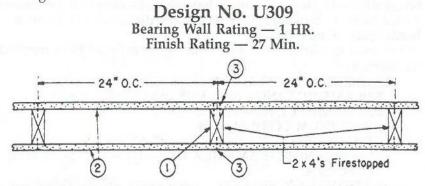
#### UL U-309 1 HR WALL - WOOD BEARING



Wood Studs - Nom 2 by 4 in., spaced 24 in. OC effectively firestopped.

2. Gypsum Board\* - 5/8 in. thick, 4 ft wide, applied either horizontally or vertically, nailed to studs and bearing plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads spaced 7 in. OC.

When Steel Framing Members\* (Item 5) are used, wallboard attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in OC When Item 6, resilient channels are used, 5/8 in. thick, 4 ft wide applied

vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs. AMERICAN GYPSUM CO — Types AGX-1, AG-C BEIJING NEW BUILDING MATERIALS CO LTD — Type

**BPB AMERICA INC** — Types EGRG or ProRoc Type C **BPB CANADA INC** — ProRoc Type C G-P GYPSUM CORP, SUB OF

- GEORGIA-PACIFIC CORP Types 5, 9, C, DAP, DD, DA, DGG, DS. GPFS6 LAFARGE NORTH AMERICA INC -Types LGFC6, LGFC-C,
- LGFC6A, LGFC2, LGFC2A, LGFC-C/A NATIONAL GYPSUM CO - Types FSK-C, FSW, FSW-3, FSW-5,
- FSW-C, FSW-G, FSMR-C PABCO GYPSUM, DIV OF PACIFIC COAST
- **BUILDING PRODUCTS INC**—Type C, PG-9 or PG-C

PANEL REY S A, NL- Type PRX SIAM GYPSUM INDUSTRY (SARABURI) CO LTD -Type

- STANDARD GYPSUM L L C Types FRX-6, VPBX-6, FRWRX-6, SHTGX-6, FRX-6 Exterior Gypsum Soffit Board,
- SG-C, SGC or SGC-G **TEMPLE-INLAND FOREST PRODUCTS CORP** — Type X,

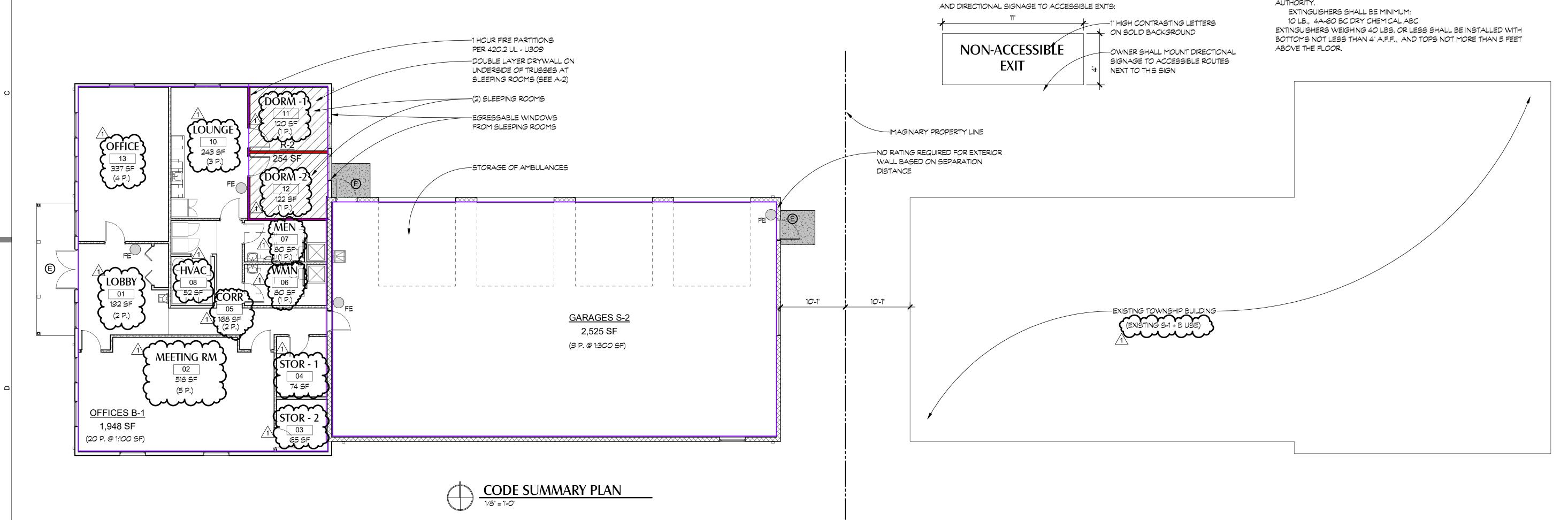
Veneer Plaster Base – Type X, Water Rated – Type X, Sheathing - Type X, Soffit – Type X, TG-C

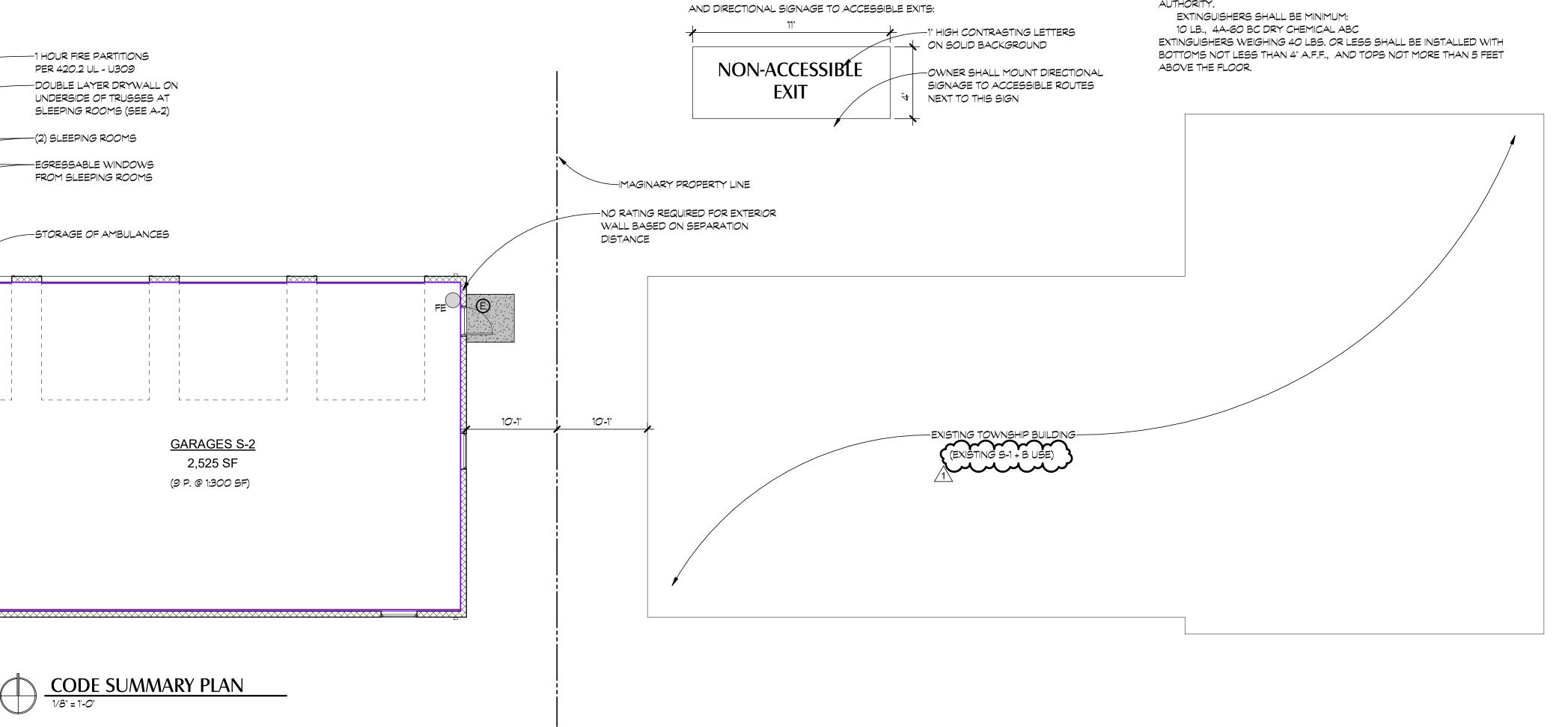
2A. Wall and Partition Facings and Accessories\* - (As an alternate to Item 2, not shown) - Nominal 5/8 in. thick, 4 ft wide panels, applied vertically to studs and bearing plates on one side of the assembly with 1-5/8 in. long Type S screws spaced 12 in. OC at perimeter of panels and 8 in. OC in the field. Horizontal joints of vertically applied panels need not be backed by studs. Panel joints covered with paper tape and two layers of joint compound. Screwheads covered with two layers of joint compound. Batts and Blankets placed in stud cavity as described in Item 4E. Not evaluated for use with Steel Framing Members, Furring Channels or Fiber, Spraved. QUIET SOLUTIÓN INC — Type QuietRock QR-530 (finish rating

Joints and Nailheads — Wallboard joints covered with paper tape and joint compound. Nailheads covered with joint compound. Gypsum plaster not more than 1/8 in. thick may be applied over the wallboard in addition to the specified joint treatment.

- 4. Batts and Blankets\* (Not Shown) Optional glass fiber insulation. **CERTAINTEED CORP** JOHNS MANVILLE INTERNATIONAL INC
- **OWENS CORNING** 4A. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft<sup>3</sup>. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft<sup>3</sup>. U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM
- (Fire Rated Material) Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 4) and Item 4A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft. NU-WOOL CO INC - Cellulose Insulation
- 4C. Batts and Blankets\* Required for use with resilient channels, Item 6, 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 4 in. face of the studs with staples placed 24 in. OC. THERMAFIBER INC — Type SAFB
- 4D. Glass Fiber Insulation (As an alternate to Item 4C) 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall, attached to the 4 in. face of the studs with staples placed 24 in. OC. See Batts and Blankets (BKNV or BZJZ) Catagories for names of Classified companies
- **Batts and Blankets\*** (Required for use with Wall and Partition Facings and Accessories, Item 2A) Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers
- 5 Steel Framing Members (Optional, Not Shown)\* Furring channels and Steel Framing Members as described below:
- a. Furring Channels Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Chan-nels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 2.
- b. Steel Framing Members\* used to attach furring channels (Item a) to studs (Item 1) . Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. PAC INTERNATIONAL INC - Type RSIC-1.
- 6. Furring Channel Optional Not Shown For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 4C or 4D is required.

\*Bearing the UL Classification Mark





#### **BUILDING CODE SUMMARY**

CURRENT CODE: 2017 OHIO BUILDING CODE

PROJECT DESCRIPTION: NEW BUILDING CONTAINING AMBULANCE STORAGE, ASSOCIATED OFFICE SPACE, AND (2) SLEEPING ROOMS

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION: HE BUILDING IS A NON-SEPARATED, MIXED USE B / S-2 / WITH ACCESSORY R-2 OCCUPANCY.

#### CHAPTER 4 - SPECIAL USES:

<u>CHAPTER 5 - I</u> BUILDING LIM	ITATIONS: (S-2 GOVE	RNS AS MORE RESTRICTIVE)
HEIGHT	TABULAR VALUE 1 ST / 40 FEET	ACTUAL 1 ST / 20 FEET
AREA FRONT INC TOTAL	9,000 SF/FLR (B USE NONE TAKEN 9,000 SF/ FLOOR	IS MORE RESTRICTIVE) 4,315 SF

## CHAPTER 6 - CONSTRUCTION: THE BUILDING IS TYPE 5B - COMBUSTIBLE / UNPROTECTED.

BUILDING IS SEPARATED FROM EXISTING BUILDING SO EXTERIOR WALL DOES NOT NEED TO BE RATED PER TABLE 602

CHAPTER 7 - RATED CONSTRUCTION: WALLS AROUND SLEEPING ROOMS ARE REQUIRED TO BE 1 HOUR FIRE PARTITIONS PER 420.2

BUILIDNG IS UNDER THE 5,000 SF FIRE AREA STORING COMMERCIAL VEHICLES.

CORRIDOR WALLS SERVE OCCUPANCY LESS THAN 30, SO NO CORRIDORS ARE REQUIRED TO BE RATED

#### CHAPTER 8 - FINISHES:

INTERIOR EXIT STAIRS AND PASSAGEWAYS - CLASS A CORRIDORS AND EXIT ACCESS - CLASS B ROOMS AND ENCLOSED SPACES - CLASS C

CLASS A FLAME SPREAD 0-25 SMOKE DEVELOP 0-450 CLASS B FLAME SPREAD 26-75 SMOKE DEVELOP 0-450 CLASS CFLAME SPREAD 76-200 SMOKE DEVELOP 0-450

#### CHAPTER 9 - FIRE PROTECTION SYSTEMS:

903 - SPRINKLER: THE BUILDING IS NOT REQUIRED TO HAVE A SPRINKLER SYSTEM AS THE FIRE ARE A IS UNDER 5,000 SF PER 903.2.10.1. R-2 OCCUPANCY IS NOT REQUIRED TO HAVE SPRINKLER BECASUE BOTH SLEEPING ROOMS HAVE DIRECT ACCESS TO AN EXIT PER 903.2.8

906 FIRE EXTINGUISHERS: LOCATIONS AS SHOWN ON THE CODE SUMMARY PLAN

907 FIRE ALARM: FIRE ALARM IS REQUIRED FOR THE R-2 OCCUPANCY IN SLEEPING ROOMS AND OUTSIDE SLEEPING ROOMS PER 907.1.11.2 - NOT REQUIRED FOR B AND S-1 USE GROUPS.

#### IAPTER 10 - MEANS OF EGRESS

PER TABLE 1004.1.2 OCCUPANCY FOR THE NEW SPACES IS AS FOLLOWS:

#### <u> CHAPTER 11 - ACCESSIBILITY:</u> SHALL COMPLY WITH ICC ANSI A117.1

#### **CHAPTER 16 - STRUCTURAL DESIGN REQUIREMENT** 603.1.1 - FLOOR LIVE LOAD (TABLE 1607.1) -OFFICE AREA - 100 PSF

GARAGE - 250 PSF 1603.1.2 - ROOF LIVE LOAD - 20 PSF

1603.1.3 - ROOF SNOW LOAD - 30 PSF (NON-REDUCABLE) NO SPECIFIC DRIFT CONDITIONS

1603.1.4 - WIND DESIGN: Vult - 120 MPH RISK CAT - 4 (TABLE 1604.5 - EMERG. SERVICES) SURFACE ROUGHNESS - C EXPOSURE CATEGORY - C

1603.1.5 - SEISMIC DESIGN: SDS = .12 FROM ATTACHED ASCE HAZARD REPORT BUILDING WEIGHT CALCULATED AT 245,540 **RESPONSE FACTOR - 6.5** Cs = SDS/R/Ie = .12 / 1.625 = .0739 BASE SHEAR (V) = .0739 X 345,540 = 18,132 LB SEISMIC DESIGN CATEGORY - C

1604.3 - DEFLECTION LIMITS: ROOF - L/240 FLOOR - N/A (SLAB ON GRADE) EXTERIOR WALLS - L/240 INTERIOR PARTITIONS - L/240

# MIDDLEFIELD TOWNSHIP NEW EMS BUILDING 15228 ST RT 528; MIDDLEIFIELD, OHIO 44062 PROJECT NUMBER: 22124

# **GENERAL NOTES**

THE CONTRACTOR SHALL PROVIDE ALL FEES, PERMITS INSPECTIONS, SERVICES, SUPERVISION, LABOR, M PLANT, EQUIPMENT, MACHINERY, AND ALL OTHER NECESSARY TO COMPLETE ALL WORK AS REQUIR PROVIDE A COMPLETE JOB IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS.

2. ALL WORK TO BE DONE IN ACCORDANCE WITH ST LOCAL CODES AND ORDINANCES. ALL WORK PERI SHALL BE OF ACCEPTAED INDUSTRY STANDARDS PRACTICES GOVERNING THE HIGHEST QUALITY OF WORKMANSHIP.

- 3. CONTRACTOR(S) SHALL VERIFY LAYOUT AND DIM PRIOR TO THE START OF CONSTRUCTION, AND SH CONSULT WITH THE PROJECT ARCHITECT REGARD DISCERPANCIES THAT MAY EXIST WITHIN THESE CONSTRUCTION DOCUMENTS. ANY AREAS WITHIN CONSTRUCTION DOCUMENTS WHICH ARE UNCLEA CONFLICTING ARE TO BE BROUGHT TO THE IMMEDI ATTENTION OF THE PROJECT ARCHITECT FOR CLA
- 4. EACH SUB-CONTRACTOR IS TO THOROUGHLY REV DRAWINGS AND EVALUATE THE SCOPE OF WORK BY THEIR RESPECTIVE TRADE PRIOR TO THE START CONSTRUCTION.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR T PROTECTION OF ANY AND ALL EXISTING STRUCTU FINISHES, AND EQUIPMENT. THIS INCLUDES WORK BY OTHER CONTRACTORS AS PART OF THE SCOP WORK.
- 6. CONTRACTOR IS TO COORDINATE ALL WORK, STO MATERIALS, REMOVAL OF DEBRIS, ETC. IN COMPL LOCAL REQUIREMENTS.
- 7. CONTRACTOR IS TO PATCH EXISTING SURFACES V WORK TIES INTO EXISTING CONDITIONS, OR WHERE CONSTRUCTION NEEDS TO BE REMOVED AND REIM TO ACCOMMODATE NEW WORK.

#### ACCESSIBLE ROUTE

(E) INDICATES ACCESSIBLE EXIT

(E) INDICATES NON-ACCESSIBLE EXIT

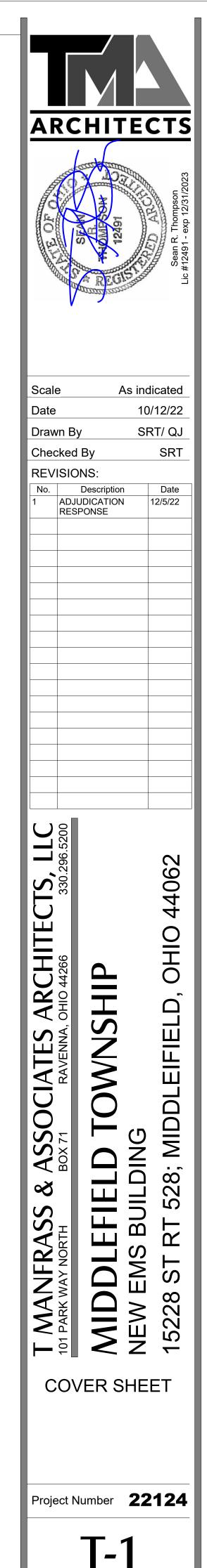
NON-ACCESSIBLE EXIT SHALL BE PROVIDED WITH ADJOINING SIGNAGE

### DRAWING INDEX

IATERIALS,		
ITEMS RED TO	T-1	COVER SHEET
H THESE	<b>C-1</b>	CIVIL COVERSHEET
	C-2	GENERAL NOTES
TATE AND RFORMED	C-3	EXISTING CONDITIONS PLAN
5 AND	C-4	PROPOSED SITE PLAN - ABBREV. SWPPP
:	C-5	PROPOSED STORM SEWER PLAN
	C-6	EROSION CONTROL DETAILS
ENSIONS ALL	<b>C-</b> 7	SIT DETAILS
DING ANY	C-8	SITE DETAILS
THESE	S-1	STRUCTURAL PLANS
AR OR DIATE	A-1	FLOOR PLAN
RIFICATION.	A-2	CEILING PLAN
/IEW THESE	A-3	ELEVATIONS AND SCHEDULES
REQUIRED	A-4	SECTIONS AND WALL SECTIONS
TOF	SP-1	ARCHITECTURAL SPECIFICATIONS
	SP-2	ARCHITECTURAL SPECIFICATIONS
HE IRE,	SP-3	ARCHITECTURAL SPECIFICATIONS
INSTALLED DE OF THE	P-1	PLUMBING PLAN AND SANITARY ISOMETRIC
	M-1	MECHANICAL PLAN
DCKING OF	E-1	LIGHTING PLAN
IANCE WITH	E-2	POWER PLAN
	E-3	ELECTRICAL DETAILS AND DIAGRAMS
WHERE NEW	E-4	ELECTRICAL SCHEDULES AND LEGENDS
RE EXISTING NSTALLED	E-5	ELECTRICAL SCHEDULES AND DETAILS
	E-6	ELECTRICAL SPECIFICATIONS

## FIRE EXTINGUISHER NOTE

OWNER SHALL PROVIDE, AND CONTRACTOR SHALL INSTALL, PORTABLE FIRE EXTINGUISHERS ON WALL BRACKETS ADJACENT TO EXTERIOR EXIT DOORS AS FF INDICATED, IN ACCORDANCE WITH OHIO FIRE CODE FM 519.2 AND OBC SECTION 906.1, OR IN OTHER LOCATIONS AS REQUESTED BY LOCAL FIRE AUTHORITY.



- THE OHIO EPA GENERAL CONSTRUCTION STORM WATER PERMIT HAS NOT BEEN APPLIED DUE TO THE DISTURBED AREA BEING LESS THAN 1 AC.
- 2. RECEIVING WATERSHED: UNNAMED TRIBUTARY TO SWINE CREEK (APPROX. 1.6 MI AWAY).
- 3. SITE LOCATION: LATITUDE N 41°27'14" LONGITUDE W 81°03'16"
- 4. CURRENT LAND USE IS: 630 EXEMPT PROPERTY TOWNSHIP PER THE GEAUGA AUDITOR'S WEBSITE.
- 5. SITE = 22.68 ACRES TOTAL PER THE GEAUGA COUNTY AUDITOR'S WEBSITE. 0.21 ACRES OF IMPERVIOUS SURFACE WILL BE CREATED, 0.8 ACRES WILL BE DISTURBED (3.5% OF TOTAL) AS A RESULT OF THIS PROJECT.

#### GENERAL CONSTRUCTION ACTIVITIES

THIS PROJECT WILL CONSIST OF THE CONSTRUCTION OF ONE NEW BUILDING TO BE USED AS THE NEW EMS BUILDING. THE TOWNSHIP TRUSTEES WILL UTILIZE THE EXISTING BUILDING FOR OTHER USES. NO STORM WATER DETENTION HAS BEEN INCLUDED SINCE THE MAJORITY OF THE PROPOSED BUILDING AREA IS CURRENTLY IMPERVIOUS (CONCRETE & ASPHALT DRIVEWAY), AND THE OVERALL DISTURBED AREA IS LESS THAN 1 ACRE.



**ASSOCIATES ENGINEERING** r o 8008 MAR 0)5(0 õ S:S

# MIDDLEFIELD EMS NEW BUILDING & SITE IMPROVEMENTS

SITE LOCATION: PPN 18-705300

15228 Madison Road

Middlefield Township, Geauga County, State of Ohio

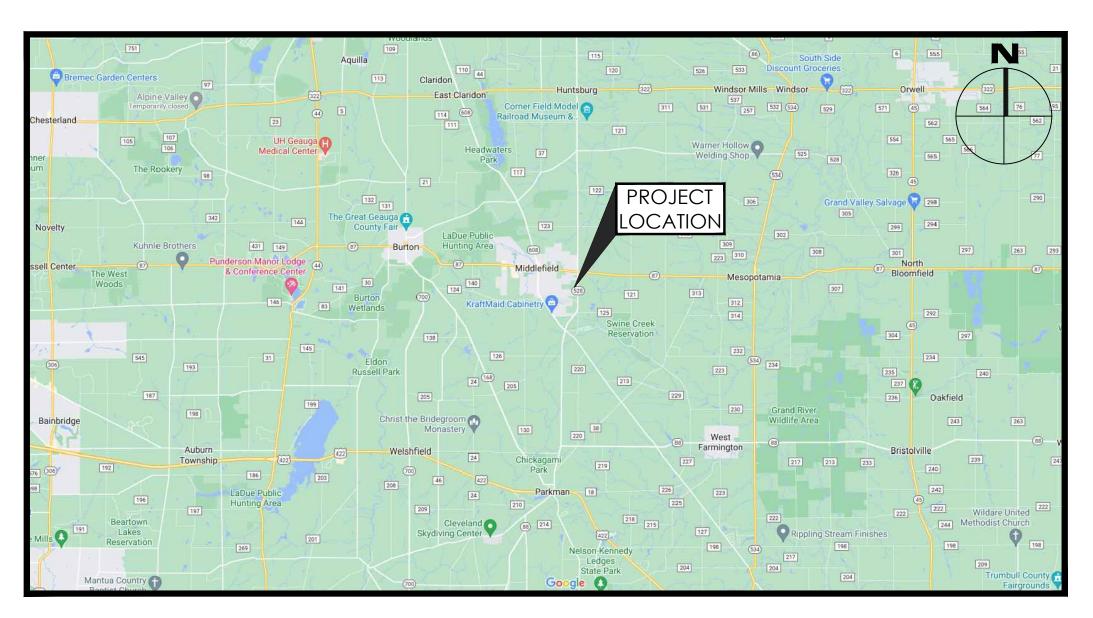
Prepared For: Middlefield Township **Board of Trustees** 

P.O. Box 384 Middlefield, OH 44062 **Contact: Paul Porter** 



**Prepared By: HESS & ASSOCIATES** ENGINEERING INC. 12121 Kinsman Road Newbury, Ohio 44065 Tel (440)564-8008 Fax (440)564-8176

# SEPTEMBER 16, 2022



LOCATION MAP NOT TO SCALE

# INDEX OF SHEETS

DESCRIPTION

TITLE SHEET

SHEET

C1

C2

С3

C4

C5

C6

C7-C8

GENERAL NOTES

EXISTING CONDITIONS PLAN

PROPOSED SITE PLAN & ABBREVIATED STORM WATER POLLUTION PREVENTION PLAN

PROPOSED STORM SEWER PLAN

EROSION CONTROL DETAILS

SITE DETAILS

HESS & ASSOCIATES ENGINEERING,

A PRE-CONSTRUCTION CONFERENCE SCHEDULED BY THE ARCHITECT(S) SHALL BE HELD PRIOR TO WORK STARTING. IN ADDITION, THE CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO THE ARCHITECT(S)/ENGINEER, PRIOR TO BEGINNING WORK TO ARRANGE FOR INSPECTION.

ALL CONSTRUCTION AND MATERIALS INCLUDED IN THIS PROJECT SHALL BE IN ACCORDANCE WITH THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS UNLESS SUPERSEDED BY THE MODIFICATIONS TO THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR GEAUGA COUNTY AND/OR MIDDLEFIELD TOWNSHIP.

ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL COMPLY WITH THE U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

IT IS THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO MAKE HIS OWN INVESTIGATIONS OF SURFACE AND SUBSURFACE CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY FACILITIES ARE SHOWN ON THE PLANS FROM DATA AVAILABLE AT THE TIME OF THE FIELD SURVEY IN COMPLIANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF THE EXISTING UTILITY OWNERS AND UTILITY PROTECTION SERVICE IN ACCORDANCE WITH SECTION 153.64 OF THE OHIO REVISED CODE.

#### STREET CLEANING

STREET CLEANING SHALL BE PERFORMED AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING STREETS CLEAN OF ALL DEBRIS RESULTING FROM THE WORK ASSOCIATED WITH THE SITE WORK.

#### MATERIAL SPECIFICATIONS

MATERIAL SPECIFICATIONS CALLED FOR ON THE PLANS REPRESENT THE MINIMUM REQUIRED FOR EACH APPLICATION. THE OWNER MAY REQUEST OR THE CONTRACTOR MAY DESIRE TO SUBSTITUTE ALTERNATE MATERIALS. ANY SUCH SUBSTITUTIONS MUST BE EQUIVALENT IN QUALITY TO THE MATERIAL CALLED FOR AND MUST BE APPROVED IN WRITING BY THE PROJECT ENGINEER, PROJECT MANAGER OR ARCHITECT(S) AND THE CONSULTING ENGINEER.

#### MATERIAL TESTING AND PERMITS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIAL TESTING AND ALL PERMITS REQUIRED FOR THIS PROJECT.

THE BEDDING FOR THE TYPE "A" CULVERTS WILL BE CLASS "B" AND THE #57 AGGREGATE WILL BE INSTALLED TO A DEPTH OF AT LEAST ONE-HALF THE DIAMETER OF THE CULVERT. BACKFILL FOR THE REMAINING TRENCH SHALL BE TAMPED OR COMPACTED EVERY 6 INCHES.

ALL TYPE "A" CULVERTS SHALL BE REINFORCED CONCRETE PIPE MEETING ODOT ITEM #706.02.

FILTER FABRIC - ALL FABRIC FOR EROSION CONTROL TO BE WOVEN MATERIAL.

THE CONTRACTOR SHALL INCLUDE COST OF GRANULAR BACKFILL MATERIAL UNDER ALL EXISTING AND PROPOSED PAVEMENTS IN PRICE BID PER LINEAL FOOT OF PIPE.

#### EARTHWORK OPERATIONS

THE DESIGNATED AREAS OF EXCAVATION AND FILL SHALL BE CLEARED AND STRIPPED BY THE CONTRACTOR PRIOR TO THE START OF ANY EARTHWORK OPERATIONS.

THE CONTRACTOR SHALL STRIP ALL TOPSOIL FROM THE WORK AREAS AND RE-SPREAD THE TOPSOIL IN THE AREAS DESIGNATED BY THE OWNER FOR RE-SPREADING, SEEDING AND MULCHING, OR REMOVE THE TOPSOIL FROM THE SITE.

THE CONTRACTOR SHALL PLACE AND COMPACT ALL SUITABLE FILL MATERIAL EXCAVATED DURING HIS CONSTRUCTION OPERATIONS WITHIN THE FILL AREAS DESIGNATED ON THE IMPROVEMENT PLANS. THE FINAL GRADE OF THE EXCAVATED AND FILLED AREAS SHALL CORRESPOND TO THE PROPOSED GRADES SHOWN ON THE IMPROVEMENT PLANS.

CLEARING AND GRUBBING SHALL BE PERFORMED WITHIN THE ENTIRE PROPOSED GRADING AREA, UNDERGROUND UTILITY EASEMENTS, AND DRAINAGE AND SEWER EASEMENT AREAS. CLEARING AND GRUBBING SHALL ALSO INCLUDE TREE REMOVAL.

ALL STUMPS, TREES, AND OTHER CONSTRUCTION DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR UNDER THE LUMP SUM BASE BID.

#### TREE PRESERVATION

TREE PROTECTION MEASURES SHALL BE INSTALLED AS SPECIFIED PRIOR TO THE START OF CONSTRUCTION.

SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO TREES AND THEIR ROOT SYSTEMS WHICH ARE NOT CALLED FOR REMOVAL. IN GENERAL, WHERE THE LINE OF TRENCH FALLS WITHIN THE LIMITS OF THE LIMB SPREAD, THE LEAVING OF HEADERS ACROSS THE TRENCH TO PROTECT ROOTS WILL BE REQUIRED. THE OPERATION OF ALL EQUIPMENT, PARTICULARLY WHEN EMPLOYING BOOMS SHALL BE CONDUCTED IN A MANNER WHICH WILL NOT INJURE TREES, TRUNKS, BRANCHES OR THEIR ROOTS UNLESS SUCH TREES ARE DESIGNATED FOR REMOVAL. THE STORAGE OF MATERIALS, AND THE DEPOSITION OF EXCAVATION SHALL BE PROHIBITED WHEN WITHIN THE TREE CANOPY OF ANY TREE BEING SAVED.

#### PAVEMENT

THE ROADWAY SUB-GRADE SHALL BE PREPARED IN ACCORDANCE WITH ODOT ITEM 203.13 AND 203.14. SUB-GRADE SHALL BE PROOF ROLLED IN ACCORDANCE WITH THE PROJECT ENGINEER STANDARDS PRIOR TO THE INSTALLATION OF THE BASE COURSE.

THE AIR TEMPERATURE SHALL BE AT LEAST 50° FOR INSTALLATION OF THE ODOT SPECIFICATION #448 TYPE 1 ASPHALTIC CONCRETE SURFACE.

#### EROSION and SEDIMENT CONTROL

MINIMIZE TRACKING OF SEDIMENTS BY VEHICLES BY UTILIZING THE CONSTRUCTION ENTRANCE AS THE ONLY ENTRANCE FOR VEHICLES. MAINTAIN THIS ENTRANCE WITH STONE AS NEEDED TO PREVENT DIRT AND MUD FROM BEING TRACKED ONTO ROADWAY. REGULAR SWEEPING OF THE ROADWAY MAY BE NECESSARY TO ENSURE ROADWAY DOES NOT BUILD UP WITH SEDIMENTS.

SEDIMENT/STORM WATER PONDS AND EROSION AND SEDIMENT CONTROLS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF GRUBBING. UPON COMPLETION OF CONSTRUCTION OF PONDS, SEEDING AND MULCHING SHALL IMMEDIATELY FOLLOW TO AID IN THE STABILIZATION AND MINIMIZE EROSION AND SEDIMENT TRANSPORT OF THE SOIL BEFORE WATER LEAVES THE POND. ALL EROSION AND SEDIMENT CONTROLS SHALL CONTINUE TO FUNCTION UNTIL DISTURBED AREAS ARE RESTABILIZED.

NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF. (THIS INCLUDES WASHING OUT CEMENT TRUCKS). DESIGNATED WASH PIT AREAS MUST BE PRESET FOR THIS PURPOSE AWAY FROM AREAS OF STORM RUNOFF.

SEDIMENT CONTROL SHALL BE ACCOMPLISHED BY SEEDING AND MULCHING TO ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF EXCAVATION OR FILL AND FINISH GRADING IN ACCORDANCE WITH ODOT ITEM 659 AND/OR AS DESIGNATED BY THE GEAUGA SOIL AND WATER CONSERVATION DISTRICT.

TEMPORARY SEEDING SHALL BE APPLIED WITHIN ALL NEW ROADWAY AREAS. UTILITY EASEMENTS AND/OR AREAS REQUIRING ONLY TEMPORARY SEEDING. AND SHALL BE PERFORMED AS SOON AS GRADING IS COMPLETED AND READY FOR RELEASE. NO RELEASE BEYOND 80% SHALL BE MADE FOR EARTHWORK ITEMS UNTIL SEDIMENT CONTROL IS IN PLACE TO PROTECT SAID WORK ITEMS.

CONTRACTOR SHALL COMPLY WITH THE MAINTENANCE SCHEDULE INCLUDED IN THE APPROVED PLANS FOR THE PROPOSED EROSION CONTROLS.

THE CONTRACTOR SHALL LIMIT THE SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY EXCAVATION, BORROW, AND FILL OPERATIONS AND PROVIDE IMMEDIATE PERMANENT OR TEMPORARY CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS OR OTHER COURSES, LAKES, PONDS, WETLANDS OR OTHER AREAS OF WATER IMPOUNDMENT.

THIS WORK SHALL CONSIST OF TEMPORARY CONTROL MEASURES AS DETAILED ON THE PLANS OR ORDERED BY THE ENGINEER DURING THE LIFE OF THE CONTRACT TO CONTROL SOIL EROSION AND SEDIMENTATION THROUGH USE OF SILT FENCES, SLOPE PROTECTION, SEDIMENT BASINS, MULCHES, SEEDING, FILTER FABRICS, DITCH LINING AND OTHER EROSION CONTROL DEVICES OR METHODS.

TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS, THE LOCATION AND SIZE OF WHICH ARE DETAILED ON THE PLANS, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CLEARING OR EARTHWORK OPERATIONS. TEMPORARY CONTROL MEASURES WILL BE USED WHEN AND AS DIRECTED BY THE ENGINEER TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE NOT FORESEEN DURING THE DESIGN STAGE, THAT ARE NEEDED PRIOR TO INSTALLATION OF PERMANENT CONTROL FEATURES, OR THAT ARE NEEDED TEMPORARILY TO CONTROL EROSION THAT DEVELOPS DURING NORMAL CONSTRUCTION PRACTICES.

EXISTING VEGETATIVE GROWTH SHALL REMAIN UNDISTURBED AS LONG AS POSSIBLE, THE CONTRACTOR SHALL SEED AND MULCH ALL AREAS DISTURBED BY THE CONSTRUCTION AND WHICH ARE EXPOSED FOR MORE THAN 30 DAYS. SEEDED AREAS WILL BE INSPECTED, AND AREAS WHERE THE SEED HAS NOT PRODUCED A GOOD COVER SHALL BE RE-SEEDED AS NECESSARY BY THE CONTRACTOR. STABILIZE AREAS WITH MULCH WHEN CONDITIONS PROHIBIT SEEDING. STABILIZE AREAS WITHIN 30 FEET OF ANY STREAM OR WETLAND WITHIN 2 DAYS ON ALL INACTIVE DISTURBED AREAS.

TEMPORARY EROSION CONTROL FEATURES SHALL BE ACCEPTABLY MAINTAINED AND SHALL SUBSEQUENTLY BE REMOVED OR REPLACED WHEN DIRECTED BY THE ENGINEER. TEMPORARY AND PERMANENT EROSION CONTROL FEATURES SHALL BE CHECKED AFTER EACH MEASURABLE RAINFALL AND REESTABLISHED AS NECESSARY. REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF SITE.

IN THE EVENT THAT TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED DUE TO THE CONTRACTOR'S NEGLIGENCE, CARELESSNESS, OR FAILURE TO INSTALL PERMANENT CONTROLS AS PART OF THE WORK, SHALL BE PERFORMED BY THE CONTRACTOR AT HIS EXPENSE.

SEED

NOTE:

MULCHING

EROSION and SEDIMENT CONTROL (CONT'D) THE CONTRACTOR MUST PROVIDE REGULAR INSPECTION AND MAINTENANCE FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD. INSPECTION MUST BE MADE A MINIMUM OF ONCE EVERY SEVEN (7) DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24 HOUR PERIOD. NAME OF CONTRACTOR'S DESIGNATED INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTIONS AND CORRECTIVE MEASURES TAKEN MUST BE NOTED ON ALL INSPECTIONS.

APPROPRIATE EROSION CONTROL METHODS MUST BE IN PLACE PRIOR TO ANY EARTHWORK COMMENCING.

SITE STABILIZATION, EITHER PERMANENT OR TEMPORARY, MUST FOLLOW THE REQUIREMENTS AS APPLICABLE PER TABLE 1 OR TABLE 2 ON SHEET C6.

ADDITIONAL EROSION CONTROL MEASURES MAY BE MANDATED BY THOSE AGENCIES HAVING JURISDICTION.

ROUTINE INSPECTION WILL BE CONDUCTED ON ALL EROSION CONTROL PRACTICES FOR THIS PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR CORRECTING ALL DEFICIENCIES REVEALED BY THE INSPECTIONS.

THESE NOTES AND DRAWINGS ARE INTENDED TO SERVE AS BASIC GUIDELINES, ALL EROSION CONTROL PRACTICES SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE GEAUGA SOIL AND WATER CONSERVATION DISTRICT.

#### SEEDING AND MULCHING

ALL AREAS DISTURBED BY CONSTRUCTION OF THIS PROJECT SHALL BE SEEDED AND MULCHED ACCORDING TO ODOT ITEM #659 USING A MIXTURE APPROVED BY THE GEAUGA SOIL AND WATER CONSERVATION DISTRICT.

#### APPROVED SEEDING MIX

SEEDING DATES:	SPECIES MIX	LBS/1000FT. 2	PER ACRE
MARCH 1 TO AUGUST 15	OATS TALL FESCUE ANNUAL RYEGRASS PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	3 1 1 1 1 1 1	128 lb 40 lb 40 lb 40 lb 40 lb 40 lb 40 lb
AUGUST 16 TO NOVEMBER 1	RYE TALL FESCUE ANNUAL RYEGRASS WHEAT TALL FESCUE ANNUAL RYEGRASS	3 1 1 3 1 1	112 lb 40 lb 40 lb 120 lb 40 lb 40 lb
	PERENNIAL RYE TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 lb 40 lb 40 lb
NOVEMBER 1 TO SPRING SEEDING	USE MULCH ONLY, SO	DDING PRACTICES, OR	ORMANT SEEDING
NOTE: OTHER APPROVED SEE	D SPECIES MAY BE SUB	STITUTED	

-TABLE FROM ODNR RAINWATER AND LAND DEVELOPMENT MANUAL

SOIL STOCKPILES SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH OR HAVE PERIMETER SILT FENCING PLACED TO PREVENT SOIL LOSS. ALL STOCKPILES SHALL BE LOCATED AT LEAST ONE HUNDRED (100) FEET FROM ALL WATERCOURSES, DRAINAGE WAYS, WETLANDS AND SITE DRAINAGE EXIT POINTS.

#### SEED BED PREPARATION

WORK THE LIME AND FERTILIZER (12-12-12 ANALYSIS, OR EQUIVALENT) INTO THE SOIL TO A DEPTH OF TWO INCHES. ON SLOPING AREAS. THE FINAL OPERATION SHALL BE ON THE CONTOUR.

#### INSTALLATION

APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) ON A FIRM, MOIST SEEDBED. COVER TO A DEPTH OF 1/4" TO 1/2", AND FIRM SEEDBED WHERE FEASIBLE.

MULCH SHALL BE APPLIED TO PROTECT THE SOIL AND PROVIDE A BETTER ENVIRONMENT FOR PLANT GROWTH CONSISTING OF SMALL GRAIN STRAW (PREFERABLE WHEAT OR RYE) AND SHALL BE APPLIED AT THE RATE OF TWO TONS PER ACRE OR 100 lbs. (TWO OR THREE BALES) PER 1000 S.F.

GENERAL CONSTRUCTION SEQUENCE

THE PROJECT SITE SHALL BE CLEARED AND GRUBBED WITHIN THE GRADING LIMITS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ARCHITECT.

DRAINAGE STRUCTURES

**DITCH MATTING** 

WASTE DISPOSAI

**CLEAN HARD FILL** 

(OAC) 3745-20).

CONCRETE WASH WATER

CONTAMINATED SOILS

**OPEN BURNING** 

SPILL REPORTING REQUIREMENTS

OPEN BURNING IS NOT PERMITTED.

DUST CONTROLS/SUPPRESSANTS

MAINTENANCE

IRRIGATION - IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDING WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED.

REPAIRS - INSPECT ALL SEEDED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS, RE-SEEDING AND RE-MULCHING WITHIN THE PLANTING SEASON. IF POSSIBLE.

2. TEMPORARY SEDIMENTATION AND EROSION CONTROL ITEMS INCLUDING SILT FENCES SHALL BE INSTALLED PER TABLE 2 ON SHEET C6. (TEMPORARY STABILIZATION)

FLOW OF EXISTING WATERCOURSE(S) TO BE MAINTAINED UNTIL PERMANENT WATERWAYS AND STORM WATER CONTROL STRUCTURES ARE CONSTRUCTED. THE EXISTING WATER COURSES ARE TO BE PROTECTED FROM SITE SEDIMENT CONTAMINATION AND MAINTAINED DURING CONSTRUCTION UNTIL THE SITE IS STABILIZED.

SAW CUTTING AND REMOVAL/DEMOLITION OF EXISTING PAVEMENT WITHIN PROPOSED LIMITS TO COMMENCE. OVERALL SITE GRADING OPERATION, BUILDING FOUNDATION AND CONSTRUCTION TO BEGIN.

AT COMPLETION OF GRADING OPERATION, TEMPORARY OR PERMANENT SEEDING AND MULCHING SHALL BE INSTALLED PER TABLE 1 ON SHEET C6. (PERMANENT STABILIZATION)

AT COMPLETION OF CONSTRUCTION AND WHEN SITE IS SUFFICIENTLY STABLE, THE TEMPORARY SEDIMENTATION AND EROSION CONTROL ITEMS SHALL BE REMOVED.

PROJECT SITE LOCATION: LATITUDE N 41°27'14" LONGITUDE W 81°03'16"

ALL STORM SEWER CATCH BASINS STRUCTURES SHALL BE ORDERED AND INSTALLED WITH A 1 FT. RISER TO ALLOW FOR ADJUSTMENTS TO SITE GRADING AS NEEDED.

EXCELSIOR MATTING SHALL BE USED IN ALL DITCHES.

#### TRENCH AND GROUND WATER CONTROL

THERE SHALL BE NO TURBID DISCHARGES TO SURFACE WATERS OF THE STATE RESULTING FROM DEWATERING ACTIVITIES. IF TRENCH OR GROUND WATERS CONTAIN SEDIMENT, IT MUST PASS THROUGH A SEDIMENT SETTLING POND OR OTHER EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE, PRIOR TO BEING DISCHARGED FROM THE CONSTRUCTION SITE. ALTERNATIVELY, SEDIMENT MAY BE REMOVED BY SETTLING IN PLACE OR DEWATERING INTO INTO A SUMP PIT, FILTER BAG OR COMPARABLE PRACTICE. GROUND WATER DEWATERING WHICH DOES NOT CONTAIN SEDIMENT OR OTHER POLLUTANTS ARE NOT REQUIRED TO BE TREATED PRIOR TO DISCHARGE, HOWEVER, CARE MUST BE TAKEN WHEN DISCHARGING GROUND WATER TO ENSURE THAT IT DOES NOT BECOME POLLUTANT-LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.

NON-SEDIMENT POLLUTANT CONTROLS

NO POLLUTANT IS ALLOWED TO BE DISCHARGED IN STORM WATER RUNOFF. POLLUTANT INCLUDE SOLIDS, WASTES OTHER THAN SEDIMENT, INCLUDING BUILDING MATERIALS, AND LIQUID WASTE. POLLUTANTS MUST BE DISPOSED OF IN A PROPER MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

CONTAINERS (e.g., DUMPSTERS, DRUMS) SHALL BE AVAILABLE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THE PERTINENT MATERIAL.

BRICKS. HARDENING CONCRETE, AND SOIL WASTE SHALL BE FREE FROM CONTAMINATION WHICH MAY LEACH CONSTITUENTS TO WATERS OF THE STATE. CLEAN CONSTRUCTION WASTES THAT WILL BE DISPOSED INTO THE PROPERTY, SHALL BE SUBJECT TO ANY LOCAL PROHIBITIONS FROM THIS TYPE OF DISPOSAL.

**CONSTRUCTION & DEMOLITION DEBRIS** 

ALL CONSTRUCTION & DEMOLITION DEBRIS (C&DD) WASTE SHALL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE (ORC) 3714. CONSTRUCTION DEBRIS MAY BE DISPOSED OF ON-SITE, BUT DEMOLITION DEBRIS MUST BE DISPOSED IN A OHIO EPA APPROVED LANDFILL. ALSO, MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS (SEE OHIO ADMINISTRATIVE CODE

CONSTRUCTION CHEMICAL COMPOUNDS

A SINGLE AREA SHALL BE DESIGNATED FOR MIXING OR STORAGE OF COMPOUNDS SUCH AS FERTILIZERS. LIME ASPHALT, OR CONCRETE, THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS, OR OTHER STORM WATER DRAINAGE AREA.

**EQUIPMENT FUELING & MAINTENANCE** 

EQUIPMENT FUELING & MAINTENANCE SHALL OCCUR IN A CENTRALIZED AREA NEXT TO THE CONCRETE WASHOUT

A SPILL PREVENTION CONTROL AND COUNTERMEASURES

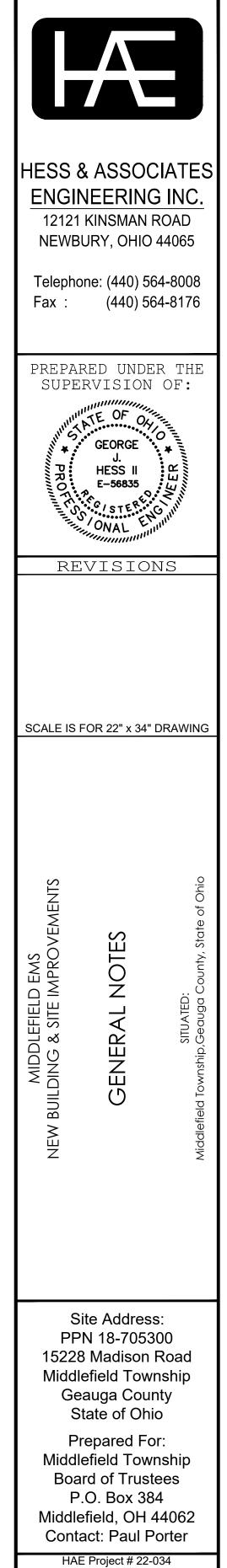
A SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN MUST BE DEVELOPED FOR SITES WITH ONE ABOVE-GROUND STORAGE TANK OF 660 GALLONS OR MORE, TOTAL ABOVE-GROUND STORAGE OF 1,330 GALLONS. OR BELOW-GROUND STORAGE OF 4.200 GALLONS OF FUEL.

A DESIGNATED CONCRETE WASHOUT AREA SHALL BE LOCATED AWAY FROM WATERCOURSES. DRAINAGE DITCHES. FIELD DRAINS, OR OTHER STORM WATER DRAINAGE AREAS.

ALL CONTAMINATED SOIL MUST BE TREATED AND/OR DISPOSED IN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES (TSDFs).

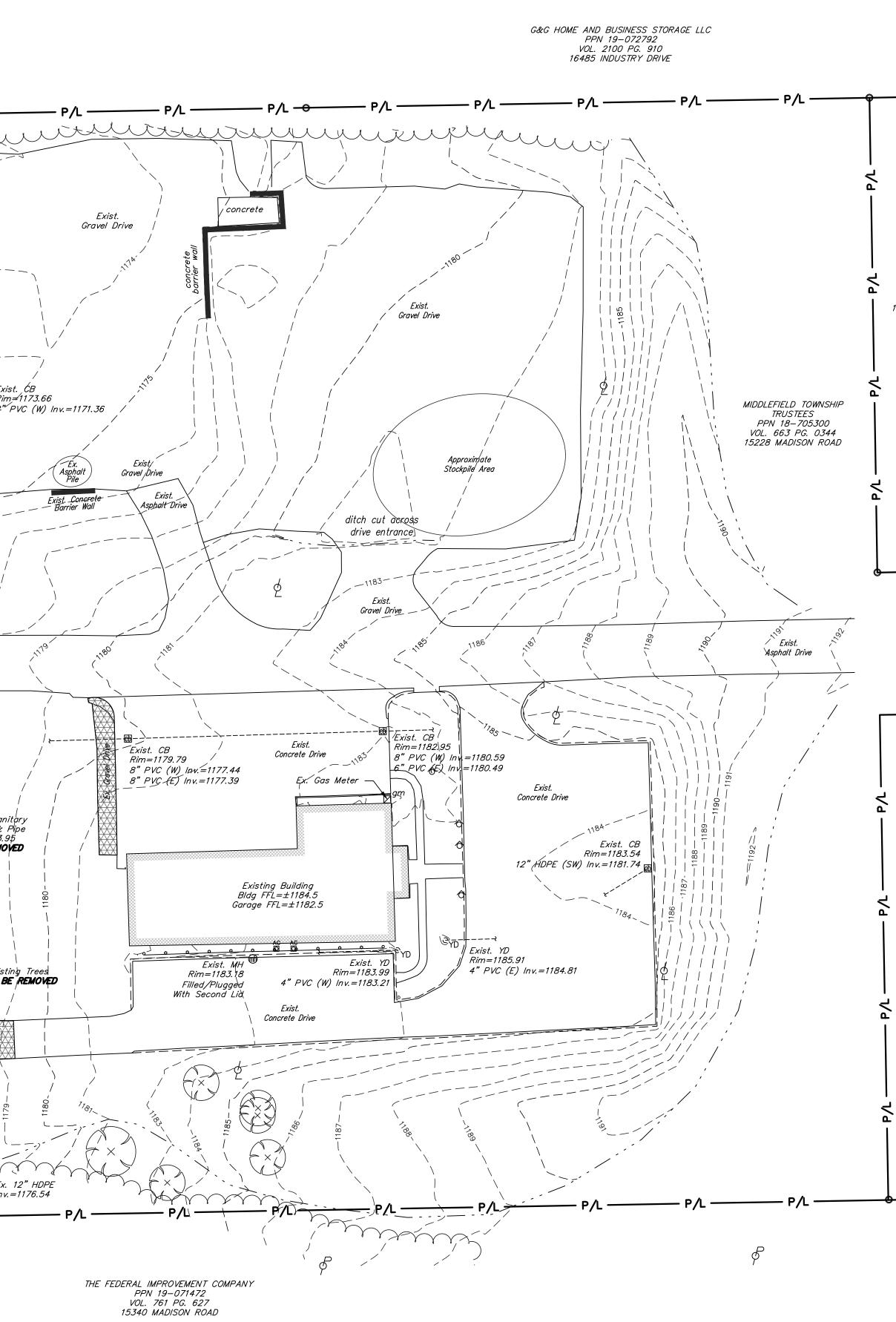
THE CONTRACTOR SHALL CONTACT THE OHIO EPA AT 800-282-9378, AND THE LOCAL FIRE DEPARTMENT (911), IN THE EVENT OF A PETROLEUM SPILL (>25 GALLONS) OR THE PRESENCE OF SHEEN.

USED OIL MAY NOT BE USED AS A DUST SUPPRESSANT. NO DUST SUPPRESSANT SHALL BE APPLIED NEAR CATCH BASINS. STORM SEWERS OR OTHER DRAINAGE WAYS.



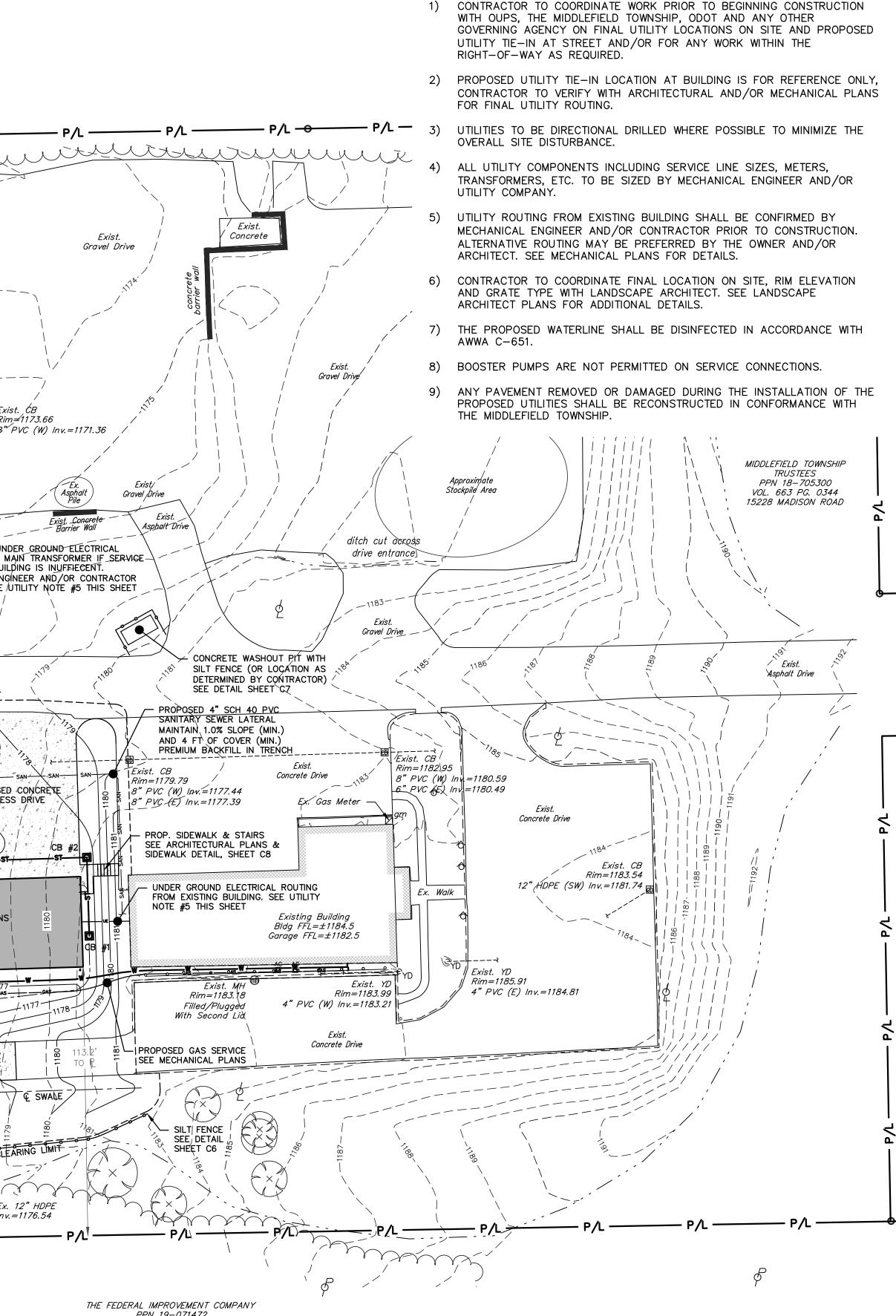
	-	
DESIGNED BY	CRE	
ORAWN BY	CRE	
HECKED BY	GJH	
DATE	09/16/22	
SCALE	H: N/A	
	V: N/A	$C^{2}$

	CL DITCH/STREAM
	RIGHT OF WAY
<u></u> Р/L	PROPERTY LINE
<u> </u>	GUARDRAIL
<u> </u>	FENCE
	EXIST. GAS LINE VOL. 2021 PG. 3096
· · · · · · · ·	EXIST. WATER LINE
	EXIST. STORM SEWER
	EXIST. SANITARY SEWER — P/L =
· ·	EXIST. TELECOM
ue	EXIST. UNDERGROUND ELEC. Exist. YD YD Gen.
	IRON PIN/PIPE FOUND 12" HDPE (W&E) Inv=1166.07
● IPS	MONUMENT BOX 5/8" $\times$ 30" Iron Pin Set
● IPS FND	FOUND Existing Maintenance Building
D	$ \begin{array}{c} DFFD\\ FL=\pm 1174.7\\ FL=\pm 1174.7\\0$
R/REC	RECORD
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0/OBS	OBSERVED CALCULATED CALCULATED COncrete Concrete
C/CALC	CALCULATED
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D.R.	Fim=1168.61         Exist         Exist         Exist           DEED RECORD         12" HDPE (N&S) Inv.=1164.78         12" HDPE (N&S) Inv.=1170.80         8" P
O.R.	OFFICIAL RECORD
Р	PLAT RECORD INFORMATION
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ල් දේ	LIGHT/POWER POLE
	POWER POLE
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-0- <sup>UP</sup>	UTILITY POLE
ю	PEDESTRIAN WALK SIGNAL
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×	FIRE HYDRANT WATER SERVICE VALVE
с С SCB	SPRINKLER CONTROL BOX
SCB ⊗ <sup>gv</sup>	GAS VALVE
• G	GAS MARKER
🖾 GT	$\begin{array}{c} Exist. YD \\ Fim=1189.82 \\ 6" PVC (E) Inv.=1188.62 \\ \end{array}$
O O SOMILY	STORM MANHOLE 12" HDPE (N&S) Inv.=1185.77
O <sub>YD</sub>	YARD DRAIN
CD	CATCH BASIN
	CURB INLET
ھ) c.o. °Conn	SANITARY MANHOLE
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1 PPN VOL. 1	RUSTE 18–7 666 P		MIDDLEFIELD EMS NEW BUILDING & SITE IMPROVEMENTS	EXISTING CONDITIONS PLAN	sITUATED: Middlefield Township,Geauga County, State of Ohio
	<b>GEN</b> 1) 2)	ERAL NOTES: THE EXISTING SITE SURVEY HAS BEEN PROVIDED BY SCHWARTZ LAND SURVEYING, INC. THE LOCATION BOTH HORIZONTAL AND VERTICAL OF THE UNDERGROUND UTILITIES SHOWN HEREON, HAVE BEEN			
Ø	3) 4)	OBTAINED BY A DILIGENT AND COMPREHENSIVE SEARCH OF AVAILABLE RECORDS. VERIFICATION BY FIELD OBSERVATION HAS BEEN CONDUCTED WHERE PRACTICAL. HOWEVER, RUDY E. SCHWARTZ, P.S. #7193 NOR GEORGE J. HESS, II, P.E. #56835 DO NOT GUARANTEE THE COMPLETENESS, NOR ACCURACY THEREOF. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE OF ALL EXISTING UTILITIES. PROPOSED IMPROVEMENTS MAY RESULT IN THE RELOCATION OF EXISTING SITE UTILITIES NOT LOCATED DURING THE SITE SURVEY OR SHOWN IN THE PROJECT PLANS. CONTRACTOR TO COORDINATION RELOCATION AS NEEDED DURING CONSTRUCTION. SEE SHEET C2 FOR EROSION CONTROL NOTES AND GENERAL CONSTRUCTION SEQUENCE.	PP 15228 Middle Ge Si Pr Middle Boa P.	te Addres N 18-7053 Madison efield Tow auga Cour tate of Ohi tate of Ohi repared For efield Tow rd of Trust O. Box 38 field, OH	800 Road nship nty io or: nship tees 84
	5) 6)	LIGHT/DASHED CONTOURS ARE EXISTING GRADE AND ARE IN (1) FOOT INCREMENTS. THE NATURAL SOILS ON THIS SITE CONSIST OF THE FOLLOWING: RsB - RITTMAN SILT LOAM (2-6% SLOPES) RsC2 - MILL SILT LOAM (6-12% SLOPES, ERODED) WbA - WADSWORTH SILT LOAM (0-2% SLOPES) WbB - WADSWORTH SILT LOAM (2-6% SLOPES)	Conta	Act: Paul F Project # 22- BY <u>CRE</u> CRE	Porter 034

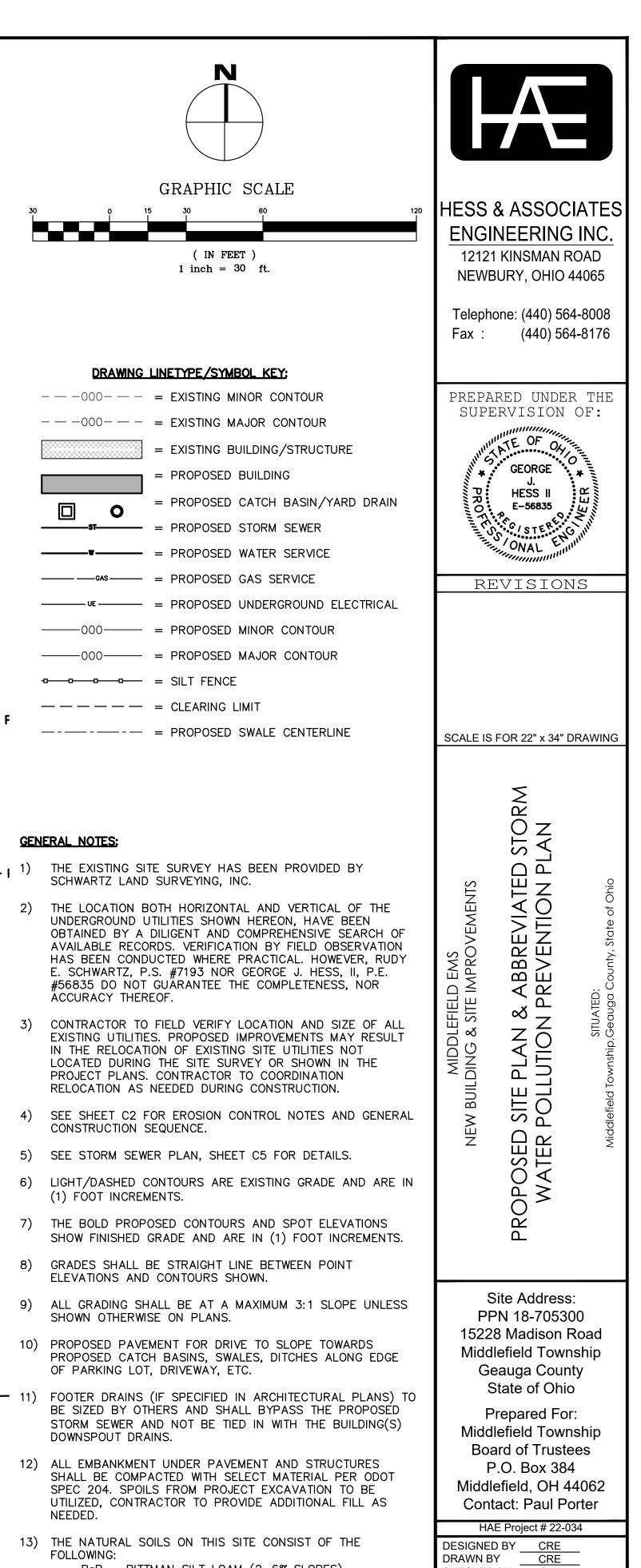
	CL DITCH/STREAM
	PROPERTY LINE
$\underline{\circ \circ \circ \circ}$	GUARDRAIL
	FENCE
	RJJ PROPERTIES LLC PPN 19-072815
	EXIST. GAS LINE VOL. 2021 PG. 3096 INDUSTRY DRIVE
	EXIST. WATER LINE EXIST. STORM SEWER
	EXIST. STORM SEWER P/L P/L P/L P/L P/L P/L P/L P/L P/L
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ue	EXIST. UNDERGROUND ELEC.
$\bigcirc$	IRON PIN/PIPE FOUND       12" HDPE (W&E) Inv = 1166.07[
	MONUMENT BOX
● IPS	5/8" X 30" Iron Pin Set
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C/CALC	CALCULATED Ex. Gravel Drive
U	USED / Exist. YD( the )
D.R.	Rim=1168.61       I       I       I       Exist
0.R.	OFFICIAL RECORD 8" PVC (E&NW) Inv.=1170.80
Р	PLAT RECORD INFORMATION
CL C/L	CENTERLINE
E/P	EDGE OF PAVEMENT
Ę	LIGHT/POWER POLE
් <i>දි</i>	POWER POLE SILT FENCE
φ΄	LIGHT POLE SHEET C6
<u>с</u> ф	YARD LIGHT     Image: Constraint of the second
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-O <sup>_UP</sup>	UTILITY POLE
ŀФ	PEDESTRIAN WALK SIGNAL
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CD	CATCH BASIN $CB \#4$ $CB \#4$ $CB \#4$
	SANITARY MANHOLE SILT FENCE SEE DETAIL CLEANOUT SHEET C6
	CLEANOUT SHEET C6
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OHIO Utilities Protecti	
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Call Before You (800) 362-2'	



UTILITY NOTES:

PPN 19-071472 VOL. 761 PG. 627

15340 MADISON ROAD



FOLLOWING: RsB - RITTMAN SILT LOAM (2-6% SLOPES) RsC2 - MILL SILT LOAM (6-12% SLOPES, ERODED) WbA - WADSWORTH SILT LOAM (0-2% SLOPES) WbB - WADSWORTH SILT LOAM (2-6% SLOPES)

GJH 09/16/22 H: 1" = 30'

C4

V: N/A

CHECKED BY

DATE SCALE

	CL DITCH/STREAM
R/W	RIGHT OF WAY
	PROPERTY LINE
	GUARDRAIL
	FENCE RJJ PROPERTIES LLC PPN 19–072815
	EXIST. GAS LINE VOL. 2021 PG. 3096 INDUSTRY DRIVE
· · · · · · · ·	EXIST. WATER LINE
	EXIST. STORM SEWER
	EXIST. SANITARY SEWER P/L P/L P/L P/L
· ·	EXIST. TELECOM
ue	EXIST. UNDERGROUND ELEC. Exist. YD YD Rim=1169.25
	IRON PIN/PIPE FOUND 12" HDPE (W&E) Inv.=1166.07
	MONUMENT BOX
● IPS	5/8" X 30" Iron Pin Set
FND	FOUND Pump Station Station Maintenance Building FFL=±1174.7
D	DEED $  \cdot   \cdot   \cdot   \cdot   \cdot   \cdot   \cdot   \cdot   \cdot   $
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D.R.	Rim=1168.61         Exist         Exist. CB         Exist           DEED RECORD         12" HDPE (N&S) Inv.=1164.78         Rim=1173.25         Rim=1173.25         8" P
0.R.	OFFICIAL RECORD
Р	PLAT RECORD INFORMATION
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E/P	EDGE OF PAVEMENT
Þ	LIGHT/POWER POLE
් අ	POWER POLE
¢ '	LIGHT POLE
_ 	YARD LIGHT
\$	TRAFFIC SIGNAL POLE
-O <sup>_UP</sup>	UTILITY POLE
ŀФ	PEDESTRIAN WALK SIGNAL
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(	GUY WIRE
E	ELECTRIC PULLBOX
	TRAFFIC PULLBOX
ф	TRAFFIC SIGNAL BOX
, ⊿ <sup>wm</sup>	WATER METER
wv M	WATER VALVE CB #3 15 LF OF 0.5% SI
Д. Д	B" HDPE OUTLET ST OF 0.5% SLOPE
~~~ ⊗	WATER CERVICE VALUE SEE DETAIL SHEET C6
Ссв	
S <sup>gv</sup> ⊗ <sup>gv</sup>	GAS VALVE
• G	GAS MARKER PROPOSED BUILDING
⊂ ⊠ GT	<i>Exist. YD</i> <i>GAS TEST</i> <i>Rim=1189.82</i> YD <i>FFL ELEV.=1177.75</i>
O O SOMA	$6'' P V (E) I_{PV} = 1188.62$
	YARD DRAIN
о <sub>үр</sub> Сб	CATCH BASIN
	CURB INLET
(S)	SAAUTARY MANULOUE INV. = 1172.00 0.5% SLOPE
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u u u u u u u u u u u u u u u u u u u	POWER TRANSFORMER
	CABLE PEDESTAL
	TELEPHONE PEDESTAL
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$\smile$	Inv.=
□ FE	FENCE POST       P/L       P/L       P/L       P/L
	TREE
242	PINE
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Utilities Protection	on CE
SERVI Call Before You	ı Dig
(800) 362-27	

#### STORM SEWER NOTES:

Exist.

Gravel Drive

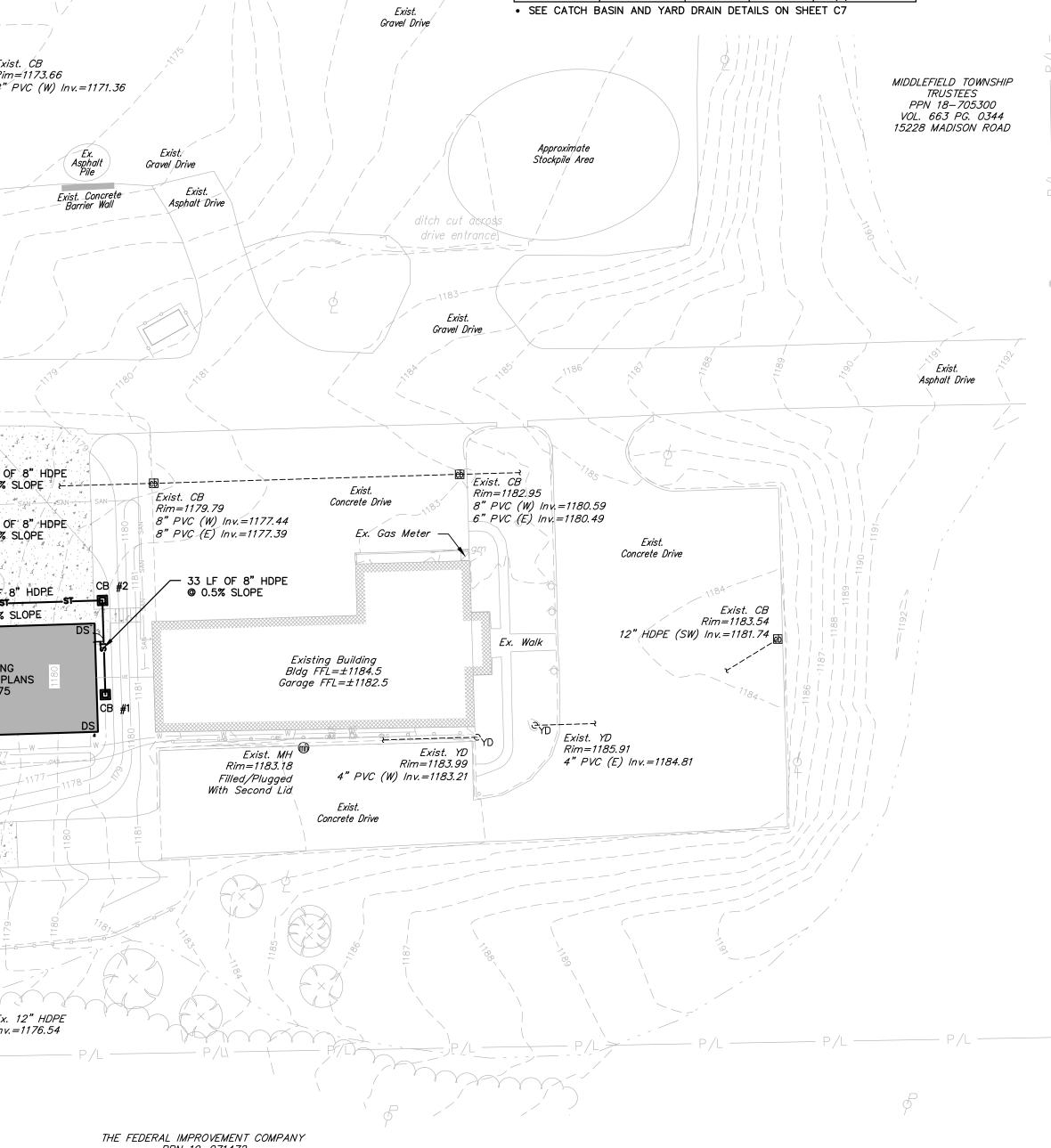
Exist.

Concrete

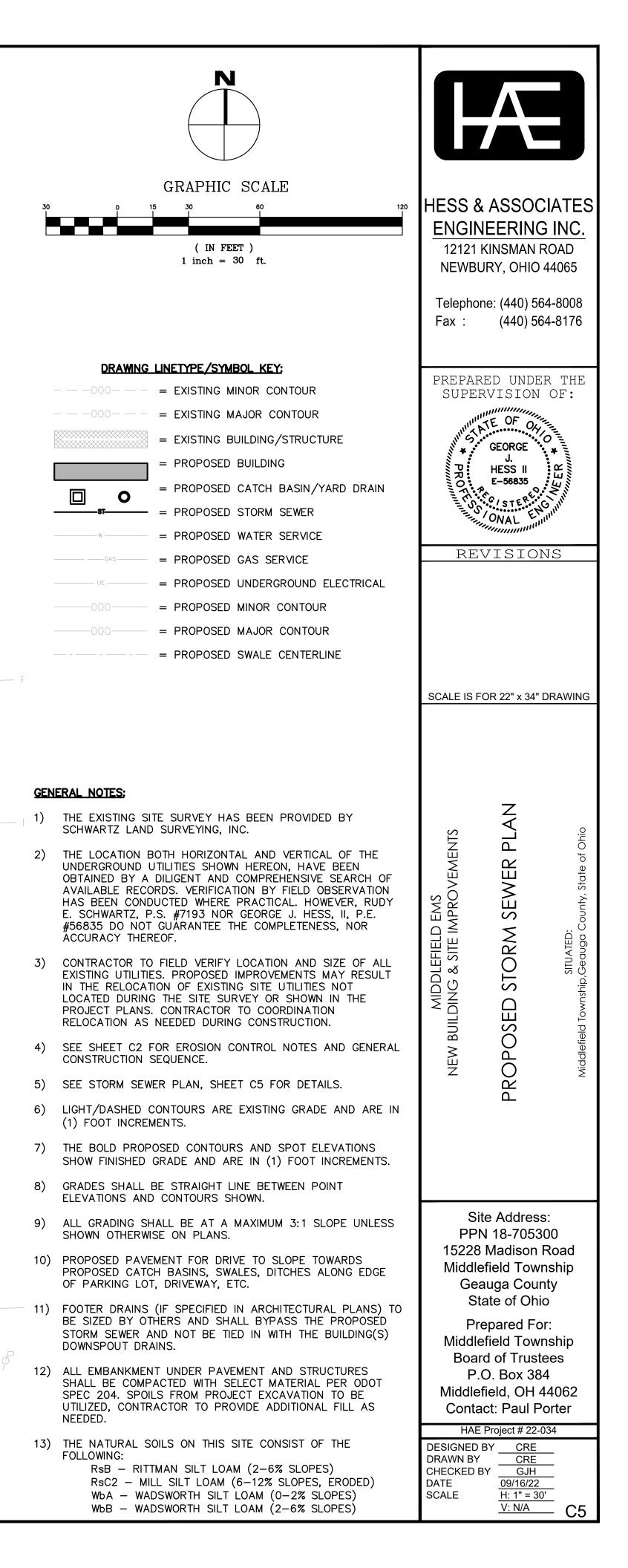
- 1) ALL STORM SEWERS TO BE MINIMUM 0.5% UNLESS SHOWN OTHERWISE.
- 2) STORM SEWERS TO BE HDPE AND/OR PVC (SDR26 MINIMUM) WITH WATER TIGHT JOINTS.
- 3) DOWNSPOUT DRAINS TO BE MINIMUM 6" AT A 1.0% SLOPE (MIN.) UNLESS SHOWN OTHERWISE. IF MORE THAN ONE (1) DOWNSPOUT TIES INTO THE SAME DRAIN THE PIPE SHALL BE MINIMUM 8" AT A 1.0% SLOPE (MIN).
- 4) ADDITIONAL YARD DRAIN AND/OR CATCH BASIN MAY BE REQUIRED BASED ON THE LANDSCAPE ARCHITECTS PLANS FOR SPECIFIC LOCATIONS, CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT. SEE LANDSCAPE ARCHITECT PLANS FOR ADDITIONAL DETAILS.

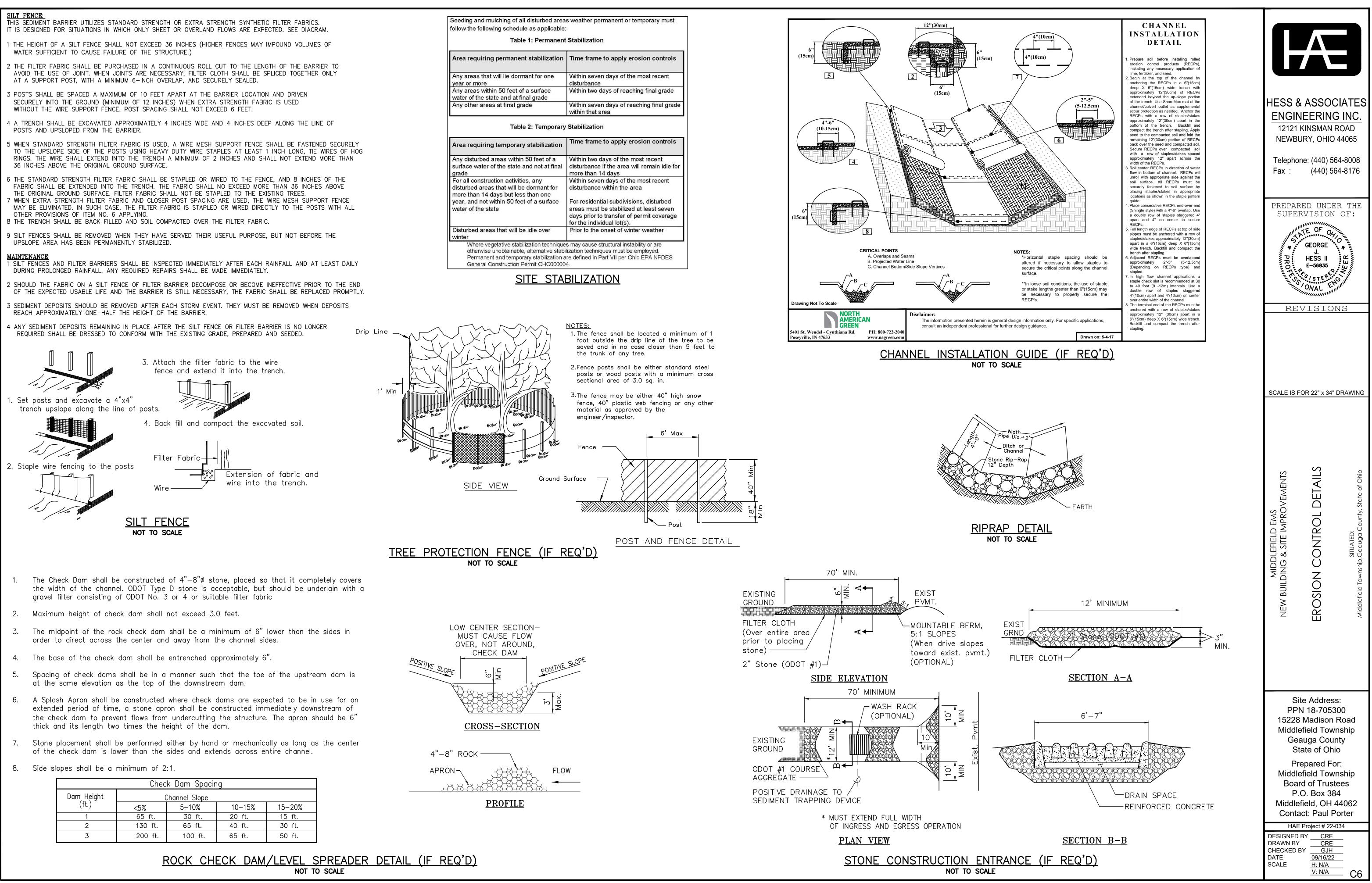
#### STORM SEWER STRUCTURE SUMMARY:

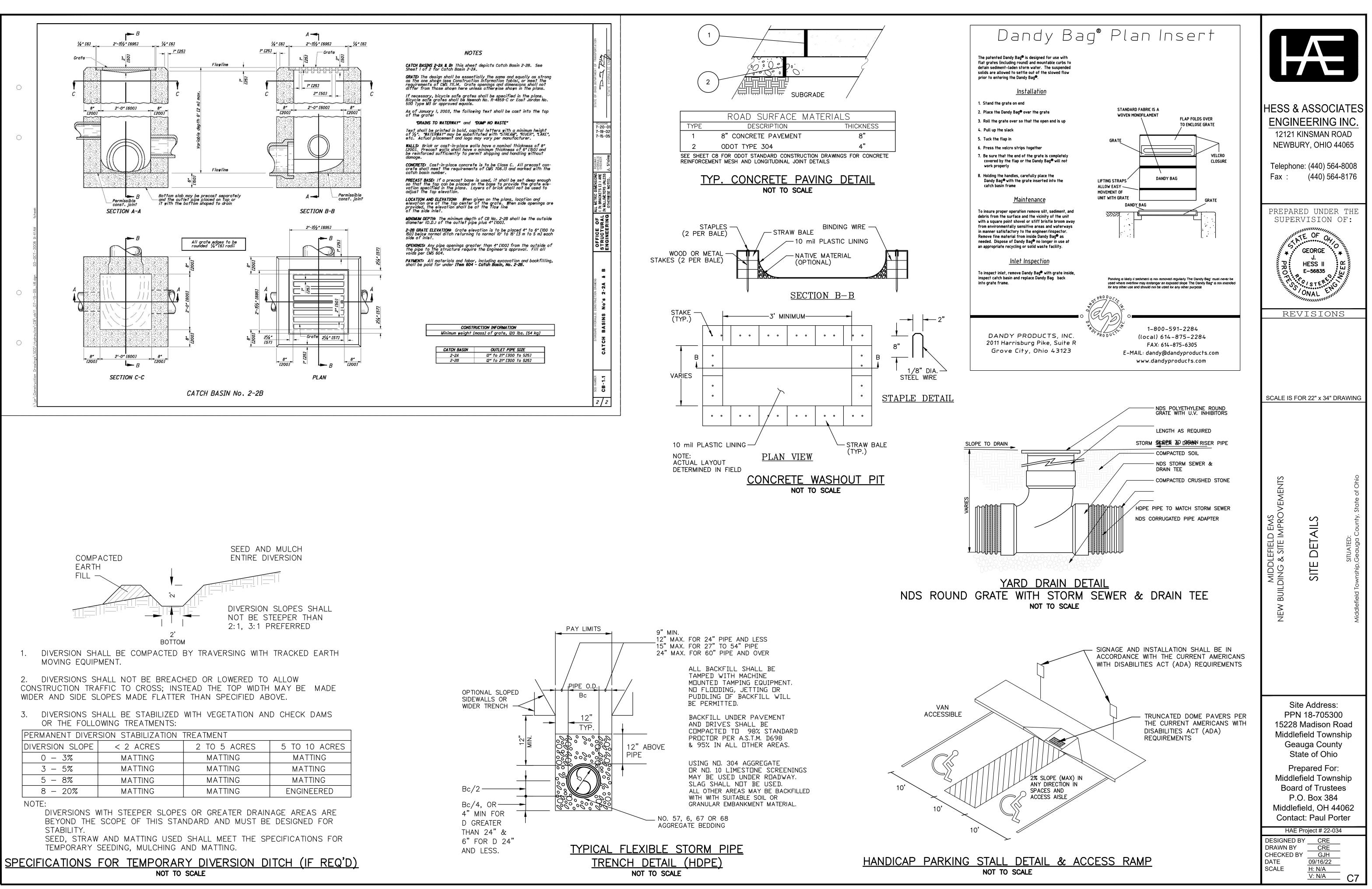
STRUCTURE NO.	STRUCT. TYPE	RIM ELEV.	SIZE/TYPE	INVERTS
CB #1	ODOT 2-2B	1177.00	8" HDPE	(N) 1173.26
CB #2	ODOT 2-2B	1177.50	8"HDPE 8"HDPE	(W) 1173.10 (S) 1173.10
CB #3	ODOT 2-2B	1176.00	8"HDPE 8"HDPE	(SE) 1172.61 (W) 1172.61
CB #4	ODOT 2-2B	1176.00	8" HDPE	(W) 1172.32
YD #1	YARD DRAIN	1177.00	8"HDPE 8"HDPE	(E) 1172.75 (N) 1172.75
YD #2	YARD DRAIN	1176.80	8"HDPE 8"HDPE	(NW) 1172.68 (S) 1172.68
• SEE CATCH B	ASIN AND YARD	DRAIN DET	AILS ON SHE	ET C7

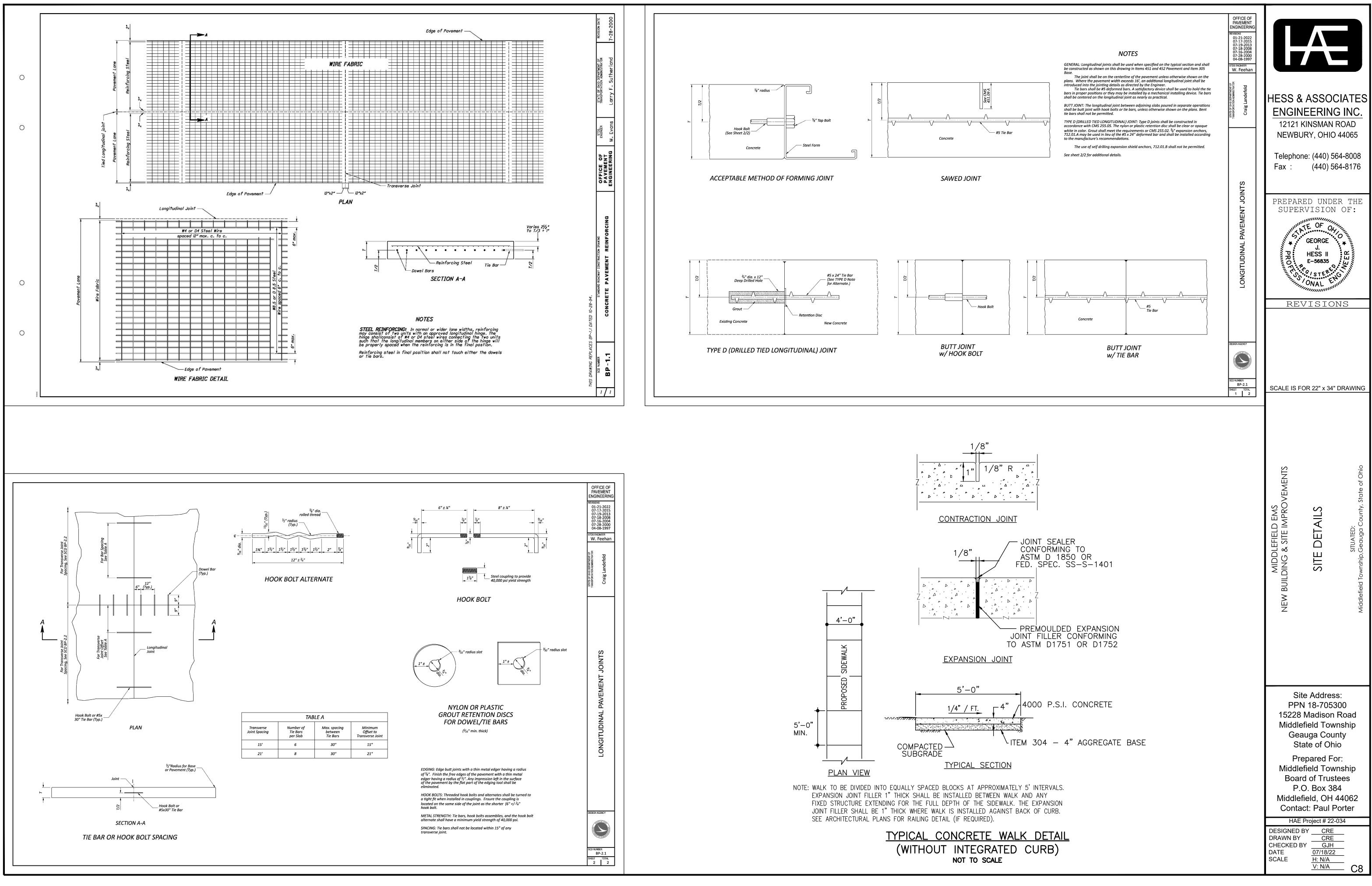


PPN 19–071472 VOL. 761 PG. 627 15340 MADISON ROAD

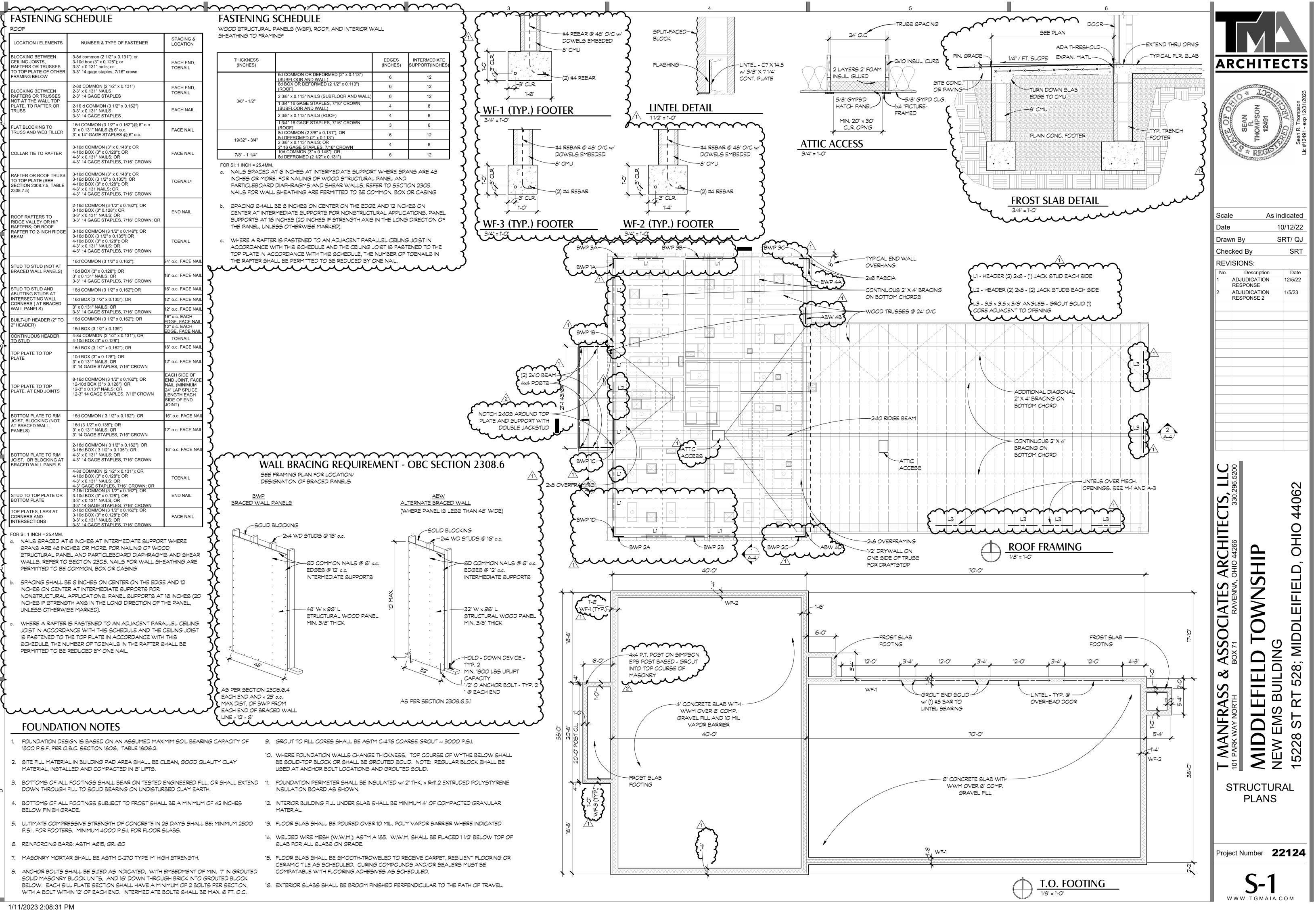




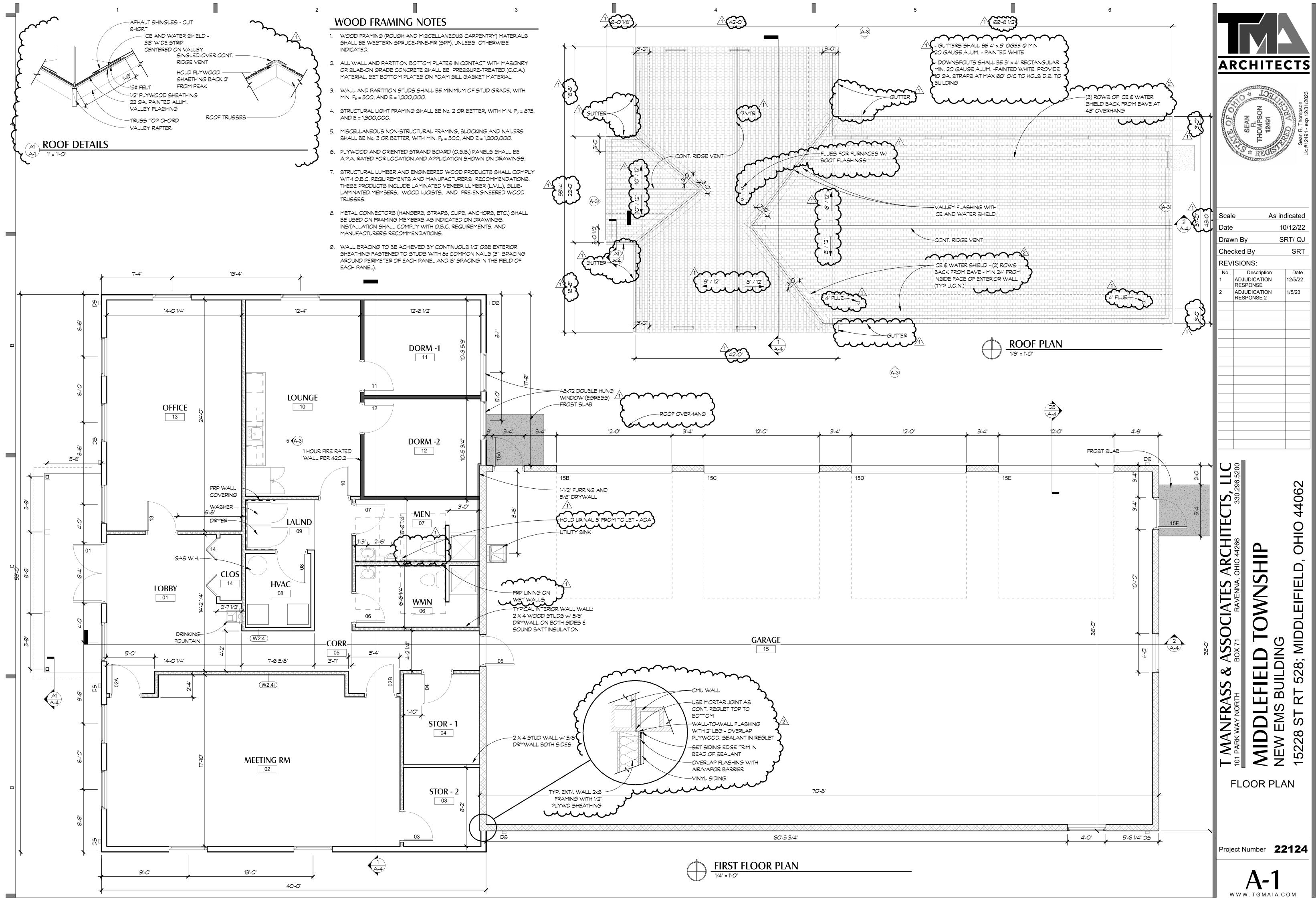




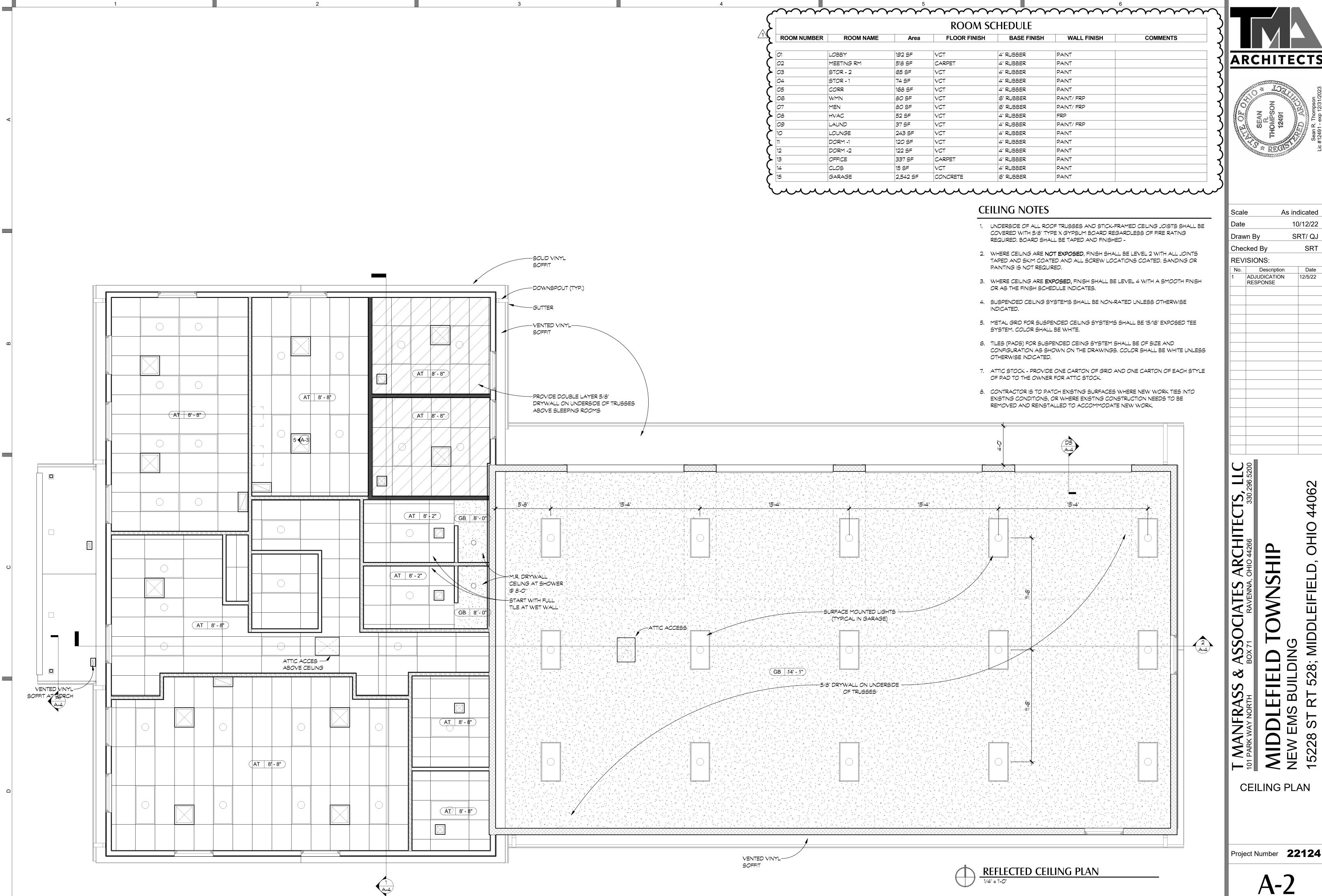
I			WOOD S		SCHEDULE . PANELS (WSP), ROOF, AND INTERIOR V 11NG°	VALL	
LOCATION / ELEMENTS	NUMBER & TYPE OF FASTENER	SPACING & LOCATION					
LOCKING BETWEEN EILING JOISTS, AFTERS OR TRUSSES O TOP PLATE OF OTHER BAMING BEI OW	3-8d common (2 1/2" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	EACH END, TOENAIL		CKNESS ICHES)	6d COMMON OR DEFORMED (2" x 0.113")	EDGES (INCHES)	INTEF SUPPO
OCKING BETWEEN	2-8d COMMON (2 1/2" x 0.131") 2-3" x 0.131" NAILS 2-3" 14 GAGE STAPLES	EACH END, TOENAIL			(SUBFLOOR AND WALL) 8d BOX OR DEFORMED (2 1/2" x 0.113") (ROOF) 2 3/8" x 0.113" NAILS (SUBFLOOR AND WALL)	6 6 6	+
AT THE WALL TOP LATE, TO RAFTER OR RUSS	2-16 d COMMON (3 1/2" x 0.162") 3-3" x 0.131" NAILS	EACH NAIL	3/8	8" - 1/2"	1 3/4" 16 GAGE STAPLES, 7/16" CROWN (SUBFLOOR AND WALL)	4	
AT BLOCKING TO USS AND WEB FILLER	3-3" 14 GAGE STAPLES 16d COMMON (3 1/2" x 0.162")@ 6" o.c. 3" x 0.131" NAILS @ 6" o.c.	FACE NAIL			2 3/8" x 0.113" NAILS (ROOF) 1 3/4" 16 GAGE STAPLES, 7/16" CROWN (ROOF) 8d COMMON (2 3/8" x 0.131"); OR	3	
	3" x 14" GAGE STAPLES @ 6" o.c. 3-10d COMMON (3" x 0.148"); OR 4-10d BOX (3" x 0.128"); OR			32" - 3/4"	6d DEFROMED (2" x 0.113") 2 3/8" x 0.113" NAILS; OR 2" 16 GAGE STAPLES, 7/16" CROWN 10d COMMON (3" x 0.148"); OR	6	
LLAR TIE TO RAFTER	4-3" x 0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL	FOR SI: 1 I	" - 1 1/4" INCH = 25.4MM	8d DEFROMED (2 1/2" x 0.131") 1.		
FTER OR ROOF TRUSS TOP PLATE (SEE CTION 2308.7.5, TABLE 08.7.5)	3-10d COMMON (3" x 0.148"); OR 3-16d BOX (3 1/2" x 0.135"); OR 4-10d BOX (3" x 0.128"); OR 4-3" x 0.131 NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL°	INCH PAR	HES OR MOR TICLEBOAR	AT 6 INCHES AT INTERMEDIATE SUPPOR RE. FOR NAILING OF WOOD STRUCTURA D DIAPHRAGMS AND SHEAR WALLS, RE LL SHEATHING ARE PERMITTED TO BE CO	L PANEL AND FER TO SECT	) TION 230
OOF RAFTERS TO IDGE VALLEY OR HIP AFTERS; OR ROOF	2-16d COMMON (3 1/2" x 0.162"); OR 3-10d BOX (3" 0.128"); OR 3-3" x 0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN; OR	END NAIL	CEN <sup>-</sup> SUPF	TER AT INTE PORTS AT 1	L BE 6 INCHES ON CENTER ON THE EDG ERMEDIATE SUPPORTS FOR NONSTRUCT 6 INCHES (20 INCHES IF STRENGTH AXIS LESS OTHERWISE MARKED).	FURAL APPLIC	
FTER TO 2-INCH RIDGE AM	3-16d BOX (3 1/2" x 0.135");OR 4-10d BOX (3" x 0.128"); OR 4-3" x 0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	TOENAIL	c. WHE ACC TOP	ERE A RAFTI ORDANCE V PLATE IN A	ER IS FASTENED TO AN ADJACENT PAR WITH THIS SCHEDULE AND THE CEILING CCORDANCE WITH THIS SCHEDULE, THE	JOIST IS FAS E NUMBER OF	TENED
UD TO STUD (NOT AT ACED WALL PANELS)	16d COMMON (3 1/2" x 0.162"); 10d BOX (3" x 0.128"); OR 3" x 0.131" NAILS; OR	24" o.c. FACE NAIL 16" o.c. FACE NAIL	THE		ALL BE PERMITTED TO BE REDUCED BY		$\mathcal{M}$
UD TO STUD AND SUTTING STUDS AT	3-3" 14 GAGE STAPLES, 7/16" CROWN 16d COMMON (3 1/2" x 0.162");OR	16" o.c. FACE NAIL	3				
TERSECTING WALL DRNERS (AT BRACED ALL PANELS)	16d BOX (3 1/2" x 0.135"); OR 3" x 0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN	12" o.c. FACE NAIL 12" o.c. FACE NAIL	}				
, LT-UP HEADER (2" TO IEADER)	3-3" 14 GAGE STAPLES, 7/16" CROWN 16d COMMON (3 1/2" x 0.162"); OR 16d BOX (3 1/2" x 0.135")	16" o.c. EACH EDGE, FACE NAIL 12" o.c. EACH	2				
NTINUOUS HEADER STUD	4-8d COMMON (2 1/2" x 0.131"); OR 4-10d BOX (3" x 0.128")	EDGE, FACE NAIL TOENAIL 16" o.c. FACE NAIL	$\boldsymbol{\zeta}$				
P PLATE TO TOP ATE	16d BOX (3 1/2" x 0.162"); OR 10d BOX (3" x 0.128"); OR 3" x 0.131" NAILS; OR	16" o.c. FACE NAIL 12" o.c. FACE NAIL	3				
	3" 14 GAGE STAPLES, 7/16" CROWN 8-16d COMMON (3 1/2" x 0.162"); OR	EACH SIDE OF END JOINT, FACE	}				
PLATE TO TOP TE, AT END JOINTS	12-10d BOX (3" x 0.128"); OR 12-3" x 0.131" NAILS; OR 12-3" 14 GAGE STAPLES, 7/16" CROWN	NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)	$\left\{ \right\}$				
TTOM PLATE TO RIM ST, BLOCKING (NOT BRACED WALL NELS)	16d COMMON ( 3 1/2" x 0.162"); OR 16d (3 1/2" x 0.135"); OR 3" x 0.131" NAILS: OR	16" o.c. FACE NAIL 12" o.c. FACE NAIL	2				
_LU)	3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON ( 3 1/2" x 0.162"); OR		く				
	3-16d BOX ( 3 1/2" x 0.135"); OR	16" o.c. FACE NAIL	5				
ST, OR BLOCKING AT	3-16d BOX ( 3 1/2" x 0.135"); OR 4-3" x 0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN	16" o.c. FACE NAIL	}{~~~		ALL BRACING REQUIRE		
IST, OR BLOCKING AT	3-16d BOX ( 3 1/2" x 0.135"); OR 4-3" x 0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN 4-8d COMMON (2 1/2" x 0.131"); OR 4-10d BOX (3" x 0.128"); OR 4-3" x 0.131" NAILS; OR 4-3" GAGE STAPLES, 7/16" CROWN; OR	16" o.c. FACE NAIL TOENAIL		SEE			
ST, OR BLOCKING AT ACED WALL PANELS JD TO TOP PLATE OR	3-16d BOX ( 3 1/2" x 0.135"); OR 4-3" x 0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN 4-8d COMMON (2 1/2" x 0.131"); OR 4-10d BOX (3" x 0.128"); OR 4-3" x 0.131" NAILS; OR 4-3" GAGE STAPLES, 7/16" CROWN; OR 2-16d COMMON (3 1/2" x 0.162"); OR 3-10d BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN			SEE	ALL BRACING REQUIRE FRAMING PLAN FOR LOCATION/ DIGNATION OF BRACED PANELS	- MENT.	
ST, OR BLOCKING AT ACED WALL PANELS JD TO TOP PLATE OR TTOM PLATE P PLATES, LAPS AT RNERS AND 'ERSECTIONS	3-16d BOX ( 3 1/2" x 0.135"); OR 4-3" x 0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN 4-8d COMMON (2 1/2" x 0.131"); OR 4-10d BOX (3" x 0.128"); OR 4-3" x 0.131" NAILS; OR 4-3" GAGE STAPLES, 7/16" CROWN; OR 2-16d COMMON (3 1/2" x 0.162"); OR 3-10d BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS; OR	TOENAIL		SEE DES <u>BWP</u> CED WALL	ALL BRACING REQUIRE FRAMING PLAN FOR LOCATION/ DIGNATION OF BRACED PANELS	- MENT.	OB
SPANS ARE 48 INC STRUCTURAL PANE WALLS, REFER TO PERMITTED TO BE INCHES ON CENTE NONSTRUCTURAL INCHES IF STRENG UNLESS OTHERWIS WHERE A RAFTER JOIST IN ACCORDA IS FASTENED TO T SCHEDULE, THE NU	3-16d BOX ( 3 1/2" x 0.135"); OR 4-3" x 0.131" NAILS; OR 4-3" 14 GAGE STAPLES, 7/16" CROWN 4-8d COMMON (2 1/2" x 0.131"); OR 4-10d BOX (3" x 0.128"); OR 4-3" x 0.131" NAILS; OR 4-3" GAGE STAPLES, 7/16" CROWN; OR 2-16d COMMON (3 1/2" x 0.162"); OR 3-10d BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON (3 1/2" x 0.162"); OR 3-10d BOX (3" x 0.128"); OR 3-3" x 0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON (3 1/2" x 0.162"); OR 3-3" x 0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON (3 1/2" x 0.162"); OR 3-3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON (3 1/2" x 0.162"); OR 3-3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON (3 1/2" x 0.162"); OR 3-3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON, 3 1/2" x 0.162"); OR 3-3" 14 GAGE STAPLES, 7/16" CROWN 2-16d COMMON, 3 1/2" x 0.162"); OR 3-3" A 0.131" NAILS; OR 5-6 INCHES AT INTERMEDIATE SUPPOR CHES ON CENTER ON THE EDG R AT INTERMEDIATE SUPPORTS FOR APPLICATIONS, PANEL SUPPORTS AT TH AXIS IN THE LONG DIRECTION OF	TOENAIL END NAIL FACE NAIL FACE NAIL FACE NAIL FACE NAIL S AND SHEAR EATHING ARE E AND 12 TIG INCHES (20 THE PANEL, ALLEL CEILING CEILING JOIST H THIS		SECTION 22	ALL BRACING REQUIRE FRAMING PLAN FOR LOCATION/ BIOCKING 2x4 WD STUDS @ 16" o.c. 6D COMMON NAILS @ 6" EDGES @ 12" o.c. INTERMEDIATE SUPPORTS 48" W x 96" L STRUCTURAL WOOD PAN MIN. 3/8" THICK		
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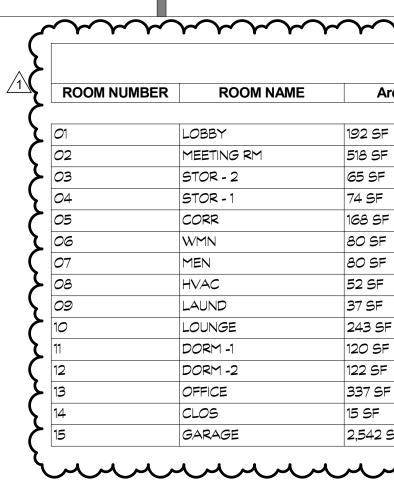


CULAR TO THE PATH OF TRAVEL.



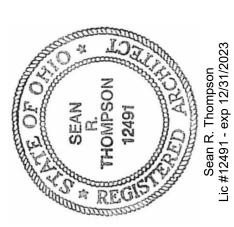
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ROOM SCHEDULE									
Area	FLOOR FINISH	BASE FINISH	WALL FINISH	COMMENTS					
,F	VCT	4" RUBBER	PAINT						
, Е	CARPET	4" RUBBER	PAINT						
=	VCT	4" RUBBER	PAINT						
=	VCT	4" RUBBER	PAINT						
F	VCT	4" RUBBER	PAINT						
F	VCT	6" RUBBER	PAINT/ FRP						
F	VCT	6" RUBBER	PAINT/ FRP						
:	VCT	4" RUBBER	FRP						
:	VCT	4" RUBBER	PAINT/ FRP						
6F	VCT	4" RUBBER	PAINT						
F	VCT	4" RUBBER	PAINT						
F	VCT	4" RUBBER	PAINT						
6F	CARPET	4" RUBBER	PAINT						
	VCT	4" RUBBER	PAINT						
SF	CONCRETE	6" RUBBER	PAINT						

# ARCHITECTS



## **CASEWORK NOTES**

- COUNTERTOPS AND BACKSPLASHES:
- COUNTERTOPS SHALL BE 1-1/2": HIGH DENSITY PARTICLEBOARD SUBSTRATE WITH 3/4"x4" HIGH DENSITY PARTICLEBOARD BACKSPLASH. ALL EXPOSED SURFACES SHALL BE FINIHSED WITH HIGH-PRESSURE PLASTIC LAMINATE. FASTEN
- COUNTERTOPS BY SCREWING THROUGH CORNER BLOCKS OF BASE UNITS INTO UNDERSIDE OF COUNTERTOP. FORM SEAMS USING SPLINES TO ALIGN ADJACENT SURFACES, AND SECURE WITH GLUE AND CONCEALED CLAMPING DEVICES DESIGNED FOR THIS PURPOSE. SECURE BACKSPLASH TO WALL USING SUITABLE CONSTRUCTION ADHESIVE. BED BACKSPLASH IN SEALANT AT COUNTERTOP JOINT. TOOL SEALANT FOR SMOOTH INSTALLATION.
- . CABINETS:

CABINETS SHALL BE HEAVY-DUTY COMMERCIAL GRADE PLASTIC LAMINATE-FACED CABINETS AS MANUFACTURED BY ONE OF THE FOLLOWING:

- A. LSI COPRPORATION OF AMERICA MINNEAPOLIS, MN -OVERLAY L45
- B. TMI SYSTEMS DESIGN CORPORATION DICKENSON, ND -TRIMLINE 2000
- C. CUSTOM CASEWORK OF EQUAL QUALITY AND MEETING THE REQUIREMENTS OF SPECIFICATIONS. COLORS, TEXTURES AND PATTERS SHALL BE AS SCHEDULED

OR SELECTED FROM MANUFACTURER'S FULL RANGE FOR THESE CHARACTERISTICS IF NOT SCHEDULED.

#### 3. CABINET COMPONENTS:

A. CABINET CONSTRUCTION SHALL BE SOFTWOOD LUMBER FRAMING, PARTICLE BOARD, PLASTIC LAMINATE FACED. EXPOSED SURFACES SHALL BE HIGH PRESSURE LAMINATE. INTERIOR SURFACES SHALL BE MANUFACTURER'S STANDARD LOW PRESSURE OR MELAMINE LAMINATE.

B. DOOR AND DRAWER FRONTS SHALL BE 3/4" PARTICLEBOARD, PLASTIC LAMINATE-FACED, WITH 10mm TEE EDGE BANDING TO MATCH PLASTIC LAMINATE.

C. BOLTS, NUTS, WASHERS AND SCREWSSHALL BE OF SIZE RECOMMENDED BY THE AWI. D. CONCEALED JOINT FASTENERS SHALL BE THREADED

STEEL.

**TOILET ACCESSORIES** 

INFORMATION ONLY

BRADLEY CORPORATION AMERICAN SPECIALTIES, INC.

TUBULAR SPECIALTIES MFG., INC.

#### HARDWARE:

- A. SHELF STANDARDS AND RESTS SHALL BE ADJUSTABLE BUTTON-TYPE IN PRE-DRILLED HOLES.
- B. DRAWER AND DOOR PULLS SHALL BE METAL WIRE PULLS IN BRUSHED CHROME FINISH.
- C. DRAWER SLIDES SHALL BE FULL-EXTENSION STEEL AND BALL BEARING CONSTRUCTION ABLE TO SUPPORT 100 LBS. D. HINGES SHALL BE CONCEALED WITH 176 DEGREE SWING. EXECUTION:
- 5. FIELD VERIFY DIMENSIONS, CONDITIONS, AND ADEQUACY OF SUPPORT FRAMING.
- 6. CONTRACTOR IS TO COORDINATE ALL WORK, STOCKING OF MATERIALS, REMOVAL OF DEBRIS, ETC. IN COMPLIANCE WITH LOCAL REQUIREMENTS.
- CONTRACTOR IS TO PATCH EXISTING SURFACES WHERE NEW WORK TIES INTO EXISTING CONDITIONS, OR WHERE EXISTING CONSTRUCTION NEEDS TO BE REMOVED AND REINSTALLED TO ACCOMMODATE NEW WORK.

TOILET ROOM ACCESSORY MODEL NUMBERS SHOW ARE AS SUPPLIED BY BOBRICK,

ALL ITEMS SHALL MEET A.D.A. REQUIREMENTS. CONTRACTOR SHALL VERIFY MOUNTING

GRAB BARS SHALL BE DESIGNED TO RESIST A SINGLE CONCENTRATED LOAD OF

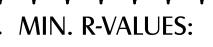
250 LBS. APPLIED AT ANY POINT IN ANY DIRECTION.

UNLESS NOTED OTHERWISE. MODEL NUMBERS ARE SHOWN FOR GENERAL

OTHER ACCEPTABLE MANUFACTURERS OFFERING EQUIVALENT PRODUCTS ARE:

HEIGHTS, COMPLYING WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

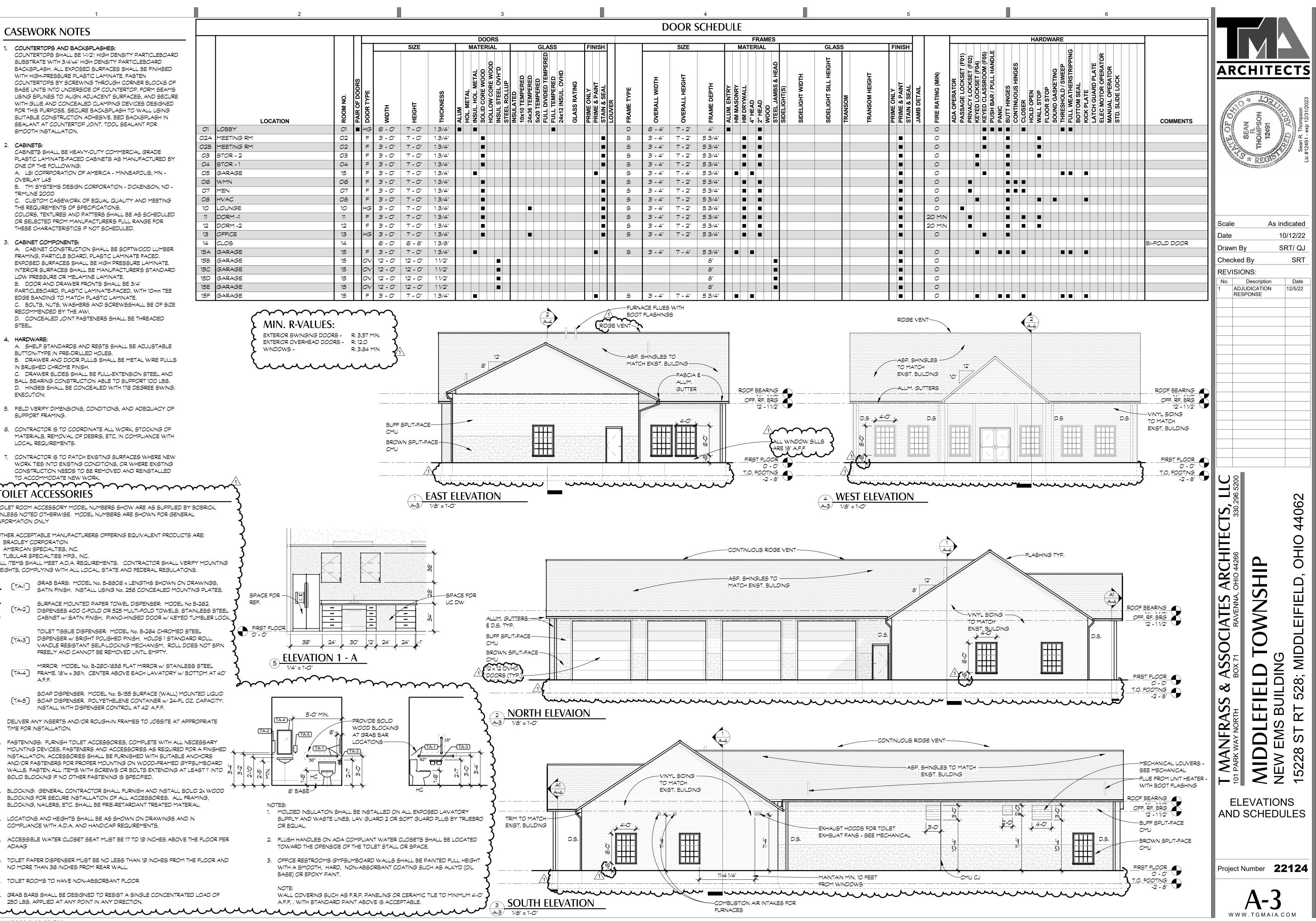
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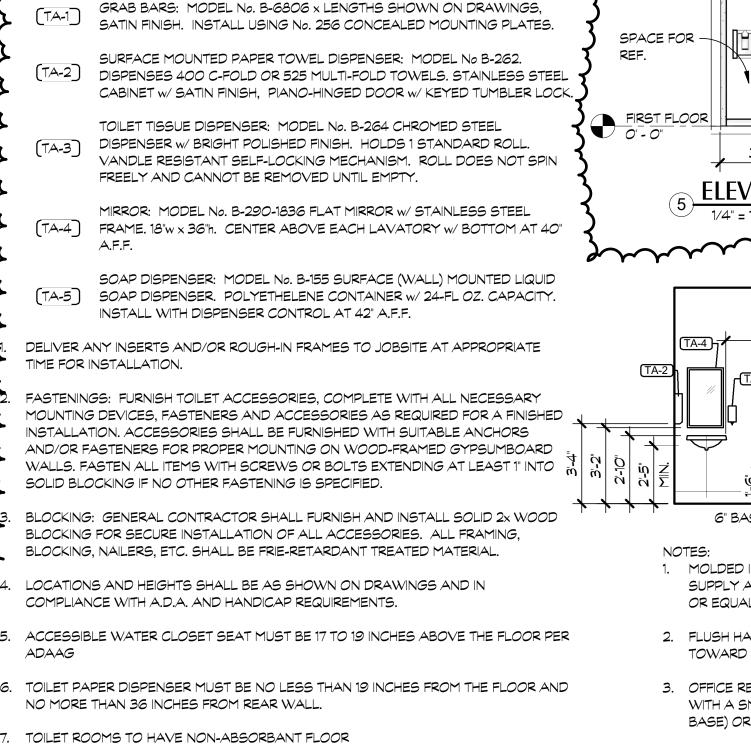


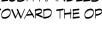
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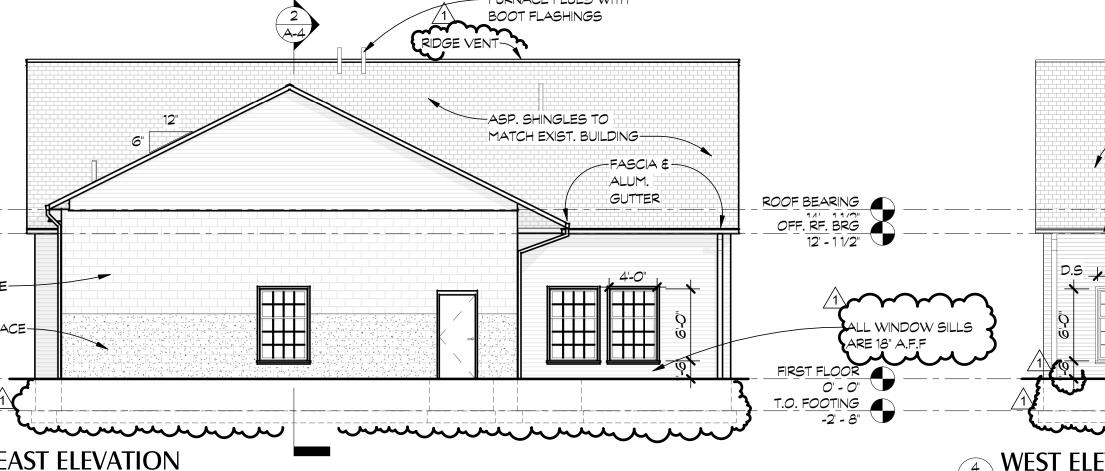
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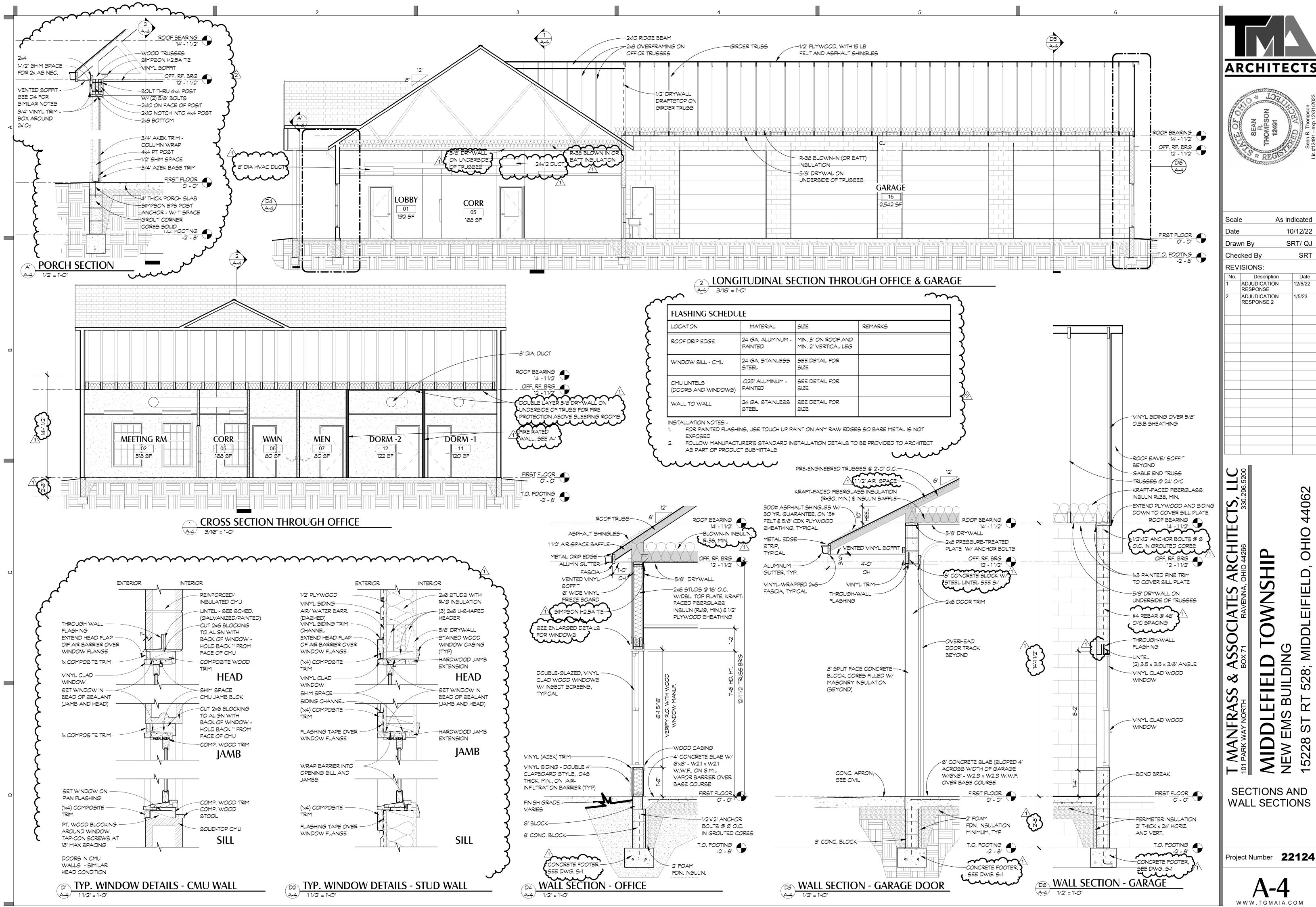






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## 030000 - CONCRETE

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Α.	CAST-IN-PLACE CONCRETE NERAL
	SECTION INCLUDES: 1. REINFORCED CONC. FOUNDATION & FOOTINGS.
	<ol> <li>EXTERIOR SIDEWALKS.</li> <li>INTERIOR SLAB ON GRADE.</li> </ol>
	<ol> <li>PATCHING EXISTING SLABS.</li> <li>CONC. ACCESSORIES.</li> </ol>
В.	SUBMITTALS: 1. SUBMIT MIX DESIGN FOR EACH STRENGTH AND LOCATION
	OF CONCRETE.
	<ol> <li>WATER STOPS PRODUCT DATA.</li> <li>WWF PRODUCT DATA.</li> </ol>
	4. CONTROL JOINT. PLAN. ODUCTS
А.	CONCRETE MATERIALS: 1. PORTLAND CEMENT: ASTM C 150, TYPE 1.
	<ol> <li>AGGREGATE: ASTM 33, UNIFORMLY GRADED.</li> <li>WATER: ASTM 94, POTABLE WATER.</li> </ol>
	<ol> <li>AIR-ENTRAINING ADMIXTURE: ASTM C 260.</li> <li>WATER REDUCING ADMIXTURE (PLASTICIZER): ASTM C 494</li> </ol>
	TYPE A, OR ASTM C 494 TYPE F (SUPER PLASTICIZER).
_	<ol> <li>CALCIUM CHLORIDE OR ADMIXTURES CONTAINING GREATER THAN 1.0% CHLORIDE IONS ARE NOT PERMITTED.</li> </ol>
В.	CONCRETE MIXES: 1. TRENCH FOOTING AND COLUMN BASE PADS: MINIMUM
	3,000 PSI, GRAVEL OR LIMESTONE AGGREGATE MAY BE USED.
	2. COLUMN PIERS, STRUCTURAL WALLS AND FLOOR SLABS: MINIMUM 4000 PSI, LIMESTONE AGGREGATE.
	3. EXTERIOR SLABS AND WALKS: MINIMUM 4000 PSI, AIR ENTRAINMENT AND LIMESTONE AGGREGATE.
C	4. MAXIMUM SLUMP SHALL BE 4 INCHES FOR ALL CONCRETE. RELATED MATERIALS:
0.	<ol> <li>PLAIN STEEL WELDED WIRE FABRIC (W.W.F.): ASTM Q 185. REINFORCING BARS: ASTM A 615, GRADE 60.</li> </ol>
	a. #10 x #10 / 6" x 6" UNLESS NOTED OTHERWISE ON THE
	DRAWINGS. b. STORE REINFORCING OFF THE GROUND TO AVOID
	SOILING BY FOREIGN MATERIALS (MUD). 2. VAPOR RETARDER (BARRIER): ASTM 1745, 10 MIL.
	POLYOLEFIN SHEET. STEGOWRAP (10 MIL.) VAPOR BARRIER: STEGO
	INDUSTRIES LLC. GRIFFOLYN T-85: REEF INDUSTRIES.
	MOISTOP ULTRA: FORTIFIBER INDUSTRIES. (OR EQUAL).
	(OR EQUAL). a. MANUFACTURERS PRODUCTS b. SEAM TAPE AS DESIGNED FOR MANUFACTURER'S
	PRODUCT (MINIMUM 4 INCHES WIDE).
	3. FLEXIBLE WATERSTOPS: RUBBER CE CRD-C 513, OR PVC, CE CRD-C 572.
	4. JOINT SEALANT (CONTAINMENT RESERVOIRS): CORROSIVE RESISTANT, ONE-PART POLYURETHANE (OR
	EQUAL) CAULKING SEALANT. 5. JOINT-FILLER STRIPS (EXPANSION MATERIAL): ASTM D 1751
	ASPHALT-SATURATED CELLULOSIC FIBER, SIZE 1/2 INCH THICK x FULL DEPTH OF SLAB.
	<ol> <li>PERIMETER INSULATION: EXTRUDED POLYSTYRENE FOAM PLASTIC BOARD.</li> </ol>
	SIZE: 2 INCHES THICK x DIMENSIONS SHOWN ON
	DRAWINGS. 7.
	A. INTERIOR SLABS: ASTM C 309, LOW V.O.C., CLEAR SPRAY-APPLIED WATER-BASED ACRYLIC CURING AND
	SEALING COMPOUND. ChemMasters SAFE-CURE & SEAL 309
	ChemMasters SAFE-CURE & SEAL 0800 DAYTON SUPERIOR "SAFE CURE & SEAL" J-18
	(OR EQUAL). NOTE: PRIOR TO APPLICATION, VERIFY COMPATABILITY
	OF CURE-SEAL WITH PAINT AND MASTICS SCHEDULED
	FOR FLOOR FINISHES. CO-ORDINATE WITH GENERAL OR FLOORING
	CONTRACTOR. A. EXTERIOR SLABS: ASTM C 309, CLEAR SPRAY-
	APPLIED SOLVENT-BASED POLYMER CURING AND SEALING COMPOUND.
	ChemMasters POLYSEAL KUHLMAN CORP. "KURE & SEAL 25".
	(OR EQUAL).
	ECUTION ALL SOIL SURROUNDING AND UNDER ALL FOOTINGS, FLOOR
Λ.	SLABS, ETC., SHALL BE PROTECTED FROM FREEZING AND
В.	FROST ACTION DURING CONSTRUCTION. COMPLY WITH ACI 306.1 FOR COLD WEATHER CONCRETE
	PLACEMENT, AND WITH ACI 305 R WHEN HOT WEATHER CONDITIONS EXIST.
C.	BOTTOMS OF ALL COLUMN BASE PADS AND TRENCH FOOTINGS SHALL BEAR ON TESTED ENGINEERED FILL, OR
	SHALL EXTEND DOWN THROUGH FILL TO SOLID BEARING ON UNDISTURBED CLAY EARTH.
	BOTTOMS OF ALL FOOTINGS SUBJECT TO FROST SHALL BE A MINIMUM OF 42 INCHES BELOW FINISH GRADE.
D.	
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## 040000 - MASONRY

#### 042000 - UNIT MASONRY

- 1.1 GENERAL A. UNIT MASONRY CONSTRUCTION SHALL CONFORM TO THE FOLLOWING
  - 1. OHIO BUIDLING (OBC) CHAPTER 21 MASONRY.
  - 2. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ ASCE 5 / TMS 402).
  - 3. SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1 / ASCE 6 / TMS 602).
- B. SUBMITTALS 1. SHOP DRAWINGS FOR REINFORCING DETAILING FABRICATION, BENDING, AND PLACEMENT OF
- REINFORCING BARS. 2. SAMPLES FOR MASONRY UNITS AND MORTAR AS CALLED OUT ON THE DRAWINGS OR SHOWING THE FULL RANGE OF COLORS AND TEXTURES AVAILABLE FOR SELECTION BY
- ARCHITECT AND/OR OWNER. PRODUCT DATA FOR EACH DIFFERENT MASONRY PRODUCT REQUIRED INCLUDING TIES, WEEPS AND VENTS. AND MORTAR COLLECTING MESH.

#### 1.2 PRODUCTS

- A. HOLLOW AND SOLID CONCRETE MASONRY UNITS (CMU) SHALL CONFORM WITH ASTM C-90, TYPE 1, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1,900 PSI EACH UNIT, NET
- CROSS-SECTIONAL AREA. WEIGHT CLASSIFICATION - NORMAL WEIGHT
- 2. FIRE RATING: MINIMUM 2 HOUR RATED MASONRY UNITS
- WHERE INDICATED ON THE DRAWINGS. 3. SPLIT-FACED UNITS - INTENT IS TO MATCH THE EXISTING BUILDING - 2 COLORS B MORTAR
- BEARING WALLS AND EXTERIOR WALLS: ASTM C-270. TYPE "S", MIN. COMPRESSIVE STRENGTH OF 1,800 PSI AT 28 DAYS
- 2. NON-BEAING INTERIOR WALLS: ASTM C-270, TYPE "N", MIN. COMPRESSIVE STRENGTH OF 1.000 PSI AT 28 DAYS. C. GROUT: SHALL CONFORM TO ASTM C-476 COARSE GROUT, 3/8"
- MAXIMUM SIZE COARSE AGGREGATE, WITH MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- D. RELATED MATERIALS:
- REINFORCING BARS IN MASONRY: ASTM A-615, GRADE 60. 2. STEEL ANGLE LINTELS: (REFERENCE LINTEL SCHEDULE) a. ALL STEEL LINTELS LOCATED IN EXTERIOR WALLS
- SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A-123, GRADE 100.
- USE ONE ANGLE FOR EACH 4" WIDTH OF MASONRY. c. ANGLE LINTELS SHALL HAVE A MINIMUM OF 4" BEARING AT EACH END WITH MINIMUM 8" SOLID OR GOUTED MASONRY BELOW BEARING ENDS
- STEEL BEAM (CHANNEL) AND PLATE LINTELS:
- a. ALL STEEL LINTELS LOCATED IN EXTERIOR WALLS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A-123, GRADE 100.
- b. BOTTOM PLATES ON CHANNELS SHALL BE 1/2" LESS IN WIDTH THAN THE ACTUAL WALL THICKNESS AND SHALL EXTEND FOR THE FULL LENGTH OF THE LINTEL BOTTOM PLATES SHALL BE STITCH WELDED TO CHANNELS WITH 1/4" FILLET WELDS 3" IN LENGTH ON
- BOTH SIDES AT 9" O/C. c. BEAM LINTELS SHALL HAVE A MINIMUM OF 8" BEARING AT EACH END WITH MINIMUM 16" SOLID OR GROUTED MASONRY BELOW BEARING ENDS.
- 4. HORIZONTAL JOINT REINFORCEMENT a. GENERAL: SHALL BE GALVANIZED
  - EXTERIOR WALLS: ASTM A-153, CLASS B-2 INTERIOR WALLS: ASTM A-641, CLASS 1
- b. FOR SINGLE WYTHE WALL CONSTRUCTION, JOINT REINFORCING SHALL BE EITHER LADDER OR TRUSS
- c. FOR MULTI-WYTHE CAVITY WALL CONSTRUCTION, PROVIDE ADJUSTABLE "HOOK AND EYE" (2 PIECE) TAB DESIGN, WITH SINGLE PAIR OF SIDE RODS AND RECTANGULAR CROSS TIES. AND WITH SEPARATE ADJUSTABLE TIES ENGAGING THE CROSS TIES AND EXTENDED INTO THE OUTER WYTHE
- d. JOINT REINFORCING SHALL BE BENT AROUND CORNERS OR USE PRE-MADE CORNERS. e. JOINT REINFORCING SHALL NOT BE CONTINUOUS
- THROUGH EXPANSION OR CONTROL JOINTS. PROVIDE MISCELLANEOUS GALVANIZED SHEET METAL OR
- WIRE TIES AND ANCHORS AS REQUIRED FOR THE APPLICATION. 6. FLEXIBLE RUBBERIZED FLASHING: W.R. GRACE "PERM-A-
- BARRIER" OR EQUAL 7. WEEPS: a. POLYETHYLENE TUBES WITH COTTON CORD WICKS, OR
- PLASTIC LOUVER STYLE WEEPS. b. OPEN HEAD JOINTS ARE NOT PERMITTED. 8. VENTS:
- a. PLASTIC LOUVER STYLE VENTS OPEN HEAD JOINT ARE NOT PERMITTED. COMPRESSIBLE FILLER: PREMOLDED FILLER STRIPS
- COMPLYING WITH ASTM D-1056, TYPE 2, CLASS A, GRADE 1 - COMPRESSIBLE UP TO 35%, OF WIDTH AND THICKNESS INDICATED OR REQUIRED. 10. PRE-FORMED CONTROPL JOINT GASKETS: DESIGNED TO
- FIT STANDARD SASH BLOCK AND TO MAINTAIN LATERAL STABILITY IN MASONRY WALL MADE FROM STYRENE-BUTADENE RUBBER COMPLYING WITH ASTM D-2000 DESIGNATION M2AA-805.
- 11. BOND BREAKER STRIPS: ASPHALT-SATURATED, ORGANIC ROOFING FELT (15 LB) COMPLYING WITH ASTM D-226, TYPE
- 12. CMU CORE INSULATION: FOAM-IN-PLACE (INJECTED) POLYURETHANE BLOCK CORE-FILL INSULATION - BASIS OF DESIGN FOAM TECH. 1.3 EXECUTION
- A. COMPLY WITH THE RECOMMENDATIONS OF THE BRICK INSTITURE OF AMERICA, NATIONAL CONCRETE MASONRY ASSOCIATION, AND THE PREVIOUSLY MENTIONED CODES AND SPECIFICATIONS FOR HOT WEATHER MASONRY CONSTRUCTION.
- B. PROTECT ALL MASONRY FROM FREEZING WHEN THE TEMPERATURE IS 40 DEGREES FAHRENHEIT AND FALLING. COMPLY WITH THE RECOMMENDATIONS OF THE BRICK INSTITURE OF AMERICA, NATIONAL CONCRETE MASONRY ASSOCIATION, AND THE PREVIOUSLY MENTIONED CODES AND SPECIFICATIONS FOR COLD WEATHER MASONRY CONSTRUCTION
- C. PROTECT PARTIALLY COMPLETED MASONRY WORK AGAINST WEATHER WHEN WORK IS NOT IN PROGRESS BY COVERING WITH POLYETHELENE SHEET.
- D. TEMPORARILY BRACE ALL MASONRY WALLS TO PROVIDE STABILITY DURING CONSTRUCTION UNTIL THE DESIGN
- STRUCTURE IS COMPLETED AND CAN STABILIZE THE WALLS. E. LAYOUT THE WALLS IN ADVANCE FOR ACCURATE SPACING OF SURFACE BOND PATTERNS AND FOR ACCURATE LOCATIONS OF OPENINGS, MOVEMENT-TYPE JOINTS, RETURNS AND OFFSETS. AVOID THE USE OF LESS THAN HALF-SIZE UNITS AT CORNERS, JAMBS, AND WHERE POSSIBLE AT OTHER LOCATIONS
- F. ALL UNIT MASONRY SHALL BE LAID IN STANDARD RUNNING
- BOND UNLESS NOTED OTHERWISE. G. TOOL EXPOSED JOINTS SLIGHTLY CONCAVE WHEN THUMBPRINT HARD. TOOL EVENLY TO ENSURE CONSISTENT
- COLOR OF MORTAR. H. AS WORK PROGRESSES, BUILD IN ITEMS SPECIFIED UNDER THIS AND OTHER SECTIONS OF THE SPECIFICATIONS. FILL IN
- SOLIDLY WITH MASONRY AROUND BUILT-IN ITEMS. I. ALL CORES WHICH CONTAIN VERTICAL REINFORCING SHALL BE

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GROUTED SOLID FOR THE FULL HEIGHT OF THE WALL. GROUT AS WORK PROGRESSES IN LIFTS NOT EXCEEDED 5'-0". BAR SPLAICE LAP LENGTHS SHALL BE MINIMUM 27" WITH 21" EMBEDMENT LENGTH FOR #5 BARS.

- J. INSTALL FLEXIBLE FLASHING MEMBRANE AND WEEP HOLES AT ALL EXTERIOR LINTELS AND SHELF ANGLES. EXTEND FLASHING 4" AT ENDS AND TURN UP NOT LESS THAN 2" TO FORM A PAN.
- a. WEEP LOCATIONS: 16" O/C AND AT ALL SHELF ANGLES, LOOSE LINTES, AND SOLID COURSES.
- b. VENT LOCATIONS: 32" O/C AT TOPS OF ALL CAVITY WALLS AND BELOW SHELF ANGLES AND SOLID COURSES.
- c. INSTALL WEEPS AND VENTS FLUSH WITH EXTERIOR FACE OF MASONRY.
- K. INSTALL CORE-FILL INSULATION AFTER WALL SECTIONS ARE COMPLETE OR FOLLOWING THE RECOMMENDATIONS OF FOAM INSULATION MANUFACTURER.
- L. IN- PROGRESS CLEANING: CLEAN UNIT MASONRY BY DRY BRUSHING AS WORK PROGRESSES. M. FINAL CLEANING: AFTER MORTAR IS THOROUGHLY SET AND CURED, CLEAN CONCRETE MASONRY BY CLEANINIG METHOD INDICATED IN NEMA TEK 8-2 APPLICABLE TO THE TYPE OF STAIN. IF PRESSURE WASHING OR CHEMICAL CLEANERS ARE USED, CARE MUST BE TAKEN NOT TO DAMAGE THE

APPEARANCE OR UNIFORMITY OF COLORED MASONRY UNIT

#### 050000 - METALS

#### 05500 - METAL FABRICATIONS. 1.1 GENERAL

WALLS.

- A. SUBMITTALS: IN ADDITION TO PRODUCT DATA, SUBMIT THE FOLLOWING: SHOP DRAWINGS DETAILING FABRICATION AND ERECTION.
- 2. TEMPLATES FOR ANCHOR BOLTS. B. TYPICAL METAL FABRICATIONS INCLUDE BUT ARE NOT LIMITED
- TO THE FOLLOWING . MISCELLANEOUS STEEL FRAMING AND SUPPORTS.
- 2. LOOSE STEEL LINTELS.
- . LOOSE BEARING AND LEVELING PLATES. 4. METAL BOLLARDS.

#### 1.2 PRODUCTS

- A. GENERAL: PROVIDE MATERIALS WITH SMOOTH, FLAT SURFACES WITHOUT BLEMISHES.
- B. FERROUS METALS: AS FOLLOWS
- 1. STEEL PLATES, SHAPES AND BARS: ASTM A 36 / A 36M. 2. STAINLESS-STEEL BARS AND SHAPES: ASTM A 276, TYPE
- 3. STEEL TUBING: COLD-FORMED STEEL TUBING COMPLYING WITH ASTM A 500.
- 4. STEEL PIPE: ASTM A 53, STANDARD WEIGHT (SCHEDULE 40), UNLESS OTHERWISE INDICATED. CONCRETE INSERTS: THREADED OR WEDGE TYPE,
- GALVANIZED FERROUS CASTINGS, EITHER ASTM A 47 (ASTM A 47 M) MALLABLE IRON ASTM A 27 (A 27M) CAST
- STEEL. PROVIDE BOLTS, WASHERS AND SHIMS AS NEEDED, HOT DIP GALVANIZED PER ASTM A 153 (A 153M). C. SHOP PRIMER FOR FERROUS METAL: FAST-CURING, LEAD AND CHROMATE-FREE, UNIVERSAL MODIFIED ALKYD PRIMER
- COMPLYING WITH FS TT-P-664 AND COMPATIBLE WITH FINISH PAINT SYSTEMS INDICATED. D. GALVANIZING REPAIR PAINT: ALL DAMAGED GALVANIZING
- SHALL BE REPAIRED PER ASTM A 780, USING HIGH-ZINC-DUST CONTENT PAINT COMPLYING WITH SSPC-PAINT 20. E. FASTENERS: PROVIDE TYPE 304 OR 316 STAINLESS-STEEL FASTENERS FOR EXTERIOR USE, AND ZINC-PLATED
- FASTENERS WITH COATING COMPLYING WITH ASTM B 633, CLASS Fe-/Zn 5 WHERE BUILT INTO EXTERIOR WALLS. SELECT FASTENERS FOR TYPE, CLASS AND GRADE REQUIRED. F. GROUT: SEE SECTION 5120 STRUCTURAL STEEL 13D.
- G. CONCRETE FILL: SEE SECTION 03300 CAST-IN-PLACE CONCRETE 1.2. FILL SHALL BE 3000 PSI AIR-ENTRAINED
- H. FABRICATION, GENERAL: USE CONNECTIONS THAT MAINTAIN STRUCTURAL VALUE OF JOINED PIECES. SHEAR AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS.
- 1. WELD CORNERS AND SEAMS CONTINUOUSLY. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP. REMOVE WELDING FLUX IMMEDIATELY. FINISH EXPOSED WELD SMOOTH AND BLENDED.
- 2. FABRICATE JOINTS THAT WILL BE EXPOSED TO WEATHER IN A MANNER TO EXCLUDE WATER, OR PROVIDE WEEP HOLES 3. FORM EXPOSED CONNECTIONS WITH HAIRLINE JOINTS,
- FLUSH AND SMOOTH, USING CONCEALED FASTENERS WHERE POSSIBLE. LOCATE JOINTS WHERE LEAST CONSPICUOUS.
- I. LOOSE BEARING AND LEVELING PLATES: PROVIDE FOR STEEL ITEMS BEARING ON MASONRY OR CONCRETE. DRILL PLATES TO RECEIVE ANCHOR BOLTS. 1. GALVANIZE PLATES WHERE SUBJECT TO MOISTURE.
- J. LOOSE STEEL LINTELS: FABRICATE FROM SHAPES AND SIZES INDICATED.
- 1. GALVANIZE LINTELS LOCATED IN EXTERIOR WALLS. K. FINISH METAL FABRICATIONS AFTER ASSEMBLY. DE-BURR, GRIND OR SAND ALL ROUGH CORNERS, EDGES AND SURFACES. SHOP PRIME ALL FERROUS METAL ITEMS NOT INDICATED TO BE GALVANIZED. FIELD PAINT.

#### 1.3 EXECUTION

- A. PROVIDE ANCHORAGE DEVICES AND FASTENERS FOR SECURING METAL FABRICATIONS TO IN-PLACE CONSTRUCTION. PERFORM CUTTING, DRILLING AND FITTING REQUIRED FOR INSTALLING METAL FABRICATIONS. SET METAL FABRICATIONS ACCURATELY IN LOCATION, WITH EDGES AND SURFACES LEVEL, PLUMB AND TRUE.
- B. SET BEARING AND LEVELING PLATES ON CLEANED SURFACES USING WEDGES, SHIMS OR LEVELING NUTS. AFTER BEARING HAVE BEEN POSITIONED AND PLUMBED, TIGHTEN ANCHOR BOLTS AND PACK VOIDS WITH GROUT.
- C. ANCHOR BOLLARDS IN PLACE WITH CONCRETE FOOTINGS. SUPPORT AND BRACE BOLLARDS IN POSITION IN FOOTING EXCAVATIONS UNTIL CONCRETE HAS BEEN PLACED AND CURED.
- D. FILL BOLLARDS SOLIDLY WITH CONCRETE, MOUNDING TOP SURFACE. E. TOUCH UP SHOP PAINT AFTER ERECTION. CLEAN FIELD
- WELDS, BOLTED CONNECTIONS AND ABRADED AREAS, AND PAINT WITH THE SAME MATERIAL AS USED FOR SHOP PAINTING
- F. GALVANIZED SURFACES: CLEAN FIELD WELDS, BOLTED CONNECTIONS AND ABRADED AREAS, AND REPAIR WITH GALVANIZED REPAIR PAINT.

#### 06000 - WOOD AND PLASTICS

#### 06100 - ROUGH CARPENTRY.

- 1.1 GENERAL A. SECTION INCLUDES THE FOLLOWING:
  - a. FRAMING WITH DIMENSIONAL LUMBER. b. FRAMING WITH ENGINEERED WOOD PRODUCTS.
  - c. WOOD BLOCKING, CANTS, NAILERS, FURRING, AND
  - SLEEPERS d. PLYWOOD PANEL WALL AND ROOF SHEATHING, AND
  - PLYWOOD FLOOR DECKING. e. PLYWOOD BACKING PANELS

- B. SUBMITTALS:
- a. PRODUCT DATA FOR EACH TYPE OF PROCESS AND FACTORY-FABRICATED PRODUCT INCLUDE DATA FOR WOOD-PRESERVATIVE AND FIRE-RETARDANT TREATMENT FROM TREATMENT MANUFACTURERS AND CERTIFICATION FROM TREATING PLANT THAT TREATED MATERIALS COMPLY WITH REQUIREMENTS.
- b. PRE-ENGINEERED WOOD TRUSS DRAWINGS .-STAMPED BY ENGINNER.

#### 1.2 PRODUCTS

- A. WOOD FRAMING (ROUGH AND MISCELLANEOUS CARPENTRY) MATERIALS SHALL BE WESTERN SPRUCE-PINE-FIR (SPF), UNLESS OTHERWISE INDICATED. B. WALL AND PARTITION STUDS SHALL BE MINIMUM OF STUD
- GRADE, WITH MIN. Fb = 500, AND E = 1,200,000, UNLESS OTHERWISE INDICATED
- C. STRUCTURAL LIGHT FRAMING SHALL BE No. 2 OR BETTER WITH MIN. Fb = 875, AND E = 1,300,000, UNLESS OTHERWISE INDICATED.
- D. MISCELLANEOUS NON-STRUCTURAL FRAMING BLOCKING AND NAILERS SHALL BE No.3 OR BETTER WITH MIN. Fb = 500 AND E = 1,200,000, UNLESS OTHERWISE INDICATED.
- E. FRAMING FOR PRE-ENGINEERED WOOD TRUSSES SHALL BE AS SPECIFIED BY THE TRUSS MANUFACTURER. F. ALL BELOW GRADE WOOD OR WOOD IN CONTACT WITH
- EARTH OR CONCRETE SHALL BE PRESERVATIVE TREATED MATERIAL COMPLYING WITH THE APPLICABLE AWPA STANDARD(S) G. ALL WALL AND PARTITION BOTTOM PLATES IN CONTACT
- WITH MASONRY OR SLAB-ON GRADE CONCRETE SHALL BE PRESERVATIVE-TREATED MATERIAL COMPLYING WITH THE APPLICABLE AWPA STANDARD(S).
- H. PLYWOOD AND ORIENTED STRAND BOARD (O.S.B.) PANELS SHALL BE A.P.A. RATED FOR LOCATION AND APPLICATION SHOW ON DRAWINGS.
- I. STRUCTURAL LUMBER AND ENGINEERED WOOD PRODUCTS SHALL COMPLY WITH OHIO BUILDING CODE (OBC) SECTION 2303 "MINIMUM STANDARDS AND QUALITY".
- a. ENGINEERED PRODUCTS INCLUDE LAMINATED VENEER LUMBER (L.V.L), GLUE-LAMINATED MEMBERS, WOOD I-JOISTS, AND PRE-ENGINEERED WOOD TRUSSES. b. SPANS, LOADINGS, INSTALLATION AND CONSTRUCTION
- DETAILS FOR ENGINEERED WOOD PRODUCTS SHALL COMPLY WITH O.B.C. REQUIREMENTS, AND MANUFACTURER'S RECOMMENDATIONS.
- ALL WOOD TRUSSES TO BE DESIGNED AND
- FABRICATED IN ACCORDANCE WITH THE 'TRUSS PLATE INSTITUTE' (TPI-1). ALL WOOD TRUSSES TO BE ERECTED AND BRACED
- IN ACCORDANCE WITH 'BRACING WOOD TRUSSES' (BWT-76) THE WOOD TRUSS MANUFACTURER IS TO FURNISH
- CERTIFIED ENGINEERING TRUSS DRAWINGS WHICH INDICATE MEMBER AND JOINT SIZES AS WELL AS LUMBER STRENGTH AND BRACING REQUIREMENTS. TRUSS DRAWINGS SHALL BE SEALED BY AN OHIO REGISTERED ARCHITECT OR PROFESSIONAL
- FNGINFFR TRUSS DESIGN DRAWINGS SHALL COMPLY WITH
- O.B.C SECTION 2303.4.1.
- CONTRACTORS SHALL FOWARD A STAMPED (SEALED) COPY OF MANUFACTURER'S TRUSS DRAWINGS TO LOCAL BUILDING DEPARTMENT JPON REVIEW OF SHOP DRAWINGS BY THE RCHITECT
- NO EXCESS, CONCENTRATION OF ANY CONSTRUCTION MATERIALS (SUCH AS PLYWOOD OR SHINGLES) SHOULD BE PLACES ON THE TRUSSES IN ANY ONE AREA
- ANY CONSTRUCTION LOAD ABOVE SHOULD BE
- LOCATED ADJACENT TO THE SUPPORTS. ANCHOR ROOF TRUSSES TO WOOD PLATE FOR AN UPLIFT OF 500\* WITH APPROVED 18 G.A. METAL
- STRAPS OR 20 G.A. ANCHOR CLIPS.

RC	OF LOADING:	
1.	TOP CHORD LL	= 25 PSF
2.	TOP CHORD DL	= 10 PSF
2		

<b>5</b> .	BOT. CHORD LL	= 0 PSF
ŀ.	BOT. CHORD DL	= 10 PSF
5.	TOTAL LOAD	= 45 PSF

SEE OHIO BUILDING	CODE STRUCTURAL DESIGN
	IN THIS DRAWING SET FOR

- NOTES ELSEWHERE IN THIS DRAWING SET FOR WIND, SNOW AND SEISMIC DESIGN CRITERIA.
- J. FIRESTOP BLOCKING SHALL BE INSTALLED AS INDICATED, AND IN ACCORDANCE WITH O.B.C. SECTION 716.0
- "CONCEALED SPACES". K. METAL CONNECTORS (HANGERS, STRAPS, CLIPS, ANCHORS, ETC.) SHALL BE GALVANIZED STEEL, USED ON FRAMING MEMBERS AS INDICATED ON DRAWINGS.

INSTALLATION SHALL COMPLY WITH O.B.C. REQUIREMENTS, AND MANUFACTURER'S

- RECOMMENDATIONS. a. METAL CONNECTORS, NAILS, SCREWS, AND OTHER FASTENERS USED WITH OR IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE STAINLESS STEEL OR HOT-DIP GALVANIZED COMPLYING WITH ASTM A 123 OR ASTM A 153, OR AS RECOMMENDED BY TREATMENT MANUFACTURER FOR TYPE OF TREATMENT BEING USED.
- b. NAILS: HAND OR AIR-DRIVEN, SIZED FOR APPLICATION. WHERE EXPOSED TO WEATHER (EXTERIOR), PROVIDE FASTENERS WITH HOT-DIP GALVANIZED COATING OR TYPE 304 STAINLESS STEEL.
- c. POWER-DRIVEN FASTENERS: CABO NER-272.
- d. MASONRY SCREWS: "TAPCON" OR EQUAL. L. SILL-SEALER GASKETS:
- a. GLASS-FIBER-RESILIENT INSULATION, FABRICATED IN STRIP FORM. 1 INCH NOMINAL THICKNESS, COMPRESSIBLE 1/32", IN MANUFACTURER'S STANDARD
- WIDTHS TO SUIT WIDTHS OF SILL MEMBERS INDICATED. b. FLEXIBLE CLOSED-CELL FOAM AIR INFILTRATING GASKETING, FABRICATED IN STRIP FORM. 1/4 INCH NOMINAL THICKNESS, COMPRESSIBLE TO 1/32 INCH, IN MANUFACTURER'S STANDARD WIDTH TO SUIT WIDTHS OF SILL MEMBERS INDICATED.

#### 1.3 EXECUTION

- A. SET ROUGH CARPENTRY TO REQUIRED LEVELS, WITH MEMBERS PLUMB, TRUE TO LINE, CUT, AND FITTED. FIT ROUGH CARPENTRY TO OTHER CONSTRUCTION, SCRIBE AND COPE AS NEEDED FOR ACCURATE FIT. LOCATE FURRING, NAILERS, BLOCKING, AND SIMILAR SUPPORTS TO COMPLY WITH REQUIREMENTS FOR ATTACHING OTHER CONSTRUCTION.
- FRAMING STANDARDS: COMPLY WITH AF & PA'S "DETAILS FOR CONVENIONAL WOOD FRAME CONSTRUCTION" AND OHIO BUILDING CODE (OBC) SECTION 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION"
- C. FRAMING WITH ENGINEERED WOOD PRODUCTS: INSTALL ENGINEERED WOOD PRODUCTS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- D. METAL FRAMING ANCHORS: INSTALL METAL FRAMING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

- SUPPORTS, UNLESS OTHERWISE INDICATED SUBSTRATE BY ANCHORING AND FASTENING AS INDICATED, COMPLYING WITH THE FOLLOWING:
- E. DO NOT SPLICE STRUCTURAL MEMBERS BETWEEN F. SECURELY ATTACH ROUGH CARPENTRY WORK TO
- a. OHIO BULDING CODE (OBC) TABLE T-2304.9.1 "FASTENING SCHEDULE". G. SEAL EXPOSED WOOD DECKING AND TIMBER TRUSSES WITH CLEAR SEALER.

#### 06200 - FINISH CARPENTRY. 1.1 GENERAL

- A. SECTION INCLUDES THE FOLLOWING: a. EXTERIOR AND INTERIOR WOOD TRIM AND MOLDINGS. b. EXTERIOR AND INTERIOR PLASTIC TRIM AND MOLDINGS. c. WOOD SHELVING.
- WOOD PANELING. e. SOLID SURFACE MATERIAL FOR WINDOW STOOLS AND MISCELLANEOUS INSTALLATIONS OTHER THAN COUNTERTOPS OR OTHER FURNISHING ITEMS.

COMPONENTS, INCLUDING MANUFACTURED CASEWORK.

B. SUBMITTALS: PRODUCTS.

QUALITY.

1.2 PRODUCTS

DRAWINGS.

DRAWINGS

DRAWINGS.

I. FASTERNERS:

J. FABRICATION:

1.3 EXECUTION

INCH RADIUS.

SEALANTS"

07210 - BUILDING INSULATION.

STANDARDS

DEVELOPED = 450.

OR EQUAL

b. MATERIAL:

1.1 GENERAL

1.2 PRODUCTS

- a. PRODUCT DATA OR LITERATURE FOR MANUFACTURED
- b. SAMPLES OF MOLDING PROFILES AND PRODUCT COLOR SELECTIONS. c. SAMPLES OF PANELING PRODUCTS. C. PERFORM WORK IN ACCORDANCE WITH AWI CUSTOM
- D. VERIFY THAT FIELD DIMENSIONS ARE AS SHOWN ON
- E. COORDINATE WORK WITH OTHER TRADES FOR CLEARANCES, ETC, INVOLVED. F. COORDINATE THE WORK WITH PLUMBING AND ELECTRICAL ROUGH-IN, INSTALLATION OF ASSOCIATED AND ADJACENT
- A. SOFTWOOD LUMBER: PINE, FIR, OR SPRUCE, MAXIMUM MOISTURE CONTENT OF 1%, WITH MIXED GRAIN, OF QUALITY SUITABLE FOR BLOCKING AND REINFORCEMENT,
- NOT EXPOSED TO VIEW. B. HARDWOOD LUMBER AND TRIM - OPAQUE (PAINT) FINISH: SOFT MAPLE OF POPLAR OF QUALITY SUITABLE FOR PAINT FINISH. SIZE AND CONFIGURATION AS SHOWN ON THE
- C. HARDWOOD LUMBER AND TRIM TRANSPARENT (STAIN OR CLEAR) FINISH: CLEAR RED OAK OR OTHER SPECIES INDICATED, SELECTED FOR COMPATABLE GRAIN AND COLOR. SIZE AND CONFIGURATION AS SHOWN ON THE
- D. SOFTWOOD VENEER PLYWOOD: GRADE A-D, EXPOSURE 1 (GOOD ONE SIDE) FOR EXPOSED INTERIOR USE. GRADE A-C, EXTERIOR (GOOD ONE SIDE) FOR EXPOSED EXTERIOR
- E. HARDWOOD VENEER PLYWOOD INTERIOR: AWI GRADE I -IV (GOOD ONE SIDE) OR GRADE I-I (GOOD TWO SIDES) FOR TRANSPARENT FINISH. AWI GRADE II-IV (GOOD ONE SIDE) OR GRADE II-II FOR OPAQUE FINISH.
- F. MEDIUM DENSITY OVERLAY (MDO): GROUP 1, EXTERIOR. G. SOLID SURFACING MATERIAL: HOMOGENEOUS SOLID SHEETS OF FILLED PLASTIC RESIN COMPLYING WITH MATERIAL AND PERFORMANCE REQUIREMENTS OF ANSI 2124.3, TYPE 5 OR TYPE 6, WITHOUT A PRECOATED FINISH.
- H. MANUFACTURED TRIM PRODUCTS (INTEIOR AND EXTERIOR): MANUFACTURER'S STANDARD SHAPES, SIZES, PROFILES, AND FABRICATIONS OF MOLDED POLYMER, FIBERGLASS, POLYESTER OR SIMILAR MATERIAL SUITABLE FOR THE INSTALLATION.
- a. MASTICS AND SEALANTS: AS RECOMMENDED BY PRODUCT MANUFACTURER TO SUIT SUBSTRATE AND INSTALLATION.
- a. OF SIZE AND TYPE TO SUIT APPLICATION, UNFINISHED, NOT EXPOSED TO VIEW b. FOR EXTERIOR USE, PROVIDE FASTENERS WITH HOT-DIP GALVANIZED STEEL, OR OF STAINLESS STEEL.
- a. WHERE APPLICABLE, SHOP ASSEMBLE WORK FOR DELIVERY TO SITE, PERMITTING PASSAGE THROUGH
- BUILDING OPENINGS. b. WHEN NECESSARY TO CUT AND FIT ON SITE, PROVIDE MATERIALS WITH AMPLE ALLOWANCE FOR CUTTING. PROVIDE TRIM FOR SCRIBING AND SIT CUTTING. c. SOLID SURFACE WINDOW STOOLS SHALL BE 3/4 INCH THICK MATERIAL UNLESS OTHERWISE INDICATED, AND SHALL HAVE POLISHED SURFACE AND EDGES, WITH
- A. VERIFY ADEQUACY OF BACKING AND SUPPORT FRAMING. B. VERIFY MECHANICAL, ELECTRICAL, AND BUILDING ITEMS AFFECTING WORK OF THIS SECTION ARE PLACES AND

ALL EXPOSED CORNERS AND EDGES EASED WITH 1/8

- READY TO RECEIVE THIS WORK. a. INSTALL INTERIOR TRIM AFTER GYPSUM BOARD JOINT-FINISHING OPERATIONS ARE COMPLETED. C. INSTALL FINISH CARPENTRY PLUMB, LEVEL, TRUE AND
- ALIGNED WITH ADJACENT MATERIALS. USE CONCEALED SHIMS WHERE REQUIRED FOR ALIGNMENT. CAREFULLY SCRIBE AND CUT FINISH CARPENTRY TO FIT ADJOINING WORK, WITH A MAXIMUM GAP OF 1/32 INCH. REFINISH AND SEAL CUTS AS RECOMMENDED BY MANUFACTURER. D. INSTALL COMPONENTS AND TRIM WITH APPROPRIATE
- FASTENERS, MASTIC OR GLUE. E. APPLY SEALANTS AS SPECIFIED IN SECTION 7900 "JOINT
- F. MAXIMUM VARIATION FROM TRUE POSITION: 1/16 INCH. G. MAXIMUM OFFSET FROM TRUE ALIGNMENT WITH ABUTTING MATERIALS: 1/32 INCH.

# 07000 - THERMAL AND MOISTURE PROTECTION

- A. SUBMITTALS: PRODUCT DATA FOR EACH TYPE OF INSULATION PRODUCT SPECIFIED.
- A. GENERAL: PROVIDE INSULATING MATERIALS THAT COMPLY WITH REQUIREMENTS AND WITH REFERENCED
- a. PREFORMED UNITS: SIZES TO FIT APPLICATIONS INDICATED, SELECTED FROM MANUFACTURER'S STANDARD THICKNESS, WIDTHS, AND LENGTHS. B. EXTRUDED-POLYSTYRENE FOAM PLASTIC INSULATION BOARD: ASTM C 578, TYPE VI, 1.80 LB./ CU. FT. MINIMUM DENSITY, MAXIMUM FLAME SPREAD = 75, MAXIMUM SMOKE
- a. MANUFACTURERS DOW CHEMICAL CO., -- PRODUCT "STYROFOAM" OWENS CORNING -- PRODUCT "FOAMULAR"
- BOARD THICKNESS: 2", OR AS SHOWN ON
- DRAWINGS. • THERMAL RESISTANE: R = 7.5 WATER Absorption: ASTM D 2842, 0.3% BY VOLUME
- MAXIMUM. COMPRESSIVE STRENGTH: MINIMUM 25 PSI. • BOARD EDGES: SQUARE.

- C. GLASS FIBER THERMAL BATT INSULATION: KRAFT-FACED. ASTM C 665, TYPE II, CLASS C, CATAGORY 1. a. MANUFACTURERS:
- CERTAINTEED CORP., -- PRODUCT "CERTAPRO" JOHNS MANVILLE, -- PRODUCT "KRAFT FACED" OWENS CORNING -- PRODUCT "KRAFT FACED" OR EQUAL
- b. MATERIAL:
- 6" (3 5/8") THICK, R-19 • 16" WIDE FOR FRICTION FIT BETWEEN 16" O.C. STUDS.

#### 1.3 EXECUTION A. INSTALL CLEAN, UNDAMAGED FOAM BOARD PERIMETER INSULATION ON COMPACTED SLAB BASE MATERIAL UNDER

- VAPOR BARRIER AS SHOWN. a. BEVEL TOP OF VERTICAL SLAB-EDGE INSULATION 45 DEGREES AS SHOWN.
- b. PROTECT PERIMETER INSULATION BOARD FROM DAMAGE OR DETERIORATION PRIOR TO AND DURING PLACEMENT OF SLAB.
- B. INSTALL BATT INSULATION IN GYPSUMBOARD WALLS WHERE INDICATED ON DRAWINGS. a. POSITION FACED SIDE OF BATT TOWARD CONDITIONED (HEATED) SPACE.
- 07311 ASPHALT SHINGLES. 1.1 GENERAL
  - A. THIS SECTION INCLUDES ASPHALT AND FIBERGLASS-REINFORCED ASPHALT SHINGLES, FELT UNDERLAYMENT. SELF-ADHERING SHEET UNDERLAYMENT, AND RIDGE VENTS
  - B. SUBMITTALS:
  - a. PRODUCT DATA: FOR EACH PRODUCT INDICATED. b. SAMPLES: ASPHALT SHINGLES FOR COLOR SELECTION BY OWNER
  - C. WARRANTY: MINIMUM 25 YEARS ON SHINGLE MATERIAL
- 1.2 PRODUCTS
  - A. GLASS-FIBER-REINFORCED ASPHALT SHINGLES: a. THREE TAB-STRIP ASPHALT SHINGLES, ASTM 3462,
  - GLASS-FIBER-REINFORCED, MINERAL-GRANULE SURFACED, SELF-SEALING,
  - WIND RESISTANCE: PASSES REQUIREMENTS OF ASTM 3161 FIRE-TEST-RESPONCE CLASSIFICATION: CLASS A
  - PER ASTM E 108.
  - B. MANUFACTURERS a. CERTAINTEED
  - b. CELOTEX
  - c. OWENS-CORNING d. (OR EQUAL)
  - C. UNDERLAYMENT MATERIALS:
  - a. FELT: 15 LB. ASTM D 226 TYPE I, OR 30 LB. ASTM D 4869 TYPE II, ASPHALT-SATURATED ORGANIC FELTS, NON-PERFORATED b. SELF-ADHERING SHEET UNDERLAYMENT
  - POLYETHYLENE FACED, ASTM D 1970, MINIMUM OF 40.
- 07920 JOINT SEALANTS. 1.1 GENERAL
  - A. SUBMITTALS: PRODUCT DATA AND COLOR SAMPLES FOR EACH TYPE OF SEALANT SPECIFIED. B. RELATED SECTIONS:
  - a. SECTION 04200 "UNIT MASONRY": SEALANTS REQUIRED IN CONJUNCTION WITH UNIT MASONRY. b. DIVISION 8 "DOORS AND WINDOWS": SEALANTS
  - REQUIRED IN CONJUNCTION WITH DOOR AND WINDOW FRAMES c. SECTION 13125 "METAL BUILDING SYSTEMS": FOR
  - SEALANTS INCLUDED AND INSTALLED AS PART OF THE METAL BUILDING PACKAGE.

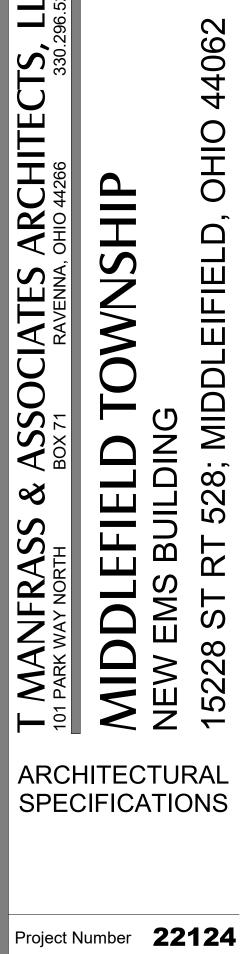
1.2 PRODUCTS A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE SEALANTS BY ONE OF THE FOLLOWING

- a. TREMCO,-- PRODUCT AS SPECIFIED.
- b. G.E. SILICONES.-- PRODUCT AS SPECIFIED.
- c. OTHER ACCEPTABLE MANUFACTURERS OFFERING EQUIVALENT PRODUCTS:
- d. SONNEBORN,-- MEET SPECIFIED MATERIALS AND PERFORMANCE.
- e. PECORA CORP.,-- MEET SPECIFIED MATERIALS AND PERFORMANCE
- B. SEALANTS: a. TYPE A- POLYURETHANE SEALANT: ASTM C 920, GRADE NS. CLASS 25. MULTI-COMPONENT, CHEMICAL CURING NON-STAINING, NON-BLEEDING, NON-SAGGING TYPE. COLOR AS SELECTED.
  - "DYMERIC" BY TREMCO. "DYMONIC" BY TREMCO SHALL BE ACCEPTABLE AS A POLYURETHANE SEALANT IN PLACE OF "DYMERIC
- b. TYPE B- SILICONE SEALANT: SINGLE COMPONENT, FUNGUS RESISTANT, ACIDIC CURING, NON-STAINING, NON-BLEEDING, NON-SAGGING TYPE. COLORS AS SELECTED.
- "SANITARY 1700" BY G.E. SILICONES. c. TYPE C- LATEX SEALANT: ASTM C 834, SINGLE COMPONENT TYPE. COLOR TO BE WHITE TO BE PAINTED
- "ACRYLIC LATEX CAULK 834" BY TREMCO. C. COLORS: PROVIDE COLORS INDICATED FOR EXPOSED JOINT
- SEALANTS OR, IF NOT INDICATED, AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE FOR THIS CHARACTERISTIC
- D. COMPATIBILITY: PROVIDE SEALANTS, BACKINGS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER, AND WITH JOINT SUBSTRATES UNDER
- CONDITIONS OF SERVICE AND APPLICATION. SEALANT BACKINGS: NON-STAINING, COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS, AND OTHER JOINT FILLERS
- JOINT CLEANER: NON-CORROSIVE AND NON-STAINING TYPE AS RECOMMENDED BY SEALANT MANUFACTURER. G. ELASTOMERIC TUBING SEALANT BACKINGS: NEOPRENE,
- BUTYL, EPDM, OR SILICONE TUBING COMPLYING WITH ASTM D 1056, NON-ABSORBANT TO WATER AND GAS, AND CAPABLE OF REMAINING RESILIENT AT TEMPERATURES DOWN TO MINUS 26 DEGREES F. (MINUS 32 DEG.C.).
- H. BOND-BREAKER TAPE: POLYETHYLENE OR OTHER PLASTIC TAPE AS RECOMMENDED BY SEALANT MANUFACTURER FOR PREVENTING SEALANT FROM ADHERING TO RIGID, INFLEXIBLE JOINT FILLER MATERIALS OR JOINT SURFACES AT BACK OF JOINT.
- I. PRIMER: NON-STAINING TYPE AS RECOMMENDED BY SEALANT MANUFACTURER WHERE REQUIRED FOR ADHESION OF SEALANT TO JOINT SUBSTRATES INDICATED.
- 1.3 EXECUTION A. GENERAL: COMPLY WITH JOINT SEALANT MANUFACTURER'S INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED
  - B. EXAMINATION: VERIFY THAT SUBSTRATE SURFACES AND JOINT OPENINGS ARE READY TO RECEIVE WORK. VERIFY THAT JOINT BACKING AND RELEASE TAPES ARE COMPATIBLE WITH SEALANT
  - C. REMOVE LOOSE MATERIALS AND FOREIGN MATTER WHICH MIGHT IMPAIR ADHESION OF SEALANT. MEASURE JOINT DIMENSIONS AND SIZE MATERIALS TO ACHIEVE 2:1 WIDTH/DEPTH RATIOS.
  - D. JOINT BACKING WILL NOT BE NECESSARY WHERE PREFORMED CONTROL JOINTS ARE INSTALLED. INSTALL BOND BREAKER WHERE JOINT BACKING IS NOT USED.





Scale	9	1"	= 1'-0"		
Date		10/12/22			
Draw	n By	SRT/ QJ			
Chec	ked By		SRT		
REVI	SIONS:				
No.	Description		Date		





	<ul> <li>E. SEALANT INSTALLATION STANDARD: ASTM C 1193.</li> <li>F. ACOUSTICAL SEALANT APPLICATION STANDARD: ASTM C 919.</li> <li>G. PROTECT FINISHED INSTALLATION AND SEALANTS UNTIL</li> </ul>
	CURED. H. SCHEDULE: a. LOCATION TYPE COLOR
	1. ALL EXTERIOR FRAMES/WALLSATBD2. EXTERIOR CONTROL JOINTSATBD3. INTERIOR CONTROL JOINTS (EXPOSED)ATBD
	4. UNDER THRESHOLDS A TBD 5. CONCRETE SLABS/WALL A TBD 6. INTERIOR FRAMES/WALLS C TBD
A	7. PLUMBING FIXTURES/WALLS B TBD 8. COUNTERTOPS/WALLS/BACKSPLASHES B TBD
	08000 - DOORS AND WINDOWS
	08111 - HOLLOW METAL DOORS AND FRAMES. 1.1 GENERAL A. SECTION INCLUDES-EXTERIOR AND INTERIOR, NON-RATED AND FIRE-RATED, INSULATED AND NON-INSULATED
	HOLLOW METALS DOORS AND FRAMES, AND ANY DOOR LOUVERS REQUIRED. B. SUBMITTALS: SUBMIT THE FOLLOWING:
	a. PRODUCT DATA FOR EACH TYPE OF DOOR AND FRAME SPECIFIED INCLUDING DOOR CONFIGURATIONS AND LOCATIONS OF CUT-OUTS FOR HARDWARE
	REINFORCEMENT. b. SHOP DRAWINGS INDICATING DOOR AND FRAME ELEVATIONS, INTERNAL REINFORCEMENT, CLOSURE
	METHOD, AND CUT-OUTS FOR GLAZING, LOUVERS, AND FINISH. c. MANUFACTURER'S CERTIFICATION THAT PRODUCTS
	MEET OR EXCEED SPECIFIED REQUIREMENTS. C. QUALITY ASSURANCE: COMPLY WITH ANSI/SDI 100 AND ANSI A 117.1.
	D. FIRE-RATED DOOR ASSEMBLIES: NFPA 80, IDENTICAL TO ASSEMBLIES TESTED PER ASTM E 152, AND LABELED AND LISTED BY U.L. WARNOCK HERSEY, OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES
	HAVING JURISDICTION.
	A. MANUFACTURERS: a. AMWELD BUILDING PRODUCTS b. STEELCRAFT
в	c. REPUBLIC BUILDERS PRODUCTS d. (OR EQUAL) B. MATERIALS:
	<ul> <li>a. HOT-ROLLED STEEL SHEETS: ASTM A 569 (ASTM A 569M).</li> <li>b. COLD-ROLLED STEEL SHEETS: ASTM A 366 (ASTM A</li> </ul>
	366M), COMMERCIAL QUALITY, OR ASTM A 620 (ASTM A 620M), DRAWING QUALITY c. GALVANIZED STEEL SHEETS: ASTM A 526 (ASTM A 500 (AS
	526M), COMMERCIAL QUALITY, OR ASTM A 642 (ASTM A 642M), DRAWING QUALITY, WITH A 60 OR G 60 (Z 180 OR ZF180) COATING DESIGNATION, MILL PHOSPHATIZED. C. STEEL DOORS: PROVIDE 1 3/4" THICK DOORS OF
	MATERIALS AND ANSI/SDI 100 GRADES AND MODELS SPECIFIED BELOW, OR AS INDICATED ON DRAWINGS OR SCHEDULES:
	a. INTERIOR DOORS: GRADE II, HEAVY DUTY, MODEL 2, SEAMLESS DESIGN, MINIMUM 0.0478 INCH (18 G.A.) THICK COLD-ROLLED STEEL SHEET FACES.
	<ul> <li>b. EXTERIOR DOORS (NON-THERMALLY BROKEN): GRADE III, EXTRA HEAVY DUTY, MODEL 2, SEAMLESS DESIGN, MINIMUM 0.0598 INCH (16 G.A.) THICK GALVANIZED</li> </ul>
	STEEL SHEET FACES, THERMALLY INSULATED. TOTAL INSULATION R VALUE OR 7.5 MINIMUM PER ASTM C 236. D. DOOR LOUVERS: ACCORDING TO SDI 111C OF THE
	FOLLOWING TYPES: a. MATERIAL AND FINISH: ROLL-FORMED STEEL, FACTORY APPLIED PRIMER. b. SIGHT-PROOF LOUVERS: WITH INVERTED V-SHAPED OR
	<ul> <li>SIGHT-FROOF LOOVERS: WITH INVERTED V-SHAPED OR Y-SHAPED BLADES.</li> <li>E. FRAMES: PROVIDE FRAMES FOR DOORS, SIDELIGHTS, BORROWED LIGHTS, AND OTHER OPENINGS THAT COMPLY</li> </ul>
	WITH ASNI/SDI 100, FABRICATED TO BE RIDIG, NEAT IN APPEARANCE AND FREE FRO MDEFECTS, WARP, OR BUCKLE.
	a. FOR INTERIOR FRAMES, PROVIDE UNITS WITH MITERED OR COPED AND CONTINUOUSLY WELDED CORNERS, FORMED FROM 18 G.A. COLD-ROLLED STEEL FOR
с	<ul> <li>OPENINGS 48 INCHES OR LESS IN WIDTH AND FROM 16</li> <li>G.A. STEEL FOR OPENINGS OVER 48 INCHES IN WIDTH.</li> <li>b. FOR EXTERIOR FRAMES, PROVIDE UNITS WITH</li> </ul>
	MITERED OR COPED AND CONTINUOUSLY WELDED CORNERS, FORMED FROM 16 G.A. GALVANIZED STEEL SHEET. c. DOOR SILENCERS: 3 ON STRIKE JAMBS OF SINGLE-
	<ul> <li>DOOR SILENCERS. 3 ON STRIKE JAMBS OF SINGLE-</li> <li>DOOR FRAMES AND 2 ON HEADS OF DOUBLE-DOOR</li> <li>FRAMES.</li> <li>PLASTER GUARDS: PROVIDE WHERE MORTAR MIGHT</li> </ul>
	OBSTRUCT HARDWARE OPERATION AND TO CLOSE OFF INTERIOR OF OPENINGS. e. GROUT: AS SPECIFIED IN DIVISION 4 SECTION "UNIT
	MASONRY". F. TOLERANCES: COMPLY WITH SDI 117. G. HARDWARE PREPARATION: PREPARE DOORS AND FRAMES
	TO RECEIVE MORTISED AND CONCEALED HARDWARE ACCORDING TO SDI 107. H. GLAZING STOPS: MINIMUM 0.0359 INCH (20 G.A.) THICK
	STEEL OF 0.040 INCH (18 G.A.) THICK ALUMINUM. a. PROVIDE NON-REMOVABLE STOPS ON OUTSIDE OF EXTERIOR DOORS AND ON SECURE SIDE OF INTERIOR DOORS FOR CLASS LOUVERS, AND OTHER PANELS IN
	DOORS FOR GLASS, LOUVERS, AND OTHER PANELS IN DOORS. b. PROVIDE SCREW-APPLIED REMOVABLE GLAZING BEADS ON INSIDE OF GLASS, LOUVERS AND OTHER
	PANELS IN DOORS. I. FINISHES: FACTORY APPLIED PRIMER ON DOORS AND FRAMES FOR FIELD-PAINTED FINISH.
	<ul> <li>a. GALVANIZED STEEL: COMPLY WITH SDI 112.</li> <li>b. SHEET STEEL: COMPLY WITH SSPC-PA 1 AND ANSI A 224.1</li> </ul>
	1.3 EXECUTION A. GENERAL: INSTALL STEEL DOORS, FRAMES AND
	ACCESSORIES ACCORDING TO SHOP DRAWINGS, MANUFACTURER'S DATA, AND AS SPECIFIED. B. PLACING FRAMES: SET FRAMES ACCURATELY IN POSITION, PLUMBED, AUCNED, AND SECURED Y PRACED UNTIL
D	PLUMBED, ALIGNED, AND SECURELY BRACED UNTIL PERMANENT ANCHORS ARE SET. a. FIELD-COAT INSIDE OF GROUTED FRAMES IN MASONRY WALLS WITH BITUMINOUS FOUNDATION COATING (OR
	EQUVALENT) PRIOR TO PLACEMENT. b. PLACE FRAMES BEFORE CONSTRUCTING ENCLOSING WALLS AND CEILINGS.
	c. INSTALL AT LEAST 3 ANCHORS PER JAMB ADJACENT TO HINGE LOCATION ON HINGE JAMB, AND AT CORRESPONDING HEIGHTS ON STRIKE JAMB.
	C. DOORS INSTALLATION: FIT HOLLOW METAL DOORS ACCURATELY IN FRAMES WITH CLEARANCES SPECIFIED IN ANSI/SDI 100.
	D. ERECTION TOLERANCES: MAXIMUM DIAGONAL DISTORTION: 1/8" MEASURED WITH STRAIGHT EDGES, CROSSED CORNER TO CORNER.

1.1 GENERAL

08211 - WOOD DOORS

- A. SECTION INCLUDES FACTORY-STAINED AND FINISHED SOLID-CORE CENEER-FACED WOOD DOORS. B. SUBMITTALS: SHOP DRAWINGS INDICATING LOCATION, SIZE
- HAND OF EACH DOOR, CONSTRUCTION DETAILS, LOCATION AND EXTENT OF HARDWARE BLOCKING, MORTICES, HOLES, CUT-OUTS, AND REQUIREMENTS FOR VENEER MATCHING AND FACTORY FINISHING. a. SAMPLES OF ACTUAL MATERIALS IN SMALL SECTIONS
- FOR EACH FACE MATERIAL, COLOR AND FINISH.

#### 1.2 PRODUCTS A. MANUFACTURERS:

- a. ALGOMA HARDWOODS INC.
- b. GRAHAM MANUFACTURING CORP. MOHAWK FLUSH DOORS, INC.
- d. WEYERHAUSER CO.
- B. DOORS FOR TRANSPARENT FINISH: AS FOLLOWS:
- a. GRADE: PREMIUM (GRADE A FACES). b. FACES: RED OAK, PLAIN SLICED. C. CORES FOR SOLID-CORE CENEER-FACED DOORS:
- a. PARTICAL BOARD CORES, WITH SOLID WOOD STILES, RAILS AND HARDWARE BLOCKING.
- D. FACTORY-FIT DOORS TO SUIT FRAME-OPENING SIZE INDICATED. COMPLY WITH CLEARANCE REQUIREMENTS OF REFERENCED QUALITY STANDARD FOR FITTING.
- E. FACTORY MACHINE DOORS FOR HARDWARE THAT IS NOT SURFACE MOUNTED.
- F. OPENINGS: CUT AND TRIM OPENINGS THROUGH DOORS AS REQUIRED. a. GLASS OPENINGS: TRIM OPENINGS WITH
- MANUFACTURER'S STANDARD STOP AND GLAZING BEAD FOR DOOR AND FINISH SPECIFIED. b. LOUVERS: FACTORY INSTALL LOUVERS IN PREPARED
- OPENINGS. G. FACTORY FINISHING: ALL WOOD DOORS SHALL RECEIVE A FACTORY FINISH.
- a. GRADE: PREMIUM. b. FINISH: MANUFACTURER'S STANDARD FINISH WITH
- PERFORMANCE REQUIREMENTS COMPARABLE TO AWI SYSTEMS TR-6 CATALYZED POLYURETHANE.
- c. STAINING: AS SELECTED BY ARCHITECT FROM
- MANUFACTURER'S FULL RANGE OF COLORS. d. EFFECT: OPEN-GRAIN FINISH.
- e. SHEEN: SATIN
- 1.3 EXECUTION

A. UPON PROJECT SITE DELIVERY, WOOD DOORS SHALL BE INSPECTED FOR DAMAGE, AND STORED IN A CLEAN, DRY LOCATION UNTIL INSTALLATION.

- B. INSTALL WOOD DOORS TO COMPLY WIT
- HMANUFACTURER'S WRITTEN INSTRUCTINS, REFERENED QUALITY STANDARD, AND AS INDICATED. C. ALIGN AND FIT DOORS IN FRAEMS WITH UNIFORM CLEARANCES AND BEVELS. DO NOT TRI MSTILES AND
- RAILS IN EXCESS OF LIMITS SET BY MANUFACTURER OR PERMITTED WITH FIRE-RATED DOORS. MACHINE DOORS FOR HARDWARE AS NECESSARY. SEAL CUT SURFACES AFTER FITTING AND MACHINING.
- D. FACTORY-FINISHED DOORS: RESTORE FINISH BEFORE INSTALLATION IF FITTING OR MACHINING IS REQUIRED AT PROJECT SITE.

08360 SECTIONAL OVERHEAD DOORS.

- 1.1 GENERAL A. SECTION INCLUDES SECTIONAL OVERHEAD DOORS (SOME ELECTRIC DRIVEN), INSULATED PANELS OF FLUSH DESIGN, OPERATING HARDWARE, MOTOR OPERATORS, CONTROLS AND SUPPORTS
  - B. PERFORMANCE REQUIREMENTS: PROVIDE SECTIONAL OVERHEAD DOORS CAPABLE OF WITHSTANDING THE EFFECTS OF GRAVITY LOADS AND UNIFORM WIND-LOAD PRESSURE (VELOCITY PRESSURE) OF 20 PSF, ACTING INWARD AND OUTWARD. WITHOUT EVIDENCE PERMANENT DEFORMATION OF DOOR COMPONENTS. DESIGN DOOR COMPONENTS AND OPERATOR TO OPERATE FOR NOT
  - LESS THAN 10,000 CYCLES. C. SUBMITTALS: IN ADDITION OR PRODUCT DATA, SUBMIT THE FOLLOWING:
  - a. SUMMARY OF FORCES AND LOADS O NWALLS AND
  - b. SHOP DRAWINGS: INDICATE OPENING DIMENSIONS AND REQUIRED TOLERANCES, CONNECTION DETAILS, ANCHORAGE SPACING, HARDWARE LOCATIONS, AND INSTALLATION DETAILS.
  - c. SAMPES OF COLORS AVAILABLE AND SAMPLSE FOR VERIFICATION, OF EACH TYPE OF EXPOSED FINISH REQUIRED. COLOR NOTE: EXTERIOR FACES OF DOORS SHALL
  - BE EITHER MANUFACTURER'S STANDARD WHITE OR BROWN. SUBMIT SAMPLES FOR OWNER SELECTION
  - d. OPERATION DATA: INCLUDE ELECTRICAL CONTROL ADJUSTMENTS.
  - e. MAINTENANCE DATA: INCLUDE DATA FOR MOTOR AND TRANSMISSION, SHAFT AND GEARING, LUBRICATION
  - FREQUENCY, SPARE PARTS SOURCES. D. LISTING AND LABELING: PROVIDE ELECTRICALLY OPERATED FIXTURES SPECIFIED IN THIS SECTION THAT ARE LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE
  - 100, AND BY UNDERWRITER'S LABORATORIES, INC., AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED. E. WARRANTY: INCLUDE COVERAGE FOR ELECTRIC MOTOR AND TRANSMISSION.

#### 1.2 PRODUCTS

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE

- FOLLOWING a. OVERHEAD DOOR CORPORATION - BASIS OF DESIGN -
- "THERMA-CORE 593" MIN. R-12.0
- b. CLOPAY BUILDING PRODUCTS CO. c. WAYNE-DALTON CORP
- d. RAYNOR GARAGE DOORS B. STEEL DOOR SECTIONS: STRUCTURAL QUALITY CARBON-STEEL SHEETS COMPLYING WITH ASTM A 653 (ASTM A 653A), COMMERCIAL QUALITY, WITH A MINIMUM YIELD
- STRENGTH OF 33,00 PSI AND A MINIMUM G60 (Z180) ZINC COATING. a. EXTERIOR SECTION FACE : FLAT
- b. ROLL HORIZONTAL MEETING EDGES TO A
- CONTINUOUS, INTERLOCKING WEATHERTIGHT SEAL WITH A REINFORCING FLANGE RETURN. REINFORCE SECTIONS WITH CONTINUOUS HORIZONTAL AND DIAGONAL GALVANIZED STEEL REINFORCEMENT, AS REQUIRED TO STIFFEN DOOR AND FOR WIND LOADING, FORMED TO DEPTH, AND BOLTED OR WELDED IN PLACE. PROVIDE REINFORCEMENT FOR HARDWARE ATTACHMENT.
- FOR INSULATED DOORS, PROVIDE DOOR SECTIONS
- WITH CONTINUOUS THERMAL-BREAK CONSTRUCTION, SEPARATING FACES OF DOOR.

- c. BOTTOM BAR: REINFORCE BOTTOM SECTION WITH A CONTINUOUS CHANNEL OR ANGLE.
- d. INSULATION: MANUFACTURER'S STANDARD
- POLYURETHANE-FOAM-TYPE THERMAL INSULATION, FOAMED IN PLACE TO COMPLETELY FILL INNER CORE OF SECTION, PRESSURE BONDED TO FACE SHEETS TO PREVENT DELAMINATION UNDER WIND LOAD, AND WITH A MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDICES OF 75 AND 450 RESPECTIVELY, ACCORDING TO ASTM E 84. ENCLOSE INSULATION COMPLETELY, WITH NO EXPOSED INSULATION MATERIAL EVIDENT.
- C. TRACKS: PROVIDE MANUFACTURER'S STANDARD STEEL TRACK SYSTEM, SIZED FOR DOOR SIZE AND WEIGHT, DESIGNED FOR LIFT TYPE INDICATED AND CLEARANCES SHOWN, MAXIMIZE ALLOWABLE CLEARANCE AT ALL DOORS. WELD OR BOLT TO TRACK SUPPORTS.
- D. TRACK REINFORCEMENT AND SUPPORTS: GALVANIZED STEEL, COMPLYING WITH ASTM A 36 (ASTM A 36M) AND ASTM A 123, AS REQUIRED FOR DOOR SIZE AND WEIGHT E. WEATHERSEALS: PROVIDE REPLACEABLE, ADJUSTABLE,
- CONTINUOUS, COMPRESSIBLE WEATHER-STRIPPING GASKETS OF FLEXIBLE VINYL, RUBBER, OR NEOPRENE FITTED TO BOTTOM, JAMBS, AND AT TOP OF OVERHEAD a. PROVIDE MOTOR-OPERATED DOORS WITH COMBINATION BOTTOM WEATHERSEAL AND SENSOR
- EDGE F. WINDOWS: NONE REQUIRED.
- G. HARDWARE: MANUFACTURER'S STANDARD HEAVY-DUTY, CORROSION-RESISTANT HINGES AND ROLLERS. a. LOCK: INSIDE MOUNTED, ADJUSTABLE KEEPER, SPRING ACTIVATED LATCH BAR WITH FEATURE TO RETAIN IN LOCKED OR RETRACTED POSITION. INTERIOR HANDLE, 1 PER DOOR.
- b. WHERE DOOR UNIT IS MOTOR-OPERATED, PROVIDE SAFETY INTERLOCK SWITCH TO DISENGAGE POWER SUPPLY WHEN DOOR IS LOCKED. H. COUNTERBALANCE MECHANISM: ADJUSTABLE-TENSION
- TORSION SPRINGS I. ELECTRIC DOOR OPERATOR: MEDIUM DUTY, TYPE, SIZE AND
- CAPACITY RECOMMENDED AND PROVIDED BY DOOR MANUFACTURER FOR DOOR, TRACK CONFIGURATION, AND OPERATIONAL LIFE SPECIFIED, WITH ELECTRIC MOTOR AND FACTORY-PREWIRED MOTOR CONTROLS, STARTER, GEAR REDUCTION UNIT, SOLENOID-OPERATED BRAKE, CLUTCH, REMOTE CONTROLS STATIONS, CONTROL DEVICES, RADIO CONTROL DEVICES, INTEGRAL GEARING FOR LOCKING DOOR, FACTORY MOUNTED DISCONNECT DEVICE, EMERGENCY AUXILARY OPERATOR AND ACCESSORIES REQUIRED FOR PROPER OPERATION. COMPLY WITH NFPA 70. DESIGN OPERATOR SO MOTOR MAY BE REMOVED WITHOUT DISTURBING LIMIT-SWITCH ADJUSTMENT AND
- WITHOUT AFFECTING EMERGENCY AUXILARY OPERATOR a. ELECTRIC MOTORS: PROVIDE 3/4 HP, 110 VOLT, 1 PHASE 60 H.Z., MEDIUM INDUCTION TYPE WITH HIGH-STARTING TORQUE, REVERSIBLE, CONTINUOUS DUTY, CLASS 'A' INSULATED, ELECTRIC MOTORS, COMPLYING WITH NEMA MG 1, WITH OVER LOAD PROTECTION, SIZED TO START, ACCELERATE, AND OPERATE DOOR IN EITHER DIRECTION, FROM ANY POSITION, AT NOT LESS THAN 2/3 FPS OR MORE THAN 1.0 FPS.
- PROVIDE OPEN DRIP-PROOF MOTOR, AND CONTROLLER WITH NEMA ICS 6, TYPE 1 ENCLOSURE. b. CONTROL EQUIPMENT: PROVIDE F.C.C. APPROVED RADIO CONTROL RECEIVER AND TRANSMITTER EQUIPMENT FOR EACH DOOR.
- PROVIDE INTERIOR CONTROL STATION WITH MOMENTARY-CONTACT, 3-BUTTON (OPEN-CLOSE-STOP) OPERATION (1 PER DOOR).
- 1. INTERIOR UNITS: FULL-GUARDED, SURFACE-MOUNTED. HEAVY-DUTY TYPE. WITH GENERAL-
- PURPOSE NEMA ICS 6, TYPE 1 ENCLOSURE. PROVIDE PORTABLE REMOTE RADIO-CONTROL TRANSMITTERS (6 TOTAL). EACH REMOTE TRANSMITTER SHALL BE PROVIDED WITH SELECTOR
- SWITCH OR SEPERATE BUTTONS TO ALLOW SEPERATE OPERATIONS OF DOORS (3 DOORS). DOOR SUPPLIER / INSTALLERS SHALL MEET WITH OWNER (TOWNSHIP TRUSTEES) AND CO-ORDINATE THE FOLLOWING
- 1. SELECTION OF REMOTE OPERATOR-TO-DOOR LOCATION OPERATION. (WHICH OPERATOR TO WHICH DOOR)
- 2. SET-UP & PROGRAMMING OF REMOTE
- OPERATORS. 3. INSTRUCTION TO OWNER ON OPERATOR
- **OPERATION AND PROGRAMMING** J. CONTROL EQUIPMENT: PROVIDE INTERIOR CONTROL STATION WITH MOMENTARY-CONTACT, 3 BUTTON (OPEN-
- CLOSE-STOP) OPERATION (1 PER DOOR.) a. INTERIOR UNITS: FULL-GUARDED, SURFACE-MOUNTED, HEAVY-DUTY TYPE, WITH GENERAL-PURPOSE NEMA ICS 6, TYPE 1 ENCLOSURE.
- K. OBSTRUCTION DETECTION DEVICE: PROVIDE EACH MOTORIZED DOOR WITH SELF-MONITORING, 4-WIRE-CONFIGURED-TYPE, ELECTRICALLY ACTUATED, EXTERNAL AUTOMATIC SAFETY SENSOR ABLE TO PROTECT FULL WIDTH OF DOOR OPENING. ACTIVATION OF SENSOR IMMEDIATELY STOPS AND REVERSES DOWNWARD DOOR
- L. ADJUSTABLE LIMIT SWITCHES: INTERLOCKED WITH MOTOR CONTROLS AND SET TO AUTOMATICALLY STOP DOOR AT FULLY OPENED AND FULLY CLOSED POSITIONS.
- D. FIELD EXAMIN AND VERIFY THAT WALL OPENINGS ARE READY TO RECEIVE WORK, AND THAT OPENING DIMENSIONS AND TOLERANCES ARE WITHIN SPECIFIED LIMITS. BEGINNING OF INSTALLATION MEANS ACCEPTANCE OF
- EXISTING SURFACES. E. INSTALL DOOR, TRACK, AND OPERATING EQUIPMENT COMPLETE WITH NECESSARY HARDWARE, JAMB AND HEAD MOLD STRIPS, ANCHORS, INSERTS, HANGERS, AND EQUIPMENT SUPPORTS ACCORDING TO SHOP DRAWINGS, MANUFACTURER'S WRITTEN INSTRUCTIONS, AND AS SPECIFIED.
- F. FASTEN VERTICAL TRACK ASSEMBLY TO FRAMING NOT LESS THAN 24 INCHES ON CENTER. HAND HORIZONTAL TRACK FROM STRUCTURAL OVERHEAD FRAMING WITH ANGLE OR CHANNEL HANGERS WELDED AND BOLT-FASTENED IN PLACE. PROVIDE SWAY BRACING AND REINFORCEMENT AS REQUIRED FOR RIGID INSTALLATION OF TRACK AND DOOR OPERATING EQUIPMENT.
- G. MAINTAIN DIMENSIONAL TOLERANCE AND ALIGNMENT WITH ADJACENT WORK. COORDINATE INSTALLATION OF ELECTRICAL SERVICE. POWER AND CONTROL WIRING BY ELECTRICAL CONTRACTOR.
- H. INSTALL PERIMETER TRIM AND CLOSURES. I. LUBRICATE BEARINGS AND SLIDING PARTS. ADJUST DOORS TO OPERATE EASILY, FREE FROM WARP, TWIST, OR DISTORTION, AND FITTING WEATHERTIGHT AROUND ENTIRE PERIMETER.

#### 08710 DOOR HARDWARE 1.1 GENERAL

- A. SUBMITTALS: PRODUCT DATA FOR EACH TYPE OF PRODUCT SPECIFIED, PLUS THE FOLLOWING. a. HARDWARE SCHEDULE: SUBMIT FINAL HARDWARE
  - SCHEDULE ORGANIZED BY "HARDWARE SETS", TO INDICATE SPECIFICALLY THE PRODUCT TO BE FURNISHED FOR EACH ITEN REQUIRED ON EACH DOOR. SUBMIT MANUFACTURER'S CATALOG CUT SHEETS.

- b. FURNISH TEMPLATES TO EACH FABRICATOR OF DOORS AND FRAMES AS REQUIRED FOR HARDWARE PREPARATION
- B. PANIC EXIT DEVICES, PROVIDE U.L. OR F.M. LABEL INDICATED "FIRE EXIT HARDWARE".
- C. REFERENCES: OHIO BUILDING CODE (OBC) 1008.1.8 AND OBC ADAAG 4.13. D. DELIVERY, STORAGE, AND HANDLING. PACKAGE
- HARDWARE ITEMS SEPARATELY. LABEL AND IDENTIFY EACH PACKAGE WITH DOOR OPENING CODE TO MATCH HARDWARE SCHEDULE. E. MAINTENANCE MATERIALS:
- a. PROVIDE SPECIAL WRENCHES AND TOOLS APPLICABLE TO EACH DIFFERENT OR SPECIAL HARDWARE COMPONENT.
- b. PROVIDE MAINTENANCE MATERIALS, TOOLS, AND ACCESSORIES SUPPLIED BY HARDWARE COMPONENT MANUFACTURER.

#### 1.2 PRODUCTS

- A. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE HEAVY-DUTY COMMERCIAL GRADE PRODUCTS BY MANUFACTURER' FOR VARIOUS PRODUCTS LISTED BELOW: a. HINGES: HAGAR. McKINNY. STANLEY.
  - b. CYLINDERS AND LOCKS: BEST, SARGENT, SCHLAGE,
  - YAI F c. FLUSH BOLTS: HAGAR, IVES, ROCKWOOD,
  - d. PUSH / PULL UNITS: BALDWIN, HIAWATHA, IVES, ROCKWOOD
  - e. OVERHEAD CLOSERS: LCN, SARGENT, YALE, NORTON. STOPS: HAGAR, IVES, ROCKWOOD. KICK PLATES: BALDWIN, HIAWATHA, IVES, ROCKWOOD.
- WEATHER STRIPPING AND SEALS: NATIONAL GUARD, REESE, PEMCO, ZERO. i. OVERHEAD DRIP GUARDS: NATIONAL GUARD, REESE,
- PENCO, ZERO. j. DOOR BOTTOM SWEEPS: NATIONAL GUARD, REESE
- PEMCO, ZERO. k. THRESHOLDS: NATIONAL GUARD, REESE, PEMCO,
- 7FRO B. KEYING: DOOR LOCKS, ALL KEYING AND MASTER KEYING SHALL BE COORDINATED WITH THE OWNER.
- C. KEYING: DOOR LOCKS, ALL KEYING AND MASTER KEYING SHALL BE FINISHED AND BASE MATERIALS DESIGNATIONS
- ARE INDICATED IN ACCORDANCE WITH ANSI BHMA A 156.18 OR THE NEAREST TRADITIONAL U.S. COMMERCIAL FINISH. a. ALL FINISHES TO BE US26D, SATIN CHROME, UNLESS NOTED OTHERWISE.
- D. HARDWARE ITEMS: a. HINGES: PROVIDE FULL-MORTISE BUTT, SIZE, WEIGHT
- AND QUANTITY IN ACCORDANCE WITH REQUIREMENTS ESTABLISHED FOR DOOR SIZE, WEIGHT AND FREQUENCY OF USE.
- PINS: STAINLESS STEEL, EXCEPT STEEL PINS WITH STEEL HINGES. NON-REMOVABLE FOR EXTERIOR AND PUBLIC INTERIOR EXPOSURE, NONRISING FOR NONSECURITY EXPOSURE, FLAT BUTTON WITH MATCHING PLUGS
- BALL-BEARING: SWAGED, INNER LEAF BEVELED, SQUARE CORNERS.
- PLAIN-BEARING: SWAGED, INNER LEAF BEVELED, ROUNDED CORNERS, EXCEPT PROVIDE BALL-BEARING FOR DOORS EQUIPPED WITH CLOSERS
- b. LOCKSETS, LOCKS, LATCHES AND BOLTS: PROVIDE NEW MASTERKEY SYSTEM WITH PROPERLY SIZED KEY CONTROL SYSTEM.
- LOCKSETS SHALL BE MORTISED-STYLE EQUIP LOCKS WITH 6-PIN TUMBLER CYLINDERS BORED LOCKS SHALL BE EXTRA-HEAVY-DUTY
- CYLINDRICAL WITH REMOVABLE CORES. STRIKES: WROUGHT BOX STRIKES WITH EXTENDED LIP FOR LATCH BOLTS. EXCEPT OPEN STRIKE
- PLATES MAY BE USED I NWOOD FRAMES, PROVIDE DUST-PROOF STRIKES FOR FOOT BOLTS. c. FLUSH BOLTS: MINIMUM OF 1/2 INCH. DIAMETER BRASS,
- BRONZE, OR STAINLESS STEEL RODS, WITH MINIMUM 12 INCH LONG ROD. d. PUSH/PULL UNITS: MANUFACTURER'S STANDARD TYPE
- SCHEDULED, THROUGH-BOLTED FOR MATCHES PAIRS. e. OVERHEAD CLOSERS: WHERE PARALLEL-ARM CLOSERS ARE INDICATED, PROVIDE UNITS ONE SIZE LARGER THAN RECOMMENDED FOR STANDARD ARM
- f. HOLDERS, STOPS, BUMPERS: PROVIDE GREY RUBBER EXPOSED RESILIENT PARTS. FINISH EXPOSED METAL TO MATCH HARDWARE
- EXCEPT FINSIH FLOOR PLATES TO MATCH FINISH OF THRESHOLDS. SIZE AND MOUNT UNITS INDICATED OR, IF NOT INDICATED, TO COMPLY WITH MANUFACTURER'S RECOMMENDATIONS FOR THE EXPOSURE
- CONDITION. REINFORCE THE SUBSTRATE AS RECOMMENDED. g. SILENCERS: PROVIDE SILENCERS ON METAL DOOR FRAMES, UNLESS NOT PERMITTED FOR FIRE-RATING,
- OR WEATEHRSTRIPPING IS PROVIDED -- 3 PER SINGLE-DOOR FRAME, 2 PER DOUBLE-DOOR FRAME. h. COORDINATORS: PROVIDE DEVICE FOR PAIRS OF
- DOORS WITH CLOSERS AND ASTRAGAL O NACTIVE LEAF, OR AUTOMATIC FLUSH BOLTS ON INACTIVE LEAF. MISCELLANEOUS DOOR HARDWARE: PROVIDE PLATES,
- TRIM, LETTER BOX, VIEWERS, KNOCKERS, BELLS, AND SIMILAR UNITS AS INDICATED. j. KICK PLATES: PROVIDE PROTECTION PLATES NOT
- MORE THAN 1 1/2 INCHES LESS THAN DOOR WIDTH ON STOP SIDE AND NOT MORE THAN 1/2 INCH LESS THAN DOOR WIDTH ON PULL SIDE, x THE HEIGHT INDICATED. MATERIAL: STAINLESS STEEL, 0.050 INCH (U.S. 18 GAUGE)
- k. WEATHERSTRIPPING: PROVIDE TYPE, SIZE AND PROFILE INDICATED OR RECOMMENDED, CONTINUOUS AT HEAD AND JAMB EDGES OF EACH EXTERIOR DOOR OPENING. PROVIDE NON-CORROSIVE FASTENERS.
- I. DOOR BOTTOM SWEEPS: ALUMINUM WITH RESILIENT INSERT, FULL WIDTH ACROSS EXTERIOR FACE OF EACH HOLLOW METAL DOOR BOTTOM. DESIGNED FOR TIGHT FIT AGAINST THRESHOLD. PROVIDE NON-CORROSIVE
- FASTENERS. m. THRESHOLDS: EXTRUDED ALUMINUM OF SADDLE TYPE. PROVIDE NON-CORROSIVE FASTENERS. ALL THRESHOLDS SHALL BE NO MORE THAN 1.2 INCH IN HEIGHT, COMPLYING WITH OBC 1008.1.6 AND OBC
- ADAAG 4.13.8. n. OVERHEAD DRIP GUARDS: EXTRUDED ALUMINUM TYPE, NOT LESS THAN 4 INCHES LONGER THAN DOOR WIDTH, CONTINUOUS ACROSS HEAD. MOUNT TO FRAME HEAD TO CLEAR DOOR SWING. PROVIDE NON-CORROSIVE FASTENERS.

#### 1.3 EXECUTION

- A. VERIFY THAT DOORS AND FRAMES ARE READY TO RECEIVE WORK AND DIMENSIONS ARE AS INSTRUCTED BY THE MANUFACTURER
- B. HARDWARE MOUNTING LOCAITONS: AS RECOMMENDED BY THE DOOR AND HARDWARE INSTITUTE, UNLESS INDICATED
- OTHERWISE. C. INSTALL EACH HARDWARE ITEM TO COMPLY WITH MANUFACTURER'S FURNISHED TEMPLATE, INSTRUCTIONS
- AND RECOMMENDATIONS. D. SET THRESHOLDS OF EXTERIOR DOORS IN FULL BED OF SEALANT AS SPECIFIED IN SECTION 07920 "JOINT SEALANTS".

# PERSONNEL IN PROPER MAINTENANCE AND ADJUSTMENT.

08800 GLAZING.

1.1 GENERA

# STOREFRONTS AND WINDOWS. DEFECTS IN CONSTRUCTION. FOLLOWING CRITERIA INDICATED BELOW: x H x DEG.F FOLLOWING:

- LOCATION.
- SPECIFIED REQUIREMENTS.
- 1.2 PRODUCTS

  - PRODUCTS INDICATED BELOW:
  - THICK, CLEAR.

  - THICKNESS ONE NICH (1")
- **1.3 EXECUTION**

1.1 GENERAL

- SIZED AND WITHIN TOLERANCE.
- REQUIREMENTS ARE INDICATED.
- HANDLING AND INSTALLATION.

EXTERIOR FACES.

B. REFERENCES:

E. HARDWARE ADJUSTMENT: RETURN TO PROJECT ONE MONTH AFTER OWNER'S OCCUPANCY, AND RE-ADJUST HARDWARE TO PROPER OPERATION AND FUNCTION. INSTRUCT OWNER'S

A. RELATED WORK: SECTION 08111 - STEEL DOORS AND FRAMES, SECTION 08411 - ALUMINUM ENTRANCES,

- B. PERFORMANCE REQUIREMENTS: PROVIDE GLAZING SYSTEMS CAPABLE OF WITHSTANDING NORMAL THERMAL MOVEMENT AND WIND IMPACT LOADS WITHOUT FAILURE. INCLUDING LOSS OR GLASS BREAKAGE ATTRIBUTABLE TO THE FOLLOWING: DEFECTIVE MANUFACTURE. FABRICATION, INSTALLATION, FAILURE OF SEALANTS OR GASKETS TO REMAIN WATERTIGHT AND AIRTIGHT, DETERIORATION OF GLAZING MATERIALS, OR OTHER
- a. GLASS DESIGN: GLASS THICKNESS INDICATED ARE MINIMUMS AND ARE FOR DETAILING ONLY. PROVIDE GLASS LITES FOR VARIOUS SIZE OPENINGS IN NOMINAL THICKNESS INDICATED, BUT NOT LESS THAN THICKNESSES AND IN STENGTHS (ANNEALED OR HEAT-TREATED) REQUIRED TO MEET OR EXCEED THE
- GLASS THICKNESS: SELECT MINIMUM GLASS THICKNESS TO COMPLY WITH ASTM E 1300, ACCORDING TO THE FOLLOWING REQUIREMENTS: SPECIFIED DESIGN WIND LOADS: 80 MPH 2. PROBABILITY OF BREAKAGE FOR VERTICAL GLAZING: 8 LITES PER 1000 FOR LITES SET VERTICALLY OR NOT MORE THAN 15 DEGREES OFF VERTICAL AND UNDER WIND ACTION. b. THERMAL AND OPTICAL PERFORMANCE PROPERTIES: AS DETERMINED ACCORDING TO PROCEDURES
- CENTER-OF-GLASS U-VALUES: NFRC 100 METHODOLOGY USING LBL-35298 WINDOW 4.1 COMPUTER PROGRAM, EXPRESSED AS BTU/SQ.FT.
- CENTER-OF-GLASS SOLAR HEAT GAIN COEFFICIENT: NFRC 100 200 METHODOLOGY USING LBL-35298 WINDOW 4.1 COMPUTER PROGRAM. SOLAR OPTICAL PROPERTIES: NFRC 300. C. SUBMITTALS: IN ADDITION TO PRODUCT DATA FOR EACH GLASS PRODUCT AND GLAZING MATERIAL, SUBMITT THE
- a. SAMPLES: IN THE FORM OF 12 INCH SQUARE SAMPLES FOR EACH TYPE OF GLASS, OTHER THAN CLEAR PRODUCTS, AND OF 12 INCH LONG SAMPLES FOR SEALANTS. INSTALL SEALANT SAMPLES BETWEEN TWO STRIPS OF MATERIAL REPRESENTATIVE IN COLOR OF THE ADJOINING FRAMING SYSTEM
- b. GLAZING SCHEDULE: USE SAME DESIGNATIONS INDICATED ON DRAWINGS FOR GLAZED OPENINGS IN PREPARING A SCHEDULE LISTIG GLASS TYPES AND THICKNESSES FOR EACH SIZE OPENING AND
- c. MANUFACTURER'S CERTIFICATE: CERTIFY THAT SEALED INSULATED GLASS MEETS OR EXCEEDS
- D. SAFETY GLASS: CATEGORY II MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND ANSI Z97.1. E. WARRANTIES: PROVIDE A FIVE (5) YEAR MANUFACTURER'S WARRANTY TO INCLUDE COVERAGE FOR SEALED GLASS UNITS FROM FAILURE, INTERPANE DUSTING OR MISTING, AND REPLACEMENT OF SAME.
- A. AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS. PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE OT LIMITED TO, THE
- a. FLOAT GLASS: ASTM C 1036, TYPE 1, QUALITY Q3, 1/4" b. HEATED-TREATED FLOAT GLASS: ASTM C 1048, TYPE 1,
- QUALITY Q3. 1/4" THICK. CLEAR. FULLY TEMPERED. c. "FROSTED" FLOAT GLASS: NO SPECIFICATION AVAILABLE. PROVIDE LIGHT TRANSMITTING, VISION OBSCURING COATING OR APPLIED MATERIAL TO GLASS
- LOCATED IN RESTROOMS FOR PRIVACY. d. INSULATING-GLASS UNITS: PREASSEMBLED UNITS
- CONSISTING OF DUEL-SEALED LITES OF GLASS SEPARATED BY DEHYDRATED INTERSPACE. AND COMPLYING WITH ASTM E 774 FOR CLASS CBA UNITS,
- OUTER PANE 1/4" CLEAR GLASS (UNLESS TINT IS INDICATED), INNER PANE 1/4" CLEAR GLASS, TOTAL
- e. PROVIDE GLAZING TAPE AND / OR OTHER MISCELLANOUS GLAZING MATERIALS AS REQUIRED FOR COMPLETE INSTALLTION.
- A. VERIFY THAT OPENIGNS FOR GLAZING ARE CORRECTLY
- B. COMPLY WITH COMBINED WRITTEN INSTUCTIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS AND OTHER GLAZING MATERIALS, UNLESS MORE STRINGENT
- C. PROTECT GLASS EDGES FROM DAMAGE DURING
- D. DO NOT EXCEED EDGE PRESSURES STIPULATED BY GLASS MANUFACTURERS FOR INSTALLING GLASS LITES.
- E. SET GLASS LITES IN EACH SERIES WITH UNIFORM PATTERN, DRAW, BOW, AND SIMILAR CHARACTERISTICS.
- F. PROTECT GLASS FROM CONTACT WITH CONTAMINATING SUBSTANCES RESULTING FROM CONSTRUCTION
- OPERATIONS, INCLUDING WELD SPLATTER. G. REMOVE AND REPLACE GLASS THAT IS BROKEN, CHIPPED, CRACKED, ABRADED OR DAMAGED IN ANY WAY. INCLUDING NATURAL CAUSES, ACCIDENTS AND VANDALISM, DURING
- CONSTRUCTION PERIOD. H. WASH GLASS ON BOTH EXPOSED SURFACES IN EACH AREA OF PROJECT NOT MORE THAN FOUR (4) DAYS BEFORE SCHEDULED INSPECTIONS THAT ESTABLISH DATE OF SUBSTANTIAL COMPLETION. WASH GLASS AS
- RECOMMENDED BY GLASS MANUFACTURER. 085200 VINYL CLAD WOOD WINDOWS
  - A. SECTION INCLUDES WOOD WINDOWS WITH VINYL CLAD
  - a. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA) • SECTIONS 450, 502, 614, 615, 624, 625, AND 902
  - b. ASTM INTERNATIONAL C 1036 - FLAT GLASS
  - C 1048 HEAT STRENGTHENED AND FULL TEMPERED FLAT GLASS
  - E 90 AIRBORNE SOUND TRANSMISSION LOSS C. PERFORMANCE REQUIREMENTS - COMPLY WITH REQUIREMENTS OF NAFS.

D. SUBMITTALS:

- a. SAMPLES: OF CLADDING MATERIAL IN COLOR SPECIFIED AND METAL ACCESSORIES IN FINISH DESIGNATED. IF NO FINISH DESIGNATED, PROVIDE SAMPLES FOR ALL COLORS IN MANUFACTURERS' STANDARD RANGE FOR ELSCTION BY THE OWNER AND ARCHITECT
- GLAZING SCHEDULE: USE SAME DESIGNATIONS INDICATED ON DRAWINGS FOR GLAZED OPENINGS IN PREPARING A SCHEDULE LISTING GLASS TYPES AND THICKNESSES FOR EACH SIZE OPENING AND LOCATION.
- MANUFACTURER'S CERTIFICATE: CERTIFY THAT SEALED INSULATED GLASS MEETS OR EXCEEDS SPECIFIED REQUIREMENTS.
- d. SHOP DRAWINGS SHOWING METHODS OF INSTALLATION, PLANS, SECTIONS, ELEVATIONS AND DETAILS OF WALLS INCLUDING FLASHINGS, VENTS, SEALANTS, AND INTERFACES WITH ALL MATERIALS NOT
- SUPPLIED BY THE WINDOW MANUFACTURER. e. A COPY OF MANUFACTURER'S STANDARD ISTALLATION DETAILS AND INSTRUCTIONS SHALL BE KEPT ON THE JOB SITE.
- SAFETY GLASS: CATEGORY II MATERIALS COMPLYING WITH TESTING REQUIREMENTS IN 16 CFR 1201 AND ANSI Z97.1 F. WARRANTIES:
- a. GLASS 20 YEARS FOR NON-IMPACT
- b. NON-GLASS PARTS 10 YEARS **EXTERIOR COATING - LIMITED LIFETIME**
- d. EXTERIOR COATING FADING 20 YEARS
- e. HARDWARE 10 YEARS G. QUALITY:
- a. DELIVER PRODUCTS TO THE SITE IN MANUAFACTURER'S ORIGINAL, UNOPENED UNDAMAGED PACKAGING WITH LABELS CLEARLY
- RFADABI F b. STORE AND PROTECT PRODUCTS FROM
- TEMPERATURE AND HUMIDITY OUTSIDE OF THE MANUFACTURER'S RECOMMENDED ALLOWABLE LIMITS. STORE OFF THE GROUND AND UNDER COVER WHERE NOT EXPOSED TO WEATHER.

#### 1.2 PRODUCTS AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH

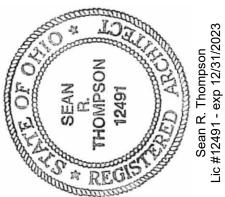
REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE OT LIMITED TO, THE PRODUCTS INDICATED BELOW: a. BASIS OF DESIGN - PELLA WINDOWS - LIFESTYLE

- SERIES WINDOWS. OR EQUAL BASED ON THE FOLLOWING PERFROMANCE REQUIREMENTS AND CONSTRUCTION.
- c. PERFORMANCE AND CONSTRUCTION:
- **EXTERIOR FRAME COMPOSITE PROFILE** CONSISTING OF 40 PERCENT RECLAIMED PRE-CONSUMER WOOD FIBER AND 60 PERCENT THERMOPLASTIC POLYMER (BY WEIGHT)
- EXTERIOR SASH PULTRUDED FIBERGLASS. INTERIOR EXPOSED FRAME AND SASH -PRESERVATIVE TREATED SOLID LUMBER (WDMA IS.4) KILN DIRED AND SUITABLE FOR STAIN OR PAINTED FINISH.
- GLASS ADVANCED COMFORT LOW-E WITH MUNTYINS BETWEEN THE GLASS (MIN. U-FACTOR OF .26 AND SHGC OF .29)
- WOOD SPECIES: PINE. INTERIOR FINISH: STAINED-CLEAR COAT
- EXTERIOR FINISH: PAINTED FRAME AND SASH WHITE WINDOW TYPE: DOUBLE HUNG AND FIXED - SEE DRAWINGS
- NON-IMPACT RESISTANT
- AIR INFILTRATION LESS THAN .2CFM/SF
- ENERGY STAR CERTIFIED
- WEATHERSTRIP
- ATTACHMENT FLANGE EXTRUDED VINYL m. HARDWARE OPERATOR SHALL BE GEAR TYPE, DIE-CAST COATED CARBON STEEL WITH STAINLESS
- COMPONENTS. HINGES SHALL BE PIANO TYPE OF STAINLESS
- STEEL FINISH (PICK ONE): ANTIQUE BRASS, BLACK, BRIGHT BRASS, BRUSHED CHROME, DISTRESSED BRONZE DISTRESSED NICKEL, GOLD DUCT, OIL RUBBED
- BRONZE, POLISHED CHROME, SATIN NICKEL, STONE, WHITE, • SASH LOCK (PICK ONE): WHITE , BLACK, POLISHED BRASS, ANTIQUE BRASS, SATIN CHROME, OIL-
- RUBBED BRONZE SASH LIDT (PICK ONE): BAR TYPE, HAND LIFT,
- FINGER LIFT
- SASH LOCK AND SASH LIFT FINISH (PICK ONE): ANTIQUE BRASS, BLACK, BRIGHT BRASS, BRUSHED CHROME, DISTRESSED BRONZE, DISTRESSED NICKEL, GOLD DUCT, OIL RUBBED BRONZE, POLISHED CHROME, SATIN NICKEL, STONE, WHITE.
- DIVIDED LIGHTS PERMANENT LOCATED WITHIN INSULATED GLASS UNITS. 3/4" WIDE IN PATTERN SHOWN ON DRAWINGS. COLR - MATCH EXTERIOR AND INTERIOR WINDOW COLOR.
- INSECT SCREENS FULL SCREENS. ALUMINUM FRAMES WITH ALUMINUM STREEN. COLOR TO BE SELECTED BY ARCHITECT/ OWNER.
- GLAZING DUAL PANE, LOW-E, INSULATED GLASS UNITS WITH U VALUE OF .30; SHGC OF .27; VISIBLE LIGHT TRANSMITTANCE OF .46; PROVIDE FULLY TEMPERED GLASS IN UNITS WHERE GLASS IS WITHIN 18" OF THE FLOOR.

#### 1.3 EXECUTION

- A. VERIFY THAT OPENIGNS FOR GLAZING ARE CORRECTLY SIZED AND WITHIN TOLERANCE. DO NOT START INSTALLATION UNTIL CONDITIONS ARE IN COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- B. COMPLY WITH COMBINED WRITTEN INSTUCTIONS OF MANUFACTURERS AND APPROVED SHOP DRAWINGS. C. INSTALL WINDOWS PLUMB, LEVEL, AND SQUARE. ANCHOR WINDOWS TO ADJACENT CONSTRUCTION AND FLASH TO
- ADJACENT SURFACES. D. ADJUST SASHES, INSECT SCREENS, AND HARDWARE AND ACCESSORIES AS APPLICABLE FOR CIRRECT FIT AND
- SMOOTH OPERATION. ADJUST WEATHERSTRIPPING FOR WEATHER-TIGHT CLOSURE. E. REMOVE PROTECTIVE FILMS AND NON-PERMANENT
- LABELS WITHIN 90 DAYS OF INSTALLATION. REMOVE EXCESS SEALANT, DIRT, AND OTHER SUBSTANCES. CLEAN WINDOW FRAME AND GLASS SURFACES. AVOID DAMAGING COATING, FINISHES AND ADJACENT SURFACES.
- G. TOUCH UP FINISHES WHERE MARKED OR SCRATCHED, AND REPLACE BROKEN GLASS UNITS H. PROTECT INSTALLED WINDOWS FROM DAMAGE DURING
- CONSTRUCTION UNTIL COMPLETION OF PROJECT AND ACCPETANCE BY THE OWNER.





REVIS	ked By SIONS:	10/ <sup>-</sup>	1'-0" 12/22 T/ QJ SRT
			Date 2/5/22
T MANFRASS & ASSOCIATES ARCHITECTS, LLC	MIDDLEFI	NEW EMS BUILDING	15228 ST RT 528; MIDDLEIFIELD, OHIO 44062
	CHITEC <sup>®</sup> ECIFICA		

Project Number 22124

09000	0 - FINISHES		2
09250 GYF	PSUM DRYWALL ASSEMBLIES		SETTINGS AND GROUTING MATERIALS: MENUFACTURE
1.1 GENE A.	SECTION INCLUDES ALL METAL STUD FRAMING AND		TILE MANUFACTURER OR: a. BONSAL, W.R, COMPANY
В.	GYPSUM BOARD ASEMBLIES. QUALITY ASSURANCE: PERFORM WORK IN ACCORDANCE		<ul><li>b. DAP, INC.</li><li>c. LATICRETE INTERNATIONAL, INC.</li></ul>
C.	WITH GA-201, GA-216 AND GA-600. QUALIFICATIONS: APPLICATION COMPANY SHALL	C.	d. (OR EQUAL) SUBMITTALS: IN ADDITION TO PRODUCT DATA FOR EAC
	SPECIZLIZE IN PERFORMING THE WORK OF THIS SECTION.		TYPE OF CERAMIC TILE, SETTING, AND GROUTING PRODUCTS SPECIFIED, SUBMIT THE FOLLOWING:
.2 PROD A.	MANUFACTURERS: GYPSUM BOARD SYSTEMS:		a. SAMPLES ACCURATELY REPRESENTING COLORS O TILE AND GROUT FROM MANUFACTURER'S FULL
	<ul> <li>a. NATIONAL GYPSUM COMPANY (GOLD BOND).</li> <li>b. UNITED STATES GYPSUM (U.S.G.).</li> <li>CEORCIA DACIEIC</li> </ul>	D	PRODUCT LINE. COLOR SELECTIONSHALL BE BY OWNER.
	c. GEORGIA PACIFIC d. CLARK (FRAMING)		UNGLAZED QUARRY TILE: SQUARE-EDGE FLAT TILE AS FOLLOWS:
	e. UNIMAST (FRAMING) FRAMING MATERIALS: - SEE 06000 WOOD		<ul> <li>a. WEARING SURFACE: NONABRASIVE, SMOOTH.</li> <li>b. FACIAL DIMENSIONS: NOMINAL 8 INCH X 8 INCH.</li> </ul>
U.	GYPSUM BOARD MATERIALS: a. REGULAR GYPSUM WALLBOARD: ASTM C 36 IN THICKNESS INDICATED		c. THICKNESS: 3/8 INCH OR 1/2 INCH. d. FACE: PLAIN
	<ul> <li>THICKNESS INDICATED.</li> <li>LONG EDGES: TAPERED.</li> </ul>		QUARRY TILE TRIM UNITS: MATCHING CHARACTERISTIC OF ADJOINING FLAT TILE AND COORDINATED WITH SIZE
	<ul> <li>ENDS: SQUARE.</li> <li>TYPE 'X' FIRE-RATED GYPSUM WALLBOARD: ASTM C 36,</li> </ul>		AND COURSING WHERE APPLICABLE. a. BASE: COVED WITH SURFACE BULLNOSE TOP EDGI
	5/8" THICK.  LONG EDGES: TAPERED.		<ul> <li>FACIAL DIMENSIONS NOMINAL 8 X 4 INCHES.</li> <li>b. BASE: INSIDE AND OUTSIDE CORNER TRIM PIECES TO A DESCRIPTION OF THE PIECES TO A DESCRIPTION OF TO A DESCRIPTION OF</li></ul>
	ENDS: SQUARE.     MOISTURE RESISTANT GYPSUM WALLBOARD: ASTM     Open And Structure Resistant Type From Theory Former		MATCH BASE. THINSET: DRY-SET PORTLAND CEMENT MORTAR
P	C360, MOISTURE RESISTANT TYPE, 5/8" THICK, FOR WALLS AND CEILINGS INDICATED IN SHOWER ROOMS.		COMPLYING WITH ANSI A 118.4. a. PREPACKAGED DRY-MORTAR MIX FOR EITHER ADD
D.	ACCESSORIES: CORNERBEAD, EDGE TRIM AND CONTROL JOINTS COMPLYING WITH ASTM C 1047, FORMED METAL OR	0	WATER OR LIQUID LATEX ADDITIVE, AT CONTRACTO OPION.
	PLASTIC, WITH METAL COMPLYING WITH THE FOLLOWING REQUIREMENTS.		GROUT: STANDARD SANDED CEMENT GROUT: ANSI A 1 COLOR SELECTION BY OWNER.
_	a. STEEL SHEET ZINC COATED (GALVANIZED) BY HOT-DIP PROCESS, OR ROLLED ZINC.		
E.	JOINT TREATMENT MATERIALS: PROVIDE JOINT TREATMENT MATERIALS COMPLYING WITH ASTM C 475.		CLEAN AND PREPARE FLOOR SURFACES BY REMOVING
	<ul> <li>a. JOINT TAPE: PAPER REINFORCING TAPE, UNLESS INDICATED OTHERWISE.</li> </ul>		SUBSTANCES THAT ARE INCAPATABLE WITH TILE SETT MATERIALS. PATCH IF REQUIRED.
	<ul> <li>DRYING TYPE JOINT COMPOUND: FACTORY PACKAGED, VINYL BASED PRODUCTS COMPLYING WITH THE</li> </ul>		ANSI TILE INSTALLATION STANDARDS: COMPLY WITH PARTS OF ANSI A 108 SERIES "SPECIFICATIONS FOR
	FOLLOWING REQUIREMENTS FOR FORMULATION AND INTENDED USE:		INSTALLATION OF CERAMIC TILE" THAT APPLY TO TYPE TILE AND SETTING AND GROUTING MATERIALS SPECIFI
	<ul> <li>TAPING COMPOUND FORMULATED FOR EMBEDDING TAPE AND FOR FIRST COAT OVER</li> </ul>		LAY TILE IN GRID PATTERN, UNLESS OTHERWISE INDICATED. ALIGN JOINTS WHEN ADJOINING TILES ON
	FASTENERS AND FACE FLANGES OF TRIM ACCESSORIES.		FLOOR, BASE AND TRIM ARE THE SAME SIZE. LAY OUT " WORK AND CENTER TILE FIELDS IN BOTH DIRECTIONS I
	<ul> <li>TOPPING COMPOUND FORMULATED FOR FILL (SECOND) AND FINISH (THIRD) COATS.</li> </ul>		EACH SPACE OR ON EACH WALL AREA. ADJUST TO MINIMIZE TILE CUTTING. PROVIDE UNIFORM JOINT WID
	<ul> <li>ALL-PURPOSE COMPOUND FORMULATED FOR BOTH TAPING AND TOPPING COMPOUNDS.</li> </ul>		<ul> <li>a. JOINT WIDTHS FOR QUARRY TILE SHALL BE 1/4 INCI</li> <li>b. TRANSITION STRIPS AT CARPET SHALL BE CARPET</li> </ul>
F.	MISCELLANEOUS MATERIALS: PROVIDE AUXILARY MATERIALS FOR GYPSUM BOARD CONSTRUCTION THAT		INSALLER. LEAVE STRAIGHT, SQUARE EDGES CENTERED UNDER DOORS.
	COMPLY WITH REFERENCED STANDARDS AND RECOMMENDATIONS OF GYPSUMBOARD MANUFACTURER.		GROUT TILE TO COMPLY WITH REQUIREMENTS OF ANS 108.10, UNLESS OTHERWISE INDICATED.
1.3 EXECL			JSTICAL PANEL CEILINGS.
A.	VERIFY THAT SITE CONDITIONS ARE READY TO RECEIVE WORK.	1.1 GENER	AL
В.	INSTALL STEEL FRAMING TO COMPLY WITH ASTM C 754 AND WITH ASTM C 840 REQUIREMENTS THAT APPLY TO		SECTION INCLUDES: SUSPENDED METAL GRID CEILING SYSTEM, PERIMETER TRIM AND ACOUSTICAL CEILING
	FRAMING INSTALLTION. a. METAL STUD SPACING: 16 INCHES ON CENTER, UNLESS	В.	PANELS (NON FIRE-RATED) SYSTEM DESCRIPTION: SUSPENDED SYSTEM TO RIGIDI
	SPECIFICALLY INDICATED OTHERWISE. b. INSTALL METAL JOIST FRAMING FOR CEILINGS IN SIZES		SECURE ACOUSTICAL CEILING SYSTEM, INCLUDING INTERGRAL MECHANICAL AND ELECTRICAL COMPONEN
	AND AT SPACINGS INDICATED. 16 INCH ON CENTER SPACING SHALL BY TYPICAL.	C.	WITH MAXIMUM DEFLECTION OF 1/360. SUBMITTALS: IN ADDITION TO PRODUCT DATA FOR EAC
	<ul> <li>INSTALL SUPPLEMENTARY FRAMING, BLOCKING AND BRACING AT TERMINATIONS IN GYPSUMBOARD,</li> </ul>		TYPE OF ACOUSTICAL PANEL AND SUSPENSION SYSTE REQUIRED, SUBMIT THE FOLLOWING:
	ASSEMBLIES TO SUPPORT FIXTURES, EQUIPIMENT SERVICES, HEAVY TRIM, GRAB BARS, TOILET		a. 12 INCH SQUARE SAMPLE OF EACH ACOUSTICAL PA TYPE, PATTERN AND COLOR.
	ACCESSORIES, FURNISHINGS, OR SIMILAR CONSTRUCTION. MISCELLANEOUS WOOD BLOCKING IS		b. SET OF 12 INCH LONG SAMPLES OF EXPOSED SUSPENSION SYSTEM MEMBERS, INCLUDING SUSPENSION SYSTEM MEMBERS, INCLUDING
	NOT REQUIRED TO BE "NON-COM" (FIRE-RETARDENT- TREATED-WOOD (F.R.T.W.)).		MOLDINGS, FOR EACH COLOR AND SYSTEM REQUI FIRE-TEST-RESPONCE CHARACTERISTICS: SURFACE
	d. SOLATE STEEL FRAMING FROM BUILDING STRUCTURE AT LOCATIONS INDICATED TO PREVENT TRANSFER OF		BURNING CHARACTERISTICS OF ACOUSTICAL PANELS SHALL COMPLY WITH ASTM E 1264 FOR CLASS A
	<ul> <li>LOADING IMPOSED BY STRUCTURAL MOVEMENT.</li> <li>WHERE BUILDING STRUCTURE ABUTS CEILING</li> </ul>	E.	MATERIALS AS TESTED PER ASTM E 84. EXTRA MATERIALS: PROVIDE ONE UNOPENED CARTON
	PERIMETER OR PENETRATES CEILING. 1. WHERE FIRE-RATED, GYPSUMBOARD	1.2 PRODUC	EACH TYPE OF ACCOUSTICAL TILE TO OWNER.
	ASSEMBLY WALLS ABUT TIGHT TO METAL ROOFING, INSTALL "FIRE TRAK", CEILING	Α.	SUSPENSION SYSTEM MANUFACTURERS: SUBJECT TO
	RUNNER SYSTEM TO PROVIDE A SLIP-JOINT CONDITION ALLOWING FOR VERTICAL		COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUC BY ONE OF THE FOLLOWING: a. U.S. GYPSUM
	MOVEMENT, BUT MAINTAINING FIRE-RATED SEAL AT JUNCTURE. SEAL ANY VOIDS WITH FIRE		b. ARMSTRONG c. CELOTEX
	CAULK SPECIFIED IN SECTION 07901 "JOINT SEALANTS".		d. (OR EQUAL) SUSPENSION SYSTEM MATERIALS: MANUFACTURER'S
	<ul> <li>WHERE PARTITION FRAMING AND WALL FURRING ABUT STRUCTURE, EXCEPT AT FLOOR.</li> </ul>		STANDARD EXPOSED-TEE DIRECT-HUNG SYSTEM, INTERMEDIATE DUTY, COMPLYING WITH APPLICABLE A
C.	INSTALL GYPSUM WALLBOARD IN ACCORDANCE WITH GA-216-85 "RECOMMENDED SPECIFICATIONS FOR THE		C 635 REQUIREMENTS, COMPONENTS DIE-CUT AND INTERLOCKING COMMERCIAL GRADE COLD-ROLLED ST
	INSTALL GYPSUM WALLBOARD IN ACCORDANCE WITH GA-216-85 "RECOMMENDED SPECIFICATIONS FOR THE APPLICATION AND FINISHING OF GYPSUM BOARD". a. INSTALL SINGLE-LAYER BOARD IN MOST ECONOMICAL		WITH GALVANIZED COATING. EXPOSED SURFACE WIDT 5/16". GRID FINISH TO BE WHITE.
	FIRM BEARING. END JOINTS SHOULD BE STAGGERED		a. ACCESSORIES: STABILIZER BARS, CLIPS, SPLICES, EDGE MOLDINGS.
	WHERE APPLICABLE, AND JOINTS ON OPPOSITE SIDES OF A PARTITION ASSEMBLY SHOULD BE ARRANGED TO		<ul> <li>b. SUPPORT CHANNELS AND HANGERS: GALVANIZED STEEL, SIZE AND TYPE TO SUIT APPLICATION AND</li> </ul>
	OCCUR ON ALTERNATE FRAMING MEMBERS. FASTEN WITH SCREWS.	C	CEILING SYSTEM FALTNESS SPECIFIED. ACOUSTICAL PANEL MANUFACTURERS: SUBJECT TO
	<ul> <li>SCREWS SPACING SHALL BE MAXIMUM 16 IN. ON CENTER FOR WALLS WITH 16 IN. ON CENTER</li> </ul>		COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUC BY ONE OF THE FOLLOWING:
	<ul><li>FRAMING.</li><li>SCREW SPACING SHALL BE MAXIMUM 12 IN. ON</li></ul>		a. U.S. GYPSUM ( BASIS OF DESIGN) b. ARMSTRONG MINABOARD CORTEGA.
	CENTER FOR CEILINGS WITH 16 IN. ON CENTER FRAMING.		<ul> <li>armstrong minaboard cortega.</li> <li>c. CELOTEX HYTONE BAROQUE.</li> <li>d. (OR EQUAL)</li> </ul>
	<ul> <li>PLACE CORNERBEADS AT OUTSIDE CORNERS, AND AS INDICATED. PLACE EDGE TRIM WHERE GYPSUMBOARD</li> </ul>	D.	a. (OR EQUAL) ACOUSTICAL PANELS: COMPLYING WITH ASTM E 1264 A THE FOLLOWING:
	ABUTS DISSIMILAR MATERIALS, AND AS INDICATED. USE LONGEST PRACTICAL LENGTHS FOR ALL TRIM.		a. SIZE: 24" X 48" b. THICKNESS: 5/8 INCH
	<ul> <li>FINISHING GYPSUMBOARD ASSEMBLIES:</li> <li>WALLS: APPLY THREE (3) COATS (TAPING, FILLING,</li> </ul>		c. COMPOSITION: MINERAL BOARD d. NRC RANGE: .50 TO .60
	AND FINISH) OF JOINT COMPOUND, SANDING BETWEEN COATS, TO LEAVE WALLS SMOOTH AND		e. STC RANGE: 35 TO 39 f. EDGE: SQUARE
	<ul><li>READY TO RECEIVE PAINT FINISH.</li><li>CEILINGS: APPLY ONE TAPING COAT AND ONE</li></ul>		g. SURFACE COLOR: WHITE h. SURFACE FINISH: NON-DIRECTIONAL FISSURED
	TEXTURING COAT OF JOINT COMPOUND. CEILING FINISH SHALL BE A SEMI-SMOOTH "KNOCK-DOWN"		
	TEXTURE TO RECEIVE PAINT FINISH.	09511 ACOL	JSTICAL PANEL CEILINGS. (CONT)
1.1 GENE		1.3 EXECUT	
	SECTION INCLUDES: UNGLAZED QUARRY TILE FLOOING AND BASE IN MAIN ENTRY LOBBY.		FIELD VERIFY SITE CONDITIONS. VERIFY THAT LAYOUT HANGERS WILL NOT INTERFERE WITH OTHER WORK. SECURE CEILING HANGERS FROM SUSPENSION SYSTE
В.	ANSI CERAMIC TILE STANDARD: PROVIDE STANDARD GRADE CERAMIC TILE THAT COMPLIES WITH ANSI A 137.1		SECURE CEILING HANGERS FROM SUSPENSION SYSTE MEMBERS TO BUILDING'S STRUCTURAL MEMBERS. INS HANGERS PLUMB AND FREE FROM CONTACT WITH OT
	"SPECIFICATIONS FOR CERAMIC TILE", FOR TYPES, COMPOSITIONS AND OTHER CHARACTERISTICS INDICATED.		HANGERS PLUMB AND FREE FROM CONTACT WITH OT OBJECTS WITHIN CEILING PLENUM. CONNECT HANGER
1.2 PROD	UCTS		DIRECTLY EITHER TO STRUCTURES OR TO INSERTS, E SCREWS OR TO OTHER DEVICES THAT ARE SECURE,
	TILE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS FROM ONE OF THE		APPROPRIATE FOR SUBSTRATE, AND THAT WILL NOT DETERIORATE OR OTHERWISE FAIL FROM AGE,
	FOLLOWING: a. AMERICAN MARAZZI TILE, INC.		CORROSION, OR ELEVATED TEMPERATURES. a. DO NOT SUPPORT CEILINGS DIRECTLY FROM DEFENSION OF FLOOD OF POOL DECK, DK
	b. DAL-TILE		PERMANENT FORMS OR FLOOR OR ROOF DECK. D NOT ATTACH HANGERS TO STEEL DECK TABS.
	c. SUMMITVILLE TILES, INC. d. (OR EQUAL)		NOT ATTACITTANOERS TO STELL DECK TADS.

- b. SPACE HANGERS NOT MORE THAN 48 INCHES ON-CENTER ALONG EACH MEMBER SUPPORTED DIRETLY FROM HANGERS, UNLESS OTHERWISE INDICATED, AND PROVIDE HANGERS NOT MORE THAN 8 INCHES FROM ENDS OF EACH MEMBER
- c. DO NOT SUPPORT COMPONENTS ON MAIN RUNNERS OR CROSS RUNNERS, SUPPORT FIXTURE LOADS BY SUPPLEMENTARY HANGERS LOCATED WITHIN 6 INCHES OF EACH CORNER, OR SUPPORT COMPONENTS INDEPENDENTLY.
- C. INSTALL EDGE MOLDINGS AND TRIM OF TYPE INDICATED AT PERIMETER OF ACOUSTICAL CEILING AREA AND WHERE NECESSARY TO CONCEAL EDGES OF ACOUSTICAL PANELS MITER CORNERS
- D. INSTALL SUSPENSION SYSTEM RUNNERS SO THEY ARE SQUARE AND SECURELY INTERLOCKED WITH ONE ANOTHER. REMOVE AND REPLACE DENTED, BENT OR
- KINKED MEMBERS. E. INSTALL ACOUSTICAL PANELS WITH UNDAMAGED EDGES AND FITTED ACCURATELY INTO SUSPENSION SYSTEM RUNNERS AND EDGE MOLDINGS. SCRIBE AND CUT PANELS AT BORDERS AND PENETRATIONS TO PROVIDE A NEAT, PRECISE FIT.

09651 RESILIENT TILE FLOORING AND RESILIENT WALL BASE 1.1 GENERAL

- A. SECTION INCLUDES: RESILIENT TILE FLOORING AND
- RESILIENT BASE. B. SUBMITTALS: IN ADDITION TO PRODUCT DATA FOR EACH TYPE OF PRODUCT SPECIFIED, SUBMIT THE FOLLOWING:
- a. TWO 2" X 2" SAMPLES OF EACH DIFFERENT COLOR AND PATTERN OF RESILIENT TILE AVAILABLE. b. TWO - 2" LONG SAMPLES OF EACH DIFFERENT COLOR
- OF RESILIENT BASE AVAILABLE. C. EXTRA MATERIALS: PROVIDE EXTRA MATERIALS TO THE
- OWNER AS FOLLOWS: a. FURNISH NOT LESS THAN ONE BOX FOR EACH 50 BOXES OR FRACTION THEROF, OF EACH TYPE, COLOR, PATTERN. CLASS. WEARING SURFACE, AND SIZE OF
- RESILIENT TILE FLOORING INSTALLED. b. FURNISH NOT LESS THAN 10 LINEAR FEET FOR EACH 500 LINEAR FEET OR FRACTION THEREOF. OF EACH TYPE, COLOR PATTERN AND SIZE OF RESILIENT BASE INSTALLED
- D. STORE MATERIALS FOR MINIMUM THREE DAYS PRIOR TO INSTALLATION IN AREA OF INSTALLATION TO ACHIEVE **TEMPERATURE STABILITY**

#### 1.2 PRODUCTS

- A. VINYL FLOORING MATERIALS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE THE
- FOLLOWING
- a. VINYL COMPOSITION FLOOR TILE: PRODUCTS COMPLYING WITH ASTM F 1066.
- b. SIZE 12" X 12"
- c. THICKNESS: 1/8" d. MANUFACTURERS
- ARMSTRONG -- STANDARD EXCELON KENTILE FLOORS, INC. -- ARCHIECTURAL CRITERION MANNINGTON -- INSPIRATIONS
- (OR EQUAL) B. VINYL OR RUBBER BASE MATERIALS: COMPLYING WITH
- ASTM F 1861. a. STYLE: COVE
- b. HEIGHT: 4" IN GENERAL AREAS, 6" IN TOILET ROOMS c. THICKNESS: 1/8"
- d. PROVIDE PERMOLDED OUTSIDE CORNERS.
- e. MANUFACTURERS
- ARMSTRONG JOHNSONITE
- ROPPE
- (OR EQUAL)
- C. RESILIENT EDGE STRIPS: PROVIDE AT EXPOSED EDGES OF TILE, OF HEIGHT REQUIRED TO PROTECT EDGES OF TILE, AND IN MAXIMUM AVAILABLE LENGTHS TO MINIMIZE RUNNING JOINTS. COLOR TO MATCH ADJOINING WALL
- BASE UNLESS OTHERWISE INDICATED. D. TROWELABLE LEVELING AND PATCHING COMPOUNDS:
- LATEX-MODIFIED, PORTLAND CEMENT BASED FORMULATION AS RECOMMENDED BY FLOORING MANUFACTURER FOR CONCRETE SLAB INSTALLATION.
- E. ADHESIVES: WATER-RESISTANT TYPE RECOMMENDED BY MANUFACTURER TO SUIT RESILIENT PRODUCTS AND SUBSTRATE INDICATED. ADHESIVES SHALL BE VOC COMPLIANT.
- 1.3 EXECUTION
  - A. VERIFY THAT CONCRETE SLAB SUBSTATE IS CLEAN, DRY AND FREE OF CURING COMPOUNDS, SEALERS, HARDENERS AND OTHER MATERIALS THAT MAY INTERFERE WITH ADHESIVE BOND.
  - B. REMOVE SUBFLOORS RIDEGS OF BUMPS, AND FILL MINOR OR LOCAL LOW SPOTS, CRACKS, JOINTS, HOLES AND OTHER DEFECTS WITH LEVELING AND PATCHING COMPOUND TO ACHIEVE A SMOOTH, HARD, FLAT SURFACE
  - C. LAY OUT TILES FROM CENTER MARKS ESTABLISHED WITH PRINCIPAL WALLS, DISCOUNTING MINOR OFFSET, SO TILES AT OPPOSITE EDGES OF ROOM ARE OF EQUAL WIDTH. ADJUST AS NECESSARY TO AVOID USING CUT WIDTHS THAT EQUAL LESS THAN ONE-HALF OF A TILE AT
  - PERIMETER. a. LAY TILES SQUARE WITH ROOM AXIS, UNLESS
  - OTHERWISE INDICATED. b. LAY TILES WITH GRAIN DIRECTION ALTERNATING IN
  - ADJACENT TILES. D. SET TILE IN PLACE AND PRESS WITH HEAVY ROLLER TO
  - ATTAIN FULL ADHESION. E. APPLY RESILIENT WALL BASE TO WALLS, COLUMNS,
  - PILASTERS, CASEWORK AND CABINETS IN TOE SPACES, AND OTHER PERMANENT FIXTURES IN ROOMS AND AREAS WHERE RESILIENT BASE IS SCHEDULED. a. INSTALL BASE IN LENGTHS AS LONG AS PRACTICAL
  - WITHOUT CAPS AT SEAMS AND WITH TOPS OF ADJACENT PIECES ALIGNED. b. TIGHTLY ADHERE BASE TO SUBSTRATE THROUGHOUT LENGTH OF EACH PIECE, WITH BASE IN CONTINUOUS
  - CONTACT WITH HORIZONTAL AND VERTICAL SUBSTRATES. c. DO NOT STRETCH BASE DURING INSTALLATION. d. ON MASONRY SURFACES OR OTHER SIMILAR IRREGULAR SUBSTRATES, FILL VOIDS ALONG TOP EDGE OF RESILIENT WALL BASE WITH MANUFACTURER'S RECOMMENDED ADHESIVE FILLER
  - MATERIAI e. MITER INTERNAL CORNERS ON JOB. F. CLEAN AND PROTECT RESILIENT PRODUCTS ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS. CLEAN RESILIENT PRODUCTS AFTER INSTALLATION AND NOT MORE THAN FOUR DAYS BEFORE DATES SCHEDULED FOR INSPECTIONS INTENDED TO ESTABLISH DATE IF SUBSTANTIAL COMPLETION IN EACH AREA OF PROJECT.
- 09680 CARPET AND CARPET BASE 1.1 GENERAL

- A. SECTION INCLUDES: CARPET FLOOR AND COVERING AND
- BOUND-EDGE CARPET WALL BASE. B. CARPET AND CARPET WALL BASE ALLOWANCE: AN ALLOWANCE OF \$ 2.00 PER SQ.FT. FOR MATERIAL AND LABOR (INSTALLED) SHALL BE INCLUDED AS PART OF
- PROJECT BID PACKAGE. ALLOWANCE COVERS CARPET AND 4" HIGH BOUND EDGE CARPET WALL BASE, INSTALLED. PROJECT CARPET INSTALLATION SHALL BE DIRECT GLUE-
- DOWN. DISREGARD SPECIFICATION REFERENCES TO CUSHION. CUSHION MANUFACTURER, TACKLESS CARPET STRIP AND STRETCH-IN INSTALLATION D. SUBMITTALS: SUBJECT PRODUCT DATA FOR EACH TYPE OF
- CARPET, CARPET CUSHION, AND THE FOLLOWING: a. SHOP DRAWINGS SHOWING CARPET TYPE, COLOR, DYE
- LOT. SEAM LOCATIONS, TYPES AND METHODS, TYPE OF SUBFLOOR AND TYPE OF INSTALLATION. SAMPLES OF EACH TYPE AND COLOR OF CARPET MATERIAL REQUIRED
- SCHEDULE OF CARPET USING SAME ROOM
- DESIGNATORS INDICATED ON DRAWINGS. MAINTENANCE DATA ON CARPET AND CUSHION TO BE
- PROVIDED TO THE OWNER. CARPET AND CUSHION MANUFACTURER'S WRITTEN CONFIRMATION OF MATERIAL FLAME SPREAD AND SMOKE DEVELOPED. THIS INFORMATION SHALL BE FORWARDED TO THE LOCAL BUILDING DEPARTMENT OR BUILDING AUTHORITY UPON RECEIPT FROM
- MANUFACTURER AFTER CARPET SELECTION. E. CARPET SURFACE FLAMMABILITY: PASSES CPSC 16 CFR, PART 1630 a. FLAME SPREAD: 25 OF LESS PER ASTM E 84.
- SMOKE DEVELOPED: 450 OF LESS PER ASTM E 84. CARPET CUSHION SURFACE FLAMABILITY: PASSES CPSC 16 CFR, PART 1630.
- a. FLAME SPREAD: 25 OR LESS PER ASTM E 84. b. SMOKE DEVELOPED: 450 OF LESS PER ASTM E 84.
- G. PROJECT CONDITIONS: COMPLY WITH CRI 104, SECTION 6 -"SITE CONDITIONS". H. SUBFLOOR MOISTURE CONDITIONS: MOISTURE EMISSION
- RATE OF NOT MORE THAN 3 LB./1000 SQ.FT./24 HOURS WHEN TESTED BY CALCIUM CHLORIDE MOISTURE TEST IN COMPLIANCE WITH CRI 104, 6.2.1, WITH SUBFLOOR TEMPERATURES NOT LESS THAN 55 DEGREES F.
- SUBFLOOR ALKALINITY CONDITIONS: A pH RANGE OF 5 TO 9 WHEN SUBFLOOR IS WETTED WITH POTABLE WATER AND pHYDRION PAPER IS APPLIED.
- EXTRA MATERIAL: PROVIDE TO OWNER FULL WIDTH CARPET PIECE(S) EQUAL TO 5 PERCENT OF AMOUNT INSTALLED FOR EACH TYPE AND COLOR OF CARPET USED. EXTRA CARPET SHALL BE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE, AND SHALL BE CLEARLY LABELED DESCRIBING CONTENTS.

#### 1.2 PRODUCTS

- A. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED IN THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: a. NYLON FIBER, 26 OUNCE, GRAPHIC LOOP PILE, WITH POLYPROPYLENE PRIMARY AND SECONDARY BACKING.
- B. CONCRETE SLAB PRIMER a. CARPET MANUFACTURER b. CARPET CUSHION MANUFACTURER
- C. TROWELABLE UNDERLAYMENTS AND PATCHING COMPOUNDS: a. CARPET MANUFACTURER
- CARPET CUSHION MANUFACTURER D. ADHESIVES: WATER-RESISTANT, MILDEW-RESISTANT, NONSTAINING TYPE TO SUIT PRODUCTS AND SUBFLOOR CONDITIONS INDICATED, AND TO COMPLY WITH VOC CONTENT AND FLAMMABILITY REQUIREMENTS FOR INSTALLED CARPET AS RECOMMENDED BY THE
- FOLLOWING: a. CARPET MANUFACTURER
- CARPET CUSHION MANUFACTURER
- E. TAKELESS CARPET STRIPPING: WATER-RESISTANT PLYWOOD IN STRIPS AS REQUIRED TO MATCH CUSHION THICKNESS AND IN COMPLIANCE WITH CRI 104, 11.3.
- SEAMING CEMENT: HOT-MELT ADHESIVE TAPE OR SIMILAR PRODUCT RECOMMENDED BY THE CARPET MANUFACTURER FOR TAPING SEAMS AND BUTTING CUT
- EDGES AT BACKING TO FORM SECURE SEAMS AND TO PREVENT PULE LOSS AT SEAMS. 1.3 EXECUTION
  - A. VERIFY THAT SUBFLOORS AND CONDITIONS ARE SATISFATORY FOR CARPET INSTALLATION AND COMPLY WITH REQUIREMENTS SPECIFIED IN THIS SECTION AND THOSE OF THE FOLLOWING:
  - a. CARPET MANUFACTURER b. CARPET CUSHION MANUFACTUER
  - B. LEVEL SUBFLOOR WITHIN 1/4 INCH IN 10 FEET,
  - NONCUMULATIVE. IN ALL DIRECTIONS. a. USE LEVELING AND PATCHING COMPOUNDS TO FILL CRACKS, HOLES AND DEPRESSIONS IN SUBFLOOR AS **RECOMMENDED BY THE FOLLOWING:** CARPET MANUFACTURER.
  - CARPET CUSHION MANUFACTURER.
  - C. REMOVE SUBFLOOR COATINGS, INCLUDE CURING COMPOUNDS, AND OTHER SUBSTANCES THAT ARE
  - INCOMPATABLE WITH ADHESIVES AND THAT CONTAIN SOAP, WAX, OIL OR SILICONE. D. BROOM OR VACUUM CLEAN SUBFLOORS TO BE COVERED
  - WITH CARPET. FOLLOWING CLEANING, EXAMINE SUBFLOOR FOR MOISTURE, ALKALINE SALTS, CARBONATION OR DUST.
  - E. CONCRETE SUBFLOOR PREPARATION: APPLY CONCRETE SLAB PRIMER, ACCORDING TO MANUFACTURER'S DIRECTIONS, WHERE RECOMMENDED BY THE FOLLOWING: a. CARPET MANUFACTURER.
  - b. CARPET CUSHION MANUFACTURER. DIRECT GLUE-DOWN INSTALLATION: COMPLY WITH CRI 104, SECTION 8 "DIRECT GLUE-DOWN."
  - G. STRETCH-IN INSTALLATION: COMPLY WITH CRI 104, SECTION 11, "STRETCH-IN UTILIZING TACKLESS STRIP."
  - H. COMPLY WITH CARPET MANUFACTURER'S RECOMMENDATIONS WITH SEAM TAPING AND LOCATIONS, AND DIRECTION OF CARPET. MAINTAIN UNOFORMITY OF CARPET DIRECTIONS AND LAY OF PILE. AT DOORWAYS, CENTER SEAMS UNDER DOOR IN CLOSED POSITION. BIND OR SEAL EDGES AS RECOMMENDED BY CARPET
  - MANUFACTURER. INSTALL PATTERN PARALLEL TO WALLS AND BORDERS. GLUE 4" HIGH BOUND-EDGE CARPET WALL BASE TO WALLS, COLUMNS, PILASTERS, CASEWORK AND CABINETS IN TOE SPACES, AND OTHER PERMANENT FIXTURES IN
  - ROOMS AND AREAS WHERE CARPET BASE IN SCHEDULED. K. VACUUM CARPET USING A COMMERCIAL MACHINE WITH FACE-BEATER ELEMENT.

- CONTAINERS BEARING MANUFACTURER'S NAME AND LABEL RAGS AND WASTE DAILY. WET SURFACES.
- PAINT PRODUCTS SHALL BE V.O.C. COMPLIANT. J. EXTRA MATERIALS: PROVIDE A MINIMUM OF ONE GALLON OF EACH COLOR, TYPE, AND SURFACE TEXTURE TO OWNER. LABEL EACH CONTAINER WITH COLOR, TYPE, AND TEXTURE, IN ADDITION TO MANUFACTURER'S LABEL. a. EXCEPTION: SMALLER QUANTITIES FOR OWNER WILL BE ALLOWED IF PROJECT WORK UTILIZED QUANTITY OF A MATERIAL LESS THAN ONE GAL. VERIFY WITH
- ARCHITECT.
- 1.2 PRODUCTS

09900 PAINTING

AND SURFACES

1.1 GENERAL

- b. PPG INDUSTRIES, INC.
- f. (OR EQUAL)
- SUBSTRATES INDICATED.

- WILL NOT BE ACCEPTABLE.

OWNER

#### A. SECTION INCLUDES: SURFACE PREPARATION AND FIELD PAINTING OF EXPOSED EXTERIOR AND INTERIOR ITEMS

a. SURFACE PREPARATION, PRIMING AND FINISH COATS SPECIFIED IN THIS SECTION ARE IN ADDITION TO SHOP PRIMING AND SURFACE TREATMENTS SPECIFIED IN OTHER SECTIONS.

B. PAINT EXPOSED SURFACES, EXCEPT WHERE THE PAINT SCHEDULES INDICATE THAT A SURFACE OR MATERIAL IS NOT TO BE PAINTED OR IS TO REMAIN NATURAL. IF THE PAINT SCHEDULES DO NOT SPECIFICALLY MENTION AN ITEM OR A SURFACE, PAIN THE ITEM OR SURFACE THE SAME AS SIMILAR ADJACENT MATERIALS OR SURFACES, WHETHER OR NOT SCHEDULES INDICATE COLOR. IF THE SCHEDULES DO NOT INDICATE COLOR OF FINISH, THE ARCHITECT WILL SELECT FROM STANDARD COLORS AND FINISHES AVAILABLE.

C. DO NOT PAINT PREFINISHED ITEMS, CONCEALED SURFACES, FINISHED METAL SURFACES, OPERATING PARTS, AND LABELS

a. LABELS: DO NOT PAINT OVER UNDERWRITERS LABRATORIES (UL), FACTORY MUTUAL (FM), OR OTHER CODE-REQUIRED LABELS, OR EQUIPIMENT NAME, IDENTIFICATION, PERFORMANCE RATING, OR NOMENCLATURE PLATES.

D. SUBMITTALS: FOR EACH PAINT SYSTEM SPECIFIED, PROVIDE THE FOLLOWING:

- a. SAMPLES FOR INITIAL SELECTION: MANUFACTURER'S COLOR CHARTS SHOWING THE FULL RANGE OF COLORS AVAILABLE FOR EACH TYPE OF FINISH-COAT MATERIAL INDICATED
- E. SOURCE LIMITATIONS: OBTAIN CLOCK-FILLERS, PRIMERS AND UNDERCOAT MATERIALS FOR EACH COATING SYSTEM FROM THE SAME MANUFACTURER AS THE FINISH COATS. F. DELIVER MATERIALS TO THE PROJECT SITE IN MANUFACTURER'S ORIGINAL UNOPENED PACKAGES AND
- G. STORE MATERIALS NOT IN USE IN TIGHTLY COVERED CONTAINERS IN A WELL-VENTILATED AREA AT A MINIMUM AMBIENT TEMPERATURE OF 45 DEG. F MAINTAIN CONTAINERS IN CLEAN CONDITIONS, FREE OF FOREIGN
- MATERIALS AND RESIDUE. PROTECT FROM FREEZING. KEEP STORAGE AREA NEAT AND ORDERLY. REMOVE OILY H. PROJECT CONDITIONS: DO NOT APPLY PAINT IN SNOW, RAIN, FOG, OR MIST, OR WHEN THE RELATIVE HUMIDITY
- EXCEEDS 85 PERCENT, OR AT A TEMPERATURE LESS THAN 5 DEGREES F. ABOVE THE DEW POINTS, OR TO DAMP OR
- A. MANUFACTURERS PAINT, EPOXY PAINT, PRIMER, SEALER, FILLERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS. PROVIDE PRODUCTS FROM ONE OF THE FOLLOWING: a. BENJAMIN MOORE & COMPANY
  - PRATT & LAMBERT, INC
- d. SCM CORPORATION (GLIDDEN) e. THE SHERWIN WILLIAMS COMPANY
- B. MATERIAL COMPATABILITY: PROVIDE BLOCK-FILLERS, PRIMERS, UNDERCOATS AND FINISH COAT MATERIALS THAT ARE COMPATABLE WITH ONE ANOTHER AND THE
- C. MATERIAL QUALITY: PROVIDE MANUFACTURER'S BEST QUALITY PAINT MATERIAL OF THE VARIOUS COATING TYPES SPECIFIED. PAINT MATERIAL CONTAINERS NOT
- DISPLAYING MANUFACTURER'S PRODUCT INDENTIFICATION D. COLORS: PROVIDE COLOR SELECTIONS MADE BY THE

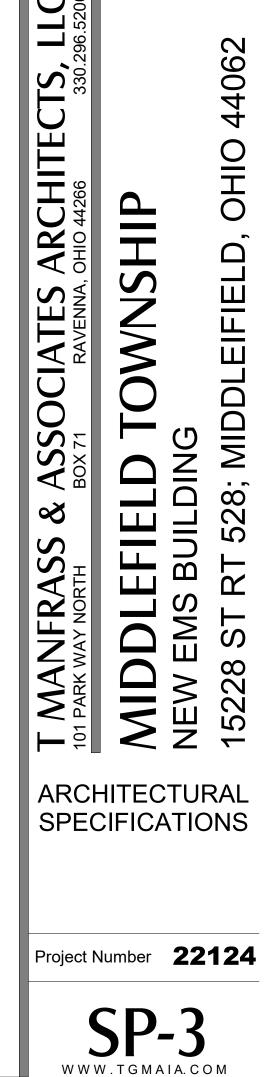
1.3 EXECUTION

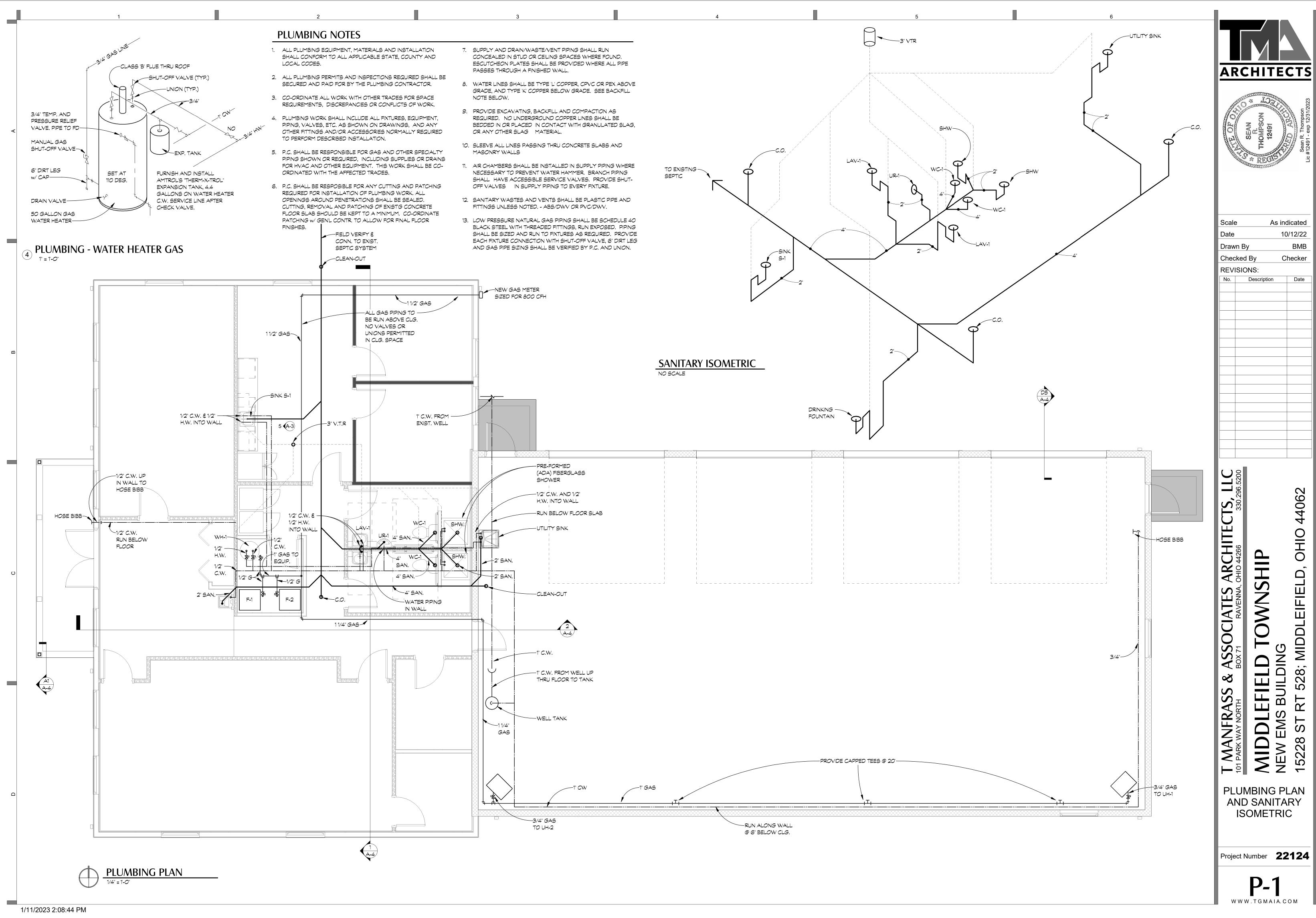
- A. EXAMINE SUBSTRATES, AREAS AND CONDITIONS UNDER WHICH PAINTING WILL BE PERFORMED. DO NOT BEGIN TO APPLY PAINT UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACES RECEIVING PAINT ARE THOROUGHLY DRY.
- B. REVIEW OTHER SECTIONS IN WHICH PRIMERS ARE PROVIDED TO ENSURE COMPATIBILITY OF THE TOTAL SYSTEM FOR VARIOUS SUBSTRATES.
- C. PREPARATION: REMOVE HARDWARE AND HARDWARE ACCESSORIES, PLATES, MACHINED SURFACES, LIGHTING FIXTURES, AND SIMILAR ITEMS ALREADY INSTALLED THAT ARE NOT TO BE PAINTED. IF REMOVAL IS IMPRACTICAL OR IMPOSSIBLE BECAUSE OF THE SIZE, WEIGHT OR ATTACHMENT OF THE ITEM, PROVIDE SURFAE-APPLIED PROTECTION OR MASKING BEFORE SURFACE PREPARATION AND PAINTING. AFTER COMPLETING PAINTING OPERATIONS IN EACH SPACE OR AREA, REINSTALL ITEMS REMOVED USING WORKERS SKILLED IN THE TRADES INVOLVED.
- D. PRIOR TO APPLYING PAINT, CLEAN AND PREPARE SURFACES TO BE PAINTED ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR EACH PARTICULAR SUBSTRATE CONDITION. DO NOT PAINT OVER DIRT, RUST, SCALE, GREASE, MOISTURE, SCUFFED SURFACES, OR CONDITIONS DETRIMENTAL TO FORMATION OR A DURABLE PAINT FILM. TOUCH UP BASE AREAS AND SHOP-APPLIED PRIME COATS THAT HAVE BEEN DAMAGED. E. APPLICATION PROCEDURES: APPLY PAINTS AND COATINGS BY BRUSH. ROLLER. SPRAY, OR OTHER APPLICATIONS ACCORDING TO MANUFACTURER'S WRITTEN
- INSTRUCTIONS F. PROTECT WORK OF OTHER TRADES. WHETHER BEING PAINTED OR NOT, AGAINST DAMAGE BY PAINTING. CORRECT DAMAGE BY CLEANING, REPAIRING OR REPLACING, AND REPAINTING, AS APPROVED BY THE
- ARCHITECT G. AFTER COMLETING PAINTING, CLEAN GLASS AND PAINT-SPATTERED SURFACES. REMOVE SPATTERED PAINT BY WASHING AND SCRAPING. BE CAREFUL NOT TO SCRATCH OR DAMAGE ADJACENT FINISHED SURFACES. H. PAINT SCHEDULES: PROVIDE THE FOLLOWING PAINT
  - SYSTEMS FOR THE VARIOUS SUBSTRATES INDICATED: a. WOOD-PAINTED ONE COAT OF LATEX PRIMER-SEALER
  - TWO COATS OF LATEX ENAMEL-EGGSHELL b. STEEL-UNPRIMED
  - ONE COATS OF EXTERIOR ALKYD PRIMER TWO COATS OF EXTERIOR ALKYD ENAMEL - SEMI-GLOSS
  - c. STEEL-PRIMED (INCLUDES PRE-ENGINEERED STEEL FRAMES, PURLINGS, ETC., IF APPLICABLE. VERIFY PAINTING OF THIS STRUCTURE PRIOR TO PROJECT TOUCH UP MATCHING ALKYD PRIMER.
  - TWO COATS OF EXTERIOR ALKYD ENAMEL SEMI-GLOSS d. STEEL-GALVANIZED
  - ONE COAT OF GALVANIZED METAL PRIMER. TWO COATS OF EXTERIOR ALKYD ENAMEL - SEMI-GLOSS
  - e. ALUMINUM MILL FINISH ONE COAT OF ZINC CHROMATE PRIMER. TWO COATS OF EXTERIOR ALKYD ENAMEL- SEMI-GLOSS
  - f. PLASTER AND GYPSUMBOARD ONE COAT OF LATEX PRIMER-SEALER
  - TWO COATS OF LATEX ENAMEL- EGGSHELL g. PLASTER AND GYPSUMBOARD - TEXTURED CEILINGS 2 COATS OF LATEX CEILING ENAMEL - FLAT
  - TWO COATS OF LATEX ENAMEL EGGSHELL h. CONCRETE BLOCK - LATEX PAINT
  - ONE COAT OF LATEX HEAVY-DUTY BLOCK-FILLER AS RECOMMENDED BY MANUFACTURER TWO COATS OF LATEX ENAMEL - EGGSHELL
  - i. CONCRETE BLOCK EPOXY PAINT ONE COAT OF LATEX HEAVY-DUTY BLOCK-FILLER AS RECOMMENDED BY MANUFACTURER
  - TWO COATS OF HIGH-SOLIDS CATALIZED EPOXY

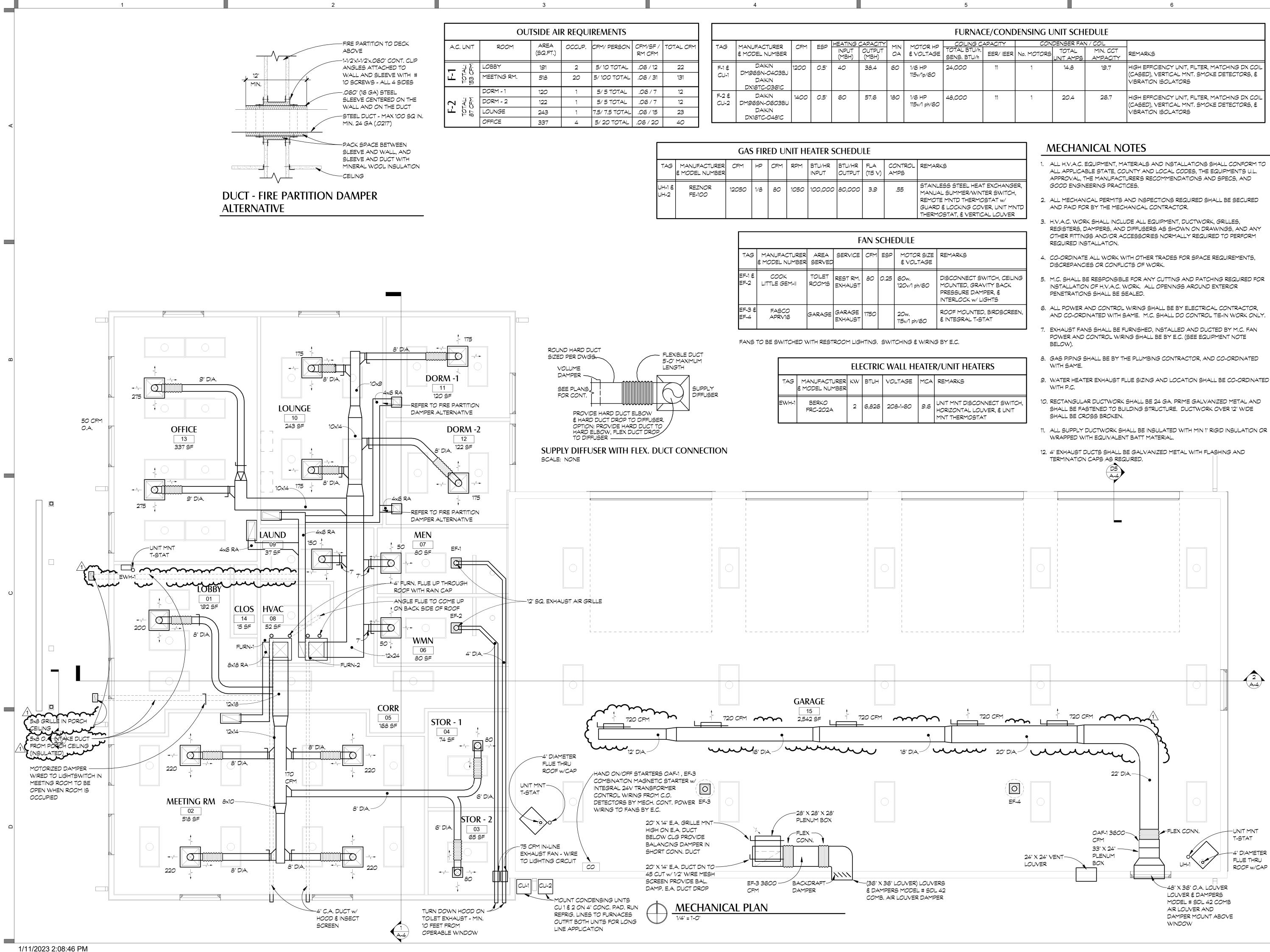




9	1"	= 1'-0"		
	10/12/22			
'n By	SRT/ QJ			
ked By	SRT			
SIONS:				
Description		Date		
	n By ked By SIONS:	10 m By SF ked By ISIONS:		







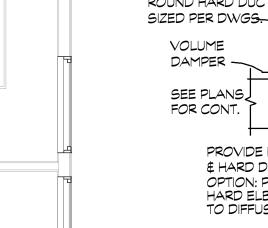
	OUTSIDE AIR REQUIREMENTS												
A.C. UNIT ROOM AREA OCCUP. CFM/ PERSON CFM/SF / TOT/ (SQ.FT.) RM CFM													
	LOBBY	191	2	5/ 10 TOTAL	.06 / 12	22							
F-1 TOTA 153 CF	MEETING RM.	518	20	5/ 100 TOTAL	.06 / 31	131							
	DORM - 1	120	1	5/ 5 TOTAL	.06/7	12							
Ϋ́, Ϋ́, Ϋ́	DORM - 2	122	1	5/ 5 TOTAL	.06/7	12							
<b>F-2</b> TOTAL: 87 CFM	LOUNGE	243	1	7.5/ 7.5 TOTAL	.06 / 15	23							
	OFFICE	337	4	5/ 20 TOTAL	.06 / 20	40							

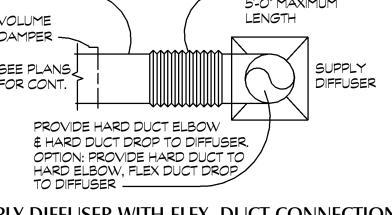
	FURNACE/CONDENSING UNIT SCHEDULE												
TAG	MANUFACTURER	CFM	ESP	HEATING	CAPACITY	MIN	MOTOR HP	COILING C		CON	DENSER FAN	N/COIL	
. –	& MODEL NUMBER	Giri	LOP	INPUT (MBH)	OUTPUT (MBH)	0A	& VOLTAGE	TOTAL BTU/h. SENS. BTU/h	EER/ IEER	No. MOTORS	TOTAL UNIT AMPS	MIN. CCT AMPACITY	REMARKS
F-1 & CU-1	DAIKIN DM965N-0403BJ DAIKIN DX16TC-0361C	1200	0.5"	40	38.4	60	1/6 HP 115v/1p/60	24,000	11	1	14.8	19.7	HIGH EFFICIENCY UNIT, FILTER, MATCHING DX COIL (CASED), VERTICAL MNT. SMOKE DETECTORS, & VIBRATION ISOLATORS
F-2 & CU-2	DAIKIN DM96SN-0603BU DAIKIN DX16TC-0481C	1400	0.5"	60	57.6	180	1/6 HP 115v/1 ph/60	48,000	11	1	20.4	26.7	HIGH EFFICIENCY UNIT, FILTER, MATCHING DX COIL (CASED), VERTICAL MNT. SMOKE DETECTORS, & VIBRATION ISOLATORS

	GAS FIRED UNIT HEATER SCHEDULE														
TAG	MANUFACTURER \$ MODEL NUMBER		ΗΡ	CFM	RPM		BTU/HR OUTPUT	FLA (115 V)	CONTROL AMPS	REMARKS					
UH-1 ∉ UH-2	REZNOR FE-100	12050	1/8	80	1050	100,000	80,000	3.9	.55	STAINLESS ST MANUAL SUMM REMOTE MNTD GUARD & LOCK THERMOSTAT,					

(	GAS	FIR	ed ui		EATER S	CHEDU	LE							
CFI	Y	β	CFM	RPM BTU/HR BTU/HR FLA INPUT OUTPUT (115 V)			ONTROL MPS	REMARKS						
20	50	1/8	80	1050	100,000	80,000	3.9		.55	STAINLESS STEEL HEAT EXCHANGE MANUAL SUMMER/WINTER SWITCH REMOTE MNTD THERMOSTAT W/ GUARD & LOCKING COVER, UNIT MN THERMOSTAT, & VERTICAL LOUVER				
	FAN SCHEDULE													
	TAG			CTURER		SERVICE	CFM	ESP	MOTO ∉ VOL	R SIZE TAGE	REMARKS			
	EF-1 8 EF-2		COOK LITTLE GEM-II			REST RM. EXHAUST	80	0.25	60w. 120v/1 ph/60		DISCONNECT SWITCH, CEILING MOUNTED, GRAVITY BACK PRESSURE DAMPER, & INTERLOCK W/ LIGHTS			
	EF-3 EF-4	ŧ	FASCO APRV10		GARAGE	GARAGE EXHAUST	1750		20w. 115v/1 ph/60				ROOF MOUNTED, BIRDSCREEN, & INTEGRAL T-STAT	

		ELE	CTRIC	C WALL HE	ATE	R/UNIT
TAG	MANUFACTURER & MODEL NUMBER	KW	BTUH	VOLTAGE	MCA	REMARK
EWH-1	BERKO FRC-202A	2	6,826	208-1-60	9.6	UNIT MNT HORIZON MNT THEF

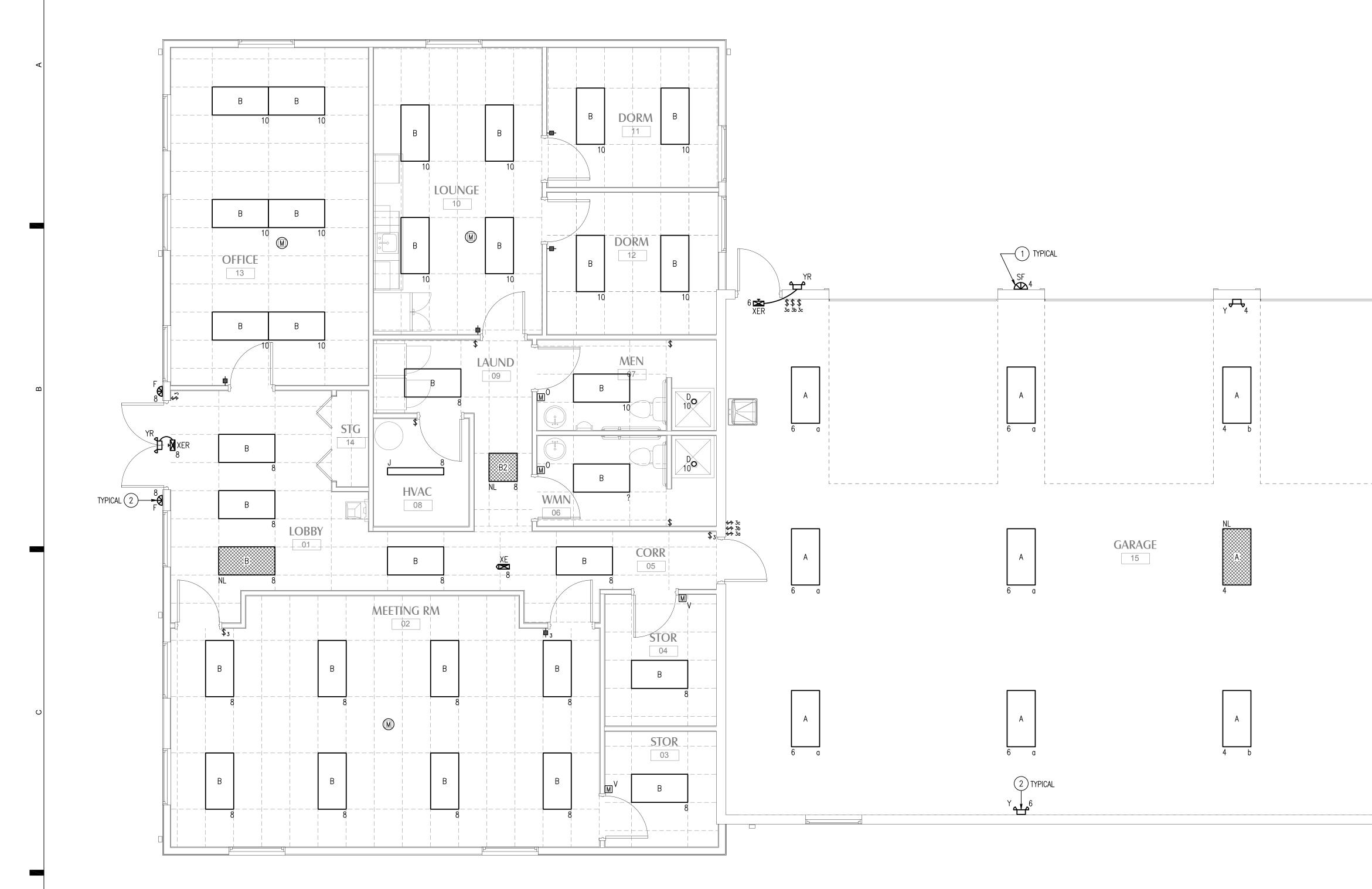




- ALL H.V.A.C. EQUIPMENT, MATERIALS AND INSTALLATIONS SHALL CONFORM TO ALL APPLICABLE STATE, COUNTY AND LOCAL CODES, THE EQUIPMENTS U.L.
- REGISTERS, DAMPERS, AND DIFFUSERS AS SHOWN ON DRAWINGS, AND ANY OTHER FITTINGS AND/OR ACCESSORIES NORMALLY REQUIRED TO PERFORM
- 5. M.C. SHALL BE RESPONSIBLE FOR ANY CUTTING AND PATCHING REQUIRED FOR
- AND CO-ORDINATED WITH SAME. M.C. SHALL DO CONTROL TIE-IN WORK ONLY.
- EXHAUST FANS SHALL BE FURNISHED, INSTALLED AND DUCTED BY M.C. FAN
- GAS PIPING SHALL BE BY THE PLUMBING CONTRACTOR, AND CO-ORDINATED
- 9. WATER HEATER EXHAUST FLUE SIZING AND LOCATION SHALL BE CO-ORDINATED
- 10. RECTANGULAR DUCTWORK SHALL BE 24 GA. PRIME GALVANIZED METAL AND
- 11. ALL SUPPLY DUCTWORK SHALL BE INSULATED WITH MIN 1" RIGID INSULATION OR

AR	CHITE NOR NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 1249 NO 1249 NO 1249 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 12491 NO 124 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 124 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 124 NO 124 NO 1249 NO 1249 NO 1249 NO 1249 NO 1249 NO 124 NO 124 NO 1249 NO 1249 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 124 NO 12 NO 12 NO 12 NO 12 NO 12 NO 12 NO 12 NO 12 NO 12 NO 12 NO 1 NO 1	Sean R. Thompson Lic #12491 - exp 12/31/2023
REVIS	10	dicated )/12/22 3/ SRT SRT Date 12/5/22
T MANFRASS & ASSOCIATES ARCHITECTS, LLC	MIDDLEFIELD TOWNSHIP BOX 7 MAVENUAL OHIO 44266 330.236.5200 NEW EMS BUILDING	7 15228 ST RT 528; MIDDLEIFIELD, OHIO 44062
Projec	ct Number 22	2124

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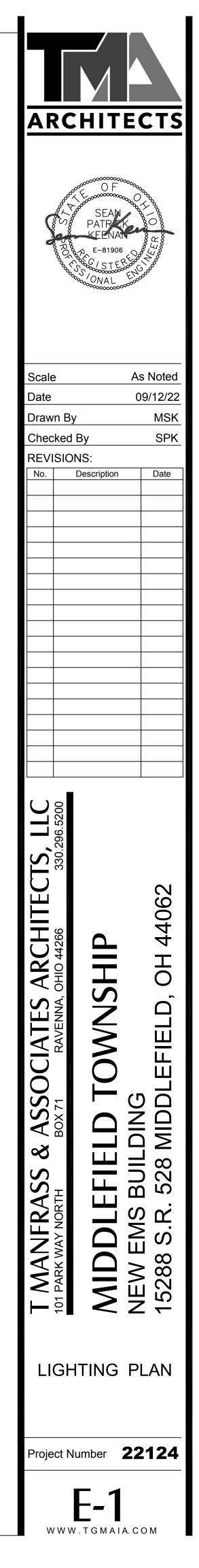
#### **GENERAL NOTES:**

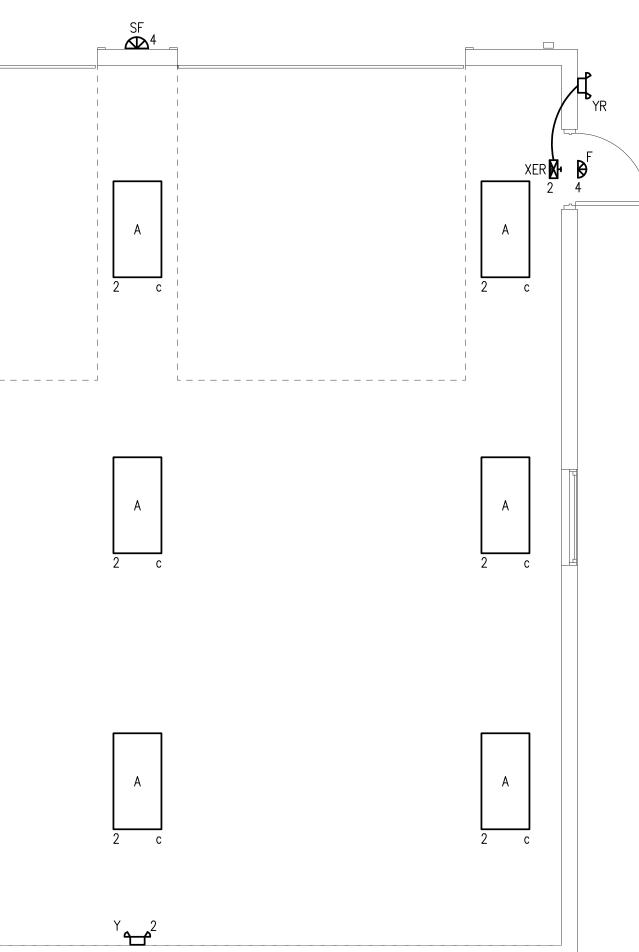
1. ALL LIGHTING SHOWN ON THIS DRAWING SHALL BE FED FROM PANEL 'PB' UNLESS NOTED OTHERWISE.

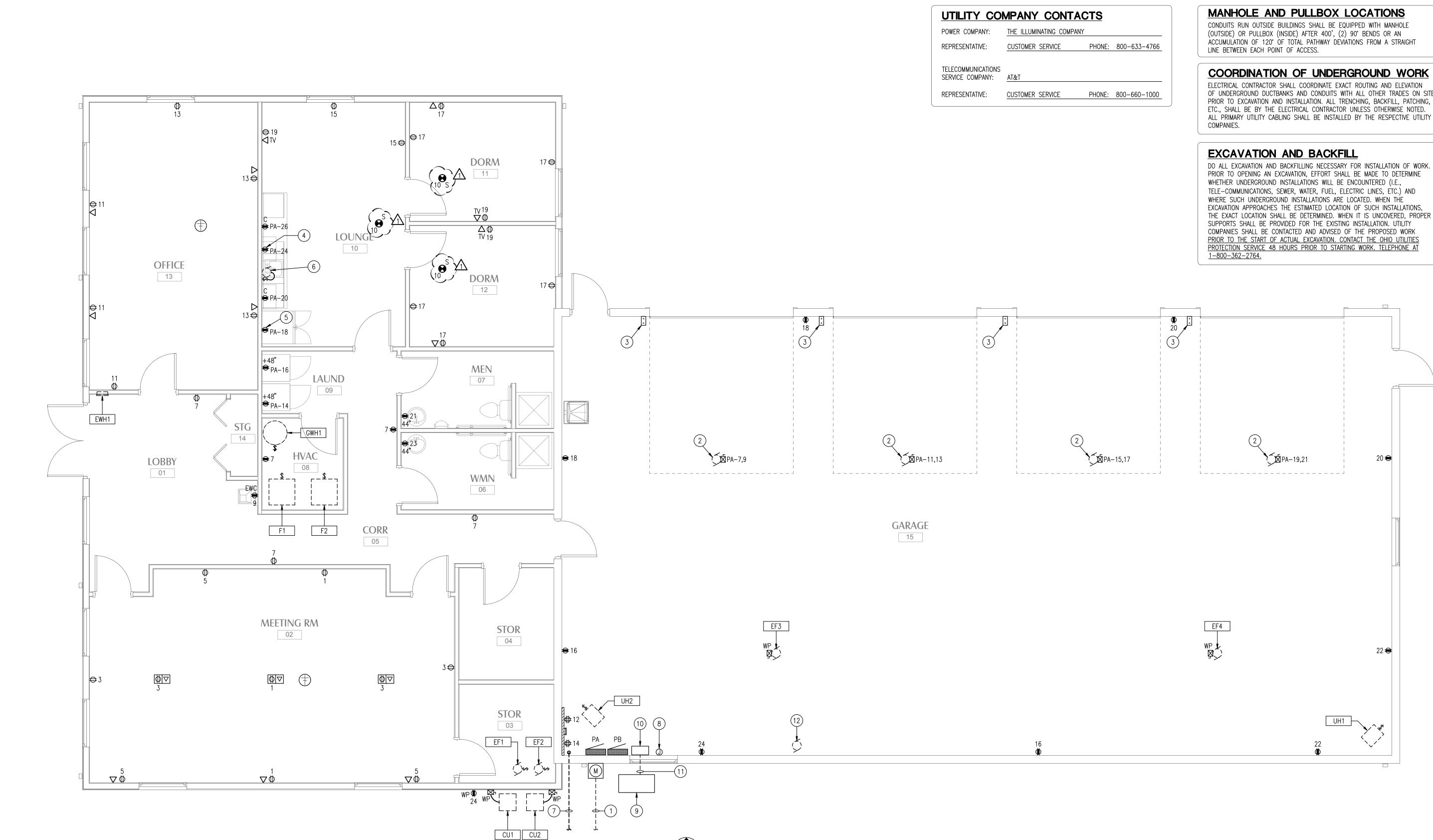


#### PLAN NOTES

- 1 ALL BRANCH CONDUIT RUNS FOR EXTERIOR WALL MOUNTED LIGHTING FIXTURES SHALL BE RUN ON INTERIOR OF BUILDING.
- 2 EMERGENCY BATTERIES IN EXIT SIGNS AND ALL EMERGENCY LIGHTING HEADS SHALL BE ELIMINATED IN LIEU OF GENERATOR TRANSFER DEVICES UNDER GENERATOR ALTERNATE E1.







#### **GENERAL NOTES:**

1. ALL CIRCUIT NUMBERS SHOWN ON THIS DRAWING CORRESPOND TO PANEL 'PB' UNLESS NOTED OTHERWISE.

#### PLAN NOTES

- ACCESSORIES AS REQUIRED.
- DOOR CONTROLLER.

(1) SECONDARY DUCTBANK. REFER TO SECONDARY DUCTBANK DETAIL ON DRAWING E-3.

2) OVERHEAD DOOR MOTOR (208V/10, 1HP) - EC SHALL CONNECT TO CIRCUITS SHOWN IN PANEL 'PA' WITH 15/2 CIRCUIT BREAKERS AND PROVIDE LOW VOLTAGE CONTROLS AND

(3) PUSHBUTTON STATION FOR OVERHEAD DOOR CONTROL FURNISHED, INSTALLED AND WIRED BY THE OVERHEAD DOOR CONTRACTOR. THE EC SHALL PROVIDE 4"x4"x2" DEEP BOX WITH SINGLE GANG COVER AT +48", WITH 3/4" EMT UP FROM BOX AND RUN TO THE OVERHEAD

(4) DISHWASHER (120V, 1.0KW) – EC SHALL LOCATE GFCI DEVICE IN ACCESSIBLE LOCATION. PROVIDE GFCI PROTECTION AT PANEL, IF NECESSARY.

(5) REFRIGERATOR (120V, 0.8KW) AT +42" AFF – EC SHALL LOCATE GFCI DEVICE IN ACCESSIBLE LOCATION. PROVIDE GFCI PROTECTION AT PANEL, IF NECESSARY.

(6) DISPOSAL (120V, 1/2 HP) – PROVIDE GROUND FAULT PROTECTION. LOCATE SWITCH PER ARCHITECT. PROVIDE POWER FROM CIRCUIT #22 IN PANEL 'PA'.

POWER PLAN

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

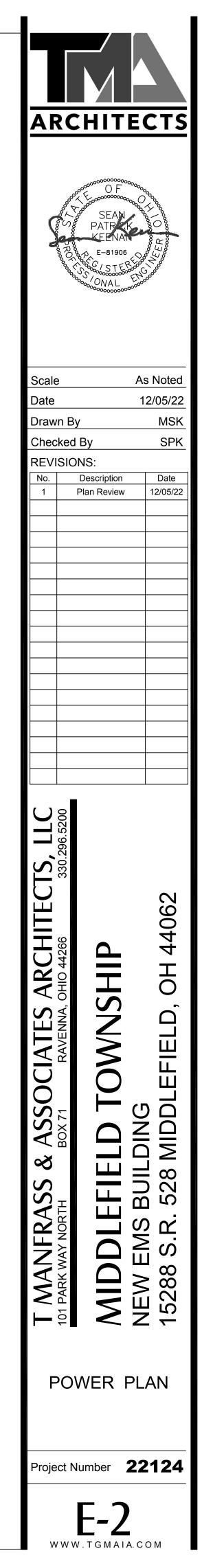
- TELECOMMUNICATIONS SERVICE CONDUIT REFER TO 'SECONDARY DUCT BANK DETAIL' ON DRAWING 'E-3'.
- (8) CO DETECTION SYSTEM CONTROL PANEL FURNISHED AND INSTALLED BY MC EC SHALL CONNECT TO CIRCUIT #26 IN PANEL 'PB'.
- 9 GENERATOR ON CONCRETE PAD AS PART OF ALTERNATE E1 REFER TO 'ONE LINE POWER DIAGRAM' ON DRAWING 'E-3'.
- (10) AUTOMATIC TRANSFER SWITCH AS PART OF ALTERNATE E1 REFER TO 'ONE LINE POWER DIAGRAM' ON DRAWING 'E-3'.
- (11) generator duct bank as part of alternate e1 refer to 'generator duct bank DETAIL' ON DRAWING 'E-3'.

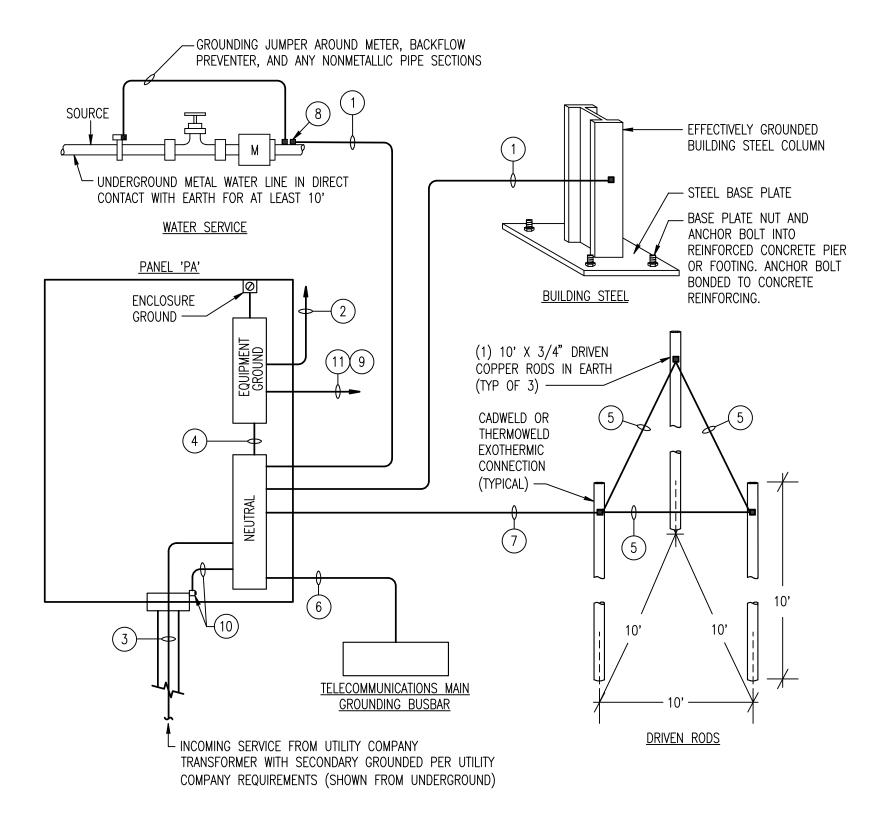


OF UNDERGROUND DUCTBANKS AND CONDUITS WITH ALL OTHER TRADES ON SITE

THE EXACT LOCATION SHALL BE DETERMINED. WHEN IT IS UNCOVERED, PROPER

(12) MOTOR OPERATED DAMPER (120V, 0.1 KW) - PROVIDE POWER FROM NEARBY RECEPTACLE BRANCH CIRCUIT AND CONNECT CONTROL WIRING AS DIRECTED BY MC.





SERVICE GROUNDING ELECTRODE SYSTEM WIRING DIAGRAM SCALE: NONE

NOTE: REFER TO ONE LINE DIAGRAM FOR GROUND AND BOND CONDUCTOR SIZING.

#### SERVICE GROUNDING ELECTRODE SYSTEM NOTES

1 THE GROUNDING ELECTRODE CONDUCTORS SHALL BE SIZED PER TABLE 250.66 OF THE NEC. THE CONDUCTOR SHALL BE CONNECTED TO AN APPROVED GROUNDING ELECTRODE.

2 GROUND CONDUCTORS TO OTHER POINTS AND EQUIPMENT, AS REQUIRED BY NEC ARTICLE 250 AND SPECIFICATIONS.

(3) SERVICE ENTRANCE PHASE CONDUCTORS WITH GROUNDED (NEURTAL) CONDUCTOR.

(4) main bonding jumper shall be sized per table 250.66 of the NEC.

5 BONDING CONDUCTOR SHALL BE SIZED PER TABLE 250.66 OF THE NEC.

(6) GROUND CONDUCTOR TO TELECOMMUNICATIONS MAIN GROUNDING ELECTRODE CONDUCTOR, PER NEC 250.66(C).

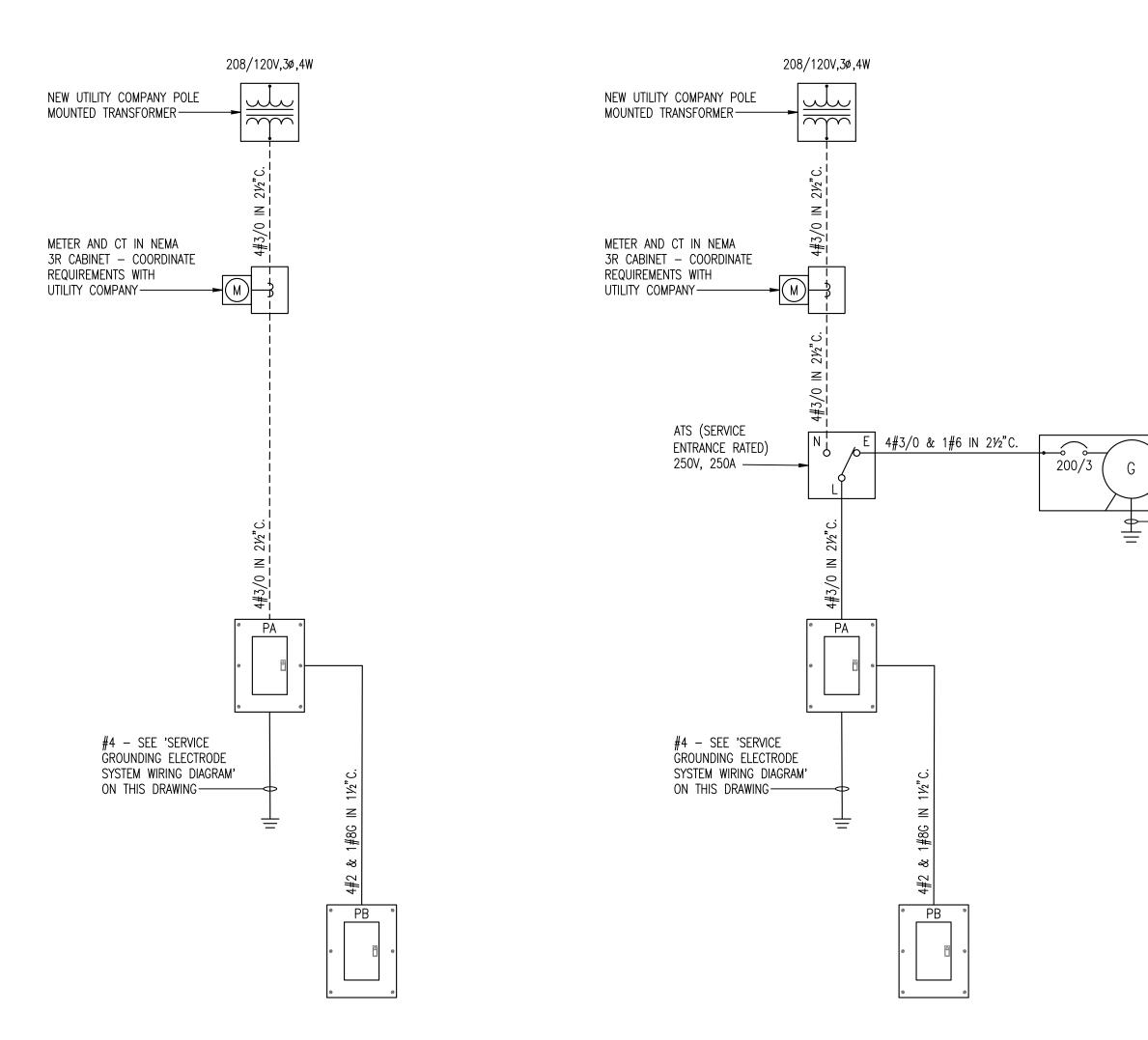
(7) ground rod electrode – provide #6 awg copper grounding electrode conductor, per Nec 250.66(A).

8 CONNECTION SHALL BE MADE WITHIN 5' OF BUILDING ENTRANCE PER NEC 250.52(A)(1).

(9) OTHER METAL PIPING (GAS, ETC.) SHALL BE BONDED PER NEC 250.104 AND NEC TABLE 250.122.

(10) SUPPLY-SIDE EQUIPMENT BONDING JUMPER - PER NEC 250.92(A). THE NON-CURRENT CARRYING METALIC PARTS OF SERVICE RACEWAYS SHALL BE BONDED. BONDING METHODS SHALL BE IN ACCORDANCE WITH NEC 250.92(B).

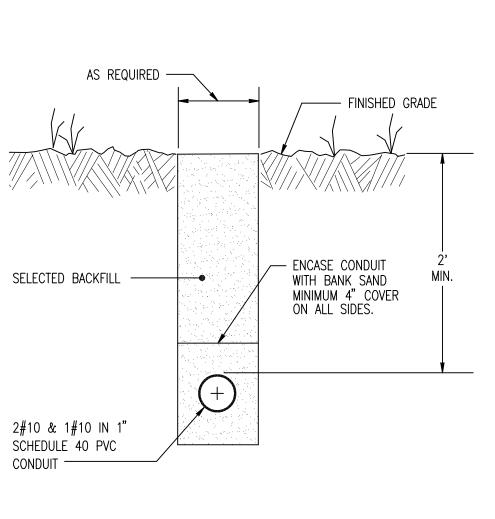
(1) METAL WATER PIPING AND STRUCTURAL STEEL NOT INTENTIONALLY GROUNDED SHALL BE BONDED PER NEC 250.104 AND NEC TABLE 250.66.



BASE BID

ALTERNATE E1

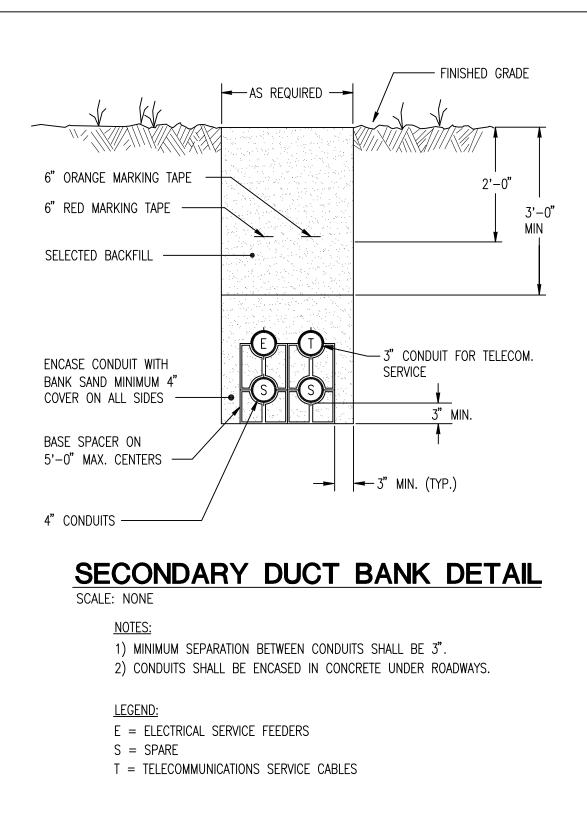
ONE LINE POWER DIAGRAM



#### UNDERGROUND RACEWAY DETAIL SCALE: NONE

NOTES:

- 1) MINIMUM SEPARATION BETWEEN CONDUITS SHALL BE 3".
- 2) CONCRETE ENCASE CONDUITS UNDER ROADWAYS.

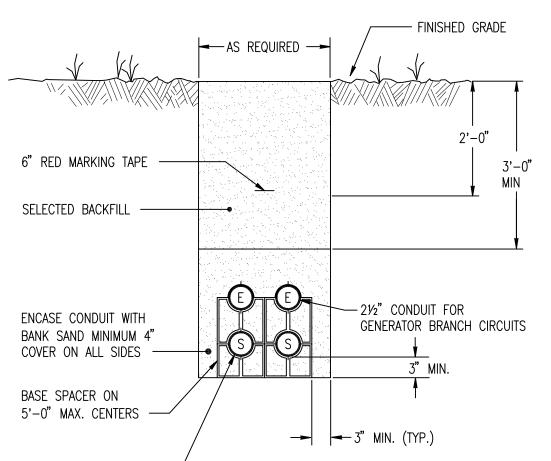




NEW 60KW/75KVA, 208Y/120V, NATURAL GAS FIRED GENSET
 MOUNTED ON CONCRETE PAD WITH VIBRATION ISOLATION SPRINGS.
 PROVIDE PAD 6" LARGER THAN GENSET. GENERATOR TO BE
 EQUIPPED WITH 200A 3P OUTPUT BREAKER TO FEED NEW ATS.

#4 – SEE 'TYPICAL SERVICE GROUNDING ELECTRODE SYSTEM WIRING DIAGRAM' ON THIS DRAWING

ONE LIN	IE SYMBOL LEGEND
SYMBOL	DESCRIPTION
	BRANCH PANELBOARD
	TRANSFORMER
<u> </u>	GROUND
	METER AND CT CABINET
N° ∕° E L°	AUTOMATIC TRANSFER SWITCH
<u> </u>	CIRCUIT BREAKER
G	GENERATOR



21/2" CONDUITS-----

#### GENERATOR DUCT BANK DETAIL SCALE: NONE PART OF ALTERNATE E1

NOTES:

MINIMUM SEPARATION BETWEEN CONDUITS SHALL BE 3".
 CONDUITS SHALL BE ENCASED IN CONCRETE UNDER ROADWAYS.

LEGEND:

E = ELECTRICAL SERVICE FEEDERS OR OTHER BRANCH CIRCUITING S = SPARE

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E-3

					LIGHTING FIXTURE SCHEDULE		KEE	N ENGINEERING
FIXTURE TYPE	LAMP(S)	CCT	FIXTURE WATTAGE	FIXTURE VOLTAGE	FIXTURE DESCRIPTION	CATALOG NUMBER	EQUAL MANUFACTURERS	NOTES
A	LED	5000К	152	120	LED, SURFACE MOUNTED LINEAR HIGH BAY FIXTURE WITH ALUMINUM FRAME, WIDE DISTRIBUTION, AND POLYCARBONATE WHITE LENS.	COLUMBIA CLB2-50MH-W-EDU/ CLB-SMB	METALUX LITHONIA DAY-BRITE	6
В	LED	3500К	50	120	LED 2'x4' FLAT PANEL WITH ALUMINUM FRAME, SATIN WHITE LENS AND ADJUSTABLE LUMEN OUTPUT.	LITHONIA EPANL-2x4-6000LM- 80CRI-35K-MIN1-MVOLT	METALUX COLUMBIA DAY-BRITE	(4) (6)
B2	LED	3500К	30	120	LED 2'x2' RECESSED FLAT PANEL WITH ALUMINUM FRAME, SATIN WHITE LENS AND ADJUSTABLE LUMEN OUTPUT.	LITHONIA CPANL-2x2-24-33- 44LM-35K-M4	METALUX COLUMBIA DAY-BRITE	(4) (6)
D 0	LED	3000К	20	120	LED 6" RECESSED LENSED DOWNLIGHT WITH CLEAR SEMI-SPECULAR REFLECTOR AND WHITE TRIM.	LITHONIA LDN6-30/15-L06- AR-LSS-120-TRW	METALUX COLUMBIA DAY-BRITE	(4) (6)
F	LED	5000K	20	120	LED BUILDING MOUNTED FIXTURE WITH INTEGRAL PHOTOCELL.	SELECTED BY OWNER	AS APPROVED WITH PHOTOMETRIC CALCULATIONS	(5) (6)
J	LED	4000K	35	120	LED 4' LONG, CHAIN HUNG STRIP FIXTURE WITH ACRYLIC LENS.	LITHONIA MNSL-L48-1LL-MVOLT- 40K-80CRI-M6	METALUX COLUMBIA DAY-BRITE	(5) (6)
SF 🕰	LED	5000K	40	120	LED, BUILDING MOUNTED FLOOD WITH FORWARD THROW DISTRIBUTION AND INTEGRAL PHOTOCELL.	LITHONIA DSXW1-LED-10C- 1000-50K-TFTM- MVOLT	AS APPROVED WITH PHOTOMETRIC CALCULATIONS	5 6
X	LED	NA	8	120	LED AC ONLY COMBINATION EMERGENCY LIGHTING UNIT/EXIT SIGN WITH 6" HIGH RED LETTERS, WHITE THERMOPLASTIC HOUSING, FACES, ARROWS AND MOUNTING AS INDICATED ON THE DRAWINGS AND (2) ADJUSTABLE LAMP HEADS.	LITHONIA LQM—R (ALT.)	SURE-LITES EMERGI-LITE DUAL-LITE	16 27 3
XE रिष्ट्र	LED	NA	10	120	LED COMBINATION EMERGENCY LIGHTING UNIT/EXIT SIGN WITH 6" HIGH RED LETTERS, WHITE THERMOPLASTIC HOUSING, FACES, ARROWS AND MOUNTING AS INDICATED ON THE DRAWINGS, NICKEL CADMIUM BATTERY, BATTERY CHARGER, TEST SWITCH, INDICATOR LIGHT AND (2) ADJUSTABLE LAMP HEADS.	LITHONIA LHQM-R	SURE-LITES Emergi-Lite Chloride	(1) (6) (2) (3)
XER	LED	NA	15	120	LED COMBINATION EMERGENCY LIGHTING UNIT/EXIT SIGN WITH 6" HIGH RED LETTERS, WHITE THERMOPLASTIC HOUSING, FACES, ARROWS AND MOUNTING AS INDICATED ON THE DRAWINGS, HIGH OUTPUT LEAD ACID BATTERY FOR REMOTE CAPACITY, BATTERY CHARGER, TEST SWITCH, INDICATOR LIGHT AND (2) ADJUSTABLE LAMP HEADS.	LITHONIA LHQM-R-HO	SURE-LITES EMERGI-LITE CHLORIDE	(1) (6) (2) (3)
۲ ۲	LED	NA	5	120	LED EMERGENCY LIGHTING UNIT WITH WHITE THERMOPLASTIC HOUSING, NICKEL CADMIUM BATTERY, BATTERY CHARGER, TEST SWITCH AND INDICATOR LIGHT.	LITHONIA ELM2L-M12	SURE-LITES EMERGI-LITE CHLORIDE	(1) (6) (2) (3)
YR C	LED	NA	5	LV	LED REMOTE EMERGENCY LIGHTING UNIT WITH WHITE THERMOPLASTIC HOUSING AND (2) LAMPHEADS.	LITHONIA ELA-W-T-LT24-LP05VS	SURE-LITES EMERGI-LITE CHLORIDE	(1) (6) (2) (3)

#### LIGHTING FIXTURE SCHEDULE NOTES:

1 WALL MOUNTED EXIT SIGNS SHALL BE ABOVE DOORS, CENTERED BETWEEN DOOR AND CEILING WHERE PRACTICAL, OR AT A SIMILAR HEIGHT IF NOT ABOVE DOORS. MOUNT EMERGENCY LIGHTING UNITS AT SIMILAR HEIGHT.

(2) FIXTURE SHALL BE WIRED AHEAD OF LOCAL SWITCHING.

- (3) AIM FIXTURES FOR OPTIMUM COVERAGE OF TASK AS DIRECTED IN FIELD BY THE ARCHITECT.
- (4) MOUNTED IN EITHER LAY-IN OR DRYWALL CEILING. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS AND PROVIDE PROPER MOUNTING ACCESSORIES.

(5) VERIFY MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.

(6) VERIFY FINISH WITH ARCHITECT PRIOR TO PROCUREMENT.

(7) EXIT SIGN SHALL BE AC ONLY IF GENERATOR ALTERNATE E1 IS ACCEPTED. BASE BID IS FOR COMBINATION EXIT SIGNS/EMERGENCY LIGHTING UNITS.

THE LIGHTING FIXTURE CATALOG NUMBERS INDICATED IN THE SCHEDULE ARE FOR THE BASIS OF SPECIFICATION. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER VIA EMAIL (SKEENAN@KEENGINEERINGGROUP.COM) IN PORTABLE DOCUMENT FORMAT (PDF) AT LEAST 10 DAYS PRIOR TO BID. ANY SUBSTITUTIONS RECEIVED AFTER THIS DATE SHALL NOT BE REVIEWED, AND SHALL NOT BE ACCEPTED. THE SUBSTITION SUBMITTAL SHALL CONTAIN, AT A MINIMUM, THE FOLLOWING INFORMATION: 1. SPECIFICATION SHEETS FOR ALL PROPOSED TYPES WITH THE TYPE NUMBER AND ANY DEVIATIONS FROM THE BASIS OF SPECIFICATION CLEARLY INDICATED.

1. LAMP TYPE:

KEEN	ENGINEERING

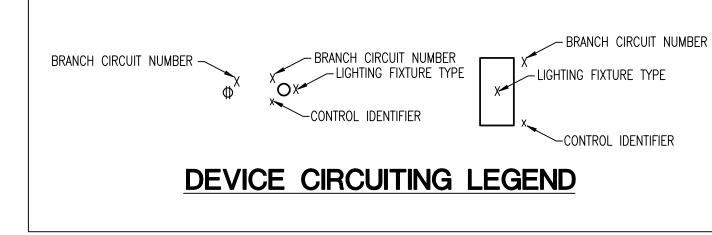
#### LIGHTING FIXTURE SUBSTITUTION NOTE:

2. THE COST SAVINGS OR ADDITION ON THE ENTIRE SUBSTITUTION PACKAGE.

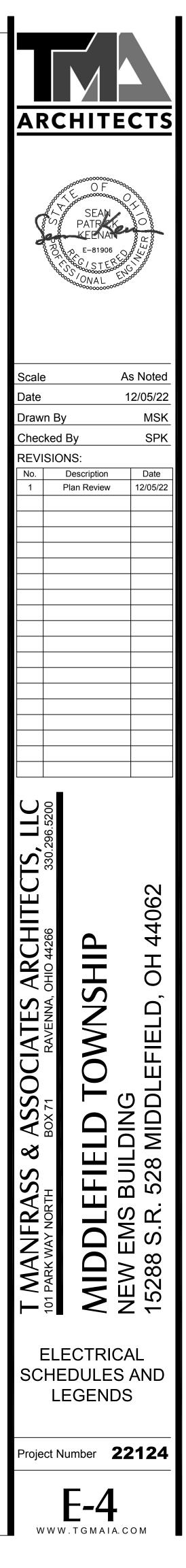
#### LIGHTING FIXTURE SCHEDULE KEY:

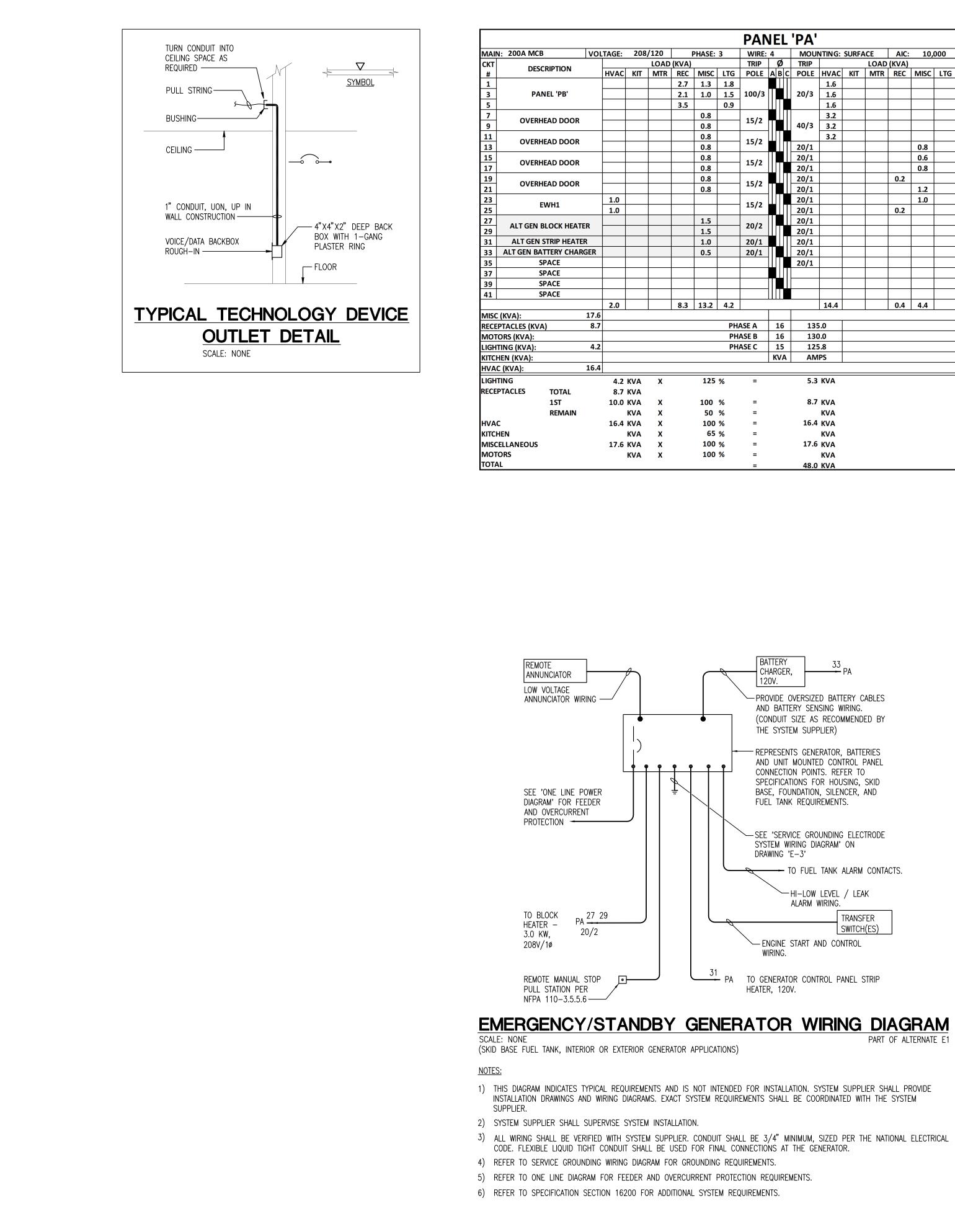
LED = LIGHT EMITTING DIODE

	ELECTRICAL SYMBOL LEGEND
SYMBOL	DESCRIPTION
	HOMERUN TO A 20 AMPERE, SINGLE POLE CIRCUIT BREAKER (PANEL 'A' CIRCUIT NUMBER 'X'), UON. PROVIDE QUANTITY OF CONDUCTORS TO ACCOMMODATE CIRCUITING AND CONTROL INDICATED.
	CONDUIT INSTALLED BELOW GRADE OR BELOW FINISHED FLOOR
\$	SWITCH (20A, 120/277V, SINGLE POLE) AT 48" AFF, UON
\$ <sub>3</sub>	THREE-WAY SWITCH (20A, 120/277V, SINGLE POLE) AT 48" AFF, UON
¢	DIMMER, INCANDESCENT UON AT 48" AFF, UON
0 0	PUSHBUTTON OPERATOR FOR MOTOR CONTROL AT 48" AFF, UON
Ø	LIGHTING CONTROL PHOTOCELL – MOUNTED AS INDICATED ON DRAWINGS
M	LIGHTING CONTROL OCCUPANCY SENSOR – CEILING MOUNTED
M	LIGHTING CONTROL OCCUPANCY SENSOR WITH DIMMER – WALL MOUNTED AT 48" AFF, UON ('0' = OCCUPANCY SENSOR, 'V' = VACANCY SENSOR)
Φ	DUPLEX RECEPTACLE (20A, 125V) AT 18" AFF, UON
<b>#</b>	DOUBLE DUPLEX RECEPTACLE AT 18" AFF, UON, TYPE AS INDICATED ON DRAWINGS
Ф	DUPLEX RECEPTACLE (20A, 125V) GROUND FAULT CIRCUIT INTERRUPTER TYPE AT 18" AFF, UON ('C' = MOUNT 8" ABOVE COUNTER, 'WP' = WEATHERPROOF)
#	DOUBLE DUPLEX RECEPTACLE GROUND FAULT CIRCUIT INTERRUPTER TYPE AT 18" AFF, UON, TYPE AS INDICATED ON DRAWINGS
$[] \nabla$	FLUSH MOUNTED COMBINATION DUPLEX RECEPTACLE (20A, 125V) AND VOICE/DATA ROUGH-IN OUTLET - IN FLOOR BOX
Ū	JUNCTION BOX – MOUNTING HEIGHT AND SIZE AS REQUIRED BY CODE OR AS NOTED ON DRAWING
	PANELBOARD (208Y/120V, 3Ø, 4 WIRE)
4	NON-FUSED DISCONNECT SWITCH - SIZE AS INDICATED
الك	FUSED DISCONNECT SWITCH – SIZE AND FUSING AS INDICATED ('WP' = WEATHERPROOF)
$\sum$	TRANSFORMER
M	METER
$\langle \rangle$	SINGLE OR THREE PHASE MOTOR – SEE DRAWINGS FOR DESCRIPTION
EQUIP	ELECTRICAL CONNECTION TO EQUIPMENT ITEM – SEE 'MECHANICAL EQUIPMENT CONNECTION SCHEDULE' ON DRAWING 'E-5'
<del></del>	GROUNDING BUS BAR
	TELECOMMUNICATIONS BACKBOARD
$\nabla$	PHONE/DATA/LOW VOLTAGE DEVICE ROUGH-IN OUTLET BOX AT 18" AFF, UON ('TV' = COORDINATE MOUNTING HEIGHT WITH ARCHITECT)
	WIFI ROUGH-IN OUTLET BOX



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ERES INTERRUPTING CURRENT RATING
CAL CONTRACTOR
CUIT BREAKER
GS ONLY
_ ELECTRICAL_CODE
_ ELECTRICAL MANUFACTURERS ASSOCIATION
FIRE PROTECTION ASSOCIATION
GHT WIRED AHEAD OF LOCAL LIGHTING CONTROL
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TRIP
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LOGY CONTRACTOR ROUND RITERS LABATORIES





						PAN	IEL	'PA'								
TAGE:	208	/120	l	PHASE:	3	WIRE:	4	MOU	NTING:	SURFA	CE	AIC:	10,	000	NOTES:	
		LOAD	(KVA)			TRIP	Ø	TRIP			LOAD	(KVA)			DESCRIPTION	СКТ
HVAC	KIT	MTR	REC	MISC	LTG	POLE	ABC	POLE	HVAC	KIT	MTR	REC	MISC	LTG	DESCRIPTION	#
			2.7	1.3	1.8				1.6							2
			2.1	1.0	1.5	100/3		20/3	1.6						CU1	4
			3.5		0.9				1.6							6
				0.8		15/2			3.2							8
				0.8		13/2		40/3	3.2						CU2	10
				0.8		15/2			3.2							12
				0.8		15/2		20/1					0.8		WASHER	14
				0.8		15/2		20/1					0.6		DRYER	16
				0.8		13/2		20/1					0.8		REFRIGERATOR	18
				0.8		15/2		20/1				0.2			LOUNGE - COUNTER	20
				0.8		13/2		20/1					1.2		DISPOSAL	22
1.0						15/2		20/1					1.0		DISHWASHER	24
1.0						13/2		20/1				0.2			LOUNGE - COUNTER	26
				1.5		20/2		20/1							SPARE	28
				1.5				20/1							SPARE	30
				1.0		20/1		20/1							SPARE	32
				0.5		20/1		20/1							SPARE	34
								20/1							SPARE	36
															SPACE	38
															SPACE	40
															SPACE	42
2.0			8.3	13.2	4.2				14.4			0.4	4.4		CONNECTED (KVA):	46.9
															DEMAND (KVA):	48.0
						ASE A	16	13								
						ASE B	16	130							CONNECTED (AMPS):	130.2
					PH	ASE C	15	12								
							KVA	AM	IPS							
															DEMAND (AMPS):	133.1
4.2	KVA	Х		125	%	=		5.3	KVA							
8.7	KVA															
10.0	KVA	Х		100	%	=		8.7	KVA							
I	KVA	Х		50	%	=			KVA							
16.4	KVA	Х		100	%	=		16.4	KVA							
I	KVA	Х		65		=			KVA							
17.6	KVA	Х		100	%	=		17.6	KVA							
I	KVA	Х		100	%	=			KVA							
						=		48.0	KVA							

									PAN	NEL	'PB'								
MAIN:	100A MLO	VOL	TAGE:	208	/120	I	PHASE:	3	WIRE:	4	MOU	NTING:	SURF	ACE	AIC:	10,0	000	NOTES:	
СКТ #	DESCRIPTION		HVAC	КІТ	LOAD MTR	(KVA) REC	MISC	LTG	TRIP POLE	Ø ABC	TRIP POLE	HVAC	КІТ	LOAD MTR	(KVA) REC	MISC	LTG	DESCRIPTION	СК1
1	MEETING ROOM					0.5			20/1		20/1						0.9	GARAGE	2
3	MEETING ROOM					0.7			20/1		20/1						0.6	GARAGE, EXTERIOR	4
5	MEETING ROOM					0.5			20/1		20/1						0.9	GARAGE	6
7	CORRIDORS, HVAC					0.9			20/1		20/1						0.9	MEETING, LOBBY, CORR, STOR	8
9	EWC						0.7		20/1		20/1					0.2	0.9	OFFICE, DORMS, LOUNGE, RRs	_
11	OFFICE					0.5			20/1		20/1				0.4			TELECOM BACKBOARD	12
13	OFFICE					0.5			20/1		20/1				0.4			TELECOM BACKBOARD	14
15	LOUNGE					0.4			20/1		20/1				0.4	0.1		GARAGE	16
17	DORMS					1.1			20/1		20/1				0.4			GARAGE	18
19	DORMS, LOUNGE - TV	s					1.2		20/1		20/1				0.4			GARAGE	20
21	MEN					0.2			20/1		20/1				0.4			GARAGE	22
23	WOMEN					0.2			20/1	▏▏ <b>┍</b> ┲ <u>┢</u>	20/1				0.4			GARAGE, EXTERIOR	24
25	SPARE								20/1		20/1					0.1		CO DETECTION	26
27	SPARE								20/1		20/1							SPARE	28
29	SPARE								20/1	╡╽┍┯┱┷	20/1							SPARE	30
31	SPARE								20/1		20/1			1				SPARE	32
33	SPARE								20/1		20/1							SPARE	34
35	SPARE								20/1	┤│┍┯┓┷	20/1							SPARE	36
37	SPARE								20/1		20/1							SPACE	38
39	SPARE								20/1									SPACE	40
41	SPARE								20/1	┤│┍┯╻┷								SPACE	42
						5.5	1.9		20/2						2.8	0.4	4.2	CONNECTED (KVA):	14.8
MISC (	κ\/Δ)·	2.3				0.0	1.5					1			2.0	0.1		DEMAND (KVA):	15.9
	TACLES (KVA)	8.3						PH	ASE A	6	48	.3							
	RS (KVA):								ASE B	5	38							CONNECTED (AMPS):	41.1
	NG (KVA):	4.2							ASE C	4	36								
	EN (KVA):								/102 0	KVA	AM								
	(KVA):																	DEMAND (AMPS):	44.0
			4.2	10.4			125	0/			<b>F</b> 2	KVA							
LIGHTI				KVA	Х		125	%	=		5.3	куа							
RECEP	TACLES TOTAL			KVA			4.00	0/			0.2								
	1ST		10.0		X		100		=		8.3	KVA							
	REMAIN			KVA	X		50		=			KVA							
HVAC				KVA	X		100		=			KVA							
КІТСНЕ				KVA	X		65		=			KVA							
				KVA	X		100		=		2.3	KVA							
MOTO				KVA	Х		100	%	=			KVA							
TOTAL									=		15.9	KVA							

	MECHANICAL EQUIPMENT CONNECTION SCHEDULE														
ITEM	DESCRIPTION	KW	LOAD FLA	C/B	VOLTAGE	PHASE	DISCON RATING		CONNECTION	PANEL	CIRCUIT	CONDUIT/WIRE	LOCATION	NOTES	
CU1	CONDENSING UNIT	4.9	14	20	208	3	30	3R	FDS	PA	2,4,6	3#12,1#12G,3/4"C.	EXTERIOR		
CU2	CONDENSING UNIT	9.7	27	40	208	3	60	3R	FDS	PA	8,10,12	3#8,1#10G,1"C.	EXTERIOR		
EF1	EXHAUST FAN	0.1	1	20	120	1	20	1	TS			2#12,1#12G,3/4"C.	STORAGE	1	
EF2	EXHAUST FAN	0.1	1	20	120	1	20	1	TS			2#12,1#12G,3/4"C.	STORAGE	1	
EF3	EXHAUST FAN	0.1	1	20	120	1	20	1	TS	PA		2#12,1#12G,3/4"C.	GARAGE		
EF4	EXHAUST FAN	0.1	1	20	120	1	20	1	TS	PA		2#12,1#12G,3/4"C.	GARAGE		
EWH1	ELECTRIC HEATER	2.0	10	15	208	1			DC	PA	23,25	2#12,1#12G,3/4"C.	LOBBY	2	
F1	FURNACE	0.5	4	20	120	1	20	1	TS	PA		2#12,1#12G,3/4"C.	HVAC		
F2	FURNACE	1.2	10	20	120	1	20	1	TS	PA		2#12,1#12G,3/4"C.	HVAC		
GWH1	WATER HEATER	0.4	3	20	120	1	20	1	TS	PA		2#12,1#12G,3/4"C.	HVAC		
UH1	UNIT HEATER	0.6	5	20	120	1	20	1	TS	PA		2#12,1#12G,3/4"C.	GARAGE		
UH2	UNIT HEATER	0.6	5	20	120	1	20	1	TS	PA		2#12,1#12G,3/4"C.	GARAGE		
CONNECT	CONNECTION NOTES									CONNECTION LEGEND					

CONNECTION NOTES

1. UNIT CONTROLLED WITH LIGHTING IN SAME ROOM 2. FURNISHED AND INSTALLED BY MC WITH INTEGRAL DISCONNECT. WIRED BY EC.

CONNECTION LEGEN

DC = DIRECT CONNECTION FDS = FUSED DISCONNECT SWITCH

TS = HORSEPOWER RATED TOGGLE TYPE DISCONNECT SWITCH

00000000000000000000000000000000000000	ADDREEDED BATTELECTS
Scale Date Drawn By	As Noted 09/12/22
Checked REVISION	
T MANFRASS & ASSOCIATES ARCHITECTS, LLC 101 PARK WAY NORTH BOX 71 RAVENNA, OHIO 44266 330.296.5200	MIDDLEFIELD TOWNSHIP NEW EMS BUILDING 15288 S.R. 528 MIDDLEFIELD, OH 44062
SCH	ECTRICAL IEDULES & DETAILS
	umber 22124 E-5

#### ELECTRICAL GENERAL PROVISIONS

- 1. THE PROVISIONS OF THE INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, ALTERNATES, ADDENDA AND DIVISION 1 ARE A PART OF THIS SPECIFICATION. ELECTRICAL, ARCHITECTURAL, MECHANICAL AND ALL OTHER DRAWINGS AS WELL AS THE SPECIFICATIONS FOR ALL THE DIVISIONS SHALL BE DEFINED AS THE CONTRACT DOCUMENTS. CONTRACTOR SHALL REVIEW ENTIRE SET OF CONTRACT DOCUMENTS PRIOR TO BIDDING.
- 2. VISIT THE SITE OF THE WORK AND BECOME FAMILIAR WITH THE CONDITIONS AFFECTING THE INSTALLATION. THIS CONTRACTOR SHALL FIELD VERIFY THAT ALL ELECTRICAL WORK CAN BE INSTALLED AS SHOWN ON THE DRAWINGS. ANY DISCREPENCY SHALL BE COMMUNICATED IN WRITING TO THE ARCHITECT OR ENGINEER PRIOR TO SUBMISSION OF A PROPOSAL. SUBMISSION OF A PROPOSAL SHALL PRESUPPOSE KNOWLEDGE OF SUCH CONDITIONS AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED WHERE EXTRA LABOR OR MATERIALS ARE REQUIRED BECAUSE OF IGNORANCE OF THESE CONDITIONS.
- 3. "CONTRACTOR" AS USED WITHIN THE CONTEXT OF THE ELECTRICAL CONTRACT DOCUMENTS SHALL EXPLICITLY REFER TO THE "ELECTRICAL CONTRACTOR" AND THE ELECTRICAL CONTRACTOR'S "SUBCONTRACTORS". THE TERM "FURNISH" SHALL MEAN TO SUPPLY AND DELIVER TO THE PROJEC SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" SHALL MEAN WORK WHICH INCLUDES THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE. THE TERM "EQUAL" SHALL MEAN TO MEET OR EXCEED THE STANDARDS OF THE SPECIFIED PRODUCTS OR LISTED MANUFACTURERS.
- 4. INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, SERVICES AND PERMITS NECESSARY FOR THE PROPER COMPLETION OF ALL ELECTRICAL WORK SHOWN. ITEMS OMITTED. BUT NECESSARY TO MAKE THE ELECTRICAL SYSTEM COMPLETE AND WORKABLE, SHALL BE UNDERSTOOD TO FORM PART OF THE WORK. SECURE AND PAY FOR PERMITS AND INSPECTIONS REQUIRED FOR ELECTRICAL WORK.
- 5. IT IS THE PURPOSE OF THE ELECTRICAL DRAWINGS TO INDICATE THE APPROXIMATE LOCATION OF ALL EQUIPMENT, DEVICES, ETC. ASCERTAIN EXACT LOCATIONS AND ARRANGE WORK ACCORDINGLY. THE RIGHT IS RESERVED TO EFFECT REASONABLE CHANGES IN THE LOCATION OF DEVICES UP TO THE TIME OF ROUGHING-IN, WITHOUT ADDITIONAL COST TO THE OWNER. CHANGES IN LOCATION OF DEVICES RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THE CONTRACT DRAWING OR SPECIFICATION REQUIREMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- 6. TEMPERATURE AND INTERLOCK CONTROLS SHALL BE PROVIDED AND WIRED BY A CONTROLS CONTRACTOR UNDER DIVISION 23. DIVISION 26 CONTRACTOR SHALL PROVIDE NECESSARY 120 VOLT POWER, TERMINATED AT JUNCTION BOXES, AS DIRECTED BY DIVISION 23 CONTRACTOR. LINE VOLTAGE (120 VOLT OR HIGHER) CONTROL DEVICES, SUCH AS THERMOSTATS AND AQUASTATS, WHICH CONTROL FRACTIONAL HORSEPOWER, 120 VOLT MOTORS, SHALL BE PROVIDED BY THE DIVISION 23 CONTRACTOR, AND SHALL BE WIRED BY THE DIVISION 26 CONTRACTOR.
- 7. RACEWAY SYSTEMS, CONDUIT, BOXES, GROUNDING, BUSBARS, HARDWARE, ETC. REQUIRED FOR TECHNOLOGY SYSTEMS, CABLING AND DEVICES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE ALL REQUIREMENTS WITH THE TECHNOLOGY SYSTEMS CONTRACTOR.
- 8. WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF LOCAL AND STATE CODES, AS WELL AS THE NATIONAL ELECTRICAL CODE (NEC), AS INTERPRETED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- 9. CONSULT THE DRAWINGS, PRODUCT DATA, WIRING DIAGRAMS AND SHOP DRAWINGS COVERING THE WORK FOR VARIOUS OTHER TRADES, THE FIELD LAYOUTS OF THE CONTRACTORS FOR THE TRADE AND MAKE ADJUSTMENTS ACCORDINGLY IN LAYING OUT THE ELECTRICAL WORK.
- 10. WARRANT THAT EQUIPMENT AND ALL WORK IS INSTALLED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE AND THAT ALL EQUIPMENT WILL MEET THE REQUIREMENTS SPECIFIED. GUARANTEE AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS; REPAIR OR REPLACE ANY DEFECTIVE WORK, MATERIAL OR EQUIPMENT WITHIN ONE YEAR FROM DATE OF FORMAL WRITTEN ACCEPTANCE BY THE OWNER.
- 11. BIDS SHALL BE BASED UPON THE SPECIFIED PRODUCTS OR LISTED ALTERNATIVES. WHERE ONLY ONE MAKE IS NAMED, IT SHALL BE PROVIDED. VERBAL REQUESTS OR APPROVALS SHALL NOT BE BINDING ON THE ARCHITECT, ENGINEER OR OWNER.
- 12. EQUIPMENT AND MATERIALS USED ON THIS PROJECT SHALL BE NEW AND U.L. LABELED FOR THE APPLICATION.
- 13. PREPARE SHOP DRAWINGS AND PRODUCT DATA FOR LIGHTING FIXTURES, PANELBOARDS, AND ALL OTHER SPECIFIED SYSTEMS AND COMPONENTS. THE SUBMITTALS THAT ARE RETURNED SHALL BE USED FOR PROCUREMENT. WHERE ADDITIONAL INSTALLATION DRAWINGS, WIRING DIAGRAMS OR OTHER DRAWINGS ARE SPECIFIED AS A PART OF THE SUBMITTAL, THEY SHALL BE SUBMITTED AT THE SAME TIME WITH SHOP DRAWINGS AND PRODUCT DATA.
- 14. THE CONTRACTOR SHALL KEEP ONE COMPLETE SET OF THE CONTRACT DRAWINGS ON THE PROJECT SITE ON WHICH SHALL BE RECORDED ANY DEVIATIONS OR CHANGES FROM SUCH CONTRACT DRAWINGS MADE DURING CONSTRUCTION. THE UPDATED CONTRACT DRAWINGS SHALL BECOME "RECORD DRAWINGS" OF THE COMPLETED CONSTRUCTION. AFTER THE PROJECT IS COMPLETED, THE RECORD DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT IN GOOD CONDITION, AS A PERMANENT RECORD OF THE INSTALLATION AS CONSTRUCTED.
- 15. PROVIDE NAMEPLATES ON PANELBOARDS, SAFETY SWITCHES, SYSTEM DISTRIBUTION JUNCTION BOXES AND PULLBOXES, CONTROL PANELS, RECEPTACLE COVERPLATES, AND METERING EQUIPMENT. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, LETTERING SHALL INCLUDE THE NAME OR DESIGNATION OF EQUIPMENT, HORSEPOWER, VOLTAGE RATING AND SERVICE DESIGNATION. NAMEPLATES SHALL BE LAMINATED PHENOLIC WITH A BLACK SURFACE AND WHITE CORE. IDENTIFICATION WITH A DYMO TYPE INSTRUMENT IS NOT PERMISSIBLE. THE INSIDE COVER OF ALL RECEPTACLE COVERPLATES SHALL BE PERMANENTLY MARKED TO INDICATE THE PANEL AND CIRCUIT NUMBER OF THE RECEPTACLE. THE OUTSIDE OF THE COVERPLATES FOR ALL JUNCTION BOXES SHALL BE PERMANENTLY MARKED TO INDICATE THE SYSTEM. IDENTIFICATION SHALL BE ON THE INSIDE OF COVERPLATES FOR ALL JUNCTION BOXES IF THEY ARE LOCATED IN FINISHED AREAS. IDENTIFICATION OF BRANCH CIRCUITS SHALL BE TYPEWRITTEN ON DIRECTORY CARDS FURNISHED WITH ALL PANELS AND PLACED IN THE CARD HOLDER ON THE DOOR.
- 16. IDENTIFY SPARE CONDUITS AND CONDUIT STUBS AS FOLLOWS: IDENTIFY SYSTEM AND/OR PURPOSE AT SOURCE, IF POSSIBLE, AND AT TERMINATION END. ALSO, AT TERMINATION END, INDICATE LOCATION OF CONDUIT ORIGINATION.
- 17. AFTER INSTALLATION, TEST FOR GROUNDS, SHORT CIRCUITS AND PROPER FUNCTION OF EACH NEW SYSTEM AND RELATED WIRING. FAULTS IN THE INSTALLATION SHALL BE CORRECTED.
- 18. AFTER ALL TESTS AND ADJUSTMENTS HAVE BEEN COMPLETED, CLEAN ALL EQUIPMENT LEAVING EVERYTHING IN WORKING ORDER AT THE COMPLETION OF THIS WORK.
- 19. PROVIDE A TEMPORARY ELECTRICAL SERVICE ADEQUATE IN SIZE FOR HEATING, FOR THE USE OF ALL TRADES AND FOR THE LIGHTING OF EACH ROOM DURING CONSTRUCTION. INSTALLATION SHALL CONFORM TO ARTICLE 590 OF THE NEC.

#### BASIC MATERIALS AND METHODS

- 1. ALL BOXES AND COVERPLATES SHALL BE SUITABLE FOR THE APPLICATIONS, RIGIDLY SUPPORTED FROM THE BUILDING STRUCTURE INDEPENDENT OF THE CONDUIT SYSTEM. ALL BOXES SHALL BE 4"x4"x2" DEEP MINIMUM WITH COVERPLATES SUITABLE FOR THEIR INTENDED USE. BOX STABILIZERS SHALL BE UTILIZED TO PROPERLY SUPPORT BOXES IN METAL STUD CONSTRUCTION.
- 2. EXTERIOR UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. ENCASED IN CONCRETE UNDER DRIVES AND ROADWAYS WITH A MINIMUM 3" ENVELOPE. CONDUITS IN CONCRETE FLOORS, DAMP OR WET LOCATIONS, OR EXPOSED HIGH TRAFFIC AREAS WHERE SUBJECT TO PHYSICAL ABUSE SHALL BE HEAVY WALL RIGID GALVANIZED STEEL. ALL OTHER INTERIOR CONDUITS SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED ON THE DRAWINGS OR WITHIN THESE SPECIFICATIONS. CONDUITS SHALL BE 3/4" TRADE SIZE, MINIMUM, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR WITHIN THESE SPECIFICATIONS. ALL EMT CONDUITS SHALL HAVE COLD-ROLLED STEEL DOUBLE SET SCREW FITTINGS.
- 3. CONDUITS THAT PASS FROM THE INTERIOR TO THE EXTERIOR OF THE BUILDING, OR ARE SUBJECT TO DIFFERENT TEMPERATURES. SHALL BE SEALED WITH AN APPROVED MATERIAL SUCH AS DUCT-SEAL TO PREVENT THE CIRCULATION OF COLD AIR TO A WARMER SECTION OF THE CONDUIT.
- A. CONDUITS THAT STUB THROUGH THE ROOF SHALL BE SUPPLIED WITH PIPE SEALS AS MANUFACTURED BY THE PATE CO. AND SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. PIPE SEALS SHALL BE ONE PIECE ALUMINUM BASE TYPE WITH FIVE INCH SLOPED ROOF SURFACE FLANGES. GRADUATED STEPPED PVC BOOTS AND ADJUSTABLE STAINLESS STEEL CLAMPS. RPS CORPORATION AND THYCURB CORPORATION ARE APPROVED EQUIVALENT MANUFACTURERS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY EXACT REQUIREMENTS WITH THE ROOFING CONTRACTOR BEFORE PROCUREMENT AND INSTALLATION OF THE PIPE SEALS.
- B. CONDUITS THAT STUB THROUGH THE FOUNDATION WALLS SHALL BE SUPPLIED WITH PIPE SEALS AS MANUFACTURED BY LINK-SEAL, OR BY EQUIVALENT METHOD AS APPROVED BY THE ARCHITECT. PIPE SEALS SHALL BE EPDM (BLACK) WITH STAINLESS STEEL HARDWARE. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY EXACT REQUIREMENTS WITH THE ARCHITECT BEFORE PROCUREMENT AND INSTALLATION OF THE PIPE SEALS.
- 4. ALL BRANCH CIRCUIT CONDUITS SHALL BE EMT CONDUIT. METAL CLAD (TYPE MC) CABLE OR ARMORED (TYPE AC) CABLE MAY BE UTILIZED IN LIEU OF BRANCH CIRCUIT EMT CONDUIT IN CONCEALED WALL SPACES. A SECURING CLIP SHALL BE PROVIDED TO SECURE THE MC OR AC CABLE TO THE WALL CONSTRUCTION AT A MINIMUM OF 16" ON CENTER. A GREEN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL EMT CONDUIT, MC CABLE AND AC CABLE. THE CONDUIT OR METAL SHEATH SHALL ITSELF QUALIFY AS AN EQUIPMENT GROUNDING RETURN PATH IN ACCORDANCE WITH NEC 250.118. WIRING SHALL BE AS SPECIFIED ELSEWHERE IN THIS SECTION.
- FT. IN LENGTH.
- 6. CONDUIT CONNECTIONS TO MOTORS AND OTHER VIBRATING EQUIPMENT SHALL BE FLEXIBLE METAL "SEAL-TITE" TYPE "UA" CONDUIT AS MANUFACTURED BY THE AMERICAN BRASS COMPANY OR EQUIVALENT AND SHALL BE OF THE SAME SIZE AS THE FEEDER CONDUIT.
- 7. LOCAL LIGHT SWITCHES SHALL BE 20 AMPERE, 120/277 VOLTS, AC SPECIFICATION GRADE. WITH GROUNDING TERMINAL – HUBBELL #HBL-122 SERIES, PASS AND SEYMOUR #PS20AC SERIES, OR LEVITON #122 SERIES.
- SEYMOUR OR HUBBELL.
- 9. WALL MOUNTED DIMMING VACANCY/OCCUPANCY SENSORS SHALL BE LEVITON #ODS10-10X OR EQUAL BY PASS & SEYMOUR HUBBELL
- 10. CEILING MOUNTED OCCUPANCY SENSORS SHALL BE 2000 SQUARE FOOT COVERAGE, MULTI -TECHNOLOGY SENSORS - WATTSTOPPERS #DT-355 OR EQUAL BY PASS & SEYMOUR OR LEVITON.
- 11. DIMMERS SHALL BE COMPATIBLE WITH LIGHTING LOADS SERVED. COORDINATE WITH DIMMING COMPATIBILITY CHARTS OF FINAL LIGHTING SELECTIONS.
- 12. DUPLEX RECEPTACLES SHALL BE 20A, 125V, 2 POLE, 3 WIRE GROUNDING.
- A. GENERAL PURPOSE "SPECIFICATION GRADE" DUPLEX RECEPTACLES: HUBBELL #5352, LEVITON #5362 OR PASS & SEYMOUR #5362.
- 13. DUPLEX RECEPTACLES, WHERE INDICATED ON THE DRAWINGS OR WHERE REQUIRED BY CODE, SHALL HAVE INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTION AND SHALL BE 20A, 125V, 2 POLE, 3 WIRE GROUNDING: HUBBELL #GF5352, PASS & SEYMOUR #2091 OR LEVITON #8899. GFCI RECEPTACLES SHALL NOT BE THROUGH-WIRED. PROVIDE INDIVIDUAL DUPLEX GFCI RECEPTACLES AS SHOWN ON THE DRAWINGS.
- 14. DUPLEX RECEPTACLES, WHERE INDICATED ON THE DRAWINGS WITH "WP" SUBSCRIPT OR WHERE REQUIRED BY CODE SHALL BE RATED WEATHER RESISTANT, HAVE INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTION, SELF-TESTING, VISIBLE TRIP ALERT AND SHALL BE 20A, 125V, 2 POLE. 3 WIRE GROUNDING: LEGRAND #2097TRWR OR EQUAL BY LEVITON OR PASS & SEYMOUR WITH VERTICAL WHILE -IN-USE COVER, LEGRAND #WIUC1GVSL OR EQUAL
- 16. ALL SWITCHES, DIMMERS, AND RECEPTACLES SHALL BE WHITE UNLESS OTHERWISE INDICATED WITHIN THESE SPECIFICATIONS. VERIFY COLOR WITH THE ARCHITECT PRIOR TO PROCUREMENT OF THE DEVICES. ALL COVERPLATES SHALL BE SMOOTH HIGH IMPACT COMMERCIAL GRADE THERMOPLASTIC OR SMOOTH NYLON FINISH WITH COLOR TO MATCH THE DEVICES. IN UNFINISHED AREAS, USE CADMIUM PLATED, ROUND CORNER, STEEL COVERPLATES FOR SURFACE MOUNTED OUTLET BOXES. BOTH THE WIRING DEVICES AND THE COVERPLATES SHALL BE BY THE SAME MANUFACTURER.
- 17. WIRE AND CABLE FOR BRANCH CIRCUITS AND FOR FEEDERS SHALL BE 90 DEGREES C., 600VOLT, TYPE THHN/THWN, COPPER ONLY, UNLESS OTHERWISE NOTED ON THE DRAWINGS. TYPE XHHW SHALL ALSO BE ACCEPTABLE FOR FEEDERS. MINIMUM SIZE FOR POWER AND LIGHTING BRANCH CIRCUITS SHALL BE
- 18. SAFETY SWITCHES SHALL BE HEAVY DUTY FUSIBLE OR NONFUSIBLE TYPE AS INDICATED ON THE DRAWINGS, AND SHALL BE SUITABLE FOR THE VOLTAGE AND CURRENT RATINGS AS SHOWN ON THE DRAWINGS.
- 19. FUSES RATED 600 AMPERES OR LESS, 600 VOLTS OR LESS, SERVING ALL LOADS SHALL BE U.L. CLASS RK-1, BUSSMANN DUAL ELEMENT, TIME DELAY "LOW PEAK", TYPE LPN-RK (250 VOLT) OR TYPE LPS-RK (600 VOLT), OR APPROVED EQUIVALENT. FUSES OF EQUIVALENT OVERLOAD AND SHORT-CIRCUIT INTERRUPTING PERFORMANCE, AS MANUFACTURED BY RELIANCE FUSE, FERRAZ-SHAWMUT, LITTELFUSE, GENERAL ELECTRIC OR S & C ARE ACCEPTABLE. EXACT FUSE TYPE REQUIRED FOR MOTOR PROTECTION SHALL BE PROVIDED AS RECOMMENDED BY THE STARTER MANUFACTURER.
- 20. DISCONNECT SWITCHES SHALL BE MANUFACTURED BY SQUARE 'D', GENERAL ELECTRIC, SIEMENS/ITE, OR CUTLER HAMMER/WESTINGHOUSE.

#### ELECTRICAL SPECIFICATIONS

- 5. FLEXIBLE METAL CONDUIT SHALL BE USED FROM OUTLET BOXES TO RECESSED LIGHTING FIXTURES, 6
- 8. WALL MOUNTED OCCUPANCY SENSORS SHALL BE LEVITON #OSD10-IDW OR EQUAL BY PASS &

15. ALL RECEPTACLES SHALL BE PROVIDED WITH A SELF-GROUNDING CLIP AT THE MOUNTING SCREW.

- 21. PROVIDE FLOOR BOXES, FLOOR PLATE ASSEMBLIES, CARPET FLANGES, AND COVERS AS INDICATED ON THE DRAWINGS. BOX DEPTHS AND CONDUIT HUBS SHALL SUIT FIELD CONDITIONS. MANUFACTURER SHALL BE HUBBELL, OR EQUAL.
- 22. FLOOR BOXES SHALL BE HUBBELL #PFBRG2 (2 GANG). OR #PFBRG3 (3 GANG). OR EQUAL. 6.00" DEEP NON-METALLIC WITH 40.0" TO 46.0" CUBIC CAPACITY PER GANG, FULLY ADJUSTABLE. STANDARD HUBS SHALL BE 1-1/4".
- A. FOR SHALLOW POURS ONLY, FLOOR BOXES SHALL BE HUBBELL #B4214 (2 GANG), OR #B4314, OR EQUAL, 2.00" DEEP CAST IRON WITH 16" CUBIC CAPACITY.
- 23. FLOOR BOXES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES. ALL LOCATIONS SHALL BE FIELD VERIFIED WITH THE ARCHITECT BEFORE CORE DRILLING.
- 24. ANY CORE DRILLING OR CUTTING OF FIRE RATED FLOORS. SHAFTS AND WALLS SHALL BE FIRE STOPPED PRIOR TO FINISH PATCHING. ALL PENETRATIONS AND BACK BOXES SHALL BE SEALED IN ACCORDANCE WITH UL FIRE RESISTANCE HANDBOOK VOLUME II AND SHALL BE RATED TO MATCH THE FIRE RATING OF THE FLOORS, SHAFTS OR WALLS PENETRATED.
- 25. CONDUITS SHALL BE CONTINUOUS AND SECURED TO ALL BOXES IN SUCH A MANNER THAT EACH CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS FROM THE POINT OF SERVICE TO ALL DEVICE BOXES. RUN CONDUITS CONCEALED UNLESS OTHERWISE INDICATED. THE ACTUAL ROUTING OF CONDUITS SHALL BE INSTALLED TO SUIT THE VARIOUS FIELD CONDITIONS.
- 26. IN AREAS WHERE IT IS NOT POSSIBLE TO INSTALL CONCEALED CONDUIT. PERMISSION MUST BE OBTAINED FROM THE ARCHITECT TO RUN SURFACE MOUNTED RACEWAYS OR CONDUIT. THE ROUTING AND ELEVATION MUST BE COORDINATED WITH THE ARCHITECT BEFORE INSTALLATION. EXPOSED RACEWAYS SHALL BE PAINTED TO MATCH ADJACENT FINISHES.
- 27. INDIVIDUAL BRANCH CIRCUITS ARE SHOWN ON THE DRAWINGS FOR CLARITY. LIGHTING AND RECEPTACLE CIRCUITS LESS THAN OR EQUAL TO 100 AMPERES MAY BE GROUPED FOR HOMERUNS, WITH A MAXIMUM OF THREE (3) CIRCUITS PER HOMERUN. NEUTRAL CONDUCTORS SHALL NOT BE SHARED.
- 28. FOR 120 VOLT BRANCH CIRCUITS WHERE SIZE IS NOT SHOWN, CONDUCTOR SIZE #12 MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 125 FEET, AND SIZE #10 MINIMUM SHALL BE USED FOR CIRCUITS 125 FEET OR GREATER. GROUND CONDUCTORS SHALL ALSO BE INCREASED TO #10 ACCORDINGLY.
- 29. IDENTIFY WIRE AND CABLE FOR BRANCH CIRCUITS AS CALLED FOR IN THE NATIONAL ELECTRICAL CODE. IDENTIFICATION OF FEEDERS SHALL BE BY MEANS OF COLORED TAPE AT TERMINALS.
- 30. ADJACENT DEVICES OF THE SAME VOLTAGE CLASS SHALL BE MOUNTED IN GANGED BOXES.
- 31. MOUNTING HEIGHTS TO THE CENTER OF OUTLET BOXES SHALL BE AS INDICATED ON THE DRAWINGS.
- 32. VERIFY MOUNTING HEIGHTS AND LOCATIONS WITH THE ARCHITECT BEFORE ROUGH-IN. REFER TO DETAILS AND INTERIOR WALL ELEVATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- 33. OUTLETS SHALL NOT BE INSTALLED BACK TO BACK.
- 34. ALL RECEPTACLES SHALL BE MOUNTED WITH THE GROUND OPENING ABOVE THE PHASE AND NEUTRAL OPENINGS.
- 35. ALL DEVICES SHALL BE SECURED WITH MORE THAN A SINGLE SCREW.
- 36. ALL HARDWARE, SUPPORTS, HANGERS, BRACKETS, ANGLE IRON, CHANNELS, RODS AND CLAMPS NECESSARY TO INSTALL ELECTRICAL EQUIPMENT SHALL BE PROVIDED TO SUIT THE FIELD CONDITIONS AND THE APPLICATIONS INTENDED AS SHOWN ON THE DRAWINGS. THE USE OF PERFORATED STRAPS IS NOT PERMITTED.
- 37. ALL EQUIPMENT MOUNTED ON INTERIOR EQUIPMENT ROOM WALLS WHERE ADDITIONAL SUPPORT IS REQUIRED SHALL BE ATTACHED TO 3/4" PAINTED PLYWOOD FIRE RATED BOARDS FURRED OUT 1" FROM WALL. BOARDS SHALL BE PAINTED TO MATCH WALL FINISHES.

#### POWER DISTRIBUTION

- 1. THE ELECTRICAL SERVICE TO THE BUILDING, THE BUILDING'S POWER DISTRIBUTION, AND THE BUILDING'S GROUNDING ELECTRODE SYSTEM SHALL BE PROVIDED AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.
- 2. GROUND ALL ELECTRICAL SYSTEM CONDUITS, RACEWAYS, MOTORS, PANELS, CABINETS, FIXTURES, METAL BOXES, AND OTHER EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ALL PROVISIONS OF THE NEC, STATE BUILDING CODE AND LOCAL OR REGIONAL CODES.
- 3. GROUNDING OF THE ELECTRICAL SYSTEM SHALL BE BY MEANS OF AN INSULATED GROUNDING CONDUCTOR INSTALLED WITH FEEDER AND BRANCH CIRCUIT CONDUCTORS IN ALL CONDUITS, SIZED IN ACCORDANCE WITH NEC ARTICLE 250.122.
- 4. INSTALL BONDING JUMPERS ACROSS ALL BUILDING EXPANSION JOINTS, AND ACROSS ALL CONDUIT EXPANSION FITTINGS.
- 5. WHERE GROUNDING CONDUCTORS ARE SUBJECT TO MECHANICAL DAMAGE PROTECT SUCH CONDUCTORS BY ENCASEMENT IN CONCRETE OR INSTALLATION IN A RIGID METALLIC RACEWAY.
- 6. ALL TERMINATIONS OF THE GROUNDING CONDUCTORS SHALL BE BY MEANS OF SOLDERLESS CONNECTIONS.
- 7. FURNISH AND INSTALL BRANCH CIRCUIT BREAKER PANELBOARDS EQUIPPED WITH CIRCUIT BREAKERS, WITH FRAME AND TRIP RATINGS LISTED ON THE DRAWINGS. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC, MOLDED CASE BOLT-ON TYPE. PROVIDE HVAC "HACR" AND ARC FAULT CIRCUIT INTERRUPTING TYPES AS REQUIRED. ALL CURRENT CARRYING PARTS OF THE BUS STRUCTURE SHALL BE TIN-PLATED ALUMINUM. EACH PANEL SHALL CONTAIN A 100% RATED NEUTRAL BUS AND A GROUNDING BUS. PANELS SHALL HAVE "DOOR-WITHIN-DOOR" TRIM, HINGED BOX TO FRONT TYPE WITH LATCH ON OUTER DOOR. ALL LOCKS SHALL BE KEYED ALIKE.
- 8. EACH PANEL, AS A COMPLETE UNIT, SHALL HAVE A MINIMUM SYMMETRICAL SHORT CIRCUIT CURRENT RATING OF 10,000 AMPERES FOR 208Y/120 VOLT RATED PANELS. CIRCUIT BREAKERS SHALL BE FULLY RATED. SERIES RATINGS ARE NOT PERMITTED.
- 9. PANELS SHALL BE AS MANUFACTURED BY SQUARE D, SIEMENS/ITE, GENERAL ELECTRIC OR CUTLER HAMMER/WESTINGHOUSE.
- 10. PANELS SHALL BE MOUNTED SO THAT TOP OF THE CABINET IS AT 6'-0" ABOVE FLOOR. A GLAZED DIRECTORY FRAME SHALL BE PROVIDED INSIDE EACH PANEL DOOR AND SHALL BE OF SUFFICIENT SIZE TO GIVE A COMPLETE DESCRIPTION OF EACH CIRCUIT. TYPED DIRECTORY CARDS SHALL BE PROVIDED LISTING EACH CIRCUIT SERVED.

- 11. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED TO INDICATE MAXIMUM AVAILABLE FAULT CURRENT (INCLUDING DATE CALCULATION WAS PERFORMED) IN ACCORDANCE WITH NEC 110.24.
- 12. THE BRANCH CIRCUIT NUMBERS USED ON THE DRAWINGS SHALL BE APPLIED FOR THE CONSTRUCTION. HOWEVER. AT THE COMPLETION OF THE WORK. CIRCUIT NUMBER ADJUSTMENTS SHALL BE MADE AS REQUIRED TO PROVIDE BALANCED PHASE LOADING ON EACH PANEL.
- 13. SPARE CIRCUIT BREAKERS SHALL BE IDENTIFIED AS SUCH ON THE PANEL DIRECTORY CARDS AND SHALL BE LEFT IN THE "OFF" POSITION.

#### LIGHTING

- 1. LIGHTING FIXTURES SHALL BE PROVIDED AS SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE ON THE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER MOUNTING ACCESSORIES. CONTRACTOR SHALL REFER TO THIS SPECIFICATION FOR LAMP, AND DRIVER REQUIREMENTS. SUBMITTALS SHALL INCLUDE PRODUCT INFORMATION FOR FIXTURES, LAMPS, AND DRIVERS.
- 2. NON-DIMMING LED DRIVERS SHALL MEET THE FOLLOWING REQUIREMENTS: 85% MINIMUM EFFICIENCY, -40°C STARTING TEMPERATURE, > 0.90 POWER FACTOR, <20% TOTAL HARMONIC DISTORTION AND CLASS A SOUND RATING. SYSTEM MUST SURVIVE 250 REPETITIVE STRIKES ON "C LOW" WAVEFORMS AT 1 MINUTE INTERVALS WITH LESS THAN 10% DEGRADATION IN CLAMPING VOLTAGE. POWER SUPPLIES CAN BE UL CLASS I OR II OUTPUT. DIMMING DRIVERS SHALL BE SIMILAR TO NON-DIMMING DRIVERS WITH THE FOLLOFING REQUIREMENTS: 0-10V DIMMING DRIVERS SHALL DIM TO A MINIMUM OF 10% AND SHALL BE TYPE AS RECOMMENDED BY MANUFACTURER UNLESS OTHER NOTED IN THE CONTRACT AND BE COMPATIBLE WITH DIMMER CONTROL SPECIFIED. PROVIDE LOW TEMPERATURE DRIVERS FOR LED FIXTURES IN EXTERIOR APPLICATIONS OR IN UNHEATED AREAS.
- 3. LEDs SHALL BE MANUFACTURED BY NICHIA, SAMSUNG, CREE, PHILIPS, OR OSRAM. ALL OTHER LAMPS SHALL BE MANUFACTURED BY GENERAL ELECTRIC, SYLVANIA, OR PHILIPS.
- 4. ALL LEDS MUST BE BATCH SORTED FOR COLOR, BRIGHTNESS AND VISUAL CONSISTENCY. ALL FIXTURES SHALL BE SUPPLIED AT SAME TIME AND SHALL COME FROM SAME BATCH. SPARE LEDS SHALL BE PROVIDED FROM SAME BATCH. LED COMPONENTS SHALL BE MERCURY AND LEAD-FREE.
- 5. THERMAL MANAGEMENT SHALL BE PASSIVE BY DESIGN. THE USE OF FANS OR OTHER MECHANICAL DEVICES SHALL NOT BE ALLOWED. FIXTURE MANUFACTURER SHALL ADHERE TO DEVICE MANUFACTURER GUIDELINES, CERTIFICATION PROGRAMS, AND TEST PROCEDURES FOR THERMAL MANAGEMENT. FIXTURES SHALL HAVE MINIMUM HEAT SINK SURFACE SUCH THAT LED MANUFACTURER'S MAXIMUM JUNCTION TEMPERATURE IS NOT EXCEEDED AT MAXIMUM RATED AMBIENT TEMPERATURE.
- 6. SURFACE MOUNTED FIXTURES MOUNTED ON CEILINGS OTHER THAN ACCESSIBLE LAY-IN CEILING SYSTEMS, OR TO THE BUILDING STRUCTURE, SHALL BE SECURELY SUPPORTED IN A MANNER APPROVED BY THE ARCHITECT.
- 7. FOR RECESSED FIXTURES IN ACCESSIBLE LAY-IN CEILING SYSTEMS, THE GRID SYSTEM TEES SHALL BE SUPPORTED AT EACH CORNER OF EACH FIXTURE WITH A SUSPENDED CEILING SUPPORT WIRE UP TO A BUILDING STRUCTURAL MEMBER, OR UP TO THE STRUCTURAL DECK. EACH FIXTURE SHALL ALSO BE SECURELY FASTENED TO THE GRID SYSTEM TEES BY MECHANICAL MEANS, SUCH AS BOLTS, SCREWS, RIVETS OR BY CLIPS IDENTIFIED FOR USE WITH THE CEILING TYPE.
- 8. ALL LIGHTING FIXTURES (INCLUDING "NORMALLY-OFF" EMERGENCY FIXTURES) THAT ARE CAPABLE OF BEING AIMED SHALL BE AIMED BY THE CONTRACTOR FOR THE OPTIMUM COVERAGE OF THEIR TASK, TO THE SATISFACTION OF, AND UNDER THE DIRECTION OF THE ARCHITECT.
- 9. LIGHTING FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 410. LOW VOLTAGE LIGHTING FIXTURES AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 411.

#### COMMUNICATIONS

- 1. NEW TELECOMMUNICATIONS BACKBOARDS SHALL BE 4' WIDE X 8' HIGH X 34" THICK AC PLYWOOD, PAINTED WITH (2) COATS OF FIRE RETARDANT WHITE PAINT ON BOTH SIDES PRIOR TO INSTALLATION. BACKBOARDS SHALL BE MOUNTED 6 INCHES ABOVE THE FINISHED FLOOR. THE RECEPTACLES SHOWN ON THE BACKBOARDS SHALL BE MOUNTED AT 18 INCHES ABOVE THE FINISHED FLOOR AND SHALL BE INSTALLED IN SURFACE MOUNTED, SINGLE GANG OUTLET BOXES WITH STAMPED, SHEET METAL COVER PLATES. VERIFY EXACT REQUIREMENTS WITH THE OWNER'S TECHNOLOGY SYSTEM SUPPLIER PRIOR TO INSTALLATION.
- 2. COMBINATION VOICE/DATA OUTLET BOXES SHALL BE 4 INCHES SQUARE WITH SINGLE GANG PLASTER RINGS. VOICE-ONLY, DATA-ONLY, FAX AND PAY TELEPHONE OUTLETS SHALL BE SIMILAR. BLANK COVERPLATES SHALL BE PROVIDED FOR ALL UNUSED OUTLETS. VERIFY EXACT REQUIREMENTS WITH THE OWNER'S TECHNOLOGY SYSTEM SUPPLIER PRIOR TO INSTALLATION.
- 3. ALL CONDUITS REQUIRED FOR COMBINATION VOICE/DATA OUTLETS AS SHOWN ON THE DRAWINGS SHALL BE INSTALLED COMPLETE WITH PULLWIRES. CONDUITS SHALL BE 1" MINIMUM.
- 4. PROVIDE CONDUIT FROM EACH OUTLET UP TO THE NEAREST ACCESSIBLE CORRIDOR OR OPEN AREA CEILING SPACE AND PROVIDE AN INSULATED BUSHING AT EACH STUB.
- ALL PHOTOELECTRIC SMOKE DETECTORS SHALL HAVE A PHOTOELECTRIC SENSOR. OPERATING TEMPERATURE RANGE SHALL BE BETWEEN 40° AND 100°F(4°-38°C) AND RELATIVE HUMIDITY SHALL RANGE BETWEEN 10%-93%. THE TEST SWITCH SHALL ELECTRONICALLY ACTIVATE THE CHAMBER TO SIMULATE SMOKE AND CHECK FOR PROPER OPERATION. THE ELECTRIC HORN SHALL HAVE A LEVEL OF 85 DECIBELS AT 10 FEET AND ALL UNITS HAVE A SEPARATE MOUNTING BRACKET. SMOKE DETECTORS SHALL MEET THE REQUIREMENTS OF U.L. 217.
  - SMOKE DETECTORS SHALL BE 1-3/8" HIGH AND 5" WIDE, POWERED BY A 120V AC, 60HZ SOURCE WITH A 9 VOLT BATTERY BACK-UP. NOMINAL SENSITIVITY SHALL BE MEASURED BY U.L. AT OBS 2.3±.95%/FT. A GREEN CONTINUOUS POWER ON INDICATOR SHALL BE A BUILT-IN LIGHT EMITTING DIODE (LED) IN THE STANDBY CONDITION; A SECOND RED BLINKING LED SHALL INDICATE THAT A SUFFICIENT 9-VOLT BATTERY BACK-UP IS PRESENT; WHEN ACTIVATED, THE INITIATING ALARM RED LED SHALL FLASH WHILE THE INTERCONNECTED ALARMS REMAIN EXTINGUISHED. A 70 DAY LOW BATTERY SIGNAL SHALL BE INCLUDED.
  - LISTED SINGLE- AND MULTIPLE-STATION SMOKE ALARMS COMPLYING WITH UL217 SHALL BE INSTALLED IN ACCORDANCE WITH OBC 907.2.11.1 THROUGH 907.2.11.6 AND NFPA 72. FIREX MODEL 4480 OR APPROVED EQUAL.

8. CO DETECTORS AND CO DETECTION SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH OFC 915.

