# Hamtramck Public Schools

## Kosciuszko Middle School Food Service Upgrades

2333 Burger, Hamtramck, MI 48212

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| List of Drawings | |
|---|---|
| Sheet Number | Sheet Title |
| A0-00 | Cover Sheet |
| | |
| Civil | |
| C1-01 | Topgraphic Survey & Partial Site Plans |
| | |
| | |
| Architectural | |
| A0-01 | General Project Information |
| A0-02 | Life Safety Plan & Code Analysis |
| A0-03 | Schedules, Door, Frame & Wall Types |
| A1-01 | Partial Demolition Plans |
| A1-02 | Partial Demolition Plans |
| A3-01 | Partial Floor Plans |
| A3-02 | Partial Floor Plans |
| A3-10 | Plan Details |
| A3-20 | Roof Plan and Details |
| A4-01 | Partial Reflected Ceiling Plans and Details |
| A4-02 | Partial Reflected Ceiling Plans and Details |
| A5-01 | Exterior Elevations |
| A6-01 | Wall Sections |
| A6-02 | Wall Sections |
| A6-10 | Section Details |
| A9-01 | Partial Finish Floor Plans |
| A9-02 | Partial Finish Floor Plans |
| | |
| | |
| | |
| Structural | |
| S3-01 | Foundation Plan and Roof Framing Plan |
| S4-00 | General Notes |
| S4-01 | Details |
| S5-00 | Details |
| | |

| List of Drawings (Continued) | |
|---|---|
| Sheet Number | Sheet Title |
| | |
| | |
| Mechanical | |
| M000 | Mechanical General Information |
| MD100 | Mechanical Demolition Plan |
| P100 | Composite Underground Plumbing Plan |
| P101A | Lower Level Plumbing Plan - Areas A & B |
| M100 | Composite Mechanical Plan |
| M101A | Lower Level Mechanical Plan - Areas A & B |
| M500 | Mechanical Details |
| M600 | Mechanical Schedules and Temperature Controls |
| | |
| | |
| Electrical | |
| E000 | Electrical General Information |
| ED101 | Electrical Demolition Plan |
| EL100 | Composite Lighting Plan |
| EL101A | Lower Level Lighting Plan - Areas A & B |
| EL101B | Lower Level Lighting Plan - Areas C & D |
| EP101 | Composite Power Plan |
| EP101A | Lower Level Power Plan - Areas A & B |
| EP101B | Lower Level Power Plan - Areas C & D |
| E500 | Electrical Details and Panel Schedule |
| E600 | One-line Diagrams |
| | |
| | |
| | |
| Food Service | |
| FS-01 | Food Service Equipment Plan |
| FS-02 | Food Service Plumbing Plan |
| FS-01 | Food Service Electrical Plan |
| FS-02 | Food Service Ventilation Plan |
| | |

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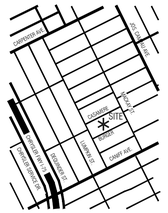
LOCATION MAP

NORTH




OWNER

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Middle School
Food Service Upgrades

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PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/2016

DRAWN BY

PJE

CHECKED BY

ACS

APPROVED BY

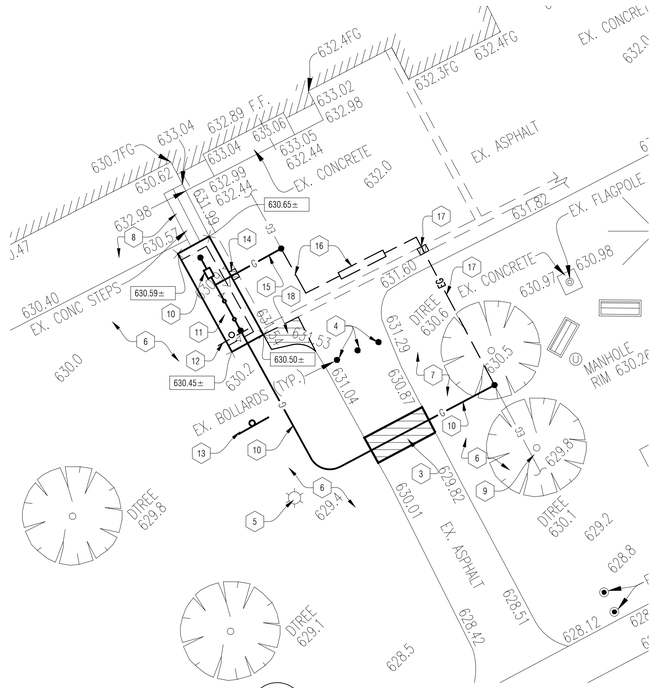
MAM

SHEET NAME

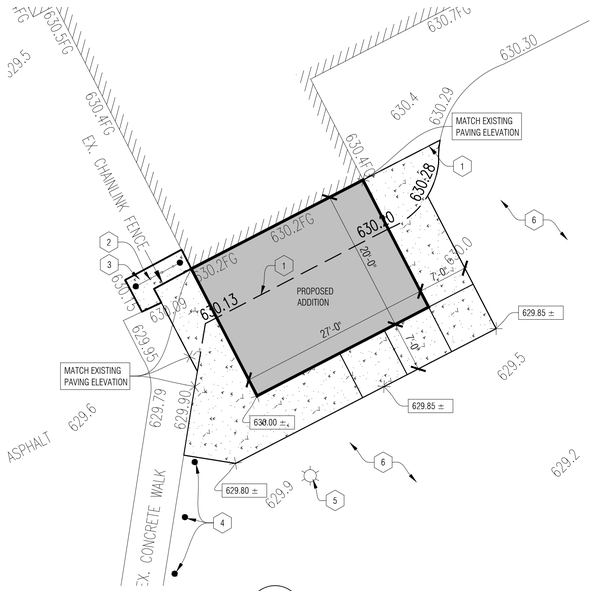
COVER SHEET

SHEET NO.

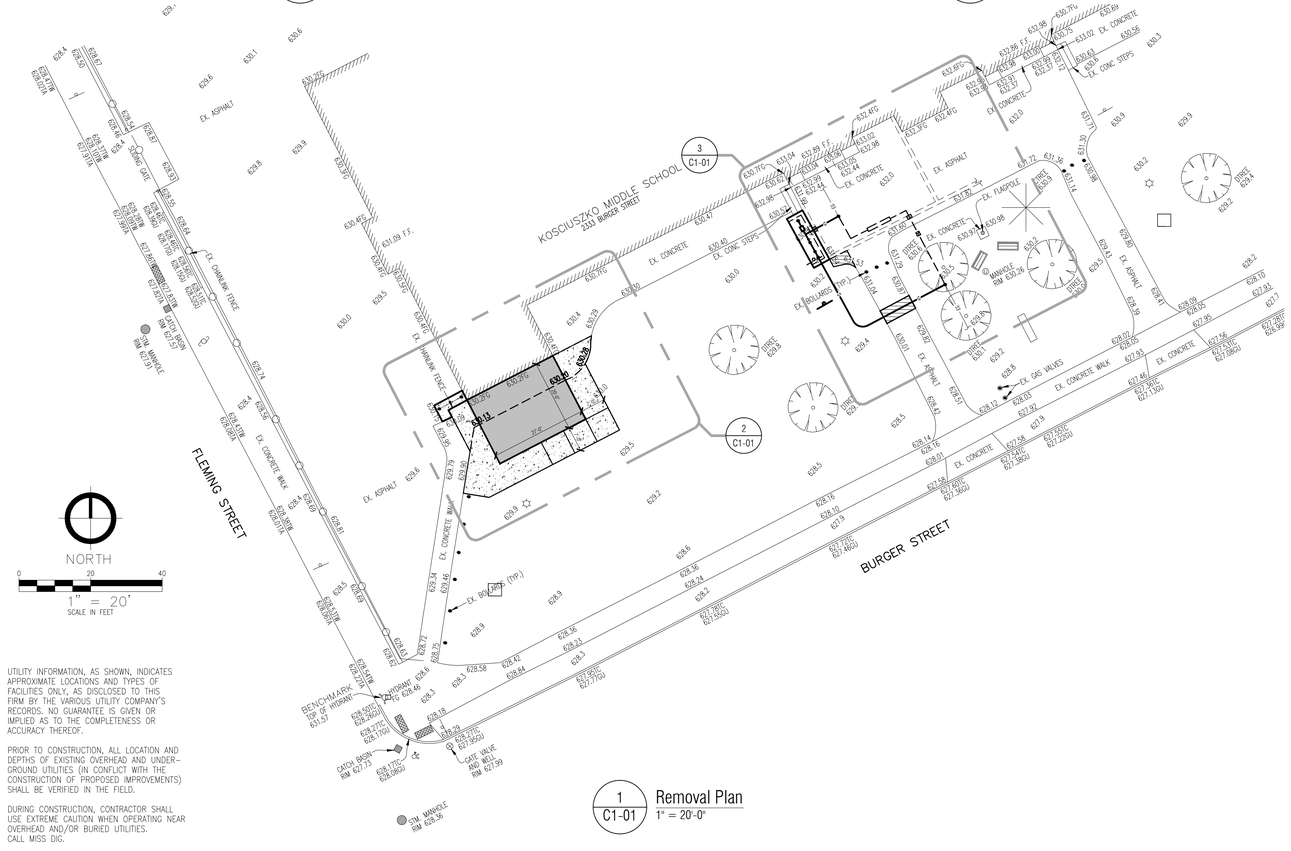
A0-00




3 C1-01 Partial Removal Plan
1" = 10'-0"




2 C1-01 Partial Removal Plan
1" = 10'-0"




NORTH
0 20 40
1" = 20'
SCALE IN FEET

UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATION AND DEPTHS OF EXISTING OVERHEAD AND UNDER-GROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD.

DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR OVERHEAD AND/OR BURIED UTILITIES. CALL MISS DIG.

1 C1-01 Removal Plan
1" = 20'-0"

## DEMO FLOOR PLAN - KEY NOTES:

1. EXISTING CONCRETE WALL TO BE REMOVED.
2. EXISTING 6' CHAIN LINK FENCE AND POSTS TO BE REMOVED.
3. AREA OF EXISTING ASPHALT PAVING TO BE SAW CUT, REMOVED AND REPLACED TO COMPLETE WORK / UTILITY INSTALLATION.
4. EXISTING BOLLARD TO REMAIN. PROTECT FROM DAMAGE.
5. EXISTING SITE LIGHTING FIXTURE WITH UNDER GROUND POWER FEED, PROTECT FROM DAMAGE.
6. EXISTING LAWN AREA TO BE RESTORED.
7. EXISTING LANDSCAPE AREA TO REMAIN. PROTECT PLANTINGS AND RESTORE BEDDING BEDDING AREAS.
8. EXISTING CONCRETE WALK AND STAIR TO REMAIN. PROTECT DURING CONSTRUCTION.
9. EXISTING GAS SERVICE PIPING AND ABOVE GRADE METER ASSEMBLY.
10. EXISTING GAS SERVICE PIPING AND ABOVE GRADE METER ASSEMBLY WITH PAINTED GALVANIZED STEEL SUPPORT STRUCTURE. REFER TO MECHANICAL. COORDINATE WITH UTILITY COMPANY.
11. NEW 4" CONCRETE PAVING ON 4" COMPACTED GRANULAR FILL. SLOPE 1% TO DRAIN. PROVIDE SEALANT ON 1/2" ISOLATION MATERIAL AT STEEL METER SUPPORTS. COORDINATE REQUIREMENTS WITH UTILITY COMPANY.
12. EXISTING POLE POLE MOUNTED SIGN TO BE REMOVED FOR REINSTALLATION. REMOVE CONCRETE SUPPORT.
13. RESET EXISTING SIGN WITH NEW 8' Ø CONCRETE FOUNDATION DOWN TO 3'-6" BELOW FINISH GRADE.
14. NEW BELOW GRADE FOUNDATION WALL PENETRATION. CORE EXISTING CONSTRUCTION FOR NEW GAS LINE. SEAL PENETRATION WATER TIGHT PER DETAIL 10 ON A6-10.
15. NEW GAS PIPING. REFER TO MECHANICAL.
16. LINE OF EXISTING GAS PIPING AND METER ASSEMBLY TO BE REMOVED. REFER TO MECHANICAL. COORDINATE REMOVAL AND TURN OVER OF METER ASSEMBLY TO UTILITY COMPANY.
17. REMOVE EXTERIOR GAS PIPING AS REQUIRED TO INFILL CONCRETE FOUNDATION WALL PENETRATION AND RE-WATERPROOF FOUNDATION WALL.
18. SAW CUT AND REMOVE ASPHALT PAVING. REGRADE ADJACENT SIDE SLOPE AND RESTORE LAWN AREA.
19. (ALTERNATE #2) LINE OF NEW BRICK MASONRY SCREEN WALL PER DETAIL 11 ON A6-10.
20. PARGE EXPOSED CONCRETE FOUNDATION WALL WITH CONCRETE TO PROVIDE SMOOTH APPEARANCE. REMOVE WATER PROOFING, AND PREPARE SURFACE FOR BONDING. TYPICAL AT EXPOSED FOUNDATION WALL.

## DEMO FLOOR PLAN - LEGEND:

- EXISTING STRUCTURE
- PROPOSED BUILDING
- NEW CONCRETE PAVING
- ASPHALT PAVING REPAIR / REPLACEMENT. THERMAL BOND PROCESS
- EXISTING CONSTRUCTION / PAVING TO BE REMOVED
- EXISTING BELOW GRADE WALL / STRUCTURE WITH CONCRETE AND ASPHALT PAVED ROOF CONSTRUCTION
- EXISTING POST MOUNTED SIGN TO BE REMOVED AND RESET
- EXISTING SITE LIGHTING FIXTURE TO REMAIN. PROTECT FROM DAMAGE. PROTECT BELOW GRADE ELECTRICAL FEED CIRCUIT
- 000.0 EXISTING GRADE ELEVATIONS. REFER TO SURVEY
- 000.00 ± NEW GRADE ELEVATIONS

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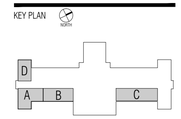
CONSULTANT

KEY PLAN

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N

DRAWN BY
ssa

CHECKED BY
ACS

APPROVED BY
MAM

SHEET NAME

REMOVAL PLAN

SHEET NO.

C1-01

# Abbreviations

## A

| | |
|---|---|
| AFF | ABOVE FINISHED FLOOR |
| ARF | ABOVE REFERENCE FLOOR |
| ACCT | ACCENT |
| AP | ACCESS PANEL |
| AC | ACOUSTICAL |
| ACT | ACOUSTICAL TILE |
| ADD | ADDENDUM |
| ADDL | ADDITIONAL |
| ADJ | ADJACENT |
| AGG | AGGREGATE |
| A/C | AIR CONDITIONING |
| ALT | ALTERNATE OR ALTERNATIVE |
| AL.ALUM | ALUMINUM |
| ANCH | ANCHOR, ANCHORAGE |
| AB | ANCHOR BOLT |
| ANOD | ANODIZED |
| ARCH | ARCHITECT(URAL) |
| ASPH | ASPHALT |
| AUTO | AUTOMATIC |

## B

| | |
|---|---|
| B.F. | BARRIER FREE |
| BP | BASE PLATE OR |
| BP$_L$ | BEARING P$_L$ |
| BRG | BEARING |
| BM | BENCH MARK OR BEAM |
| BTW | BETWEEN |
| BIT | BITUMINOUS |
| BLKG | BLOCKING |
| BD | BOARD |
| BS | BOTH SIDES |
| BOT | BOTTOM |
| BC | BOTTOM OF CURB |
| BRK. | BRICK |
| BLDG | BUILDING |
| BL | BUILDING LINE |

## C

| | |
|---|---|
| CABT | CABINET |
| CR | CARD READER |
| CPT | CARPET(ED) |
| CES | CARPET EDGE STRIP |
| CI | CAST IRON |
| CIP | CAST-IN-PLACE |
| CB | CATCH BASIN |
| CLG | CEILING |
| CEM | CEMENT |
| C TO C | CENTER TO CENTER |
| CM | CENTIMETER(S) |
| C° | DEGREES CENTIGRADE |
| CER | CERAMIC |
| CT | CERAMIC TILE |
| CHAN | CHANNEL |
| CHEK PL | CHECKERED PLATE |
| CL | CLEAR(ANCE) |
| CLOS | CLOSET |
| CO | CLEAN OUT |
| CHK | COAT HOOK |
| CW | COLD WATER |
| COL | COLUMN |
| COMB | COMBINATION |
| COMP | COMPRESS(ED),(ION),(IBLE) |
| CONCE | CONCEALED |
| CONC | CONCRETE |
| CMU | CONCRETE MASONRY UNIT (CONCRETE BLOCK) |
| CONN | CONNECTION |
| CONST | CONSTRUCTION |
| CONST JT | CONSTRUCTION JOINT |
| CONT | CONTINUOUS OR CONTINUE |
| CONTR | CONTRACT(OR) |
| CJ | CONTROL JOINT |
| CORR | CORRUGATED OR CORRIDOR |
| CEN | CENTER |
| CTSK | COUNTERSUNK |
| CF | CUBIC FOOT |
| CY | CUBIC YARD |
| CYL | CYLINDER |

## D

| | |
|---|---|
| DPR | DAMPER |
| DP | DAMPROOFING |
| DL | DEAD LOAD |
| DEFS | DIRECT EXTERIOR FINISH SYSTEM |
| DET | DETAIL |
| DIAG | DIAGONAL |
| Ø | DIAMETER |
| DIFF | DIFFUSER |
| DIM | DIMENSION |
| D/W | DISHWASHER |
| DO | DOOR OPENING |
| DN | DOWN |
| DT | DRAIN TILE |
| DWG | DRAWING |
| DF | DRINKING FOUNTAIN |

## E

| | |
|---|---|
| EA | EACH |
| EF | EACH FACE |
| EW | EACH WAY |
| E | EAST |
| ELEC | ELECTRIC(AL) |
| EWC | ELECTRIC WATER COOLER |
| EL | ELEVATION |
| ELEV | ELEVATOR |
| EMER | EMERGENCY |
| ENC | ENCLOS(E), (URE) |
| EP | EPOXY |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| ESC | ESCALATOR |
| EPDM | ETHYLENE PROPYLENE DIENE MONOMERS |
| EXH | EXHAUST |
| EB | EXPANSION BOLT |
| EJ | EXPANSION JOINT |
| EXP CONST | EXPOSED CONSTRUCTION |
| EXT | EXTERIOR |
| ETR | EXISTING TO REMAIN |

## F

| | |
|---|---|
| FWP | FABRIC WRAPPED PANEL |
| FB | FACE BRICK |
| FOC | FACE OF CONCRETE |
| FF | FACTORY FINISH |
| FS | FAR SIDE |
| F° | DEGREES FAHRENHEIT |
| FT | FEET/FOOT |
| FIN | FINISH(ED) |
| FE | FIRE EXTINGUISHER |
| FEC | FIRE EXTINGUISHER CABINET |
| FVC | FIRE VALVE CABINET |
| FLD | FIELD |
| FHS | FIRE HOSE STATION |
| FPR | FIRE PROOFING |
| FL | FLOOR(ING) |
| FD | FLOOR DRAIN |
| FLUOR | FLUORESCENT |
| FTG | FOOTING |
| FDN | FOUNDATION |
| FA | FRESH AIR |
| FSRS | FULLY-ADHERED SHEET ROOFING SYSTEM |
| FURR | FURR(ED), (ING) |

## G

| | |
|---|---|
| GA | GAGE, GAUGE |
| GAL | GALLON |
| GALV | GALVANIZED |
| GL | GLASS, GLAZING |
| GR | GRADE, GRADING |
| g | GRAM |
| GRD | GROUND |
| GYP | GYPSUM |
| GYP BD | GYPSUM BOARD |
| GYP L | GYPSUM LATH |
| GP | GYPSUM PLASTER |

## H

| | |
|---|---|
| HDCP | HANDICAP(PED) |
| HDBD | HARDBOARD |
| HDWE | HARDWARE |
| HWD | HARDWOOD |
| HTG | HEATING |
| H&V | HEATING & VENTILATING |
| HVAC | HEATING/VENTILATION/ AIR CONDITIONING |
| HT | HEIGHT |
| H | HIGH |
| HP | HIGH POINT |
| HS | HIGH STRENGTH |
| HC | HOLLOW CORE |
| HM | HOLLOW METAL |
| HORIZ | HORIZONTAL |
| HP | HORSE POWER |
| HB | HOSE BIBB |
| HW | HOT WATER |
| HWH | HOT WATER HEATER |
| HR | HOUR |

## I

| | |
|---|---|
| IN(") | INCH(ES) |
| INCL | INCLUDE(D), (ING) |
| INFO | INFORMATION |
| ID | INSIDE DIMENSION |
| INSUL | INSULATE(D), (ION) |
| ICA | INTEGRAL COLOR ANODIZED |
| INT | INTERIOR/INTERNAL |
| INTERM | INTERMEDIATE |
| INV | INVERT |
| IRR | IRRIGATION |

## J

| | |
|---|---|
| JC | JANITOR'S CLOSET |
| JT | JOINT |
| JST | JOIST |
| JB | JUNCTION BOX |

## K

| | |
|---|---|
| kg | KILOGRAMS |
| KV | KILOVOLT |
| KVA | KILOVOLT-AMPERE |
| KW | KILOWATT(S) |
| KWH | KILOWATT-HOUR |
| kg/m | KILOGRAM PER METER |
| kg/cm$^2$ | KILOGRAM PER SQUARE CENTIMETER |
| K | KIPS |
| KSI | KIPS PER SQUARE INCH |
| KIT | KITCHEN |
| KO | KNOCKOUT |

## L

| | |
|---|---|
| LAB | LABORATORY |
| LAM | LAMINATE(D) |
| LAV | LAVATORY |
| LCC | LEAD COATED COPPER |
| LH | LEFT HAND |
| LHR | LEFT HAND REVERSE |
| L | LENGTH |
| LT | LIGHT |
| LTG | LIGHTING |
| LP | LIGHTING PANEL |
| LIN | LINEAR, LINEAL |
| LSWD | LINEAR SUSPENDED WOOD CEILING |
| LL | LIVE LOAD |
| LG | LONG |
| LLBB | LONG LEGS BACK TO BACK |
| LLH | LONG LEG HORIZONTAL |
| LLO | LONG LEG OUTSTANDING |
| LLV | LONG LEG VERTICAL |
| LOC | LOCATE/LOCATION |
| L.P. | LOW POINT |
| LV | LOW VOLTAGE |

## M

| | |
|---|---|
| MAG | MAGNETIC |
| MH | MANHOLE |
| MFR | MANUFACTURE(R) |
| MAR | MARBLE |
| MAR.T. | MARBLE THRESHOLD |
| MBD | MARKER BOARD |
| MAS | MASONRY |
| MO | MASONRY OPENING |
| MAT | MATERIAL(S) |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MC | MEDICINE CABINET |
| MED | MEDIUM |
| MEM | MEMBER |
| MEMB | MEMBRANE |
| MET | METAL |
| MDS | METAL DIVIDER STRIP |
| ML | METAL LATH |
| MET T. | METAL THRESHOLD |
| MEZZ | MEZZANINE |
| mm | MILLIMETER(S) |
| MIN | MINIMUM |
| MIR | MIRROR |
| MISC | MISCELLANEOUS |
| MISC | MISCELLANEOUS IRON |
| MON. | MONITOR(ED) |
| MCC | MOTOR CONTROL CENTER |
| MTD | MOUNT(ED), (ING) |
| MULL | MULLION |

## N

| | |
|---|---|
| NAT | NATURAL |
| NCA | NATURAL COLOR ANODIZED |
| NEG | NEGATIVE |
| NRC | NOISE REDUCTION COEFFICIENT |
| NONCOMB | NONCOMBUSTIBLE |
| NOM | NOMINAL |
| N | NORTH |
| NA | NOT APPLICABLE |
| NIC | NOT IN CONTRACT |
| NTS | NOT TO SCALE |
| NO (#) | NUMBER |

## O

| | |
|---|---|
| OFF | OFFICE |
| O/C | ON CENTER(S) |
| OPG | OPENING |
| OPP | OPPOSITE |
| OPP HD | OPPOSITE HAND |
| ORIG | ORIGINAL |
| Oz | OUNCE |
| OS | OUTSIDE |
| OA | OUTSIDE AIR |
| OD | OUTSIDE DIAMETER |
| OH | OVERHEAD |

## P

| | |
|---|---|
| PH | PHYSICALLY HANDICAPPED |
| PT | PORCELAIN TILE |
| PR | PAIR |
| PNL | PANEL |
| PTD | PAPER TOWEL DISPENSER |
| PTD/R | PAPER TOWEL DISPENSER & RECEPTACLE COMBINATION |
| PKG | PARKING |
| PBD | PARTICLE BOARD |
| PARTN | PARTITION |
| PE | PASSENGER ELEVATOR |
| PERM | PERMANENT |
| PLAS | PLASTER |
| PLAM | PLASTIC LAMINATE |
| PL | PLATE |
| PLBG | PLUMBING |
| PLWD | PLYWOOD |
| PNT | PAINT(ED) |
| POLYISO | POLYISOCYANURATE |
| PVC | POLYVINYL CHLORIDE |
| lb/# | POUND(S) |
| PCF | POUNDS PER CUBIC FOOT |
| PPF | POUNDS PER FOOT |
| PLF | POUNDS PER LINEAL FOOT |
| PSF | POUNDS PER SQUARE FOOT |
| PC | PRECAST CONCRETE |
| PRE-FAB | PREFABRICATE(D) |
| PROP | PROPOSED |

## Q

| | |
|---|---|
| QT | QUARRY TILE |
| QB | QUARRY TILE BASE |
| QTR | QUARTER |

## R

| | |
|---|---|
| RAD | RADIUS, RADIATOR, RADIATION |
| RC | RAINWATER CONDUCTOR |
| RECVG | RECEIVING |
| REC | RECESS(ED) |
| REF | REFERENCE |
| REFL | REFLECT(ED), (IVE), (OR) |
| REFR | REFRIGERATOR |
| REG | REGISTER |
| REINF | REINFORCE(D), (ING) |
| REQD | REQUIRED |
| RESIL | RESILIENT |
| RT | RESILIENT TILE |
| RA | RETURN AIR |
| REV | REVISION(S), REVISED |
| RH | RIGHT HAND |
| RHR | RIGHT HAND REVERSE |
| ROW | RIGHT OF WAY |
| R | RISER |
| Rd | ROAD |

## R (CONT.)

| | |
|---|---|
| RD | ROOF DRAIN |
| RS | ROOF SUMP |
| RFG | ROOFING |
| RM | ROOM |
| RO | ROUGH OPENING |
| RUB | RUBBER |
| RB | RUBBER BASE (OR RESILIENT BASE) |

## S

| | |
|---|---|
| SAN | SANITARY |
| SND | SANITARY NAPKIN DISPENSER |
| SNWR | SANITARY NAPKIN WASTE RECEPTACLE |
| SCH | SCHEDULE |
| SJ | SCORED JOINT |
| S.CONC | SEALED CONCRETE |
| SEAL | SEALER |
| SECT | SECTION |
| SS | SERVICE SINK |
| SHT | SHEET |
| SLO | SHORT LEG OUTSTANDING |
| SIM | SIMILAR |
| SK | SINK |
| SB | SOIL BORING |
| STC | SOUND TRANSMISSION CLASS |
| S | SOUTH |
| SPC | SPACER, SPACING |
| SPK | SPEAKER |
| SPEC(S) | SPECIFICATION(S) |
| SPEC'D | SPECIFIED |
| SQ | SQUARE |
| cm $^2$ | SQUARE CENTIMETER |
| SF | SQUARE FOOT (OR STOREFRONT) (OR SPORTS FLOORING) |
| STAG | STAGGERED |
| SST | STAINLESS STEEL |
| STD | STANDARD |
| STA | STATION |
| STL | STEEL |
| STN | STONE |
| STOR | STORAGE |
| SD | STORM DRAIN |
| ST | STREET |
| STRUCT | STRUCTURAL |
| SA | SUPPLY AIR |
| SUPP | SUPPORTS |
| SUSP | SUSPENDED |
| SW | SWITCH |
| SWBD | SWITCHBOARD |
| SWGR | SWITCHGEAR |
| SYM | SYMMETRY(ICAL) |

## T

| | |
|---|---|
| TKB | TACKBOARD |
| TP | TANGENT POINT |
| TEL | TELEPHONE |
| TV | TELEVISION |
| TEMP | TEMPERATURE, TEMPERED |
| TERR | TERRAZZO |
| TT | TERRAZZO TILE |
| THERM | THERMOSTAT |
| THK | THICK(NESS) |
| THRES | THRESHOLD |
| THRU | THROUGH/THOUGHOUT |
| TOIL | TOILET |
| TPH | TOILET PAPER HOLDER |
| TOL | TOLERANCE |
| T&G | TONGUE AND GROOVE |
| T&B | TOP & BOTTOM |
| TE | TOP ELEVATION |
| TOC | TOP OF CONCRETE |
| TC | TOP OF CURB |
| TOS | TOP OF STEEL |
| TWC | TOWEL & WASTE CABINET |
| TRAN | TRANSFORMER |
| T | TREAD |
| TYP | TYPICAL |

## U

| | |
|---|---|
| UH | UNIT HEATER |
| UON | UNLESS OTHERWISE NOTED |
| UR | URINAL |

## V

| | |
|---|---|
| VA | VALVE |
| VB | VAPOR BARRIER |
| VR | VAPOR RETARDER |
| VAR | VARNISH |
| VERT | VERTICAL |
| VEST | VESTIBULE |
| VIN | VINYL |
| VCT | VINYL COMPOSITION TILE |
| VT | VINYL TILE |
| VWC | VINYL WALL COVERING |
| VIT | VITREOUS |
| VRS | VINYL RESILIENT STRIP |

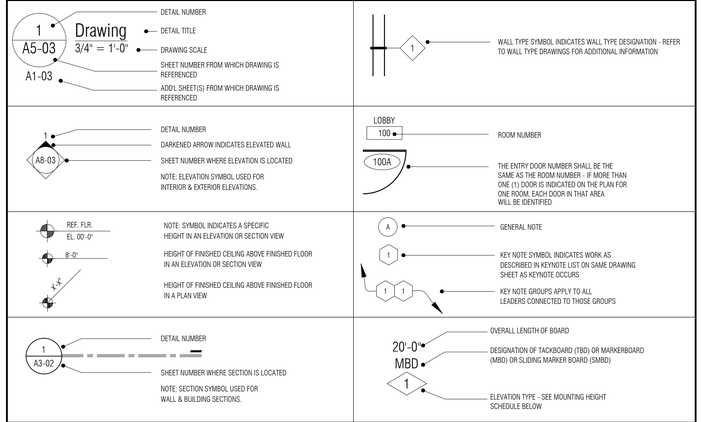
## W

| | |
|---|---|
| WAIN | WAINSCOT |
| WHYD | WALL HYDRANT |
| WH | WATER HEATER |
| WC | WATER CLOSET |
| WM | WATER MAIN |
| WP | WATERPROOFING |
| WR | WATER RESISTANT |
| WS | WATERSTOP |
| WT | WEIGHT |
| WWF | WELDED WIRE FABRIC |
| WWM | WELDED WIRE MESH |
| W | WIDTH, WIDE, WEST |
| W/ | WITH |
| W/O | WITHOUT |
| WD | WOOD |

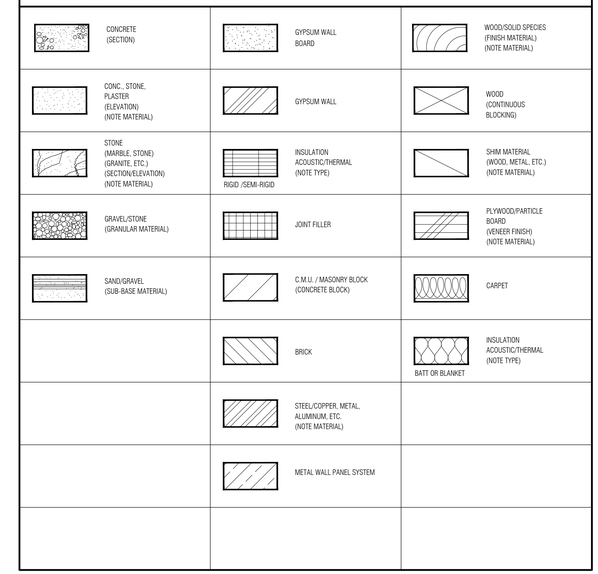
## Y

| | |
|---|---|
| YD | YARD |

# Graphic Symbols




# Material Poche Indications




# Text Symbols

| | | | |
|---|---|---|---|
| △ | ANGLE | P$_L$ | PLATE |
| ℄ | CENTERLINE | Ø | ROUND / DIAMETER |
| ⊏ | CHANNEL | & | AND |
| ⊥ | PERPENDICULAR | @ | AT |

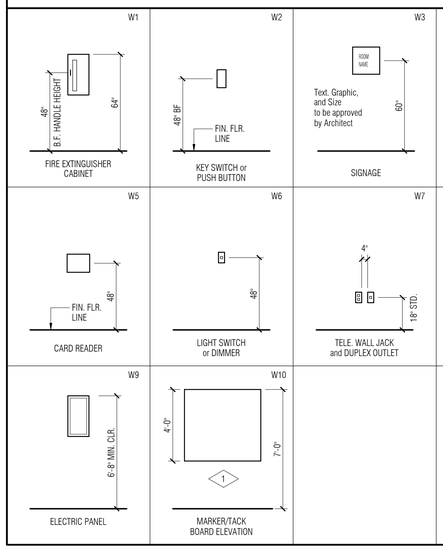
# Line Type Designation

| | |
|---|---|
| ——— | EXISTING ITEM TO REMAIN |
| - - - - | EXISTING ITEM TO BE REMOVED |
| ——— | NEW ITEM AS NOTED |

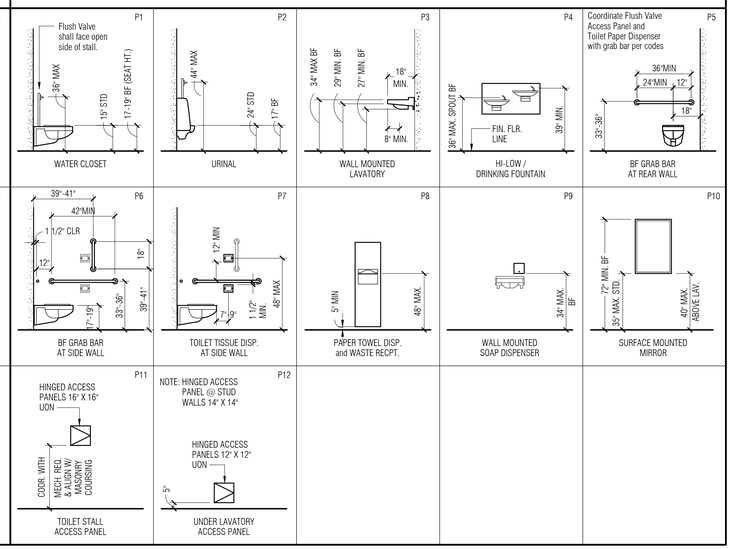
# Mounting Height Schedule

NOTES:
- ALL HEIGHTS SHOWN ARE TYPICAL FOR ALL ITEMS WHERE THEY OCCUR UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS (B.F. DENOTES BARRIER FREE REQUIREMENTS)
- NOT ALL ITEMS SHOWN ON THIS DRAWING MAY OCCUR ON THIS PROJECT

## WALL MOUNTED ACCESSORIES




## PLUMBING FIXTURES and TOILET ACCESSORIES





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CONSULTANT

KEY PLAN

OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/2016

DRAWN BY

PJE

CHECKED BY

ACS

APPROVED BY

MAM

SHEET NAME

GENERAL PROJECT INFORMATION

SHEET NO.

A0-01

## CODE INFORMATION - NARATIVE

**EXISTING BUILDING:**

THE ORIGINAL BUILDING WAS CONSTRUCTED IN 1928 AS AN EDUCATIONAL BUILDING. THE BUILDING HAS BEEN CONTINUALLY OCCUPIED AS AN EDUCATIONAL FACILITY FROM THAT TIME. THE CURRENT SCHOOL HAS BEEN CONSTRUCTED / RENOVATED AND APPROVED FOR OCCUPANCY UNDER PREVIOUS CODES. THE STRUCTURE IS MASONRY BEARING WITH CONCRETE FLOOR AND BEAMS.

**PROPOSED PROJECT SCOPE:**

THE PROPOSED PROJECT IS TO CONSTRUCT A SMALL ADDITION TO HOUSE AND SEPARATE NEW COOKING AREA FOR THE SCHOOL AND RENOVATE THE EXISTING FOOD SERVICE AND DINING AREAS. THE SCHOOL SERVES BOTH MIDDLE SCHOOL AND ELEMENTARY SCHOOL FOOD SERVICE PROGRAMS. PART OF THE RENOVATIONS WILL CONSOLIDATE THE DINING AREAS FOR THE MIDDLE SCHOOL AS WELL AS THE MIDDLE SCHOOL FOOD SERVICE AREAS. CONSOLIDATING THE FOOD SERVICE AND DINING FUNCTIONS WILL NECESSITATE RE-OCCUPANCY OF A FORMER CLASSROOM AREA ACROSS THE MAIN CORRIDOR FOR EDUCATIONAL PURPOSES AND CONNECTING THE SERVICE AND DINING AREA THROUGH A COMMON WALL.

**BUILDING ADDITION:**

THE BUILDING ADDITION HOUSES THE NEW COOKING EQUIPMENT AND IS SEPARATED FROM THE CURRENT BUILDING BY A 2 HOUR RATED FIRE WALL WITH SELF CLOSING FIRE DOOR TIED TO THE BUILDING FIRE ALARM SYSTEM. THE ADDITION HAS AN EMERGENCY EGRESS WINDOW INSTALLED. FREE PASSAGE HARDWARE IS INSTALLED TO PROVIDE CONTINUOUS EGRESS PATH TO THE NEAREST EXIT.

**RENOVATION AREAS:**

THE FOOD SERVICE AND DINING AREAS ARE RENOVATED FOR REPLACEMENT OF DETERIORATING FINISHES AND TO PROVIDE A MORE EFFICIENT DELIVERY AND SERVICE OF MEALS. THE FOOD SERVICE AREAS HAVE NO GAS FIRED EQUIPMENT AND ARE EQUIPPED TO MAINTAIN THE FOOD TEMPERATURES ONLY. ALL COOKING IS CONDUCTED IN THE PROPOSED NEW ADDITION.

**FOOD SERVICE UPGRADES:**

THE CURRENT FOOD SERVES AT THE SCHOOL IS PREPARED IN A REMOTE LOCATION AND TRANSPORTED TO THE SCHOOL FOR SERVICE. THE OLD WARMING EQUIPMENT IS BEING REPLACED AS WELL AS INSTALLATION OF THE NEW PROPOSED FOOD PREPARATION KITCHEN. ALL OF THE COOKING EQUIPMENT IS INSTALLED PER CURRENT HEATH DEPARTMENT REQUIREMENTS AND CURRENT CODE. A VENTILATION HOOD WITH FIRE SUPPRESSION IS BEING INSTALLED AS WELL AS A DISH WASHING HOOD IN THE WEAR WASHING AREA. VENTILATION IS THROUGH THE ADDITION ROOF AREAS DUCTWORK IS EQUIPPED WITH SMOKE FIRE DAMPERS.

**MECHANICAL AND ELECTRICAL SYSTEM UPGRADES:**

The new addition and adjacent renovated food service areas are served by a new roof top HVAC unit located on the addition roof. The remainder of the building is heated and ventilated by the existing steam heat and central ventilation system. The gas service has been upgraded for the new cooking equipment and is relocated to the exterior of the building per the utility requirements. The electrical system has been modified and re-circuited to support the addition and renovation areas. The fire alarm system has been upgraded with a new added panel to support the addition and renovation areas.

## BUILDING CODE PLAN LEGEND

NEW, OR EXISTING TO BE UPGRADED, 1-HOUR "FIRE PARTITION" CONSTRUCTION PER 2012 MBC SECTION 708. THIS WALL CONSTRUCTION HAS 20 MINUTE DOOR AND FRAME PROTECTIVES FOR ALL CORRIDORS.

NEW, OR EXISTING TO BE UPGRADED, 2-HOUR "FIRE BARRIER" CONSTRUCTION PER 2012 MBC SECTION 707 AND 1997 NFPA 101 SECTION 6-2.3. THIS WALL CONSTRUCTION HAS 90 MINUTE DOOR AND FRAME PROTECTIVES. PROVIDE FIRE / SMOKE DAMPERS AS REQUIRED PER 2012 MBC SECTION 714.

OCCUPANT LOAD EXITING THROUGH EGRESS COMPONENT

OCCUPANT CAPACITY OF EGRESS COMPONENT

OCCUPANT LOAD OF ROOM OR AREA

XXX ### ROOM NAME AND NUMBER

EXISTING BUILDING TO REMAIN

RENOVATED AREA

PROPOSED ADDITION

## GENERAL LIFE SAFETY NOTES

1. ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS SHALL BE IDENTIFIED WITH SIGNS OF STENCILING (WHERE WALL AREAS ARE CONCEALED FROM VIEW). LETTERS MUST BE A MIN. 3" IN HEIGHT WITH A MIN. 3/8" STROKE IN CONTRASTING COLOR, AND READ 'FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS'. LOCATE WITHIN 15'-0" OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30'-0".
2. THESE CODE ANALYSIS DRAWINGS (SHEET A0-02), NOTES, PLANS AND WALL IDENTIFICATION TYPES AND LOCATIONS ARE FOR FIRE RATINGS AND / OR SMOKE BARRIERS AS REQUIRED FOR LIFE SAFETY AND BUILDING CODE COMPLIANCE. ALL OTHER CONSTRUCTION REQUIREMENTS ARE INDICATED ON THE CONSTRUCTION DOCUMENTS.
3. ALL FIRE RATED WALLS OF ANY TYPE SHALL BE SEALED TIGHT TO ROOF DECK SYSTEM ABOVE WITH UL APPROVED MATERIAL BY EITHER JOHNS MANSVILLE FIRETEMP, HILTI FIRESTOP COMPOUND, OR 3M. ALL PRODUCTS / MATERIALS MUST BE UL APPROVED AND CLASSIFIED AND SUBMITTED FOR REVIEW AND APPROVAL BY ARCHITECT BEFORE APPLICATION/INSTALLATION.

## CODE INFORMATION - BUREAU OF FIRE SERVICES

**GOVERNING CODE:**

1999 SCHOOL SAFETY RULES
NFPA 101 LIFE SAFETY CODE, 1997 EDITION W/ AMENDMENTS (LSC)

**CHAPTER 3 USE and OCCUPANCY CLASSIFICATION:**

NFPA 101 SECTION 4-1.3: EDUCATIONAL OCCUPANCY
WITH ASSEMBLY AREA

**LSC BUILDING DATA SUMMARY:**

1997 LIFE SAFETY CODE:
CONSTRUCTION TYPE: II (000)
USE GROUP: E - EDUCATIONAL W/ AN ASSEMBLY SPACE

**CHAPTER 5 - MEANS OF EGRESS:**

EGRESS CAPACITY
LEVEL COMPONENTS AND RAMPS
0.2" / PERSON

**CHAPTER 6 FEATURES of FIRE PROTECTION:**

ALLOWABLE: PER MICHIGAN SCHOOL RULES, 10-1.6

CODE ANALYSIS AREA DATA - GROSS AREA - 'E' USE:

| | |
|---|---|
| (EXISTG. AREA) LOWER LEVEL | = 26,025 SQ FT |
| (ADDITION AREA) | = 537 SQ FT |
| TOTAL AREA (LOWER LEVEL) | = 26,562 SQ FT |
| AREA TO BE RENOVATED | = 5,420 SQ FT |

**PER LSC SECTION 9-1.7 & 10-1.7 AND MICHIGAN SCHOOL RULES 10-1.7.1**

ALLOWANCES PER OCCUPANT:

- 26-1.7- BUSINESS: 1 PERSON/100 SQ FT
- 10-1.7.1- CLASSROOMS: 1 PERSON/20 NET SQ FT

## CODE INFORMATION - BUREAU OF CONSTR. CODES

**GOVERNING CODES:**

2012 MICHIGAN BUILDING CODE w/ AMENDMENTS (MBC)
2011 NATIONAL ELECTRICAL CODE w/ AMENDMENTS (NEC)
2012 MICHIGAN MECHANICAL CODE w/ AMENDMENTS (MMC)
2012 MICHIGAN PLUMBING CODE w/ AMENDMENTS (MPC)
2009 ICC / ANSI A 117.1

**CLASSIFICATION OF OCCUPANCY (PER MBC SECTION 305)**

- USE GROUP
  E - EDUCATIONAL

**CONSTRUCTION TYPE (PER MBC CHAPTER 6)**

- EXISTING BUILDING : TYPE IB, NOT FIRE SUPPRESSED
- EXISTING BUILDING : 3 STORIES, LOWER LEVEL IS 34" BELOW GRADE
- ADDITION AREAS : TYPE IIB
  - 'E' USE GROUP - SINGLE STORY 34" BELOW GRADE

**ALLOWABLE HEIGHT AND BUILDING AREA (PER MBC TABLE 503)**

CODE ANALYSIS AREA DATA - GROSS AREA - 'E' USE : 3 STORIES

| | |
|---|---|
| (EXISTG. AREA) LOWER LEVEL | = 26025 SQ FT |
| (EXISTG. AREA) MAIN LEVEL | = 21628 SQ FT |
| (EXISTG AREA) UPPER LEVEL | = 23718 SQ FT |
| EXISTG AREA TOTAL | = 71371 SQ FT |
| (ADDITION AREA) SEPARATED W/ 2HR FIRE WALL | = 537 SQ FT |

EXISTING AREA TO BE RENOVATED:

| | |
|---|---|
| AREAS A AND B | = 2879 SQ FT |
| AREA C | = 1616 SQ FT |
| AREA D | = 925 SQ FT |
| RENOVATION AREA TOTAL | = 5420 SQ FT |

OCCUPANT LOADS WERE CALCULATED BASED ON THE FOLLOWING ALLOWANCES. THE MOST RESTRICTIVE APPLIES.

**PER MBC TABLE 1004.1.1**

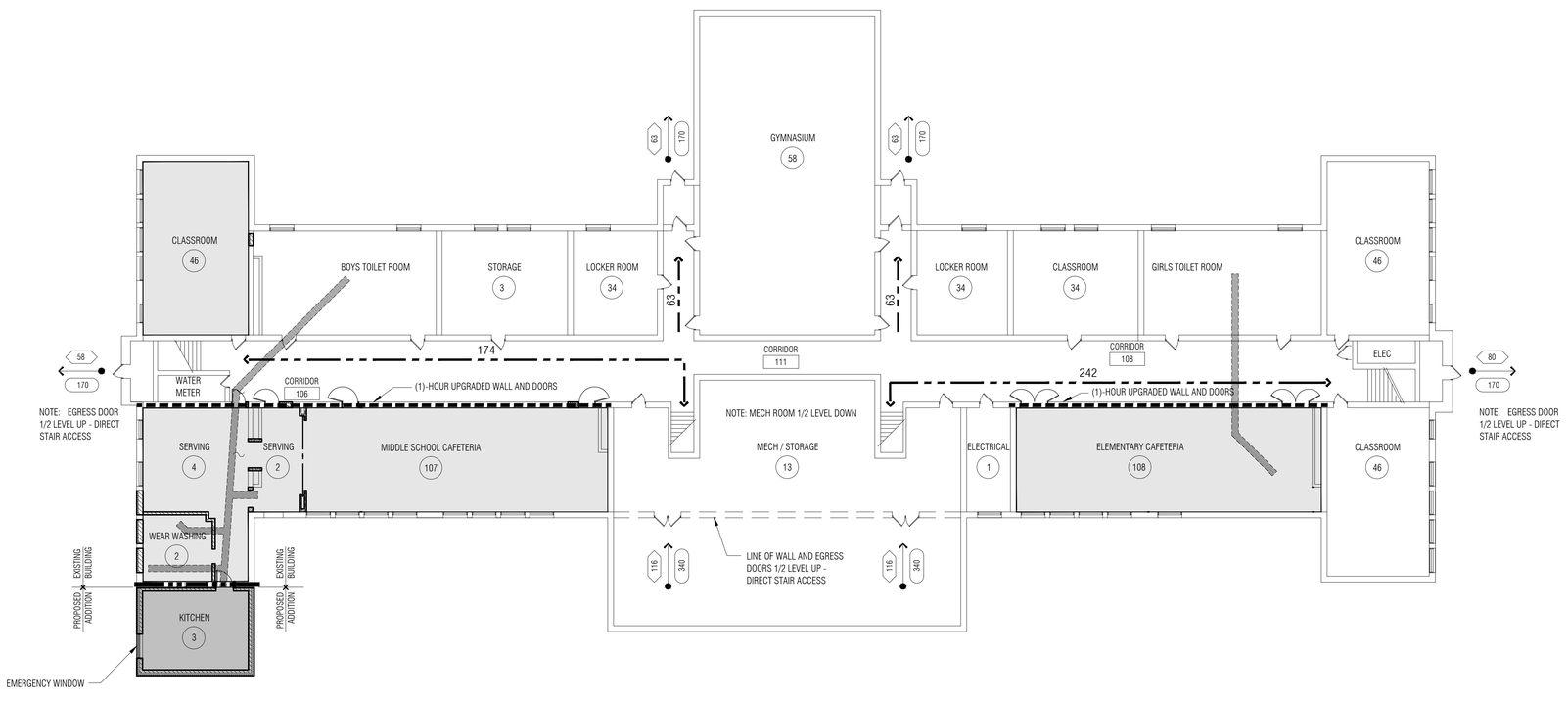
| | |
|---|---|
| STORAGE / MECH: | 1/300 SF (GROSS) |
| CLASSROOM | 1/20 SF (GROSS) |
| KITCHEN / SERVING | 1/200 SF (GROSS) |
| DINING ASSEMBLY UNCONCENTRATED | 1/15 SF (GROSS) |
| GYMNASIUM W/O BLEACHERS | 1/ 50 SF (GROSS) |

**MEANS OF EGRESS CAPACITY (PER MBC 1005.3.2)**

MEANS OF EGRESS CAPACITY FACTOR 0.2" PER OCCUPANT

**NUMBER OF MEANS OF EGRESS (ADDITION) (PER MBC 1015.1)**

TOTAL NUMBER OF OCCUPANTS IS LESS THAN 49
TOTAL DISTANCE TO AN EXIST IS LESS THAN 75 FEET. (PER MBC 1014.3)
TOTAL DISTANCE TO AN EXIT IS LESS THAN 200 FEET (PER MBC 1016.2)
NOTE; AN EMERGENCY EGRESS WINDOW IS PROVIDED IN ADDITION AREA.




1 Ground Level Code / Composite Plan
1/16" = 1'-0"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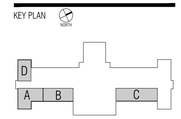
KEY PLAN




OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/2016

N

DRAWN BY
PJE

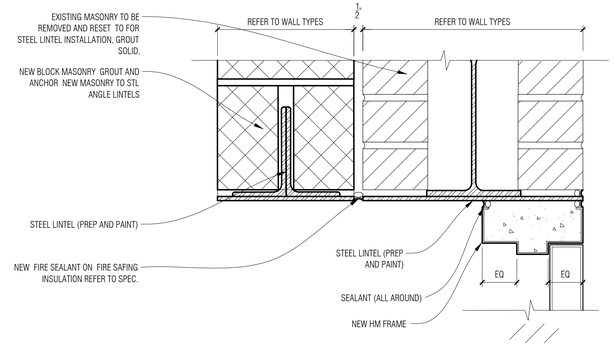
CHECKED BY
ACS

APPROVED BY
MAM

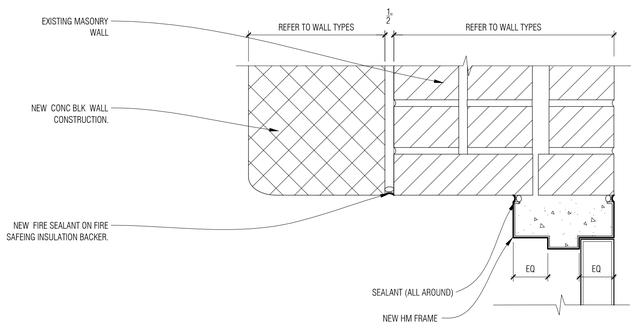
SHEET NAME

CODE / COMPOSITE FLOOR PLAN

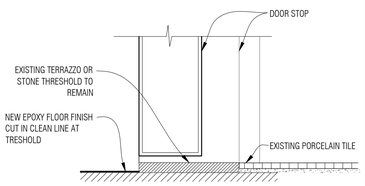
SHEET NO.
A0-02




T4 — HM HEAD AT NEW MASONRY WALL 3" = 1'-0" — D4

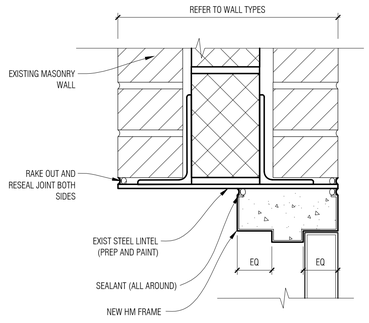



T3 — HM JAMB AT NEW MASONRY WALL 3" = 1'-0" — D3

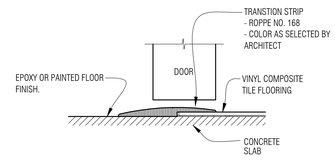



VINYL TO PORCELAIN TILE TRANSITION 6" = 1'-0" — T2

3" = 1'-0" — D6

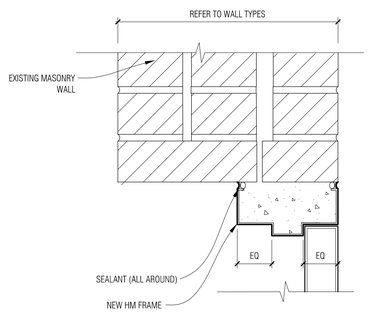



HM HEAD AT EXISTING MASONRY WALL 3" = 1'-0" — D2



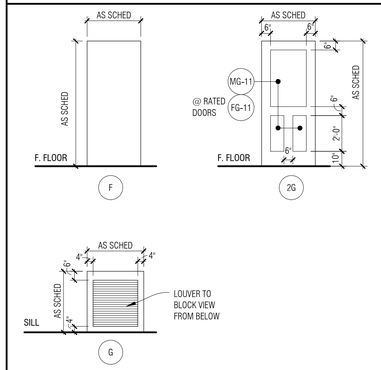

EPOXY TO VCT TRANSITION 6" = 1'-0" — T1

3" = 1'-0" — D5

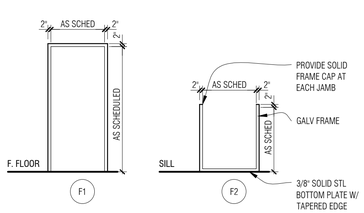



HM JAMB AT EXISTING MASONRY WALL 3" = 1'-0" — D1

## Door Types




## Frame Types




## Door/ Opening Schedule

| DOOR NO. | DOOR/OPENG SIZE (W x H) | DOOR | | | FRAME | | | DETAILS | | | HARDWARE SET # | DOOR LABEL (MIN) | DOOR/ OPENING KEY NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TYPE | MAT. | FINISH | TYPE | MAT. | FINISH | HEAD | JAMB | THRES / SILL | | | |
| 101 | 3'-8" x 7'-0" | F | HM | PNT | F1 | HM | PNT-1 | D4 | D3 | -- | 01 | 90 | 2, 3 |
| 103 | 3'-0" x 7'-0" | 2G | WD | ST-1 | F1 | HM | PNT-1 | D2 | D1 | T1 | 02 | 20 | 4 |
| 104 | 3'-0" x 7'-0" | 2G | WD | ST-1 | F1 | HM | PNT-1 | D2 | D1 | T1 | 02 | 20 | 4, 5 |
| 105A | 3'-6" x 7'-0" | 2G | WD | ST-1 | F1 | HM | PNT-1 | D2 | D1 | T1 | 03 | 20 | 4, 5 |
| 105B | 3'-6" x 7'-0" | 2G | WD | ST-1 | F1 | HM | PNT-1 | D2 | D1 | T1 | 03 | 20 | 4, 5 |
| 107A | (2) 3'-0" x 7'-0" | 2G | WD | ST-1 | F1 | HM | PNT-1 | D2 | D1 | T1 | 04 | 20 | 1, 4, 5 |
| 107B | (2) 3'-0" x 7'-0" | 2G | WD | ST-1 | F1 | HM | PNT-1 | D2 | D1 | T1 | 04 | 20 | 1, 4, 5 |
| RT01 | 3'-8" x 7'-0" | G | HM | PNT | F2 | HM | PNT | | D1 SIM | 8/A6-10 | 05 | 20 | 6 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

## Door/ Openings General Notes:

A. FIELD VERIFY ALL OPENINGS PRIOR TO DOOR/FRAME FABRICATION
B. GLAZING STOPS TO BE ON SECURE SIDE OF OPENING - TYPICAL
C. REFER TO DRAWING A0-03 FOR TYPICAL HEAD/JAMB/SILL DETAIL -REFER TO BALANCE OF DRAWINGS FOR ADDITIONAL DETAILS.
F. REFER TO SPECIFICATION SECTION 088000 GLAZING FOR GLASS TYPES, TYP. - COORDINATE GLASS THICKNESS WITH DOOR THICKNESS
G. ALL FRAMES IN 5" WALLS TO BE 5 3/4" DEPTH UNLESS OTHERWISE NOTED.

## Door/ Opening Key Notes:

1. MASONRY OPENING =6'-3"; FRAME JAMBS TO BE EQUAL AT =1 /12" EACH SIDE, FRAME HEAD TO BE 2".
2. SET FRAME AND ANCHORS TO ENGAGE WALL MASONRY AND NOT HIT VOID BETWEEN WALL CONSTRUCTION.
3. DOOR EQUIPPED W/ MAGNETIC HOLD OPEN - COORDINATE HARDWARE W/ ELEC AND FIRE ALARM.
4. FRAME SET IN EXISTING MASONRY. PROVIDE RENOVATION ANCHORS. FILL FASTENER HEADS FOR SMOOTH FINISH.
5. DOOR TO SWING 180° AGAINST WALL - COORDINATE HARDWARE.
6. NEW GALV EXTERIOR GATE W/ SPECIALTY HARDWARE. SET DOOR AND FRAME AFTER ROOF AND FLASHING INSTALLATION.

## Room Finish Schedule

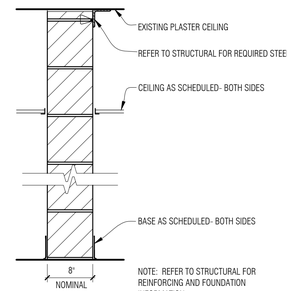
| ROOM NO. | ROOM NAME | FLOOR | BASE | WALLS | | | | CEILING FIN. | ROOM FINISH KEY NOTES |
|---|---|---|---|---|---|---|---|---|---|
| | | | | NORTH | EAST | SOUTH | WEST | | |
| 101 | KITCHEN | EPOXY | EPOXY | PNT-2 | PNT-2 | PNT-2 | PNT-2 | ACT-3 | 5, |
| 102 | DISHWASHING | EPOXY | EPOXY | PNT-2 | PNT-2 | PNT-2 | PNT-2 | ACT-3 | 4, 5, 6 |
| 103 | SERVING AREA A | VCT-1,2,3,4,5 | EPOXY | PNT-4 | PNT-2 | PNT-4 | PNT-2 | ACT-2 / GYP SOFFIT | 4, 6, 7 |
| 104 | CASHIER | VCT-1,2,3,4 | EPOXY / RB-1 | PNT-4 | PNT-2 | PNT-4 | PNT-2 | ACT-2 | 1, 4,6 |
| 105 | CAFETERIA A | VCT-1,2,3,4,5 | EPOXY / RB-1 | PNT-2,3,9 | PNT-2,3 | PNT-2 | PNT-2 | ACT-2,4 / GYP SOFFIT | 1, 4, 6, 7 |
| 106 | CORRIDOR | ETR / PATCH | ETR | ETR | ETR | PNT-12,13 | ETR | ETR | 2, 3 (REFER TO ALT #1) |
| 107 | CAFETERIA B | VCT-6 THRU 12 | EPOXY | PNT-2,6,8 | PNT-2 | PNT-2 | PNT-2,6,8 | ACT-2,4 / GYP SOFFIT | 4, 6, 7 |
| 108 | CORRIDOR | ETR / PATCH | ETR | ETR | ETR | PNT-12,13 | ETR | ETR | 2, 3 (REFER TO ALT #1) |
| 109 | CLASSROOM | VCT-13 | EPOXY | PNT-14 | PNT-14 | PNT-14 | PNT-14 | ACT-5 | 4, 6, 7 |
| 110 | CORRIDOR | EPOXY | EPOXY | -- | PNT-2 | PNT-2 | PNT-2 | ACT-1 | 4, 5, 6, |
| 111 | CORRIDOR | EPOXY | EPOXY | ETR | ERT | ERT | ETR | ETR | 8, (REFER TO ALT #1) |
| | | | | | | | | | |

## Room Finish General Notes:

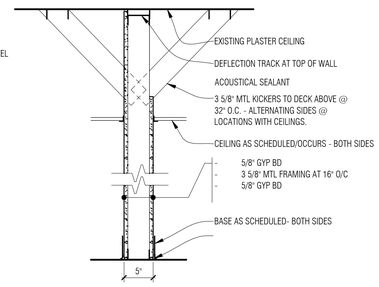
A. REFER TO REFLECTED CEILING PLANS AND FINISH FLOOR PLANS FOR LOCATIONS OF MATERIAL/ PAINT TRANSITION.
B. REFER TO MATERIAL FINISH/ COLOR SCHEDULE, SPECIFICATION SECTION 000200.
C. PROVIDE REDUCER STRIP AT ALL FLOOR MATERIAL TRANSITIONS - REFER TO THRESHOLD DETAILS
D. ALTERNATE #1 - NEW EPOXY FLOOR FINISH AND BASE FINISH IN CORRIDORS 106, 108, 110, INCLUDING REMOVAL OF OLD PAINTED FINISH AND PREP OF EXISTING SURFACES TO RECEIVE EPOXY FINISH. ( REFER TO KEY NOTES 2, 4,5,6,7)

## Room Finish Key Notes:

1. RUBBER BASE OCCURS AT GYP BD WALL, MATCH EPOXY BASE COLOR.
2. REFER TO NOTES 42-44 ON SHEET A3-01 FOR FLOOR PATCHING AT NEW WORK. (BASE BID)
3. PAINT WALL AT TOOTHED-IN MASONRY INFILLS TO MATCH EXISTING PAINT COLORS.
4. PROVIDE ADDITIONAL FLOOR PREP AND FILL AT OLDER DAMAGED CONCRETE FLOOR SURFACE TO PROVIDE A UNIFORM SURFACE TO RECIEVE NEW FLOOR FINISH.
5. PREP EXISTING CONCRETE FLOOR TO RECEIVE NEW EPOXY FLOOR FINISH.
6. PREP EXISTING CAST CONCRETE FLOOR BASE TO RECEIVE NEW EPOXY FINISH INCLUDING BASE REPAIRS.
7. REMOVE PAINT FROM EXISTING FLOOR DRAINS, CLEANOUTS, AND UTILITY COVERS FOR A NEWER APPEARANCE.
8. REFER TO SHEET A3-01 FOR EXTENT OF ALTERNATE # 1 FLOOR FINISH REPLACEMENT. VERIFY CONDITIONS IN FIELD.




2 WALL TYPE '2'
1" = 1'-0"




1 WALL TYPE '1'
1" = 1'-0"

## Wall Types - General Notes:

A. REFER TO WALL SECTIONS AND INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.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CONSULTANT

KEY PLAN

OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/2016

DRAWN BY
PJE

CHECKED BY
ACS

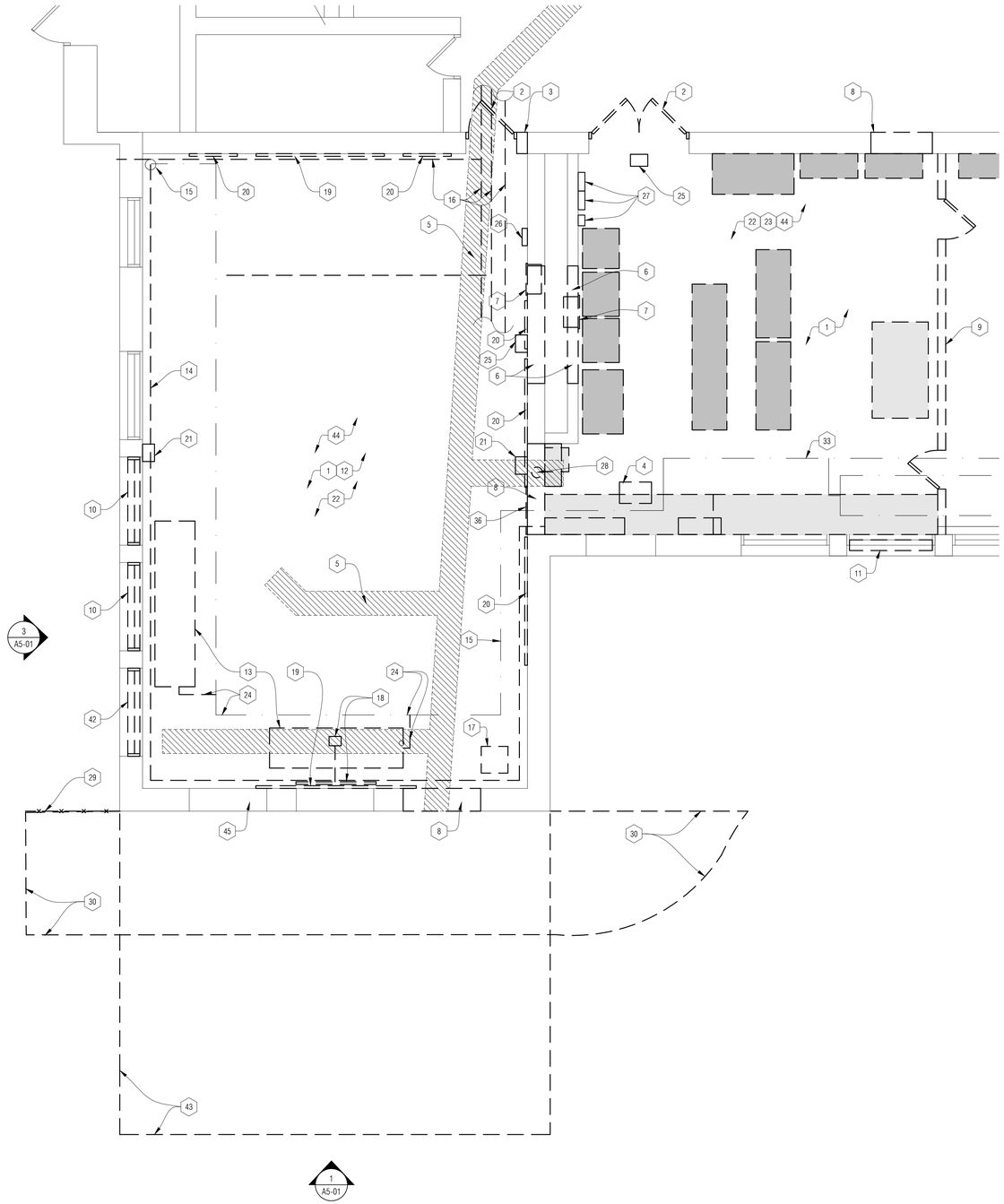
APPROVED BY
MAM

SHEET NAME

SCHEDULES, DOOR, FRAME & WALL TYPES

SHEET NO.

A0-03




1 Partial Demo Floor Plan - Area A
1/4" = 1'-0"

## DEMO FLOOR PLAN - KEY NOTES:

1. EXISTING VCT FLOORING TO BE REMOVED AND CONC FLOOR PREPARED FOR NEW FINISH.
2. EXISTING WD DOOR AND FRAME TO BE REMOVED FOR NEW DOOR AND FRAME.
3. EXISTING MASONRY TO BE REMOVED AND MODIFIED FOR NEW DOOR AND FRAME INSTALLATION.
4. EXISTING IN-FLOOR GREASE TROP TO BE REMOVED.
5. EXISTING CONC FLOOR SLAB TO BE SAW-CUT AND REMOVED FOR NEW UTILITY INSTALLATION - REFER TO MECH AND FOOD SERVICE EQUIPMENT PLANS. REFER TO COMPOSITE CODE PLAN, SHEET A0-02, FOR EXTENT OF WORK BEYOND.
6. EXISTING MASONRY CHASE WALL AND FLUE CONSTRUCTION TO BE REMOVED AND MODIFIED FOR NEW OPENING, INCLUDING FLOOR MODIFICATION AND INFILL - REFER TO NEW WORK PLAN.
7. EXISTING WALL GRILLE AND LOUVER TO BE REMOVED.
8. EXISTING MASONRY WALL TO BE REMOVED FOR NEW DOOR OPENING - REFER TO NEW WORK PLAN.
9. EXISTING FRAMED PARTITION WALL AND DOOR OPENING TO BE REMOVED COMPLETE.
10. EXISTING EXTERIOR WINDOW SYSTEM TO BE REMOVED COMPLETE, INCLUDING MTL CASEMENT TRIM.
11. EXISTING FAN UNIT AND INSULATED WINDOW PANEL BRACKETS TO BE REMOVED COMPLETE. PREP WINDOW FOR RELOCATED GLASS INSTALLATION. REFER TO NOTE 6 ON A3-01.
12. EXISTING LAY-IN CEILING SYSTEM AND LIGHT TO BE REMOVED INCLUDING LIGHT FIXTURES.
13. EXISTING CEILING MOUNTED RADIATORS TO BE REMOVED WITH PIPING MODIFICATIONS - REFER TO MECH.
14. EXISTING LOW CONDENSATE PIPING AND RISER TO BE REMOVED AND MODIFIED - REFER TO MECH.
15. EXISTING STEAM HEATING LINE TO REMAIN W/ MODIFICATIONS - REFER TO MECH.
16. EXISTING WALL OR CEILING HUNG DOMESTIC WATER LINES TO BE MODIFIED - REFER TO MECH.
17. EXISTING TV BRACKET TO BE REMOVED.
18. EXISTING SMART BOARD PROJECTOR AND ASSOCIATED CONTROLS TO BE RELOCATED.
19. EXISTING WALL MOUNTED CHALK BOARD TO BE REMOVED COMPLETE.
20. EXISTING WALL MOUNTED MARKER/TACK BOARD TO BE RELOCATED.
21. EXISTING SOUND REINFORCING SYSTEM SPEAKER AND COMPONENTS TO BE RELOCATED - VERIFY LOCATION AND WIRING IN FIELD.
22. EXISTING SURFACE MOUNTED ELECTRICAL/DATA OUTLETS AND RACEWAYS TO BE REMOVED AND/OR RE-CIRCUITED - REFER TO ELEC.
23. EXISTING LIGHTING FIXTURES AND WIRING TO BE REMOVED - REFER TO ELEC.
24. EXISTING STEAM HEATING LINE TO REMAIN (ABOVE). MODIFY FOR REMOVAL OF BRANCH LINE SERVING RADIATORS - REFER TO MECH.
25. EXISTING PA SPEAKER TO BE REMOVED. PRESSURE WIRE CONNECTION FOR NEW SPEAKER INSTALLATION.
26. EXISTING THERMOSTAT/CONTROLS TO BE REMOVED - REFER TO MECH.
27. EXISTING ELECTRICAL PANELS AND DISCONNECT TO BE MODIFIED - REFER TO ELEC.
28. EXISTING SANITARY VENT STACK TO BE MODIFIED FOR NEW ROOF DRAIN PIPE CONNECTION. - REFERR TO MECH.
29. EXISTING 6'-0" HIGH CHAIN LINK FENCE SECTION W/ END POSTS AND POST FOUNDATIONS TO BE REMOVED. SAW CUT AND THERMAL BOND REPAIR ASPHALT PAVING AS REQ'D.
30. LINE OF EXISTING CONC WALK TO BE REMOVED FOR NEW ADDITION CONSTRUCTION - REFER TO CIVIL SURVEY AND SITE PLAN.
31. EXISTING DOOR PANEL, FRAME, AND TRIM TO BE REMOVED.
32. EXISTING WALL MOUNTED CLOCK TO BE REMOVED AND TURNED OVER TO OWNER.
33. EXISTING STEAM HEAT PIPING AND RADIATORS TO REMAIN. PROTECT DURING DEMO AND NEW WORK - REFER TO MECH WORK PLAN.
34. EXISTING CONDENSATE PIPING TO REMAIN W/ MODIFICATIONS - REFER TO MECH.
35. EXISTING PAINTED FLOOR FINISH (MULTIPLE LAYERS) TO BE REMOVED FOR NEW FLOOR FINISH INSTALLATION INCLUDING EXISTING BASE.
36. EXISTING WALL GRILLE SUPPLY TO BE REMOVED AND REPLACE - MATCH SIZE - REFER TO MECH.
37. EXISTING WALL EXHAUST GRILLE W/ BACK DRAFT DAMPER TO BE REMOVED AND REPLACED - MATCH SIZE. CLEAN DEBRIS FROM EXHAUST FLUE.
38. EXISTING DOMESTIC WATER LINE TO EXTERIOR HOSE BIB TO BE MODIFIED - REFER TO MECH.
39. EXISTING ACOUSTICAL TILE/GRID SOFFIT DROP TO BE REMOVED, INCLUDING SUPPLEMENTAL HANGERS AND FRAMING.
40. AREA OF EXISTING DAMAGED PLASTER SUB-CEILING - REMOVE DAMAGED PLASTER AND REFASTEN PLASTER EDGE. VERIFY EXTENT OF DAMAGED/LOOSE PLASTER IN FIELD.
41. EXISTING EXIT SIGN TO BE REMOVED AND TURNED OVER TO OWNER.
42. EXISTING WINDOW UNIT TO BE REMOVED FOR REINSTALLATION IN NEW CONSTRUCTION.
43. LINE OF NEW ADDITION.
44. EXISTING CONC FLOOR SLAB TO BE SAW CUT AND REMOVED FOR NEW ELECTRICAL IN-FLOOR J-BOX LOCATIONS. REFER TO ELECTRICAL FOR LOCATIONS AND EXTENT OF WORK.
45. REFER TO MECH, ELEC, NEW WORK PLAN FOR NEW UTILITY AND DUCT PENETRATIONS. PROVIDE STL LINTEL L2 TO SUPPORT CONSTRUCTION ABOVE.

## DEMO FLOOR PLAN - GENERAL NOTES:

A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL, CIVIL, STRUCT., MECH. AND ELEC., AND FOOD SERVICE DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/ SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.

B. ALL KEY NOTES MAY NOT APPLY TO EACH SHEET - REFER TO ADDITIONAL DEMO SHEETS.

C. ALL REMOVED ITEMS, WALLS, FLOORS, CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES.

D. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

E. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.

F. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH. U.N.O.

G. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO BIDDING.

H. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER, ARCHITECT, OR CONSTRUCTION MANAGER) AT NO ADDITIONAL COST.

I. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION.

J. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER'S ABATEMENT CONTRACTOR PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT.

K. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF-SITE, U.O.N.

L. REMOVE ALL PICTURES, FRAMES &PLAQUES THAT MAY BE DAMAGED DURING CONSTRUCTION AND RETURN TO OWNER.

M. CONTRACTOR IS TO DEMO AND PREPARE EXISTING WALL CONSTRUCTION AS REQUIRED FOR INSTALLATION OF NEW MECHANICAL AND ELECTRICAL WORK WITHIN EXISTING WALL.

N. PREP ALL MASONRY OPENINGS TO RECEIVE NEW TOOTHED-IN MASONRY FOR LIKE NEW APPEARANCE WHERE DEMOLITION OCCURS AND WALL IS VISIBLE.

O. CONTRACTOR TO COORDINATE EXIST. CONC. SLAB REMOVAL THAT IS REQUIRED FOR INSTALLATION OF NEW UNDERGROUND PLUMBING WITH DEMOLITION CONTRACTOR.

P. REMOVE ALL EXISTING EXPOSED CONDUIT NOT IN USE PRIOR TO OR AFTER NEW WORK.

Q. ALL DEVICES SUCH AS SECURITY CAMERAS, CLOCKS, DVD, VCR, WIFI WIRELESS ROUTERS, ETC. AND THEIR ASSOC. COMPONENTS ARE TO BE CAREFULLY REMOVED AND TURNED OVER TO OWNER.

## DEMO LEGEND:

EXISTING KITCHEN EQUIPMENT TO BE RELOCATED INCLUDING TEMPORARY STORAGE WITH-IN BUILDING

EXISTING KITCHEN EQUIPMENT, COUNTERS, CASEWORK TO BE REMOVED AND DISPOSED OF OFF-SITE UNLESS TAGGED FOR SALVAGE BY OWNER

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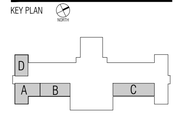
KEY PLAN

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Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
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PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/2016

DRAWN BY
PJE

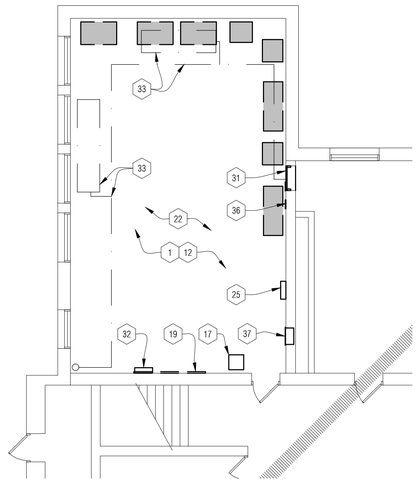
CHECKED BY
ACS

APPROVED BY
MAM

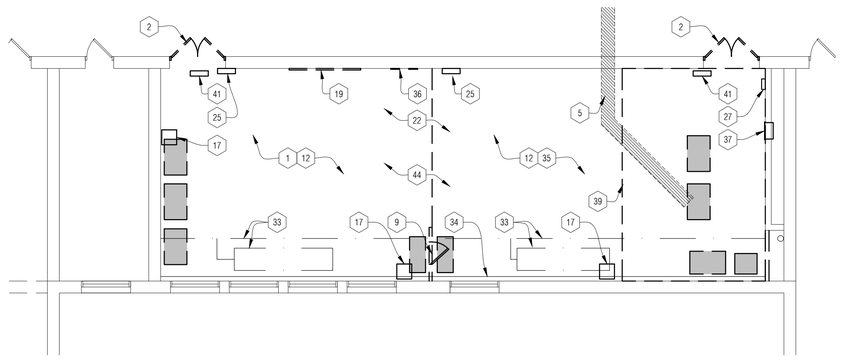
SHEET NAME

PARTIAL DEMO
FLOOR PLANS

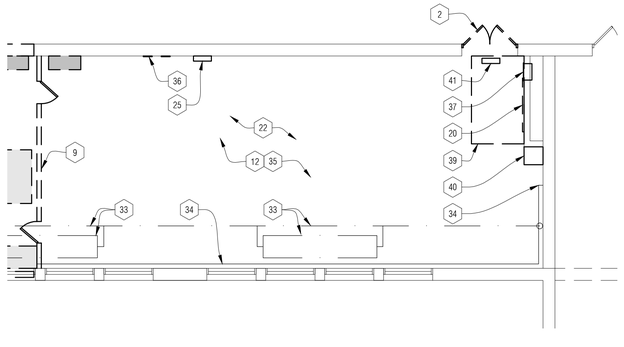
SHEET NO.
A1-01




3 Partial Demo Floor Plan - Area D
1/8" = 1'-0"




2 Partial Demo Floor Plan - Area C
1/8" = 1'-0"




1 Partial Demo Floor Plan - Area B
1/8" = 1'-0"

## DEMO FLOOR PLAN - KEY NOTES:

1. EXISTING VCT FLOORING TO BE REMOVED AND CONC FLOOR PREPARED FOR NEW FINISH.
2. EXISTING WD DOOR AND FRAME TO BE REMOVED FOR NEW DOOR AND FRAME.
3. EXISTING MASONRY TO BE REMOVED AND MODIFIED FOR NEW DOOR AND FRAME INSTALLATION.
4. EXISTING IN-FLOOR GREASE TROP TO BE REMOVED.
5. EXISTING CONC FLOOR SLAB TO BE SAW-CUT AND REMOVED FOR NEW UTILITY INSTALLATION - REFER TO MECH AND FOOD SERVICE EQUIPMENT PLANS. REFER TO COMPOSITE CODE PLAN, SHEET A0-02, FOR EXTENT OF WORK BEYOND.
6. EXISTING MASONRY CHASE WALL AND FLUE CONSTRUCTION TO BE REMOVED AND MODIFIED FOR NEW OPENING, INCLUDING FLOOR MODIFICATION AND INFILL - REFER TO NEW WORK PLAN.
7. EXISTING WALL GRILLE AND LOUVER TO BE REMOVED.
8. EXISTING MASONRY WALL TO BE REMOVED FOR NEW DOOR OPENING - REFER TO NEW WORK PLAN.
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14. EXISTING LOW CONDENSATE PIPING AND RISER TO BE REMOVED AND MODIFIED - REFER TO MECH.
15. EXISTING STEAM HEATING LINE TO REMAIN W/ MODIFICATIONS - REFER TO MECH.
16. EXISTING WALL OR CEILING HUNG DOMESTIC WATER LINES TO BE MODIFIED - REFER TO MECH.
17. EXISTING TV BRACKET TO BE REMOVED.
18. EXISTING SMART BOARD PROJECTOR AND ASSOCIATED CONTROLS TO BE RELOCATED.
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22. EXISTING SURFACE MOUNTED ELECTRICAL/DATA OUTLETS AND RACEWAYS TO BE REMOVED AND/OR RE-CIRCUITED - REFER TO ELEC.
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EXISTING KITCHEN EQUIPMENT, COUNTERS, CASEWORK TO BE REMOVED AND DISPOSED OF OFF-SITE UNLESS TAGGED FOR SALVAGE BY OWNER

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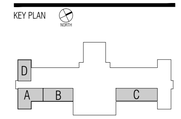
KEY PLAN




OWNER

Hamtramck
Public Schools

PROJECT NAME

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Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/2016

N

DRAWN BY
PJE

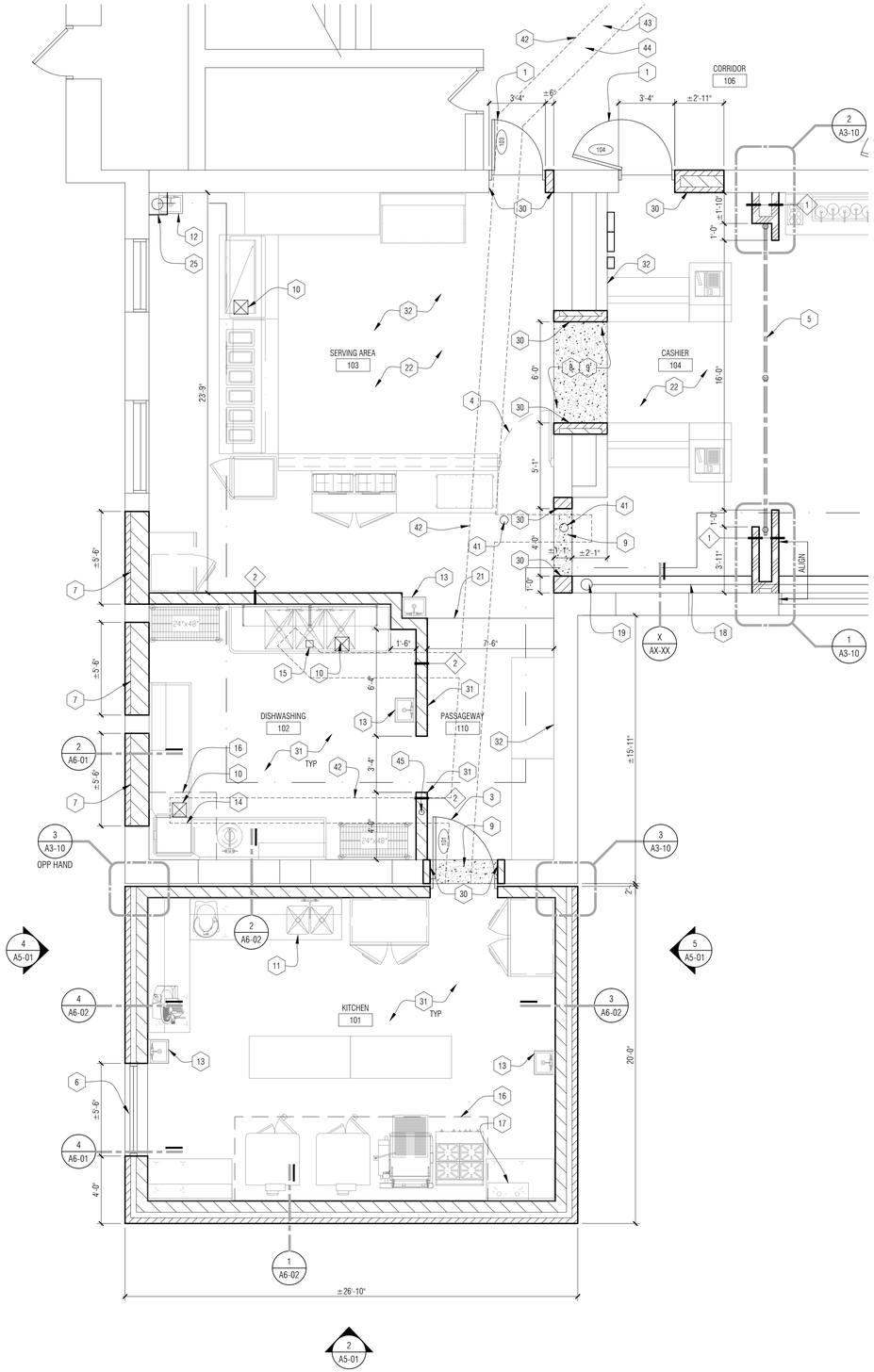
CHECKED BY
ACS

APPROVED BY
MAM

SHEET NAME

PARTIAL DEMO
FLOOR PLANS

SHEET NO.
A1-02




1 Partial New Work Floor Plan - Area A
1/4" = 1'-0"

## FLOOR PLAN - KEY NOTES:

1. NEW WD DOOR / HM FRAME IN ALTERED EXISTING OPENING. VERIFY / COORDINATE W/ FIELD CONDITIONS - REFER TO DOOR SCHEDULE.
2. NEW WD DOOR / HM FRAME IN EXISTING OPENING. VERIFY / COORDINATE W/ FIELD CONDITIONS - REFER TO DOOR SCHEDULE.
3. NEW HM DOOR AND FRAME IN NEW RATED WALL CONSTRUCTION - REFER TO DOOR SCHEDULE.
4. NEW NON-LOCKING ACCESS GATE BY FOOD SERVICE EQUIPMENT CONTRACTOR.
5. NEW HORIZONTAL FOLDING SECURITY GRILLE. COORDINATE LOCK POST AND INTERMEDIATE LOCK POSTS AND FLOOR RECEIVER PER MANUFACTURER REQMENTS.
6. RELOCATED WINDOW UNIT IN NEW WALL CONSTRUCTION. PROVIDE NEW MATCHING ALUMINUM TRIM INTERIOR / EXTERIOR. REMOVE UPPER GLASS FOR INFILL OF ROOM 105 - REFER TO DEMO NOTE 11/A1-01. PROVIDE 3/4" INSULATED PANEL IN UPPER SASH - REFER TO SPEC.
7. NEW MATCHING BRICK AND BLOCK MASONRY INFILL AT REMOVED WINDOW. COORDINATE W/ EXISTING FIELD CONDITIONS - MATCH BRICK COURSING.
8. NEW OPENING IN EXISTING CHASE WALL CONSTRUCTION. COORDINATE W/ EXISTING EXHAUST FLUE LOCATIONS - REFER TO STRUCTURAL FOR NEW LINTEL. PROVIDE TEMPORARY SHORING AS REQ'D.
9. NEW OPENING IN EXISTING MASONRY WALL - REFER TO STRUCTURAL FOR LINTEL. REMOVE MASONRY BELOW FLOOR LINE. INFILL CONC FLOOR SLAB TO MATCH. GRIND EXISTING FLOOR SURFACE AND/OR INFILL EXISTING SLAB FOR TRANSITION.
10. NEW FLOOR SINK / INDIRECT WASTE IN EXISTING CONC FLOOR CONSTRUCTION. SAW CUT EXISTING FLOOR SLAB FOR FIXTURE AND UNDER FLOOR WASTE PIPING. COORDINATE LOCATION W/ FOOD SERVICE CONTRACTOR AND EQUIPMENT LAYOUT - REFER TO MECH.
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17. NEW ANSEL FIRE PROTECTION SYSTEM W/ WALL MOUNTING BRACKETS AND CONTROLS - COORDINATE W/ FOOD SERVICE CONTRACTOR.
18. EXISTING CONDENSATE HEATING PIPE TO REMAIN W/ MODIFICATIONS AND NEW PIPE COVER - REFER TO DETAIL 6/A6-10 AND MECH.
19. NEW STEAM PIPE CONNECTION AND CONDENSATE RISER CONNECTING TO EXISTING PIPING - REFER TO MECH.
20. NEW WD DOOR IN HM FRAME IN NEW OPENING - REFER TO DOOR SCHEDULE. COORDINATE W/ FIELD CONDITIONS.
21. NEW EPOXY FLOOR FINISH / VCT FLOOR FINISH TRANSITION.
22. NEW VCT FLOOR FINISH - REFER TO ROOM FINISH SCHEDULE AND FINISH PLAN.
23. NEW WALL SUPPLY GRILLE (HIGH ON WALL). PAINT TO MATCH WALL COLOR - REFER TO MECH.
24. NEW WALL RELIEF GRILLE W/ DAMPER (LOW ON WALL). PAINT TO MATCH WALL COLOR - REFER TO MECH.
25. NEW GYP BD ON 2" MTL FURRING TO CONCEAL WATER PIPING TO EXTERIOR HOSE BIB. PAINT TO MATCH NEW WALL COLOR. REFER TO MECH FOR PIPE MODIFICATIONS.
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30. MODIFY AND/OR EXTEND EXISTING 3 1/2" CAST CONC BASE AT NEW DOOR OPENING. RETURN CAST BASE TO DOOR FRAME LOCATION. MATCH EXISTING BASE PROFILE. PAINT BASE PER FINISH SCHEDULE (V.I.F.).
31. EXTEND EPOXY FINISH (WITHOUT COLOR FLAKES) AT EXISTING CONC BASE AND MATCHING HEIGHT UP WALL AT NEW MASONRY WALL CONSTRUCTION.
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40. REINSTALL RELOCATED SMART BOARD AND PROJECTOR, INCLUDING ELEC POWER AND DATE IN SURFACE RACEWAY SYSTEM - REFER TO ELEC.
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42. LINE OF CONC FLOOR SLAB INFILL AT UNDER-FLOOR UTILITY INSTALLATION. PROVIDE SAND FILL COMP TO 95% - REFER TO ELEC FOR ADDITIONAL WORK SCOPE.
43. REFER TO COMPOSITE PLAN ON A0-02 FOR EXTENT OF FLOOR INFILL AND FINISH RESTORATION BEYOND PLAN AREA - COORDINATE W/ MECH.
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45. ROOF DRAIN RISER IN NEW WALL CONSTRUCTION. DRAIN LINE TO RUN UNDER FLOOR TO EXISTING FLOOR DRAIN LOCATION. REFER TO MECH. INSTALL NEW CLEAN OUT COVER AT VERTICAL DRAIN LINE.

## FLOOR PLAN - GENERAL NOTES:

A. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESSES ARE SHOWN NOMINAL - SEE WALL TYPES FOR ACTUAL THICKNESS.

B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS.

C. ALL EXPOSED CORNERS OF MASONRY BLOCK ARE TO BE BULLNOSED.

D. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

E. EXISTING MASONRY WALL INTERSECTIONS WHICH ARE LEFT EXPOSED AFTER DEMOLITION OF ADJACENT MASONRY CONSTRUCTION MUST BE PATCHED AND REPAIRED WITH NEW MASONRY OR EXISTING BRICK VENEER, TOOTH-IN TO MATCH EXISTING COURSING AND BOND PATTERN, TYPICAL AT ALL LOCATIONS.

F. FIRE RATED PARTITIONS ARE INDICATED ON CODE PLANS.

G. REFER TO MECHANICAL / ELECTRICAL DRAWINGS FOR INSTALLATION OF NEW EQUIPMENT, WIRING, ETC. AT EXISTING WALLS. ALL ITEMS ARE TO BE INSTALLED WITHIN EXISTING WALLS - REMOVE AND REINSTALL MASONRY (TOOTH-IN) AT ALL LOCATIONS.

H. REFER TO MECHANICAL / ELECTRICAL DRAWINGS FOR REMOVAL OF EXISTING EQUIPMENT WITHIN EXISTING CONSTRUCTION - TOOTH-IN NEW MASONRY BLOCK AND AND PREP FOR NEW FINISH.

I. FIELD VERIFY ALL EXISTING OPENINGS TO RECEIVE NEW WORK PRIOR TO FABRICATION OF ANY FRAME TYPES - NOTIFY ARCHITECT OF ANY DISCREPANCIES.

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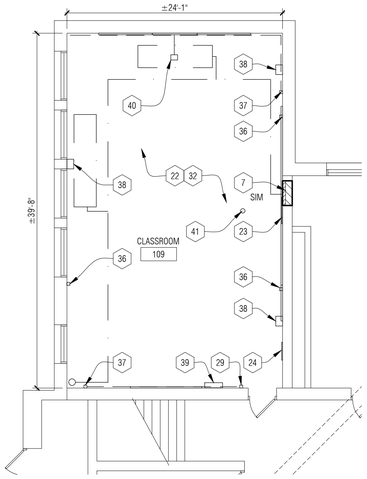
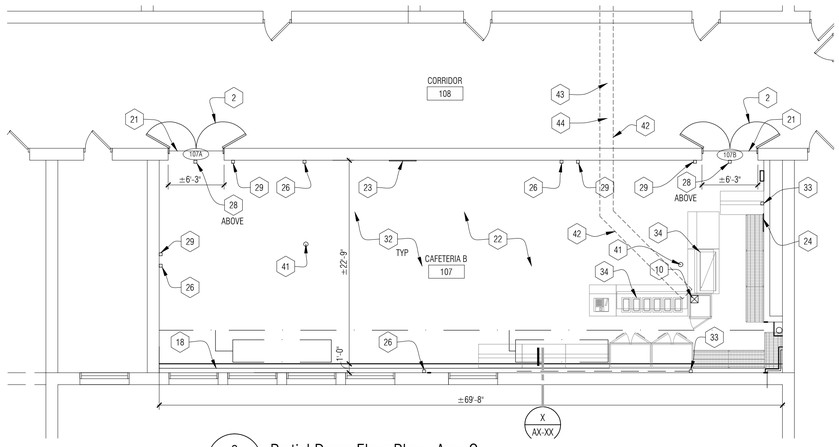
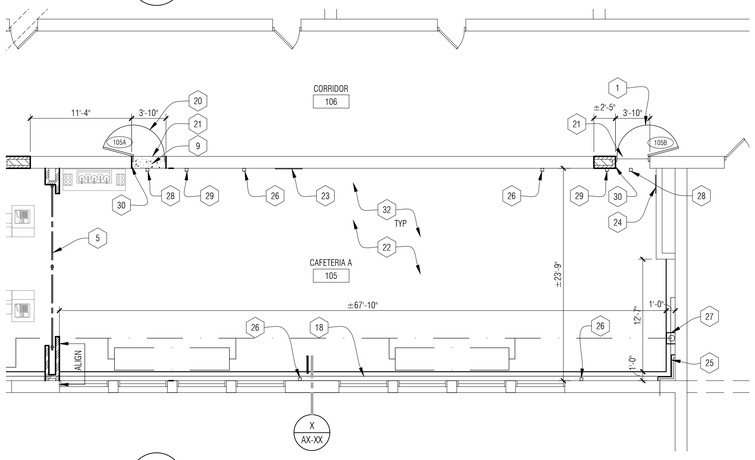



3 Partial Demo Floor Plan - Area D
1/8" = 1'-0"




2 Partial Demo Floor Plan - Area C
1/8" = 1'-0"

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PLANS

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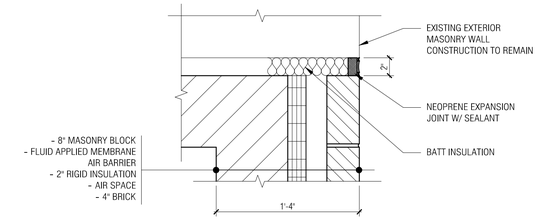
A3-02

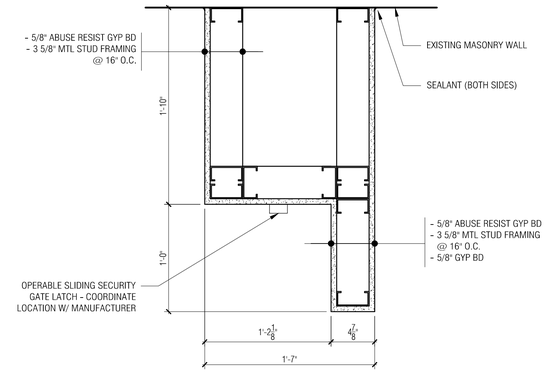
12 Detail
1-1/2" = 1'-0"

9 Detail
1-1/2" = 1'-0"

6 Detail
1-1/2" = 1'-0"




3 PlanDetail
1-1/2" = 1'-0"




2 Plan Detail
1-1/2" = 1'-0"

11 Detail
1-1/2" = 1'-0"

8 Detail
1-1/2" = 1'-0"

5 Detail
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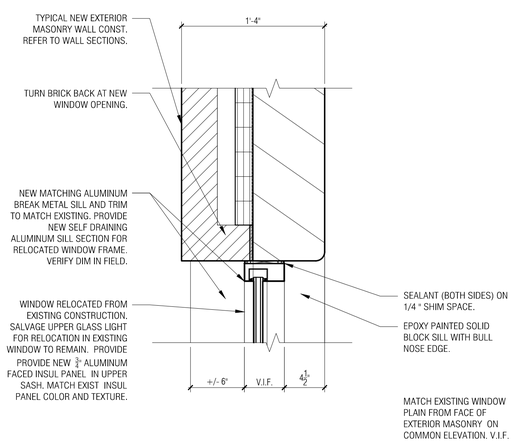


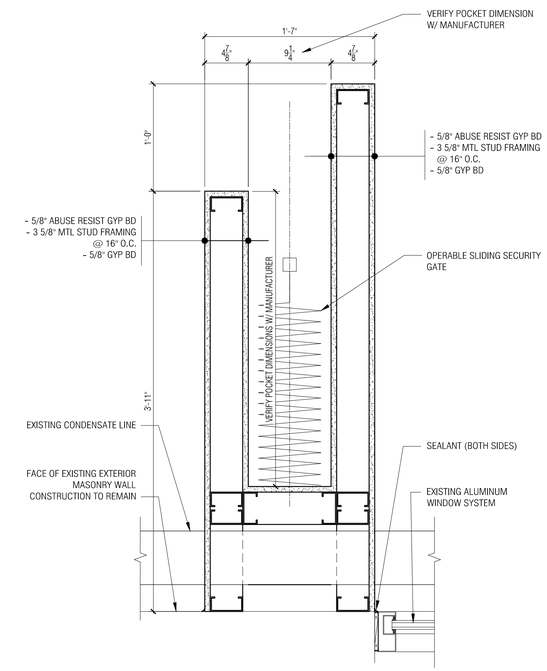


10 Detail
1-1/2" = 1'-0"

7 Detail
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4 Detail
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1 Plan Detail
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PLAN DETAILS

SHEET NO.

A3-10

## ROOF PLAN - GENERAL NOTES

A. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION ROOF RELATED ITEMS.

B. TAPERED INSULATION SHALL SLOPE 1/4" PER 1'-0" TOWARDS ROOF SUMP UNLESS OTHERWISE NOTED. SLOPE VALUES ARE APPROXIMATE. IF SLOPE CANNOT BE ACHIEVED, CONTACT ARCHITECT BEFORE PROCEEDING FURTHER. ARROWS SHOWN REPRESENT DOWN SLOPE OF ROOF.

C. MECH CURBS SHALL BE PROVIDED CONTINUOUSLY AT ALL SIDES OF MECH UNITS - REF TO DETAIL 2/A3-20.

D. PROVIDE 1 ROW OF 36"x36" ROOF WALKWAY PADS AROUND ENTIRE MECHANICAL UNIT. TYP FOR ALL MECHANICAL UNITS.

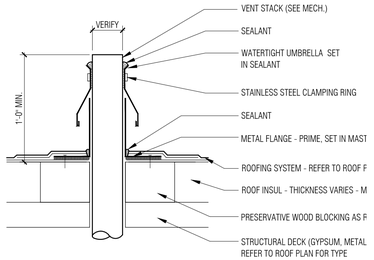
E. REFER TO ROOF DETAILS SHEET A3-20 FOR ADDITIONAL INFORMATION.

F. ROOF INSULATION FASTENERS SHALL NOT BE VISIBLE FROM INTERIOR WHERE METAL DECK IS EXPOSED, BUT SHALL BE INSTALLED TO MEET ALL ROOFING WARRANTY AND INSURANCE REQUIREMENTS.

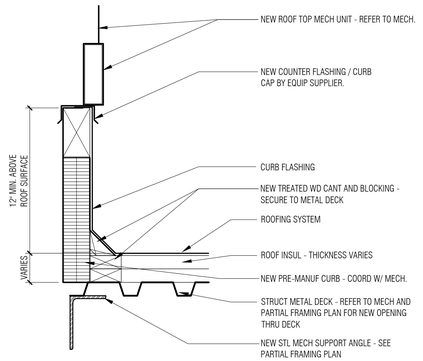
G. REFER TO MECHANICAL AND ELECTRICAL FOR ALL THRU ROOF PENETRATIONS. FLASH AND SEAL ALL PENETRATIONS IN ACCORDANCE WITH THE ROOF WARRANTY AND ROOF DETAILS.

## ROOF PLAN - KEY NOTES

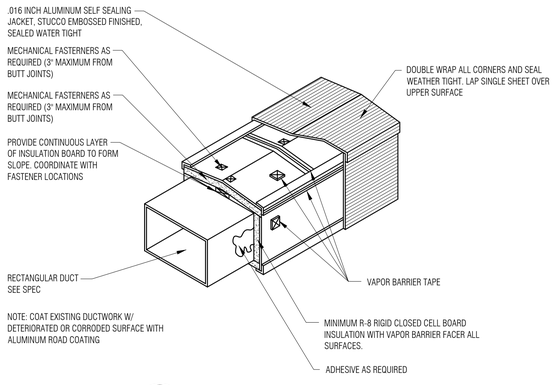
1. SINGLE-PLY MEMBRANE ROOFING SYSTEM
2. MECHANICAL UNIT WITH CONTINUOUS ROOF CURB - REFER TO TYPICAL ROOF DETAILS AND MECH - COORDINATE WITH ELEC AND STRUCT
3. NEW LOUVERED ROOF ACCESS GATE (RTO1) - REFER TO DETAIL 7/A6-10 AND DOOR SCHEDULE
4. SHADED AREA OF TAPERED INSULATION BENEATH SINGLE-PLY MEMBRANE ROOFING SYSTEM
5. ROOF INSULATION SADDLE
6. COMBO ROOF DRAIN / OVERFLOW DRAIN WITH ROOF SUMP - REFER TO MECH FOR ADDITIONAL INFORMATION AND COORDINATE WITH STRUCT - SEE ROOF SUMP DETAIL 2 ON DRAWING A3-20
7. NEW PRE-FIN METAL ROOF COPING - REFER TO DETAIL 3/A6-10
8. NEW BELLOW TYPE EXPANSION JOINT W/ METAL COUNTER FLASHING - REFER TO DETAIL 5/A6-10
9. NEW AIR INTAKE JACKET W/INSULATION AND WEATHER PROOF JACKET - SET TOP OF DUCT AT WALL LOUVER ELEVATION. REFER TO DETAIL 8/A6-10 AND DETAIL 5/A3-20 FOR EXTERIOR DUCT JACKET
10. ROOF WALKWAY PADS - INSTALL AS SHOWN ON ROOF PLAN
11. PLUMBING VENT THRU ROOF - REFER TO DETAIL 4/A3-20 AND COORDINATE WITH MECHANICAL
12. GAS PIPE PENETRATION THRU - REFER TO DETAIL 4/A3-20 (SIM) AND COORDINATE WITH MECHANICAL
13. NEW MECHANICAL LOUVER W/STEEL TUBE SUPPORT - REFER TO DETAIL 8/A6-10
14. AREA OF SLOPED METAL COPING - INSTALL FIXED CAP TRIM AT PEAK AND SEAL WEATHER TIGHT
15. WRAP COPING MATERIAL INTO PARAPET ARTICULATION ALL SIDES
16. LINE OF NEW 3" MAIN ROOF DRAIN TO BE ROUTED TO NEW VERTICAL CONDUCTOR IN NEW WALL CONSTR. DRAIN UNDER FLOOR TO EXISTING CLEAN OUT /DRAIN PIPING. REFER TO MECHANICAL .
17. LINE OF EMERGENCY OVER FLOW THRU WALL NOZZLE. SET HIGH IN WALL. REFER TO ELEVATIONS AND MECHANICAL.



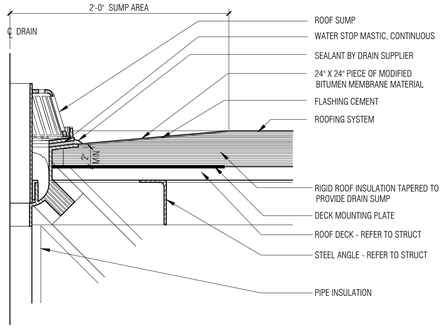

4 Typical Detail @ Roof Pipe Penetration
1-1/2" = 1'-0"



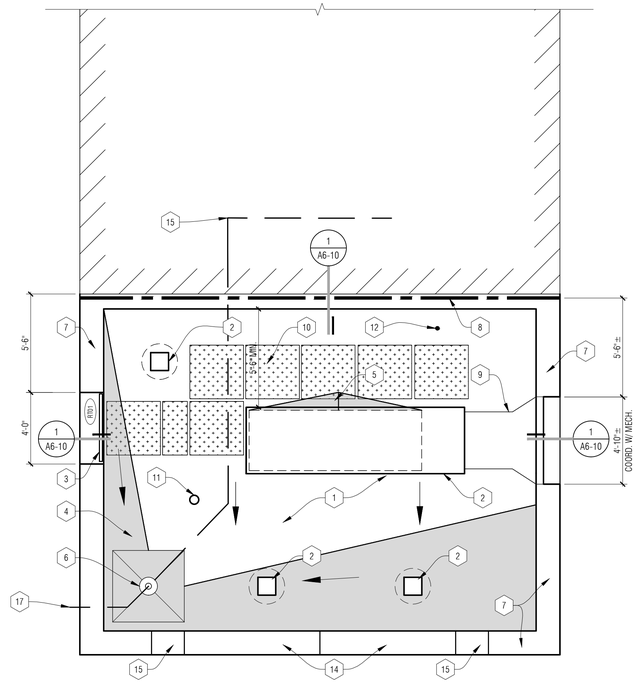

3 Typical Detail @ Roof Curb
N.T.S.




5 Outdoor Duct Insulation Detail
Not To Scale




2 Typical Roof Sump Detail
1-1/2" = 1'-0"




1 Roof Plan
1/4" = 1'-0"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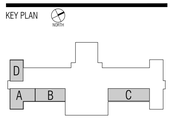
KEY PLAN




OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/2016

DRAWN BY

JTS

CHECKED BY

ACS

APPROVED BY

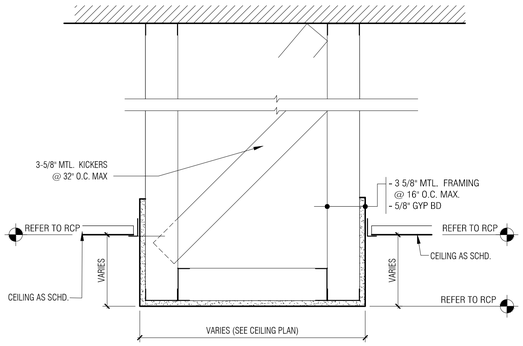
MAM

SHEET NAME

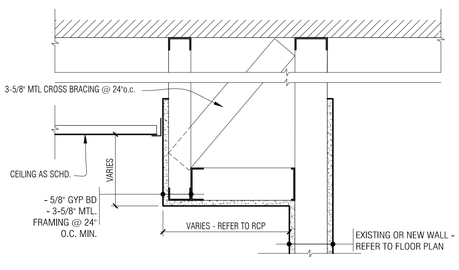
Roof Plan and Roof Details

SHEET NO.

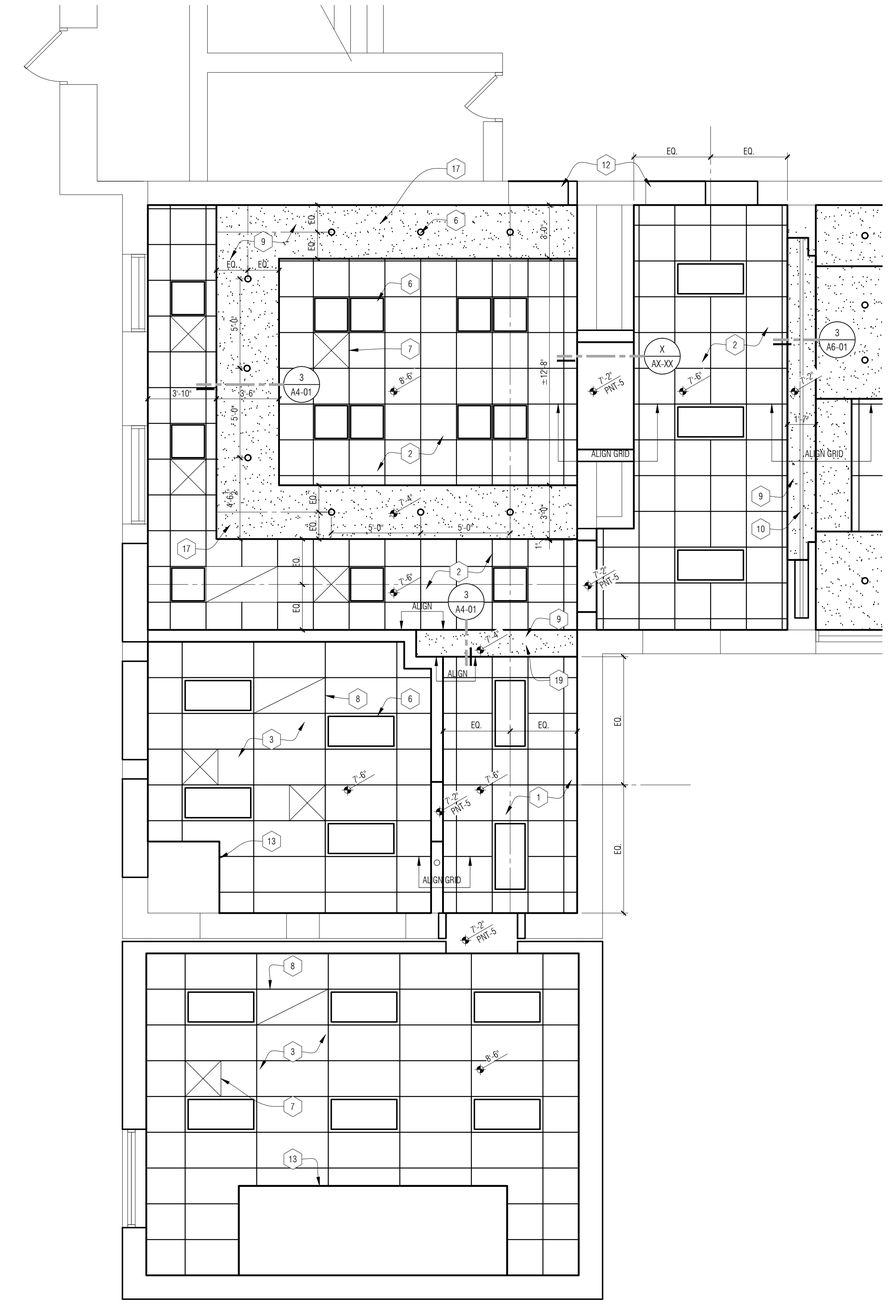
A3-20




3 / A4-01 Ceiling Detail
1-1/2" = 1'-0"




2 / A4-01 Ceiling Detail
1-1/2" = 1'-0"




1 / A4-01 Partial Reflected Ceiling Plan - Area A
1/4" = 1'-0"

## REFLECTED CEILING PLAN - GENERAL NOTES:

A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS.

B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SPECIFICATIONS.

C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS.

D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING TILE AND GYP SOFFIT U.O.N.

E. CEILING GRID IS TO BE CENTERED IN ROOM U.O.N.

F. REFER TO KEY NOTES FOR VERTICAL AND HORIZONTAL PAINT COLORS AT SOFFITS. IF NO KEY NOTE IS INDICATED AT A SOFFIT, OR ONLY A VERTICAL SURFACE COLOR IS NOTED, SOFFIT COLOR SHALL BE (PNT-5).

## REFLECTED CEILING PLAN - KEY NOTES:

1. ACOUSTICAL CEILING TILE AND GRID (ACT-1).
2. ACOUSTICAL CEILING TILE AND GRID (ACT-2).
3. ACOUSTICAL CEILING TILE AND GRID (ACT-3).
4. ACOUSTICAL CEILING TILE AND GRID (ACT-4).
5. ACOUSTICAL CEILING TILE AND GRID (ACT-5).
6. LIGHT FIXTURE - COORDINATE WITH ELEC.
7. SUPPLY AIR DIFFUSER - REFER TO MECH.
8. RETURN AIR GRILLE - REFER TO MECH.
9. GYPSUM BOARD SOFFIT / CEILING.
10. LINE OF SLIDING GRILLE DOOR - COORDINATE WITH MANUFACTURERS REQMENTS.
11. EXISTING CEILING MOUNTED RADIATOR TO REMAIN - PREP AND CLEAN MTL TO RECEIVE NEW PAINT COLOR - PAINT COMPLETE INCLUDING ALL HANGERS, BRACKETS, ETC. (PNT-11).
12. EXPOSED STEEL LINTEL - PAINT TO MATCH ADJACENT MASONRY.
13. LINE OF NEW FOOD SERVICE HOOD - COORDINATE LOCATION WITH FOOD SERVICE CONTRACTOR.
14. PAINT VERTICAL SURFACE OF SOFFIT (PNT-6).
15. PAINT VERTICAL SURFACE OF SOFFIT AT CLASSROOM SIDE (PNT-7). PAINT HORIZONTAL SURFACE OF SOFFIT AND VERTICAL SURFACE OF SOFFIT AT ALCOVE FACING WINDOW/WALL (PNT-5).
16. PAINT BOTH VERTICAL AND HORIZONTAL SURFACES OF SOFFIT (PNT-8).
17. PAINT BOTH VERTICAL AND HORIZONTAL SURFACES OF SOFFIT (PNT-9).
18. PAINT BOTH VERTICAL AND HORIZONTAL SURFACES OF SOFFIT (PNT-10).
19. PAINT VERTICAL SURFACE OF SOFFIT (PNT-1).
20. PAINT VERTICAL SURFACE OF SOFFIT AT CLASSROOM SIDE (PNT-9). PAINT HORIZONTAL SURFACE OF SOFFIT (PNT-9). PAINT VERTICAL SURFACE OF SOFFIT AT ALCOVE FACING WINDOW/WALL (PNT-5).

## Ceiling Symbols Legend

| | |
|---|---|
| | 5/8" GYP BD ON 3 5/8" METAL STUD CONSTRUCTION AT 16" O.C. SECURE TO STRUCTURE ABOVE AT 48" O.C. MAX EACH WAY |
| | 2' X 4' LAY-IN LIGHT FIXTURE IN GRID |
| | 2' X 2' LAY-IN LIGHT FIXTURE IN GRID |
| | RECESSED ROUND LIGHT FIXTURE CEILING OR WALL MOUNTED |
| | EXIT LIGHTS - CEILING & WALL MOUNTED |
| S | SPEAKER - CEILING AND WALL MOUNTED |
| SD | SMOKE DETECTOR |
| OS | OCCUPANCY SENSOR (ELECTRICAL) |
| | SUPPLY AIR DIFFUSER (MECHANICAL) |
| | RETURN AIR GRILLE (MECHANICAL) |
| | CEILING MOUNTED RADIANT HEATER (MECHANICAL) |

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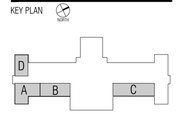
KEY PLAN

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PROJECT NO.

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PJE

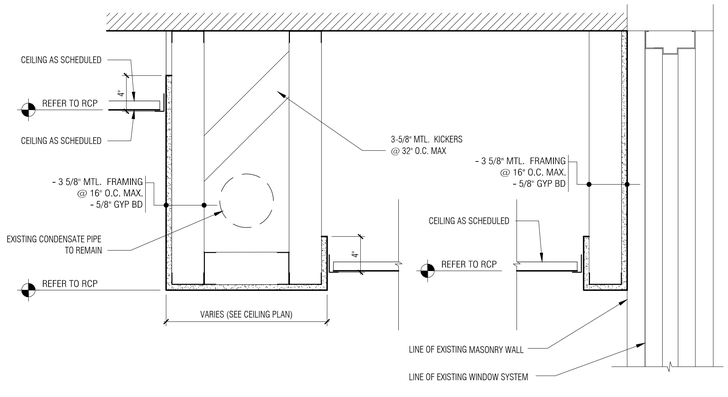
CHECKED BY
ACS

APPROVED BY
MAM

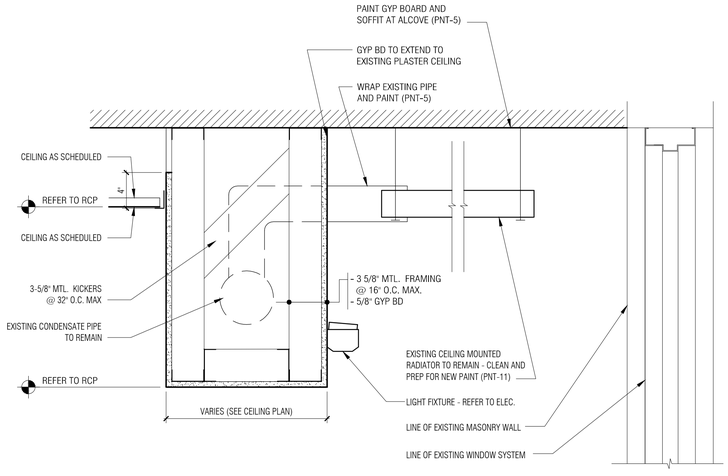
SHEET NAME

PARTIAL
REFLECTED
CEILING PLANS

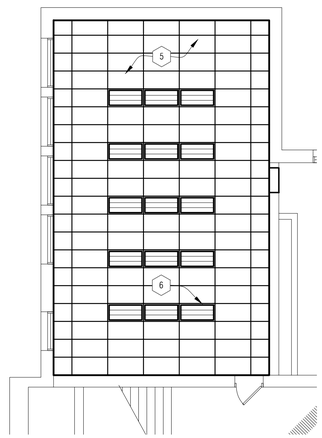
SHEET NO.
A4-01



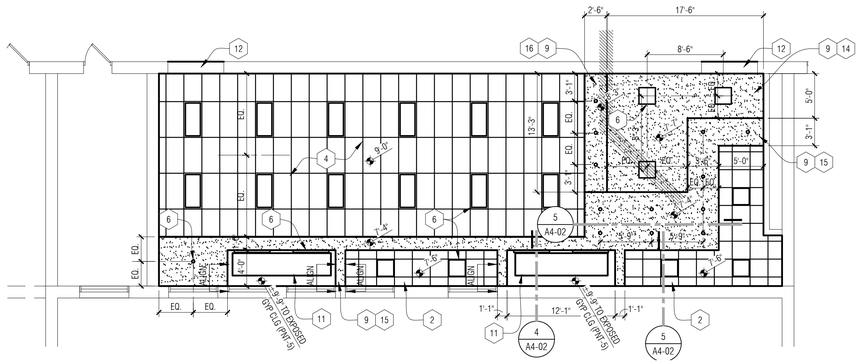

5 / A4-02 Ceiling Detail
1-1/2" = 1'-0"



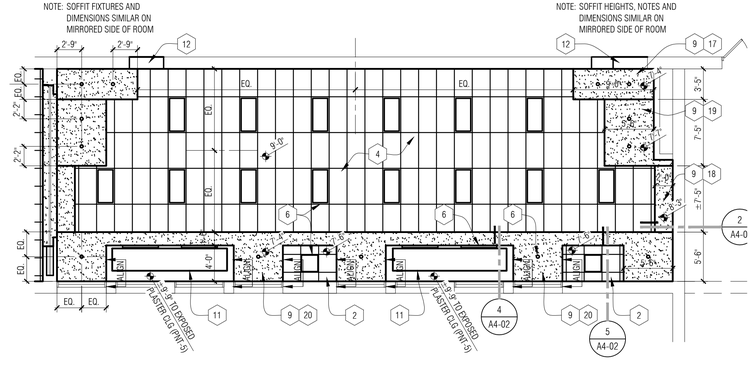

4 / A4-02 Ceiling Detail
1-1/2" = 1'-0"




3 / A4-02 Partial Reflected Ceiling Plan - Area D
1/8" = 1'-0"




2 / A4-02 Partial Reflected Ceiling Plan - Area C
1/8" = 1'-0"




1 / A4-02 Partial Reflected Ceiling Plan - Area B
1/8" = 1'-0"

## REFLECTED CEILING PLAN - GENERAL NOTES:

A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS.

B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SPECIFICATIONS.

C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS.

D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING TILE AND GYP SOFFIT U.O.N.

E. CEILING GRID IS TO BE CENTERED IN ROOM U.O.N.

F. REFER TO KEY NOTES FOR VERTICAL AND HORIZONTAL PAINT COLORS AT SOFFITS. IF NO KEY NOTE IS INDICATED AT A SOFFIT, OR ONLY A VERTICAL SURFACE COLOR IS NOTED, SOFFIT COLOR SHALL BE (PNT-5).

## REFLECTED CEILING PLAN - KEY NOTES:

1. ACOUSTICAL CEILING TILE AND GRID (ACT-1).
2. ACOUSTICAL CEILING TILE AND GRID (ACT-2).
3. ACOUSTICAL CEILING TILE AND GRID (ACT-3).
4. ACOUSTICAL CEILING TILE AND GRID (ACT-4).
5. ACOUSTICAL CEILING TILE AND GRID (ACT-5).
6. LIGHT FIXTURE - COORDINATE WITH ELEC.
7. SUPPLY AIR DIFFUSER - REFER TO MECH.
8. RETURN AIR GRILLE - REFER TO MECH.
9. GYPSUM BOARD SOFFIT / CEILING.
10. LINE OF SLIDING GRILLE DOOR - COORDINATE WITH MANUFACTURER'S REQMENTS.
11. EXISTING CEILING MOUNTED RADIATOR TO REMAIN - PREP AND CLEAN MTL TO RECEIVE NEW PAINT COLOR - PAINT COMPLETE INCLUDING ALL HANGERS, BRACKETS, ETC. (PNT-11).
12. EXPOSED STEEL LINTEL - PAINT TO MATCH ADJACENT MASONRY.
13. LINE OF NEW FOOD SERVICE HOOD - COORDINATE LOCATION WITH FOOD SERVICE CONTRACTOR.
14. PAINT VERTICAL SURFACE OF SOFFIT (PNT-6).
15. PAINT VERTICAL SURFACE OF SOFFIT AT CLASSROOM SIDE (PNT-7). PAINT HORIZONTAL SURFACE OF SOFFIT AND VERTICAL SURFACE OF SOFFIT AT ALCOVE FACING WINDOW/WALL (PNT-5).
16. PAINT BOTH VERTICAL AND HORIZONTAL SURFACES OF SOFFIT (PNT-8).
17. PAINT BOTH VERTICAL AND HORIZONTAL SURFACES OF SOFFIT (PNT-9).
18. PAINT BOTH VERTICAL AND HORIZONTAL SURFACES OF SOFFIT (PNT-10).
19. PAINT VERTICAL SURFACE OF SOFFIT (PNT-1).
20. PAINT VERTICAL SURFACE OF SOFFIT AT CLASSROOM SIDE (PNT-9). PAINT HORIZONTAL SURFACE OF SOFFIT (PNT-9). PAINT VERTICAL SURFACE OF SOFFIT AT ALCOVE FACING WINDOW/WALL (PNT-5).

## Ceiling Symbols Legend

| | |
|---|---|
| | 5/8" GYP BD ON 3 5/8" METAL STUD CONSTRUCTION AT 16" O.C. SECURE TO STRUCTURE ABOVE AT 48" O.C. MAX EACH WAY |
| | 2' X 4' LAY-IN LIGHT FIXTURE IN GRID |
| | 2' X 2' LAY-IN LIGHT FIXTURE IN GRID |
| | RECESSED ROUND LIGHT FIXTURE CEILING OR WALL MOUNTED |
| | EXIT LIGHTS - CEILING & WALL MOUNTED |
| S | SPEAKER - CEILING AND WALL MOUNTED |
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| | RETURN AIR GRILLE (MECHANICAL) |
| | CEILING MOUNTED RADIANT HEATER (MECHANICAL) |
| | |
| | |

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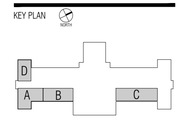


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SHEET NAME

PARTIAL
REFLECTED
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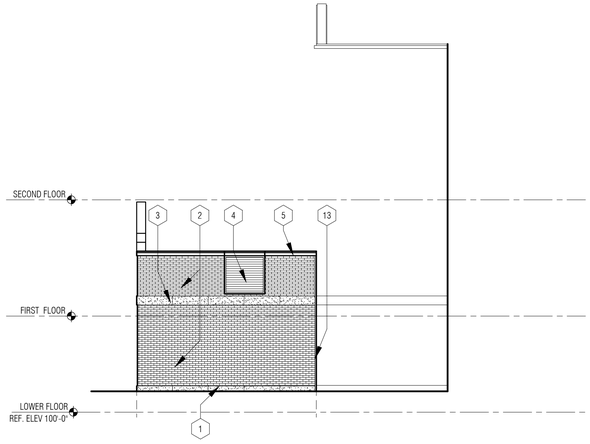
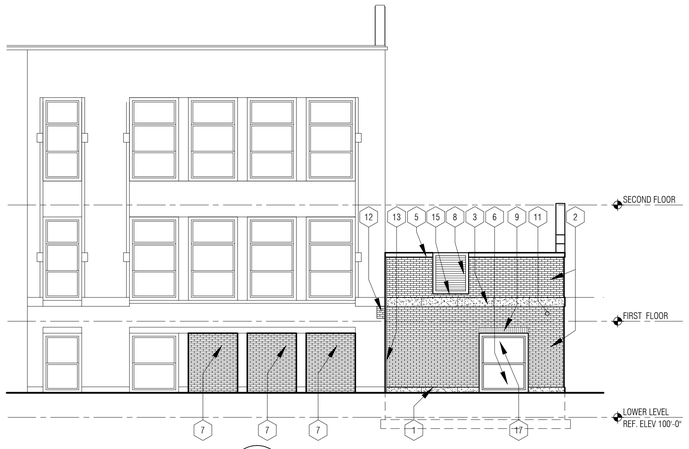
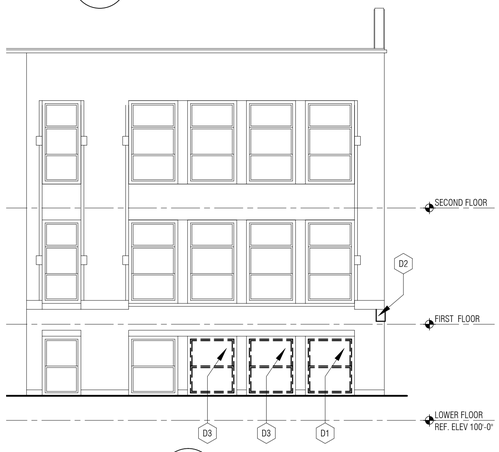
SHEET NO.
A4-02



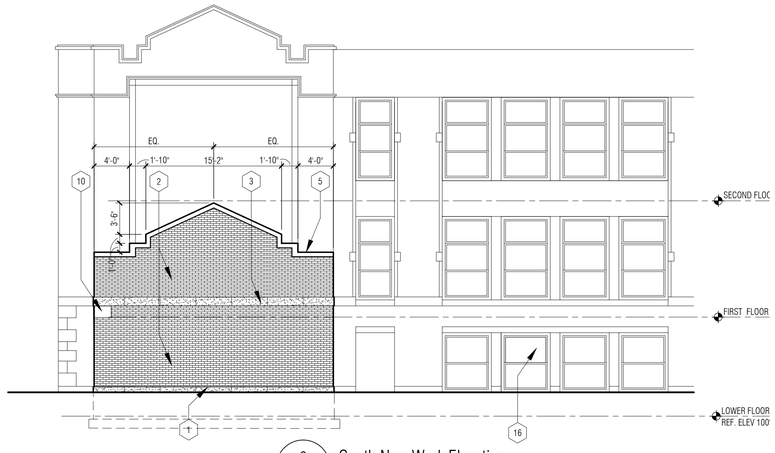

5 A3-01 East New Work Elevation
1/8" = 1'-0"




4 A3-01 West New Work Elevation
1/8" = 1'-0"




3 A1-01 West Demolition Elevation
1/8" = 1'-0"




2 A3-01 South New Work Elevation
1/8" = 1'-0"

1 A1-01 South Demolition Elevation
1/8" = 1'-0"

## EXTERIOR ELEVATIONS - GENERAL NOTES:

A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRIKE THRU LINES). DEMOLITION CONTRACTOR IS REQUIRED TO COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL DRAWINGS. REFER TO THESE DRAWINGS FOR ADDITIONAL DEMOLITION WORK.

B. PATCH ALL AREAS WHERE DEMOLITION HAS OCCURRED TO MATCH ADJACENT EXISTING CONDITIONS, AND AS REQUIRED TO INSTALL NEW EQUIPMENT, MATERIALS OR FINISHES. THIS MAY INCLUDE CLEANING AND PREPARING EXISTING SURFACES FOR NEW FINISHES ENSURING THAT ALL MASTIC GLUE, GROUT CAULK, ETC. HAVE BEEN REMOVED.

C. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF SITE, U.N.O.

D. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE CM AND ARCHITECT.

E. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER OR ARCHITECT OR CONSTRUCTION MANAGER) AT NO ADDITIONAL COST.

F. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

G. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS.

H. ALL DEVICES SUCH AS SECURITY CAMERAS, EXISTING SIGNS, SPEAKERS, ALARM BELLS, EMERGENCY LIGHTS, ETC. AND THEIR ASSOC. COMPONENTS ARE TO BE CAREFULLY REMOVED AND TURNED OVER TO OWNER OR SECURED SAFELY TO BE REUSED AS SCHEDULED.

K. LOCATION OF NEW WALL PENETRATIONS SHALL BE COORD WITH FLOOR PLANS AND WALL SECTIONS FOR SIZE AND LOCATION.

L. REFER TO MATERIAL FINISH/ COLOR SCHEDULE (SECTION 000200)

## EXTERIOR ELEVATIONS - KEY NOTES:

1. CAST STONE BASE (CS-2)
2. FACE BRICK: FB-1 (FLEMING BOND) - TO MATCH EXISTING
3. CAST STONE ACCENT BAND (CS-1)
4. NEW ALUMINUM HORIZONTAL DRAINABLE BLADE LOUVER - COORDINATE WITH MECHANICAL
5. PREFINISHED METAL COPING (MFP-1)
6. REINSTALL SALVAGED ALUMINUM WINDOW UNIT
7. 12" MASONRY BLOCK AND BRICK INFILL WHERE WINDOWS WERE REMOVED DURING DEMOLITION
8. GALV. H.M. ROOF ACCESS DOOR - REFER TO DOOR SCHEDULE
9. BRICK SOLDIER COURSE (FB-1)
10. REINSTALL SALVAGED CORNERSTONE
11. THRU-WALL DOWNSPOUT NOZZLE - REFER TO DETAIL 9/A6-10 AND MECH.
12. PROVIDE AND INSTALL NEW BRICK AND MASONRY BLOCK TO MATCH EXISTING WHERE CORNERSTONE WAS REMOVED DURING DEMOLITION
13. EXPANSION JOINT
14. LINE OF NEW FOUNDATION - REFER TO STRUCTURAL
15. LADDER DOCK AND GRAB BAR SAFETY DEVICE - REFER TO DETAILS AND SPECIFICATIONS
16. REMOVE UPPER GLASS LIGHT FROM REMOVED WINDOW AND INSTALL IN UPPER SASH OF EXIST. WINDOW
17. INSTALL NEW INSULATED PANEL IN UPPER SASH. MATCH EXIST.

## EXTERIOR DEMO ELEVATIONS - KEY NOTES:

- D1 REMOVE EXISTING ALUMINUM WINDOW UNIT AND SALVAGE FOR REINSTALLATION - COORDINATE WITH NEW WORK
- D2 REMOVE AND SALVAGE EXISTING CORNERSTONE BLOCK - COORDINATE WITH NEW WORK
- D3 REMOVE EXIST. ALUMINUM WINDOW UNIT AND TRIM FOR NEW MASONRY INSTALLATION - TURN WINDOW UNITS OVER TO OWNER
- D4 REMOVE UPPER INSULATED PANEL AND AND EXHAUST FAN - WINDOW UNIT TO REMAIN

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KEY PLAN

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Public Schools

PROJECT NAME

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Middle School
Food Service Upgrades

2333 Burger
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PROJECT NO.

15-175B

ISSUES / REVISIONS

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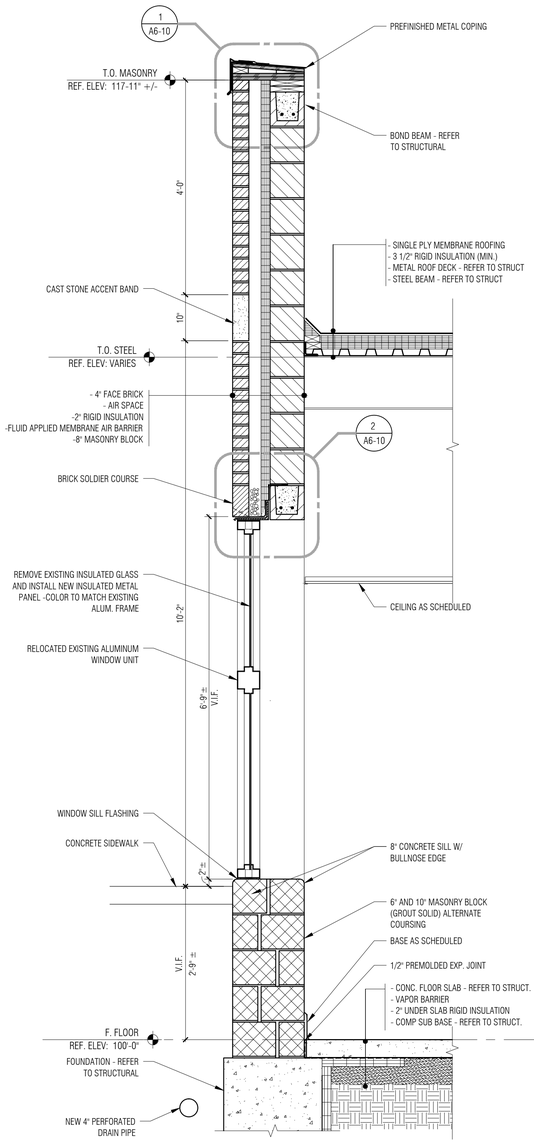
SHEET NAME

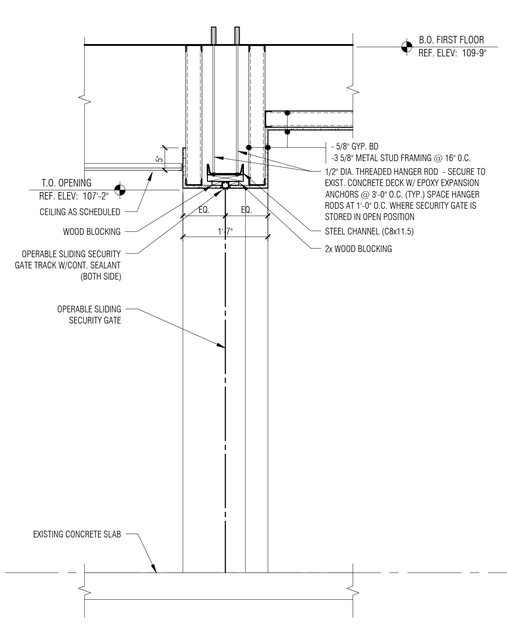
EXTERIOR
ELEVATIONS

SHEET NO.

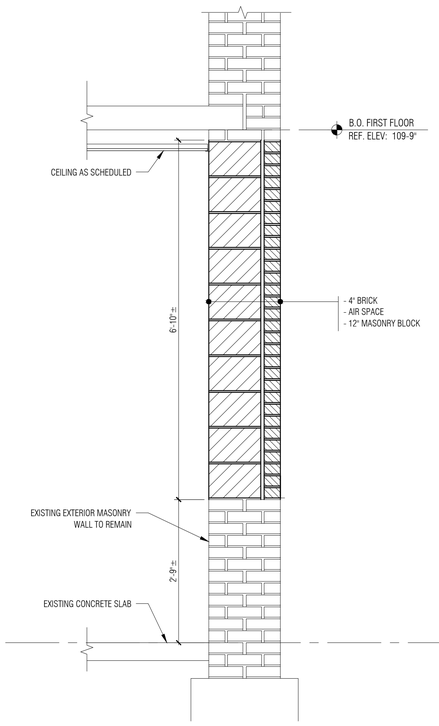
A5-01



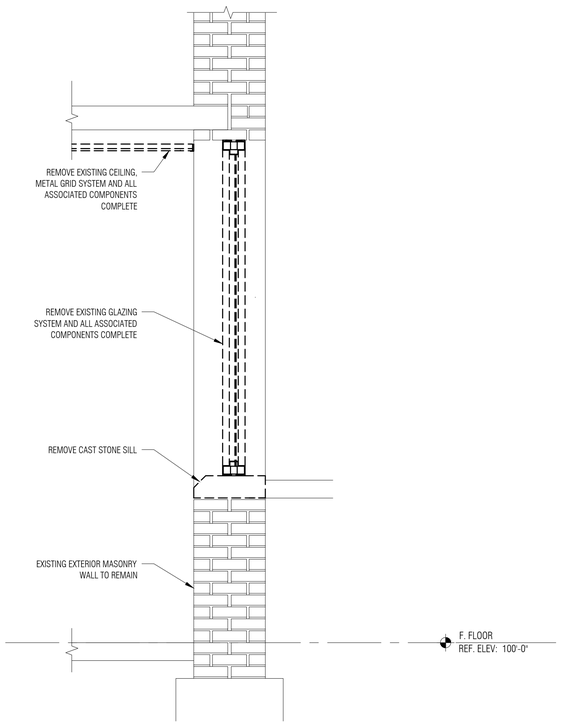

4 / A3-01 Wall Section
3/4" = 1'-0"




3 / A3-01 Wall Section
3/4" = 1'-0"




2 / A3-01 Wall Section
3/4" = 1'-0"




1 / A1-01 Wall Section
3/4" = 1'-0"

GENERAL NOTE: REFER TO STRUCTURAL FOR
BRICK TIES AND HORIZONTAL BLOCK REINFORCING

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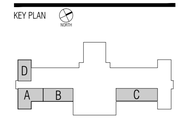


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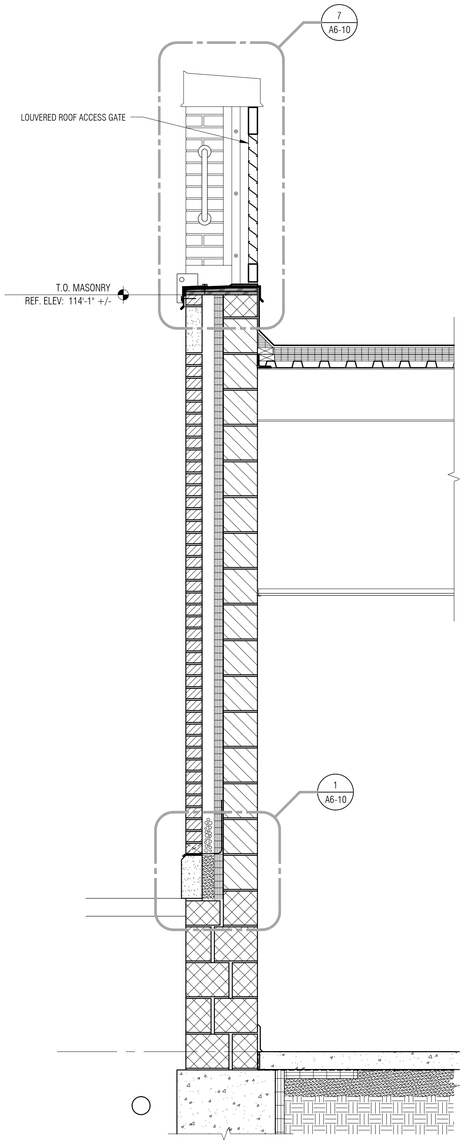
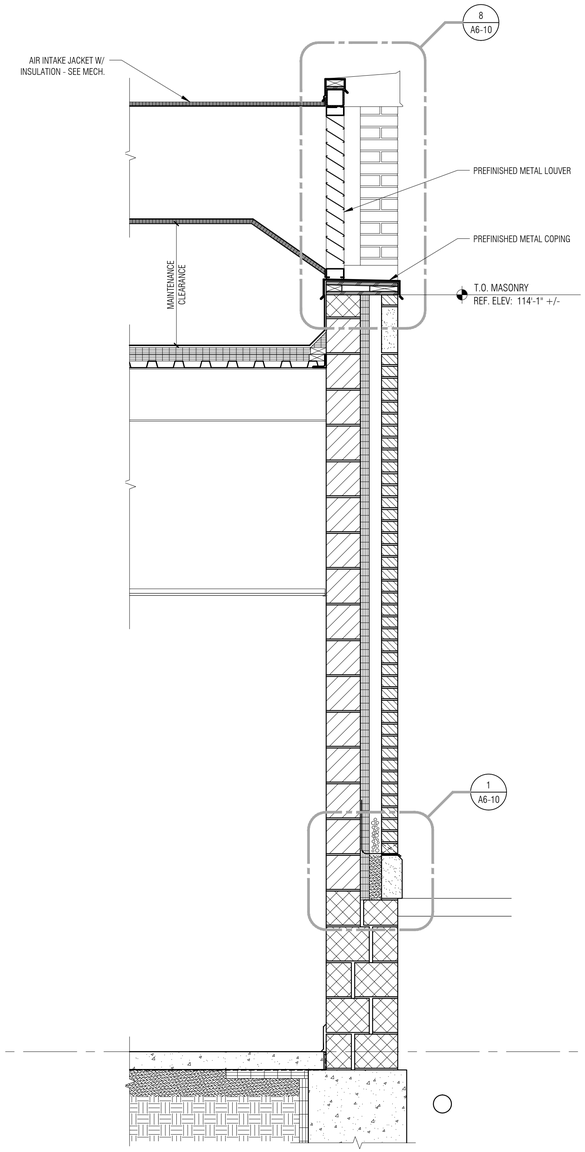
WALL SECTIONS

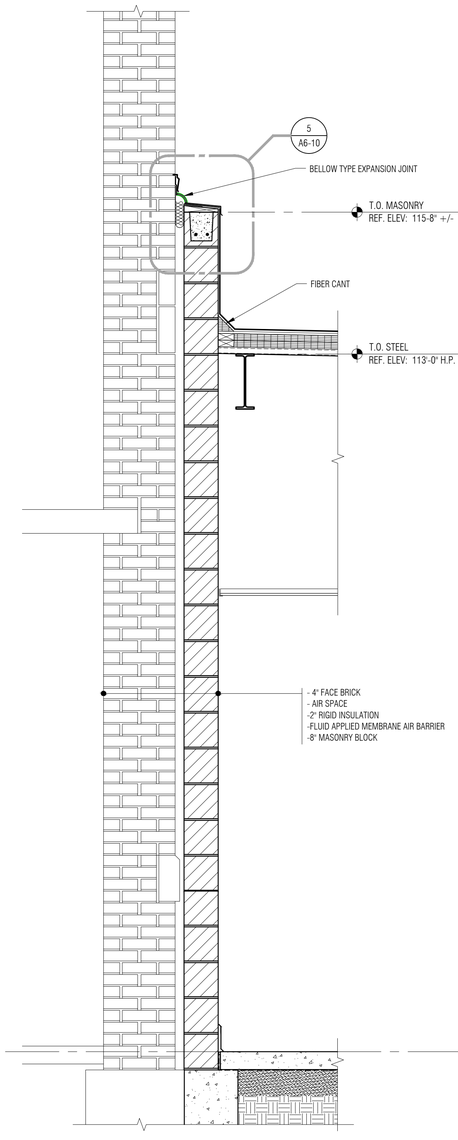
SHEET NO.
A6-01



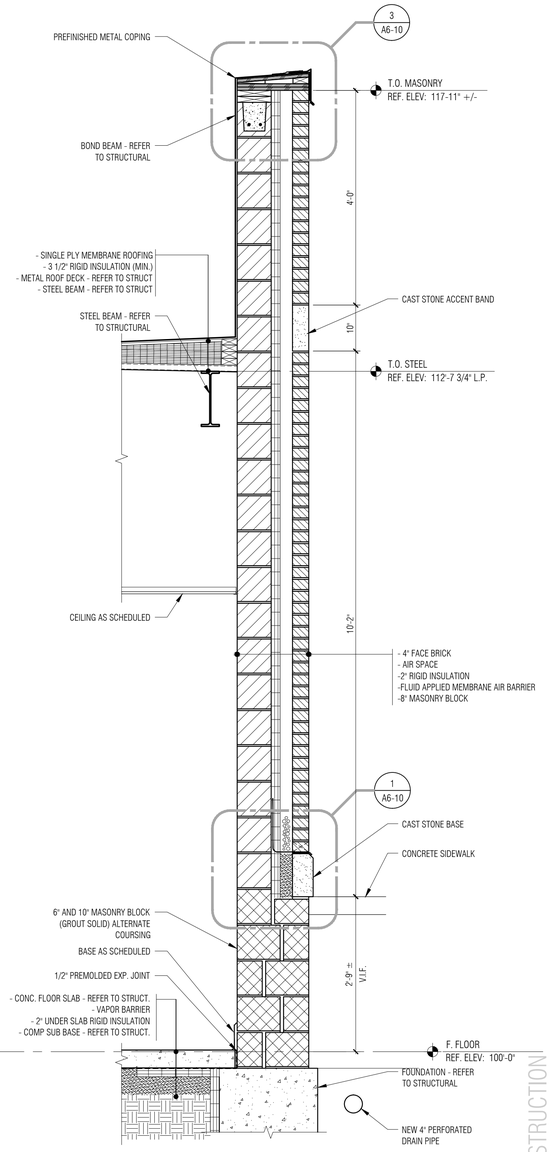

4 A3-01 **Wall Section**
3/4" = 1'-0"
REFER TO SECTION 1 THIS SHEET FOR SIMILAR NOTES AND DIMENSIONS




3 A3-01 **Wall Section**
3/4" = 1'-0"
REFER TO SECTION 1 THIS SHEET FOR SIMILAR NOTES AND DIMENSIONS




2 A3-01 **Wall Section**
3/4" = 1'-0"
REFER TO SECTION 1 THIS SHEET FOR SIMILAR NOTES AND DIMENSIONS




1 A3-01 **Wall Section**
3/4" = 1'-0"

GENERAL NOTE: REFER TO STRUCTURAL FOR BRICK TIES AND HORIZONTAL BLOCK REINFORCING

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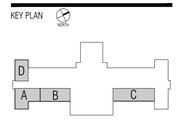


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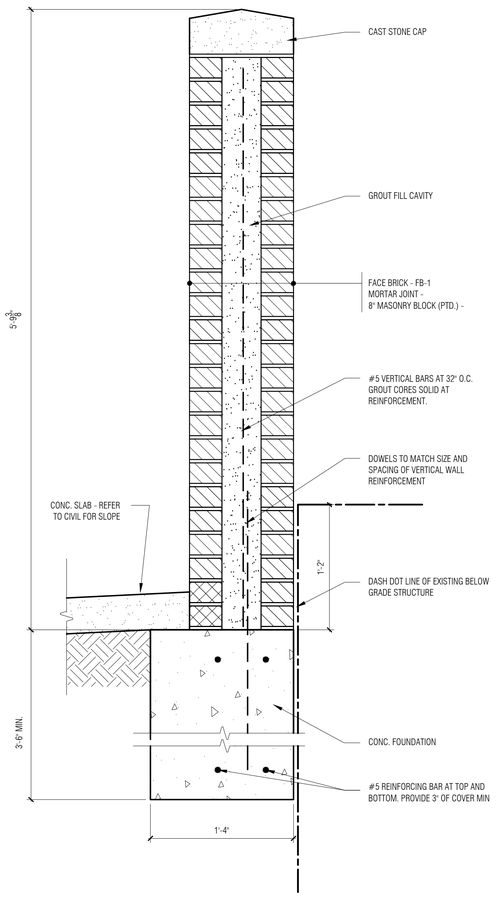
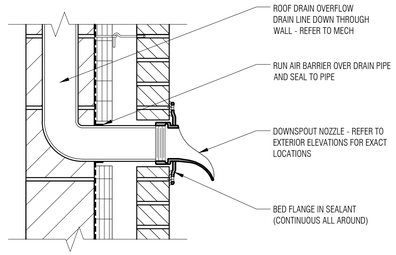
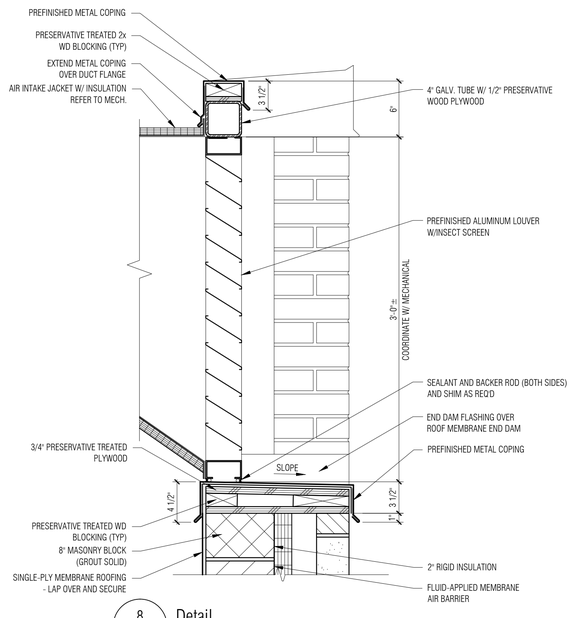
SHEET NO.
A6-02



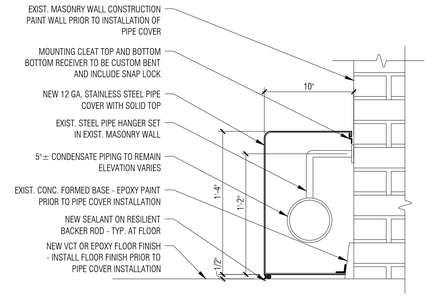

11 C1-01 Screen Wall Section - ALTERNATE #2
1-1/2" = 1'-0"




9 A5-01 Typical Downspout Nozzle Detail
1-1/2"=1'-0"

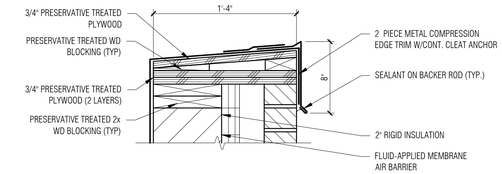



8 A6-02 Detail
1-1/2" = 1'-0"

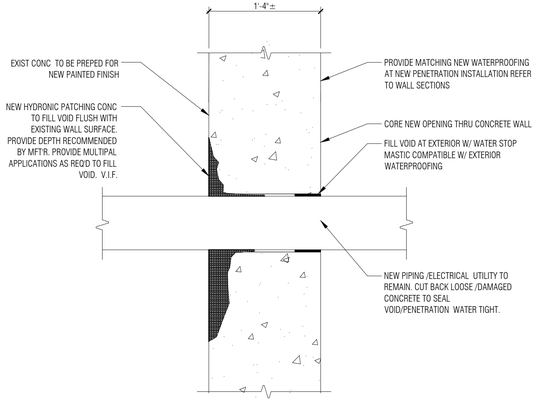



NOTE:
PROVIDE STAINLESS STEEL SPLICE PLATE
W/STAINLESS STEEL TORX HEAD SECURITY
FASTENERS AT COVER SECTIONS

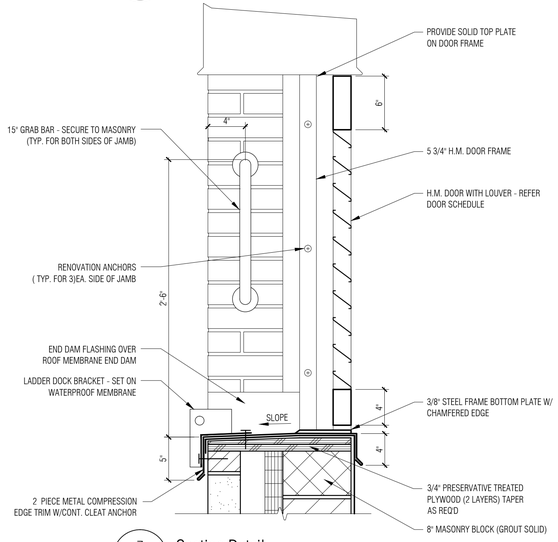
6 A3-01 Typical Pipe Cover Detail
1-1/2" = 1'-0"



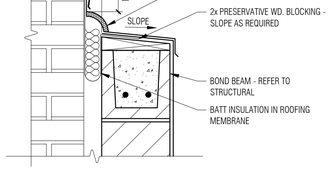

3 A6-01 Section Detail
1 1/2" = 1'-0"



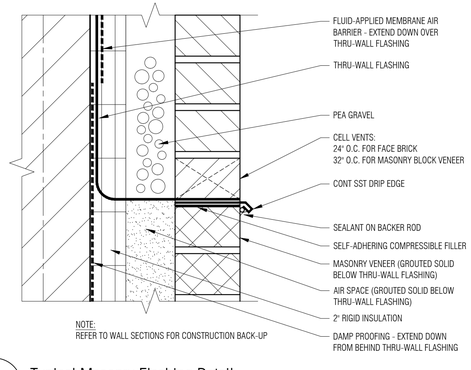

10 C1-01 Detail @ Wall Patch
1-1/2" = 1'-0"




7 A6-02 Section Detail
1-1/2" = 1'-0"

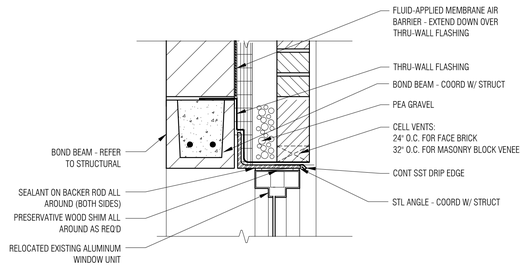



5 A6-02 Section Detail
1-1/2" = 1'-0"

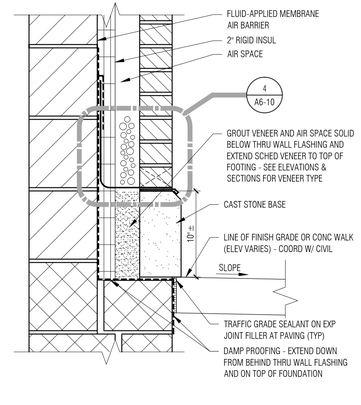



NOTE:
REFER TO WALL SECTIONS FOR CONSTRUCTION BACK-UP

4 A6-10 Typical Masonry Flashing Detail
3" = 1'-0"




2 A6-01 Section Detail
1 1/2" = 1'-0"




1 A6-01 Section Detail
1 1/2" = 1'-0"

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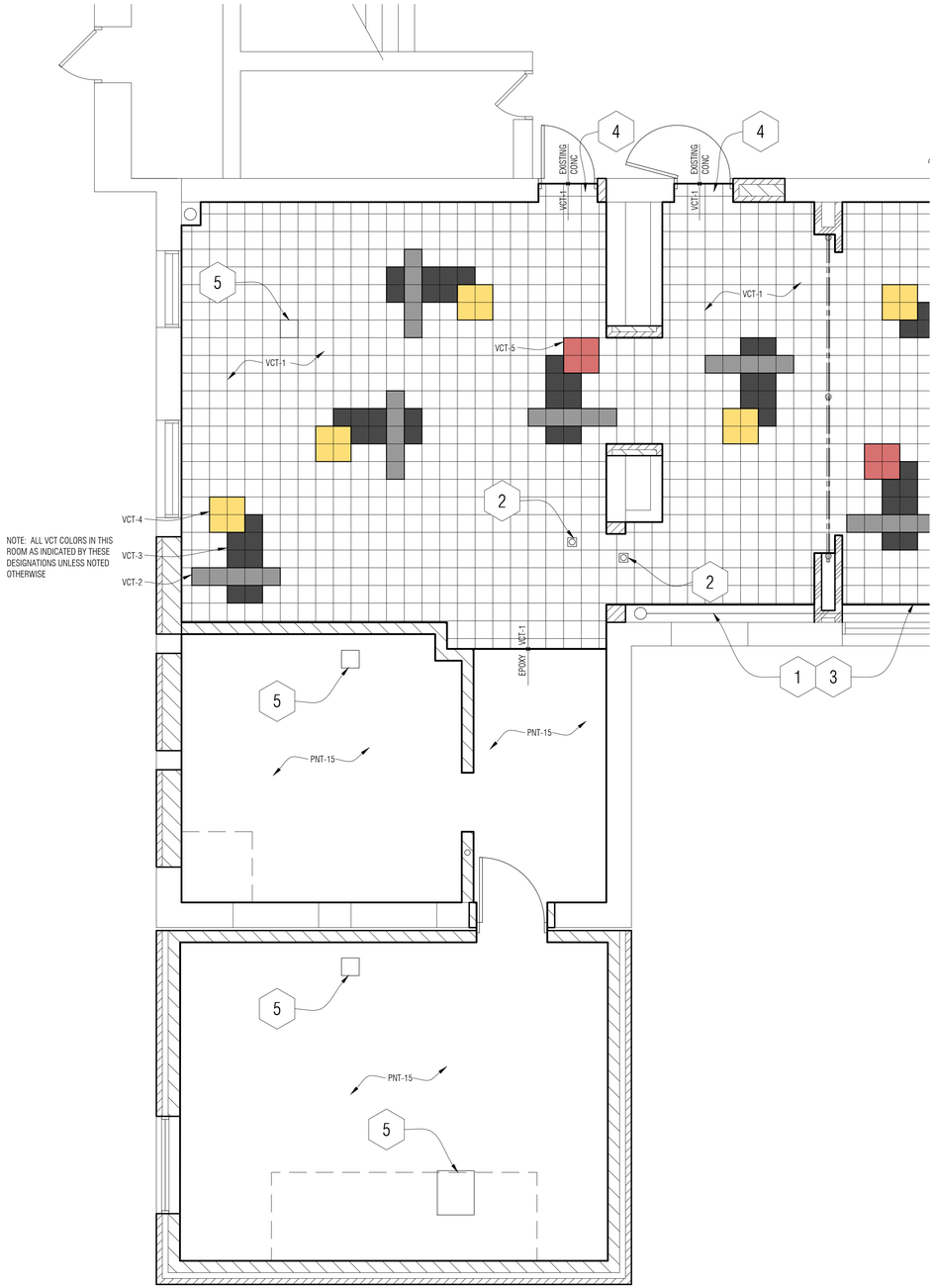
SECTION DETAILS

SHEET NO.
A6-10




1 Partial Finish Floor Plan - Area A
1/4" = 1'-0"

## FINISH FLOOR PLAN - GENERAL NOTES:

A. REFERENCE ROOM FINISH SCHEDULE AND MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200) FOR ADDITIONAL FINISH INFORMATION.

B. VCT COLOR TRANSITION TO BEGIN AT FIRST JOINT INSIDE CORNER OF WALL AT ALL DOORWAYS SHOWN AS HAVING A COLOR TRANSITION.

C. ALL DIMENSIONS ARE SHOWN AS +/- AND NEED TO BE VERIFIED IN FIELD.

D. UNLESS OTHERWISE NOTED, FLOOR FINISHES TRANSITION UNDER THE CENTERLINE OF DOORS (WHEREVER APPLICABLE).

E. SET COLOR PATTERNS IN FOOD SERVING AREAS TO NOT FALL BELOW KITCHEN EQUIPMENT - REFER TO FOOD SERVICE DRAWING COORDINATE FLOORING AND EQUIPMENT LAYOUT.

## FINISH FLOOR PLAN - KEY NOTES:

1. EXTEND FLOOR FINISH BELOW PIPE COVER
2. FLOOR DRAIN - REFER TO MECH. PROVIDE POSITIVE SLOPE TO DRAIN - VERIFY LOCATION IN FIELD
3. EXPOXY FINISH BASE PRIOR TO PIPE COVER INSTALLATION
4. EXISTING VCT FINISH INTO DOOR ALCOVE
5. NEW FLOOR SINK / GREASE TRAP - COORDINATE W/KSE CONTRACTOR

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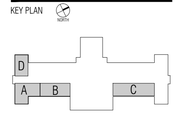


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PARTIAL FINISH FLOOR PLANS

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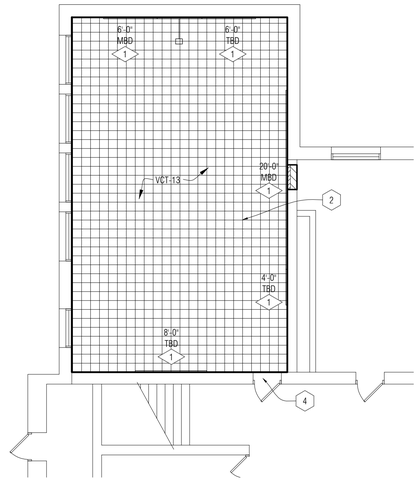
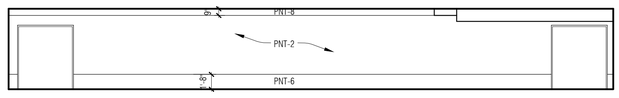
A9-01

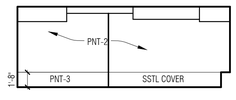



3 Partial Finish Floor Plan - Area D
1/8" = 1'-0"

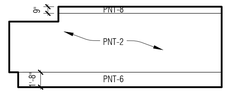
2 Partial Finish Floor Plan - Area C
1/8" = 1'-0"



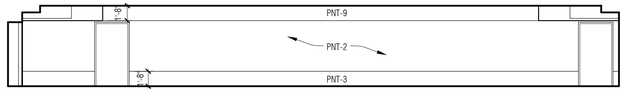

7 Color Reference Elevation - Cafeteria B - North Wall
1/8" = 1'-0"



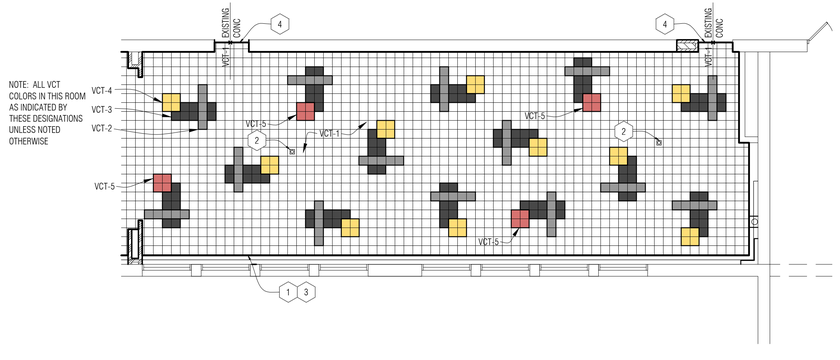

5 Color Reference Elevation - Cafeteria A - East Wall
1/8" = 1'-0"




6 Color Reference Elevation - Cafeteria B - West Wall
1/8" = 1'-0"




4 Color Reference Elevation - Cafeteria A - North Wall
1/8" = 1'-0"




1 Partial Finish Floor Plan - Area B
1/8" = 1'-0"

## FINISH FLOOR PLAN - GENERAL NOTES:

A. REFERENCE ROOM FINISH SCHEDULE AND MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200) FOR ADDITIONAL FINISH INFORMATION.

B. VCT COLOR TRANSITION TO BEGIN AT FIRST JOINT INSIDE CORNER OF WALL AT ALL DOORWAYS SHOWN AS HAVING A COLOR TRANSITION.

C. ALL DIMENSIONS ARE SHOWN AS +/- AND NEED TO BE VERIFIED IN FIELD.

D. UNLESS OTHERWISE NOTED, FLOOR FINISHES TRANSITION UNDER THE CENTERLINE OF DOORS (WHEREVER APPLICABLE).

E. SET COLOR PATTERNS IN FOOD SERVING AREAS TO NOT FALL BELOW KITCHEN EQUIPMENT - REFER TO FOOD SERVICE DRAWING COORDINATE FLOORING AND EQUIPMENT LAYOUT.

## FINISH FLOOR PLAN - KEY NOTES:

1. EXTEND FLOOR FINISH BELOW PIPE COVER
2. FLOOR DRAIN - REFER TO MECH. PROVIDE POSITIVE SLOPE TO DRAIN - VERIFY LOCATION IN FIELD
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5. NEW FLOOR SINK / GREASE TRAP - COORDINATE W/KSE CONTRACTOR

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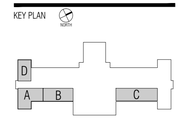


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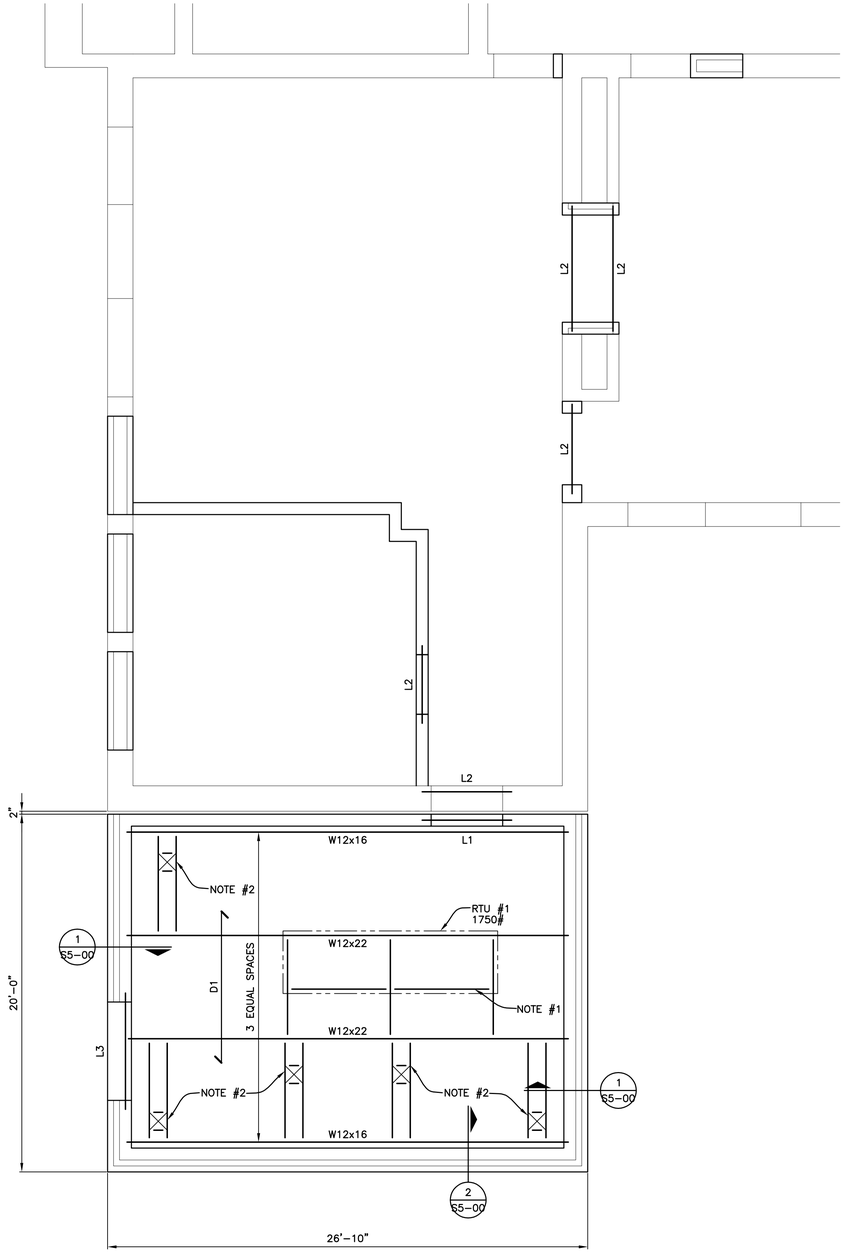
PARTIAL FINISH
FLOOR PLANS

SHEET NO.
A9-02



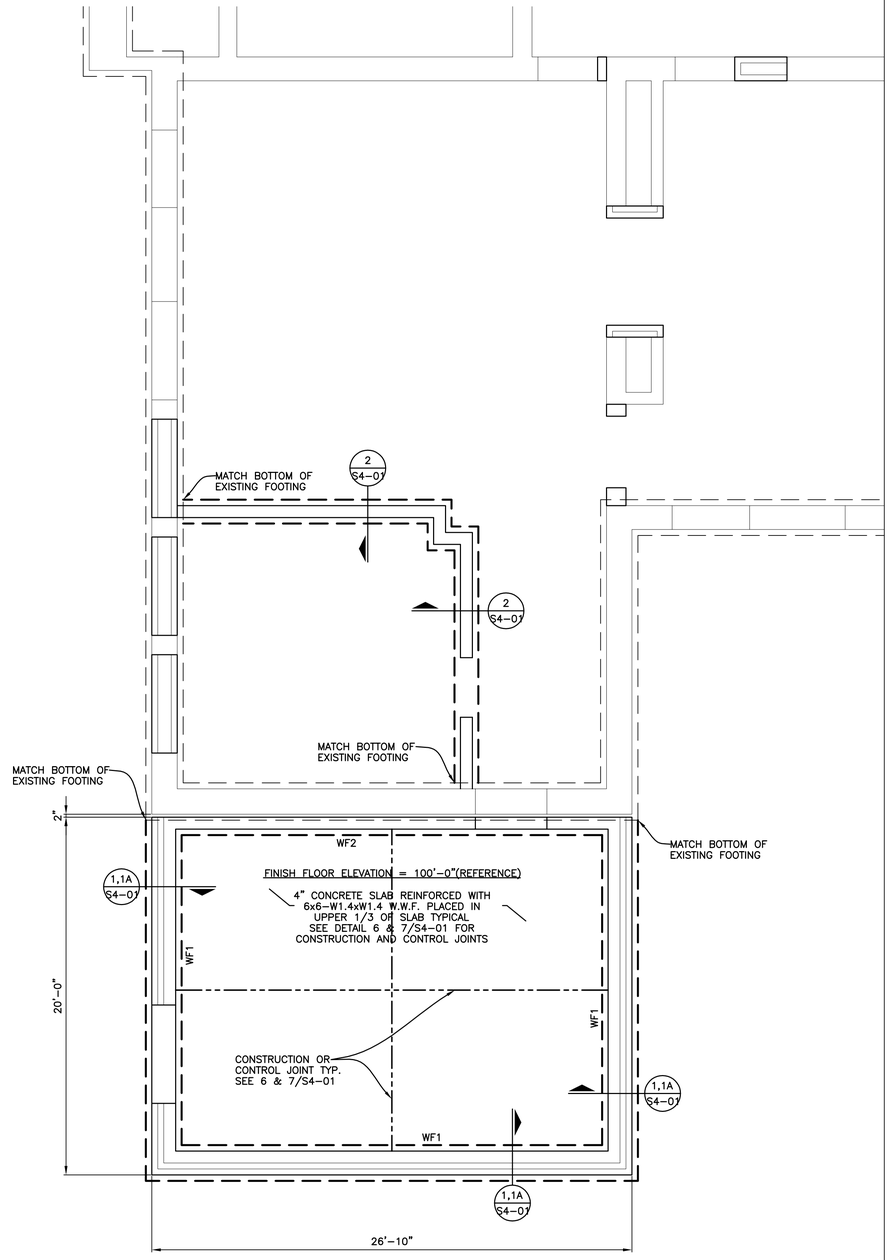

## ROOF FRAMING PLAN

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

D1 — 1 1/2-20 GA. WIDE RIB METAL DECK (3 SPAN MINIMUM)

NOTE #1: PROVIDE L5x3 1/2x5/16 ALL AROUND AT RTU SUPPORT CURB. VERIFY LOCATION WITH MECH. CONTRACTOR SEE DETAIL -/S-

NOTE #2: PROVIDE L3x3x1/4 ALL AROUND AT ROOF OPENINGS AND OVERFLOW DRAINS. COORDINATE LOCATION WITH ARCH. DRAWINGS




## FOUNDATION PLAN

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

BOTTOM OF EXTERIOR FOOTING ELEVATION = 96'-0" UNLESS OTHERWISE NOTED (X'-X")

NOTE: REINFORCE ALL MASONRY WALLS WITH #5 @ 48" O.C. FULL HEIGHT VERTICAL, GROUT REINFORCED CORES SOLID, DOWEL TO FOOTING. PLACE BARS AT CORNERS AND FACE OF OPENINGS AND EACH SIDE OF CONTROL JOINTS. SEE DETAILS 8, 9, 10, 11, & 12/S4-01

NOT FOR CONSTRUCTION

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KEY PLAN

OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/00/201€

DRAWN BY

CHECKED BY
ACS

APPROVED BY
MAM

SHEET NAME

FOUNDATION PLAN AND ROOF FRAMING PLAN

SHEET NO.

S3-01

G E N E R A L   N O T E S

GENERAL CONDITIONS

1. IF ANY GENERAL NOTE CONFLICTS WITH ANY DETAIL OR NOTE ON THE PLANS OR IN THE SPECIFICATIONS, THE STRICTEST PROVISION SHALL GOVERN.

2. THE STRUCTURAL DRAWINGS ARE FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS ONLY. O.S.H.A., LOCAL GOVERNMENT CODES AND SAFETY CODE REQUIREMENTS SHALL BE ADHERED TO BY THE CONTRACTOR.

3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES PROVIDING TEMPORARY BRACING, SHORING, GUYS OR TIE- DOWNS. THESE TEMPORARY SUPPORTS WILL REMAIN IN PLACE UNTIL ALL STRUCTURAL COMPONENTS ARE IN PLACE AND COMPLETED.

4. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS STRICTLY PROHIBITED. DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR BUILDING LAYOUT AND LOCATION. SEE ARCHITECTURAL DRAWINGS AND SITE PLAN FOR THESE PURPOSES.

5. THE CONTRACTOR SHALL CHECK SHOP DRAWINGS PRIOR TO SUBMITTAL AND IS SOLEY RESPONSIBLE FOR ERRORS & OMISSION IN THE PREPARATION OF SHOP DRAWINGS TO CONFORM TO THE DESIGN DRAWINGS. SUBMIT NO MORE THAN ON REPRODUCIBLE AND TWO PRINTS OF SHP DRAWINGS FOR ENGINEER REVIEW. TWO COPIES WILL BE RETURNED TO THE ARCHITECT.

6. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL RELEVANT DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATIONS AGAINST PURCHASED MANUFACTURER'S CERTIFIED EQUIPMENT DRAWINGS. DIMENSIONS THAT DEPEND UPON SPECIFIC EQUIPMENT SUCH AS ELEVATOR OPENINGS, MECHANICAL EQUIPMENT SUPPORTS, ETC. SHALL BE COORDINATED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. SUCH DIMENSIONS SHALL BE PROVIDED ON THE SHOP DRAWINGS BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER.

EXISTING CONDITIONS

1. VERIFY ALL EXISTING ASSUMED DIMENSIONS AND CONDITIONS (I.E. EXISTING MATERIALS; FRAMING MEMBER SIZES AND LOCATIONS; METHODS OF CONSTRUCTION; ETC.) AT THE SITE PRIOR TO CONSTRUCTION AND FABRICATION. IF DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT BEFORE PROCEEDING WITH WORK.

FOUNDATIONS

1. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL WITH AN ASSUMED BEARING CAPACITY OF 2500 P.S.F. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ARCHITECT. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.

2. WHERE NEW FOOTINGS ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND PLACE BOTTOM OF NEW FOOTING AT THE SAME ELEVATION AS THE EXISTING.

3. PROVIDE NECESSARY SHEETING SHORING BRACING, ETC. AS REQUIRED DURING EXCAVATIONS TO PROTECT SIDES OF EXCAVATIONS.

4. COMPLY FULLY WITH REQUIREMENTS OF OSHA AND OTHER REGULATORY AGENCIES FOR SAFETY PROVISIONS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND TEMPORARY SUPPORT OF ALL EXISTING BUILDINGS AND ADJACENT PROPERTY DURING THE INSTALLATION OF THE NEW CONSTRUCTION. ANY SHORING, BRACING, UNDERPINNING AND OR EARTH RETENTION SYSTEM SHOWN ON THE DRAWINGS IS CONCEPTUAL. THE CONTRACTOR IS RESPONSIBLE FOR THE FINAL DESIGN, INCLUDING METHODS OF CONSTRUCTION, SEQUENCE OF WORK AND DETERMINING REINFORCEMENT OF THE EXISTING STRUCTURE. SHORING, BRACING, UNDERPINNING AND OR EARTH RETENTION SYSTEM SHALL BE PERFORMED BY A CONTRACTOR WITH A MINIMUM 5 YEARS DEMONSTRATED EXPERIENCE IN SIMILAR SIZE AND SCOPE OF SHORING, BRACING AND UNDERPINNING PROJECTS. SHORING, BRACING, UNDERPINNING AND OR EARTH RETENTION SYSTEM SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN WITH A MINIMUM 5 YEARS DEMONSTRATED EXPERIENCE IN SIMILAR SIZE AND SCOPE OF SHORING, BRACING AND UNDERPINNING PROJECTS. DESIGN LOADS AND METHODS SHALL CONFORM TO APPLICABLE CODES. SUBMIT DRAWINGS AND CALCULATIONS SEALED BY THE CONTRACTOR'S PROFESSIONAL ENGINEER SHOWING COMPLETE DESIGN INCLUDING TEMPORARY CONDITIONS, FINAL CONDITIONS AND SEQUENCE OF WORK.

CONCRETE

1. MINIMUM CONCRETE STRENGTH TO BE 3000 P.S.I. @ 28 DAYS, U.O.N.; SLABS SHALL BE 3500 P.S.I. MIN. U.O.N. EXPOSED CONCRETE SHALL BE 4000 PSI WITH 6% + 1% ENTRAINED AIR U.O.N.

2. FLYASH OR GROUND GRANULATED BLAST FURNACE SLAG MAY BE SUBSTITUTED UP TO 25% MAXIMUM OF MIX DESIGN CEMENT CONTENT IN NON-EXPOSED CONCRETE MIXES. DO NOT USE IN EXPOSED MIX DESIGNS.

3. ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST RECOMMENDATIONS OF A.C.I.

4. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS AND SHALL HAVE MINIMUM 36 BAR DIAMETER LAP AND BE FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION.

5. REINFORCED CONCRETE WALL FOOTINGS SHALL HAVE CORNER BARS AT ALL INTERSECTIONS OF THE SAME SIZE AND SPACING AS THE MAIN HORIZONTAL REINFORCING.

6. ALL SLABS ON GROUND SHALL BE 4" THICK AND HAVE 6" X 6" W1.4 X W1.4 WELDED WIRE FABRIC IN THE TOP 1/3 OF THE SLAB, UNLESS OTHERWISE NOTED.

7. FIELD AND SHOP TESTING OF CONCRETE WORK SHALL INCLUDE INSPECTION OF REINFORCING STEEL PLACEMENT, REBARS, NUMBER, LOCATION, AND LAP SPLICE LENGTH.

8. UNLESS OTHERWISE SHOWN, PROVIDE THE FOLLOWING COVER FOR REINFORCING STEEL:

   A. UNFORMED SURFACES IN CONTACT WITH EARTH -3 IN.
   B. UNFORMED SURFACES OVER MOISTURE BARRIERS -2 IN.
   C. FORMED SURFACES EXPOSED TO EARTH OR WEATHER OR WATER PROOFING/DAMP PROOFING
      #6 OR LARGER -2 IN.
      #5 OR SMALLER -1 1/2 IN.
   D. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER
      SLABS -3/4 IN.

MASONRY

1. THE MASONRY PORTIONS OF THIS STRUCTURE ARE DESIGNED ACCORDING TO THE LATEST ALLOWABLE STRESS DESIGN PROVISIONS OF THE MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 602) INCLUDING SECTIONS 2106 AND 2107 OF CHAPTER 21 IN THE MICHIGAN BUILDING CODE. MASONRY COMPONENTS HAVE BEEN DESIGNED ACCORDING TO THE PROVISIONS FOR SEISMIC DESIGN CATEGORY B.

MASONRY (CONT.)

2. ALL STRUCTURAL MASONRY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6) MASONRY SUBMITTALS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602. SECTION 1.5 MASONRY TESTING AND INSPECTIONS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602 SECTION 1.6, TABLE 5.

3. ALL STRUCTURAL MASONRY HAS BEEN ENGINEERED IN ACCORDANCE WITH CHAPTER 2 ALLOWABLE STRENGTH DESIGN. COMPRESSION STRENGTH SHALL BE DETERMINED ACCORDING TO THE UNIT STRENGTH METHOD FOR CONCRETE MASONRY MSJC SECTION 1.4. B.2.b.

4. ALL BLOCK SHALL CONFORM TO ASTM C90, TYPE I, WITH A MINIMUM UNIT NET AREA COMPRESSIVE STRENGTH OF 2800 PSI.

5. MASONRY COMPRESSIVE STRENGTH f'm = 2000 PSI MINIMUM.

6. MORTAR SHALL BE TYPE "S" (1800 PSI) CONFORMING TO ASTM C-270. USE MORTAR CEMENT WHERE EXTERIOR WALLS ARE UNREINFORCED.

7. PROVIDE HORIZONTAL WIRE TYPE REINFORCING WITH 9 GAUGE SIDE AND CROSS MEMBERS IN EVERY SECOND COURSE (16" O.C.), IN ALL MASONRY WALLS. WALLS WITH VERTICAL REINFORCING SHALL ONLY HAVE "LADDER" TYPE REINFORCING.

8. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS, FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION AND HAVE THE FOLLOWING MINIMUM LAP LENGTHS:

| BAR SIZE | 8" CMU | 12" CMU |
|---|---|---|
| #3 | 18" | 18" |
| #4 | 24" | 24" |
| #5 | 30" | 30" |
| #6 | 38" | 36" |
| #7 | | 42" |
| #8 | | 50" |

9. ALL MASONRY BEARING STEEL BEAMS AND LINTELS TO BEAR 8" MINIMUM ON 3 COURSES SOLID MASONRY, WITH 2-3/4" DIAMETER BOLTS EACH END, UNLESS OTHERWISE NOTED.

10. UNLESS OTHERWISE NOTED WHERE STEEL JOISTS BEAR ON MASONRY, PROVIDE A MINIMUM OF ONE COURSE OF SOLID BLOCK BELOW K-SERIES JOISTS AND A MINIMUM OF TWO COURSES SOLID BELOW LH SERIES JOISTS.

11. ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID.

12. MASONRY GROUT SHALL CONFORM TO ASTM C 476, WITH PEA GRAVEL AGGREGATE AND A MINIMUM STRENGTH OF 2000 PSI, BUT NOT LESS THAN SPECIFIED f'm.

13. UNLESS OTHERWISE NOTED, AT ALL MASONRY WALLS PROVIDE THE FOLLOWING LINTELS:

8" WALLS

(2) L4x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0"
(2) L5x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4"
W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"
W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

12" WALLS:

(3) L4x3- 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0"
(3) L5x3-1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4"
W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"
W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

14. ALL DOUBLE ANGLE LINTELS SHALL BE WELDED BACK TO BACK WITH A MINIMUM 2 INCH STITCH WELD EVERY 8 INCHES.

15. UNLESS OTHERWISE NOTED, PROVIDE L5 X 3-1/2 X 5/16 L.L.V. LINTEL FOR EACH 4" OF MASONRY FOR SPANS UP TO 5'-0" MAX.

16. PROVIDE DOWELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL

1. STEEL DESIGN, FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH THE LATEST A.I.S.C. MANUAL AND SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS. ALL WIDE FLANGE BEAMS AND COLUMNS SHALL CONFORM TO THE LATEST ASTM. SERIAL DESIGNATION A992, GR50; ALL MISCELLANEOUS STEEL PLATES, BARS, ANGLES, ETC., SHALL CONFORM TO ASTM A36; STEEL TUBING TO BE ASTM A500, GRADE B; STEEL PIPE ASTM. A-53, GRADE B.

2. ALL WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS CODE, E70XX ELECTRODES, WITH WELDING PERFORMED BY QUALIFIED WELDERS.

3. BOLTED CONNECTIONS SHALL BE MADE WITH A-325 OR A-490 BOLTS. ALL BOLTS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS FOR "STRUCTURAL JOINTS USING A.S.T.M. A-325 OR A-490 BOLTS." TYPICAL BOLTED CONNECTIONS ARE "BEARING TYPE" UNLESS NOTED OTHERWISE.

4. DESIGN CONNECTIONS FOR MINIMUM ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD PER A.I.S.C. BEAM LOAD TABLES, UNLESS OTHERWISE NOTED. (MIN. 2 BOLTS EACH CONNECTION).

5. THE STRUCTURAL STEEL CONTRACTOR SHALL INCLUDE (5) (10) TONS OF ADDITIONAL STEEL, INCLUDING FABRICATION AND ERECTION, TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

6. THE DESIGN, CONFIGURATION & ERECTION SAFETY OF ALL STRUCTURAL STEEL CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE STRUCTURAL STEEL FABRICATOR. REVIEW AND ACCEPTANCE OF THE SHOP DRAWINGS BY THE ENGINEER SHALL CONSTITUTE APPROVAL OF THE LOAD CARRYING ADEQUACY ONLY.

7. TYPE OF CONSTRUCTION PER ASCE A2.2 IS TYPE 2 "SIMPLE FRAMING" UNLESS NOTED OTHERWISE.

8. TEMPORARY ERECTION SEATS SHALL BE PROVIDED AS RECOMMENDED ON PAGE 3-59 OF THE A.I.S.C. PUBLICATION "ENGINEERING FOR STEEL CONSTRUCTION".

9. METAL DECK SHALL CONFORM TO ALL REQUIREMENTS OF "BASIC DESIGN SPECIFICATION" AS ADOPTED BY THE STEEL DECK INSTITUTE (S.D.I.). METAL ROOF DECK SHALL BE WIDE RIB WITH NESTING SIDE SEAMS OF DEPTH AND GAGE INDICATED ON THE DRAWINGS. DECK SHALL BE WELDED TO ALL SUPPORTING STEEL WITH PUDDLE WELDS (5/8" DIAMETER MINIMUM), AT 12" ON CENTER MAXIMUM SPACING AND 6" O/C (ALL FLUTES) AT END LAP SUPPORT POINTS AND BUILDING PERIMETER ATTACHMENTS. SIDE LAP CONNECTIONS SHALL BE MADE AT MAXIMUM 3'-0" CENTERS AT MIDPOINT OF SPAN WITH #10 TEK SCREW MIN. REFER TO SPECIFICATIONS FOR ADDITIONAL ERECTION PROCEDURES.

10. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ANGLES, PLATES, BARS, CLIPS, ETC., ATTACHED TO STRUCTURAL STEEL.

11. UNLESS OTHERWISE NOTED, ROOF OPENINGS SHALL BE FRAMED WITH L 5 X 3-1/2 X 5/16 L.L.V. VERIFY EXACT SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND WITH CONTRACTOR INVOLVED.

STRUCTURAL STEEL (CONT.)

12. THIS STEEL FRAME IS NON SELF-SUPPORTING PER A.I.S.C. CODE OF STANDARD PRACTICE, SECTIONS 7.9.3. AND 7.9.5. ERECTION, BRACING, SHORING, ETC. SHALL CONFORM TO THESE SECTIONS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE.

13. THE CONTRACTOR SHALL FURNISH ALL ACCESSORIES INCLUDING CLOSURES, "Z" CLOSURES, COLUMN CLOSURES, SCREED ANGLES AND GIRDER FILLERS AS REQUIRED.

14. ROOF DECK SHALL HAVE GALVANIZED COATING CONFORMING TO ASTM A653-COATING DESIGNATION G-90 OR AS NOTED.

15. NO LOADS SHALL BE PERMITTED TO BE HUNG FROM ANY ROOF DECK. ALL HANGERS FOR CEILINGS, DUCTWORK, ELECTRICAL CONDUIT, PIPING, ETC., SHALL BE HUNG DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS.

16. MASONRY AND BRICK LINTELS SHALL BE GALVANIZED G90 PER ASTM A123.

17. PROVIDE L4X4X1/4 SEATS AT COLUMN WEBS WHERE REQUIRED FOR SUPPORT OF ROOF AND FLOOR DECKS. PROVIDE ANGLE OUTRIGGER FROM EXTERIOR COLUMNS FOR SLAB AND ROOF EDGE PLATE SUPPORT.

18. ALL BOLTED MOMENT CONNECTIONS REQUIRE SLIP CRITICAL BOLTS.

SPECIAL INSPECTION

1. WORK CONSTRUCTED SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. INSPECTIONS REQUIRED BY CHAPTER 17 OF THE MICHIGAN BUILDING CODE; LOCAL BUILDING DEPARTMENTS AND THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY. SITE VISITS BY THE DESIGN ENGINEER DO NOT CONSTITUTE OR REPLACE INSPECTION

2. THE FOLLOWING ITEMS SHALL BE INSPECTED IN ACCORDANCE WITH MBC 2012 SEC. 1704 BY A CERTIFIED SPECIAL INSPECTOR UNLESS NOTED OTHERWISE IN REMARKS COLUMN. ALL INSPECTION SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED. ALL PRODUCTS WITH ICC APPROVALS SHALL BE INSTALLED PER THE APPROVAL AND PER MANUFACTURER'S RECOMMENDATIONS. FOR MATERIAL TESTING REQUIREMENTS, SEE SPECIFICATIONS AND/OR GENERAL NOTES. TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT.

FABRICATOR'S SHOP (SEC. 1704.2) *

STEEL FABRICATION

*SPECIAL INSPECTION IS NOT REQUIRED FOR FABRICATOR SHOP IF CERTIFICATE OF APPROVAL SUBMITTED BY FABRICATOR'S INSPECTION AGENCY PER 1704.2.1 EXCEPTION AND 1704.2.2

TABLE 1704.3
REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | NOT APPLICABLE | REFERENCED STANDARD | MBC REFERENCED |
|---|---|---|---|---|---|
| 1. MATERIAL VERIFICATION OF HIGH-STRENGHT BOLTS, NUTS AND WASHERS: | | | | | |
| a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. | - | X | - | AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS | |
| b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED. | - | X | - | - | - |
| 2. INSPECTION OF HIGH-STRENGTH BOLTING: | | | | | |
| a. SNUG-TIGHT JOINTS. | - | X | - | AISC 360, SECTION M2.5 | 1704.3.3 |
| b. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION. | - | X | - | | |
| c. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION. | X | - | - | | |
| 3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK: | | | | | |
| a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360. | - | X | - | AISC 360, SECTION M5.5 | |
| b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS. | - | X | - | APPLICABLE ASTM MATERIAL STANDARDS | |
| c. MANUFACTURER'S CERTIFIED TEST REPORTS. | - | X | - | | |
| 4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS: | | | | | |
| a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS. | - | X | - | AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS | - |
| b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED. | - | X | - | - | - |
| 5. INSPECTION OF WELDING: | | | | | |
| a. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK: | | | | | |
| 1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS. | X | - | - | AWS D1.1 | 1704.3.1 |
| 2) MULTIPASS FILLET WELDS. | X | - | - | | |
| 3) SINGLE-PASS FILLET WELDS > 5/16" | X | - | - | | |
| 4) PLUG AND SLOT WELDS. | X | - | - | | |
| 5) SINGLE-PASS FILLET WELDS ≤ 5/16" | - | X | - | | |
| 6) FLOOR AND ROOF DECK WELDS. | - | X | - | AWS D1.3 | |
| b. REINFORCING STEEL: | | | | | |
| 1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706. | - | X | - | AWS D1.4 ACI 318: SECTION 3.5.2 | - |
| 2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT. | X | - | - | | |
| 3) SHEAR REINFORCEMENT. | X | - | - | | |
| 4) OTHER REINFORCING STEEL. | - | X | - | | |
| 6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE: | | | | | |
| a. DETAILS SUCH AS BRACING AND STIFFENING. | - | X | - | - | 1704.3.2 |
| b. MEMBER LOCATIONS. | - | X | - | | |
| c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION. | - | X | - | | |

TABLE 1704.4
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | NOT APPLICABLE | REFERENCED STANDARD | MBC REFERENCED |
|---|---|---|---|---|---|
| 1. INSPECTION OF REINFORCING STEEL INCLUDING PRESTRESSING TENDONS AND PLACEMENT. | - | X | - | ACI 318: 3.5, 7.1-7.7 | 1913.4 |
| 2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3 ITEM 5b | - | - | - | AWS D1.4 ACI 318: 3.5.2 | - |
| 3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED. | X | - | - | ACI 318 8.13,2128 | 1911.5 1912.1 |
| 4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE. | - | X | - | ACI 318 3.8.6,8.1.3,21.2.8 | 1912.1 |
| 5. VERIFYING USE OF REQUIRED DESIGN MIX. | - | X | - | ACI 318: CH.4,5.2-5.4 | 1904.2.2, 1913.2,1913.3 |
| 6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE | X | - | - | ASTM C 172 ASTM C 31 ACI 318: 5.6,5.8 | 1913.10 |
| 7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. | X | - | - | ACI 318: 5.9,5.10 | 1913.6, 1913.7,1913.8 |
| 8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES. | - | X | - | ACI 318: 5.11-5.13 | 1913.9 |
| 9. INSPECTION OF PRESTRESSED CONCRETE<br>a. APPLICATION OF PRESTRESSING FORCES<br>b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE RESISTING SYSTEM.. | X<br>X | - | - | ACI 318: 18.20 ACI 318: 18.18.4 | - |
| 10. ERECTION OF PRECAST CONCRETE MEMBERS. | - | X | - | ACI 318: CH.16 | - |
| 11. VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS BEAMS AND STRUCTURAL SLABS. | - | X | - | ACI 318: 6.2 | - |
| 12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. | - | X | - | ACI 318: 6.1.1 | - |

TABLE 1704.5.1
LEVEL 1 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION

| VERIFICATION AND INSPECTION | FREQUENCY OF INSPECTION | | | REFERENCE FOR CRITERIA | | |
|---|---|---|---|---|---|---|
| | CONTINUOUS | PERIODIC | NOT APPLICABLE | IBC SECTION | TMS 402/ACI 530/ASCE 5 | TMS 602/ACI 530.1/ASCE 6 |
| 1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED. | - | X | - | - | - | ART. 1.5 |
| 2. VERIFICATION OF $f'_M$ AND $f'_{ACC}$ PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE. | - | X | - | - | - | ART. 1.4B |
| 3. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT. | X | - | - | - | - | ART. 1.5B.1.b.3 |
| 4. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: | | | | | | |
| a. PROPORTIONS OF SITE-PREPARED MORTAR. | - | X | - | - | - | ART. 2.6A |
| b. CONSTRUCTION OF MORTAR JOINTS. | - | X | - | - | - | ART. 3.3B |
| c. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS AND ANCHORAGES. | - | X | - | - | - | ART. 3.4, 3.6A |
| d. PRESTRESSING TECHNIQUE. | - | X | - | - | - | ART. 3.6B |
| e. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES. | - | X | - | - | - | ART. 2.4B, 2.4H |
| 5. DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY: | | | | | | |
| a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS. | - | X | - | - | - | ART. 3.3F |
| b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION. | - | X | - | - | SEC. 1.2.2(e), 1.16.1 | - |
| C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES. | - | X | - | - | SEC. 1.15 | ART. 2.4, 3.4 |
| d. WELDING OF REINFORCING BARS. | X | - | - | - | SEC. 2.1.9.7.2, 3.3.3.4(b) | - |
| e. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F). | - | X | - | SEC. 2104.3, 2104.4 | - | ART. 1.8C 1.8D |
| f. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE. | X | - | - | - | - | ART. 3.6B |
| 6. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: | | | | | | |
| a. GROUT SPACE IS CLEAN. | - | X | - | - | - | ART. 3.2D |
| b. PLACEMENT OF REINFORCEMENT AND CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES. | - | X | - | - | SEC. 1.13 | ART. 3.4 |
| C. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS. | - | X | - | - | - | ART. 2.6B |
| d. CONSTRUCTION OF MORTAR JOINTS. | - | X | - | - | - | ART. 3.3B |
| 7. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE: | X | - | - | - | - | ART. 3.5 |
| a. GROUTING OF PRESTRESSING BONDED TENDONS. | X | - | - | - | - | ART. 3.6C |
| 8. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED. | - | X | - | SEC. 2105.2.2 2105.3 | - | ART. 1.4 |

TABLE 1704.5.3
LEVEL 2 REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION

| VERIFICATION AND INSPECTION | FREQUENCY OF INSPECTION | | | REFERENCE FOR CRITERIA | | |
|---|---|---|---|---|---|---|
| | CONTINUOUS | PERIODIC | NOT APPLICABLE | IBC SECTION | TMS 402/ACI 530/ASCE 5 | TMS 602/ACI 530.1/ASCE 6 |
| 1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS. | - | X | - | - | - | ART. 1.5 |
| 2. VERIFICATION OF $f'_M$ AND $f'_{ACC}$ PRIOR TO CONSTRUCTION AND FOR EVERY 5,000 SQUARE FEET DURING CONSTRUCTION. | - | X | - | - | - | ART. 1.4B |
| 3. VERIFICATION OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR AND GROUT AS DELIVERED TO THE SITE | - | X | - | - | - | ART. 1.5B.1.b.3 |
| 4. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT. | X | - | - | - | - | ART. 1.5B.1.b.3 |
| 5. THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: | | | | | | |
| a. PROPORTIONS OF SITE-PREPARED MORTAR, GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS. | - | X | - | - | - | ART. 2.6A |
| b. PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS. | - | X | - | - | - | ART. 3.3B |
| c. PLACEMENT OF REINFORCEMENT, CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES. | - | X | - | - | SEC. 1.15 | ART. 3.4, 3.6A |
| d. GROUT SPACE PRIOR TO GROUT. | X | - | - | - | - | ART. 3.2D |
| e. PLACEMENT OF GROUT. | X | - | - | - | - | ART. 3.5 |
| f. PLACEMENT OF PRESTRESSING GROUT. | X | - | - | - | - | ART. 3.6C |
| g. SIZE AND LOCATION OF STRUCTURAL ELEMENTS. | - | X | - | - | - | ART. 3.3F |
| h. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION. | X | - | - | - | SEC. 1.2.2(e) 1.16.1 | - |
| i. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES. | - | X | - | - | SEC. 1.15 | ART. 2.4,3.4 |
| j. WELDING OF REINFORCING BARS. | X | - | - | - | SEC. 2.1.7.2 3.3.3.4(b) | - |
| k. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F). | - | X | - | SEC. 2104.3 2104.4 | - | ART. 1.8C, 1.8D |
| i. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE. | X | - | - | - | - | ART. 3.6B |
| 6. PREPARATION OF ANY REQUIRED GROUT SPECIMENS AND/OR PRISMS SHALL BE OBSERVED. | X | - | - | SEC. 2105.2.2 2105.3 | - | ART. 1.4 |

TABLE 1704.7
REQUIRED VERIFICATION AND INSPECTION OF SOILS

| VERIFICATION AND INSPECTION TASK | CONTINUOUS DURING TASK LISTED | PERIODICALLY DURING TASK LISTED | NOT APPLICABLE |
|---|---|---|---|
| 1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY. | - | X | |
| 2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL. | - | X | |
| 3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS. | - | X | |
| 4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL. | X | - | |
| 5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY. | - | X | |

DESIGN CRITERIA

CODE: MBC 2012 THE STRUCTURE IS DESIGNED FOR THE FOLLOWING LIVE LOADS, IN ADDITION TO THE LATERAL LOADS, SUPER-IMPOSED DEAD LOADS, & SELF WEIGHT OF THE STRUCTURE. WHERE APPLICABLE LIVE LOADS ARE REDUCED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE.

A. AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI-318).

B. MANUAL OF STEEL CONSTRUCTION BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION (LATEST EDITION).

C. LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6)

D. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS AND SPECIFICATIONS.

E. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY AMERICAN FOREST AND PAPER ASSOCIATION.

| | | CODE REFERENCE |
|---|---|---|
| BUILDING OCCUPANCY CATEGORY | III | MBC-Table 1604.5 ASCE Table 1.5-1 |

SNOW LOADS/ROOF LIVE LOADS

| SNOW CRITERIA | | CODE REFERENCE |
|---|---|---|
| GROUND SNOW LOAD | Pg = 25 PSF | MBC FIG. 1608.2 ASCE Fig. 7-1 |
| FLAT ROOF SNOW LOAD | Pf = 22 PSF (MINIMUM) | ASCE Sec. 7.3 |
| EXPOSURE FACTOR | Ce = 1.0 | ASCE Table 7-2 |
| IMPORTANCE FACTOR | I = 1.1 | ASCE Table 1.5-2 |
| THERMAL FACTOR | Ct = 1.0 | ASCE Table 7-3 |
| ROOF LIVE LOADS | Lr = 20 PSF | ASCE Table 4-1 |

NOTE: SNOW LOADS ADJACENT VERTICAL PROJECTIONS, ON LOWER ROOFS, ADJACENT TO HIGH ROOFS, OR SLOPED ROOFS ARE INCREASED FOR THE EFFECT OR DRIFTING

WIND LOADS

| WIND CRITERIA | | CODE REFERENCE |
|---|---|---|
| BASIC WIND SPEED (3 SEC. GUST) | V = 120 MPH | ASCE FIG. 26.5-1A, 26.5-1B, 26.5-1C |
| RISK FACTOR | III | ASCE Table 1.5-1 |
| EXPOSURE CATEGORY | B | ASCE Sec. 26.7.3 |
| INTERNAL PRESSURE COEFFICIENT | ± 0.18 (ENCLOSED) | ASCE TABLE 26.11-1 |
| MWFRS ANALYSIS PROCEDURE | DIRECTIONAL PROCEDURE | ASCE CHAP. 27 |
| COMPONENTS AND CLADDING | ± 33 PSF MINIMUM AND PER CODE REQUIREMENTS BASED ON ABOVE INFORMATION | ASCE Sec. 30.2.2 |

SEISMIC LOADS

| SEISMIC CRITERIA | | CODE REFERENCE |
|---|---|---|
| SEISMIC IMPORTANCE FACTOR | I = 1.25 | ASCE Table 1.5-2 |
| -0.2 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) Ss | Ss = 0.0943 | ASCE Sec. 11.4 |
| -1.0 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) $S_1$ | $S_1$ = 0.0465 | ASCE Sec. 11.4 |
| SOIL SITE CLASS | D | ASCE Sec. 11.4.2 |
| SEISMIC DESIGN CATEGORY | B | ASCE Sec. 11.6 |
| SEISMIC FORCE RESISTING SYSTEM | STEEL NOT SPECIFICALLY DETAILED FOR SEISMIC | ASCE Table 12.2-1 |
| RESPONSE MODIFICATION FACTOR | R = 3.5 | ASCE Table 12.2-1 |
| DEFLECTION AMPLIFICATION FACTOR | Cd = 2.25 | ASCE Table 12.2-1 |
| ANALYSIS PROCEDURE | EQUIVALENT LATERAL FORCE | ASCE Sec. 12.8 |

NOT FOR CONSTRUCTION

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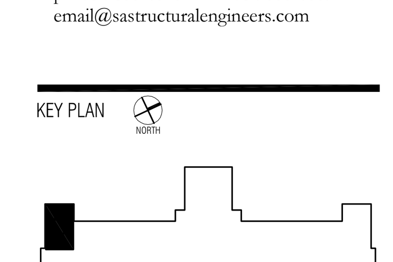
KEY PLAN




OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

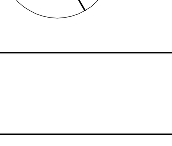
2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/00/2016

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CHECKED BY
ACS

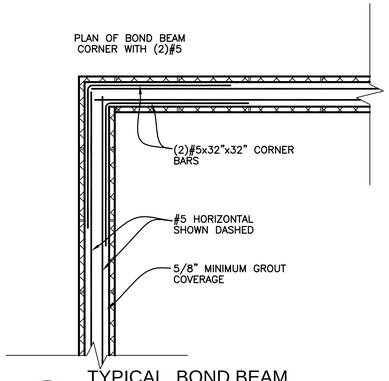
APPROVED BY
MAM

SHEET NAME
GENERAL NOTES

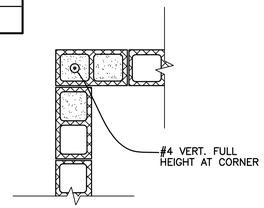
SHEET NO.
S4-00

## WALL FOOTING SCHEDULE

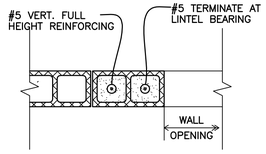
| MARK | SIZE W | SIZE D | REINFORCING STEEL BOTTOM U.O.N. | REMARKS |
|---|---|---|---|---|
| WF1 | 1'–8" | 12" | 2–#5 | |
| WF2 | 1'–4" | 12" | 2–#5 | |



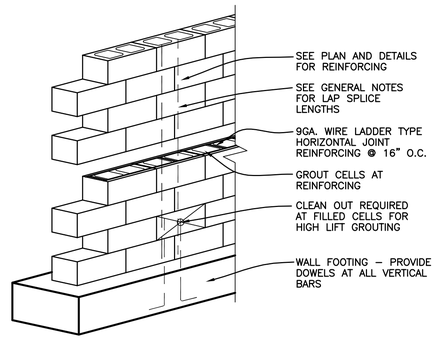

12 S4-01 TYPICAL BOND BEAM CORNER DETAIL
SCALE : 3/4" = 1'–0"




11 S4-01 TYPICAL REINFORCING AT CORNERS
SCALE : 3/4" = 1'–0"



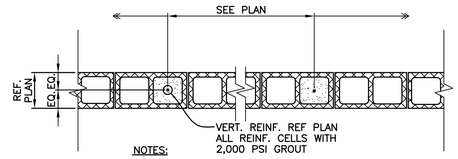

10 S4-01 TYPICAL REINFORCING ALONG SIDE OPENING
SCALE : 3/4" = 1'–0"




GROUT INSTRUCTIONS :

1. CONSTRUCT WALL TO HEIGHT OF 4'–0" – ALLOW MORTAR TO SET SUFFICIENTLY TO WITHSTAND GROUT PRESSURE.
2. INSPECT UNITS FOR ALIGNMENT, CLEAN OUT CELLS TO BE FILLED.
3. FILL CELLS TO 8" BELOW TOP COURSE WITH 2,000 PSI CONCRETE GROUT.
4. DELAY 3 – 5 MINUTES PRIOR TO CONSOLIDATING TO ALLOW WATER TO BE ABSORBED BY MASONRY.

9 S4-01 REINFORCED MASONRY CONSTRUCTION DETAIL
SCALE : NONE

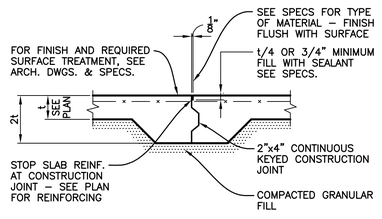



NOTES:

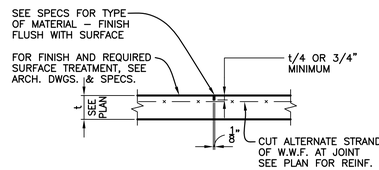
1. PROVIDE CLEANOUTS AT BOTTOM OF EACH REINFORCED CELL IN ACCORDANCE WITH THE SPECIFICATIONS
2. PROVIDE HORIZONTAL JOINT REINF. PER GENERAL NOTES @ 16" O.C. MAX. U.N.O.

| MASONRY REINF. LAP LENGTH | | |
|---|---|---|
| BAR SIZE | 8" WALL | 12" WALL |
| 4 | 24" | 24" |
| 5 | 30" | 30" |
| 6 | 38" | 36" |
| 7 | | 42" |

8 S4-01 TYPICAL WALL REINFORCING DETAIL
SCALE : 3/4" = 1'–0"

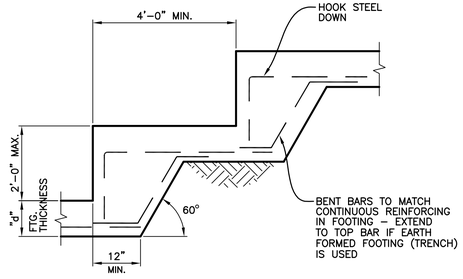



7 S4-01 TYPICAL FLOOR CONSTRUCTION JOINT
SCALE : 1" = 1'–0"

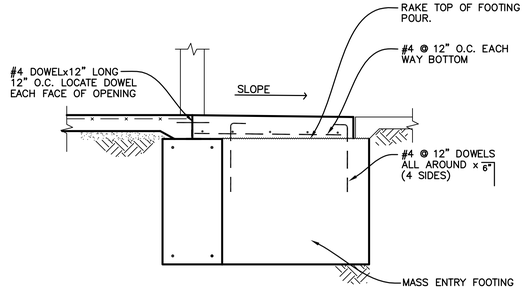



(15'-0" O.C. EACH WAY MAXIMUM)

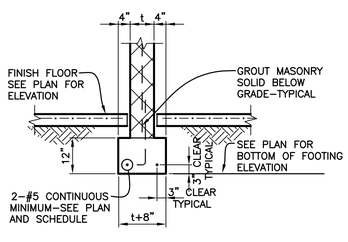
6 S4-01 TYPICAL FLOOR CONTROL JOINT
SCALE : 1" = 1'–0"



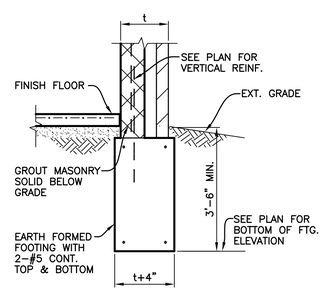

5 S4-01 TYPICAL STEP FOOTING DETAIL
SCALE : NONE (IF REQUIRED)




3 S4-01 TYPICAL MASS ENTRANCE SLAB
SCALE : 1/2" = 1'–0"

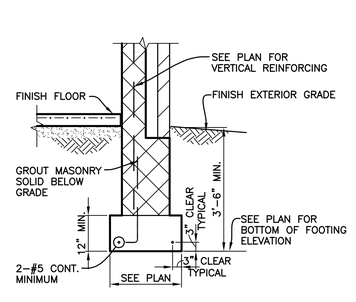



2 S4-01 TYPICAL INTERIOR WALL FOOTING
SCALE : 1/2" = 1'–0"




1A S4-01 ALTERNATE EXTERIOR COMPOSITE WALL FOOTING
SCALE : 1/2" = 1'–0" (CONTRACTOR OPTION)

NOTE : THIS DETAIL MAY BE USED IN LIEU OF DETAIL 1 AT CONTRACTOR'S OPTION IF FIELD CONDITIONS ALLOW AND IF ACCEPTABLE TO THE SOILS ENGINEER




1 S4-01 TYPICAL EXTERIOR COMPOSITE WALL PAD FOOTING
SCALE : 1/2" = 1'–0"

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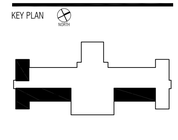
KEY PLAN



OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/00/201€

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MAM

SHEET NAME

DETAILS

SHEET NO.

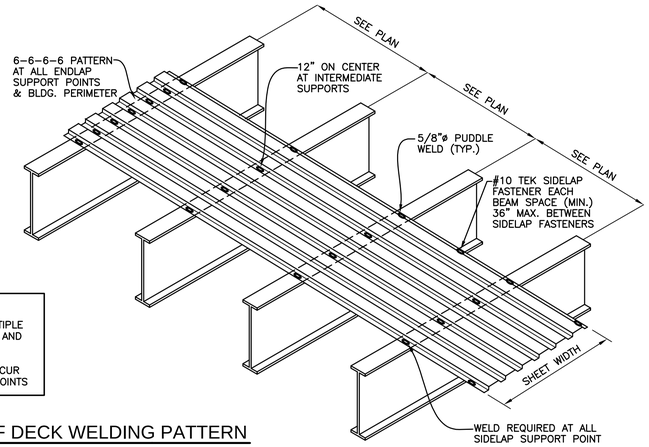
S4-01

## LINTEL SCHEDULE

8" BEARING EACH END–U.N.O.

| MARK | DESCRIPTION | |
|---|---|---|
| L1 | (2)L4x3 1/2x5/16 LLV | |
| L2 | W8x18 + 3/8" PL | |
| L3 | 8" WIDEx16" DEEP MASONRY LINTEL WITH 4–#5 BOTTOM + GALVANIZED L5x5x5/16 | |
| | | |
| | | |

LINTEL NOTES:
1. PLATES ON LINTELS EXTEND WIDTH OF MASONRY OPENINGS ONLY. (SEE ARCH. DRAWINGS)
2. HOLD EDGE OF PLATE ON LINTEL BACK FROM EACH FACE OF MASONRY 1/4"
3. WELD 1/2"ø x8" HEADED STUDS 32" O.C. TO TOP FLANGE OF ALL WIDE FLANGE LINTELS
4. ALL EXTERIOR LINTELS TO BE GALVANIZED G90 PER ASTM 123

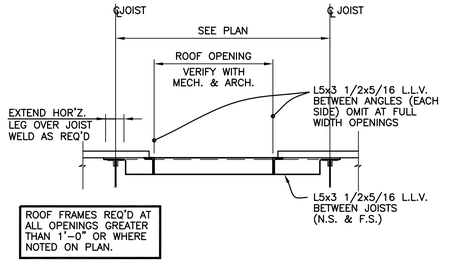



NOTES:

WELD THROUGH MULTIPLE SHEETS AT ALL END AND SIDE LAPS.

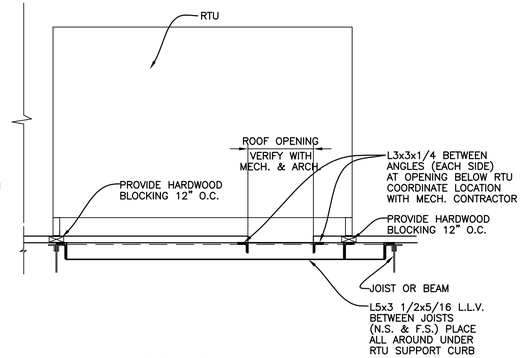
END LAPS SHALL OCCUR ONLY AT SUPPORT POINTS

- / S5-00 TYPICAL ROOF DECK WELDING PATTERN
SCALE : NONE

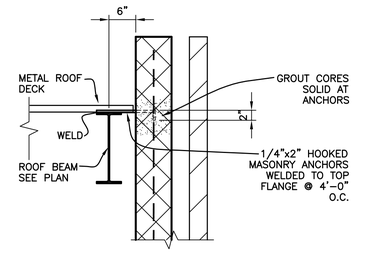



ROOF FRAMES REQ'D AT ALL OPENINGS GREATER THAN 1'–0" OR WHERE NOTED ON PLAN.

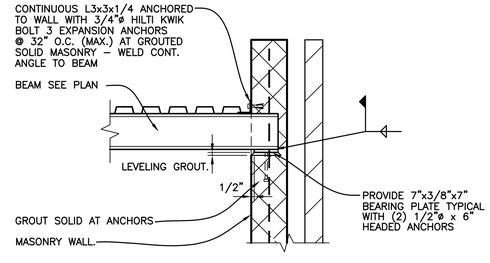
- / S5-00 TYPICAL ROOF OPENING DETAIL
SCALE : 3/4" = 1'–0"




- / S5-00 TYPICAL DETAIL AT MECHANICAL UNIT SUPPORT
SCALE : 3/4" = 1'–0"




2 / S5-00 SECTION AT BEAM PARALLEL TO MASONRY WALL
SCALE : 3/4" = 1'–0"




1 / S5-00 TYPICAL ROOF BEAM BEARING ON MASONRY WALL
SCALE : 3/4" = 1'–0"

NOT FOR CONSTRUCTION


PARTNERS

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KEY PLAN

OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/00/201€

N

DRAWN BY

CHECKED BY

ACS

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MAM

SHEET NAME

DETAILS

SHEET NO.

S5-00

## MECHANICAL ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| AAV | AUTOMATIC AIR VENT / AIR ADMITTANCE VALVE |
| AD | ACCESS DOOR |
| AE | AIR EXTRACTOR |
| AFF | ABOVE FINISHED FLOOR |
| APD | AIR PRESSURE DROP |
| ASR | AUTOMATIC SPRINKLER RISER |
| BFP | BACKFLOW PREVENTER |
| BHP | BRAKE HORSEPOWER |
| BOD | BOTTOM OF DUCT |
| BTU | BRITISH THERMAL UNIT |
| BTUH | BRITISH THERMAL UNITS PER HOUR |
| BWV | BACKWATER VALVE |
| CAP | CAPACITY |
| CAV | CONSTANT AIR VOLUME |
| CFH | CUBIC FEET PER HOUR |
| CFM | CUBIC FEET PER MINUTE |
| CIRC | CIRCULATING |
| CLG | COOLING |
| CO | CLEAN OUT |
| CONT | CONTINUATION OR CONTINUED |
| CONV | CONVECTOR |
| CUH | CABINET UNIT HEATER |
| CV | CONTROL VALVE |
| DB | DRY BULB TEMPERATURE |
| DEG | DEGREES |
| DDC | DIRECT DIGITAL CONTROL |
| DN | DOWN |
| DTC | DRAIN TILE CONNECTION |
| DWH | DOMESTIC WATER HEATER |
| (E) | EXISTING |
| EA/EXH | EXHAUST AIR |
| EAT | ENTERING AIR TEMPERATURE |
| EDB | ENTERING DRY BULB TEMPERATURE |
| EF | EXHAUST FAN |
| EJ | EXPANSION JOINT |
| EL | ELEVATION |
| ELECT | ELECTRICAL |
| EMS | ENERGY MANAGEMENT SYSTEM |
| ESP | EXTERNAL STATIC PRESSURE |
| EWB | ENTERING WET BULB TEMPERATURE |
| EWC | ELECTRIC WATER COOLER |
| °F | DEGREES FAHRENHEIT |
| FA | FACE AREA (COIL) / FREE AREA (LOUVER) |
| FC | FLEXIBLE CONNECTION |
| FD | FLOOR DRAIN |
| FDC | FIRE DEPARTMENT CONNECTION |
| FH | FIRE HYDRANT |
| FHC | FIRE HOSE CABINET |
| FHR | FIRE HOSE RACK |
| FHV | FIRE HOSE VALVE |
| FLA | FULL LOAD AMPS |
| FLR | FLOOR |
| FPM | FEET PER MINUTE |
| FFD | FUNNEL FLOOR DRAIN |
| FFE | FINISHED FLOOR ELEVATION |
| FS | FLOOR SINK |
| FT | FEET |
| FV | FACE VELOCITY |
| FVC | FIRE VALVE CABINET |
| GAL | GALLON |
| GPH | GALLONS PER HOUR |
| GPM | GALLONS PER MINUTE |
| HB | HOSE BIBB |
| HO | HUB OUTLET |
| HP | HORSEPOWER |

## MECHANICAL ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| HR | HOUR |
| HTG | HEATING |
| HYD | HYDRANT |
| HZ | HERTZ |
| ID | INSIDE DIAMETER |
| IE | INVERT ELEVATION |
| IN | INCHES |
| INV | INVERT |
| ISP | INTERNAL STATIC PRESSURE |
| IW | INDIRECT WASTE |
| KW | KILOWATT |
| LAT | LEAVING AIR TEMPERATURE |
| LAV | LAVATORY |
| LBS/HR | POUNDS PER HOUR |
| LDB | LEAVING DRY BULB TEMPERATURE |
| LRA | LOCKED ROTOR AMPS |
| LWB | LEAVING WET BULB TEMPERATURE |
| MAV | MANUAL AIR VENT |
| MAX | MAXIMUM |
| MBH | 1000 BRITISH THERMAL UNITS PER HOUR |
| MCA | MINIMUM CIRCUIT AMPACITY |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MOD | MOTOR OPERATED DAMPER (AUTOMATIC) |
| MOP | MAXIMUM OVER-CURRENT PROTECTION |
| N.C. | NOISE CRITERIA |
| NIC | NOT IN CONTRACT |
| NC | NORMALLY CLOSED |
| NO | NORMALLY OPEN |
| NOM | NOMINAL |
| OA | OUTSIDE AIR |
| OBD | OPPOSED BLADE DAMPER |
| OC | ON CENTER / CENTER TO CENTER |
| OD | OUTSIDE DIAMETER |
| OED | OPEN ENDED DUCT |
| ORS | OVERFLOW ROOF SUMP |
| OS&Y | OUTSIDE SCREW AND YOKE |
| PD | PRESSURE DROP (FEET OF WATER) |
| PRV | PRESSURE REDUCING VALVE |
| PSIA | POUNDS PER SQUARE INCH - ABSOLUTE |
| PSIG | POUNDS PER SQUARE INCH - GAUGE |
| PT | PRESSURE / TEMPERATURE PORT |
| RA | RETURN AIR |
| RH | RELATIVE HUMIDITY |
| REQD | REQUIRED |
| REL.A | RELIEF AIR |
| RPM | REVOLUTIONS PER MINUTE |
| RPZ | REDUCED PRESSURE ZONE |
| RS | ROOF SUMP |
| SA | SUPPLY AIR |
| SH | SHOWER |
| SP | STATIC PRESSURE |
| SqFt / SF | SQUARE FOOT/SQUARE FEET |
| SS | SERVICE SINK |
| TC | TEMPERATURE CONTROL |
| T & P | TEMPERATURE AND PRESSURE |
| TSP | TOTAL STATIC PRESSURE |
| TYP | TYPICAL |
| UG | UNDERGROUND |
| UH | UNIT HEATER |
| UL | UNDERWRITERS LABORATORY |
| UNO | UNLESS NOTED OTHERWISE |

## MECHANICAL ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| UR | URINAL |
| VD | VOLUME DAMPER (MANUALLY ADJUSTABLE) |
| VTR | VENT THRU ROOF |
| W | WASTE |
| W&V | WASTE AND VENT |
| WB | WET BULB TEMPERATURE |
| WC | WATER CLOSET |
| WG | WATER GAUGE |
| WH | WALL HYDRANT |

## MECHANICAL PIPING SYMBOLS

| ABBREV. | DESCRIPTION |
|---|---|
| | PIPE ELBOW UP |
| | PIPE ELBOW DOWN |
| | PIPE TEE DOWN |
| | DIRECTION OF FLOW |
| | UNION |
| | STRAINER |
| | CONCENTRIC REDUCER |
| | ECCENTRIC REDUCER |
| | EXPANSION JOINT |
| | FLEXIBLE CONNECTION |
| | PIPE ANCHOR |
| | PIPE GUIDE |
| | PIPE CAP OR PLUG |
| | ISOLATION VALVE |
| | CIRCULATING PUMP |
| | GLOBE VALVE |
| | BALL VALVE |
| | BUTTERFLY VALVE |
| | ANGLE VALVE |
| | CHECK VALVE (SWING) |
| | CHECK VALVE (SPRING) |
| | PLUG VALVE |
| | NEEDLE VALVE |
| | OUTSIDE SCREW AND YOKE VALVE (OS&Y) |
| | PRESSURE REGULATING VALVE |
| | SOLENOID VALVE |
| | CONTROL VALVE (2-WAY / 3-WAY) |
| | CENTRIFUGAL FAN |
| | AUTOMATIC GAS SHUT-OFF VALVE |
| | TRAP (PLAN VIEW) |
| | FLOOR DRAIN / FUNNEL FLOOR DRAIN (PLAN VIEW) |
| | FLOOR DRAIN / FUNNEL FLOOR DRAIN (ELEVATION) |
| | ROOF SUMP |
| CO | CLEAN OUT (IN FLOOR) |
| CO | CLEAN OUT (IN LINE) |
| WCO | CLEAN OUT (WALL) |
| BFP | BACKFLOW PREVENTER |
| M | WATER METER ASSEMBLY |
| | HOSE BIBB, WALL HYDRANT |
| | DIRECTION OF PIPE PITCH |
| | SPRINKLER HEAD (UPRIGHT) |
| | SPRINKLER HEAD (SIDEWALL) |
| FS | FLOW SWITCH |
| | SIAMESE CONNECTION (YARD) |
| | SIAMESE CONNECTION (WALL MOUNTED) |
| | FIRE HYDRANT |
| | FLOW MEASURING DEVICE |
| | BALANCING VALVE |
| | COMBINATION FLOW MEASURING AND BALANCING DEVICE |
| AAV | AUTOMATIC AIR VALVE |
| MAV | MANUAL AIR VALVE |

## MECHANICAL SYMBOLS

| ABBREV. | DESCRIPTION |
|---|---|
| | RECTANGULAR TAKE-OFF (SINGLE LINE) |
| | RECTANGULAR TAKE-OFF (DOUBLE LINE) |
| | ROUND TAKE-OFF (SINGLE LINE) |
| | ROUND TAKE-OFF (DOUBLE LINE) |
| | SPIN-IN FITTING (WITH VOLUME DAMPER) |
| | ELBOW (WITH TURNING VANES) |
| | RADIUS RECTANGULAR ELBOW |
| | RADIUS ROUND ELBOW |
| | RECTANGULAR ELBOW UP |
| | ROUND ELBOW UP |
| | RECTANGULAR ELBOW DOWN |
| | ROUND ELBOW DOWN |
| | CONCENTRIC TRANSITION (DOUBLE LINE) |
| | CONCENTRIC TRANSITION (SINGLE LINE) |
| | ECCENTRIC TRANSITION (DOUBLE LINE) |
| | ECCENTRIC TRANSITION (SINGLE LINE) |
| R | INCLINED RISE IN DIRECTION OF AIR FLOW (DOUBLE LINE) |
| R | INCLINED RISE IN DIRECTION OF AIR FLOW (SINGLE LINE) |
| D | INCLINED DROP IN DIRECTION OF AIR FLOW (DOUBLE LINE) |
| D | INCLINED DROP IN DIRECTION OF AIR FLOW (SINGLE LINE) |
| | FLEXIBLE CONNECTION |
| | FLEXIBLE DUCT CONNECTION TO SUPPLY DIFFUSER |
| | SUPPLY DIFFUSER |
| | LINEAR SLOT DIFFUSER |
| | RETURN OR EXHAUST GRILLE |
| | TRANSFER GRILLE |
| | CROSS SECTION OF SUPPLY AIR DUCT |
| | CROSS SECTION OF EXHAUST OR RETURN AIR DUCT |
| EXISTING / NEW | FIRE DAMPER (HORIZONTAL) |
| EXISTING / NEW | FIRE DAMPER (VERTICAL) |
| EXISTING / NEW | SMOKE DAMPER |
| EXISTING / NEW | COMBINATION FIRE/SMOKE DAMPER (VERTICAL) |
| EXISTING / NEW | COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL) |
| | VOLUME DAMPER (MANUALLY ADJUSTABLE) |
| M | MOTORIZED DAMPER |
| SD | SMOKE DETECTOR |
| CO2 | CO2 SENSOR |
| T | THERMOSTAT OR TEMPERATURE SENSOR |
| H | HUMIDISTAT OR HUMIDITY SENSOR |
| | RETURN OR EXHAUST / SUPPLY AIR FLOW |

## PIPING LEGEND

| ABBREV. | DESCRIPTION |
|---|---|
| CA | COMPRESSED AIR PIPING |
| CD | CONDENSATE DRAIN PIPING |
| DT | DRAIN TILE |
| F | FIRE PROTECTION PIPING |
| FOR | FUEL OIL RETURN PIPING |
| FOS | FUEL OIL SUPPLY PIPING |
| G | NATURAL GAS PIPING |
| BCW | BOOSTED-DOMESTIC COLD WATER PIPING |
| BHW | BOOSTED-DOMESTIC HOT WATER PIPING |
| CW | DOMESTIC COLD WATER PIPING |
| NPCW | NON POTABLE COLD WATER PIPING |
| TW | TEMPERED WATER PIPING |
| HW | DOMESTIC HOT WATER PIPING |
| HW(140°F) | DOMESTIC 140°F HOT WATER PIPING |
| HWR | DOMESTIC HOT WATER RETURN PIPING |
| SAN | SANITARY WASTE PIPING |
| PSAN | PUMPED SANITARY PIPING |
| V | VENT PIPING |
| ST | STORM SEWER PIPING |
| PST | PUMPED STORM PIPING |
| RC | RAIN CONDUCTOR PIPING |
| ORC | OVERFLOW RAIN CONDUCTOR PIPING |
| CHWR | CHILLED WATER RETURN PIPING |
| CHWS | CHILLED WATER SUPPLY PIPING |
| CWR | CONDENSER WATER RETURN PIPING |
| CWS | CONDENSER WATER SUPPLY PIPING |
| HHWR | HEATING HOT WATER RETURN PIPING |
| HHWS | HEATING HOT WATER SUPPLY PIPING |
| HPLR | HEAT PUMP LOOP RETURN PIPING |
| HPLS | HEAT PUMP LOOP SUPPLY PIPING |
| RL | REFRIGERANT LIQUID PIPING |
| RS | REFRIGERANT SUCTION PIPING |
| HGB | HOT GAS BY-PASS PIPING |
| GXHR | GEO HEAT EXCHANGE RETURN |
| GXHS | GEO HEAT EXCHANGE SUPPLY |
| STM | STEAM PIPING |
| HPS | HIGH PRESSURE STEAM PIPING |
| LPS | LOW PRESSURE STEAM PIPING |
| CR | STEAM CONDENSATE RETURN PIPING |
| PCR | PUMPED STEAM CONDENSATE RETURN PIPING |
| LPC | LOW PRESSURE CONDENSATE PIPING |
| HPC | HIGH PRESSURE CONDENSATE PIPING |
| MA | MEDICAL AIR PIPING |
| N | NITROGEN GAS PIPING |
| O2 | OXYGEN GAS PIPING |
| VAC | VACUUM PIPING |

## APPLICABLE CODES AND REGULATIONS

| YEAR | CODE |
|---|---|
| 2012 | MICHIGAN BUILDING CODE |
| 2012 | MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS |
| 2012 | MICHIGAN PLUMBING CODE |
| 2012 | MICHIGAN MECHANICAL CODE |
| 2009 | MICHIGAN UNIFORM ENERGY CODE |
| 2012 | INTERNATIONAL FIRE CODE |
| 2012 | INTERNATIONAL FUEL GAS CODE |
| 2009 | NFPA 90A |
| 2008 | NFPA 96 |
| 2003 | ICC/ANSI ACCESSIBLE AND USABLE BUILDING & FACILITIES |
| - | AMERICANS WITH DISABILITIES ACT ACCESSIBILITIES GUIDELINE (ADA-AG) |

## DRAWING INDEX



| SHT NO | DESCRIPTION |
|---|---|
| M000 | MECHANICAL GENERAL INFORMATION |
| MD100 | MECHANICAL DEMOLITION PLAN |
| P100 | COMPOSITE UNDERGROUND PLUMBING PLAN |
| P101A | LOWER LEVEL PLUMBING PLAN - AREAS A&B |
| M100 | COMPOSITE MECHANICAL PLAN |
| M101A | LOWER LEVEL MECHANICAL PLAN - AREA A |
| M500 | MECHANICAL DETAILS |
| M600 | MECHANICAL SCHEDULES AND TEMPERATURE CONTROLS |



## DRAWING NOTATION

| SYMBOL | DESCRIPTION |
|---|---|
| 1 | NEW WORK KEY NOTE NO. 1 |
| 1 | DEMOLITION KEY NOTE NO. 1 |
| EF 1 | EQUIPMENT DESIGNATION, (IE: EXHAUST FAN NO. 1) |
| S-1 8ø 100 | AIR TERMINAL TAG: S = SUPPLY, R = RETURN, E = EXHAUST<br>IE: DIFFUSER TYPE = S-1, NECK SIZE = 10"x10", CFM = 100 (TYPICAL FOR 2) |
| | EXISTING DEVICES OR EQUIPMENT |
| | NEW OR MODIFIED DEVICES OR EQUIPMENT |
| | EXISTING SYSTEM COMPONENT TO BE REMOVED |
| | POINT OF NEW CONNECTION |
| 4 / M5.2 | SECTION NO. 4 … SHEET M5.2 ON WHICH SECTION IS DRAWN |
| 6 / M5.2 | SECTION NO. 6 … SECTION, SCALE: 1/4" = 1' - 0" … SHEET M5.2 ON WHICH SECTION IS CUT (ENLARGED PARTIAL PLAN SIMILAR) |


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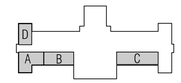
SES Project # 16 0357 01

KEY PLAN




OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/16

N

DRAWN BY

GFB

CHECKED BY

RRS

APPROVED BY

TMV

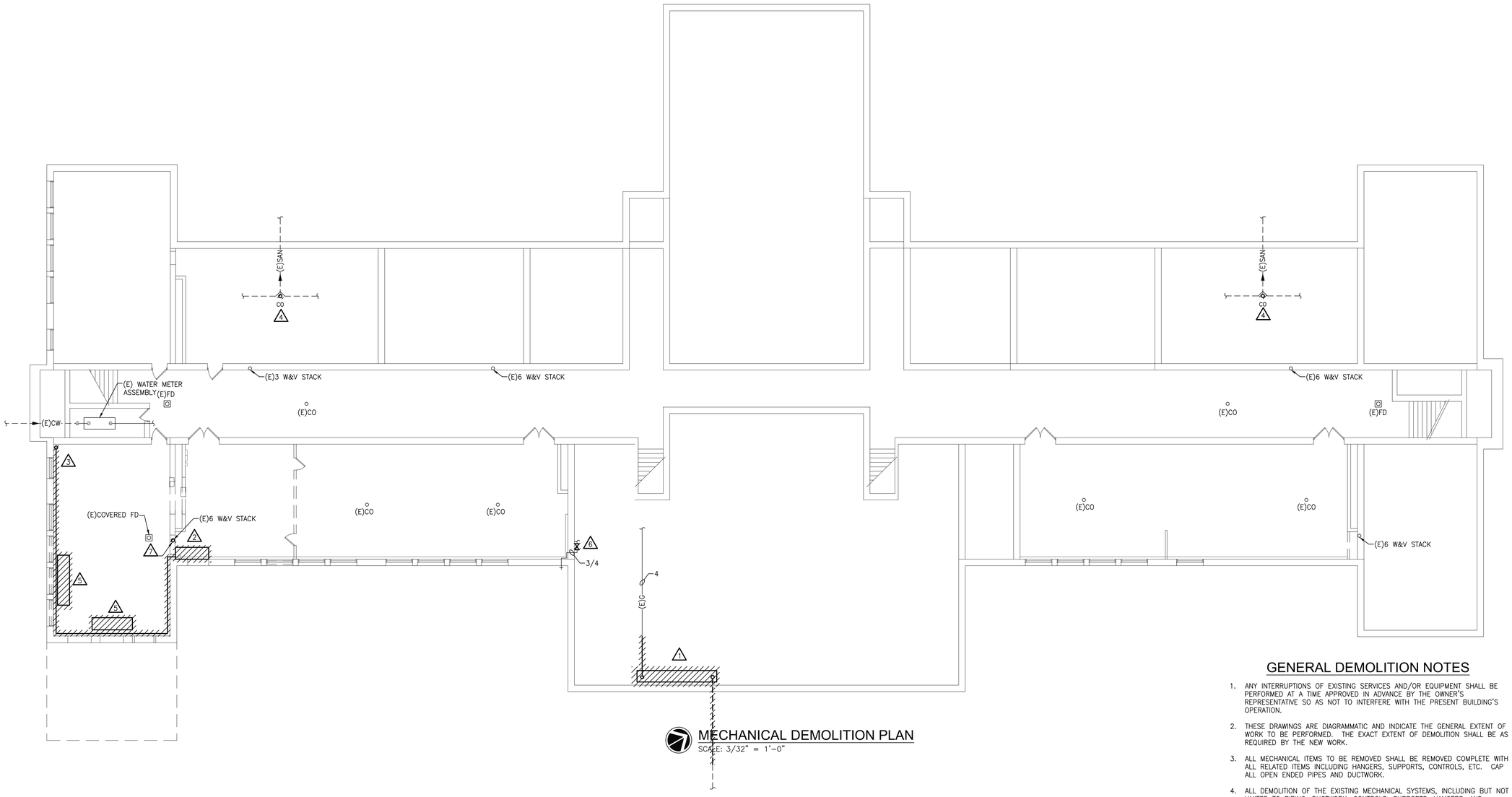
SHEET NAME

MECHANICAL GENERAL INFORMATION

SHEET NO.

M000


Drawing: S:\16 0357 01 Hamtramck School District, Kosciuszko MS Kitchen Upgrades\CAD\Mech\16 0357 01-M000.dwg
Date: Mar 18, 2016, 11:26am Layout: M000 Plotted by: rrs




## MECHANICAL DEMOLITION PLAN

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

## GENERAL DEMOLITION NOTES

1. ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
3. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.
4. ALL DEMOLITION OF THE EXISTING MECHANICAL SYSTEMS, INCLUDING BUT NOT LIMITED TO PIPING, DUCTWORK, CONTROLS, SUPPORTS, HANGERS, AND EQUIPMENT SHALL BE UNDER SCOPE OF DIVISION 20 THRU 23 OF THE SPECIFICATIONS.
5. THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED.

## DEMOLITION KEYED NOTES

1. GAS METERS FOR KOSCIUSZKO MIDDLE SCHOOL AND DICKENSON ELEMENTARY SCHOOL TO BE RELOCATED. REFER TO NEW WORK PLANS FOR LOCATION.
2. THREE COMPARTMENT SINK TO BE RELOCATED. CAP SANITARY, VENT, HOT, AND COLD WATER PIPING BELOW FLOOR IN A CONCEALED MANNER. PATCH FLOOR TO MATCH EXISTING.
3. REMOVE 2" CONDENSATE DRAIN PIPING IN ORDER TO BE REPLACED. PREPARE REMAINING PIPING FOR NEW WORK.
4. PREPARE EXISTING SANITARY PIPE FOR NEW WORK. FIELD VERIFY EXACT LOCATION.
5. REMOVE STEAM RADIATOR COMPLETE. CAP STEAM PIPE AT MAIN.
6. REMOVE BALL VALVE IN ORDER TO BE REPLACED. PREPARE REMAINING PIPE FOR NEW WORK.
7. EXISTING WASTE AND VENT STACK TO BE RELOCATED. COORDINATE EXACT LOCATIONS IN FIELD.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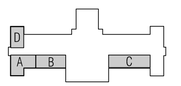
KEY PLAN

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ISSUES / REVISIONS

| | |
|---|---|
| Bidding - Construction | 03/17/16 |

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GFB

CHECKED BY

RRS

APPROVED BY

TMV

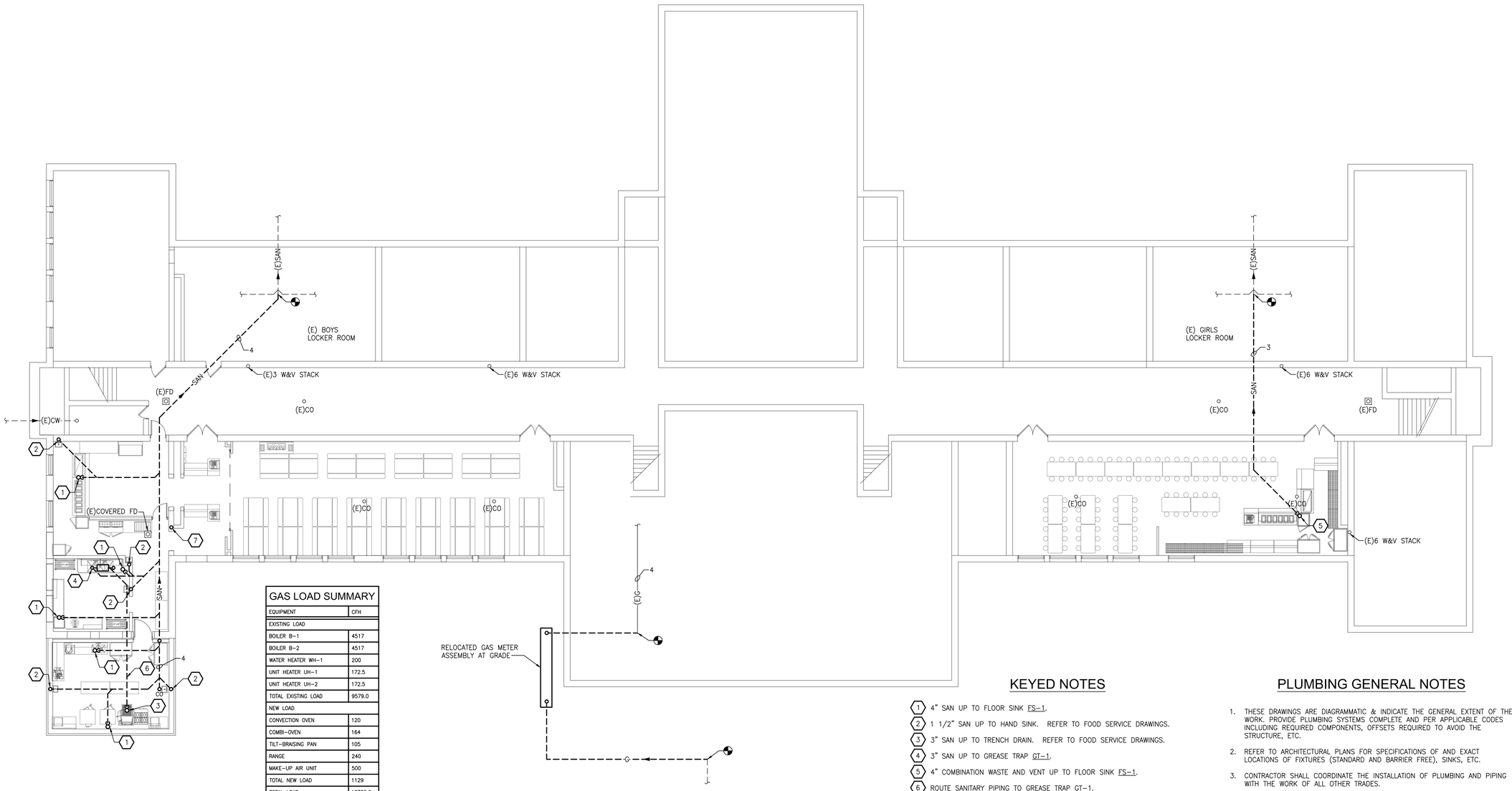
SHEET NAME

MECHANICAL DEMOLITION PLAN

SHEET NO.

MD100


Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Mech\16 0357 01-MD100.dwg
Date: Mar 18, 2016, 11:26am Layout: MD100 Plotted by: rrs




## GAS LOAD SUMMARY

| EQUIPMENT | CFH |
|---|---|
| EXISTING LOAD | |
| BOILER B-1 | 4517 |
| BOILER B-2 | 4517 |
| WATER HEATER WH-1 | 200 |
| UNIT HEATER UH-1 | 172.5 |
| UNIT HEATER UH-2 | 172.5 |
| TOTAL EXISTING LOAD | 9579.0 |
| NEW LOAD | |
| CONVECTION OVEN | 120 |
| COMBI-OVEN | 164 |
| TILT-BRAISING PAN | 105 |
| RANGE | 240 |
| MAKE-UP AIR UNIT | 500 |
| TOTAL NEW LOAD | 1129 |
| TOTAL LOAD | 10708.0 |

NOTES:

1. CONTRACTOR TO COORDINATE GAS LOAD WITH LOCAL UTILITY COMPANY.
2. CONTRACTOR SHALL VERIFY ALL EQUIPMENT CONNECTION REQUIREMENTS (SIZES, LOCATIONS, TYPES, ETC.) PRIOR TO COMMENCEMENT OF WORK.
3. 14"W.C. DELIVERY PRESSURE. DISTRIBUTION GAS PIPING IS SIZED FOR MAXIMUM PRESSURE DROP OF 0.5"W.C. BASED ON TOTAL DEVELOPED LENGTH OF 350 LF.

## COMPOSITE UNDERGROUND PLUMBING PLAN

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

## KEYED NOTES

1. 4" SAN UP TO FLOOR SINK FS-1.
2. 1 1/2" SAN UP TO HAND SINK. REFER TO FOOD SERVICE DRAWINGS.
3. 3" SAN UP TO TRENCH DRAIN. REFER TO FOOD SERVICE DRAWINGS.
4. 3" SAN UP TO GREASE TRAP GT-1.
5. 4" COMBINATION WASTE AND VENT UP TO FLOOR SINK FS-1.
6. ROUTE SANITARY PIPING TO GREASE TRAP GT-1.
7. RELOCATED WASTE AND VENT STACK. FIELD VERIFY EXACT LOCATION.

## PLUMBING GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC & INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE PLUMBING SYSTEMS COMPLETE AND PER APPLICABLE CODES INCLUDING REQUIRED COMPONENTS, OFFSETS REQUIRED TO AVOID THE STRUCTURE, ETC.
2. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS OF AND EXACT LOCATIONS OF FIXTURES (STANDARD AND BARRIER FREE), SINKS, ETC.
3. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING AND PIPING WITH THE WORK OF ALL OTHER TRADES.
4. PIPING SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT/PANELS. PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT. PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
5. PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
6. CONTRACTOR SHALL PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL MECHANICAL SYSTEMS.
7. HOT AND COLD WATER PIPING RUN-OUTS TO LAVS AND SINKS SHALL BE 1/2" UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR FIXTURE CONNECTION SIZES.
8. PLUMBING VENT PIPING THRU THE ROOF SHALL BE LOCATED 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
11. PROVIDE VALVES ON ALL BRANCH PIPING SERVING GROUP TOILET ROOMS. PROVIDE FULL OPEN VALVES AND SHUT OFF VALVES PER PLUMBING CODE.
12. PROVIDE TRAP SEAL PROTECTION ON ALL FLOOR DRAINS PER MICHIGAN PLUMBING CODE SECTION 1002.4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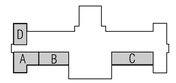
KEY PLAN




OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/16

DRAWN BY

GFB

CHECKED BY

RRS

APPROVED BY

TMV

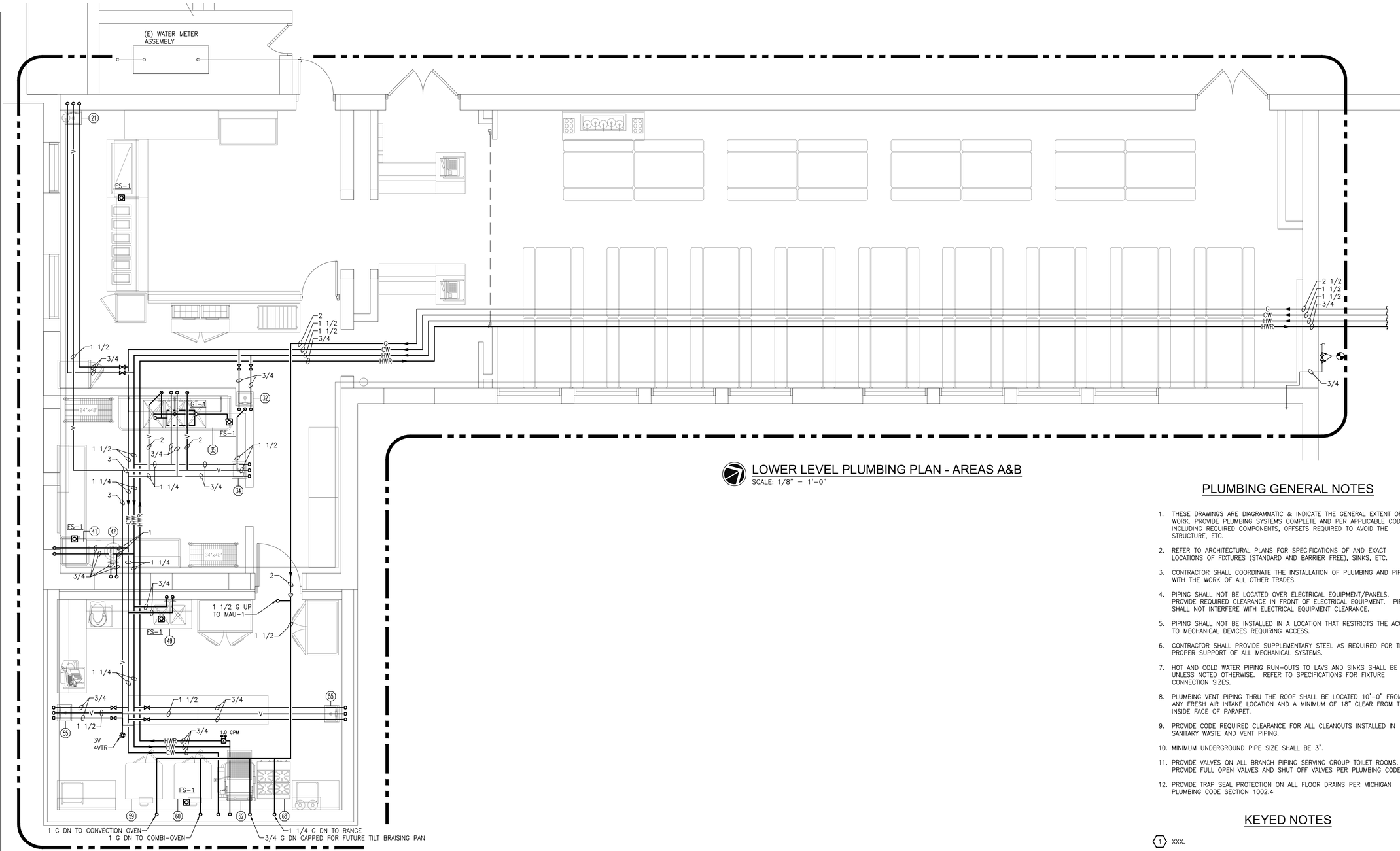
SHEET NAME

COMPOSITE UNDERGROUND PLUMBING PLAN

SHEET NO.

P100


Drawing: S:\16 0357 01 | Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Mech\16 0357 01-P100.dwg
Date: Mar 18, 2016, 11:26am Layout: P100 Plotted by: rrs




LOWER LEVEL PLUMBING PLAN - AREAS A&B
SCALE: 1/8" = 1'-0"

## PLUMBING GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC & INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE PLUMBING SYSTEMS COMPLETE AND PER APPLICABLE CODES INCLUDING REQUIRED COMPONENTS, OFFSETS REQUIRED TO AVOID THE STRUCTURE, ETC.
2. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS OF AND EXACT LOCATIONS OF FIXTURES (STANDARD AND BARRIER FREE), SINKS, ETC.
3. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PLUMBING AND PIPING WITH THE WORK OF ALL OTHER TRADES.
4. PIPING SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT/PANELS. PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT. PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
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12. PROVIDE TRAP SEAL PROTECTION ON ALL FLOOR DRAINS PER MICHIGAN PLUMBING CODE SECTION 1002.4

## KEYED NOTES

(1) XXX.

XXX.

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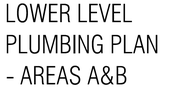


OWNER
Hamtramck Public Schools

PROJECT NAME
Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.
15-175B

ISSUES / REVISIONS
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GFB

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RRS

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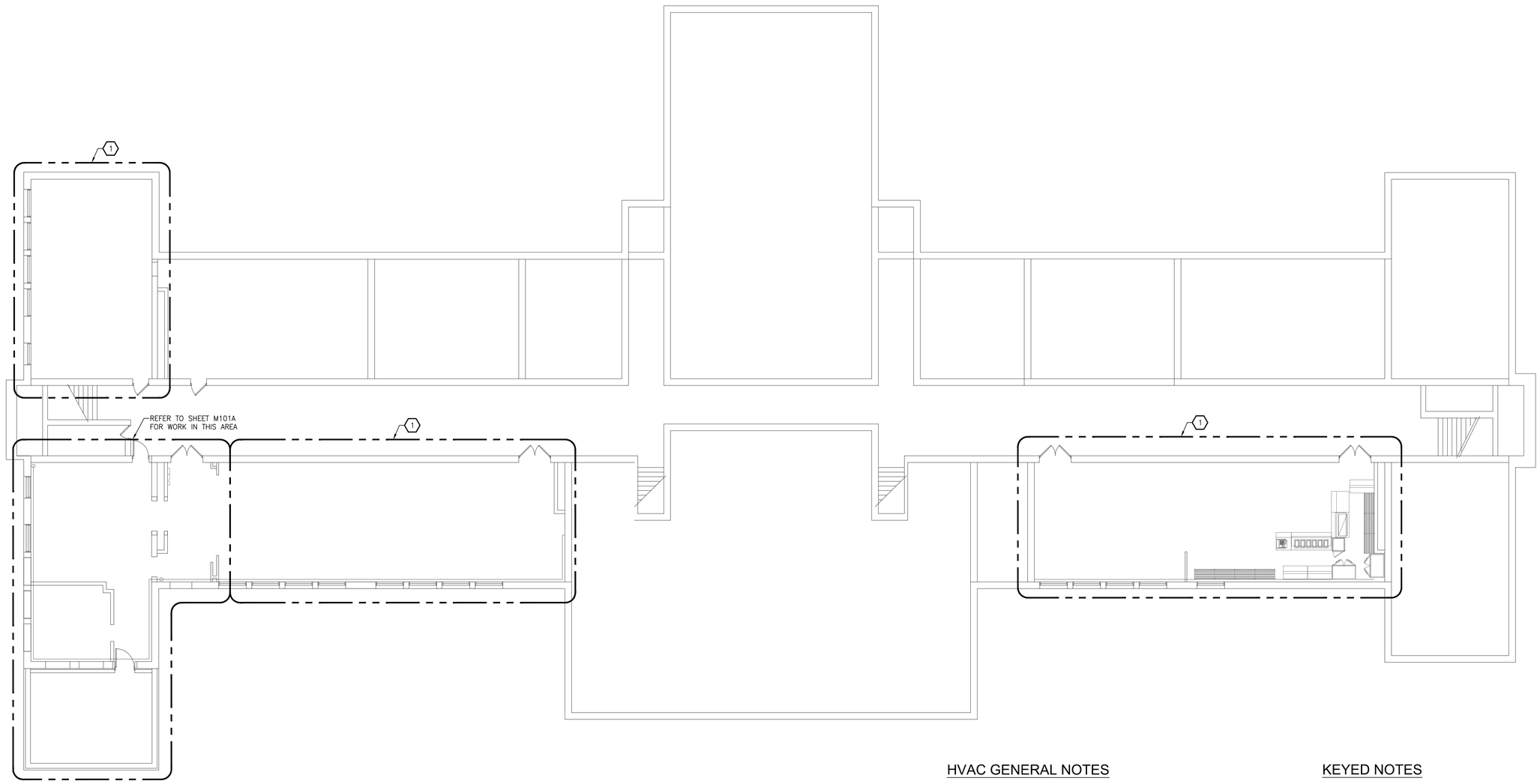
TMV

SHEET NAME
LOWER LEVEL PLUMBING PLAN - AREAS A&B

SHEET NO.
P101A

Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Mech\16 0357 01-P101.dwg
Date: Mar 18, 2016, 11:26am Layout: P101A Plotted by: rrs




## COMPOSITE MECHANICAL PLAN

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

## HVAC GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC & INDICATE THE GENERAL EXTENT OF THE WORK. PROVIDE SHEET METAL SYSTEMS COMPLETE PER SPECIFICATION, SMACNA STANDARDS, AND PER APPLICABLE CODES INCLUDING ALL NECESSARY OFFSETS, FITTINGS, SPECIAL RADIUS OR MITERED ELBOWS WHICH ARE REQUIRED DUE TO SPACE CONSTRAINTS OR OTHER CONDITIONS.
2. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF ALL OTHER TRADES. VERIFY ALL CLEARANCES PRIOR TO THE FABRICATION OF ANY WORK.
3. DUCTWORK SHALL NOT BE LOCATED OVER ELECTRICAL EQUIPMENT/PANELS. PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT. DUCTWORK SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
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5. COORDINATE FLOOR, WALL, ROOF PENETRATIONS, LOUVER SIZES, PAD LOCATIONS ETC. WITH ARCHITECTURAL TRADES.
6. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF GRILLES, REGISTERS, AND DIFFUSERS.
7. COORDINATE AND PROVIDE ACCESS DOORS IN HARD CEILING AREAS FOR ACCESS TO BALANCING DAMPERS, ETC. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
8. BRANCH DUCTWORK TO GRILLES, REGISTERS AND DIFFUSERS SHALL BE THE SAME SIZE AS THE GRILLE, REGISTER OR DIFFUSER NECK SIZE WHERE NO DUCT SIZE IS INDICATED ON PLAN.
9. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 5'-0".

## KEYED NOTES

1. EXISTING SUPPLY AND RETURN VENTILATION DUCTWORK IN THIS AREA IS EXISTING TO REMAIN.


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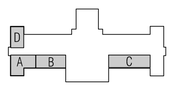


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PROJECT NAME

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Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

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|---|---|
| Bidding - Construction | 03/17/16 |

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GFB

CHECKED BY

RRS

APPROVED BY

TMV

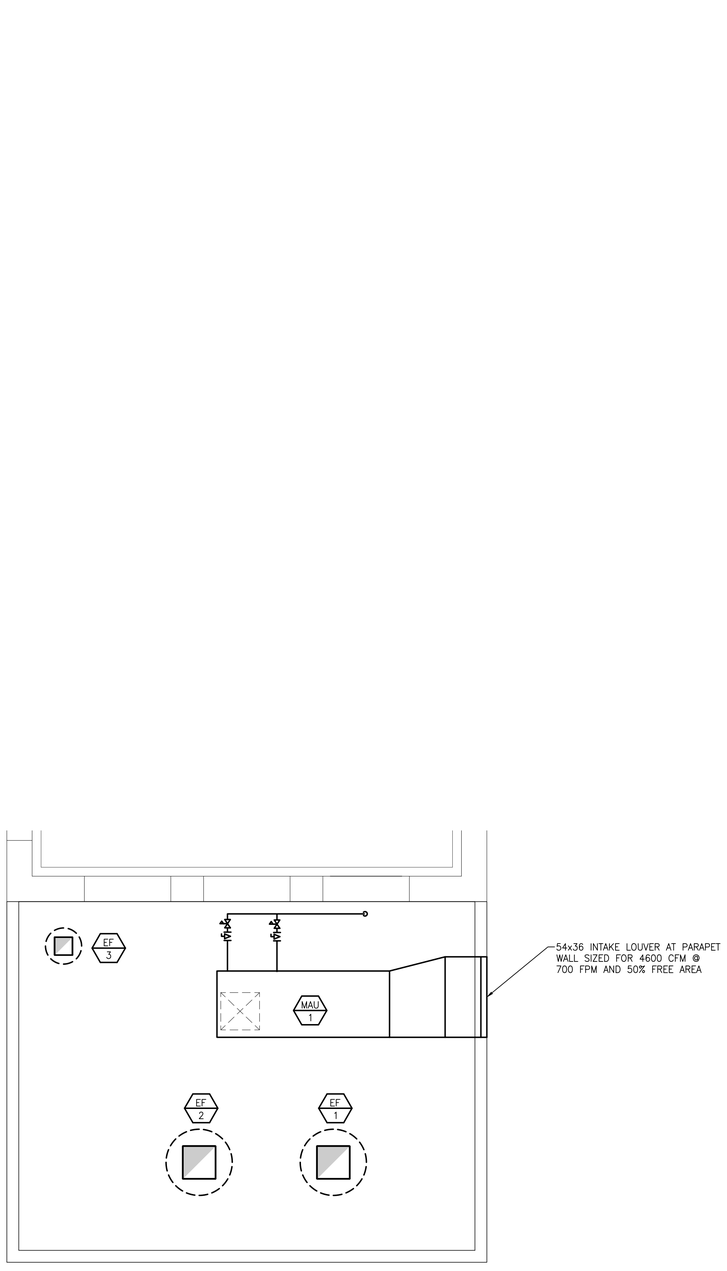
SHEET NAME

COMPOSITE MECHANICAL PLAN

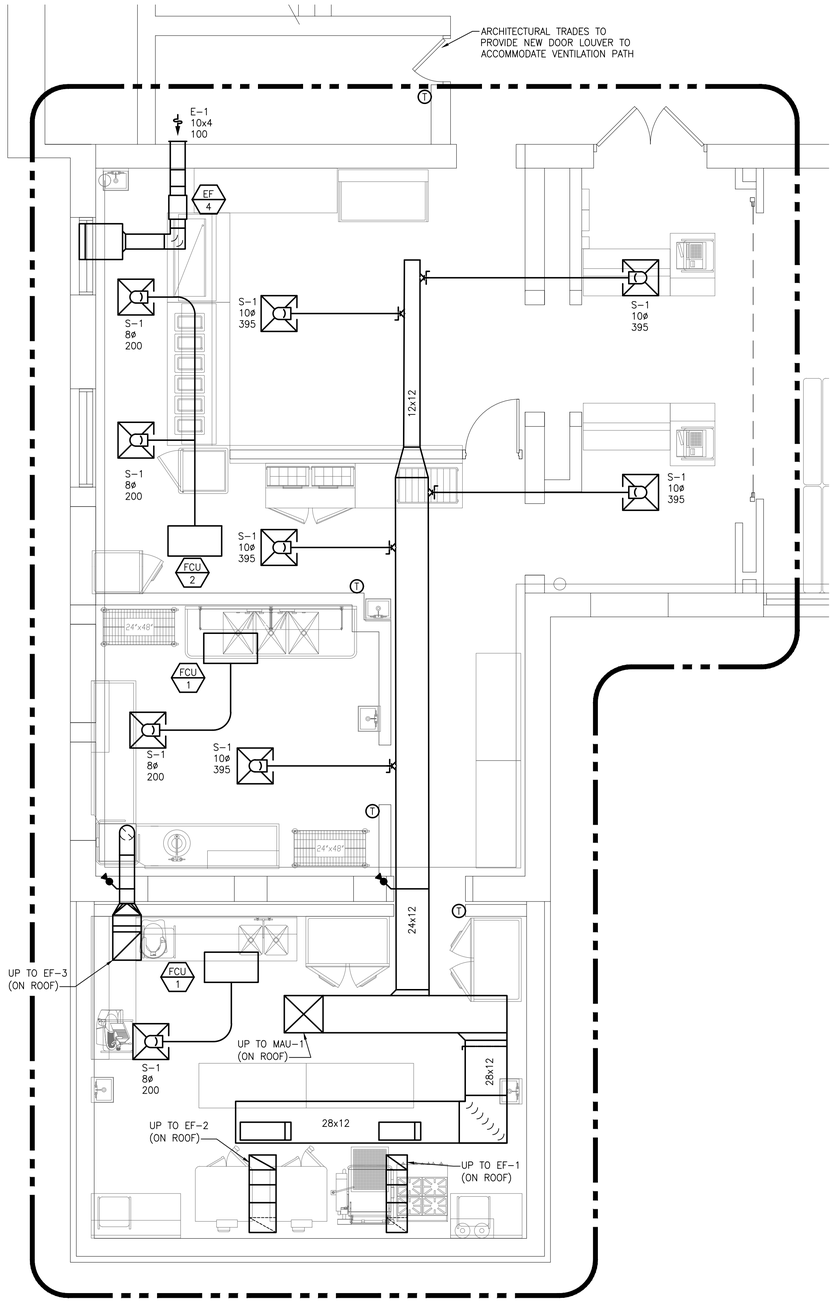
SHEET NO.

M100


Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Mech\16 0357 01-M100.dwg
Date: Mar 18, 2016, 11:26am Layout: M100 Plotted by: ms




PARTIAL ROOF MECHANICAL PLAN
SCALE: 1/4" = 1'-0"




LOWER LEVEL MECHANICAL PLAN - AREA A
SCALE: 1/4" = 1'-0"

## HVAC GENERAL NOTES

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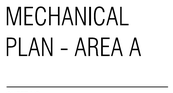



OWNER
Hamtramck
Public Schools

PROJECT NAME
Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.
15-175B

ISSUES / REVISIONS
Bidding - Construction 03/17/16

N

DRAWN BY
GFB

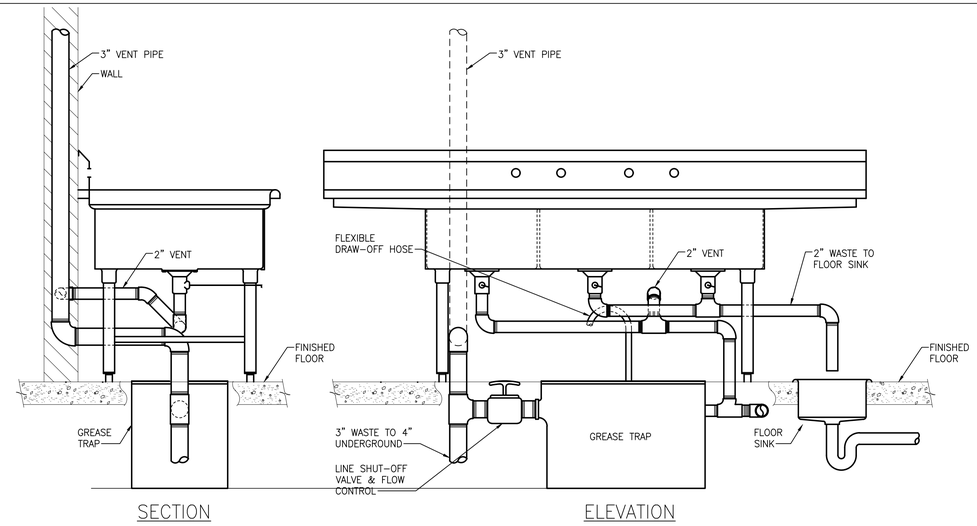
CHECKED BY
RRS

APPROVED BY
TMV

SHEET NAME
LOWER LEVEL
MECHANICAL
PLAN - AREA A

SHEET NO.
M101A

Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Mech\16 0357 01-M101.dwg
Date: Mar 18, 2016, 11:26am Layout: M101A Plotted by: rrs

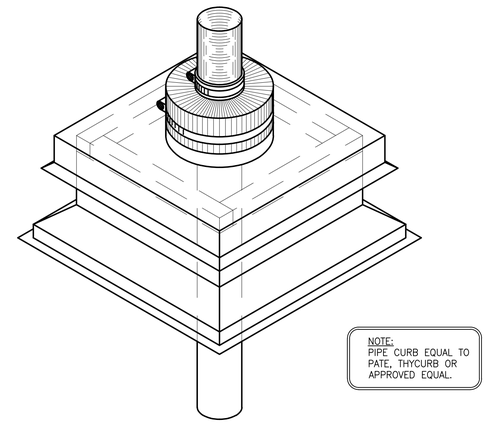



## TYPICAL GREASE TRAP INSTALLATION DETAIL

NO SCALE

NOTES:

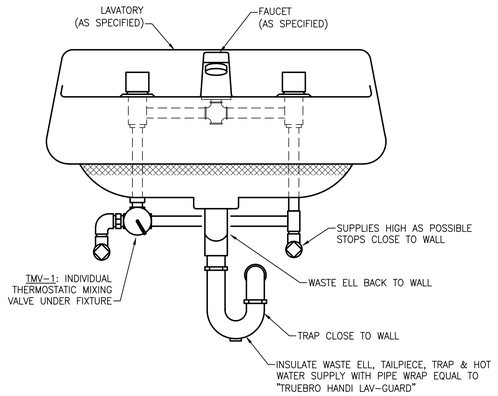
1. RECESSED DEPTH OF GREASE TRAP MAY VARY DEPENDING UPON PIPING CONFIGURATION AND INVERT ELEVATION OF SANITARY PIPING.
2. BEFORE ORDERING GREASE TRAPS, PLUMBING CONTRACTOR SHALL COORDINATE SIZE AND LOCATIONS WITH FIELD CONDITIONS TO ENSURE CLEANOUT & SERVICE REQUIREMENTS.
3. GREASE TRAP: JAY R. SMITH 8025 GTX, SEMI-RECESSED GREASE TRAP, RATED TO DELIVER 25 GPM AND 50 LB GREASE CAPACITY, 3" INLET AND 3" OUTLET.



NOTE:
PIPE CURB EQUAL TO PATE, THYCURB OR APPROVED EQUAL.

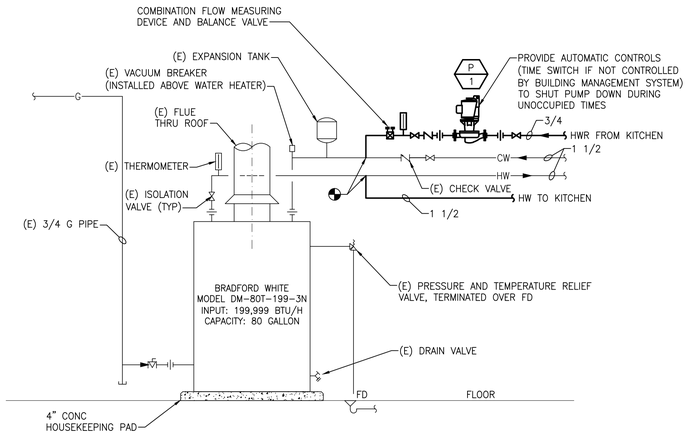
## PIPE CURB DETAIL

NO SCALE



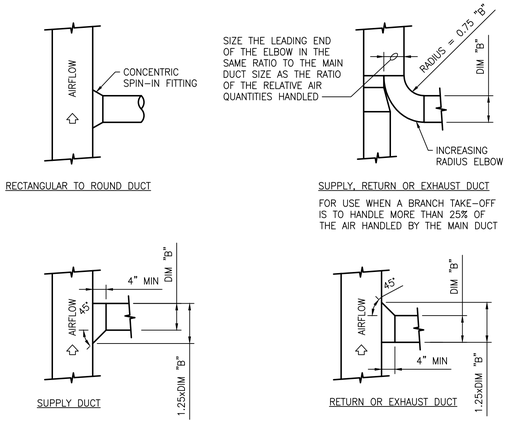

## THERMOSTATIC MIXING VALVE DETAIL

NO SCALE



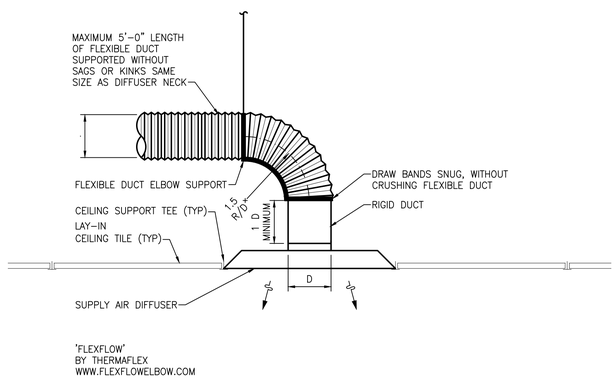

## EXISTING GAS FIRED DOMESTIC WATER HEATER CONNECTION DETAIL

NO SCALE




## RECTANGULAR DUCT BRANCH TAKE-OFF DETAILS

NO SCALE




## SUPPLY AIR DIFFUSER DETAIL

NO SCALE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PROJECT NO.

15-175B

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RRS

APPROVED BY

TMV

SHEET NAME

MECHANICAL DETAILS

SHEET NO.

M500


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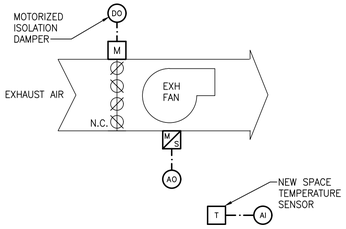
Date: Mar 18, 2016, 11:26am Layout: M500 Plotted by: rrs

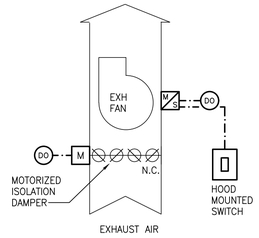



## VENTIALTION FAN CONTROL DIAGRAM

NO SCALE EF-4

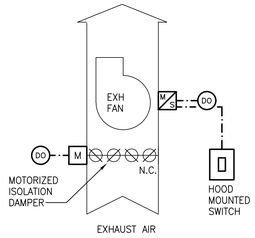
WATER METER ROOM VENTILATION FAN SEQUENCE OF OPERATIONS:
NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR.

1. WHEN THE SPACE TEMPERATURE SENSOR IS ABOVE THE SET POINT, A SIGNAL SHALL BE SENT TO ENERGIZE THE EXHAUST FAN.
2. WHEN THE SPACE TEMPERATURE SENSOR IS SATISFIED, THE VENTILATION FAN SHALL BE DE-ENERGIZED.



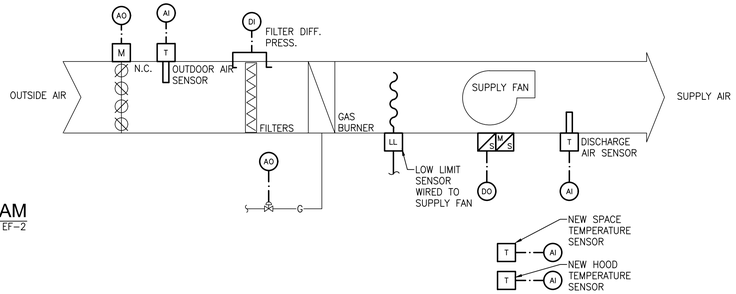

## EXHAUST FAN CONTROL DIAGRAM

NO SCALE EF-3




## EXHAUST FAN CONTROL DIAGRAM

NO SCALE EF-1 AND EF-2




## KITCHEN MAKE UP AIR UNIT CONTROL DIAGRAM

NO SCALE

KITCHEN MAKE-UP AIR UNIT SEQUENCE OF OPERATIONS:
NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR.

1. WITH THE SUPPLY AND EXHAUST FANS' HAND/OFF/AUTO SWITCHES IN THE "AUTO" POSITION, THE SUPPLY FAN SHALL BE AUTOMATICALLY STARTED AND STOPPED WITH THE TIME CLOCK OCCUPANCY SCHEDULE.
2. FAN CONTROL: EXHAUST FAN AND MAKE UP AIR UNITS ARE INTERLOCKED. WHENEVER THE EXHAUST FAN IS ENERGIZED BY ITS LOCAL WALL SWITCH OR HEAT IS DETECTED IN THE COOKING HOOD (BY ITS HEAT SENSOR) THE MAKEUP AIR UNIT SHALL BE ENERGIZED AND THEIR ISOLATION DAMPERS SHALL BE FULLY OPENED. THE MAKEUP AIR UNIT SHALL ONLY BE ENERGIZED WHEN THE EXHAUST FAN IS ENERGIZED.
3. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE STAGES OF GAS HEAT TO MAINTAIN THE SPACE TEMPERATURE.
4. IF THE FREEZE-STAT SETPOINT IS REACHED (35°F OR BELOW), THEN THE SUPPLY FAN SHALL BE DE-ENERGIZED. IF THE DUCT MOUNTED SMOKE DETECTORS DETECT SMOKE, THEN THE SUPPLY FAN SHALL BE DE-ENERGIZED.
5. WHEN THE SUPPLY FAN IS DE-ENERGIZED, THE OUTSIDE AIR DAMPERS SHALL BE CLOSED.
6. UPON ACTIVATION OF THE ANSUL SYSTEM, THE MAKE UP AIR UNIT SHALL DEACTIVATE AND THE EXHAUST FANS SHALL ACTIVATE.

## GRILLE, REGISTER AND DIFFUSER SCHEDULE

| UNIT ID | FACE SIZE | NECK SIZE | MOUNTING | ACCESSORY | FINISH | MATERIAL | TYPE | MODEL NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| S-1 | 24x24 | SEE PLANS | LAY-IN | - | WHITE | STEEL | DIFFUSER | ASPD | |
| E-1 | NECK+2" | 10x4 | WALL | - | WHITE | STEEL | GRILLE | 610Z | |

NOTES:

1. MODEL NUMBERS ARE PRICE UNLESS OTHERWISE NOTED.

## DOMESTIC WATER RECIRC PUMP SCHEDULE

| UNIT ID | SERVICE | TYPE | GPM | HEAD (FT) | MOTOR WATTS | FLA | RPM | VOLTS | PHASE | MODEL NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P-1 | DOMESTIC HOT WATER | INLINE | 1 | 15 | 125 | 1.1 | 2950 | 120 | 1 | NBF-25 | |

NOTES:

1. MODEL NUMBERS ARE BELL & GOSSET UNLESS NOTED OTHERWISE.
2. ELECTRICAL TRADES SHALL PROVIDE DISCONNECT.
3. PROVIDE LEAD FREE ALL BRONZE RECIRCULATING PUMP WITH AQUASTAT AND TIME CLOCK, 120V-1ø - POWERED FROM PUMP.

## GREASE INTERCEPTOR SCHEDULE

| UNIT ID | FLOW RATE GPM | GREASE CAPACITY (LBS) | DIMENSIONS | | | MODEL NO. |
|---|---|---|---|---|---|---|
| | | | HEIGHT | LENGTH | WIDTH | |
| GT-1 | 35 | 75 | 21 | 32 1/2 | 18 1/4 | 8035GTX |

NOTES:

1. MODEL NUMBER IS JAY R SMITH UNLESS OTHERWISE NOTED.
2. GREASE INTERCEPTOR TO BE FULLY RECESSED IN FLOOR. PROVIDE EXTENSION AS REQUIRED TO CONNECTION TO TRENCH DRAIN.

## GAS FIRED MAKE UP AIR UNIT SCHEDULE

| UNIT ID | SERVICE | AIRFLOW CFM | ESP | HEATING | | | | | BURNER TYPE | BLOWER HP | BLOWER BHP | ELECTRICAL | | | | CURB HEIGHT (IN) | MODEL NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | GAS INPUT (MBH) | GAS OUTPUT (MBH) | PRESSURE (IN WG) | EAT °F | LAT °F | | | | VOLTS | PHASE | MCA | MOCP | | | |
| MAU-1 | KITCHEN | 4600 | 0.5 | 500 | 400 | 6-14 | 0 | 80.5 | INDIRECT NAT. GAS | 2 | 1.87 | 230 | 3 | 12.1 | 15 | 12 | IGX-115-H22 | |

NOTES:

1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
2. MANUFACTURER TO PROVIDE FULLY MODULATING GAS VALVE.

## FAN COIL UNIT SCHEDULE

| UNIT ID | NOMINAL AIRFLOW (CFM) | HEATING COIL | | | | | MAXIMUM UNIT DIMENSIONS | | | FILTER | ELECTRICAL | | | MODEL NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MIN TOTAL CAPACITY (MBH) | AIR | | STEAM | | LENGTH (IN) | DEPTH (IN) | HEIGHT (IN) | TYPE | AMPS | VOLTS | PHASE | | |
| | | | EDB °F | LDB °F | STEAM PRESSURE (PSIG) | COND. LOAD (LBM/HR) | | | | | | | | | |
| FCU-1 | 200 | 16.2 | 65 | 80 | 5 | 16.8 | 30.48 | 20.2 | 11.13 | THROW AWAY | 0.6 | 115 | 1 | FCHH-202A | |
| FCU-2 | 400 | 23.6 | 65 | 80 | 5 | 24.4 | 35.98 | 20.2 | 11.13 | THROW AWAY | 0.7 | 115 | 1 | FCHH-204A | |

NOTES:

1. MODEL NUMBERS ARE DAIKIN UNLESS OTHERWISE NOTED.

## ROOF MOUNTED EXHAUST FAN SCHEDULE

| UNIT ID | SERVING | TYPE | CFM | ESP (IN WG) | TSP (IN WG) | FAN RPM | MOTOR | | | | ELECTRICAL | | CURB HEIGHT (IN) | MODEL NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | BHP | HP | RPM | DRIVE TYPE | VOLTS | PHASE | | | |
| EF-1 | HOOD 64A | CENTRIFUGAL | 1625 | 1.3 | 1.7 | 1725 | 0.92 | 1 | 1725 | DIRECT | 230 | 3 | 18 | CUE-161HP-A | |
| EF-2 | HOOD 64B | CENTRIFUGAL | 2125 | 1.3 | 1.4 | 1725 | 0.96 | 1 | 1725 | DIRECT | 230 | 3 | 18 | CUE-141-A | |
| EF-3 | HOOD 40 | CENTRIFUGAL | 600 | 0.75 | 1.1 | 1725 | 0.23 | 1/4 | 1725 | DIRECT | 115 | 1 | 18 | CUE-099-A | |
| EF-4 | WATER METER ROOM | INLINE | 100 | 0.25 | 0.25 | 1544 | 0.02 | 1/10 | 1725 | DIRECT | 115 | 1 | -- | SQ-60-VG | |

NOTES:

1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
2. CONTROL SHALL BE BY MANUAL MOTOR STARTER PROVIDED BY ELECTRICAL TRADES.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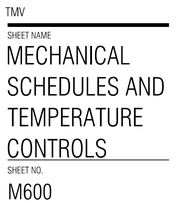
SES Project # 16 0357 01

KEY PLAN




OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/16

N

DRAWN BY

GFB

CHECKED BY

RRS

APPROVED BY

TMV

SHEET NAME

MECHANICAL SCHEDULES AND TEMPERATURE CONTROLS

SHEET NO.

M600


Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CADM\cad\16 0357 01-M600.dwg
Date: Mar 18, 2016, 11:26am Layout: M500 Plotted by: rrs

## LUMINAIRE SCHEDULE

| FIXTURE MARK | DESCRIPTION | MANUFACTURER(S) | LAMP SOURCE | WATTS |
|---|---|---|---|---|
| A | 2' x 4' LED TROFFER LUMINAIRE SUITABLE FOR RECESS MOUNTING IN LAY-IN TYPE GRID CEILING, COLD-ROLLED STEEL HOUSING, POLYESTER PAINTED WHITE ENAMEL FINISH, LINEAR FACETED REFLECTOR CAVITY, LINEAR CLEAR ACRYLIC DIFFUSER, FLUSH ALUMINUM WHITE DOOR FRAME, SPRING LOADED LATCH, INTEGRAL T-BAR SAFETY CLIPS, ELECTRONIC DRIVER. 0-10V DIMMING CAPABLE OF 1 PERCENT DIMMING, MULTI-VOLT. SUITABLE FOR DAMP LOCATION. | 1. LITHONIA 2GTL LED 2GTL-4-48L-FW-LP835<br>2. METALLUX 24GR LED<br>3. LSI | LED 3500'K MVOLT 80+ CRI | 47 |
| AE | SAME AS TYPE "A" EXCEPT PROVIDE 1400 LUMEN EMERGENCY BATTERY PACK CAPABLE OF PROVIDING EMERGENCY ILLUMINATION FOR MINIMUM OF 90 MINUTES LIGHT OUTPUT OPERATION | EL14L | 120V | 14 |
| B | 6" DIAMETER HIGH BRIGHTNESS LIGHT EMITTING DIODES (LED'S) RECESS MOUNTED LED DOWNLIGHT SUITABLE FOR INSTALLATION IN DRYWALL OR LAY-IN TYPE CEILING CONSTRUCTION. WIDE DISTRIBUTION, SEMI-SPECULAR DIFFUSE ALUMINUM REFLECTOR WITH CLEAR APERTURE/TRIM, CONSTANT CURRENT LED DRIVER, 0-10V DIMMING DRIVER DOWN TO 1% MVOLT OPERATION. NOMINAL 2000 LUMEN OUTPUT. | 1. LITHONIA LDN6 35/-20-L06/AR-LD-120-EZ1.<br>2. PORTFOLIO LD6A SERIES<br>3. CREE | LED 3500'K MVOLT 85CRI | 23.2 |
| C | RECESSED 2X4 VOLUMETRIC TYPE LED TROFFER WITH CENTER BASKET SQUARE DIFFUSER AND LINEAR PRISMS. DIE-FORMED HOUSING, POLYESTER POWDER PAINTED WHITE FINISH, INTEGRAL T-BAR SAFETY CLIPS, 0-10V DIMMING DRIVER DOWN TO 1%. MVOLT OPERATION. NOMINAL 4800 LUMEN OUTPUT. | 1. LITHONIA 2BLT4-48L-SDP-EZ1-LP835<br>2. CORELITE CLASS R1<br>3. METALUMEN COMMONS | LED 3500'K MVOLT 82CRI | 45 |
| CE | SAME AS TYPE "C" EXCEPT PROVIDE 1400 LUMEN EMERGENCY BATTERY PACK CAPABLE OF PROVIDING EMERGENCY ILLUMINATION FOR MINIMUM OF 90 MINUTES LIGHT OUTPUT OPERATION | EL14L | 120V | 14 |
| D | RECESSED 2X2 VOLUMETRIC TYPE LED TROFFER WITH CENTER BASKET SQUARE DIFFUSER AND LINEAR PRISMS. DIE-FORMED HOUSING, POLYESTER POWDER PAINTED WHITE FINISH, INTEGRAL 1-BAR SAFETY CLIPS, 0-10V DIMMING DRIVER DOWN TO 1%. MVOLT OPERATION. NOMINAL 4000 LUMEN OUTPUT. | 1. LITHONIA 2BLT2-40L-SDP-EZ1-LP835<br>2. CORELITE CLASS R1<br>3. METALUMEN COMMONS | LED 3500'K MVOLT 82CRI | 39 |
| DE | SAME AS TYPE "A" EXCEPT PROVIDE 1400 LUMEN EMERGENCY BATTERY PACK CAPABLE OF PROVIDING EMERGENCY ILLUMINATION FOR MINIMUM OF 90 MINUTES LIGHT OUTPUT OPERATION. | EL14L | 120V | 14 |
| D1 | SAME AS TYPE "A" EXCEPT PROVIDE DRYWALL GRID ADAPTER. | 1. LITHONIA 2BLT2 40L-SDP-EZ1-LP835-DGA22<br>2. CORELITE CLASS R1<br>3. | LED 3500'K MVOLT 82CRI | 39 |
| D1E | SAME AS TYPE "D1" EXCEPT PROVIDE 1400 LUMEN EMERGENCY BATTERY PACK CAPABLE OF PROVIDING EMERGENCY ILLUMINATION FOR MINIMUM OF 90 MINUTES LIGHT OUTPUT OPERATION | EL14L | 120V | 14 |
| E | 5 3/4" DIAMETER SUPER SHALLOW OPEN APPEARANCE DOWNLIGHT, RECESS MOUNTED LED DOWNLIGHT SUITABLE FOR INSTALLATION IN DRYWALL TYPE CEILING CONSTRUCTION. STANDARD DISTRIBUTION, SEAMLESS TAPERED ALUMINUM SELF-FLANGED TRIM WITH WHITE FINISH, CONSTANT CURRENT LED DRIVER, 0-10V DIMMING DRIVER. NOMINAL 2491 LUMEN OUTPUT. | 1. KIRLIN LRR-05438 | LED 3500'K 120V 85CRI | 42 |
| F | 4' STRIP LED FIXTURE SURFACE MOUNTED ON CEILING, COLD-ROLLED STEEL HOUSING WITH SNAP-N-LOCK END PLATE, MDEDIUM DIFFUSE LENS, RUST RESISTANCE, INTEGRATED ON A TWO-LAYER CIRCUIT BOARD, ELECTRONIC LED DRIVER, 0-10V DIMMING DRIVER. NOMINAL 2000 LUMEN OUTPUT. | 1. LITHONIA ZL2N-L48-2000L-MDD-WH | LED 3500'K MVOLT 80CRI | 32 |
| X | EXIT LIGHT SHALL BE MOUNTED AS REQUIRED TYPE WITH WHITE THERMOPLASTIC HOUSING, HIGH OUTPUT LED DIFFUSE LIGHT PANEL, SINGLE STENCIL WHITE FACE, RED LETTERS AND DIRECTIONAL ARROWS AS INDICATED ON PLANS. FIXTURE SHALL HAVE SELF-DIAGNOSTICS AND BE SUITABLE FOR DUAL VOLTAGE OPERATION. UNIT SHALL BE COMPLETELY SELF-CONTAINED WITH MAINTENANCE FREE NICAD BATTERY CAPABLE OF PROVIDING 90 MINUTE FULL LIGHT OPERATION. PROVIDE WIRE GUARD AS INDICATED ON LIGHTING PLAN | 1. LITHONIA QUANTUM LQM<br>2. LIGHTALARMS GRANDE SERIES<br>3. SURE-LITES APX SERIES | LED | 1 |

## LUMINAIRE SCHEDULE GENERAL NOTES

1. REFER TO ELECTRICAL SPECIFICATIONS FOR MORE INFORMATION.
2. ALL LIGHT FIXTURES SHALL BE UL LABELED.
3. FIRST MANUFACTURER LISTED IS BASIS OF DESIGN. OTHER MANUFACTURERS LISTED ARE APPROVED MANUFACTURERS.
4. ELECTRICAL TRADES SHALL PROVIDE COMPLETE SUBMITTALS (SHOP DRAWINGS) ON ALL LIGHT FIXTURES, LAMPS, CONTROLS AND ACCESSORIES, ETC. REFER TO SPECIFICATION FOR SUBMITTAL FORMAT AND PROCESS.
5. ALL LUMINARIES AND CONTROLS SHALL COMPLY WITH THE MICHIGAN UNIFORM ENERGY CODE AND ASHRAE 90.1.

## LIGHTING SYMBOL LIST

| SYMBOL | DESCRIPTION |
|---|---|
| | FLUORESCENT LIGHT FIXTURE |
| | FLUORESCENT NIGHT LIGHT FIXTURE |
| | FLUORESCENT EMERGENCY LIGHT FIXTURE |
| | WALL MOUNTED FLUORESCENT LIGHT FIXTURE |
| | DOWNLIGHT |
| | DOWNLIGHT WALL WASH FIXTURE |
| | WALL SCONCE LIGHT FIXTURE |
| | SURFACE MOUNTED LIGHT FIXTURE |
| | INTERIOR WALL MOUNTED LIGHT FIXTURE |
| | TRACK AND TRACK MOUNTED LIGHT FIXTURES |
| | CEILING MOUNTED EXIT LIGHT - ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE) |
| | WALL MOUNTED EXIT LIGHT - ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE) |
| | EMERGENCY BATTERY UNIT |
| | COMBINATION EMERGENCY BATTERY UNIT/EXIT SIGN |
| | EXTERIOR POLE MOUNTED LIGHT FIXTURE |
| | EXTERIOR WALL MOUNTED LIGHT FIXTURE |
| | EXTERIOR POST TOP LIGHT FIXTURE |
| | BOLLARD LIGHT FIXTURE |
| $ | SINGLE POLE SWITCH |
| $2 | TWO POLE SWITCH |
| $3 | THREE WAY SWITCH |
| $4 | FOUR WAY SWITCH |
| $K | KEYED SWITCH |
| $D | DIMMER SWITCH |
| $L | LOW VOLTAGE SWITCH |
| $P | SWITCH WITH PILOT LIGHT |
| $3 | DUAL SWITCH |

## LIGHTING CONTROLS LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| $T | DIGITAL TIMER SWITCH |
| $O | WALL OCCUPANCY SENSOR SWITCH |
| OS | OCCUPANCY SENSOR |
| DLS | DAYLIGHT SENSOR |
| P | PHOTOCELL |

NOTES:
1. DRAWINGS INDICATE DESIGN INTENT ONLY.
2. SENSOR SELECTION, QUANTITY AND LOCATION TO BE DETERMINED BY MANUFACTURER BASED ON AREA TO BE COVERED.

## FIRE ALARM SYMBOL LIST

| SYMBOL | DESCRIPTION |
|---|---|
| F | AUDIBLE DEVICE |
| F | COMBINATION AUDIBLE/VISUAL DEVICE |
| F | CEILING MOUNTED AUDIBLE/VISUAL DEVICE |
| S | VISUAL DEVICE |
| S | CEILING MOUNTED VISUAL DEVICE |
| FD | FIRE DEPARTMENT COMMUNICATION OUTLET |
| F | MANUAL PULL STATION |
| DH | DOOR HOLDER |
| S | SMOKE DETECTOR (ZONED AS INDICATED) |
| S P | PHOTOELECTRIC SMOKE DETECTOR (ZONED AS INDICATED) |
| H | HEAT DETECTOR (ZONED AS INDICATED) |
| TS | TAMPER SWITCH |
| FS | FLOW SWITCH |
| D | DUCT MOUNTED SMOKE DETECTOR |
| FAA | FIRE ALARM ANNUNCIATOR PANEL |
| FACP | FIRE ALARM CONTROL PANEL |

## ELECTRICAL ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| AF | AMP FUSE |
| AFF | ABOVE FINISHED FLOOR |
| AIC | AVAILABLE INTERRUPTING CURRENT (AMPS) |
| ATS | AUTOMATIC TRANSFER SWITCH |
| CB | CIRCUIT BREAKER |
| (E) | EXISTING ELECTRICAL EQUIPMENT OR WORK |
| EMT | ELECTRICAL METALLIC TUBING |
| EWC | ELECTRIC WATER COOLER |
| FA | FIRE ALARM |
| FACP | FIRE ALARM CONTROL PANEL |
| FLA | FULL LOAD AMPS |
| G/GRD | GROUND |
| GFI | GROUND FAULT INTERRUPTER |
| HOA | HAND-OFF-AUTO |
| IG | ISOLATED GROUND |
| LP | LIGHTING PANEL |
| MCB | MAIN CIRCUIT BREAKER |
| MDP | MAIN DISTRIBUTION PANEL |
| MLO | MAIN LUG ONLY |
| NEMA | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION |
| NF | NON-FUSIBLE |
| NIC | NOT IN CONTRACT |
| P | POLE |
| (R) | RELOCATED EXISTING ELECTRICAL EQUIPMENT |
| (RR) | REMOVE AND REINSTALL |
| RMC | RIGID METALLIC CONDUIT |
| RP | RECEPTACLE PANEL |
| TBB | TELEPHONE BACKBOARD |
| TYP. | TYPICAL |
| WG | WIRE GUARD |
| WP | WEATHERPROOF |

## POWER SYMBOL LIST

| SYMBOL | DESCRIPTION |
|---|---|
| TC | TIME CLOCK |
| C | CONTACTOR |
| J | HARD WIRE CONNECTION BY ELECTRICAL CONTRACTOR |
| | SINGLE RECEPTACLE OUTLET |
| | DUPLEX RECEPTACLE OUTLET |
| | DUPLEX RECEPTACLE OUTLET MOUNTED 6" ABOVE FINISH COUNTER |
| C | CEILING MOUNTED DUPLEX RECEPTACLE OUTLET |
| | EMERGENCY DUPLEX RECEPTACLE OUTLET |
| | DEDICATED DUPLEX RECEPTACLE OUTLET |
| | QUAD RECEPTACLE OUTLET |
| | DEDICATED QUAD RECEPTACLE OUTLET |
| | FLOOR MOUNTED DUPLEX RECEPTACLE OUTLET |
| | NEMA RECEPTACLE OUTLET (CONFIGURATION AS NOTED) |
| | PLUG STRIP |
| J | JUNCTION BOX (C=CEILING MOUNTED) |
| | RECEPTACLE PANEL |
| | LIGHTING PANEL |
| | DISTRIBUTION/EQUIPMENT POWER PANEL |
| T | TRANSFORMER |
| | SINGLE PHASE MOTOR |
| | THREE PHASE MOTOR |
| | CONDUIT DOWN |
| | CONDUIT UP |
| | GROUNDING ROD |
| | GROUND |
| | GROUNDING BAR |
| M | METER |
| | NON-FUSED DISCONNECT SWITCH |
| | FUSED DISCONNECT SWITCH |
| | COMBINATION MAGNETIC MOTOR STARTER |
| $M | MOTOR RATED SWITCH |
| TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSOR |

## AUXILIARY SYST. SYMBOL LIST

| SYMBOL | DESCRIPTION |
|---|---|
| | TELEPHONE OUTLET |
| | FLOOR MOUNTED TELEPHONE OUTLET BOX (TYP.) |
| | TELEPHONE OUTLET MOUNTED 6" ABOVE FINISHED COUNTER |
| | DATA OUTLET |
| | COMBINATION OUTLET (VOICE, VIDEO, AND/OR DATA) |
| C | CEILING MOUNTED OUTLET BOX (TYP.) |
| | PUSH BUTTON |
| | BELL |
| CR | CARD READER |
| DH | MAGNETIC DOOR HOLD |
| TV | TELEVISION OUTLET |
| | WALL CLOCK |
| | DOUBLE SIDED WALL CLOCK |
| S | COMBINATION WALL CLOCK / SPEAKER |
| S | SPEAKER |
| | CAMERA |

## DRAWING INDEX

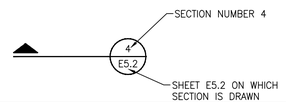


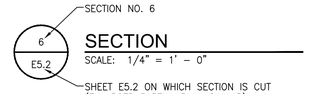
| SHT NO | DESCRIPTION |
|---|---|
| E000 | ELECTRICAL GENERAL INFORMATION |
| ED101 | ELECTRICAL DEMOLITION PLAN |
| EL100 | COMPOSITE LIGHTING PLAN |
| EL101A | LOWER LEVEL LIGHTING PLAN - AREAS A&B |
| EL101B | LOWER LEVEL LIGHTING PLAN - AREAS C&D |
| EP101 | COMPOSITE POWER PLAN |
| EP101A | LOWER LEVEL POWER PLAN - AREA A |
| EP101B | LOWER LEVEL POWER PLAN - AREAS C |
| E500 | ELECTRICAL DETAILS AND PANEL SCHEDULES |
| E600 | ONE-LINE DIAGRAMS |



## DRAWING NOTATION

| SYMBOL | DESCRIPTION |
|---|---|
| FA | LIGHTING FIXTURE TAG |
| 1 | CONSTRUCTION KEY NOTE NUMBER 1 |
| 1 | DEMOLITION KEY NOTE NUMBER 1 |
| EF 1 | EQUIPMENT DESIGNATION, (I.E. EXHAUST FAN NUMBER 1) |
| | EXISTING DEVICES OR EQUIPMENT |
| | NEW OR MODIFIED DEVICES OR EQUIPMENT |
| | NEW OR MODIFIED UNDERGROUND WIRING |
| | EXISTING SYSTEM COMPONENT TO BE REMOVED |




## APPLICABLE CODES AND REGULATIONS

| YEAR | CODE |
|---|---|
| 2014 | MICHIGAN ELECTRICAL CODE RULES, PART 8 |
| 2014 | NATIONAL ELECTRICAL CODE (NFPA 70) |
| 2012 | MICHIGAN BUILDING CODE |
| 2012 | MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS |
| 2009 | MICHIGAN RESIDENTIAL CODE |
| 2009 | MICHIGAN UNIFORM ENERGY CODE |
| 2010 | NFPA 20 |
| 2010 | NFPA 72 |
| 2012 | NFPA 101 |
| 2010 | NFPA 110 |
| 2009 | ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES |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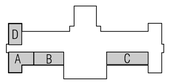
SES Project # 16 0357 01

KEY PLAN




OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/16

N

DRAWN BY

GFB/HMN

CHECKED BY

RRS

APPROVED BY

TMV

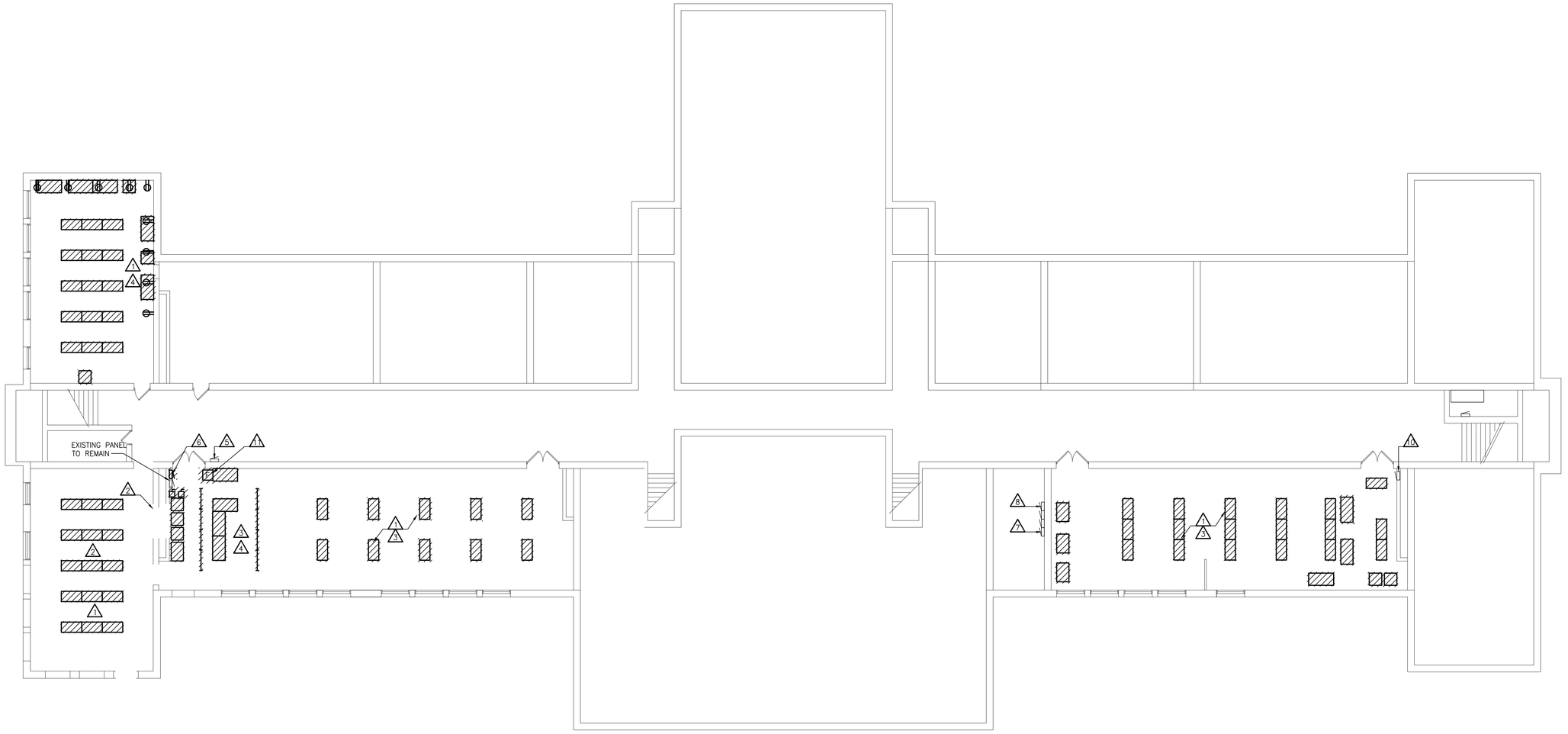
SHEET NAME

ELECTRICAL GENERAL INFORMATION

SHEET NO.

E000


Drawing: 5\16 0357 01 | Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Elec\16 0357 01 | E000.dwg
Date: Mar 18, 2016, 11:27am Layout: E000 Plotted by: rrs




ELECTRICAL DEMOLITION PLAN
SCALE: 3/32" = 1'-0"

## DEMOLITION KEYED NOTES

1. EXISTING 2X4 FLUORESCENT LAY-IN FIXTURES TO BE REMOVED COMPLETELY. REMOVE CONDUIT AND WIRING BACK TO SOURCE.
2. DISCONNECT AND REMOVE ALL SURFACE MOUNTED CONDUIT AND RECEPTACLES BACK TO SOURCE.
3. DISCONNECT AND REMOVE PENDANT MOUNTED STRIP FIXTURES. REMOVE CONDUIT AND WIRING BACK TO SOURCE. ALL SWITCHES SHALL BE REMOVED, REFER TO NEW PLANS FOR NEW SWITCH LOCATIONS.
4. DISCONNECT AND REMOVE ALL EXISTING SURFACE MOUNTED RECEPTACLES. REMOVE CONDUIT AND WIRING BACK TO SOURCE.
5. EXISTING PANEL SURFACE MOUNTED 120/240V-1ø-3W WITH 150A MAIN BREAKER, (12) 20A 1P, (1) 20A 2P, (1) 15A 2P, (1) 30A 2P CIRCUIT BREAKERS TO REMAIN. REFER TO NEW PANEL SCHEDULE FOR MORE UPDATED SCHEDULE.
6. EXISTING 120/240V-1ø-200A PANEL TO BE REMOVE AND REPLACE WITH NEW. REFER TO NEW WORK PLAN EP101A AND ONE LINE DIAGRAM E600.
7. EXISTING 120/240V-1ø-3W-800A SWITCH BOARD TO REMAIN.
8. EXISTING 400A 3ø 3W PANEL TO REMAIN. REFER TO NEW WORK FOR ADDITIONAL INFORMATION.
9. NOT USED.
10. EXISTING PANEL "7" TO REMAIN. REFER TO PANEL SCHEDULE FOR ADDITIONAL INFORMATION
11. EXISTING FIRE ALARM PULL STATION TO BE REMOVED. REMOVE CONDUIT AND WIRING BACK TO SOURCE.

## GENERAL DEMOLITION NOTES

1. VISIT THE SITE PRIOR TO SUBMISSION OF BID TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
2. EXAMINE THE DRAWINGS OF OTHER TRADES, BE FAMILIAR WITH THE DEMOLITION REQUIRED BY OTHER TRADES. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES.
3. REMOVE LIGHTING FIXTURES AND ELECTRICAL DEVICES AS INDICATED ON PLAN. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO THOSE DEVICES SHOWN.
4. COORDINATE WITH NEW WORK PLANS, ONE LINE AND RISER DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
5. COORDINATE ANY SHUTDOWN OF EXISTING SERVICES AND EQUIPMENT REMAINING IN USE WITH OWNERS' REPRESENTATIVE. WHERE EXISTING BUILDING SERVICE IS REQUIRED TO BE SHUT DOWN, INCLUDE ALL ASSOCIATED OVERTIME COST TO PERFORM THIS WORK DURING EVENINGS AND WEEKENDS. INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUTDOWNS OCCUR FOR PERIODS LONGER THAN THE ABOVE STATED HOURS.
6. COORDINATE THE SHUT DOWN OF ELECTRICAL EQUIPMENT WITH THE OWNERS' REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO SHUT DOWN.
7. REMOVE ALL CONDUIT AND WIRE BACK TO NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
8. WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM DEVICES TO REMAIN; EXTEND CONDUIT AND WIRE AS REQUIRED TO MAINTAIN ELECTRICAL SERVICE.
9. DISPOSE OF ALL MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, INCLUDING TCLP TESTING, PRIOR TO DISPOSAL AND/OR RECYCLING OF FLUORESCENT LAMPS.
10. PROVIDE BLANK COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED AND WALL REMAINS INTACT. MARK ALL UNUSED CIRCUIT BREAKERS AS "SPARE".
11. CONTRACTOR TO TAG ALL CIRCUITS AT BOTH ENDS AFFECTED BY THIS ALTERATION.
12. CONTRACTOR SHALL PROVIDE UPDATED, TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
13. CONTRACTOR SHALL VERIFY ALL UNDERGROUND AND IN-SLAB UTILITIES LOCATIONS PRIOR TO SAW CUTTING OR PENETRATING ANY FLOOR SLABS.
14. REFER TO NEW WORK SHEETS FOR LIGHTING AND POWER CIRCUIT DESIGNATIONS.
15. EXTEND EXISTING CONDUIT AND WIRE AS REQUIRED FOR ALL RELOCATED DEVICES.

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KEY PLAN

OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

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| Bidding - Construction | 03/17/16 |

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RRS

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TMV

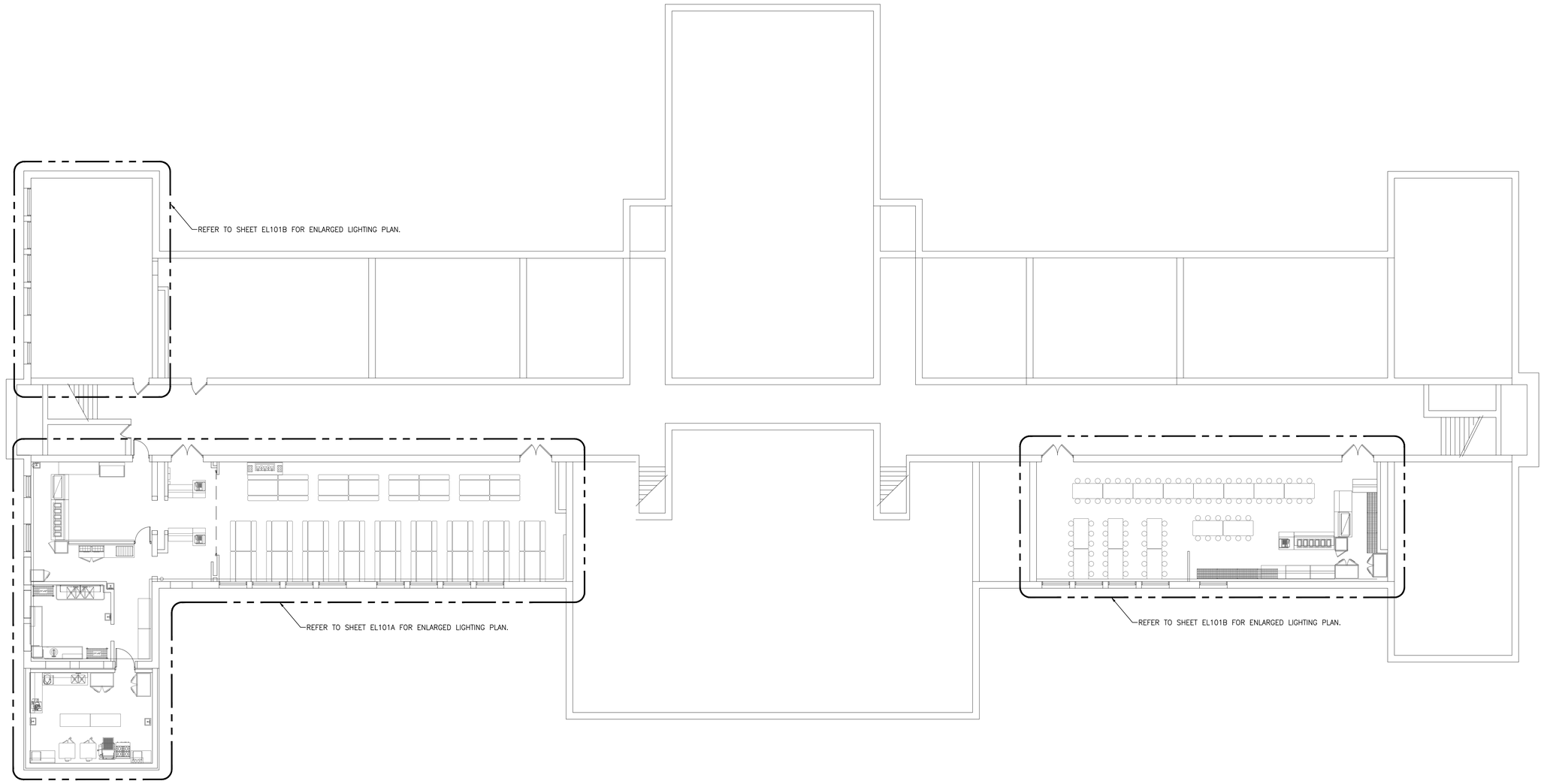
SHEET NAME

ELECTRICAL
DEMOLITION
PLAN

SHEET NO.

ED101

Drawing: SAVE 0357 01 | Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Revit\16 0357 01 - ED100.dwg
Date: Mar 18, 2016, 11:27am Layout: ED100 Plotted by: rrs




## COMPOSITE LIGHTING PLAN
SCALE: 3/32" = 1'-0"

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COMPOSITE
LIGHTING PLAN

SHEET NO.

EL100

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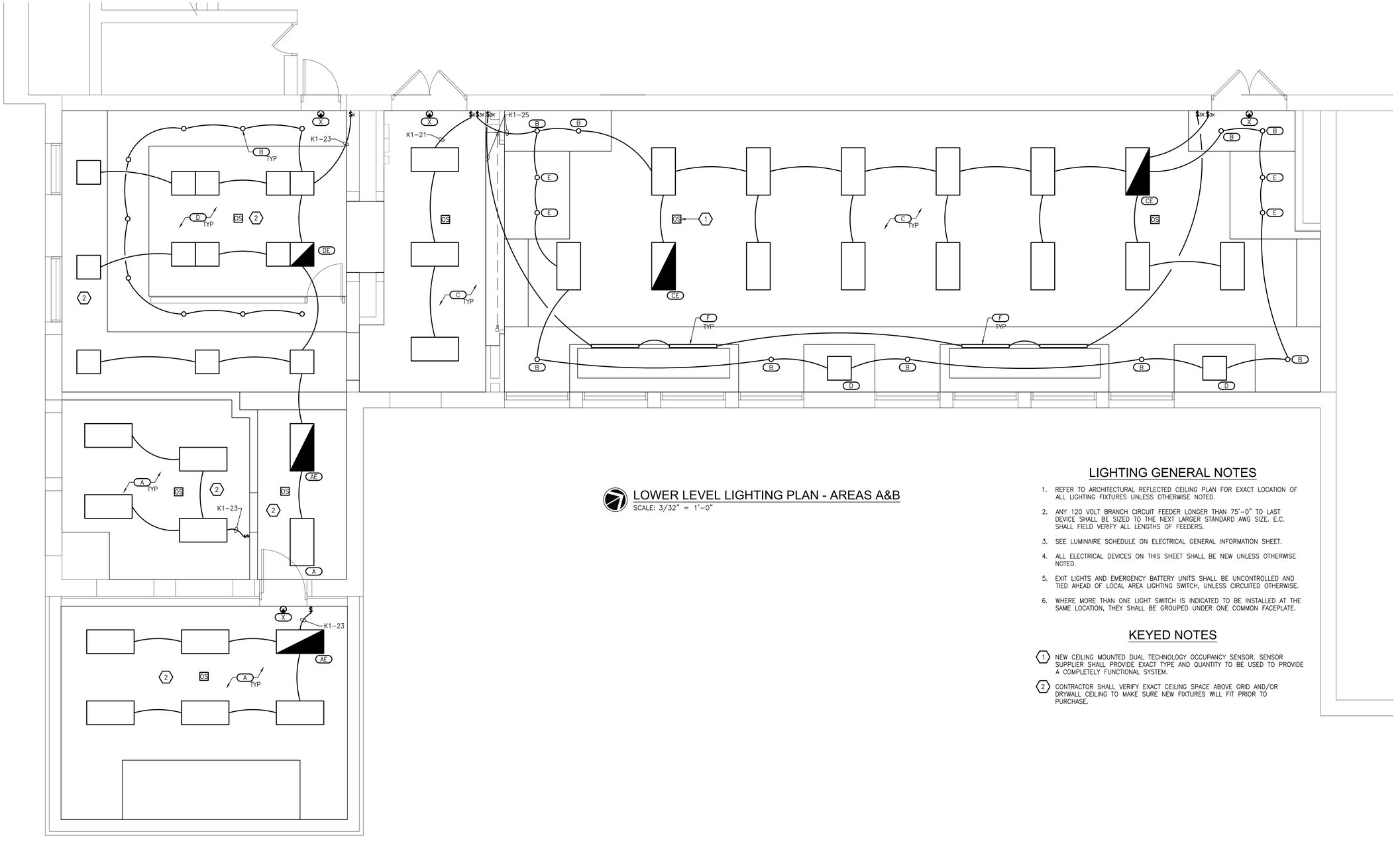
Date: Mar 18, 2016, 11:27am Layout: EL100 Plotted by: rrs




## LOWER LEVEL LIGHTING PLAN - AREAS A&B

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

## LIGHTING GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
3. SEE LUMINAIRE SCHEDULE ON ELECTRICAL GENERAL INFORMATION SHEET.
4. ALL ELECTRICAL DEVICES ON THIS SHEET SHALL BE NEW UNLESS OTHERWISE NOTED.
5. EXIT LIGHTS AND EMERGENCY BATTERY UNITS SHALL BE UNCONTROLLED AND TIED AHEAD OF LOCAL AREA LIGHTING SWITCH, UNLESS CIRCUITED OTHERWISE.
6. WHERE MORE THAN ONE LIGHT SWITCH IS INDICATED TO BE INSTALLED AT THE SAME LOCATION, THEY SHALL BE GROUPED UNDER ONE COMMON FACEPLATE.

## KEYED NOTES

1. NEW CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR. SENSOR SUPPLIER SHALL PROVIDE EXACT TYPE AND QUANTITY TO BE USED TO PROVIDE A COMPLETELY FUNCTIONAL SYSTEM.
2. CONTRACTOR SHALL VERIFY EXACT CEILING SPACE ABOVE GRID AND/OR DRYWALL CEILING TO MAKE SURE NEW FIXTURES WILL FIT PRIOR TO PURCHASE.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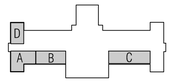


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LOWER LEVEL LIGHTING PLAN - AREAS A&B

SHEET NO.

EL101A


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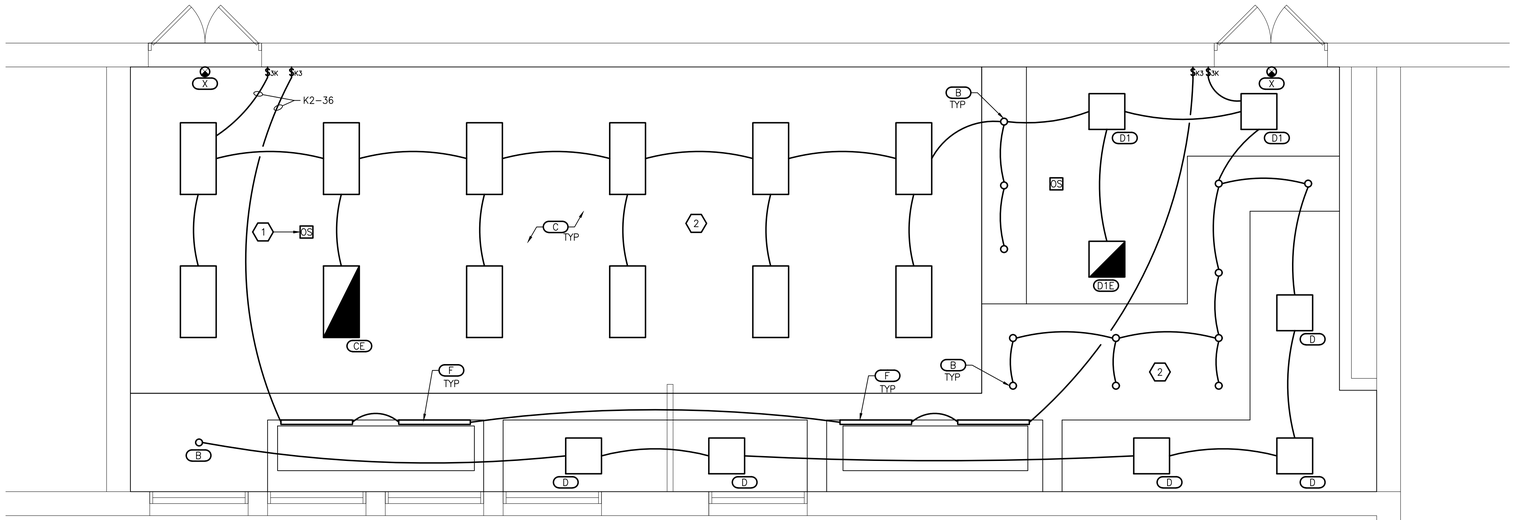
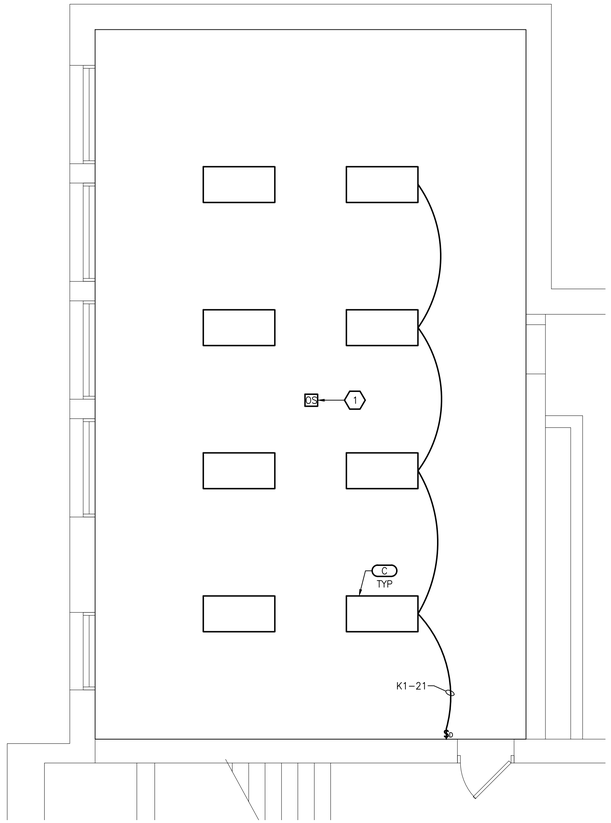



LOWER LEVEL LIGHTING PLAN - AREA C

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




LOWER LEVEL LIGHTING PLAN - AREA D

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

## LIGHTING GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
3. SEE LUMINAIRE SCHEDULE ON ELECTRICAL GENERAL INFORMATION SHEET.
4. ALL ELECTRICAL DEVICES ON THIS SHEET SHALL BE NEW UNLESS OTHERWISE NOTED.
5. EXIT LIGHTS AND EMERGENCY BATTERY UNITS SHALL BE UNCONTROLLED AND TIED AHEAD OF LOCAL AREA LIGHTING SWITCH, UNLESS CIRCUITED OTHERWISE.
6. WHERE MORE THAN ONE LIGHT SWITCH IS INDICATED TO BE INSTALLED AT THE SAME LOCATION, THEY SHALL BE GROUPED UNDER ONE COMMON FACEPLATE.

## KEYED NOTES

1. NEW CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR. SENSOR SUPPLIER SHALL PROVIDE EXACT TYPE AND QUANTITY TO BE USED TO PROVIDE A COMPLETELY FUNCTIONAL SYSTEM.
2. CONTRACTOR SHALL VERIFY EXACT CEILING SPACE ABOVE GRID AND/OR DRYWALL CEILING TO MAKE SURE NEW FIXTURES WILL FIT PRIOR TO PURCHASE.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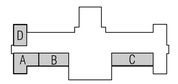


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PROJECT NO.

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SHEET NAME

LOWER LEVEL LIGHTING PLAN - AREAS C&D

SHEET NO.

EL101B


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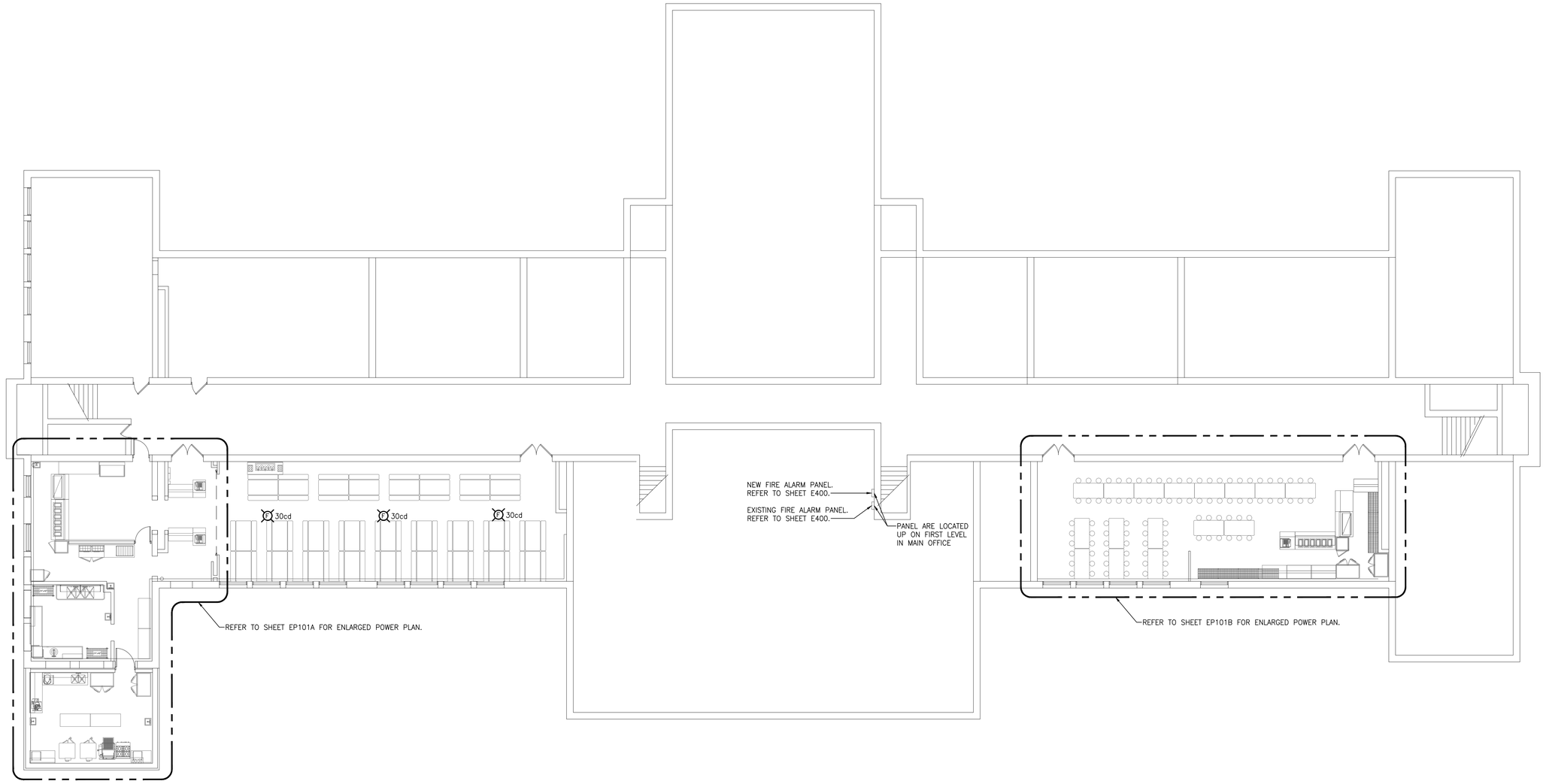


## COMPOSITE POWER PLAN

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


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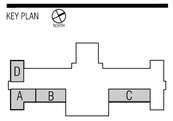


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SHEET NAME

COMPOSITE
POWER PLAN

SHEET NO.

EP101


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NOTE: ELECTRICAL SYMBOLS APPLY TO THIS SHEET ONLY.

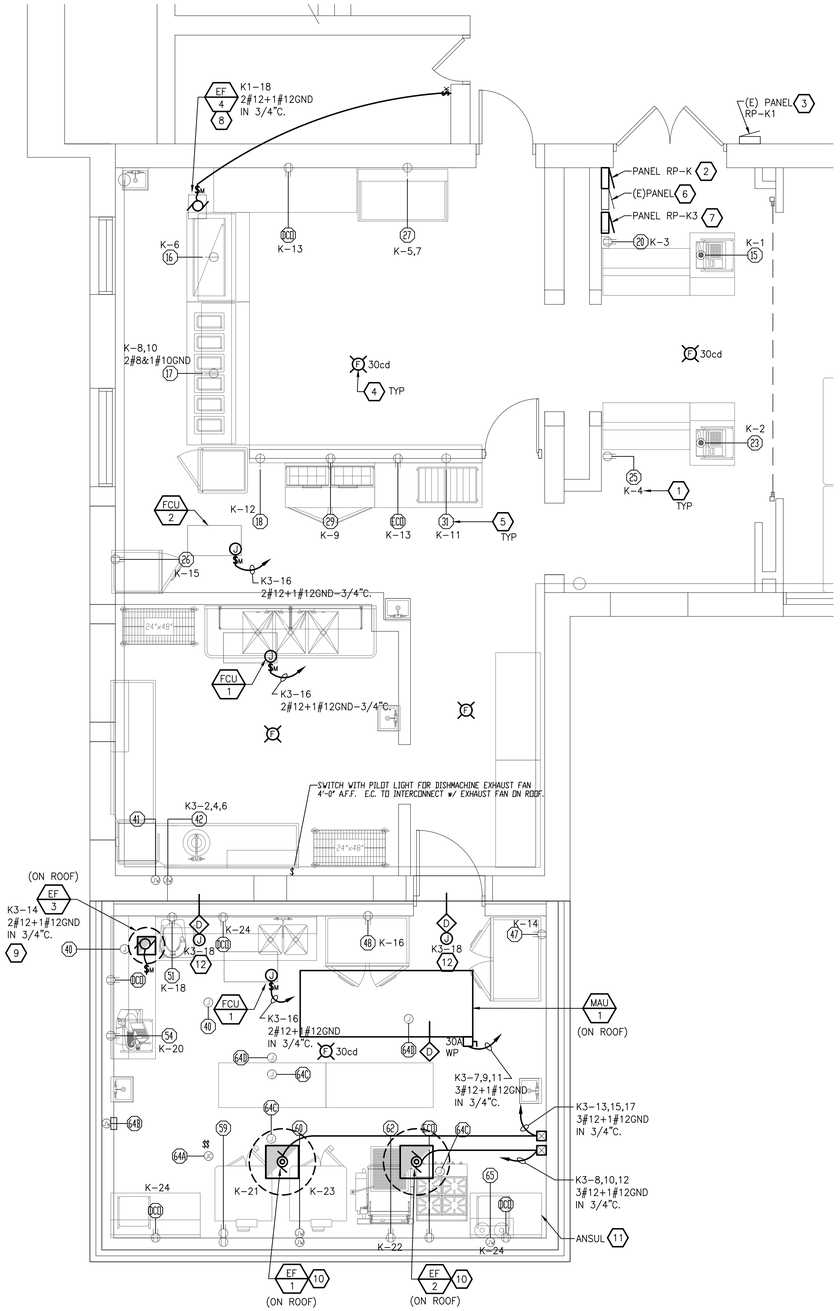
## ELECTRICAL SYMBOL LEGEND

| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
|---|---|---|---|
| A.F.F. | ABOVE FINISHED FLOOR | | 120V SINGLE RECEPTACLE |
| DCO | DUPLEX CONVENIENCE OUTLET | | SINGLE POWER RECEPTACLE TO MATCH EQUIPMENT |
| D.F.A. | DOWN FROM ABOVE | | FLUSH FLOOR RECEPTACLE W/HINGED BRASS COVER |
| E.C. | ELECTRICAL CONTRACTOR | | FLUSH MOUNTED JUNCTION BOX IN CEILING |
| F.E.C. | FOODSERVICE EQUIPMENT CONTRACTOR | | FLUSH MOUNTED JUNCTION BOX IN WALL |
| G.C. | GENERAL CONTRACTOR | | FLUSH MOUNTED JUNCTION BOX IN FLOOR |
| | 120V GROUND FAULT DUPLEX RECEPTACLE | | CONDUIT OUT-OF-CEILING |
| | SPLIT WIRED GROUND FAULT DUPLEX RECEPTACLE | | CONDUIT OUT-OF-WALL |
| $ | SWITCH | | CONDUIT OUT-OF-FLOOR |
| | FLUORESCENT LIGHT | | LIGHT |

DIMENSIONS FROM ABOVE FINISHED FLOOR ARE TO BE TO THE BOTTOM OF THE DEVICE.

## ELECTRICAL SCHEDULE

| Item | Qty | Equipment Description | Voltage | Phase | Amps | Connection Type | Hgt A.F.F. | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | MILK COOLER | 120 | 1 | 7 | C&P | 1'-6" | – |
| 3 | 1 | REACH-IN FREEZER | 120 | 1 | 12 | C&P | 7'-6" | – |
| 5 | 1 | COLD FOOD COUNTER | 120 | 1 | 7 | C&P | STUB UP 5" | – |
| 6 | 1 | HOT FOOD COUNTER | 120/208 | 1 | 36 | C&P | STUB UP 5" | – |
| 7 | 1 | CASHIER COUNTER | 120 | 1 | 15 | C&P | STUB UP 5" | – |
| 9 | 1 | HOT CART | 120 | 1 | 15 | C&P | STUB UP 5" | – |
| 10 | 1 | REACH-IN REFRIGERATOR | 120 | 1 | 10.7 | C&P | 7'-6" | – |
| 11 | 3 | MILK COOLERS | 120 | 1 | 7 | C&P | 1'-6" | – |
| 15 | 1 | CASHIER COUNTER | 120 | 1 | 15 | C&P | IN FLOOR | – |
| 16 | 1 | COLD FOOD COUNTER | 120 | 1 | 7 | C&P | STUB UP 5" | – |
| 17 | 1 | HOT FOOD COUNTER | 120/208 | 1 | 36 | C&P | STUB UP 5" | – |
| 18 | 1 | HOT CART | 120 | 1 | 15 | C&P | 1'-6" | – |
| 20 | 1 | MILK COOLER | 120 | 1 | 7 | C&P | 1'-6" | – |
| 23 | 1 | CASHIER COUNTER | 120 | 1 | 15 | C&P | IN FLOOR | – |
| 25 | 1 | MILK COOLER | 120 | 1 | 7 | C&P | 1'-6" | – |
| 26 | 1 | REACH-IN REFRIGERATOR | 120 | 1 | 7 | C&P | 7'-6" | – |
| 27 | 1 | AIRSCREEN MERCHANDISER | 120/208 | 1 | 15 | C&P | 1'-6" | – |
| 29 | 1 | REFRIGERATED PREPTABLE | 120 | 1 | 12 | C&P | 1'-6" | – |
| 31 | 1 | HEATED SANDWICH SLIDE | 120 | 1 | 15.1 | C&P | 1'-6" | – |
| 40 | 1 | CONDENSATE CANOPY | 120 | 1 | 15 | DIRECT | ON ROOF | E.C. TO INTER-WIRE EXHAUST FAN THROUGH SWITCH ON WALL |
| 41 | 1 | DISHWASHER | 208 | 3 | 46 | DIRECT | 1'-6" | E.C. TO BRANCH TO CONNECTIONS |
| 42 | 1 | DISPOSER & CONTROLS | 208 | 3 | 6.6 | DIRECT | 1'-6" | E.C. TO INTER-WIRE THORUGH CONTROLS |
| 47 | 1 | REACH-IN FREEZER | 120 | 1 | 12 | C&P | 7'-6" | – |
| 48 | 1 | REACH-IN REFRIGERATOR | 120 | 1 | 10.7 | C&P | 7'-6" | – |
| 51 | 1 | 20 QL MIXER | 120 | 1 | 9 | C&P | 4'-0" | – |
| 54 | 1 | SLICER | 120 | 1 | 5 | C&P | 4'-0" | – |
| 59 | (2) | DOUBLE DECK CONVECTION OVEN | 120 | 1 | 9+9 | C&P | 24" & 48" | EACH DECK REQUIRES A SEPARATE CIRCUIT |
| 60 | (2) | DOUBLE DECK COMBI OVEN | 120 | 1 | 8.3+8.3 | DIRECT | 24" & 48" | EACH DECK REQUIRES A SEPARATE CIRCUIT |
| 62 | 1 | TILT BRAISING PAN | 120 | 1 | 5 | C&P | 1'-6" | – |
| 64A | 1 | EXHAUST CANOPY | 120 | 1 | 15 | DIRECT | FROM ABOVE | SEE DIVISION 16 NOTE G |
| 64B | 1 | CANOPY CONTROL PANEL | 120 | 1 | 15 | DIRECT | 4'-6" | SEE DIVISION 16 NOTE G |
| 64C | 2 | EXHUAST FANS | 208 | 3 | 15 | DIRECT | ON ROOF | SEE DIVISION 16 NOTE G |
| 64D | 1 | MAKE-UP AIR UNIT | 208 | 3 | 50 | DIRECT | ON ROOF | SEE DIVISION 16 NOTE G |
| 65 | 1 | FIRE PROTECTION SYSTEM | 120 | 1 | 15 | DIRECT | FROM ABOVE | SEE DIVISION 16 NOTE F |
| | | | | | | | | |
| DCO | 5 | DUPLEX RECEPTACLE OUTLET | 120 | 1 | 15 | C&P | 4'-0" | FOR GENERAL PURPOSE USE |
| ECO | 2 | DUPLEX RECEPTACLE OUTLET | 120 | 1 | 15 | C&P | 1'-6" | FOR GENERAL PURPOSE USE |




## LOWER LEVEL POWER PLAN - AREA A

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

## POWER GENERAL NOTES

1. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
3. ALL RECEPTACLES SHALL BE 20A RATED.
4. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
5. ALL RECEPTACLES WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GFCI TYPE RECEPTACLE.
6. REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR EXACT LOCATION OF DEVICES.
7. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING SHALL BE LABELED WITH CIRCUITS SERVED.
8. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
9. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
10. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
11. ALL RECEPTACLES INSTALLED IN THE ELEVATOR PIT(S), ELEVATOR MACHINE ROOM(S), CONTROL ROOM(S)/SPACE(S) SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE (GFCI).
12. A DEDICATED SINGLE PHASE RECEPTACLE SUPPLYING A ELEVATOR PIT SUMP PUMP SHALL NOT BE A GFCI TYPE RECEPTACLE.
13. ALL ELECTRICAL EQUIPMENT MOUNTED ON THE FLOOR SHALL BE MOUNTED ON A 4" CONCRETE HOUSE KEEPING PAD.
14. ALL FIRE ALARM DEVICES SHALL BE 15 CANDELA RATED UNLESS NOTED OTHERWISE.
15. ALL BRANCH CIRCUIT WIRING SHALL BE 2#12, 1#12GND IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE..
16. ALL RECEPTACLES LOCATED OUTSIDE OR OUTDOORS SHALL BE GFCI.

## KEYED NOTES

1. INDICATED PANEL NAME AND CIRCUIT NUMBER. REFER TO PANEL SCHEDULES ON SHEET E500.
2. NEW PANEL "RP-K" TO REPLACE EXISTING PANEL IN PLACE. REUSE EXISTING FEEDER. REFER TO ONE LINE DIAGRAM ON SHEET E600.
3. EXISTING PANEL TO BE USED TO FEED NEW CIRCUITS. REFER TO PANEL SCHEDULES ON SHEET E500.
4. NEW CEILING MOUNTED FIRE ALARM HORN/STROBE. REFER TO SHEET E500 FOR FIRE ALARM RISER DIAGRAM AND SHEET EP101 FOR ADDITIONAL DEVICES.
5. INDICATES ITEM NUMBER. REFER TO ELECTRICAL SCHEDULE (THIS SHEET) FOR ADDITIONAL INFORMATION.
6. EXISTING PANELBOARD.
7. NEW 120/240V-3ø-3W PANEL RP-K3. REFER TO ONE-LINE DAIGRAM AND PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
8. NEW 120V, 1ø EXHAUST FAN, CIRCUIT AS SHOWN. PROVIDE MANUAL MOTOR KEY SWITCH STARTER FURNISHED WITH HOA SELECTOR SWITCH. LABEL STARTER WITH LAMICOID NAMEPLATE INDICATING FAN BEING SERVED. COORDINATE CONTROLS WITH MECHANICAL CONTRACTOR.
9. NEW EXHAUST FAN, CIRCUIT AS SHOWN. PROVIDE FRACTIONAL MOTOR STARTER WITH HOA SELECTOR SWITCH AND RELAY. LABEL STARTER WITH LAMICOID NAMEPLATE INDICATING FAN BEING SERVED. REMOTE ON/OFF STATION SHALL BE PROVIDE BY HOOD MANUFACTURER. PROVIDE 2#14 AWG IN 3/4"C BACK TO MOTOR STARTER.
10. NEW EXHAUST FAN, CIRCUIT AS SHOWN. PROVIDE MAGNETIC MOTOR STARTER AND RELAY. LABEL STARTER WITH LAMICOID NAMEPLATE INDICATING FAN BEING SERVED. REMOTE ON/OFF STATION SHALL BE PROVIDE BY HOOD MANUFACTURER. PROVIDE 2#14 AWG IN 3/4"C BACK TO MOTOR STARTER
11. NEW FIRE PROJECTION SYSTEM (ANSUL). UPON ANSUL GET PULL, THE MAKE-UP AIR UNIT (MAU) WITH SMOKE DAMPER AND GAS VALVE SHALL BE SHUT-OFF, EXHAUST FANS (EF-1 & EF-2) SHALL TURN ON. THE ANSUL SYSTEM SHALL SEND SIGNAL NOTIFICATION TO MAIN FIRE ALARM PANEL. COORDINATE WITH MECHANICAL CONTROL CONTRACTOR TO FINALIZED THE SHUT-DOWN SEQUENCE OF OPERATION.
12. PROVIDE A DUCT SMOKE DETECTOR AND CONTROL INTERLOCK WIRING TO FIRE/SMOKE DAMPER. PROVIDE 2#12, 1#12GND IN 3/4" CONDUIT FROM CIRCUIT INDICATED TO FIRE/SMOKE DAMPER. COORDINATE WITH MECHANICAL TRADE PRIOR TO INSTALLATION OF THE DUCT SMOKE DETECTOR.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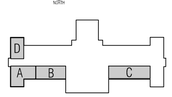
SES Project # 16 0357 01

KEY PLAN




OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

| | |
|---|---|
| Bidding - Construction | 03/17/16 |

N

DRAWN BY
GFB/HMN

CHECKED BY
RRS

APPROVED BY
TMV

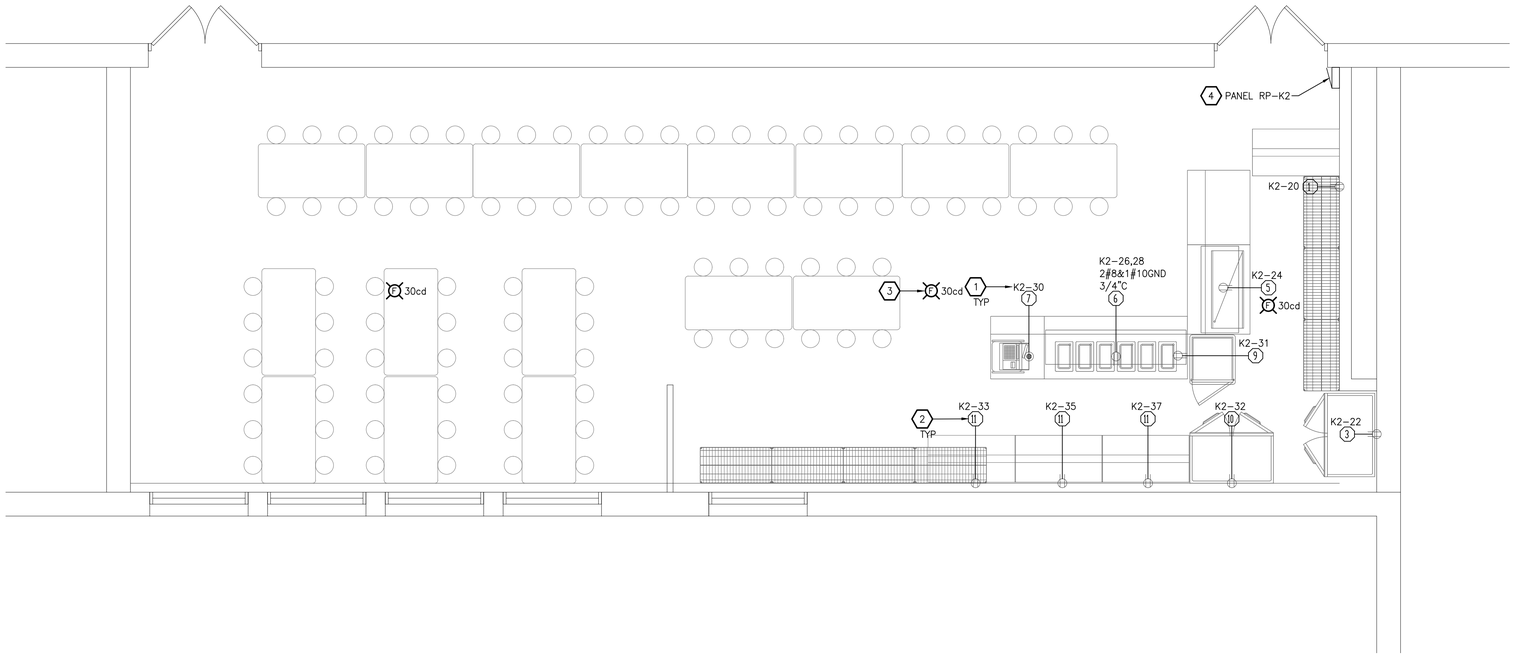
SHEET NAME

LOWER LEVEL POWER PLAN - AREA A

SHEET NO.

EP101A


Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Elec\16 0357 01 - EP 101.dwg
Date: Mar 18, 2016, 11:27am Layout: EP101A Plotted by: rrs




## LOWER LEVEL POWER PLAN - AREA C

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

## POWER GENERAL NOTES

1. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
3. ALL RECEPTACLES SHALL BE 20A RATED.
4. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
5. ALL RECEPTACLES WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GFCI TYPE RECEPTACLE.
6. REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR EXACT LOCATION OF DEVICES.
7. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING SHALL BE LABELED WITH CIRCUITS SERVED.
8. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
9. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
10. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
11. ALL RECEPTACLES INSTALLED IN THE ELEVATOR PIT(S), ELEVATOR MACHINE ROOM(S), CONTROL ROOM(S)/SPACE(S) SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE (GFCI).
12. A DEDICATED SINGLE PHASE RECEPTACLE SUPPLYING A ELEVATOR PIT SUMP PUMP SHALL NOT BE A GFCI TYPE RECEPTACLE.
13. ALL ELECTRICAL EQUIPMENT MOUNTED ON THE FLOOR SHALL BE MOUNTED ON A 4" CONCRETE HOUSE KEEPING PAD.
14. ALL FIRE ALARM DEVICES SHALL BE 15 CANDELA RATED UNLESS NOTED OTHERWISE.
15. ALL BRANCH CIRCUIT WIRING SHALL BE 2#12, 1#12GND IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE..
16. ALL RECEPTACLES LOCATED OUTSIDE OR OUTDOORS SHALL BE GFCI.

## KEYED NOTES

1. INDICATED PANEL NAME AND CIRCUIT NUMBER. REFER TO PANEL SCHEDULES ON SHEET E500.
2. INDICATES ITEM NUMBER. REFER TO ELECTRICAL SCHEDULE ON SHEET EP101A FOR ADDITIONAL INFORMATION.
3. NEW CEILING MOUNTED FIRE ALARM HORN/STROBE. REFER TO SHEET E500 FOR FIRE ALARM RISER DIAGRAM AND SHEET EP101 FOR ADDITIONAL DEVICES.
4. EXISTING PANEL "RP-K2" TO BE USED TO FEED NEW CIRCUITS. REFER TO PANEL SCHEDULES ON SHEET E500.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ISSUES / REVISIONS

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|---|---|
| Bidding - Construction | 03/17/16 |

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GFB/HMN

CHECKED BY
RRS

APPROVED BY
TMV

SHEET NAME

LOWER LEVEL POWER PLAN - AREAS C

SHEET NO.

EP101B


Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Elec\16 0357 01 EP101.dwg
Date: Mar 18, 2016, 11:27am Layout: EP101B Plotted by: rrs

**PANEL NAME:** (E)RP-K2 (PANEL 7) | **MAIN:** MLO | **L-L VOLTAGE:** 240
**LOCATION:** SERVING AREA | **BUSSING:** 200 | **L-N VOLTAGE:** 120
**SOURCE:** MDP | **GROUND BUS:** STANDARD | **PHASE:** 1
**FEEDER SIZE:** EXISTING | **MOUNTING:** SURFACE | **WIRE:** 3
**NEUTRAL:** 100% | **MIN SC INTERRUPT RATING:** 10kA

| LOAD DESCRIPTION | LIGHTING LOAD | RECEPTACLE LOAD | CONTINUOUS LOAD | NON-CONTINUOUS LOAD | OCPD | CKT | L1 | L2 | CKT | OCPD | NON-CONTINUOUS LOAD | CONTINUOUS LOAD | RECEPTACLE LOAD | LIGHTING LOAD | LOAD DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PANEL TWO | | | | | 100 | 1 | | | 2 | 100 | | | | | PANEL ONE |
| | | | | | | 3 | | | 4 | | | | | | |
| Existing Loads | | 800 | | | 20 | 5 | | | 6 | 20 | | | 800 | | Existing Loads |
| Existing Loads | | 800 | | | 20 | 7 | | | 8 | 20 | | | 800 | | Existing Loads |
| Existing Loads | | 800 | | | 20 | 9 | | | 10 | 20 | | | 800 | | Existing Loads |
| Existing Loads | | 800 | | | 20 | 11 | | | 12 | 20 | | | 800 | | Existing Loads |
| Existing Loads | | 800 | | | 20 | 13 | | | 14 | 20 | | | 800 | | Existing Loads |
| Existing Loads | | 800 | | | 20 | 15 | | | 16 | 20 | | | 800 | | Existing Loads |
| Existing Loads | | 800 | | | 20 | 17 | | | 18 | 20 | | | 800 | | Existing Loads |
| Existing Loads | | 800 | | | 20 | 19 | | | 20 | 20 | 840 | | | | ITEM #1 (Relocated Milk Cooler) |
| Existing Loads | | 800 | | | 20 | 21 | | | 22 | 20 | 1440 | | | | ITEM #3 (Relocated Reach-in freezer) |
| Existing Loads | | 800 | | | 20 | 23 | | | 24 | 20 | 840 | | | | ITEM #5 ( Relocated Cold food counter) |
| Existing Loads | | 800 | | | 20 | 25 | | | 26 | 45 | 3744 | | | | ITEM #6 (Relocated Hot Food Counter) |
| Existing Loads | | 800 | | | 20 | 27 | | | 28 | | 3744 | | | | |
| Existing Loads | | 800 | | | 20 | 29 | | | 30 | 15 | | | 300 | | ITEM #7 (Cashier Counter) |
| ITEM #9 (Hot Cart) | | | | 1200 | 15 | 31 | | | 32 | 20 | 1284 | | | | ITEM #10 (Relocated Reach-in Refrigerator) |
| ITEM #11 ( Relocated Milk Cooler) | | | | 840 | 20 | 33 | | | 34 | | | | | | Lighting m |
| ITEM #11 ( Relocated Milk Cooler) | | | | 840 | 20 | 35 | | | 36 | | | | | 1282 | New Lighting |
| ITEM #11 ( Relocated Milk Cooler) | | | | 840 | 20 | 37 | | | 38 | | | | | | SPACE |
| SPACE | | | | | -- | 39 | | | 40 | | | | | | SPACE |

| | CONNECTED LOAD | | | DEMAND FACTOR | DEMAND LOAD | | | |
|---|---|---|---|---|---|---|---|---|
| LOAD TYPE | L1 | L2 | TOTAL | | L1 | L2 | TOTAL | |
| LIGHTING LOAD (VA) | 0 | 1282 | 1282 | 1.00 | 0 | 1282 | 1282 | |
| RECEPTACLE LOAD (VA) | 9100 | 7200 | 16300 | 1.00 (FIRST 10KVA) | 5583 | 4417 | 10000 | RECEPTACLE DEMAND FACTOR PER ARTICLE 220.44 OF THE NEC |
| | | Amount over 10KVA | 6300 | 0.50 (> 10KVA) | 1759 | 1391 | 3150 | |
| CONTINUOUS LOAD (VA) | 0 | 0 | 0 | 1.00 | 0 | 0 | 0 | |
| NON-CONTINUOUS (VA) | 6864 | 8748 | 15612 | 1.00 | 5491 | 6998 | 12490 | |
| TOTAL LOAD (KVA) | 15.96 | 17.23 | 39.49 | 125% OF LIGHT/CONT AND RECEPT | 12.83 | 14.09 | 26.92 | |
| TOTAL AMPACITY (A) | 133.0 | 143.6 | 164.6 | (<10KVA) LOAD PLUS OTHER LOAD | 106.9 | 117.4 | 112.2 | |
| MINIMUM FEEDER SIZE (A) | 144.7 | 155.5 | 176.3 | <---- PER NEC ARTICLE 215.2 ----> | 118.6 | 129.3 | 123.9 | |

**PANEL NAME:** RP-K | **MAIN:** 200 | **L-L VOLTAGE:** 240
**LOCATION:** KITCHEN | **BUSSING:** 200 | **L-N VOLTAGE:** 120
**SOURCE:** MDP | **GROUND BUS:** STANDARD | **PHASE:** 1
**FEEDER SIZE:** EXISTING | **MOUNTING:** SURFACE | **WIRE:** 3
**NEUTRAL:** 100% | **MIN SC INTERRUPT RATING:** 10kA

| LOAD DESCRIPTION | LIGHTING LOAD | RECEPTACLE LOAD | CONTINUOUS LOAD | NON-CONTINUOUS LOAD | OCPD | CKT | L1 | L2 | CKT | OCPD | NON-CONTINUOUS LOAD | CONTINUOUS LOAD | RECEPTACLE LOAD | LIGHTING LOAD | LOAD DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM #15 (CASH COUNTER) | | 1200 | | | 20 | 1 | | | 2 | 20 | | | 1200 | | ITEM #23 (CASHIER COUNTER) |
| ITEM #20 (MILK COUNTER) | | | | 900 | 15 | 3 | | | 4 | 20 | 900 | | | | ITEM #25 (MILK COOLER) |
| ITEM # 27 (AIRSCREEN MERCHANDISER) | | | | 1560 | 20 | 5 | | | 6 | 20 | | | | | ITEM #16 (COLD FOOD COUNTER) |
| | | | | 1560 | | 7 | | | 8 | 50 | 3432 | | | | ITEM #17 (HOT FOOD COUNTER) |
| ITEM #29 (REFRIGERATED PREPTABLE) | | | | 1080 | 15 | 9 | | | 10 | | 3432 | | | | |
| ITEM #31 (HEATED SANDWICH SLIDE) | | | | 1080 | 20 | 11 | | | 12 | 20 | 1500 | | | | ITEM #18 (HOT CART) |
| GENERAL RECEPTACLE | | 600 | | | | 13 | | | 14 | 20 | 1440 | | | | ITEM #47 (REACH-IN FREEZER) |
| ITEM #26 (REACH-IN REFRIGERATOR) | | | | 660 | 15 | 15 | | | 16 | 20 | 1284 | | | | ITEM #48 (REACH-IN REFRIGERATOR) |
| ITEM #42 (DISPOSER & CONTROLS) | | | | 1258 | 20 | 17 | | | 18 | 20 | | | 1247 | | ITEM #51 (20 QT. MIXER) |
| | | | | 1258 | | 19 | | | 20 | 20 | | | 1247 | | ITEM #24 (SLICER) |
| ITEM #59 (DOUBLE DECK CONVEC. OVEN) | | 840 | | | 20 | 21 | | | 22 | 20 | 600 | | | | ITEM #62 (TILT BRAISING PAN) |
| ITEM #60 (DOUBLE DECK COMBI OVEN) | | | | 996 | 20 | 23 | | | 24 | 20 | | | 1080 | | GENERAL RECEPTACLE |
| EXISTING LOAD | | | | | 20 | 25 | | | 26 | 15 | | | | | |
| EXISTING LOAD | | | | | 20 | 27 | | | 28 | | | | | | |
| EXISTING LOAD | | | | | 20 | 29 | | | 30 | | | | | | |
| EXISTING LOAD | | | | | 20 | 31 | | | 32 | | | | | | SPACE |
| EXISTING LOAD | | | | | 20 | 33 | | | 34 | | | | | | SPACE |
| EXISTING LOAD | | | | | 20 | 35 | | | 36 | | | | | | SPACE |
| EXISTING LOAD | | | | | 20 | 37 | | | 38 | | | | | | SPACE |
| EXISTING LOAD | | | | | 20 | 39 | | | 40 | | | | | | SPACE |

| | CONNECTED LOAD | | | DEMAND FACTOR | DEMAND LOAD | | | |
|---|---|---|---|---|---|---|---|---|
| LOAD TYPE | L1 | L2 | TOTAL | | L1 | L2 | TOTAL | |
| LIGHTING LOAD (VA) | 0 | 0 | 0 | 1.00 | 0 | 0 | 0 | |
| RECEPTACLE LOAD (VA) | 5087 | 2327 | 7414 | 1.00 (FIRST 10KVA) | 5087 | 2327 | 7414 | RECEPTACLE DEMAND FACTOR PER ARTICLE 220.44 OF THE NEC |
| | | Amount over 10KVA | 0 | 0.50 (> 10KVA) | 0 | 0 | 0 | |
| CONTINUOUS LOAD (VA) | 0 | 0 | 0 | 1.00 | 0 | 0 | 0 | |
| NON-CONTINUOUS (VA) | 9370 | 13570 | 22940 | 0.80 | 7496 | 10856 | 18352 | |
| TOTAL LOAD (KVA) | 14.46 | 15.90 | 30.35 | 125% OF LIGHT/CONT AND RECEPT | 12.58 | 13.18 | 25.77 | |
| TOTAL AMPACITY (A) | 120.5 | 132.5 | 126.5 | (<10KVA) LOAD PLUS OTHER LOAD | 104.9 | 109.9 | 107.4 | |
| MINIMUM FEEDER SIZE (A) | 131.1 | 137.3 | 134.2 | <---- PER NEC ARTICLE 215.2 ----> | 115.5 | 114.7 | 115.1 | |

**Panel Designation:** New RP-K3 | **Main:** 200A BREAKER | **P-P Voltage:** 240
**Panel Location:** KITCHEN | **Bussing:** 225A | **P-N Voltage:** 120
**Fed From:** (E) PARK OHIO DISTRIBUTION | **Ground Bus:** STANDARD | **Phase:** 3
**Feeder Size:** SEE ONE LINE DIAGRAM | **Mounting:** SURFACE | **Wire:** 3
**Neutral:** 100% | **Min SC Interrupting Rating:** 10kA

| Remarks | Light Load | Recept Load | Cont Load | nonC Load | OC Prot | CKT | Ø A | Ø B | Ø C | CKT | OC Prot | nonC Load | Cont Load | Recept Load | Light Load | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DISHWASHER (KITCHEN) | | | | 5520 | | 1 | X | | | 2 | | 792 | | | | |
| | | | | 5520 | 60 | 3 | | X | | 4 | 15 | 792 | | | | DISPOSER & CONTROLS (KITCHEN) |
| | | | | 5520 | | 5 | | | X | 6 | | 792 | | | | |
| MAU-1 (KITCHEN) | | | | 1452 | | 7 | X | | | 8 | | 576 | | | | |
| | | | | 1452 | 15 | 9 | | X | | 10 | 15 | 576 | | | | EF-2 (KITCHEN) |
| | | | | 1452 | | 11 | | | X | 12 | | 576 | | | | |
| | | | | 576 | | 13 | X | | | 14 | 15 | 696 | | | | EF-3 (KITCHEN) |
| EF-1 (KITCHEN) | | | | 576 | 15 | 15 | | X | | 16 | 20 | 230 | | | | (2) FCU-1 & (1) FCU-2 |
| | | | | 576 | | 17 | | | X | 18 | 20 | 200 | | | | SMOKE DAMPERS (KITCHEN) |
| SPARE | | | | | 20 | 19 | X | | | 20 | 20 | | | | | SPARE |
| SPARE | | | | | 20 | 21 | | X | | 22 | -- | | | | | SPACE |
| SPACE | | | | | -- | 23 | | | X | 24 | -- | | | | | SPACE |
| SPACE | | | | | -- | 25 | X | | | 26 | -- | | | | | SPACE |
| SPACE | | | | | -- | 27 | | X | | 28 | -- | | | | | SPACE |
| SPACE | | | | | -- | 29 | | | X | 30 | -- | | | | | SPACE |

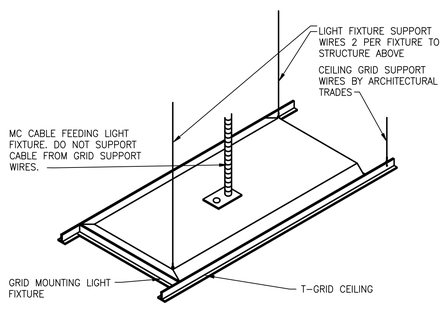
| Load Description | Connected Load ØA | ØB | ØC | Total | Demand Factor | Demand Load ØA | ØB | ØC | Total |
|---|---|---|---|---|---|---|---|---|---|
| Lighting or Continous Load (Volt-Amps) | 0 | 0 | 0 | 0 | 1.00 | 0 | 0 | 0 | 0 |
| 180VA Receptacle Load (Volt-Amps) | 0 | 0 | 0 | 0 | 1.00 (First 10kVA) | 0 | 0 | 0 | 0 |
| | Amount over 10kVA | | | 0 | 0.50 (> 10kVA) | 0 | 0 | 0 | 0 |
| Continuous Load (Volt-Amps) | 0 | 0 | 0 | 0 | 1.00 | 0 | 0 | 0 | 0 |
| Non-Continuous Load (Volt-Amps) | 9612 | 9146 | 9116 | 27874 | 1.00 | 9612 | 9146 | 9116 | 27874 |
| Total Load (kVA) | 9.61 | 9.15 | 9.12 | 27.87 | 125% of Light/Cont and Recept | 9.61 | 9.15 | 9.12 | 27.87 |
| Total Ampacity (Amps) | 80.1 | 76.2 | 76.0 | 77.4 | (<10kVA) load plus other load | 80.1 | 76.2 | 76.0 | 77.4 |
| Minimum Feeder Sizing (Amps) | 80.1 | 76.2 | 76.0 | 77.4 | <---- per NEC Article 215.2 ----> | 80.1 | 76.2 | 76.0 | 77.4 |

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

**PANEL NAME:** (E) RP-K1 | **MAIN:** 150 | **L-L VOLTAGE:** 240
**LOCATION:** CORRIDOR NEAR KITCHEN | **BUSSING:** 200 | **L-N VOLTAGE:** 120
**SOURCE:** (E) PARK OHIO DISTRIBUTION PANEL | **GROUND BUS:** STANDARD | **PHASE:** 1
**FEEDER SIZE:** EXISTING | **MOUNTING:** SURFACE | **WIRE:** 3
**NEUTRAL:** 100% | **MIN SC INTERRUPT RATING:** 10kA

| LOAD DESCRIPTION | LIGHTING LOAD | RECEPTACLE LOAD | CONTINUOUS LOAD | NON-CONTINUOUS LOAD | OCPD | CKT | L1 | L2 | CKT | OCPD | NON-CONTINUOUS LOAD | CONTINUOUS LOAD | RECEPTACLE LOAD | LIGHTING LOAD | LOAD DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXISTING LOAD | | 800 | | | 20 | 1 | | | 2 | 20 | | | 800 | | EXISTING LOAD |
| EXISTING LOAD | | 800 | | | 20 | 3 | | | 4 | 20 | | | 800 | | EXISTING LOAD |
| EXISTING LOAD | | 800 | | | 20 | 5 | | | 6 | 20 | | | 800 | | EXISTING LOAD |
| EXISTING LOAD | | 800 | | | 20 | 7 | | | 8 | 20 | | | 800 | | EXISTING LOAD |
| EXISTING LOAD | | 800 | | | 20 | 9 | | | 10 | 20 | | | 800 | | EXISTING LOAD |
| EXISTING LOAD | | 800 | | | 20 | 11 | | | 12 | 20 | | | 800 | | EXISTING LOAD |
| | | | | 1000 | 20 | 13 | | | 14 | 15 | 1000 | | | | |
| EXISTING LOAD | | | | 1000 | | 15 | | | 16 | | 1000 | | | | EXISTING LOAD |
| | | | | 1800 | 30 | 17 | | | 18 | 20 | 696 | | | | EF-4 (WATER METER ROOM) |
| | | | | 1800 | | 19 | | | 20 | 20 | | | | | SPARE |
| NEW LIGHTING - CLASSROOM | 495 | | | | 20 | 21 | | | 22 | 20 | | | | | SPARE |
| NEW LIGHTING - KITCHEN | 1092 | | | | 20 | 23 | | | 24 | 20 | | | | | SPARE |
| NEW LIGHTING - CAFETERIA | 1212 | | | | 20 | 25 | | | 26 | 20 | | | | | SPACE |
| SPACE | | | | | 20 | 27 | | | 28 | | | | | | SPACE |
| SPACE | | | | | 20 | 29 | | | 30 | | | | | | SPACE |
| SPACE | | | | | 20 | 31 | | | 32 | | | | | | SPACE |
| SPACE | | | | | 20 | 33 | | | 34 | | | | | | SPACE |
| SPACE | | | | | 20 | 35 | | | 36 | | | | | | SPACE |
| SPARCE | | | | | 20 | 37 | | | 38 | | | | | | SPACE |
| C/A | | | | | 20 | 39 | | | 40 | | | | | | SPACE |

| | CONNECTED LOAD | | | DEMAND FACTOR | DEMAND LOAD | | | |
|---|---|---|---|---|---|---|---|---|
| LOAD TYPE | L1 | L2 | TOTAL | | L1 | L2 | TOTAL | |
| LIGHTING LOAD (VA) | 1707 | 1092 | 2799 | 1.00 | 1707 | 1092 | 2799 | |
| RECEPTACLE LOAD (VA) | 4800 | 4800 | 9600 | 1.00 (FIRST 10KVA) | 4800 | 4800 | 9600 | RECEPTACLE DEMAND FACTOR PER ARTICLE 220.44 OF THE NEC |
| | | Amount over 10KVA | 0 | 0.50 (> 10KVA) | 0 | 0 | 0 | |
| CONTINUOUS LOAD (VA) | 0 | 0 | 0 | 1.00 | 0 | 0 | 0 | |
| NON-CONTINUOUS (VA) | 4496 | 3800 | 8296 | 0.80 | 3597 | 3040 | 6637 | |
| TOTAL LOAD (KVA) | 11.00 | 9.69 | 20.70 | 125% OF LIGHT/CONT AND RECEPT | 10.10 | 8.93 | 19.04 | |
| TOTAL AMPACITY (A) | 91.7 | 80.8 | 86.2 | (<10KVA) LOAD PLUS OTHER LOAD | 84.2 | 74.4 | 79.3 | |
| MINIMUM FEEDER SIZE (A) | 105.2 | 93.0 | 99.1 | <---- PER NEC ARTICLE 215.2 ----> | 97.8 | 86.7 | 92.2 | |

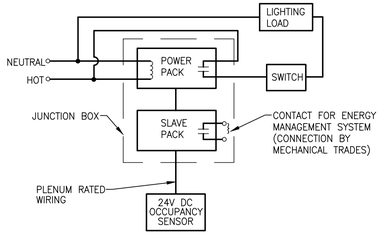



## T-GRID FIXTURE MOUNTING DETAIL

NO SCALE

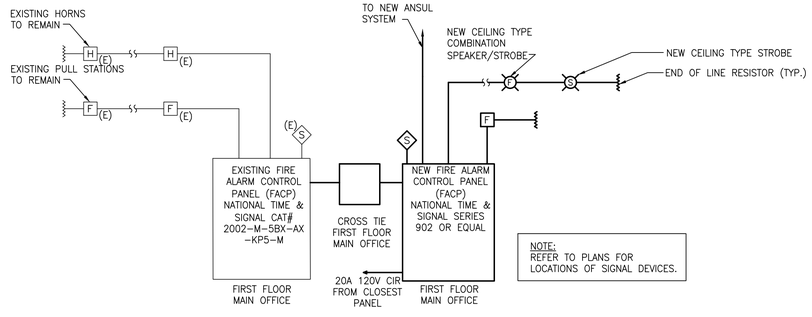
ELECTRICAL FIXTURES

1. LIGHT FIXTURES WEIGHING LESS THAN 10 POUNDS SHALL HAVE ONE 12 GAUGE HANGER WIRE CONNECTED FROM THE FIXTURE TO THE STRUCTURE ABOVE. THIS WIRE MAY BE SLACK.
2. LIGHT FIXTURE WEIGHING MORE THAN 10 POUNDS AND LESS THAN 56 LBS. SHALL HAVE 12 GAUGE WIRES ATTACHED AT OPPOSING CORNERS OF THE LIGHT FIXTURE TO THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.
3. LIGHT FIXTURES WEIGHING MORE THAN 56 POUNDS SHALL BE SUPPORTED BY DIRECTLY FROM THE STRUCTURE ABOVE. THESE WIRES MUST BE TAUT.
4. PENDANT MOUNTED FIXTURES SHALL BE DIRECTLY SUPPORTED FROM THE STRUCTURE ABOVE USING A 9 GAUGE WIRE OR AN APPROVED ALTERNATE SUPPORT WITHOUT USING THE CEILING SUSPENSION SYSTEM FOR DIRECT SUPPORT.
5. TANDEM FIXTURES MAY UTILIZE COMMON WIRES.




## TYPICAL CEILING MOUNTED OCCUPANCY SENSOR WIRING DIAGRAM

NO SCALE




NOTES:

1. FOR FIRE ALARM EQUIPMENT SPECIFICATION AND ADDITIONAL REQUIREMENTS, SEE SPECIFICATIONS.
2. ALL DUCT DETECTORS SHALL BE WIRED TO ACTIVATE ALARM SYSTEM AND SHUT DOWN FAN. PROVIDE INDICATOR LIGHT WHERE SMOKE DETECTORS ARE INSTALLED IN CONCEALED LOCATIONS OR ARE MORE THAN 10FT. ABOVE THE FINISHED FLOOR.
3. CANDELA RATING ARE SHOWN IN ALL ROOMS, ALL AUDIO AND VISUAL RATINGS SHALL MEET OR EXCEED NFPA REQUIREMENTS.
4. PROVIDE REMOTE POWER SUPPLIES AS REQUIRED FOR NOTIFICATION APPLIANCE CIRCUITS, NOT TO EXCEED 80% OF CAPACITY.
5. PROVIDE SMOKE DETECTOR ABOVE EACH REMOTE POWER SUPPLY PANEL.
6. PROVIDE BATTERY, CURRENT LOAD AND VOLTAGE DROP CALCULATIONS PER SPECIFICATIONS.
7. SEAL AROUND ALL PIPES & CONDUITS IN MASONRY AND DRYWALL WALLS.
8. ALL FIRE ALARM WIRING SHALL BE MINIMUM #14 AWG AND IN CONDUIT MIN 3/4" IN EXPOSED CEILING AREAS, CABLE IS ACCEPTABLE ABOVE LAY-IN CEILINGS IN J-HOOKS.
9. FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHARGES INVOLVED IN OBTAINING APPROVAL AND CERTIFICATION FROM STATE ELECTRICAL INSPECTOR FOR A COMPLETE SYSTEM. CERTIFIED CONTRACTOR TO PAY ALL FEES REQUIRED.
10. THE ELEVATION DIAGRAM IS FOR REFERENCE PURPOSES. EXACT QUANTITIES OF DEVICES AND LOCATIONS SHALL COMPLY WITH NFPA GUIDELINES AND MEET APPROVAL OF THE STATE ELECTRICAL INSPECTOR. FIRE ALARM CONTRACTOR SHALL HAVE SHOP DRAWINGS APPROVED BY THE STATE ELECTRICAL INSPECTOR PRIOR TO COMMENCEMENT OF WORK.
11. FOR FIRE ALARM SYMBOL LEGEND SEE DRAWING E000.
12. PROVIDE COVER WITH SIREN FEATURE TO ALL NEW FIRE ALARM MANUAL PULL STATION.

## FIRE ALARM RISER

NO SCALE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Phone 248.399.1900 Fax 246.399.1901
www.sesnet.com



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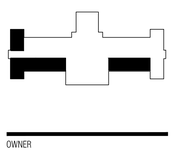
SES Project # 16 0357 01

KEY PLAN



OWNER

Hamtramck Public Schools

PROJECT NAME

Kosciuszko Middle School Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/16

DRAWN BY

GFB

CHECKED BY

RRS

APPROVED BY

TMV

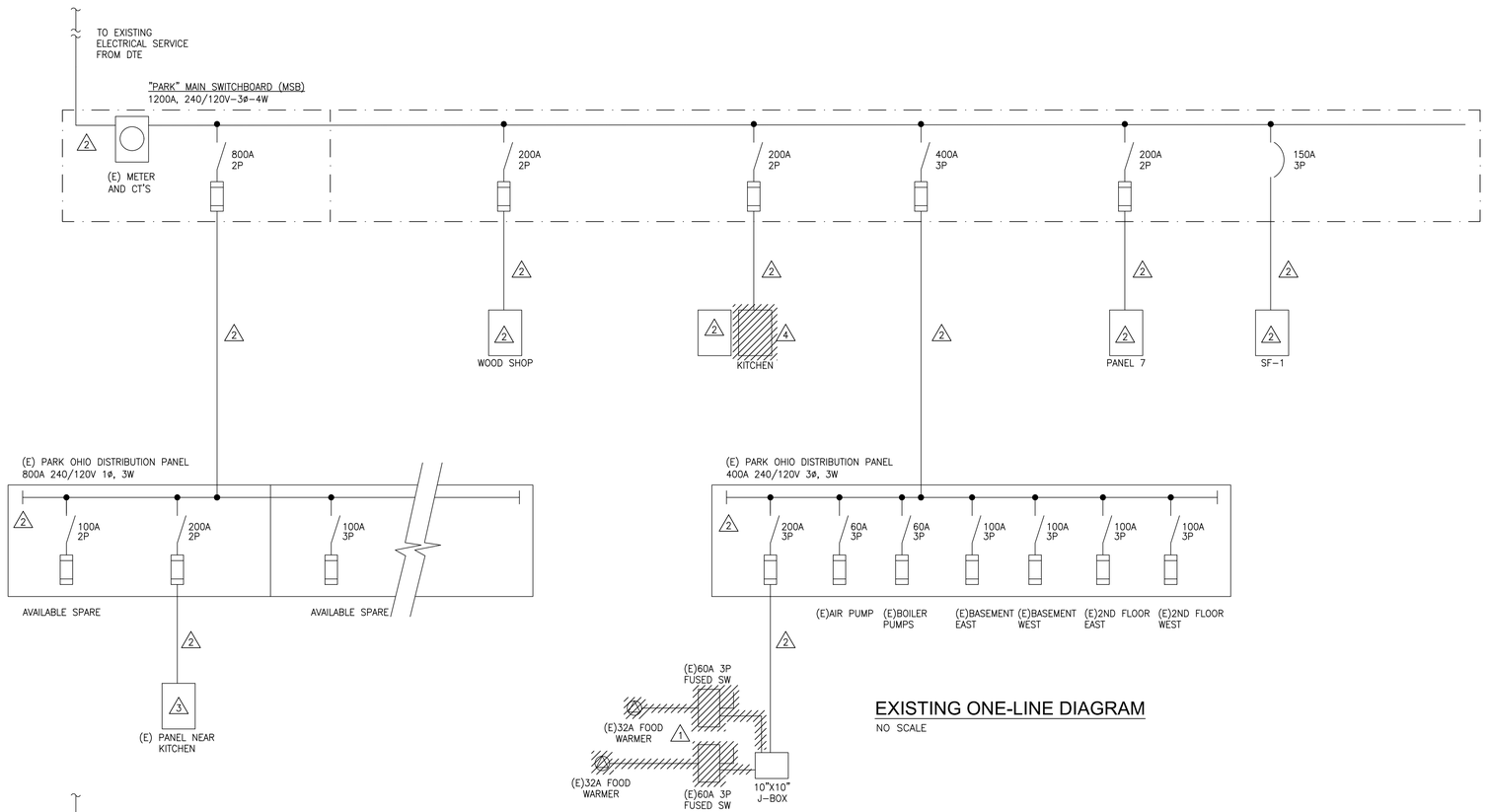
SHEET NAME

ELECTRICAL DETAILS AND PANEL SCHEDULES

SHEET NO.

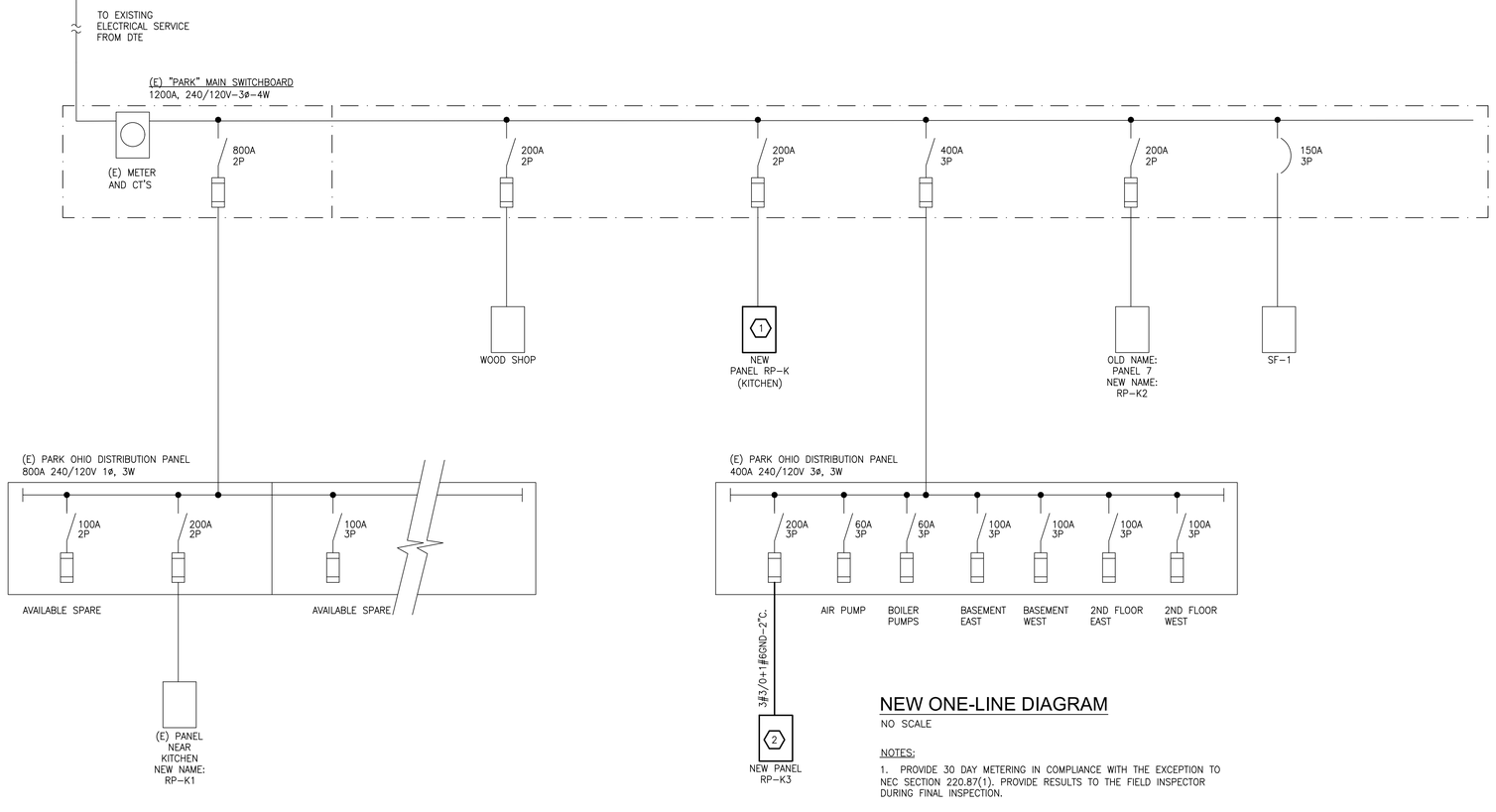
E500


Drawing: S:\16 0357 01 | Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Elec\16 0357 01 E500.dwg
Date: Mar 18, 2016, 1:27am Layout: E500 Plotted by: ms




## EXISTING ONE-LINE DIAGRAM

NO SCALE




## NEW ONE-LINE DIAGRAM

NO SCALE

NOTES:

1. PROVIDE 30 DAY METERING IN COMPLIANCE WITH THE EXCEPTION TO NEC SECTION 220.87(1). PROVIDE RESULTS TO THE FIELD INSPECTOR DURING FINAL INSPECTION.

## GENERAL NOTES

1. ALL EXISTING ITEMS IN THE CONTRACT DRAWINGS HAVE BEEN TAKEN FROM THE OWNER'S LIMITED RECORD DRAWINGS AND FIELD OBSERVATIONS. ALL SUB-CONTRACTORS SHALL VISIT THE SITE AND UNDERSTAND THE CONDITIONS UNDER WHICH THE WORK MUST BE PERFORMED. IF A DEPARTURE FROM THE DESIGN INTENT OF THE DOCUMENTS IS REQUIRED DUE TO THE ACTUAL FIELD CONDITIONS OBSERVED BY THE SUB-CONTRACTOR, THE SUB-CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT IN WRITING FOR RESOLUTION PRIOR TO SUBMITTING FINAL BID OR ENTERING INTO A CONTRACT FOR CONSTRUCTION. FAILURE TO PROVIDE THE ARCHITECT OR GENERAL CONTRACTOR WITH NOTIFICATION SHALL RESULT IN THE SUB-CONTRACTOR BEING HELD RESPONSIBLE TO COMPLETE ALL WORK TO MEET THE DESIGN INTENT WITH NO ADDITIONAL COST BEING INCURRED BY THE OWNER.
2. COORDINATE SHUTDOWN OF SERVICE WITH OWNER NO LESS THAN TWO WEEKS PRIOR TO INTENDED DATE OF WORK. REQUEST SHALL BE SUBMITTED IN WRITING.
3. SEE PANEL SCHEDULES FOR FURTHER INFORMATION.
4. REFER TO DEMOLITION AND NEW WORK PLANS AS ADDITIONAL PANELS ARE BEING REPLACED THAT ARE NOT SHOWN ON ONE-LINE DIAGRAM

## DEMOLITION KEYED NOTES

1. DISCONNECT AND REMOVE EXISTING 10"X10" PULL BOX, (2) 60A 3P 240V FUSED DISCONNECT SWITCHES, AND (2) NEMA RECEPTACLES. REMOVE CONDUIT AND WIRING BACK AS SHOWN TO PULL BOX.
2. EXISTING FEEDER AND/OR ELECTRICAL PANEL TO REMAIN.
3. EXISTING PANEL LOCATED IN CORRIDOR OUTSIDE OF EXISTING KITCHEN AND FEEDING EQUIPMENT IN SERVING ROOM ACROSS FROM KITCHEN TO REMAIN. THIS PANEL WILL BE RENAMED PANEL "RP-K1". REFER TO PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
4. DISCONNECT AND REMOVE EXISTING KITCHEN PANEL, RETAIN EXISTING FEEDER TO FEED NEW PANEL "RP-K".

## NEW WORK KEYED NOTES

1. NEW PANEL RP-K TO REPLACE EXISTING KITCHEN PANEL IN PLACE, REFER TO PANEL SCHEDULES FOR LOAD INFORMATION.
2. NEW PANEL RP-K3 TO BE INSTALLED ADJACENT TO PANEL RP-K IN KITCHEN TO FEED 3 PHASE LOADS, REFER TO PANEL SCHEDULES FOR LOAD INFORMATION.

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SES Project # 16 0357 01

KEY PLAN

OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/17/16

DRAWN BY

GFB

CHECKED BY

RRS

APPROVED BY

TMV

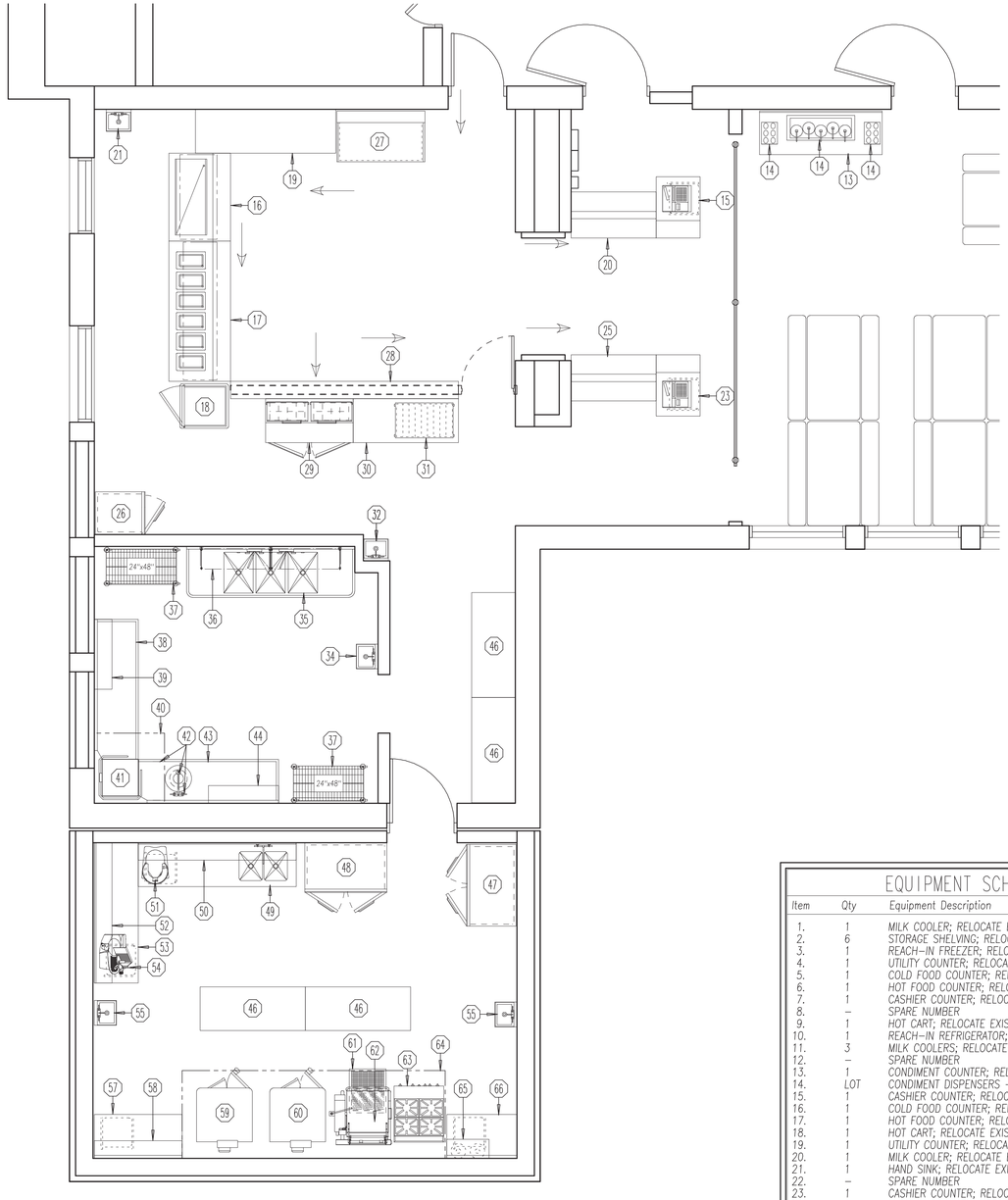
SHEET NAME

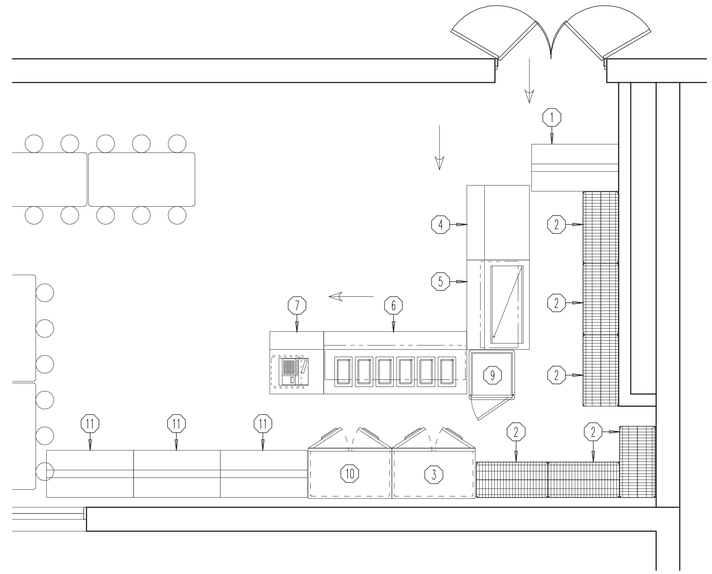
ONE-LINE
DIAGRAMS

SHEET NO.

E600

Drawing: S:\16 0357 01 Hamtramck School District Kosciuszko MS Kitchen Upgrades\CAD\Elec\16 0357 01 E600.dwg
Date: Mar 18, 2016, 11:27am Layout: E600 Plotted by: rrs




## EQUIPMENT SCHEDULE

| Item | Qty | Equipment Description |
|---|---|---|
| 1. | 1 | MILK COOLER; RELOCATE EXISTING |
| 2. | 6 | STORAGE SHELVING; RELOCATE EXISTING |
| 3. | 1 | REACH-IN FREEZER; RELOCATE EXISTING |
| 4. | 1 | UTILITY COUNTER; RELOCATE EXISTING |
| 5. | 1 | COLD FOOD COUNTER; RELOCATE EXISTING |
| 6. | 1 | HOT FOOD COUNTER; RELOCATE EXISTING |
| 7. | 1 | CASHIER COUNTER; RELOCATE EXISTING |
| 8. | – | SPARE NUMBER |
| 9. | 1 | HOT CART; RELOCATE EXISTING |
| 10. | 1 | REACH-IN REFRIGERATOR; RELOCATE EXISTING |
| 11. | 3 | MILK COOLERS; RELOCATE EXISTING |
| 12. | – | SPARE NUMBER |
| 13. | 1 | CONDIMENT COUNTER; RELOCATE EXISTING |
| 14. | LOT | CONDIMENT DISPENSERS – BY OWNER |
| 15. | 1 | CASHIER COUNTER; RELOCATE EXISTING |
| 16. | 1 | COLD FOOD COUNTER; RELOCATE EXISTING |
| 17. | 1 | HOT FOOD COUNTER; RELOCATE EXISTING |
| 18. | 1 | HOT CART; RELOCATE EXISTING |
| 19. | 1 | UTILITY COUNTER; RELOCATE EXISTING |
| 20. | 1 | MILK COOLER; RELOCATE EXISTING |
| 21. | 1 | HAND SINK; RELOCATE EXISTING |
| 22. | – | SPARE NUMBER |
| 23. | 1 | CASHIER COUNTER; RELOCATE EXISTING |
| 24. | – | SPARE NUMBER |
| 25. | 1 | MILK COOLER; RELOCATE EXISTING |
| 26. | 1 | REACH-IN REFRIGERATOR; RELOCATE EXISTING |
| 27. | 1 | AIRSCREEN MERCHANDISER; RELOCATE EXISTING |
| 28. | 1 | WALL MOUNTED TRAYSLIDE; RELOCATE EXISTING |
| 29. | 1 | REFRIGERATED PREPTABLE; RELOCATE EXISTING |
| 30. | 1 | 30"x84" WORKTABLE; RELOCATE EXISTING |
| 31. | 1 | HEATED SANDWICH SLIDES; RELOCATE EXISTING |
| 32. | 1 | HAND SINK; RELOCATE EXISTING |
| 33. | – | SPARE NUMBER |

## EQUIPMENT SCHEDULE

| Item | Qty | Equipment Description |
|---|---|---|
| 34. | 1 | HAND SINK; RELOCATE EXISTING |
| 35. | 1 | 3 COMPARTMENT SINK; RELOCATE EXISTING |
| 36. | 1 | DOUBLE OVERSHELF; RELOCATE EXISTING |
| 37. | 2 | MOBILE DISH RACKS; RELOCATE EXISTING |
| 38. | 1 | CLEAN DISHTABLE; RELOCATE EXISTING |
| 39. | 1 | OVERSHELF; RELOCATE EXISTING |
| 40. | 1 | CONDENSATE CANOPY |
| 41. | 1 | DISHWASHER; RELOCATE EXISTING |
| 42. | 1 | DISPOSER, CONTROLS & PRE-RINSE; RELOCATE EXISTING |
| 43. | 1 | SOILED DISHTABLE; RELOCATE EXISTING |
| 44. | 1 | OVERSHELF; RELOCATE EXISTING |
| 45. | – | SPARE NUMBER |
| 46. | 4 | MOBILE WORKTABLES; RELOCATE EXISTING |
| 47. | 1 | REACH-IN FREEZER; RELOCATE EXISTING |
| 48. | 1 | REACH-IN REFRIGERATOR; RELOCATE EXISTING |
| 49. | 1 | PREPTABLE WITH SINKS & DRAWER; RELOCATE EXISTING |
| 50. | 1 | OVERSHELF; RELOCATE EXISTING |
| 51. | 1 | 20 Qt. MIXER; RELOCATE EXISTING |
| 52. | 1 | OVERSHELF; RELOCATE EXISTING |
| 53. | 1 | WORKTABLE w/DRAWER; RELOCATE EXISTING |
| 54. | 1 | SLICER; RELOCATE EXISTING |
| 55. | 2 | HAND SINKS; RELOCATE EXISTING |
| 56. | – | SPARE NUMBER |
| 57. | 1 | WORKTABLE w/DRAWER; RELOCATE EXISTING |
| 58. | 1 | OVERSHELF; RELOCATE EXISTING |
| 59. | 1 | CONVECTION OVENS; RELOCATE EXISTING |
| 60. | 1 | DOUBLE DECK COMBI OVEN; RELOCATE EXISTING |
| 61. | 1 | FLOOR TROUGH; RELOCATE EXISTING |
| 62. | 1 | TILT BRAISING PAN – FUTURE |
| 63. | 1 | RANGE; RELOCATE EXISTING |
| 64. | 1 | EXHUAST CANOPY & VENTILATION SYSTEM |
| 65. | 1 | FIRE PROTECTION SYSTEM |
| 66. | 1 | WORKTABLE w/DRAWER; RELOCATE EXISTING |

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FOODSERVICE DESIGNERS
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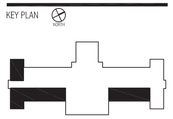
KEY PLAN



OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/00/2016

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RDM

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RDM

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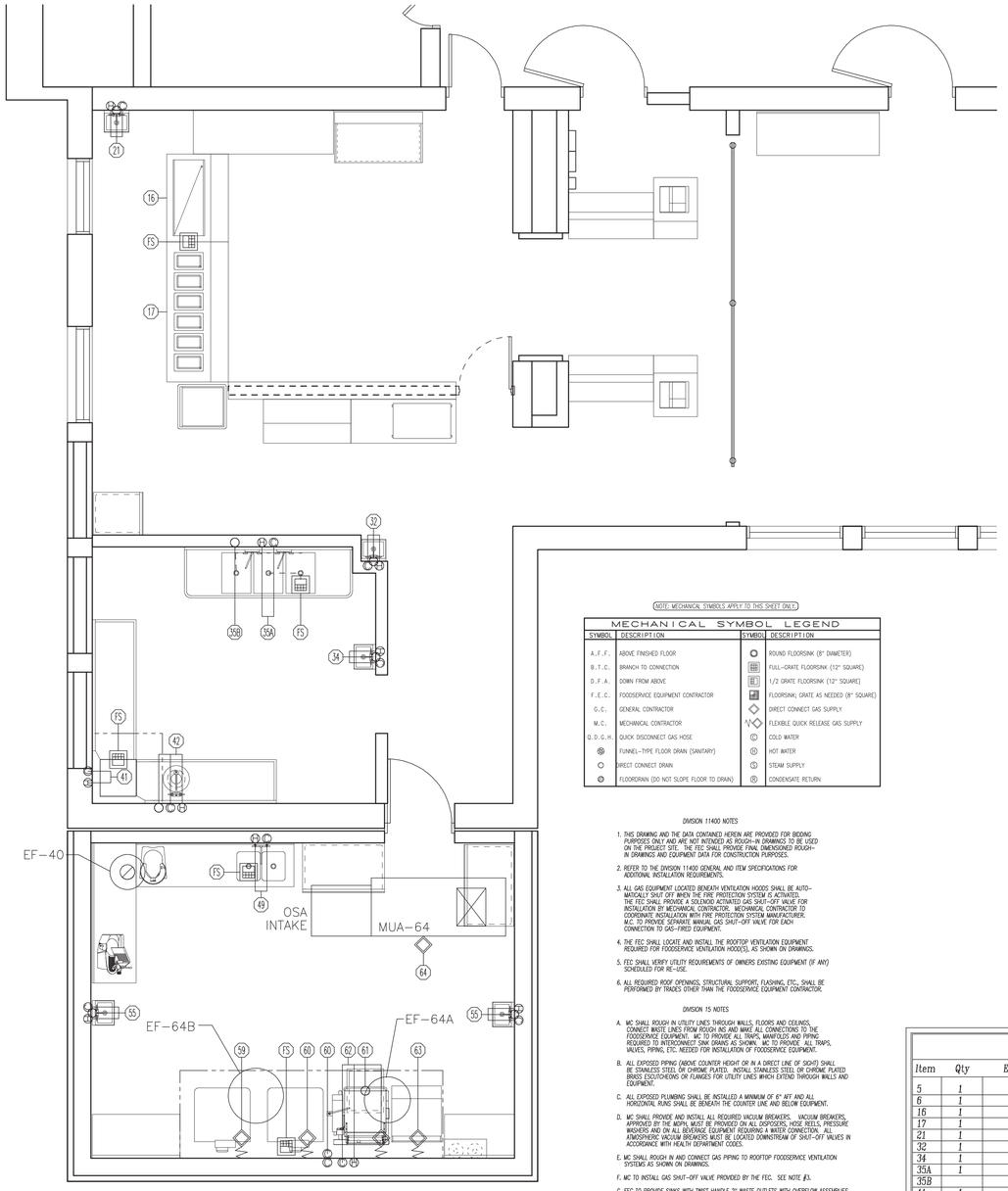
RDM

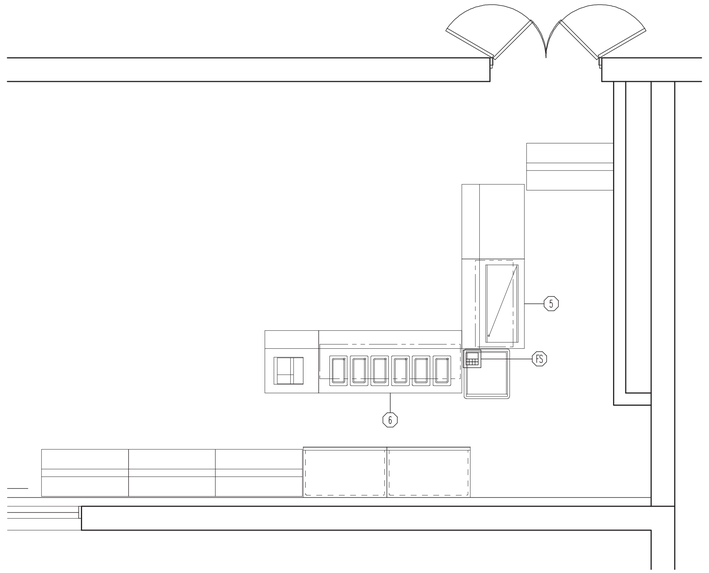
SHEET NAME

FOOD SERVICE EQUIPMENT PLAN

SHEET NO.

FS-01




(NOTE: MECHANICAL SYMBOLS APPLY TO THIS SHEET ONLY)

MECHANICAL SYMBOL LEGEND

| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
|---|---|---|---|
| A.F.F. | ABOVE FINISHED FLOOR | | ROUND FLOORSINK (8" DIAMETER) |
| B.T.C. | BRANCH TO CONNECTION | | FULL-GRATE FLOORSINK (12" SQUARE) |
| D.F.A. | DOWN FROM ABOVE | | 1/2 GRATE FLOORSINK (12" SQUARE) |
| F.E.C. | FOODSERVICE EQUIPMENT CONTRACTOR | | FLOORSINK; GRATE AS NEEDED (8" SQUARE) |
| G.C. | GENERAL CONTRACTOR | | DIRECT CONNECT GAS SUPPLY |
| M.C. | MECHANICAL CONTRACTOR | | FLEXIBLE QUICK RELEASE GAS SUPPLY |
| Q.D.G.H. | QUICK DISCONNECT GAS HOSE | (C) | COLD WATER |
| | FUNNEL-TYPE FLOOR DRAIN (SANITARY) | (H) | HOT WATER |
| | DIRECT CONNECT DRAIN | (S) | STEAM SUPPLY |
| | FLOORDRAIN (DO NOT SLOPE FLOOR TO DRAIN) | (R) | CONDENSATE RETURN |

DIVISION 11400 NOTES

1. THIS DRAWING AND THE DATA CONTAINED HEREIN ARE PROVIDED FOR BIDDING PURPOSES ONLY AND ARE NOT INTENDED AS ROUGH-IN DRAWINGS TO BE USED ON THE PROJECT SITE. THE FEC SHALL PROVIDE FINAL DIMENSIONED ROUGH-IN DRAWINGS AND EQUIPMENT DATA FOR CONSTRUCTION PURPOSES.
2. REFER TO THE DIVISION 11400 GENERAL AND ITEM SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. ALL GAS EQUIPMENT LOCATED BENEATH VENTILATION HOODS SHALL BE AUTO-MATICALLY SHUT OFF WHEN THE FIRE PROTECTION SYSTEM IS ACTIVATED. THE FEC SHALL PROVIDE A SOLENOID ACTIVATED GAS SHUT-OFF VALVE FOR INSTALLATION BY MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE INSTALLATION WITH FIRE PROTECTION SYSTEM MANUFACTURER. M.C. TO PROVIDE SEPARATE MANUAL GAS SHUT-OFF VALVE FOR EACH CONNECTION TO GAS-FIRED EQUIPMENT.
4. THE FEC SHALL LOCATE AND INSTALL THE ROOFTOP VENTILATION EQUIPMENT REQUIRED FOR FOODSERVICE VENTILATION HOOD(S), AS SHOWN ON DRAWINGS.
5. FEC SHALL VERIFY UTILITY REQUIREMENTS OF OWNERS EXISTING EQUIPMENT (IF ANY) SCHEDULED FOR RE-USE.
6. ALL REQUIRED ROOF OPENINGS, STRUCTURAL SUPPORT, FLASHING, ETC., SHALL BE PERFORMED BY TRADES OTHER THAN THE FOODSERVICE EQUIPMENT CONTRACTOR.

DIVISION 15 NOTES

A. MC SHALL ROUGH IN UTILITY LINES THROUGH WALLS, FLOORS AND CEILINGS. CONNECT WASTE LINES FROM ROUGH INS AND MAKE ALL CONNECTIONS TO THE FOODSERVICE EQUIPMENT. MC TO PROVIDE ALL TRAPS, MANIFOLDS AND PIPING REQUIRED TO INTERCONNECT SINK BRAND AS SHOWN. MC TO PROVIDE ALL TRAPS, VALVES, PIPING, ETC. NEEDED FOR INSTALLATION OF FOODSERVICE EQUIPMENT.

B. ALL EXPOSED PIPING (ABOVE COUNTER HEIGHT OR IN A DIRECT LINE OF SIGHT) SHALL BE STAINLESS STEEL OR CHROME PLATED. INSTALL STAINLESS STEEL OR CHROME PLATED BRASS ESCUTCHEONS OR FLANGES FOR UTILITY LINES WHICH EXTEND THROUGH WALLS AND EQUIPMENT.

C. ALL EXPOSED PLUMBING SHALL BE INSTALLED A MINIMUM OF 6" AFF AND ALL HORIZONTAL RUNS SHALL BE BEHEATH THE COUNTER LINE AND BELOW EQUIPMENT.

D. MC SHALL PROVIDE AND INSTALL ALL REQUIRED VACUUM BREAKERS. VACUUM BREAKERS, APPROVED BY THE MDPH, MUST BE PROVIDED ON ALL DISPOSERS, HOSE REELS, PRESSURE WASHERS AND ON ALL BEVERAGE EQUIPMENT REQUIRING A WATER CONNECTION. ALL ATMOSPHERIC VACUUM BREAKERS MUST BE LOCATED DOWNSTREAM OF SHUT-OFF VALVES IN ACCORDANCE WITH HEALTH DEPARTMENT CODES.

E. MC SHALL ROUGH IN AND CONNECT GAS PIPING TO ROOFTOP FOODSERVICE VENTILATION SYSTEMS AS SHOWN ON DRAWINGS.

F. MC TO INSTALL GAS SHUT-OFF VALVE PROVIDED BY THE FEC. SEE NOTE #3.

G. FEC TO PROVIDE SINKS WITH TWIST HANDLE 2" WASTE OUTLETS WITH OVERFLOW ASSEMBLIES. PROVIDE LOOSE TO MC FOR INSTALLATION.

MECHANICAL SCHEDULE

| Item | Qty | Equipment Description | Hot Water | Cold Water | Hgt A.F.F. | Drain Type | Drain Size | Hgt A.F.F. | Gas Size | BTU Rating | Hgt A.F.F. | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 1 | COLD FOOD COUNTER | – | – | – | INDIRECT | 1" | – | – | – | – | INDIRECT WASTE TO FLOORSINK SHOWN |
| 6 | 1 | HOT FOOD COUNTER | – | – | – | INDIRECT | 1" | – | – | – | – | INDIRECT WASTE TO FLOORSINK SHOWN |
| 16 | 1 | COLD FOOD COUNTER | – | – | – | INDIRECT | 1" | – | – | – | – | INDIRECT WASTE TO FLOORSINK SHOWN |
| 17 | 1 | HOT FOOD COUNTER | – | – | – | INDIRECT | 1" | – | – | – | – | INDIRECT WASTE TO FLOORSINK SHOWN |
| 21 | 1 | HAND SINK | 1/2" | 1/2" | 1'-0" | DIRECT | 1-1/2" | 1'-6" | – | – | – | – |
| 32 | 1 | HAND SINK | 1/2" | 1/2" | 1'-0" | DIRECT | 1-1/2" | 1'-6" | – | – | – | – |
| 34 | 1 | HAND SINK | 1/2" | 1/2" | 1'-0" | DIRECT | 1-1/2" | 1'-6" | – | – | – | – |
| 35A | 1 | 3 COMPARTMENT SINK | 3/4" | 3/4" | 1'-0" | INDIRECT | (2) 2-1/2" | – | – | – | – | INDIRECT WASTE TO FLOORSINK SHOWN |
| 35B | | | | | | DIRECT | (1) 2-1/2" | 10" | – | – | – | DIRECT WASTE TO GREASE TRAP PER LOCAL CODES |
| 41 | 1 | DISHWASHER | 3/4" | 1/2" | 1'-0" | INDIRECT | 2-1/2" | – | – | – | – | INDIRECT WASTE TO FLOORSINK SHOWN |
| 42 | 1 | DISPOSER & PRE-RINSE | 1/2" | 1/2" | 1'-0" | DIRECT | 2" | 10" | – | – | – | M.C. TO BRANCH TO CONNECTIONS |
| 49 | 1 | PREPTABLE w/SINKS | 1/2" | 1/2" | 1'-0" | INDIRECT | (2) 1-1/2" | – | – | – | – | INDIRECT WASTE TO FLOORSINK SHOWN |
| 55 | 2 | HAND SINKS | 1/2" | 1/2" | 1'-0" | DIRECT | 1-1/2" | 1'-6" | – | – | – | – |
| 59 | 1 | CONVECTION OVENS | – | – | – | – | – | – | 3/4" | 120,000 | 1'-0" | – |
| 60 | 1 | COMBI-OVENS | – | (2) 3/4" | 30" & 60" | INDIRECT | (2) 1-1/2" | – | 3/4" | 164,000 | 1'-0" | M.C. TO BRANCH TO OVENS THROUGH FILTERS |
| 61 | 1 | FLOOR TROUGH | – | – | – | DIRECT | 3" | – | – | – | – | – |
| 62 | 1 | FUTURE TILT BRAISING PAN | 1/2" | 1/2" | 1'-0" | – | – | – | 3/4" | 105,000 | 1'-0" | – |
| 63 | 1 | RANGE | – | – | – | – | – | – | 1" | 240,000 | 1'-0" | – |
| 64 | 1 | MAKE-UP AIR UNIT | – | – | – | – | – | – | 1" | 250,000 | ON ROOF | – |
| | | | | | | | | | | | | |
| FS | 6 | FLOOR SINKS | | | FOR INDIRECT WASTE FROM EQUIPMENT SHOWN | | | | | | | |

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FOODSERVICE DESIGNERS
OPERATIONAL CONSULTING
AND PLANNERS


KEY PLAN

OWNER

Hamtramck
Public Schools

PROJECT NAME

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2333 Burger
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PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/00/2016

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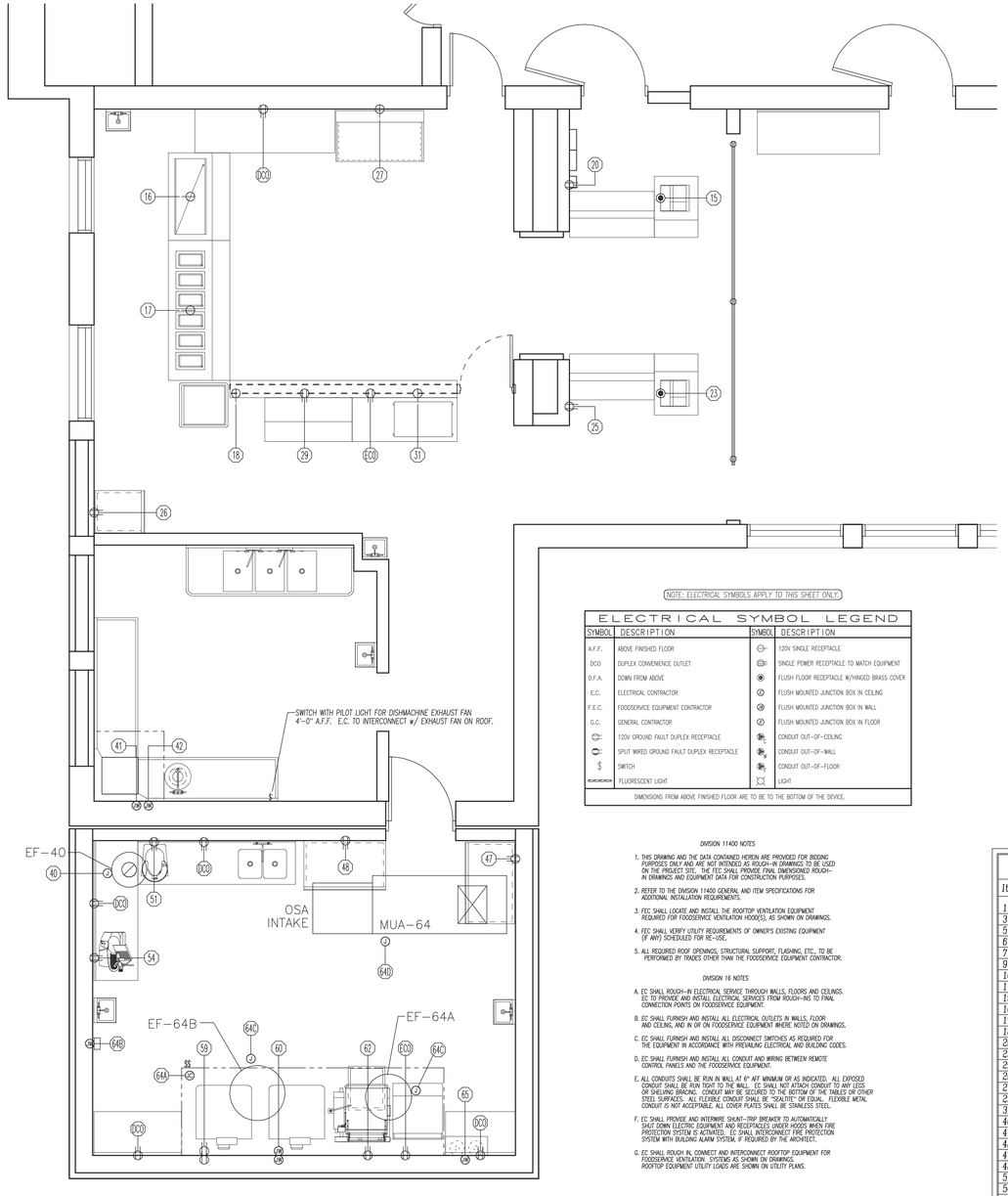
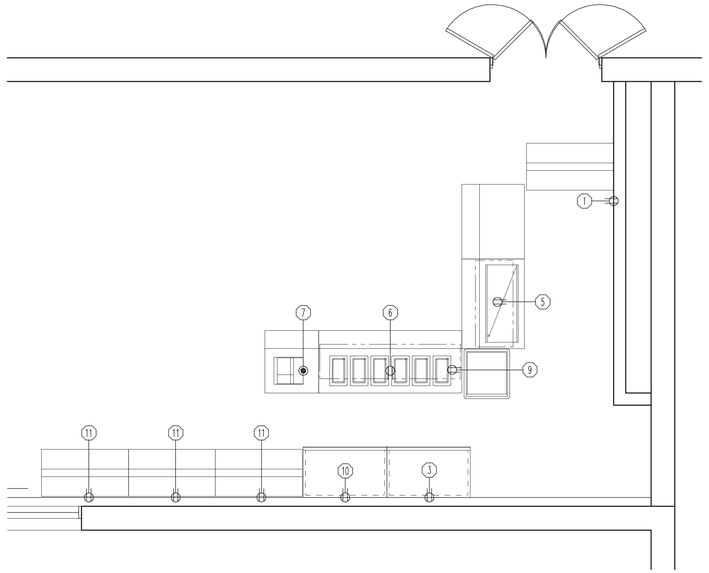
SHEET NAME

FOOD SERVICE
PLUMBING PLAN

SHEET NO.

FS-02




NOTE: ELECTRICAL SYMBOLS APPLY TO THIS SHEET ONLY.

ELECTRICAL SYMBOL LEGEND

| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
|---|---|---|---|
| A.F.F. | ABOVE FINISHED FLOOR | | 120V SINGLE RECEPTACLE |
| DCO | DUPLEX CONVENIENCE OUTLET | | SINGLE POWER RECEPTACLE TO MATCH EQUIPMENT |
| D.F.A. | DOWN FROM ABOVE | | FLUSH FLOOR RECEPTACLE W/HINGED BRASS COVER |
| E.C. | ELECTRICAL CONTRACTOR | | FLUSH MOUNTED JUNCTION BOX IN CEILING |
| F.E.C. | FOODSERVICE EQUIPMENT CONTRACTOR | | FLUSH MOUNTED JUNCTION BOX IN WALL |
| G.C. | GENERAL CONTRACTOR | | FLUSH MOUNTED JUNCTION BOX IN FLOOR |
| | 120V GROUND FAULT DUPLEX RECEPTACLE | | CONDUIT OUT-OF-CEILING |
| | SPLIT WIRED GROUND FAULT DUPLEX RECEPTACLE | | CONDUIT OUT-OF-WALL |
| $ | SWITCH | | CONDUIT OUT-OF-FLOOR |
| | FLUORESCENT LIGHT | | LIGHT |

DIMENSIONS FROM ABOVE FINISHED FLOOR ARE TO BE TO THE BOTTOM OF THE DEVICE.

DIVISION 11400 NOTES

1. THIS DRAWING AND THE DATA CONTAINED HEREIN ARE PROVIDED FOR BIDDING PURPOSES ONLY AND ARE NOT INTENDED AS ROUGH-IN DRAWINGS TO BE USED ON THE PROJECT SITE. THE FEC SHALL PROVIDE FINAL DIMENSIONED ROUGH-IN DRAWINGS AND EQUIPMENT DATA FOR CONSTRUCTION PURPOSES.
2. REFER TO THE DIVISION 11400 GENERAL AND ITEM SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. FEC SHALL LOCATE AND INSTALL THE ROOFTOP VENTILATION EQUIPMENT REQUIRED FOR FOODSERVICE VENTILATION HOOD(S), AS SHOWN ON DRAWINGS.
4. FEC SHALL VERIFY UTILITY REQUIREMENTS OF OWNER'S EXISTING EQUIPMENT (IF ANY) SCHEDULED FOR RE-USE.
5. ALL REQUIRED ROOF OPENINGS, STRUCTURAL SUPPORT, FLASHING, ETC., TO BE PERFORMED BY TRADES OTHER THAN THE FOODSERVICE EQUIPMENT CONTRACTOR.

DIVISION 16 NOTES

A. EC SHALL ROUGH-IN ELECTRICAL SERVICE THROUGH WALLS, FLOORS AND CEILINGS. EC TO PROVIDE AND INSTALL ELECTRICAL SERVICES FROM ROUGH-INS TO FINAL CONNECTION POINTS ON FOODSERVICE EQUIPMENT.

B. EC SHALL FURNISH AND INSTALL ALL ELECTRICAL OUTLETS IN WALLS, FLOOR AND CEILING, AND IN OR ON FOODSERVICE EQUIPMENT WHERE NOTED ON DRAWINGS.

C. EC SHALL FURNISH AND INSTALL ALL DISCONNECT SWITCHES AS REQUIRED FOR THE EQUIPMENT IN ACCORDANCE WITH PREVAILING ELECTRICAL AND BUILDING CODES.

D. EC SHALL FURNISH AND INSTALL ALL CONDUIT AND WIRING BETWEEN REMOTE CONTROL PANELS AND THE FOODSERVICE EQUIPMENT.

E. ALL CONDUITS SHALL BE RUN IN WALL AT 6" AFF MINIMUM OR AS INDICATED. ALL EXPOSED CONDUIT SHALL BE RUN TIGHT TO THE WALL. EC SHALL NOT ATTACH CONDUIT TO ANY LEGS OR SHELVING BRACING. CONDUIT MAY BE SECURED TO THE BOTTOM OF THE TABLES OR OTHER STEEL SURFACES. ALL FLEXIBLE CONDUIT SHALL BE "SEALTITE" OR EQUAL. FLEXIBLE METAL CONDUIT IS NOT ACCEPTABLE. ALL COVER PLATES SHALL BE STAINLESS STEEL.

F. EC SHALL PROVIDE AND INTERMIRE SHUNT-TRIP BREAKER TO AUTOMATICALLY SHUT DOWN ELECTRIC EQUIPMENT AND RECEPTACLES UNDER HOODS WHEN FIRE PROTECTION SYSTEM IS ACTIVATED. EC SHALL INTERCONNECT FIRE PROTECTION SYSTEM WITH BUILDING ALARM SYSTEM, IF REQUIRED BY THE ARCHITECT.

G. EC SHALL ROUGH IN, CONNECT AND INTERCONNECT ROOFTOP EQUIPMENT FOR FOODSERVICE VENTILATION SYSTEMS AS SHOWN ON DRAWINGS. ROOFTOP EQUIPMENT UTILITY LOADS ARE SHOWN ON UTILITY PLANS.

ELECTRICAL SCHEDULE

| Item | Qty | Equipment Description | Voltage | Phase | Amps | Connection Type | Hgt A.F.F. | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | MILK COOLER | 120 | 1 | 7 | C&P | 1'-6" | - |
| 3 | 1 | REACH-IN FREEZER | 120 | 1 | 12 | C&P | 7'-6" | - |
| 5 | 1 | COLD FOOD COUNTER | 120 | 1 | 7 | C&P | STUB UP 5" | - |
| 6 | 1 | HOT FOOD COUNTER | 120/208 | 1 | 36 | C&P | STUB UP 5" | - |
| 7 | 1 | CASHIER COUNTER | 120 | 1 | 15 | C&P | STUB UP 5" | - |
| 9 | 1 | HOT CART | 120 | 1 | 15 | C&P | STUB UP 5" | - |
| 10 | 1 | REACH-IN REFRIGERATOR | 120 | 1 | 10.7 | C&P | 7'-6" | - |
| 11 | 3 | MILK COOLERS | 120 | 1 | 7 | C&P | 1'-6" | - |
| 15 | 1 | CASHIER COUNTER | 120 | 1 | 15 | C&P | IN FLOOR | - |
| 16 | 1 | COLD FOOD COUNTER | 120 | 1 | 7 | C&P | STUB UP 5" | - |
| 17 | 1 | HOT FOOD COUNTER | 120/208 | 1 | 36 | C&P | STUB UP 5" | - |
| 18 | 1 | HOT CART | 120 | 1 | 15 | C&P | 1'-6" | - |
| 20 | 1 | MILK COOLER | 120 | 1 | 7 | C&P | 1'-6" | - |
| 23 | 1 | CASHIER COUNTER | 120 | 1 | 15 | C&P | IN FLOOR | - |
| 25 | 1 | MILK COOLER | 120 | 1 | 7 | C&P | 1'-6" | - |
| 26 | 1 | REACH-IN REFRIGERATOR | 120 | 1 | 7 | C&P | 7'-6" | - |
| 27 | 1 | AIRSCREEN MERCHANDISER | 120/208 | 1 | 15 | C&P | 1'-6" | - |
| 29 | 1 | REFRIGERATED PREPTABLE | 120 | 1 | 12 | C&P | 1'-6" | - |
| 31 | 1 | HEATED SANDWICH SLIDE | 120 | 1 | 15.1 | C&P | 1'-6" | - |
| 40 | 1 | CONDENSATE CANOPY | 120 | 1 | 15 | DIRECT | ON ROOF | E.C. TO INTER-WIRE EXHAUST FAN THROUGH SWITCH ON WALL |
| 41 | 1 | DISHWASHER | 208 | 3 | 46 | DIRECT | 1'-6" | E.C. TO BRANCH TO CONNECTIONS |
| 42 | 1 | DISPOSER & CONTROLS | 208 | 3 | 6.6 | DIRECT | 1'-6" | E.C. TO INTER-WIRE THORUGH CONTROLS |
| 47 | 1 | REACH-IN FREEZER | 120 | 1 | 12 | C&P | 7'-6" | - |
| 48 | 1 | REACH-IN REFRIGERATOR | 120 | 1 | 10.7 | C&P | 7'-6" | - |
| 51 | 1 | 20 QT. MIXER | 120 | 1 | 9 | C&P | 4'-0" | - |
| 54 | 1 | SLICER | 120 | 1 | 5 | C&P | 4'-0" | - |
| 59 | (2) | DOUBLE DECK CONVECTION OVEN | 120 | 1 | 9+9 | C&P | 24" & 48" | EACH DECK REQUIRES A SEPARATE CIRCUIT |
| 60 | (2) | DOUBLE DECK COMBI OVEN | 120 | 1 | 8.3+8.3 | DIRECT | 24" & 48" | EACH DECK REQUIRES A SEPARATE CIRCUIT |
| 62 | 1 | TILT BRAISING PAN | 120 | 1 | 5 | C&P | 1'-6" | - |
| 64A | 1 | EXHAUST CANOPY | 120 | 1 | 15 | DIRECT | FROM ABOVE | SEE DIVISION 16 NOTE G |
| 64B | 1 | CANOPY CONTROL PANEL | 120 | 1 | 15 | DIRECT | 4'-6" | SEE DIVISION 16 NOTE G |
| 64C | 2 | EXHUAST FANS | 208 | 3 | 15 | DIRECT | ON ROOF | SEE DIVISION 16 NOTE G |
| 64D | 1 | MAKE-UP AIR UNIT | 208 | 3 | 50 | DIRECT | ON ROOF | SEE DIVISION 16 NOTE G |
| 65 | 1 | FIRE PROTECTION SYSTEM | 120 | 1 | 15 | DIRECT | FROM ABOVE | SEE DIVISION 16 NOTE F |
| DCO | 5 | DUPLEX RECEPTACLE OUTLET | 120 | 1 | 15 | C&P | 4'-0" | FOR GENERAL PURPOSE USE |
| ECO | 2 | DUPLEX RECEPTACLE OUTLET | 120 | 1 | 15 | C&P | 1'-6" | FOR GENERAL PURPOSE USE |

NOT FOR CONSTRUCTION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FOODSERVICE DESIGNERS
OPERATIONAL CONSULTING
AND PLANNERS


KEY PLAN

OWNER

Hamtramck
Public Schools

PROJECT NAME

Kosciuszko
Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.

15-175B

ISSUES / REVISIONS

Bidding - Construction 03/00/2016

DRAWN BY

RDM

CHECKED BY

RDM

APPROVED BY

RDM

SHEET NAME

FOOD SERVICE
ELECTRICAL
PLAN

SHEET NO.

FS-03

## EQUIPMENT SCHEDULE

| ITEM | LOCATION | TYPE | MODEL | CFM | S.P. | RPM | V/PH | H.P. | AMP. | WT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-40 | HOOD 40 | UPBLAST | SOLER & PALAU TXB08-1/4 | 600 | 0.75" | 1818 | 115/1 | .25 | 4.4 | 175 | UL705, UPBLAST, DISCONNECT, BELT DRIVE, WINDBAND EXTENSION, ROOF CURB |
| EF-64A | HOOD 64A | UPBLAST | SOLER & PALAU TXBRHUL15-3/4 | 1625 | 1.0" | 1295 | 208/3 | .75 | 3.2 | 200 | UL762, UPBLAST, DISCONNECT, BELT DRIVE, GREASE TROUGH, WINDBAND EXTENSION, ROOF CURB |
| EF-64B | HOOD 64B | UPBLAST | SOLER & PALAU TXBRHUL18-3/4 | 2125 | 1.0" | 1064 | 208/3 | 1.0 | 3.6 | 300 | UL762, UPBLAST, DISCONNECT, BELT DRIVE, GREASE TROUGH, WINDBAND EXTENSION, ROOF CURB |
| MUA-64 | KITCHEN | DIRECT FIRED | ABSOLUTAIRE V3-HOM | 4350 | 0.38" | 900 | 208/3 | 2.0 | 5.9 | 800 | ETL LISTED, DISCONNECT, DOWN DISCHARGE, REMOTE CONTROL PANEL, BELT DRIVE, NATURAL GAS CONNECTION, ROOF CURB |

## HOOD FILTER SCHEDULE

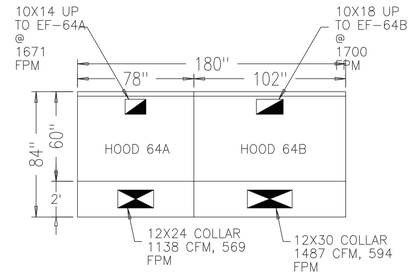
| HOOD | LENGTH | QTY. REQUIRED | SIZE | NET AREA | CFM/ FILTER | AVERAGE FPM | STATIC PRESSURE FILTER/COLLAR |
|---|---|---|---|---|---|---|---|
| 64A | 6'-6" | 1<br>3 | 16x16<br>16x20 | 6.61 | 406 | 245 | 0.35" / 0.55" |
| 64B | 8'-6" | 1<br>4 | 16x16<br>16x20 | 8.36 | 425 | 254 | 0.36" / 0.56" |

SPACERS: AS REQUIRED
FILTERS: U.L. CLASSIFIED, BAFFLE STYLE GREASE FILTERS, STAINLESS STEEL

MUA INTAKES SHALL BE LOCATED 10' IN ANY DIRECTION FROM COMBUSTIBLE FLUE OUTLETS, PLUMBING VENT OUTLETS, GAS METERS, GAS REGULATORS, EXHAUST FANS, OR OTHER SOURCES OF HAZARDOUS OR NOXIOUS VAPORS OR ODORS.

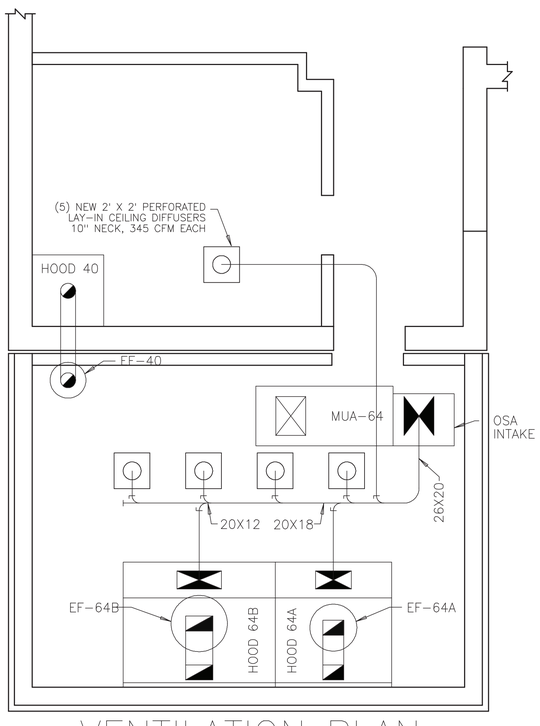
## AIR BALANCE SCHEDULE

| UNIT | SUPPLY AIR | RETURN AIR | OUTSIDE AIR | RELIEF AIR | EXHAUST AIR | BUILDING PRESSURE |
|---|---|---|---|---|---|---|
| EF-40 | | | | | -600 | -600 |
| EF-64A | | | | | -1625 | -2225 |
| EF-64B | | | | | -2125 | -4350 |
| MUA-64 | | | 4350 | | | -0- |
| TOTAL | | | 4350 | | -4350 | -0- |

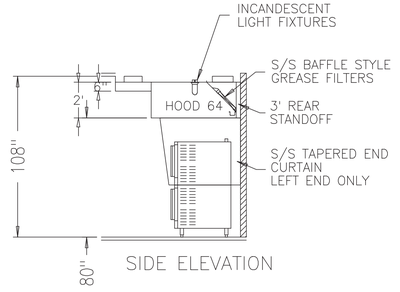



## HOOD EXHAUST AIR CALCULATIONS

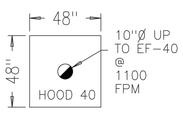
| EQUIPMENT | LENGTH | CFM | TOTAL |
|---|---|---|---|
| HOOD 40<br>4'-0" x 4'-0" x 24" HT | | MMC 2012 | |
| DISHWASHER | | | |
| TOTAL EXHAUST HOOD 40: | | | 600 |
| HOOD 64A<br>6'-6" x 5'-0" x 24" HT | | U.L. 710 250/FT | |
| RANGE | 2.5 | | |
| TILT SKILLET | 3.5 | | |
| TOTAL EXHAUST HOOD 64A: | | | 1625 |
| HOOD 64B<br>8'-6" x 5'-0" x 24" HT | | U.L. 710 250/FT | |
| D/D CONVECTION OVEN | 3.16 | | |
| D/D CONVECTION OVEN | 3.16 | | |
| TOTAL EXHAUST HOOD 64B: | | | 2125 |
| TOTAL EXHAUST CFM: | | | 4350 |

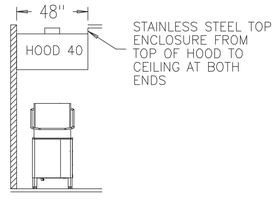



VENTILATION PLAN

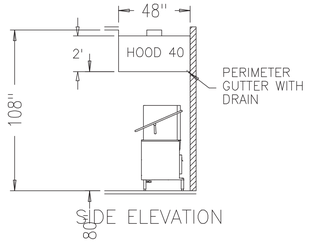



SIDE ELEVATION




FRONT ELEVATION




SIDE ELEVATION

GENERAL NOTES:

1. DO NOT SCALE DRAWINGS, USE DIMENSIONS AS INDICATED. IF QUESTIONS SHOULD ARISE, CLARIFY WITH VENT-TECH, INC. PRIOR TO RELEASING FOR MANUFACTURING.

2. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS FROM ALL STATE AND LOCAL OFFICIALS PRIOR TO PROCEEDING WITH INSTALLATION. THESE DRAWINGS ARE TO SERVE AS BASIC

SHALL PREVAIL.

3. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO CHECK BUILDING ACCESS AND FIELD CONDITIONS TO ALLOW FOR ADEQUATE CLEARANCES FOR THE EQUIPMENT TO BE BROUGHT IN AND INSTALLED.

4. VENT-TECH, INC. SHALL NOT BE RESPONSIBLE FOR IMPROPER EXHAUST OR MAKE-UP AIR DUE TO CHANGES IN STATIC PRESSURE OR AIR VOLUMES OTHER THAN

5. AIR INTAKES MUST BE NO CLOSER THAN 10 FEET FROM ANY EXHAUST OR VENT OUTLET.

6. EXHAUST DUCT MUST BE CONSTRUCTED FROM A MINIMUM OF 16 GAUGE LIQUID-TIGHT WELDED STEEL FITTED TIGHTLY INTO HOOD COLLAR AND CONTINUOUSLY WELDED TO HOOD. DUCT CLEAN OUTS SHALL BE PROVIDED AT EVERY CHANGE IN DIRECTION. INSTALLING CONTRACTOR SHALL VERIFY ANY REQUIREMENTS FOR INSULATION OF THE EXHAUST DUCT. EXHAUST FAN(S) SHALL EXTEND A MINIMUM OF 40 INCHES ABOVE ROOF SURFACE AND BE PROPERLY FLASHED TO ADJOINING MATERIAL.

7. SUPPLY DUCTWORK SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST SMACNA HVAC DUCT CONSTRUCTION STANDARD (METAL AND FLEXIBLE) AND SHALL BE EXTERNALLY INSULATED AND PROVIDED WITH VOLUME CONTROL DAMPERS AT EACH DISCHARGE GRILL.

8. ALL EXHAUST FANS, MAKE-UP AIR UNITS, AIR TRANSFER FANS, ETC.,ARE TO BE ELECTRICALLY INTERLOCKED. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ALL NECESSARY STARTERS, RELAYS, SWITCHES, ETC., AS REQUIRED.

9. VERIFY ALL STRUCTURAL LOADS WITH ARCHITECT OF RECORD.

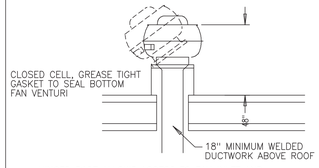
10. THESE DRAWINGS ARE TO SERVE AS A BASIC DESIGN ONLY AND ANY STATE OR LOCAL ORDINANCE WHICH IS MORE RESTRICTIVE SHALL PREVAIL.

11. IT IS THE RESPONSIBILITY OF THE OWNER/ARCHITECT TO ENSURE THE HOOD CLEARANCE FROM COMBUSTIBLES (AND NON OR LIMITED COMBUSTIBLES) IS IN COMPLIANCE WITH THE LATEST EDITION OF THE NATIONAL FIRE PROTECTION ASSOCIATION BULLETIN #96.

12. HOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH 2012 MMC, 2012 MBC STATE BUILDING CODE, NFPA, NSF.
CONSTRUCTION SHALL BE 18 GAUGE MIN. STAINLESS STEEL WHERE VISIBLE, NON-VISIBLE SECTIONS SHALL BE 18 GAUGE ALUMINIZED STL. OR 18 GAUGE ST. STL. ALL EXTERIOR SEAMS TO BE WELDED LIQUID TIGHT.

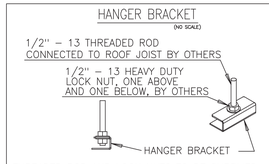
•13. ROOF SERVICE PLATFORM(S), GUARD RAIL(S), AND ACCESS TO THEM SHALL BE PROVIDED IN ACCORDANCE WITH MMC 2012 SEC 306.5 AND 304.11

EXHAUST FAN DETAIL
(NO SCALE)




HINGED BASE ALLOWS ACCESS TO FAN INLET AND INTERIOR DUCT WORK FOR CLEANING AND INSPECTION. HINGED BASE REQUIRED PER NFPA-96.

HANGER BRACKET
(NO SCALE)




THREADED ROD AND LOCK NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR.
EQUIPMENT MUST BE SUPPORTED BY ALL HANGING BRACKETS PROVIDED.

| SURFACE | CLEARANCE |
|---|---|
| NFPA #96 CLEARANCES FROM COMBUSTIBLES: | |
| COMBUSTIBLE | 3" INSULATED |
| LIMITED-COMBUSTIBLE | 3"UN-INSULATED |
| NON-COMBUSTIBLE | 0" REQUIRED |

3" UN-INSULATED CLEARANCE PROVIDED STANDARD. IF 9" REDUCED CLEARANCE IS REQUIRED PER PLANS, THE ARCHITECT/OWNER SHALL NOTIFY VENT TECH INC.

CLEARANCES ARE MAINTAINED PER CODES.

2012 INTERNATIONAL CODE (MI MECH 2012) FROM COMBUSTIBLES:

COMBUSTIBLE SURFACE REDUCTION TO 7" AS FOLLOWS - 24 GA. MINIMUM UNPAINTED SHEET METAL(0.024) SPACED 1" OFF THE COMBUSTIBLE ASSEMBLY.

ALL VENT TECH HOODS MEET ONE OR MORE OF THE FOLLOWING:
U.L.- 710, ETL, BOCA, NSF, NFPA 96, MMC 2012

KEY
SUPPLY DUCT
EXHAUST DUCT

NOT FOR CONSTRUCTION

Drawn By: BB
Date: 3-4-16
Scale: 1/4"=1'-0" UNLESS OTHERWISE STATED
Revisions:

| # | Date | By |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |

Vent Tech # Sheet 1 of 1

PROJECT NAME: KOSCIUSZKO MIDDLE SCHOOL
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AND PLANNERS

KEY PLAN
NORTH

OWNER
Hamtramck
Public Schools

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Middle School
Food Service Upgrades

2333 Burger
Hamtramck, MI 48212

PROJECT NO.
15-175B

ISSUES / REVISIONS
Bidding - Construction 03/00/2016

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SHEET NAME
FOOD SERVICE
VENTILATION
PLAN

SHEET NO.
FS-04