THROTTLING.
2. VALVES SHALL BE SIZED BY THE TEMPERATURE CONTROL MANUFACTURER AND GUARANTEED TO MEET THE HEATING OR COOLING REQUIREMENTS AS SPECIFIED. CONTROL VALVES SHALL BE SUITABLE FOR PRESSURE CONDITIONS AND CLOSE AGAINST 110% OF PUMP DIFFERENTIAL PRESSURE.
3. ALL VALVE BODIES SHALL HAVE THE SAME PRESSURE CHARACTERISTICS AS THE PIPE IN WHICH IT IS INSTALLED.
4. VALVES 2 INCHES AND SMALLER UNLESS OTHERWISE SPECIFIED SHALL HAVE BRONZE BODIES WITH SCREWED CONNECTIONS. VALVES SHALL BE FISHER TYPE ED, WARREN TYPE 20/70, K&M SERIES GCG, BELIMO OR AS APPROVED.
5. VALVES BETWEEN 2-1/2" AND 4 INCH UNLESS OTHERWISE SPECIFIED, SHALL HAVE CAST IRON OR CARBON STEEL BODIES WITH FLANGED CONNECTIONS IN ACCORDANCE WITH THE PIPING SPECIFICATIONS. VALVES SHALL BE FISHER STYLE ED, WARREN TYPE 20/70 OR 1800 SERIES GCG, K&M SERIES GCG, BELIMO OR AS APPROVED.
6. CONTROL VALVES 4" AND LARGER UNLESS OTHERWISE SPECIFIED SHALL BE ELECTRIC BRAY, OR AS APPROVED.
7. AUTOMATIC CONTROL VALVES EXPOSED TO THE ELEMENTS SHALL HAVE ELECTRONIC ACTUATORS WITH ALL REQUIRED ACCESSORIES.
G. EXECUTION:
I. ELECTRICAL INSTALLATION:
1. THE BMS CONTRACTOR SHALL COORDINATE LOCATION FOR ALL SPACE SENSORS AND CONTROL PANELS.
2. THE BMS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORE DRILLING FOR THE VERTICAL CONDUIT RISERS BETWEEN FLOORS. ALL VERTICAL WIRING BETWEEN FLOORS SHALL BE IN EMT CONDUIT.
3. PROVIDE TURNKEY INSTALLATION OF ALL DEVICES, CONDUIT, WIRE, TERMINATIONS AND WIRING ACCESSORIES AS REQUIRED.
4. PROVIDE ALL CONTROL POWER WIRE AS REQUIRED. REFER TO THE ELECTRICAL PLANS FOR DESIGNATED CIRCUITS AND EXTEND 120VAC POWER AS NEEDED.
5. ALL EXPOSED WIRE IN MECHANICAL EQUIPMENT ROOMS TO BE INSTALLED IN EMT CONDUIT.
6. PLENUM RATED CABLE IS ACCEPTABLE IN CEILINGS, WALLS AND UNDER RAISED FLOORS. TIE AND SUPPORT CONDUCTORS FOR NEAT WORKMEN LIKE INSTALLATION.
7. ALL WIRING LOCATED OUTSIDE SHALL BE INSTALLED IN RIGID GALVANIZED CONDUIT.
II. CHECKOUT AND VERIFICATION
1. INCLUDE LABOR TO CHECKOUT AND VERIFY DDC CONTROLLERS AND POINTS TO ENSURE THE PROPER OPERATION OF THE BMS.
III. COMMISSIONING
1. THE BAS CONTRACTOR SHALL PROVIDE MANPOWER TO ASSIST THE COMMISSIONING AGENT IN TESTING, ADJUSTING, AND COMMISSIONING ALL SYSTEMS IN THE BUILDING
a. THIS TESTING SHALL TAKE PLACE AFTER THE BMS CONTRACTOR SATISFACTORILY MET THE REQUIREMENTS OF SHOP DWGS ACCEPTANCE, AND AFTER THE BMS CONTRACTOR HAS INDEPENDENTLY STARTED UP AND CHECKED OUT THE BMS.
IV. TRAINING:
1. THE BMS CONTRACTOR SHALL PROVIDE A MINIMUM OF (24) HOURS TRAINING FOR FACILITY STAFF ON-SITE. TRAINING CAN BE PERFORMED IN SEPARATE (4) HOUR INTERVALS AT THE DISCRETION OF THE TENANT.
2. THE BMS CONTRACTOR SHALL PROVIDE HARDCOPY OF AS-BUILT DRAWINGS AND REVIEW ALL MAINTENANCE REQUIREMENTS AND PROCEDURES FOR ALL EQUIPMENT.
V. WARRANTY:
1. THE BMS CONTRACTOR SHALL PROVIDE A FULL ONE YEAR WARRANTY FOR ALL LABOR AND MATERIAL.
VI. GENERAL:
1. ADDITIONAL CONTROL WIRE:
a. PROVIDE ALL CONTROL WIRE AS REQUIRED FOR SPLIT SYSTEM AC-UNIT EVAPORATORS AND REMOTE CONDENSERS.
b. PROVIDE CONTROL WIRE FOR LOOSE SENSORS, THERMOSTATS ETC. PROVIDED BY UNIT MANUFACTURERS FOR TERMINAL EQUIPMENT, COOLING TOWERS, AC UNITS, ETC.
2. PROVIDE ALL RELAYS, SWITCHES, DAMPER ACTUATORS, THERMOSTATS, PANELS, SAFETY DEVICES, TRANSFORMERS, TIME CLOCKS, CONTROL VALVES AND OTHER DEVICES AS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION.
3. PROVIDE ALL SUPERVISION OR PROJECT MANAGEMENT AS REQUIRED FOR PROPER COORDINATION BETWEEN ASSOCIATED TRADES.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

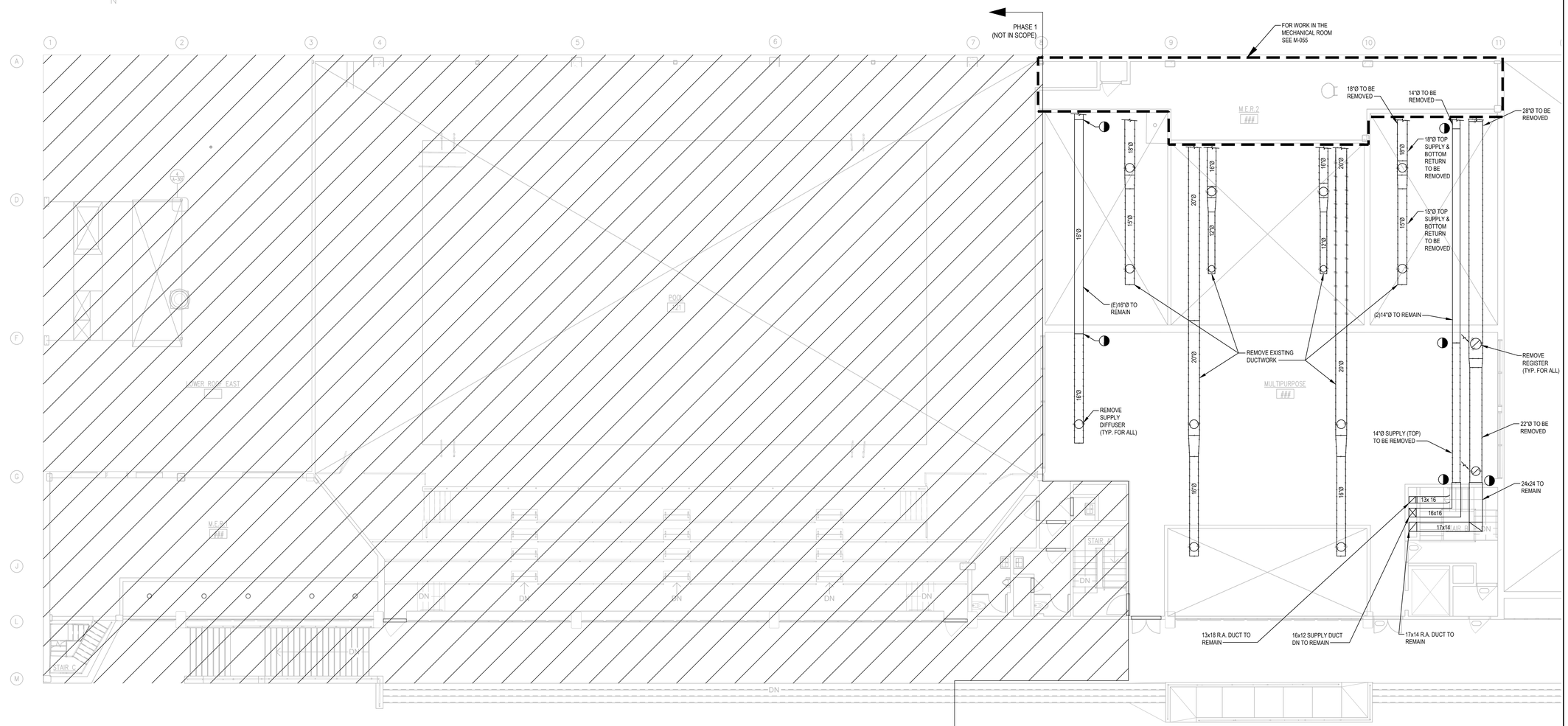
PROJECT
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
MECHANICAL
SPECIFICATIONS 5 OF 5

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-006.00
DRAWN BY D.K.
6 OF 37

NYC DOB Number




## 1 M-051.00 MECHANICAL SECOND FLOOR EAST - DEMOLITION PLAN

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

NOTES:

1. CLEAN ALL EXISTING TO REMAIN DUCTWORK (SEE SPECIFICATIONS FOR DETAILS).
2. PARTS OF DUCTWORK ARE HIDDEN AND INACCESSIBLE DURING SURVEY. CONTRACTOR TO VERIFY ALL DUCTWORK (EXPOSED AND ENCLOSED) IN FIELD.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL SECOND
FLOOR EAST - DEMOLITION
PLAN

SEAL & SIGNATURE

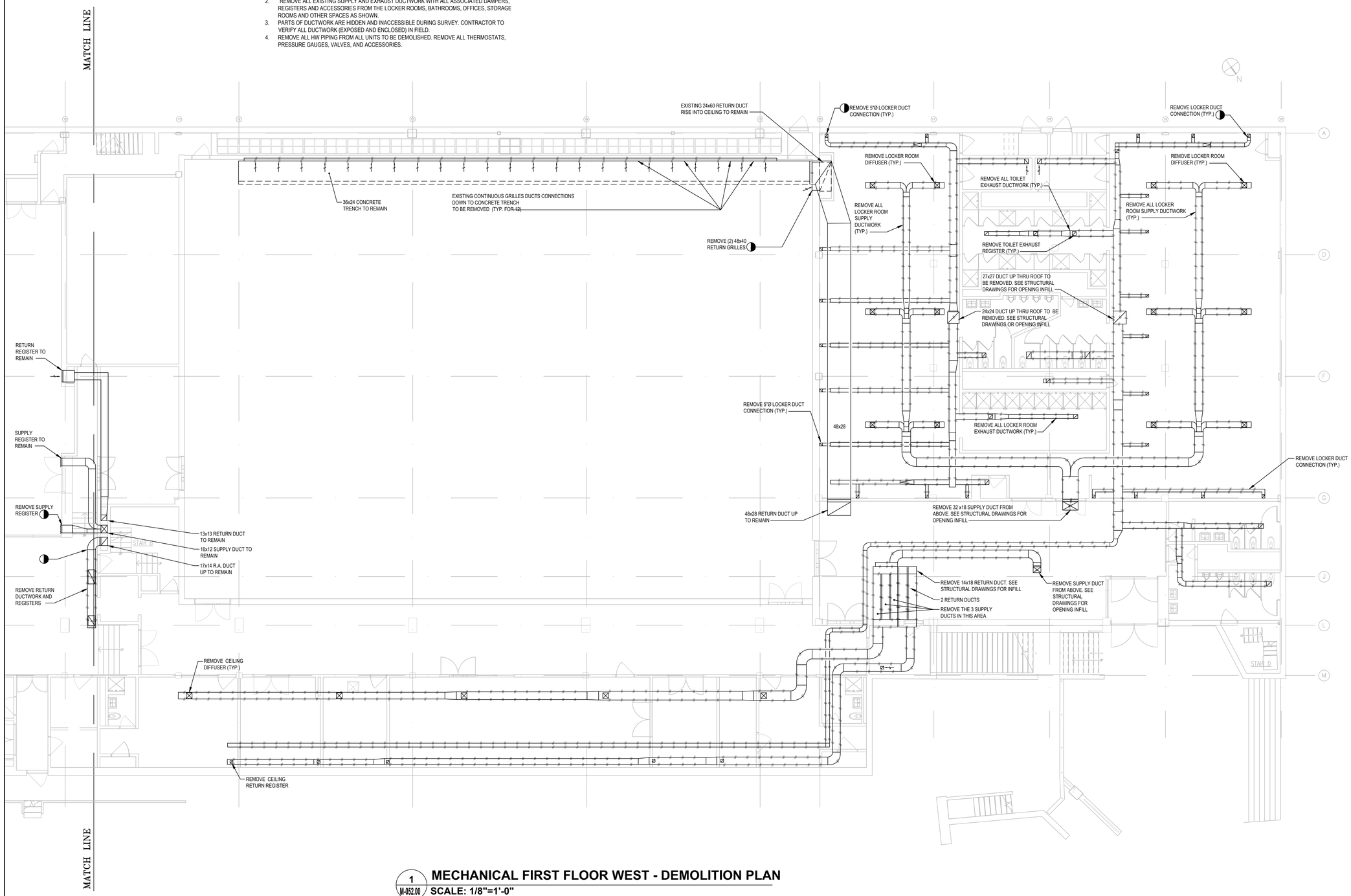
DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-051.00
DRAWN BY D.K.


NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

NOTES:

1. CLEAN ALL EXISTING TO REMAIN DUCTWORK. (SEE SPECIFICATIONS FOR DETAILS)
2. REMOVE ALL EXISTING SUPPLY AND EXHAUST DUCTWORK WITH ALL ASSOCIATED DAMPERS, REGISTERS AND ACCESSORIES FROM THE LOCKER ROOMS, BATHROOMS, OFFICES, STORAGE ROOMS AND OTHER SPACES AS SHOWN.
3. PARTS OF DUCTWORK ARE HIDDEN AND INACCESSIBLE DURING SURVEY. CONTRACTOR TO VERIFY ALL DUCTWORK (EXPOSED AND ENCLOSED) IN FIELD.
4. REMOVE ALL HW PIPING FROM ALL UNITS TO BE DEMOLISHED. REMOVE ALL THERMOSTATS, PRESSURE GAUGES, VALVES, AND ACCESSORIES.




## 1 M-052.00 MECHANICAL FIRST FLOOR WEST - DEMOLITION PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

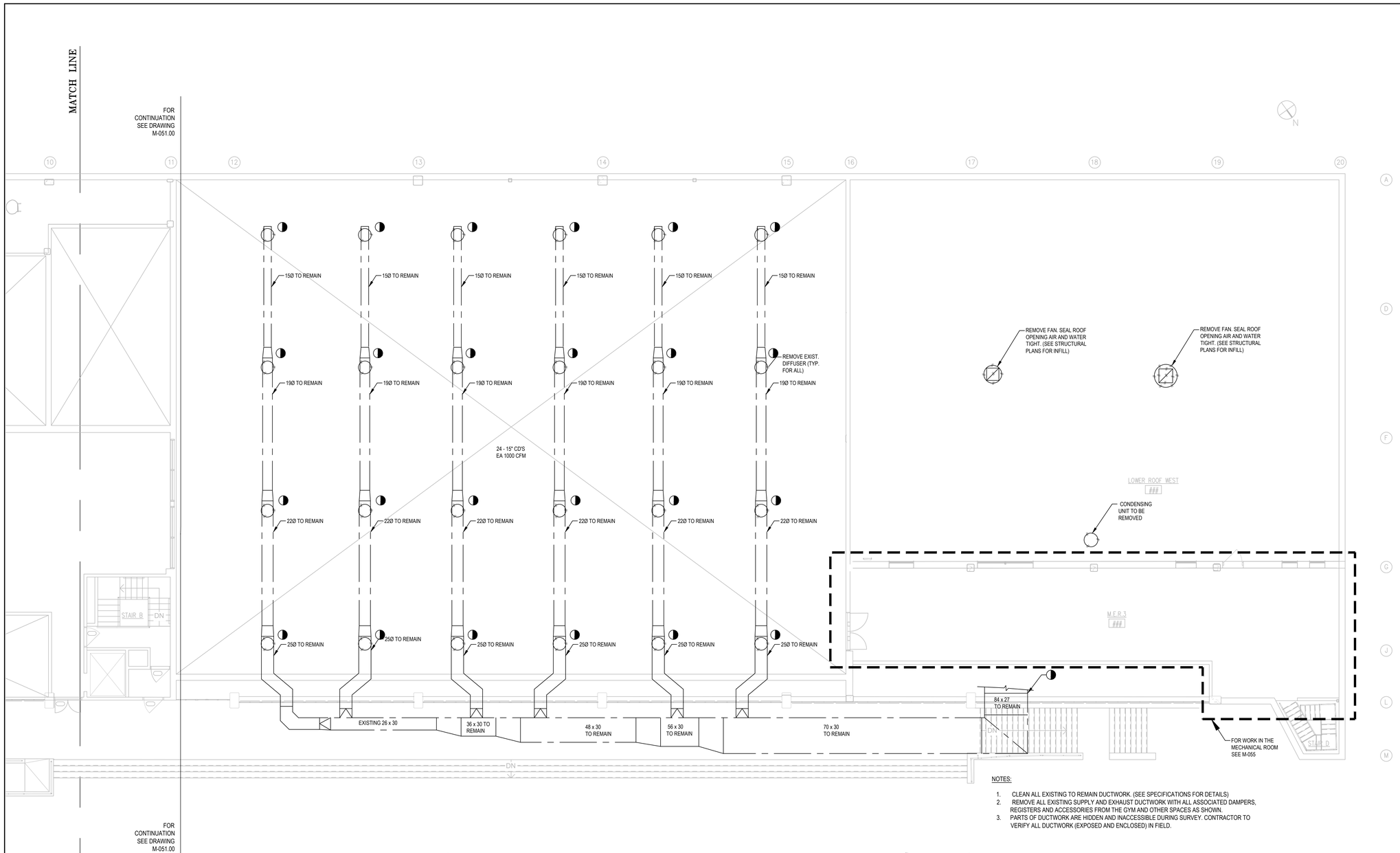
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING
MECHANICAL FIRST FLOOR WEST - DEMOLITION PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-052.00
DRAWN BY D.K.
8 OF 37

NYC DOB Number




## 1 M-053.00 MECHANICAL SECOND FLOOR WEST DEMOLITION PLAN

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

NOTES:

1. CLEAN ALL EXISTING TO REMAIN DUCTWORK. (SEE SPECIFICATIONS FOR DETAILS)
2. REMOVE ALL EXISTING SUPPLY AND EXHAUST DUCTWORK WITH ALL ASSOCIATED DAMPERS, REGISTERS AND ACCESSORIES FROM THE GYM AND OTHER SPACES AS SHOWN.
3. PARTS OF DUCTWORK ARE HIDDEN AND INACCESSIBLE DURING SURVEY. CONTRACTOR TO VERIFY ALL DUCTWORK (EXPOSED AND ENCLOSED) IN FIELD.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL SECOND FLOOR WEST - DEMOLITION PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. M-053.00 |
| | DRAWN BY: D.K. |
| | 9 OF 37 |

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

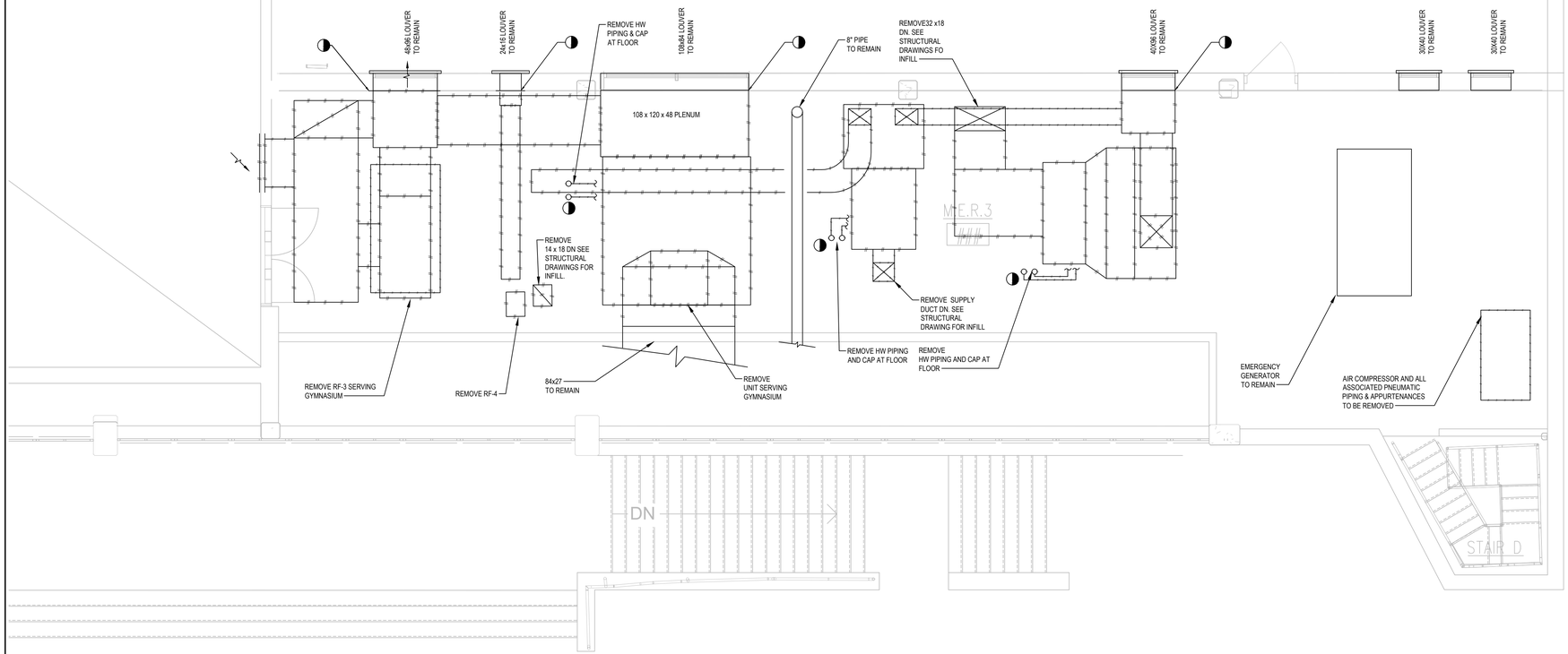
ASBESTOS REMOVAL NOTES:

1. CONTRACTOR TO CARRY IN COST REMOVAL OF ASBESTOS AND ABATEMENT FOR ALL HOT WATER PIPING INSULATION WITHIN MECHANICAL ROOM (APPROXIMATELY 30FT). ALL POTENTIAL AREAS WITH ACM SHALL BE TESTED AND CONFIRMED PRIOR TO DEMOLITION OF WORK. ACTUAL LENGTH OF PIPING CONTAINING ACM TO BE VERIFIED IN FIELD.
2. THE ASBESTOS ABATEMENT CONTRACTOR AND THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISMANTLING THE HVAC PIPING FOR PROPER REMOVAL AND DISPOSAL OF ALL ACM.
3. COORDINATE ASBESTOS REMOVAL WITH THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR, MECHANICAL CONTRACTOR, PLUMBING CONTRACTOR AND ALL SUBCONTRACTORS HIRED TO PERFORM DEMOLITION.
4. ABATEMENT CONTRACTOR SHALL PREPARE THE WORK AREA IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATORY STANDARDS.

NOTES:

1. CLEAN ALL EXISTING TO REMAIN DUCTWORK. (SEE SPECIFICATIONS FOR DETAILS)
2. REMOVE ALL EXISTING SUPPLY AND EXHAUST DUCTWORK WITH ALL ASSOCIATED DAMPERS, REGISTERS AND ACCESSORIES FROM THE LOCKER ROOMS, BATHROOMS, OFFICES, STORAGE ROOMS AND OTHER SPACES AS SHOWN.
3. PARTS OF DUCTWORK ARE HIDDEN AND INACCESSIBLE DURING SURVEY. CONTRACTOR TO VERIFY ALL DUCTWORK (EXPOSED AND ENCLOSED) IN FIELD.
4. REMOVE ALL HW PIPING FROM ALL UNITS TO BE DEMOLISHED. REMOVE ALL THERMOSTATS, PRESSURE GAUGES, VALVES, AND ACCESSORIES.

LOWER ROOF WEST
###




## 1 M-054.00 MECHANICAL ROOM ENLARGED PLAN - DEMOLITION

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING
MECHANICAL ROOM ENLARGED PLAN - DEMOLITION

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-054.00
DRAWN BY D.K.
10 OF 37

NYC DOB Number

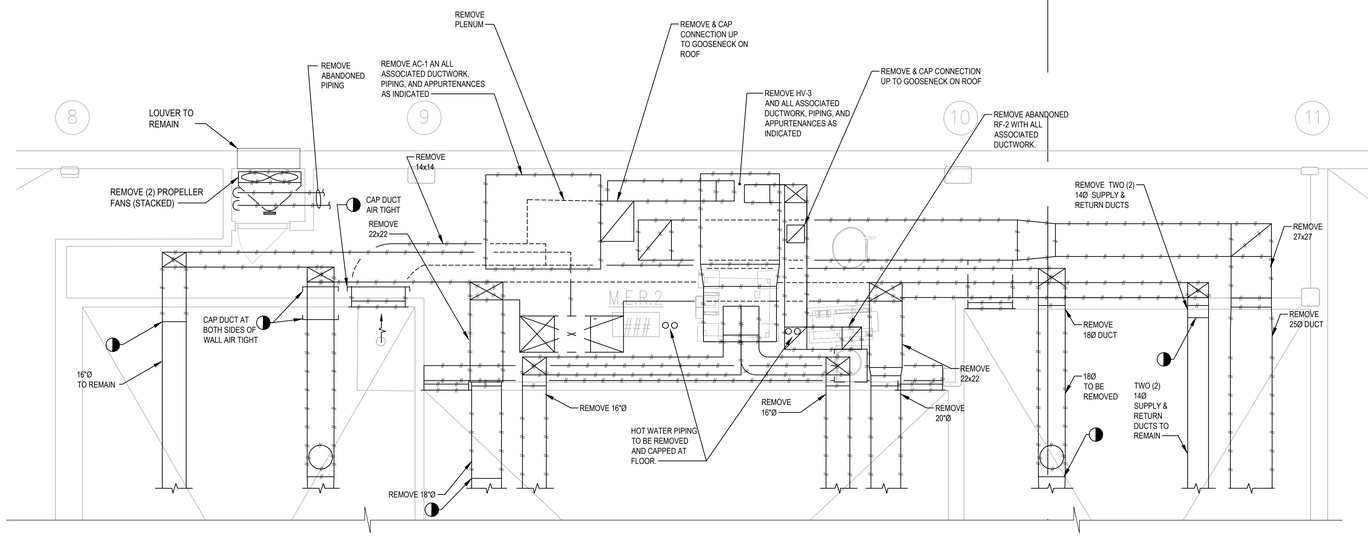
NOTES:

1. CLEAN ALL EXISTING TO REMAIN DUCTWORK. (SEE SPECIFICATIONS FOR DETAILS)
2. REMOVE ALL EXISTING SUPPLY AND EXHAUST DUCTWORK WITH ALL ASSOCIATED DAMPERS, REGISTERS AND ACCESSORIES FROM THE LOCKER ROOMS, BATHROOMS, OFFICES, STORAGE ROOMS AND OTHER SPACES AS SHOWN.
3. PARTS OF DUCTWORK ARE HIDDEN AND INACCESSIBLE DURING SURVEY. CONTRACTOR TO VERIFY ALL DUCTWORK (EXPOSED AND ENCLOSED) IN FIELD.
4. REMOVE ALL HW PIPING FROM ALL UNITS TO BE DEMOLISHED. REMOVE ALL THERMOSTATS, PRESSURE GAUGES, VALVES, AND ACCESSORIES.

ASBESTOS REMOVAL NOTES:

1. CONTRACTOR TO CARRY IN COST REMOVAL OF ASBESTOS AND ABATEMENT FOR ALL HOT WATER PIPING INSULATION WITHIN MECHANICAL ROOM (APPROXIMATELY 30FT). ALL POTENTIAL AREAS WITH ACM SHALL BE TESTED AND CONFIRMED PRIOR TO DEMOLITION OF WORK. ACTUAL LENGTH OF PIPING CONTAINING ACM TO BE VERIFIED IN FIELD.
2. THE ASBESTOS ABATEMENT CONTRACTOR AND THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISMANTLING THE HVAC PIPING FOR PROPER REMOVAL AND DISPOSAL OF ALL ACM.
3. COORDINATE ASBESTOS REMOVAL WITH THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR, MECHANICAL CONTRACTOR, PLUMBING CONTRACTOR AND ALL SUBCONTRACTORS HIRED TO PERFORM DEMOLITION.
4. ABATEMENT CONTRACTOR SHALL PREPARE THE WORK AREA IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATORY STANDARDS.

MATCH LINE




## 1 MECHANICAL ROOM #2 ENLARGED PLAN - DEMOLITION
M-056.00

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

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300


Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com
COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL ROOM #2
ENLARGED PLAN -
DEMOLITION

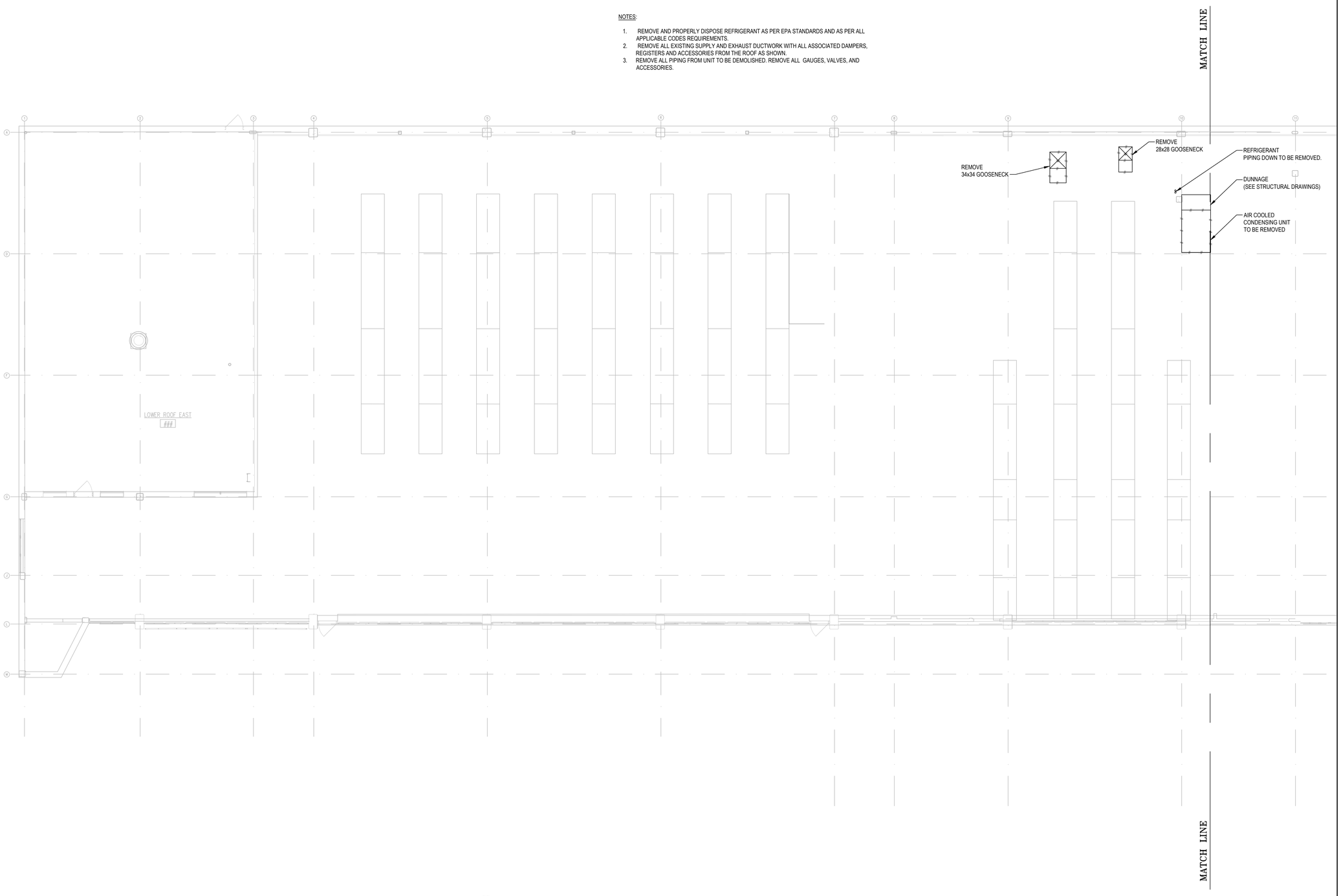
| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. M-055.00 |
| | DRAWN BY D.K. / 11 OF 37 |

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

NOTES:

1. REMOVE AND PROPERLY DISPOSE REFRIGERANT AS PER EPA STANDARDS AND AS PER ALL APPLICABLE CODES REQUIREMENTS.
2. REMOVE ALL EXISTING SUPPLY AND EXHAUST DUCTWORK WITH ALL ASSOCIATED DAMPERS, REGISTERS AND ACCESSORIES FROM THE ROOF AS SHOWN.
3. REMOVE ALL PIPING FROM UNIT TO BE DEMOLISHED. REMOVE ALL GAUGES, VALVES, AND ACCESSORIES.




1 M-056.00 **MECHANICAL UPPER ROOF EAST - DEMOLITION PLAN**
**SCALE: 1/8"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

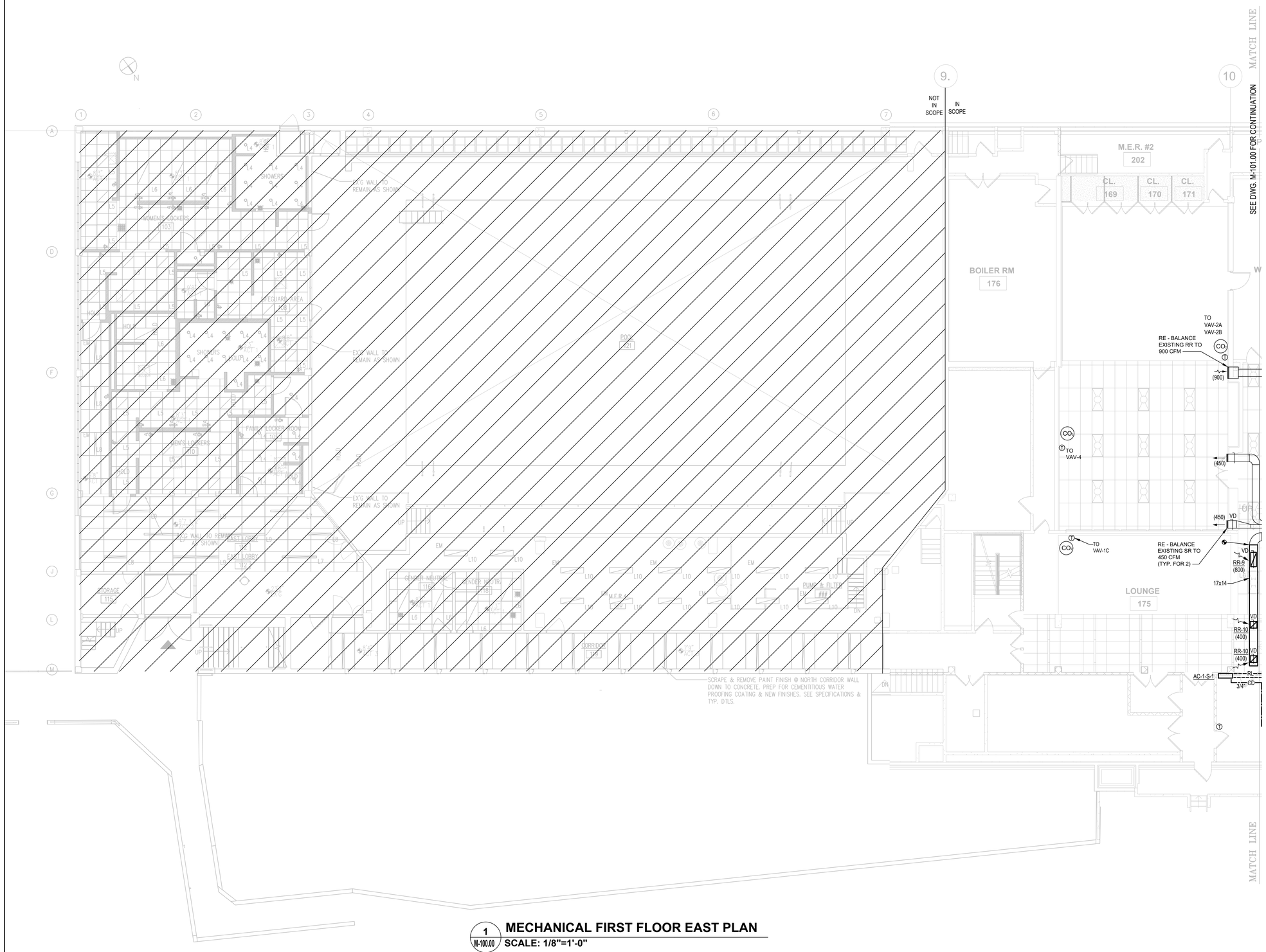
CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
MECHANICAL UPPER
ROOF EAST -
DEMOLITION PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. M-056.00 |
| | DRAWN BY D.K. / 12 OF 37 |

NYC DOB Number




**1 M-100.00 MECHANICAL FIRST FLOOR EAST PLAN**
**SCALE: 1/8"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

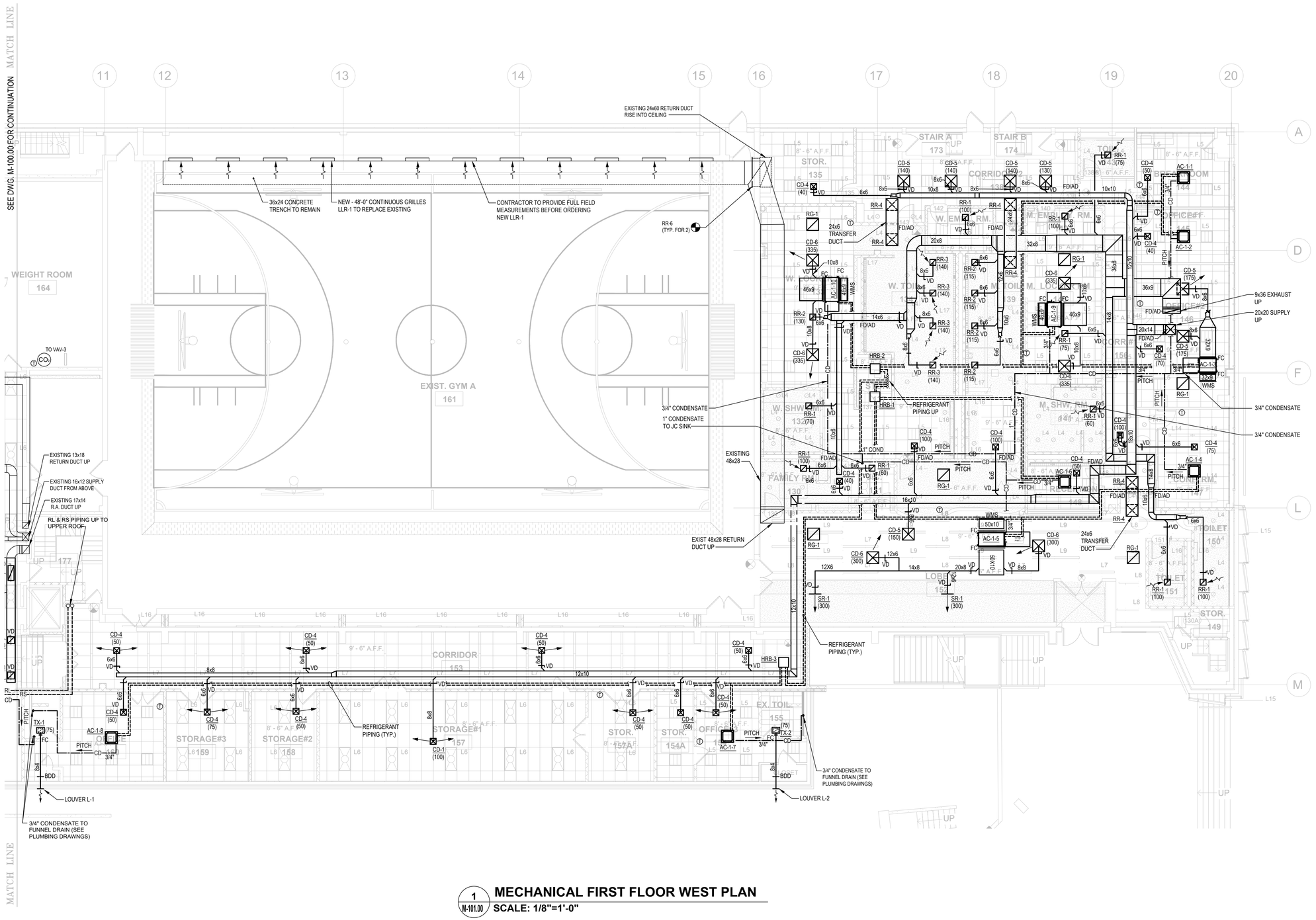
DRAWING

MECHANICAL FIRST FLOOR
EAST PLAN

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | M-100.00 |
| DRAWN BY | D.K. |
| | 13 OF 37 |

NYC DOB Number




## 1 M-101.00 MECHANICAL FIRST FLOOR WEST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

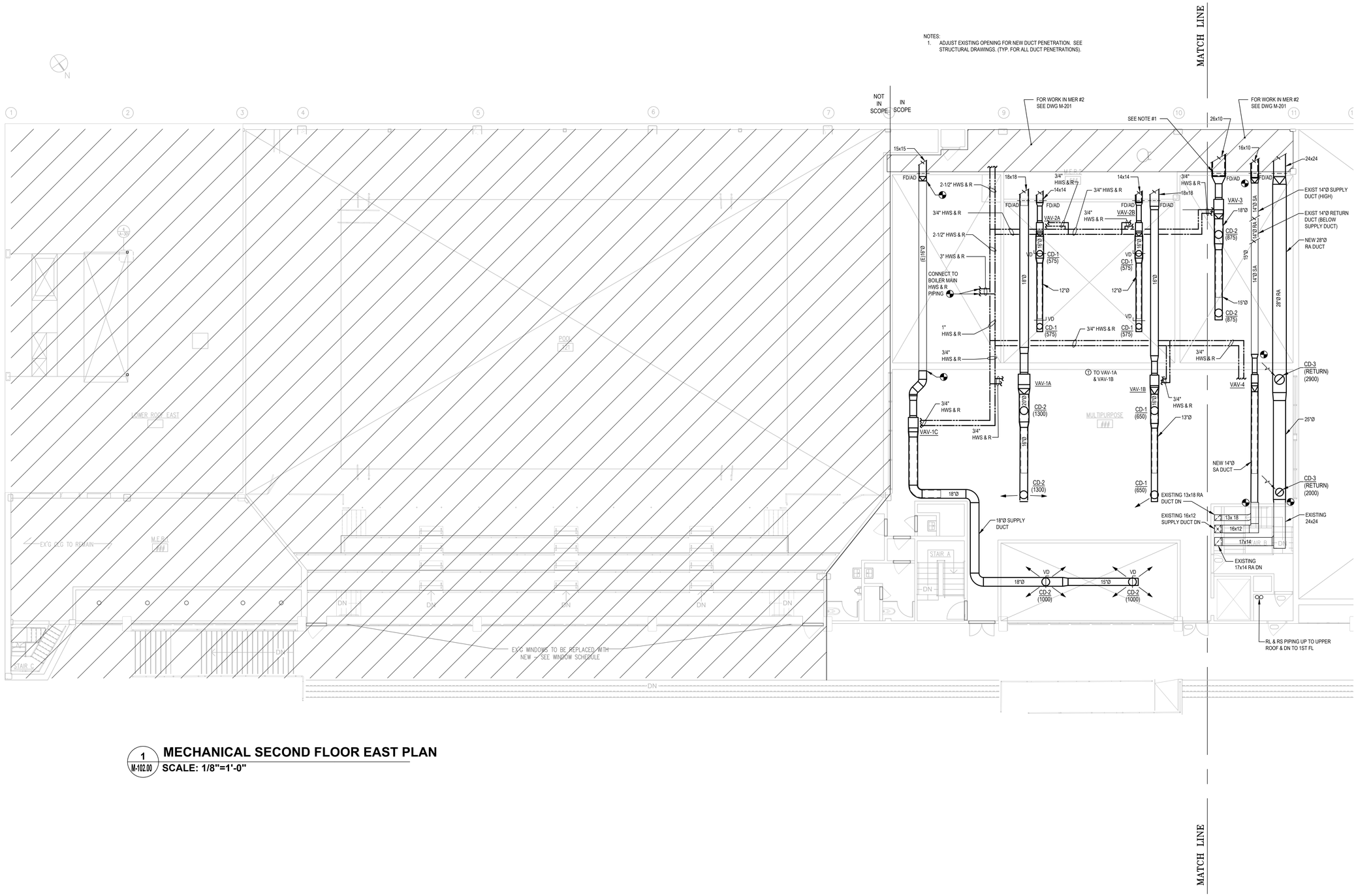
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
MECHANICAL FIRST FLOOR WEST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-101.00
DRAWN BY D.K.
14 OF 37

NYC DOB Number




## 1 M-102.00 MECHANICAL SECOND FLOOR EAST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

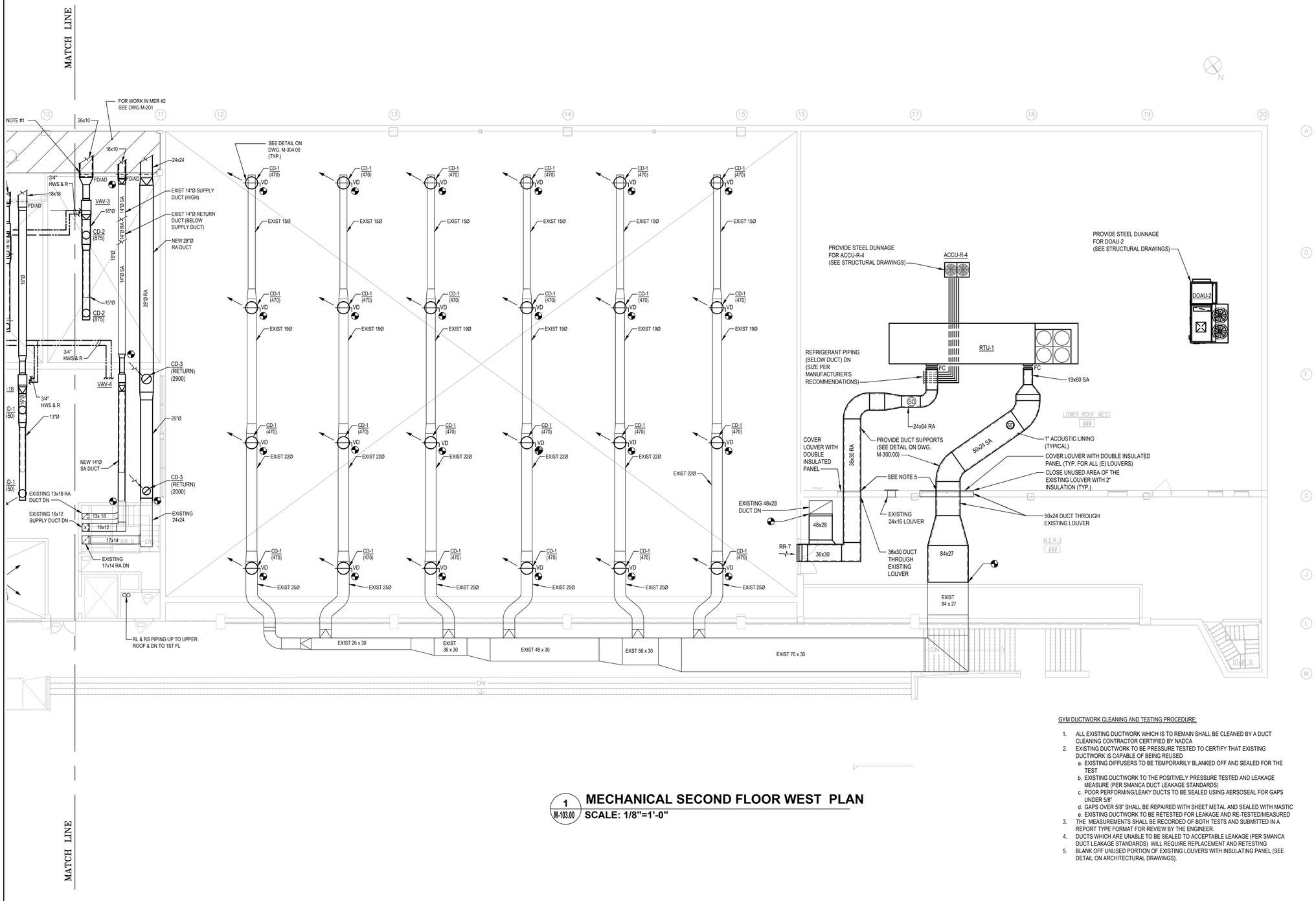
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
MECHANICAL SECOND FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-102.00
DRAWN BY D.K.
15 OF 37

NYC DOB Number




## 1 M-103.00 MECHANICAL SECOND FLOOR WEST PLAN

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

GYM DUCTWORK CLEANING AND TESTING PROCEDURE:

1. ALL EXISTING DUCTWORK WHICH IS TO REMAIN SHALL BE CLEANED BY A DUCT CLEANING CONTRACTOR CERTIFIED BY NADCA
2. EXISTING DUCTWORK TO BE PRESSURE TESTED TO CERTIFY THAT EXISTING DUCTWORK IS CAPABLE OF BEING REUSED
   a. EXISTING DIFFUSERS TO BE TEMPORARILY BLANKED OFF AND SEALED FOR THE TEST
   b. EXISTING DUCTWORK TO THE POSITIVELY PRESSURE TESTED AND LEAKAGE MEASURE (PER SMANCA DUCT LEAKAGE STANDARDS)
   c. POOR PERFORMING/LEAKY DUCTS TO BE SEALED USING AERSOSEAL FOR GAPS UNDER 5/8"
   d. GAPS OVER 5/8" SHALL BE REPAIRED WITH SHEET METAL AND SEALED WITH MASTIC
   e. EXISTING DUCTWORK TO BE RETESTED FOR LEAKAGE AND RE-TESTED/MEASURED
3. THE MEASUREMENTS SHALL BE RECORDED OF BOTH TESTS AND SUBMITTED IN A REPORT TYPE FORMAT FOR REVIEW BY THE ENGINEER.
4. DUCTS WHICH ARE UNABLE TO BE SEALED TO ACCEPTABLE LEAKAGE (PER SMANCA DUCT LEAKAGE STANDARDS) WILL REQUIRE REPLACEMENT AND RETESTING
5. BLANK OFF UNUSED PORTION OF EXISTING LOUVERS WITH INSULATING PANEL (SEE DETAIL ON ARCHITECTURAL DRAWINGS).

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameroneng.com
COPYRIGHT

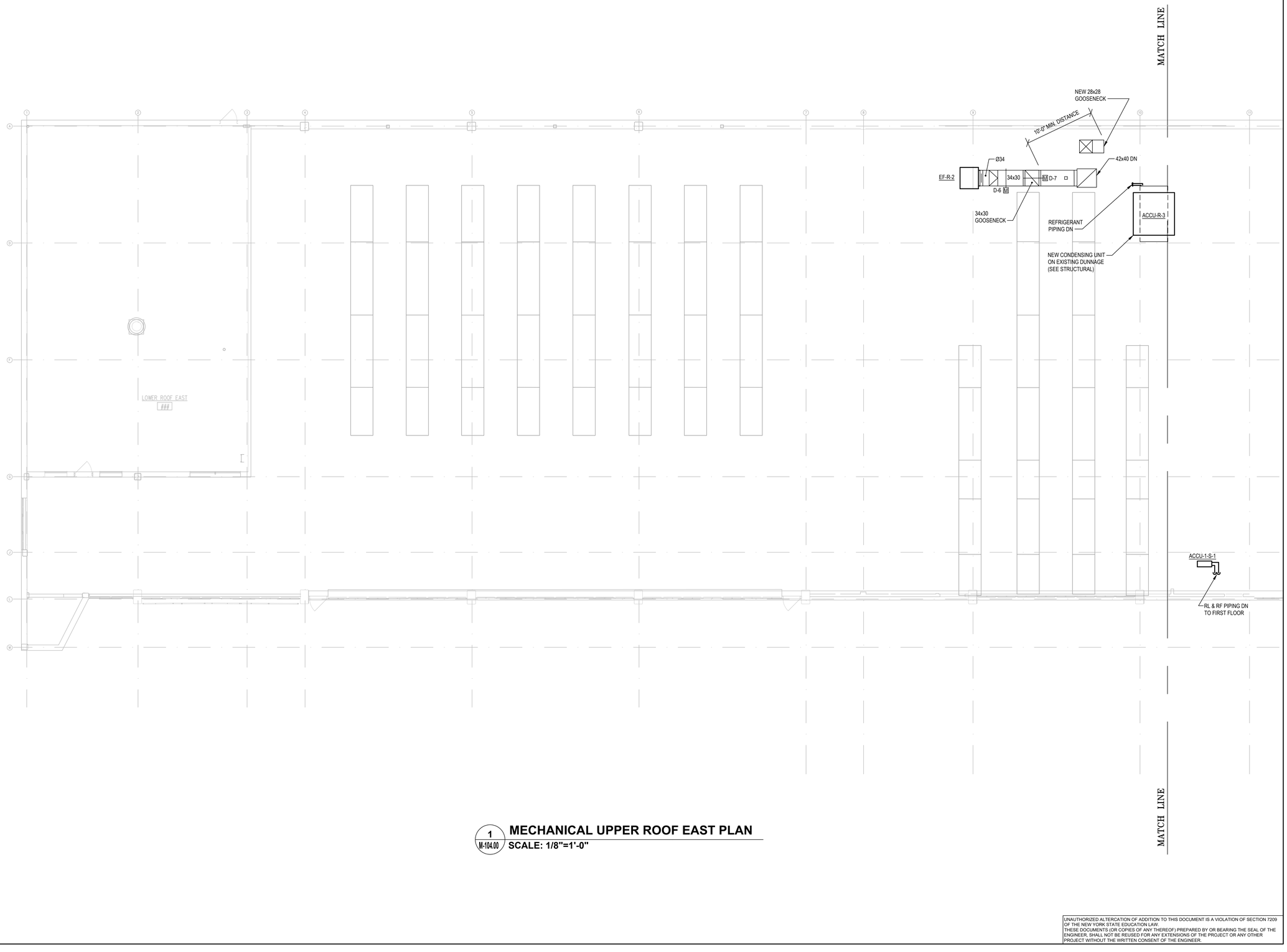
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
MECHANICAL SECOND FLOOR WEST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-103.00
DRAWN BY D.K.
16 OF 37

NYC DOB Number




1 M-104.00 **MECHANICAL UPPER ROOF EAST PLAN**

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

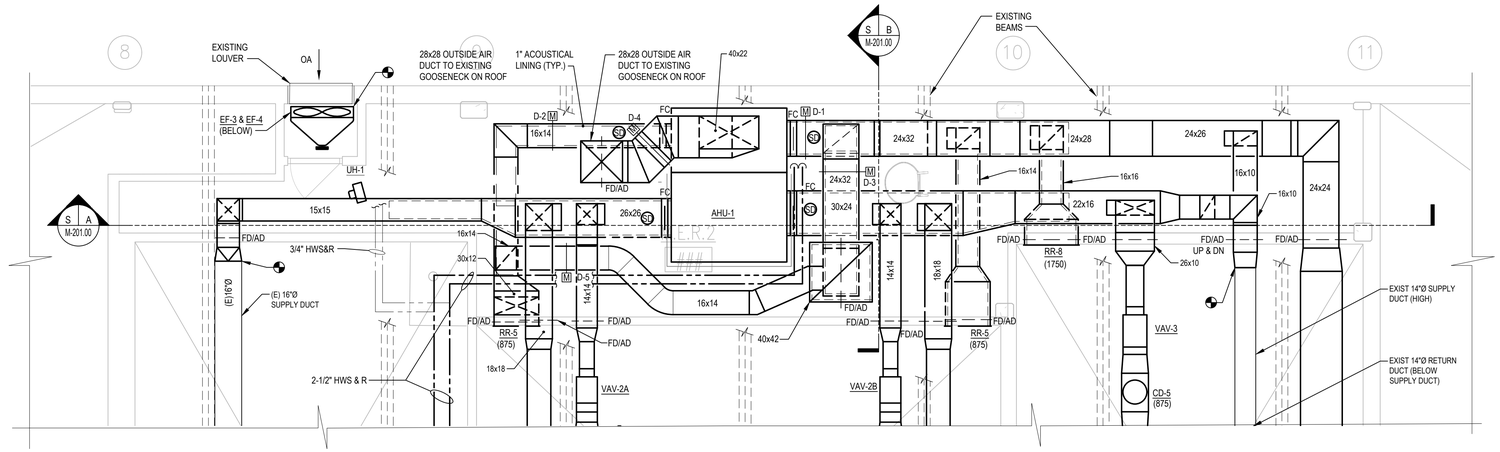
DRAWING

MECHANICAL UPPER
ROOF EAST PLAN

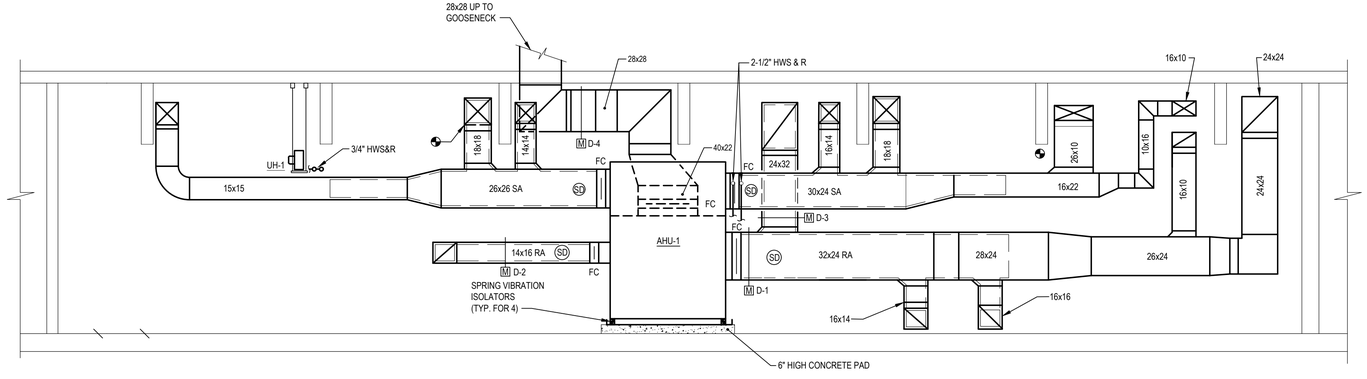
SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-104.00
DRAWN BY D.K.
17 OF 37

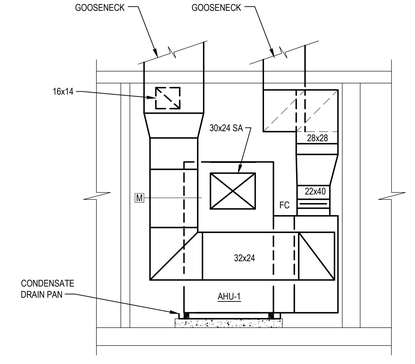
NYC DOB Number




**1 M-201.00 MECHANICAL ROOM MER-2 PART PLAN - NEW WORK**
**SCALE: 1/4"=1'-0"**




**S-A M-201.00 SECTION "A"**
**SCALE: 1/4"=1'-0"**




**S-B M-201.00 SECTION "B"**
**SCALE: 1/4"=1'-0"**

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

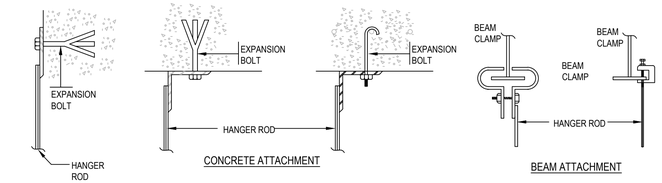
MECHANICAL ROOM
MER-2 - PART PLAN
AND SECTIONS - NEW
WORK

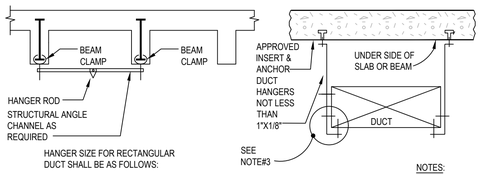
SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-201.00
DRAWN BY D.K.
18 OF 37

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




HANGER SIZE FOR RECTANGULAR DUCT SHALL BE AS FOLLOWS:

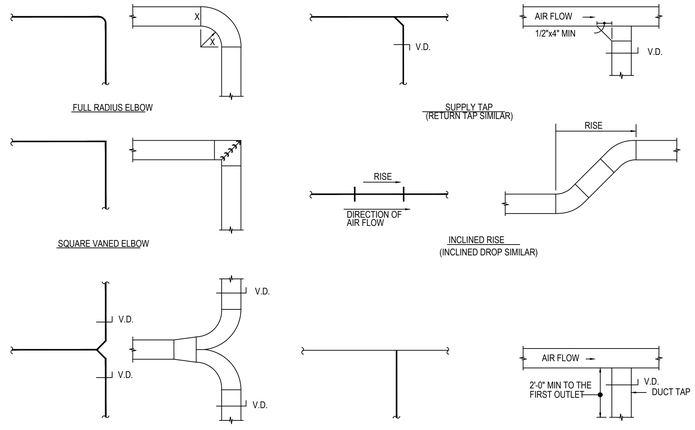
| LONGEST DIMENSION OF DUCT | ROUND HANGERS | MAX SPACING SEE NOTE #4 | STRAP HANGERS | TRAPEZE SHELF ANGLES |
|---|---|---|---|---|
| UP TO 18" | 8"GA.WIRE | 8'-0" | 1"X1/8" | 1" x 1" x 1/8" |
| 19" TO 30" | 1/4" ROD | 8'-0" | 1"X1/8" | 1" x 1" x 1/8" |
| 31" TO 42" | 1/4" ROD | 8'-0" | 1"X1/8"GA. | 1 1/2" x 1 1/2" x 1/8" |
| 43" TO 60" | 3/8" ROD | 4'-0" | —— | 1 1/2"X 1 1/2" x 1/8" |
| 61" TO 84" | 3/8" ROD | 4'-0" | —— | 2" x 2" x 1/8" |
| 85" TO 96" | 3/8" ROD | 4'-0" | —— | 2" x 2" x 3/16" |
| OVER 97" | 3/8" ROD | 4'-0" | | 2" x 2" x 1/4" |

NOTES:

1. ALL DUCT TO BE HUNG FROM BUILDING CONSTRUCTION NOT TO BE SUPPORTED FROM HUNG CEILING.
2. WHEN DUCT AREA EXCEEDS 8 SQ.FT. ANGLE STIFFENERS REQUIRED AROUND CIRCUMFERENCE EVERY 4'-0.
3. FOR DUCT OVER 48"WIDE HANGERS SHALL TURN UNDER DUCT AT LEAST 2"AND SHALL BE FASTENED TO THE BOTTOM AS WELL AS TO THE SIDES OF THE DUCT.
4. FOR DUCTS WITH A CROSS SECTIONAL AREA OF 4 SQ.FT. OR LESS. HANGERS SHALL BE NO MORE THAN 8FT. APART. FOR DUCTS WITH A CROSS SECTIONAL AREA OF MORE THAN 4 SQ.FT. BUT NOT OVER 8 SQ.FT. HANGERS SHALL BE NOT MORE THAN 6 FT. A PART. AND FOR DUCTS WITH A CROSS SECTIONAL AREA OF MORE THAN 8 SQ.FT. HANGERS SHALL BE NOT MORE THAN 4 FT. A PART. THE DISTANCES BETWEEN SHALL BE MEASURED LINEARLY ALONG THE DUCT.

## 1 DUCT HANGING DETAIL

NOT TO SCALE

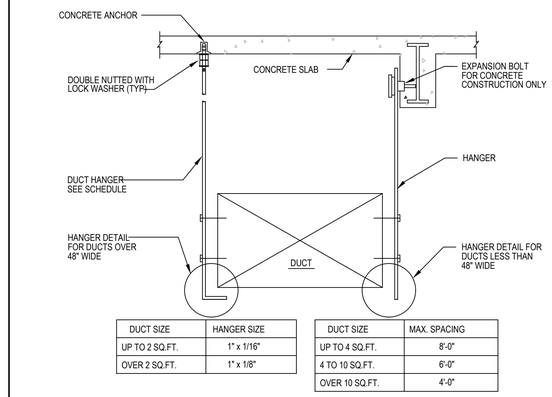



SINGLE LINE DUCTWORK — EQUIVALENT DOUBLE LINE DUCTWORK

SINGLE LINE DUCTWORK — EQUIVALENT DOUBLE LINE DUCTWORK

## 2 TYPICAL SUPPLY OR EXHAUST DUCT CONNECTION

NOT TO SCALE

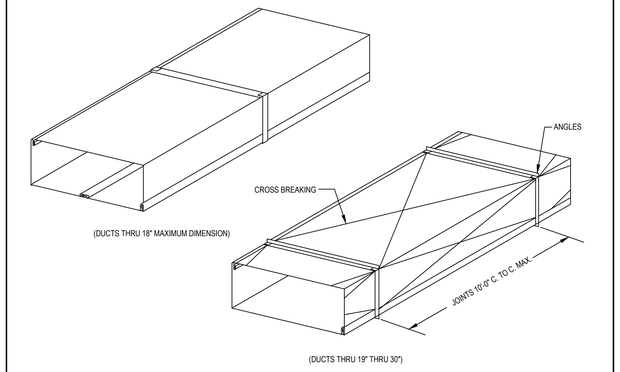



| DUCT SIZE | HANGER SIZE |
|---|---|
| UP TO 2 SQ.FT. | 1" x 1/16" |
| OVER 2 SQ.FT. | 1" x 1/8" |

| DUCT SIZE | MAX. SPACING |
|---|---|
| UP TO 4 SQ.FT. | 8'-0" |
| 4 TO 10 SQ.FT. | 6'-0" |
| OVER 10 SQ.FT. | 4'-0" |

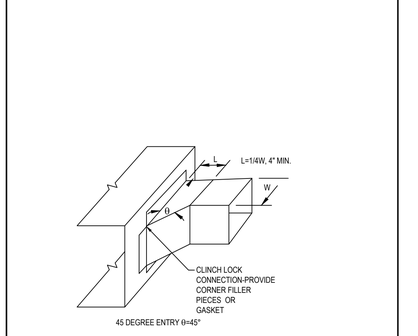
## 3 SCHEDULE OF SUPPORTS DUCT HANGING DETAIL

NOT TO SCALE



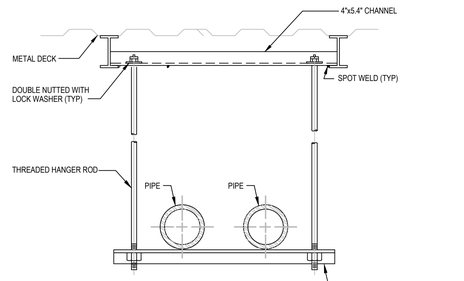

## 4 DUCT CONSTRUCTION DETAIL

NOT TO SCALE



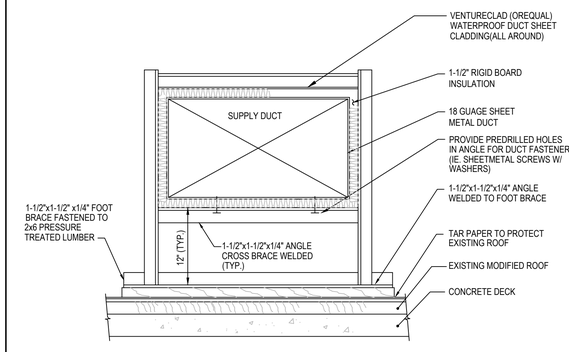

## 5 RECTANGULAR BRANCH CONNECTION DETAIL

NOT TO SCALE




## 6 TRAPEZE HANGER

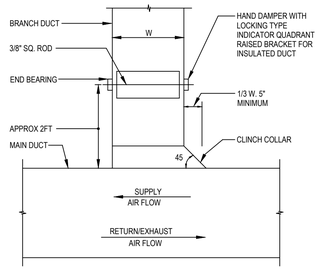
NOT TO SCALE




NOTE:
DETAIL TYPICAL FOR ALL SUPPLY AND RETURN DUCTWORK EXPOSED ON ROOF.

## 7 ROOF MOUNTED DUCTWORK DETAIL

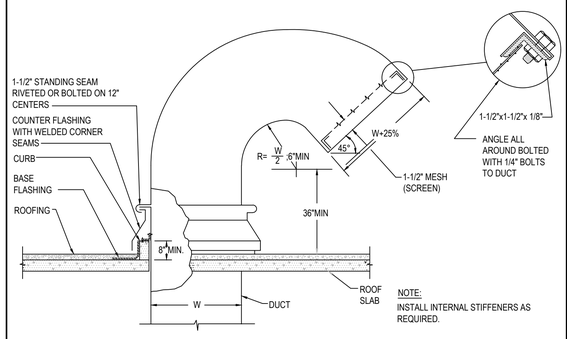
NOT TO SCALE




NOTE: FURNISH THIS TYPE CONNECTION WHEN SINGLE LINE DUCTWORK IS INDICATED AS THIS ⊥ BRANCHES WITH LESS THAN 25% OF THE TOTAL AIR FLOW

## 8 RECTANGULAR DUCT WITH VOLUME DAMPER

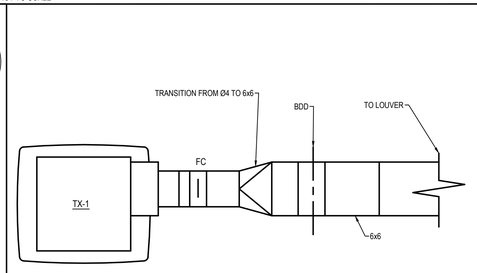
NOT TO SCALE




NOTE:
INSTALL INTERNAL STIFFENERS AS REQUIRED.

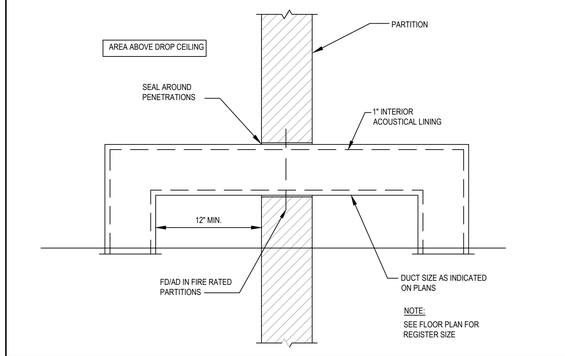
## 9 GOOSENECK INSTALLATION

NOT TO SCALE




## 10 TYPICAL TOILET EXHAUST INSTALLATION

NOT TO SCALE




NOTE:
SEE FLOOR PLAN FOR REGISTER SIZE

## 11 ELEVATION VIEW OF TRANSFER DUCT

NOT TO SCALE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER. SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

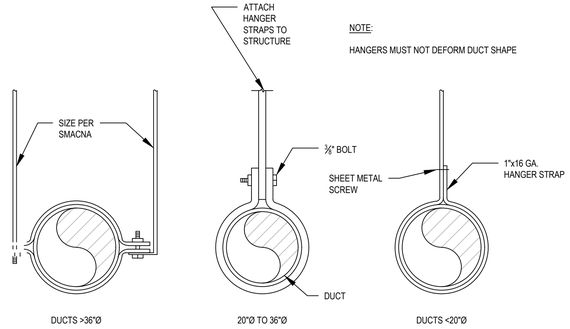
DRAWING

MECHANICAL DETAILS
SHEET No. 1

SEAL & SIGNATURE

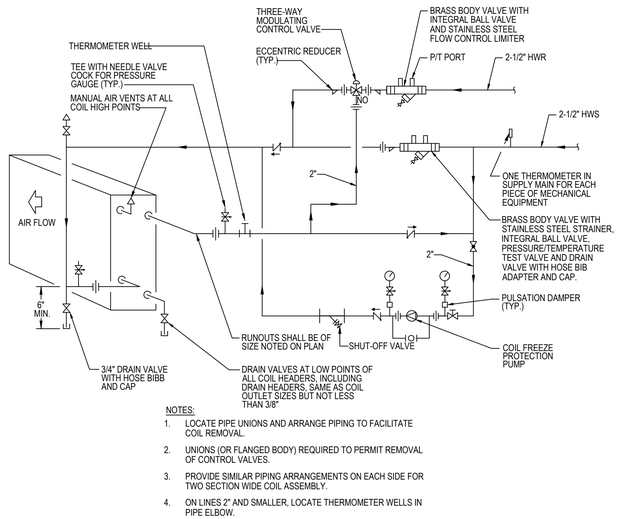
| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | M-300.00 |
| DRAWN BY | D.K. |
| | 19 OF 37 |

NYC DOB Number




12 ROUND DUCT SUPPORT DETAIL

NOT TO SCALE

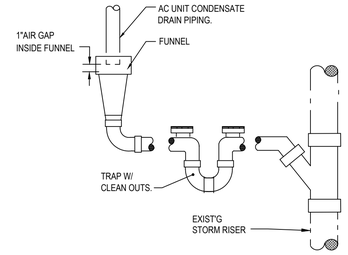



NOTES:

1. LOCATE PIPE UNIONS AND ARRANGE PIPING TO FACILITATE COIL REMOVAL.
2. UNIONS (OR FLANGED BODY) REQUIRED TO PERMIT REMOVAL OF CONTROL VALVES.
3. PROVIDE SIMILAR PIPING ARRANGEMENTS ON EACH SIDE FOR TWO SECTION WIDE COIL ASSEMBLY.
4. ON LINES 2" AND SMALLER, LOCATE THERMOMETER WELLS IN PIPE ELBOW.

13 HOT WATER COIL CONNECTION WITH FREEZE PROTECTION PUMP FOR AHU-1

NOT TO SCALE

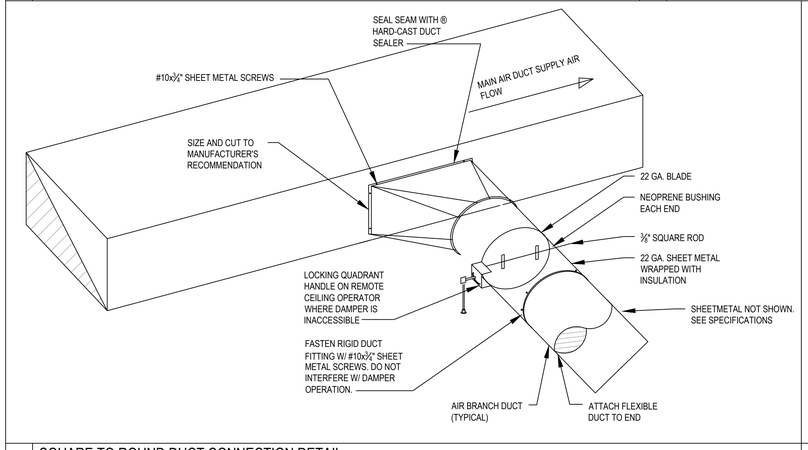



NOTES:

1. FUNNEL, TRAP AND CONNECTION TO THE EXISTING STORM RISER SHALL BE BY THE PLUMBING SCOPE OF WORK.

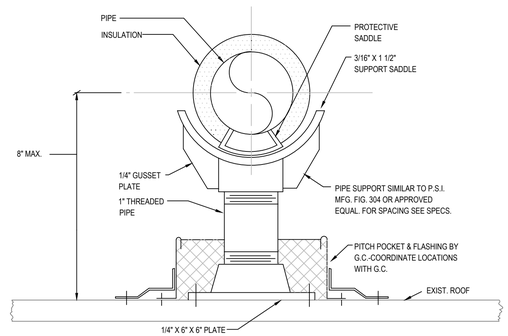
14 FUNNEL DRAING INSTALLATION DETAIL

NOT TO SCALE



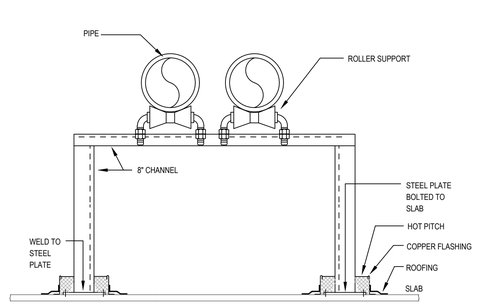

15 SQUARE TO ROUND DUCT CONNECTION DETAIL

NOT TO SCALE



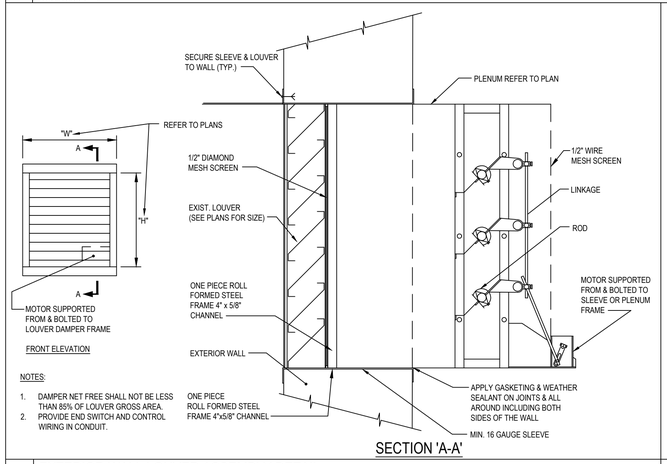

16 ROOF MOUNTED PIPE SUPPORT DETAIL

NOT TO SCALE




17 PIPING SUPPORT FROM ROOF

NOT TO SCALE

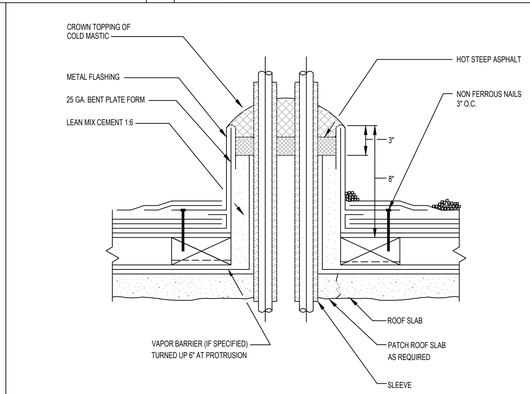



NOTES:

1. DAMPER NET FREE SHALL NOT BE LESS THAN 85% OF LOUVER GROSS AREA.
2. PROVIDE END SWITCH AND CONTROL WIRING IN CONDUIT.

18 EXTERIOR WALL LOUVER ASSEMBLY DETAIL

NOT TO SCALE

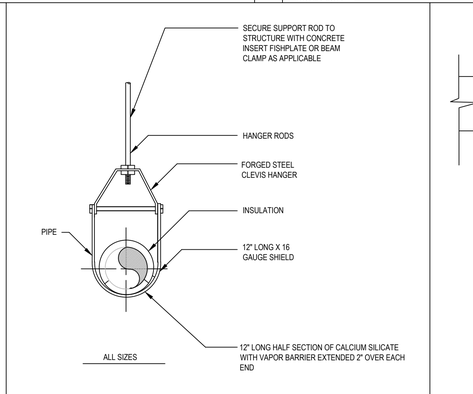



NOTE:

SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR THE ROOF CONSTRUCTION.

19 PIPING THROUGH ROOF

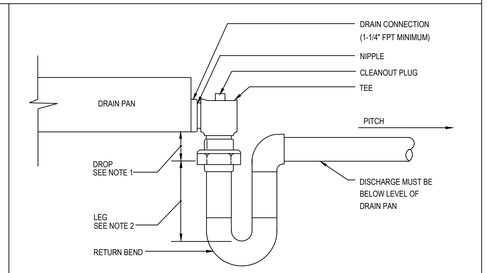
NOT TO SCALE




WHERE STRUCTURAL SLAB DOES NOT PERMIT INSERTS. SUPPORT PIPING FROM STRUCTURE WITH AUXILIARY STEEL IF REQUIRED.

20 WATER PIPING HANGER DETAIL

NOT TO SCALE




NOTES :

1. 1" MIN. DROP REQUIRED USE OF STANDARD FITTINGS SHOWN EXCEEDS THIS MINIMUM.
2. Y + 1" = LEG FOR BLOW-THRU UNIT WHERE Y=DISCHARGE PRESSURE OF FAN. (MIN. 7")
3. ALLOW SUFFICIENT SPACE BELOW DRAIN PAN FOR TRAP.
4. PITCH DRAIN FOR PROPER RUN-OFF AND DISCHARGE TO APPROVED RECEPTACLE.
5. SUPPORT DRAIN LINES TO PREVENT SAG AND CONDENSATE OVERFLOW.
6. MANUALLY PRIME FILL TRAP BEFORE START-UP TO FORM INITIAL DRAIN SEAL.

21 DRAIN PAN WATER SEAL PIPING BLOW-THRU UNIT

NOT TO SCALE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ARCHITECT

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

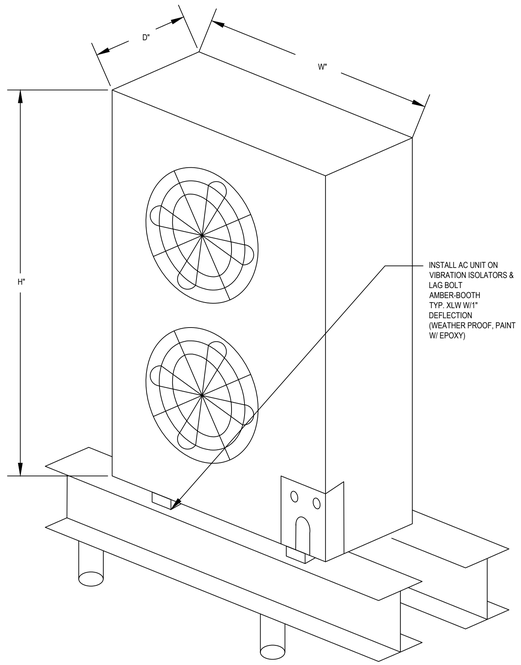
DRAWING

MECHANICAL DETAILS
SHEET No. 2

SEAL & SIGNATURE

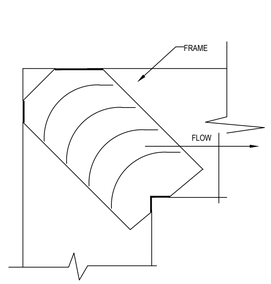
DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-301.00
DRAWN BY D.K.


NYC DOB Number

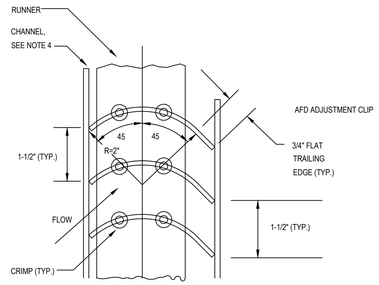



22 CONDENSING UNIT FRAME DETAIL

NOT TO SCALE




VANED ELBOW



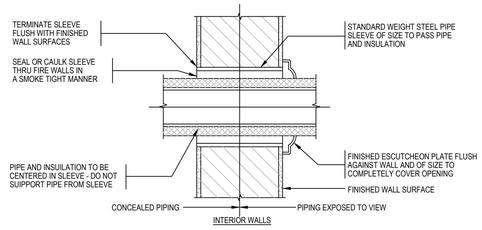

TURNING VANES

23 SINGLE THICKNESS TURNING VANES FOR SQUARE ELBOW

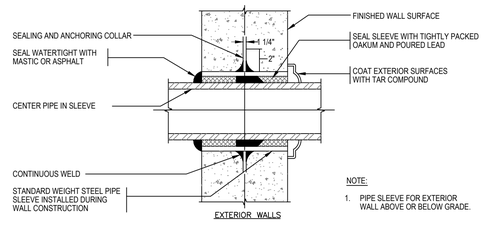
NOTES:

1. MAXIMUM UNSUPPORTED VANE LENGTH 36"
2. VANES AND FRAMES - 24 GAUGE
3. DUCT INLET AND OUTLET DIMENSIONS TO BE EQUAL
4. FOR HIGH VELOCITY APPLICATIONS PROVIDE 18 GAUGE CHANNEL AND TACK WELD VANE EDGES TO CHANNEL, TYPICAL BOTH ENDS
5. FRAMES AND CHANNELS - BOLTED OR TACK WELDED TO ELBOW

NOT TO SCALE




INTERIOR WALLS



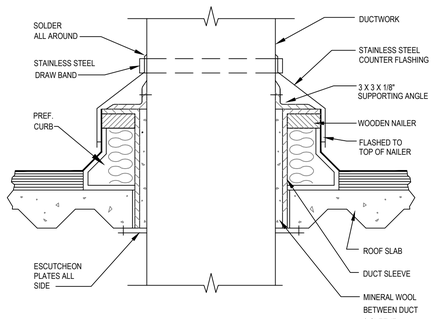

NOTE:

1. PIPE SLEEVE FOR EXTERIOR WALL ABOVE OR BELOW GRADE.

EXTERIOR WALLS

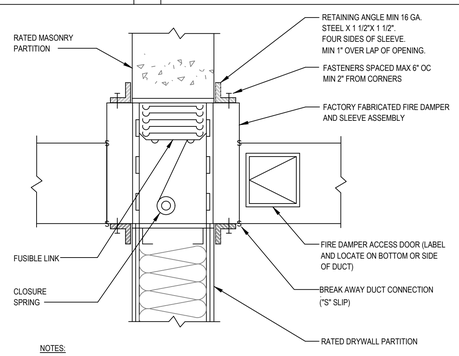
24 PIPE PENETRATIONS DETAIL

NOT TO SCALE




25 ROOF PENETRATION DETAIL

NOT TO SCALE

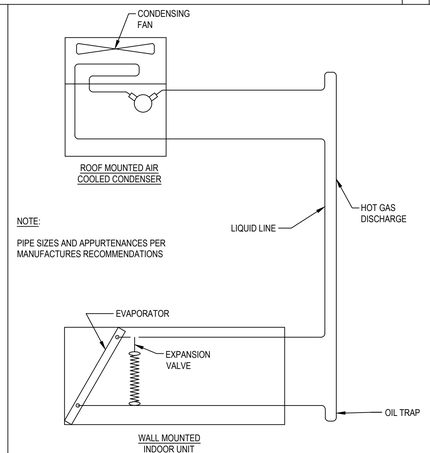



NOTES:

1. GREENHECK FIRE DAMPER WITH SLEEVE MODEL FD-150X TYPE B(OR EQUAL). UL LISTING R-13317.
2. FASTEN RETAINING ANGLE TO SLEEVE BY: TACK OR SPOT WELDS, No. 10 SHEETMETAL SCREWS, 1/4" BOLTS AND NUTS, 3/16 STEEL POP RIVETS. DO NOT FASTEN ANGLE TO WALL.
3. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS TO OBTAIN UL 555 LISTING.
4. HVAC CONTRACTOR SHALL CUT AND PATCH OPENINGS. HEADS OF MASONRY OPENINGS SHALL BE REINFORCED WITH 5x5x1/4 LINTELS BY HVAC CONTRACTOR.

26 FIRE DAMPER DETAIL

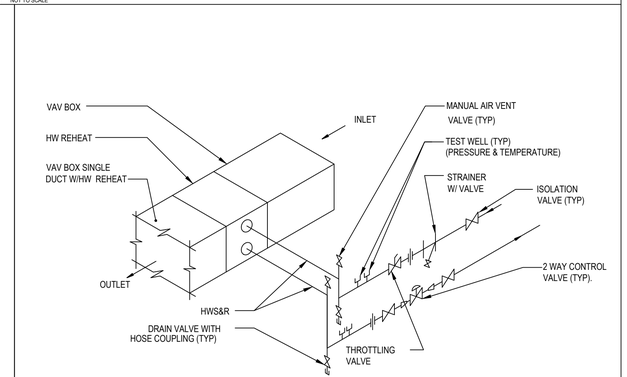
NOT TO SCALE




WALL MOUNTED
INDOOR UNIT

27 VERTICALLY SPLIT SYSTEM REFRIGERANT PIPING DIAGRAM

NOT TO SCALE




28 VAV BOX REHEAT COIL PIPING DETAIL

NOT TO SCALE

RIOC
ROOSEVELT ISLAND
OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameroneng.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL DETAILS
SHEET No. 3

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

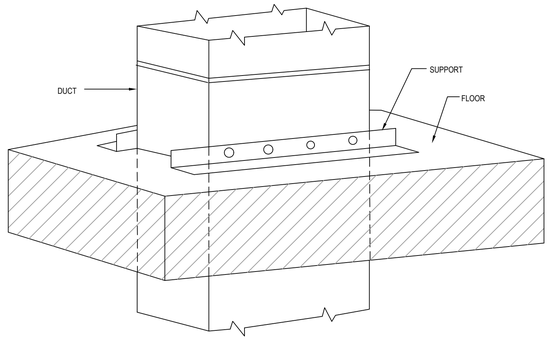
DWG. No. M-302.00

DRAWN BY D.K.

21 OF 37

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

NYC DOB Number

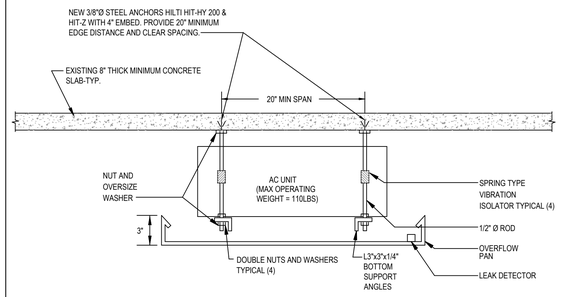



UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, SUPPORT VERTICAL DUCTS BY MEANS OF TWO STEEL ANGLES, SECURED TO DUCT AND RESTING ON FLOOR SLAB OR ADJACENT STRUCTURAL STEEL MEMBER, AT EVERY FLOOR THROUGH WHICH THE DUCT PASSES.

SIZE SUPPORTS AS FOLLOWS:

| MAX. SIDE DIMENSION | SUPPORT ANGLE | SECURE TO DUCT WITH | MIN. BEARING EACH END |
|---|---|---|---|
| 48" | 1-1/2x1-1/2x1/8 | SCREWS | 2" |
| 60" | 1-1/2x1-1x1/4 | SCREWS | 2" |
| 80" | 2x2x1/4 | BOLTS | 2" |
| 100" | 3x3x1/4 | BOLTS | 2" |

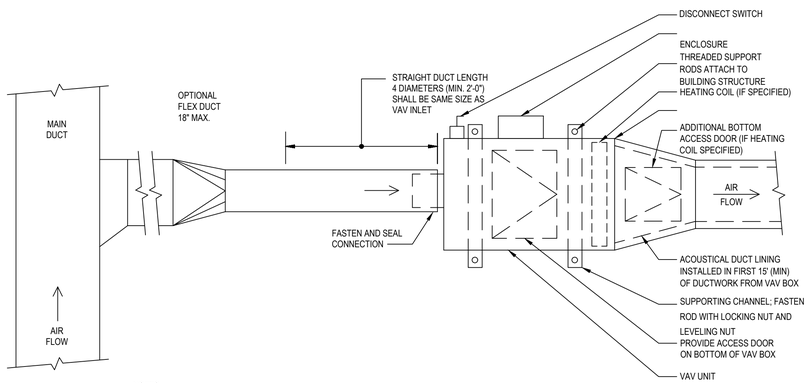
29 DUCT RISER SUPPORTS FROM FLOOR DETAIL
NOT TO SCALE




NOTES:

1. SHOP DRAWINGS DETAILING THE A.C. UNIT HANGING SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
2. LEAK DETECTOR SHALL ALARM LOCALLY ONCE DETECT LEAKING AND SHALL TURN OFF UNIT.

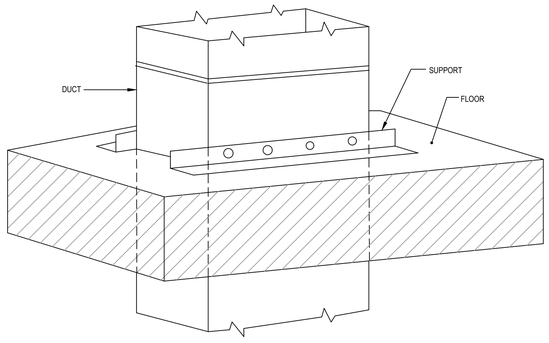
30 AC UNIT SUPPORT DETAIL
NOT TO SCALE




NOTES:

1. THE OPERATION OF VAV TERMINAL UNITS ARE AFFECTED BY EXCESSIVE TURBULENCE ON THE ENTERING SIDE OF EACH TERMINAL UNIT, THEREFORE, TERMINAL UNITS MUST NOT BE INSTALLED TOO CLOSE TO MAIN DUCTS, ELBOWS & FITTINGS.
2. WHEN MINIMUM UPSTREAM STRAIGHT DUCT CONNECTION TO TERMINALS AS INDICATED ABOVE CANNOT BE MAINTAINED, PROVIDE ORIFICE PLATE, STRAIGHTENING VANES OR OTHER DEVICE AS RECOMMENDED BY TERMINAL UNIT MANUFACTURER AND SUBMIT TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
3. MANUFACTURER OF TERMINAL UNIT SHALL PROVIDE CONTROLS ON LEFT OR RIGHT SIDE AS REQUIRED BY FIELD CONDITIONS.
4. ARRANGE ACCESS TO PERMIT EASY FIELD BALANCE AND MAINTENANCE OF TERMINAL UNIT.
5. HEATING COIL (INCLUDING COIL MAINFOLDS) SHALL BE INSULATED.

31 VAV TERMINAL UNIT INSTALLATION DETAIL




UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, SUPPORT VERTICAL DUCTS BY MEANS OF TWO STEEL ANGLES, SECURED TO DUCT AND RESTING ON FLOOR SLAB OR ADJACENT STRUCTURAL STEEL MEMBER, AT EVERY FLOOR THROUGH WHICH THE DUCT PASSES.

SIZE SUPPORTS AS FOLLOWS:

| MAX. SIDE DIMENSION | SUPPORT ANGLE | SECURE TO DUCT WITH | MIN. BEARING EACH END |
|---|---|---|---|
| 48" | 1-1/2x1-1/2x1/8 | SCREWS | 2" |
| 60" | 1-1/2x1-1x1/4 | SCREWS | 2" |
| 80" | 2x2x1/4 | BOLTS | 2" |
| 100" | 3x3x1/4 | BOLTS | 2" |

32 DUCT RISER SUPPORTS FROM FLOOR DETAIL

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

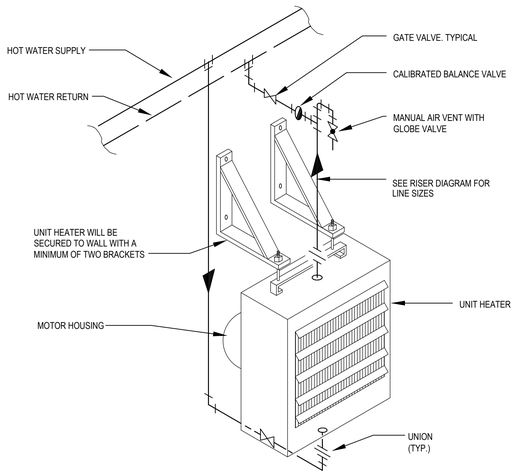
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
MECHANICAL DETAILS
SHEET No. 4

SEAL & SIGNATURE

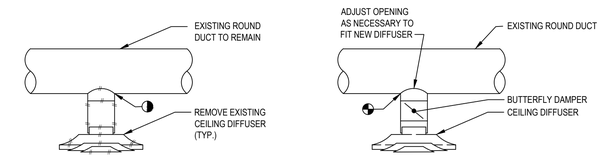
DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-303.00
DRAWN BY D.K.
22 OF 37

NYC DOB Number



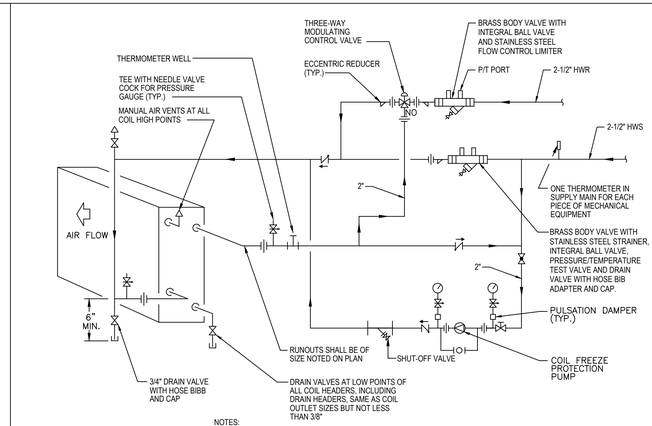

33 HOT WATER UNIT HEATER DETAIL

NOT TO SCALE




34 CEILING DIFFUSER CONNECTION TO ROUND DUCT DETAIL- ROUND NECK FITTING

NOT TO SCALE

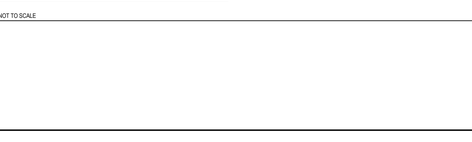



NOTES:

1. LOCATE PIPE UNIONS AND ARRANGE PIPING TO FACILITATE COIL REMOVAL.
2. UNIONS (OR FLANGED BODY) REQUIRED TO PERMIT REMOVAL OF CONTROL VALVES.
3. PROVIDE SIMILAR PIPING ARRANGEMENTS ON EACH SIDE FOR TWO SECTION WIDE COIL ASSEMBLY.
4. ON LINES 2" AND SMALLER, LOCATE THERMOMETER WELLS IN PIPE ELBOW.

35 HOT WATER COIL CONNECTION WITH FREEZE PROTECTION PUMP FOR AHU-1

NOT TO SCALE




36 AHU-1 CONDENSATE DRAIN PIPING

NOT TO SCALE




NOTES:

1. MINIMUM DRAIN PIPE SIZE (D) EQUAL TO CONNECTION PROVIDED WITH EQUIPMENT.
2. MINIMUM DISTANCE EQUAL TO NEGATIVE STATIC PRESSURE (IN. W.C.)+1" OR 1/2X POSITIVE STATIC PRESSURE (IN. W.C.) +1". SEE MECH. SCHEDULES FOR STATIC PRESSURE INFORMATION.
3. DISTANCE EQUAL TO 1/2 NEGATIVE STATIC PRESSURE (IN. WC) +1" OR POSITIVE STATIC PRESSURE (IN. WC)+1". SEE MECHANICAL SCHEDULES FOR STATIC PRESSURE INFORMATION.

37 RTU-1 CONDENSATE DRAIN DETAIL

NOT TO SCALE




38 ROUND VOLUME DAMPER-UP TO 14 IN. DIAMETER, LOW PRESSURE

NOT TO SCALE




39 FIRE DAMPER INSTALLATION DETAIL

NOT TO SCALE




NOTES:

1. CONNECT LEAK DETECTOR INTO BUILDING MANAGEMENT SYSTEM AND PROVIDE WITH GRAPHICS.
2. AHU SHALL SHUT DOWN AND SUPPLY AND RETURN SOLENOID VALVES SHALL CLOSE WHENEVER THE LEAK DETECTOR IS ACTIVATED.
3. DRIP PAN TO COVER ENTIRE UNIT, PUMP, VALVE, FITTINGS, ETC.

40 AHU-1 CONDENSATE DRAIN DETAIL

NOT TO SCALE

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL DETAILS
SHEET No. 5

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | M-304.00 |
| | DRAWN BY | D.K. |
| | | 23 OF 37 |

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## DEDICATED OUTSIDE AIR UNIT (WITH ERV) SCHEDULE

RUPP AIR AS STANDARD

| | SUPPLY FAN | | | | | | | | | | | | | | | DX COIL | | | | | | | | | | | | | | | | ENERGY RECOVERY | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | COMPRESSOR | | | OUTDOOR FAN | | INDOOR COIL | | | | | | | | | | | | EXHAUST AIR FAN (ECM) | | | | | SUPPLY AIR SUMMER | | RA | DESIGN RECOVERED SUMMER CAPACITY | | | SUPPLY AIR WINTER | | RA |
| FAN UNIT No. | TAG | QTY | DOAS / RTU MODEL | BLOWER | RETURN AIR (CFM) | MAX. OUTSIDE AIR (CFM) | TOTAL SUPPLY AIR (CFM) | ESP (IN. W.C.) | RPM | HP | BHP | V/PH/HZ | MCA (A) | MOCP (A) | WEIGHT (LBS) | SONES (DBL) | TONNAGE | VOLTAGE | FASE (Ø) | V/PH/HZ | MOTOR QTY | ROWS | FACE AREA (SF) | OA DB/WB (°F) | MIXED AIR DB/WB (°F) | LAT DB/WB (°F) | LDP (°F) | TOTAL CAP. (MBH) | SENSIBLE CAP. (MBH) | LATENT CAP. (MBH) | REHEAT LAT DB/WB (°F) | DESIRED REHEAT CAP. (MBH) | MAX REHEAT CAP. (MBH) | REHEAT LEAVING RH (%) | MOISTURE REMOVAL RATE (LBS/HR) | IEER | CFM | SP (IN. W.C.) | HP | V/PH/HZ | OUTSIDE AIR (CFM) | EAT DB/WB (°F) | LAT DB/WB (°F) | DB/WB (°F) | TOTAL CAP. (MBH) | SENSIBLE CAP. (MBH) | LATENT CAP. (MBH) | EAT DB/WB (°F) | LAT DB/WB (°F) | DB/WB (°F) |
| 1 | DOAU-2 | 1 | RARTU2-1.200-18-10T-DOAS-ERV | 18P-2 | 0 | 1950 | 1950 | 1.5 | 1432 | 5.0 | 5.315 | 208/3/60 | 82.1 | 110 | 2758 | 15.6 | 10.0 | 190-240 | 3 | 200-240/3/60 | 2 | 5 | 7.3 | 95.0/75.0 | 80.2/66.0 | 50.7 | 50.8 | 88.8 | 63.7 | 25.1 | 70.2/58.6 | 42.1 | 96 | 50 | 22.5 | 18.6 | 1950 | 1.475 | 5.0 | 208/3/60 | 1950 | 95.0/75.0 | 80.2/66.0 | 75.0/62.0 | 65.3 | 30.5 | 34.8 | 17.0/13.0 | 58.6/51.0 | 75.0/62.0 |

NOTES

PROVIDE THE FOLLOWING CBY UNIT MANUFACTURER:
1. SINGLE POINT ELECTRICAL CONNECTION FOR RTU: QNTY-1, 750 VA TRANSFORMER USED.
2. GASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED.
3. 2" MERV 13 SUPPLY FILTERS.
4. OVERHEAT STAT.
5. VFD FACTORY MOUNTED AND WIRED IN COMMERCIAL CONTROL VESTIBULE.
6. 10 TON MODULATING COOLING OPTION, 208/230V. R410 REFRIGERANT , VARIABLE SPEED COMPRESSOR, ECM CONDENSER FANS.
7. DOWN RETURN.
8. ENERGY RECOVERY VENTILATOR 208/230V MAIN UNIT VOLTAGE.
9. ECONOMIZER BAROMETRIC RELIEF.
10. RTU FIXED 100% OA INTAKE CONTROL.
11. INLET PRESSURE GAUGE, 0-35" W.C.
12. MANIFOLD PRESSURE GAUGE, 0 TO 10" W.C. 1 FURNACE.
13. 10 TON MONITORING REHEAT OPTION. DISCHARGE RELATIVE HUMIDITY CONTROL.
14. COMMERCIAL SMOKE DETECTOR /ALARM INTERLOCK (SUPPLIED BY OTHERS).
15. MANUAL CONTROL FOR ERV EXHAUST FAN VIA HMI.
16. CLOGGED FILTER SWITCH WITH NOTIFICATION ON HMI.
17. 2" MERV 13 RETURN FILTERS.
18. 4" MERV 15 FILTERS, QTY - 4.
19. MANIFOLD PRESSURE GAUGE, 0 TO 10" W.C. 1 FURNACE.
20. 10 TON MONITORING REHEAT OPTION. DISCHARGE RELATIVE HUMIDITY CONTROL.
21. COMMERCIAL SMOKE DETECTOR /ALARM INTERLOCK (SUPPLIED BY OTHERS).
22. VAV PACKAGE WITH MANUAL/DDC CONTROL (571 VFD INCLUDED).

## DEDICATED OUTSIDE AIR UNIT (WITH ERV) SCHEDULE (CONTINUATION)

| | HEATING (GAS FURNACE) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| FAN UNIT No. | TAG | GAS INPUT (MBH) | GAS OUTPUT (MBH) | TEMP RISE. (°F) | GAS PRESS. (IN. W.C.) | GAS TYPE | BURNER EFFICIENCY (%) | REMARKS |
| 1 | DOAU-2 | 156.6 | 125.3 | 58 | 7-14 | NAT. | 80 | SEE NOTES |

## OUTDOOR AIR COOLED CONDENSER UNIT SCHEDULE

BASIS OF DESIGN: UNITED COOLAIR

| TAG No. | NO. OF UNITS | LOCATION | SERVICE | MODEL # | NOMINAL COOLING CAPACITY (MBH) | NOMINAL HEATING CAPACITY (BTU/H) | CONDENSER FAN (CFM) | CONDENSER FAN (QTY) / KW | OAT (°F) | COND COIL ROWS | REFRIGERANT | ELECTRICAL DATA | | | | | | | EER | IEER | DIMENSIONS L x W x H (IN) | UNIT NET WEIGHT (LBS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | VOLTS | PHASE | HZ | KW/FLA EACH | MCA | MOP | CONDENSER MOTOR FLA (A) | MINIMUM FUSE SIZE (A) | | | |
| ACCU-R-3 | 1 | UPPER ROOF (EAST) | AHU-1 | PBK222G1AFH0850 | 342.3 | 0 | 45,346 | 4/2.1 | 95 | 2 | R410A | 208 | 3 | 60 | 6.4 | 27.2 | 30 | 6.4 (EA) | 30 | 10.2 | 11.7 | 92 x 89 x 53 | 1389 |

NOTES:
1. CONTRACTOR TO COORDINATE WITH LOCAL UNIT MANUFACTURER TO PROVIDE PIPING DIAGRAM FOR APPROVAL
2. SIZE AND INSTALL PIPING AS PER MANUFACTURER'S GUIDELINES
3. PROVIDE CONDENSER ECM FAN SPEED CONTROL (LOW AMBIENT TO 0 DEG F).

## AIR HANDLING UNIT SCHEDULE

UNITED COOLAIR AS STANDARD

| | DX COOLING COIL | | | | | | | | | | | | HOT WATER COIL | | | | | | | HOT GAS REHEAT (MODULATING) | | | | | EVAPORATOR BLOWER | | | | | COMPRESSOR | | | | FILTER | | | | REFRIGERANT | | ELECTRICAL INFORMATION | | | PHYSICAL DIMENSIONS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TAG No. | MODEL | LOCATION | SUPPLY AIR FLOW (CFM) | MIN AIRFLOW FOR VAV (CFM) | OA CFM (CFM) | NOM. TONS | TOTAL CAP. (MBH) | SENS CAP. (MBH) | EDB/EWB (°F) | LDB/LWB (°F) | COILS (QTY) | ROWS (QTY) | FPI | FACE VEL. | HEATING CAP. (MBH) | EAT (DB °F) | LAT (DB °F) | WPD (FT WG) | EWT (°F) | LWT (°F) | GPM | EAT (DB °F) | LAT (DB °F) | COILS | ROWS | FPI | CAPACITY (MBH) | QTY / TYPE | KW | MCA | FLA | ESP (IWG) | QTY | TYPE | LRA (EACH) | RLA (EACH) | TYPE | QTY | SIZE (IN) | EFFICIENCY | TYPE | CHARGE (LBS) | VOLTAGE (V/PH/HZ) | MCA (AMPS) | MINIMUM FUSE SIZE (A) | L x W x H (IN) | WEIGHT (LBS) | REMARKS |
| AHU-1 | VZA35G3ATAC-A-X | MER #2 | 12,000 | 9,720 | 1,340 | 35 | 382.666 | 216.954 | 70.5/64.7 | 54.1/54.1 | 1 | 1 | 12 | 450 FPM | 536,510 | 45 | 86 | 1.7 | 180 | 152.4 | 40.0 | 54.1 | 72.2 | 1 | 1 | 12 | 238,302 | 2 / ECM | 3.6 | 132.8 | 11.0 | 2.00 | 2 | SCROLL | 340 | 55.8 | PLEATED THROWAWAY | 9 | 22x22 | 2" MERV 13 | R-410A | - | 208/3/60 | 132.8 | 175 | 77-1/2 x 60-1/8 x 105-1/8 | 3789 | SEE NOTES |

NOTES:
1. PROVIDE 100% AIR SIDE ECONOMIZER.
2. PROVIDE DUCT SMOKE DETECTORS ON SUPPLY AND RETURN DUCTS.
3. ELECTRICAL CONTRACTOR SHOULD PROVIDE DISCONNECT SWITCH.
4. ECONOMIZER DAMPERS SHOULD PROVIDE MECHANICAL CONTRACTOR.
5. DIGITAL COMPRESSOR ON LEAD CIRCUIT.
6. HOT GAS BYPASS ON SECOND CIRCUIT.
7. MODULATING HOT GAS REHEAT.
8. HOT WATER COIL MOUNTED IN EXTERNAL FILTER RACK.
9. DOUBLE WALL INSULATION - PERFORATED.
10. NON PAINTED EZ-FIT CABINET.
11. COMPRESSOR ACOUSTIC COVERS
12. (4) REFRIGERANT LINES OUT CORNER POST
13. MARVEL PREMIUM CONTROLLER - VAV
14. DUCT MOUNTED TEMP/HUMIDITY SENSOR
15. BACNET
16. AVERAGING BULB-FREEZESTAT ON HOT WATER COIL
17. PAINTED CONDENSER CABINET
18. MOUNTED RAINPROOF DISCONNECT
19. ECM FAN CONTROL FOR LOW AMBIENT
20. UNIT INTERCONNECT KIT

## HEAT RECOVERY BOXES SCHEDULE

BASIS OF DESIGN: SAMSUNG

| LOCATION | TAG | MODEL NUMBER | QUANTITY | POWER | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | VOLTS | PHASE | HZ | RLA | MCA | MOP |
| STORAGE - 137 | HRB-1 | MCU-S4NEK3N | 1 | 208 / 230V | 1Ph | 60Hz | 0.2 | 2.0 | 15 |
| STORAGE - 137 | HRB-2 | MCU-S6EK2N | 1 | 208 / 230V | 1Ph | 60Hz | 0.3 | 2.0 | 15 |
| BATH - 155 | HRB-3 | MCU-S2NEK2N | 1 | 208 / 230V | 1Ph | 60Hz | 0.2 | 2.0 | 15 |

## INDOOR VRF EVAPORATOR UNIT SCHEDULE

BASIS OF DESIGN: SAMSUNG

| TAG No. | ROOM LOCATION/ SERVICE | MODEL NUMBER | NOMINAL CAPACITY (TONS) | COOLING CAPACITY (BTU/hr) | HEATING CAPACITY (BTU/hr) | CFM | ESP (INWG) | REFRIGERANT | POWER SUPPLY (V/PH/HZ) | NOMINAL RUNNING CURRENT | DIMENSIONS WxHxD (IN) | WEIGHT (LBS.) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AC-1-1 | BREAK ROOM 144 | AM009NNNDCH/AA | 0.75 | 9,500 | 10,500 | 300 | - | R410A | 208-230/1/60 | 0.17 | 23x10x23 | 26.46 | SEE NOTES |
| AC-1-2 | OFFICE #1 145 | AM007NNNDCH/AA | 0.625 | 7,500 | 8,700 | 272 | - | R410A | 208-230/1/60 | 0.17 | 23x10x23 | 26.46 | SEE NOTES |
| AC-1-3 | OFFICE #2 146 | AM015MNHDCH/AA | 1.25 | 15,000 | 17,000 | 353 | 0.6 | R410A | 208-230/1/60 | 0.32 | 34x10x28 | 69.4 | SEE NOTES |
| AC-1-4 | CONFERENCE ROOM 147 | AM009NNNDCH/AA | 0.75 | 9,500 | 10,500 | 300 | - | R410A | 208-230/1/60 | 0.17 | 23x10x23 | 26.46 | SEE NOTES |
| AC-1-5 | LOBBY | AM048MNHDCH/AA | 4 | 48,000 | 54,000 | 1,201 | 0.2 | R410A | 208-230/1/60 | 1.84 | 52x12x28 | 102.5 | SEE NOTES |
| AC-1-6 | RECEPTION 148 | AM007NNNDCH/AA | 0.625 | 7,500 | 8,700 | 272 | - | R410A | 208-230/1/60 | 0.17 | 23x10x23 | 26.46 | SEE NOTES |
| AC-1-7 | OFFICE A | AM009NNNDCH/AA | 0.75 | 9,500 | 10,500 | 300 | - | R410A | 208-230/1/60 | 0.17 | 23x10x23 | 26.46 | SEE NOTES |
| AC-1-8 | OFFICE 160 | AM009NNNDCH/AA | 0.75 | 9,500 | 10,500 | 300 | - | R410A | 208-230/1/60 | 0.17 | 23x10x23 | 26.46 | SEE NOTES |
| AC-1-9 | MEN'S LOCKER ROOM | AM024MNHDCH/AA | 2 | 24,000 | 27,000 | 671 | 0.79 | R410A | 208-230/1/60 | 0.81 | 23x10x23 | 89.3 | SEE NOTES |
| AC-1-10 | WOMEN'S LOCKER ROOM | AM024MNHDCH/AA | 2 | 24,000 | 27,000 | 671 | 0.79 | R410A | 208-230/1/60 | 0.81 | 23x10x23 | 89.3 | SEE NOTES |

NOTES:
1. CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER TO PROVIDE PIPING DIAGRAM FOR APPROVAL
2. SIZE AND INSTALL PIPING AS PER MANUFACTURER'S GUIDELINES
3. PROVIDE BRANCH CONTROLLERS FOR REFRIGERANT PIPING
4. DUCTED TYPE UNITS SHALL HAVE THE FOLLOWING PROVIDED BY THE UNIT MANUFACTURER:
   -HORIZONTAL DISCHARGE AIRFLOW
   -THE INDOOR UNIT SHALL STORE SYSTEM PROGRAMMING INFORMATION, UNIT NAME, AND OTHER DATA
   -ALL INDOOR UNIT ADDRESSING AND OPTION SETTINGS SHALL BE DONE DIGITALLY.
   -THE INDOOR UNIT SHALL HAVE STATIC PRESSURE SCANNING FOR SIMPLE SETUP AND OPTIMIZED COMFORT SETTINGS FOR THE OCCUPANT.
   -THE INDOOR UNIT SHALL HAVE SMART-TUNING FUNCTION THAT CAN PROVIDE OPTIMIZED COMFORT BY ALLOWING THE OCCUPANT TO OFFSET THE FAN CFM CURVE WITH A WIRED REMOTE CONTROLLER TO INCREASE OR DECREASE AIRFLOW.
   -THE INDOOR UNIT SHALL ALLOW SERVICE ACCESS FROM FOUR SIDES (TOP, BOTTOM, LEFT, RIGHT).
   -THE INDOOR UNIT SHALL HAVE AN INTERNAL CONDENSATE PUMP AS STANDARD WITH FLOAT SWITCH (MAXIMUM 29" LIFT FROM BOTTOM OF UNIT). INTERNAL CONDENSATE PUMP SHALL BE CONNECTED TO CONDENSATE DRAIN PIPING. ROUTE CONDENSATE PIPING TO EXISTING SLOP SINK OR NEW FUNNEL DRAIN(PROVIDED BY PLUMBING SCOPE OF WORK) TERMINATE WITH INDIRECT CONNECTION.
   -HIGH-VOLTAGE TERMINAL BLOCK TEMPERATURE SENSOR TO DISABLE UNIT IN THE EVENT OVERHEATING OF POWER CONNECTION.
   -DISCHARGE AIR TEMPERATURE SENSOR WITH TARGET DISCHARGE TEMPERATURE CONTROL CAPABILITY
5. CASSETTE TYPE INDOOR UNITS SHALL HAVE THE FOLLOWING PROVIDED BY THE UNIT MANUFACTURER:
   - ELECTRO-STATIC, WASHABLE, PLEATED FILTERS AS STANDARD (INCLUDED WITH FASCIA PANEL)
   - BUILT IN CONDENSATE PUMP WITH MAXIMUM 29" LIFT FROM THE BOTTOM OF THE UNIT, CHECK VALVE, AND FLOAT SWITCH THAT DISABLES INDOOR UNIT DURING OVERFLOW DETECTION. CONDENSATE PUMP SHALL BE CONNECTED TO CONDENSATE DRAIN PIPING. ROUTE CONDENSATE PIPING TO EXISTING SLOP SINK OR NEW FUNNEL DRAIN(PROVIDED BY PLUMBING SCOPE OF WORK) TERMINATE WITH INDIRECT CONNECTION.
   - KNOCK-OUT FOR OUTSIDE AIR CAPABILITY
   -FASCIA PANEL SHALL HAVE LED INDICATOR LIGHTS AND 4 MOTORIZED LOUVERS WITH INDEPENDENT CONTROL (32°-65°LOUVER CONTROL RANGE)
   -HIGH-VOLTAGE TERMINAL BLOCK TEMPERATURE SENSOR TO DISABLE UNIT IN THE EVENT OVERHEATING OF POWER CONNECTION.
   -WIND-FREE™ FUNCTION WILL CLOSE THE SUPPLY AIR OUTLET LOUVER WHILE IN COOLING MODE TO GENTLY DISPERSE COOL AIR INTO THE SPACE WITHOUT BLOWING DIRECTLY ONTO OCCUPANTS. THE WIND-FREE™ FEATURE IS OPTIONAL AND CAN BE ENABLED USING CENTRAL OR LOCAL CONTROL OPTIONS (MWR-SH11UN, MWR-WE13N, MWR-WE11GUN, AR-EH03U ONLY).
   -UNIT SHALL BE CONFIGURED FOR 2-STAGE OPERATION, COOLING THE SPACE WITH THE LOUVER OPEN (FIXED OR SWING) UNTIL THE ROOM TEMPERATURE NEARS SET TEMPERATURE. ONCE ROOM TEMPERATURE IS NEAR SET TEMPERATURE, WIND-FREE™ OPERATION WILL START AUTOMATICALLY, CLOSING THE LOUVER AND USING THE FACE OF THE FASCIA PANEL TO GENTLY COOL THE SPACE WITH STILL AIR.
   -UNIT PANEL SHALL HAVE AN INTEGRAL HUMIDITY SENSOR THAT WILL OPEN THE LOUVERS FOR STANDARD COOL MODE WHEN SPACE CONDITIONS COULD POTENTIALLY CAUSE CONDENSATION FORMATION ON THE PANEL SURFACE.
   VRF MANUFACTURER TO PROVIDE BMS CENTRAL CONTROLLER AND TOUCHSCREEN INTERFACE.

## FAN SCHEDULE

| TAG No. | LOCATION | MANUFACTURER | MODEL | CFM | ESP (W.G.) | HP / (W) | RPM | V/PH/HZ | WEIGHT (LB) | DRIVE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-R-2 | UPPER ROOF | GREENHECK | USF-27 | 10,000 | 1.2 | 7.5 | 1012 | 230/3/60 | 57 | DIRECT | 3,4,5,11,13,14,15 |
| EF-3 & 4 | MER-2 | COOK | 36XMWH | 6,800 | 0.25 | 0.66 | 542 | 230/1/60 | 418 | BELT | 17,21,22,23, 24 |
| TX-1 & 2 | 1ST FL W | COOK | GCVF-100 | 75 | 0.336 | (9.0) | 863 | 115/1/60 | 27 | DIRECT | 17,18,19,20 |

NOTES:
1. MOTOR - VARI-GREEN EC MOTOR WITH DIAL OR 0-10VDC INPUT
2. CONTROL - DIAL FOR BALANCING
3. UL/cUL 705 LISTED - "POWER VENTILATORS"
4. SWITCH, NEMA-3R, TOGGLE, SHIPPED WITH UNIT
5. JUNCTION BOX MOUNTED & WIRED
6. ROOF CURB-GALV., ATS-19-10-G18, UNDERSIZED 1.5 IN. TOTAL, TRAY, 1 IN. INSULATION
7. DAMPER SHIPPED LOOSE, WD-100-PB-10X10, GRAVITY OPERATED, NOT COATED
8. HOOD HASPS
9. BIRDSCREEN: GALVANIZED
10. ALUMINUM WHEEL MATERIAL
11. UNIT WARRANT: 1 YR (STANDARD)
12. DAMPER SHIPPED LOOSE, ED-100-PB-12X12, GRAVITY OPERATED, NOT COATED
13. PSC MOTOR
14. ADAPTER-GALV., CURB CAP ADAPTER TO 22x22
15. SOLID STATE SPEED CONTROL, 6 AMP, SHIPPED LOOSE
16. STANDARD CURB CAP SIZE - 22 IN SQUARE
17. SWITCH, NEMA-1, TOGGLE, SHIPPED WITH UNIT
18. INTEGRAL BDD
19. 6x4 DUCT ADAPTOR
20. RC-75 SET (4) ISOLATORS
21. MOTORIZED SHUTTER - 39 230V
22. WALL COLLAR
23. WIREGUARD MOTOR SIDE
24. SPARE BELT SET

## HOT WATER UNIT HEATER SCHEDULE

BASIS OF DESIGN: "AIREDALE"

| TAG No. | LOCATION | MODEL | HEATING | | | | | | | FAN MOTOR | | | | WEIGHT (LBS) | DIMENSIONS LxWxH (IN) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | MBH | CFM | GPM | WPD (FT WC) | EWT (°F) | LWT (°F) | EAT (°F) | LAT (°F) | MOTOR HP | RPM | FLA (A) | VOLT/PH/HZ | | | |
| UH-1 | MER-2 | WSC18SB01SA | 12.6 | 340 | 1.3 | 0.5 | 200 | 180 | 60 | 94 | 1/60 | 1550 | 0.8 | 208/60/1 | 16.0 | 11-1/2x12-3/4x11 | SEE NOTES |

NOTES:
1. PROVIDE UNIT MOUNTED THERMOSTAT - RANGE 40-90°F
2. STEP DOWN TRANSFORMER, 208V, TO 115V, 0.5 KVA 1 PHASE
3. MANUAL STARTER - 1 POLE
4. SOLID STATE SPEED CONTROL

## RETURN REGISTER SCHEDULE

| TAG No. | SERVICE | MODEL | MODULE SIZE ( IN x IN) | AIRFLOW (CFM) | MAX PD | NC | SPACING | DEFLECTION | MATERIAL | BORDER | MANUFACTURER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RR-1 | SEE PLANS | 30-45 | 6x6 | 40-100 | 0.04 | <20 | 3/4" | 45° | ALUMINUM | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-2 | SEE PLANS | 30-45 | 8x8 | 101-130 | 0.07 | <20 | 3/4" | 45° | ALUMINUM | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-3 | SEE PLANS | 30-45 | 12x12 | 140 | 0.04 | <20 | 3/4" | 45° | ALUMINUM | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-4 | SEE PLANS | 30-45 | 24x24 | - | - | - | 3/4" | 45° | ALUMINUM | BY ARCH | ANEMOSTAT | TRANSFER DUCT |
| RR-5 | SEE PLANS | 30-45 | 30x14 | 875 | 0.04 | 23 | 3/4" | 45° | ALUMINUM | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-6 | GYM | HD3 | 48x40 | 6250 | 0.03 | 28 | 3/4" | 0° | STAINLESS STEEL | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-7 | GYM | HD3 | 36x24 | 2000 | 0.02 | <20 | 3/4" | 0° | STAINLESS STEEL | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-8 | SEE PLANS | 30-45 | 38x24 | 1750 | 0.04 | 29 | 3/4" | 0° | STAINLESS STEEL | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-9 | SEE PLANS | HD3 | 30x12 | 800 | 0.03 | <20 | 3/4" | 0° | STAINLESS STEEL | BY ARCH | ANEMOSTAT | SEE NOTES |
| RR-10 | SEE PLANS | 30-45 | 14x14 | 400 | 0.04 | 23 | 3/4" | 45° | STAINLESS STEEL | BY ARCH | ANEMOSTAT | SEE NOTES |

NOTES:
1. BORDER TYPES SHALL BE COMPATIBLE WITH ARCHITECTURAL CEILING TYPE FOR THE ROOM IN WHICH THE AIR DEVICE IS LOCATED
2. SEE PLANS FOR LOCATION AND AIR QUANTITIES FOR EACH OUTLET
3. ALL AIR DEVICES SHALL BE TESTED IN ACCORDANCE WITH ASHRAE STANDARD 702-2006
4. NC VALUES ARE BASED UPON A 10 DB ROOM ATTENUATION

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@nerring.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL
SCHEDULES-1

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | M-400.00 |
| DRAWN BY | D.K. |
| | 24 OF 37 |

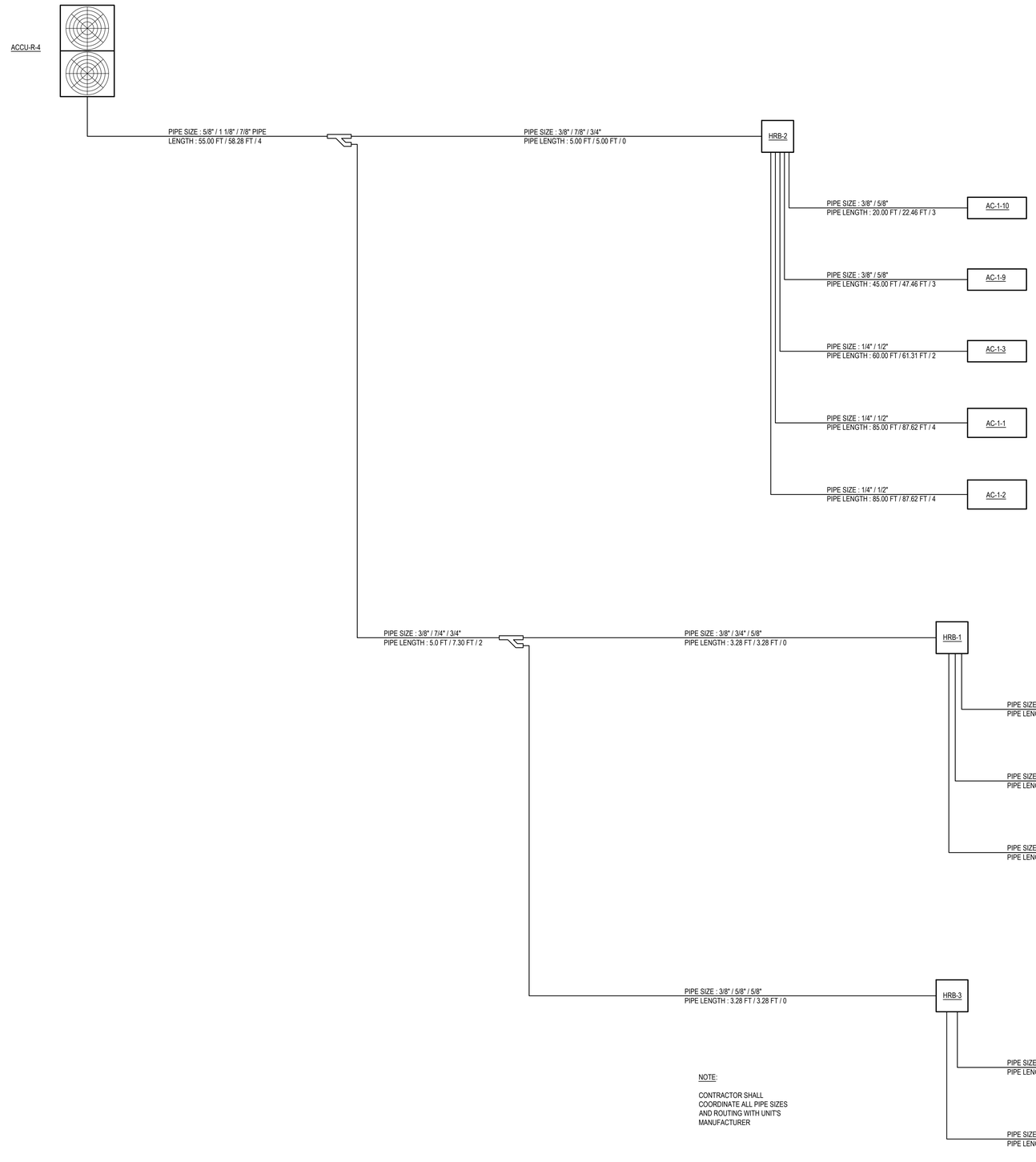
NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## AIR COOLED PACKAGED ROOFTOP UNIT SCHEDULE (GYM)

DUNHAM-BUSH AS STANDARD

| TAG | MODEL | LOCATION | DX COOLING COIL | | | | | | GAS HEATING | | HOT GAS REHEAT COIL | | | | | | | | | ENERGY RECOVERY (HEAT WHEEL) | | | | | | | | |




NOTE:

CONTRACTOR SHALL
COORDINATE ALL PIPE SIZES
AND ROUTING WITH UNIT'S
MANUFACTURER

ACCU-R-4 VRF REFRIGERANT PIPING DIAGRAM

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

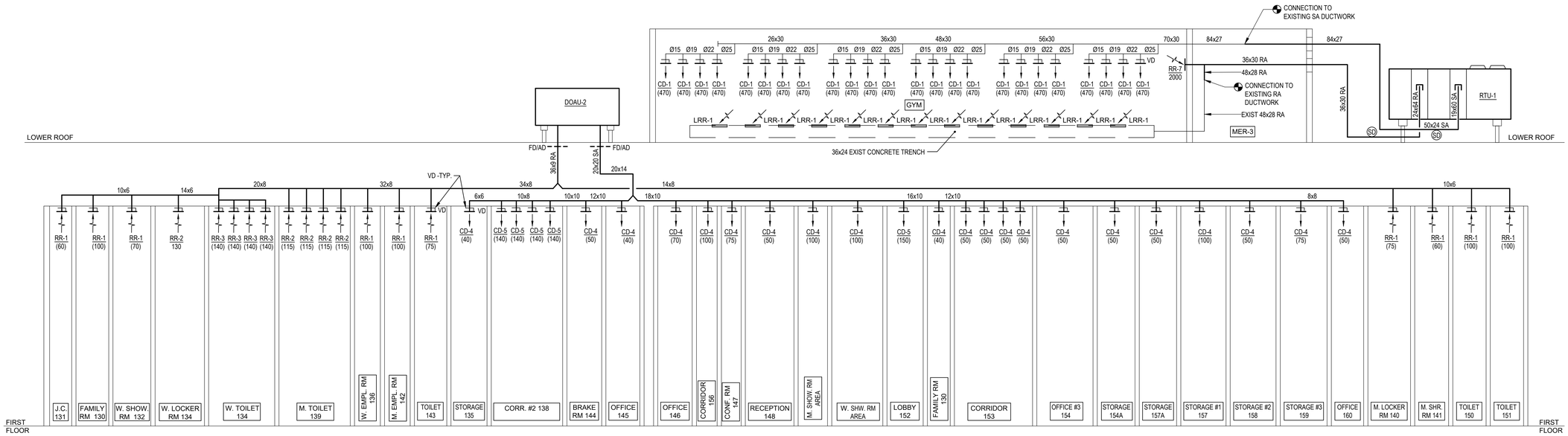
DRAWING

MECHANICAL VRF
REFRIGERANT PIPING RISER
DIAGRAM

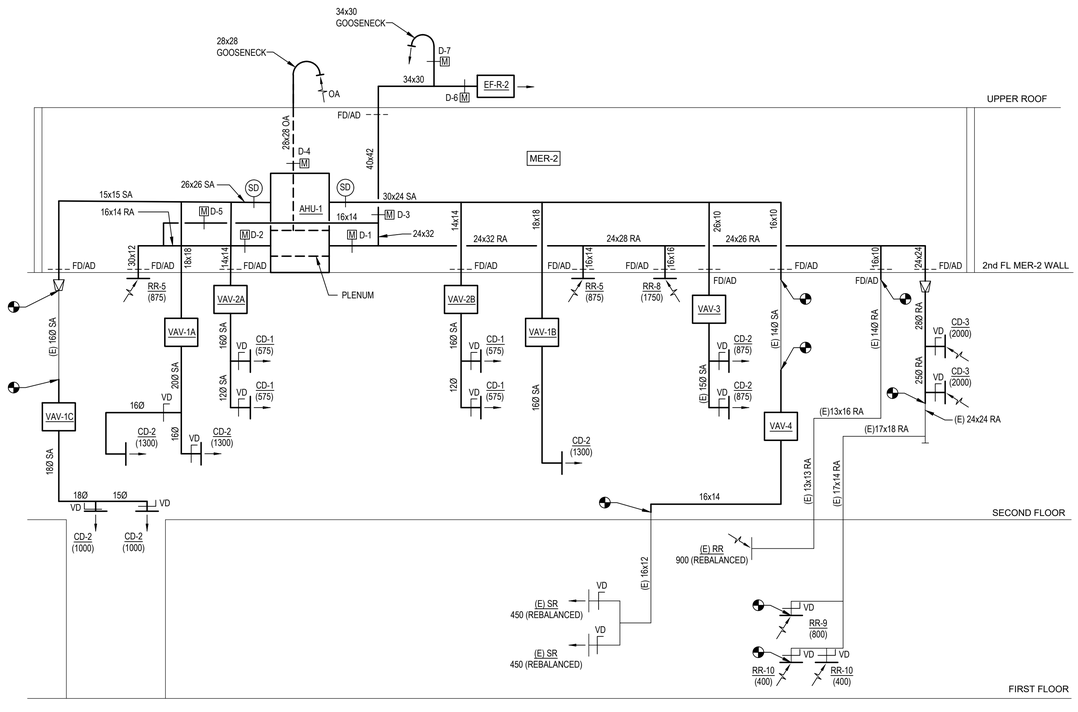
SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-500.00
DRAWN BY D.K.
26 OF 37

NYC DOB Number




AIR RISER DIAGRAM
NOT TO SCALE




AHU-1 AIR RISER DIAGRAM
NOT TO SCALE

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

MECHANICAL DUCT RISER DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-501.00
DRAWN BY D.K.


NYC DOB Number

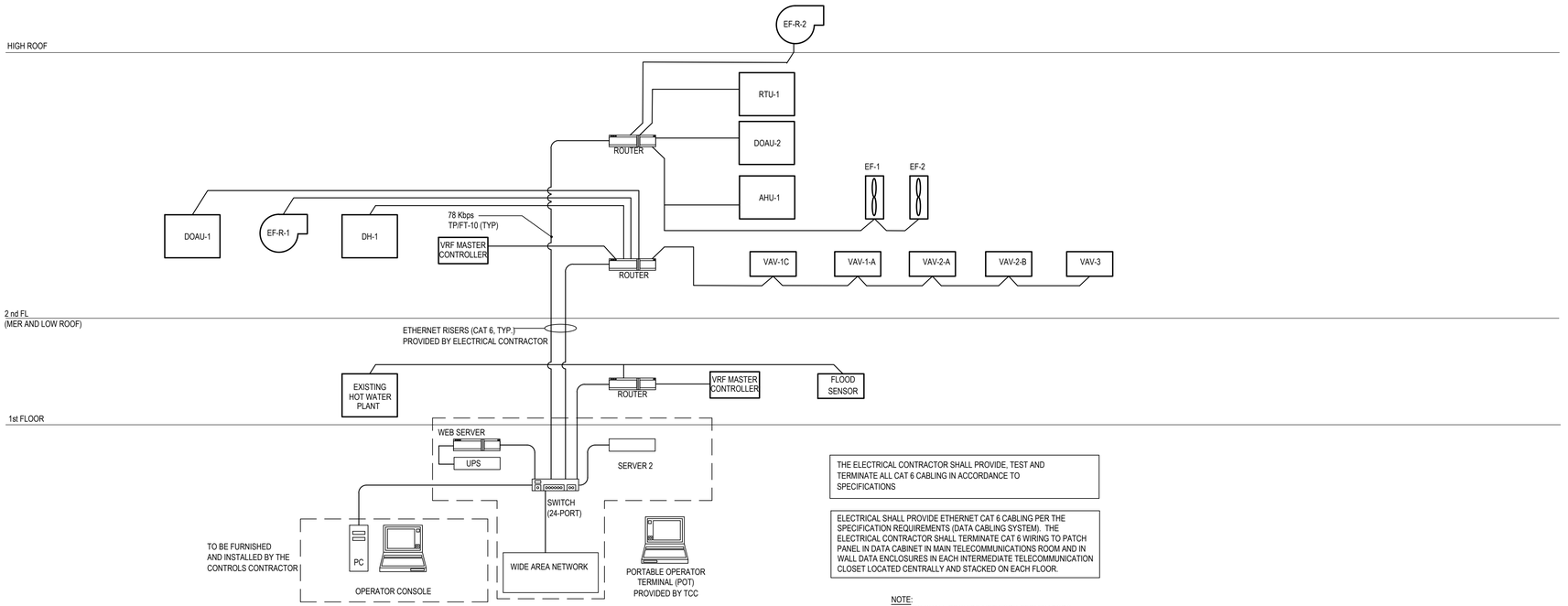
UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

NOTES:

1. SHOW ALL TERMINAL EQUIPMENT (UNIT HEATERS) CONNECTED TO THE NETWORK.
2. SHOW ALL NETWORKED THERMOSTATS WHICH CONTROLS TERMINAL EQUIPMENT (EX.: UNIT HEATERS, ETC.)
3. PROVIDE HARDWIRED RETURN AIR DUCT HUMIDITY SENSORS TO MONITOR OCCUPIED SPACE HUMIDITY LEVELS PER THE SPECIFICATIONS. PROVIDE SPACE HUMIDITY SENSORS TO MAINTAIN UNOCCUPIED SPACE HUMIDITY LEVELS PER THE SPECIFICATIONS.

## SYMBOLS

| | |
|---|---|
| VAV | VARIABLE AIR VOLUME BOX |
| ——— | 78 KILO BAUD LOCAL OPERATING NETWORK FREE TOPOLOGY BY TCC |
| — — — | SCOPE OF WORK BOUNDARY |
| — — — | BOUNDARY OF MAIN TELECOMMUNICATIONS ROOM |
| ——— | ETHERNET (CAT 6) |
| BMS | BUILDING MANAGEMENT SYSTEM |
| BS | BACK-UP DATABASE & HMI SOFTWARE STORAGE |
| HMI | HUMAN MACHINE INTERFACE |
| IP | INTERNET PROTOCOL |
| ITC | INTERMEDIATE TELECOMMUNICATIONS CLOSET |
| MS | MAIN DATABASE & HMI SOFTWARE STORAGE |
| MTR | MAIN TELECOMMUNICATIONS ROOM |
| PC | PERSONAL COMPUTER |
| TCC | TEMPERATURE CONTROL CONTRACTOR |
| TCP | TRANSMISSION CONTROL PROTOCOL |
| TYP | TYPICAL |
| UPS | UNINTERRUPTIBLE POWER SUPPLY |
| VFD | VARIABLE FREQUENCY DRIVE |
| WAN | WIDE AREA NETWORK |




THE ELECTRICAL CONTRACTOR SHALL PROVIDE, TEST AND TERMINATE ALL CAT 6 CABLING IN ACCORDANCE TO SPECIFICATIONS

ELECTRICAL SHALL PROVIDE ETHERNET CAT 6 CABLING PER THE SPECIFICATION REQUIREMENTS (DATA CABLING SYSTEM). THE ELECTRICAL CONTRACTOR SHALL TERMINATE CAT 6 WIRING TO PATCH PANEL IN DATA CABINET IN MAIN TELECOMMUNICATIONS ROOM AND IN WALL DATA ENCLOSURES IN EACH INTERMEDIATE TELECOMMUNICATION CLOSET LOCATED CENTRALLY AND STACKED ON EACH FLOOR.

NOTE:
THE TCC SHALL PROVIDE NETWORK TERMINATORS ON EACH BACNET SEGMENT.

## SYSTEM CONTROL ARCHITECTURE

NOT TO SCALE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

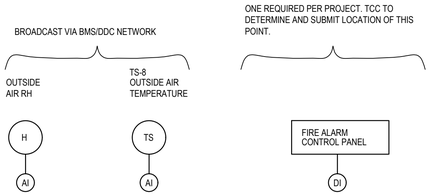
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING
SYSTEM CONTROL CONTROL DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-600.00
DRAWN BY D.K.
28 OF 37

NYC DOB Number




NOTES:

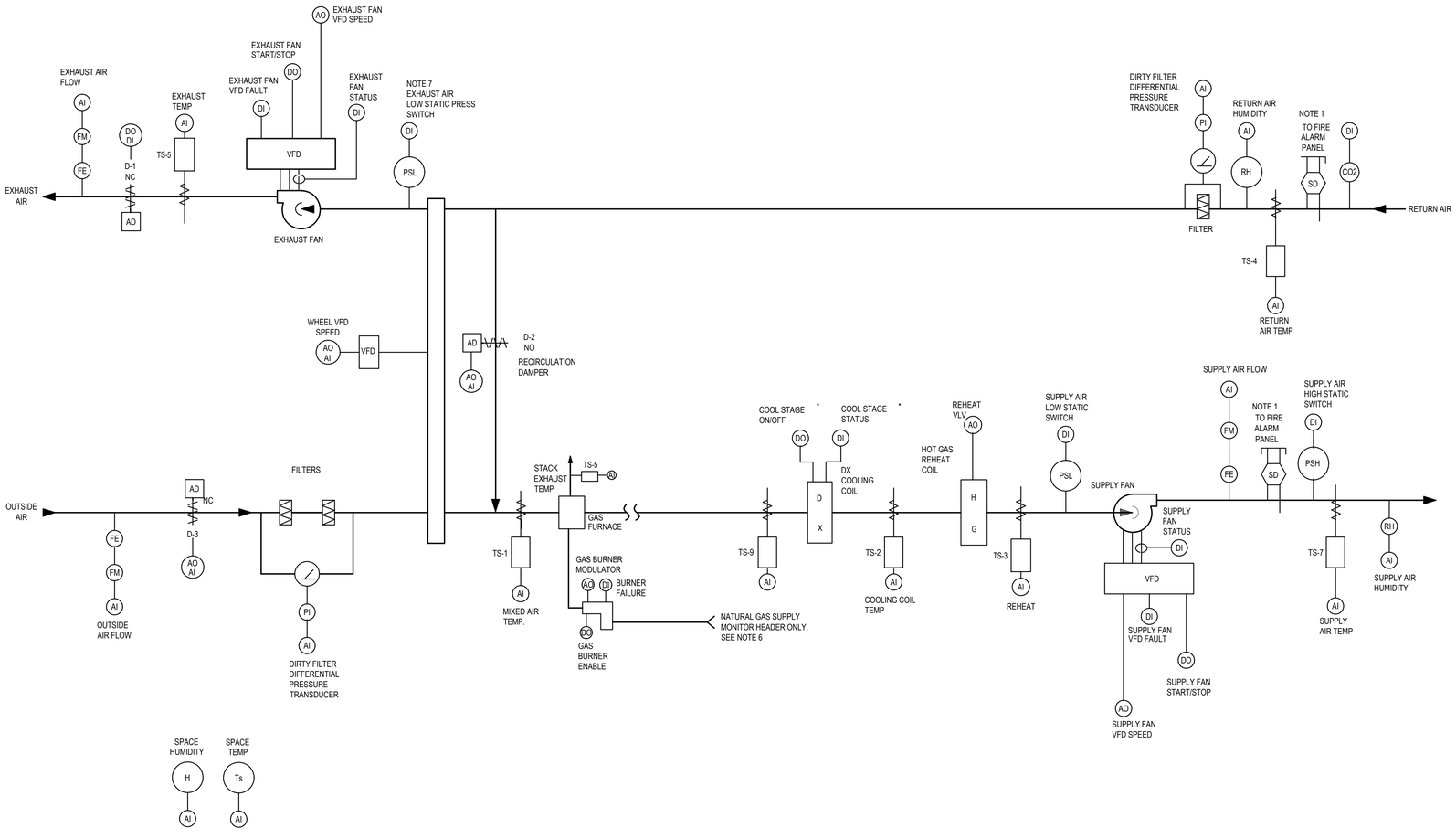
1. CONTROL WIRING OF SMOKE DETECTORS IS BY FIRE ALARM SCOPE OF WORK.
2. PROVIDE ONE SPACE HUMIDITY SENSOR PER SYSTEM AS SHOWN ON THE DRAWINGS.
3. EXHAUST FAN VFD SHALL BE ADJUSTED TO MAINTAIN REQUIRED EXHAUST RATE AS MEASURED BY EXHAUST AIR FLOW MONITORING STATION.
4. SELECT ONE SPACE TEMP SENSOR SERVED BY THE RTU, TO BE USED FOR NIGHT SETBACK CONTROL.
5. SAFETY DEVICES SHALL BE HARDWIRED TO THE FAN STARTER CIRCUIT, IN ADDITION TO THE DDC SYSTEM. COORDINATE WITH VFD VENDOR ASSURING THAT THE SAFETIES SHUTDOWN THE FAN IN ALL MODES.

ABBREVIATIONS

| | |
|---|---|
| H | HUMIDITY SENSOR |
| TS | TEMPERATURE SENSOR |
| TS-1 | MIXED AIR TEMP |
| TS-2 | DISCHARGE AIR TEMP (DX-COIL) |
| TS-3 | DISCHARGE AIR TEMP (REHEAT COIL) |
| TS-4 | RETURN AIR TEMP |
| TS-5 | EXHAUST TEMP DISCHARGE FROM WHEEL |
| TS-6 | NOT USED |
| TS-7 | SUPPLY AIR TEMP |
| TS-8 | OUTSIDE AIR TEMP |
| TS-9 | DISCHARGE AIR TEMP (HW COIL) |
| TLL-1 | TEMPERATURE LOW LIMIT |
| PT | STATIC PRESSURE TRANSMITTER |
| FE | FLOW ELEMENT |
| FT | FLOW TRANSMITTER |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| * | # OF COOLING STAGES |
| PSL | PRESSURE SWITCH LOW |
| PSH | PRESSURE SWITCH HIGH |
| OEM | ORIGINAL EQUIPMENT MANUFACTURER |
| PI | PRESSURE INDICATOR |
| VLV | VALVE |

NOTES:

1. ORIGINAL EQUIPMENT MANUFACTURER CONTROLS SHALL ALWAYS BE PROVIDED. THE DESIGNER SHALL REMOVE FROM THIS SCHEMATIC THE DEVICES USED FOR MONITORING ONLY WHEN APPLYING THIS SCHEMATIC TO A " DDC WITH LOCAL NETWORK" TYPE PROJECT.
2. POINTS AND CONTROLS, FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURERS SHALL NOT BE DELETED.
3. PROVIDE ENERGY RECOVERY WHEEL (ERW) PER AND SPACE OCCUPANCY SENSOR FOR DEMAND CONTROLLED VENTILATION.




RTU-1 CONTROL DIAGRAM VARIABLE AIR VOLUME AIR CONDITIONER

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
RTU-1 CONTROL DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-601.00
DRAWN BY D.K.
29 OF 37

NYC DOB Number

# ROOFTOP SINGLE ZONE VARIABLE AIR VOLUME WITH ENTHALPY WHEEL (GYMNASIUM WITH DCV-ECONOMIZER, GAS-HEATING, DX-COOLING, DEHUMIDIFICATION AND DDC CONTROLS WITH EXHAUST FAN)

SAFETY DEVICES:
SAFETIES SHALL BE IN FORCE AT ALL TIMES AND DURING ALL MODES OF OPERATION.

1. SUPPLY DUCT OVERPRESSURE CONTROL: A SUPPLY DUCT STATIC PRESSURE SENSOR SWITCH SHALL BE LOCATED DOWNSTREAM OF THE SUPPLY FAN. IF THE STATIC PRESSURE IN THE SUPPLY DUCT EXCEEDS THE POSITIVE STATIC PRESSURE SWITCH SETPOINT OF 2.5 WG FOR ANY REASON, THE SUPPLY FAN SHALL STOP AND THE UNIT SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE SAFETY PRESSURE SWITCH IS MANUALLY RESET. AFTER THE ALARM IS CLEARED, THE ROOFTOP UNIT (RTU) SHALL RESUME ITS NORMAL OPERATION ACCORDING TO THE APPROPRIATE MODE. A CHANGE-OF-STATE ALARM SHALL BE GENERATED AT THE BACNET NETWORK. NOTE THAT THIS FAN SAFETY SHALL BE HARDWIRED TO SHUT THE FAN OFF IN ALL MODES OF FAN-CONTROL OPERATION.
2. EXHAUST DUCT SUCTION PRESSURE CONTROL: AN EXHAUST DUCT STATIC PRESSURE SENSOR SWITCH SHALL BE LOCATED UPSTREAM OF THE EXHAUST FAN. IF THE STATIC PRESSURE IN THE EXHAUST DUCT EXCEEDS THE NEGATIVE STATIC PRESSURE SWITCH SETPOINT OF 1.5 WG THE EXHAUST FAN SHALL STOP AND THE UNIT SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE SAFETY PRESSURE SWITCH IS MANUALLY RESET. AFTER THE ALARM IS CLEARED, THE RTU SHALL RESUME ITS NORMAL OPERATION ACCORDING TO THE APPROPRIATE MODE. A CHANGE-OF-STATE ALARM SHALL BE GENERATED AT THE BACNET NETWORK. NOTE THAT THIS FAN SAFETY SHALL BE HARDWIRED TO SHUT THE FAN OFF IN ALL MODES OF FAN-CONTROL OPERATION.
3. FILTER CONDITION: DIAL TYPE FILTER PRESSURE GAUGES SHALL INDICATE EACH AND EVERY FILTER PRESSURE DROP. ADDITIONALLY, FILTER DIFFERENTIAL PRESSURE TRANSDUCERS WIRED TO THE OEM CONTROLLER FOR EACH AND EVERY FILTER SET SHALL INDICATE EACH AND EVERY FILTER SET PRESSURE DROP. THE ANALOG PRESSURE DROPS FOR EACH FILTER SET SHALL BE ABLE TO BE PASSED OUT TO THE NETWORK. CLOGGED FILTER ALARMS SHALL BE GENERATED HMI WHEN THE PRESSURE DROPS EXCEED THE MAXIMUM ALLOWED PRESSURE DROPS AS RECOMMENDED BY THE FILTER MANUFACTURERS.
4. FIRE ALARM SHUT DOWN: THIS SEQUENCE OF OPERATION SHALL BE IN FORCE AT ALL TIMES AND UNDER ALL MODES OF OPERATION. THE FIRE ALARM CONTRACTOR SHALL FURNISH AND THE RTU MANUFACTURER SHALL INSTALL THE SMOKE DETECTORS TO SHUT DOWN THE SYSTEM UPON SENSING SMOKE. FURTHERMORE, THE FOLLOWING SHALL BE PROVIDED THROUGH ELECTRICAL DIVISION.
5. DURING A FIRE ALARM CONDITION, THE FIRE ALARM CONTROL PANEL (FACP) SHALL SHUT DOWN THE SUPPLY AND EXHAUST FAN AND THE SYSTEM SHALL OPERATE AND REMAIN IN THE SYSTEM-OFF MODE UNTIL THE ALARM CONDITION IS CLEARED. WHEN THE UNIT FANS ARE SHUT DOWN BY A FIRE ALARM CONDITION, ALL FIRE/SMOKE AND SMOKE DAMPERS SHALL CLOSE AS COMMANDED BY THE FACP. AFTER THE FIRE ALARM SHUTDOWN IS CLEARED, ALL SMOKE AND FIRE/SMOKE DAMPERS SHALL BE COMMANDED OPEN BY THE FACP .
6. FIRE ALARM SYSTEM ACTIVATION INITIATED BY MANUAL PULL STATION SHALL NOT SHUT DOWN THE UNIT SUPPLY AND EXHAUST FANS AND SHALL NOT CLOSE THE ASSOCIATED FIRE/SMOKE DAMPERS.
7. OPERATING MODES: THE OPERATING MODES OF THE RTU SHALL BE AUTOMATICALLY DETERMINED BY THE COMBINED ACTIONS OF THE DDC SCHEDULER WHICH SHALL SCHEDULE THE OCCUPIED AND UNOCCUPIED TIME PERIODS, THE LOCAL RTU MOUNTED HAND-OFF-AUTO (HOA) SWITCH; CONTROL AND SAFETY DEVICES AND THE FIRE ALARM SYSTEM. DURING TIMES OF SUPPLY AND EXHAUST FAN OPERATION, THE SUPPLY PRE-FILTER MERV 7 AND SUPPLY POST FILTER MERV 13 FILTER BANK DIFFERENTIAL PRESSURE TRANSDUCER SIGNALS AS WELL AS THE RETURN FILTER MERV 7 FILTER BANK DIFFERENTIAL PRESSURE TRANSDUCER SIGNAL SHALL INDICATE THE ANALOG PRESSURE DROPS WHICH SHALL BE SENT TO THE BACNET NETWORK TO ALLOW REMOTE MONITORING OF THE FILTER PRESSURE DROPS. FOR ALL MODES, THE ENERGY WHEEL ROTATIONAL SPEED SHALL BE CONTROLLED BY ITS VARIABLE FREQUENCY DRIVE (VFD).
8. MODE SELECTION AND FAN OPERATION:

a. THE OPERATOR SHALL BE ABLE TO MANUALLY SELECT THE OPERATING MODE THROUGH AN H-O-A SWITCH MOUNTED IN THE RTU AND WIRED INTO THE OEM DIGITAL CONTROLLER. IN THE "AUTO" POSITION THE RTU IS INDEXED AUTOMATICALLY BY THE DDC SCHEDULER BETWEEN THE VARIOUS MODES OF OPERATION DESCRIBED HEREIN. IN THE "HAND" POSITION THE RTU SHALL REMAIN IN THE OCCUPIED MODE. IN THE "OFF" POSITION THE RTU SHALL REMAIN IN THE SYSTEM-OFF MODE. NOTE THAT THE H-O-A SWITCH IS NOT THE SAME AS THE MANUFACTURER'S SERVICE DISCONNECT SWITCH WHICH SHALL SHUTDOWN THE RTU.

b. WHEN THE H-O-A SWITCH IS PLACED INTO EITHER THE "HAND" OR THE "OFF" POSITION AN ADVISORY IS GENERATED.

c. EXHAUST AIR FAN SHALL RUN CONCURRENTLY WITH THE SUPPLY FAN DURING THE OCCUPIED HEATING AND OCCUPIED COOLING MODES. THE EXHAUST FAN SHALL BE DE-ENERGIZED WHEN THE UNIT RECIRCULATES AIR DURING THE UNOCCUPIED COOLING.

d. SUMMER/WINTER MODE SELECTION: THE RTU SHALL BE MANUALLY INDEXED OR AUTOMATICALLY INDEXED TO OPERATE IN EITHER THE SUMMER MODE OR WINTER MODE BASED ON THE READINGS OF AN OUTSIDE TEMPERATURE SENSOR AND OUTSIDE AIR RELATIVE HUMIDITY SENSOR THAT MAY BE HARD WIRED TO EACH RTU CONTROLLER OR PASSED AS NETWORK VARIABLES TO EACH CONTROLLER. OUTSIDE ENTHALPY CONDITIONS ARE USED TO DETERMINE IF THE RTU SHALL GO INTO THE ECONOMIZER MODE OR THE MECHANICAL COOLING MODE. THE OUTSIDE ENTHALPY IS CALCULATED BY THE CONTROLLER FROM THE OUTSIDE AIR TEMPERATURE AND OUTSIDE AIR RELATIVE HUMIDITY. A GLOBAL OUTSIDE ENTHALPY MAY BE PASSED AS A NETWORK POINT IF EACH CONTROLLER OF EACH RTU DOES NOT CALCULATE ITS OWN OUTSIDE ENTHALPY VALUE BASED ON ITS OWN HARD WIRED INPUTS OR NETWORK VARIABLE INPUTS FOR OUTSIDE AIR TEMPERATURE AND OUTSIDE AIR RELATIVE HUMIDITY.

1) WINTER MODE: IF THE OUTSIDE TEMPERATURE IS LESS THAN OR EQUAL TO 50°F, THE UNIT SHALL BE INDEXED TO THE WINTER HEATING MODE.
2) IF THE OUTSIDE TEMPERATURE IS GREATER THAN 50°F BUT LESS THAN 55°F, THE UNIT SHALL BE IN WHATEVER MODE WAS THE LAST MODE OF OPERATION (WINTER HEATING OR SUMMER COOLING).
3) SUMMER MODE: IF THE OUTSIDE TEMPERATURE IS GREATER THAN OR EQUAL TO 65°F BUT LESS THAN 65°F AND THE OUTSIDE AIR ENTHALPY IS LESS THAN THE RETURN ENTHALPY, THE UNIT SHALL BE INDEXED TO THE SUMMER ECONOMIZER COOLING MODE. IF THE OUTSIDE TEMPERATURE IS GREATER THAN OR EQUAL TO 55°F BUT LESS THAN 65°F AND THE OUTSIDE AIR ENTHALPY IS GREATER THAN THE RETURN ENTHALPY, THE ROOFTOP UNIT SHALL BE INDEXED TO SUMMER MECHANICAL COOLING MODE. IF THE OUTSIDE TEMPERATURE IS GREATER THAN OR EQUAL TO 65°F, THE UNIT SHALL BE INDEXED TO THE MECHANICAL COOLING MODE.
4) ECONOMIZER COOLING MODE: THE DEMAND CONTROLLED VENTILATION MODE WHERE THE AMOUNT OF OUTSIDE AIR TAKEN IN DEPENDS ON THE RELATIVE CARBON DIOXIDE CONCENTRATION BETWEEN THE SPACE AND THE OUTSIDE AIR, IS SUSPENDED DURING THE ECONOMIZER MODE. IN THE ECONOMIZER COOLING MODE, THE ENERGY WHEEL SHALL BE STOPPED. THE COMPRESSORS AND FURNACE SHALL BE DE-ENERGIZED DURING THE ECONOMIZER COOLING MODE. THE SUPPLY FAN SHALL BE ENERGIZED AND SHALL BE CONTROLLED BASED ON THE RETURN AIR TEMPERATURE. THE DISCHARGE AIR TEMPERATURE SHALL BE WHATEVER THE OUTSIDE AIR TEMPERATURE IS DURING THE ECONOMIZER MODE (I.E. GREATER THAN OR EQUAL TO 55°F BUT LESS THAN 65°F). IF THE RETURN AIR TEMPERATURE RISES ABOVE 78°F, THE SUPPLY FAN SHALL BE MODULATED TO PROVIDE ITS MAXIMUM FLOW. IF THE RETURN AIR TEMPERATURE DROPS BELOW 76°F, THE SUPPLY FAN SHALL MODULATE TO ITS OCCUPIED MINIMUM FLOW. THE OUTSIDE AIR DAMPER SHALL BE FULLY OPEN. THE TWO POSITION EXHAUST DAMPER SHALL REMAIN BE FULLY OPEN. THE RECIRCULATION DAMPER SHALL BE FULLY CLOSED. THE EXHAUST FLOW RATE SHALL BE CONTROLLED BY THE EXHAUST AIR FLOW MONITORING STATION WHICH SHALL MODULATE THE EXHAUST FAN VFD TO MAINTAIN THE EXHAUST FLOW RATE AT 10% LESS THAN THE OUTSIDE INTAKE RATE TO MAINTAIN SPACE POSITIVE PRESSURIZATION. IF THE OUTSIDE AIR ENTHALPY IS GREATER THAN THE RETURN ENTHALPY OR IF THE RETURN AIR TEMPERATURE EXCEEDS THE SETPOINT OF 78°F FOR A TIME DELAY OF 30 MINUTES (ADJUSTABLE), THE RTU SHALL BE INDEXED TO MECHANICAL COOLING MODE.
5) DEHUMIDIFICATION MODE:
WHEN THE RA HUMIDITY SENSOR DETECTS A LEVEL OF 50% RH (ADJUSTABLE) OR ABOVE THE DX COMPRESSOR WILL BE STAGED AS REQUIRED TO MAINTAIN THE RA HUMIDITY SETPOINT. DURING DE - HUMIDIFICATION MODE, IF THE SPACE FALLS BELOW THE OCCUPIED TEMPERATURE SETPOINT THEN THE HOT GAS RE - HEAT SHALL MODULATE TO MAINTANE THE SPACE TEMPERATURE SETPOINT.
6) FAN ACCELERATION/DE-ACCELERATION: WHEN THE SUPPLY AND EXHAUST FANS ARE STARTED, THE FANS SHALL BE SLOWLY ACCELERATED UP TO THEIR REQUIRED SPEED ACCORDING TO THE RAMP ADJUSTMENTS IN THE VARIABLE FREQUENCY DRIVES. THE RAMP-UP TIME SHALL BE SET TO (30) SECONDS. WHEN THE FANS ARE DE-ENERGIZED, THEY SHALL BE DE-ENERGIZED IMMEDIATELY WITHOUT DE-ACCELERATION.
7) THE SYSTEM SHALL HAVE THE ABILITY TO DO A MANUAL SUMMER/WINTER CHANGEOVER. A NETWORK VARIABLE INPUT SHALL BE ABLE TO BE SENT TO THE UNIT CONTROLLER TO OVERRIDE THE APPLICABLE AUTOMATICALLY CALCULATED HVAC MODE.
8) SYSTEM-OFF MODE: THE RTU SUPPLY AND EXHAUST FANS SHALL BE OFF; THE WHEEL ROTATION SHALL BE STOPPED; THE RTU DAMPERS SHALL BE COMMANDED TO THEIR RESPECTIVE FAIL-SAFE POSITIONS: OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL BE CLOSED, AND RECIRCULATION AIR DAMPER SHALL BE OPEN. THE COMPRESSORS SHALL BE DE-ENERGIZED IN THE UNOCCUPIED HEATING MODE . THE FURNACE SHALL BE DE-ENERGIZED DURING THE ECONOMIZER CYCLE AND MECHANICAL COOLING MODE. THE DX COMPRESSORS AND THE GAS FURNACE IS DENERGIZED.
9. UNOCCUPIED MODE:

a. UNOCCUPIED WINTER MODE:
1) THE UNIT SHALL BE IN THE SYSTEM-OFF MODE DURING THE UNOCCUPIED WINTER MODE AND THE TERMINAL HEATING SYSTEM IN THE SPACES SHALL MAINTAIN A 55°F TEMPERATURE.

b. UNOCCUPIED SUMMER MODE:
1) THE MECHANICAL DEHUMIDIFICATION SEQUENCE SHALL ONLY BE ENABLED IF THE RELATIVE ENTHALPY CONDITIONS AND OUTSIDE AIR TEMPERATURE CONDITIONS DO NOT ENABLE THE UNOCCUPIED NIGHTTIME PURGE SEQUENCE. OUTSIDE AIR INTAKE DAMPER AND EXHAUST AIR DAMPER SHALL FULLY CLOSE AND THE RECIRCULATION DAMPER SHALL FULLY OPEN. THE EXHAUST FAN SHALL REMAIN OFF CONSIDERING THE ORIENTATION OF THE EXHAUST PORT DOES NOT AID IN THE UNOCCUPIED RECIRCULATION MODE. FURNACE SHALL BE DE-ENERGIZED. THE SUPPLY FAN MAY START IF THE SPACE CONDITIONS WARRANT. THE FLOW STATION INSTALLED IN THE SUPPLY PATH SHALL SEND AN ANALOG CONTROL SIGNAL TO THE UNIT CONTROLLER. THE AIRFLOW CONTROL SIGNAL SHALL BE USED TO CONTROL THE SPEED OF THE SUPPLY FAN TO ITS MAXIMUM FLOW SETPOINT. THE ENERGY WHEEL SHALL REMAIN OFF DURING THE UNOCCUPIED PERIOD SINCE THE ENERGY WHEEL IS BYPASSED IN THE RECIRCULATION MODE BY THE RECIRCULATION DAMPERS. THE RTU SHALL BE CYCLED TO MAINTAIN SPACE HIGH-LIMIT SETPOINT AS FOLLOWS.
2) UPON PROOF OF AIR FLOW, DX COOLING SHALL BE CONTROLLED BY MAINTAINING THE COOLING COIL DISCHARGE TEMPERATURE SETPOINT (NOMINALLY 55°F PLUS 0 MINUS 2 °F, ADJUSTABLE).

4. OCCUPIED COOLING MODE:

c. WHEN THE UNIT INDEXED TO MECHANICAL COOLING MODE IT SHALL MAINTAIN THE REQUIRED RETURN AIR TEMPERATURE SETPOINT (78°F PLUS 0 MINUS 2ºF NOMINAL ADJUSTABLE). A SINGLE ZONE VARIABLE AIR VOLUME SYSTEM SHALL BE EMPLOYED. DURING THE O CCUPIED MECHANICAL COOLING PERIOD, RETURN AIR RELATIVE HUMIDITY SHALL BE CONTROLLED BY INDIRECT DEHUMIDIFICATION BY MAINTAINING THE DISCHARGE TEMPERATURE OFF THE DX COOLING COIL AT 55 F MAXIMUM PRIOR TO FAN SPEED INCREASE WHILE IN THE CONSTANT VOLUME MODE AT LOWER LOADS AND ALSO MAINTAINING 55 F MAXIMUM DISCHARGE COOLING COIL TEMPERATURE WHEN THE FAN SPEED IS INCREASED WHILE IN THE VARIABLE VOLUME MODE AT HIGHER LOADS. IN THE VARIABLE VOLUME MODE, VARIABLE CAPACITY SHALL BE PROVIDED BY ADJUSTING THE FAN SPEED ABOVE THE INSTANTANEOUS MINIMUM VENTILATION RATE WHEN RESPONDING TO RETURN AIR TEMPERATURE. IN THE CONSTANT VOLUME MODE AFTER THE FLOW HAS BEEN REDUCED TO THE INSTANTANEOUS MINIMUM VENTILATION RATE, VARIABLE CAPACITY SHALL BE PROVIDED BY ON/OFF SEQUENTIAL COMPRESSOR CYCLING WHEN THE RETURN AIR TEMPERATURE DROPS TO 75 ºF. THESE MEASURES SHOULD ALWAYS KEEP THE SPACE WITHIN THE COMFORT ZONE AS DEFINED IN ASHRAE 55-2010. IN THE CONSTANT VOLUME MODE, WHEN THE RETURN AIR TEMPERATURE EXCEEDS THE RETURN AIR TEMPERATURE SETPOINT (78ºF ADJ.), THE COMPRESSORS SHALL BE STAGED TO PROVIDE A 55 F MAXIMUM DISCHARGE COOLING COIL TEMPERATURE WHILE THE SUPPLY FAN IS STILL AT THE MINIMUM INSTANTANEOUS VENTILATION CONCENTRATION COMPARED TO THE OUTSIDE CO2 CONCENTRATION FLOW DETERMINED BY THE DIFFERENCE OF THE SPACE CO2. IF THE RETURN AIR TEMPERATURE DOESN'T REACH RETURN AIR TEMPERATURE CUT-OUT (SETPOINT MINUS 2ºF), THE UNIT SHALL TRANSITION TO THE VARIABLE VOLUME MODE AND THE SUPPLY FAN SHALL BE MODULATED TO INCREASE SPEED AS REQUIRED TO MAX SPEED (SET BY BALANCER). AS THE RETURN AIR TEMPERATURE SETPOINT IS MET, THE REVERSE SHALL OCCUR WHERE THE FAN IS FIRST SLOWED TO MIN SPEED INSTANTANEOUS VENTILATION FLOW AND THEN THE COMPRESSORS SHALL BE STAGED OFF AS REQUIRED WHEN THE CUT-OUT CONTROL POINT OF 75ºF IS REACHED. IF THE RETURN AIR TEMPERATURE RISES ABOVE 78°F AGAIN, THE COMPRESSORS SHALL BE STAGED ON (THE TOTAL FLOW SHALL BE AT THE INSTANTANEOUS VENTILATION FLOW AT THIS POINT) FOLLOWED BY THE SUPPLY FAN MODULATED TO PROVIDE ITS MAXIMUM FLOW IF NECESSARY TO MEET THE RETURN AIR SETPOINT. IF THE RETURN AIR TEMPERATURE DROPS BELOW 76°F AGAIN, THE SUPPLY FAN SHALL BE MODULATED TO ITS INSTANTANEOUS MINIMUM FLOW AND THE COMPRESSORS SHALL BE STAGED OFF AS REQUIRED WHEN THE CUT-OUT CONTROL POINT OF 75ºF IS REACHED. THE OUTSIDE AIR DAMPER SHALL BE MODULATED BY THE OUTSIDE AIR FLOW MONITORING STATION SIGNAL TO MAINTAIN THE MINIMUM OUTSIDE VENTILATION AIR . THE TWO POSITION EXHAUST DAMPER SHALL REMAIN BE FULLY OPEN. THE RECIRCULATION DAMPER SHALL BE MODULATED TO MAKE UP THE DIFFERENCE BETWEEN THE TOTAL REQUIRED FLOW AND THE INSTANTANEOUS OUTSIDE AIR FLOW. THE EXHAUST FLOW RATE SHALL BE CONTROLLED BY THE EXHAUST AIR FLOW MONITORING STATION WHICH SHALL MODULATE THE EXHAUST FAN VFD TO MAINTAIN THE EXHAUST FLOW RATE AT 10% LESS THAN THE OUTSIDE INTAKE RATE TO MAINTAIN SPACE POSITIVE PRESSURIZATION. DURING THE MECHANICAL COOLING CYCLE AND ECONOMIZER COOLING CYCLE, THE FURNACE SHALL BE DE-ENERGIZED. THE ENERGY WHEEL SHALL BE SET TO RUN AT ITS FULL RPM. THE ENERGY WHEEL ROTATION SHALL BE STOPPED DURING THE ECONOMIZER COOLING MODE. DURING THE ECONOMIZER COOLING CYCLE, T HE COOLING ECONOMIZER MODE SHALL TAKE PRIORITY OVER THE DEMAND CONTROLLED VENTILATION MODE. IF IN THE ECONOMIZER MODE, ON A RISE IN RETURN DUCT TEMPERATURE ABOVE 78.0°F FOR A TIME DELAY OF 30 MINUTES (ADJUSTABLE), THE OUTSIDE AIR AND EXHAUST DAMPERS SHALL BE MODULATED PAST THEIR MINIMUM POSITION AND RECIRCULATION AIR DAMPER SHALL BE MODULATED TOWARDS CLOSED TO PROVIDE REQUIRED COOLING. ON A DROP IN RETURN DUCT TEMPERATURE TO 76.0°F, THE OUTSIDE AIR, RECIRCULATION AIR AND EXHAUST DAMPERS SHALL BE INDEXED BACK TO THE ORIGINAL OCCUPIED AIR FLOW SETTINGS.

c. DEMAND CONTROLLED VENTILATION: THE OUTSIDE AIR DAMPER AND EXHAUST FAN VFD SHALL BE MODULATED TO PROVIDE THEIR OUTSIDE AIR AND EXHAUST FLOW SETPOINTS PER THE RESET SCHEDULE BASED ON THE CARBON DIOXIDE DIFFERENTIAL. THE RECIRCULATION DAMPER SHALL BE ADJUSTED TO PROVIDE THE REQUIRED TOTAL SUPPLY FLOW AS DETERMINED BY THE RETURN AIR TEMPERATURE. THE EXHAUST FLOW RATE SHALL BE CONTROLLED BY THE EXHAUST AIR FLOW MONITORING STATION WHICH SHALL MODULATE THE EXHAUST FAN VFD TO MAINTAIN THE EXHAUST FLOW RATE AT 10% LESS THAN THE OUTSIDE INTAKE RATE TO MAINTAIN SPACE POSITIVE PRESSURIZATION.

10. WINTER OCCUPIED HEATING CONTROL SEQUENCE:

a. THE UNIT SHALL BE FULLY DECOUPLED DURING THE WINTER HEATING MODE. THE TERMINAL EQUIPMENT IN THE SPACES SHALL PROVIDE THE REQUIRED SPACE HEATING TO 72˚F PLUS 0 MINUS 2˚F. THE UNIT'S COMPRESSORS SHALL BE DE-ENERGIZED. THE FURNACE SHALL BE MODULATED TO PROVIDE A DISCHARGE AIR TEMPERATURE OF 65˚F PLUS 0 MINUS 2˚F. THE EXHAUST AIR DAMPER SHALL BE FULLY OPENED. THE REQUIRED INSTANTANEOUS OUTSIDE AIRFLOW RATE SHALL BE DETERMINED BY DEMAND CONTROLLED VENTILATION. THE SUPPLY FAN FLOW SHALL BE MODULATED TO THE MINIMUM SAFE FLOW AS NOTED ON THE SCHEDULES THAT MAINTAINS FAN STABILITY AND MAINTAINS THE REQUIRED MINIMUM FLOW ACROSS THE FURNACE. THE SUPPLY FLOW SENSOR SHALL MEASURE THE SUPPLY FLOW AND SHALL SIGNAL THE SUPPLY FAN VFD AS REQUIRED TO MEET THE MINIMUM SAFE SUPPLY FLOW SETPOINT. AFTER THE REQUIRED OUTSIDE AIRFLOW RATE SETPOINT IS DETERMINED THE OUTSIDE AIRFLOW MONITORING STATION SHALL SIGNAL THE OUTSIDE AIR DAMPER TO MODULATE AS REQUIRED TO MEET THE INSTANTANEOUS OUTSIDE AIRFLOW RATE SETPOINT AND THE RECIRCULATION DAMPER SHALL BE MODULATED SUCH THAT THE INSTANTANEOUS OUTSIDE AIR FLOW PLUS THE RECIRCULATION AIR FLOW EQUALS THE MINIMUM SAFE SUPPLY FAN FLOW. THE EXHAUST FLOW RATE SHALL BE MODULATED BY THE EXHAUST AIR FLOW MONITORING STATION SIGNAL AND EXHAUST FAN VFD TO BE 10% LESS THAN THE INSTANTANEOUS OUTSIDE AIR INTAKE FLOW RATE.

b. FROST PROTECTION: A FROST CONTROL SETPOINT SHALL BE DEFINED AS FOLLOWS: EXHAUST PATH ENERGY WHEEL EXHAUST TEMPERATURE CONDITIONS OF 35˚F (ADJUSTABLE). WHENEVER THE ENERGY WHEEL EXHAUST LEAVING AIR TEMPERATURE IS LESS THAN THE EXHAUST AIR FROST CONTROL TEMPERATURE SETPOINT, THE WHEEL SPEED SHALL BE MODULATED AS REQUIRED TO MAINTAIN THE EXHAUST LEAVING AIR TEMPERATURE ABOVE THE EXHAUST AIR TEMPERATURE FOR FROST CONTROL SETPOINT.

11. LOSS OF COMMUNICATION

a). UPON LOSS OF COMMUNICATION WITH THE NETWORK, THE UNIT DDC CONTROLLER SHALL OPERATE IN THE APPLICABLE SEASONAL OCCUPIED MODE AS DETERMINED BY THE OUTSIDE AIR CONDITIONS (BEFORE THE LOSS OF COMMUNICATION) WITH THE EXCEPTION OF THE CASE OF A LOSS OF COMMUNICATION WITH THE NETWORK DURING THE UNOCCUPIED WINTER MODE WHERE THE UNIT SHALL REMAIN IN THE SYSTEM-OFF MODE.

12. FAN ALARMING:

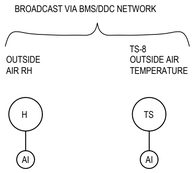
a). IF THE FANS DO NOT PROVE ON AS INDICATED BY THE FLOW SENSORS, AN ALARM SHALL BE ISSUED.

| RTU-1 VARIABLE AIR VOLUME ROOFTOP UNIT POINTS LIST | | INPUT OUTPUT (NOTE 1) | | | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2. 3) | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | CALCULATED | | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | | MISCELLANEOUS FEATURES | | | |
| REFERENCE No | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | STRING VALVE | RATE OF VARIABLE | TOTALIZE VARIABLE | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | "DIRECT LON COMMUNICATION" | TRENDED VALUE | MISCELLANEOUS OTHER | NETWORK VARIABLE TYPE | NOTES |
| 1 | OUTSIDE AIR TEMPERATURE | X | | | | | | | | | | | | X | | X | | NVO | |
| 2 | OUTSIDE AIR HUMIDITY | X | | | | | | | | | | | | X | | X | | NVO | |
| 3 | MIXED AIR TEMP | X | | | | | | | | | | 40F | | | | X | | NVO | |
| 4 | DX COIL DISCHARGE TEMP | X | | | | | | | | | | 45F | | | | X | | NVO | |
| 5 | HOT GAS RHC DISCHARGE TEMP | X | | | | | | | | | | 55F | | | | X | | NVO | |
| 6 | SUPPLY AIR TEMP | X | | | | | | | | | | | | | | X | | NVO | |
| 7 | RETURN AIR TEMP | X | | | | | | | | | | 55F | | | | X | | NVO | |
| 8 | RETURN AIR HUMIDITY | X | | | | | | | | | | | | | | X | | NVO | |
| 9 | SPACE TEMP | X | | | | | | | | | | 45F | | | | X | | NVO | |
| 10 | SPACE HUMIDITY | X | | | | | | | | | 70%RH | | | | | X | | NVO | 8 |
| 11 | DIRTY FILTER ALARM | X | | | | | | | | X | PER MFR | | | | | | | NVO | |
| 12 | SUPPLY AIR STATIC PRESSURE | X | | | | | | | | | | | | | | X | | NVO | |
| 13 | SUPPLY AIR STATIC PRESSURE SETPOINT | | X | | | | | | | | | | | | | | | NVI/NVO | |
| 14 | SF HIGH STATIC PRESSURE | | | X | | | | | | X | TBD | | | | | | | NVO | 7 |
| 15 | EF LOW SUCTION PRESSURE | | | X | | | | | | X | | TBD | | | | | | NVO | 7 |
| 16 | OUTSIDE AIR DAMPER | | X | | | | | | | | | | | | | | | NVO | |
| 17 | EXHAUST AIR DAMPER | | | | X | | | | | | | | | | | | | NVO | |
| 18 | RECIRCULATION AIR DAMPER | | X | | | | | | | | | | | | | | | NVO | |
| 19 | GAS FURNACE COMMAND | | | | X | | | | | | | | | | | | X | OUTPUT | |
| 20 | GAS FURNACE VALVE | | X | | | | | | | | | | | | | | X | OUTPUT | |
| 21 | GAS FURNACE FAILURE | | | | X | | | | | X | | | | | | | X | INPUT | |
| 22 | GAS FURNACE STACK TEMPERATURE | X | | | | | | | | | 400°F | | | | | | X | INPUT | |
| 23 | RTU-1 GAS SUPPLY PRESSURE | X | | | | | | | | | | 4" W.C. | | | | | X | INPUT | |
| 24 | RTU-1 GAS FLOW | X | | | | CFH | CCF | | | | | | | | | | X | INPUT | |
| 25 | DX COOLING COMMAND | | | | X | | | | | | | | | | | | | NVO | |
| 26 | DX COMPRESSOR STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 27 | HOT GAS RHC VALVE COMMAND | | X | | | | | | | | | | | | | | | NVO | |
| 28 | OUTSIDE AIR FLOW | X | | | | CFM | CCF | | | | SP+10% | SP+10% | | | | | X | NVO | 6 |
| 29 | SUPPLY FAN STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 30 | SUPPLY FAN VFD | | | | | | | | | | | | | | | X | | NVO | 4 |
| 31 | SUPPLY FAN VFD S/S | | | | X | | | | | | | | | | | | | NVO | |
| 32 | SUPPLY FAN VFD FAULT | | | X | | | | | | X | | | | | | | | NVO | |
| 33 | SUPPLY FAN VFD SPEED | X | | | | | | | | | | | | | | | | NVO | |
| 34 | SUPPLY FAN FAILURE | | | | X | | | | X | | | | | | | | | NVO | 2 |
| 35 | EXHAUST FAN STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 36 | EXHAUST FAN VFD | | | | | | | | | | | | | | | X | | NVO | 4 |
| 37 | EXHAUST FAN VFD S/S | | | | X | | | | | | | | | | | | | NVO | |
| 38 | EXHAUST FAN VFD FAULT | | | X | | | | | | X | | | | | | | | NVO | |
| 39 | EXHAUST FAN VFD SPEED | | X | | | | | | | | | | | | | | | NVO | |
| 40 | EXHAUST FAN FAILURE | | | | X | | | | X | | | | | | | | | NVO | 2 |
| 41 | COMMON FIRE ALARM | | | X | | | | | | X | | | | X | | | | NVO | |
| 42 | SUPPLY AIR TEMP ACTIVE SETPOINT | | X | | | | | | | | | | | | | | X | NVO | |
| 43 | SUPPLY AIR TEMP SETPOINT | | X | | | | | | | | | | | | | | | NVI/NVO | |
| 44 | MANUAL SUPPLY AIR TEMP OVERRIDE | | | | X | | | | | | | | | | | | | NVI/NVO | |
| 45 | EXHAUST AIR FLOW | X | | | | | | | | | | | | | | | | NVO | |
| 46 | SUPPLY AIR FLOW | X | | | | | | | | | | | | | | | | NVO | |
| 47 | EXHAUST TEMP ENTERING WHEEL | X | | | | | | | | | | | | | | | | NVO | |
| 48 | EXHAUST TEMP DISCHARGING FROM WHEEL | X | | | | | | | | | | | | | | | | NVO | |
| 49 | ENTHALPY WHEEL ROTATION SENSOR | X | | | | | | | | | | | | | | | | NVO | |
| 50 | ENTHALPY WHEEL VFD SPEED | | X | | | | | | | | | | | | | | | NVO | |
| 51 | TEMP LOW LIMIT | | | X | | | | | | | | 39F | | | | | | NVO | |
| 51 | SPACE CO2 | X | | | | | | | | | | | | | | | | INPUT | |

X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES :
1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. THE TCC SHALL PROVIDE ALL DIGITAL ALARM LOGIC. ALL DIGITAL ALARMS SHALL BE PART OF THE DATABASE
3. PROVIDE ALL TRENDING AND ANALOG ALARMING.
4. PROVIDE COMMUNICATION CONNECTION TO THIS DEVICE MAPPING ALL REQUIRED POINTS INTO THE DATABASE.
5. PROVIDE OCCUPIED AND UNOCCUPIED SETPOINTS.
6. PROVIDE ACCUMULATED AIR FLOW FOR VALIDATION OF PURGE-MODE AND FOR PERMANENT VALIDATION OF OCCUPANT VENTILATION
7. PROVIDE MANUAL RESET DEVICE. NOTE THAT THIS DEVICE BOTH ALARMS IN THE BMS AND IS HARDWIRED TO THE VFD'S FOR SHUTDOWN OF THE FANS IN ALL OPERATING CONDITIONS OF THE VFD.
8. ALARM ONLY AFTER AN 8-HOUR CONSECUTIVE TIME PERIOD WHICH THE RELATIVE HUMIDITY EXCEEDS ITS SETPOINT.
9. NVO IS NETWORK VARIABLE OUTPUT. NVI IS NETWORK VARIABLE INPUT.
10. REFER TO THE ASSOCIATED CONTROL DETAIL FOR DESIGN NOTES AND OTHER RELATED WORK REFERENCES.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PRO

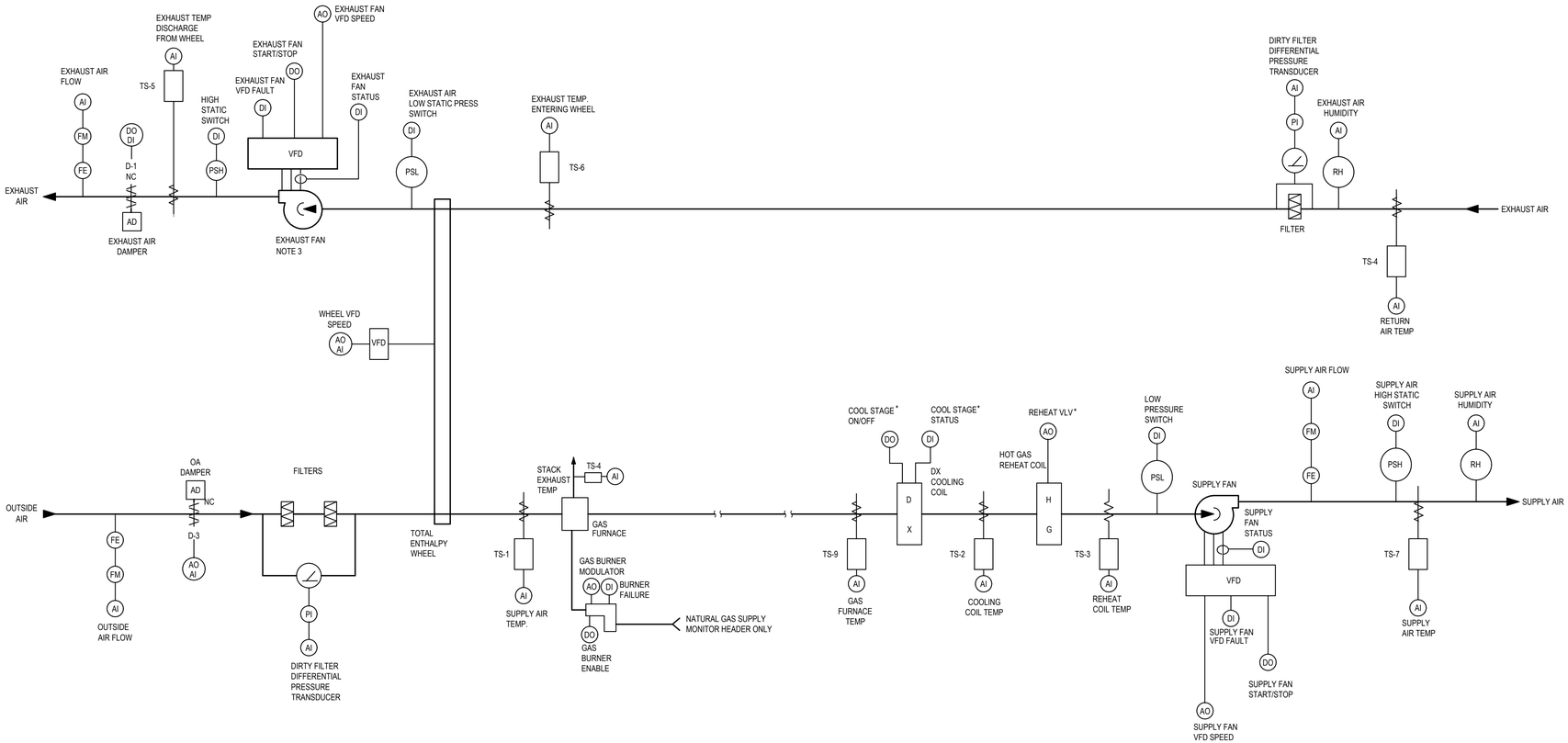



ABBREVIATIONS

| | |
|---|---|
| H | HUMIDITY SENSOR |
| TS | TEMPERATURE SENSOR |
| TS-1 | SUPPLY AIR TEMP LEAVING WHEEL |
| TS-2 | DISCHARGE AIR TEMP (DX-COIL) |
| TS-3 | DISCHARGE AIR TEMP (HG COIL) |
| TS-4 | GAS FLUE TEMP |
| TS-5 | EXHAUST TEMP DISCHARGE FROM WHEEL |
| TS-6 | EXHAUST TEMP ENTERING WHEEL |
| TS-7 | SUPPLY AIR TEMP |
| TS-8 | OUTSIDE AIR TEMP |
| TS-9 | DISCHARGE AIR TEMP (GAS FURNACE) |
| TLL-1 | TEMPERATURE LOW LIMIT |
| RH | RELATIVE HUMIDITY |
| PT | STATIC PRESSURE TRANSMITTER |
| FE | FLOW ELEMENT |
| FT | FLOW TRANSMITTER |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| * | # OF COOLING STAGES |
| PSL | PRESSURE SWITCH LOW |
| PSH | PRESSURE SWITCH HIGH |
| OEM | ORIGINAL EQUIPMENT MANUFACTURER |
| PI | PRESSURE INDICATOR |
| VLV | VALVE |

NOTES:

1. ORIGINAL EQUIPMENT MANUFACTURER CONTROLS SHALL ALWAYS BE PROVIDED.
2. POINTS AND CONTROLS, FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURERS SHALL NOT BE DELETED.
3. REVISE CONTROL DIAGRAM AND POINTS LIST AS REQUIRED TO REFLECT SEQUENCE OF OPERATION.




CONTROL DIAGRAM DOAU VARIABLE AIR VOLUME ROOFTOP UNIT

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

DOAU-2 CONTROL DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-603.00
DRAWN BY D.K.
31 OF 37

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## DEDICATED OUTSIDE AIR UNIT CONSTANT VOLUME WITH GAS HEATING, DX COOLING AND DEHIMIDIFICATION WITH HOT GAS BY - PASS)

1. SAFETY DEVICES:
   a. SUPPLY DUCT OVERPRESSURE CONTROL: IF THE STATIC PRESSURE IN THE SUPPLY DUCT EXCEEDS THE POSITIVE STATIC PRESSURE SWITCH SETPOINT FOR ANY REASON, THE SUPPLY FAN SHALL STOP AND RTU SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE SAFETY PRESSURE SWITCH IS MANUALLY RESET. AFTER THE ALARM IS CLEARED, THE RTU SHALL RESUME ITS NORMAL OPERATION ACCORDING TO THE APPROPRIATE MODE. A CHANGE-OF-STATE ALARM SHALL BE GENERATED. NOTE THAT THIS FAN SAFETY SHALL BE HARDWIRED TO SHUT THE FAN OFF IN ALL MODES OF FAN-CONTROL OPERATION.
   b. RETURN DUCT SUCTION PRESSURE CONTROL: IF THE STATIC PRESSURE IN THE RETURN DUCT EXCEEDS THE NEGATIVE STATIC PRESSURE SWITCH SETPOINT THE RETURN FAN SHALL STOP AND DOAU-2 SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE SAFETY PRESSURE SWITCH IS MANUALLY RESET. AFTER THE ALARM IS CLEARED, THE RTU SHALL RESUME ITS NORMAL OPERATION ACCORDING TO THE APPROPRIATE MODE. A CHANGE-OF-STATE ALARM SHALL BE GENERATED AT THE SOC. NOTE THAT THIS FAN SAFETY SHALL BE HARDWIRED TO SHUT THE FAN OFF IN ALL MODES OF FAN-CONTROL OPERATION.
   c. CLOGGED FILTER ALARM: THERE SHALL BE INSTALLED AN INDICATING, DIFFERENTIAL PRESSURE GAUGE ACROSS THE FILTERS WHICH SHALL INDICATE THE COMBINED PRESSURE DROP ACROSS THE FILTERS AND WHICH INCLUDES A PAIR OF CONTACTS. A CLOGGED FILTER ALARM SHALL BE GENERATED WHEN THE PRESSURE DROP EXCEEDS THE COMBINED PRESSURE DROPS AS RECOMMENDED BY THE FILTER MANUFACTURER FOR REPLACEMENT.
2. I/O POINTS: PROVIDE THE I/O POINTS AS SPECIFIED AND AS SHOWN ON THE CONTROL CONTRACT DRAWINGS.

A. OPERATING MODES: THE OPERATING MODES OF THE DOAU-2 SHALL BE AUTOMATICALLY DETERMINED BY THE COMBINED ACTIONS OF THE DDC SCHEDULER, THE ROOM SENSOR BYPASS PUSHBUTTON, THE LOCAL UNIT MOUNTED HAND-OFF-AUTO SWITCH; CONTROL AND SAFETY DEVICES AND THE FIRE ALARM SYSTEM AND AS DESCRIBED IN THE SPECIFICATIONS.

1. MODE SELECTION AND FAN OPERATION:
   a. THE OPERATOR SHALL BE ABLE TO MANUALLY SELECT THE OPERATING MODE THROUGH AN H-O-A SWITCH (LABELED HAND-OFF-AUTO) MOUNTED IN THE RTU AND WIRED INTO THE DIGITAL CONTROLLER. IN THE AUTO-POSITION THE RTU IS INDEXED AUTOMATICALLY BY THE DDC SCHEDULER BETWEEN THE VARIOUS MODES OF OPERATION DESCRIBED HEREIN. IN THE HAND POSITION THE RTU SHALL REMAIN IN THE OCCUPIED MODE. IN THE OFF POSITION THE RTU SHALL OFF. NOTE THAT THE H-O-A SWITCH IS NOT THE SAME AS THE MANUFACTURER'S SERVICE SWITCH WHICH SHALL SHUTDOWN THE DOAU-2.
   b. WHEN THE H-O-A SWITCH IS PLACED INTO EITHER THE "HAND" OR THE "OFF" POSITION AN ADVISORY IS GENERATED.
   c. EXHAUST AIR FAN (EF) SHALL BE ELECTRICALLY INTERLOCKED WITH THE SUPPLY FAN (SF) OF THE DOAU-2.
   d. SUMMER/WINTER MODE SELECTION : THE DOAU-2 UNIT SHALL BE AUTOMATICALLY INDEXED TO OPERATE IN EITHER THE SUMMER MODE OR WINTER MODE BASED ON THE INTERNAL CONTROLS OF THE UNIT.

1) THE SYSTEM SHALL HAVE THE ABILITY TO DO A MANUAL SUMMER/WINTER CHANGEOVER. A NETWORK VARIABLE INPUT SHALL BE ABLE TO BE SENT TO THE DOAU-2 UNIT CONTROLLER TO OVERRIDE THE APPLICABLE AUTOMATICALLY CALCULATED HVAC MODE.

2. SYSTEM-OFF MODE:
   a. THE DOAU-2 UNIT SUPPLY AND EXHAUST FAN SHALL BE OFF; THE DOAU-2 UNIT DAMPERS SHALL BE COMMANDED TO THEIR RESPECTIVE FAIL-SAFE POSITIONS AS FOLLOWS: OUTSIDE AIR AND EXHAUST AIR DAMPERS CLOSED, THE WHEEL ROTATION SHALL BE STOPPED, GAS-FIRED HEATING SHALL BE DE-ENERGIZED AND THE COMPRESSOR SHALL BE DE-ENERGIZED.
3. OCCUPIED MODE: WHEN THE DOAU-2 DDC CONTROLLER IS INDEXED TO THE OCCUPIED MODE, THE DOAU-2 SUPPLY AND EXHAUST FANS SHALL BE STARTED VIA THEIR RESPECTIVE VARIABLE THESE MODES ARE DESCRIBED IN THE SPECIFICATIONS.

9. COMMUNICATION
   a. UPON LOSS OF COMMUNICATION WITH THE NETWORK, THE ROOFTOP UNIT DDC CONTROLLER SHALL OPERATE IN THE APPLICABLE SEASONAL OCCUPIED MODE AS DETERMINED BY THE OUTSIDE AIR TEMPERATURE (BEFORE THE LOSS OF COMMUNICATION).

| DOAU-2 VARIABLE AIR VOLUME ROOFTOP UNIT POINTS LIST | | INPUT OUTPUT (NOTE 1) | | | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2, 3) | | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | | CALCULATED | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | | MISCELLANEOUS FEATURES | | | | | |
| REFERENCE No | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | STRING VALVE | RATE OF VARIABLE | TOTALIZE VARIABLE | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | DIRECT LON COMMUNICATION* | TRENDED VALUE | MISCELLANEOUS OTHER | NETWORK VARIABLE TYPE | NOTES |
| 1 | OUTSIDE AIR TEMPERATURE | X | | | | | | | | | | | | X | | X | | NVO | |
| 2 | OUTSIDE AIR HUMIDITY | X | | | | | | | | | | | | X | | X | | NVO | |
| 3 | DX COIL DISCHARGE TEMP | X | | | | | | | | | | 45F | | | | X | | NVO | |
| 4 | HOT GAS RHC DISCHARGE TEMP | X | | | | | | | | | | 55F | | | | X | | NVO | |
| 5 | SUPPLY AIR TEMP | X | | | | | | | | | | | | | | X | | NVO | |
| 6 | EXHAUST AIR TEMP | X | | | | | | | | | | 55F | | | | X | | NVO | |
| 7 | EXHAUST AIR HUMIDITY | X | | | | | | | | | | | | | | X | | NVO | |
| 8 | DIRTY FILTER ALARM | X | | | | | | | | X | PER MFR | | | | | | | NVO | |
| 9 | SUPPLY AIR STATIC PRESSURE | X | | | | | | | | | | | | | | X | | NVO | |
| 10 | SUPPLY AIR STATIC PRESSURE SETPOINT | | X | | | | | | | | | | | | | | | NVI/NVO | |
| 11 | SF HIGH STATIC PRESSURE | | | X | | | | | | X | TBD | | | | | | | NVO | |
| 12 | EF LOW SUCTION PRESSURE | | | X | | | | | | X | | TBD | | | | | | NVO | |
| 13 | OUTSIDE AIR DAMPER | | X | | | | | | | | | | | | | | | NVO | |
| 14 | EXHAUST AIR DAMPER | | | | X | | | | | | | | | | | | | NVO | |
| 19 | GAS FURNACE COMMAND | | | | X | | | | | | | | | | | X | | OUTPUT | |
| 20 | GAS FURNACE VALVE | | X | | | | | | | | | | | | | X | | OUTPUT | |
| 21 | GAS FURNACE FAILURE | | | | X | | | | | X | | | | | | X | | INPUT | |
| 22 | GAS FURNACE STACK TEMPERATURE | X | | | | | | | | | 400°F | | | | | X | | INPUT | |
| 23 | DOAU-2 GAS SUPPLY PRESSURE | X | | | | | | | | | | 4" W.C. | | | | X | | INPUT | |
| 24 | DOAU-2 GAS FLOW | X | | | | CFH | CCF | | | | | | | | | X | | INPUT | |
| 25 | DX COOLING COMMAND | | | | X | | | | | | | | | | | | | NVO | |
| 26 | DX COMPRESSOR STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 27 | HOT GAS RHC VALVE COMMAND | | X | | | | | | | | | | | | | | | NVO | |
| 28 | OUTSIDE AIR FLOW | X | | | | CFM | CCF | | | | SP-10% | SP+10% | | | | X | | NVO | |
| 29 | SUPPLY FAN STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 30 | SUPPLY FAN VFD | | | | X | | | | | | | | | X | | | | NVO | 4 |
| 31 | SUPPLY FAN VFD S/S | | | | X | | | | | | | | | | | | | NVO | |
| 32 | SUPPLY FAN VFD FAULT | | | X | | | | | | X | | | | | | | | NVO | |
| 33 | SUPPLY FAN VFD SPEED | X | | | | | | | | | | | | | | | | NVO | |
| 34 | SUPPLY FAN FAILURE | | | | X | | | | X | | | | | | | | | NVO | |
| 35 | EXHAUST FAN STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 36 | EXHAUST FAN VFD | | | | | | | | | | | | | | X | | | NVO | |
| 37 | EXHAUST FAN VFD S/S | | | | X | | | | | | | | | | | | | NVO | |
| 38 | EXHAUST FAN VFD FAULT | | | X | | | | | | X | | | | | | | | NVO | |
| 39 | EXHAUST FAN VFD SPEED | | X | | | | | | | | | | | | | | | NVO | |
| 40 | EXHAUST FAN FAILURE | | | | X | | | | X | | | | | | | | | NVO | |
| 41 | COMMON FIRE ALARM | | | X | | | | | | X | | | | X | | | | NVO | |
| 42 | SUPPLY AIR TEMP ACTIVE SETPOINT | | X | | | | | | | | | | | | | X | | NVO | |
| 43 | SUPPLY AIR TEMP SETPOINT | | X | | | | | | | | | | | | | | | NVI/NVO | |
| 44 | MANUAL SUPPLY AIR TEMP OVERRIDE | | | | X | | | | | | | | | | | | | NVI/NVO | |
| 45 | EXHAUST AIR FLOW | X | | | | | | | | | | | | | | | | NVO | |
| 46 | SUPPLY AIR FLOW | X | | | | | | | | | | | | | | | | NVO | |
| 47 | EXHAUST TEMP ENTERING WHEEL | X | | | | | | | | | | | | | | | | NVO | |
| 48 | EXHAUST TEMP DISCHARGING FROM WHEEL | X | | | | | | | | | | | | | | | | NVO | |
| 49 | ENTHALPY WHEEL ROTATION SENSOR | X | | | | | | | | | | | | | | | | NVO | |
| 50 | ENTHALPY WHEEL VFD SPEED | | X | | | | | | | | | | | | | | | NVO | |
| 51 | TEMP LOW LIMIT | | | X | | | | | | | | 39F | | | | | | NVO | |

X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES :

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. PROVIDE ALL DIGITAL ALARM LOGIC. ALL DIGITAL ALARMS SHALL BE PART OF THE DATABASE
3. PROVIDE COMMUNICATION CONNECTION TO THIS DEVICE MAPPING ALL REQUIRED POINTS INTO THE LNS DATABASE.
4. PROVIDE MANUAL RESET DEVICE. NOTE THAT THIS DEVICE BOTH ALARMS IN THE BMS AND IS HARDWIRED TO THE VFD'S FOR SHUTDOWN OF THE FANS IN ALL OPERATING CONDITIONS OF THE VFD.
5. NVO IS NETWORK VARIABLE OUTPUT. NVI IS NETWORK VARIABLE INPUT.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

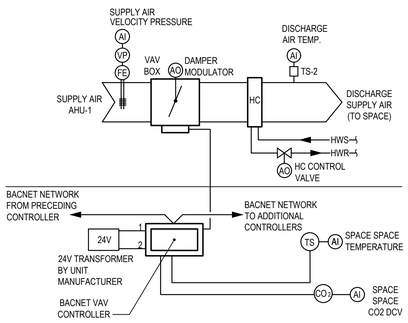
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
DOAU-2 CONTROL POINT LIST AND SEQUENCE OF OPERATION

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-604.00
DRAWN BY D.K.


NYC DOB Number




TYPICAL CONTROL DIAGRAM FOR NON FAN POWERED VAV BOX WITH HOT WATER HEATING COIL

| | "VARIABLE AIR VOLUME (VAV) BOX CONTROL" | INPUT / OUTPUT (NOTE 1) | | | | | | | SOFTWARE / FIRM WARE FEATURES (NOTES 2, 3) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | | CALCULATED | | | ALARMS AND ADVISORIES WITH INSTRUCTIONS | | | | | | | | | | |
| | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | STRING VOLUE | RATE OF VARIABLE | TOTALIZE VARIABLE | DIGITAL ALARM | CHANGE-OFF STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | "DIRECT BACnet COMMUNICATION" | TRENDED VALUE | MISC. OTHER | NETWORK VARIABLE TYPE | NOTES |
| 1 | SPACE TEMP | X | | | | | | | | | TABLE 1 | TABLE 1 | | | | | X | INPUT | |
| 2 | VELOCITY PRESSURE | X | | | | CFM | | | | | | | | | | | X | INPUT | |
| 3 | DAMPER POSITION | | X | | | | | | | | | | | | | | X | OUTPUT | |
| 4 | PERIMETER HOT WATER VALVE | | X | | | | | | | | | | | | | | X | OUTPUT | |
| 5 | SPACE $CO_2$ | X | | | | | | | | | | | | | | | X | INPUT | |
| 6 | OCCUPANCY MODE | | | | | | | | | | | | | | X | | X | INPUT | |
| 7 | BOX FLOW | X | X | | | | | | | | | | | | | | X | INPUT | |
| 8 | SPACE TEMP SETPOINT | | X | | | | | | | | | | | | | | X | SET POINT | 5 |
| 9 | ACTIVE CFM SETPOINT | | X | | | | | | | | | | | | | | X | SET POINT | |
| 10 | CFM STANDBY / MIN/MAX SETPOINT | | X | | | | | | | | | | | | | | X | SET POINT | |
| 11 | HC HOT WATER CONTROL VALVE | | X | | | | | | | | | | | | | | X | OUTPUT | |

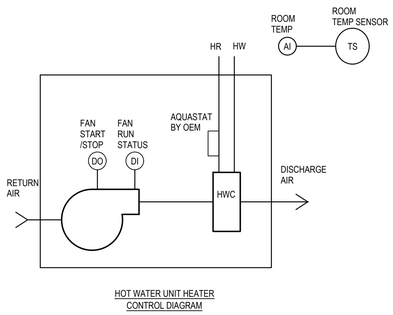
X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECECERY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES:

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED TO THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEM OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY THE GENERAL AND MECHANICAL CONTRACTORS.
2. PROVIDE ALL TRENDING AND ALARM LOGIC. ALL TRENDING AND ALARMS SHALL BE PART OF THE BACnet DATABASE.
3. PROVIDE ALL TRENDING AND ANALOG ALARMING VIA THE HMI SOFTWARE.
4. PROVIDE BACnet COMMUNICATION CONNECTION TO THIS DEVICE LINKING ALL REQUIRED POINTS INTO THE BACnet DATABASE.
5. PROVIDE OCCUPIED AND UNOCCUPIED SETPOINTS.

## SEQUENCE OF OPERATION FOR VARIABLE AIR VOLUME (VAV) BOX CONTROL (NON FAN POWERED, WITH HOT WATER COIL)

1. THE OPERATING MODES OF THE VAV BOX CONTROLLER SHALL BE SEQUENCED OCCUPIED HEATING AND COOLING AND UNOCCUPIED HEATING AND COOLING THROUGH A SPACE TEMPERATURE SENSOR AND SPACE CO2 CONTROLLER WIRED TO THE DDC CONTROLLER. OCCUPIED AND STANDBY VACANT MODES SHALL BE AUTOMATICALLY DETERMINED BY THE CO 2 SENSOR:
   a. OCCUPIED MODE DURING SCHEDULED OCCUPANCY PERIODS: WHEN THE CO2 SENSOR DETERMINES THAT THE SPACE IS OCCUPIED, THE ACTIVE VAV BOX MINIMUM SHALL BE THE OCCUPIED MINIMUM AIR FLOW SETPOINT AS SHOWN ON THE DRAWING SCHEDULES. DURING THE OCCUPIED MODE, VAV DAMPER SHALL BE COMMANDED TO ITS INSTANTANEOUS OCCUPIED MINIMUM POSITION DURING THE HEATING MODE AND SHALL MODULATE AS REQUIRED TO MEET THE SPACE SETPOINT DURING THE COOLING MODE.
   b. UNOCCUPIED COOLING MODE DURING SCHEDULED UNOCCUPIED PERIODS: ALL VAV BOXES SHALL BE CLOSED IF THE REPRESENTATIVE ROOM MEASURED TEMPERATURE IS LESS THAN THE UNOCCUPIED SPACE SETPOINT OF 85°F PLUS 2°F. AT THE UNOCCUPIED SPACE SETPOINT OF 85°F PLUS 2°F OR GREATER, ALL VAV BOXES SHALL BE OPENED TO THEIR FULLY OCCUPIED MINIMUM VENTILATION RATE POSITION AS SHOWN ON THE DRAWING SCHEDULES AND TABLE BELOW. CENTRAL AIR UNIT SHALL CYCLE ITS SUPPLY FAN UNTIL THE REPRESENTATIVE ROOM HAS MET THE UNOCCUPIED SPACE SETPOINT OF 85°F.
2. SCHEDULING: THE DDC SCHEDULER SHALL PLACE THE DDC CONTROLLED VAV BOX IN THE UNOCCUPIED MODE OR OCCUPIED MODE.
3. SCHEDULED OCCUPIED COOLING MODE: ON A DROP IN SPACE TEMPERATURE BELOW ITS OCCUPIED COOLING SETPOINT OF 78˚F NOMINAL ADJUSTABLE MINUS A 2°F DIFFERENTIAL, THE VAV BOX SHALL MODULATE FROM ITS MAXIMUM COOLING AIRFLOW SETTING TO ITS INSTANTANEOUS MINIMUM OCCUPIED COOLING AIRFLOW SETTING DURING OCCUPIED HOURS OR TO ITS STANDBY SETTING DURING STANDBY OCCUPIED HOURS. OCCUPANCY OR VACANCY SHALL BE DETERMINED BY SPACE CO SENSOR 2 SUBJECT TO 30-MINUTE TIME DELAY, ADJUSTABLE. ON A RISE IN SPACE TEMPERATURE ABOVE SETPOINT OF 78°F NOMINAL ADJUSTABLE, THE REVERSE SEQUENCE SHALL OCCUR.
4. SCHEDULED OCCUPIED HEATING MODE: IN HEATING MODE, THE VAV BOX SHALL MAINTAIN ITS INSTANTANEOUS MINIMUM OCCUPIED AIRFLOW SETTING DURING SCHEDULED OCCUPIED HOURS OR ITS MINIMUM STANDBY SETTING DURING SCHEDULED OCCUPIED HOURS. OCCUPANCY OR VACANCY SHALL BE DETERMINED BY SPACE CO SENSOR. ON A DROP IN SPACE TEMPERATURE 2 BELOW ITS OCCUPIED HEATING SETPOINT OF 72˚F NOMINAL ADJUSTABLE MINUS A 2°F DIFFERENTIAL, THE HOOT WATER VALVE SHALL BE MODULATED OPEN TO MAINTAIN ITS HEATING SETPOINT. ON A RISE IN SPACE TEMPERATURE ABOVE THE HEATING SETPOINT OF 72˚F NOMINAL ADJUSTABLE, THE REVERSE SEQUENCE SHALL OCCUR.
5. SCHEDULED UNOCCUPIED HEATING MODE: VAV BOX SHALL BE COMMANDED CLOSED AND VAV CONTROLLER SHALL MAINTAIN THE UNOCCUPIED HEATING SETPOINT OF 55˚F BY THROTTLING THE HOT WATER VALVE.
6. ALL SPACE HEATING CONTROLS SHALL ONLY BE ENABLED DURING THE WINTER MODE AND SHALL BE DE-ACTIVATED DURING THE SUMMER MODE . ALL COOLING SEQUENCES SHALL BE DISABLED DURING THE WINTER MODE AND ONLY ENABLED IN THE SUMMER MODE.
7. DEMAND CONTROL VENTILATION:
   a. WHEN THE DIFFERENCE BETWEEN SPACE AND OA CO2 IS 0-699 PPM THE VAV DAMPER SHALL MODULATE TO THE MINIMUM VAV BOX AIR FLOW SETPOINT.
   b. WHEN THE DIFFERENCE BETWEEN SPACE AND OA CO2 IS MORE THEN 700 PPM, THE AHU-1 OUTSIDE AIR DAMPER SHALL MODULATE OPEN AND THE RETURN DAMPERS SHALL MODULATE CLOSED. THE VAV WILL MODULATE OPEN TILL THE DIFFERENCE BETWEEN THE SPACE AND OA PPO FALLS BELOW 700 PPM. AT THIS POINT THE OPPOSITE SHALL OCUR.
8. I/O POINTS: PROVIDE THE I/O POINTS AS SPECIFIED.




HOT WATER UNIT HEATER CONTROL DIAGRAM

ABBREVIATIONS

| | |
|---|---|
| TS-1 | ROOM AIR TEMP |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |

## UNIT HEATER CONTROL (HOT WATER)

PROVIDE BACNET ROOM THERMOSTAT TO MAINTAIN SPACE TEMPERATURE. PROVIDE STRAP-ON AQUASTAT ON UNIT RETURN PIPING TO DE-ENERGIZE FAN MOTOR WHEN FLUID TEMPERATURE FALLS BELOW ADJUSTABLE SETTING OF AQUASTAT. ALL SPACE HEATING CONTROLS SHALL ONLY BE ENABLED DURING THE WINTER MODE AND SHALL BE DE-ACTIVATED DURING THE SUMMER MODE. FAILURE OF THE FAN TO RUN SHALL BE ALARMED AT THE BMS SYSTEM.

| | "HOT WATER UNIT HEATER AND CABINET UNIT HEATER CONTROL" | INPUT OUTPUT (NOTE 1) | | | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2. 3) | | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | | CALCULATED | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | | MISCELLANEOUS FEATURES | | | | | |
| REFERENCE No | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | STRING VALVE | RATE OF VARIABLE | TOTALIZE VARIABLE | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | "DIRECT LON COMMUNICATION" | TRENDED VALUE | MISCELLANEOUS OTHER | NETWORK VARIABLE TYPE | |
| 5 | SPACE TEMP | X | | | | | | | | | | 45F | | | | X | | NVO | |
| 11 | UNIT FAN STATUS | | | X | | | | | | | | | | | | | | NVO | |
| 12 | UNIT FAN S/S | | | | X | | | | | | | | | | | | | NVO | |
| 20 | SPACE TEMP SETPOINT | | X | | | | | | | | | | | | | | | NVI/NVO | 5 |
| 22 | OCCUPANCY MODE | | | | | X | | | | | | | | | | | | NVO | |

X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES :

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. PROVIDE ALL DIGITAL ALARM LOGIC.
3. PROVIDE OCCUPIED AND UNOCCUPIED SETPOINTS.
4. NVO IS NETWORK VARIABLE OUTPUT. NVI IS NETWORK VARIABLE INPUT.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

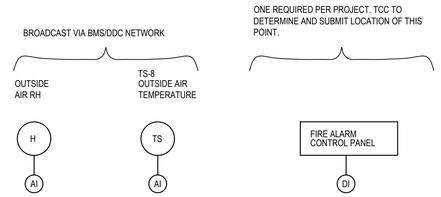
VAV'S POINT LIST, CONTROL DIAGRAM & SEQUENCE OF OPERATION

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-605.00
DRAWN BY D.K.
33 OF 37

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.





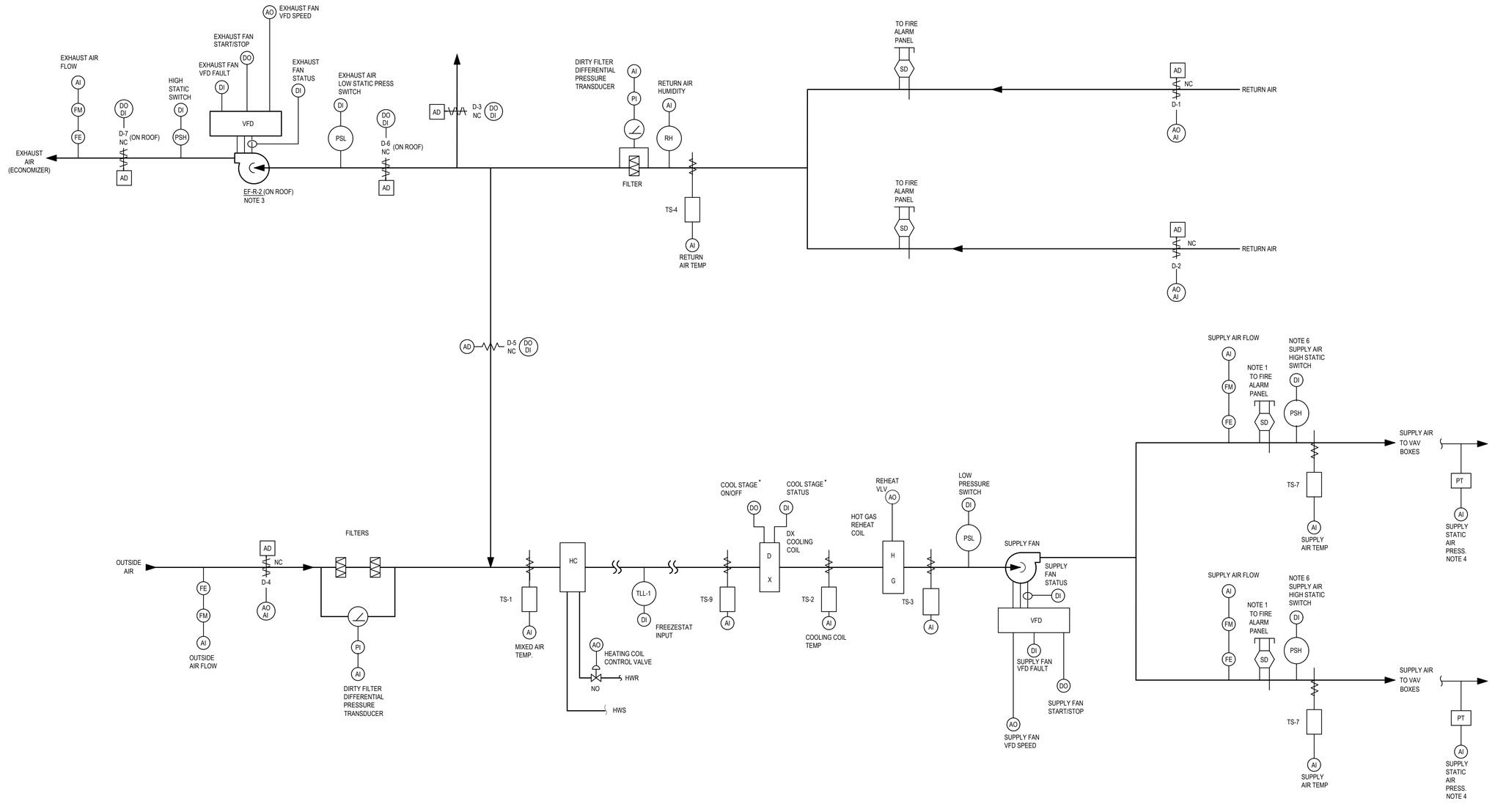


NOTES:

1. CONTROL WIRING OF SMOKE DETECTORS AND SMOKE DAMPERS IS BY FIRE ALARM SCOPE OF WORK.
2. PROVIDE ONE SPACE HUMIDITY SENSOR PER SYSTEM AS SHOWN ON THE DRAWINGS.
3. EXHAUST FAN VFD SHALL BE ADJUSTED TO MAINTAIN REQUIRED EXHAUST RATE AS MEASURED BY EXHAUST AIR FLOW MONITORING STATION.
4. THE SUPPLY DUCT STATIC PRESSURE SENSOR SHALL BE LOCATED IN ACCORDANCE WITH ASHRAE 90.1-13 SECTION 6.5.3.2.2 (SUCH THAT THE INITIAL CONTROLLER SETPOINT (SUBJECT TO RESET) IS NO GREATER THAN 1.2" WC). IF LOCATING THE STATIC PRESSURE TO ACHIEVE THIS RESULTS IN SENSOR BEING LOCATED DOWNSTREAM OF MAJOR DUCT SPLITS, SENSORS SHALL BE INSTALLED IN EACH MAJOR BRANCH TO INSURE THAT STATIC PRESSURE CAN BE MAINTAINED IN EACH DUCT. STATIC PRESSURE SET POINT SHALL BE RESET UP OR DOWN BASED ON THE ZONE REQUIRING THE MOST PRESSURE; I.E. THE SET POINT IS RESET UNTIL ONE ZONE DAMPER IS NEARBY WIDE OPEN.

ABBREVIATIONS

| | | | |
|---|---|---|---|
| H | HUMIDITY SENSOR | PT | STATIC PRESSURE TRANSMITTER |
| HC | HEATING COIL | FE | FLOW ELEMENT |
| TS | TEMPERATURE SENSOR | FT | FLOW TRANSMITTER |
| TS-1 | MIXED AIR TEMP | DI | DIGITAL INPUT |
| TS-2 | DISCHARGE AIR TEMP (DX-COIL) | DO | DIGITAL OUTPUT |
| TS-3 | DISCHARGE AIR TEMP (REHEAT COIL) | AI | ANALOG INPUT |
| TS-4 | RETURN AIR TEMP | AO | ANALOG OUTPUT |
| TS-5 | EXHAUST TEMP DISCHARGE FROM WHEEL | * | # OF COOLING STAGES |
| TS-6 | EXHAUST TEMP ENTERING WHEEL | PSL | PRESSURE SWITCH LOW |
| TS-7 | SUPPLY AIR TEMP | PSH | PRESSURE SWITCH HIGH |
| TS-8 | OUTSIDE AIR TEMP | OEM | ORIGINAL EQUIPMENT MANUFACTURER |
| TS-9 | DISCHARGE AIR TEMP (HW COIL) | | |
| TLL-1 | TEMPERATURE LOW LIMIT | PI | PRESSURE INDICATOR |
| | | VLV | VALVE |




AHU-1 CONTROL DIAGRAM VARIABLE AIR VOLUME AIR CONDITIONER

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
AHU-1 CONTROL DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. M-606.00
DRAWN BY D.K.
34 OF 37

NYC DOB Number

## VARIABLE VOLUME AHU-1 WITH HOT WATER, DX COIL AND DDC CONTROLS

1. SAFETY DEVICES: SAFETIES SHALL BE IN FORCE AT ALL TIMES AND DURING ALL MODES OF OPERATION.
   a. SUPPLY DUCT OVERPRESSURE CONTROL: IF THE STATIC PRESSURE IN THE SUPPLY DUCT EXCEEDS THE POSITIVE STATIC PRESSURE SWITCH SETPOINT FOR ANY REASON, THE SUPPLY FAN SHALL STOP AND AHU SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE SAFETY PRESSURE SWITCH IS MANUALLY RESET. AFTER THE ALARM IS CLEARED, THE AHU SHALL RESUME ITS NORMAL OPERATION ACCORDING TO THE APPROPRIATE MODE. A CHANGE-OF-STATE ALARM SHALL BE GENERATED AT THE HMI. NOTE THAT THIS FAN SAFETY SHALL BE HARDWIRED TO SHUT THE FAN OFF IN ALL MODES OF OPERATION.
   b. RETURN/EXHAUST DUCT SUCTION PRESSURE CONTROL: IF THE STATIC PRESSURE IN THE EXHAUST DUCT EXCEEDS THE NEGATIVE STATIC PRESSURE SWITCH SETPOINT, THE EXHAUST FAN SHALL STOP AND UNIT SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE SAFETY PRESSURE SWITCH IS MANUALLY RESET. AFTER THE ALARM IS CLEARED, THE UNIT SHALL RESUME ITS NORMAL OPERATION ACCORDING TO THE APPROPRIATE MODE. A CHANGE-OF-STATE ALARM SHALL BE GENERATED AT THE HMI. NOTE THAT THIS FAN SAFETY SHALL BE HARDWIRED TO SHUT THE FAN OFF IN ALL MODES OF FAN-CONTROL OPERATION.
   c. CLOGGED FILTER ALARMS: THERE SHALL BE INSTALLED AN INDICATING, DIFFERENTIAL PRESSURE TRANSDUCER ACROSS BOTH OUTSIDE AIR AND RETURN AIR FILTER BANKS WHICH SHALL INDICATE THE COMBINED PRESSURE DROP ACROSS THE FILTERS. A CLOGGED FILTER ALARM SHALL BE GENERATED AT THE HMI WHEN THE PRESSURE DROP EXCEEDS THE COMBINED PRESSURE DROPS AS RECOMMENDED BY THE FILTER MANUFACTURER FOR REPLACEMENT FOR EACH BANK OF FILTERS.
   d. FREEZE PROTECTION LOCKOUT: THE FREEZE PROTECTION DEVICE SHALL BE WIRED INTO THE SUPPLY FAN AND SPILL EXHAUST FAN MOTOR VFD TO SHUTDOWN THE SUPPLY FAN ALL ASSOCIATED EXHAUST FANS UPON REACHING ITS SETPOINT. UNIT SHALL BE SENT TO SYSTEM OFF MODE. OEM LIMIT CONTROL FREEZESTAT WITH SERPENTINE ELEMENT LOCATED ON THE INLET OF THE HOT WATER HEATING COIL SHALL STOP ALL FANS TO PREVENT HEATING COIL FREEZE-UPS AND TO PREVENT COLD AIR BEING DISTRIBUTED TO THE BUILDING THUS AVOIDING POTENTIAL BUILDING PIPE FREEZE-UPS. SET AT 39˚F (ADJUSTABLE). FREEZESTAT SHALL RESET AUTOMATICALLY UNLESS ANY TRIP EXCEEDS 30 SECONDS AS MEASURED BY THE INTEGRAL TIMER. TRIPS EXCEEDING 30 SECONDS SHALL REQUIRE MANUAL RESET. AT THE SAME TIME AN ALARM SIGNAL IS SENT TO THE DDC CONTROLLER AND AN ALARM IS DISPLAYED ON THE HMI.
2. FIRE ALARM SHUT DOWN: THIS SEQUENCE OF OPERATION SHALL BE IN FORCE AT ALL TIMES AND UNDER ALL MODES OF OPERATION.
   a. THE FIRE ALARM CONTRACTOR SHALL FURNISH AND THE MECHANICAL CONTRACTOR SHALL INSTALL THE SMOKE DETECTOR(S) TO SHUT DOWN THE SYSTEM UPON SENSING SMOKE. FURTHERMORE, THE FOLLOWING SHALL BE PROVIDED.
   b. DURING A FIRE ALARM CONDITION, THE FIRE ALARM CONTROL PANEL (FACP) SHALL SHUT DOWN THE SUPPLY FAN AND THE EXHAUST FAN. SUPPLY FAN AND EXHAUST FAN SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE ALARM CONDITION IS CLEARED. WHEN THE SUPPLY FAN AND EXHAUST FANS ARE SHUT DOWN BY A FIRE ALARM CONDITION, ALL FIRE/SMOKE DAMPERS SHALL CLOSE AS COMMANDED BY THE FACP. AFTER THE FIRE ALARM SHUTDOWN IS CLEARED, ALL FIRE/SMOKE DAMPERS SHALL BE COMMANDED OPEN BY THE FACP.
   c. FIRE ALARM SYSTEM ACTIVATION INITIATED BY MANUAL PULL STATION SHALL NOT SHUT DOWN THE UNIT SUPPLY AND EXHAUST FANS AND SHALL NOT CLOSE THE ASSOCIATED FIRE/SMOKE DAMPER IF IN THE TESTING MODE.
   d. THE MECHANICAL CONTRACTOR SHALL PROVIDE COMBINATION FIRE/SMOKE DAMPERS (FSD) WITH ACTUATORS AND PROOF-OF-OPEN END-SWITCHES. THE FACP SHALL MONITOR ALL ASSOCIATED END-SWITCHES FOR PROOF-OF-OPEN ON AN INDIVIDUAL OR ZONE BASIS. THE FACP SHALL INDICATE VIA A FACP MOUNTED LED THAT A DAMPER OR ZONE OF DAMPERS HAS NOT PROVEN OPEN. FIRE/SMOKE DAMPERS ASSOCIATED WITH THE POST- FIRE SMOKE PURGE SYSTEM AND SMOKE CONTROL SYSTEMS SHALL BE MONITORED ON AN INDIVIDUAL BASIS BY THE FACP.
3. I/O POINTS: PROVIDE THE I/O POINTS AS SPECIFIED.
A. OPERATING MODES. THE OPERATING MODES OF THE UNIT SHALL BE AUTOMATICALLY DETERMINED BY THE COMBINED ACTIONS OF THE DDC SCHEDULER, THE LOCAL UNIT MOUNTED HAND-OFF-AUTO SWITCH; AND THE FIRE ALARM SYSTEM.
1. MODE SELECTION AND FAN OPERATION:
   a. THE OPERATOR SHALL BE ABLE TO MANUALLY SELECT THE OPERATING MODE THROUGH AN H-O-A SWITCH (LABELED HAND-OFF-AUTO) MOUNTED IN THE UNIT AND WIRED INTO THE DIGITAL CONTROLLER. IN THE AUTOMATIC-POSITION THE UNIT IS INDEXED AUTOMATICALLY BY THE DDC SCHEDULER BETWEEN THE VARIOUS MODES OF OPERATION DESCRIBED HEREIN. IN THE HAND POSITION THE UNIT SHALL REMAIN IN THE OCCUPIED MODE. IN THE OFF POSITION THE UNIT SHALL REMAIN OFF. NOTE THAT THE H-O-A SWITCH IS NOT THE SAME AS THE MANUFACTURER'S SERVICE SWITCH WHICH SHALL SHUTDOWN THE UNIT.
   b. WHEN THE H-O-A SWITCH IS PLACED INTO EITHER THE "HAND" OR THE "OFF" POSITION AN ADVISORY IS GENERATED AT THE HMI.
   c. UNIT'S FANS SHALL BE COMMANDED TO START BY THE DDC SCHEDULER.
   d. FAN ACCELERATION/DE-ACCELERATION: WHEN THE SUPPLY FAN AND EXHAUST FANS ARE STARTED, THE FANS SHALL BE SLOWLY ACCELERATED UP TO THE REQUIRED SPEED ACCORDING TO THE RAMP ADJUSTMENTS IN THE VFDS. THE RAMP-UP TIME SHALL BE SET TO (30) SECONDS. WHEN THE FANS ARE DE-ENERGIZED THEY SHALL BE DE-ENERGIZED IMMEDIATELY WITHOUT DE-ACCELERATION.
   e. SUMMER/WINTER MODE SELECTION: THE UNIT SHALL BE AUTOMATICALLY INDEXED TO OPERATE IN EITHER THE SUMMER MODE OR WINTER MODE BASED ON THE OUTSIDE AMBIENT TEMPERATURE OR MANUALLY INDEXED.
   1) WINTER MODE: IF THE OUTSIDE TEMPERATURE IS LESS THAN OR EQUAL TO 50°F. THE UNIT SHALL BE INDEXED TO THE WINTER HEATING MODE.
   2) IF THE OUTSIDE TEMPERATURE IS GREATER THAN 50°F BUT LESS THAN 55°F, THE UNIT SHALL BE IN WHATEVER MODE WAS THE LAST MODE OF OPERATION (HEATING OR COOLING).
   3) SUMMER MODE: IF THE OUTSIDE TEMPERATURE IS GREATER THAN OR EQUAL TO 55°F BUT LESS THAN 65°F AND THE OUTSIDE AIR ENTHALPY IS LESS THAN THE RETURN ENTHALPY, THE UNIT SHALL BE INDEXED TO THE SUMMER ECONOMIZER COOLING MODE. IF THE OUTSIDE TEMPERATURE IS GREATER THAN OR EQUAL TO 55°F BUT LESS THAN 65°F AND THE OUTSIDE AIR ENTHALPY IS GREATER THAN THE RETURN ENTHALPY, THE AHU-1 SHALL BE INDEXED TO SUMMER MECHANICAL COOLING MODE. IF THE OUTSIDE TEMPERATURE IS GREATER THAN OR EQUAL TO 65°F, THE UNIT SHALL BE INDEXED TO THE MECHANICAL COOLING MODE.
   4) ECONOMIZER MODE: IF THE RETURN AIR EXCEEDS 78°F FOR A TIME DELAY OF 30 MINUTES (ADJUSTABLE), THE UNIT SHALL BE INDEXED TO SUMMER MECHANICAL COOLING MODE
   5) THE SYSTEM SHALL HAVE THE ABILITY TO DO A MANUAL SUMMER/WINTER CHANGEOVER. A NETWORK VARIABLE INPUT SHALL BE ABLE TO BE SENT TO THE UNIT CONTROLLER TO OVERRIDE THE APPLICABLE AUTOMATICALLY CALCULATED HVAC MODE.
   f. SUPPLY AND ECONOMIZER FAN CONTROL:
   1) THE SUPPLY FAN SHALL BE STARTED AND STOPPED AS DESCRIBED IN THESE SEQUENCES.
   2) DURING THE HEATING AND COOLING OCCUPIED CYCLES, THE SUPPLY FAN VFD SPEED SHALL REMAIN UNDER THE CONTROL OF THE DUCT STATIC PRESSURE CONTROLLER TO MAINTAIN ITS SETPOINT. THE FINAL SETPOINT SETTING SHALL BE DETERMINED BY THE TESTING & BALANCING CONTRACTOR AND SHALL BE SUBJECT TO CRITICAL ZONE RESET. DURING THE OCCUPIED CYCLES, THE OUTSIDE AIR DAMPER SHALL BE PLACED UNDER THE CONTROL OF THE OUTSIDE AIR INTAKE AIR FLOW MEASURING STATION TO PROVIDE THE CUMULATIVE INSTANTANEOUS MINIMUM CODE REQUIRED VENTILATION AIR.
   3) THE ECONOMIZER EXHAUST FAN VFD SPEED SHALL BE PLACED UNDER CONTROL OF THE CONTROLLER TO MAINTAIN A FIXED EXHAUST RATE AS MEASURED BY THE EXHAUST AIR FLOW MONITORING STATION, WHEN THE SYSTEM IS IN THE ECONOMIZER MODE. ECONOMIZER FAN SHALL MAINTAIN PROPER PRESSURIZATION WITH RESPECT TO THE OUTSIDE AIR FLOW ACROSS THE ENTIRE SUPPLY FAN MODULATING RANGE. THE FINAL SETTING SHALL BE DETERMINED AND SET BY THE TEST & AIR BALANCING CONTRACTOR. THE EXHAUST FLOWRATE AT THE CENTRAL UNIT SHALL BE BETWEEN 85% TO 90% OF THE CUMULATIVE INSTANTANEOUS OUTSIDE AIR INTAKE RATE.
   4) UPON PROOF OF SUPPLY FAN OPERATION, THE CONTROL SEQUENCE SHALL PROCEED ACCORDING TO THE APPROPRIATE MODE. IF THE SUPPLY FAN DOES NOT PROVE ON, A HMI ALARM SHALL BE ISSUEDTO THE HMI.
   g. SUPPLY DUCT STATIC PRESSURE SETPOINT CONTROL: DURING THE OCCUPIED CYCLES, THE SUPPLY FAN VFD SHALL SLOWLY RAMP UP TO THE INITIAL SETPOINT OF 1.2" WC TOTAL DESIGN FAN STATIC PRESSURE AS SENSED BY THE SUPPLY DUCT STATIC PRESSURE SENSOR. IN COOLING, STATIC PRESSURE SETPOINT SHALL BE RESET UPWARDS OR DOWNWARDS FROM THE INITIAL 1.2" WC SETPOINT BASED ON THE ZONE REQUIRING THE MOST PRESSURE; I.E. THE SETPOINT IS RESET UNTIL ONE ZONE DAMPER IS NEARLY WIDE OPEN (GREATER THAN 85% OPEN AND LESS THAN 95% OPEN). DURING ALL OCCUPIED CYCLES, UNIT CONTROLLER SHALL BE NETWORKED WITH ALL ASSOCIATED VAV TERMINAL UNITS TO OBTAIN VAV BOX DAMPER POSITIONS AND TO BROADCAST THE VACANT STANDBY OR OCCUPIED MINIMUM FLOW SETPOINTS ON TEN-MINUTE POLLING INTERVALS SO THE CENTRAL UNIT CONTROLLER CAN TALLY UP AND COMPUTE THE REQUIRED CUMULATIVE INSTANTANEOUS MINIMUM OUTSIDE AIR FLOW REQUIRED AT THE CENTRAL UNIT OUTSIDE AIR INTAKE PORT. IN COOLING, THE STATIC PRESSURE SETPOINT SHALL BE RESET BASED ON ZONE AIRFLOW REQUESTS DERIVED FROM VAV BOX DAMPER POSITIONS OR OTHER INDICATOR OF NEED FOR STATIC PRESSURE AND SHALL MEET THE AIRFLOW AND SPACE TEMPERATURE REQUIREMENTS. IF THE MEASURED DUCT STATIC PRESSURE IS GREATER THAN THE DUCT STATIC PRESSURE SETPOINT, THE FAN SPEED SHALL BE DECREASED.
3. SYSTEM-OFF MODE:
   a. THE UNIT SUPPLY AND ECONOMIZER EXHAUST FAN SHALL BE OFF; THE UNIT DAMPERS SHALL BE COMMANDED TO THEIR RESPECTIVE FAIL-SAFE POSITIONS AS FOLLOWS: OUTSIDE AIR AND EXHAUST AIR DAMPERS CLOSED, RECIRCULATION AIR DAMPER OPEN; COOLING AND HOT WATER VALVES CLOSED.
   b. WINTER MODE: THE UNIT SHALL MAINTAIN THE SPACES AT 55°F.
   c. UNOCCUPIED SUMMER COOLING MODE: THE MECHANICAL COOLING SEQUENCE SHALL ONLY BE ENABLED IF THE RELATIVE ENTHALPY CONDITIONS AND OUTSIDE AIR TEMPERATURE CONDITIONS DO NOT ENABLE THE UNOCCUPIED NIGHTTIME PURGE SEQUENCE. THE UNIT SHALL BE CYCLED TO MAINTAIN A COOLING MODE NIGHT SET UP SPACE TEMPERATURE (FOR THE REPRESENTATIVE ROOM) HIGH-LIMIT (HHL) SETPOINT OF 85°F.

4. OCCUPIED MODE: WHEN THE UNIT IS INDEXED TO THE OCCUPIED MODE, THE FOLLOWING OCCURS.
   a. THE SUPPLY FAN SHALL BE STARTED AND THE SUPPLY FAN VFD SPEED SHALL BE PLACED UNDER CONTROL OF THE DUCT STATIC PRESSURE CONTROLLER TO MAINTAIN ITS SETPOINT.
   b. THE EXHAUST FAN VFD SPEED SHALL BE PLACED UNDER CONTROL OF THE DDC CONTROLLER TO OPERATE ONLY DURING ECONOMIZER MODE AND TO MAINTAIN PRESSURIZATION CONTROL AS DESCRIBED IN THE ABOVE SUPPLY AND EXHAUST FAN CONTROL SUBPARAGRAPH OF THIS ARTICLE.
   c. UPON PROOF OF SUPPLY FAN OPERATION, THE CONTROL SEQUENCE SHALL OPERATE IN THE OCCUPIED MODE. UNOCCUPIED NIGHTTIME PURGE AND SHALL NOT BE ACTIVE WHEN IN THE OCCUPIED MODE. IF THE FANS DO NOT PROVE ON, AN ALARM SHALL BE ISSUED TO THE HMI.
   d. WHEN INDEXED TO OCCUPIED HEATING MODE, THE COMPRESSOR SHALL BE OFF. THE ECONOMIZER DAMPER (D-6) SHALL BE CLOSED. OUTSIDE AIR DAMPER (D-4) AND EXHAUST DAMPER (D-3) SHALL OPEN TO PROVIDE REQUIRED OUTSIDE AIR. RE-CIRCULATION DAMPER (D- 5) AND RETURN AIR DAMPERS (D-1) AND (D-2) SHALL MODULATE TO PROVIDE THE REQUIRED OUTSIDE AIR. SUPPLY FAN ECM MOTOR SHALL MODULATE TO MAINTAIN THE SET POINT OF THE DUCT STATIC PRESSURE CONTROLLER. THE ECONOMAIZER EXHAUST FAN EF-R-2 SHALL BE OFF. THE HW VALVE HALL MODULATE TO PROVIDE THE REQUIRED SUPPLY TEMPERATURE.
   e. WHEN INDEXED TO OCCUPIED COOLING MODE THE HW VALVE SHALL BE IN CLOSED POSITION. THE ECONOMIZER DAMPER (D-6) SHALL BE CLOSED. OUTSIDE AIR DAMPER (D-4) AND EXHAUST DAMPER (D-3) SHALL OPEN TO PROVIDE REQUIRED OUTSIDE AIR. RE-CIRCULATION DAMPER (D- 5) AND RETURN AIR DAMPERS (D-1) AND (D-2) SHALL MODULATE TO PROVIDE THE REQUIRED OUTSIDE AIR. SUPPLY FAN ECM MOTOR SHALL MODULATE TO MAINTAIN THE SET POINT OF THE DUCT STATIC PRESSURE CONTROLLER. THE ECONOMIZER EXHAUST FAN EF-R-2 SHALL BE OFF. MECHANICAL DX COOLING SHALL MAINTAIN A MAXIMUM 55˚F COIL DISCHARGE TEMPERATURE. THE HOT GAS REHEAT VALVES SHALL BE MODULATED TO INCREASE THE UNIT DISCHARGE TEMPERATURE TO MAINTAIN THE RETURN AIR RESET SCHEDULE WHEN THE RETURN AIR IS LESS THAN 76˚F. ON A DROP IN RETURN DUCT TEMPERATURE BELOW 75ºF AFTER THE HOT GAS REHEAT VALVES ARE ALL FULLY OPENED, THE COMPRESSORS SHALL BE SEQUENTIALLY STAGED TO RESET THE COIL DISCHARGE TEMPERATURE AS REQUIRED TO MAINTAIN THE DUCT RETURN AIR TEMPERATURE BETWEEN 76˚F AND 78˚F. MECHANICAL COOLING AND INDIRECT DEHUMIDIFICATION SHALL BE RE-ENABLED TO ALLOW STAGED AND CONTROLLED COMPRESSOR ENERGIZATIONS TO MAINTAIN A MAXIMUM 55˚F COOLING COIL DISCHARGE TEMPERATURE AND HOT GAS REHEAT MODULATION SUBJECT TO RETURN AIR TEMPERATURE RESET SCHEDULE WHEN THE RETURN AIR EXCEEDS 78ºF. SUMMER OCCUPIED PERIOD RETURN AIR RELATIVE HUMIDITY IS CONTROLLED WITH INDIRECT DEHUMIDIFICATION BY KEEPING THE DISCHARGE OFF THE DX COOLING COILS AT NO GREATER THAN 55˚F WHICH SHOULD ALWAYS KEEP THE SPACE WITHIN THE COMFORT ZONE AS DEFINED IN ASHRAE 55-2010. THE OUTSIDE AIR DAMPER SHALL BE SET TO ITS CUMULATIVE INSTANTANEOUS MINIMUM VENTILATION POSITION DURING THE OCCUPIED MECHANICAL COOLING CYCLE. THE EXHAUST AIR FAN VFD SHALL BE MODULATED TO EXHAUST 85% TO 90% OF THE CUMULATIVE INSTANTANEOUS OUTSIDE AIR INTAKE FLOW
   f. WHEN INDEXED TO UNOCCUPIED HEATING MODE:
   THE ECONOMIZER DAMPER (D-6) SHALL BE CLOSED. OUTSIDE AIR DAMPER SHALL BE CLOSED. RETURN AIR DAMPERS (D-1 AND D-2) SHALL OPEN. THE HW VALVE SHALL MODULATE TO PROVIDE THE REQUIRED SPACE TEMPERATURE.
   f. WHEN INDEXED TO UNOCCUPIED COOLING MODE:
   THE ECONOMIZER DAMPER (D-6) SHALL BE CLOSED. OUTSIDE AIR DAMPER (D-4) SHALL BE CLOSED. RETURN AIR DAMPERS (D-1 AND D-2) SHALL OPEN. HW VALVE SHALL BE IN CLOSED POSITION. DX COOLING SHALL MAINTAIN THE REQUIRED SPACE TEMPERATURE.
   g. FROST PROTECTION:
   WHENEVER THE AIR LEAVING THE HOT WATER COIL AND TEMPERATURE IS LESS THAN 35°F THE UNIT SHALL GO TO FREEZE LOCK UP MODE.
   h. DURING OCCUPIED ECONOMIZER COOLING MODE THE DX COIL SHALL BE OFF. FOR THE ECONOMIZER COOLING MODE, THE OUTSIDE AIR TEMPERATURE SHALL BE GREATER THAN OR EQUAL TO 55˚F BUT LESS THAN 65˚F. THE ACTUAL SUPPLIED AIR TEMPERATURE TO THE SPACES SHALL BE GREATER THAN OR EQUAL TO 55˚F BUT LESS THAN 65˚F. THE UNIT OPERATES IN A 100% OUTSIDE AIR MODE. THE RECIRCULATING DAMPER (D-5) SHALL CLOSE. THE EXHAUST DAMPER (D-3) SHALL BE CLOSED, THE EXHAUST DAMPER (D-6) SHALL FULLY OPEN AND THE ECONOMIZER EXHAUST FAN SHALL TURN ON AND SHALL EXHAUST 90% THE SUPPLY AIR FLOW. ON A RISE IN RETURN DUCT TEMPERATURE ABOVE 78.0°F FOR A TIME DELAY OF 30 MINUTES (ADJUSTABLE), THE ECONOMIZER COOLING MODE SHALL BE DEEMED INADEQUATE TO MEET THE MAXIMUM ACCEPTABLE CONDITIONS AT WHICH TIME THE UNIT SHALL BE COMMANDED TO THE OCCUPIED MECHANICAL COOLING MODE. DURING THE MECHANICAL COOLING OCCUPIED MODE DX COIL SHALL MAINTAIN THE DISCHARGE AIR AT 55˚F MAXIMUM. RECIRCULATION DAMPER (D-5), RETURN DAMPERS (D-1 AND D-2), OUTSIDE DAMPER (D-4) AND EXHAUST DAMPER (D-3) SHALL MODULATE TO PROVIDE THE THE REQUIRED OUTSIDE AIR. SUPPLY AIR FAN SHALL MODULATE TO MAINTAIN THE SETPOINT OF THE DUCT STATIC PRESSURE CONTROLLER. ECONOMIZER EXHAUST DAMPER (D-6) SHALL BE CLOSED AND ECONOMIZER EXHAUST FAN SHALL BE OFF.

6. COMMUNICATION:
   a. UPON LOSS OF COMMUNICATION WITH THE NETWORK, THE UNIT DDC CONTROLLER SHALL OPERATE IN THE APPLICABLE SEASONAL OCCUPIED MODE AS DETERMINED BY THE OUTSIDE AIR TEMPERATURE (BEFORE THE LOSS OF COMMUNICATION).

| AHU-1 VARIABLE AIR VOLUME ROOFTOP UNIT POINTS LIST | | INPUT OUTPUT (NOTE 1) | | | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2. 3) | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | CALCULATED | | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | | | MISCELLANEOUS FEATURES | | | | |
| REFERENCE № | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | STRING VALVE | RATE OF VARIABLE | TOTALIZE VARIABLE | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | DIRECT LOCATION CONNECTION | TRENDED VALUE | MISCELLANEOUS OTHER | NETWORK VARIABLE TYPE | NOTES |
| 1 | OUTSIDE AIR TEMPERATURE | X | | | | | | | | | | | | X | | X | | NVO | |
| 2 | OUTSIDE AIR HUMIDITY | X | | | | | | | | | | | | X | | X | | NVO | |
| 3 | DX COIL DISCHARGE TEMP | X | | | | | | | | | | 45F | | | | X | | NVO | |
| 4 | HOT GAS RHC DISCHARGE TEMP | X | | | | | | | | | | 55F | | | | X | | NVO | |
| 5 | SUPPLY AIR TEMP | X | | | | | | | | | | | | | | X | | NVO | |
| 6 | EXHAUST AIR TEMP | X | | | | | | | | | | 55F | | | | X | | NVO | |
| 7 | EXHAUST AIR HUMIDITY | X | | | | | | | | | | | | | | X | | NVO | |
| 8 | DIRTY FILTER ALARM | X | | | | | | | | X | PER MFR | | | | | | | NVO | |
| 9 | SUPPLY AIR STATIC PRESSURE | X | | | | | | | | | | | | | | | X | NVO | |
| 10 | SUPPLY AIR STATIC PRESSURE SETPOINT | | X | | | | | | | | | | | | | | | NVI/NVO | |
| 11 | SF HIGH STATIC PRESSURE | | | X | | | | | | X | TBD | | | | | | | NVO | |
| 12 | EF-R-2 LOW SUCTION PRESSURE | | | X | | | | | | X | | TBD | | | | | | NVO | |
| 13 | DAMPER D-1 | | X | | | | | | | | | | | | | | | NVO | |
| 14 | DAMPER D-2 | | X | | | | | | | | | | | | | | | NVO | |
| 15 | DAMPER D-3 | | X | | | | | | | | | | | | | | | NVO | |
| 16 | DAMPER D-4 | | X | | | | | | | | | | | | | | | NVO | |
| 17 | DAMPER D-5 | | X | | | | | | | | | | | | | | | NVO | |
| 18 | DAMPER D-6 | | X | | | | | | | | | | | | | | | NVO | |
| 19 | DAMPER D-7 | | X | | | | | | | | | | | | | | | NVO | |
| 20 | HEATING COIL DISCHARGE TEMP | X | | | | | | | | | 40F | | | | | X | | NVO | |
| 21 | HEATING COIL VALVE | | X | | | | | | | | | | | | | | | NVO | |
| 22 | DX COOLING COMMAND | | | | X | | | | | | | | | | | | | NVO | |
| 23 | DX COMPRESSOR STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 24 | HOT GAS RHC VALVE COMMAND | | X | | | | | | | | | | | | | | | NVO | |
| 25 | OUTSIDE AIR FLOW | X | | | | CFM | CCF | | | | SP+10% | SP+10% | | | | X | | NVO | |
| 26 | SUPPLY FAN STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 27 | SUPPLY FAN VFD | | | | | | | | | | | | | X | | | | NVO | |
| 28 | SUPPLY FAN VFD S/S | | | | X | | | | | | | | | | | | | NVO | |
| 29 | SUPPLY FAN VFD FAULT | | | X | | | | | | X | | | | | | | | NVO | |
| 30 | SUPPLY FAN VFD SPEED | X | | | | | | | | | | | | | | | | NVO | |
| 31 | SUPPLY FAN FAILURE | | | | X | | | | X | | | | | | | | | NVO | |
| 32 | EF-R-2 FAN STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 33 | EF-R-2 FAN VFD | | | | | | | | | | | | | X | | | | NVO | |
| 34 | EF-R-2 FAN VFD S/S | | | | X | | | | | | | | | | | | | NVO | |
| 35 | EF-R-2 FAN VFD FAULT | | | X | | | | | | X | | | | | | | | NVO | |
| 36 | EF-R-2 FAN VFD SPEED | | X | | | | | | | | | | | | | | | NVO | |
| 37 | EF-R-2 FAN FAILURE | | | | X | | | | X | | | | | | | | | NVO | |
| 38 | COMMON FIRE ALARM | | | X | | | | | | X | | | | X | | | | NVO | |
| 39 | SUPPLY AIR TEMP ACTIVE SETPOINT | | X | | | | | | | | | | | | | X | | NVO | |
| 40 | SUPPLY AIR TEMP SETPOINT | | X | | | | | | | | | | | | | | | NVI/NVO | |
| 41 | MANUAL SUPPLY AIR TEMP OVERRIDE | | | | X | | | | | | | | | | | | | NVI/NVO | |
| 42 | EXHAUST AIR FLOW | X | | | | | | | | | | | | | | | | NVO | |
| 43 | SUPPLY AIR FLOW | X | | | | | | | | | | | | | | | | NVO | |
| 44 | TEMP LOW LIMIT | | | X | | | | | | | | 39F | | | | | | NVO | |

X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES :

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. THE TCC SHALL PROVIDE ALL DIGITAL ALARM LOGIC. ALL DIGITAL ALARMS SHALL BE PART OF THE DATABASE.
3. PROVIDE COMMUNICATION CONNECTION TO THIS DEVICE MAPPING ALL REQUIRED POINTS INTO THE LNS DATABASE.
4. PROVIDE MANUAL RESET DEVICE. NOTE THAT THIS DEVICE BOTH ALARMS IN THE BMS AND IS HARDWIRED TO THE VFD'S FOR SHUTDOWN OF THE FANS IN ALL OPERATING CONDITIONS OF THE VFD.
5. NVO IS NETWORK VARIABLE OUTPUT. NVI IS NETWORK VARIABLE INPUT.
6. SEE NOTE 4 ON THE DRAWING.
7. REFER TO THE ASSOCIATED CONTROL DETAIL FOR DESIGN NOTES AND OTHER RELATED WORK REFERENCES

## AHU-1 CONTROL POINT LIST

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com
COPYRIGHT

PROJECT

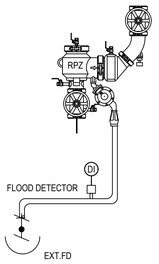
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

AHU-1 CONTROL POINT LIST AND SEQUENCE OF OPERATION

| SEAL & SIGNATURE | DATE 06.10.2019 |
|---|---|
| | JOB NUMBER 19010 |
| | DWG. No. M-607.00 |
| | DRAWN BY D.K. / 35 OF 37 |

NYC DOB Number




| "FLOOD DETECTOR CONTROL" | | INPUT OUTPUT (NOTE 1) | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2. 3) | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | MISCELLANEOUS FEATURES | | | | | |
| REFERENCE No | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | "DIRECT LON COMMUNICATION" | TRENDED VALUE | MISCELLANEOUS OTHER | NETWORK VARIABLE TYPE | NOTES |
| 1 | FLOOD DETECTOR | | | X | | | | | | | | | | | INPUT | 3, 4 |

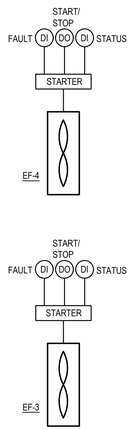
X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES :

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. THE TCC SHALL PROVIDE ALL DIGITAL ALARM LOGIC. ALL DIGITAL ALARMS SHALL BE PART OF THE DATABASE
3. PROVIDE BACnet COMMUNICATION ON CONNECTION TO THIS DEVICE MAPPING ALL REQUIRED POINTS INTO THE BACnet DATABASE.
4. COORDINATE WITH PLUMBING CONTRACTOR AND EQUIPMENT VENDOR FOR THE REQUIRED INTERLOCK WIRING AND INSTALLATION OF DEVICES .

## FLOOD DETECTOR SEQUENCE OF OPERATION.

1. I/O POINTS: PROVIDE THE I/O POINTS AS SPECIFIED AND AS SHOWN ON THE CONTROL CONTRACT DRAWINGS.
2. WHEN THE DETECTOR SENSES FLOODING IT SHALL SEND A SIGNAL TO THE BMS SYSTEM.




## EF-1 AND EF-2 CONTROL DIAGRAM

| EXHAUST FANS EF-1 AND EF-2 POINTS LIST | | INPUT OUTPUT (NOTE 1) | | | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2. 3) | | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | CALCULATED | | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | | MISCELLANEOUS FEATURES | | | | | |
| REFERENCE No | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | STRING VALVE | RATE OF VARIABLE | TOTALIZE VARIABLE | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | "DIRECT LON COMMUNICATION" | TRENDED VALUE | MISCELLANEOUS OTHER | NETWORK VARIABLE TYPE | NOTES |
| 1 | EXHAUST FAN EF-3 STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 2 | EXHAUST FAN EF-3 START/STOP | | | X | | | | | | | | | | | | | | NVO | |
| 3 | EXHAUST FAN EF-3 FAULT | | | X | | | | | | X | | | | | | | | NVO | |
| 1 | EXHAUST FAN EF-4 STATUS | | | X | | | | | | | | | 1,000 | | | | | NVO | |
| 2 | EXHAUST FAN EF-4 START/STOP | | | X | | | | | | | | | | | | | | NVO | |
| 3 | EXHAUST FAN EF-4 FAULT | | | X | | | | | | X | | | | | | | | NVO | |

X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

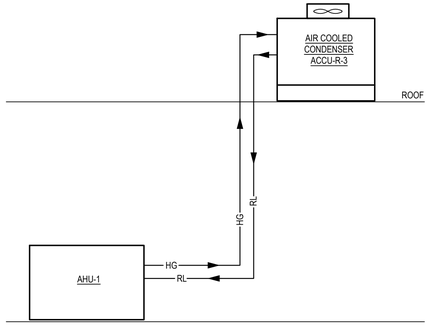
NOTES :

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. PROVIDE ALL DIGITAL ALARM LOGIC. ALL DIGITAL ALARMS SHALL BE PART OF THE DATABASE
3. PROVIDE COMMUNICATION CONNECTION TO THIS DEVICE MAPPING ALL REQUIRED POINTS INTO THE LNS DATABASE.
4. PROVIDE MANUAL RESET DEVICE. NOTE THAT THIS DEVICE BOTH ALARMS IN THE BMS AND IS HARDWIRED TO THE VFD'S FOR SHUTDOWN OF THE FANS IN ALL OPERATING CONDITIONS OF THE VFD.
5. NVO IS NETWORK VARIABLE OUTPUT. NVI IS NETWORK VARIABLE INPUT.

## EXHAUST FANS EF-1 AND EF-2 SEQUENCE OF OPERATION

MODE SELECTION AND FAN OPERATION:

a. THE OPERATOR SHALL BE ABLE TO MANUALLY SELECT THE OPERATING MODE THROUGH TOGGLE SWITCH WITH SECURITY GUARD LOCATED IN GYM.




ABBREVIATIONS

| | |
|---|---|
| HG | REFRIGERANT PIPING (HOT GAS) |
| RL | REFRIGERANT PIPING (LIQUID) |

NOTES:

1. PROVIDE DI POINTS FOR EACH CONDENSER FAN (STATUS AND FAULT).
2. TCC SHALL PROVIDE THE NECESSARY INTERLOCK WIRING BETWEEN THE AIR HANDLING UNITS AND AIR COOLED CONDENSERS.COORDINATE WITH THE UNIT VENDOR AND MECHANICAL CONTRACTOR.

## SYSTEM GRAPHIC SYSTEM AHU-1 (INDOOR UNIT) / WITH AIR COOLED CONDENSER ACCU-R-3

| "AHU-1 WITH ACCU-R-3 CONDENSER CONTROL" | | INPUT OUTPUT (NOTE 1) | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2. 3) | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | MISCELLANEOUS FEATURES | | | | | |
| REFERENCE No | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | BROADCASTED POINT | "DIRECT LON COMMUNICATION" | TRENDED VALUE | MISCELLANEOUS OTHER | NETWORK VARIABLE TYPE | NOTES |
| 1 | AHU-1 / ACCU-R-3 CONTROLLER | X | | | | | | | | | | | | | INPUT | 3, 4 |

X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES :

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. THE TCC SHALL PROVIDE ALL DIGITAL ALARM LOGIC. ALL DIGITAL ALARMS SHALL BE PART OF THE DATABASE
3. PROVIDE BACnet COMMUNICATION ON CONNECTION TO THIS DEVICE MAPPING ALL REQUIRED POINTS INTO THE BACnet DATABASE.
4. COORDINATE WITH MECHANICAL CONTRACTOR AND EQUIPMENT VENDOR FOR THE REQUIRED INTERLOCK WIRING AND INSTALLATION OF DEVICES .

## AHU-1 (INDOOR UNIT) / AIR COOLED CONDENSER ACCU-R-3 CONTROL POINT LIST

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

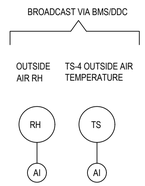
DRAWING

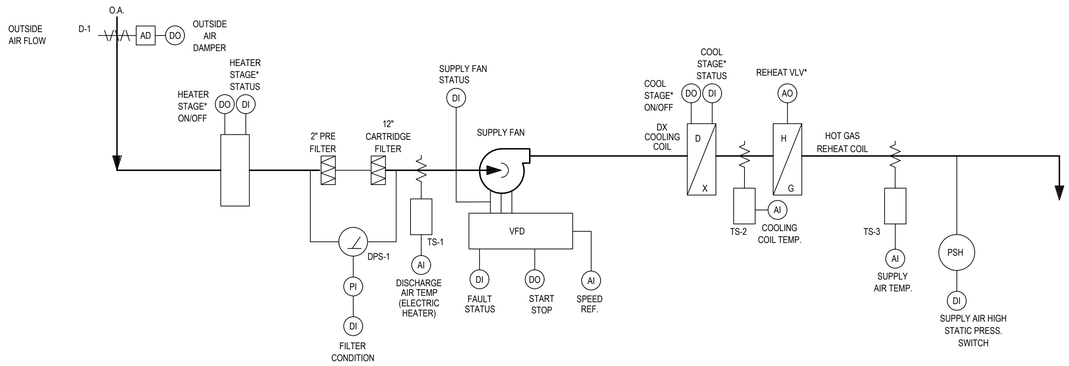
EF-3, EF-4, AHU-1/ACCU-R-3 & FLOOD DETECTOR CONTROL DRAWINGS.

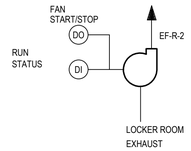
| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | M-608.00 |
| | DRAWN BY | D.K. |
| | ---- OF 37 | |

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




NOTES:

1. PROVIDE ONE SPACE HUMIDITY SENSOR PER SYSTEM AS SHOWN ON THE DRAWINGS.
2. EXHAUST FAN STARTER/VFD SHALL BE INTERLOCKED WITH SUPPLY FAN STARTER/VFD FOR START/STOP COMMAND AND SPEED TRACKING.
3. VARIABLE FREQUENCY DRIVES USED TO FACILITATE BALANCING PROCEDURE AND FOR TWO-SPEED CONTROL.

CONTROL DIAGRAM DOAU-1 VARIABLE AIR VOLUME ROOFTOP UNIT

ABBREVIATIONS

| | |
|---|---|
| H | HUMIDITY SENSOR |
| TS | TEMPERATURE SENSOR |
| TS-1 | DISCHARGE AIR TEMP (ELECTRIC HEATER) |
| TS-2 | DISCHARGE AIR TEMP (DX-COIL) |
| TS-3 | DISCHARGE AIR TEMP (REHEAT COIL) |
| TS-4 | OUTSIDE AIR TEMP |
| RH | RELATIVE HUMIDITY |
| FE | FLOW ELEMENT |
| FT | FLOW TRANSMITTER |
| DI | DIGITAL INPUT |
| DO | DIGITAL OUTPUT |
| AI | ANALOG INPUT |
| AO | ANALOG OUTPUT |
| BAC | BACnet BUILDING AUTOMATION NETWORK |
| * | # OF HEATING OR COOLING STAGES |
| DPS | DIFFERENTIAL PRESSURE SWITCH |
| OEM | ORIGINAL EQUIPMENT MANUFACTURER |
| PSH | PRESSURE SWITCH HIGH |
| PI | PRESSURE INDICATOR |

## CONSTANT-VOLUME EDICATED OUTDOOR AIR HEAT PUMP UNIT , HEATING AND DDC CONTROLS (DOAU-1)

A. SAFETY CONTROLS:

1. SUPPLY DUCT OVERPRESSURE CONTROL: IF THE STATIC PRESSURE IN THE SUPPLY DUCT EXCEEDS THE POSITIVE STATIC PRESSURE SWITCH SETPOINT FOR ANY REASON, THE SUPPLY FAN SHALL STOP AND DOAU-1 SHALL REMAIN IN THE SYSTEM-OFF MODE UNTIL THE SAFETY PRESSURE SWITCH IS MANUALLY RESET. AFTER THE ALARM IS CLEARED, THE RTU SHALL RESUME ITS NORMAL OPERATION ACCORDING TO THE APPROPRIATE MODE. A CHANGE-OF-STATE ALARM SHALL BE GENERATED. THIS FAN SAFETY SHALL BE HARDWIRED TO SHUT THE FAN OFF IN ALL MODES OF OPERATION.

B. OPERATING MODES: THE OPERATING MODES OF THE DOAU-1 SHALL BE AUTOMATICALLY DETERMINED BY THE COMBINED ACTIONS OF THE DDC SCHEDULER, THE LOCAL UNIT MOUNTED HAND-OFF-AUTO H-O-A SWITCH; CONTROL AND SAFETY DEVICES.

1. MODE SELECTION AND FAN OPERATION:
   a. THE OPERATOR SHALL BE ABLE TO MANUALLY SELECT THE OPERATING MODE THROUGH AN H-O-A SWITCH MOUNTED IN THE DOAU-1 AND WIRED INTO THE DIGITAL CONTROLLER. IN THE AUTOMATIC-POSITION, THE DOAU-1 IS INDEXED AUTOMATICALLY BY THE DDC SCHEDULER BETWEEN THE VARIOUS MODES OF OPERATION DESCRIBED HEREIN. IN THE HAND POSITION THE DOAU-1 SHALL REMAIN IN THE OCCUPIED MODE. IN THE OFF POSITION THE DOAU-1 SHALL REMAIN OFF. NOTE THAT THE H-O-A SWITCH IS NOT THE SAME AS THE MANUFACTURER'S SERVICE SWITCH WHICH SHALL SHUTDOWN THE DOAU-1.
   b. WHEN THE H-O-A SWITCH IS PLACED INTO EITHER THE "HAND" OR THE "OFF" POSITION AN ADVISORY SHALL BE GENERATED.
   c. EXHAUST AIR FAN (EF) SHALL BE ELECTRICALLY INTERLOCKED WITH THE SUPPLY FAN (SF) OF THE DOAU-1.
   d. SUMMER/WINTER MODE SELECTION: THE DOAU-1 SHALL BE AUTOMATICALLY INDEXED TO OPERATE IN EITHER THE SUMMER MODE OR WINTER MODE BASED ON THE OUTSIDE AMBIENT TEMPERATURE OR MANUALLY INDEXED. THE DOAU-1 INTERNAL CONTROLS SHALL PROVIDE WINTER/SUMMER MODE CHANGE OVER.

C. SEQUENCE OF OPERATION:

1. SYSTEM-OFF:
   a. WHEN THE DOAU-1 IS OFF, THE OUTSIDE AIR DAMPER SHALL BE CLOSED, THE FANS SHALL BE OFF, AND ALL HEATING AND COOLING SHALL BE DE-ENERGIZED.
2. OCCUPIED CYCLE:
   a. THE SUPPLY FAN AND INTERLOCKED EXHAUST FANS ARE COMMANDED ON AND RUN CONTINUOUSLY SUBJECT TO ALL SAFETIES.
   b. THE OUTSIDE AIR INTAKE DAMPER IS OPENED.
   c. OCCUPIED HEATING:
   1) THE HEAT-PUMP IS CYCLED TO MAINTAIN A MINIMUM SUPPLY DUCT TEMPERATURE OF 68°F. ON A DROP IN SUPPLY DUCT TEMPERATURE BELOW THE MINIMUM SUPPLY DUCT TEMPERATURE, THE COMPRESSOR SHALL BE STAGED TO PROVIDE SUPPLY AIR TEMPERATURE. IF THE SUPPLY AIR TEMPERATURE EXCEEDS THE HTL SETPOINT IT SHALL TAKE CONTROL OF THE HEATER REDUCING THE HEATING CAPACITY OF THE HEAT TO MAINTAIN ITS MAXIMUM ALLOWABLE SETPOINT. IF THE GAS HEATER IS UNABLE TO MEET THE SUPPLY AIR TEMPERATURE SETPOINT, THAN THE HOT GAS REHEAT COIL SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SETPOINT.
   2) ON A RISE IN SUPPLY DUCT TEMPERATURE ABOVE 72.0°F, THE COMPRESSORS SHALL BE TURNED OFF. IF THE OUTSIDE AIR TEMPERATURE FALLS BELOW THE LOW LIMIT TEMPERATURE REQUIRED BY THE UNIT MANUFACTURER SO THE UNIT DOES NOT DE-RATE DURING HEATING. THE ELECTRIC HEATER SHALL BE STAGED ON. IF THE OUTSIDE AIR TEMPERATURE RAISE ABOVE THE LOW LIMIT TEMPERATURE REQUIRED BY THE UNIT MANUFACTURER, THE ELECTRIC UNIT HEATER SHALL TURN OF.
   d. OCCUPIED COOLING:
   1) MECHANICAL DX COOLING SHALL BE CONTROLLED IN STAGES AND SEQUENCED SO AS TO MAINTAIN A MAXIMUM SUPPLY DUCT TEMPERATURE CONDITION WITH A COOLING SETPOINT OF 72 °F. FAILURE OF THE DX-COOLING COMPRESSORS TO RUN AFTER BEING COMMANDED TO RUN SHALL BE ALARMED HMI . ON A DROP IN SUPPLY DUCT TEMPERATURE TO 70.0°F, THE COMPRESSORS SHALL BE SEQUENTIALLY STAGED OFF.
   2) COMMUNICATION
      a. UPON LOSS OF COMMUNICATION WITH THE NETWORK, THE DOAU-1 DDC CONTROLLER SHALL OPERATE IN THE APPLICABLE SEASONAL OCCUPIED MODE AS DETERMINED BY THE OUTSIDE AIR TEMPERATURE (BEFORE THE LOSS OF COMMUNICATION).
      b. I/O POINTS: PROVIDE THE I/O POINTS AS SPECIFIED.

| DOAU-1 VARIABLE AIR VOLUME ROOFTOP UNIT POINTS LIST | | INPUT OUTPUT (NOTE 1) | | | | | | | SOFTWARE / FIRMWARE FEATURES (NOTES 2. 3) | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SENSED | | | | CALCULATED | | | ALARMS AND ADVISORIES (WITH INSTRUCTIONS) | | | | | MISCELLANEOUS FEATURES | | |
| REFERENCE No | POINT NAME | ANALOG INPUT | ANALOG OUTPUT | DIGITAL INPUT | DIGITAL OUTPUT | STRING VALVE | RATE OF VARIABLE | TOTALIZE VARIABLE | DIGITAL ALARM | CHANGE-OF-STATE ALARM | HIGH LIMIT ALARM | LOW LIMIT ALARM | RUNTIME LIMIT (HRS) | TRENDED VALUE | VARIABLE TYPE | NOTES |
| 1 | OUTSIDE AIR TEMPERATURE | X | | | | | | | | | | | | X | INPUT | |
| 2 | OUTSIDE AIR HUMIDITY | X | | | | | | | | | | | | X | INPUT | |
| 3 | DX COIL DISCHARGE TEMP | X | | | | | | | | | | 45F | | X | INPUT | |
| 4 | HOT GAS RHC DISCHARGE TEMP | X | | | | | | | | | | 55F | | X | INPUT | |
| 5 | SUPPLY AIR TEMP | X | | | | | | | | | | | | X | INPUT | |
| 6 | DIRTY FILTER ALARM | | | X | | | | | | X | PER MFR | | | X | INPUT | |
| 7 | SF HIGH STATIC PRESSURE | | | X | | | | | | X | TBD | | | X | INPUT | 4 |
| 8 | OUTSIDE AIR DAMPER | | X | | | | | | | | | | | X | OUTPUT | |
| 9 | DX COOLING COMMAND | | | | X | | | | | | | | | X | OUTPUT | |
| 10 | DX COMPRESSOR STATUS | | | X | | | | | | | | | 1,000 | X | INPUT | |
| 11 | HOT GAS RHC VALVE COMMAND | | X | | | | | | | | | | | X | OUTPUT | |
| 12 | OUTSIDE AIR FLOW | X | | | | | CFM | CCF | | | SP-10% | SP+10% | | X | INPUT | |
| 13 | SUPPLY FAN STATUS | | | X | | | | | | | | | 1,000 | X | INPUT | |
| 14 | SUPPLY FAN VFD | | | | | | | | | | | | | X | INPUT | |
| 15 | SUPPLY FAN VFD S/S | | | | X | | | | | | | | | X | OUTPUT | |
| 16 | SUPPLY FAN VFD FAULT | | | X | | | | | | X | | | | X | INPUT | |
| 17 | SUPPLY FAN VFD SPEED | X | | | | | | | | | | | | X | INPUT | |
| 18 | SUPPLY FAN FAILURE | | | | X | | | | X | | | | | X | OUTPUT | 2 |
| 19 | SUPPLY AIR TEMP SETPOINT | | X | | | | | | | | | | | X | SETPOINT | |
| 20 | EXHAUST FAN S/S | | | | X | | | | | | | | | X | OUTPUT | |
| 21 | EXHAUST FAN STATUS | | | X | | | | | | | | | | X | INPUT | |
| 22 | EXHAUST FAN FAILURE | | | | X | | | | X | | | | | X | OUTPUT | |
| 23 | HVAC MODE | | | | | X | | | | | | | | X | INPUT | |
| 24 | OCCUPANCY MODE | | | | | X | | | | | | | | X | INPUT | |

X = CONTRACTOR TO PROVIDE QUANTITY AS REQUIRED TO INCLUDE ALL INSTANCES OF THE INDICATED FEATURE. INCLUDE MULTIPLE POINTS WITHIN EACH MECHANICAL SYSTEM AS NECESSARY. COORDINATE WITH EQUIPMENT VENDOR.

NOTES :

1. THE POINTS LISTED HEREIN ARE THE MINIMUM POINTS REQUIRED FOR THE CONTROL AND MONITORING OF THIS EQUIPMENT. THIS POINT LIST IS TYPICAL FOR EACH MECHANICAL / ELECTRICAL SYSTEMS OF THIS TYPE. IF THE SEQUENCE OF OPERATION REQUIRES ADDITIONAL OR DIFFERING INFORMATION IT MUST BE PROVIDED BY THE RESPECTIVE PROVIDER OF THE CONTROLS FOR THIS TYPE OF EQUIPMENT AS COORDINATED BY GENERAL AND MECHANICAL CONTRACTORS.
2. THE TCC SHALL PROVIDE ALL DIGITAL ALARM LOGIC. ALARM SHALL BE DISPLAYED AT THE POT WHEN THE POT IS CONNECTED TO THE DIGITAL CONTROLLER. DIGITAL CONTROLLER SHALL STORE ALL TRENDED DATA.
3. THE TCC WILL PROVIDE ALL TRENDING.
4. PROVIDE MANUAL RESET DEVICE. NOTE THAT THIS DEVICE ALARMS IN THE DDC CONTROLLERAND IS HARDWIRED TO THE VFD'S FOR SHUTDOWN OF THE FANS IN ALL OPERATING CONDITIONS OF THE VFD.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
DOAU-1 CONTROL DIAGRAM, POINTS LIST & SEQUENCE OF OPERATATION

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | M-609.00 |
| DRAWN BY | D.K. |
| | 37 OF 37 |

NYC DOB Number

## GENERAL NOTES:

1. PROVIDE LABOR, MATERIALS, EQUIPMENT AND SERVICE FOR COMPLETE ELECTRICAL SYSTEMS AS SHOWN ON DRAWINGS SPECIFIED AND REQUIRED BY THE NATIONAL ELECTRICAL CODE, AND ANY OTHER LOCAL AND STATE AUTHORITIES. USE NEW, U.L APPROVED EQUIPMENT AND FIELD TEST EQUIPMENT.
2. CONDUCTORS: MINIMUM #12 COPPER 90°, 600V, THHN/THWN INSULATION AND MANUFACTURER COLOR CODED.
3. WORK PERFORMED SHALL BE UNDERTAKEN WITH ABSOLUTE PRECAUTION BEING MAINTAINED TO ENSURE SAFETY OF PERSONNEL AND EQUIPMENT IN AREA IN SUCH MANNER SO AS NOT TO DISTURB NORMAL WORK PROCEDURE. PROVIDE PROTECTIVE SCAFFOLDING, BARRIERS, SIGNS, ETC., SUBJECT TO APPROVAL OF OWNER.
4. PROVIDE LIGHTING FIXTURES AS INDICATED ON DRAWING AND SPECIFIED IN ARCHITECTURAL DRAWINGS. FIXTURES BEAR LABEL OF UNDER-WRITERS LABORATORIES. INSTALLED TRUE AND PLUMB, LEFT CLEAR AND FREE FROM GREASE AND FINGERPRINTS. PROVIDE LIGHTING FIXTURES COMPLETE WITH NECESSARY MOUNTING HARDWARE, LAMPS, BALLAST AND OTHER NECESSARY EQUIPMENT. USE OF CATALOG NUMBERS DESCRIBING TYPE OF FIXTURE DOES NOT NECESSARILY INCLUDE REQUIRED ACCESSORIES FOR COMPLETE INSTALLATION. PROVIDE EVERY ACCESSORY REQUIRED FOR COMPLETE INSTALLATION.
5. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EXACT LOCATION AND DETAILS OF WORK TO BE INSTALLED. SIZES AND LOCATION OF EQUIPMENT AND WIRING MAY BE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON DRAWINGS. FINAL LOCATION OF OUTLETS AND EQUIPMENT SHALL BE AS APPROVED BY ARCHITECT. INSTALL WORK TO CONFORM TO STRUCTURE, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. DO NOT SCALE DRAWINGS , USE FIELD MEASUREMENTS.
6. WORK IS NEW, UNLESS OTHERWISE NOTED.
7. INSTALL CONDUIT EXPOSED IN UNFINISHED AREA AND CONCEALED IN FINISH AREAS WHEREVER POSSIBLE. FIELD COORDINATE WITH ARCHITECT WHERE REQUIRED.
8. IF ANY DEVIATIONS/VARIATIONS ARE DISCOVERED BETWEEN SPECIFICATIONS AND FLOOR PLANS, OR BETWEEN FLOOR PLANS AND CONNECTION DIAGRAMS, OR BETWEEN ANY DOCUMENTS, ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUANTITY OR HIGHER COST SHALL BE INCLUDED IN BASE BID WITH CREDIT SUBMITTED, SHOULD LESSER AMOUNT BE REQUIRED.
9. PROVIDE WIRING FOR EQUIPMENT FURNISHED BY OTHERS. COORDINATE WITH OTHER TRADES ON DETAILS FOR INSTALLATION. TERM "WIRING", INCLUDES CONDUIT, WIRE, JUNCTION BOXES, DISCONNECTS AND MAKING CONNECTIONS. CHECK ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT TO BE INSTALLED BY OTHERS. PROVIDE PROPER WIRING AND NECESSARY ELECTRICAL ADJUSTMENTS TO EQUIPMENT TO CONFORM TO SPECIFIED REQUIREMENTS OF EQUIPMENT. "CIRCUITRY" IS SYNONYMOUS WITH "WIRING"
10. VERIFY EXACT LOCATION OF EQUIPMENT, SHOWN OR NOT SHOWN, IN FIELD PRIOR TO PERFORMING ANY WORK. SUBMIT LAYOUT FOR APPROVAL.
11. INSTALL CONDUIT RUNS AS CLOSE TO CEILING SLAB AS POSSIBLE. PROVIDE REQUIRED CONDUITS, ELBOWS, FITTINGS, OFFSETS AND PULL BOXES.
12. PROPERLY SUPPORT CONDUIT WITH APPROVED CLAMPS OR FITTINGS. NO CONDUIT SHALL BE SECURED TO, SUPPORTED BY OR HUNG FROM DUCTWORK OR PIPING OR OTHER SUCH ITEMS.
13. PASS RACEWAY OVER WATER OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. INSTALL NO RACEWAY WITHIN 3" OF HOT WATER PIPES OR APPLIANCES, EXCEPT CROSSING WHERE RACEWAY SHALL BE AT LEAST 1" FROM PIPE COVER.
14. AVOID HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS EXCEPT FOR SHORT RUNS WHERE ARCHITECT PERMISSION IS OBTAINED.
15. EXACT LOCATION OF CONDUIT RUNS SHALL BE DETERMINED IN FIELD. LOCATE CONDUIT RUNS TO CLEAR PIPING, DUCTWORK, ACCESS DOORS AND OTHER OBSTRUCTIONS. COORDINATE ROUTING WITH WORK OF OTHER TRADES AND ALTER WHERE NECESSARY TO AVOID INTERFERENCE. INSTALL CONDUIT CONCEALED TO MAXIMUM EXTENT POSSIBLE.
16. SYSTEMS SHALL BE MADE OPERATIONAL AS RENOVATED SPACES ARE ACCEPTED, PROVIDE PERSONNEL, TESTING, SCHEDULING AS REQUIRED. INCLUDE COST IN BID.
17. LOCATIONS OF OUTLETS ARE APPROXIMATE AND FINAL LOCATION SHALL BE AS DIRECTED BY ARCHITECT. VERIFY LOCATIONS BEFORE INSTALLATION. NO EXTRAS WILL BE ALLOWED FOR CHANGES UP TO 10'-0" FROM LOCATION SHOWN ON PLAN PRIOR TO ROUGH-IN.
18. REFER TO MECHANICAL/PLUMBING/FIRE PROTECTION/EQUIPMENT APPROVED SHOP DRAWINGS AND WIRING DIAGRAMS FOR POWER, CONTROL AND ALARM WIRING CONNECTIONS. OBTAIN NECESSARY POWER, CONTROL AND ALARM WIRING REQUIREMENTS FROM MECHANICAL/PLUMBING/FIRE PROTECTION SUB-CONTRACTORS PRIOR TO BID AND INCLUDE IN BID.
19. SEAL PENETRATIONS THROUGH FIRE RATED WALLS, FLOOR OR PARTITIONS TO PREVENT SPREAD OF SMOKE AND FIRE THROUGH THEM. FIRE RATING OF PENETRATION SEAL SHALL BE AT LEAST THAT OF FLOOR OR WALL INTO WHICH IT IS INSTALLED, SO THAT ORIGINAL FIRE RATING OF FLOOR OR WALL IS MAINTAINED AS REQUIRED BY APPLICABLE CODES. FOAM SEALANT SHALL MEET OR EXCEED FIRE TEST AND HOSE STREAM TEST REQUIREMENTS AND SHALL BE UL CLASSIFIED AS WALL OPENING PROTECTIVE DEVICE. SEALANT SHALL BE MANUFACTURED BY 3M OR DOW CORNING AND SHALL HAVE BS & A NUMBER.
20. PROVIDE CIRCUIT DIRECTORY WITH METAL FRAMES AND GLASSINE PAGE ON INSIDE DOOR OF PANELBOARDS. UPON COMPLETION OF WORK, DIRECTORIES SHALL BE TYPEWRITTEN, INDICATING SERVICE CONTROLLED BY EACH CIRCUIT.
21. MAKE FINAL CONNECTIONS FOR MOTORIZED EQUIPMENT OR EQUIPMENT SUBJECT TO VIBRATION, WITH FLEXIBLE RACEWAY.
22. PROVIDE IDENTIFICATION TAGS FOR WIRING AND INSTALL AT EACH END AND IN INTERMEDIATE PULL/JUNCTION BOXES, CABINETS, HOUSINGS, ETC. INDICATE ON TAGS, LEGIBLY, MINIMUM 1/4" HIGH LETTERS, THE POINTS OF ORIGIN AND TERMINATION OF EACH CIRCUIT. INCLUDE DATE OF INSTALLATION.
23. PROVIDE IDENTIFICATION ON EACH WIRING DEVICE FACE PLATE, DISCONNECT SWITCH, PANEL, ETC. IDENTIFICATION OF WIRING DEVICE FACE PLATE SHALL CONSIST OF PANEL DESIGNATION AND CIRCUIT NUMBER OF DEVICE AS CONNECTED, UTILIZE DYMO LABEL OR BROTHER "P-TOUCH" TYPE MATERIAL ADHERED TO FACE. TYPICAL IDENTIFICATION SHALL READ: "LP2-#4" IN PUBLIC SPACES AND GUESTROOMS INSTALL LABEL ON INSIDE OF FACEPLATE.
24. CIRCUIT NUMBERS ON DRAWINGS ARE FOR IDENTIFICATION ONLY AND DO NOT INDICATE POSITION ON PANEL BOARD. CONNECT CIRCUITS WITH LIGHTEST LOADS AND RECEPTACLE CIRCUITS NEAR TOP OF PANEL AND MORE HEAVILY LOADED CIRCUITS NEAR BOTTOM. BALANCE CIRCUITS EVENLY BETWEEN PHASES SO THAT FEEDER WIRES CARRY APPROXIMATELY EQUAL CURRENT. REBALANCE IF NECESSARY, DOCUMENT AND SUBMIT RECORD AS SHOP DRAWING.
25. PROVIDE DRAG LINE WITH EMPTY CONDUIT.
26. WHERE FIXTURES ARE INSTALLED IN COMBUSTION RETARDING HUNG CEILINGS, COORDINATE WITH G.C. TO ENSURE PROPER FIXTURE LOCATION, FIRE RETARDING FIXTURE ENCLOSURE DIMENSIONS AND SCHEDULING OF ELECTRICAL WORK. ASCERTAIN LOCATIONS OF FIRE RETARDING CEILINGS FROM ARCHITECTURAL DRAWINGS AND VERIFY IN FIELD. FIXTURE OUTLET BOXES SHALL BE ACCESSIBLE.
27. WHERE DEVIATION FROM CONTRACT DOCUMENTS REQUIRES A DIFFERENT QUANTITY AND ARRANGEMENT OF EQUIPMENT, WIRING, CONDUIT, AND EQUIPMENT FROM THAT SPECIFIED OR INDICATED ON DRAWINGS, PROVIDE SUCH EQUIPMENT, WIRING, AND CONDUIT AND OTHER ADDITIONAL EQUIPMENT REQUIRED BY SYSTEM, AT NO ADDITIONAL COST TO OWNER. WORK SHALL INCLUDE ANY RELATED CHANGES TO OTHER TRADES.
28. PHASING OF ELECTRICAL WORK SHALL COMPLY WITH "PHASING OF WORK" AS DESCRIBED BY ARCHITECT.
29. PROVIDE BLANK COVERS ON ABANDONED OR UNUSED OUTLETS BOXES.
30. UPON COMPLETION OF ELECTRICAL WORK ADJUST AND TEST CIRCUITS, OUTLETS, SWITCHES, LIGHTS, MOTORS, AND ANY OTHER ELECTRICAL ITEMS. DEFECTIVE ITEMS SHALL BE IMMEDIATELY REPAIRED OR REPLACED WITH NEW EQUIPMENT AND THAT PART OF SYSTEM RETESTED. PERFORM SUCH REPLACEMENT OR REPAIR AT NO ADDITIONAL COST TO OWNER.
31. WHERE DUE TO UNION REGULATIONS OR TRADE AGREEMENTS, ANY WORK SHOWN ON DRAWINGS OR SPECIFIED NOT CONSIDERED ELECTRICAL WORK, ELECTRICAL CONTRACTOR SHALL CUB-CONTRACT WORK IN QUESTION, BUT ASSUME FULL RESPONSIBILITY FOR COMPLETE INSTALLATION.
32. SUBMIT FOR APPROVAL PRIOR TO ACTUAL INSTALLATION, SCALED INSTALLATION SHOP DRAWINGS SHOWING LOCATIONS OF FEEDERS, EQUIPMENT/DEVICES TO BE INSTALLED AND INDICATING EXACT CIRCUITRY, WIRING DEVICES, CONTROL DEVICES AND DIMENSIONED CLEARANCES FROM EXISTING STRUCTURE AND EQUIPMENT. COORDINATE SHOP DRAWINGS WITH OTHER TRADES PRIOR TO SUBMITTAL.

## SPECIAL NOTES:

1. CONTRACTOR SHALL BE FAMILIAR WITH THE CURRENT CONSTRUCTION, BOCK WALLS, DEEP BEAM/CEILING CONSTRUCTION EXPOSED RACEWAYS ETC. PRIOR TO SUBMITTING BID AND COMMENCEMENT OF WORK. ALL CONDUIT/RACEWAYS SHALL BE CONCEALED EXCEPT EXPOSED CONDUIT ROUTING AND LOCATIONS MUST BE APPROVED PRIOR TO INSTALLATION. SUBMIT CONDUIT ROUTING PLAN TO ARCHITECT FOR APPROVAL.
2. INCLUDE AND SUBMIT SEPARATE UNIT PRICE TO FURNISH AND INSTALL THE FOLLOWING:
   a) (2) OF EACH TYPE OF ELECTRICAL DEVICE SHOWN ON PLANS. LOCATION TO BE AS DIRECTED BY OWNER
   b) (2) OF EACH TYPE OF LOW VOLTAGE DEVICE SHOWN ON PLANS. LOCATION TO BE AS DIRECTED BY OWNER
   c) (2) OF EACH TYPE OF ELECTRICAL LIGHTING SHOWN ON PLANS.
   d) (2) OF EACH TYPE OF ELECTRICAL DEVICE SHOWN ON PLANS.
   e) (1) SEPARATE 120V/20A LIGHTING CIRCUIT WITH CONNECTIONS TO (5) OUTLETS/FIXTURES.
   f) (1) SEPARATE 120V/20A POWER CIRCUIT WITH CONNECTIONS TO (5) RECEPTACLES.
   g) (1) DEDICATED 120V/20A POWER CIRCUIT WITH CONNECTION TO (2) RECEPTACLE/EQUIPMENT.

   ALL UNUSED PORTION OF THE ABOVE SHALL BE RETURNED TO OWNER OR BE REDISTRIBUTED AS PER OWNER DIRECTIONS.
3. INCLUDE IN BID TO FURNISH AND INSTALL ALL CONDUIT, OUTLET BOXES AND DRAG LINE FOR THE FOLLOWING SYSTEMS.
   a) ALL LOW VOLTAGE SYSTEMS

   REFER TO OWNER VENDORS DRAWINGS FOR ALL REQUIREMENTS AND SIZES.
4. CONTRACTOR SHALL VISIT SITE AND TAKE NOTE OF EXISTING ELECTRICAL INSTALLATION, CONDUIT, FEEDER, LIGHTING FIXTURES, WIRING DEVICES, ETC. AND INCLUDE THE FOLLOWING:
   a) INCLUDE THE COMPLETE DEMOLITION OF THE ELECTRICAL SYSTEM IN THE AREA OF WORK. U.O.N.
   b) MAKE TEMPORARY CONNECTIONS TO ALLOW FOR ACTIVE TENANTS OPERATION WHERE REQUIRED.
   c) SCHEDULE ALL WORK WITH BUILDING MANAGEMENT PRIOR TO POWER DISCONNECTION.
   d) REFER TO ARCHITECTURAL DRAWINGS FOR AREAS OF DEMOLITION AND PHASING.
   e) REFER TO SPECIFICATIONS AND INCLUDED MEP SET OF DOCUMENTS TO INCLUDE FULL SCOPE OF ELECTRICAL WORK.
   f) UNLESS OTHERWISE EXCLUDED IN BID, CONTRACTOR SHALL INCLUDE ALL ELECTRICAL WORK IN HIS SCOPE INCLUSIVE OF HVAC CONTROLS.
   g) INCLUDE FIELD CIRCUITS TESTING AND AHJ'S APPROVAL OF INSPECTION TO VERIFY FEEDS AND CIRCUITS SUPPLYING POWER TO SPORTSPARK'S CURRENTLY OCCUPIED SPACE AS WELL AS THE SPACE IN THESE DRAWINGS.

## BASE BUILDING NOTES:

1. PROVIDE AS-BUILT DRAWINGS, EQUIPMENT USE PERMITS, ELECTRICAL SIGN-OFFS AND FINAL PANEL PHASES BALANCING REPORTS TO BUILDING MANAGEMENT AT JOB COMPLETION.
2. THE CONTRACTOR IS TO NOTIFY AND SCHEDULE ANY WORK REQUIRING INTERACTION OR SHUT DOWN OF THE BUILDING SYSTEMS.
3. ALL SHUTDOWNS AND TIE-INS ARE TO BE COORDINATED WITH BUILDING MANAGEMENT.
4. INDICATE POINT OF CONNECTIONS FOR ALL SERVICES SHOWN ON PLANS. THESE ITEMS MUST BE IDENTIFIED AS PART OF THE CONSTRUCTION DOCUMENTS.
5. THE LOCATION AND ELEVATIONS OF ALL PIPING, CONDUIT, PANELS, EQUIPMENT AND/OR DUCTWORK THAT IS IN OR PASSING THROUGH BASE BUILDING SPACES AND/OR TENANT SPACES ARE TO BE COORDINATED WITH BUILDING MANAGEMENT AND INDICATED ON SHOP DRAWINGS BEFORE PROCEEDING WITH WORK.
6. ALL WORK TO COMPLY WITH BUILDING ENGINEERING STANDARDS AS DIRECTED BY OWNER REPRESENTATIVE.
7. CONFIRM AND NOTIFY THE BUILDING MANAGEMENT OF ANY WORK THAT WILL AFFECT ADJACENT TENANT AREAS.

THE ELECTRICAL POWER AND LIGHTING SYSTEMS COMPLIES WITH THE REQUIREMENTS OF 2020 NEW YORK CITY ENERGY CONSERVATION CODE (NYCECC).

"TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT THE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NYCECC"

## ELECTRICAL ABBREVIATIONS

NOTE: COORDINATE ALL ABBREVIATIONS THAT ARE APPLICABLE TO THE PROJECT

| | |
|---|---|
| A | AMPERES |
| AC | AIR CONDITIONER |
| AFF | ABOVE FINISHED FLOOR |
| AWG | AMERICAN WIRE GAUGE |
| BLDG | BUILDING |
| BX | ARMORED CABLE |
| C | CONDUIT |
| CB | CIRCUIT BREAKER |
| CCTV | CLOSED CIRCUIT TELEVISION |
| CKT | CIRCUIT |
| CLG | CEILING |
| CP | CONDENSATE PUMP |
| DN | DOWN |
| D.S. | DISCONNECT SWITCH |
| DWG | DRAWING |
| EC | ELECTRICAL CONTRACTOR OR EMPTY CONDUIT |
| EF | EXHAUST FAN |
| EM | EMERGENCY |
| EX, E, (E) | EXISTING DEVICE TO REMAIN |
| ER | EXISTING DEVICE IN RELOCATED POSITION |
| FBO | FURNISHED BY OTHERS |
| FL | FLOOR |
| FT | FEET OR FOOT |
| G | GROUND WIRE |
| GC | GENERAL CONTRACTOR |
| GFI | GROUND FAULT INTERRUPTER |
| HD | HAND DRYER |
| HP | HORSEPOWER |
| HC | HUNG CEILING |
| KVA | KILOVOLT AMPERES |
| KW | KILOWATTS |
| LV | LOW VOLTAGE |
| MCB | MAIN CIRCUIT BREAKER |
| MCM | THOUSAND CIRCULAR MILS |
| MC | MECHANICAL CONTRACTOR |
| MLO | MAIN LUGS ONLY |
| MTD | MOUNTED |
| N, (N) | NEW DEVICE |
| NC | NORMALLY CLOSED |
| NF | NON-FUSED |
| NIC | NOT IN CONTRACT |
| NL | NIGHT LIGHT |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| P | POLE |
| PB | PULL BOX |
| PH | PHASE |
| PNL | PANEL |
| RE | EXISTING TO BE REMOVED |
| RR | EXISTING TO BE REMOVED AND RELOCATED |
| SW | DISCONNECT SWITCH |
| TC | TIMECLOCK |
| TYP | TYPICAL |
| UON | UNLESS OTHERWISE NOTED |
| V | VOLTS |
| VA | VOLTAMPS |
| VP | VAPOR PROOF |
| W | WATTS |
| WP | WEATHER PROOF |
| JB,J | JUNCTION BOX |

**ELECTRICAL DRAWING LIST**

| Sheet Number | Sheet Title |
|---|---|
| E-001.00 | ELECTRICAL NOTES SYMBOLS AND ABBREVIATIONS |
| E-002.00 | ELECTRICAL SPECIFICATIONS |
| E-100.00 | ELECTRICAL FIRST FLOOR EAST PLAN |
| E-101.00 | ELECTRICAL FIRST FLOOR WEST PLAN |
| E-102.00 | ELECTRICAL SECOND FLOOR EAST- WEST PLAN |
| E-103.00 | ELECTRICAL SECOND FLOOR WEST PLAN |
| E-105.00 | ELECTRICAL UPPER ROOF EAST - WEST PLAN |
| E-201.00 | LIGHTING FIRST FLOOR WEST PLAN |
| E-202.00 | LIGHTING FIRST FLOOR EAST PLAN |
| E-203.00 | LIGHTING SECOND FLOOR EAST PLAN |
| E-300.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS |
| E-301.00 | ELECTRICAL DETAILS - LIGHTING CONTROLS #2 |
| E-400.00 | ELECTRICAL PANEL SCHEDULE |
| E-401.00 | ELECTRICAL PANEL SCHEDULE |
| E-500.00 | ELECTRICAL RISER DIAGRAM |

## ELECTRICAL SYMBOL LIST:

NOTE: COORDINATE ALL SYMBOLS THAT ARE APPLICABLE TO THE PROJECT

- F1 LC1-A / EMNL — LIGHTING FIXTURE AND OUTLET BOX. HALF SHADED OR "NL" ADJACENT TO FIXTURE DENOTES FIXTURE CONNECTED TO EMERGENCY GENERATOR CIRCUIT. 'F1' DENOTES FIXTURE TYPE; 'a' DENOTES SWITCH CONTROL; 'LC1-A' DENOTES LIGHTING CONTACTOR RELAY CONTROL; 'EMNL' DENOTES EMERGENCY/NIGHT LIGHT POWERED THROUGH(24HRS), CONNECTED TO CENTRAL BATTERY UNLESS OTHERWISE NOTED. REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING ARCH. DWGS FOR TYPES AND SPECIFICATIONS.
- EXIT LIGHT WITH BATTERY BACKUP AND DIRECTIONAL ARROW AS REQUIRED. REFER TO LIGHTING FIXTURE SCHEDULE FOR VOLTAGE REQUIREMENTS. REFER TO ARCHITECTURAL LIGHTING FIXTURE SCHEDULE FOR ALL OTHER INFORMATION.
- ELECTRICAL PANELBOARD (FLUSH WITHIN 6" METAL STUD WALL OR SURFACE MOUNTED AS INDICATED ON SCHEDULES).
- (VS) CEILING MOUNTED VACANCY SENSOR WITH POWER SUPPLY/ROOM CONTROLLER.
- (DS) CEILING MOUNTED DAYLIGHT SENSOR
- (OS) CEILING MOUNTED OCCUPANCY SENSOR
- $VS WALL MOUNTED VACANCY SENSOR SWITCH W/ OVERRIDE. B.O.D. MODEL = LUTRON MAESTRO (PROGRAM FOR VACANCY MODE)
- $OS WALL MOUNTED OCCUPANCY SENSOR SWITCH W/ OVERRIDE. B.O.D. MODEL = LUTRON MAESTRO (PROGRAM FOR OCCUPANCY MODE)
- $P LUTRON PICO REMOTE WITH ON/OFF BUTTON
- $P/RL LUTRON PICO REMOTE WITH ON/OFF BUTTON AND RAISE AND LOWER
- $MA LUTRON MAESTRO SWITCH
- $OR LUTRON OVERRIDE SWITCH
- CP LUTRON 'GRAFIK EYE' LIGHTING CONTROLLER. SEE DETAILS ON E-301.
- PP LUTRON POWPAK
- RECESSED WALL-MTD DUPLEX CONVENIENCE RECEPTACLE, 1'-6" A.F.F., U.O.N. PROVIDE WHITE PLASTIC COVERS; LEVITON DECORA WHITE. 'TV - TYPE RECEPTACLES INDICATED TO BE HOUSED IN FSR PROJECT WALL BOX 'PWB-200' SERIES U.O.N. 'C' - DENOTES CEILING MOUNTED TYPE
- RECESSED WALL MOUNTED DUPLEX CONVENIANCE RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER. 1'-3" A.F.F., U.O.N., LEVITON DECORA WHITE
- RECESSED WALL MOUNTED QUAD CONVENIANCE RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER. 1'-3" A.F.F., U.O.N., LEVITON DECORA WHITE
- RECESSED WALL-MTD DUPLEX COMPUTER RECEPTACLE, 1'-6" A.F.F., U.O.N. RECEPTACLE SHALL BE GRAY COLOR CODED. MAXIMUM (4) DUPLEXES PER 20 AMP CIRCUIT; LEVITON DECORA WHITE
- RECESSED WALL-MTD QUAD RECEPTACLE, 1'-6" A.F.F., U.O.N. (2) RECEPTACLES TO BE ON GENERAL CIRCUIT AND (2) RECEPTACLES TO BE GRAY COLOR CODED FOR COMPUTER ON MAXIMUM (4) OUTLETS PER (1) 20 AMP CIRCUIT; LEVITON DECORA WHITE
- RECESSED WALL-MTD QUAD RECEPTACLE, 1'-6" A.F.F., U.O.N. ON DEDICATED CIRCUIT; LEVITON DECORA WHITE
- RECESSED WALL-MTD DUPLEX RECEPTACLE, 1'-6" A.F.F., U.O.N. ON DEDICATED CIRCUIT; LEVITON DECORA WHITE
- EX EXISTING RECEPTACLE
- (J) RECESSED CEILING POWER JUNCTION BOX
- (J)MD JUNCTION BOX FOR MOTORIZED DAMPER
- (J)EW JUNCTION BOX FOR MOTORIZED ELECTRIC WINCH
- RECESSED VOICE/ DATA OUTLET WITH 1" CONDUIT FROM OUTLET BOX TO 6" ABOVE HUNG CEILING. INSTALLATION AND WIRING BY OTHERS (N.I.C.) TO BE COORDINATED WITH CLIENTS VENDOR. 2 CAT 6 DATA DROPS / LINES TO EACH OUTLET.
- $T THERMAL DISCONNECT SWITCH.
- NON-FUSED DISCONNECT SWITCH IN NEMA 1 TYPE ENCLOSURE. 3P/60A 'WP' DENOTES WEATHERPROOF. 'A' - 20A, 208V, 1PH; 'B' - 20A, 208V, 3PH; 'C' - 400A, 208V, 3PH; 'D' - 60A, 208V, 3PH; 'E' - 60A, 208V, 1PH; 'F' - 100A, 208V, 3PH; 'G' - 200A, 208V, 3PH
- FUSED DISCONNECT SWITCH IN NEMA 1 TYPE ENCLOSURE. 3P/60A 'WP' DENOTES WEATHERPROOF. 'A' - 20A, 120V, 1PH; 'B' - 20A, 208V, 3PH; 'C' - 20, 208V, 1PH
- $A TOGGLE DISCONNECT SWITCH, LETTER DESIGNATION IS AS FOLLOWS: 'A' - 20A, 208V, 1PH; 'B' - 20A, 120V, 1PH; 'C' - 40A, 208V, 1PH
- GROUND (EARTH).
- CONDUIT & WIRE HOMERUN CONCEALED IN CEILINGS OR WALL TO DESIGNATED PANELBOARD. SIZED TO ACCOMMODATE WIRING INDICATED.
- (M) MOTOR
- FUTURE CCTV BY OTHERS
- CR FUTURE CARDREADER BY OTHERS
- M EXISTING UTILITY METER

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING& ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New◆ork, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woo◆bury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT


PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL NOTES SYMBOLS AND ABBREVIATIONS

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. E-001.00 |
| | DRAWN BY D.M. / 1 OF 15 |


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.


NYC DOB Number

# ELECTRICAL SPECIFICATIONS

A. GENERAL

1. PERFORM ALL WORK IN ACCORDANCE WITH THE NEW YORK CITY ELECTRICAL CODE, (2011 EDITION), O.S.H.A., PERTINENT NFPA CODES, THE RULES AND REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION, AND ALL STANDARDS APPLIED BY THE BUILDING MANAGEMENT.

2. OBTAIN ALL PERMITS, FILE DOCUMENTS, PAY ALL FEES AND PERFORM ALL TESTING AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION. PROVIDE OWNER WITH CERTIFICATES OF INSPECTION.

3. DO ALL NECESSARY CUTTING AND ROUGH PATCHING INCLUDING CORE DRILLING OF CONCRETE FLOOR SLAB AND FIRESTOPPING FOR INSTALLATION OF NEW FEEDER CONDUIT AND BRANCH CIRCUITS. FINISH PAINTING AND PATCHING SHALL BE DONE BY OTHERS.

4. THESE DRAWINGS INDICATE THE SIZE AND GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. EXACT LOCATIONS, HEIGHTS, DOOR SWINGS, MOUNTING HEIGHTS, ETC OR ANY DIMENSIONS NOT SHOWN SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND DETAILS.

5. COORDINATE WORK WITH OTHER TRADES INCLUDING THE SPRINKLER, HVAC, PLUMBING, AND GENERAL CONTRACTOR AND/OR EXISTING CONDITIONS. CONFER WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION; AND ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT IN PROPER RELATION TO THE WORK AND EQUIPMENT OF OTHERS, WITH BUILDING CONSTRUCTION AND WITH ARCHITECTURAL FINISH SO THAT IT WILL HARMONIZE IN SERVICE AND APPEARANCE. EXTRA COMPENSATION WILL NOT BE GRANTED FOR MIS-COORDINATED WORK.

6. BIDDERS, BEFORE SUBMITTING A PROPOSAL, SHALL VISIT AND EXAMINE CAREFULLY THE AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE; AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE.

7. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION, AND ANY PORTIONS OF THE WORK WHICH DEVELOP DEFECTS DURING THAT TIME SHALL BE REPLACED OR REPAIRED IN A MANNER SATISFACTORY TO THE ARCHITECT AND/OR OWNER.

8. FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS REQUIRED BY THE OWNER.

9. PREPARE AND FURNISH TO THE OWNER "AS BUILT" PLANS FOR ALL WORK INSTALLED ON DISC'S OR CD's IN AUTOCAD 14 FORMAT OR ON REPRODUCIBLE SEPIAS AS DIRECTED BY THE OWNER.

10. SUBMIT SHOP DRAWINGS TO THE OWNER AND/OR HIS ENGINEER FOR REVIEW COMMENTS BEFORE FABRICATION, PURCHASE, OR INSTALLATION OF ANY EQUIPMENT.

11. ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY LIGHT AND POWER FOR THE NEW CONSTRUCTION AREAS, IN ACCORDANCE WITH ACCEPTED STANDARDS ESTABLISHED BY O.S.H.A. ENERGY COSTS WILL BE BORNE BY THE OWNER.

12. ALL PARTS OF THE WORK AND ASSOCIATED EQUIPMENT SHALL BE TESTED AND ADJUSTED TO WORK PROPERLY AND BE LEFT IN PERFECT OPERATING CONDITION. THIS SHALL INCLUDE MEGGER TESTS BETWEEN PHASES AND BETWEEN EACH PHASE AND GROUND OF ALL EXISTING REUSED FEEDERS, SUBFEEDERS AND PANELBOARDS. CORRECT DEFECTS DISCLOSED BY THESE TESTS WITHOUT ANY ADDITIONAL COST TO THE OWNER. REPEAT TESTS ON REPAIRED OR REPLACED WORK.

13. ALL WORK SHALL BE PERFORMED BY SKILLED LICENSED ELECTRICIANS.

14. ALL WORK AND MATERIALS SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST AMENDMENTS TO THE NEW YORK CITY ELECTRICAL CODE, NATIONAL ELECTRIC CODE, ANY PPLICABLE EMERGENCY CONSERVATION CODES, AND ALL AUTHORITES HAVING JURISDICTION.

15. PROVIDE MATERIALS AND EQUIPMENT LISTED BY UNDERWRITERS LABORATORIES, INC. EXCEPT IN THOSE CASES WHERE SUCH LISTING IS NOT AVAILABLE. COMPLY WITH THE LATEST APPLICABLE STANDARDS OF ANSI, ASTM, IEEE, AND NEMA.

16. IF SUBSTITUTIONS FOR SPECIFIED EQUIPMENT OR SYSTEMS ARE DESIRED, A LIST MUST BE SUBMITTED WITH THE BASE BID INCLUDING AVAILABILITY AND THE CREDIT OR EXTRA INVOLVED. ALL SUBSTITUTED ITEMS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. IF NO SUCH LIST IS SUBMITTED, IT SHALL BE UNDERSTOOD THAT ALL MATERIALS AND EQUIPMENT WILL BE FURNISHED AS SPECIFIED.

17. "APPROVED EQUAL" MEANS ANY DEVICE, MATERIAL, SYSTEMS OR EQUIPMENT CONSIDERED BY THE ARCHITECT TO BE EQUIVALENT IN QUALITY, CONSTRUCTION, PERFORMANCE, FINISH AND APPEARANCE TO THAT SPECIFIED. "FURNISH" AND INSTALL" MEANS PURCHASE, ARRANGE DELIVERY OF, HANDLING AND INSTALLATION, TEST AND LEAVE READY FOR OPERATION.

18. PROVIDE ALL PANELS, FEEDERS, BRANCH CIRCUIT WIRING AND ALL ACCESSORIES AND SUPPORTS TO CONNECT TO THE EXISTING BUILDING DISTRIBUTION SYSTEM AND PROVIDE A COMPLETE OPERABLE ELECTRICAL SYSTEM. ALL WIRING AND EQUIPMENT TO BE SIZED PER CODE. COORDINATE WITH ALL EQUIPMENT TO PROVIDE POWER SUPPLY OF THE PROPER VOLTAGE, AMPACITY AND ARRANGEMENT.

19. SHORT CIRCUIT INTERRUPTING CURRENT RATINGS OF ALL PANELS, SWITCHES, FUSES AND CIRCUIT BREAKERS SHALL BE SELECTIVELY COORDINATED WITH THE BUILDING DISTRIBUTION SYSTEM. ADDITION OF EQUIPMENT TO THE SYSTEM SHALL BE REEVALUATED AND PROPER SHORT CIRCUIT DEVICES BE PROVIDED TO OBTAIN SHORT CIRCUIT PROTECTION REQUIRED. COORDINATE WITH ALL AGENCIES AND SUBMIT CALCULATION TO SUPPORT EQUIPMENT SELECTED.

20. FOR SHORT CIRCUIT INTERRUPTION AND PROPER SEQUENCE TRIPPING ALL PROTECTIVE DEVICES UNDER OVERLOAD CONDITIONS, THE DEVICE NEAREST TO THE FAULT OR OVERLOAD SHOULD TRIP FIRST.

B. SCOPE OF WORK

1. PROVISIONS FOR TEMPORARY POWER AND LIGHTING.

2. REMOVAL OF ALL EXISTING DEVICES AND WIRING WHICH ARE NOT BEING REUSED.

3. PROVIDE INSTALLATION OF A COMPLETE CONDUIT AND RACEWAY SYSTEM.

4. PROVIDE BRANCH CIRCUIT WIRING FOR LIGHTING, RECEPTACLES AND MECHANICAL EQUIPMENT AND LINE VOLTAGE CONTROL WIRING FOR ALL EQUIPMENT FURNISHED BY OTHERS. U.O.N.

5. PROVIDE WIRING DEVICES (RECEPTACLES, SWITCHES, PLATES, ETC.) AND LIGHTING FIXTURES

6. PROVIDE PANELBOARDS AND ASSOCIATED CIRCUIT BREAKERS.

7. PROVIDE DISCONNECT SWITCHES FUSES AND STARTERS.

C. ALTERATION

1. PERFORM ALL WORK WHEN AND AS DIRECTED. SUBMIT SCHEDULE FOR ACCEPTANCE. ACKNOWLEDGE PHASING OF WORK WHEN OUTLINED BY THE ARCHITECT.

2. REMOVE ALL EXISTING DEVICES AND WIRING NOT SHOWN AS EXISTING TO REMAIN. ALL REMOVED ELECTRICAL RECEPTACLES, ETC. SHALL HAVE ALL THEIR ASSOCIATED WIRING REMOVED BACK TO THEIR SOURCE. ALL CONDUIT MADE OBSOLETE SHALL BE REMOVED IN ITS ENTIRETY. REUSE UPON ARCHITECT APPROVAL.

3. MAINTAIN CONTINUOUS SERVICE ON FEEDERS, CIRCUITS OR PARTIAL CIRCUITS, AND OUTLETS AFFECTED BY THIS WORK, EXCEPT WHERE OWNER GIVES WRITTEN PERMISSION FOR OUTAGE FOR SPECIFIED TIME. ADVISE OWNER THREE WORKING DAYS IN ADVANCE. WHEN THE OWNER AND/OR HIS ENGINEER SPECIFICALLY REQUESTS CERTAIN SPECIAL WORK TO BE DONE ON OVERTIME, INSTALL SUCH WORK ON OVERTIME; AND ONLY THE "PREMIUM" PORTION OF WAGES WILL BE PAID.

4. PROVIDE RECONNECTIONS AND TEMPORARY INSTALLATIONS AS REQUIRED; REMOVE AT JOB COMPLETION.

5. ALL EXISTING PANELS AFFECTED SHALL HAVE THEIR DIRECTORIES CORRECTED FOR NEW WORK, AND EXISTING REMAINING CIRCUITS VERIFIED. REMOVE EXISTING UNUSED OVERCURRENT PROTECTION DEVICES AND PROVIDE NEW DEVICES IN EXISTING PANELBOARDS TO CONFORM WITH THE NEW PANEL SCHEDULES INDICATED ON THE DRAWINGS.

6. MAINTAIN, STORE, CLEAN, AND REINSTALL ALL EXISTING DEVICES (INCLUDING POWER, DATA, FIRE ALARM, HVAC CONTROLS, VOICE, ETC.) INDICATED TO REMAIN. PROVIDE NEW WIRING AS REQUIRED TO MAINTAIN THESE DEVICES AT THEIR CURRENT LOCATION OR NEW LOCATION AS DIRECTED BY THE ARCHITECT.

7. TAKE POSSESSION AND REMOVE FROM THE PREMISES ALL ABANDONED MATERIALS AND EQUIPMENT UNLESS SPECIFIED AS RETURNABLE TO THE OWNER. CAREFULLY REMOVE ALL SUCH EQUIPMENT AND TURN OVER TO OWNER AT LOCATION DESIGNATED BY THE OWNER.

8. PROVIDE BLANK PLATES ON ALL UNUSED OUTLET BOXES. FINISH OF PLATE SHALL BE COORDINATED WITH ARCHITECT

D. CONDUIT AND RACEWAYS

1. ALL WIRING FROM THE PANELBOARD TO THE FIRST CONCEALED JUNCTION BOX IN THE HUNG CEILING, WALL, OR RAISED FLOOR AND EXPOSED (IN DRY LOCATIONS) IS TO BE RUN IN GALVANIZED THINWALL CONDUIT (EMT), 3/4" MINIMUM.

2. WIRING IN WALLS SHALL RUN IN CONCEALED CONDUIT EXCEPT WHERE NOTED. WIRING IN CEILING SHALL RUN IN EXPOSED CONDUIT. CONDUIT INSTALLATION SHALL BE AS FOLLOWS:

| | |
|---|---|
| a) WALLS AND CEILINGS | EMT |
| b) CONCRETE SLABS, MASONRY WALLS, OUTDOORS OR EXPOSED TO DAMAGE | RIGID GALVANIZED STEEL |
| c) WHERE PERMITTED BY CODE | ALUMINUM |

3. ARMORED CABLE (BX) IS PERMISSIBLE FOR CONCEALED POWER WIRING IN CEILING AND WALLS FROM THE FIRST JUNCTION FORWARD AS PERMITTED BY BUILDING STANDARDS.

4. HANGERS, SUPPORTS AND SLEEVES SHALL BE AS ACCEPTABLE TO THE ENGINEER. SUPPORT CONDUIT ON EACH SIDE OF BENDS AND NOT GREATER THAN 10'-0" ON CENTERS.

5. COORDINATE CONDUIT RUNS WITH EXISTING AND NEW WORK. RUN CONDUIT CLEAR OF SHAFTS, OPENINGS, CABLE SLOTS SLEEVES AND EQUIPMENT. DO NOT SUPPORT CONDUITS OR RACEWAYS FROM DUCTWORK OR EQUIPMENT.

6. TERMINATE EACH CONDUIT WITH TWO LOCKNUTS, ONE INSIDE AND ONE OUTSIDE AND A BUSHING. USE ALUMINUM LOCKNUTS FOR ALUMINUM CONDUIT, AND MALLEABLE IRON OR GALVANIZED OR CADMIUM PLATED STEEL FOR STEEL CONDUITS. BUSHINGS SHALL BE THE INSULATED PLASTIC TYPE, TB SERIES 5LO OR AS ACCEPTABLE. WHERE CONDUITS LARGER THAN 2" SIZE ARE TERMINATED LOCKNUTS SHALL BE THE BONDING TYPE TB SERIES L06, OR AS ACCEPTABLE. IF ALUMINUM BONDING LOCKNUTS ARE NOT AVAILABLE USE A BONDING WEDGE IN ADDITION UNDER THE INTERIOR ALUMINUM LOCKNUT.

7. WHERE CONDUITS LANGER THAN 1" SIZE TERMINATE IN CONCENTRIC KNOCKOUTS AND WHERE ALL OF THE KNOCKOUT RINGS HAVE NOT BEEN REMOVED, INSULATED GROUNDED BUSHING SHALL BE USED. INSULATED GROUNDED BUSHINGS SHALL BE CAST, THREADED TYPE EQUIPPED WITH A LUG FOR GROUNDING. UPPER EDGE SHALL HAVE A NYLON RING OR A BAKELITE RING WHICH IS MOLDED INTO THE BUSHING. GROUND LUG SHALL BE SIZED TO TAKE CONDUCTOR SIZED ACCORDING TO CODE WITH A MINIMUM SIZE OF #12 AWG.

8. WHERE ELECTRICAL METALLIC TUBING IS INSTALLED, THE CONNECTORS AND COUPLINGS SHALL BE THE NYLON INSULATED THROAT TYPE AS MANUFACTURED BY THE THOMAS BETTS CO., SERIES 5120 AND 5123 RESPECTIVELY, OR AS ACCEPTABLE. ON TUBING LARGER THAN 1" USE BONDING LOCKNUTS AS DESCRIBED ABOVE FOR RIGID CONDUIT

9. WHERE FLEXIBLE METALLIC CONDUIT IS INSTALLED, CONNECTORS SHALL BE THE "TITE BITE" TYPE WITH NYLON INSTALLED THROATS AS MANUFACTURED BY THE THOMAS BETTS CO., SERIES 3110 OR AS ACCEPTABLE.

10. ALL FINAL CONNECTIONS TO VIBRATING EQUIPMENT OR ELECTRIFIED FURNITURE SYSTEMS SHALL BE MADE WITH FLEXIBLE GALVANIZED STEEL CONDUIT IN LENGTHS NOT EXCEEDING 18 INCHES. IN WET OR DAMP LOCATION USE LIQUID- TIGHT FLEXIBLE METAL CONDUIT.

11. FIRE RATINGS SHALL BE PROVIDED FOR EACH OPENING OF FIRE-RATED SLABS AND PARTITIONS. WHERE SLEEVES OR OTHER TYPES OF OPENINGS ARE PROVIDED FOR PENETRATIONS THROUGH FLOOR SLABS AND FIRE RATED WALLS, IT SHALL BE FILLED WITH AN APPROVED FIRE RESISTANT MATERIAL.

E. CONDUCTORS

1. ALL WIRES AND CABLES FOR CONDUCTORS #2 AWG AND SMALLER FOR BRANCH CIRCUITS IN CONDUIT SHALL BE THHN. ALL WIRE AND CABLE FOR CONDUCTORS AWG #1 AND LARGER SHALL BE THWN. NO WIRE SMALLER THAN #12 AWG SHALL BE USED FOR LIGHTING OR POWER SERVICES. ALL CONDUCTORS SHALL BE COPPER RATED FOR WET AND DRY USE.

2. ALL WIRE AND CABLES IN PULL, SPLICE AND CABLE SUPPORT BOXES, IN PANELS AND POINTS OF TERMINATION SHALL BE BUNDLED AND LACED BY CIRCUITS AND TAGGED USING NYLON TIEWRAP MATERIAL AND USING FLAME RESISTING TAGS OF ADHESIVE MATERIAL. TAGS SHALL IDENTIFY CABLES AND PIECES OF EQUIPMENT SERVED. TAGS SHALL BE TB "TY-RAP" OR "E-Z-CODE" OR AS ACCEPTABLE.

3. ALL #8 AWG WIRE AND LARGER SHALL BE STRANDED. ALL #10 AWG WIRE AND SMALLER SHALL BE SOLID. RATING OF INSULATION SHALL BE 600 VOLTS. CONNECTIONS FOR WIRE #8 AND SMALLER SHALL BE MADE WITH TB "PIGGY PIGTAILS" OR AS ACCEPTABLE.

4. RECESSED LIGHTING FIXTURES IN HUNG CEILING SHALL BE SUPPLIED WITH TYPE THHN INSULATED STRANDED WIRE IN 6 FEET FLEXIBLE METALLIC CONDUIT FORM JUNCTION BOX IN CEILING SERVING MAXIMUM 4 FIXTURES OFF JUNCTION BOX.

5. ALL LOW VOLTAGE CABLING INSTALLED EXPOSED IN HUNG CEILING SHALL BE TEFLON JACKETED AND PLENUM RATED TYPE.

6. FACTORY COLOR CODING FOR WIRE AND CABLE SHALL BE AS FOLLOWS:

   a. 120/208 VOLTS - BLACK, RED, BLUE AND WHITE FOR PHASES A, B, C, AND NEUTRAL, RESPECTIVELY. GROUND WIRE SHALL BE GREEN.

7. VOLTAGE DROP IN WIRING WHEN INSTALLED SHALL BE WITHIN LIMITATIONS OF ALL AGENCIES HAVING JURISDICTION. 120 VOLT BRANCH WIRING IN EXCESS OF 75 FEET AND 277 VOLT BRANCH WIRING IN EXCESS OF 175 FEET TO THE FIRST OUTLET SHALL BE #10 AWG FOR THE ENTIRE LENGTH OF THE BRANCH CIRCUIT. SIZE OF ALL FEEDERS IN EXCESS OF 200 FEET SHALL BE INCREASED TO ACCOMMODATE VOLTAGE DROP.

F. POWER MATERIALS AND WIRING DEVICES

1. FURNISH AND INSTALL ALL BOXES, FITTINGS, DEVICES, RACEWAYS, CONDUCTORS, CONNECTIONS, MOUNTING ACCESSORIES, ADAPTERS AND ALL OTHER MATERIALS, EQUIPMENT AND LABOR NECESSARY FOR A COMPLETE ELECTRICAL INSTALLATION.

2. ELECTRICAL OUTLETS SHALL BE INSTALLED VERTICALLY. THOSE LOCATED ON INTERIOR COLUMNS AND COUNTER BACKSPLASH SHALL BE CENTERED LATERALLY.

3. MOUNTING HEIGHTS OF CONVENIENCE RECEPTACLES SHALL BE AS PER ARCHITECTURAL DRAWINGS. WHERE COUNTER AREAS CONFLICT WITH RECEPTACLES, MOUNT RECEPTACLES VERTICALLY ABOVE BACK SPLASH.

4. USE CAST BOXES FOR EXPOSED WORK; ALL OTHER OUTLET BOXES SHALL BE SHEET STEEL AND GALVANIZED 4 INCHES SQUARE, 1 ½ INCHES DEEP MINIMUM. USE EXTENSION RINGS FOR DEVICES REQUIRING SINGLE GANG OPENING.

5. LOCAL SWITCHES EXCEPT AS OTHERWISE INDICATED SHALL BE ROCKER TYPE 20 AMPERE, 120-277V CAPACITY WITH FULLY ENCLOSED COMPOSITION CASES, SHALL CONFORM TO NEMA STANDARD WD-1 FOR HEAVY DUTY SWITCHES, COMMERCIAL GRADE, AND SHALL BE LEVITON DECORA SERIES OR AS ACCEPTABLE. COORDINATE COLOR WITH ARCHITECT.

6. DUPLEX WALL MOUNTED RECEPTACLES, INCLUDING GFI RECEPTACLES, SHALL BE 2 POLE, 3 WIRE, GROUNDED 20 AMPERE, COMMERCIAL GRADE, LEVITON DECORA SERIES OR AS DIRECTED BY ARCHITECT.

7. OCCUPANCY/VACANCY SENSORS:

   a) CEILING AND SWITCH-BOX MOUNTING UNITS: UNITS RECEIVES CONTROL POWER FROM A CONTACTS IN THAT UNIT IN RESPONSE TO SIGNALS FROM SENSORS.

      1) AUXILIARY POWER AND CONTROL UNITS: MATCHED TO SENSORS WITH SWITCH USED.

         FEATURES AS FOLLOWS:
         a. RELAYS RATED FOR MINIMUM OF 20-A NORMAL BALLAST LOAD OR 12-A TUNGSTEN FILAMENT OR HIGH-INRUSH BALLAST LOAD.
         b. SENSOR POWER SUPPLY: RATED TO SUPPLY THE NUMBER OF CONNECTED SENSORS.

   b) SWITCH-BOX-MOUNTING UNITS: UNIT RECEIVES POWER DIRECTLY FROM SWITCH LEG OF THE 120 OR 277-V AC CIRCUIT IT CONTROLS AND OPERATES INTEGRAL POWER SWITCHING CONTACTS RATED 800W AT 120-V AC, AND 1000W AT 277-V AC MINIMUM.

      1) MANUAL ON/OFF SWITCH: TURNS LIGHTS OFF AUTOMATICALLY REGARDLESS OF ELAPSED TIME DELAY.

   c) OPERATION: MAINTAIN LIGHTS ON WHEN ROOM OR COVERED AREA IS OCCUPIED AND WHEN, SWITCH IS MANUALLY TURNED OFF.

      1) TIME DELAY FOR TURNING LIGHTS OFF: ADJUSTABLE OVER A RANGE FROM 1 TO 15 MINUTES, MINIMUM.

      2) AMBIENT-LIGHT-LEVEL CONTROL: ADJUSTABLE FOR SETTING A LEVEL OF AMBIENT ILLUMINATION ABOVE WHICH SENSOR WILL NOT TURN LIGHTS ON WHEN OCCUPANCY IS SENSED.

   d) PASSIVE-INFRARED TYPE: DETECTS OCCUPANCY BY A COMBINATION OF HEAT AND MOVEMENT IN ZONE OF COVERAGE. EACH SENSOR DETECTS OCCUPANCY ANYWHERE IN AN AREA OF 1000 SQ. FT. (93 SQ. M) BY DETECTING OCCURRENCES OF 6-INCH (150-MM) MINIMUM MOVEMENT OF ANY PORTION OF HUMAN BODY THAT PRESENTS A MINIMUM TARGET OF 36 SQ. IN. (232SQ. CMM.) TO THE SENSOR.

   e) ULTRASONIC TYPE: EMITS A BEAM OF ULTRASONIC ENERGY AND DETECTS OCCUPANCY THROUGH USE OF DOPPLERS PRINCIPLE IN DISCERNING MOVEMENT IN ZONE OF COVERAGE BY SENSING A CHANGE IN PATTERN OF REFLECTED ULTRASONIC ENERGY.

   f) DUAL-TECHNOLOGY TYPE: USES A COMBINATION OF PASSIVE-INFRARED AND ULTRASONIC DETECTION METHODS TO DISTINGUISH BETWEEN OCCUPIED AND UNOCCUPIED CONDITIONS FOR AREA COVERED. PARTICULAR TECHNOLOGY OR COMBINATION OF TECHNOLOGIES THAT CONTROLS EACH FUNCTION (ON OR OFF) IS DETECTABLE IN THE FIELD BY OPERATING CONTROLS ON UNIT.

   g) MANUFACTURERS SHOULD BE:

      1) LUTRON (SEE E300.00 SERIES FOR MODEL NUMBERS)
      2) APPROVED EQUAL

G. LIGHTING FIXTURES AND LAMPS

1. NEW LIGHT FIXTURES SHALL BE AS FOLLOWS:

   a. PROVIDE LIGHT FIXTURES AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS.

   b. EMERGENCY AND EXIT LIGHTING FIXTURES SHALL BE PROVIDED WITH BATTERY POWER FOR A MINIMUM OF 90 MINUTES AND VISIBLE TEST SWITCH AND INDICATION LIGHT.

   c. EXIT LIGHTS AND SIGNS SHALL BE PROVIDED WITH 8 INCHES LETTERS AND DIRECTIONAL ARROWS. ATLITE MARATHON SERIES OR EQUAL.

   d. EMERGENCY FIXTURES SHALL BE PROVIDED WITH BATTERY BALLASTS SIMILAR TO UNIVERSAL 8500, LIGHT ALARMS AM7, EMERGI-LITE OR APPROVED EQUAL.

   e. SELF POWERED EMERGENCY FIXTURES SHALL BE RATED FOR 120/277 VOLTS OPERATION AND SHALL BE LIGHT ALARMS SERIES 605P1M OR APPROVED EQUAL.

   f. WALL MOUNTED BATTERY PACK UNITS SHALL BE RATED FOR 120/277 VOLTS OPERATION AND SHALL BE LIGHT ALARMS SERIES S12SN WITH NUMBER OF HEADS AS INDICATED. REMOTE HEADS SHALL BE ELF610, TYPE AS SPECIFIED OR EQUAL.

2. ALL NEW LIGHTING FIXTURES SHALL BE ENERGY SAVING TYPE AND SHALL BE PROVIDED WITH HIGH EFFICIENCY DRIVERS AND CONTROLS AS FOLLOWS:

   a. ALL NEW LIGHTING FIXTURES SHALL BE L.E.D. TYPE.
   b. ELECTRONIC DRIVERS SHALL BE U.L. LISTED AND COMPATIBLE WITH DIMMING CONTROLS.

3. ALL NEW FLUORESCENT LAMPS AND ELECTRONIC BALLASTS SHALL BE HIGH EFFICIENCY ENERGY SAVING TYPE AS FOLLOWS:

   a. LAMPS SHALL BE GENERAL ELECTRIC TYPE F32 T-8 OR TYPE AS SPECIFIED.

   b. ELECTRONIC BALLASTS SHALL BE MOTOROLA, MAGNETEK OR ADVANCE. WITH A MINIMUM BALLAST EFFICIENCY FACTOR (BEF) OF 1.15. AND LOW SOUND RATING.

4. SPLICES IN INTERNAL WIRING WITHIN FIXTURE SHALL BE MADE WITH APPROVED MECHANICAL CONNECTORS, SUITABLE FOR THE TEMPERATURE AND VOLTAGE CONDITIONS TO WHICH THEY ARE SUBJECTED.

5. ALL STEM HANGERS SHALL BE EQUIPPED WITH SUITABLE ALIGNER BOX COVERS OR CANOPIES SO THAT STEMS HANG VERTICALLY IRRESPECTIVE OF THE ANGLE OF THE SURFACE THEY ARE MOUNTED FROM. PROVIDE A FINISH RING TO CONCEAL THE OUTLET BOX. USE AIRPLANE STEEL WIRES WHEN REQUIRED.

6. FIXTURES FOR USE OUTDOORS OR IN AREAS DESIGNATED AS DAMP OR WET LOCATIONS, SHALL BE SUITABLE GASKETED TO PREVENT THE ENTRANCE OF MOISTURE.

7. ONLY SINGLE AND/OR TWO LAMP FLUORESCENT BALLASTS, SHALL BE USED IN ANY ONE LUMINAIRE. EACH BALLAST SHALL BE INDIVIDUALLY/INTERNALLY PROTECTED.

8. BALLASTS FOR COMPACT FLUORESCENT FIXTURES SHALL BE ENERGY SAVING HIGH POWER FACTOR TYPE. BALLASTS SHALL BE CORE AND COIL TYPE, AS MANUFACTURED BY ADVANCE, MAGNETEK OR MOTOROLA. ELECTRONIC BALLAST WITH END OF LAMP LIFE PROTECTION MAY BE SUBSTITUTED UPON APPROVAL.

9. WHERE SO DIRECTED BY THE ARCHITECT, CERTAIN LUMINAIRES SHALL BE TEMPORARILY INSTALLED, CONNECTED AND ADJUSTED FOR MOCK-UP PURPOSES. THIS SHALL BE DONE AT NO COST TO THE OWNER.

10. SUBMIT MANUFACTURERS CERTIFICATION THAT LIGHTING FIXTURES COMPLY WITH THE REQUIREMENTS OF ALL ELECTRIC CODE AUTHORITIES HAVING JURISDICTION AND THAT BALLASTS AND TRANSFORMERS FOR DISCHARGE TYPE LAMPS COMPLY WITH THE LATEST C.B.M. SPECIFICATIONS.

11. SUBMIT PHOTOMETRIC DATA, ESTABLISHED BY AN INDEPENDENT TESTING LABORATORY, IN ACCORDANCE WITH INSTRUCTIONS ISSUED BY THE ARCHITECT.

H. PANELBOARD (CIRCUIT BREAKER)

1. PANELBOARD SHALL BE OF THE ENCLOSED TYPE, FLUSH OR SURFACE MOUNTED AS INDICATED IN SCHEDULE. IN STEEL CABINETS - CODE GAUGE, WITH STEEL TRIM, CONCEALED HINGES, DOORS AND FLUSH TYPE LOCK. ALL LOCKS SHALL BE KEYED ALIKE.

2. ALL BUSSES, INCLUDING NEUTRAL BUS, SHALL BE MINIMUM 98 PERCENT CONDUCTIVITY, HARD-DRAWN COPPER, SILVER OR TIN PLATED JOINTS AND SIZED ON THE BASIS OF 1,000 AMPERES PER SQUARE INCH CROSS-SECTIONAL AREA. BUSSES SHALL BE ARRANGED FOR SEQUENCE PHASING.

3. GROUND BUS SHALL BE MINIMUM 25% OF PHASE CAPACITY. ISOLATION GROUND BUS SHALL BE SIZED FOR 100% OF PHASE CAPACITY. NEUTRAL BUS SHALL BE SIZED 200% WHEN USED WITH A "K" RATED TRANSFORMER.

4. PANELBOARDS SHALL BE EQUIPPED WITH BOLT-ON MOLDED CASE CIRCUIT BREAKERS OF THE TYPE, NUMBER OF POLES, TRIP SIZES AS INDICATED ON SCHEDULES. INTERRUPTING CAPACITY SHALL BE BUILDING STANDARD OR BETTER.

5. CABINET SHALL BE SUFFICIENT SIZE TO ALLOW A GUTTER SPACE OF AT LEAST SIX INCHES ON SIDE TOP AND BOTTOM AND SHALL BE CONSTRUCTED OF CODE GAUGE SHEET STEEL, GALVANIZED FINISHED ELECTRIC GRAY. UNLESS OTHERWISE NOTED.

6. DOORS AND TRIM SHALL BE ONE PIECE SO DESIGNED THAT DOORS WILL OPEN 180 DEGREES. DOORS SHALL BE FASTENED TO TRIMS WITH SEMI-CONCEALED 5 KNUCKLE STEEL WITH NON-FERROUS PINS. TRIMS SHALL BE FASTENED TO BACK BOXES BY MEANS OF SCREWS.

7. PANELS SHALL BE PROVIDED WITH:

   a. 10% LOCKING TABS (MINIMUM (4) PER PANEL. UNUSED TABS SHALL BE TURNED OVER TO THE OWNER.

   b. PROVIDE TIE HANDLES ON ALL MULTI-WIRE BRANCH CIRCUITS (2 AND 2 POLE) AS PER THE DESIRED GROUPING.

   c. GFI BREAKERS IN LIEU OF GFI DEVICES WHERE GFI DEVICES ARE REQUIRED.

   d. ARC FAULT CIRCUIT BREAKERS WHERE REQUIRED.

   e. TYPE HACR RATED BREAKERS TO SERVE MOTOR LOADS AND HVAC EQUIPMENT.

   f. BREAKERS RATED TO MATCH AIC RATING OF DISTRIBUTION SYSTEM.

8. A CIRCUIT DIRECTORY WITH METAL FRAMES AND GLASSINE PAGE SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. UPON COMPLETION OF THE PROJECT, THE DIRECTORIES SHALL BE TYPEWRITTEN, INDICATING THE LOCATION AND SERVICE CONTROLLED BY EACH CIRCUIT. DIRECTORIES TO BE COMPLETELY FILLED IN TO CONFORM TO NEW FINAL ARRANGEMENT OF CIRCUITS.

9. LOADS ON PHASE LEGS OF ALL NEW PANELS SHALL BE BALANCED AT SUPPLY POINT TO WITHIN 10 %. ANY PANEL FOUND WITH UNBALANCED LOADS SHALL HAVE ITS CIRCUITS REARRANGED AS REQUIRED TO BALANCE PHASE LEGS.

J. GROUNDING

1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED TO PROVIDE AN ELECTRICALLY GROUNDING PATH TO THE GROUNDING ELECTRODE IN A CODE APPROVED MANNER.

2. METAL RACEWAYS, METAL ENCLOSURES OF ELECTRICAL DEVICES AND EQUIPMENT, LIGHTING FIXTURES AND OTHER EQUIPMENT SHALL BE COMPLETELY GROUNDED.

3. PROPER HARDWARE REQUIRED FOR COMPLETE GROUNDING SYSTEM SHALL BE INSTALLED BY THE CONTRACTOR. USE EXOTHERMIC WELDING PROCESS FOR INACCESSIBLE CONNECTIONS.

4. USE AN INTERNAL BONDING CONDUCTOR WHERE FLEXIBLE METALLIC CONDUITS ARE INSTALLED.

5. GROUNDING CONDUCTOR SHALL BE RUN WITH THE CIRCUIT CONDUCTORS AND TERMINATED TO AN APPROVED GROUNDING TERMINAL.

K. NAMEPLATES.

1. ALL NEW ELECTRICAL EQUIPMENT AND DISCONNECT SWITCHES SHALL BE PROVIDED WITH NAMEPLATES TO MATCH BUILDING STANDARDS OR AS APPROVED BY THE ENGINEER/ ARCHITECT.

2. PROVIDE LABELS AT LIGHTING FIXTURES AND RECEPTACLES TO MATCH CIRCUITRY. OBTAIN ARCHITECT APPROVAL FOR SUBSTITUTION.

L. TELEPHONE/DATA COMMUNICATIONS SYSTEM

1. ELECTRICAL CONTRACTOR SHALL PROVIDE TELEPHONE/DATA/COMMUNICATIONS OUTLET BOXES WITHOUT COVERPLATES. ALL WALL MOUNTED OUTLET BOXES SHALL BE 2"x4"x 2 1/2"d with CONDUIT TO CEILING.COVER PLATES FOR EACH TYPE OF DEVICE TO BE PROVIDED BY OTHERS.

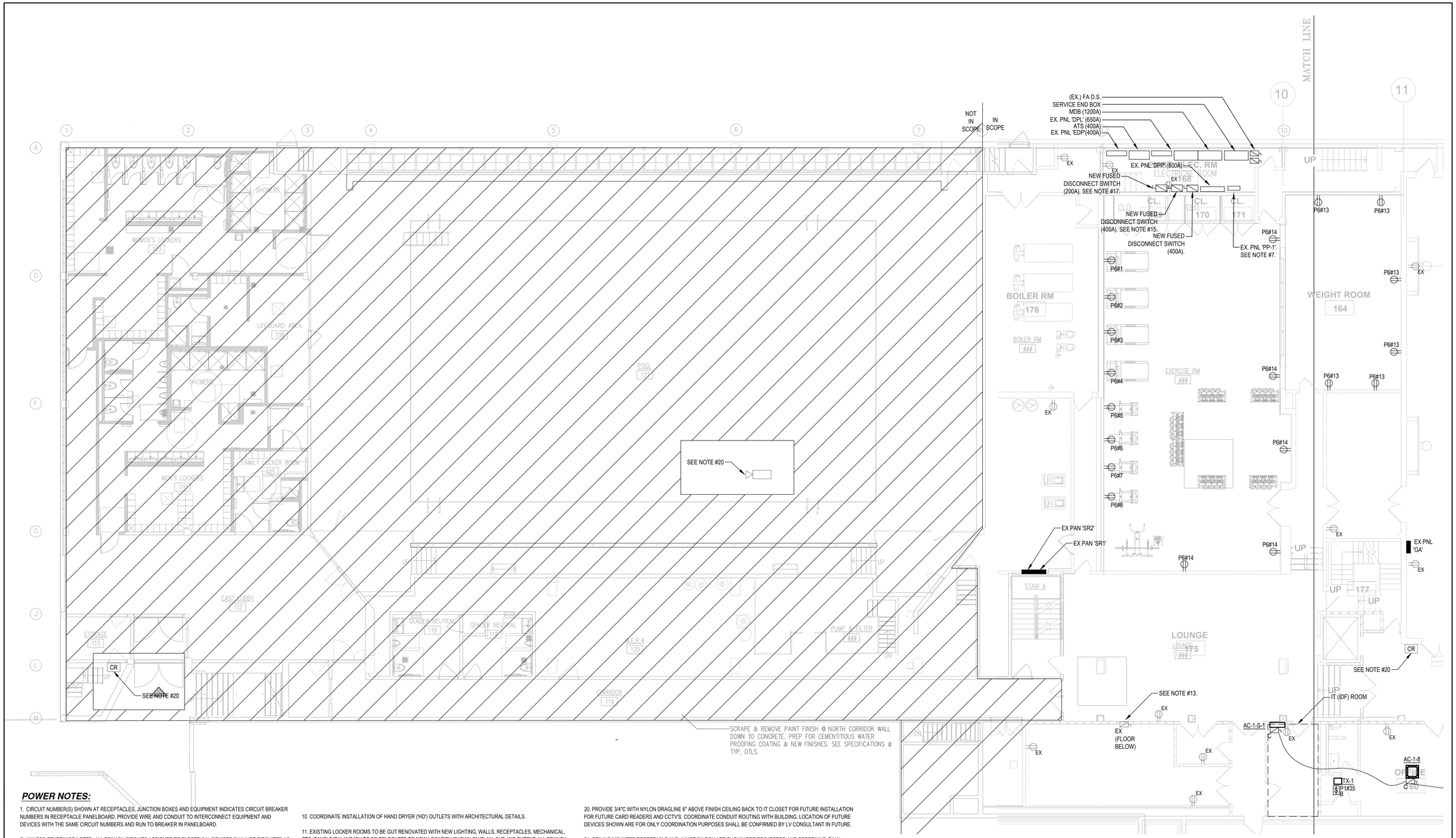
2. ELECTRICAL CONTRACTOR SHALL PROVIDE EMPTY CONDUIT FROM ALL DATA COMMUNICATIONS OUTLET BOXES TO 6" ABOVE HUNG CEILING VIA VERTICAL STUB-UP IN WALLS. (PROVIDE NON-FIRE-THRU OUTLETS AND/OR CHASING INTO FLOOR SLAB WHERE REQUIRED). CONDUIT SHALL BE 1" MINIMUM OR AS INDICATED ON CONTRACT DRAWINGS.

3. WHERE THERE IS NO ACCESSIBLE HUNG CEILINGS, CONDUIT SHALL BE PROVIDED TO THE NEAREST ACCESSIBLE CEILINGS AREA OR THROUGH OUT TO ITS ORIGINATION OR FINAL TERMINATION POINT OF SERVICE. DRAG LINES MAY BE SUBSTITUTED AT INTERVALS WITH ACCESS PANELS IN SHEET ROCK CEILINGS IF APPROVED BY THE ARCHITECT.

4. TELEPHONE/DATA COMMUNICATIONS CABLING SHALL BE PROVIDED BY THE OWNER VENDOR OR AS INDICATED OR INSTRUCTED BY THE GENERAL CONTRACTOR.

5. PROVIDE A DRAG LINE IN EACH EMPTY CONDUIT AND LABEL BOTH ENDS.

6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT SIZES FOR TELEPHONE/ DATA WIRING WITH TH




## POWER NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT BREAKER NUMBERS IN RECEPTACLE PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH THE SAME CIRCUIT NUMBERS AND RUN TO BREAKER IN PANELBOARD.

2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- EXISTING PANEL 'GL' (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'EA' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'MC-1' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MC-2' (120/208V) CIRCUIT #2
   - P5#2 - NEW PANEL 'MB' (120/208V) CIRCUIT #2
   - P6#2 - EXISTING PANEL 'PP-1' (120/208V) CIRCUIT #2

CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN / AFFECTED BY NEW CONSTRUCTION WHERE REQUIRE TO MAINTAIN CONTINUITY.

3. BRANCH CIRCUIT RACEWAYS SERVING MOTOR LOADS, PANTRY EQUIPMENT, AND GROUND FAULT INTERRUPTER RECEPTACLES SHALL BE PROVIDED WITH A GROUND CONDUCTOR.

4. RECEPTACLE/POWER CIRCUIT RACEWAY SHALL BE INDEPENDENT FROM LIGHTING CIRCUIT WIRING/RACEWAYS AND ALL OTHER SYSTEM WIRING/RACEWAYS.

7. EXISTING PANEL IN MAIN ELEC ROOM TO REMAIN TO FEED EXERCISE ROOM LIGHTING AND POWER. PROVIDE NEW BREAKERS AS REQUIRED. COORDINATE WITH PANEL SCHEDULE.

8. CONTRACTOR TO FIELD VERIFY POWER CONNECTIONS OF ALL EQUIPMENT, DEVICES AND LIGHTING TO REMAIN REQUIRING POWER FEEDS. RE-FEED ALL NECESSARY CIRCUITS TO NEW AND RELOCATED PANELS.

9. CONTRACTOR TO FIELD VERIFY RATINGS AND CONDITIONS OF ALL ELECTRICAL FEEDERS. PROVIDE ADD-ALT FOR ALL MAIN FEEDERS IN THE EVENT THEY APPEAR TO BE DESTROYED BEYOND REPAIR UPON INSPECTION DURING INSPECTION.

10. COORDINATE INSTALLATION OF HAND DRYER ('HD') OUTLETS WITH ARCHITECTURAL DETAILS.

11. EXISTING LOCKER ROOMS TO BE GUT RENOVATED WITH NEW LIGHTING, WALLS, RECEPTACLES, MECHANICAL, ETC. PANELS 'EA' AND 'GL' TO BE RELOCATED TO NEW LOCATION SHOWN ON PLAN. CUT AND EXTEND ALL BRANCH CIRCUITS SERVING EXISTING TO REMAIN RECEPTACLES/EQUIPMENT.

12. EXISTING OFFICES IN MAIN CORRIDOR TO BE RENOVATED. EXISTING OUTLETS TO REMAIN.

13. DECOMMISSION AND REMOVE EXISTING DISCONNECT IN CELLAR LEVEL. REMOVE ALL EXPOSED CABLING AND SEAL OPEN BACKBOX.

14. CONTRACTOR TO PROVIDE WALL MOUNTED 'CHARGING STATION' (B.O.D. KWIKBOOST). SUBMIT FOR APPROVAL FROM ARCHITECT AND OWNERSHIP.

15. CONTRACTOR TO PROVIDE NEW DISCONNECT SWITCH (400A) FOR NEW MECHANICAL UNIT RTU-1 ON LOWER WEST ROOF. REFER TO SINGLE LINE FOR MORE INFORMATION.

16. COORDINATE POINTS OF CONNECTION AND ELECTRICAL REQUIREMENTS FOR FIXTURES WITHIN BATHROOMS WITH APPROVED FIXTURE PRODUCT SUBMITTALS.

17. CONTRACTOR TO PROVIDE NEW DISCONNECT SWITCH (200A) FOR NEW MECHANICAL UNIT DOAS-2 ON LOWER WEST ROOF. REFER TO SINGLE LINE FOR MORE INFORMATION.

18. FINAL LOCATIONS OF DATA OUTLETS SHALL BE COORDINATED WITH ARCHITECT/PROGRAM MANAGEMENT.

19. LV CONSULTANT / CONTRACTOR SHALL COORDINATE WITH IT DIRECTOR FOR ALL REQUIRED CONNECTIONS FOR TV MONITORS. EXACT HEIGHT OF RECEPTACLES WITH ARCHITECT PRIOR TO ROUGH-IN. TV SPECS FROM RIOC IT DIRECTOR AS FOLLOWS: INTERIOR TV SPEC - SONY X80H 85 INCH AND EXTERIOR TV SPEC - FURRION AURORA - 43 INCH MODEL FDUF43CBR.

20. PROVIDE 3/4"C WITH NYLON DRAGLINE 6" ABOVE FINISH CEILING BACK TO IT CLOSET FOR FUTURE INSTALLATION FOR FUTURE CARD READERS AND CCTV'S. COORDINATE CONDUIT ROUTING WITH BUILDING. LOCATION OF FUTURE DEVICES SHOWN ARE FOR ONLY COORDINATION PURPOSES SHALL BE CONFIRMED BY LV CONSULTANT IN FUTURE.

21. CEILING MOUNTED RECEPTACLE AND JUNCTION BOX ARE SHOWN FOR PROJECTOR AND SCREENING. FINAL CONNECTION TYPE (RECEPTACLE OR HARD-WIRED CONNECTION) FOR PROJECTOR AND SCREENING SHALL BE COORDINATED PRIOR TO ROUGH-IN.

22. PROVIDE BLANK PLATE TO EXISTING RECEPTACLES (LOCATED ON NORTHERN WALL OF GYM) BASED ON NEW GYMNASIUM FLOORING SYSTEM. PROPERLY CAP EXISTING WIRING AS NECESSARY PRIOR TO INSTALLING BLANK PLATE.

23. PROVIDE 3/4"C WITH NYLON DRAGLINE 6" ABOVE FINISH CEILING BACK TO IT CLOSET FOR FUTURE INSTALLATION FOR HANDICAP BUTTON. COORDINATE CONDUIT ROUTING WITH BUILDING. COORDINATE DOOR HARDWARE REQUIREMENTS WITH ARCHITECT.

## 1 E-100.00 ELECTRICAL FIRST FLOOR EAST PLAN

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

N

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

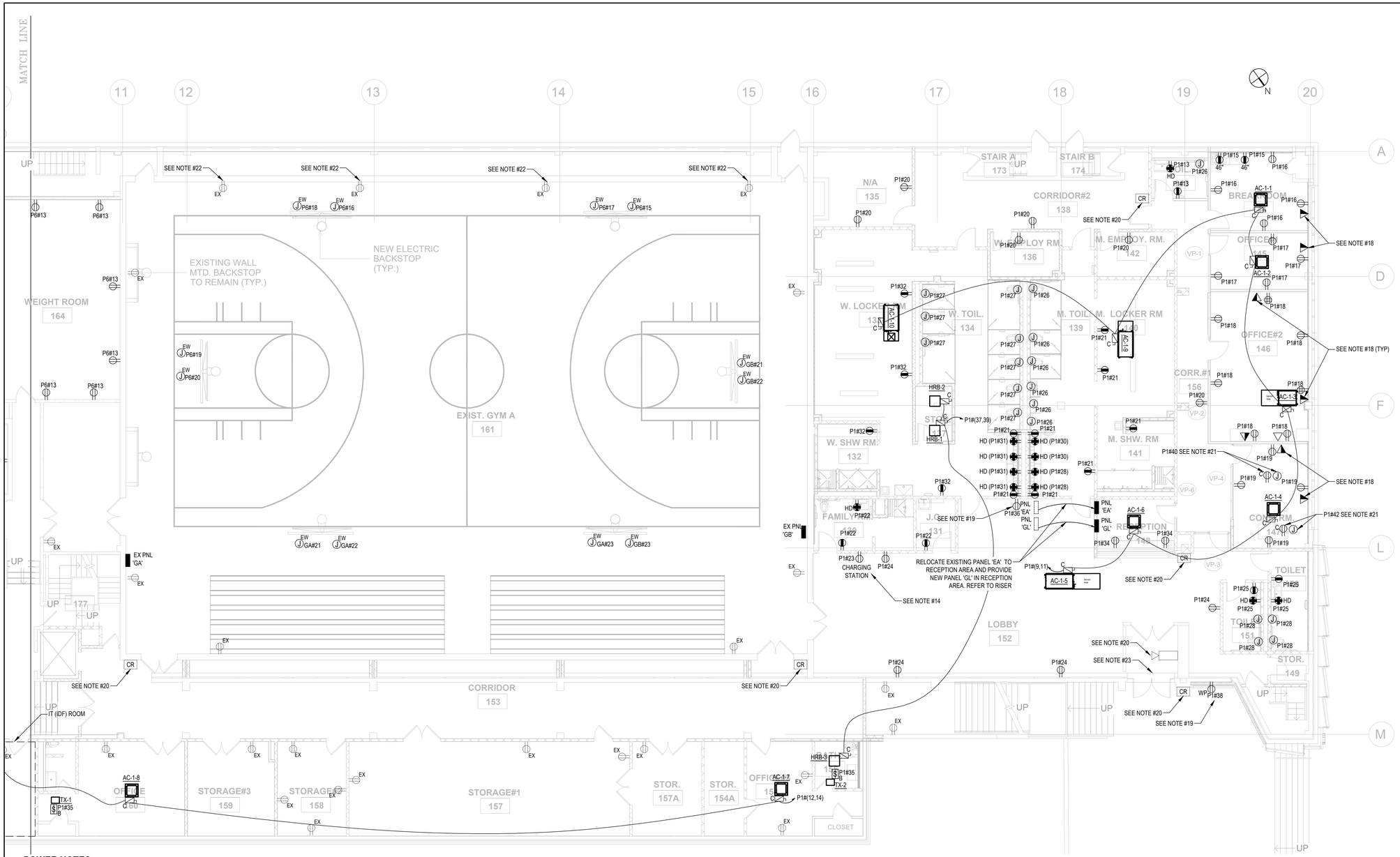
CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ELECTRICAL FIRST FLOOR EAST PLAN

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | E-100.00 |
| | DRAWN BY D.M. | 3 OF 15 |

NYC DOB Number




## POWER NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT BREAKER NUMBERS IN RECEPTACLE PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH THE SAME CIRCUIT NUMBERS AND RUN TO BREAKER IN PANELBOARD.

2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- EXISTING PANEL 'GL' (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'EA' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'MC-1' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MC-2' (120/208V) CIRCUIT #2
   - P5#2 - NEW PANEL 'MB' (120/208V) CIRCUIT #2
   - P6#2 - EXISTING PANEL 'PP-1' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN / AFFECTED BY NEW CONSTRUCTION WHERE REQUIRE TO MAINTAIN CONTINUITY.

3. BRANCH CIRCUIT RACEWAYS SERVING MOTOR LOADS, PANTRY EQUIPMENT, AND GROUND FAULT INTERRUPTER RECEPTACLES SHALL BE PROVIDED WITH A GROUND CONDUCTOR.

4. RECEPTACLE/POWER CIRCUIT RACEWAY SHALL BE INDEPENDENT FROM LIGHTING CIRCUIT WIRING/RACEWAYS AND ALL OTHER SYSTEM WIRING/RACEWAYS.

7. EXISTING PANEL IN MAIN ELEC ROOM TO REMAIN TO FEED EXERCISE ROOM LIGHTING AND POWER. PROVIDE NEW BREAKERS AS REQUIRED. COORDINATE WITH PANEL SCHEDULE.

8. CONTRACTOR TO FIELD VERIFY POWER CONNECTIONS OF ALL EQUIPMENT, DEVICES AND LIGHTING TO REMAIN REQUIRING POWER FEEDS. RE-FEED ALL NECESSARY CIRCUITS TO NEW AND RELOCATED PANELS.

9. CONTRACTOR TO FIELD VERIFY RATINGS AND CONDITIONS OF ALL ELECTRICAL FEEDERS. PROVIDE ADD-ALT FOR ALL MAIN FEEDERS IN THE EVENT THEY APPEAR TO BE DESTROYED BEYOND REPAIR UPON INSPECTION DURING INSPECTION.

10. COORDINATE INSTALLATION OF HAND DRYER ('HD') OUTLETS WITH ARCHITECTURAL DETAILS.

11. EXISTING LOCKER ROOMS TO BE GUT RENOVATED WITH NEW LIGHTING, WALLS, RECEPTACLES, MECHANICAL, ETC. PANELS 'EA' AND 'GL' TO BE RELOCATED TO NEW LOCATION SHOWN ON PLAN. CUT AND EXTEND ALL BRANCH CIRCUITS SERVING EXISTING TO REMAIN RECEPTACLES/EQUIPMENT.

12. EXISTING OFFICES IN MAIN CORRIDOR TO BE RENOVATED. EXISTING OUTLETS TO REMAIN.

13. DECOMMISSION AND REMOVE EXISTING DISCONNECT IN CELLAR LEVEL. REMOVE ALL EXPOSED CABLING AND SEAL OPEN BACKBOX.

14. CONTRACTOR TO PROVIDE WALL MOUNTED 'CHARGING STATION' (B.O.D. KWIKBOOST). SUBMIT FOR APPROVAL FROM ARCHITECT AND OWNERSHIP.

15. CONTRACTOR TO PROVIDE NEW DISCONNECT SWITCH (400A) FOR NEW MECHANICAL UNIT RTU-1 ON LOWER WEST ROOF. REFER TO SINGLE LINE FOR MORE INFORMATION.

16. COORDINATE POINTS OF CONNECTION AND ELECTRICAL REQUIREMENTS FOR FIXTURES WITHIN BATHROOMS WITH APPROVED FIXTURE PRODUCT SUBMITTALS.

17. CONTRACTOR TO PROVIDE NEW DISCONNECT SWITCH (200A) FOR NEW MECHANICAL UNIT DOAS-2 ON LOWER WEST ROOF. REFER TO SINGLE LINE FOR MORE INFORMATION.

18. FINAL LOCATIONS OF DATA OUTLETS SHALL BE COORDINATED WITH ARCHITECT/PROGRAM MANAGEMENT.

19. LV CONSULTANT / CONTRACTOR SHALL COORDINATE WITH IT DIRECTOR FOR ALL REQUIRED CONNECTIONS FOR TV MONITORS. EXACT HEIGHT OF RECEPTACLES WITH ARCHITECT PRIOR TO ROUGH-IN. TV SPECS FROM RIOC IT DIRECTOR AS FOLLOWS: INTERIOR TV SPEC - SONY X800H 85 INCH AND EXTERIOR TV SPEC - FURRION AURORA - 43 INCH MODEL FDUF43CBR.

20. PROVIDE 3/4"C WITH NYLON DRAGLINE 6" ABOVE FINISH CEILING BACK TO IT CLOSET FOR FUTURE INSTALLATION FOR FUTURE CARD READERS AND CCTV'S. COORDINATE CONDUIT ROUTING WITH BUILDING. LOCATION OF FUTURE DEVICES SHOWN ARE FOR ONLY COORDINATION PURPOSES SHALL BE CONFIRMED BY LV CONSULTANT IN FUTURE.

21. CEILING MOUNTED RECEPTACLE AND JUNCTION BOX ARE SHOWN FOR PROJECTOR AND SCREENING. FINAL CONNECTION TYPE (RECEPTACLE OR HARD-WIRED CONNECTION) FOR PROJECTOR AND SCREENING SHALL BE COORDINATED PRIOR TO ROUGH-IN.

22. PROVIDE BLANK PLATE TO EXISTING RECEPTACLES (LOCATED ON NORTHERN WALL OF GYM) BASED ON NEW GYMNASIUM FLOORING SYSTEM. PROPERLY CAP EXISTING WIRING AS NECESSARY PRIOR TO INSTALLING BLANK PLATE.

23. PROVIDE 3/4"C WITH NYLON DRAGLINE 6" ABOVE FINISH CEILING BACK TO IT CLOSET FOR FUTURE INSTALLATION FOR HANDICAP BUTTON. COORDINATE CONDUIT ROUTING WITH BUILDING. COORDINATE DOOR HARDWARE REQUIREMENTS WITH ARCHITECT.

## 1 E-101.00 ELECTRICAL FIRST FLOOR WEST PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

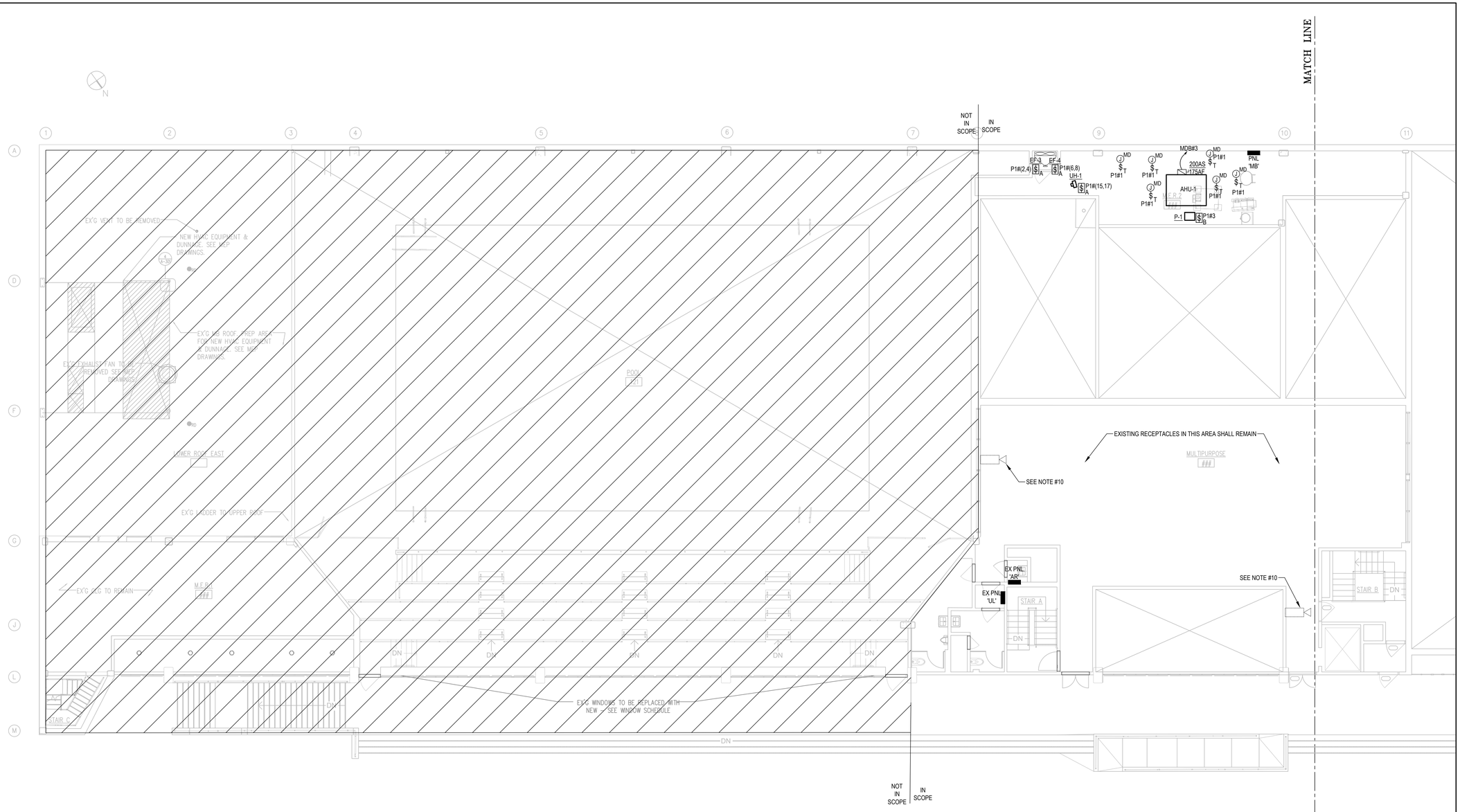
CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING
ELECTRICAL FIRST FLOOR WEST PLAN

| | | |
|---|---|---|
| SEAL & SIGNATURE | DATE | 06.10.2019 |
| | JOB NUMBER | 19010 |
| | DWG. No. | E-101.00 |
| | DRAWN BY D.M. | 4 OF 15 |

NYC DOB Number




## 1 E-102.00 ELECTRICAL SECOND FLOOR EAST- WEST PLAN

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

### *POWER NOTES:*

1. CIRCUIT NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT BREAKER NUMBERS IN RECEPTACLE PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH THE SAME CIRCUIT NUMBERS AND RUN TO BREAKER IN PANELBOARD.

2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- NEW PANEL 'MB' (120/208V) CIRCUIT #2 (PANEL LOCATED IN MER #2)
   - P2#2- NEW PANEL 'MC-1' (120/208V) CIRCUIT #2
   - P3#2- NEW PANEL 'MC-2' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.

3. BRANCH CIRCUIT RACEWAYS SERVING MOTOR LOADS, PANTRY EQUIPMENT, AND GROUND FAULT INTERRUPTER RECEPTACLES SHALL BE PROVIDED WITH A GROUND CONDUCTOR.

4. RECEPTACLE/POWER CIRCUIT RACEWAY SHALL BE INDEPENDENT FROM LIGHTING CIRCUIT WIRING/RACEWAYS AND ALL OTHER SYSTEM WIRING/RACEWAYS.

7. ALL ELECTRICAL INFRASTRUCTURE AND DEVICES EXISTING TO REMAIN WITHIN POOL AREA. ALL FEEDERS AND EQUIPMENT TO TO BE TRACED BACK TO ELECTRICAL SERVICE ROOM AND MAINTAINED THROUGHOUT CONSTRUCTION.

8. CONTRACTOR TO FIELD VERIFY POWER CONNECTIONS OF ALL EQUIPMENT, DEVICES AND LIGHTING TO REMAIN REQUIRING POWER FEEDS. RE-FEED ALL NECESSARY CIRCUITS TO NEW AND RELOCATED PANELS.

9. CONTRACTOR TO FIELD VERIFY RATINGS AND CONDITIONS OF ALL ELECTRICAL FEEDERS. PROVIDE ADD-ALT FOR ALL MAIN FEEDERS IN THE EVENT THEY APPEAR TO BE DESTROYED BEYOND REPAIR UPON INSPECTION DURING INSPECTION.

10. PROVIDE 3/4"C WITH NYLON DRAGLINE 6" ABOVE FINISH CEILING BACK TO IT CLOSET LOCATED ON 1ST FLOOR FOR FUTURE INSTALLATION FOR FUTURE CARDREADERS AND CCTVS. COORDINATE CONDUIT ROUTING WITH BUILDING. LOCATION OF FUTURE DEVICES SHOWN ARE FOR ONLY COORDINATION PURPOSES SHALL BE CONFIRMED BY LV CONSULTANT IN FUTURE.

11. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF EQUIPMENT.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

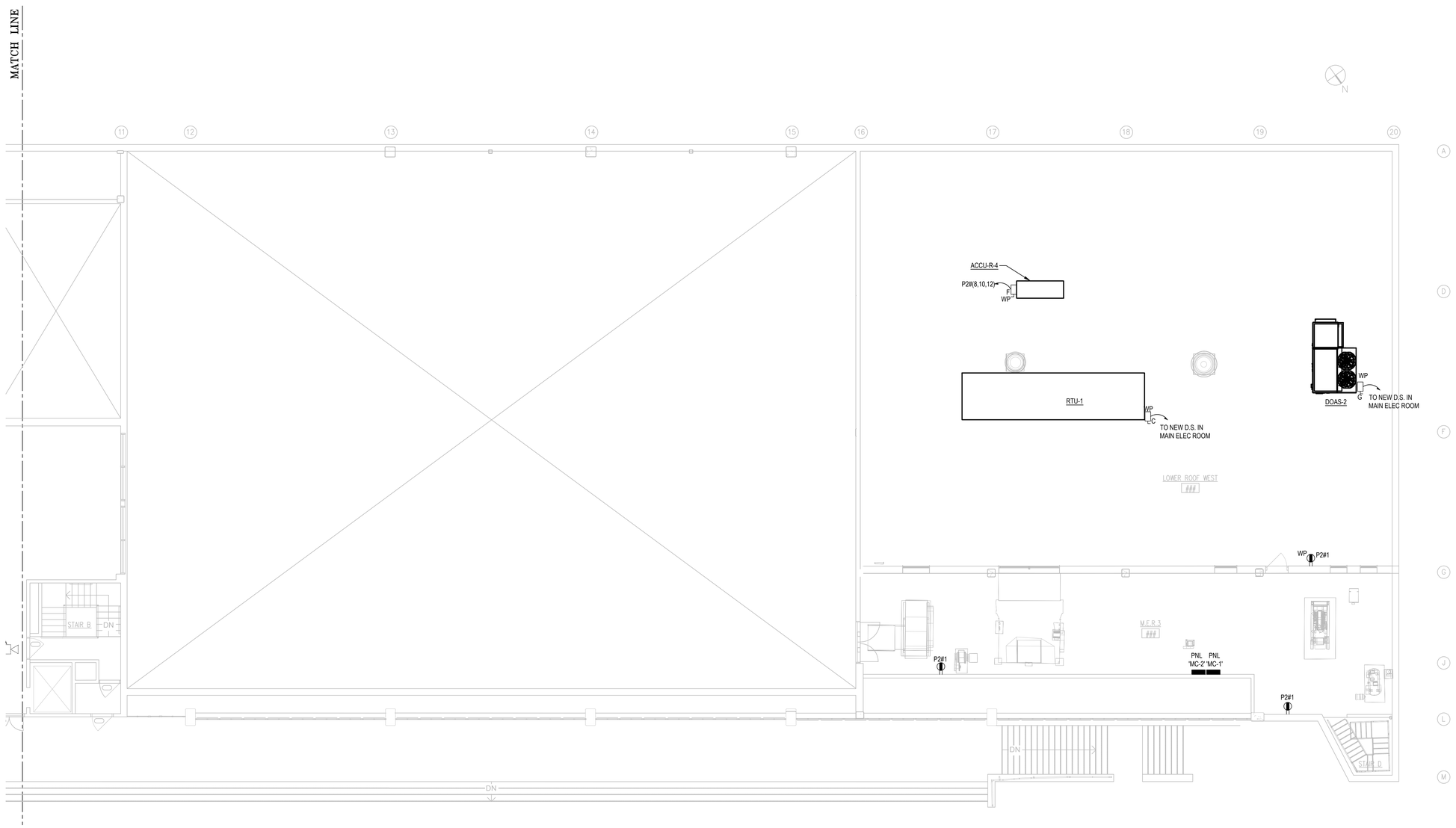
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ELECTRICAL SECOND FLOOR EAST- WEST PLAN

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | E-102.00 |
| DRAWN BY | D.M. |
| | 5 OF 15 |

NYC DOB Number




## POWER NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT BREAKER NUMBERS IN RECEPTACLE PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH THE SAME CIRCUIT NUMBERS AND RUN TO BREAKER IN PANELBOARD.

2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- NEW PANEL 'MB' (120/208V) CIRCUIT #2 (PANEL LOCATED IN MER #2)
   - P2#2- NEW PANEL 'MC-1' (120/208V) CIRCUIT #2
   - P3#2- NEW PANEL 'MC-2' (120/208V) CIRCUIT #2

CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.

3. BRANCH CIRCUIT RACEWAYS SERVING MOTOR LOADS, PANTRY EQUIPMENT, AND GROUND FAULT INTERRUPTER RECEPTACLES SHALL BE PROVIDED WITH A GROUND CONDUCTOR.

4. RECEPTACLE/POWER CIRCUIT RACEWAY SHALL BE INDEPENDENT FROM LIGHTING CIRCUIT WIRING/RACEWAYS AND ALL OTHER SYSTEM WIRING/RACEWAYS.

7. ALL ELECTRICAL INFRASTRUCTURE AND DEVICES EXISTING TO REMAIN WITHIN POOL AREA, ALL FEEDERS AND EQUIPMENT TO TO BE TRACED BACK TO ELECTRICAL SERVICE ROOM AND MAINTAINED THROUGHOUT CONSTRUCTION.

8. CONTRACTOR TO FIELD VERIFY POWER CONNECTIONS OF ALL EQUIPMENT, DEVICES AND LIGHTING TO REMAIN REQUIRING POWER FEEDS. RE-FEED ALL NECESSARY CIRCUITS TO NEW AND RELOCATED PANELS.

9. CONTRACTOR TO FIELD VERIFY RATINGS AND CONDITIONS OF ALL ELECTRICAL FEEDERS. PROVIDE ADD-ALT FOR ALL MAIN FEEDERS IN THE EVENT THEY APPEAR TO BE DESTROYED BEYOND REPAIR UPON INSPECTION DURING INSPECTION.

10. PROVIDE 3/4"C WITH NYLON DRAGLINE 6" ABOVE FINISH CEILING BACK TO IT CLOSET LOCATED ON 1ST FLOOR FOR FUTURE INSTALLATION FOR FUTURE CARDREADERS AND CCTVS. COORDINATE CONDUIT ROUTING WITH BUILDING. LOCATION OF FUTURE DEVICES SHOWN ARE FOR ONLY COORDINATION PURPOSES SHALL BE CONFIRMED BY LV CONSULTANT IN FUTURE.

11. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF EQUIPMENT.

## 1 E-103.00 ELECTRICAL SECOND FLOOR WEST PLAN

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

N

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

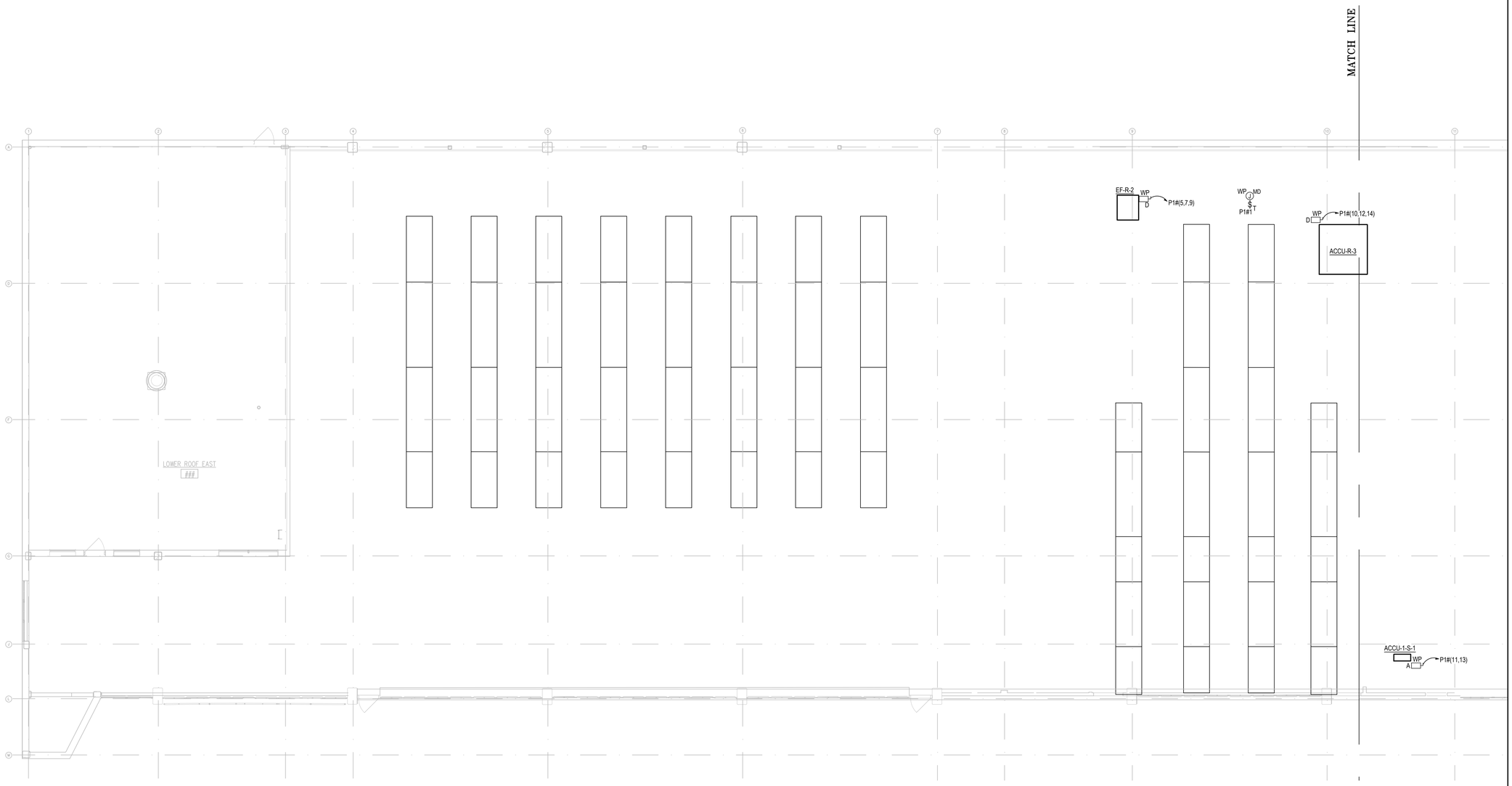
DRAWING

ELECTRICAL SECOND
FLOOR WEST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-103.00
DRAWN BY D.M.
6 OF 15

NYC DOB Number




## POWER NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT BREAKER NUMBERS IN RECEPTACLE PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH THE SAME CIRCUIT NUMBERS AND RUN TO BREAKER IN PANELBOARD.

2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   P1#2- NEW PANEL 'MB' (120/208V) CIRCUIT #2 (PANEL LOCATED IN MER #2)

3. BRANCH CIRCUIT RACEWAYS SERVING MOTOR LOADS, PANTRY EQUIPMENT, AND GROUND FAULT INTERRUPTER RECEPTACLES SHALL BE PROVIDED WITH A GROUND CONDUCTOR.

4. RECEPTACLE/POWER CIRCUIT RACEWAY SHALL BE INDEPENDENT FROM LIGHTING CIRCUIT WIRING/RACEWAYS AND ALL OTHER SYSTEM WIRING/RACEWAYS.

7. ALL ELECTRICAL INFRASTRUCTURE AND DEVICES EXISTING TO REMAIN WITHIN POOL AREA, ALL FEEDERS AND EQUIPMENT TO TO BE TRACED BACK TO ELECTRICAL SERVICE ROOM AND MAINTAINED THROUGHOUT CONSTRUCTION.

8. CONTRACTOR TO FIELD VERIFY POWER CONNECTIONS OF ALL EQUIPMENT, DEVICES AND LIGHTING TO REMAIN REQUIRING POWER FEEDS. RE-FEED ALL NECESSARY CIRCUITS TO NEW PANELS.

9. PROVIDE REQUIRED WEATHERPROOF CONDUITS/FITTINGS/ETC FOR OUTDOOR INSTALLATION.

1 / E-105.00 **ELECTRICAL UPPER ROOF EAST - WEST PLAN**

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

N

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

ARCHITECT

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

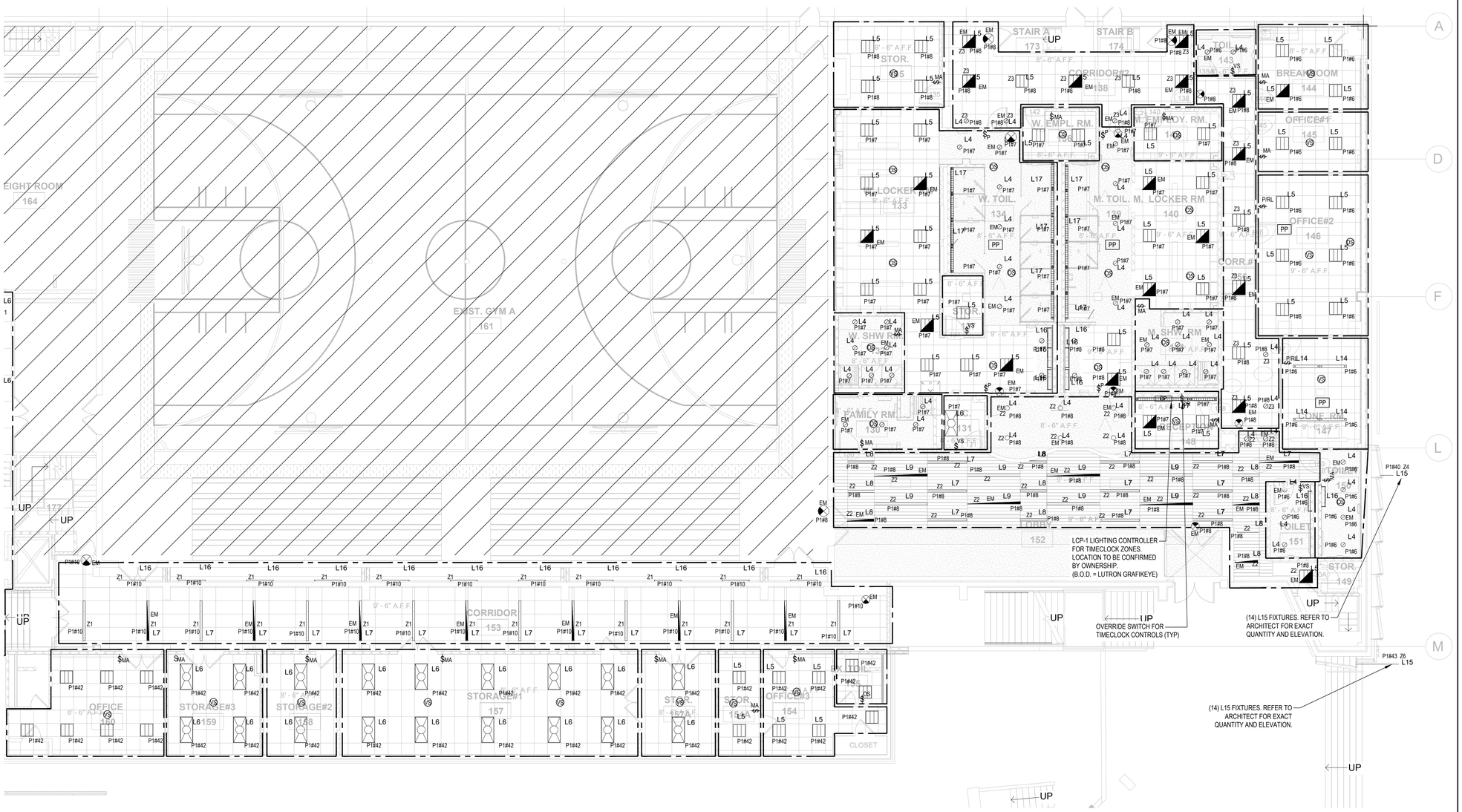
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL UPPER
ROOF EAST - WEST
PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. E-105.00 |
| | DRAWN BY D.M. / 7 OF 15 |

NYC DOB Number




***LIGHTING NOTES:***

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- EXISTING PANEL 'GL' (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'ELK' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'MC SECT 1' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MC SECT 2' (120/208V) CIRCUIT #2
   - P5#2 - NEW PANEL 'MB' (120/208V) CIRCUIT #2
   - P6#2 - EXISTING PANEL 'PP-1' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. FOR BOTH NEW AND REMOVED LIGHT FIXTURE LAYOUT COORDINATE WITH ARCHITECTURAL DRAWINGS/RCP.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR LOBBY, CORRIDOR AND EXERCISE ROOM.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP.
9. EXIT LIGHTS SHALL BE WIRED AHEAD OF TIMECLOCK CONTROLS/ZONES, POW PAK, SWITCHES WHERE SHARING THE SAME CIRCUIT TO BE LIT FOR 24HRS

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| TIMECLOCK | -RECEPTION<br>-CORRIDOR<br>-WEIGHT GYM | -6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL-ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIK EYE CONTROLLER.)<br>- AFTER BUSINESS HOURS, LIGHTING SHALL BE DIMMED TO 50%.<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK FUNCTIONALITY.<br>- TIMECLOCK TO HAVE A MINIMUM 7 DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE.<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| AUTO ON/AUTO OFF | -MEN'S LOCKER ROOM<br>-WOMEN'S LOCKER ROOM<br>-FAMILY LOCKER ROOM | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | -STORAGE<br>-FAMILY LOCKER ROOM<br>-JANITOR'S CLOSET<br>-OFFICES<br>-CONFERENCE ROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>-DAYLIGHTING WHERE INDICATED ON PLAN. |

**1 / E-201.00 LIGHTING FIRST FLOOR WEST PLAN**
**SCALE: 1/8"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

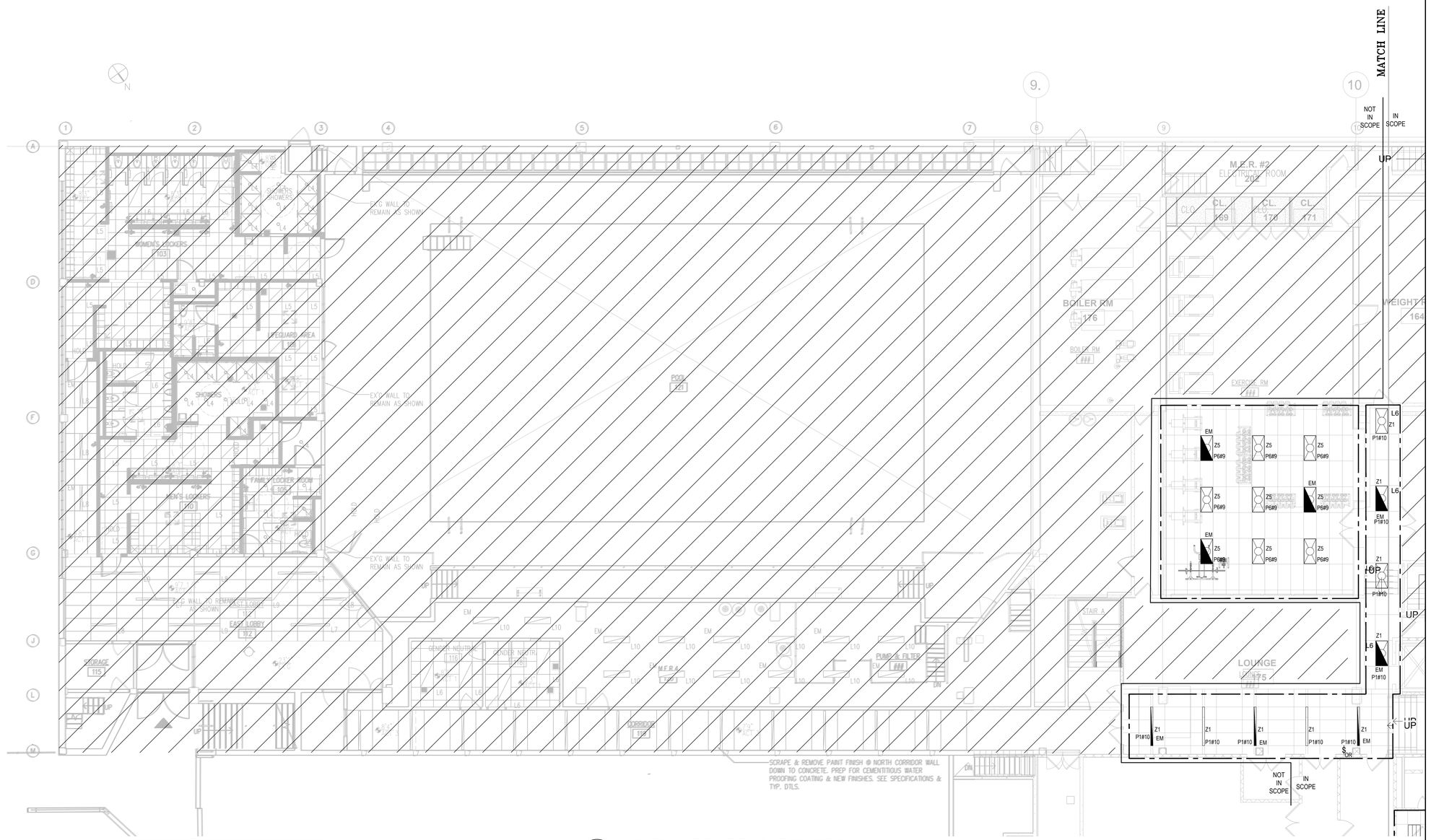
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
LIGHTING FIRST FLOOR WEST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-201.00
DRAWN BY D.M.
8 OF 15

NYC DOB Number




## 1 LIGHTING FIRST FLOOR EAST PLAN
E-202.00 SCALE: 1/8"=1'-0"

### *LIGHTING NOTES:*

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2 - EXISTING PANEL 'GL' (120/208V) CIRCUIT #2
   - P2#2 - EXISTING PANEL 'EA' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'MC SECT 1' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MC SECT 2' (120/208V) CIRCUIT #2
   - P5#2 - NEW PANEL 'MB' (120/208V) CIRCUIT #2
   - P6#2 - EXISTING PANEL 'PP-1' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. FOR BOTH NEW AND REMOVED LIGHT FIXTURE LAYOUT COORDINATE WITH ARCHITECTURAL DRAWINGS/RCP.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR LOBBY, CORRIDOR AND EXERCISE ROOM.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP.
9. EXIT LIGHTS SHALL BE WIRED AHEAD OF TIMECLOCK CONTROLS/ZONES, POW PAK, SWITCHES WHERE SHARING THE SAME CIRCUIT TO BE LIT FOR 24HRS

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| TIMECLOCK | -RECEPTION<br>-CORRIDOR<br>-WEIGHT GYM | -6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL-ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIK EYE CONTROLLER.)<br>- AFTER BUSINESS HOURS, LIGHTING SHALL BE DIMMED TO 50%.<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK-FUNCTIONALITY.<br>-TIMECLOCK TO HAVE A MINIMUM 7-DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE.<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| AUTO ON/AUTO OFF | -MEN'S LOCKER ROOM<br>-WOMEN'S LOCKER ROOM<br>-FAMILY LOCKER ROOM | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | -STORAGE<br>-FAMILY LOCKER ROOM<br>-JANITOR'S CLOSET<br>-OFFICES<br>-CONFERENCE ROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>-DAYLIGHTING WHERE INDICATED ON PLAN. |

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 F: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

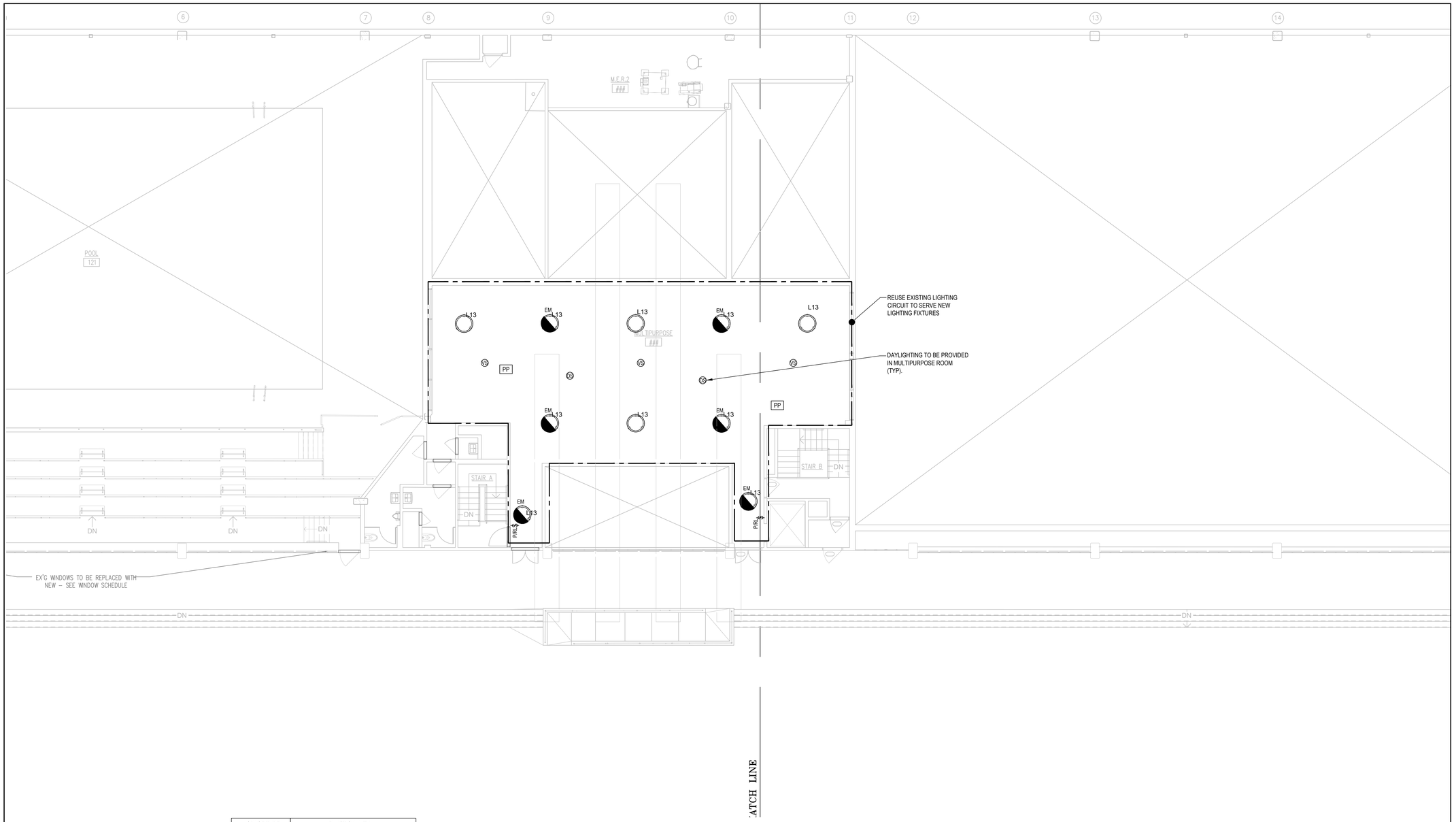
LIGHTING FIRST FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-202.00
DRAWN BY D.M.
9 OF 15

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

NYC DOB Number




## 1 LIGHTING SECOND FLOOR EAST PLAN
E-203.00

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

N

***LIGHTING NOTES:***

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED.
   P1#2- EXISTING PANEL 'PL-1 (120/208V) CIRCUIT #2
   P2#2- EXISTING PANEL 'PL-2' (120/208V) CIRCUIT #2
   P3#2 - NEW PANEL 'EB' (120/208V) CIRCUIT #2
   P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING LIGHTING FIXTURES TO BE REMOVED.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP.

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| MANUAL ON/AUTO OFF | - STUDIO /MULTIPURPOSE | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH<br>- PROVIDE DAYLIGHTING WHERE INDICATED ON PLAN. |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

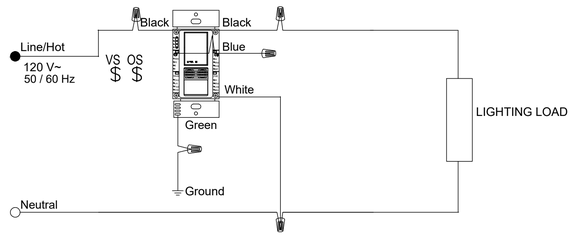
DRAWING
LIGHTING SECOND FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-203.00
DRAWN BY D.M.
10 OF 15

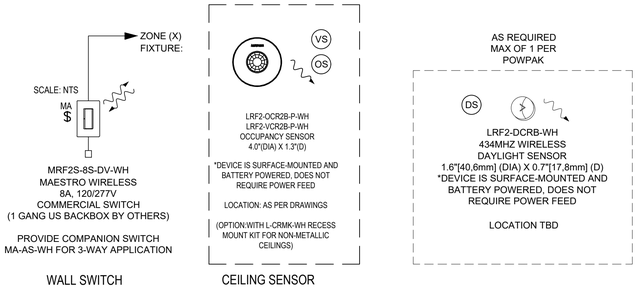
NYC DOB Number

Single Pole Wiring - Single-Circuit (MS-B102)




## 1 LUTRON WALL-MOUNTED OCCUPANCY (SINGLE ROOM CONTROL) (WITH BUILT-IN SENSOR)

SCALE: NTS

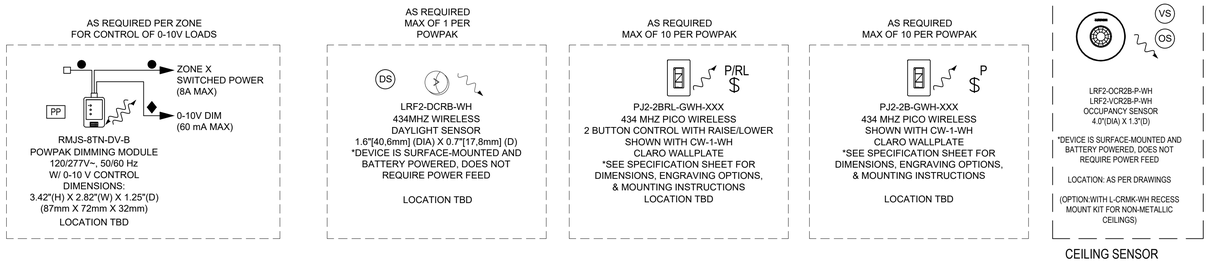



## 2 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) (WITH REMOTE WIRELESS SENSORS)

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.




## 3 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) WITH POWPAK

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.

LIGHT SCHEDULE

| TAG | TYPE | MANUF | MODEL | MOUNT | WATTAGE | LAMP | DIMMING TYPE | NOTES |
|---|---|---|---|---|---|---|---|---|
| L1 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6MS-50-60-FR-45-WET | 25'-0" | - | LED | | NOT USED |
| L2 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-09K-2MS-50-60-FR-WET | 25'-0" | - | LED | | NOT USED |
| L3 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES40S-A1-36K-6MS-50-60-FR-90-WET | 25'-0" | - | LED | | NOT USED |
| L4 | SQUARE DOWNLIGHT | LITHONIA LIGHTING | LDN6SSQ 35/10 LS9WR | RECESSED | 10W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L5 | 2'-0" X 2'-0" RECESSED | DAY-O-LITE | HML-D-SI-35-20-22-G-W-DIM10 | RECESSED | 28W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L6 | 2'-0" X 4'-0" RECESSED | LITHONIA LIGHTING | 2TL4 30L MPL MOLT EZ1 LP835 | RECESSED GRID | 36W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L7 | 6' LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-6-G-W-DIM10 | SGF | 42W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L8 | 4' LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-4-G-W-DIM10 | SGF | 28W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L9 | 8' LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-8-G-W-DIM10 | SGF | 56W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L10 | PENDANT WRAP LIGHT | H.E. WILLIAMS | 39 SERIES 4'-0" PENDANT | VARIES | - | LED | | NOT USED |
| L11 | RETROFIT CAN LIGHT | INTENSE LIGHTING | 6" SS LED REMODEL DOWNLIGHT GEN 4 | RETROFIT EXG FIXTURE | - | LED | | NOT USED |
| L12 | WALL MTD. VANITY LIGHT | ALW | RLP1SM.11MED/90/3500/WH/UNV | 7'-0" AFF | 9.2/FT | LED | 0-10V | |
| L13 | 3'-0" DIAMETER PENDANT RING LIGHT | DAY-O-LITE | COML-24-DP-35-SO-3-ACM-WHITE-DIM10 | PENDANT | 63W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L14 | 4'-0" PENDANT LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-3-PD-W-DIM-10 | PENDANT | 7W/FT | LED | 0-10V | |
| L15 | EXTERIOR FIXTURE | SAYLITE | CWLL96L90W9800LDMV40KSA-E | WALL MTD | 90W | LED | 0-10V | |
| L16 | 4'-0" WALL MTD LED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-LO-3-WM-W-DIM-10 | WALL MTD | 20W | LED | 0-10V | |
| L17 | 8'-0" COVE LIGHT | DAY-O-LITE | JBL-2-35-SO-8-F-W-DIM10 | | 28W | LED | 0-10V | |

***NOTES:***

1. **LIGHTING SCHEDULE IS PROVIDED FOR ENGINEERING PURPOSES TO AID IN THE CIRCUITING AND ELECTRICAL CALCULATIONS. THIS SCHEDULE SHALL NOT BE USED FOR ORDERING OR PRICING PURPOSES. REFER TO ARCHITECT & LIGHTING CONSULTANT DRAWINGS/DOCUMENTS FOR EXACT SPECIFICATION OF ALL FIXTURES.**
2. LIGHTING FIXTURES SHALL BE UL LISTED AND APPROVED FOR INSTALLATION WHERE REQUIRED.
3. CONTRACTOR SHALL COORDINATE WITH ARCHITECT, AND OWNER REQUIREMENTS FOR LIGHTING INSTALLATION. PROVIDE MOUNTING DETAILS, HARDWARE AND DEVICES AS REQUIRED FOR COMPLETE INSTALLATION.
4. FIXTURES WITH INTERNAL OR REMOTE TRANSFORMERS/BALLASTS SHALL BE INSTALLED WITH PROPER VENTILATION PER MANUFACTURER SPECIFICATIONS. COORDINATE WITH ARCHITECT ALL MOUNTING AND ACCESS REQUIREMENTS.
5. SUBMIT MANUFACTURER SHOP DRAWINGS FOR ALL FIXTURES FOR ARCHITECT REVIEW. OBTAIN APPROVAL PRIOR TO ORDERING. PROVIDE MARK-UP OF INSTALLATION FOR OWNER AND ARCHITECT REVIEW WHEN REQUESTED.
6. FOR ALL FIXTURES DESIGNATED WITH HALF SHADE OR EM, CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND PROVIDE FIXTURE WITH BATTERY BALLAST AND WIRE AS EMERGENCY FIXTURE. IN THE EVENT FIXTURE IS NOT AVAILABLE WITH BATTERY BALLAST, CONTRACTOR SHALL RETROFIT FIXTURE WITH BODINE EMERGENCY BALLAST SIMILAR TO BODINE B94C OR PROVIDE AN INDEPENDENT BATTERY BACK UP FIXTURE TO PROVIDE EMERGENCY LIGHTING IN ALL PUBLIC AREAS WHERE EMERGENCY FIXTURE IS INDICATED.
7. ALL LED FIXTURES SHALL BE PROVIDED WITH SAME TYPE DRIVERS TO ALLOW FOR SIMILAR DIMMING. CONTRACTOR SHALL COORDINATE LED DRIVERS AND DIMMER SELECTION WITH LIGHTING MANUFACTURER AND ARCHITECT.
8. ALL LED FIXTURES SHALL BE NEMA 410-2015 RATED.

1. **PROVIDE EMERGENCY BATTERY BACK-UP FOR ALL FIXTURES DESIGNATED WITH 'EM' ON ELECTRICAL LIGHTING PLANS.**
2. **ALL FIXTURE SHALL BE PROVIDED WITH 0-10V DIMMING BALLAST U.O.N**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

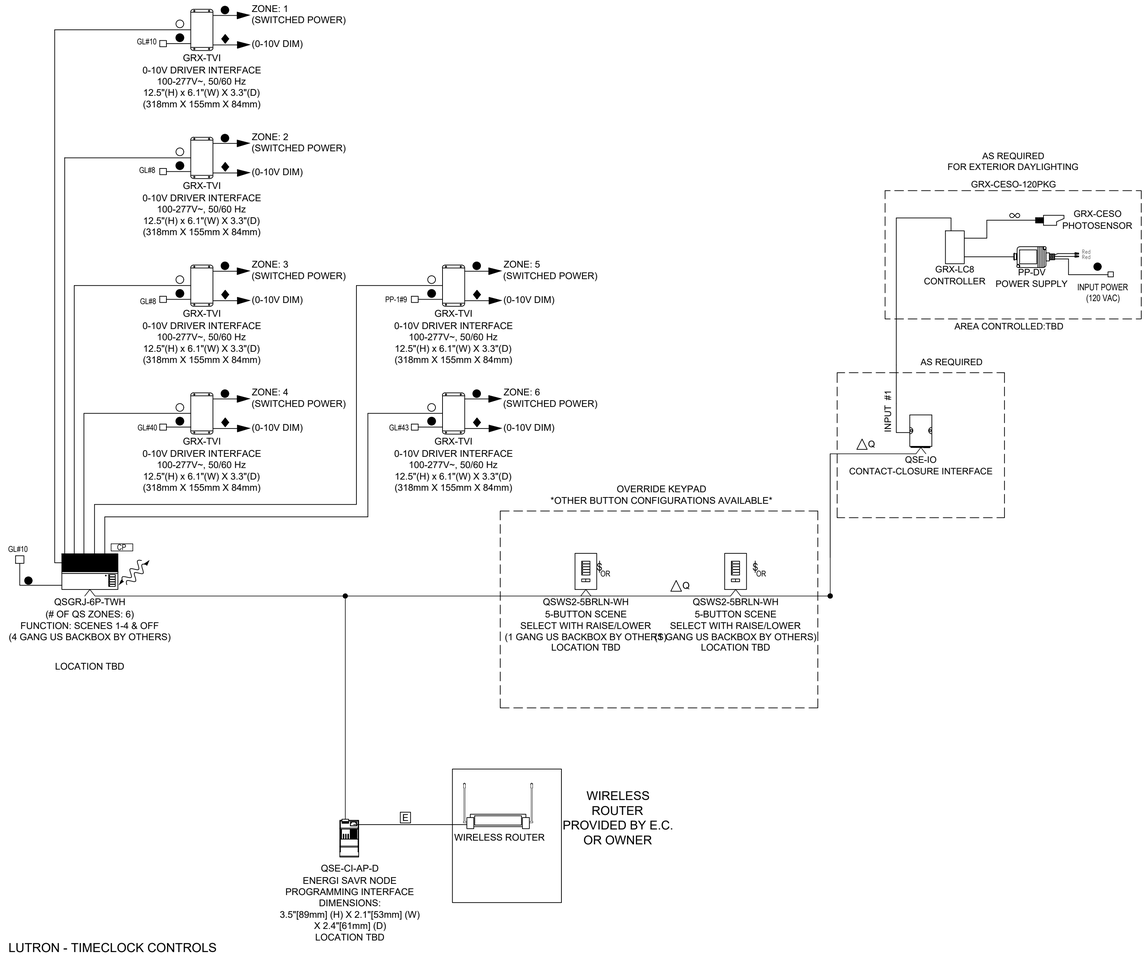
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ELECTRICAL DETAILS - LIGHTING CONTROLS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-300.00
DRAWN BY D.M.
11 OF 15

NYC DOB Number




## WIRING LEGEND:

△Q QS CONTROL LINK (SEE WIRE DESCRIPTION BELOW)

QS WIRING AS REQUIRED BY CONTROL LINK LENGTH
(REFER TO QS SMART PANEL POWER SUPPLY WIRING GUIDE FOR SHADE WIRING NOTES):

| TOTAL CONTROL LINK LENGTH | WIRE GAUGE | AVAILABLE FROM LUTRON IN ONE CABLE: |
|---|---|---|
| LESS THAN 500ft (152.4 m) | POWER (TERMINALS 1&2): 1 PAIR 18 AWG (1.0 mm²) | GRX-CBL-346S (NON-PLENUM) OR GRX-PCBL-346S (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |
| 500ft (152.4 m) TO 2,000ft (610 m)** | POWER (TERMINALS 1&2): 1 PAIR 12 AWG (4.0 mm²) | GRX-CBL-46L (NON-PLENUM) OR GRX-PCBL-46L (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |

*ALTERNATE DATA-ONLY CABLE: USE APPROVED DATA LINK CABLE (22 AWG [0.5 mm²] TWISTED/SHIELDED) FROM BELDEN (MODEL # 9461).

**TOTAL LENGTH OF THE QS LINK MUST NOT EXCEED 2,000 ft (600 m).

□ INPUT POWER (NORMAL)
● 2 #12AWG (4 mm²)
◆ 0-10V SIGNAL: 2 #18AWG (1.0 mm²)
1-WAY RF COMMUNICATION
2-WAY RF COMMUNICATION

## WIRING NOTES:

### QS LINK RULES

*THE FOLLOWING LINK RULES MUST BE OBSERVED FOR PROPER OPERATION:*

- THIS IS A TOPOLOGY-FREE LINK (T-TAP, HOME-RUN, ETC. IS OK); REFER TO TABLE BELOW FOR WIRE RUN LIMITS.
- IF WIRED DIFFERENTLY THAN WHAT IS SHOWN, POWER DRAW UNIT REQUIREMENTS NEED TO BE CONFIRMED; SEE POWER DRAW UNITS (PDUs) SPECIFICATION SHEET INCLUDED IN THIS SUBMITTAL.
- MAXIMUM OF 512 OUTPUTS (BALLASTS, SHADES, CONTACT CLOSURES, ETC).
- MAXIMUM OF 100 OCCUPANCY SENSORS, 100 DAYLIGHT SENSORS/RADIO SHADOW SENSORS AND 100 KEYPADS.
- MAXIMUM OF 100 QS DEVICES (SUCH AS A GRAFIK EYE® QS, SEETOUCH® QS KEYPAD, SMART PANEL POWER SUPPLY [QSPS-10PNL], ESN, OR QS SHADE / DRAPERY DRIVE UNIT). QUANTUM PROCESSOR COUNTS AS 1 DEVICE PER LINK.
- MAXIMUM OF 100 ZONES - SUCH AS A QS SHADE / DRAPERY DRIVE UNIT, OR A LIGHTING ZONE ON A GRAFIK EYE QS (DOES NOT APPLY TO QUANTUM SYSTEMS).
- THE 10 OUTPUTS ON A QSPS-10PNL CANNOT EXCEED A COMBINED LENGTH OF 2,000 ft (600 m).

CONCEPT DRAWING NOTES:
CONTROL SYSTEM DRAWING IS PROVIDED FOR CONCEPTUAL PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION. EXACT EQUIPMENT REQUIREMENTS, INCLUDING LOCATIONS AND QUANTITIES, SHOULD BE VERIFIED IN ACCORDANCE WITH THE MOST UP-TO-DATE LIGHTING/ELECTRICAL REFLECTED CEILING PLANS, LIGHTING FIXTURE SCHEDULES, PANEL SCHEDULES, CONTROL INTENT AND SPECIFICATIONS. SHADE EQUIPMENT SHOULD BE VERIFIED IN ACCORDANCE WITH ARCHITECTURAL PLANS, SPECIFICATIONS AND WINDOW SCHEDULES/DETAILS.

LED DIMMING REQUIRES AN EXACT MATCH BETWEEN THE LED ARRAY, DRIVER AND CONTROL. LUTRON CANNOT GUARANTEE COMPATIBILITY OR PERFORMANCE WITHOUT TESTING THIS COMBINATION.

TO CONFIRM WHAT PRODUCTS LUTRON HAS AVAILABLE OR WHAT INTERFACES MAY BE REQUIRED, CALL 1-877-DIM-LED8 OR CHECK LUTRON'S PRODUCT COMPATIBILITY MATRIX ON-LINE AT WWW.LUTRON.COM/LED.

TO REQUEST THE TESTING OF AN LED PRODUCT BY LUTRON MANUFACTURERS CAN FILL OUT AN LED EVALUATION REQUEST FORM ON-LINE AT WWW.LUTRON.COM/LED OR CONTACT LEDS@LUTRON.COM.

LUTRON CAN GUARANTEE COMPATIBILITY AND PERFORMANCE OF LUTRON HI-LUME LED DRIVERS USED WITH APPROPRIATE LUTRON CONTROLS. PLEASE REFER TO THE SPECIFICATION SUBMITTAL SHEET FOR FURTHER INFORMATION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING 0-10V CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. PRODUCTS FOLLOWING THE IEC STANDARD 60929 ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING PHASE CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. ELV PRODUCTS PROVIDING HIGH END AND LOW END TRIM ADJUSTMENTS OR LUTRON HI-LUME 1% 2-WIRE DRIVERS ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

LUTRON - TIMECLOCK CONTROLS

LCP–1 – (120V) LIGHTING CONTROL RELAY PANEL (WITH TIME CLOCK)

| ZONE # | ZONE DESCRIPTION | FIXTURE TAG | CIRCUIT # | VOLTAGE | LOAD TYPE | DIM (Y/N) | FIXTURE WATTS | QTY. | TOTAL WATTS |
|---|---|---|---|---|---|---|---|---|---|
| Z1 | 1ST FLOOR CORRIDOR 153 | L6 | GL#10 | 120V | LED | Y | 25 | 4 | 100 |
| | | L7 | GL#10 | 120V | LED | Y | 42 | 20 | 840 |
| | | L16 | GL#10 | 120V | LED | Y | 20 | 11 | 220 |
| Z2 | 1ST FLOOR LOBBY | L5 | GL#8 | 120V | LED | Y | 28 | 1 | 28 |
| | | L7 | GL#8 | 120V | LED | Y | 42 | 10 | 420 |
| | | L8 | GL#8 | 120V | LED | Y | 28 | 10 | 280 |
| | | L9 | GL#8 | 120V | LED | Y | 56 | 8 | 448 |
| | | L4 | GL#8 | 120V | LED | Y | 10 | 8 | 80 |
| Z3 | 1ST FLOOR CORRIDOR 138/156 | L4 | GL#8 | 120V | LED | Y | 10 | 5 | 50 |
| | | L5 | GL#8 | 120V | LED | Y | 28 | 12 | 336 |
| Z4 | EXTERIOR | L15 | GL#40 | 120V | LED | Y | 90 | 14 | 1260 |
| Z5 | EXERCISE ROOM | L6 | PP-1#9 | 120V | LED | Y | 25 | 9 | 225 |
| Z6 | EXTERIOR | L15 | GL#43 | 120V | LED | Y | 90 | 14 | 1260 |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ARCHITECT
JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
175 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ELECTRICAL DETAILS -
LIGHTING CONTROLS #2

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-301.00
DRAWN BY D.M.


NYC DOB Number

## (NEW) PANEL SCHEDULE

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | MB | NEW | | EXISTING | | FLOOR: | 2 | COPPER BUS: | 100 A | | | |
| LOCATION: | MER #2 | VOLTAGE (V): | 120 | 208 | | | | A.I.C: | 22KA | | | |
| FEED BY: | N/A | PHASE: | 3 | WIRE: | 4 | POLES: | 24 | NEMA: | 1 | | | |
| MAIN: | 100 A | MCB | MOUNTING: | SURFACE | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | MOTORIZED DAMPERS | A | 360 | 832 | | | | | A | EF-3 | 20/2P | 2 |
| 3 | 20 | P-1 | A | | | 270 | 832 | | | A | 2#12 +1#12G - 3/4"C. | | 4 |
| 5 | 40/3P | EF-R-2 | A | | | | | 2880 | 832 | A | EF-4 | 20/2P | 6 |
| 7 | | 3#8 +1#10G - 3/4"C | A | 2880 | 832 | | | | | A | 2#12 +1#12G - 3/4"C. | | 8 |
| 9 | | | A | | | 2880 | 3240 | | | A | ACCU-R-3 | 40/3P | 10 |
| 11 | 20/2P | ACCU-1-S-1 | A | | | | | 1144 | 3240 | A | 3#8 + 1#10G - 3/4"C | | 12 |
| 13 | | 2#12 +1#12G - 3/4"C. | A | 1144 | 3240 | | | | | A | | | 14 |
| 15 | 20/2P | UH-1 | A | | | 104 | | | | | SPARE | 20 | 16 |
| 17 | | 2#12 +1#12G - 3/4"C. | A | | | | | 104 | | | SPARE | 20 | 18 |
| 19 | 20 | SPARE | | | | | | | | | SPARE | 20 | 20 |
| 21 | 20 | SPARE | | | | | | | | | SPARE | 20 | 22 |
| 23 | 20 | SPARE | | | | | | | | | SPARE | 20 | 24 |
| TOTAL: | | | | 9288 | | 7326 | | 8200 | | | | | |

DEMAND CALCULATIONS PER NEC 220:

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD |
|---|---|---|---|---|
| LIGHTING (L) | 0 | 125% | 0 | TOTAL CONNECTED LOAD (VA): 24814 |
| AC/EQUIP (A) | 24814 | 100% | 24814 | TOTAL CONNECTED AMPACITY (A): 68.88 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: |
| APPLIANCE (AR) | 0 | 100% | 0 | |
| CONVEN.(R) | 0 | 1ST 10K @ 100% REM @ 50% | 0 | |
| LRGST MOTOR(M) | 0 | 125% | 0 | |
| MOTOR (M) | 0 | 100% | 0 | |
| DWELLING (D) | 0 | 23% | 0 | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): 24814 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): 68.88 |

## (NEW) PANEL SCHEDULE

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | MC-2 | NEW | | EXISTING | | FLOOR: | 2 | COPPER BUS: | 100 A | | | |
| LOCATION: | WEST MECH RM (MER 2) | VOLTAGE (V): | 120 | 208 | | | | A.I.C: | 22KA | | | |
| FEED BY: | N/A | PHASE: | 3 | WIRE: | 4 | POLES: | 24 | NEMA: | 1 | | | |
| MAIN: | - | MLO | MOUNTING: | SURFACE | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | Spare | | | | | | | | | Spare | 20 | 2 |
| 3 | 20 | Spare | | | | | | | | | Spare | 20 | 4 |
| 5 | 20 | Spare | | | | | | | | | Spare | 20 | 6 |
| 7 | 20 | Spare | | | | | | | | | Spare | 20 | 8 |
| 9 | 20 | Spare | | | | | | | | | Spare | 20 | 10 |
| 11 | 20 | Spare | | | | | | | | | Spare | 20 | 12 |
| 13 | 20 | Spare | | | | | | | | | Spare | 20 | 14 |
| 15 | 20 | Spare | | | | | | | | | Spare | 20 | 16 |
| 17 | 20 | Spare | | | | | | | | | Spare | 20 | 18 |
| 19 | 20 | Spare | | | | | | | | | Spare | 20 | 20 |
| 21 | 20 | Spare | | | | | | | | | Spare | 20 | 22 |
| 23 | 20 | Spare | | | | | | | | | Spare | 20 | 24 |
| TOTAL: | | | | 0 | | 0 | | 0 | | | | | |

DEMAND CALCULATIONS PER NEC 220:

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD |
|---|---|---|---|---|
| LIGHTING (L) | 0 | 125% | 0 | TOTAL CONNECTED LOAD (VA): 0 |
| AC/EQUIP (A) | 0 | 100% | 0 | TOTAL CONNECTED AMPACITY (A): 0.00 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: |
| APPLIANCE (AR) | 0 | 100% | 0 | 1. NEW CIRCUITS IN BOLD AND UNDERLINE |
| CONVEN.(R) | 0 | 1ST 10K @ 100% REM @ 50% | 0 | |
| LRGST MOTOR(M) | 0 | 125% | 0 | |
| MOTOR (M) | 0 | 100% | 0 | |
| DWELLING (D) | 0 | 23% | 0 | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): 0 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): 0.00 |

## (NEW) PANEL SCHEDULE

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | MC-1 | NEW | | EXISTING | | FLOOR: | 2 | COPPER BUS: | 225 A | | | |
| LOCATION: | WEST MECH RM (MER 2) | VOLTAGE (V): | 120 | 208 | | | | A.I.C: | 22KA | | | |
| FEED BY: | N/A | PHASE: | 3 | WIRE: | 4 | POLES: | 32 | NEMA: | 1 | | | |
| MAIN: | - | MLO | MOUNTING: | SURFACE | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | RECEPTACLES | R | 540 | 7920 | | | | | A | ACCU-R-4 | 80/3P | 2 |
| 3 | 20 | MER 2 EXISTING LIGHT | L | | | 1000 | 7920 | | | A | 4#8 + 1#10 - 1" C. | | 4 |
| 5 | 20 | SPARE | | | | | | 7920 | | A | | | 6 |
| 7 | 20 | SPARE | | | | | | | | | SPARE | 20 | 8 |
| 9 | 20 | SPARE | | | | | | | | | SPARE | 20 | 10 |
| 11 | 20 | SPARE | | | | | | | | | SPARE | 20 | 12 |
| 13 | 20 | SPARE | | | | | | | | | SPARE | 20 | 14 |
| 15 | 20 | SPARE | | | | | | | | | SPARE | 20 | 16 |
| 17 | 20 | SPARE | | | | | | | | | SPARE | 20 | 18 |
| 19 | 20 | SPARE | | | | | | | | | SPARE | 20 | 20 |
| 21 | 20 | SPARE | | | | | | | | | SPARE | 20 | 22 |
| 23 | 20 | SPARE | | | | | | | | | SPARE | 20 | 24 |
| 25 | 20 | SPARE | | | | | | | | | SPARE | 20 | 26 |
| 27 | 20 | SPARE | | | | | | | | | SPARE | 20 | 28 |
| 29 | 20 | SPARE | | | | | | | | | SPARE | 20 | 30 |
| 31 | 20 | SPARE | | | | | | | | | SPARE | 20 | 32 |
| TOTAL: | | | | 8460 | | 8920 | | 7920 | | | | | |

DEMAND CALCULATIONS PER NEC 220:

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD |
|---|---|---|---|---|
| LIGHTING (L) | 1000 | 125% | 1250 | TOTAL CONNECTED LOAD (VA): 25300 |
| AC/EQUIP (A) | 23760 | 100% | 23760 | TOTAL CONNECTED AMPACITY (A): 70.23 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: |
| APPLIANCE (AR) | 0 | 100% | 0 | |
| CONVEN.(R) | 540 | 1ST 10K @ 100% REM @ 50% | 0 | |
| LRGST MOTOR(M) | 0 | 125% | 0 | |
| MOTOR (M) | 0 | 100% | 0 | |
| DWELLING (D) | 0 | 23% | 0 | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): 25010 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): 69.42 |

## (NEW) PANEL SCHEDULE

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | GL | NEW | | EXISTING | | FLOOR: | 1 | COPPER BUS: | 100A | | | |
| LOCATION: | RECEPTION | VOLTAGE (V): | 120 | 208 | | | | A.I.C: | 22KA | | | |
| FEED BY: | N/A | PHASE: | 3 | WIRE: | 4 | POLES: | 54 | NEMA: | 1 | | | |
| MAIN: | 100A | MCB | MOUNTING: | SURFACE | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | Existing Load | R | 1000 | 1000 | | | | | R | Existing Load | 20 | 2 |
| 3 | 20 | Existing Load | R | | | 1000 | 1000 | | | R | Existing Load | 20 | 4 |
| 5 | 20 | Men's Locker Lighting | L | | | | | 500 | 1000 | L | Office/Conf Rm Ltg | 20 | 6 |
| 7 | 20 | Women's Locker Lighting | L | 500 | 1000 | | | | | L | Corridor/Lobby Ltg | 20 | 8 |
| 9 | 20A/2P | Mech AC Units | A | | | 400 | 1000 | | | R | Main Corridor/Office Ltg | 20 | 10 |
| 11 | | 2#12+#12G, - 3/4"C. | A | | | | | 400 | 400 | A | Mech AC Units | 20A/2P | 12 |
| 13 | 20 | Receptacles | R | 1000 | 400 | | | | | A | 2#12+#12G, - 3/4"C. | | 14 |
| 15 | 20 | Receptacles | R | | | 1000 | 720 | | | R | Receptacles | 20 | 16 |
| 17 | 20 | Receptacles | R | | | | | 720 | 1000 | R | Receptacles | 20 | 18 |
| 19 | 20 | Receptacles | R | 720 | 400 | | | | | R | Receptacles | 20 | 20 |
| 21 | 20 | Receptacles | R | | | 400 | 1000 | | | R | Receptacles | 20 | 22 |
| 23 | 20 | Receptacles | R | | | | | 400 | 400 | R | Receptacles | 20 | 24 |
| 25 | 20 | Receptacles/Hand Dryers | R | 1400 | 1000 | | | | | R | Plumbing Fixtures | 20 | 26 |
| 27 | 20 | Plumbing Fixtures | R | | | 1000 | 1000 | | | R | Hand Dryers | 20 | 28 |
| 29 | 20 | Plumbing Fixtures | R | | | | | 1000 | 1000 | R | Hand Dryers | 20 | 30 |
| 31 | 20 | Hand Dryers | R | 1000 | 720 | | | | | R | Receptacles | 20 | 32 |
| 33 | 20 | Hand Dryers | R | | | 1000 | 360 | | | R | Receptacles | 20 | 34 |
| 35 | 20 | TX-1 & TX-2 | A | | | | | 18 | 400 | R | TV IN LOBBY | 20 | 36 |
| 37 | 20A/2P | HRB-1 & HRB-2 | A | 416 | 1200 | | | | | R | DISPLAY PANEL | 20 | 38 |
| 39 | | 2#12=12G - 3/4"C | A | | | 416 | 1260 | | | L | EXTERIOR LIGHTING | 20 | 40 |
| 41 | 20 | LIGHTING | L | | | | | | 500 | R | PROJECTOR | 20 | 42 |
| 43 | 20 | LIGHTING | L | 1260 | 200 | | | | | R | SCREENING | 20 | 44 |
| 45 | 20 | SPARE | | | | | | | | | SPARE | 20 | 46 |
| 47 | 20 | SPARE | | | | | | | | | SPARE | 20 | 48 |
| 49 | | SPACE | | | | | | | | | SPACE | | 50 |
| 51 | | SPACE | | | | | | | | | SPACE | | 52 |
| 53 | | SPACE | | | | | | | | | SPACE | | 54 |
| TOTAL: | | | | 13216 | | 11556 | | 7738 | | | | | |

BOLD REPRESENTS NEW

DEMAND CALCULATIONS PER NEC 220:

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD |
|---|---|---|---|---|
| LIGHTING (L) | 5520 | 125% | 6900 | TOTAL CONNECTED LOAD (VA): 32510 |
| AC/EQUIP (A) | 2450 | 100% | 2450 | TOTAL CONNECTED AMPACITY (A): 90.24 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTE: |
| APPLIANCE (AR) | 0 | 100% | 0 | |
| CONVEN.(R) | 24540 | 1ST 10K @ 100% REM @ 50% | 17270 | |
| LRGST MOTOR(M) | 0 | 125% | 0 | |
| MOTOR (M) | 0 | 100% | 0 | |
| DWELLING (D) | 0 | 23% | 0 | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): 26620 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): 73.89 |

## (EXISTING) PANEL SCHEDULE

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | PP-1 | NEW | | EXISTING | | FLOOR: | 1 | COPPER BUS: | 200 A | | | |
| LOCATION: | MAIN ELEC RM | VOLTAGE (V): | 120 | 208 | | | | A.I.C: | 22KA | | | |
| FEED BY: | N/A | PHASE: | 3 | WIRE: | 4 | POLES: | 24 | NEMA: | 1 | | | |
| MAIN: | 200 A | MCB | MOUNTING: | SURFACE | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | Exercise Load | M | 1000 | 1000 | | | | | R | Exercise Load | 20 | 2 |
| 3 | 20 | Exercise Load | M | | | 1000 | 1000 | | | R | Exercise Load | 20 | 4 |
| 5 | 20 | Exercise Load | M | | | | | 1000 | 1000 | R | Exercise Load | 20 | 6 |
| 7 | 20 | Exercise Load | M | 1000 | 1000 | | | | | R | Exercise Load | 20 | 8 |
| 9 | 20 | Gym Lighting | L | | | 1000 | | | | | SPARE | 20 | 10 |
| 11 | 20 | SPARE | | | | | | | | | SPARE | 20 | 12 |
| 13 | 20 | GYM LOAD | M | 1080 | 360 | | | | | R | Gym Load | 20 | 14 |
| 15 | 20 | ELECTRIC WINCH | M | | | 1680 | 1680 | | | M | ELECTRIC WINCH | 20 | 16 |
| 17 | 20 | ELECTRIC WINCH | M | | | | | 1680 | 1680 | M | ELECTRIC WINCH | 20 | 18 |
| 19 | 20 | ELECTRIC WINCH | M | 1680 | 1680 | | | | | M | ELECTRIC WINCH | 20 | 20 |
| 21 | 20 | SPARE | | | | | | | | | SPARE | 20 | 22 |
| 23 | 20 | SPARE | | | | | | | | | SPARE | 20 | 24 |
| TOTAL: | | | | 8800 | | 6360 | | 5360 | | | | | |

DEMAND CALCULATIONS PER NEC 220:

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD |
|---|---|---|---|---|
| LIGHTING (L) | 1000 | 125% | 1250 | TOTAL CONNECTED LOAD (VA): 20520 |
| AC/EQUIP (A) | 0 | 100% | 0 | TOTAL CONNECTED AMPACITY (A): 56.96 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: |
| APPLIANCE (AR) | 0 | 100% | 0 | 1. NEW CIRCUITS IN BOLD AND UNDERLINE |
| CONVEN.(R) | 4360 | 1ST 10K @ 100% REM @ 50% | 0 | |
| LRGST MOTOR(M) | 3360 | 125% | 4200 | |
| MOTOR (M) | 11800 | 100% | 11800 | |
| DWELLING (D) | 0 | 23% | 0 | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): 17250 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): 47.88 |

## (RELOCATED) PANEL SCHEDULE

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | EA | NEW | | EXISTING | | FLOOR: | 1 | COPPER BUS: | 100 A | | | |
| LOCATION: | RECEPTION | VOLTAGE (V): | 120 | 208 | | | | A.I.C: | 22KA | | | |
| FEED BY: | N/A | PHASE: | 3 | WIRE: | 4 | POLES: | 22 | NEMA: | 1 | | | |
| MAIN: | - | MLO | MOUNTING: | SURFACE | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 2 |
| 3 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 4 |
| 5 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 6 |
| 7 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 8 |
| 9 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 10 |
| 11 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 12 |
| 13 | | SPACE | | | | | | | | | SPACE | | 14 |
| 15 | | SPACE | | | | | | | | | SPACE | | 16 |
| 17 | | SPACE | | | | | | | | | SPACE | | 18 |
| 19 | | SPACE | | | | | | | | | SPACE | | 20 |
| 21 | | SPACE | | | | | | | | | SPACE | | 22 |
| TOTAL: | | | | 0 | | 0 | | 0 | | | | | |

DEMAND CALCULATIONS PER NEC 220:

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD |
|---|---|---|---|---|
| LIGHTING (L) | 0 | 125% | 0 | TOTAL CONNECTED LOAD (VA): 0 |
| AC/EQUIP (A) | 0 | 100% | 0 | TOTAL CONNECTED AMPACITY (A): 0.00 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: |
| APPLIANCE (AR) | 0 | 100% | 0 | |
| CONVEN.(R) | 0 | 1ST 10K @ 100% REM @ 50% | 0 | |
| LRGST MOTOR(M) | 0 | 125% | 0 | |
| MOTOR (M) | 0 | 100% | 0 | |
| DWELLING (D) | 0 | 23% | 0 | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): 0 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): 0.00 |

***ELECTRICAL PANEL NOTES:***

1. EXISTING ACTIVE CIRCUITS SERVING THE FACILITY SHALL REMAIN (RECEPTACLES, HEATERS, LIGHTING ETC.). CONTRACTOR SHALL MAINTAIN ON EXISTING/RELOCATED/NEW PANELS AS REQUIRED.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
175 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ELECTRICAL PANEL SCHEDULE

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-400.00
DRAWN BY D.M.
13 OF 15

NYC DOB Number

## (EXISTING) PANEL SCHEDULE

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | GA | NEW | | EXISTING | | FLOOR: | 1 | COPPER BUS: | 100 A | | | | |
| LOCATION: | GYM | | VOLTAGE (V): | 120 | 208 | | | A.I.C: | | | | | |
| FEED BY: | N/A | | PHASE: | 3 | WIRE: | 4 | POLES: | 24 | NEMA: | 1 | | | |
| MAIN: | 100 A | MLO | MOUNTING: | SURFACE | | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15 | EXISTING | | | | | | | | | EXISTING | 15 | 2 |
| 3 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 4 |
| 5 | 15 | EXISTING | | | | | | | | | EXISTING | 20 | 6 |
| 7 | 15 | EXISTING | | | | | | | | | EXISTING | | 8 |
| 9 | 20 | EXISTING | | | | | | | | | | 15/3P | 10 |
| 11 | 20 | EXISTING | | | | | | | | | | | 12 |
| 13 | 20 | EXISTING | | | | | | | | | EXISTING | 15 | 14 |
| 15 | 15 | EXISTING | | | | | | | | | EXISTING | 20 | 16 |
| 17 | 20A/2P | EXISTING | | | | | | | | | EXISTING | 20 | 18 |
| 19 | | | | | | | | | | | EXISTING | 20 | 20 |
| 21 | **20** | **ELECTRIC WINCH *** | **M** | | | 1680 | 1680 | | | **M** | **ELECTRIC WINCH *** | **20** | 22 |
| 23 | **20** | **ELECTRIC WINCH *** | **M** | | | | | 1680 | | | SPACE | | 24 |
| TOTAL: | | | | **0** | | **3360** | | **1680** | | | | | |

**DEMAND CALCULATIONS PER NEC 220:**

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD | |
|---|---|---|---|---|---|
| LIGHTING (L) | 0 | 125% | 0 | TOTAL CONNECTED LOAD (VA): | 5040 |
| AC/EQUIP (A) | 0 | 100% | 0 | TOTAL CONNECTED AMPACITY (A): | 13.99 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: | |
| APPLIANCE (AR) | 0 | 100% | 0 | 1. NEW CIRCUITS IN BOLD AND UNDERLINE | |
| CONVEN.(R) | 0 | 1ST 10K @ 100% REM @ 50% | 0 | * PROVIDE 20AMP BREAKER | |
| LRGST MOTOR(M) | 3360 | 125% | 4200 | | |
| MOTOR (M) | 1680 | 100% | 1680 | | |
| DWELLING (D) | 0 | 23% | 0 | | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): | 5880 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): | 16.32 |

## (EXISTING) PANEL SCHEDULE

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL NAME: | GB | NEW | | EXISTING | | FLOOR: | 1 | COPPER BUS: | 100 A | | | | |
| LOCATION: | GYM | | VOLTAGE (V): | 120 | 208 | | | A.I.C: | | | | | |
| FEED BY: | N/A | | PHASE: | 3 | WIRE: | 4 | POLES: | 24 | NEMA: | 1 | | | |
| MAIN: | 100 A | MLO | MOUNTING: | SURFACE | | | | | | | | | |

| CKT | TRIP AMPS | DESCRIPTION | TYPE | PHASE-A (VA) | | PHASE B(VA) | | PHASE-C (VA) | | TYPE | DESCRIPTION | TRIP AMPS | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 2 |
| 3 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 4 |
| 5 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 6 |
| 7 | 15 | EXISTING | | | | | | | | | EXISTING | 15 | 8 |
| 9 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 10 |
| 11 | 20 | EXISTING | | | | | | | | | EXISTING | 20 | 12 |
| 13 | 20 | EXISTING | | | | | | | | | EXISTING | 15 | 14 |
| 15 | 15 | EXISTING | | | | | | | | | EXISTING | | 16 |
| 17 | 20A/2P | EXISTING | | | | | | | | | | 15/3P | 18 |
| 19 | | | | | | | | | | | | | 20 |
| 21 | **20** | **ELECTRIC WINCH *** | **M** | | | 1680 | 1680 | | | **M** | **ELECTRIC WINCH *** | **20** | 22 |
| 23 | **20** | **ELECTRIC WINCH *** | **M** | | | | | 1680 | | | SPACE | | 24 |
| TOTAL: | | | | **0** | | **3360** | | **1680** | | | | | |

**DEMAND CALCULATIONS PER NEC 220:**

| LOAD TYPE | CONNECTED LOAD (VA) | DEMAND FACTOR (%) | DEMAND LOAD (VA) | PANELBOARD LOAD | |
|---|---|---|---|---|---|
| LIGHTING (L) | 0 | 125% | 0 | TOTAL CONNECTED LOAD (VA): | 5040 |
| AC/EQUIP (A) | 0 | 100% | 0 | TOTAL CONNECTED AMPACITY (A): | 13.99 |
| COMPUTER (PC) | 0 | 100% | 0 | NOTES: | |
| APPLIANCE (AR) | 0 | 100% | 0 | 1. NEW CIRCUITS IN BOLD AND UNDERLINE | |
| CONVEN.(R) | 0 | 1ST 10K @ 100% REM @ 50% | 0 | * PROVIDE 20AMP BREAKER | |
| LRGST MOTOR(M) | 3360 | 125% | 4200 | | |
| MOTOR (M) | 1680 | 100% | 1680 | | |
| DWELLING (D) | 0 | 23% | 0 | | |
| KITCHEN (K) | 0 | 65% | 0 | TOTAL DEMAND LOAD (VA): | 5880 |
| MISC (S) | 0 | 100% | 0 | TOTAL DEMAND AMPACITY (A): | 16.32 |

***ELECTRICAL PANEL NOTES:***

1. EXISTING ACTIVE CIRCUITS SERVING THE FACILITY SHALL REMAIN (RECEPTACLES, HEATERS, LIGHTING ETC.). CONTRACTOR SHALL MAINTAIN ON EXISTING PANEL AS REQUIRED.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

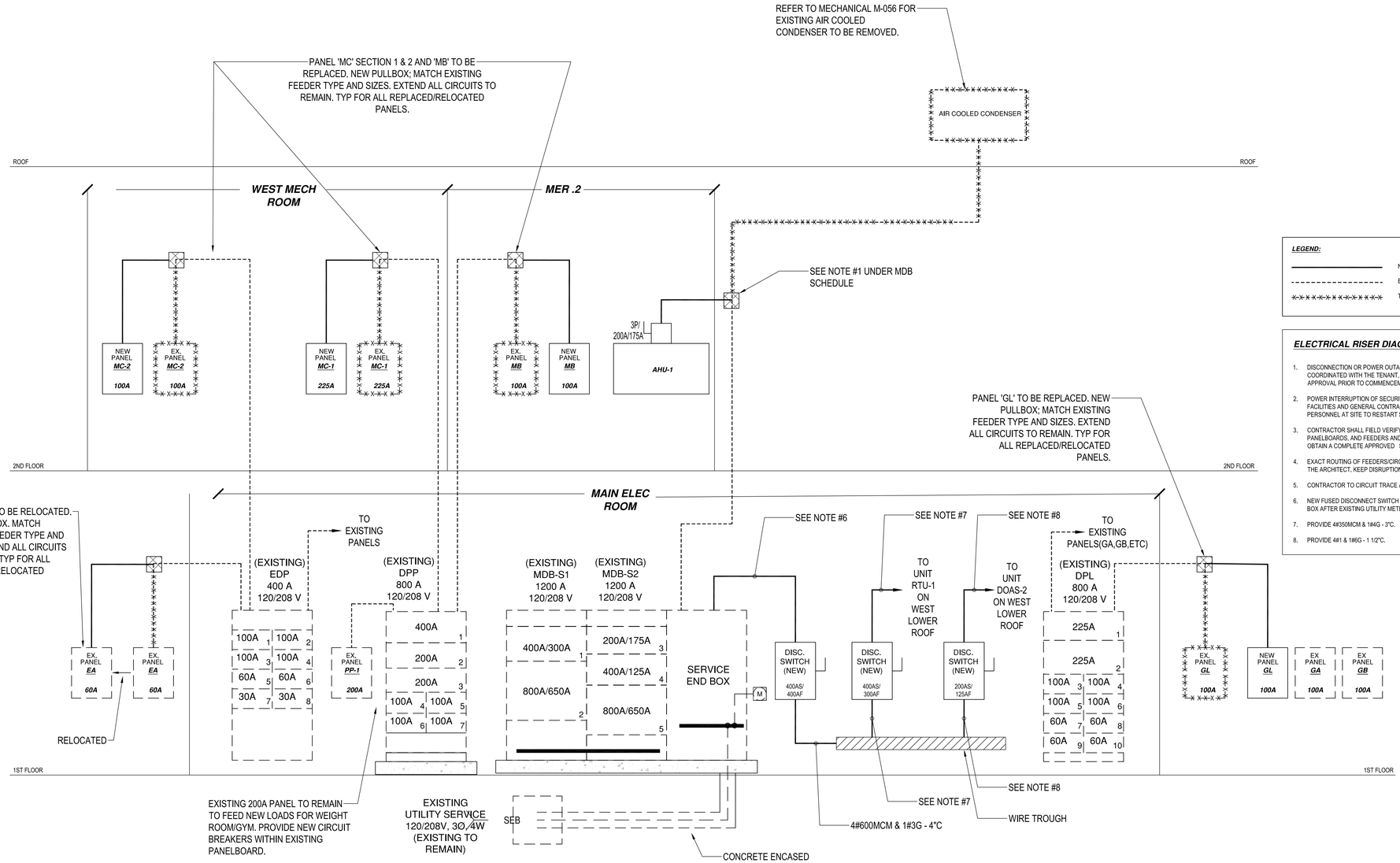
PROJECT
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ELECTRICAL PANEL
SCHEDULE

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-401.00
DRAWN BY D.M.
14 OF 15

NYC DOB Number




***LEGEND:***

- NEW
- EXISTING
- TO BE REMOVED

## *ELECTRICAL RISER DIAGRAM NOTES*

1. DISCONNECTION OR POWER OUTAGE TO EXISTING SERVICE OR ANY FEEDERS/PANELS SHALL BE COORDINATED WITH THE TENANT, ARCHITECT AND THE BUILDING. SUBMIT SCHEDULE TO ARCHITECT FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
2. POWER INTERRUPTION OF SECURITY OR SPECIAL SERVICE MUST BE SCHEDULED AND APPROVED BY FACILITIES AND GENERAL CONTRACTOR. ALL SUCH INTERRUPTIONS MUST OBTAIN APPROVAL WITH PERSONNEL AT SITE TO RESTART SYSTEMS.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS OF ALL EXISTING MAIN SWITCHGEAR, PANELBOARDS, AND FEEDERS AND PROVIDE ALL MODIFICATIONS AS REQUIRED BY OTHER AUTHORITIES TO OBTAIN A COMPLETE APPROVED SYSTEM.
4. EXACT ROUTING OF FEEDERS/CIRCUITS IN AREA NOT IN CONSTRUCTION MUST BE FIELD COORDINATED WITH THE ARCHITECT. KEEP DISRUPTION TO A MINIMUM AS PER APPROVED SCHEDULE OF WORK.
5. CONTRACTOR TO CIRCUIT TRACE ALL BRANCH CIRCUITRY PRIOR TO SHUTDOWN OF SERVICE.
6. NEW FUSED DISCONNECT SWITCH (400AF/400AS) TO BE PROVIDED. BUSSING TAP TO BE MADE IN SERVICE END BOX AFTER EXISTING UTILITY METER. GC TO COORDINATE WITH CONED. PROVIDE 4#600MCM & 1#3G - 4"C
7. PROVIDE 4#350MCM & 1#4G - 3"C.
8. PROVIDE 4#1 & 1#6G - 1 1/2"C.

## *EXISTING SWITCHBOARD MDB SCHEDULE*

MAIN DISTRIBUTION PANEL ***"MDB"*** VOLTS : 208/120V SERVICE : 1600A MAIN BUS PHASE & WIRE : 3Ø, 4W FEEDER SIZE : SEE RISER MOUNTING : SURFACE

| NO. | SWITCH SIZE | FUSE SIZE | SERVING | COPPER FEEDERS |
|---|---|---|---|---|
| 1 | 800A | 650A | SUB DIST PANEL "DPP" (EX.) | EXISTING |
| 2 | 800A | 650A | SUB DIST PANEL "DPL" (EX.) | EXISTING |
| 3 | 200A | 175A | AIR HANDLER UNIT (NEW) | SEE NOTE #1 BELOW |
| 4 | 400A | 300A | SUB DIST PANEL "EDP" (EX.) | EXISTING |
| 5 | 200A | - | SPACE | EXISTING |

1. CONTRACTOR SHALL DISCONNECT EXISTING FEEDER FROM DEMOLISHED A/C UNIT. REFEED EXISTING FEEDER TO NEW AIR HANDLER UNIT / DISCONNECT SWITCH. CONTRACTOR SHALL PROVIDE IN SCOPE TO FIELD VERIFY IF NEW FEEDER IS REQUIRED FOR AHU-1 BASED ON EXISTING FIELD CONDITIONS AND SHALL MATCH EXISTING FEEDER SIZES WITH NEW CONDUIT.

## *EXISTING SWITCHBOARD DPP SCHEDULE*

MAIN DISTRIBUTION PANEL ***"DPP"*** VOLTS : 208/120V SERVICE : 800A MAIN BUS PHASE & WIRE : 3Ø, 4W FEEDER SIZE : SEE RISER MOUNTING : SURFACE

| NO. | SWITCH SIZE | FUSE SIZE | SERVING | COPPER FEEDERS |
|---|---|---|---|---|
| 1 | 400A | 250A | PANEL "MA" (EX.) | EXISTING |
| 2 | 60A | 60A | PANEL "MB" (EX.) | EXISTING |
| 3 | 200A | 150A | PANEL "MC" SECT. 1 (EX.) | EXISTING |
| 4 | 100A | 70A | POOL EQUIPMENT (EX.) | EXISTING |
| 5 | 100A | 100A | ELEVATOR (EX.) | EXISTING |
| 6 | 200A | 125A | PANEL "SR" SEC 1 (EX.) | EXISTING |
| 7 | 100A | - | SPARE | EXISTING |

## *EXISTING SWITCHBOARD DPL SCHEDULE*

MAIN DISTRIBUTION PANEL ***"DPL"*** VOLTS : 208/120V SERVICE : 800A MAIN BUS PHASE & WIRE : 3Ø, 4W FEEDER SIZE : SEE RISER MOUNTING : SURFACE

| NO. | SWITCH SIZE | FUSE SIZE | SERVING | COPPER FEEDERS |
|---|---|---|---|---|
| 1 | 200A | 125A | PANEL "GN" | EXISTING |
| 2 | 200A | 175A | PANEL "PL" | EXISTING |
| 3 | 60A | 60A | PANEL "UL" | EXISTING |
| 4 | 60A | 60A | PANEL "AE" | EXISTING |
| 5 | 100A | 100A | PANEL "GL" | EXISTING |
| 6 | 60A | 60A | PANEL "GA" | EXISTING |
| 7 | 60A | 60A | PANEL "GB" | EXISTING |
| 8 | 100A | 80A | PANEL "SL" | EXISTING |
| 9 | 100A | - | SPARE | N/A |

## *EXISTING SWITCHBOARD EDP SCHEDULE*

MAIN DISTRIBUTION PANEL ***"EDP"*** VOLTS : 208/120V SERVICE : 400A MAIN BUS PHASE & WIRE : 3Ø, 4W FEEDER SIZE : SEE RISER MOUNTING : SURFACE

| NO. | SWITCH SIZE | FUSE SIZE | SERVING | COPPER FEEDERS |
|---|---|---|---|---|
| 1 | 60A | 60A | PANEL "EA" | EXISTING |
| 2 | 60A | 60A | PANEL "EB" | EXISTING |
| 3 | 100A | 90A | PANEL "SR" SECT. 2 | EXISTING |
| 4 | 60A | 60A | PANEL "MC" SECT. 2 | EXISTING |
| 5 | 30A | 15A | OLD FACP | EXISTING |
| 6 | 30A | 15A | OLD SMOKE CONTROL PNL | EXISTING |
| 7 | 100A | - | SPARE | EXISTING |
| 8 | 30A | - | SPARE | EXISTING |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 F: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ELECTRICAL RISER DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. E-500.00
DRAWN BY D.M.
15 OF 15

NYC DOB Number

## PLUMBING DEMOLITION NOTES

1. GENERAL

1.1. IT IS THE PURPOSE OF THIS SECTION TO OUTLINE TO THE PLUMBING CONTRACTOR THE GENERAL SCOPE OF THE REMOVAL WORK.

1.2. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND EXAMINE CAREFULLY THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND DIFFICULTIES THAT WILL EFFECT THE EXECUTION OF THIS WORK. THE CONTRACTOR SHALL PERFORM THIS, PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUCTED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN UPON SUCH AN EXAMINATION.

2. SCOPE OF WORK.

2.1. THIS WORK INCLUDES DISCONNECTION AND REMOVAL OF PLUMBING FIXTURES AND ASSOCIATED PIPING FROM WALLS OR FLOORS, AS INDICATED ON ARCHITECTURAL PLANS, DISCONNECTING PIPING AT STACKS OR RISERS AND CAPPING TO AVOID DEAD ENDS, ALL SYSTEMS AS REQUIRED TO ASSURE CONTINUITY IN CIRCULATING AND SUPPLY LINES.

2.2. PERFORM THE WORK AS SCHEDULED BY THE CONTRACTOR. SUBMIT SHUTDOWN SCHEDULE TO OWNER FOR APPROVAL PRIOR TO PERFORMING WORK.

2.3. ALL FIXTURES, EQUIPMENT, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, RELOCATED, TURNED OVER TO THE OWNER, OR SALVAGED AS DIRECTED.

2.4. PROVIDE INTERIM WORK, IF REQUIRED, FOR CONTINUED UNINTERRUPTED SERVICE WHERE EXTENDED SHUTDOWN IS REQUIRED.

2.5. THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF DEMOLITION. AT COMPLETION OF THE WORK, THOROUGHLY CLEAN PREMISES. REMOVE TOOLS, DEBRIS, ETC.

2.6. ALL UNUSED PIPING, HANGERS, AND SUPPORT SHALL BE COMPLETELY REMOVED ALL THE WAY BACK TO CORE RISERS, OR BACK TO THE NEAREST ACTIVE BRANCH MAIN AND CAPPED, SEALED WATER TIGHT, OR AIR TIGHT. ALL THE OPENINGS RESULTING SHALL BE PROPERLY PATCHED, SEALED, AND FIRESTOPPED TO MAINTAIN THE ORIGINAL INTEGRITY OF THE PARTITION'S FIRE RATING.

2.7. CONTRACTOR SHALL COORDINATE WITH OWNER THE DEMOLITION OF EXISTING SLAB FOR PLUMBING WORK PRIOR TO STARTING WORK AND SHALL PATCH UP UPON APPROVAL AND COMPLETION OF WORK

2.8. ANY PIPE NOT SPECIFICALLY LABELED TO BE REMOVED SHALL REMAIN, UNLESS OTHERWISE NOTED.

## NYC BUILDING DEPARTMENT NOTES

THE PLUMBING SYSTEMS (SANITARY, WASTE, VENT, WATER DISTRIBUTION AND GAS) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE 2014 PLUMBING CODE OF THE CITY OF NEW YORK AS CITED IN ARTICLE 28.

1. THE SANITARY SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH THE GENERAL PROVISIONS OF SECTION PC 701.
2. THE MATERIAL USED IN THE PLUMBING SYSTEMS WILL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC 402, 605, 702, 902, 1102.
3. EQUIPMENT HOOK-UP AND THE JOINING OF PIPING WILL BE IN FULL COMPLIANCE WITH SECTION PC 605.
4. THE INSTALLATION OF FIXTURES WILL BE IN FULL ACCORDANCE WITH SECTION PC 401.
5. TRAPS FOR FIXTURES AND DRAIN LINES WILL BE PROVIDED AND CLEANOUTS INSTALLED IN FULL COMPLIANCE WITH SECTION PC 708, 709 & 1002.
6. VERTICAL AND HORIZONTAL PIPING WILL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND WITH THE FULL COMPLIANCE WITH SECTION PC 308.
7. THE WATER SUPPLY SYSTEM OF THE SUBJECT BUILDING SHALL BE INSTALLED AND MAINTAINED IN FULL COMPLIANCE WITH SECTION PC 601.
8. THE SANITARY DRAINAGE SYSTEM WILL BE SIZED AND INSTALLED IN FULL COMPLIANCE WITH SECTIONS PC 704 AND 710.
9. THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM OF THE SUBJECT BUILDING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC 901.
10. THE STORM DRAINAGE SYSTEM AND PIPING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC 1101.
11. GAS PIPING AND EQUIPMENT WILL BE INSTALLED IN FULL COMPLIANCE WITH THE NYC GAS CODE ADOPTED 2014 WITH LATEST UPDATES.
12. ALL TRENCHING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 306.
13. TEMPORARY TOILET FACILITIES SHALL BE PROVIDED FOR WORKMEN AS PER SECTION 311.
14. FUEL GAS METER AND PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NYC FUEL GAS CODE FGC-401 AND APPENDIX E & F.

## APPLICABLE CODES

| |
|---|
| 2014 NYC BUILDING CODE |
| 2014 NYC PLUMBING CODE |
| 2020 NYC ENERGY CONSERVATION CODE |

## INSPECTIONS, PROGRESS INSPECTIONS, SPECIAL INSPECTIONS AND TESTING OF PLUMBING SYSTEMS

1. THE FOLLOWING INSPECTIONS, TESTS, PROGRESS INSPECTIONS AND SPECIAL INSPECTIONS SHALL BE CONSIDERED PART OF THE CONTRACT WORK.
2. UPON COMPLETION OR PARTIAL COMPLETION OF THE PERMITTED PLUMBING WORK, INSPECTIONS, PROGRESS INSPECTIONS, SPECIAL INSPECTIONS AND TESTS SHALL BE CONDUCTED BY APPROVED AGENCIES OR SPECIAL INSPECTORS QUALIFIED TO CONDUCT SUCH INSPECTIONS AND TESTS. INSPECTIONS AND PROGRESS INSPECTIONS SHALL BE PERFORMED IN COMPLIANCE WITH SECTION BC110 OF THE NEW YORK CITY BUILDING CODE. SPECIAL INSPECTIONS SHALL BE PERFORMED IN COMPLIANCE WITH SECTIONS BC1704 AND BC1707 OF THE NEW YORK CITY BUILDING CODE FOR ALL PLUMBING SYSTEMS REGULATED BY THE NEW YORK CITY PLUMBING CODE, SECTIONS PC 107, PC 312, CHAPTERS 6, 7, 9 AND 11, THE NEW YORK CITY FUEL GAS CODE, SECTIONS FGC 107, AND FGC 406. REFER TO ARTICLE 116 OF CHAPTER 1 OF TITLE 28 OF THE ADMINISTRATIVE CODE FOR ADDITIONAL PROVISIONS RELATED TO INSPECTIONS.
3. SPECIAL INSPECTIONS OF PLUMBING SYSTEMS SHALL INCLUDE THE FOLLOWING AS APPLICABLE TO THE SYSTEM:

A. VISUAL CERTIFICATION THAT REQUIRED COMPONENTS OF SUCH SYSTEMS ARE COMPLETE IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION GUIDELINES AND THE APPROVED CONSTRUCTION DOCUMENTS.

B. SUPPORTS, HANGERS, SEISMIC BRACING, AND VIBRATION ISOLATION EQUIPMENT ARE PROPERLY SPACED AND ANCHORED TO SUPPORTING STRUCTURE.

C. INSTALLATION OF REQUIRED SIGNAGE AND SAFETY INSTRUCTIONS.

D. ELECTRICAL COMPONENTS ARE INSTALLED AND ELECTRICAL SIGN- OFF ISSUED.

E. REQUIRED LABELING, OPERATIONAL INSTRUCTIONS AND SAFETY SIGNAGE PROPERLY POSTED.

F. ALL RELATED SPECIAL INSPECTIONS FOR SUCH SYSTEMS ARE COMPLETE.

4. PROGRESS INSPECTIONS OF PLUMBING SYSTEMS SHALL INCLUDE THE FOLLOWING AS APPLICABLE TO THE SYSTEM:

A. THROUGH-PENETRATION FIRE STOPPING.

5. TESTS OF PLUMBING SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING NEW YORK CITY BUILDING CODE AND NEW YORK CITY PLUMBING CODE SECTIONS:

| | |
|---|---|
| DRAINAGE & VENT WATER TEST | PC 312.2 |
| DRAINAGE & VENT AIR TEST | PC 312.3 |
| DRAINAGE & VENT FINAL TEST | PC 312.4 |
| WATER SUPPLY SYSTEM TEST | PC 312.5 |
| WATER SERVICE PIPE | PC 312.5.1 |
| GRAVITY SEWER TEST | PC 312.6 |
| REGULATORS AND VALVE ASSEMBLIES | FGC 406.1.5 |
| EXPANSION JOINTS | FGC 406.3.1 |

6. THE FOLLOWING IS A LIST OF ALL REQUIRED SPECIAL INSPECTIONS:

| SPECIAL INSPECTION ITEMS: | CODE/SECTION |
|---|---|
| FIRESTOPPING | BC 1704.27 |

7. UPON COMPLETION OF ALL SPECIAL INSPECTIONS, TESTING AND BUILDING DEPARTMENT SIGN-OFF, THE PLUMBING CONTRACTOR SHALL SECURE ALL CERTIFICATES OF COMPLIANCE AND TRANSMIT SAME TO OWNER.

## GENERAL NOTES

1. ALL MATERIALS, APPARATUS, WORKMANSHIP AND PROCUREMENT OF PERMITS AND CERTIFICATES FOR THESE SYSTEMS SHALL BE IN ACCORDANCE WITH ALL LAWS, RULES AND REGULATIONS OF THE NEW YORK CITY BUILDING CODE, AND ALL OTHER AUTHORITIES HAVING JURISDICTION.
2. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. EXACT SIZES AND LOCATIONS OF EXISTING PIPING SHALL BE VERIFIED AT THE PROJECT SITE.

## NYC FUEL GAS CODE NOTES:

GENERAL

1. ALL REQUIREMENTS FOR INSTALLATION OF GAS DISTRIBUTION PIPING WITH OPERATING PRESSURES AT 1/2 PSIG OR LESS AND ABOVE 1/2 PSIG SHALL BE IN ACCORDANCE WITH CHAPTER 4 OF THE NYCFGC.
2. GAS DISTRIBUTION PIPING OPERATING AT A PRESSURE OF OVER ½ PSIG TO 5 PSIG AND SIZE 4 INCHES OR LARGER SHALL BE WELDED.
3. ALL WELDING OF GAS DISTRIBUTION PIPING SHALL BE SUBJECT TO SPECIAL INSPECTION AS SET FORTH IN SECTION 406 OF THE NYCFGC.
4. THREADED PIPING MAY BE USED UP TO 4 INCHES AT PRESSURE NO GREATER THAN 1/2 PSIG.
5. USED PIPE, FITTINGS, VALVES AND OTHER MATERIALS SHALL NOT BE REUSED.
6. CARBON STEEL AND WROUGHT -IRON PIPE SHALL BE AT LEAST OF STANDARD WEIGHT AND SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:
   a. ASME B36.10, 10M
   b. ASTM A 53/A 53M; or
   c. ASTM A 106.
7. WHERE IN CONTACT WITH MATERIAL OR ATMOSPHERE EXERTING A CORROSIVE ACTION, METALLIC PIPING AND FITTINGS COATED WITH A CORROSION-RESISTANT MATERIAL SHALL BE USED. EXTERNAL COATINGS OR LININGS USED ON PIPING OR COMPONENTS SHALL NOT BE CONSIDERED AS ADDING STRENGTH.

## PLUMBING SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| | NEW DOMESTIC COLD WATER PIPING |
| | NEW DOMESTIC HOT WATER PIPING |
| | NEW DOMESTIC HOT WATER RETURN PIPING |
| | EXISTING DOMESTIC COLD WATER PIPING |
| | EXISTING DOMESTIC HOT WATER PIPING |
| | EXISTING DOMESTIC HOT WATER RETURN PIPING |
| I.W. | INDIRECT WASTE PIPING |
| | NEW SANITARY PIPING |
| | NEW UNDERSLAB SANITARY PIPING |
| | EXISTING UNDERSLAB SANITARY PIPING |
| | NEW VENT PIPING |
| | EXISTING VENT PIPING |
| | EXISTING PIPING TO BE DEMOLISHED |
| | BALL VALVE |
| | GATE VALVE |
| | CHECK VALVE |
| FD | NEW FLOOR DRAIN |
| | POINT OF CONNECTION TO EXISTING |
| | DISCONNECT EXISTING |
| | CLEAN OUT DECK PLATE |
| | CLEAN OUT |
| | HOT WATER RETURN BALANCING VALVE |

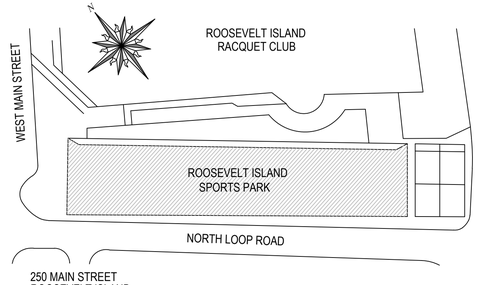
NOTE: ALL SYMBOLS ARE NOT NECESSARILY SHOWN ON DRAWINGS.

## PLUMBING ABBREVIATIONS

| | | | |
|---|---|---|---|
| AFF | ABOVE FINISHED FLOOR | HW | HOT WATER |
| ATP | AUTOMATIC TRAP PRIMER | HWR | HOT WATER RECIRCULATING |
| APP | APPROVED | IW | INDIRECT WASTE |
| APPROX | APPROXIMATE | MS | MOP SINK |
| ARCH | ARCHITECTURAL | MFR | MANUFACTURER |
| & | AND | MIN | MINIMUM |
| @ | AT | MTG | MOUNTING |
| | | NIC | NOT IN CONTRACT |
| BSMT | BASEMENT | #, NO. | NUMBER |
| BFF | BELOW FINISHED FLOOR | NTS | NOT TO SCALE |
| BLDG | BUILDING | NG | NATURAL GAS |
| | | PC | PLUMBING CONTRACTOR |
| CLG | CEILING | % | PERCENT |
| CFH | CUBIC FEET PER HOUR | Ph | PHASE |
| CO | CLEANOUT | PLBG | PLUMBING |
| CODP | CLEANOUT W/DECK PLATE | | |
| CONN | CONNECTION | QTY | QUANTITY |
| CONT | CONTINUATION | | |
| CW | COLD WATER | RM | ROOM |
| DFU | DRAINAGE FIXTURE UNIT | REQ | REQUIRED |
| DIA, ~ | DIAMETER | | |
| DN | DOWN | SFU | SUPPLY FIXTURE UNIT |
| DWG | DRAWING | SHT | SHEET |
| DF | DRINKING FOUNTAIN | SPECS. | SPECIFICATIONS |
| | | SQ.FT | SQUARE FOOT |
| EA | EACH | SRV | SAFETY RELIEF VALVE |
| EQ | EQUAL | TMV | THERMOSTATIC MIXING VALVE |
| EQUIP | EQUIPMENT | TYP | TYPICAL |
| EXIST | EXISTING | | |
| FD | FLOOR DRAIN | VTR | VENT THRU ROOF |
| FUD | FUNNEL DRAIN | WC | WATER CLOSET |
| FT | FEET | WCO | WALL CLEANOUT |
| | | WM | WATER METER |
| GC | GENERAL CONTRACTOR | WTH | WIDTH |
| HWC | HANDICAP WC | W/ | WITH |
| HGT | HEIGHT | | |

NOTE: ALL ABBREVIATIONS ARE NOT NECESSARILY SHOWN ON DRAWINGS.

| PLUMBING DRAWING LIST | |
|---|---|
| Sheet Number | Sheet Title |
| P-001.00 | PLUMBING NOTES SYMBOLS AND ABBREVIATIONS |
| P-002.00 | FLOOD INSURANCE RATE MAP |
| P-051.00 | PLUMBING FIRST FLOOR WEST - DEMOLITION PLAN |
| P-100.00 | PLUMBING FIRST FLOOR EAST PLAN |
| P-101.00 | PLUMBING FIRST FLOOR WEST PLAN |
| P-103.00 | PLUMBING SECOND FLOOR WEST PLAN |
| P-105.00 | PLUMBING ROOF WEST PLAN |
| P-300.00 | PLUMBING DETAILS |
| P-400.00 | PLUMBING SCHEDULES |
| P-500.00 | PLUMBING RISER DIAGRAM I |
| P-501.00 | PLUMBING RISER DIAGRAM II |




250 MAIN STREET
ROOSEVELT ISLAND,
N.Y. 10044
BLOCK No: 1373
LOT No: 1
ZONING MAP: 9A
PRIMARY ZONING: R7-2

1 PLOT PLAN
Scale: NTS

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT


CONSULTANTS


CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-6500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING NOTES SYMBOLS AND ABBREVIATIONS

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. P-001.00 |
| | DRAWN BY F.K. — 1 OF 13 |

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** (BFEs) shown on this map apply only landward of 0.0' National Geodetic Vertical Datum of 1929 (NGVD 29). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was New York State Plane FIPSZONE 3104. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the National Geodetic Vertical Datum of 1929. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3182
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

**Base map** information shown on this FIRM was provided in digital format by the Department of Information Technology and Telecommunication, City of New York. This information was derived from digital orthophotos produced at a scale of 1:1,200 with 2-foot pixel resolution from photography dated 2004.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map showing the layout of map panels for this jurisdiction.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.

250 MAIN ST. ROOSEVELT ISLAND, NY 10044.
PROPERTY IS LOCATED IN FLOOD ZONE X

73°58'07.5" 40°46'52.5"
995000 FT
JOINS PANEL 0087
1000000 FT
73°56'15" 40°46'52.5"
45°15'000"N
E 92ND STREET
E 93RD STREET
City of New York 360497
CENTRAL PARK
KU1421
KU1426
KU1415
KU1416
KU1417
KU1418
KU1057
KU1055
ZONE X
ZONE AE
(EL 11)
(EL 12)
(EL 13)
(EL 14)
East River
West Channel
East Channel
Gas Main
FDR DRIVE
EAST RIVER PARK
EAST END AVENUE
GRACE TERRACE
TERRACE DRIVE
EAST END AVENUE
EAST RIVER PARK
EAST 92ND STREET
EAST 93RD STREET
EAST 94TH STREET
EAST 95TH STREET
EAST 96TH STREET
EAST 97TH STREET
EAST 98TH STREET
EAST 99TH STREET
EAST 100TH STREET
EAST 101ST STREET
EAST 102ND STREET
EAST 103RD STREET
EAST 104TH STREET
EAST 105TH STREET
EAST 106TH STREET
EAST 107TH STREET
EAST 108TH STREET
EAST 109TH STREET
EAST 110TH STREET
EAST 111TH STREET
EAST 112TH STREET
EAST 113TH STREET
EAST 114TH STREET
EAST 115TH STREET
EAST 116TH STREET
EAST 117TH STREET
EAST 118TH STREET
EAST 119TH STREET
EAST 120TH STREET
EAST 121ST STREET
EAST 122ND STREET
EAST 123RD STREET
EAST 124TH STREET
EAST 125TH STREET
EAST 126TH STREET
EAST 127TH STREET
EAST 128TH STREET
EAST 129TH STREET
EAST 130TH STREET
EAST 131ST STREET
EAST 132ND STREET
EAST 133RD STREET
EAST 134TH STREET
EAST 135TH STREET
EAST 136TH STREET
EAST 137TH STREET
EAST 138TH STREET
EAST 139TH STREET
EAST 140TH STREET
EAST 141ST STREET
EAST 142ND STREET
EAST 143RD STREET
EAST 144TH STREET
EAST 145TH STREET
EAST 146TH STREET
EAST 147TH STREET
EAST 148TH STREET
EAST 149TH STREET
EAST 150TH STREET
EAST 151ST STREET
EAST 152ND STREET
EAST 153RD STREET
EAST 154TH STREET
EAST 155TH STREET
EAST 156TH STREET
EAST 157TH STREET
EAST 158TH STREET
EAST 159TH STREET
EAST 160TH STREET
EAST 161ST STREET
EAST 162ND STREET
EAST 163RD STREET
EAST 164TH STREET
EAST 165TH STREET
EAST 166TH STREET
EAST 167TH STREET
EAST 168TH STREET
EAST 169TH STREET
EAST 170TH STREET
EAST 171ST STREET
EAST 172ND STREET
EAST 173RD STREET
EAST 174TH STREET
EAST 175TH STREET
EAST 176TH STREET
EAST 177TH STREET
EAST 178TH STREET
EAST 179TH STREET
EAST 180TH STREET
EAST 181ST STREET
EAST 182ND STREET
EAST 183RD STREET
EAST 184TH STREET
EAST 185TH STREET
EAST 186TH STREET
EAST 187TH STREET
EAST 188TH STREET
EAST 189TH STREET
EAST 190TH STREET
EAST 191ST STREET
EAST 192ND STREET
EAST 193RD STREET
EAST 194TH STREET
EAST 195TH STREET
EAST 196TH STREET
EAST 197TH STREET
EAST 198TH STREET
EAST 199TH STREET
EAST 200TH STREET
EAST 201ST STREET
EAST 202ND STREET
EAST 203RD STREET
EAST 204TH STREET
EAST 205TH STREET
EAST 206TH STREET
EAST 207TH STREET
EAST 208TH STREET
EAST 209TH STREET
EAST 210TH STREET
EAST 211TH STREET
EAST 212TH STREET
EAST 213TH STREET
EAST 214TH STREET
EAST 215TH STREET
EAST 216TH STREET
EAST 217TH STREET
EAST 218TH STREET
EAST 219TH STREET
EAST 220TH STREET
EAST 221ST STREET
EAST 222ND STREET
EAST 223RD STREET
EAST 224TH STREET
EAST 225TH STREET
EAST 226TH STREET
EAST 227TH STREET
EAST 228TH STREET
EAST 229TH STREET
EAST 230TH STREET
EAST 231ST STREET
EAST 232ND STREET
EAST 233RD STREET
EAST 234TH STREET
EAST 235TH STREET
EAST 236TH STREET
EAST 237TH STREET
EAST 238TH STREET
EAST 239TH STREET
EAST 240TH STREET
EAST 241ST STREET
EAST 242ND STREET
EAST 243RD STREET
EAST 244TH STREET
EAST 245TH STREET
EAST 246TH STREET
EAST 247TH STREET
EAST 248TH STREET
EAST 249TH STREET
EAST 250TH STREET
EAST 251ST STREET
EAST 252ND STREET
EAST 253RD STREET
EAST 254TH STREET
EAST 255TH STREET
EAST 256TH STREET
EAST 257TH STREET
EAST 258TH STREET
EAST 259TH STREET
EAST 260TH STREET
EAST 261ST STREET
EAST 262ND STREET
EAST 263RD STREET
EAST 264TH STREET
EAST 265TH STREET
EAST 266TH STREET
EAST 267TH STREET
EAST 268TH STREET
EAST 269TH STREET
EAST 270TH STREET
EAST 271ST STREET
EAST 272ND STREET
EAST 273RD STREET
EAST 274TH STREET
EAST 275TH STREET
EAST 276TH STREET
EAST 277TH STREET
EAST 278TH STREET
EAST 279TH STREET
EAST 280TH STREET
EAST 281ST STREET
EAST 282ND STREET
EAST 283RD STREET
EAST 284TH STREET
EAST 285TH STREET
EAST 286TH STREET
EAST 287TH STREET
EAST 288TH STREET
EAST 289TH STREET
EAST 290TH STREET
EAST 291ST STREET
EAST 292ND STREET
EAST 293RD STREET
EAST 294TH STREET
EAST 295TH STREET
EAST 296TH STREET
EAST 297TH STREET
EAST 298TH STREET
EAST 299TH STREET
EAST 300TH STREET
EAST 301ST STREET
EAST 302ND STREET
EAST 303RD STREET
EAST 304TH STREET
EAST 305TH STREET
EAST 306TH STREET
EAST 307TH STREET
EAST 308TH STREET
EAST 309TH STREET
EAST 310TH STREET
EAST 311TH STREET
EAST 312TH STREET
EAST 313TH STREET
EAST 314TH STREET
EAST 315TH STREET
EAST 316TH STREET
EAST 317TH STREET
EAST 318TH STREET
EAST 319TH STREET
EAST 320TH STREET
EAST 321ST STREET
EAST 322ND STREET
EAST 323RD STREET
EAST 324TH STREET
EAST 325TH STREET
EAST 326TH STREET
EAST 327TH STREET
EAST 328TH STREET
EAST 329TH STREET
EAST 330TH STREET
EAST 331ST STREET
EAST 332ND STREET
EAST 333RD STREET
EAST 334TH STREET
EAST 335TH STREET
EAST 336TH STREET
EAST 337TH STREET
EAST 338TH STREET
EAST 339TH STREET
EAST 340TH STREET
EAST 341ST STREET
EAST 342ND STREET
EAST 343RD STREET
EAST 344TH STREET
EAST 345TH STREET
EAST 346TH STREET
EAST 347TH STREET
EAST 348TH STREET
EAST 349TH STREET
EAST 350TH STREET
EAST 351ST STREET
EAST 352ND STREET
EAST 353RD STREET
EAST 354TH STREET
EAST 355TH STREET
EAST 356TH STREET
EAST 357TH STREET
EAST 358TH STREET
EAST 359TH STREET
EAST 360TH STREET
EAST 361ST STREET
EAST 362ND STREET
EAST 363RD STREET
EAST 364TH STREET
EAST 365TH STREET
EAST 366TH STREET
EAST 367TH STREET
EAST 368TH STREET
EAST 369TH STREET
EAST 370TH STREET
EAST 371ST STREET
EAST 372ND STREET
EAST 373RD STREET
EAST 374TH STREET
EAST 375TH STREET
EAST 376TH STREET
EAST 377TH STREET
EAST 378TH STREET
EAST 379TH STREET
EAST 380TH STREET
EAST 381ST STREET
EAST 382ND STREET
EAST 383RD STREET
EAST 384TH STREET
EAST 385TH STREET
EAST 386TH STREET
EAST 387TH STREET
EAST 388TH STREET
EAST 389TH STREET
EAST 390TH STREET
EAST 391ST STREET
EAST 392ND STREET
EAST 393RD STREET
EAST 394TH STREET
EAST 395TH STREET
EAST 396TH STREET
EAST 397TH STREET
EAST 398TH STREET
EAST 399TH STREET
EAST 400TH STREET
EAST 401ST STREET
EAST 402ND STREET
EAST 403RD STREET
EAST 404TH STREET
EAST 405TH STREET
EAST 406TH STREET
EAST 407TH STREET
EAST 408TH STREET
EAST 409TH STREET
EAST 410TH STREET
EAST 411TH STREET
EAST 412TH STREET
EAST 413TH STREET
EAST 414TH STREET
EAST 415TH STREET
EAST 416TH STREET
EAST 417TH STREET
EAST 418TH STREET
EAST 419TH STREET
EAST 420TH STREET
EAST 421ST STREET
EAST 422ND STREET
EAST 423RD STREET
EAST 424TH STREET
EAST 425TH STREET
EAST 426TH STREET
EAST 427TH STREET
EAST 428TH STREET
EAST 429TH STREET
EAST 430TH STREET
EAST 431ST STREET
EAST 432ND STREET
EAST 433RD STREET
EAST 434TH STREET
EAST 435TH STREET
EAST 436TH STREET
EAST 437TH STREET
EAST 438TH STREET
EAST 439TH STREET
EAST 440TH STREET
EAST 441ST STREET
EAST 442ND STREET
EAST 443RD STREET
EAST 444TH STREET
EAST 445TH STREET
EAST 446TH STREET
EAST 447TH STREET
EAST 448TH STREET
EAST 449TH STREET
EAST 450TH STREET
EAST 451ST STREET
EAST 452ND STREET
EAST 453RD STREET
EAST 454TH STREET
EAST 455TH STREET
EAST 456TH STREET
EAST 457TH STREET
EAST 458TH STREET
EAST 459TH STREET
EAST 460TH STREET
EAST 461ST STREET
EAST 462ND STREET
EAST 463RD STREET
EAST 464TH STREET
EAST 465TH STREET
EAST 466TH STREET
EAST 467TH STREET
EAST 468TH STREET
EAST 469TH STREET
EAST 470TH STREET
EAST 471ST STREET
EAST 472ND STREET
EAST 473RD STREET
EAST 474TH STREET
EAST 475TH STREET
EAST 476TH STREET
EAST 477TH STREET
EAST 478TH STREET
EAST 479TH STREET
EAST 480TH STREET
EAST 481ST STREET
EAST 482ND STREET
EAST 483RD STREET
EAST 484TH STREET
EAST 485TH STREET
EAST 486TH STREET
EAST 487TH STREET
EAST 488TH STREET
EAST 489TH STREET
EAST 490TH STREET
EAST 491ST STREET
EAST 492ND STREET
EAST 493RD STREET
EAST 494TH STREET
EAST 495TH STREET
EAST 496TH STREET
EAST 497TH STREET
EAST 498TH STREET
EAST 499TH STREET
EAST 500TH STREET
EAST 501ST STREET
EAST 502ND STREET
EAST 503RD STREET
EAST 504TH STREET
EAST 505TH STREET
EAST 506TH STREET
EAST 507TH STREET
EAST 508TH STREET
EAST 509TH STREET
EAST 510TH STREET
EAST 511TH STREET
EAST 512TH STREET
EAST 513TH STREET
EAST 514TH STREET
EAST 515TH STREET
EAST 516TH STREET
EAST 517TH STREET
EAST 518TH STREET
EAST 519TH STREET
EAST 520TH STREET
EAST 521ST STREET
EAST 522ND STREET
EAST 523RD STREET
EAST 524TH STREET
EAST 525TH STREET
EAST 526TH STREET
EAST 527TH STREET
EAST 528TH STREET
EAST 529TH STREET
EAST 530TH STREET
EAST 531ST STREET
EAST 532ND STREET
EAST 533RD STREET
EAST 534TH STREET
EAST 535TH STREET
EAST 536TH STREET
EAST 537TH STREET
EAST 538TH STREET
EAST 539TH STREET
EAST 540TH STREET
EAST 541ST STREET
EAST 542ND STREET
EAST 543RD STREET
EAST 544TH STREET
EAST 545TH STREET
EAST 546TH STREET
EAST 547TH STREET
EAST 548TH STREET
EAST 549TH STREET
EAST 550TH STREET
EAST 551ST STREET
EAST 552ND STREET
EAST 553RD STREET
EAST 554TH STREET
EAST 555TH STREET
EAST 556TH STREET
EAST 557TH STREET
EAST 558TH STREET
EAST 559TH STREET
EAST 560TH STREET
EAST 561ST STREET
EAST 562ND STREET
EAST 563RD STREET
EAST 564TH STREET
EAST 565TH STREET
EAST 566TH STREET
EAST 567TH STREET
EAST 568TH STREET
EAST 569TH STREET
EAST 570TH STREET
EAST 571ST STREET
EAST 572ND STREET
EAST 573RD STREET
EAST 574TH STREET
EAST 575TH STREET
EAST 576TH STREET
EAST 577TH STREET
EAST 578TH STREET
EAST 579TH STREET
EAST 580TH STREET
EAST 581ST STREET
EAST 582ND STREET
EAST 583RD STREET
EAST 584TH STREET
EAST 585TH STREET
EAST 586TH STREET
EAST 587TH STREET
EAST 588TH STREET
EAST 589TH STREET
EAST 590TH STREET
EAST 591ST STREET
EAST 592ND STREET
EAST 593RD STREET
EAST 594TH STREET
EAST 595TH STREET
EAST 596TH STREET
EAST 597TH STREET
EAST 598TH STREET
EAST 599TH STREET
EAST 600TH STREET
EAST 601ST STREET
EAST 602ND STREET
EAST 603RD STREET
EAST 604TH STREET
EAST 605TH STREET
EAST 606TH STREET
EAST 607TH STREET
EAST 608TH STREET
EAST 609TH STREET
EAST 610TH STREET
EAST 611TH STREET
EAST 612TH STREET
EAST 613TH STREET
EAST 614TH STREET
EAST 615TH STREET
EAST 616TH STREET
EAST 617TH STREET
EAST 618TH STREET
EAST 619TH STREET
EAST 620TH STREET
EAST 621ST STREET
EAST 622ND STREET
EAST 623RD STREET
EAST 624TH STREET
EAST 625TH STREET
EAST 626TH STREET
EAST 627TH STREET
EAST 628TH STREET
EAST 629TH STREET
EAST 630TH STREET
EAST 631ST STREET
EAST 632ND STREET
EAST 633RD STREET
EAST 634TH STREET
EAST 635TH STREET
EAST 636TH STREET
EAST 637TH STREET
EAST 638TH STREET
EAST 639TH STREET
EAST 640TH STREET
EAST 641ST STREET
EAST 642ND STREET
EAST 643RD STREET
EAST 644TH STREET
EAST 645TH STREET
EAST 646TH STREET
EAST 647TH STREET
EAST 648TH STREET
EAST 649TH STREET
EAST 650TH STREET
EAST 651ST STREET
EAST 652ND STREET
EAST 653RD STREET
EAST 654TH STREET
EAST 655TH STREET
EAST 656TH STREET
EAST 657TH STREET
EAST 658TH STREET
EAST 659TH STREET
EAST 660TH STREET
EAST 661ST STREET
EAST 662ND STREET
EAST 663RD STREET
EAST 664TH STREET
EAST 665TH STREET
EAST 666TH STREET
EAST 667TH STREET
EAST 668TH STREET
EAST 669TH STREET
EAST 670TH STREET
EAST 671ST STREET
EAST 672ND STREET
EAST 673RD STREET
EAST 674TH STREET
EAST 675TH STREET
EAST 676TH STREET
EAST 677TH STREET
EAST 678TH STREET
EAST 679TH STREET
EAST 680TH STREET
EAST 681ST STREET
EAST 682ND STREET
EAST 683RD STREET
EAST 684TH STREET
EAST 685TH STREET
EAST 686TH STREET
EAST 687TH STREET
EAST 688TH STREET
EAST 689TH STREET
EAST 690TH STREET
EAST 691ST STREET
EAST 692ND STREET
EAST 693RD STREET
EAST 694TH STREET
EAST 695TH STREET
EAST 696TH STREET
EAST 697TH STREET
EAST 698TH STREET
EAST 699TH STREET
EAST 700TH STREET
EAST 701ST STREET
EAST 702ND STREET
EAST 703RD STREET
EAST 704TH STREET
EAST 705TH STREET
EAST 706TH STREET
EAST 707TH STREET
EAST 708TH STREET
EAST 709TH STREET
EAST 710TH STREET
EAST 711TH STREET
EAST 712TH STREET
EAST 713TH STREET
EAST 714TH STREET
EAST 715TH STREET
EAST 716TH STREET
EAST 717TH STREET
EAST 718TH STREET
EAST 719TH STREET
EAST 720TH STREET
EAST 721ST STREET
EAST 722ND STREET
EAST 723RD STREET
EAST 724TH STREET
EAST 725TH STREET
EAST 726TH STREET
EAST 727TH STREET
EAST 728TH STREET
EAST 729TH STREET
EAST 730TH STREET
EAST 731ST STREET
EAST 732ND STREET
EAST 733RD STREET
EAST 734TH STREET
EAST 735TH STREET
EAST 736TH STREET
EAST 737TH STREET
EAST 738TH STREET
EAST 739TH STREET
EAST 740TH STREET
EAST 741ST STREET
EAST 742ND STREET
EAST 743RD STREET
EAST 744TH STREET
EAST 745TH STREET
EAST 746TH STREET
EAST 747TH STREET
EAST 748TH STREET
EAST 749TH STREET
EAST 750TH STREET
EAST 751ST STREET
EAST 752ND STREET
EAST 753RD STREET
EAST 754TH STREET
EAST 755TH STREET
EAST 756TH STREET
EAST 757TH STREET
EAST 758TH STREET
EAST 759TH STREET
EAST 760TH STREET
EAST 761ST STREET
EAST 762ND STREET
EAST 763RD STREET
EAST 764TH STREET
EAST 765TH STREET
EAST 766TH STREET
EAST 767TH STREET
EAST 768TH STREET
EAST 769TH STREET
EAST 770TH STREET
EAST 771ST STREET
EAST 772ND STREET
EAST 773RD STREET
EAST 774TH STREET
EAST 775TH STREET
EAST 776TH STREET
EAST 777TH STREET
EAST 778TH STREET
EAST 779TH STREET
EAST 780TH STREET
EAST 781ST STREET
EAST 782ND STREET
EAST 783RD STREET
EAST 784TH STREET
EAST 785TH STREET
EAST 786TH STREET
EAST 787TH STREET
EAST 788TH STREET
EAST 789TH STREET
EAST 790TH STREET
EAST 791ST STREET
EAST 792ND STREET
EAST 793RD STREET
EAST 794TH STREET
EAST 795TH STREET
EAST 796TH STREET
EAST 797TH STREET
EAST 798TH STREET
EAST 799TH STREET
EAST 800TH STREET
EAST 801ST STREET
EAST 802ND STREET
EAST 803RD STREET
EAST 804TH STREET
EAST 805TH STREET
EAST 806TH STREET
EAST 807TH STREET
EAST 808TH STREET
EAST 809TH STREET
EAST 810TH STREET
EAST 811TH STREET
EAST 812TH STREET
EAST 813TH STREET
EAST 814TH STREET
EAST 815TH STREET
EAST 816TH STREET
EAST 817TH STREET
EAST 818TH STREET
EAST 819TH STREET
EAST 820TH STREET
EAST 821ST STREET
EAST 822ND STREET
EAST 823RD STREET
EAST 824TH STREET
EAST 825TH STREET
EAST 826TH STREET
EAST 827TH STREET
EAST 828TH STREET
EAST 829TH STREET
EAST 830TH STREET
EAST 831ST STREET
EAST 832ND STREET
EAST 833RD STREET
EAST 834TH STREET
EAST 835TH STREET
EAST 836TH STREET
EAST 837TH STREET
EAST 838TH STREET
EAST 839TH STREET
EAST 840TH STREET
EAST 841ST STREET
EAST 842ND STREET
EAST 843RD STREET
EAST 844TH STREET
EAST 845TH STREET
EAST 846TH STREET
EAST 847TH STREET
EAST 848TH STREET
EAST 849TH STREET
EAST 850TH STREET
EAST 851ST STREET
EAST 852ND STREET
EAST 853RD STREET
EAST 854TH STREET
EAST 855TH STREET
EAST 856TH STREET
EAST 857TH STREET
EAST 858TH STREET
EAST 859TH STREET
EAST 860TH STREET
EAST 861ST STREET
EAST 862ND STREET
EAST 863RD STREET
EAST 864TH STREET
EAST 865TH STREET
EAST 866TH STREET
EAST 867TH STREET
EAST 868TH STREET
EAST 869TH STREET
EAST 870TH STREET
EAST 871ST STREET
EAST 872ND STREET
EAST 873RD STREET
EAST 874TH STREET
EAST 875TH STREET
EAST 876TH STREET
EAST 877TH STREET
EAST 878TH STREET
EAST 879TH STREET
EAST 880TH STREET
EAST 881ST STREET
EAST 882ND STREET
EAST 883RD STREET
EAST 884TH STREET
EAST 885TH STREET
EAST 886TH STREET
EAST 887TH STREET
EAST 888TH STREET
EAST 889TH STREET
EAST 890TH STREET
EAST 891ST STREET
EAST 892ND STREET
EAST 893RD STREET
EAST 894TH STREET
EAST 895TH STREET
EAST 896TH STREET
EAST 897TH STREET
EAST 898TH STREET
EAST 899TH STREET
EAST 900TH STREET
EAST 901ST STREET
EAST 902ND STREET
EAST 903RD STREET
EAST 904TH STREET
EAST 905TH STREET
EAST 906TH STREET
EAST 907TH STREET
EAST 908TH STREET
EAST 909TH STREET
EAST 910TH STREET
EAST 911TH STREET
EAST 912TH STREET
EAST 913TH STREET
EAST 914TH STREET
EAST 915TH STREET
EAST 916TH STREET
EAST 917TH STREET
EAST 918TH STREET
EAST 919TH STREET
EAST 920TH STREET
EAST 921ST STREET
EAST 922ND STREET
EAST 923RD STREET
EAST 924TH STREET
EAST 925TH STREET
EAST 926TH STREET
EAST 927TH STREET
EAST 928TH STREET
EAST 929TH STREET
EAST 930TH STREET
EAST 931ST STREET
EAST 932ND STREET
EAST 933RD STREET
EAST 934TH STREET
EAST 935TH STREET
EAST 936TH STREET
EAST 937TH STREET
EAST 938TH STREET
EAST 939TH STREET
EAST 940TH STREET
EAST 941ST STREET
EAST 942ND STREET
EAST 943RD STREET
EAST 944TH STREET
EAST 945TH STREET
EAST 946TH STREET
EAST 947TH STREET
EAST 948TH STREET
EAST 949TH STREET
EAST 950TH STREET
EAST 951ST STREET
EAST 952ND STREET
EAST 953RD STREET
EAST 954TH STREET
EAST 955TH STREET
EAST 956TH STREET
EAST 957TH STREET
EAST 958TH STREET
EAST 959TH STREET
EAST 960TH STREET
EAST 961ST STREET
EAST 962ND STREET
EAST 963RD STREET
EAST 964TH STREET
EAST 965TH STREET
EAST 966TH STREET
EAST 967TH STREET
EAST 968TH STREET
EAST 969TH STREET
EAST 970TH STREET
EAST 971ST STREET
EAST 972ND STREET
EAST 973RD STREET
EAST 974TH STREET
EAST 975TH STREET
EAST 976TH STREET
EAST 977TH STREET
EAST 978TH STREET
EAST 979TH STREET
EAST 980TH STREET
EAST 981ST STREET
EAST 982ND STREET
EAST 983RD STREET
EAST 984TH STREET
EAST 985TH STREET
EAST 986TH STREET
EAST 987TH STREET
EAST 988TH STREET
EAST 989TH STREET
EAST 990TH STREET
EAST 991ST STREET
EAST 992ND STREET
EAST 993RD STREET
EAST 994TH STREET
EAST 995TH STREET
EAST 996TH STREET
EAST 997TH STREET
EAST 998TH STREET
EAST 999TH STREET
EAST 1000TH STREET
220000 FT
215000 FT
JOINS PANEL 0088
JOINS PANEL 0093
JOINS PANEL 0202
40°45'00" 73°58'07.5"
88°000"E
89°000"E
73°56'15" 40°45'00"
45°12'000"N
45°14'000"N
QUEENS COUNTY
NEW YORK COUNTY
MAIN STREET
WEST ROAD
EAST ROAD
RIVER ROAD
33RD ROAD
43RD ROAD
44TH AVENUE
ROOSEVELT ISLAND BRIDGE
QUEENSBORO BRIDGE
ROOSEVELT ISLAND
VERNON BOULEVARD
SOUTH STREET
NORTH STREET
10TH AVENUE
11TH AVENUE
12TH AVENUE
13TH AVENUE
14TH AVENUE
15TH AVENUE
16TH AVENUE
17TH AVENUE
18TH AVENUE
19TH AVENUE
20TH AVENUE
21ST AVENUE
22ND AVENUE
23RD AVENUE
24TH AVENUE
25TH AVENUE
26TH AVENUE
27TH AVENUE
28TH AVENUE
29TH AVENUE
30TH AVENUE
31ST AVENUE
32ND AVENUE
33RD AVENUE
34TH AVENUE
35TH AVENUE
36TH AVENUE
37TH AVENUE
38TH AVENUE
39TH AVENUE
40TH AVENUE
41ST AVENUE
42ND AVENUE
43RD AVENUE
44TH AVENUE
45TH AVENUE
46TH AVENUE
47TH AVENUE
48TH AVENUE
49TH AVENUE
50TH AVENUE
51ST AVENUE
52ND AVENUE
53RD AVENUE
54TH AVENUE
55TH AVENUE
56TH AVENUE
57TH AVENUE
58TH AVENUE
59TH AVENUE
60TH AVENUE
61ST AVENUE
62ND AVENUE
63RD AVENUE
64TH AVENUE
65TH AVENUE
66TH AVENUE
67TH AVENUE
68TH AVENUE
69TH AVENUE
70TH AVENUE
71ST AVENUE
72ND AVENUE
73RD AVENUE
74TH AVENUE
75TH AVENUE
76TH AVENUE
77TH AVENUE
78TH AVENUE
79TH AVENUE
80TH AVENUE
81ST AVENUE
82ND AVENUE
83RD AVENUE
84TH AVENUE
85TH AVENUE
86TH AVENUE
87TH AVENUE
88TH AVENUE
89TH AVENUE
90TH AVENUE
91ST AVENUE
92ND AVENUE
93RD AVENUE
94TH AVENUE
95TH AVENUE
96TH AVENUE
97TH AVENUE
98TH AVENUE
99TH AVENUE
100TH AVENUE
101ST AVENUE
102ND AVENUE
103RD AVENUE
104TH AVENUE
105TH AVENUE
106TH AVENUE
107TH AVENUE
108TH AVENUE
109TH AVENUE
110TH AVENUE
111TH AVENUE
112TH AVENUE
113TH AVENUE
114TH AVENUE
115TH AVENUE
116TH AVENUE
117TH AVENUE
118TH AVENUE
119TH AVENUE
120TH AVENUE
121ST AVENUE
122ND AVENUE
123RD AVENUE
124TH AVENUE
125TH AVENUE
126TH AVENUE
127TH AVENUE
128TH AVENUE
129TH AVENUE
130TH AVENUE
131ST AVENUE
132ND AVENUE
133RD AVENUE
134TH AVENUE
135TH AVENUE
136TH AVENUE
137TH AVENUE
138TH AVENUE
139TH AVENUE
140TH AVENUE
141ST AVENUE
142ND AVENUE
143RD AVENUE
144TH AVENUE
145TH AVENUE
146TH AVENUE
147TH AVENUE
148TH AVENUE
149TH AVENUE
150TH AVENUE
151ST AVENUE
152ND AVENUE
153RD AVENUE
154TH AVENUE
155TH AVENUE
156TH AVENUE
157TH AVENUE
158TH AVENUE
159TH AVENUE
160TH AVENUE
161ST AVENUE
162ND AVENUE
163RD AVENUE
164TH AVENUE
165TH AVENUE
166TH AVENUE
167TH AVENUE
168TH AVENUE
169TH AVENUE
170TH AVENUE
171ST AVENUE
172ND AVENUE
173RD AVENUE
174TH AVENUE
175TH AVENUE
176TH AVENUE
177TH AVENUE
178TH AVENUE
179TH AVENUE
180TH AVENUE
181ST AVENUE
182ND AVENUE
183RD AVENUE
184TH AVENUE
185TH AVENUE
186TH AVENUE
187TH AVENUE
188TH AVENUE
189TH AVENUE
190TH AVENUE
191ST AVENUE
192ND AVENUE
193RD AVENUE
194TH AVENUE
195TH AVENUE
196TH AVENUE
197TH AVENUE
198TH AVENUE
199TH AVENUE
200TH AVENUE
201ST AVENUE
202ND AVENUE
203RD AVENUE
204TH AVENUE
205TH AVENUE
206TH AVENUE
207TH AVENUE
208TH AVENUE
209TH AVENUE
210TH AVENUE
211TH AVENUE
212TH AVENUE
213TH AVENUE
214TH AVENUE
215TH AVENUE
216TH AVENUE
217TH AVENUE
218TH AVENUE
219TH AVENUE
220TH AVENUE
221ST AVENUE
222ND AVENUE
223RD AVENUE
224TH AVENUE
225TH AVENUE
226TH AVENUE
227TH AVENUE
228TH AVENUE
229TH AVENUE
230TH AVENUE
231ST AVENUE
232ND AVENUE
233RD AVENUE
234TH AVENUE
235TH AVENUE
236TH AVENUE
237TH AVENUE
238TH AVENUE
239TH AVENUE
240TH AVENUE
241ST AVENUE
242ND AVENUE
243RD AVENUE
244TH AVENUE
245TH AVENUE
246TH AVENUE
247TH AVENUE
248TH AVENUE
249TH AVENUE
250TH AVENUE
251ST AVENUE
252ND AVENUE
253RD AVENUE
254TH AVENUE
255TH AVENUE
256TH AVENUE
257TH AVENUE
258TH AVENUE
259TH AVENUE
260TH AVENUE
261ST AVENUE
262ND AVENUE
263RD AVENUE
264TH AVENUE
265TH AVENUE
266TH AVENUE
267TH AVENUE
268TH AVENUE
269TH AVENUE
270TH AVENUE
271ST AVENUE
272ND AVENUE
273RD AVENUE
274TH AVENUE
275TH AVENUE
276TH AVENUE
277TH AVENUE
278TH AVENUE
279TH AVENUE
280TH AVENUE
281ST AVENUE
282ND AVENUE
283RD AVENUE
284TH AVENUE
285TH AVENUE
286TH AVENUE
287TH AVENUE
288TH AVENUE
289TH AVENUE
290TH AVENUE
291ST AVENUE
292ND AVENUE
293RD AVENUE
294TH AVENUE
295TH AVENUE
296TH AVENUE
297TH AVENUE
298TH AVENUE
299TH AVENUE
300TH AVENUE
301ST AVENUE
302ND AVENUE
303RD AVENUE
304TH AVENUE
305TH AVENUE
306TH AVENUE
307TH AVENUE
308TH AVENUE
309TH AVENUE
310TH AVENUE
311TH AVENUE
312TH AVENUE
313TH AVENUE
314TH AVENUE
315TH AVENUE
316TH AVENUE
317TH AVENUE
318TH AVENUE
319TH AVENUE
320TH AVENUE
321ST AVENUE
322ND AVENUE
323RD AVENUE
324TH AVENUE
325TH AVENUE
326TH AVENUE
327TH AVENUE
328TH AVENUE
329TH AVENUE
330TH AVENUE
331ST AVENUE
332ND AVENUE
333RD AVENUE
334TH AVENUE
335TH AVENUE
336TH AVENUE
337TH AVENUE
338TH AVENUE
339TH AVENUE
340TH AVENUE
341ST AVENUE
342ND AVENUE
343RD AVENUE
344TH AVENUE
345TH AVENUE
346TH AVENUE
347TH AVENUE
348TH AVENUE
349TH AVENUE
350TH AVENUE
351ST AVENUE
352ND AVENUE
353RD AVENUE
354TH AVENUE
355TH AVENUE
356TH AVENUE
357TH AVENUE
358TH AVENUE
359TH AVENUE
360TH AVENUE
361ST AVENUE
362ND AVENUE
363RD AVENUE
364TH AVENUE
365TH AVENUE
366TH AVENUE
367TH AVENUE
368TH AVENUE
369TH AVENUE
370TH AVENUE
371ST AVENUE
372ND AVENUE
373RD AVENUE
374TH AVENUE
375TH AVENUE
376TH AVENUE
377TH AVENUE
378TH AVENUE
379TH AVENUE
380TH AVENUE
381ST AVENUE
382ND AVENUE
383RD AVENUE
384TH AVENUE
385TH AVENUE
386TH AVENUE
387TH AVENUE
388TH AVENUE
389TH AVENUE
390TH AVENUE
391ST AVENUE
392ND AVENUE
393RD AVENUE
394TH AVENUE
395TH AVENUE
396TH AVENUE
397TH AVENUE
398TH AVENUE
399TH AVENUE
400TH AVENUE
401ST AVENUE
402ND AVENUE
403RD AVENUE
404TH AVENUE
405TH AVENUE
406TH AVENUE
407TH AVENUE
408T

# PLUMBING SPECIFICATIONS SHEET 1

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION AND OR AIA DOCUMENT A105 AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. IN CASE OF CONFLICT BETWEEN THESE GENERAL PROVISIONS AND THE SPECIAL AND GENERAL CONDITIONS THE MORE RESTRICTIVE REQUIREMENTS GOVERN AS DETERMINED BY THE ARCHITECT.

C. THE DRAWINGS ARE SCHEMATIC AND DIAGRAMMATIC AND ARE INTENDED TO BE A GRAPHIC REPRESENTATION OF THE CONTRACT REQUIREMENTS. DUE TO RESTRICTIONS OF SCALE, COMPLETE DETAILS CAN NOT BE SHOWN. IT IS HOWEVER ASSUMED TO REPRESENT A COMPLETE INSTALLATION, COORDINATION WITH OTHER TRADES, AND COORDINATION WITH FIELD CONDITIONS.

D. RISER DIAGRAMS AND SCHEMATIC DIAGRAMS GENERALLY INDICATE EQUIPMENT CONNECTIONS TO BE USED FOR VARIOUS SYSTEMS. PROVIDE ALL WORK SHOWN WETHER OR NOT IT IS DUPLICATED ON THE PLANS.

E. SPECIFICATIONS INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL", "SHALL BE", "FURNISH", "PROVIDE", "A", "AN", "THE", AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

F. EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM TO COMPLETE WITH ALL APPURTENANCES OR ACCESSORIES NECESSARY TO COMPLETE ANY REQUIRED SYSTEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.

G. SPECIFICATIONS AND DRAWINGS ARE COMPLIMENTARY AND ARE TO BE TAKEN TOGETHER FOR A COMPLETE INTERPRETATION OF THE WORK.

H. DRAWINGS OF NECESSITY UTILIZE SYMBOLS AND SCHEMATIC DIAGRAMS TO INDICATE VARIOUS ITEMS OF WORK. NEITHER OF THESE HAVE ANY DIMENSIONAL SIGNIFICANCE NOT DO THEY DELINEATE EVERY ITEM REQUIRED FOR THE INTENDED INSTALLATION.

INSTALL THE WORK IN ACCORDANCE WITH THE DIAGRAMMATIC INTENT EXPRESSED ON THE ELECTRICAL AND MECHANICAL DRAWINGS, AND IN CONFORMITY WITH THE DIMENSIONS INDICATED ON FINAL ARCHITECTURAL AND STRUCTURAL WORKING DRAWINGS AND ON EQUIPMENT SHOP DRAWINGS.

I. CERTAIN DETAILS APPEAR ON THE DRAWINGS WHICH ARE SPECIFIC WITH REGARD TO DIMENSIONING AND POSITIONING OF WORK. THESE DETAILS ARE INTENDED ONLY FOR THE PURPOSE OF ESTABLISHING GENERAL FEASIBILITY. THEY DO NOT OBVIATE FIELD COORDINATION FOR INDICATED WORK.

J. DERIVE INFORMATION AS TO THE GENERAL CONSTRUCTION FROM STRUCTURAL AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

K. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.

L. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

M. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH NON-SHRINKING FIRE PROOF CAULKING OR OTHER NONCOMBUSTIBLE MATERIAL.

L. PROVIDE ALL NECESSARY FLASHING AND COUNTER-FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OF PIPING AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AS REQUIRED.

M. ALL PRESENT MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

N. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

O. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

P. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

2. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMITY WITH THE NEW YORK CITY PLUMBING CODE AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. THE CONTRACT DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLEMENTED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT FOR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

3. SHOP DRAWINGS AND SAMPLES:

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWING SUBMITTED:

1. PROJECT NAME AND LOCATION
2. NAME OF ARCHITECT AND ENGINEER
3. ITEM IDENTIFICATION
4. APPROVAL STAMP OF PRIME CONTRACTOR

THE LOCATION AND ELEVATIONS OF ALL PIPING AND EQUIPMENT THAT IS IN OR PASSING THROUGH BASE BUILDING SPACES AND/OR TENANT SPACES ARE TO BE COORDINATED WITH BUILDING MANAGEMENT AND INDICATED ON SHOP DRAWINGS BEFORE PROCEEDING WITH WORK.

C. SUBMISSIONS:

1. SUBMISSIONS MAY BE SUBMITTED ELECTRONICALLY IN LIEU OF HARD COPIES PROVIDED SUBMITTALS ARE SENT THROUGH THE GENERAL CONTRACTOR AND OR ARCHITECT.

2. HARD COPY SUBMISSIONS 11 IN. X 17 IN. OR SMALLER:
IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.

3. SUBMISSIONS LARGER THAN 11 IN. X 17 IN.:
SUBMIT 4 PRINTS TO THE ARCHITECT.
THE ARCHITECT WILL FORWARD ONE PRINT TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

1. PIPE AND FITTINGS
2. VALVES
3. PLUMBING FIXTURES AND TRIM
4. PIPING LAYOUTS
5. SUPPORTS, HANGERS AND GUIDES
6. INSULATION
7. HI-LOW THERMOSTATIC MIXING VALVES
8. COORDINATED PIPE SLEEVE PLANS

4. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS:

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

5. GENERAL PROVISIONS FOR PLUMBING WORK:

A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

B. DEFINITIONS:

1. "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
2. "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
3. "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
4. "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
5. "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND RELATED ITEMS.
6. "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.
7. "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
8. "SIMILAR TO" OR "EQUAL TO": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

C. QUALITY ASSURANCE

1. QUALITY AND GAUGE OF MATERIALS: NEW, BEST OF THEIR RESPECTIVE KINDS, FREE FROM DEFECTS AND LISTED BY UNDERWRITERS LABORATORIES, INC., OR BEARING THEIR LABEL. MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK.

D. PRODUCT DELIVERY, STORAGE AND HANDLING

1. MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.
2. ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS SHALL BE PERMITTED. CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

E. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC CHROMATE FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. RED LEAD OR ZINC CHROMATE WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD-APPLIED ZINC CHROMATE PRIME COAT SHALL BE UTILIZED FOR STEEL AND IRON WORK.

F. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED. CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

G. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL PLUMBING FIXTURES SHALL BE VERIFIED BY ARCHITECT.

H. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

6. PIPE AND FITTINGS:

A. SANITARY DRAINAGE AND VENT

1. SERVICE WEIGHT HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS WITH LEAD AND OAKUM JOINTS. BELOW GRADE.

2. HUBLESS CAST IRON SOIL PIPE AND FITTINGS WITH EXTRA WIDE HEAVY DUTY GASKETED HUBLESS COUPLINGS FOR FOOD SERVICE APPLICATIONS. ABOVE GRADE.

3. GALVANIZED SCHEDULE 40 STEEL PIPE WITH GALVANIZED THREADED MALLEABLE IRON FITTINGS. EJECTOR AND OR SUMP DISCHARGE PIPING.

B. DOMESTIC WATER

1. TYPE L HARD COPPER TUBING WITH CAST BRONZE OR WROUGHT COPPER FITTINGS AND 95/5 TIN ANTIMONY SOLDER JOINTS.

2. STANDARD WEIGHT RED BRASS PIPE WITH STANDARD WEIGHT CAST BRONZE THREADED FITTINGS.

3. ALL EXPOSED PIPE AND FITTINGS SHALL BE CHROME PLATED BRASS.

4. ALL EXPOSED PIPING PASSING THROUGH WALLS, FLOORS, CEILINGS, AND PARTITIONS SHALL BE PROVIDED WITH CHROME PLATED CAST BRASS ESCUTCHEONS HELD IN PLACE WITH SET SCREWS.

C. GAS PIPING
1. GAS PIPING SHALL BE SCHEDULE 40 STEEL AND MEET ASTM A53 SPECIFICATIONS.
2. FOR GAS PRESSURES UNDER 14" WC, PIPING 4" AND SMALLER SHALL BE THREADED OR WELDED; PIPING OVER 4" SHALL BE WELDED.
3. FOR GAS PRESSURES OVER 14" WC, PIPING SHALL BE WELDED.

7. VALVES:

1. GATE VALVES
   a. BRONZE RISING STEM, 200 PSI WOG.

2. BALL VALVES
   a. TWO-PIECE BRONZE, END ENTRY, 600 PSI WWP.

3. CHECK VALVES
   a. BRONZE SWING CHECK, THREADED CAP, TEFLON DISC.

8. INSTALLATION OF SLEEVES AND ESCUTCHEONS:

1. PIPING PASSING THROUGH WALLS SHALL HAVE A TRIM OPENING CUT NO GREATER THAN NECESSARY FOR THE INSTALLATION OF A SLEEVE SECURED THEREIN. SLEEVE SHALL BE 1/2" IN DIAMETER LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE PASSING THROUGH AND OF SUFFICIENT LENGTH TO BE FLUSH WITH THE FINISHED WALL SURFACE.

2. SLEEVES IN MASONRY WALLS SHALL BE SCHEDULE 40, STANDARD STEEL PIPE AND IN FRAMED PARTITIONS 20 GAGE SHEET GALVANIZED METAL.

3. ANNULAR SPACES BETWEEN PIPING AND SLEEVES SHALLBE PACKED WITH "THERMAFIBER" AND SEALED TO RETAIN THE FIRE INTEGRITY OF THE WALLS WITH A NON-HARDENING COMPOUND SIMILAR TO UNISEAL OR DUXSEAL AS MANUFACTURED BY JOHNS-MANVILLE CO. "THERMAFIBER" SHALL BE THERMAFIBER SAFING INSULATION AS MANUFACTURED BY UNITED STATES GYPSUM CO.

4. EXPOSED PIPING PASSING THROUGH WALLS OR CEILINGS SHALL BE FITTED WITH CHROMIUM PLATED CAST BRASS ESCUTCHEONS WITH FASTENING SET SCREWS.

9. INSULATION:

A. ALL INSULATION (INCLUDING JACKET, FACING AND ADHESIVE) SHALL CONFORM TO THE LATEST ENERGY CODE & BUILDING CODE. INSULATION SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURES LISTED IN ASTM E-84, NFPA 255 AND UL 273; NOT EXCEEDING A FLAME SPREAD OF 25 AND A SMOKE DEVELOPED OF 50.

B. ALL VALVES AND FITTINGS GREATER THAN 1" SHALL BE INSULATED WITH PRE-MOLDED FIBERGLASS FITTINGS. COLD WATER VALVES AND FITTINGS SHALL BE PROVIDED WITH A VAPOR SEAL.

C. DOMESTIC COLD WATER PIPING (40 F TO 60 F)
PIPE SIZES < 1" = $\frac{1}{2}$" MINIMUM THICKNESS.
PIPE SIZES 1" TO < $1\frac{1}{2}$" = $\frac{1}{2}$" MINIMUM THICKNESS.
PIPE SIZES $1\frac{1}{2}$" TO < 4" = 1" MINIMUM THICKNESS.
PIPE SIZES 4" TO < 8" = 1" MINIMUM THICKNESS.

D. DOMESTIC HOT WATER PIPING (105 F TO 140 F)
PIPE SIZES < 1" = 1" MINIMUM THICKNESS.
PIPE SIZES 1" TO < $1\frac{1}{2}$" = 1" MINIMUM THICKNESS.
PIPE SIZES $1\frac{1}{2}$" TO < 4" = $1\frac{1}{2}$" MINIMUM THICKNESS.
PIPE SIZES 4" TO < 8" = $1\frac{1}{2}$" MINIMUM THICKNESS.

E. ALL PIPING INSULATION SHALL BE ONE-PIECE MOLDED SECTIONAL FIBERGLASS HAVING A NOMINAL 4-POUND DENSITY. ITS THERMAL CONJUNCTIVITY SHALL NOT EXCEED 0.23 AT 75 DEGREES F. MEAN TEMPERATURE. IT SHALL BE SUITABLE FOR USE ON PIPING UP TO 370 DEGREES F.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
PLUMBING SPECIFICATIONS I

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. P-003.00
DRAWN BY F.K.
3 OF 13

NYC DOB Number

# PLUMBING SPECIFICATIONS SHEET 2

10. PLUMBING FIXTURES:

A. PROVIDE ALL FIXTURES WITH STOP VALVES AND SUPPLIES AND FIXTURE TRAPS AS REQUIRED.

B. ALL FIXTURES SHALL BE AS SPECIFIED & INDICATED ON ARCHITECTURAL DRAWINGS. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE FOR PLUMBING CONNECTION SIZES.

C. REDUCED PRESSURE BACKFLOW PREVENTER (RPZ) SHALL BE 4" WILKINS MODEL NO. 475V, LEAD-FREE, (MEA # 468-99-M VOL 4). PROVIDE WITH WATTS SENTRYPLUS ALERT RPZ FLOOD SENSOR AND WITH AIR GAP ADAPTER, AND INDIRECT WASTE PIPING FROM RPZ RELIEF PORT TO FLOOR DRAIN.

D. FLOOR & SHOWER DRAINS SHALL BE AS LISTED IN THE PLUMBING SCHEDULES IN DRAWING P-400.00

11. PIPING SUPPORTS:

A. SUPPORT ALL PIPING FROM BUILDING CONSTRUCTION BY PROVIDING INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), AND ACCEPTABLE BRACKETS. SUBMIT ALL METHODS FOR REVIEW.

B. PROVIDE TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS FOR GROUPED LINES AND SERVICES.

C. PROVIDE ADDITIONAL FRAMING WHERE BUILDING CONSTRUCTION IS INADEQUATE. SUBMIT FOR REVIEW.

D. SUSPENDED HORIZONTAL PIPING:

1. SUPPORT ALL PIPING INDEPENDENTLY FROM STRUCTURE USING HEAVY IRON-HINGED TYPE HANGERS.

2. PROVIDE ELECTROPLATED SOLID-BAND HANGERS SIMILAR TO AUTO-GRIP, FOR TWO-INCH AND SMALLER PIPE.

3. PROVIDE WALL BRACKETS FOR WALL SUPPORTED PIPING AND PROVIDE PIPE SADDLES FOR FLOOR MOUNTED PIPING.

4. PROVIDE SUPPORTS WITH COPPER LINING FOR UNINSULATED COPPER PIPING.

5. SUSPEND PIPING FROM INSERTS, USING BEAM CLAMPS WITH RETAIN CLAMP OR LOCKNUT, STEEL FISHPLATES, CANTILEVER BRACKETS OR OTHER ACCEPTED MEANS. BEAM CLAMPS SHALL BE SIMILAR TO GRINNEL FIGURES 61, 87, 131, OR 225.

6. SUSPEND PIPING BY RODS WITH DOUBLE NUTS.

7. PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND ACCEPTED WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS.

8. SUPPORT BRANCH FIXTURE WATER PIPING IN CHASES WITH COPPER PLATED METAL BRACKETS, SECURED TO STUDS,

E. PROVIDE 180 DEGREE ARC GALVANIZED METAL COVERING SHIELDS ON HANGERS FOR INSULATED PIPING WITHOUT INCOMPRESSIBLE INSULATING BLOCK ON INSULATION AT HANGERS.

F. MAXIMUM HANGER SPACING AS INDICATED.

1. PIPE 1 INCH AND SMALLER SHALL BE EVERY 8 FEET.

2. PIPE 1-1/4 INCH AND LARGER SHALL BE EVERY 10 FEET.

3. COPPER TUBING 1-1/4 INCH AND SMALLER SHALL BE EVERY 6 FEET.

4. COPPER TUBING 1-1/4 INCH AND LARGER SHALL BE EVERY 10 FEET.

5. CAST IRON: EVERY FIVE FEET AND AT EVERY FITTING OR JOINT.

G. VERTICAL PIPING:

1. PROVIDE SPACING AS INDICATED:

a. THREADED PIPING SHALL BE EVERY OTHER FLOOR LEVEL, AT A MAXIMUM OF 25 FEET ON CENTERS.

b. CAST IRON PIPING SHALL BE EVERY FLOOR LEVEL, MAXIMUM 20 FEET ON CENTERS; HUBLESS PIPE IS THE EXCEPTION, REQUIRING A MAXIMUM OF 10 FEET ON CENTERS.

c. TUBING SHALL BE EVERY FLOOR LEVEL MAXIMUM 10 FEET ON CENTERS.

H. EXPANSION ANCHORS:

1. PROVIDE SMOOTH WALL, NON-SELF-DRILLING INTERNAL PLUG EXPANSION TYPE ANCHORS CONSTRUCTED OF AISC 12L14 STEEL AND ZINC PLATED IN ACCORDANCE WITH FED. SPEC. QQ-A-325 TYPE 1, CLASS 3.

2. DO NOT EXCEED 1/4 OF AVERAGE VALVES FOR A SPECIFIC ANCHOR SIZE USING 2000 PSIG (13,800 KPA) CONCRETE ONLY, FOR MAXIMUM WORKING LOADS.

3. PROVIDE SPACING AND INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

4. EXPANSION ANCHORS SHALL BE U.L. LISTED AND SIMILAR TO HILTI HDI.

12. TESTS:

A. DOMESTIC WATER PIPING:

1. TEST PIPING HYDROSTATICALLY AT A PRESSURE OF 125 PSI.

2. DURATION OF TEST SHALL BE 2 HOURS WITHOUT A LOSS IN PRESSURE.

B. DRAINAGE AND VENT PIPING:

1. CAP ALL OUTLETS AND FILL PIPING SYSTEM TO OVERFLOWING FROM A POINT AT LEAST 10 FEET ABOVE THE FLOOR.

2. THE WATER LEVEL SHALL REMAIN CONSTANT THROUGHOUT THE TEST DURATION OF 2 HOURS.

C. ARRANGE AND COORDINATE TESTS WITH OWNER 48 HOURS IN ADVANCE NOTIFY ENGINEER AND ARCHITECT OF TEST AND DATE TIME.

13. ACCEPTABLE MANUFACTURERS FOR PLUMBING WORK

A. THE FIRST MANUFACTURER LISTED FOR EACH PRODUCT IS THE PROJECT DESIGN BASIS. THE MANUFACTURER'S LISTED AFTER ARE ACCEPTABLE AND "EQUAL TO" PRODUCTS SPECIFIED FOR THIS PROJECT PROVIDED THAT THEY MEET THE REQUIREMENTS OF THE SPECIFICATIONS, RATINGS, SPACE ALLOCATIONS OR SHOWN ON DRAWINGS.

B. PLUMBING FIXTURES:
1. PLUMBING FIXTURES SHALL BE AS SPECIFIED BY ARCHITECT.

C. HANGERS & SUPPORTS:
1. ANVIL INTERNATIONAL
2. B-LINE COPPER INDUSTRIES
3. GRINNELL COMPANY, CO.

D. ESCUTCHEONS:
1. BRASS CRAFT
2. MCQUIRE MFG.
3. OATEY

E. INSULATION:
1. OWENS CORNING
2. CERTAINTEED
3. GRINNELL

F. WATER HAMMER ARRESTORS & SHOCK ABSORBERS:
1. WATTS
2. SIOUX CHIEF
3. JR SMITH CO.

G. VALVES:
1. APOLLO VALVES
2. MILWAUKEE VALVE
3. NIBCO
4. NORDSTROM
5. McDONALD

H. DRAINS, CARRIERS AND SPECIALTIES:
1. ZURN
WATER CLOSET CARRIERS MATCHING WITH TOILETS FROM TOTO MODEL # CT708EV (G) & CT708E(G) (AS SPECIFIED BY ARCHITECT): Z1201 & Z1202
URINAL CARRIERS MATCHING WITH URINALS FROM TOTO MODEL #UT104EV (AS SPECIFIED BY ARCHITECT): Z1221 & Z1222
2. JOSAM
3. JR SMITH MFG. CO.

I. PIPING AND FITTINGS (CAST IRON):
1. CHARLOTTE PIPE
2. U.S. PIPE AND FOUNDARY
3. TYLER PIPE CORPORATION

J. PIPING AND FITTINGS (COPPER):
1. MUELLER INDUSTRIES
2. WIELAND COPPER PRODUCTS
3. CAMBRIDGE-LEE INDUSTRIES

K. PIPING AND FITTINGS (STEEL):
1. U.S. PIPE
2. WHEATLAND TUBE
3. AMERICAN-USA PIPE

L. PIPING AND FITTINGS (DUCTILE IRON):
1. U.S. PIPE
2. CLOW PIPE CO.
3. AMERICAN-USA PIPE

M. PIPE SLEEVES & SEALS:
1. ADVANCE PRODUCTS & SYSTEM
2. COOPER INDUSTRIES
3. FLEXICRAFT

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING
SPECIFICATIONS II

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

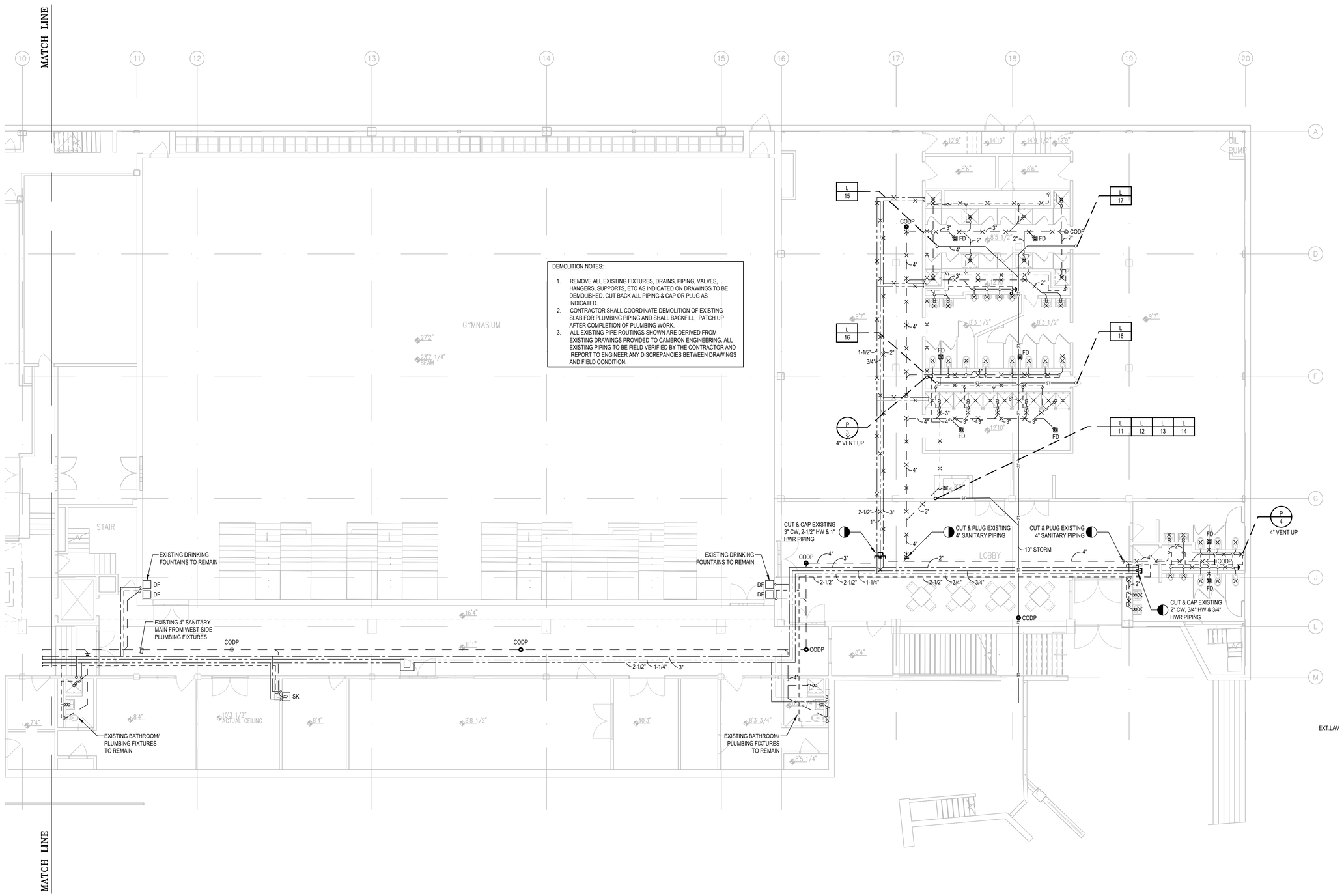
DWG. No. P-004.00

DRAWN BY F.K.

4 OF 13

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




## 1 P-051.00 PLUMBING FIRST FLOOR WEST - DEMOLITION PLAN

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

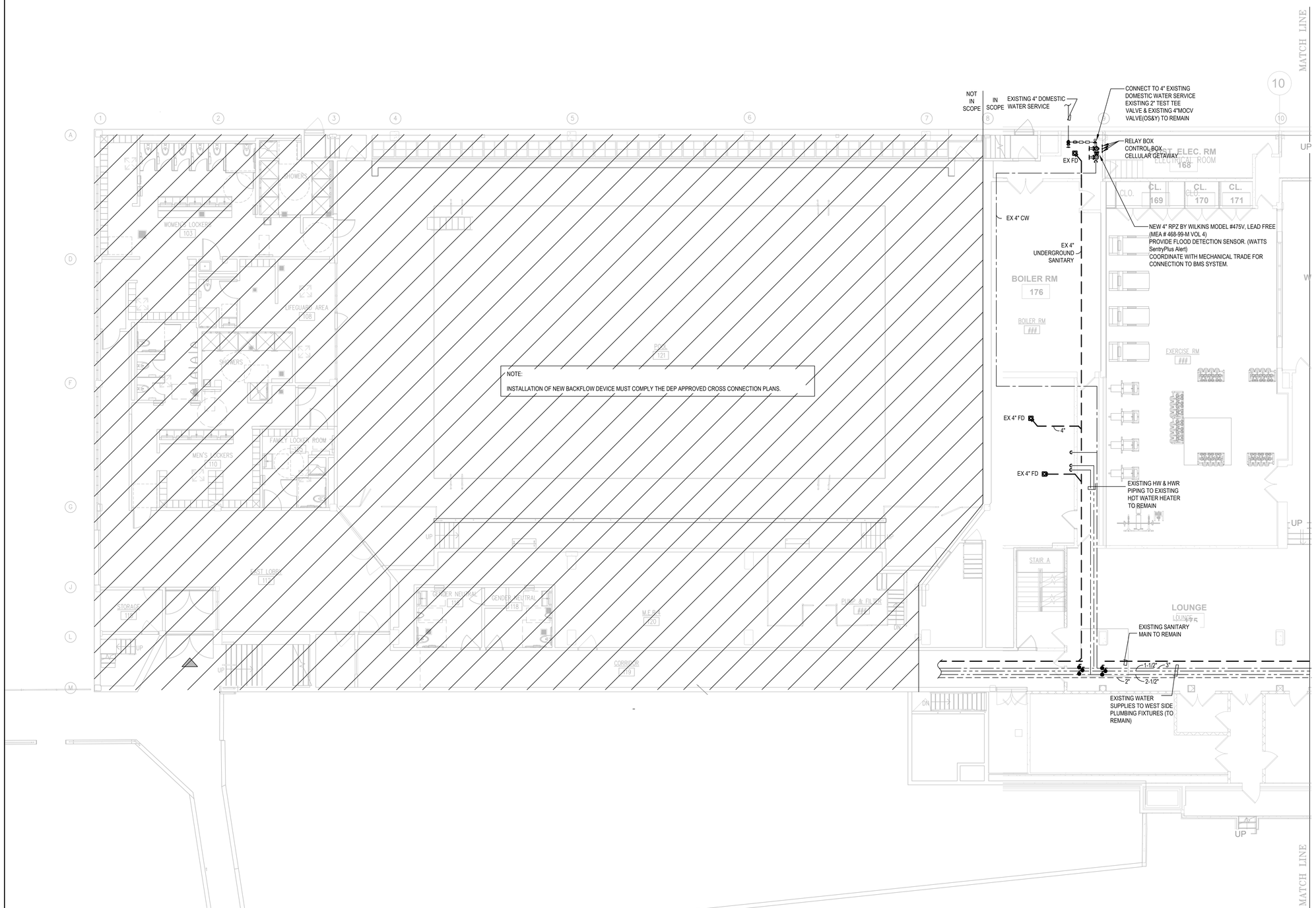
CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
PLUMBING FIRST FLOOR WEST - DEMOLITION PLAN

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | P-051.00 |
| | DRAWN BY F.K. | 5 OF 13 |

NYC DOB Number




1 P-100.00 **PLUMBING FIRST FLOOR EAST PLAN**
**SCALE: 1/8"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

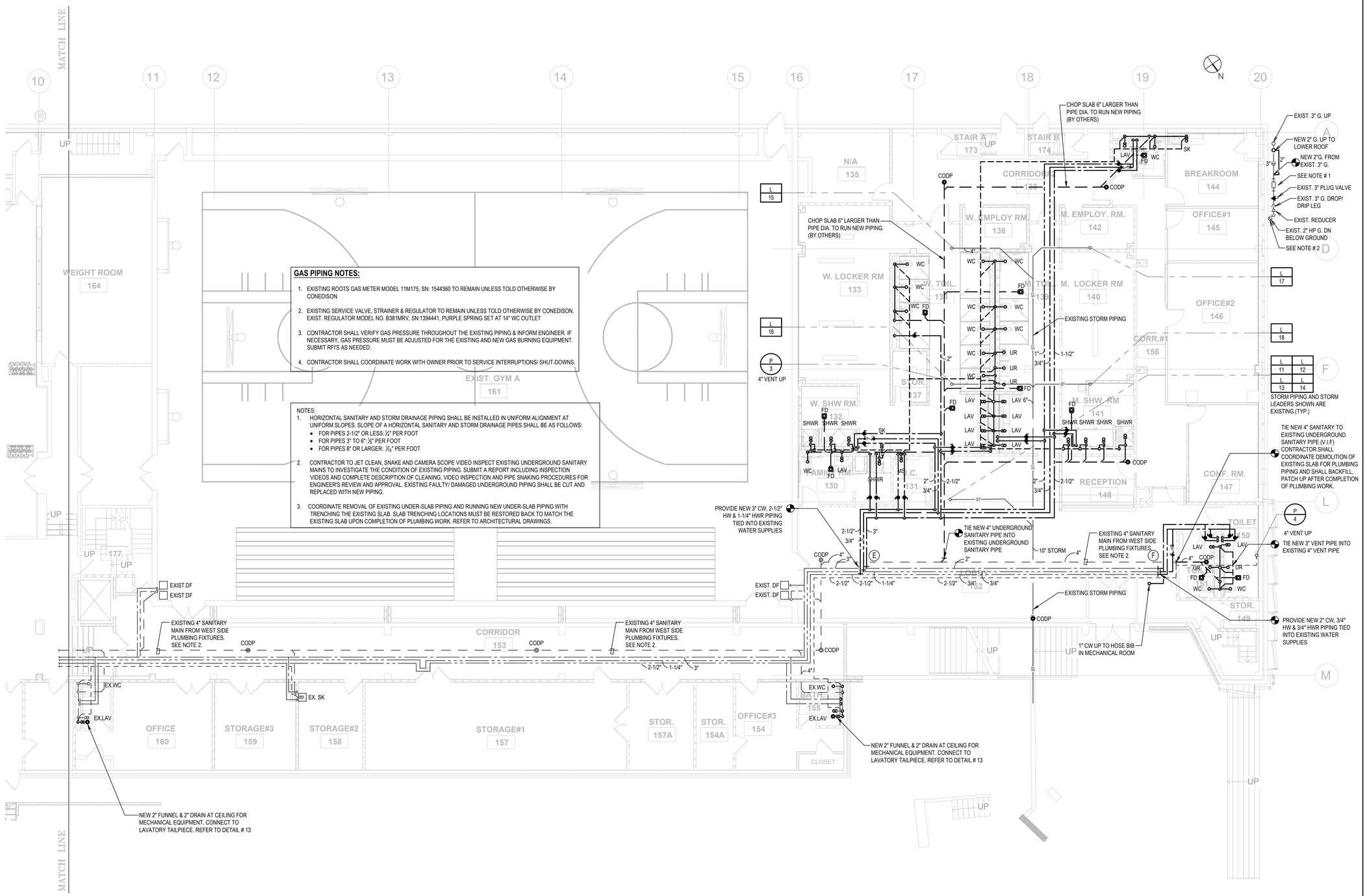
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING
PLUMBING FIRST FLOOR EAST PLAN

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | P-100.00 |
| DRAWN BY | F.K. |
| | 6 OF 13 |

NYC DOB Number




**GAS PIPING NOTES:**

1. EXISTING ROOTS GAS METER MODEL 11M175, SN: 1544360 TO REMAIN UNLESS TOLD OTHERWISE BY CONEDISON
2. EXISTING SERVICE VALVE, STRAINER & REGULATOR TO REMAIN UNLESS TOLD OTHERWISE BY CONEDISON. EXIST. REGULATOR MODEL NO. B381MRV, SN:1394441, PURPLE SPRING SET AT 14" WC OUTLET
3. CONTRACTOR SHALL VERIFY GAS PRESSURE THROUGHOUT THE EXISTING PIPING & INFORM ENGINEER. IF NECESSARY, GAS PRESSURE MUST BE ADJUSTED FOR THE EXISTING AND NEW GAS BURNING EQUIPMENT. SUBMIT RFI'S AS NEEDED.
4. CONTRACTOR SHALL COORDINATE WORK WITH OWNER PRIOR TO SERVICE INTERRUPTIONS/ SHUT-DOWNS.

NOTES:

1. HORIZONTAL SANITARY AND STORM DRAINAGE PIPING SHALL BE INSTALLED IN UNIFORM ALIGNMENT AT UNIFORM SLOPES. SLOPE OF A HORIZONTAL SANITARY AND STORM DRAINAGE PIPES SHALL BE AS FOLLOWS:
   - FOR PIPES 2-1/2" OR LESS: ¼" PER FOOT
   - FOR PIPES 3" TO 6": ⅛" PER FOOT
   - FOR PIPES 8" OR LARGER: 1/16" PER FOOT
2. CONTRACTOR TO JET CLEAN, SNAKE AND CAMERA SCOPE VIDEO INSPECT EXISTING UNDERGROUND SANITARY MAINS TO INVESTIGATE THE CONDITION OF EXISTING PIPING. SUBMIT A REPORT INCLUDING INSPECTION VIDEOS AND COMPLETE DESCRIPTION OF CLEANING, VIDEO INSPECTION AND PIPE SNAKING PROCEDURES FOR ENGINEER'S REVIEW AND APPROVAL. EXISTING FAULTY/ DAMAGED UNDERGROUND PIPING SHALL BE CUT AND REPLACED WITH NEW PIPING.
3. COORDINATE REMOVAL OF EXISTING UNDER-SLAB PIPING AND RUNNING NEW UNDER-SLAB PIPING WITH TRENCHING THE EXISTING SLAB. SLAB TRENCHING LOCATIONS MUST BE RESTORED BACK TO MATCH THE EXISTING SLAB UPON COMPLETION OF PLUMBING WORK. REFER TO ARCHITECTURAL DRAWINGS.

## 1 P-101.00 PLUMBING FIRST FLOOR WEST PLAN

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

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
365 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

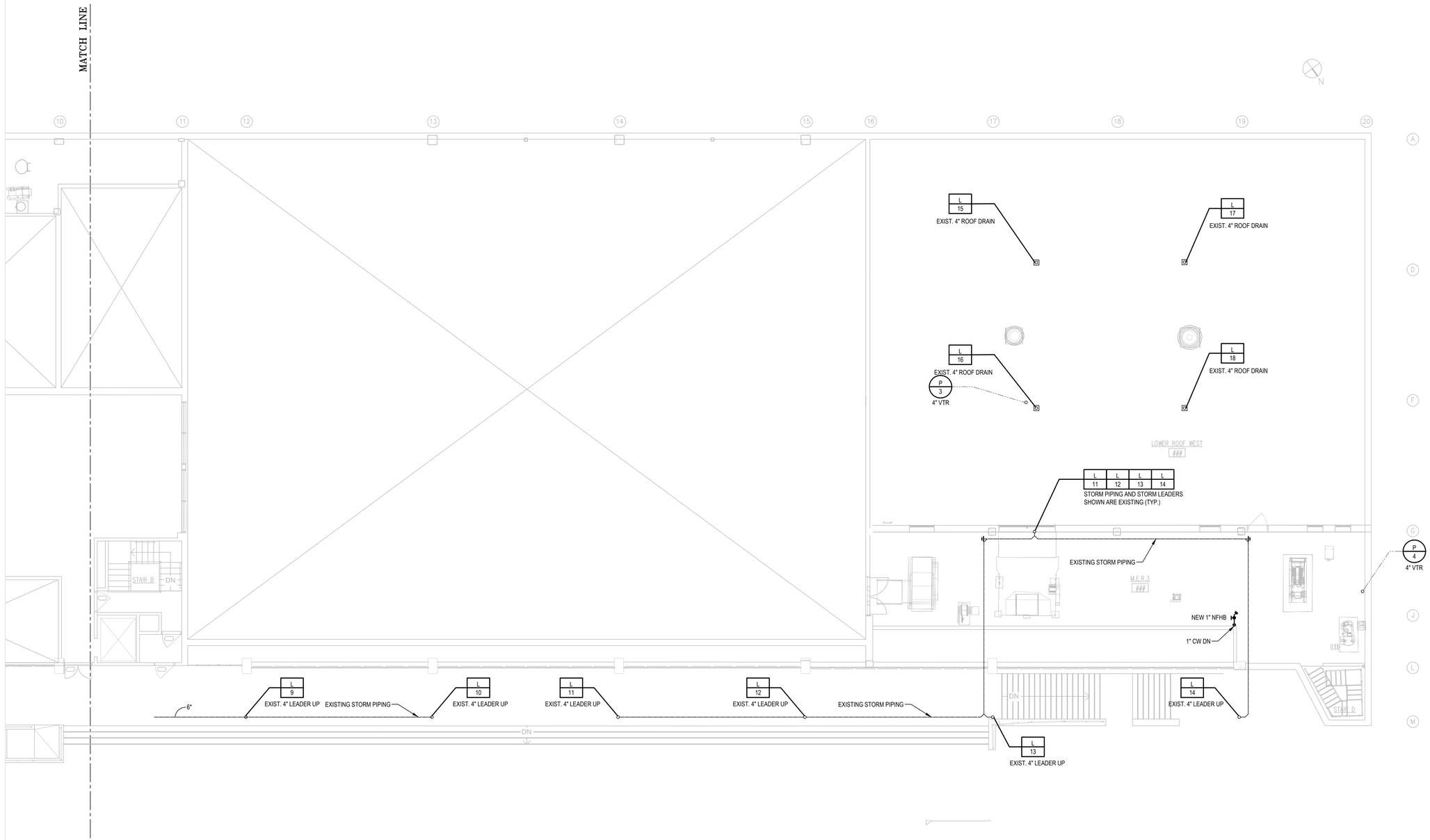
PLUMBING FIRST FLOOR
WEST PLAN

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | P-101.00 |
| DRAWN BY F.K. | 7 OF 13 |

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




## 1 PLUMBING SECOND FLOOR WEST PLAN
P-103.00
**SCALE: 1/8"=1'-0"**

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneng@neering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

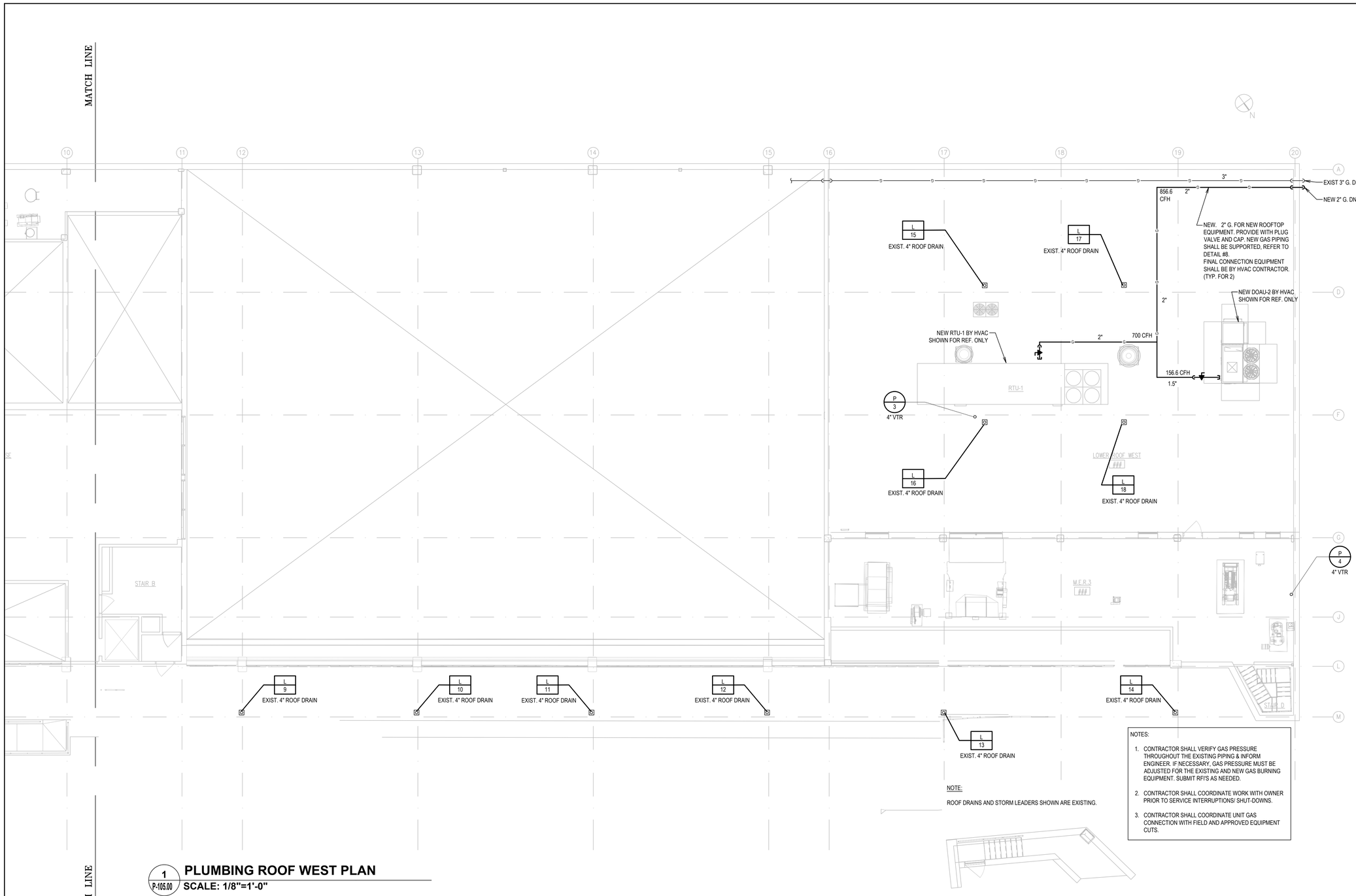
DRAWING

PLUMBING SECOND
FLOOR WEST PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. P-103.00 |
| | DRAWN BY F.K. / 8 OF 13 |

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




NOTE:

ROOF DRAINS AND STORM LEADERS SHOWN ARE EXISTING.

NOTES:

1. CONTRACTOR SHALL VERIFY GAS PRESSURE THROUGHOUT THE EXISTING PIPING & INFORM ENGINEER. IF NECESSARY, GAS PRESSURE MUST BE ADJUSTED FOR THE EXISTING AND NEW GAS BURNING EQUIPMENT. SUBMIT RFI'S AS NEEDED.
2. CONTRACTOR SHALL COORDINATE WORK WITH OWNER PRIOR TO SERVICE INTERRUPTIONS/ SHUT-DOWNS.
3. CONTRACTOR SHALL COORDINATE UNIT GAS CONNECTION WITH FIELD AND APPROVED EQUIPMENT CUTS.

## 1 P-105.00 PLUMBING ROOF WEST PLAN

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

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

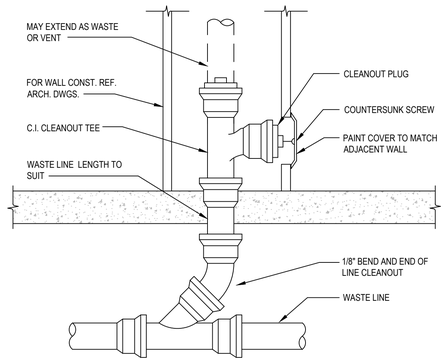
DRAWING

PLUMBING ROOF WEST
PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. P-105.00 |
| | DRAWN BY F.K. |
| | 9 OF 13 |

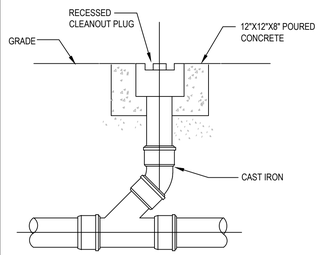
NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.



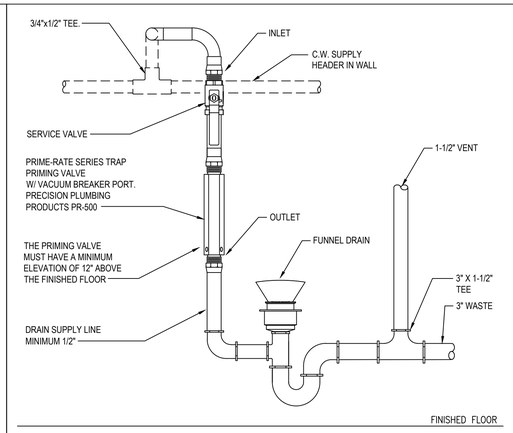

## 1 TYPICAL WALL CLEANOUT

NOT TO SCALE



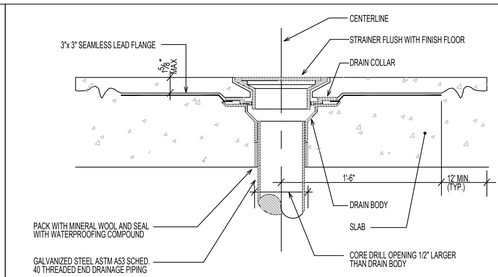

## 2 CLEANOUT DECK PLATE AT SLAB

NOT TO SCALE




## 3 FUNNEL DRAIN WITH TRAP PRIMER

NOT TO SCALE

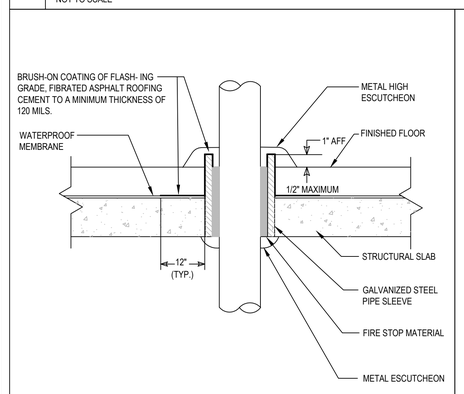



NOTES:

1. WATERPROOF EXISTING FLOOR OF ROOM WHERE FLOOR DRAIN IS TO BE LOCATED USING THOROSEAL SEALANT OR APPROVED EQUAL.

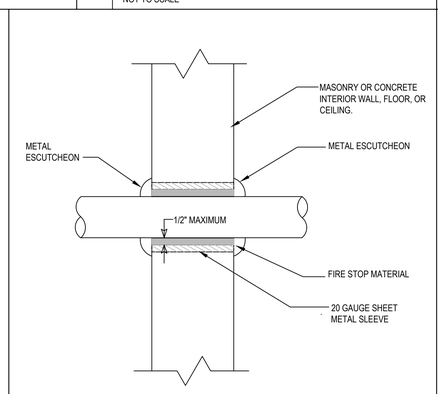
## 4 TYPICAL FLOOR DRAIN INSTALLATION

NOT TO SCALE



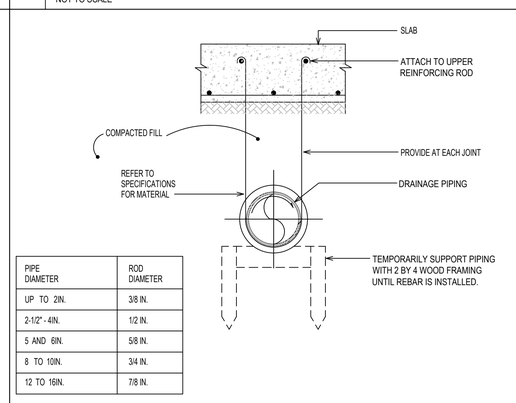

## 5 PENETRATION THRU WATERPROOFED SLAB

NOT TO SCALE




## 6 PIPE THRU INTERIOR WALL

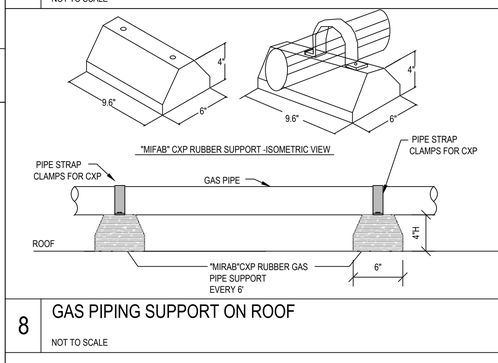
NOT TO SCALE




| PIPE DIAMETER | ROD DIAMETER |
|---|---|
| UP TO 2IN. | 3/8 IN. |
| 2-1/2" - 4IN. | 1/2 IN. |
| 5 AND 6IN. | 5/8 IN. |
| 8 TO 10IN. | 3/4 IN. |
| 12 TO 16IN. | 7/8 IN. |

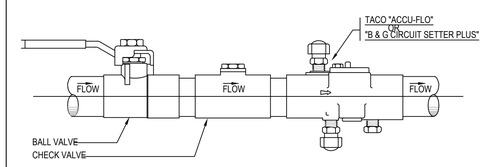
## 7 UNDERGROUND PIPING SUPPORT BELOW SLAB

NOT TO SCALE



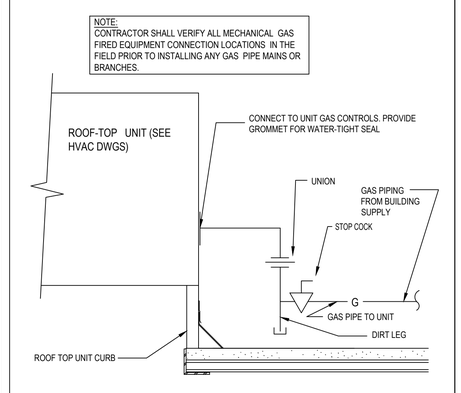

## 8 GAS PIPING SUPPORT ON ROOF

NOT TO SCALE



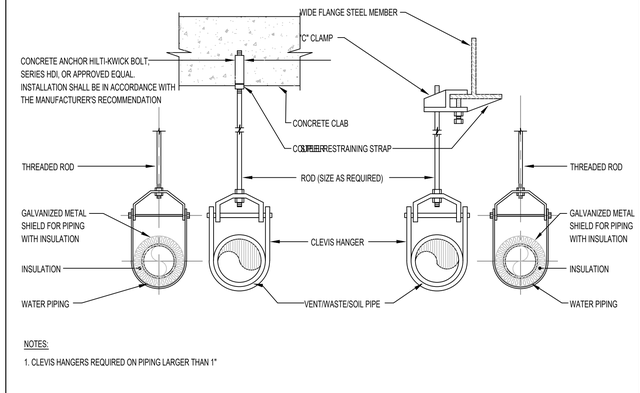

## 9 HOT WATER RETURN BALANCING VALVE RIG

NOT TO SCALE




## 10 GAS PIPING CONNECTION AT ROOFTOP EQUIPMENT

NOT TO SCALE

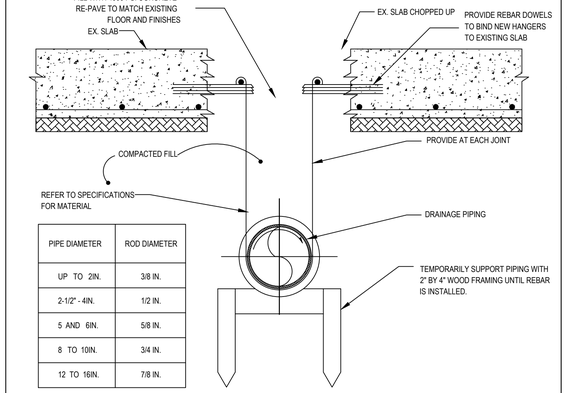



NOTES:

1. CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 1"

## 11 PIPE HANGER

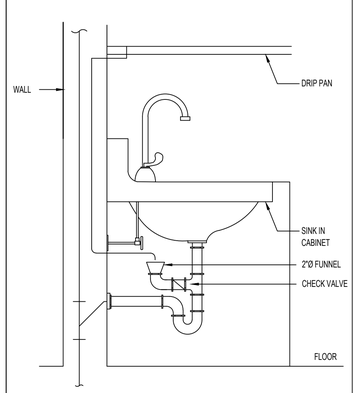
NOT TO SCALE




| PIPE DIAMETER | ROD DIAMETER |
|---|---|
| UP TO 2IN. | 3/8 IN. |
| 2-1/2" - 4IN. | 1/2 IN. |
| 5 AND 6IN. | 5/8 IN. |
| 8 TO 10IN. | 3/4 IN. |
| 12 TO 16IN. | 7/8 IN. |

## 12 UNDERGROUND PIPING SUPPORT BELOW EXISTING SLAB

NOT TO SCALE




## 13 DRIP PAN DRAINAGE

NOT TO SCALE

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com


COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING DETAILS

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. P-300.00
DRAWN BY F.K.
10 OF 13

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

## VALVE SCHEDULE

| TYPE | PIPE SIZE | PRESS RATE STEAM/WOG | BONNET STEM ASSY | MATERIAL/ BODY STYLE | MILWAUKEE MODEL # |
|---|---|---|---|---|---|
| GATE | 2-1/2" & SMALLER | 125#/200# | UB/NRS | AB/IPS or SE | 105 or 115 |
| GATE | 3" & LARGER | 125#/200# | OS&Y/RS<br>FL/NRS | IBBM/FL<br>IBBM/FL | F2885-M<br>F2882-M |
| GATE | 2-1/2" & SMALLER | 150#/300# | UB/NRS | AB/IPS | 1141 |
| GATE | 3" & LARGER | 250#/500# | OS&Y/RS | IBBM/FL | F-2894 |
| BALL | 2" & SMALLER | 150#/600# | CHROME BALL<br>2 PIECE | AB/IPS | BA-150 |
| BALL | 1" & SMALLER | --- | --- | AB/IPS | McDONALD MFG.<br>FIG 10596 |
| PLUG | 2" & SMALLER | /200# | --- | AB/IPS | NORDSTROM<br>FIG 142 |
| PLUG | 2-1/2" TO 4" | /200# | --- | IBBM | NORDSTROM<br>FIG 115 |
| PLUG | 6" TO 8" | /200# | --- | IBBM | NORDSTROM |
| GLOBE | 2-1/2" & SMALLER | 150#/300# | UB | AB/COMPOSITION DISC | FIG 165<br>590T or |
| CHECK HORIZONTAL SWING | | 125#/200# | SCREWED ENDS<br>SOLDERED ENDS<br>FLANGED ENDS | UP TO 3"<br>UP TO 2"<br>3" & LARGER | 1590T<br>509<br>1509<br>F2974-M |

NOTES: 1. ALL VALVES MILWAUKEE UNLESS OTHERWISE STATED

AB = ALL BRONZE
IBBM = IRON BODY BRONZE MOUNT
RS = RISING STEM
NRS = NON-RISING STEM
UB = UNION BONNET
ISB = INSIDE SCREW
SOB = SCREW OVER BONNET
OS&Y = OUTSIDE SCREW AND YOKE
IPS = IRON PIPE SIZE
FL = FLANGE
SE = SOLDERED/SWEAT ENDS
PIFE = TEFLON

GDFGDFD

## PLUMBING DRAIN AND SPECIALTIES SCHEDULE

| ID. No. | DESCRIPTION | MANUFACTURER | MODEL No. | SERVICE | REMARKS |
|---|---|---|---|---|---|
| FD | FLOOR DRAIN | J.R. SMITH | 2005 OR APP. EQ. | TLT/SHWR AREAS | CAST IRON, WITH FLASHING COLLAR AND ADJUSTABLE STRAINER AND SLOTTED SEDIMENT BUCKET AND TRAP PRIMER CONNECTION |
| SHWR | SHOWER HEAD FOR SHOWER ROOMS | ZURN | Z7000-16 OR APP. EQ. | SHWR AREAS | SELF-CLEANING BRASS CHROME PLATED SHOWER HEAD, WITH BRONZE BODY INSTITUTIONAL WALL MOUNT WITH HARD CHROME PLATED FINISH, MAXIMUM FLOW RATE 2.5 GPM AT 80 PSI. |
| SHWR | METERING SHOWER CONTROL VALVE | ZURN | Z7130 OR APP. EQ. | SHWR AREAS | DESIGNED FOR TEMPERED WATER SYSTEMS SINGLE PUSH BUTTON ON-OFF CONTROL, WITH ADJUSTABLE METERING FEATURE. |
| ADA SHWR | ADA SHOWER UNIT | ZURN | Z7300-SS-MT-MW-H9 OR APP. EQ. | FAMILY LOCKER ROOM | SINGLE HANDLE PRESSURE BALANCING MIXING TUB AND SHOWER UNIT. ALL EXPOSED TRIM AND HANDLE ARE METAL WITH POLISHED NICKEL CHROME PLATED SURFACE. VALVE SUPPLIED WITH 1.6 GPM @ 80 PSI HAND/WALL UNIT, 60" FLEXIBLE METAL HOSE 24" MOUNTING BAR, SUPPLY ELBOW AND FLANGE. |
| CODP | CLEANOUT DECK PLATE | J.R. SMITH | 4020 OR APP. EQ. | U/G MAINS | DUCO CAST IRON WITH ROUND ADJUSTABLE SCORIATED NICKEL BRONZE TOP. VANDAL PROOF. |
| | | | 4240 OR APP. EQ. | U/G MAINS | DUCO CAST IRON WITH ROUND ADJUSTABLE SCORIATED NICKEL BRONZE TOP. VANDAL PROOF. USE IN PARKING AREA ONLY |
| WCO | WALL CLEANOUT | J.R. SMITH | 4402 OR APP. EQ. | TLT AREAS | DUCO CAST IRON WITH ROUND ADJUSTABLE SCORIATED NICKEL BRONZE TOP. VANDAL PROOF. |

## PLUMBING FIXTURE CONNECTION SCHEDULE

| FIXTURE TAG | FIXTURE TYPE | CONNECTIONS | | | | |
|---|---|---|---|---|---|---|
| | | CW | HW | SAN | W | V |
| WC | WATER CLOSET (FLUSH VALVE) | 1-1/4" | - | 4" | - | 2" |
| UR | URINAL | ¾" | - | 2" | - | 1-1/2" |
| LAV | LAVATORY | ½" | ½" | - | 1-1/2" | 1-1/2" |
| SH | SHOWER | ½" | ½" | - | 2" | 1-1/2" |

*SEE ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE SELECTION

## PIPING MATERIALS SCHEDULE

| PIPING SYSTEM | PIPE MATERIAL | FITTINGS | JOINTS | WORKING PSI |
|---|---|---|---|---|
| SANITARY ABOVE GROUND | HUBLESS CAST IRON | HUBLESS CAST IRON - PLAIN END | C.I.S.P.I. STAINLESS STEEL BAND CLAMP WITH NEOPRENE GASKET | 10 FEET STATIC HEAD |
| SANITARY UNDERGROUND | SERVICE HEAVY CAST IRON | SERVICE HEAVY CAST IRON HUB & SPIGOT | NEOPRENE COMPRESSION GASKET TO ASTM 564 | 10 FEET STATIC HEAD |
| STORM ABOVE GROUND | 3" & SMALLER HUBLESS CAST IRON | HUBLESS CAST IRON - PLAIN 3" & SMALLER | WITH NEOPRENE GASKET 3" & SMALLER C.I.S.P.I. STAINLESS STEEL BAND CLAMP | 10 FEET STATIC HEAD |
| | 4" & LARGER SERVICE WEIGHT CAST IRON | 4" OR LARGER SERVICE WEIGHT CAST IRON HUB & SPIGOT | CAULKED LEAD & OAKUM 4" & LARGER PUSH ON NEOPRENE GASKET, OR | |
| STORM UNDERGROUND | SERVICE WEIGHT CAST IRON | SERVICE WEIGHT CAST IRON HUB & SPIGOT | NEOPRENE COMPRESSION GASKET TO ASTM 564 | 10 FEET STATIC HEAD |
| DOMESTIC COLD WATER UNDERGROUND | IRON CLASS 52 CEMENT LINED DUCTILE | CLASS 52 WITH MECHANICAL CEMENT LINED DUCTILE IRON JOINT ENDS (AWWA STD.) | JOINTS WITH NEOPRENE "O" RING GASKET AWWA STANDARD BOLT ON MECHANICAL | 125 PSIG. HYDROSTATIC |
| DOMESTIC COLD WATER ABOVE GROUND | COPPER TUBING TYPE "L" HARD DRAWN | WROT COPPER WITH SWEAT SOLDER ENDS | 95 % TIN- 5% ANTIMONY SOLDER | 125 PSIG. HYDROSTATIC |
| DOMESTIC HOT WATER & HOT WATER RECIRCULATION | COPPER TUBING TYPE "L" HARD DRAWN | WROT COPPER WITH SWEAT SOLDER ENDS | 95 % TIN- 5% ANTIMONY SOLDER | 125 PSIG. HYDROSTATIC |

NOTES:

1. EXTRA HEAVY CAST IRON SHALL BE USED FOR THE FOLLOWING PIPING INSTALLATIONS:
   A) ALL EXPOSED AREAS UNLESS OTHERWISE INDICTED.
   B) FOR SANITARY AND STORM WATER HOUSE DRAINS.
2. ALL SANITARY/STORM PIPES AND FITTINGS SHALL BE APPROVED TO CIPSI (BEARING THE CIPSI TRADEMARK) & LISTED BY NSF INTERNATIONAL REQUIREMENTS. NO-HUB COUPLINGS SHALL CONFORM TO ASTM C564 AND ASTM A240 AS WELL AS MEET ALL CISPI 310 SPECIFICATIONS.
3. ALL SANITARY/STORM PIPES FROM EJECTOR/STORM SUMP PUMPS SHALL BE THREADED JOINTS AND TESTED TO PRESSURE CAPACITY OF PUMP.

## SLEEVE SCHEDULE

| STORM, SANITARY, GAS & F.S.P (UNINSULATED) THROUGH FLOORS & WALLS | STORM, SANITARY, GAS & F.S.P (UNINSULATED) THROUGH BEAMS | WATER PIPING (INSULATED) |
|---|---|---|
| 1-1/2" - 3" SLEEVE | 1-1/2" - 3" OPENING | 1/2" & 3/4" - 3" SLEEVE |
| 2" - 4" SLEEVE | 2" - 3-1/2" OPENING | 1" - 4" SLEEVE |
| 2-1/2" - 4" SLEEVE | 2-1/2" - 4" OPENING | 1-1/4" - 4" SLEEVE |
| 3" - 5" SLEEVE | 3" - 4-1/2" OPENING | 1-1/2" - 4" SLEEVE |
| 4" - 6" SLEEVE | 4" - 5-1/2" OPENING | 2" & 2-1/2" - 5" SLEEVE |
| 5" - 8" SLEEVE | 5" - 6-1/2" OPENING | 3" - 6" SLEEVE |
| 6" - 8" SLEEVE | 6" - 7-1/2" OPENING | 4" - 8" SLEEVE |
| 8" - 10" SLEEVE | 8" - 9-1/2" OPENING | 5" - 8" SLEEVE |
| 10" - 12" SLEEVE | 10" - 11-1/2" OPENING | 6" - 10" SLEEVE |
| 12" - 15" SLEEVE | 12" - 13-1/2" OPENING | 8" - 12" SLEEVE |
| 15" - 18" SLEEVE | 15" - 16-1/2" OPENING | 10" - 15" SLEEVE |

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

PLUMBING SCHEDULES

SEAL & SIGNATURE

DATE 06.10.2019

JOB NUMBER 19010

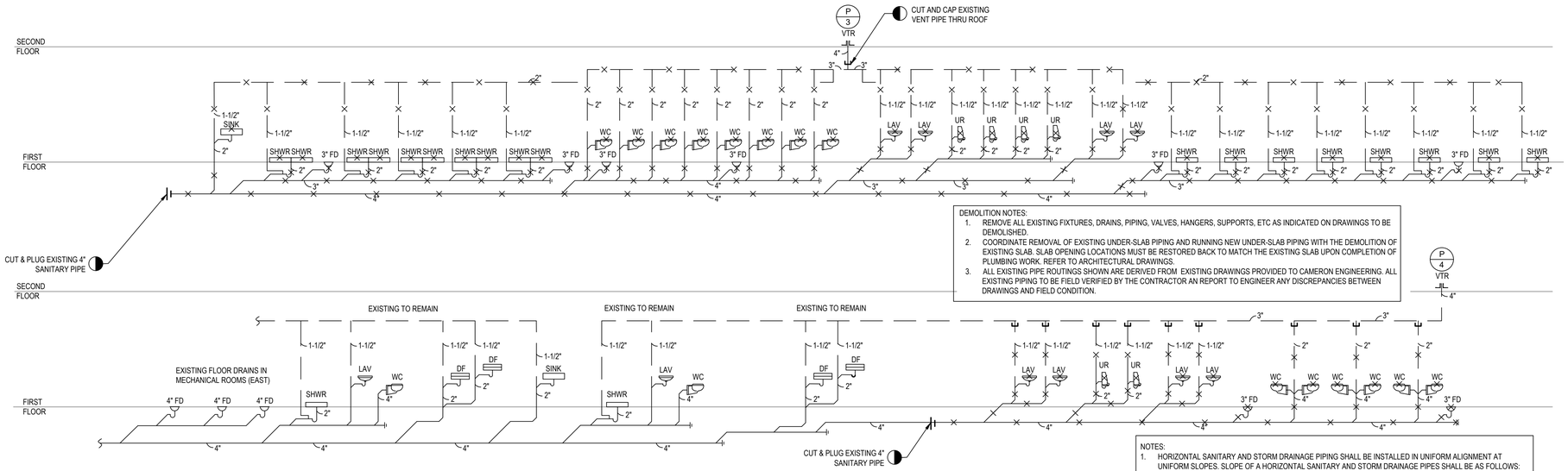
DWG. No. P-400.00

DRAWN BY F.K.

11 OF 13

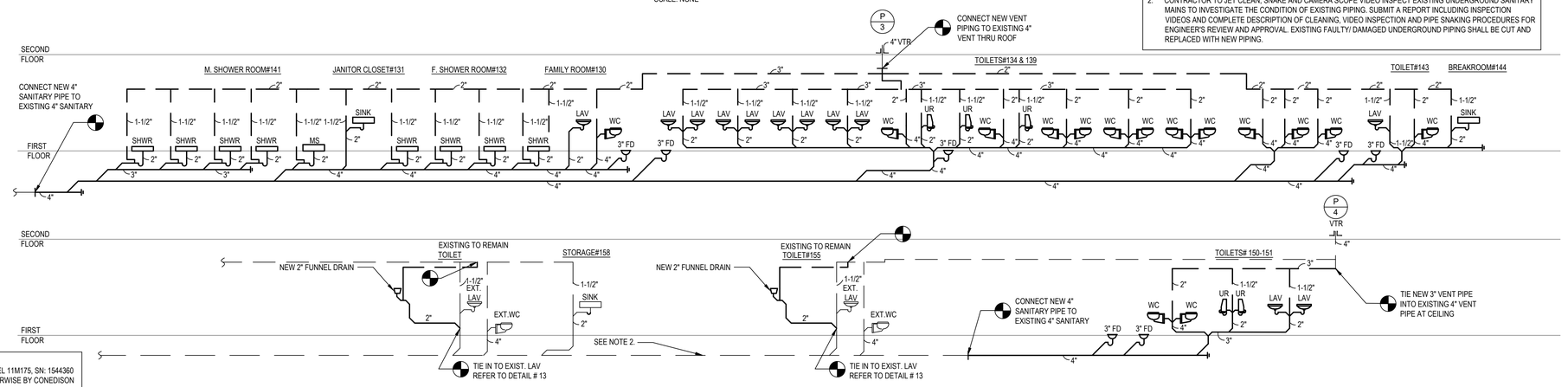
NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

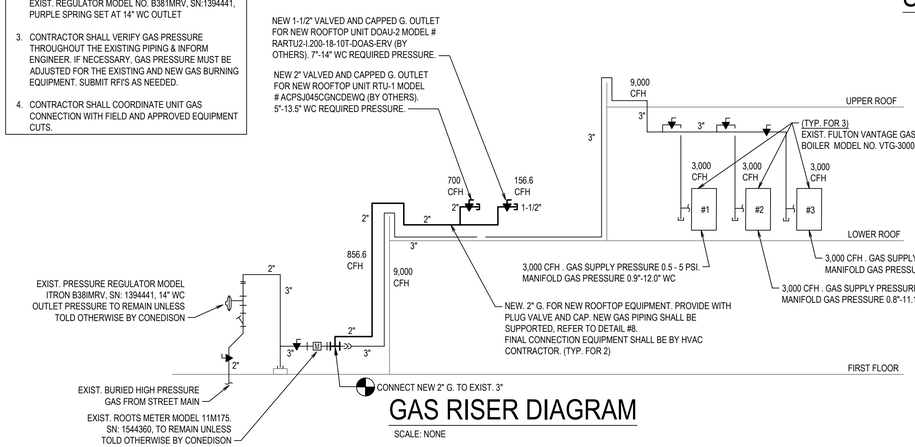



## SANITARY RISER DIAGRAM-DEMO & EXISTING

SCALE: NONE

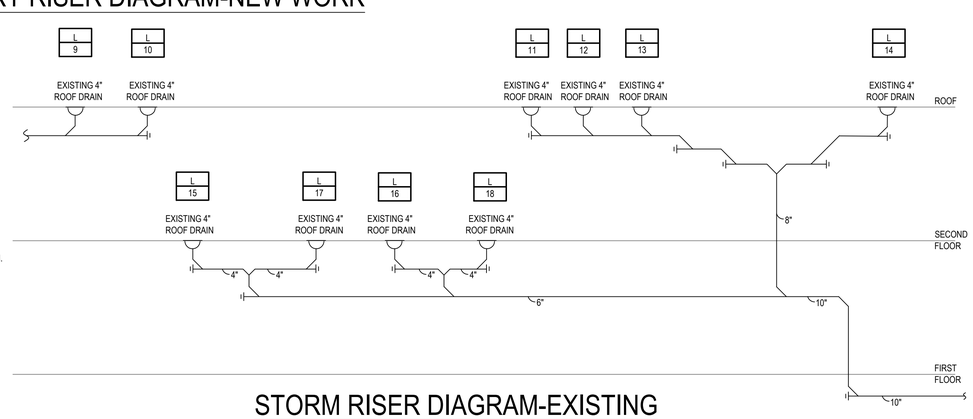



## SANITARY RISER DIAGRAM-NEW WORK




## GAS RISER DIAGRAM

SCALE: NONE




## STORM RISER DIAGRAM-EXISTING

SCALE: NONE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

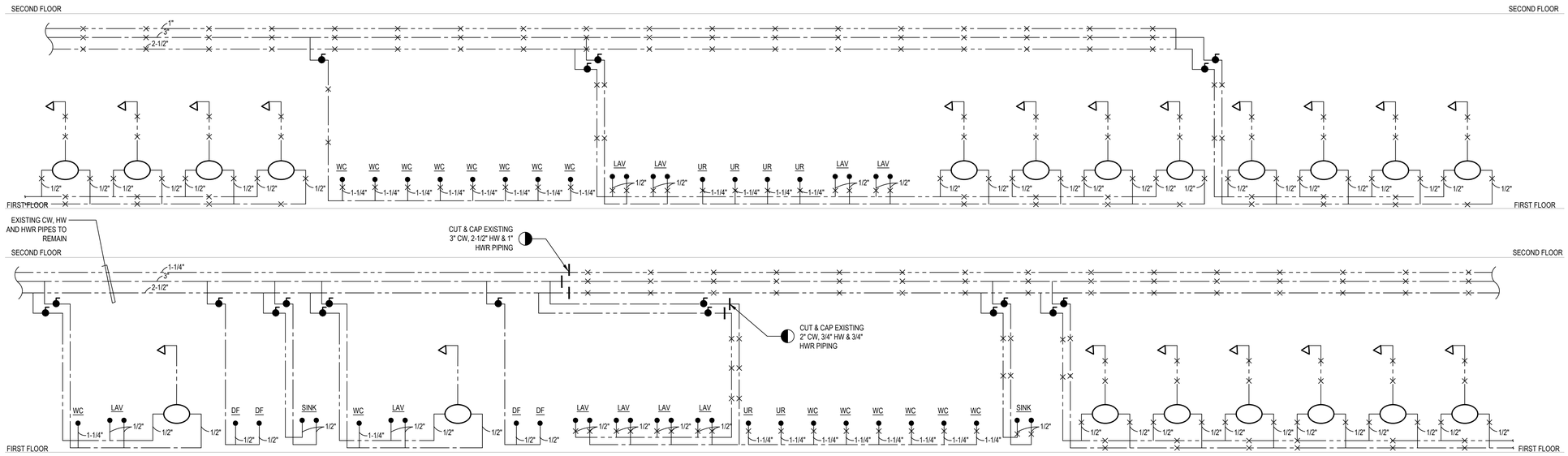
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
PLUMBING RISER DIAGRAM I

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. P-500.00
DRAWN BY F.K.
12 OF 13

NYC DOB Number




# EXISTING AND DEMO DOMESTIC WATER RISER DIAGRAM

SCALE: NONE




# PROPOSED DOMESTIC WATER RISER DIAGRAM

SCALE: NONE

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING

PLUMBING RISER DIAGRAM II

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. P-501.00
DRAWN BY F.K.
13 OF 13

NYC DOB Number

## FIRE ALARM SPECIFICATIONS:

1. CONTRACTOR SHALL CONTACT BUILDING FA VENDOR TO ESTABLISH ALL REQUIREMENTS OF THE INSTALLATION AND TO FIELD VERIFY EXISTING INSTALLATION. CONTRACTOR SHALL INCLUDE IN HIS BID ALL WORK FOR A COMPLETE AND CODE APPROVED SYSTEM.

2. FURNISH AND INSTALL AN ELECTRICALLY SUPERVISED MANUAL AND AUTOMATIC FIRE ALARM SYSTEM TO SERVICE THE PREMISES.

3. CONTRACTOR SHALL INCLUDE IN HIS BID ALL WORK FOR A COMPLETE AND CODE APPROVED SYSTEM.

4. THE FIRE ALARM SYSTEM SHALL BE IN COMPLIANCE WITH THE CURRENT CODES AND ADA GUIDELINES AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   A. STROBE LIGHTS, HORNS, AND COMBINATION HORNS/STROBE UNITS.
   B. MANUAL PULL STATIONS.
   C. AREA SMOKE DETECTORS.
   D. DUCT SMOKE DETECTORS FOR AC UNITS EXCEEDING 2000 CFM.
   E. SHUT DOWN CONTROLS FOR DAMPERS AND AC UNITS WITH DUCT SMOKE DETECTORS.

5. ALL NEW FIRE ALARM SYSTEM DEVICES, WIRING AND INSTALLATION SHALL BE COMPATIBLE WITH ALL APPLICABLE CODES.

6. WIRING-FIRE ALARM CABLES SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. A MINIMUM TEMPERATURE RATING OF 150 DEGREES CELSIUS.
   B. A MINIMUM AVERAGE INSULATION THICKNESS OF 15 MILS.
   C. A MINIMUM AVERAGE JACKET THICKNESS OF 25 MILS.
   D. THE COLOR OF THE CABLE SHALL BE RED.
   E. THE CABLE SHALL BE A TYPE FPLP (PLENUM TYPE).
   F. FIRE ALARM CABLES SHALL BE EXTERNALLY MARKED AS FOLLOWS AS REQUIRED BY UNDERWRITERS LABORATORIES: COMPANY NAME, "TYPE FPLP", SIZE (AWG), TEMPERATURE RATING, THE UL REGISTERED TRADEMARK, AND CERTIFIED FIRE ALARM CABLE"

7. ALL WIRING SHALL BE PROTECTED AGAINST MECHANICAL DAMAGE. ALL CABLES SHALL BE RUN IN RACEWAYS IN OPEN SHAFTS, STAIRWAYS, MECHANICAL ROOMS AND EXTREME TEMPERATURE AND HAZARDOUS LOCATIONS.

8. INSTALLATION:
   8.1. INSTALL THE FIRE ALARM SYSTEM IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND APPLICABLE STANDARDS AND REGULATIONS.
   A. THE SYSTEM SHALL BE PROVIDED COMPLETE WITH ALL OUTLET/JUNCTION BOXES, POWER SUPPLIES, RELAYS, CABINETS, ETC., REGARDLESS OF WHETHER OR NOT SUCH ITEMS ARE FURNISH AS INTEGRAL PARTS OF THE EQUIPMENT.
   B. ALL DEVICES SHALL BE FLUSH MOUNTED, WHERE WALL DEPTH IS NOT ADEQUATE, DEVICES SHALL BE SEMI-FLUSH MOUNTED WITH AN EXTENSION COLLAR TO MATCH THE FINISH PLATE. SURFACE DEVICES WITH FINISHED BOXES SHALL BE PROVIDED UPON ARCHITECT APPROVAL.
   C. GENERAL LOCATION OF DEVICES:
   D. PULL STATIONS — 48" AFF
   E. STROBE LIGHT AND COMBINATION — 80"AFF OR 6" BELOW CEILING
   F. HORNS/STROBE LIGHTS — WHICHEVER IS LOWER.
   G. CEILING MOUNTED DEVICES UPON
   H. ARCHITECT APPROVAL
   I. SMOKE DETECTORS.
   J. FLAT CEILINGS — ON CEILING
   K. OPEN SLAB — ON SLAB
   L. COORDINATE WITH ARCHITECT EXACT LOCATION AND COLOR OF ALL DEVICES ON PLAN PRIOR TO ROUGH-IN.

10. SUBMITTALS.
   10.1. FIRE ALARM VENDOR APPROVED CATALOG CUTS ARE REQUIRED FOR THE FOLLOWING:
   A. STROBE LIGHTS, COMBINATION STROBE LIGHT AND HORN/STROBE.
   B. PULL STATIONS.
   C. SMOKE DETECTORS, HEAT DETECTORS, DUCT DETECTORS.
   D. COMPONENTS AND WIRING DETAILS FOR FIRE CONTROL EQUIPMENT FOR FAN SHUTDOWN AND SMOKE CONTROL FUNCTIONS, DOOR RELEASES, ELEVATOR RECALL, ETC.
   E. FIRE ALARM VENDOR RISER DIAGRAM INDICATING ALL FIRE ALARM DEVICES.
   F. FIRE ALARM CONTROL PANEL.

12. ALLOWANCE.
   12.1. CONTRACTOR SHALL INCLUDE IN HIS BID AN ALLOWANCE BASED ON UNIT PRICING TO FURNISH AND INSTALL 5 PERCENT ADDITIONAL DEVICES BY TYPE (MINIMUM 5). ANY PORTION OF THE ALLOWANCE NOT USED AFTER FINAL ACCEPTANCE OF THE SYSTEM SHALL BE CREDITED TO THE OWNER OR TURNOVER TO THE OWNER IN THE ORIGINAL CARTONS.

13. FILING AND FEES.
   A. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND BE RESPONSIBLE FOR ALL INSPECTIONS, TESTING, SUPERVISION AND FILING REQUIRED FOR THE SYSTEM. CONTRACTOR SHALL ARRANGE FOR AND PAY ALL FEES REQUIRED TO PERFORM FIRE DEPARTMENT TESTS AND OBTAIN FIRE DEPARTMENT APPROVALS.
   B. COORDINATE AND PAY ALL COSTS AND FEES ASSOCIATED WITH SOFTWARE REPROGRAMMING, CONNECTIONS TO THE FIRE ALARM SYSTEM AND TESTING.
   C. FIRE ALARM PLANS SHALL BE FILED WITH THE DEPARTMENT OF BUILDINGS AND THE FIRE DEPARTMENT UNDER A SEPARATE PW-1 ALT. 9 APPLICATION AS AN "INSTALLATION OF MANUAL & AUTOMATIC FIRE ALARM SYSTEM WITH SMOKE/SPRINKLER DETECTION AND CENTRAL OFFICE CONNECTION".
   D. FIRE ALARM PLANS SHALL BE APPROVED BY THE FIRE DEPARTMENT PLAN EXAMINER AND A PLAN APPROVAL BE PROVIDED TO THE BUILDING MANAGER.
   E. THE EXPEDITER SHALL VERIFY THAT PLAN APPROVAL ENTRY WAS MADE INTO THE DEPARTMENT OF BUILDINGS COMPUTER SYSTEM BIS AS "PERMIT ENTIRE".
   F. ALL LINE VOLTAGE ELECTRICAL WORK ASSOCIATED WITH THE FIRE ALARM SYSTEM (IF APPLICABLE) SHALL BE FILED FOR WITH THE BUREAU OF ELECTRICAL CONTROL (FORM 16A).
   G. UPON COMPLETION OF THE INSTALLATION, THE CLASS E SYSTEM SHALL BE 100% PRE-TESTED BY THE FIRE ALARM VENDOR AND THE LICENSED ELECTRICAL CONTRACTOR.
   H. IN ACCORDANCE WITH NEW DEPARTMENT OF BUILDINGS AND FIRE DEPARTMENT PROCEDURES, AS-BUILT FIRE ALARM DRAWINGS SHALL BE PREPARED, SIGNED AND SEALED BY THE ENGINEER-OF-RECORD.
   I. A FULLY OPERATIONAL FIRE ALARM SYSTEM SHALL BE THEN INSPECTED BY THE FA VENDOR PRIOR TO THE FIRE DEPARTMENT INSPECTION (NEW PROFESSIONAL CERTIFICATION PROCEDURE EFFECTIVE 12/1/2009).
   J. UPON SATISFACTORY COMPLETION OF THE TESTING, FA VENDOR WILL ISSUE PROPER FORMS AND APPLICATIONS TO THE FIRE DEPARTMENT, PAY A $210.00 PROFESSIONAL CERTIFICATION REVIEW FEE. ENGINEER OF RECORD WILL SIGN AND SEAL AS-BUILT PLANS.
   K. UPON REVIEW OF THE DOCUMENTS SUBMITTED FA VENDOR, FIRE DEPARTMENT WILL ISSUE A LETTER OF APPROVAL, WHICH WILL BE ELECTRONICALLY TRANSMITTED TO THE DEPARTMENT OF BUILDINGS BIS SYSTEM. AT THAT POINT, DEPARTMENT OF BUILDINGS WILL CLOSE OUT THE OPEN APPLICATION.
   L. BUILDINGS DEPARTMENT LETTER OF COMPLETION FOR THE FIRE ALARM APPLICATION SHALL BE POSTED ON THE DOB WEB SITE.
   M. IF THE APPLICATION IS NOT CLOSED OUT WITHIN 1 YEAR FROM THE INITIAL FILING DATE, THE TENANT WILL BE RESPONSIBLE FOR THE DOB FOLDER REINSTATEMENT AND ASSOCIATED COSTS.

15. SERVICE AND REPAIR.
   A. THE CONTRACTOR SHALL PROVIDE COMPLETE SERVICE INCLUDING ALL LABOR AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE AND COMPLETION OF WORK AT NO ADDITIONAL COST TO OWNER.
   B. CERTIFICATION THAT THE ENTIRE SYSTEM HAVE BEEN INSPECTED, TESTED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE CODES, STANDARDS, MANUFACTURER RECOMMENDATIONS AND ULI LISTINGS AND ARE IN PROPER WORKING ORDER. CONTRACTOR SHALL USE "FIRE ALARM SYSTEM CERTIFICATION AND DESCRIPTION AS REQUIRED BY NFPA 72.

16. EQUIPMENT OPERATION INSTRUCTIONS:
   16.1. UNIT MANUFACTURER SHALL PROVIDE 16 HOURS OF TRAINING FOR THE USE AND OPERATION OF ALL THE FIRE ALARM EQUIPMENT SHOWN ON THE FIRE ALARM DRAWINGS.

### FIRE ALARM CIRCUIT CLASS AND STYLE

1. FIRE ALARM CIRCUITS SHALL BE WIRED USING NFPA CLASS B STYLE. ANY FIRE ALARM NETWORK CIRCUIT SHALL USE NFPA CLASS X STYLE. ALL AUDIBLE AND VISUAL CIRCUITS SHALL BE CLASS B AND NYC SPLIT A/B. SPLIT A/B CIRCUITS SHALL BE WIRED SO THAT EVERY OTHER DEVICE IS WIRED ON AN ALTERNATE CIRCUIT.

### FIRE ALARM DRAWING LIST

| | DRAWING NO. | DRAWING TITLE |
|---|---|---|
| 1 | FA-001.00 | FIRE ALARM NOTES, SYMBOLS, AND ABBREVIATIONS |
| 2 | FA-100.00 | FIRE ALARM FIRST FLOOR EAST PLAN |
| 3 | FA-101.00 | FIRE ALARM FIRST FLOOR WEST PLAN |
| 4 | FA-102.00 | FIRE ALARM SECOND FLOOR EAST PLAN |
| 5 | FA-103.00 | FIRE ALARM SECOND FLOOR WEST PLAN |
| 6 | FA-500.00 | FIRE ALARM RISER DIAGRAM |

## FIRE ALARM SCOPE OF WORK:

1. THESE PLANS AND SPECIFICATIONS ARE FOR A MODIFICATION TO THE EXISTING BASE BUILDING FIRE ALARM SYSTEM AND DEVICES TO SERVE THE AREA OF WORK.

2. THE FOLLOWING SCOPE OF WORK SHALL BE PERFORMED:
   A. PROVIDE AND INSTALL NEW WIRING AND DEVICES TO SERVE THE PREMISES.
   B. PROGRAM EXISTING PANEL OBTAIN SIGN-OFF FROM ALL AGENCIES, DOB, AND FDNY.
   C. SUBMIT THE PROPER CLOSE-OUT DOCUMENTS FOR OWNER RECORDS.

3. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE, FIRE DEPARTMENT RULES AND REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND THE BEST TRADE PRACTICES.

4. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED INSURANCE CERTIFICATES WITH THE DEPARTMENT OF BUILDINGS. OBTAIN ALL REQUIRED PERMITS, AND PAY ALL FEES REQUIRED BY THE GOVERNING NEW YORK CITY AGENCIES.

5. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT REQUIRED FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED IN THE DRAWINGS.

6. THE CONTRACTOR SHALL COORDINATE ALL WORK PROCEDURES WITH THE STIPULATIONS OF LOCAL AUTHORITIES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREA. THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR ALL STRUCTURAL OR REMOVAL TASKS. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR DAMAGE OR INJURIES CAUSED BY OR DURING THE EXECUTION OF THE WORK.

8. THE CONTRACTOR SHALL LAY OUT HIS WORK, AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER TRADES: FIRE ALARM, ELECTRICAL, ETC.

9. FIRE ALARM WORK SHALL BE PERFORMED BY PERSONS LICENSED IN THEIR TRADES, WHO SHALL ARRANGE FOR AND OBTAIN THROUGH THE DEPARTMENT OF BUILDINGS ALL REQUIRED PERMITS, INSPECTIONS AND REQUIRED SIGN OFFS.

10. ELECTRICAL WORK SHALL BE PERFORMED BY PERSONS LICENSED IN THEIR TRADES, WHO SHALL ARRANGE FOR AND OBTAIN THROUGH THE BUREAU OF ELECTRICAL CONTROL ALL REQUIRES PERMITS, INSPECTIONS AND REQUIRES SIGN OFFS.

11. THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING, REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO COMPLETE THE JOB.

12. ALL CONDUIT TO BE ABANDONED SHALL BE REMOVED TO A POINT OF CONCEALMENT AND SHALL BE PROPERLY CAPPED OR PLUGGED. ALL UNUSED WIRING SHALL BE REMOVED.

13. ALL RACEWAY WIRING SHALL BE CONCEALED. OBTAIN OWNER PERMISSION FOR EXPOSED RACEWAY/WIRING LOCATIONS.

14. INSTALLATION WILL COMPLY WITH 2014 NYC BUILDING CODE. ELECTRICAL WORK SHALL COMPLY WITH NFPA 70.

| ROOM SPACING FOR CEILING MOUNTED VISIBLE APPLIANCES | | |
|---|---|---|
| MAXIMUM ROOM SIZE | MAXIMUM LENS HEIGHT | MINIMUM REQUIRED LIGHT OUTPUT (cd) |
| 20 X 20 | 10 | 15 |
| 30 X 30 | 10 | 30 |
| 40 X 40 | 10 | 60 |
| 44 X 44 | 10 | 75 |
| BASED ON TABLE 18.5.5.4.1(b) NFPA 72 | | |

| DESIGN CRITERIA FOR AUDIBLE NOTIFICATION DEVICES | | |
|---|---|---|
| AUDIBLE NOTIFICATION DEVICES - DESIGN CRITERIA | AMBIENT LEVEL | DESIGN GOAL |
| BUSINESS OCCUPANCIES | 55DBA | > 70DBA |
| CORRIDORS | 55DBA | > 70DBA |
| MECHANICAL ROOMS | 85DBA | >100DBA |
| BASED ON TABLE A.18.4.3 OF NFPA 72 | | |

### FDNY LETTER OF APPROVAL

DEPT OF BLDGS JOB/APP/NB — JOB Number — B1000/2021 — Date Came

The City of New York

FIRE DEPARTMENT
BUREAU OF FIRE PREVENTION
9 METROTECH CENTER 3RD FLOOR - BROOKLYN, N.Y. 11201-3857

ROOSEVELT ISLAND OPERATI
591 MAIN STREET
ROOSEVELT ISLAN, NY 1004

BLDGS DEPT APPL. NO.: 120280409
ACCOUNT NUMBER: 31024326
DATE OF APPROVAL: 06/1/13
DATE OF INSPECTION: 03/17/11
INSPECTOR NAME: R. BONAVITA
PLAN NUMBER:
FLOOR(S) INSPECTED: FLS: 1 MEZZ

PREMISES: 250 MAIN ST — BOROUGH: NEW YORK

**LETTER OF APPROVAL**

THIS LETTER OF APPROVAL COVERS THE SYSTEM INDICATED BELOW. IT IS SUBJECT TO ADMINISTRATIVE REVIEW AND AUDIT.

APPROVAL OF THE SYSTEM(S) IS GRANTED IN ACCORDANCE WITH:

☐ SELF CERTIFICATION ☒ INSPECTION ☐ PROFESSIONAL CERTIFICATION
FA & SD & CO — 27-NYC Admin. Code § FC 104.2

Sincerely,
Chief of Fire Prevention
City of New York

31024326 06/20/13 28708.1

## TENANT SAFETY NOTES:

1. THIS BUILDING IS CURRENTLY OCCUPIED AND WILL REMAIN OCCUPIED DURING CONSTRUCTION. CONTRACTOR SHALL SAFEGUARD THE SAFETY AND HEALTH OF THE OCCUPANTS DURING CONSTRUCTION.
2. GENERAL: ALL WORK TO BE COMPLETED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE, ARTICLE 19, NEW YORK CITY HOUSING MAINTENANCE CODE, NEW YORK STATE MULTIPLE DWELLING LAW, AND REGULATIONS OF ALL OTHER AGENCIES HAVING JURISDICTION.
3. MEANS OF EGRESS: ALL EXISTING MEANS OF EGRESS FOR TENANTS OF THE BUILDING TO BE MAINTAINED CLEAR AND FREE OF ALL OBSTRUCTIONS SUCH AS BUILDING MATERIALS, TOOLS, ETC.
4. FIRE SAFETY:
   a) FIRE-RATED ASSEMBLIES AND ENCLOSURES SHALL BE MAINTAINED AT ALL TIMES.
   b) ALL BUILDING MATERIALS WHICH ARE STORED AT THE SITE OR ANY AREA OF THE BUILDING ARE TO BE STORED IN A LOCKED AREA. ACCESS TO THE AREA IS TO BE CONTROLLED BY THE OWNER.
   c) ALL MATERIALS TO BE STORED IN AN ORDERLY FASHION.
   d) ALL FLAMMABLE MATERIALS TO BE USED AND STORED IN AN ADEQUATELY VENTILATED SPACE.
   e) ALL FLAMMABLE MATERIALS TO BE KEPT TIGHTLY SEALED IN THEIR RESPECTIVE MANUFACTURER'S CONTAINERS. SUCH MATERIALS ARE TO BE KEPT AWAY FROM HEAT.
   f) ALL ELECTRICAL POWER TO BE SHUT OFF IN THE IMMEDIATE CONSTRUCTION AREA WHERE THERE ARE EXPOSED CONDUITS.
   g) ALL ELECTRICAL POWER IN THE CONSTRUCTION AREA TO BE SHUT OFF AFTER WORKING HOURS.
   h) CONTRACTOR AT ALL TIMES TO ENSURE THAT THERE IS NO NATURAL GAS LEAKAGE IN THE BUILDING, OR ANY FLAMMABLE GAS TO BE USED DURING CONSTRUCTION.
5. DUST CONTROL:
   a) DEBRIS, DIRT, AND DUST TO BE KEPT TO A MINIMUM AND CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
   b) THE CONTRACTOR SHALL PROVIDE TEMPORARY DOORS, PARTITIONS, BARRICADES AND POLYETHYLENE SHEETING AS NECESSARY TO PROTECT AND SEPARATE ANY OCCUPIED AREAS OF WORK. DUST PARTITIONS SHALL BE INSTALLED BY THE GENERAL CONTRACTOR IN ACCORDANCE WITH FIRE PROTECTION AND EGRESS REQUIREMENTS AND IN COMPLIANCE WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. DUST PARTITIONS ARE NOT TO BE REMOVED UNTIL ALL FINISH WORK IS COMPLETED OR APPROVAL IS GRANTED BY THE OWNER.
   c) DEBRIS, DIRT AND DUST TO BE CLEANED UP AND CLEARED FROM THE BUILDING SITE PERIODICALLY TO AVOID EXCESSIVE ACCUMULATION.
   d) CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS MATERIALS.
6. HEALTH REQUIREMENTS: SITE SHALL BE KEPT CLEAN TO MAINTAIN PEST CONTROL AND SANITARY CONDITIONS.
7. NOISE AFTER HOURS:
   a) CONSTRUCTION OPERATION WILL BE CONFINED TO NORMAL WORKING HOURS: 7:30 AM TO 5:00 PM, MONDAY TO FRIDAY, EXCEPT LEGAL HOLIDAYS.
   b) CONTRACTOR MUST OBTAIN WRITTEN PERMISSION FROM ALL AFFECTED PARTIES AND THE CITY/BUILDING MANAGEMENT TO WORK OTHER THAN REGULAR HOURS.
   c) WHERE HOURS OF THE DAY OR DAYS OF THE WEEK IN WHICH CONSTRUCTION WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE NEW YORK CITY NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE MAINTAINED BY THE CONTRACTOR.
   d) CONTRACTOR SHALL INCLUDE IN HIS BID AN ALLOWANCE TO PERFORM WORK AFTER HOURS PERTAINING TO EXCESSIVE NOISE FOR DRILLING, CHOPPING, HAMMERING, ETC. LIST DOLLAR VALUE IN BID OF HOURS BEYOND CONTRACT. OBTAIN BUILDING APPROVAL PRIOR TO PERFORMING SUCH OVERTIME WORK.
8. STRUCTURAL SAFETY: NO STRUCTURAL ELEMENTS SHALL BE REMOVED UNLESS PORTIONS AFFECTED ARE ADEQUATELY SUPPORTED BY EITHER TEMPORARY SHORING OR NEW STRUCTURAL ELEMENTS AS REQUIRED TO PROTECT THE STABILITY AND INTEGRITY OF THE EXISTING STRUCTURE.
9. CONSTRUCTION OPERATIONS WILL NOT INVOLVE INTERRUPTION OF HEATING, WATER OR ELECTRICAL OR OTHER BUILDING SERVICES TO OTHER TENANTS WITHOUT WRITTEN PERMISSION FROM AFFECTED PARTIES.

## SPECIAL NOTES:

1. COORDINATE AND PURCHASE ALL WORK AND WIRING REQUIREMENTS WITH FIRE ALARM VENDOR FOR FINAL CONNECTIONS AND MODIFICATIONS REQUIRED TO THE BUILDING'S CLASS 'E' FIRE ALARM SYSTEM TO ACCOMMODATE NEW DEVICES.
   VENDOR: JOHNSON CONTROLS
   CONTACT: KEVIN BERLINGER (212)372-4236
2. MAINTAIN EXISTING CEILING/WALL MOUNTED DEVICES DURING CONSTRUCTION. REMOVE ABANDONED DEVICES WHEN NEW DEVICES ARE IN OPERATION. RE-INSTALL EXISTING TEMPORARILY HUNG DEVICES TO WALL AS DIRECTED BY THE ARCHITECT. REMOVE WIRING NOT IN USE.
3. ALL WIRING TO F.A. DEVICES SHALL BE TEFLON COATED APPROVED FOR FIRE ALARM SYSTEM. RUN #14 AWG MINIMUM EXPOSED IN ACCESSIBLE CEILING AREA. OTHERWISE RUN IN 3/4" EMT CONDUIT.
4. ALL SYSTEM WIRING AND SEQUENCE OF OPERATION SHALL BE IN ACCORDANCE WITH N.Y.C. BUILDING CODE AND N.Y.C. FIRE DEPARTMENT REQUIREMENTS FOR THE EXISTING FIRE ALARM SYSTEM.
5. AFTER INSTALLATION OF ALL DEVICES AND COMPONENTS, PERFORM COMPLETE SYSTEM TESTS IN OWNERS AND BUILDING'S REPRESENTATIVE PRESENCE ON ALL FIRE ALARM DEVICES AS FOLLOWS:
   a. TEST ALL DEVICES SERVING THE SPACE ON THE FIRE ALARM SYSTEM INCLUDING BUT NOT LIMITED TO SMOKE DETECTORS, FAN SHUT-DOWN RELAYS, DOOR RELEASE DEVICES, ETC.
   b. VERIFY THAT ALL FIRE ALARM DEVICES UPON ACTIVATION CAUSE APPROPRIATE ANNUNCIATION AT THE FIRE COMMAND STATION AND PROPER SEQUENCE OF OPERATION WITHIN THE TENANT PREMISES.
   c. VERIFY THAT ALL CONTROL POINTS OPERATE PROPERLY WHEN INITIATE EITHER BY AN ALARM DEVICE WITHIN THE SPACE OR FROM THE FIRE COMMAND STATION.
   d. TEST SPEAKER AUDIBILITY THROUGHOUT THE SPACE AND TEST STROBES.
   e. SUBMIT WRITTEN TEST REPORT TO THE OWNER AND TO THE BUILDING FIRE ALARM VENDOR.

### FIRE ALARM CIRCUIT CLASS AND STYLE

1. FIRE ALARM CIRCUITS SHALL BE WIRED USING NFPA CLASS B STYLE. ANY FIRE ALARM NETWORK CIRCUIT SHALL USE NFPA CLASS X STYLE. ALL AUDIBLE AND VISUAL CIRCUITS SHALL BE CLASS B AND NYC SPLIT A/B. SPLIT A/B CIRCUITS SHALL BE WIRED SO THAT EVERY OTHER DEVICE IS WIRED ON AN ALTERNATE CIRCUIT.

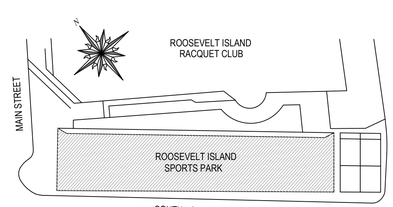
## SYMBOL LIST:

| SYMBOL | DESCRIPTION |
|---|---|
| H | FIRE ALARM HORN STROBE |
| F | FIRE ALARM PULL STATION |
| ST | FIRE ALARM STROBE |
| S ST | FIRE ALARM CEILING MOUNTED STROBE |
| S | CEILING MOUNTED SMOKE DETECTOR |
| D S | DUCT SMOKE DETECTOR WITH RELAY SHUTDOWN<br>"S" - SUPPLY SIDE<br>"R" - RETURN SIDE |
| F R | RELAY<br>- "F" DENOTES FAN SHUTDOWN |
| FACP | FIRE ALARM CONTROL PANEL WITH INTEGRAL CST |
| RAP | REMOTE ANNUNCIATOR PANEL |
| | NYC FUSED DISCONNECT SWITCH WITH (2) 20A FUSES AND SOLID NEUTRAL |
| CST | CENTRAL STATION TRANSPONDER (INTERFACE FOR FDNY NOTIFICATIONS) |
| N | NEW |
| EX | EXISTING TO REMAIN |
| RE | REPLACE EXISTING WITH NEW |

### FIRE ALARM LEVEL OF SURVIVABILITY

1. ALL PATHWAYS SHALL COMPLY WITH NFPA 70.

| | PATHWAY SURVIVABILITY CHART | |
|---|---|---|
| | LEVEL 0 | PATHWAY SHALL NOT BE REQUIRED TO HAVE ANY PROVISIONS FOR PATHWAY SURVIVABILITY |
| | LEVEL 1 | PATHWAY IN BUILDINGS THAT ARE FULLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 WITH ANY INTERCONNECTING CONDUCTORS, CABLES, OR OTHER PHYSICAL PATHWAYS INSTALLED IN METAL RACEWAYS. |
| | LEVEL 2 | PATHWAY SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING: |
| | A | 2 HOURS FIRE RATED CIRCUIT INTEGRITY OR FIRE RESISTIVE CABLE |
| | B | 2 HOUR FIRE RATED CABLE SYSTEM (ELECTRICAL CIRCUIT PROTECTIVE SYSTEM) |
| | C | 2 HOUR FIRE RATED ENCLOSURE OR PROTECTED AREA |
| | D | PERFORMANCE ALTERNATIVES APPROVED BY THE AUTHORITY HAVING JUSRIDICTION |
| X | LEVEL 3 | PATHWAY IN BUILDINGS THAT ARE FULLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13 AND INCLUDE ONE OR MORE OF THE FOLLOWING |
| | A | 2 HOURS FIRE RATED CIRCUIT INTEGRITY OR FIRE RESISTIVE CABLE |
| | B | 2 HOUR FIRE RATED CABLE SYSTEM (ELECTRICAL CIRCUIT PROTECTIVE SYSTEM) |
| X | C | 2 HOUR FIRE RATED ENCLOSURE OR PROTECTED AREA |
| | D | PERFORMANCE ALTERNATIVES APPROVED BY THE AUTHORITY HAVING JUSRIDICTION |




250 MAIN STREET
ROOSEVELT ISLAND,
N.Y. 10044
BLOCK No: 1373
LOT No: 1
ZONING MAP: 9A
PRIMARY ZONING: R7-2

1 PLOT PLAN
Scale: NTS

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

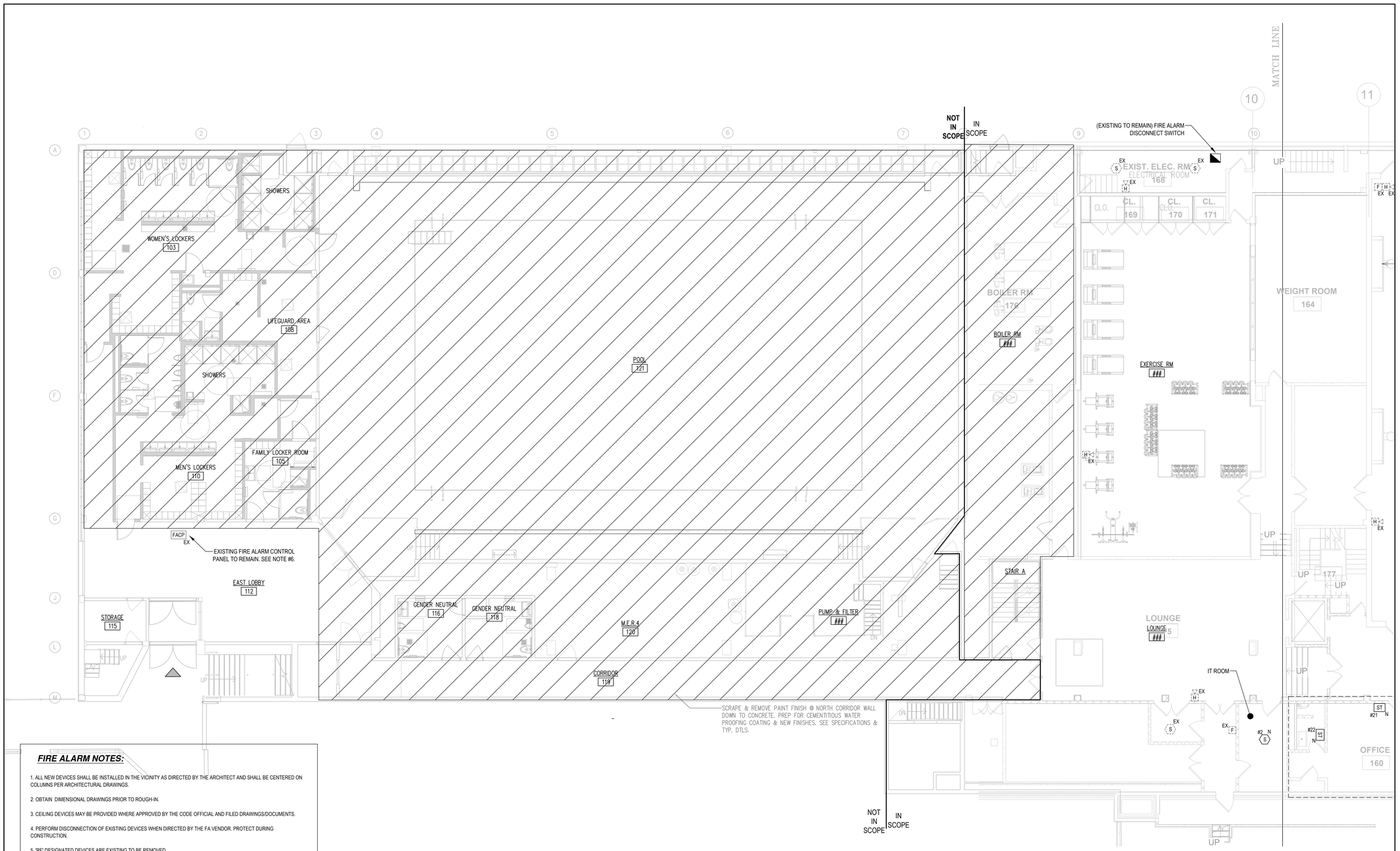
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
FIRE ALARM NOTES SYMBOLS AND ABBREVIATIONS

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. FA-001.00 |
| | DRAWN BY D.M. — 1 OF 6 |

NYC DOB Number




## FIRE ALARM NOTES:

1. ALL NEW DEVICES SHALL BE INSTALLED IN THE VICINITY AS DIRECTED BY THE ARCHITECT AND SHALL BE CENTERED ON COLUMNS PER ARCHITECTURAL DRAWINGS.

2. OBTAIN DIMENSIONAL DRAWINGS PRIOR TO ROUGH-IN.

3. CEILING DEVICES MAY BE PROVIDED WHERE APPROVED BY THE CODE OFFICIAL AND FILED DRAWINGS/DOCUMENTS.

4. PERFORM DISCONNECTION OF EXISTING DEVICES WHEN DIRECTED BY THE FA VENDOR. PROTECT DURING CONSTRUCTION.

5. 'RE' DESIGNATED DEVICES ARE EXISTING TO BE REMOVED.

6. FIRE ALARM CONTROL PANEL WAS INSTALLED UNDER PREVIOUSLY APPROVED APPLICATION. REFER TO FA-001.00 FOR LETTER OF APPROVAL INFORMATION.

7. NEW FA SCOPE OF WORK LIMITED TO LOCKER ROOMS, OFFICES, STORAGE AND RESTROOMS AS INDICATED BY DASHED LINE ON PLAN. ALL OTHER DEVICES IN AREAS ARE TO REMAIN, UNLESS OTHERWISE NOTED.

8. REUSE EXISTING WIRING TO CONNECT TO NEW DEVICE FROM EXISTING DEVICE. EXTEND WIRING AS FEASIBLE.

**1 / FA-100.00 FIRE ALARM FIRST FLOOR EAST PLAN**
**SCALE: 1/8"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

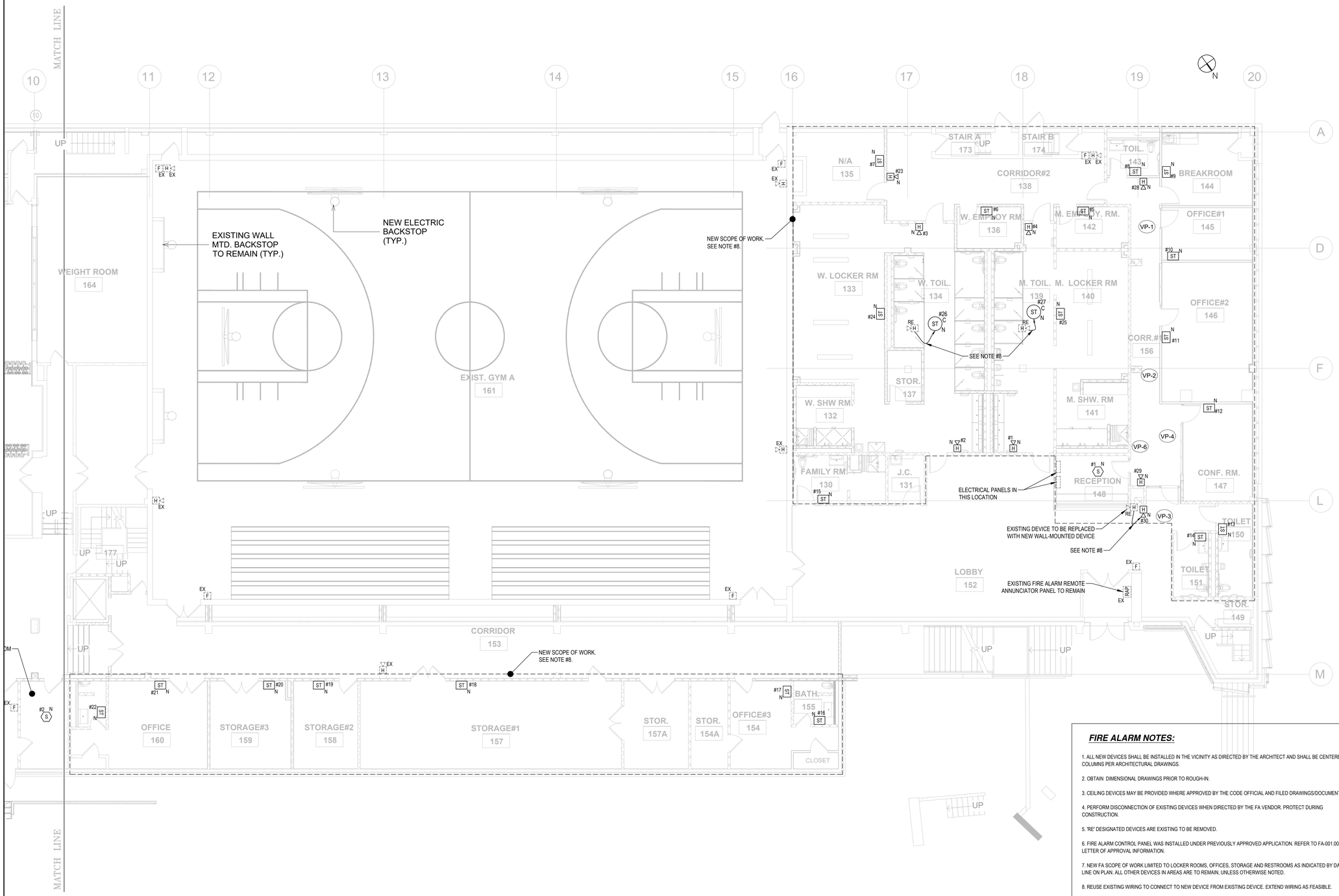
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
FIRE ALARM FIRST FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. FA-100.00
DRAWN BY D.M.
3 OF 6

NYC DOB Number




## 1 FA-101.00 FIRE ALARM FIRST FLOOR WEST PLAN

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

### *FIRE ALARM NOTES:*

1. ALL NEW DEVICES SHALL BE INSTALLED IN THE VICINITY AS DIRECTED BY THE ARCHITECT AND SHALL BE CENTERED ON COLUMNS PER ARCHITECTURAL DRAWINGS.
2. OBTAIN DIMENSIONAL DRAWINGS PRIOR TO ROUGH-IN.
3. CEILING DEVICES MAY BE PROVIDED WHERE APPROVED BY THE CODE OFFICIAL AND FILED DRAWINGS/DOCUMENTS.
4. PERFORM DISCONNECTION OF EXISTING DEVICES WHEN DIRECTED BY THE FA VENDOR. PROTECT DURING CONSTRUCTION.
5. 'RE' DESIGNATED DEVICES ARE EXISTING TO BE REMOVED.
6. FIRE ALARM CONTROL PANEL WAS INSTALLED UNDER PREVIOUSLY APPROVED APPLICATION. REFER TO FA-001.00 FOR LETTER OF APPROVAL INFORMATION.
7. NEW FA SCOPE OF WORK LIMITED TO LOCKER ROOMS, OFFICES, STORAGE AND RESTROOMS AS INDICATED BY DASHED LINE ON PLAN. ALL OTHER DEVICES IN AREAS ARE TO REMAIN, UNLESS OTHERWISE NOTED.
8. REUSE EXISTING WIRING TO CONNECT TO NEW DEVICE FROM EXISTING DEVICE. EXTEND WIRING AS FEASIBLE.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

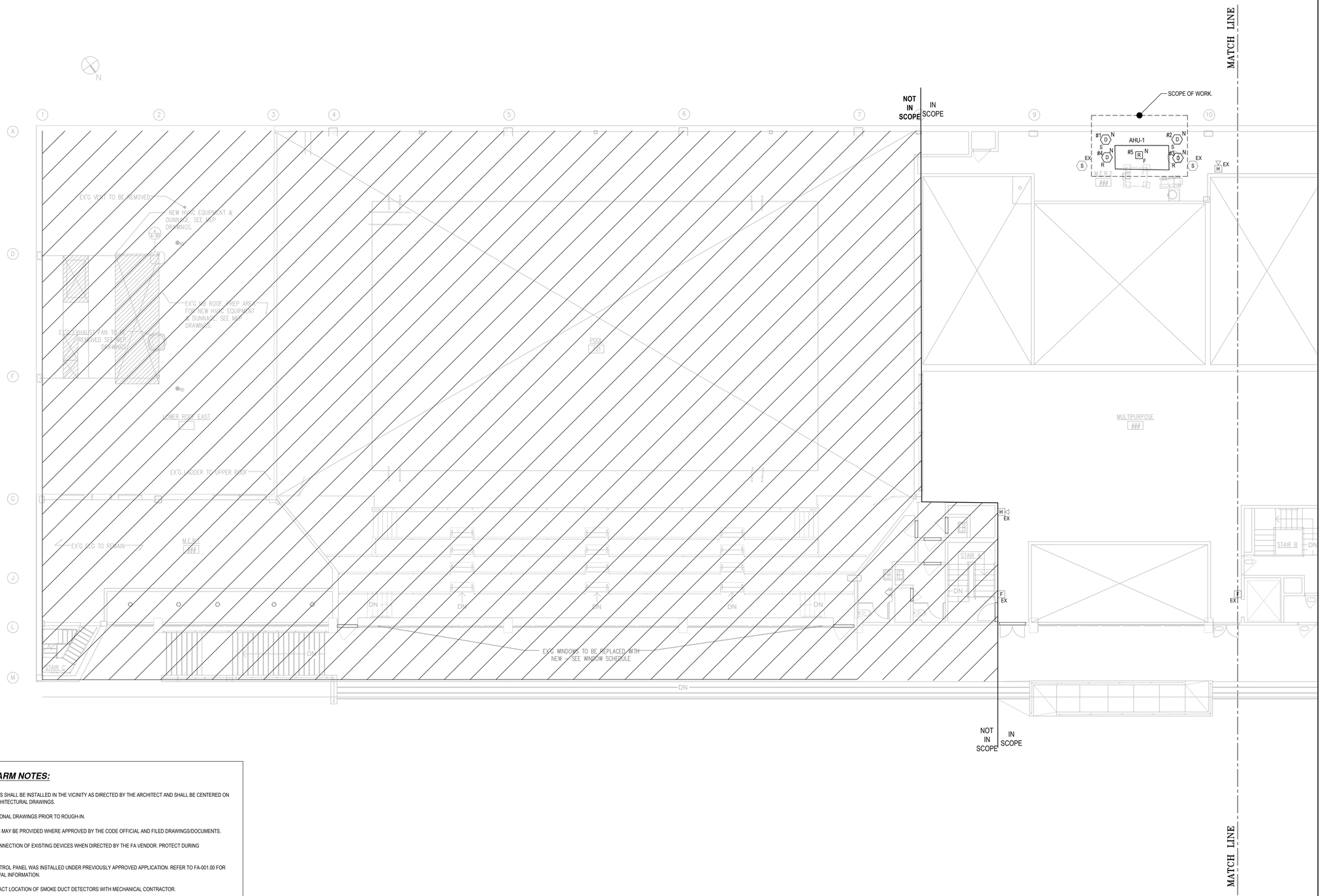
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
FIRE ALARM FIRST FLOOR WEST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. FA-101.00
DRAWN BY D.M.


NYC DOB Number




## FIRE ALARM NOTES:

1. ALL NEW DEVICES SHALL BE INSTALLED IN THE VICINITY AS DIRECTED BY THE ARCHITECT AND SHALL BE CENTERED ON COLUMNS PER ARCHITECTURAL DRAWINGS.
2. OBTAIN DIMENSIONAL DRAWINGS PRIOR TO ROUGH-IN.
3. CEILING DEVICES MAY BE PROVIDED WHERE APPROVED BY THE CODE OFFICIAL AND FILED DRAWINGS/DOCUMENTS.
4. PERFORM DISCONNECTION OF EXISTING DEVICES WHEN DIRECTED BY THE FA VENDOR. PROTECT DURING CONSTRUCTION.
5. FIRE ALARM CONTROL PANEL WAS INSTALLED UNDER PREVIOUSLY APPROVED APPLICATION. REFER TO FA-001.00 FOR LETTER OF APPROVAL INFORMATION.
6. COORDINATE EXACT LOCATION OF SMOKE DUCT DETECTORS WITH MECHANICAL CONTRACTOR.

1 / FA-102.00 **FIRE ALARM SECOND FLOOR EAST PLAN**
**SCALE: 1/8"=1'-0"**

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

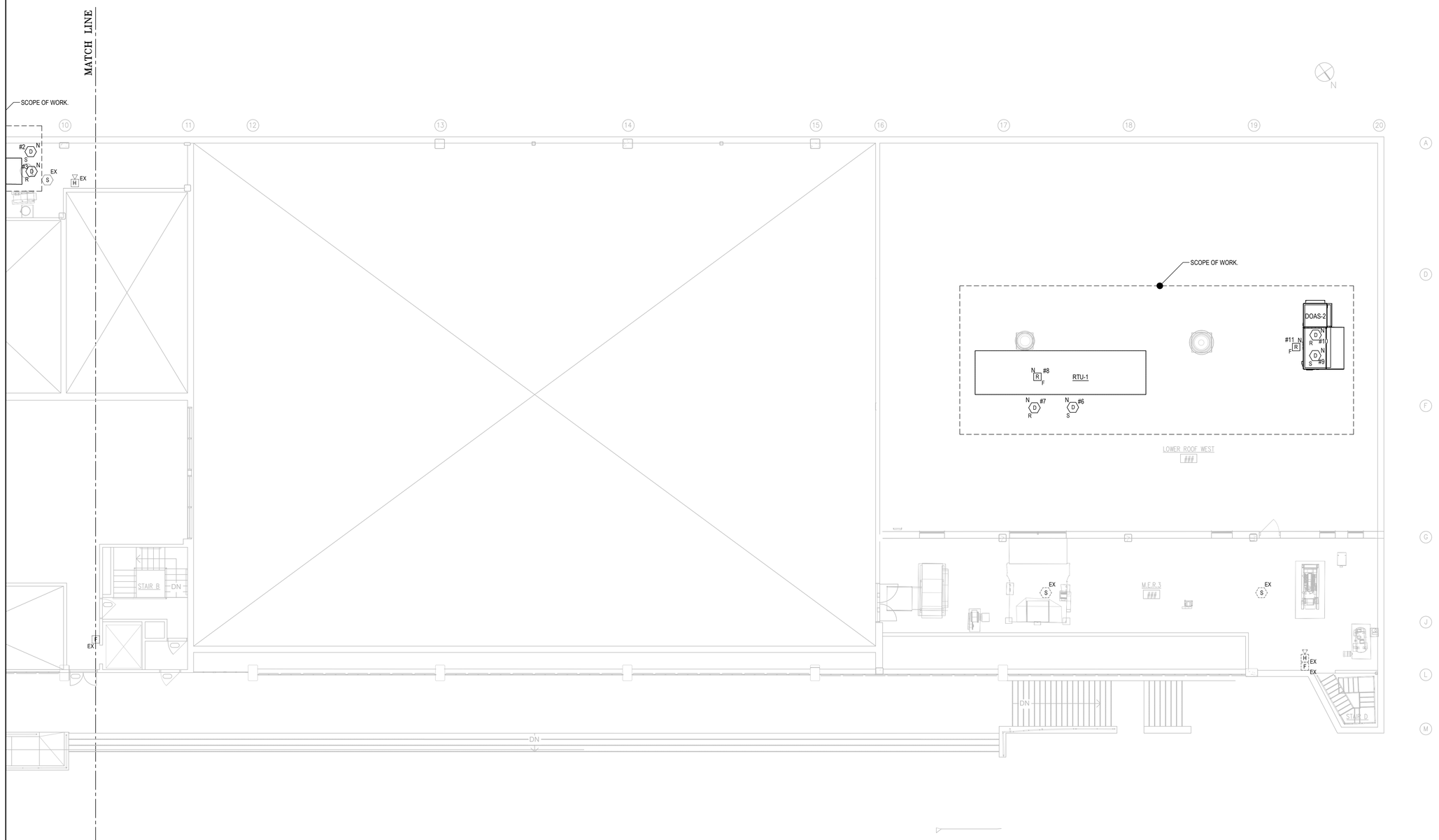
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
FIRE ALARM SECOND FLOOR EAST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. FA-102.00
DRAWN BY D.M.
5 OF 6

NYC DOB Number




**1 FA-103.00 FIRE ALARM SECOND FLOOR WEST PLAN**
**SCALE: 1/8"=1'-0"**

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

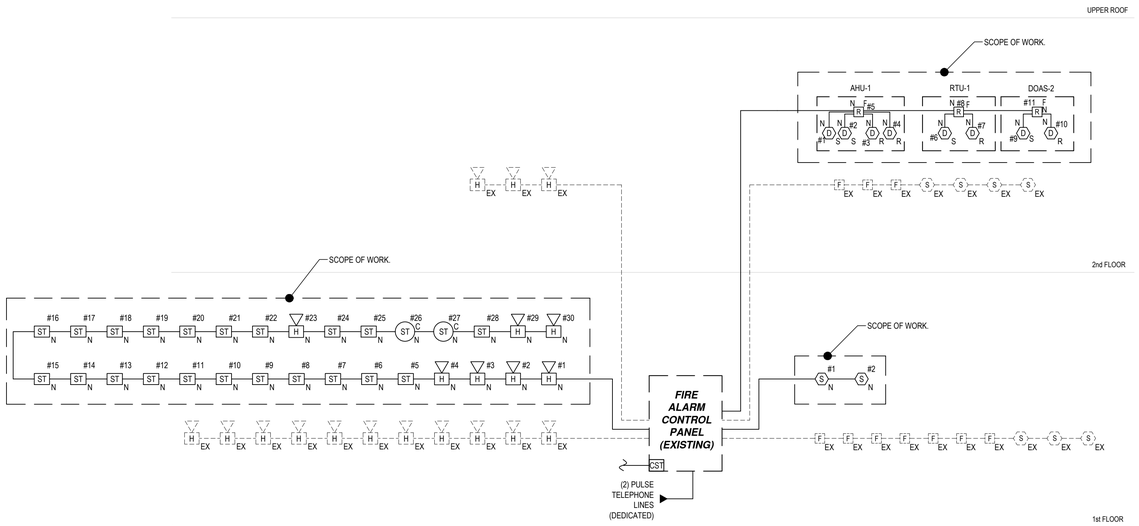
FIRE ALARM SECOND FLOOR WEST PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. FA-103.00
DRAWN BY D.M.
6 OF 6

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




APPROVED CLASS 'TEMPORAL 3' SYSTEM- FIRE ALARM RISER DIAGRAM

N.T.S.

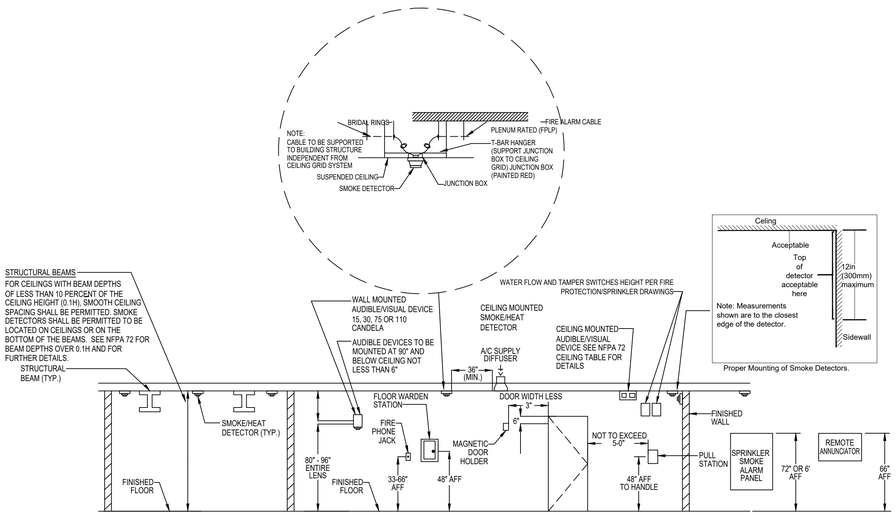
FIRE ALARM RISER NOTES:

1. USE EXISTING FIRE ALARM CONTROL PANEL TO PERFORM THE FIRE ALARM FUNCTIONS AS SPECIFIED HEREIN. EXISTING PANEL MAY BE REUSED IF FOUND TO BE CAPABLE OF SUPPORTING DEVICES AS INDICATED.
2. ALL DEVICES SHALL BE BUILDING STANDARD TYPE OR AS SPECIFIED.
3. SEE PLANS FOR LOCATION AND QUANTITIES OF FIRE ALARM DEVICES. ALL HORN AND STROBES SHALL BE WIRED ON ALTERNATE CIRCUITS.
4. ALL WIRING TO FIRE ALARM DEVICES SHALL BE TEFLON COATED APPROVED FOR FIRE ALARM SYSTEM. RUN #14AWG MINIMUM EXPOSED IN ACCESSIBLE CEILING AREA. OTHERWISE RUN IN 3/4" EMT CONDUIT.
5. ALL SYSTEMS WIRING AND SEQUENCE OF OPERATION SHALL BE IN ACCORDANCE WITH THE LATEST NEW YORK STATE BUILDING CODE AND THE NEW YORK CITY FIRE DEPARTMENT REQUIREMENTS.
6. OBTAIN AND SUBMIT SHOP DRAWINGS FROM FIRE ALARM VENDOR WITH ALL DEVICES AND WIRING DIAGRAMS AS REQUIRED TO OBTAIN IN FIRE ALARM APPROVAL.
7. AFTER INSTALLATION OF ALL DEVICES AND COMPONENTS, PERFORM COMPLETE SYSTEM TESTS IN OWNERS AND BUILDINGS REPRESENTATIVE PRESENCE ON ALL FIRE ALARM DEVICES AS FOLLOWS:
   - A. TEST ALL DEVICES SERVING THE SPACE ON THE FIRE ALARM SYSTEM INCLUDING BUT NOT LIMITED TO SMOKE DETECTORS, FAN SHUT-DOWN RELAYS, DOOR RELEASE DEVICES, ETC.
   - B. VERIFY THAT ALL FIRE ALARM DEVICES UPON ACTIVATION CAUSE APPROPRIATE ANNUNCIATION AT THE FIRE ALARM CONTROL PANEL AND PROPER SEQUENCE OF OPERATION WITHIN THE PREMISES.
   - C. VERIFY THAT ALL CONTROL POINTS OPERATE PROPERLY WHEN INITIATED EITHER BY AN ALARM DEVICE WITHIN THE SPACE OR FROM THE FIRE CONTROL PANEL.
   - D. TEST HORN AUDIBILITY THROUGHOUT THE SPACE AND TEST STROBES.
   - E. SUBMIT WRITTEN TEST REPORT TO THE OWNER AND TO THE FIRE ALARM VENDOR.

***LEGEND:***

EX EXIST. DEVICE/WIRING TO REMAIN

N NEW DEVICE/WIRING TO BE INSTALLED




STANDARD FIRE ALARM DEVICE MOUNTING HEIGHTS

NOTE:
1. REFER TO FLOOR PLANS FOR LOCATIONS.
2. ALL FINAL MOUNTING HEIGHT MUST COMPLY WITH NFPA 72 AND AUTHORITY HAVING JURISDICTION.
3. ALL INSTALLATION TO BE IN ACCORDANCE WITH MFG. RECOMMENDATIONS AND AS PER APPROVED SHOP DRAWINGS
4. MOUNTING HEIGHTS ARE SHOWN FOR COMPLIANCE WITH NFPA 72. NOT ALL DEVICES SHOWN ARE APPLICABLE TO THIS PROJECT.

MANUAL/AUTOMATIC FIRE ALARM SYSTEM

| SYSTEM INPUT | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | BB | CC | DD | EE | FF | GG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FIRE ALARM PANEL | | | | | | | | ANNUN. | | | | NOTIFICATION | | | | | | | | | | | | | | | | | | FIRE SAFETY CONTROL | | | | | | | |
| | ACTIVATE AUDIBLE/VISUAL ALARM AT FACP | ACTIVATE AUDIBLE/VISUAL TROUBLE AT FACP | | | | | | | ACTIVATE AUDIBLE/VISUAL ALARM AT REMOTE ANNUNCIATOR | | | | ACTIVATE AUDIBLE ALARM ON ALL FLOORS | ACTIVATE VISUAL ALARM ON ALL FLOORS | | | | ACTIVATE CENTRAL OFFICE TRANSMITTER SUPERVISORY | ACTIVATE CENTRAL OFFICE TRANSMITTER MANUAL SIGNAL | ACTIVATE CENTRAL OFFICE TRANSMITTER SMOKE SIGNAL | ACTIVATE CENTRAL OFFICE TRANSMITTER WATERFLOW SIGNAL | ACTIVATE CENTRAL OFFICE TRANSMITTER TROUBLE SIGNAL | | | ACTIVATE FAN SHUTDOWN | ACTIVATE DOOR RELEASE | ACTIVATE DRY VALVE RELEASE | | | | | | | |
| 1 | MANUAL PULLSTATION | | | | | | | | ● | | | | ● | ● | | | | | ● | | | | | | | | ● | | | | | | | | 1 |
| 2 | AREA SMOKE DETECTOR | | | | | | | | ● | | | | ● | ● | | | | | | ● | | | | | | ● | ● | | | | | | | | 2 |
| 3 | DUCT SMOKE DETECTOR | | | | | | | | ● | | | | ● | ● | | | | | | ● | | | | | | ● | ● | | | | | | | | 3 |
| 4 | HEAT DETECTOR | | | | | | | | ● | | | | ● | ● | | | | | | ● | | | | | | ● | ● | | | | | | | | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |

| SYSTEM FAULT/TROUBLE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | BB | CC | DD | EE | FF | GG | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OPEN CIRCUIT | | ● | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 1 |
| 2 | GROUNDED WIRE | | ● | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 2 |
| 3 | A/C FAILURE | | ● | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 3 |
| 4 | BATTERY FAULT | | ● | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 4 |
| 5 | WIRE TO WIRE SHORT | | ● | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | | | | | | 5 |
| | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | AA | BB | CC | DD | EE | FF | GG | |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY 10044

DRAWING

FIRE ALARM RISER DIAGRAM

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. FA-500.00
DRAWN BY D.M.
7 OF 6

NYC DOB Number

COM*check* Software Version 4.1.4.0

# Mechanical Compliance Certificate

## Project Information

Energy Code: 2020 New York City Energy Conservation Code
Project Title: RIOC - Sportspark
Location: New York, New York
Climate Zone: 4a
Project Type: Alteration

Construction Site:
250 Main St.
Roosevelt Island, NY 10044

Owner/Agent:
Roosevelt Island Operating Corporation

Designer/Contractor:
Cameron Engineering
1411 Broadway
Suite 610
New York, NY 10018
212-324-4000

## Mechanical Systems List

**Quantity** **System Type & Description**

1 RTU-1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 500 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et
Cooling: 1 each - Single Package DX Unit, Capacity = 483 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 9.80 EER, Required Efficiency: 9.80 EER + 11.4 IEER
Fan System: None

1 ACCU-1-S-1 (Single Zone):
Split System Heat Pump
Heating Mode: Capacity = 12 kBtu/h,
Proposed Efficiency = 9.50 HSPF, Required Efficiency = 8.20 HSPF
Cooling Mode: Capacity = 14 kBtu/h,
Proposed Efficiency = 18.00 SEER, Required Efficiency: 14.00 SEER
Fan System: None

1 ACCU-R-3 (Single Zone):
Cooling: 1 each - Split System, Capacity = 250 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 10.00 EER, Required Efficiency: 10.00 EER + 11.6 IEER
Fan System: None

1 ACCU-R-4 (Single Zone):
Split System Heat Pump
Heating Mode: Capacity = 189 kBtu/h,
Proposed Efficiency = 3.57 COP, Required Efficiency = 3.20 COP
Cooling Mode: Capacity = 168 kBtu/h,
Proposed Efficiency = 11.60 EER, Required Efficiency: 10.60 EER + 11.6 IEER
Fan System: None

1 DOAU-2 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 157 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Single Package DX Unit, Capacity = 89 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.00 EER, Required Efficiency: 11.00 EER + 12.7 IEER
Fan System: None



## Mechanical Compliance Statement

*Compliance Statement:* The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2020 New York City Energy Conservation Code requirements in COM*check* Version 4.1.4.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____



COM*check* Software Version 4.1.4.0

# Inspection Checklist

Energy Code: 2020 New York City Energy Conservation Code

Requirements: 85.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| Section # & Req.ID | Plan Review | Complies? | Comments/Assumptions |
|---|---|---|---|
| C103.2 [PR2][1] | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.5.2 [PR36][1] | Electrical meters for tenant spaces in covered buildings. Each covered tenant space in a new building shall be equipped with a separate meter or sub-meter to measure the electrical consumption of such space when let or sublet. See section details and Section 28-311.2 of the Administrative Code. As new covered tenant spaces are created, they shall be equipped with meters or sub-meters as provided in this section | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.10 [PR38][1] | New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Footing / Foundation Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.12.2, C403.12.3 [FO9][1] | Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Plumbing Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C404.5, C404.5.1, C404.5.2 [PL6][1] | Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C404.5, C404.5.1, C404.5.2 [PL6][1] | Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.5, C404.5.1, C404.5.2 [PL6][1] | Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.5, C404.5.1, C404.5.2 [PL6][1] | Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.5, C404.5.1, C404.5.2 [PL6][1] | Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.6.3 [PL7][1] | Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C404.6.3 [PL7][1] | Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.6.3 [PL7][1] | Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.6.3 [PL7][1] | Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.6.3 [PL7][1] | Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.7 [PL8][1] | Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Plumbing Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C404.7 [PL8][1] | Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.7 [PL8][1] | Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.7 [PL8][1] | Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C404.7 [PL8][1] | Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C402.2.6 [ME41][1] | Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.11.3 [ME61][2] | HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.11.3 [ME61][2] | HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.11.3 [ME61][2] | HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.8.1 [ME65][1] | HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. *See the Mechanical Systems list for values.* |
| C403.8.1 [ME65][1] | HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. *See the Mechanical Systems list for values.* |
| C403.8.1 [ME65][1] | HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. *See the Mechanical Systems list for values.* |
| C403.8.1 [ME65][1] | HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. *See the Mechanical Systems list for values.* |
| C403.8.1 [ME65][1] | HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. *See the Mechanical Systems list for values.* |
| C403.8.3 [ME117][2] | Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.8.3 [ME117][2] | Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.8.3 [ME117][2] | Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.8.3 [ME117][2] | Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.8.3 [ME117][2] | Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.12.1 [ME71][1] | Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.3 [ME55][1] | HVAC equipment efficiency verified. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Mechanical Systems list for values.* |
| C405.8.1.1 [ME36][1] | New traction elevators with a rise of 75 feet or more have a power conversion system that complies as follows: C405.8.1.1.1 Induction motors with a Class IE2 efficiency ratings are be used. C405.8.1.1.2 Transmissions does not reduce the efficiency of the combined motor/transmission below that shown for the Class IE2 motor for elevators with capacities below 4,000 lbs. C405.8.1.1.3 Potential energy released during motion recovered with a regenerative drive that supplies electrical energy to the building electrical system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.9 [ME37][1] | Commercial kitchen equipment shall comply with the minimum efficiency requirements of Tables C405.9(1) through table C405.9(5). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.3.2. Table12 [ME144][1] | Vapor Compression Based Indoor Pool Dehumidifiers comply with the minimum efficiency requirements of Table C403.3.2(12). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| Table C403.3.2. 13, Table C403.3.2. 14 [ME145][1] | Electrically operated DX-DOAS units, single-package and remote condenser, without energy recovery comply with minimum efficiency requirements of Table C403.3.2(13). Units with energy recovery comply with minimum efficiency requirements of Table C403.3.2(14). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.2 [ME59][1] | Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



RIOC
ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY COMPLIANCE - MECHANICAL COMCHECK 1

| SEAL & SIGNATURE | DATE 06.10.2019 |
|---|---|
| | JOB NUMBER 19010 |
| | DWG. No. EN-001.00 |
| | DRAWN BY D.K. / 1 OF 8 |

NYC DOB Number

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.7.1 [ME59]$^{1}$ | Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.7.2 [ME115]$^{3}$ | Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.7.6 [ME141]$^{3}$ | HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.7.4 [ME57]$^{1}$ | Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.7.5 [ME116]$^{1}$ | Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.11.1 C403.11.2 [ME60]$^{2}$ | HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.4.3.3.2 [ME121]$^{3}$ | Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or closed-circuit cooling towers used in conjunction with a separate heat exchanger have heat loss by shutting down the circulation pump on the cooling tower loop. Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.4.3.3.2 [ME121]$^{3}$ | Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or closed-circuit cooling towers used in conjunction with a separate heat exchanger have heat loss by shutting down the circulation pump on the cooling tower loop. Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.4.1.4 [ME63]$^{2}$ | Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.3.3 [ME35]$^{1}$ | Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25% | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.3.3 [ME35]$^{1}$ | Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25% | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.3.3 [ME35]$^{1}$ | Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25% | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.5, C403.5.1, C403.5.2 [ME123]$^{3}$ | Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2.. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C405.6 [EL26]$^{2}$ | Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.7 [EL27]$^{2}$ | Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.8.2, C405.8.2.1 [EL28]$^{2}$ | Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.9 [EL29]$^{2}$ | Total voltage drop across the combination of feeders and branch circuits <= 5%. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C303.3, C408.2.5.3 [FI8]$^{3}$ | Furnished O&M manuals for HVAC systems within 90 days of system acceptance. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.2 [FI27]$^{1}$ | HVAC systems and equipment capacity does not exceed calculated loads. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1 [FI47]$^{1}$ | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1 [FI47]$^{1}$ | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1 [FI47]$^{1}$ | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1 [FI47]$^{1}$ | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1.1 [FI42]$^{1}$ | Heat pump controls prevent supplemental electric resistance heat from coming on when not needed. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| C403.2.4.1.1 [FI42]$^{1}$ | Heat pump controls prevent supplemental electric resistance heat from coming on when not needed. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.4.1.2 [FI38]$^{1}$ | Thermostatic controls have a 5 °F deadband. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.1.3 [FI20]$^{1}$ | Temperature controls have setpoint overlap restrictions. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.2.4.2 [FI39]$^{3}$ | Each zone equipped with setback controls using automatic time clock or programmable control system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C403.2.4.2.1, C403.2.4.2.2 [FI40]$^{3}$ | Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.1.1 [FI57]$^{1}$ | Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)





ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com

COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

ENERGY COMPLIANCE - MECHANICAL COMCHECK 2

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-002.00
DRAWN BY D.K.
2 OF 8

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

NYC DOB Number

COMcheck Software Version 4.1.4.0

# Interior Lighting Compliance Certificate

**Project Information**

Energy Code: 2020 New York City Energy Conservation Code
Project Title: RIOC - Sportspark
Project Type: Alteration

Construction Site:
250 Main St.
Roosevelt Island, NY 10044

Owner/Agent:
Roosevelt Island Operating Corporation

Designer/Contractor:
Cameron Engineering
1411 Broadway
Suite 610
New York, NY 10018
212-324-4000

**Allowed Interior Lighting Power**

| A Area Category | B Floor Area (ft2) | C Allowed Watts / ft2 | D Allowed Watts (B X C) |
|---|---|---|---|
| 1-Lobby (Common Space Types:Lobby - General) | 1100 | 0.90 | 990 |
| 2-Corridor (Common Space Types:Corridor/Transition <8 ft wide) | 2230 | 0.58 | 1293 |
| 3-Locker Rooms (Common Space Types:Locker Room) | 2500 | 0.45 | 1125 |
| 4-Offices (Common Space Types:Office - Enclosed) | 2884 | 0.85 | 2451 |
| 5-Weight Gym/Studio (Gymnasium/Fitness Center:Exercise Area) | 4500 | 0.50 | 2250 |
| 6-Storage Rooms (Common Space Types:Storage >=50 - <=1000 sq.ft.) | 1000 | 0.43 | 430 |
| 7-2nd Floor Multipurpose Room (Common Space Types:Conference/Meeting/Multipurpose) | 2100 | 0.93 | 1953 |
| | | Total Allowed Watts = | 10493 |

**Proposed Interior Lighting Power**

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| Lobby ( Common Space Types:Lobby - General 1100 sq.ft.) | | | | |
| LED 14: L4: LED MR 10W: | 1 | 8 | 10 | 80 |
| LED 11: L7: Other: | 1 | 10 | 42 | 420 |
| LED 2: L8: LED Linear 33W: | 1 | 8 | 28 | 224 |
| LED 3: L9: LED Linear 33W: | 1 | 10 | 56 | 560 |
| LED 13: L5: LED Panel 19W: | 1 | 1 | 28 | 28 |
| Corridor ( Common Space Types:Corridor/Transition <8 ft wide 2230 sq.ft.) | | | | |
| LED 13 copy 1: L5: LED Panel 19W: | 1 | 13 | 28 | 364 |
| LED 7: L4: LED MR 10W: | 1 | 3 | 10 | 30 |
| LED 11 copy 1: L7: Other: | 1 | 21 | 42 | 882 |
| LED 15: L6: Other: | 1 | 4 | 36 | 144 |
| LED 15 copy 1: L16: Other: | 1 | 20 | 28 | 560 |
| Locker Rooms ( Common Space Types:Locker Room 2500 sq.ft.) | | | | |
| LED 13 copy 2: L5: LED Panel 19W: | 1 | 19 | 19 | 361 |
| LED 14 copy 1: L4: LED MR 10W: | 1 | 38 | 10 | 380 |



| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| LED 14 copy 2: L12: Other: | 1 | 4 | 36 | 144 |
| Offices ( Common Space Types:Office - Enclosed 2884 sq.ft.) | | | | |
| LED 13 copy 3: L5: LED Panel 19W: | 1 | 38 | 28 | 1064 |
| LED 9: L6: Other: | 1 | 18 | 36 | 648 |
| LED 4: L4: LED MR 10W: | 1 | 4 | 10 | 40 |
| LED 14 copy 3: L12: Other: | 1 | 1 | 36 | 36 |
| LED 14 copy 4: L16: Other: | 1 | 6 | 20 | 120 |
| LED 14 copy 5: L17: Other: | 1 | 6 | 28 | 168 |
| Weight Gym/Studio ( Gymnasium/Fitness Center:Exercise Area 4500 sq.ft.) | | | | |
| LED 2 copy 1: L6: LED Linear 33W: | 1 | 9 | 36 | 324 |
| Storage Rooms ( Common Space Types:Storage >=50 - <=1000 sq.ft. 1000 sq.ft.) | | | | |
| LED 15 copy 1: L6: Other: | 1 | 19 | 36 | 684 |
| LED 13 copy 3: L5: LED Panel 19W: | 1 | 1 | 28 | 28 |
| 2nd Floor Multipurpose Room ( Common Space Types:Conference/Meeting/Multipurpose 2100 sq.ft.) | | | | |
| LED 13 copy 4: L13: LED Panel 19W: | 1 | 10 | 64 | 640 |
| | | Total Proposed Watts = | | 7929 |

**Interior Lighting PASSES**

**Interior Lighting Compliance Statement**

*Compliance Statement:* The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2020 New York City Energy Conservation Code requirements in COMcheck Version 4.1.4.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date



COMcheck Software Version 4.1.4.0

# Exterior Lighting Compliance Certificate

**Project Information**

Energy Code: 2020 New York City Energy Conservation Code
Project Title: RIOC - Sportspark
Project Type: Alteration
Exterior Lighting Zone: 2 (Residentially zoned area)

Construction Site:
250 Main St.
Roosevelt Island, NY 10044

Owner/Agent:
Roosevelt Island Operating Corporation

Designer/Contractor:
Cameron Engineering
1411 Broadway
Suite 610
New York, NY 10018
212-324-4000

**Allowed Exterior Lighting Power**

| A Area/Surface Category | B Quantity | C Allowed Watts / Unit | D Tradable Wattage | E Allowed Watts (B X C) |
|---|---|---|---|---|
| Exterior (Pedestrian and vehicular entrances and exits) | 500 ft of | 12.6 | Yes | 6300 |
| | | Total Tradable Watts (a) = | | 6300 |
| | | Total Allowed Watts = | | 6300 |
| | | Total Allowed Supplemental Watts (b) = | | 400 |

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

**Proposed Exterior Lighting Power**

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| Exterior ( Pedestrian and vehicular entrances and exits 500 ft of door width): Tradable Wattage | | | | |
| LED 1: L15: Exterior LED: Other: | 1 | 28 | 90 | 2520 |
| | | Total Tradable Proposed Watts = | | 2520 |

**Exterior Lighting PASSES**

**Exterior Lighting Compliance Statement**

*Compliance Statement:* The proposed exterior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2020 New York City Energy Conservation Code requirements in COMcheck Version 4.1.4.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date



COMcheck Software Version 4.1.4.0

# Inspection Checklist

Energy Code: 2020 New York City Energy Conservation Code

Requirements: 98.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| Section # & Req.ID | Plan Review | Complies? | Comments/Assumptions |
|---|---|---|---|
| C103.2 [PR4][1] | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C103.2 [PR8][1] | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.5.2 [PR36][1] | Electrical meters for tenant spaces in covered buildings. Each covered tenant space in a new building shall be equipped with a separate meter or sub-meter to measure the electrical consumption of such space when let or sublet. See section details and Section 28-311.2 of the Administrative Code. As new covered tenant spaces are created, they shall be equipped with meters or sub-meters as provided in this section | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.10 [PR38][1] | New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C405.2.2.2 [EL22][1] | Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.1, C405.2.1.1 [EL18][1] | Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, corridor/transition areas, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, janitorial closets, corridors/transition areas, dining areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces, cafeteria dining areas, and fast food dining areas. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.1.2 [EL19][1] | Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.1.3 [EL20][1] | Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.2.1, C405.2.2.2 [EL21][2] | Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C405.2.3, C405.2.3.1, C405.2.3.2 [EL23][2] | Daylight zones provided with individual controls that control the lights independent of general area lighting within daylight zones in the following spaces: 1. Spaces with a total of more than 100 watts of general lighting within sidelit zones complying with Section C405.2.3.2. General lighting does not include lighting that is required to have specific application control in accordance with Section C405.2.4. 2. Spaces with a total of more than 100 watts of general lighting within toplit zones complying with Section C405.2.3.3. See code section C405.2.3.1 Daylight responsive control function and section | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.4 [EL26][1] | Separate lighting control devices for specific uses installed per approved lighting plans. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.4 [EL27][1] | Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.6 [EL28][2] | Exterior lighting systems provided with controls that comply with Sections C405.2.6.1 through C405.2.6.5. Decorative lighting systems comply with Sections C405.2.6.1-2, and C405.2.6.4. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.6.1 [EL31][2] | Lights automatically turned off when daylight is present and satifies the lighting needs. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.1.1 [EL6][1] | Internally illuminated exit signs do not exceed 5 watts per face. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.6.2 [EL32][2] | Building facade and landscape lighting automatically shut off from not later than 1 hour after business closing to not earlier than 1 hour before business opening. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.6.3 [EL33][2] | Lighting that is not controlled in accordance with Section C405.2.6.2 controlled so that the total wattage of such lighting is automatically reduced by not less than 50 percent by selectively switching off or dimming luminaires at one of the following times: 1. From not later than midnight to not earlier than 6a.m. 2. From not later than one hour after business closing to not earlier than one hour before business opening. 3. During any time where activity has not been detected for 15 minutes or more. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C405.2.6.4 [EL34][2] | Time-switch controls for exterior lighting comply with the following: 1. Have a clock capable of being programmed for not fewer than 7 days. 2. Capable of being set for seven different day types per week. 3. Incorporate an automatic holiday setback feature. 4. Have program backup capabilities that prevent the loss of program and time settings for a period of not less than 10 hours in the event that power is interrupted. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.2.6.5 [EL35][2] | Outdoor parking area luminaires mounted 24' or less above the ground controlled to automatically reduce the power of each luminaire by a minimum of 50 percent when no activity has been detected for at least 15 minutes. No more than 1500 W of lighting power shall be controlled together. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.6 [EL26][2] | Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.7 [EL27][2] | Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist). | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.8.2, C405.8.2.1 [EL28][2] | Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C405.9 [EL29][2] | Total voltage drop across the combination of feeders and branch circuits <= 5%. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C303.3, C408.2.5.2 [FI17][1] | Furnished O&M instructions for systems and equipment to the building owner or designated representative. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C405.3.1 [FI18][1] | Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Interior Lighting fixture schedule for values.* |
| C405.4.1 [FI19][1] | Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Exterior Lighting fixture schedule for values.* |
| C408.1.1 [FI57][1] | Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.3 [FI33][1] | Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)



PROGRESS INSPECTIONS:

INTERIOR LIGHTING POWER (IC2), (IIC3)
EXTERIOR LIGHTING POWER (IIC4)
LIGHTING CONTROLS (IIC5)

THE ELECTRICAL POWER AND LIGHTING SYSTEMS COMPLIES WITH THE REQUIREMENTS OF 2020 NYC ENERGY CONVERSATION CODE.

"TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT THE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NYCECC CODE" FILED UNDER ALTERATIONS.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

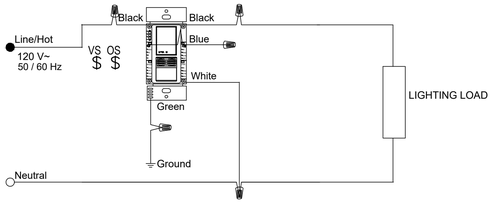
DRAWING

ENERGY COMPLIANCE - LIGHTING COMCHECK

| SEAL & SIGNATURE | DATE | 06.10.2019 |
|---|---|---|
| | JOB NUMBER | 19010 |
| | DWG. No. | EN-003.00 |
| | DRAWN BY D.M. | 3 OF 8 |

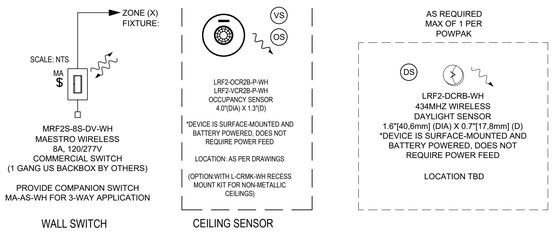
NYC DOB Number

Single Pole Wiring - Single-Circuit (MS-B102)




## 1 LUTRON WALL-MOUNTED OCCUPANCY (SINGLE ROOM CONTROL) (WITH BUILT-IN SENSOR)

SCALE: NTS

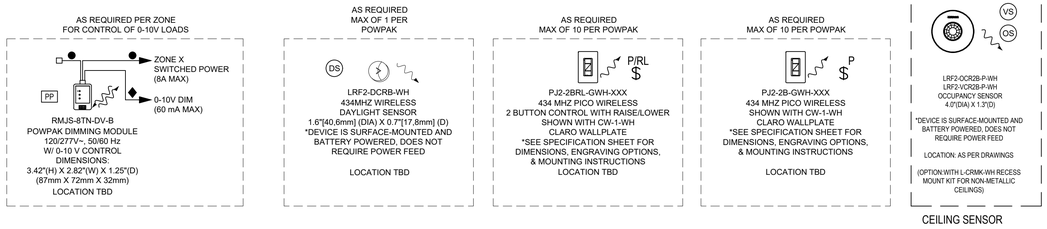



## 2 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) (WITH REMOTE WIRELESS SENSORS)

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.




## 3 LUTRON WIRELESS SWITCH (SINGLE ROOM VACANCY/OCCUPANCY) WITH POWPAK

SCALE: NTS

***NOTES:***

1. ALL COMPONENTS SHALL BE FROM LUTRON.
2. SUBMIT SHOP DRAWINGS AND WIRING DIAGRAM INDICATING ALL CONTROLS REQUIRED FOR A COMPLETE OPERATIONAL CONTROL SYSTEM.
3. OBTAIN LOCAL AUTHORITY APPROVAL FOR LIGHTING INSTALLATION. ALL WIRING SHALL BE CONCEALED AND APPROVED WHERE INSTALLED.
4. ALL ENCLOSED OR OPEN ROOMS AND OFFICES SHALL BE PROVIDED WITH WALL CEILING MOUNTED VACANCY SENSORS UNLESS DAYLIGHT CONTROL IS REQUIRED.

LIGHT SCHEDULE

| TAG | TYPE | MANUF | MODEL | MOUNT | WATTAGE | LAMP | DIMMING TYPE | NOTES |
|---|---|---|---|---|---|---|---|---|
| L1 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES4GS-A1-36K-6MS-50-80-FR-45-WET | 25'-0" | | LED | | NOT USED |
| L2 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES4GS-A1-05K-2MS-50-80-FR-WET | 25'-0" | | LED | | NOT USED |
| L3 | LED HIGH BAY FIXTURES: SERIES 4.0 | FLEX LIGHTING | ES4GS-A1-36K-6MS-50-80-FR-90-WET | 25'-0" | | LED | | NOT USED |
| L4 | SQUARE DOWNLIGHT | LITHONIA LIGHTING | LDN6SSQ 35/10 LS9WR | RECESSED | 10W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L5 | 2'-0" X 2'-0" RECESSED | DAY-O-LITE | HML-D-SI-35-20-22-G-W-DIM10 | RECESSED | 28W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L6 | 2'-0" X 4'-0" RECESSED | LITHONIA LIGHTING | 2TL4 30L MPL MOLT EZ1 LP835 | RECESSED GRID | 36W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L7 | 6' LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-6-G-W-DIM10 | SGF | 42W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L8 | 4' LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-4-G-W-DIM10 | SGF | 28W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L9 | 8' LINEAR RECESSED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-8-G-W-DIM10 | SGF | 56W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L10 | PENDANT WRAP LIGHT | H.E. WILLIAMS | 39 SERIES 4'-0" PENDANT | VARIES | - | LED | | NOT USED |
| L11 | RETROFIT CAN LIGHT | INTENSE LIGHTING | 6" SS LED REMODEL DOWNLIGHT GEN 4 | RETROFIT EXIG FIXTURE | | LED | | NOT USED |
| L12 | WALL MTD. VANITY LIGHT | ALW | RLP1SM.11MED/90/3500/WH/UNV | 7'-0" AFF | 9.2/FT | LED | 0-10V | |
| L13 | 3'-0" DIAMETER PENDANT RING LIGHT | DAY-O-LITE | COML-24-DP-35-SO-3-ACM-WHITE-DIM10 | PENDANT | 63W | LED | 0-10V | PROVIDE EMERGENCY BATTERY BACK-UP FOR EM FIXTURES |
| L14 | 4'-0" PENDANT LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-SO-3-PD-W-DIM-10 | PENDANT | 7W/FT | LED | 0-10V | |
| L15 | EXTERIOR FIXTURE | SAYLITE | CWLL96L90W9800LDMV40KSA-E | WALL MTD | 90W | LED | 0-10V | |
| L16 | 4'-0" WALL MTD LED LIGHT | DAY-O-LITE | PRFL-44-D-FL-35-LO-3-WM-W-DIM-10 | WALL MTD | 20W | LED | 0-10V | |
| L17 | 8'-0" COVE LIGHT | DAY-O-LITE | JBL-2-35-SO-8-F-W-DIM10 | | 28W | LED | 0-10V | |

***NOTES:***

1. **LIGHTING SCHEDULE IS PROVIDED FOR ENGINEERING PURPOSES TO AID IN THE CIRCUITING AND ELECTRICAL CALCULATIONS. THIS SCHEDULE SHALL NOT BE USED FOR ORDERING OR PRICING PURPOSES. REFER TO ARCHITECT & LIGHTING CONSULTANT DRAWINGS/DOCUMENTS FOR EXACT SPECIFICATION OF ALL FIXTURES.**
2. LIGHTING FIXTURES SHALL BE UL LISTED AND APPROVED FOR INSTALLATION WHERE REQUIRED.
3. CONTRACTOR SHALL COORDINATE WITH ARCHITECT, AND OWNER REQUIREMENTS FOR LIGHTING INSTALLATION. PROVIDE MOUNTING DETAILS, HARDWARE AND DEVICES AS REQUIRED FOR COMPLETE INSTALLATION.
4. FIXTURES WITH INTERNAL OR REMOTE TRANSFORMERS/BALLASTS SHALL BE INSTALLED WITH PROPER VENTILATION PER MANUFACTURER SPECIFICATIONS. COORDINATE WITH ARCHITECT ALL MOUNTING AND ACCESS REQUIREMENTS.
5. SUBMIT MANUFACTURER SHOP DRAWINGS FOR ALL FIXTURES FOR ARCHITECT REVIEW. OBTAIN APPROVAL PRIOR TO ORDERING. PROVIDE MARK-UP OF INSTALLATION FOR OWNER AND ARCHITECT REVIEW WHEN REQUESTED.
6. FOR ALL FIXTURES DESIGNATED WITH HALF SHADE OR EM, CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND PROVIDE FIXTURE WITH BATTERY BALLAST AND WIRE AS EMERGENCY FIXTURE. IN THE EVENT FIXTURE IS NOT AVAILABLE WITH BATTERY BALLAST, CONTRACTOR SHALL RETROFIT FIXTURE WITH BODINE EMERGENCY BALLAST SIMILAR TO BODINE B94C OR PROVIDE AN INDEPENDENT BATTERY BACK UP FIXTURE TO PROVIDE EMERGENCY LIGHTING IN ALL PUBLIC AREAS WHERE EMERGENCY FIXTURE IS INDICATED.
7. ALL LED FIXTURES SHALL BE PROVIDED WITH SAME TYPE DRIVERS TO ALLOW FOR SIMILAR DIMMING. CONTRACTOR SHALL COORDINATE LED DRIVERS AND DIMMER SELECTION WITH LIGHTING MANUFACTURER AND ARCHITECT.
8. ALL LED FIXTURES SHALL BE NEMA 410-2015 RATED.

1. **PROVIDE EMERGENCY BATTERY BACK-UP FOR ALL FIXTURES DESIGNATED WITH 'EM' ON ELECTRICAL LIGHTING PLANS.**
2. **ALL FIXTURE SHALL BE PROVIDED WITH 0-10V DIMMING BALLAST U.O.N**

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION


JDA

June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC

1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com



COPYRIGHT


PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

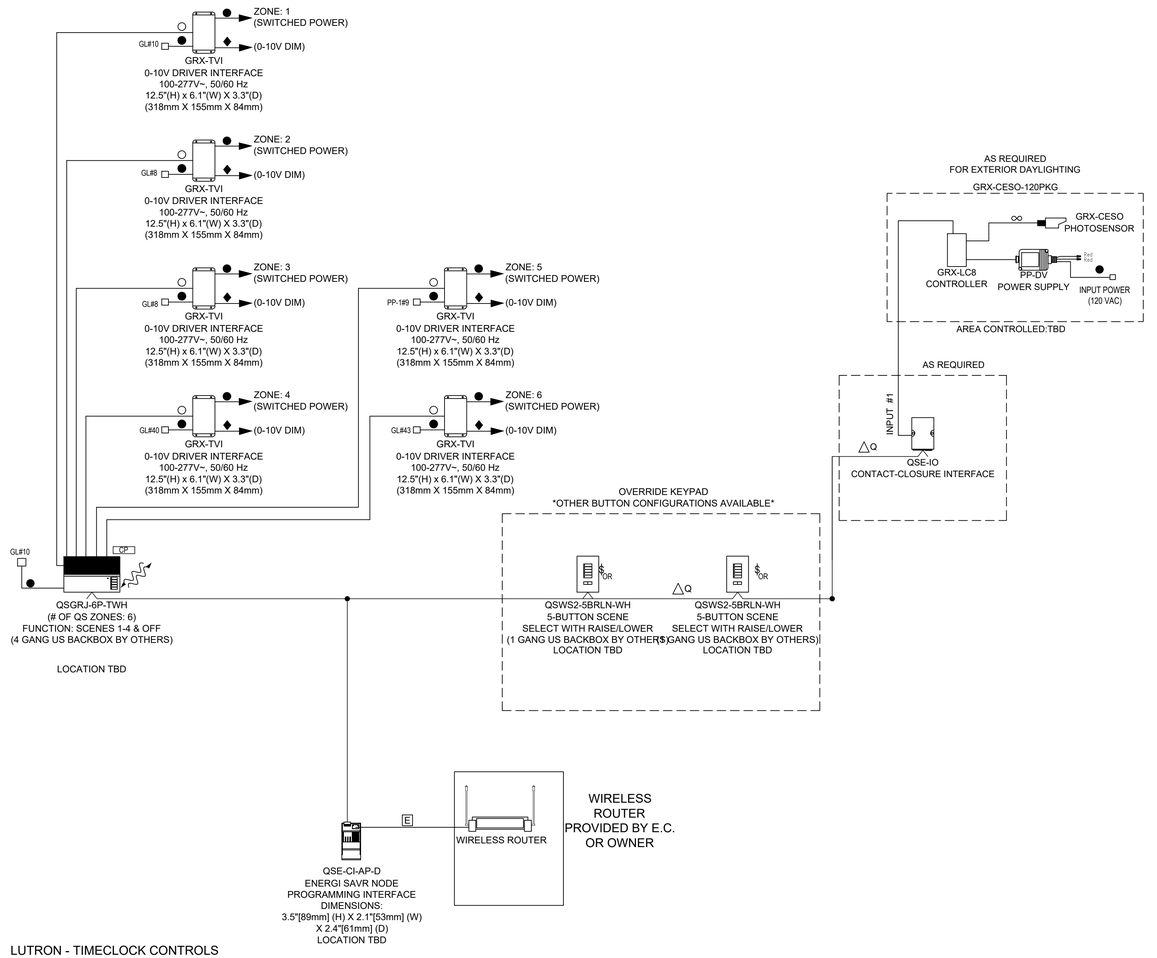
ENERGY COMPLIANCE -
LIGHTING DETAILS #1

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-004.00
DRAWN BY D.M.
4 OF 8

NYC DOB Number


UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.




LUTRON - TIMECLOCK CONTROLS

LCP–1 – (120V) LIGHTING CONTROL RELAY PANEL (WITH TIME CLOCK)

| ZONE # | ZONE DESCRIPTION | FIXTURE TAG | CIRCUIT # | VOLTAGE | LOAD TYPE | DIM (Y/N) | FIXTURE WATTS | QTY. | TOTAL WATTS |
|---|---|---|---|---|---|---|---|---|---|
| Z1 | 1ST FLOOR CORRIDOR 153 | L6 | GL#10 | 120V | LED | Y | 25 | 4 | 100 |
| | | L7 | GL#10 | 120V | LED | Y | 42 | 20 | 840 |
| | | L16 | GL#10 | 120V | LED | Y | 20 | 11 | 220 |
| Z2 | 1ST FLOOR LOBBY | L5 | GL#8 | 120V | LED | Y | 28 | 1 | 28 |
| | | L7 | GL#8 | 120V | LED | Y | 42 | 10 | 420 |
| | | L8 | GL#8 | 120V | LED | Y | 28 | 10 | 280 |
| | | L9 | GL#8 | 120V | LED | Y | 56 | 8 | 448 |
| | | L4 | GL#8 | 120V | LED | Y | 10 | 8 | 80 |
| Z3 | 1ST FLOOR CORRIDOR 138/156 | L4 | GL#8 | 120V | LED | Y | 10 | 5 | 50 |
| | | L5 | GL#8 | 120V | LED | Y | 28 | 12 | 336 |
| Z4 | EXTERIOR | L15 | GL#40 | 120V | LED | Y | 90 | 14 | 1260 |
| Z5 | EXERCISE ROOM | L6 | PP-1#9 | 120V | LED | Y | 25 | 9 | 225 |
| Z6 | EXTERIOR | L15 | GL#43 | 120V | LED | Y | 90 | 14 | 1260 |

## WIRING LEGEND:

△Q QS CONTROL LINK (SEE WIRE DESCRIPTION BELOW)

QS WIRING AS REQUIRED BY CONTROL LINK LENGTH
(REFER TO QS SMART PANEL POWER SUPPLY WIRING GUIDE FOR SHADE WIRING NOTES):

| TOTAL CONTROL LINK LENGTH | WIRE GAUGE | AVAILABLE FROM LUTRON IN ONE CABLE: |
|---|---|---|
| LESS THAN 500ft (152.4 m) | POWER (TERMINALS 1&2): 1 PAIR 18 AWG (1.0 mm²) | GRX-CBL-346S (NON-PLENUM) OR GRX-PCBL-346S (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |
| 500ft (152.4 m) TO 2,000ft (610 m)** | POWER (TERMINALS 1&2): 1 PAIR 12 AWG (4.0 mm²) | GRX-CBL-46L (NON-PLENUM) OR GRX-PCBL-46L (PLENUM) |
| | DATA (TERMINALS 3&4): 1 PAIR 22 AWG (0.5 mm²), TWISTED AND SHIELDED* | |

*ALTERNATE DATA-ONLY CABLE: USE APPROVED DATA LINK CABLE (22 AWG [0.5 mm²] TWISTED/SHIELDED) FROM BELDEN (MODEL # 9461).

**TOTAL LENGTH OF THE QS LINK MUST NOT EXCEED 2,000 ft (600 m).

□ INPUT POWER (NORMAL)
● 2 #12AWG (4 mm²)
◆ 0-10V SIGNAL: 2 #18AWG (1.0 mm²)
1-WAY RF COMMUNICATION
2-WAY RF COMMUNICATION

## WIRING NOTES:

### QS LINK RULES

*THE FOLLOWING LINK RULES MUST BE OBSERVED FOR PROPER OPERATION:*

- THIS IS A TOPOLOGY-FREE LINK (T-TAP, HOME-RUN, ETC. IS OK); REFER TO TABLE BELOW FOR WIRE RUN LIMITS.
- IF WIRED DIFFERENTLY THAN WHAT IS SHOWN, POWER DRAW UNIT REQUIREMENTS NEED TO BE CONFIRMED; SEE POWER DRAW UNITS (PDUs) SPECIFICATION SHEET INCLUDED IN THIS SUBMITTAL.
- MAXIMUM OF 512 OUTPUTS (BALLASTS, SHADES, CONTACT CLOSURES, ETC).
- MAXIMUM OF 100 OCCUPANCY SENSORS, 100 DAYLIGHT SENSORS/RADIO SHADOW SENSORS AND 100 KEYPADS.
- MAXIMUM OF 100 QS DEVICES (SUCH AS A GRAFIK EYE® QS, SEETOUCH® QS KEYPAD, SMART PANEL POWER SUPPLY [QSPS-10PNL], ESN, OR QS SHADE / DRAPERY DRIVE UNIT). QUANTUM PROCESSOR COUNTS AS 1 DEVICE PER LINK.
- MAXIMUM OF 100 ZONES - SUCH AS A QS SHADE / DRAPERY DRIVE UNIT, OR A LIGHTING ZONE ON A GRAFIK EYE QS (DOES NOT APPLY TO QUANTUM SYSTEMS).
- THE 10 OUTPUTS ON A QSPS-10PNL CANNOT EXCEED A COMBINED LENGTH OF 2,000 ft (600 m).

CONCEPT DRAWING NOTES:
CONTROL SYSTEM DRAWING IS PROVIDED FOR CONCEPTUAL PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION. EXACT EQUIPMENT REQUIREMENTS, INCLUDING LOCATIONS AND QUANTITIES, SHOULD BE VERIFIED IN ACCORDANCE WITH THE MOST UP-TO-DATE LIGHTING/ELECTRICAL REFLECTED CEILING PLANS, LIGHTING FIXTURE SCHEDULES, PANEL SCHEDULES, CONTROL INTENT AND SPECIFICATIONS. SHADE EQUIPMENT SHOULD BE VERIFIED IN ACCORDANCE WITH ARCHITECTURAL PLANS, SPECIFICATIONS AND WINDOW SCHEDULES/DETAILS.

LED DIMMING REQUIRES AN EXACT MATCH BETWEEN THE LED ARRAY, DRIVER AND CONTROL. LUTRON CANNOT GUARANTEE COMPATIBILITY OR PERFORMANCE WITHOUT TESTING THIS COMBINATION.

TO CONFIRM WHAT PRODUCTS LUTRON HAS AVAILABLE OR WHAT INTERFACES MAY BE REQUIRED, CALL 1-877-DIM-LED8 OR CHECK LUTRON'S PRODUCT COMPATIBILITY MATRIX ON-LINE AT WWW.LUTRON.COM/LED.

TO REQUEST THE TESTING OF AN LED PRODUCT BY LUTRON MANUFACTURERS CAN FILL OUT AN LED EVALUATION REQUEST FORM ON-LINE AT WWW.LUTRON.COM/LED OR CONTACT LEDS@LUTRON.COM.

LUTRON CAN GUARANTEE COMPATIBILITY AND PERFORMANCE OF LUTRON HI-LUME LED DRIVERS USED WITH APPROPRIATE LUTRON CONTROLS. PLEASE REFER TO THE SPECIFICATION SUBMITTAL SHEET FOR FURTHER INFORMATION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING 0-10V CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. PRODUCTS FOLLOWING THE IEC STANDARD 60929 ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

IF USING UNTESTED, NON-LUTRON LED DRIVERS REQUIRING PHASE CONTROL, PERFORMANCE AND COMPATIBILITY CANNOT BE GUARANTEED BY LUTRON. ELV PRODUCTS PROVIDING HIGH END AND LOW END TRIM ADJUSTMENTS OR LUTRON HI-LUME 1% 2-WIRE DRIVERS ARE MORE LIKELY TO PROVIDE ACCEPTABLE PERFORMANCE RESULTS. DETERMINATION OF RESULT ACCEPTABILITY IS UP TO THE USER'S DISCRETION.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

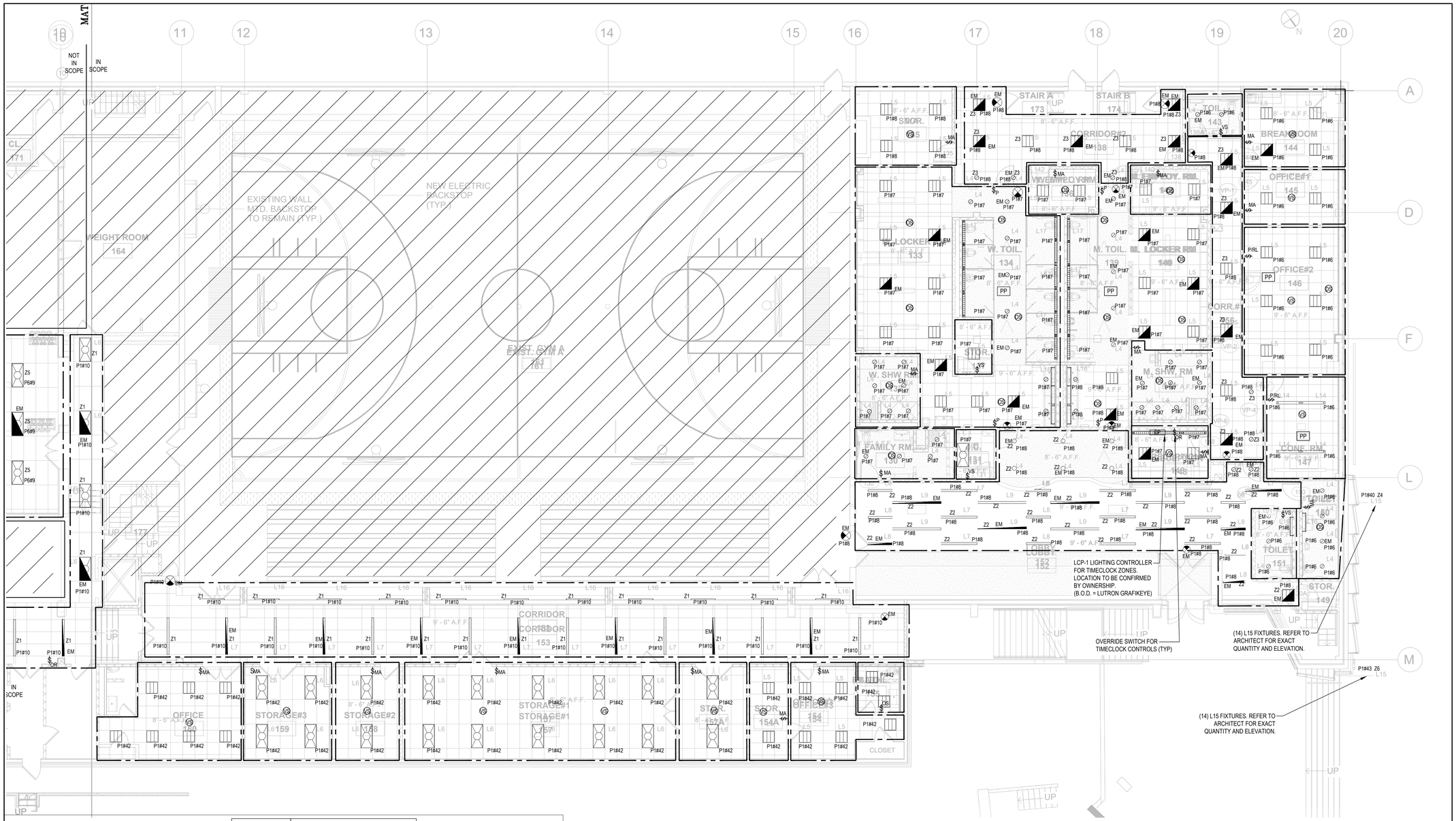
PROJECT
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ENERGY COMPLIANCE -
LIGHTING DETAILS #2

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-005.00
DRAWN BY D.M.
5 OF 8

NYC DOB Number




## LIGHTING NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2- EXISTING PANEL 'GL' (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'EA' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'MC SECT 7' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MC SECT 2' (120/208V) CIRCUIT #2
   - P5#2 - NEW PANEL 'MB' (120/208V) CIRCUIT #2
   - P6#2 - EXISTING PANEL 'PP-1' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. FOR BOTH NEW AND REMOVED LIGHT FIXTURE LAYOUT COORDINATE WITH ARCHITECTURAL DRAWINGS/RCP.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR LOBBY, CORRIDOR AND EXERCISE ROOM.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP.
9. EXIT LIGHTS SHALL BE WIRED AHEAD OF TIMECLOCK CONTROLS/ZONES, POW PAK, SWITCHES WHERE SHARING THE SAME CIRCUIT TO BE LIT FOR 24HRS

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| TIMECLOCK | -RECEPTION<br>-CORRIDOR<br>-WEIGHT GYM | -6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIK EYE CONTROLLER.)<br>- AFTER BUSINESS HOURS, LIGHTING SHALL BE DIMMED TO 50%.<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK FUNCTIONALITY.<br>-TIMECLOCK TO HAVE A MINIMUM 7-DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| AUTO ON/AUTO OFF | -MEN'S LOCKER ROOM<br>-WOMEN'S LOCKER ROOM<br>-FAMILY LOCKER ROOM | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | -STORAGE<br>-FAMILY LOCKER ROOM<br>-JANITOR'S CLOSET<br>-OFFICES<br>-CONFERENCE ROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>-DAYLIGHTING WHERE INDICATED ON PLAN. |

## 1 EN-006.00 ENERGY COMPLIANCE - LIGHTING FIRST FLOOR PLAN WEST

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

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
127 Crossways Park Drive Woodbury, NY 11797 F: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

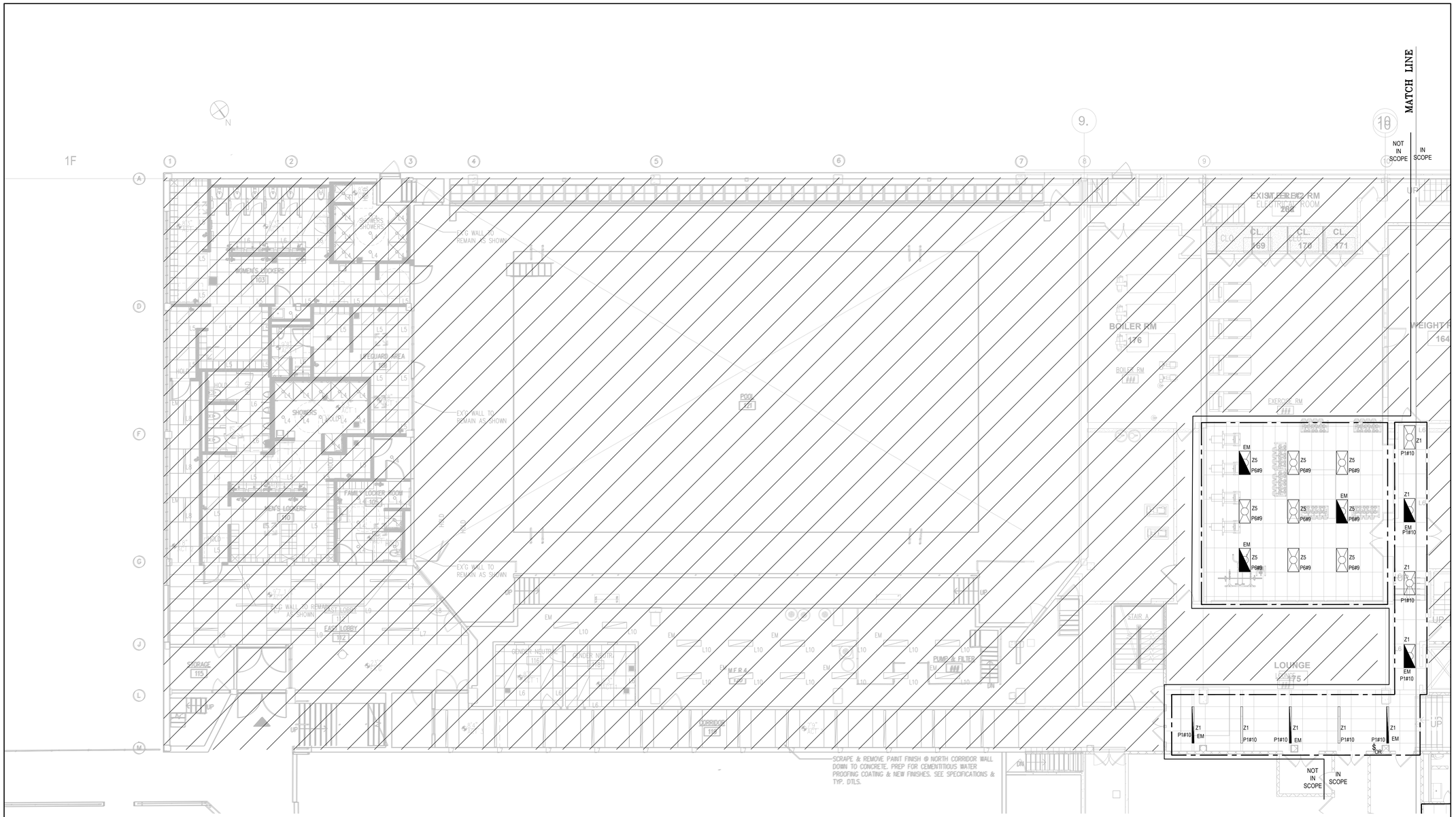
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ENERGY COMPLIANCE - LIGHTING FIRST FLOOR PLAN WEST

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-006.00
DRAWN BY D.M.
6 OF 8

NYC DOB Number




## LIGHTING NOTES:

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   - P1#2 - EXISTING PANEL 'GL' (120/208V) CIRCUIT #2
   - P2#2- EXISTING PANEL 'EA' (120/208V) CIRCUIT #2
   - P3#2 - NEW PANEL 'MC SECT 1' (120/208V) CIRCUIT #2
   - P4#2 - NEW PANEL 'MC SECT 2' (120/208V) CIRCUIT #2
   - P5#2 - NEW PANEL 'MB' (120/208V) CIRCUIT #2
   - P6#2 - EXISTING PANEL 'PP-1' (120/208V) CIRCUIT #2

   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. FOR BOTH NEW AND REMOVED LIGHT FIXTURE LAYOUT COORDINATE WITH ARCHITECTURAL DRAWINGS/RCP.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. LUTRON GRAFIKEYE CONTROLLERS WITH DIMMING FUNCTIONALITY TO BE PROVIDED FOR LOBBY, CORRIDOR AND EXERCISE ROOM.
8. EXIT LIGHTS AND EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP.
9. EXIT LIGHTS SHALL BE WIRED AHEAD OF TIMECLOCK CONTROLS/ZONES, POW PAK, SWITCHES WHERE SHARING THE SAME CIRCUIT TO BE LIT FOR 24HRS

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| TIMECLOCK | -RECEPTION<br>-CORRIDOR<br>-WEIGHT GYM | -6AM TO 9PM - OR AS SPECIFIED BY OWNER) - LIGHTING TO BE FULL-ON VIA TIMECLOCK (INTEGRAL TO LUTRON GRAFIK EYE CONTROLLER.)<br>- AFTER BUSINESS HOURS, LIGHTING SHALL BE DIMMED TO 50%.<br>-ZONES TO BE PROVIDED WITH MANUAL OVERRIDE CAPABILITY.<br>-ZONES TO BE CONTROLLED VIA LUTRON GRAFIK EYE CONTROLLER WITH INTEGRAL TIMECLOCK FUNCTIONALITY.<br>-TIMECLOCK TO HAVE A MINIMUM 7-DAY/24-HR/365 DAY CLOCK AND MULTIPLE PROGRAM SCHEDULE.<br>-EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| AUTO ON/AUTO OFF | -MEN'S LOCKER ROOM<br>-WOMEN'S LOCKER ROOM<br>-FAMILY LOCKER ROOM | -WHEN OCCUPANT(S) ENTERS AREA, LIGHT(S) AUTOMATICALLY TURN ON TO MAXIMUM LEVEL.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE VIA LOCAL OCCUPANCY SENSORS (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>- EM. FIXTURES TO BE TURNED TO FULL BRIGHTNESS UPON POWER SENSING LOSS FOR EMERGENCY PURPOSES. |
| MANUAL ON/AUTO OFF | -STORAGE<br>-FAMILY LOCKER ROOM<br>-JANITOR'S CLOSET<br>-OFFICES<br>-CONFERENCE ROOMS | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH.<br>-DAYLIGHTING WHERE INDICATED ON PLAN. |

**1 EN-007.00 ENERGY COMPLIANCE - LIGHTING FIRST FLOOR PLAN EAST**
SCALE: 1/8"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 F: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8500
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

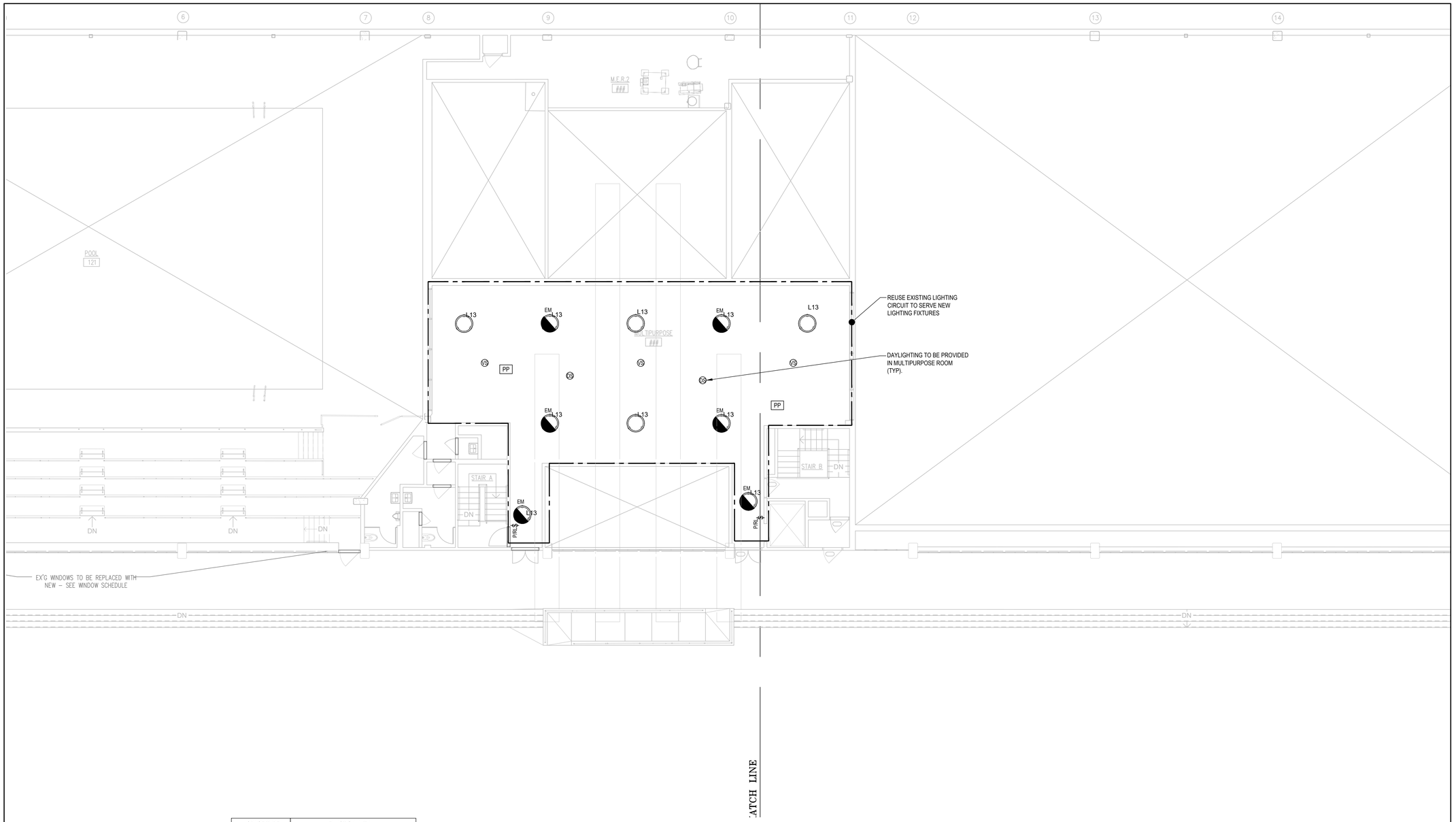
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ENERGY COMPLIANCE - LIGHTING FIRST FLOOR PLAN EAST

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-007.00
DRAWN BY D.M.
7 OF 8

NYC DOB Number




**LIGHTING NOTES:**

1. CIRCUIT NUMBER(S) SHOWN AT LIGHTING FIXTURES AND ASSOCIATED JUNCTION BOXES INDICATES CIRCUIT BREAKER NUMBERS IN PANELBOARD/DIMMING PANEL. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND ASSOCIATED CONTROL DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD INDICATED.
2. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUITS ASSIGNED TO ELECTRICAL DEVICES SHALL BE CIRCUITED AS INDICATED:
   P1#2- EXISTING PANEL 'PL-1 (120/208V) CIRCUIT #2
   P2#2- EXISTING PANEL 'PL-2' (120/208V) CIRCUIT #2
   P3#2 - NEW PANEL 'EB' (120/208V) CIRCUIT #2
   P4#2 - NEW PANEL 'MA' (120/208V) CIRCUIT #2
   CONTRACTOR TO FIELD VERIFY EXACT CIRCUIT NUMBER OF EXISTING LOADS TO REMAIN.
3. CIRCUIT NUMBER AND SWITCH LETTER FOR THE LIGHTING FIXTURES IN ROOMS/AREAS WITH MULTIPLE SWITCHES SHALL BE CONTROLLED BY THE DESIGNATED SWITCHES. IF DESIGNATION IS NOT INDICATED, THE SWITCH INDICATED IN THE ROOM SHALL CONTROL ALL LIGHTING FIXTURES IN ROOM/AREA.
4. ALL BRANCH CIRCUITS FOR DIMMER CONTROLLED LIGHTING FIXTURES SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING LIGHTING FIXTURES TO BE REMOVED.
6. LIGHTING BRANCH CIRCUIT RACEWAY SYSTEM SHALL BE INDEPENDENT FROM RECEPTACLE/POWER CIRCUIT WIRING.
7. EMERGENCY 'EM' FIXTURES TO BE PROVIDED WITH BATTERY BACK-UP.

| | SPACE TYPE | FUNCTIONALITY |
|---|---|---|
| MANUAL ON/AUTO OFF | - STUDIO /MULTIPURPOSE | -OCCUPANT(S) MUST TURN LIGHTS ON VIA WALL MOUNTED SWITCH.<br>-LIGHTS SHALL AUTOMATICALLY TURN OFF WITHIN 20 MINUTES OF ALL OCCUPANT(S) LEAVING THE SPACE.<br>-OCCUPANCY SENSORS SHALL BE LOCAL (OFF-SYSTEM TYPE)<br>-DURING OCCUPIED PERIOD, OCCUPANT(S) HAS CAPABILITY TO MANUALLY TURN ON/OFF LIGHTING VIA LOCAL SWITCH<br>- PROVIDE DAYLIGHTING WHERE INDICATED ON PLAN. |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
ENERGY COMPLIANCE - LIGHTING SECOND FLOOR PLAN EAST

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. EN-008.00
DRAWN BY D.M.
8 OF 8

NYC DOB Number

## GENERAL STRUCTURAL NOTES

1. ALL NEW WORK SHALL CONFORM WITH THE REQUIREMENTS OF NEW YORK CITY BUILDING CODE, INCLUDING LATEST ADDENDA, AND CONTRACT DOCUMENTS, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-11), AISC MANUAL FOR STEEL STRUCTURES AND ALL OTHER GOVERNING CODES. IN CASE OF CONFLICT, MOST STRINGENT REQUIREMENT SHALL GOVERN.

2. COORDINATE ALL WORK REQUIRED ON THESE DRAWINGS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL/SITE DRAWINGS. EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE PER INFORMATION PROVIDED BY THE ORIGINAL STRUCTURAL DRAWINGS OR ARE ASSUMED. THE OWNER, ARCHITECT AND STRUCTURAL ENGINEER ARE NOT RESPONSIBLE FOR ACCURACY OF THE INFORMATION.

3. PROVISIONS SHALL BE MADE FOR PLACEMENT OF MATERIALS IN COLD OR HOT WEATHER.

4. SUBMIT SAMPLES, SHOP DRAWINGS, PRODUCT DATA, TEST REPORTS AND DATA, MANUFACTURER'S NAMES, CERTIFICATIONS AND PROCEDURES FOR ALL SPECIFIED ITEMS AND AS REQUESTED. SHOP DRAWINGS SHALL CONFORM TO THE BEST STANDARDS OF THE CONSTRUCTION INDUSTRY, AND SHALL BE PREPARED BY AND UNDER THE SUPERVISION OF COMPETENT ENGINEERING PERSONNEL. SUBMIT REINFORCING STEEL, SHOP AND ERECTION DRAWINGS INCLUDING APPLICABLE CONNECTION DETAILS, SCHEDULES AND CERTIFIED MILL TEST REPORTS. THE CONTRACTOR SHALL ALLOW FOR 10 WORKING DAYS FOR SHOP DRAWING REVIEW.

5. CONTRACTOR SHALL PATCH AND REPAIR ALL PORTIONS OF THE EXISTING CONDITION, FACILITY TO REMAIN OR ANY EQUIPMENT OR UTILITIES HARMED DURING CONSTRUCTION.

6. BEFORE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL VISIT THE PREMISES OF THE PROPOSED WORK AND SHALL CAREFULLY EXAMINE THE ENGINEERING DRAWINGS, EXISTING CONDITIONS AND LIMITATIONS THEREOF. VERIFICATION SHALL BE MADE AS TO THE ACTUAL LOCATIONS WHERE NEW CONSTRUCTION AND/OR STRUCTURES WILL BE ROUTED, COORDINATING WITH NEW AND EXISTING WORK AND PROVIDING CLEARANCES WITH STRUCTURAL MEMBERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS PRIOR TO THE DEMOLITION AND/OR FABRICATION AND/OR CONSTRUCTION OF ALL ITEMS. DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND ENGINEER PRIOR TO DEMOLITION AND/OR FABRICATION.

7. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT OF THE STRUCTURAL ELEMENTS AND INDICATE THE REQUIRED SIZES AND POINTS OF TERMINATION OF SAME. HOWEVER, IT IS NOT THE INTENTION OF THE DRAWINGS TO SHOW ALL NECESSARY OFFSETS, OBSTRUCTIONS OR STRUCTURAL CONDITIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE WORK SHOWN ON THESE DRAWINGS IN FULL COMPLIANCE WITH GOVERNING CODE IN SUCH A MANNER THAT IT WILL CONFORM TO THE STRUCTURAL DESIGN INTENT.

8. THE OWNER RESERVES THE RIGHT TO LET OTHER CONTRACTS IN CONNECTION WITH THE WORK OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS AS REQUIRED TO CONFORM TO THE GENERAL CONSTRUCTION SCHEDULE AND SHALL AFFORD OTHER CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND STORAGE OF THEIR MATERIALS AND EQUIPMENT AND TO EXECUTE THEIR WORK.

9. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND TEMPORARY CONSTRUCTION NECESSARY TO SAFEGUARD ALL PERSONS AND PROPERTY ON OR ADJACENT TO THE SITE. ALL MACHINERY, TOOLS, SERVICE LINES, AND CONDUIT SHALL BE GUARDED, SHIELDED OR BARRICADED TO PROVIDE SAFETY AND PREVENT CONTACT BY WORKERS AND THE PUBLIC IN ACCORDANCE WITH APPLICABLE REQUIREMENTS.

10. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS OBTAINED PROPER INSURANCE AND BONDING.

11. THE CONTRACTOR SHALL COMPLY WITH ALL SAFETY AND HEALTH LAWS AND REGULATIONS INCLUDING, BUT NOT LIMITED TO PROVISIONS, AND REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND/OR THE CONSTRUCTION SAFETY ACT OF 1969, AS AMENDED, INCLUDING CONFINED SPACE ENTRY REQUIREMENTS.

12. ALL REINFORCEMENT OF EXISTING BUILDING SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION.

13. ALL DETAILS SHALL BE CONSIDERED TYPICAL AT ALL SAME AND SIMILAR CONDITIONS.

14. STRUCTURAL SCOPE IS LIMITED TO THE FOLLOWING:
- NEW STEEL DUNNAGE TO SUPPORT NEW LOWER ROOF EQUIPMENT.
- NEW EXHAUST FAN SLAB OPENING.
- SLAB INFILL OF EXISTING EXHAUST FAN OPENING.

## STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE NEW YORK CITY BUILDING CODE AND TO THE FOLLOWING MINIMUM YIELD STRENGTH:

| | |
|---|---|
| WIDE FLANGE SECTIONS | ASTM A572 OR A992 50 KSI |
| HOLLOW STRUCTURAL SECTIONS | ASTM A500 GRADE B 46 KSI |
| ANGLES AND CONNECTION MATERIAL | ASTM A36 36 KSI |

2. AISC SPECIFICATIONS FOR "LOAD AND RESISTANCE FACTOR DESIGN (LRFD) FOR STRUCTURAL STEEL IN BUILDINGS" - LATEST EDITION SHALL APPLY, EXCEPT AS MODIFIED BY THE NOTES, SCHEDULES AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS OR ANY RESTRICTIVE REQUIREMENTS OF THE BUILDING CODE.

3. THE FRAME SHALL BE CARRIED UP TRUE AND PLUMB AND TEMPORARY BRACING SHALL BE INTRODUCED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING EQUIPMENT AND OPERATION OF SAME. SUCH BRACING SHALL BE THE RESPONSIBILITY OF THE STEEL CONTRACTOR AND SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY.

4. ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS.

5. ALL WELDED CONNECTIONS SHALL CONFORM TO THE NEW YORK CITY BUILDING CODE. PROVISIONS SHALL BE MADE FOR FIELD INSPECTION AND TESTING OF WELDS. ALL SHOP WELDS SHALL BE TESTED BY ANY OF APPROVED METHODS AND SHALL BE CERTIFIED.

6. ALL BOLT STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, LATEST EDITION: HIGH STRENGTH BOLTS A-325 AND A-490, U.O.N.

7. ALL BOLTS SHALL BE 3/4" Ø MINIMUM ON HOLES 13/16" Ø UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

8. ALL SHOP CONNECTIONS SHALL BE HIGH STRENGTH BOLTED OR WELDED.

9. ALL COLUMN SPLICES, CONNECTIONS OF BEAMS TO COLUMNS, CONNECTION WITHIN THREE FEET OF COLUMNS, CONNECTIONS OF OR TO DIAGONAL MEMBERS, AND ALL BEAMS CARRYING MACHINE LOADS SHALL BE HIGH STRENGTH FRICTION CONNECTIONS. OTHER FIELD CONNECTIONS MAY USE UNFINISHED BOLTS (A307) EXCEPT WHERE SPECIFICALLY SHOWN OTHERWISE IN STRUCTURAL DRAWINGS.

10. IN ADDITION TO MOMENT CONNECTION, PROVIDE AISC STANDARD SHEAR CONNECTIONS FOR ALL GRAVITY AND WIND LOADS.

    A. CONNECTIONS FOR ALL BEAMS MUST BE GOOD FOR REACTIONS FIGURED FROM 1/2" OF TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF "UNIFORM LOAD CONSTANTS" PART 3 (LRFD) MANUAL; UNLESS OTHERWISE NOTED ON THE DRAWINGS.

11. ALL SHEAR CONNECTIONS SHALL BE 3/4" Ø HEADED STUDS AND 4 1/2" LONG, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

12. ALL ENDS OF COLUMNS AT SPLICES AND ALL OTHER BEARING CONNECTIONS SHALL BE MILLED TO COMPLETE TRUE BEARING.

13. PROVISIONS SHALL BE MADE FOR CONNECTIONS OF OTHER TRADES INCLUDING CUTTING AND PUNCHING OF STRUCTURAL MEMBERS, WHERE REQUIRED BY THE DWG. OR FOR WHICH INFORMATION IS FURNISHED PRIOR TO FABRICATION.

14. THE USE OF A CUTTING TORCH IN THE FIELD WILL NOT BE PERMITTED.

15. WELDING ELECTRODES SHALL CONFORM TO E70XX ELECTRODES.

16. CONTRACTOR SHALL PROVIDE STIFFENERS PER CHAPTER K OF AISC SPECIFICATION (LRFD) REGARDING THE NEED FOR COLUMN STIFFENERS.

17. ALL WELDERS TO BE AWS CERTIFIED.

## CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO ACI-318 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS AND ACI-301 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

2. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60, EXCEPT STIRRUPS AND TIES WHICH MAY BE GRADE 40.

3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 WITH A MINIMUM ULTIMATE STRENGTH OF 70,000 PSI.

4. REINFORCING BARS SHALL BE SPLICED A MINIMUM OF 45 BAR DIAMETERS OR 24" WHICHEVER IS GREATER, UNLESS OTHERWISE NOTED. LAP TOP BARS AT MIDSPAN AND BOTTOM BARS AT SUPPORTS.

5. PROVIDE 2-#6 BARS MINIMUM IN ALL SIDES AROUND WALL OPENINGS. EXTEND HORIZONTAL BARS 2'-0" PAST OPENING ON EACH SIDE OR HOOK WHERE 2'-0 NOT POSSIBLE. EXTEND VERTICAL BARS FOR FULL HEIGHT OF WALL.

6. NON-SHRINK GROUT SHALL BE NON-METALLIC WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 P.S.I.

7. PROVIDE PROPER HIGH CHAIRS, SPACERS AND SUPPORTS TO HOLD REINFORCING SECURELY IN PLACE WHILE PLACING CONCRETE.

8. THE CONTRACTOR SHALL ASCERTAIN LOCATION OF ALL SLEEVES, INSERTS ANCHOR BOLTS, ETC. REQUIRED BY OTHER TRADES. INSTALLATION OF ALL SUCH EMBEDMENTS SHALL BE CHECKED FOR COMPLETENESS AND LOCATION BEFORE CONCRETE IS POURED AND COORDINATED WITH SHOP DRAWINGS OF TRADES REQUIRING THESE ITEMS. MINIMUM CONCRETE BETWEEN SLEEVES SHALL BE 6 INCHES.

9. UNLESS OTHERWISE NOTED ON DRAWINGS, SLEEVES FOR PIPING THRU WALLS SHALL BE STEEL PIPE SLEEVES OF NOMINAL DIAMETER 2 INCHES LARGER THAN THE NOMINAL SIZE OF THE PIPE PENETRATING THE WALL. THE THICKNESS OF THE SLEEVE SHALL CONFORM TO SCHEDULE NO. 40 BUT NEED NOT BE MORE THAN 3/8 INCH.

10. ALL TEMPORARY OPENINGS AND BEAM OR COLUMN POCKETS SHALL BE FILLED. PROVIDE 2X4 KEY AROUND OPENING OR POCKET.

11. CALCIUM CHLORIDE SHALL NOT BE USED IN CONCRETE MIXES.

12. WHERE NEW CONCRETE IS TO BE PLACED AGAINST EXISTING CONCRETE SURFACES, THE EXISTING SURFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH. THE SURFACE SHALL BE CLEANED AND LAITANCE REMOVED IMMEDIATELY. ALL CONSTRUCTION JOINTS SHALL BE MOISTENED AND STANDING WATER REMOVED BEFORE THE NEW CONCRETE IS PLACED.

13. UNLESS OTHERWISE NOTED, REINFORCING BARS OR WELDED WIRE FABRIC SHALL NOT BE WELDED, TACK-WELDED OR USED FOR STRIKING AN ARC.

14. THROUGHOUT CONSTRUCTION, THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT, MATERIALS OR METHODS, ICE, RAIN, SNOW, EXCESSIVE HEAT AND FREEZING TEMPERATURES.

## FOUNDATION

1. THE FOOTING SHALL BEAR ON UNDISTURBED SOIL HAVING A MINIMUM BEARING CAPACITY OF 2 TONS PER SQUARE FOOT.

2. EXCAVATION SHALL BE PERFORMED SO AS NOT TO DISTURB EXISTING ADJACENT BUILDINGS, STREETS, AND UTILITY LINES. VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF WORK. HAND EXCAVATE AROUND UTILITIES AS REQUIRED.

3. COMPACT SOIL AT BOTTOM OF NEW FOOTING TO NOT LESS THAN 95% OF MAXIMUM DENSITY OF MODIFIED PROCTOR (ASTM D1557).

4. THE DESIGN, ADEQUACY AND SAFETY OF BRACING, SHORING OF TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

5. BACKFILL AGAINST FOOTING SHALL BE PLACED EVENLY ON BOTH SIDES.

6. FILL AND BACKFILL MATERIAL SHALL BE FREE OF DELETERIOUS ORGANIC MATTER.

7. SPREAD FOOTINGS SHALL BE LOCATED SUCH THAT COLUMNS ARE CENTERED OVER FOOTINGS IN BOTH DIRECTIONS, UNLESS NOTED OTHERWISE ON PLAN.

8. NO FOOTING SHALL BE PLACED IN WATER OR ON FROZEN GROUND.

9. STANDARD PROCEDURES OF FROST PROTECTION FOR FOOTINGS AND FOOTING EXCAVATIONS SHALL BE USED FOR WINTER CONSTRUCTION. BACKFILLING OF FOOTING EXCAVATIONS SHALL BE DONE AS SOON AS POSSIBLE TO PROTECT FOOTINGS FROM FROST ACTION.

10. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND POSITIONS OF EXISTING FOUNDATIONS AT OR ADJACENT TO NEW CONSTRUCTION AND SUBMIT FIELD SKETCHES AS MAY BE REQUIRED FOR ARCHITECT/ENGINEERS' APPROVAL BEFORE STARTING ANY FIELD WORK.

## SPECIAL AND PROGRESS INSPECTIONS

| DESCRIPTION | CODE REFERENCE |
|---|---|
| STRUCTURAL STEEL-WELDING | BC 1704.3.1 |
| STRUCTURAL STEEL - DETAILS | BC 1704.3.2 |
| STRUCTURAL STEEL - HIGH STRENGTH BOLTING | BC 1704.3.3 |
| CONCRETE - CAST-IN-PLACE | BC 1704.4 |
| STRUCTURAL STABILITY - EXISTING BUILDINGS | BC 1704.20.1 |
| SUBGRADE INSPECTION | BC 1704.7.1 |
| SPRAYED FIRE-RESISTANT MATERIALS | BC 1704.11 |
| POST-INSTALLED ANCHORS | BC 1704.32 |
| FINAL INSPECTION | 28-116.2.4.2, BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY 101-10 |

NOTES:
THE WORK MEETS THE EXEMPTION CRITERIA OF BUILDINGS BULLETIN 2009-026, ITEM IV, AND I HERBY ELECT TO WAIVE THE REQUIREMENT OF CONCRETE TESTING AND OF THE TR2 FORM AND/OR TR3 FORM.

## SUBMITTALS

1. PRIOR TO PROCEEDING WITH THE WORK, CONTRACTOR SHALL SUBMIT THE FOLLOWING TO THE ENGINEER FOR REVIEW:

   A. ERECTION AND SHOP DRAWINGS FOR ALL STRUCTURAL STEEL.
   B. MANUFACTURER'S CATALOG DATA, TOGETHER WITH CERTIFIED TEST DATA, FOR ANY PROPRIETARY PRODUCT PROPOSED AS A SUBSTITUTE FOR SPECIFIED MATERIALS.

2. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS ONLY FOR GENERAL COMPLIANCE WITH DESIGN INTENT. REVIEW OF THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF COMPLETING THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR WILL ALLOW A MINIMUM OF 10 WORKING DAYS FOR REVIEW OF ALL SUBMITTALS, FOLLOWING RECEIPT BY ENGINEER.

3. SUBMIT THE FOLLOWING TO THE ENGINEER FOR RECORD PURPOSES:

   A. MILL CERTIFICATES AND TEST REPORTS FOR STRUCTURAL STEEL.

4. REPRODUCTION OF STRUCTURAL CONTRACT DOCUMENTS ARE NOT TO BE SUBMITTED AS ERECTION PLANS.

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737

ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

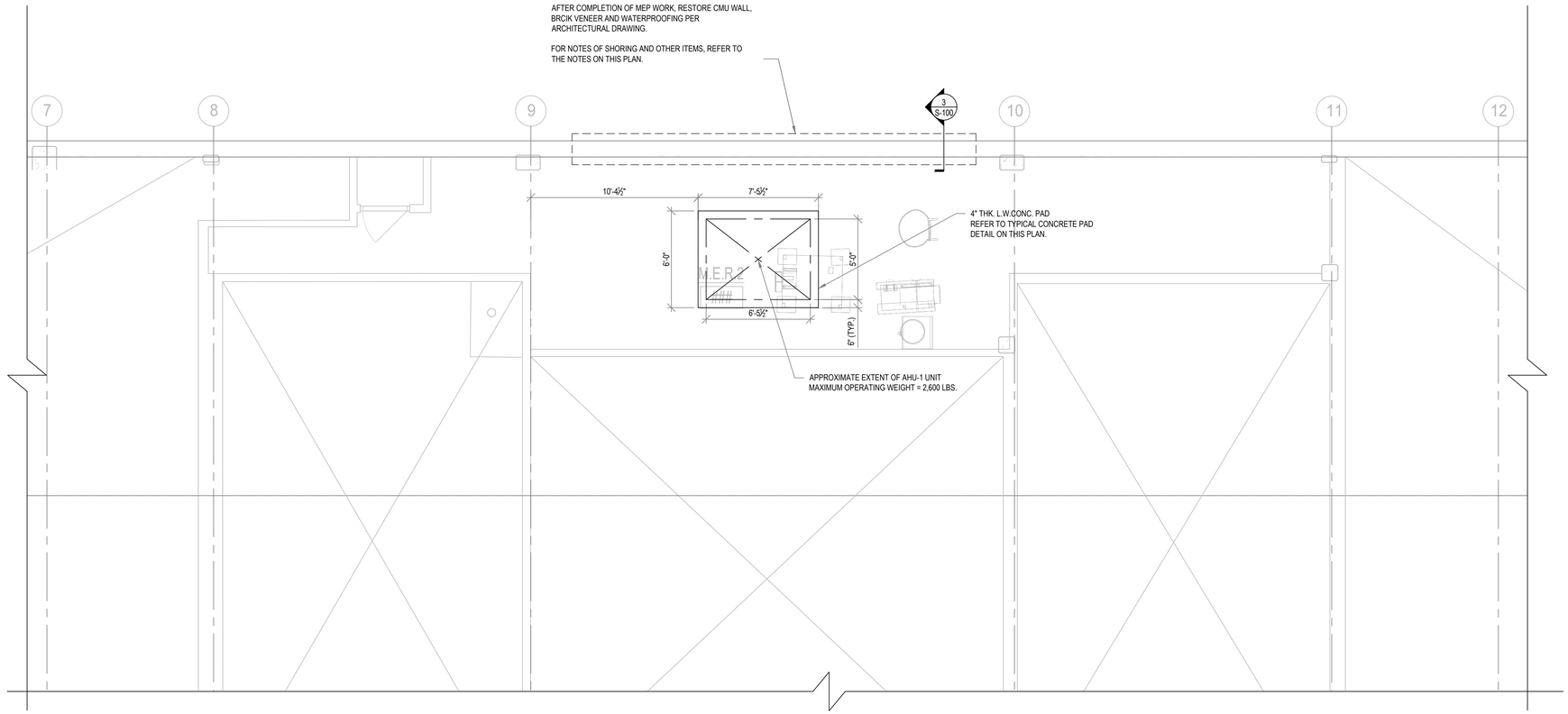
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

STRUCTURAL NOTES

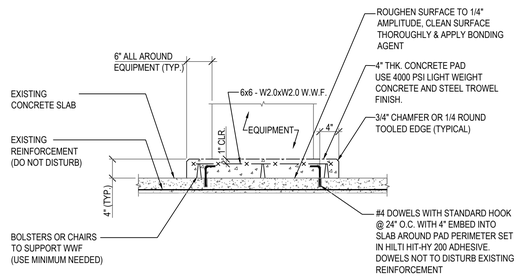
| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. S-001.00 |
| | DRAWN BY M.M. — 1 OF 6 |

NYC DOB Number



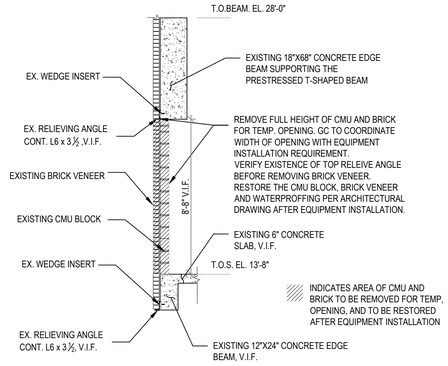

## UPPER LEVEL - SOUTH MECHANICAL ROOM PLAN

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




2 / S-100 TYPICAL FLOOR CONCRETE PAD DETAIL

NTS




3 / S-100 TEMP. INSTALLATION OPENING SECTION

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

## NOTES:

1. EXISTING FLOOR CONSTRUCTION: 6" THK. N.W. CONC. ONE-WAY SLAB SPANNING OVER CONCRETE COLUMNS AND PERIMETER BEAMS.
2. CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN ON STRUCTURAL PLANS (DIMENSIONS, ELEVATIONS, ETC.) AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
3. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH WHAT IS SHOWN ON STRUCTURAL PLANS AND DETAILS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH THE PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY ENGINEER AND ARCHITECT.
4. THE CONTRACTOR IS RESPONSIBLE FOR SHORING AND LATERAL BRACING OF ALL EXISTING STRUCTURES PRIOR TO ANY MODIFICATION OF EXISTING STRUCTURES.
5. CONTRACTOR SHALL PERFORM A SITE VISIT AND REVIEW THE SCOPE OF WORK. CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ARCHITECT AND ENGINEER IMMEDIATELY. FAILURE TO NOTIFY ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF UNSATISFACTORY CONDITIONS.
6. DO NOT OVERLOAD ANY AREAS OF EXISTING SLAB WITH REMOVED AND/OR CONSTRUCTION MATERIALS.
   - UNIFORM LOAD NOT EXCEED 75PSF
   - CONCENTRATED LOAD NOT EXCEED 2000LB
7. CONTRACTOR TO COORDINATE EXACT SIZE OF TEMPORARY FACADE WALL OPENING WITH ARCHITECT AND OTHER ENGINEERING TRADES PRIOR TO THE START OF CONSTRUCTION.
8. ALL SHORING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AND ALL TEMPORARY SHORING DESIGN SHALL BE PROVIDED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER RETAINED BY THE GENERAL CONTRACTOR. GENERAL CONTRACTOR TO PROVIDE APPROVED TEMPORARY SHORING PLANS STAMPED BY NEW YORK STATE LICENSED PROFESSIONAL ENGINEER FOR OUR REVIEW PRIOR TO START OF CONSTRUCTION.
9. DO NOT DISTURB EXISTING STRUCTURAL SUPPORT OF EXISTING FAÇADE WALL DURING CONSTRUCTION.
10. ALL WATERPROOFING SHALL BE RESTORED AND COORDINATED WITH ARCHITECT PRIOR TO START OF CONSTRUCTION.
11. FACADE WALL SHALL BE RESTORED AND FACADE WALL OPENING SHALL BE INFILLED AFTER PLACING NEW EQUIPMENT AT AT ITS INTENDED LOCATION.

## LEGEND:

| | |
|---|---|
| * | INDICATES DIMENSION TO BE VERIFIED IN FIELD. |
| ** | INDICATES NEW EQUIPMENT DIMENSION OR CLEARANCE TO BE VERIFIED WITH MANUFACTURER AND MEP ENGINEER. |
| (V.I.F.) | INDICATES VERIFY IN FIELD |
| CANT. | INDICATES CANTILEVER BEAM |
| T.O.XX | INDICATES TOP OF XX. |
| (H) | INDICATES STEEL BEAM AT HIGHER ELEVATION |
| (L) | INDICATES STEEL BEAM AT LOWER ELEVATION |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameroneengineering.com
COPYRIGHT

PROJECT

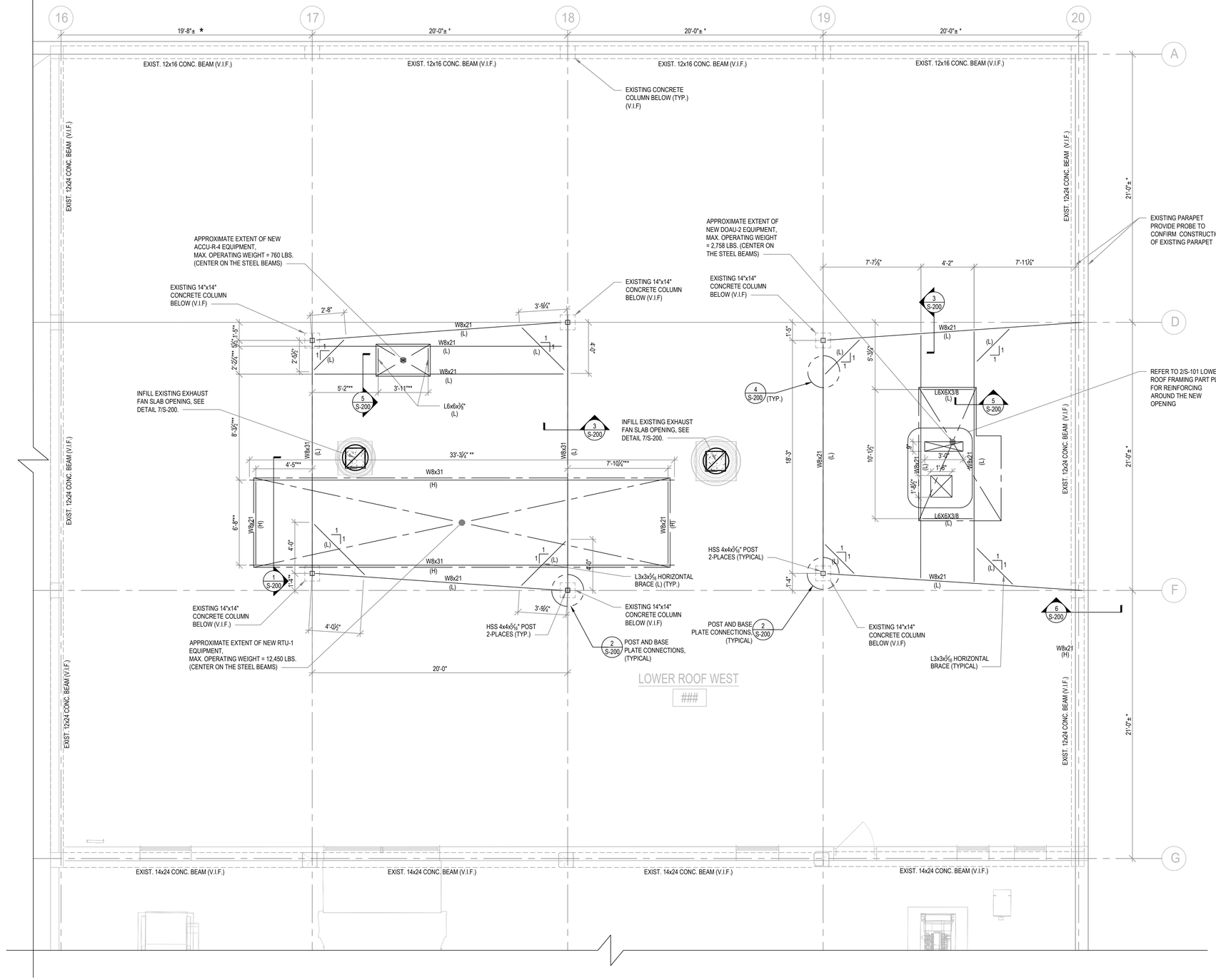
ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

SECOND FLOOR MECHANICAL
ROOM FRAMING PLAN

| | |
|---|---|
| SEAL & SIGNATURE | DATE 06.10.2019 |
| | JOB NUMBER 19010 |
| | DWG. No. S-100.00 |
| | DRAWN BY M.M. / 2 OF 6 |

NYC DOB Number




1 S-101 **WEST LOWER ROOF DUNNAGE FRAMING PLAN**
SCALE: 1/4"=1'-0"

2 S-101 **LOWER ROOF FRAMING PART PLAN**
SCALE: 1/2"=1'-0"

NOTE:
1. SHIM TIGHT BETWEEN TOP OF NEW BEAM AND UNDERSIDE OF EXISTING SLAB.
2. INSTALL NEW FRAMING BEFORE CUTTING OPENING IN SLAB.
3. PROVIDE FIREPROOFING SPRAY TO NEW BEAMS.

## NOTES:

1. EXISTING FLOOR CONSTRUCTION: 2-WAY 8" N.W. CONCRETE SLAB SPANNING OVER CONCRETE COLUMNS AND PERIMETER BEAMS.
2. ALL NEW STEEL BEAMS, PLATES AND CONNECTION ELEMENTS SHALL BE HOT-DIPPED GALVANIZED STEEL.
3. STEEL FABRICATOR TO PROVIDE SSPC-SP 16 SURFACE PREPARATION TO ALL NEW GALVANIZED STEEL BEAMS.
4. ALL FIELD WELDS AND DAMAGED GALVANIZED COATING SHALL BE TOUCHED-UP WITH TWO COATS OF ZINC RICH COMPONENTS AS PER MANUFACTURER'S INSTALLATION SPECIFICATIONS.
5. REFER TO MANUFACTURER'S RECOMMENDATIONS AND CUT-SHEETS TO STIFFEN AND SUPPORT THE NEW EQUIPMENT ON THE NEW STEEL DUNNAGE.
6. THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC.) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT.
7. THE CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. FAILURE TO NOTIFY ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF UNSATISFACTORY CONDITIONS.
8. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE EXISTING FIELD CONDITION, COORDINATE WITH STRUCTURAL ENGINEER WITH PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE ARCHITECT.
9. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY SHORING OF ALL EXISTING STRUCTURES PRIOR TO ANY MODIFICATION OF EXISTING STRUCTURES. DESIGN OF TEMPORARY SHORING SHALL BE PROVIDED BY QUALIFIED PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR.
10. THE CONTRACTOR MUST PERFORM A SITE VISIT AND REVIEW THE SCOPE OF WORK. ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ARCHITECT AND ENGINEER IMMEDIATELY.
11. DO NOT OVERLOAD ANY AREAS OF EXISTING SLAB WITH REMOVED AND/OR CONSTRUCTION MATERIALS.
12. EXACT LOCATIONS OF NEW STEEL BEAMS THAT FRAME AROUND NEW EQUIPMENT SHALL BE VERIFIED WITH MEP AND MANUFACTURER PRIOR TO STEEL FABRICATION TO ENSURE PROPER SUPPORT FOR THE NEW EQUIPMENT.

## LEGEND:

| | |
|---|---|
| * | INDICATES DIMENSION TO BE VERIFIED IN FIELD. |
| ** | INDICATES NEW EQUIPMENT DIMENSION OR CLEARANCE TO BE VERIFIED WITH MANUFACTURER AND MEP ENGINEER. |
| (V.I.F.) | INDICATES VERIFY IN FIELD |
| CANT. | INDICATES CANTILEVER BEAM |
| T.O.XX | INDICATES TOP OF XX. |
| (H) | INDICATES STEEL BEAM AT HIGHER ELEVATION |
| (L) | INDICATES STEEL BEAM AT LOWER ELEVATION |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
175 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

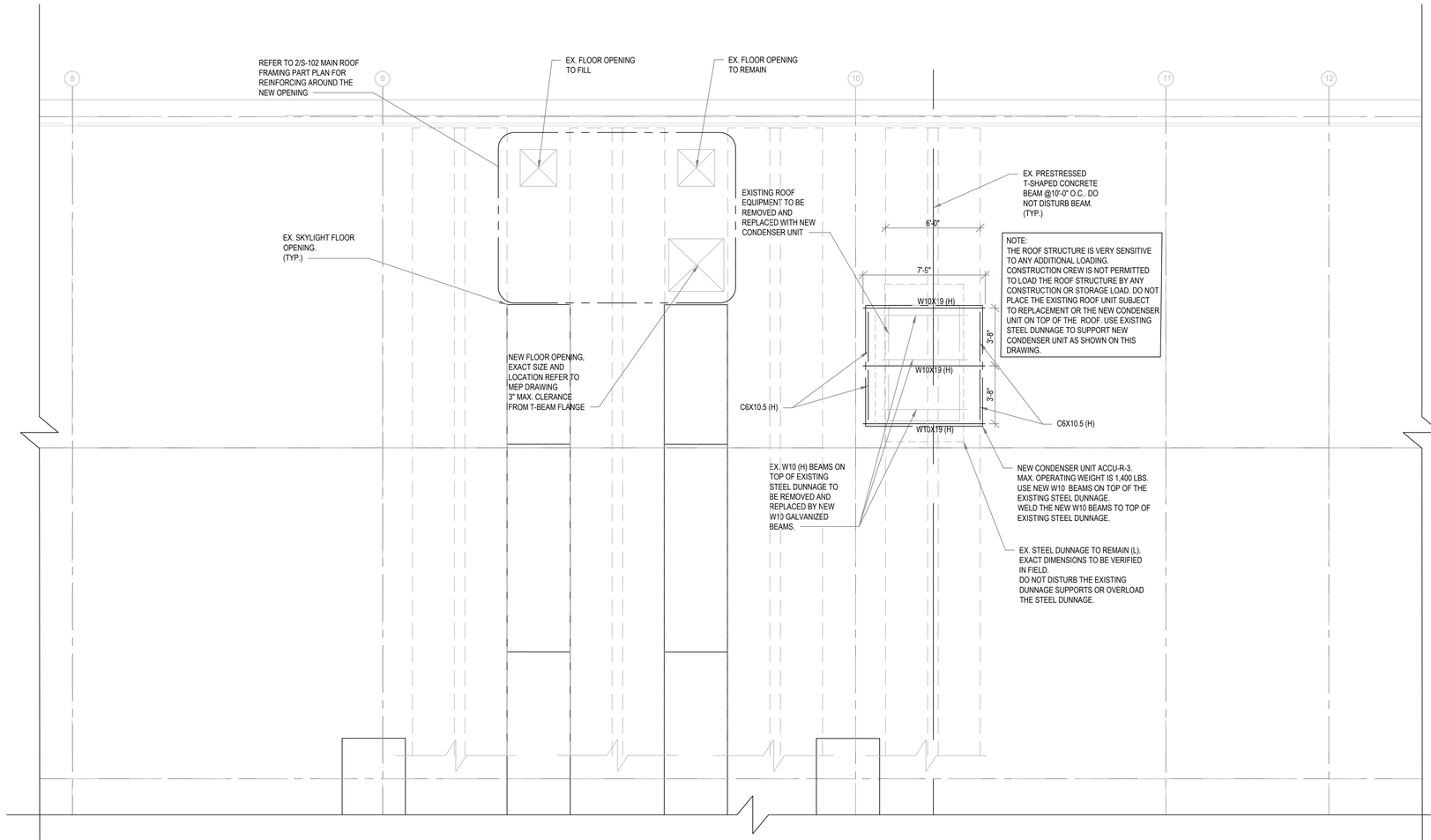
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
LOWER ROOF DUNNAGE FRAMING PLAN

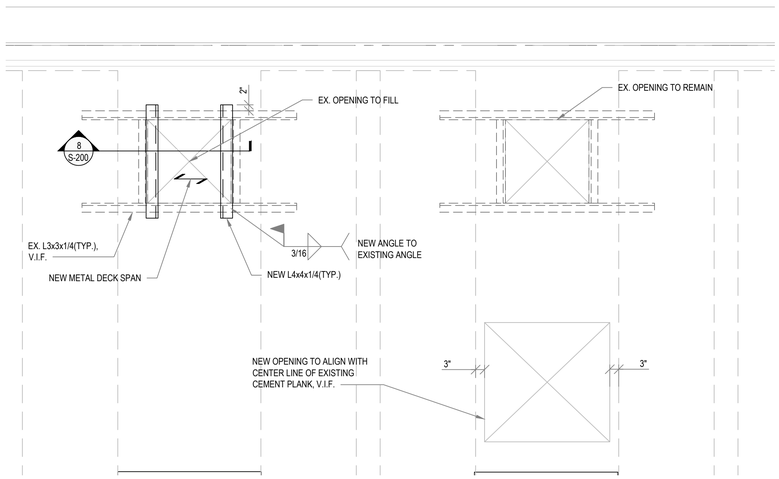
SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. S-101.00
DRAWN BY M.M.
3 OF 6

NYC DOB Number




1 S-102 MAIN ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"




2 S-102 MAIN ROOF FRAMING PART PLAN
SCALE: 1/2"=1'-0"

## NOTES:

1. EXISTING FLOOR CONSTRUCTION: 3" THK. CONCRETE PLANKS SPAN ON TOP OF T-SHAPED PRESTRESSED BEAMS.
2. ALL NEW STEEL BEAMS, PLATES AND CONNECTION ELEMENTS SHALL BE HOT-DIPPED GALVANIZED STEEL.
3. ALL FIELD WELDS AND DAMAGED GALVANIZED COATING SHALL BE TOUCHED-UP WITH TWO COATS OF ZINC RICH COMPONENTS AS PER MANUFACTURER'S INSTALLATION SPECIFICATIONS.
4. REFER TO MANUFACTURER'S RECOMMENDATIONS AND CUT-SHEETS TO STIFFEN AND SUPPORT THE NEW EQUIPMENT ON THE NEW STEEL DUNNAGE.
5. THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC.) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT.
6. THE CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. FAILURE TO NOTIFY ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF UNSATISFACTORY CONDITIONS.
7. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE EXISTING FIELD CONDITION, COORDINATE WITH STRUCTURAL ENGINEER WITH PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE ARCHITECT.
8. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY SHORING OF ALL EXISTING STRUCTURES PRIOR TO ANY MODIFICATION OF EXISTING STRUCTURES. DESIGN OF TEMPORARY SHORING SHALL BE PROVIDED BY QUALIFIED PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR.
9. THE CONTRACTOR MUST PERFORM A SITE VISIT AND REVIEW THE SCOPE OF WORK. ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ARCHITECT AND STRUCTURAL ENGINEER IMMEDIATELY.
10. DO NOT LOAD ANY AREAS OF EXISTING SLAB WITH REMOVED AND/OR CONSTRUCTION MATERIALS.
11. THE ROOF STRUCTURE IS VERY SENSITIVE TO LADING. CONSTRUCTION CREW IS NOT PERMITTED TO LOAD THE ROOF STRUCTURE BY ANY LOAD. DO NOT PLACE THE EXISTING ROOF UNIT SUBJECT TO REPLACEMENT OR THE NEW CONDENSER UNIT ON TOP OF THE ROOF. USE EXISTING STEEL DUNNAGE TO SUPPORT NEW CONDENSER UNIT AS SHOWN ON THIS DRAWING.
12. NO ROOF PENETRATIONS OR OPENINGS ARE ALLOWED TO THE ROOF STRUCTURE UNLESS INDICATED ON THE PLAN.

## LEGEND:

| | |
|---|---|
| * | INDICATES DIMENSION TO BE VERIFIED IN FIELD. |
| ** | INDICATES NEW EQUIPMENT DIMENSION OR CLEARANCE TO BE VERIFIED WITH MANUFACTURER AND MEP ENGINEER. |
| (V.I.F.) | INDICATES VERIFY IN FIELD |
| CANT. | INDICATES CANTILEVER BEAM |
| T.O.XX | INDICATES TOP OF XX. |
| (H) | INDICATES STEEL BEAM AT HIGHER ELEVATION |
| (L) | INDICATES STEEL BEAM AT LOWER ELEVATION |
| K.B. | INDICATES STEEL L3X3X1/4 KNEE BRACE |

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

ISSUE / REVISION

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
377 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

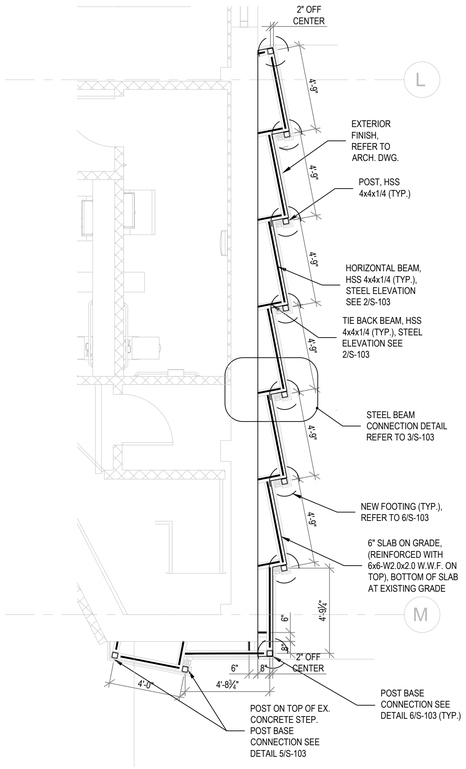
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
UPPER ROOF FRAMING PLAN

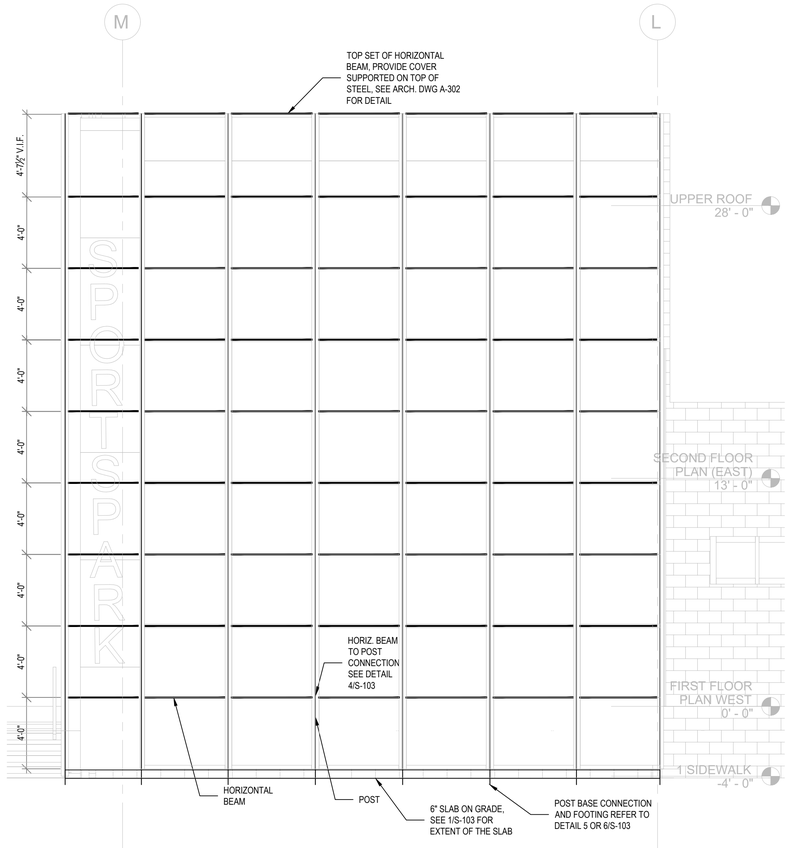
SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. S-102.00
DRAWN BY M.M.
4 OF 6

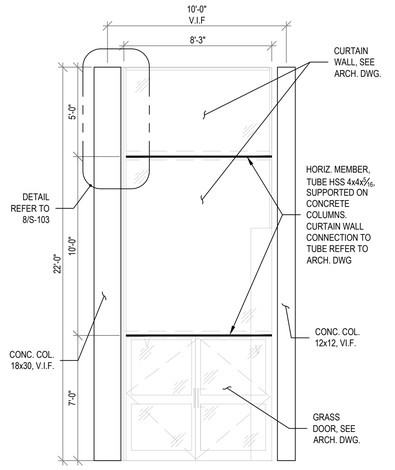
NYC DOB Number




1 S-103 EXTERIOR CLADDING FRAMING PLAN
SCALE: 1/4"=1'-0"



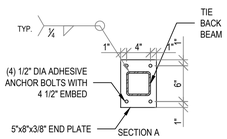

2 S-103 EXTERIOR CLADDING FRAMING ELEVATION
SCALE: 1/4"=1'-0"

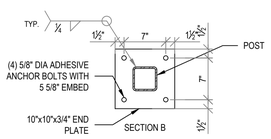


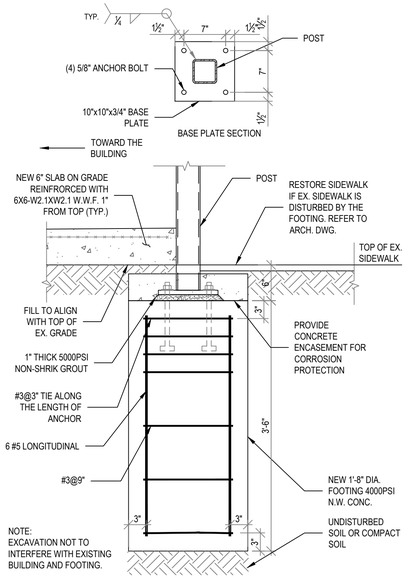

7 S-103 ENTRANCE DOOR HORIZONTAL MEMBER ELEVATION
SCALE: 1/4"=1'-0"

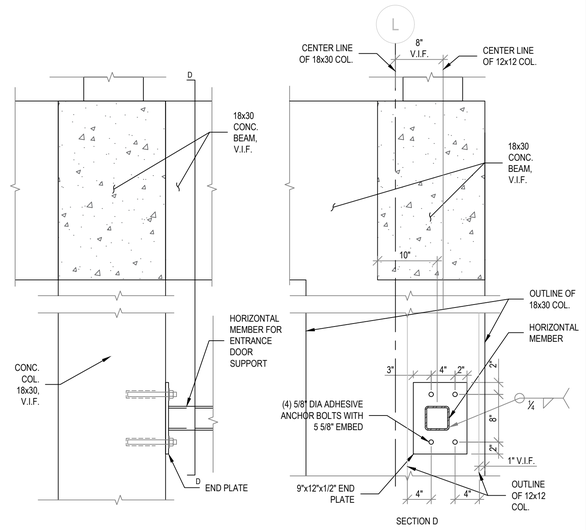
NOTES:

1. ALL NEW STEEL BEAMS, PLATES AND CONNECTION ELEMENTS SHALL BE HOT-DIPPED GALVANIZED STEEL.
2. ALL FIELD WELDS AND DAMAGED GALVANIZED COATING SHALL BE TOUCHED-UP WITH TWO COATS OF ZINC RICH COMPONENTS AS PER MANUFACTURER'S INSTALLATION SPECIFICATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, ETC.) AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION OF ANY STRUCTURAL COMPONENT.
4. THE CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. FAILURE TO NOTIFY ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF UNSATISFACTORY CONDITIONS.
5. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE ARCHITECT.
6. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY SHORING OF ALL EXISTING STRUCTURES PRIOR TO ANY MODIFICATION OF EXISTING STRUCTURES. DESIGN OF TEMPORARY SHORING SHALL BE PROVIDED BY QUALIFIED ENGINEER RETAINED BY THE CONTRACTOR.
7. THE CONTRACTOR MUST PERFORM A SITE VISIT AND REVIEW THE SCOPE OF WORK. ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ARCHITECT AND STRUCTURAL ENGINEER IMMEDIATELY.

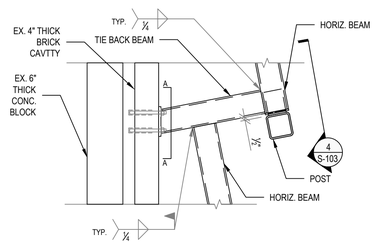


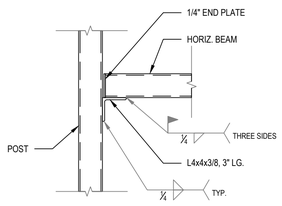



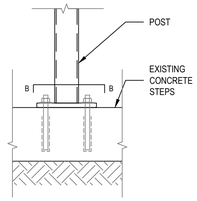

NOTE:
LOCATE REBAR IN EXISTING CONCRETE COLUMN PRIOR TO DRILLING HOLES FOR BOLT. ADJUST BOLT LOCATION TO AVOID EXISTING REBAR.




3 S-103 STEEL BEAM CONNECTION DETAIL
SCALE: 1"=1'-0"




HORIZ. BEAM TO POST CONNECTION DETAIL
4 S-103 SCALE: 1"=1'-0"




5 S-103 POST BASE CONNECTION DETAIL AT STEPS
SCALE: 1"=1'-0"

6 S-103 POST BASE CONNECTION DETAIL AT SIDE WALK
SCALE: 1"=1'-0"

8 S-103 ENTRANCE DOOR HORIZONTAL MEMBER TO CONCRETE COLUMN CONNECTION DETAIL
SCALE: 1"=1'-0"

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS
CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
305 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

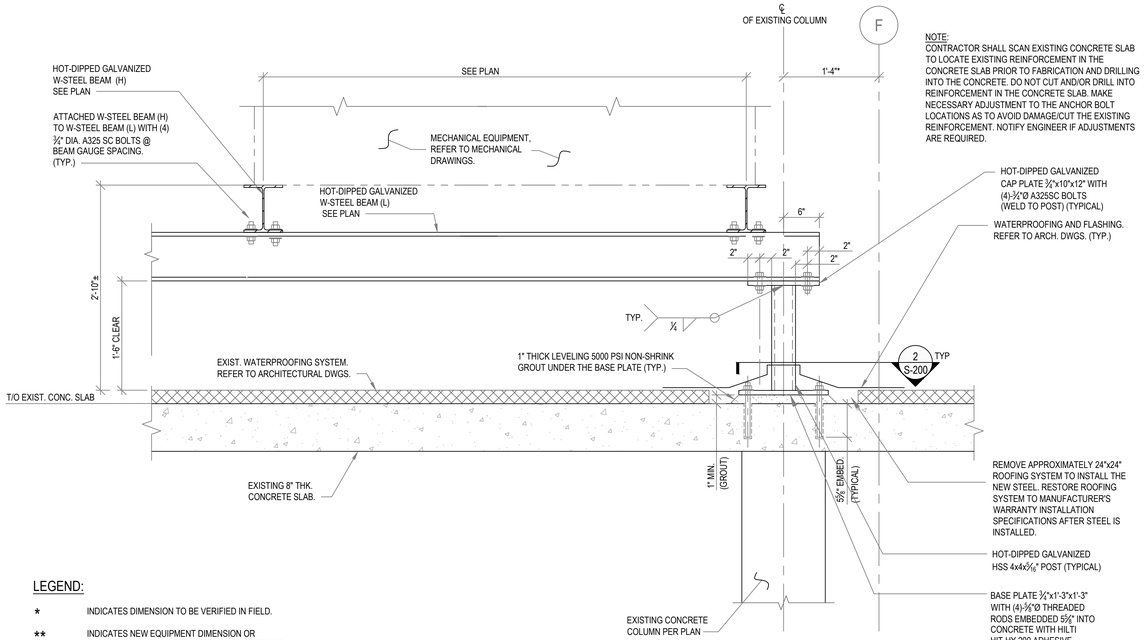
PROJECT
ROOSEVELT ISLAND-SPORTSPARK RENOVATIONS PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING
EXTERIOR CLADDING SUPPPORTING FRAMING PLAN

SEAL & SIGNATURE

DATE 06.10.2019
JOB NUMBER 19010
DWG. No. S-103.00
DRAWN BY M.M.
5 OF 6

NYC DOB Number

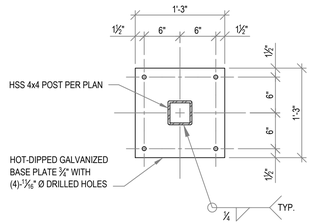



NOTE:
CONTRACTOR SHALL SCAN EXISTING CONCRETE SLAB TO LOCATE EXISTING REINFORCEMENT IN THE CONCRETE SLAB PRIOR TO FABRICATION AND DRILLING INTO THE CONCRETE. DO NOT CUT AND/OR DRILL INTO REINFORCEMENT IN THE CONCRETE SLAB. MAKE NECESSARY ADJUSTMENT TO THE ANCHOR BOLT LOCATIONS AS TO AVOID DAMAGE/CUT THE EXISTING REINFORCEMENT. NOTIFY ENGINEER IF ADJUSTMENTS ARE REQUIRED.

1 S-200 SECTION
SCALE: 1"=1'-0"

## LEGEND:

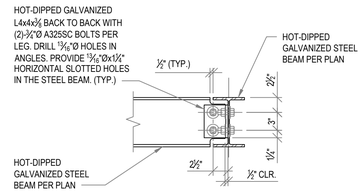
| | |
|---|---|
| * | INDICATES DIMENSION TO BE VERIFIED IN FIELD. |
| ** | INDICATES NEW EQUIPMENT DIMENSION OR CLEARANCE TO BE VERIFIED WITH MANUFACTURER AND MEP ENGINEER. |
| (V.I.F.) | INDICATES VERIFY IN FIELD |
| CANT. | INDICATES CANTILEVER BEAM |
| T.O.XX | INDICATES TOP OF XX. |
| (H) | INDICATES STEEL BEAM AT HIGHER ELEVATION |
| (L) | INDICATES STEEL BEAM AT LOWER ELEVATION |



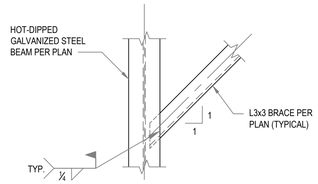

(BASE PLATE TYPICAL 2 PLACES)

NOTE: APPLY TWO COATS OF RICH ZINC PAINTS OVER WELDS, REFER TO NOTE #4 ON DRAWING S-100.

2 S-200 PLAN BASE PLATE
SCALE: 1"=1'-0"

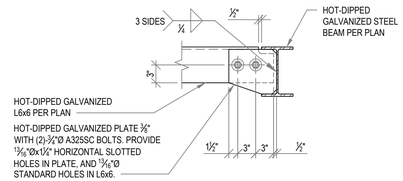



3 S-200 SECTION
SCALE: 1"=1'-0"

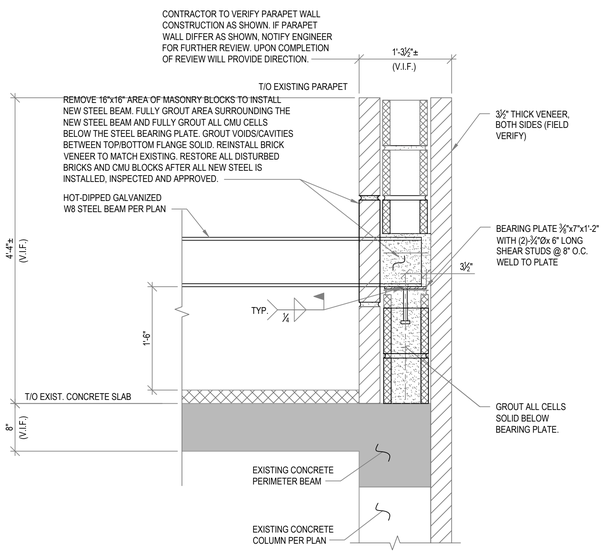



NOTE: APPLY TWO COATS OF RICH ZINC PAINTS OVER WELDS, REFER TO NOTE #4 ON DRAWING S-100.

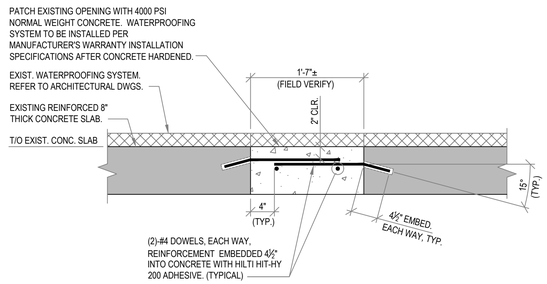
4 S-200 BRACING DETAIL
SCALE: 1"=1'-0"



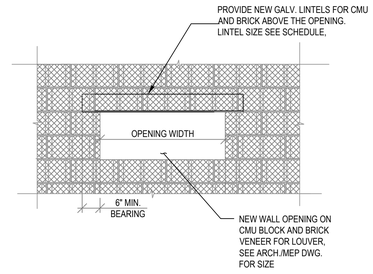

5 S-200 SECTION
SCALE: 1"=1'-0"




6 S-200 SECTION
SCALE: 1"=1'-0"




7 S-200 CONCRETE INFILL SECTION
SCALE: 1"=1'-0"

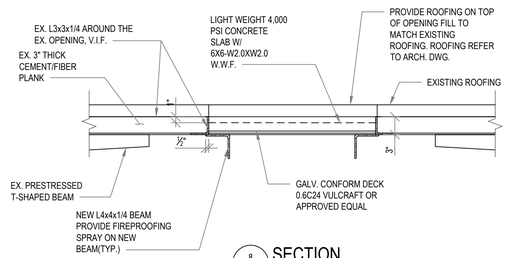



NOTE:
1. CONTRACTOR TO PROVIDE TEMPORARY SHORING BEFORE CUTTING THE OPENING.

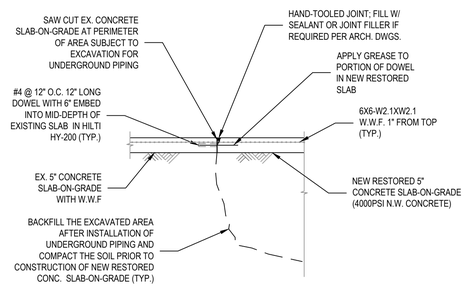
| LOOSE LINTEL SCHEDULE | | |
|---|---|---|
| MASONRY OPENING WIDTH | ANGLE SIZE PER EACH 4" WIDTH OF MASONRY | ANGLE SIZE FOR 6" WIDTH OF MASONRY |
| UP TO 5'-0" | L3½ x 3½ x 5/16 | 6 X 4 X ⅜ |
| 5'-1" TO 8'-0" | 6 X 4 X ⅜ | 6 X 4 X ½ |

NOTES:
1. ANGLE LENGTH = MASONRY OPENING PLUS 1'-0" (6" BEARING AT EACH END).
2. ANGLE LONG LEG IS VERTICAL.
3. JOINTS SHALL NOT BE LOCATED OVER THE MASONRY OPENING.
4. LINTEL TO BE GALV.
5. PROVIDE CONTINUOUS LINTEL WHEN TWO OPENINGS AT SAME TOP ELEVATION AND LESS THAN 16" APART.

9 S-200 TYP. MASONRY LINTEL SCHEDULE
SCALE: 3/4"=1'-0"




8 S-200 SECTION
SCALE: 1"=1'-0"




10 S-200 TYP. SLAB ON GRADE REMEDIATION DETAIL
SCALE: NTS

UNAUTHORIZED ALTERCATION OF ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.
THESE DOCUMENTS (OR COPIES OF ANY THEREOF) PREPARED BY OR BEARING THE SEAL OF THE ENGINEER, SHALL NOT BE REUSED FOR ANY EXTENSIONS OF THE PROJECT OR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

ROOSEVELT ISLAND OPERATING CORP.

D.O.B. DISCLAIMER:

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

| NO. | DATE | ISSUE / REVISION |
|---|---|---|
| 4 | 01.29.21 | ISSUED FOR 100% CD |
| 3 | 01.12.21 | ISSUED FOR FILING |
| 2 | 01.08.21 | ISSUED FOR OWNER'S REVIEW |
| 1 | 08.10.20 | 50% SUBMISSION |

JDA
June Daniel Architect PLLC
64 Hilton Avenue
Hempstead, New York 11550
Tel. 516.414.6737
ARCHITECT

CONSULTANTS

CAMERON ENGINEERING & ASSOCIATES of NEW YORK, PLLC
1411 Broadway, Suite 610 New York, NY 10018 T: (212) 234-4000
177 Crossways Park Drive Woodbury, NY 11797 T: (516) 827-4900
303 Tarrytown Road, 1st Floor, White Plains, NY 10603 T: (914) 721-8300
Corporate Seal Initiated 2012 State of New York
www.Cameronengineering.com
COPYRIGHT

PROJECT

ROOSEVELT ISLAND-
SPORTSPARK
RENOVATIONS
PHASE #3
250 Main St.
Roosevelt Island, NY
10044

DRAWING

STRUCTURAL SECTIONS AND DETAILS

SEAL & SIGNATURE

| | |
|---|---|
| DATE | 06.10.2019 |
| JOB NUMBER | 19010 |
| DWG. No. | S-200.00 |
| DRAWN BY | M.M. |
| | 6 OF 6 |

NYC DOB Number