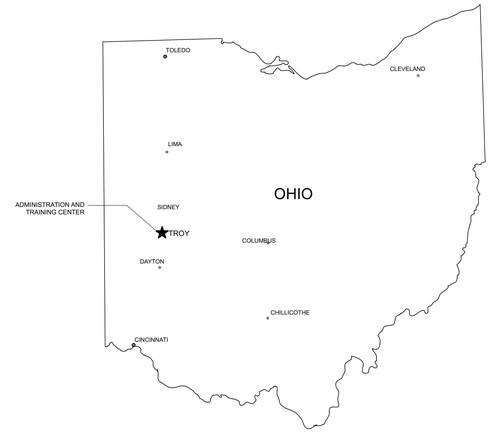
ADMINISTRATION AND TRAINING CENTER

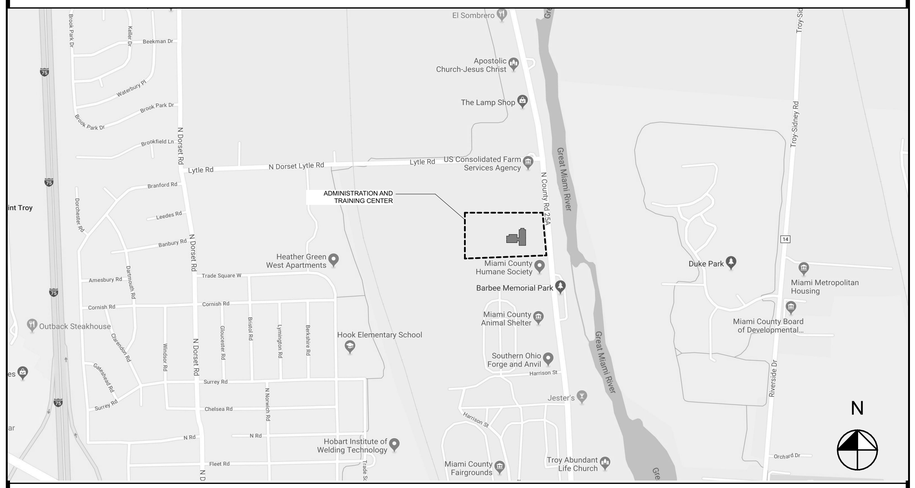
FOR

TRI COUNTY BOARD OF RECOVERY AND MENTAL HEALTH SERVICES

1280 N COUNTY RD. 25A TROY, OHIO 45373



STATE MAP



CONSULTANTS

NAUMAN & ZELINKSI LLC
MECHANICAL/ELECTRICAL ENGINEERS

CHOICE ONE ENGINEERING
CIVIL ENGINEERING

JEZERINAC GEERS & ASSOCIATES INC.
STRUCTURAL ENGINEERING

BCL IT CONSULTING
TECHNOLOGY AND DATA

JACCYN DESIGN GROUP
LANDSCAPE/SITE DESIGN

FOR REBID: 05/12/2021

STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

SHEET INDEX

FREYTAG & ASSOCIATES INC.
ARCHITECTS ENGINEERS

226 N. MIAMI AVE.
P.O. BOX 220
SIDNEY, OHIO 45365

(937) 492-6983
www.freytaginc.com
info@freytaginc.com

COMM. NUMBER	DATE
1615.04	05/12/2021
DRAWN BY	CHECKED BY
AF	DF

COVER

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON NAVD 88 (ODOT VRS GEOID 18).

GENERAL NOTES AND DETAILS

ALL CONSTRUCTION METHODS, MATERIALS, AND SPECIFICATIONS SHALL COMPLY WITH THE LATEST VERSION OF THE **MIAMI COUNTY** STANDARDS AND SPECIFICATIONS AND/OR THE LATEST VERSION OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARDS AND SPECIFICATIONS (INCLUDING CURRENT SUPPLEMENTAL SPECIFICATIONS 800 AND 832), WHICHEVER IS MORE RESTRICTIVE AS DETERMINED BY THE **MIAMI COUNTY.**

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION ACCORDING TO THE BEST AVAILABLE DATA. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING THEM IN THE FIELD PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THEM. CONTRACTOR TO CONTACT OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) 48 HOURS PRIOR TO CONSTRUCTION.

NON-MEMBERS MUST BE CALLED DIRECTLY.

UTILITY OWNERSHIP

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

STREETS & STORM WATER
MIAMI COUNTY ENGINEERING DEPARMENT
2100 N. COUNTY ROAD 25A
TROY, OHIO 45373
(937) 440-5656

SANITARY & WATER
MIAMI COUNTY SANITARY
ENG. DEPARMENT
2200 N. COUNTY ROAD 25A
TROY, OHIO 45373
(937) 440-5653

GAS
VECTREN CORPORATION
2345 E. MAIN STREET
DANVILLE, IN 46122
(317) 718-3639
ATTN: PUBLIC PROJECT COORDINATOR

TELEPHONE
FRONTIER COMMUNICATIONS
6464 WESTBROOK ROAD
CLAYTON, OHIO 45315
(937) 833-0468
ATTN: CHARLES BERNACCHI

CABLE
SPECTRUM
3691 TURNER ROAD
DAYTON, OHIO 45415
(937) 396-8386
ATTN: MICHAEL BURNS

ELECTRIC
DP&L
1900 DRYDEN ROAD
DAYTON, OHIO 45439
(937) 331-4521
ATTN: WILLIAM GOURLEY

OHIO UTILITIES PROTECTION SERVICE (OUPS)
CONTACT 48 HOURS
"CALL BEFORE YOU DIG" 1-800-362-2764

UTILITY INTERFERENCE

IF, DURING THE CONSTRUCTION, INTERFERENCE ARISES WITH EXISTING UTILITIES IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY AND COORDINATE AS NEEDED WITH THE UTILITY COMPANY INVOLVED. ANY AND ALL WORK REQUIRED FOR PRIVATE UTILITIES SHALL BE COORDINATED WITH AND, IF REQUIRED, DONE BY THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS. THE CONTRACTOR SHALL NOTIFY, AT LEAST 7 DAYS BEFORE BREAKING GROUND, ALL PUBLIC SERVICE CORPORATIONS HAVING WIRES, POLES, PIPES, CONDUITS, MANHOLES, OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS.

EXISTING TILE HOOKUPS

THE DRAINAGE TILE CURRENTLY CONNECTED TO THE EXISTING STORM SEWER SHALL BE CONNECTED TO THE PROPOSED STORM SEWER. ANY DRAINAGE TILE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. ALL TILE REMOVED, REPLACED AND/OR CONNECTED TO THE STORM SEWER SHALL BE NOTED ON THE RECORD DRAWINGS AND SHALL BE INSPECTED BY THE **MIAMI COUNTY** BEFORE THEY ARE COVERED.

ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS OR PLUGGED AS APPROVED AND DIRECTED BY THE **MIAMI COUNTY.** CONNECTION OF INTERSECTING DRAIN TILES AND THE PROPOSED STORM SEWER SHALL BE THROUGH MANUFACTURED TEES, UNLESS OTHERWISE APPROVED BY THE **MIAMI COUNTY**. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTORS OVERALL LUMP SUM BID FOR THE PROJECT.

MUD

THE TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON PUBLIC STREETS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR.

EXISTING UTILITY CONFLICT NOTE

IF A CONFLICT ARISES WITH EXISTING UTILITIES, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY TO GET THE CONFLICT RESOLVED.

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. CHOICE ONE ENGINEERING CORPORATION MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN-SERVICE OR ABANDONED. CHOICE ONE ENGINEERING CORPORATION FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. CHOICE ONE ENGINEERING CORPORATION HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

CAD FILE DISCLAIMER

THE CAD FILE ASSOCIATED WITH THESE CONSTRUCTION PLANS IS A NON-CERTIFIED DOCUMENT. ANY USE OF THE INFORMATION OBTAINED OR DERIVED FROM THE ASSOCIATED CAD FILE WILL BE AT THE RECEIVING PARTY/USER'S RISK. CHOICE ONE ENGINEERING CORP. OFFERS NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION IN THE CAD FILE OR THAT REVISIONS HAVE BEEN ISSUED AFTER THE CAD DRAWING WAS RELEASED. RECEIVING PARTIES/USERS SHALL HOLD HARMLESS TO THE MAXIMUM EXTENT ALLOWED BY LAW CHOICE ONE ENGINEERING CORP. FROM ANY USE OF THE CAD FILE BY THE RECEIVING PARTY/USER. IN ALL CIRCUMSTANCES, AND AT ALL TIMES, THE PUBLISHED PAPER AND/OR PDF DRAWINGS FOR THE PROJECT SHALL SUPERSEDE THE CAD FILES. IN THE CASE OF AN INCONSISTENCY BETWEEN THE PUBLISHED PAPER/PDF DRAWINGS AND THE ASSOCIATED CAD FILE, THE PUBLISHED PAPER/PDF DRAWINGS SHALL GOVERN THE PROJECT AND ALL WORK.

SAFETY

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

MASONRY COLLAR

A CONCRETE COLLAR SHALL BE PROVIDED WHERE PROPOSED STORM SEWER PIPE IS CONNECTED TO AN EXISTING PIPE. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTORS OVERALL LUMP SUM BID FOR THE PROJECT.

DEWATERING

ANY NECESSARY DEWATERING OR PUMPING NECESSARY FOR THE CONSTRUCTION OF ANY ITEMS SHALL BE INCIDENTAL TO THOSE PARTICULAR CONSTRUCTION ITEMS AND SHALL BE INCLUDED IN THE CONTRACTORS OVERALL LUMP SUM BID FOR THE PROJECT.

CLEAN WATER NOTE

ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED

STORM SEWER INSTALLATION

THIS WORK CONSISTS OF CONSTRUCTING STORM SEWER. THE CONTRACTOR SHALL PROVIDE ALL TOOLS AND EQUIPMENT REQUIRED FOR INSTALLING THESE ITEMS. THE WORK ALSO INCLUDES FURNISHING ALL MATERIALS, EXCAVATING, BEDDING, LAYING PIPE, JOINTING, BACKFILLING, REMOVAL AND RESTORATION OF DISTURBED FACILITIES AND SURFACES, CURB REPAIR, SIDEWALK REPAIR, PAVEMENT REPAIR (i.e. PAVEMENT IN STREETS, ALLEYS AND DRIVEWAYS), DISPOSAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIALS, AND OTHER WORK NECESSARY TO COMPLETE THE ITEMS. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD LOCATE ALL EXISTING STORM SEWER, AND OTHER UTILITIES, PRIOR TO INSTALLING THE PROPOSED STORM SEWER SYSTEM. THE EXISTING STORM SEWER AND LATERALS SHOWN ON THE PLANS ARE IN THE APPROXIMATE LOCATION AND IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD LOCATE PROPOSED TIE-INS TO THE EXISTING STORM PRIOR TO ANY STORM SEWER CONSTRUCTION. ALL TIE-INS SHALL BE THROUGH PREMANUFACTURED TEES OR HOLES INSTALLED USING A CORING MACHINE. PIPE MAY BE ANY OF THE PIPE TYPES LISTED BELOW UNLESS OTHERWISE SPECIFIED ON THE PLANS.

TYPES OF PIPE PERMITTED	ODOT MATERIALS NUMBERS
CORRUGATED POLYETHYLENE SMOOTH-LINED PIPE (CPSLP)	707.33
POLYPROPYLENE CORRUGATED DOUBLE WALL PIPE (PCDWP)	707.65
POLYVINYL CHLORIDE SOLID WALL PIPE (SDR-35)	707.45
REINFORCED CONCRETE PIPE	706.02

GENERAL NOTES

1. INSTALL AND TEST ALL UTILITIES PER THE LATEST VERSION OF THE **MIAMI COUNTY** STANDARDS.

2. CONTRACTOR TO BE RESPONSIBLE FOR ANY PERMITS OR FEES THAT MAY BE NECESSARY FOR THE COMPLETION OF THE SITE WORK.

3. ALL WORK SHALL CONFORM WITH ALL FEDERAL, STATE, AND LOCAL ADA REGULATIONS AND STANDARDS.

UTILITIES

CONTRACTOR SHALL INSTALL AND/OR COORDINATE THE INSTALLATION OF GAS, ELECTRIC, TELEPHONE, CABLE TELEVISION, FIBER OPTIC, ETC.. CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES PRIOR TO INSTALLATION OF ANY FACILITIES. ALL UTILITIES SHALL BE INSTALLED PER EACH PARTICULAR UTILITY COMPANY'S STANDARDS AND PROCEDURES. CONTRACTOR TO VERIFY ACTUAL SIZES, LOCATIONS (POINTS OF ENTRY INTO THE BUILDING) AND INVERTS OF ALL UTILITIES TYING INTO THE BUILDING WITH ALL ARCHITECT PLANS (BUILDING, PLUMBING, ELECTRICAL, ETC.) BEFORE CONSTRUCTION

STORM AND SANITARY CONDUITS /STRUCTURES AND RELATED WORK

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 611, PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES, EXCEPT AS HEREIN MODIFIED.

THE INSTALLATION OF ALL STORM SEWER, SANITARY SEWER, AND ALL CORRESPONDING STRUCTURES SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR AS NOTED ON THE PLANS. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN A HIGH STANDARD OF WORK. CONTRACTOR IS RESPONSIBLE TO ENSURE ALL WORK IS PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR AS NOTED ON THE PLANS. CONTRACTOR SHALL ALSO ENSURE THAT ALL ITEMS ARE FULLY AND PROPERLY FUNCTIONAL, AND TO A QUALITY ACCEPTABLE TO THE OWNER.

ALL PIPE CULVERTS, CONDUITS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES (CATCH BASINS, YARD DRAINS, MANHOLES, ETC.) SHALL MEET THE MATERIAL REQUIREMENTS OF THIS ITEM. THE FOLLOWING ITEMS WILL NOT BE REQUIRED UNLESS OTHERWISE NOTED: 1) INSTALLATION PLAN, 2) CONSTRUCTION INSPECTION FORMS, 3) PERFORMANCE INSPECTIONS AND REPORTS, 4) CONDUIT AND DRAINAGE STRUCTURE EVALUATIONS.

THE CONTRACTOR SHALL ENSURE THE CONDUIT BEDDING AND BACKFILL COMPACTION DENSITY MEETS ASTM D698 (98% STANDARD PROCTOR). TESTING MAY BE REQUIRED IF DEEMED NECESSARY BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

MAINTAINING TRAFFIC

MAINTAIN TRAFFIC AS INDICATED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", ALSO THE FOLLOWING REQUIREMENTS SHALL APPLY.

EXCAVATIONS WITHIN PUBLIC RIGHT-OF-WAY LIMITS SHALL BE CLOSED AT TIMES WHEN WORK IS NOT BEING PERFORMED.

LOCAL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING THE TIME THAT AN APPROVED CLOSURE AND DETOUR IS ALLOWED BY THE GOVERNING AUTHORITY.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING NECESSARY TRAFFIC CONTROL DEVICES AND PAVEMENT REPAIR MATERIALS TO MAINTAIN THE TRAVELED PAVEMENT SAFELY.

NO SHUT DOWN OF ANY OWNER FACILITY DRIVE, ROADWAY OR PARKING LOT WILL BE ALLOWED WITHOUT WRITTEN CONSENT FROM THE OWNER. ALL OWNER ROADWAYS MUST HAVE AT LEAST ONE LANE OPEN AT ALL TIMES. NO STAGING OF TRUCKS OUTSIDE OF CONSTRUCTION LIMITS WILL BE PERMITTED WITHOUT CONSENT FROM THE OWNER.

SUBCONTRACTOR SUPERVISION

THE CONTRACTOR IS REQUIRED TO HAVE SOMEONE ON-SITE TO SUPERVISE THE SUBCONTRACTOR FOR QUALITY CONTROL PURPOSES AND TO PROVIDE ANY NECESSARY ASSISTANCE TO THE SUBCONTRACTOR TO ENSURE QUALITY WORK. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTORS OVERALL LUMP SUM BID FOR THE PROJECT.

GRAFFITI AND VANDALISM

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF ANY CONCRETE WORK OR OTHER ITEMS UNDER THIS CONTRACT WHICH IS DEEMED UNACCEPTABLE BY THE OWNER DUE TO GRAFFITI OR VANDALISM DAMAGE.

DOWNSPOUTS

THE CONTRACTOR SHALL CONNECT ANY DOWNSPOUTS AS SHOWN ON THE SITE PLAN OR TO THE CLOSEST STORM PIPING OR CATCH BASINS USING CPSLP OR PVC SDR-35 SEWER OR APPROVED EQUAL.

REVIEW OF DRAINAGE FACILITIES

BEFORE FINAL ACCEPTANCE BY THE OWNER, REPRESENTATIVES OF THE OWNER, AND THE CONTRACTOR, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. ALL EXISTING SEWERS INSPECTED BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO PRE-EXISTING CONDITION OF THE SEWER. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE **MIAMI COUNTY** AND/OR OWNER.

ALL NEW CONDUITS, UNDERDRAINS (INCLUDING THE STONE BACKFILL ABOVE THE UNDERDRAIN PIPING), INLETS, CATCH BASINS, MANHOLES, SWALES/DITCHES, AND DETENTION/RETENTION BASINS CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER (INCLUDING SEDIMENT) AND IN A CLEAN CONDITION AND FULLY AND PROPERLY FUNCTIONAL BEFORE THE PROJECT WILL BE ACCEPTED BY THE OWNER.

MODIFICATIONS

ANY MODIFICATIONS TO THE SPECIFICATIONS OR CHANGES TO THE WORK AS SHOWN ON THE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE OWNER.

RESTORATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY DISTURBED AND/OR DAMAGED AREAS, INCLUDING PAVEMENT, TO CONDITIONS EQUAL TO OR BETTER THAN CONDITIONS PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF THE OWNER.

MISCELLANEOUS

THE INTENT OF THESE DRAWINGS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. PERFORMANCE BY THE CONTRACTOR SHALL BE REQUIRED TO THE EXTENT CONSISTENT WITH THE CONTRACT DOCUMENTS AND REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INTENDED RESULTS.

IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE OWNER'S REPRESENTATIVE'S INTERPRETATION.

CONTRACTORS SHALL VERIFY ALL GRADES, ELEVATIONS, AND EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

GENERAL NOTES FOR CIVIL WORK

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND IS TO INCLUDE SUCH COSTS.

2. THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE APPROPRIATE UNDERGROUND UTILITY MARKING SERVICE PRIOR TO THE START OF ANY CONSTRUCTION IN ORDER TO AVOID CONFLICTS WITH EXISTING UTILITIES. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR IS TO NOTIFY THE OWNER PRIOR TO THE START OF ANY WORK THAT WOULD BE IN CONFLICT WITH THE UTILITIES.

3. THE CONTRACTOR IS TO VISIT AND INVESTIGATE THE PROJECT SITE, PRIOR TO BIDDING, IN ORDER TO DETERMINE THE EXISTING GROUND AND SITE CONDITIONS. FOR SOIL TYPE AND GROUND WATER TABLE, THE CONTRACTOR IS ENCOURAGED TO UTILIZE ANY AVAILABLE DATA TO ESTIMATE GROUND CONDITIONS. SHOULD THE BIDDING CONTRACTOR REQUIRE ADDITIONAL TEST HOLES PRIOR TO BIDDING IN ORDER TO DETERMINE OR VALIDATE GROUND CONDITIONS, THIS CAN BE COMPLETED AT THE DISCRETION OF THE OWNER. NO TEST HOLES ARE TO BE DUG WITHOUT CONTACTING THE OWNER'S REPRESENTATIVE PRIOR TO EXCAVATION AND WITHOUT RECEIVING WRITTEN APPROVAL FROM THE OWNER'S REPRESENTATIVE TO DO SO.

4. THE CONTRACTOR SHALL COMPLY WITH ALL RULES AND REGULATIONS WITH REGARD TO EXCAVATION, SAFETY, QUALITY AND WORK PROGRESS. IT IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH THESE THROUGHOUT CONSTRUCTION OPERATIONS.

5. THE LOCATION OF MATERIALS STORED ON SITE MUST RECEIVE THE APPROVAL OF THE OWNER. IN GENERAL, MATERIALS SHOULD BE STORED SO AS TO MINIMIZE THE INCONVENIENCE TO THE OWNER.

6. IF EXCAVATED MATERIALS ARE FOUND TO BE CONTAMINATED, REMEDIATION WILL BE AT THE OWNER'S EXPENSE PRIOR TO REMOVAL FROM THE SITE OR DISPOSAL ON-SITE BY THE CONTRACTOR. THIS PROCESS WILL BE COORDINATED BETWEEN THE OWNER AND CONTRACTOR.

7. TRENCH EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH THE BID SPECIFICATIONS AND IN ACCORDANCE WITH ALL APPLICABLE OSHA RULES AND REGULATIONS. IN ADDITION, THE OWNER MAY HAVE ADDITIONAL REQUIREMENTS FOR EXCAVATION AND TRENCHING ON OWNER PROPERTY THAT MAY BE MORE STRINGENT THAN CURRENT LOCAL OR OSHA REQUIREMENTS. IN THIS CASE, THE OWNERS REQUIREMENTS ARE TO BE FOLLOWED UNLESS THIS ACTION WOULD BE CONSIDERED NON-COMPLIANT WITH CURRENT GOVERNING CODES OR REGULATIONS AS DEFINED BY LOCAL OR GOVERNING AUTHORITIES. WHERE A NON-COMPLIANCE ISSUE IS NOTED, THE CONTRACTOR IS TO MAKE THE OWNER AND ENGINEER AWARE OF THE GOVERNING CODE.

8. THE CONTRACTOR WILL BE RESPONSIBLE TO REPAIR, REPLACE, AND/OR RECONNECT ANY EXISTING DRAINAGE TILES, NOT SHOWN ON THE PLANS, WHICH CROSS THROUGH THE EXCAVATED TRENCH. ANY DRAINAGE TILES ENCOUNTERED ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER AND A MEASUREMENT TAKEN FROM THE NEAREST MANHOLE OR INLET STRUCTURE TO THE CENTERLINE OF THE TILE. THIS INFORMATION SHALL BE PROVIDED TO THE OWNER AS PART OF THE RECORD DRAWINGS.

9. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRS TO ANY UTILITY LINE(S) THAT THE CONTRACTOR DAMAGES UNLESS OTHERWISE CLEARLY THE RESPONSIBILITY OF THE UTILITY COMPANY.

10. THE CONTRACTOR WILL REPLACE ALL DAMAGED OR REMOVED DRIVES AND PAVEMENT WITH THE REQUIRED THICKNESS SHOWN ON THE PLANS OR MATCH EXISTING IF GREATER.

11. ALL DISTURBED LAWN AREAS SHALL BE GRADED TO DRAIN TO THE NEAREST INLET STRUCTURE.

12. CONTRACTOR SHALL USE PROPER EROSION CONTROL TECHNIQUES TO MAINTAIN GRADE PRIOR TO SEEDING.

13. SEE THE PROJECT MANUAL SECTION 329200 TURF AND GRASSES FOR SEEDING.

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LOVELAND, OHIO 513.239.8554
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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY
AND MENTAL HEALTH
1280 N COUNTY RD. 25A TROY, OHIO 45373

STATE OF OHIO
ANDREW T. SHUMAN
71386
REGISTERED
PROFESSIONAL ENGINEER

REVISIONS:
FOR REBID

COMM. NUMBER	DATE
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SITE NOTES

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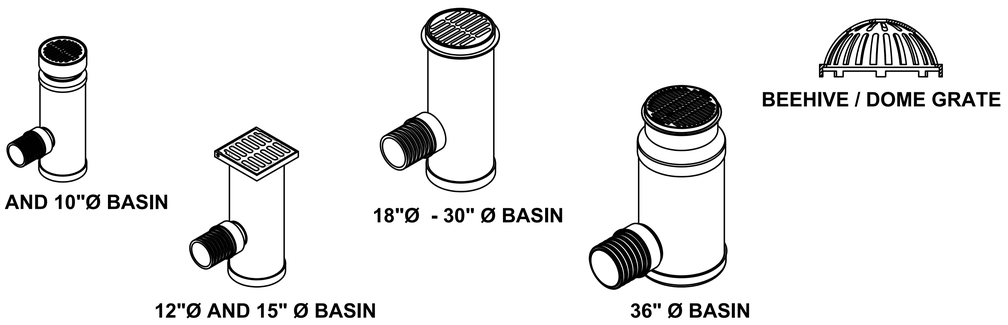


NOTES

A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE.

B. THE MINIMAL BASIN DIAMETER SHOULD BE AS STATED AND CALLED FOR IN THE PLANS. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE BASIN MANUFACTURER, NYLOPLAST, TO DETERMINE IF A LARGER DIAMETER BASIN THAN THAT WHICH IS STATED IS NEEDED BASED ON THE PIPE CONFIGURATION AND TO SUPPLY THE LARGER DIAMETER IF NEEDED. CONTRACTOR TO INSTALL PER MANUFACTURERS RECOMMENDATIONS.

C. THE FRAME AND GRATE SHALL BE THE STANDARD OPTION DUCTILE IRON PER ASTM A536 GRADE 70–50–05. (NYLOPLAST – 8" #0899CGS)

D. THE BASINS SHALL BE MANUFACTURED FROM PVC PIPE STOCK (RAW MATERIAL PER ASTM D1784 CELL CLASS 12454), UTILIZING A THERMOFORMING PROCESS TO REFORM THE PIPE STOCK TO SPECIFIED CONFIGURATION. A WATERTIGHT CONNECTION SHALL CONFORM TO ASTM D3212. FLEXIBLE ELASTOMERIC SEALS SHALL CONFORM TO ASTM F477. PER ASTM D1784 CELL CLASS 12454. (NYLOPLAST – 8" #2808AG)

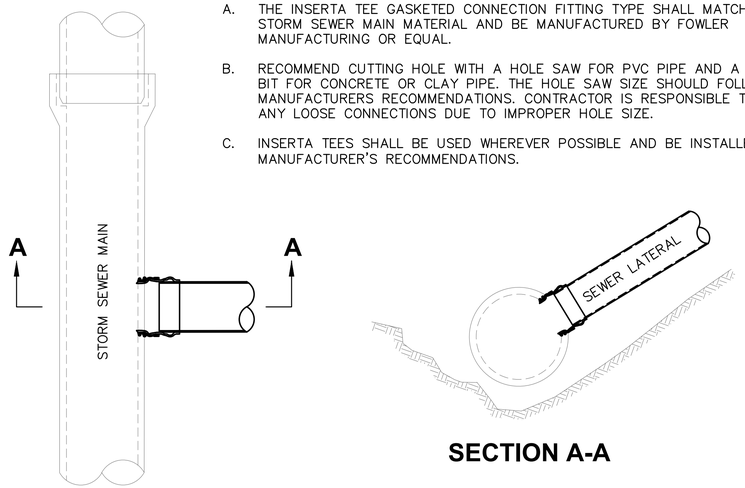
E. THE BASIN ADAPTOR CONNECTIONS HAVE THE CAPABILITY TO CONNECT INTO VARIOUS TYPES (HDPE, PVC SDR–35, PVC SCG–40, PVC C900, CORRUGATED/RIBBED PVC.

F. ALL YARD DRAINS THAT ARE INSTALLED WITHIN PLANTING BEDS AND/OR MULCH BEDS SHALL HAVE A BEEHIVE/DOME GRATE WITH A STONE COLLAR SURROUNDING THEM TO PREVENT MULCH FROM WASHING INTO THE BASIN. STONE COLLAR TO BE 6" WIDE BY 6" THICK AROUND THE ENTIRE PERIMETER OF THE BASIN AND CONSIST OF 1" TO 2" ROUND RIVER ROCK. CONTRACTOR SHALL FASTEN/BOLT DOWN GRATE TO BASIN TO ENSURE GRATE IS SECURELY FASTENED IN PLACE.

G. IF GRATES ARE LOCATED WITHIN PAVED OR WALKING AREAS, GRATES MUST BE SAFE FOR PEDESTRIAN TRAFFIC PER ADA REQUIREMENTS, BE LOCKING, BE DUCTILE IRON, AND MEET H–10 LOADING.

YARD DRAIN

NTS



NOTES

A. THE INSERTA TEE GASKETED CONNECTION FITTING TYPE SHALL MATCH THE STORM SEWER MAIN MATERIAL AND BE MANUFACTURED BY FOWLER MANUFACTURING OR EQUAL.

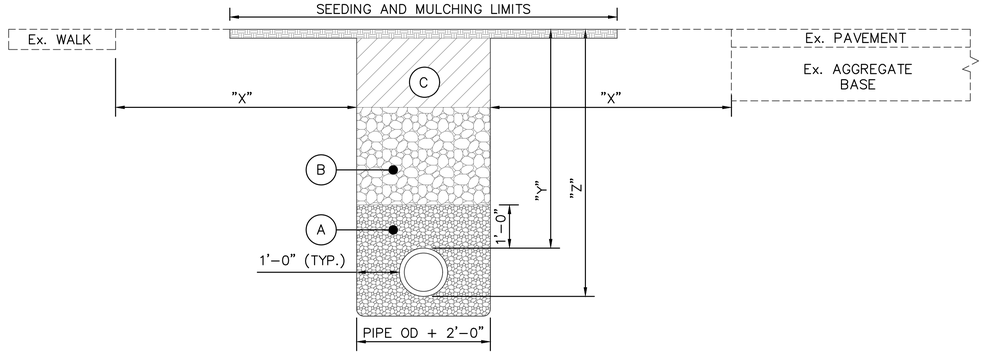
B. RECOMMEND CUTTING HOLE WITH A HOLE SAW FOR PVC PIPE AND A DIAMOND BIT FOR CONCRETE OR CLAY PIPE. THE HOLE SAW SIZE SHOULD FOLLOW THE MANUFACTURERS RECOMMENDATIONS. CONTRACTOR IS RESPONSIBLE TO FIX ANY LOOSE CONNECTIONS DUE TO IMPROPER HOLE SIZE.

C. INSERTA TEES SHALL BE USED WHEREVER POSSIBLE AND BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

SECTION A-A

INSERTA TEE (LATERAL TO MAIN) CONNECTION

NTS



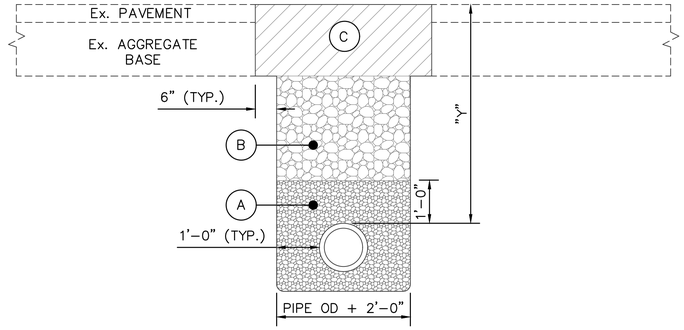
TRENCH DETAIL (OUTSIDE PAVEMENT AREAS)

NTS

"X"= DISTANCE FROM EDGE OF TRENCH TO EDGE OF CLOSEST PROPOSED OR EXISTING PAVEMENT, CURB, DRIVEWAYS, ALLEYS, STONE AREA OR WALKS.

"Z"= DISTANCE FROM TOP OF BEDDING TO FINISH SURFACE.

"Y"= DEPTH OF COVER FOR PROPOSED CONDUIT
WATER MAINS.....4'–6" MIN. (REFER TO PROFILE)
STORM SEWERS.....2'–0" MIN. (REFER TO PROFILE)
SANITARY SEWERS.....4'–0" MIN. (REFER TO PROFILE)



TRENCH DETAIL (IN PAVEMENT AREAS)

NTS

NOTES

A. BEDDING SHALL BE PER ODOT 703.11 "STRUCTURAL BACKFILL FOR 611 BEDDING AND BACKFILL" TYPE 3 (#57 OR #67 AGGREGATE), OR OTHER APPROVED EQUIVALENT BY THE **MUNICIPALITY**. THE FOLLOWING BEDDING MATERIAL SHALL BE USED PER PROPOSED CONDUIT:

- WATER MAIN, WATER SERVICES, FIRE HYDRANTS AND APPURTENANCES – SHALL BE NATURAL CRUSHED STONE OR NATURAL GRAVEL.
- STORM AND SANITARY SEWERS – SHALL BE CRUSHED LIMESTONE OR NATURAL CRUSHED STONE.

B. STRUCTURAL BACKFILL – DENSITY TEST TO 95% OF ASTM D698 STANDARD PROCTOR CURVE MAY BE REQUIRED BY **MUNICIPALITY** TO BE COMPLETED BY A CERTIFIED COMMERCIAL TESTING LABORATORY.

FOR "OUTSIDE PAVEMENT AREAS":
ALL TRENCHES WHERE "X" IS GREATER THAN "Z", THE BACKFILL MATERIAL SHALL BE COMPACTED NATIVE MATERIAL IN 12" MAXIMUM LIFTS OR AS APPROVED BY THE **MUNICIPALITY**. NO MATERIAL SHALL BE USED FOR BACKFILLING THAT CONTAINS STONE, ROCKS, ETC., GREATER THAN 3" DIAMETER.

ALL TRENCHES WHERE "Z" IS GREATER THAN "X", THE BACKFILL MATERIAL SHALL BE ODOT ITEM 703.11, TYPE 1 (#304 AGGREGATE). THE AGGREGATE SHALL BE COMPACTED IN 12" MAXIMUM LIFTS AND BE USED UNTIL THE BACKFILL HEIGHT RESULTS IN "X" BEING GREATER THAN "Z" AT WHICH TIME NATIVE BACKFILL CAN BE USED.

FOR "IN PAVEMENT AREAS":
ALL TRENCHES SHALL HAVE ODOT ITEM 703.11, TYPE 1 (#304 AGGREGATE) BACKFILL PLACED FROM THE TOP OF THE BEDDING TO THE BOTTOM OF THE ROADWAY BASE.

B.A. ALL "OUTSIDE PAVEMENT AREAS" SHALL RECEIVE A MIN. OF 6" OF TOPSOIL OVER THE COMPACTED MATERIAL AND THEN SEEDED PER ODOT 659. ALL "IN PAVEMENT AREAS" SHALL FOLLOW THE CORRESPONDING PAVEMENT COMPOSITION PROVIDED IN THE HATCH LEGEND. THE TRENCH DETAIL SHOWS THE PAVEMENT REPAIR LIMITS. ANY PAVEMENT REPAIR BEYOND THIS WILL BE AT THE COST OF THE CONTRACTOR.

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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY AND MENTAL HEALTH
1280 N COUNTY RD. 25A TROY, OHIO 45373

STATE OF OHIO
ANDREW T. SHUMAN 71386
REGISTERED PROFESSIONAL ENGINEER

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GENERAL DETAILS

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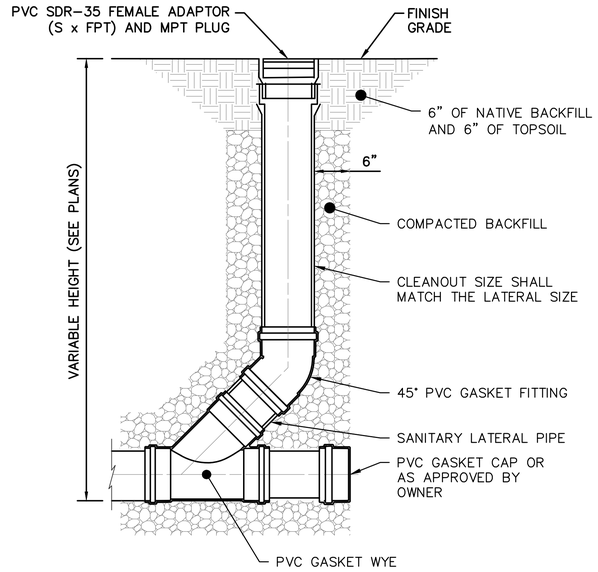
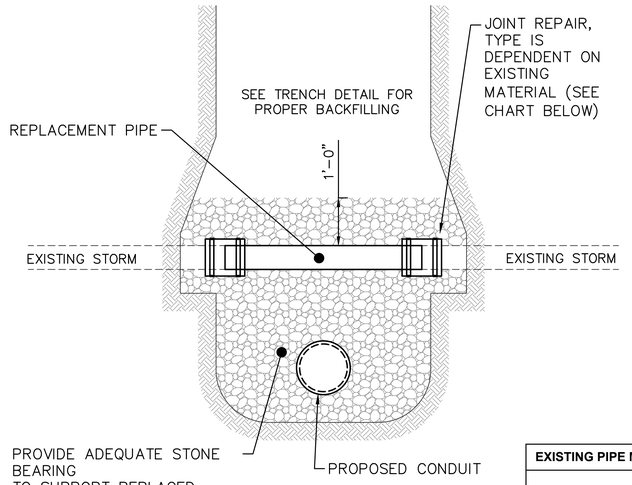


CLEANOUT DETAIL
(NON-PAVEMENT AREAS)



NOTES

A. CONCRETE REPAIRS OR PATCHES ARE UNACCEPTABLE.

B. ANY DRAINAGE TILE DAMAGED BY THE CONTRACTOR MUST BE REPLACED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. ANYTHING REMOVED, REPLACED, AND/OR CONNECTED TO THE STORM SEWER MUST BE NOTED ON THE AS-BUILT DRAWINGS AND MUST BE INSPECTED BY THE INSPECTOR BEFORE THEY A RE-COVERED.

C. ALL FIELD OR STORM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION MUST BE PROVIDED WITH UNOBSTRUCTED OUTLETS OR PLUGGED AS APPROVED AND DIRECTED BY THE **COUNTY**.

EXISTING PIPE MATERIAL	JOINT REPAIR
PVC	STAINLESS STEEL SOLID SLEEVE PLASTIC TO PLASTIC, PVC COUPLING ASTM D-3034/F-1336PSM OR EQUAL
OTHER THAN PVC (CLAY, DUCTILE, ETC.)	STAINLESS STEEL SOLID SLEEVE COUPLINGS WITH STAINLESS STEEL BANDS, EACH SIDE, OR EQUAL
CMP	CORRUGATED METAL PIPE COUPLING
RCP	CONCRETE COLLAR

REPAIR OF EXISTING FIELD TILE OR STORM PIPE DETAIL
NTS

NOTES

A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE. WHEN SIDE OPENINGS ARE PROVIDED, ELEVATION SHALL BE THE FLOW LINE OF THE SIDE INLET.

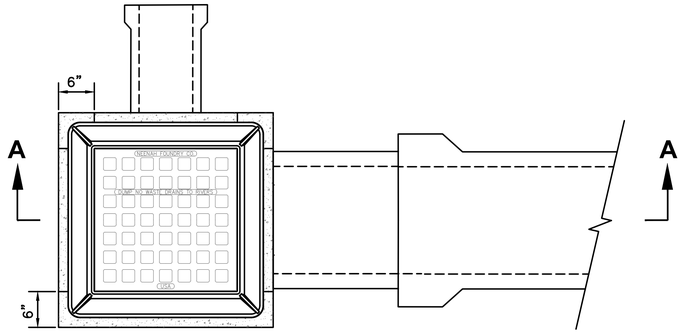
B. CATCH BASINS INSTALLED IN **PAVED AREAS** SHALL BE PROVIDED WITH A FRAME AND GRATE MANUFACTURED BY NEENAH R-3405 PR EAST JORDAN IRON WORKS (FRAME 5250Z) AND GRATE (5250M).

C. CONCRETE, CAST-IN-PLACE, TO BE ODOT QC MISC. (CEMENT ONLY – NO POZZOLAN MATERIAL). PRECAST CONSTRUCTION IS PERMITTED AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13.

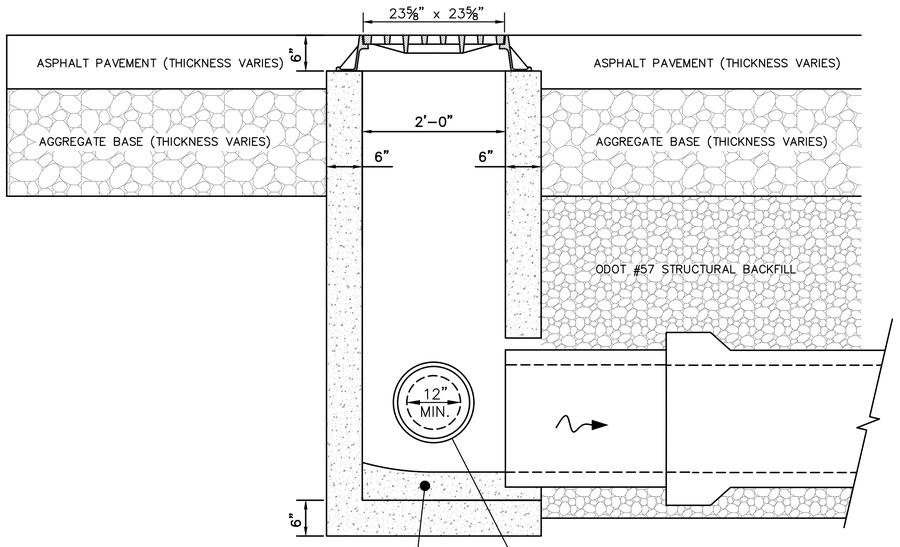
D. CATCH BASIN SHALL ACCOMMODATE AN 18" OR SMALLER PIPE.

E. PIPE TO INTRUDE INTO CATCH BASIN 1" MAXIMUM AND PIPE MUST BE CUT PARALLEL TO CATCH BASIN. CONTRACTOR TO USE NON-SHRINK GROUT COMPLETELY SEAL AROUND THE PIPE AND CATCH BASIN.

F. THE CONTRACTOR SHALL ENSURE THE FRAME IS SECURELY BOLTED/FASTENED TO THE CATCH BASIN DURING INSTALLATION IN ALL PAVED AREAS (GRAVEL, ASPHALT AND CONCRETE).



PLAN VIEW



2-2B CATCH BASIN (PAVED AREAS NO UNDERDRAINS)
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PROFESSIONAL ENGINEER

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STORM DETAILS

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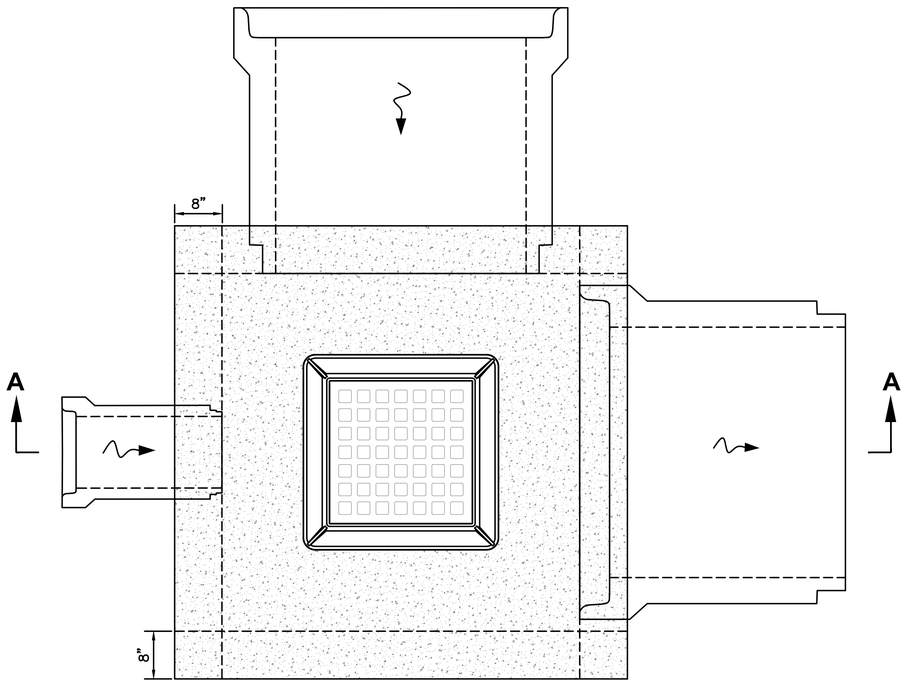
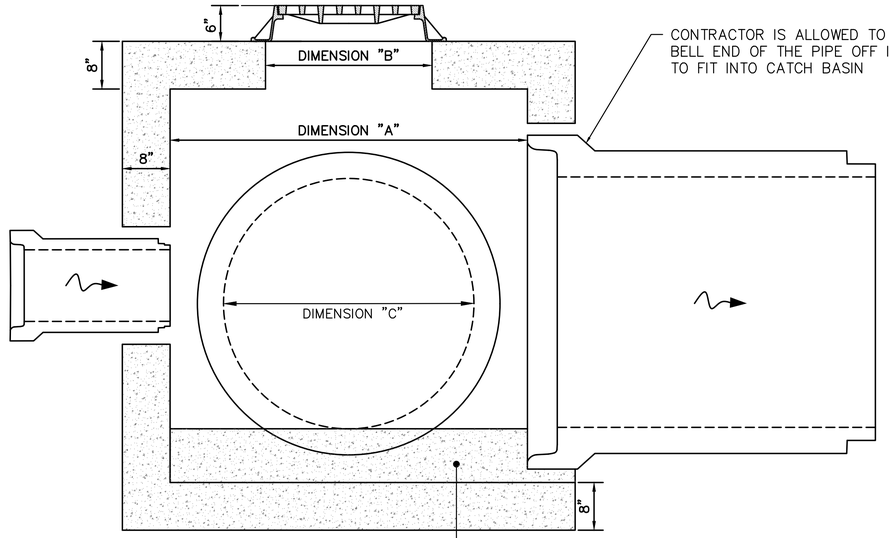
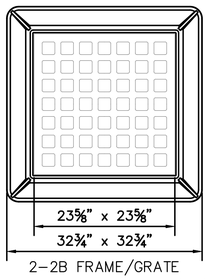


PLAN VIEW

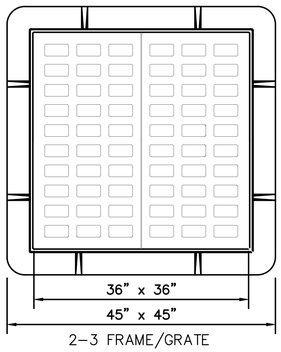


SECTION A-A

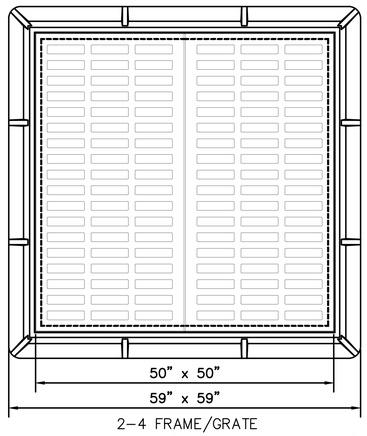
CB SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION 'C"
2-3	3'-0" x 3'-0"	2'-0" x 2'-0" (2-2B GRATE) 3'-0" x 3'-0" (2-3 GRATE)	12" - 24"
2-4	4'-0" x 4'-0"	2'-0" x 2'-0" (2-2B GRATE) 3'-0" x 3'-0" (2-3 GRATE) 4'-0" x 4'-0" (2-4 GRATE)	12" - 36"
2-5	5'-0" x 5'-0"	2'-0" x 2'-0" (2-2B GRATE) 3'-0" x 3'-0" (2-3 GRATE) 4'-0" x 4'-0" (2-4 GRATE)	12" - 48"
2-6	6'-0" x 6'-0"	2'-0" x 2'-0" (2-2B GRATE) 3'-0" x 3'-0" (2-3 GRATE) 4'-0" x 4'-0" (2-4 GRATE)	12" - 54"
2-7	7'-0" x 7'-0"	2'-0" x 2'-0" (2-2B GRATE) 3'-0" x 3'-0" (2-3 GRATE) 4'-0" x 4'-0" (2-4 GRATE)	12" - 66"



2-2B FRAME/GRATE
NEENAH R-3405-W (TYPE H GRATE)
EJIW NO. 5250 (TYPE M GRATE)



2-3 FRAME/GRATE
NEENAH R-3437 (TYPE C GRATE)



2-4 FRAME/GRATE
NEENAH R-3438-A (2 PIECE TYPE A GRATE)

NOTES

A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE.

B. FRAME AND GRATE FOR PAVED AREAS SHALL BE NEENAH CATALOG NO. R-3405 OR EAST JORDAN IRON WORKS NO. 5250 OR EQUIVALENT. CONTRACTOR SHALL FASTEN/BOLT DOWN GRATE TO BASIN TO ENSURE GRATE IS SECURELY FASTENED IN PLACE.

C. REINFORCING STEEL BAR # AND SPACING IN TOP SLAB SHALL FOLLOW ODOT SCD CB-1.2/1.3.

D. PRECAST CONSTRUCTION IS REQUIRED, UNLESS OTHERWISE APPROVED, AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13.

E. PIPE TO INTRUDE INTO CATCH BASIN 1" MAXIMUM AND PIPE MUST BE CUT PARALLEL TO CATCH BASIN. USE NON-SHRINK GROUT AROUND PIPE TO SEAL BETWEEN PIPE AND CATCH BASIN.

2-3, 2-4, 2-5, 2-6, 2-7 CATCH BASINS (IN PAVEMENT AREAS)

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STORM DETAILS

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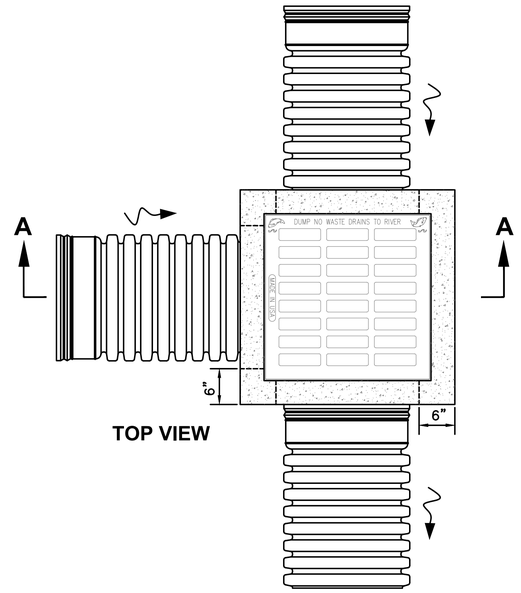

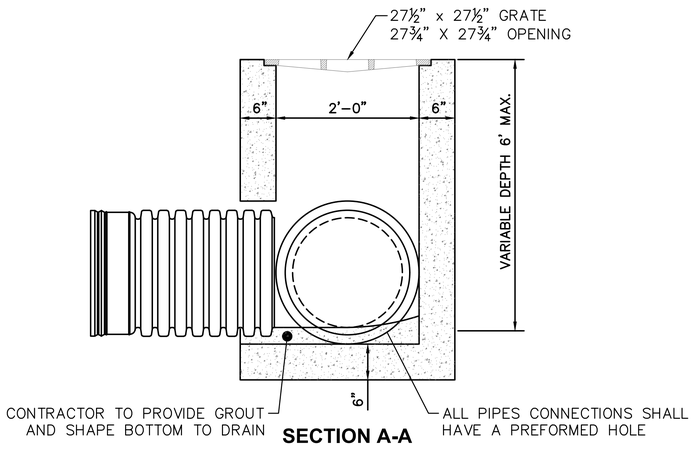

NOTES

A. LOCATION AND ELEVATIONS WHEN GIVEN ON THE PLANS IS TOP CENTER OF THE GRATE. WHEN SIDE OPENINGS ARE PROVIDED, ELEVATION SHALL BE THE FLOW LINE OF THE SIDE INLET.

B. CATCH BASINS INSTALLED IN **NON-PAVED AREAS** SHALL BE PROVIDED WITH A RECESSED GRATE MANUFACTURED BY NEENAH CATALOG NO. R-4859-C (TYPE A) OR EAST JORDAN IRON WORKS 5110 (TYPE M3) OR EQUIVALENT.

C. CONCRETE, CAST-IN-PLACE, TO BE ODOT QC MISC. (CEMENT ONLY – NO POZZOLAN MATERIAL). PRECAST CONSTRUCTION IS PERMITTED AND CONCRETE SHALL MEET THE REQUIREMENTS OF 706.13.

D. CATCH BASIN SHALL ACCOMMODATE AN 18" OR SMALLER PIPE.

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2-2B CATCH BASIN (NON-PAVED AREAS)

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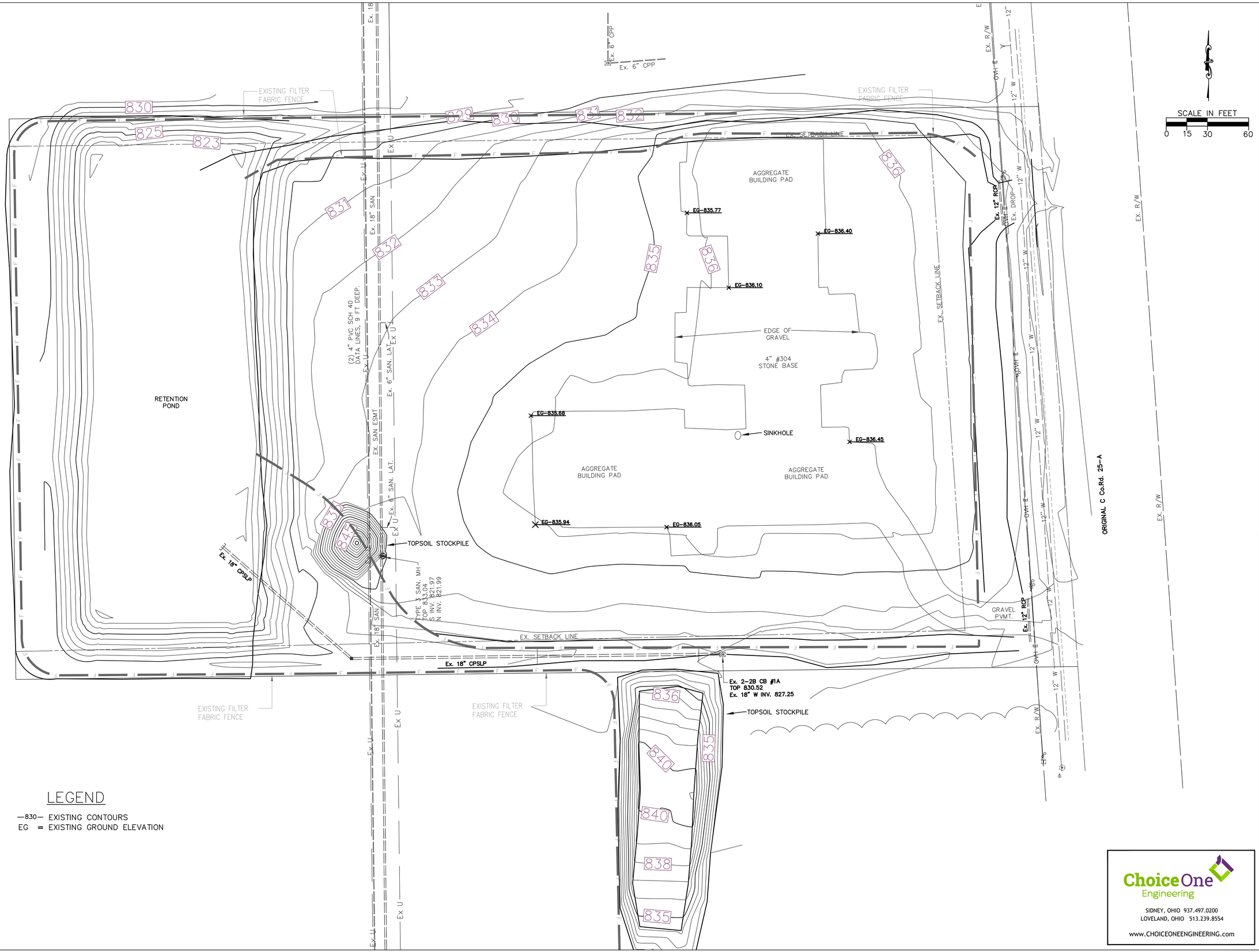

LEGEND

—830— EXISTING CONTOURS
EG = EXISTING GROUND ELEVATION

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EXISITNG SITE

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EXISTING UTILITY NOTES:
CONTRACTOR SHALL DETERMINE THE TYPE OF SERVICE FOR ALL EXISTING UNDERGROUND LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION AND SHALL ENSURE THE FOLLOWING:

1. THAT ALL EXISTING STORM LINES OR ANY OTHER EXISTING CLEAN WATER DRAINAGE LINES THAT ARE DISCOVERED AND/OR ENCOUNTERED DURING CONSTRUCTION AND ARE OR NEED TO REMAIN IN SERVICE ARE ROUTED AS NEEDED TO ENSURE THAT THEY ARE CONNECTED INTO THE PROPOSED OR EXISTING STORM SEWER.

2. THAT ALL EXISTING SANITARY LINES THAT ARE DISCOVERED AND/OR ENCOUNTERED DURING CONSTRUCTION AND ARE TO REMAIN IN SERVICE ARE ROUTED AS NEEDED TO ENSURE THAT THEY ARE CONNECTED INTO ACTIVE EXISTING SANITARY SEWER LINES/STRUCTURES OR INTO PROPOSED SANITARY SEWER LINES/STRUCTURES.

3. THAT ALL EXISTING WATER LINES THAT ARE DISCOVERED AND/OR ENCOUNTERED DURING CONSTRUCTION AND ARE TO REMAIN IN SERVICE ARE ROUTED AS NEEDED TO ENSURE THAT THEY ARE CONNECTED INTO ACTIVE EXISTING WATER LINES OR INTO PROPOSED WATER LINES.

ALL WORK TO BE PER AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND TO BE WITNESSED BY THE OWNER'S REP. COST OF THIS ITEM SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S OVERALL LUMP SUM BID FOR THE PROJECT.

DOWNSPOUT PIPING NOTE:
THE CONTRACTOR SHALL CONNECT ANY DOWNSPOUTS AS SHOWN ON THE SITE PLAN OR TO THE CLOSEST STORM PIPING OR CATCH BASINS USING CPSLP OR PVC SDR-35 SEWER OR APPROVED EQUAL.

SITE CONTRACTOR SHALL SUPPLY & INSTALL DOWNSPOUT BOOT AT EACH DOWNSPOUT LOCATION. BOOT SHALL BE BLACK PLASTIC WITH TRANSITION FROM STORM PIPE TO RECTANGULAR METAL DOWNSPOUT. METAL DOWNSPOUT SIZE IS 3.75"X4.75". COORDINATE EXACT LOCATION & ELEVATION OF BOOT/DOWNSPOUT CONNECTION WITH THE GENERAL CONTRACTOR.

EXISTING "APPROXIMATE" AND/OR "PER PLANS" UNDERGROUND UTILITIES NOTE:
EXISTING UNDERGROUND UTILITIES LABELED AS "APPROXIMATE" AND/OR "PER PLANS" HAVE BEEN SHOWN BASED ON PREVIOUS PLANS AND OLD SITE INFORMATION AND THEIR EXACT LOCATION, DEPTH, SIZE, TYPE, SLOPE, ETC. ARE UNKNOWN. CONTRACTOR SHALL TAKE THIS INTO ACCOUNT FOR ALL WORK RELATED TO AND/OR INVOLVING THESE UTILITIES AND SHALL FIELD VERIFY AND/OR DETERMINE ALL INFO FOR THESE UTILITIES PRIOR TO CONSTRUCTION.

NOTES:
CONTRACTOR TO VERIFY EXACT LOCATION, DEPTH AND SIZE OF UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY OWNER OF ANY CONFLICTS PRIOR TO THE INSTALLATION OF UTILITIES.

ALL UTILITIES TO BE INSTALLED PER MIAMI COUNTY STANDARDS.

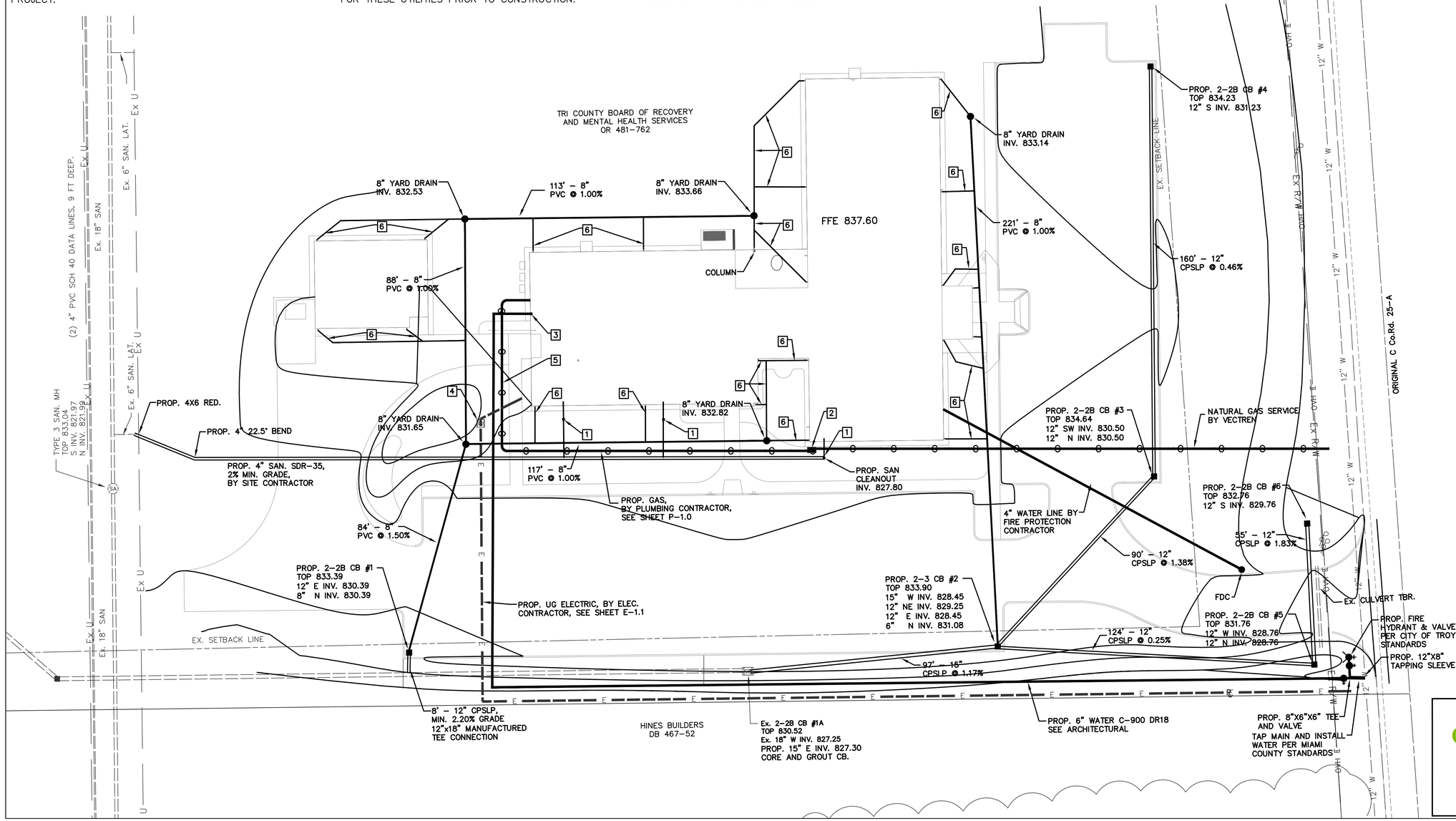
CONTRACTOR TO VERIFY AND LOCATE WHERE STORM, SANITARY, AND WATER LATERALS AND ALL OTHER PROPOSED UTILITY SERVICES TIE INTO THE PROPOSED BUILDING PER BUILDING PLANS. CONTRACTOR SHALL ALSO VERIFY THE SIZES AND TYPES OF ALL LATERALS AND HOW THEY MAY TIE INTO THE PROPOSED BUILDINGS.

CONTRACTOR TO FOLLOW ALL PERMIT REQUIREMENTS AND SPECIFICATIONS TO INSTALL THE PROPOSED UTILITIES INCLUDING COORDINATING THE INSTALLATION WITH LOCAL OFFICIALS AS NEEDED AND/OR REQUIRED.

CONTRACTOR TO COORDINATE ALL WORK WITH THE OWNER AS NEEDED/REQUIRED.

UNKNOWN EXISTING UNDERGROUND UTILITIES:
CONTRACTOR TO BE AWARE THERE MAY BE OTHER UNKNOWN SERVICES OR UNKNOWN UNDERGROUND UTILITIES OR ITEMS WHICH MAY BE LOCATED WITHIN THE SITE AND MAY REQUIRE REMOVAL OR REROUTING IN ORDER TO PERFORM THE PROPOSED PROJECT. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY OF ANY UNKNOWN UNDERGROUND UTILITIES OR OTHER ITEMS WHICH ARE ENCOUNTERED AND WORK WITH THE OWNER TO DECIDE HOW THESE ITEMS SHOULD BE HANDLED.

PLAN NOTES:
1) SANITARY SEWER LATERAL EXTENDED 5'0" OUTSIDE OF BUILDING BY PLUMBING CONTRACTOR. SITE CONTRACTOR TO CONNECT SITE SANITARY PIPE AT THIS POINT. SEE SHEET P-1.0. COORDINATE INVERT ELEVATION WITH PLUMBING CONTRACTOR.
2) GAS SERVICE REGULATION & METER BY PUBLIC UTILITY. SEE SHEET P-1.0.
3) SITE CONTRACTOR TO EXTEND A 6" WATER SERVICE INTO BUILDING AND TERMINATE ABOVE FLOOR, SEE SHEETS P-1.0 & P-1.1 & F1.1. COORDINATE WITH PLUMBING CONTRACTOR FOR PIPE LOCATION & TERMINATION DETAILS.
4) ELECTRIC TRANSFORMER BY DP & L.
5) GAS SERVICE LINE BY PLUMBING CONTRACTOR, SEE SHEET P1.0.
6) ALL STORM OUTLET PIPES FROM DOWNSPOUTS SHALL BE 4" PVC @ 2.00% MINIMUM SLOPE, DOWNSPOUT BOOTS BY THE SITE CONTRACTOR.



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SITE UTILITY PLAN

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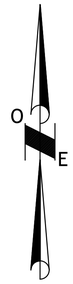
VICINITY MAP



MIAMI COUNTY
MIAMI COUNTY, OHIO
INDEX OF SHEETS

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION A NEW BUILDING AND ASSOCIATED DRIVES AND PARKING. SITE WORK TO INCLUDE STORM SEWER, SANITARY SEWER, WATER, SITE GRADING, PAVEMENT WORK AND BUILDING CONSTRUCTION.

PROJECT WORK CONSTRUCTION DATES:
START: APRIL 2021
ESTIMATED COMPLETION: APRIL 2022

EROSION CONTROL NOTES:
1. INSTALL AND MAINTAIN FILTER FABRIC FENCE AND INLET PROTECTION WHERE SHOWN AND AS NEEDED TO MINIMIZE SEDIMENT LADEN WATER FROM LEAVING THE SITE OR ENTERING ANY STORM SYSTEM, ADJACENT DITCHES, STREAMS ETC. IF STORMWATER RUNOFF CONTAINING SEDIMENTS IS FOUND TO BE LEAVING THE PROJECT SITE IN AN AREA WHERE NO BMP/CONTROL MEASURE IS SHOWN OR IN PLACE, CONTRACTOR SHALL IMMEDIATELY INSTALL THE APPROPRIATE BMP/CONTROL MEASURE AS NEEDED TO REMEDY THE SITUATION (TYP. INLET PROTECTION, FILTER FABRIC FENCE, ETC.).

2. INSTALL INLET PROTECTION ON ALL STORM INLET STRUCTURES (YARD DRAINS, CATCH BASINS, MANHOLES WITH GRATED LIDS, ETC.) AND TO ANY EXISTING STORM STRUCTURES WITHIN THE PROJECT AREA WHICH MAY RECEIVE RUNOFF FROM THE CONSTRUCTION SITE AS NEEDED. INLET PROTECTION MAY CONSIST OF DEVICES SUCH AS SEDCAGE (WWW.SEDCATCH.COM), DANDY BAGS, SEDIGUARD FILTERS, FLEXSTORM INLET FILTERS, SEDIMENT FENCE OR OTHER DEVICES WHICH ARE EFFECTIVE AT MINIMIZING THE AMOUNT OF SEDIMENT ENTERING THE STRUCTURE.

3. CONTRACTOR IS RESPONSIBLE FOR IMMEDIATELY CLEANING UP ANY MUD, DIRT AND DEBRIS WHICH IS TRACKED OR SPILLED ONTO THE ROADWAYS.

4. PRE CONSTRUCTION - CONTRACTOR IS RESPONSIBLE TO INSTALL A CONSTRUCTION ENTRANCE AS NEEDED TO MINIMIZE ANY MUD, DIRT AND DEBRIS TRACKED ONTO THE ROADWAYS.

5. DURING CONSTRUCTION - THE CONTRACTOR MUST MAINTAIN EROSION CONTROL UNTIL AREA IS STABILIZED INCLUDING TEMPORARY SEEDING AS NEEDED. CONTRACTOR SHALL TEMPORARYILY SEED ALL CRITICAL EXPOSED SLOPES TO MINIMIZE SEDIMENT RUNOFF.

6. FINAL/POST CONSTRUCTION - CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. CONTRACTOR SHALL ENSURE GRASS IS PERMANENTLY AND PROPERLY ESTABLISHED IN ALL AREAS WHERE GRASS IS SPECIFIED. ALL SEDIMENT AND EROSION CONTROL STRUCTURES, INCLUDING SEDIMENT FENCE, SHALL REMAIN IN PLACE UNTIL GRASS IS IN PLACE AND SITE IS STABILIZED. ONCE SITE IS STABILIZED AND ALL CONSTRUCTION IS COMPLETE, ALL SEDIMENT FENCE, INLET PROTECTION AND ANY OTHER TEMPORARY BMP'S SHALL BE REMOVED FROM THE SITE.

BMP NOTES:
FOR ALL BMP'S INSTALLED, ENSURE THAT THE PONDING OF WATER BEHIND THE BMP WILL NOT DAMAGE PROPERTY OR POSE A SAFETY THREAT.

IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL MEASURE/BMP HAS BEEN USED INAPPROPRIATELY, THE CONTRACTOR MUST REPLACE AND ADJUST THE CONTROL/BMP TO MEET SITE CONDITIONS AS REQUIRED. THE CONTRACTOR SHALL ADJUST THE SWPPP AND ITS CONTROLS/BMPS AND THEIR QUANTITIES TO MEET FIELD CONDITIONS AND THE OHIO EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION ACTIVITIES GENERAL PERMIT.

MAINTENANCE NOTE:
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE ALL TEMPORARY AND PERMANENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED IN A FUNCTIONAL CONDITION UNTIL ALL UP-SLOPE AREAS THEY CONTROL ARE PERMANENTLY STABILIZED. THE SWP3 SHALL BE DESIGNED TO MINIMIZE MAINTENANCE REQUIREMENTS. THE APPLICANT SHALL PROVIDE A DESCRIPTION OF MAINTENANCE PROCEDURES NEEDED TO ENSURE THE CONTINUED PERFORMANCE OF CONTROL PRACTICES.

SWPPP AND INSPECTION AVAILABILITY AND UPDATES NOTE:
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE SWPPP AND INSPECTION REPORTS ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM AND DOCUMENT ALL REQUIRED SWPPP INSPECTIONS AND ALL UPDATES AND AMENDMENTS TO THE SWPPP.

DOCUMENTATION AND GOVERNMENT INSPECTION NOTE:
CONTRACTOR(S) SHALL PROVIDE THE OWNER'S REPRESENTATIVE A WRITTEN COPY OF THEIR CO-PERMITTEE APPLICATION AND ANY OTHER DOCUMENTATION THE CONTRACTOR(S) MAY SEND OR RECEIVE FROM THE OEPA OR ANY OTHER GOVERNING AUTHORITIES.

IF AN INSPECTOR OR REPRESENTATIVE FROM THE OEPA OR ANY OTHER GOVERNING AUTHORITY IS ON-SITE, THE CONTRACTOR SHALL IMMEDIATELY CONTACT AND NOTIFY THE OWNER'S REPRESENTATIVE.

CONTACT INFORMATION:
FACILITY SITE LOCATION: PROPERTY TO THE SOUTH OF 1300 N COUNTY ROAD 25A, CONCORD TOWNSHIP, OHIO 45373
OWNER: FREYTAG & ASSOCIATES, INC, JOHN FREYTAG, 937-622-1878, 226 N. MIAMI AVENUE, PO BOX 220, SIDNEY, OH 45365, jfreytag@freytaginc.com
CONTRACTOR CONTACT - TBD

SWPPP AND INSPECTION REPORTS LOCATION:
NOTE: THE SWPPP AND INSPECTION REPORTS WILL BE KEPT ON-SITE IN THE JOB TRAILER/FOREMAN'S PICK-UP.

WASTE DISPOSAL NOTE:
CONTAINERS (e.g. DUMPSTERS, DRUMS) MUST BE AVAILABLE FOR THE DISPOSAL OF DEBRIS, TRASH, HAZARDOUS MATERIAL AND PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF.

CLEAN HARD FILL NOTE:
NO CLEAN CONSTRUCTION WASTES SHALL BE DISPOSED OF INTO THE PROPERTY.

FUELING AND STAGING NOTE:
CONTRACTOR'S STAGING AND STORAGE AREA WILL BE LOCATED WITHIN CONSTRUCTION LIMITS OF THE PROJECT. FUEL TANKS AND OTHER HAZARDOUS MATERIALS TO BE SAFELY STORED, PROTECTED, AND PROPERLY HANDLED BY CONTRACTOR. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE NO POLLUTANTS FROM THE STAGING/STORAGE AREA LEAVE THE SITE OR ENTER ADJACENT SURFACE WATERS OR THE STORM SYSTEM. CONTRACTOR SHALL CLEAN UP AND PROPERLY DISPOSE OF ANY WASTE MATERIALS.

SOIL STOCKPILE NOTE:
CONTRACTOR'S SHALL LOCATE SOIL STOCKPILE AREAS WITHIN THE PROJECT AREA SO AS NOT TO BE WITHIN THE IMMEDIATE PROXIMITY OF ANY SURFACE WATERS OR STORM INLET STRUCTURES. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE NO POLLUTANTS FROM THE STOCKPILE AREA LEAVE THE SITE OR ENTER ADJACENT SURFACE WATERS OR THE STORM SYSTEM. THESE MEASURES MAY INCLUDE BUT SHALL NOT BE LIMITED TO INSTALLING FILTER FABRIC FENCE AROUND STOCKPILE, TEMPORARILY COVERING THE STOCKPILE AND/OR TEMPORARILY SEEDING THE STOCKPILE.

DEWATERING NOTE:
PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR ANY OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, DITCH OR STREAM CORRIDORS, ANY WETLANDS OR STORM SEWERS IS PROHIBITED. ALL SUCH WATER SHALL BE PROPERLY FILTERED OR SETTLED TO REMOVE SOIL PARTICLES PRIOR TO ITS RELEASE.

IF AN AREA OF THE SITE OR TRENCH NEEDS DEWATERED, IT SHOULD BE PUMPED FROM A SUMP PIT WITH A SOCK FILTER OR OTHER TYPE OF FILTERING DEVICE ON THE DISCHARGE OF THE HOSE. DO NOT ALLOW DISCHARGED WATER TO PASS OVER DISTURBED GROUND. IF THE DISCHARGE WATER IS BEING PUMPED INTO A SEDIMENT POND THEN NO FILTER IS REQUIRED AT THE END OF THE HOSE.

IF THE GROUNDWATER MUST BE LOWERED, THE WATER MAY BE FREELY DISCHARGED AS LONG AS THE WATER REMAINS CLEAN. DO NOT CO-MINGLE CLEAN GROUND WATER WITH SEDIMENT LADEN WATER OR DISCHARGE IT BY ALLOWING IT TO PASS OVER DISTURBED GROUND.

LOG/DOCUMENTATION SHEETS: AS PART OF THE SWPPP, THE CONTRACTOR SHALL MAINTAIN LOG/DOCUMENTATION SHEETS FOR THE FOLLOWING: 1) A SIGNATURE LOG CONTAINING THE SIGNATURES OF ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED IN THE IMPLEMENTATION OF THE SWPPP AS PROOF ACKNOWLEDGING THAT THEY REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THE SWPPP. 2) A GRADING AND STABILIZATION LOG DOCUMENTING THE PROJECTS GRADING AND STABILIZATION ACTIVITIES AND 3) A SWPPP AMENDMENT LOG DOCUMENTING CHANGES/AMENDMENTS TO THE SWPPP, WHICH OCCUR AFTER CONSTRUCTION ACTIVITIES COMMENCE.

SWPPP NOTE:
THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR FREYTAG & ASSOCIATES, INC. FOR THE PERFORMANCE OF THE TRI-COUNTY BOARD OF RECOVERY SITE PLAN PROJECT IN MIAMI COUNTY, OHIO. ALL WORK SHALL BE PER AND COMPLY WITH THE OEPA CONSTRUCTION SITE STORM WATER GENERAL PERMIT, PERMIT #OHC000005. THIS INCLUDES FILING A CO-PERMITTEE NOI FORM WITH THE OEPA FOR ALL OPERATORS ENGAGED IN SITE WORK ON THE SITE. CONTRACTOR SHALL FOLLOW THE SPECIFICATIONS, INSTALLATION, MAINTENANCE AND REQUIREMENTS OF ODOT'S CURRENT SUPPLEMENTAL SPECIFICATION 832 "TEMPORARY SEDIMENT AND EROSION CONTROL." COMPLIANCE WITH SUPPLEMENTAL SPECIFICATION 832 SHALL INCLUDE THE STANDARD CONSTRUCTION DRAWING REFERENCES LISTED IN SECTION 832.03, BUT SHALL NOT INCLUDE SECTION 832.11 "INSPECTIONS AND SWPPP UPDATES." ALL INSPECTIONS AND SWPPP UPDATES SHALL BE PER THE OEPA CONSTRUCTION SITE STORM WATER GENERAL PERMIT, PERMIT #OHC000005. ALL WORK SHALL ALSO BE PER THE CURRENT ODOT CMS 107.19. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH LOCAL STORMWATER AND EROSION CONTROL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH AND INSTALLING ALL ITEMS NOTED AND AS REQUIRED BY OEPA AND LOCAL AUTHORITIES FOR MEETING ALL STORM WATER POLLUTION PREVENTION REQUIREMENTS. FREYTAG & ASSOCIATES AND THE SELECTED CONTRACTOR SHALL BE THE RESPONSIBLE PARTY IN CHARGE OF THE SWPPP AND ASSOCIATED BMP'S.

SITE DATA:
LOCATION SOIL TYPES_____GLYNWOOD/BLOUNT/PEWAMO SILTY LOAM
EARTH DISTURBED AREA_____3.30 ACRES
PROPOSED IMPERVIOUS AREA ADDED:_____2.05 ACRES
PRE-CONSTRUCTION RUNOFF COEFFICIENT:_____0.30
POST-CONSTRUCTION RUNOFF COEFFICIENT:____0.68
DESCRIPTION OF PRIOR LAND USE_____AGRICULTURAL
EXISTING QUALITY OF DISCHARGE FROM SITE____FAIR QUALITY UNTREATED AGRICULTURAL RUNOFF
IMMEDIATE RECEIVING WATERS:_____ON-SITE DETENTION
SUBSEQUENT RECEIVING WATERS:_____GREAT MIAMI RIVER
LATITUDE 40.059843° LONGITUDE -84.214607°

WATERS EDGE NOTE: ALL MATERIAL AND EQUIPMENT STAGING OR STORAGE AREAS, DEWATERING AREAS, CONCRETE TRUCK WASH OUT AREAS, CONSTRUCTION ACCESS LOCATIONS, AND VEHICLE FUELING AND REFUELING LOCATIONS MUST BE LOCATED A MINIMUM OF 100' FROM ANY CREEK/RIVER/STREAM WATERS EDGE.

CLEAN STORM SYSTEM NOTE:
IMMEDIATELY PRIOR TO FINAL COMPLETION OF THE PROJECT, CONTRACTOR SHALL ENSURE THE ENTIRE STORM SYSTEM, INCLUDING BUT NOT LIMITED TO, THE DETENTION/RETENTION BASIN(S), CATCH BASINS, MANHOLES, PIPING, UNDERDRAINS AND UNDERDRAIN TRENCHES ARE FREE FROM SEDIMENTATION AND OTHER POLLUTANTS AND FOREIGN MATERIALS AND ARE TO BE CLEANED AS NEEDED TO ENSURE MAXIMUM STORMWATER QUALITY AND FULL FUNCTIONALITY.

OFFSITE CONSTRUCTION ACTIVITIES:
IT IS EXPECTED ALL CONSTRUCTION ACTIVITIES WILL TAKE PLACE ON SITE.

SPILL REPORTING REQUIREMENTS:
IN THE EVENT OF A SMALL RELEASE (LESS THAN 25 GALLONS) OF PETROLEUM WASTE, SPECIAL HANDING PROCEDURES MUST BE USED. IN THE EVENT OF A LARGE RELEASE (25 GALLONS OR MORE) OF PETROLEUM WASTE, YOU MUST CONTACT THE OHIO EPA (AT 1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE (LEPC) WITHIN 30 MINUTES OF A SPILL OF 25 OR MORE GALLONS.

VEHICLE FULEING:
VEHICLE FUELING AND MAINTENANCE WILL BE PERFORMED VIA A SMALL REFUEL TANK ON THE BACK OF A PICK-UP TRUCK.

OPEN BURNING NOTE:
OPEN BURNING IS NOT PERMITTED IN THE CORPORATION LIMIT.

Choice One Engineering
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203 W. LOVELAND AVENUE • LOVELAND, OHIO 45140 • 513.239.8554
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May 5, 2021

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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY
AND MENTAL HEALTH
1280 N COUNTY RD. 25A TROY, OHIO 45373

STATE OF OHIO
ANDREW T. SHUMAN
71386
REGISTERED
PROFESSIONAL ENGINEER

REVISIONS:
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SWPPP NOTES

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LOVELAND, OHIO 513.239.8554
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IMPLEMENTATION SCHEDULE (EROSION CONSTRUCTION SEQUENCE)

THE CONTRACTOR OR ITS APPOINTED REPRESENTATIVES WILL ASSUME RESPONSIBILITY FOR INSTALLATION, INSPECTION AND MAINTENANCE OF ALL SOIL EROSION CONTROL MEASURES DURING CONSTRUCTION. THE INSTALLATION OF THE SOIL EROSION CONTROL MEASURES WILL BE COMPLETED, AS FOLLOWS:

A. PRIOR TO ANY GRADING OR EARTHWORK:
A-1. SILT FENCE AND INLET PROTECTION (ON EX. STORM STRUCTURES) TO BE INSTALLED AS SHOWN ON SWPPP
A-2. INSTALL CONSTRUCTION ENTRANCE(S) IF NEEDED AS SHOWN ON SWPPP. INSTALLATION OF ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES, E.G. ROCK CHECK DAMS, CONCRETE WASHOUT PIT, SEDIMENT BASIN, ETC.

B. PERFORM ROUGH GRADING, INSTALL UTILITIES, BUILDINGS, PAVEMENT:
B-1. CLEAR AND GRUB AREA AS NEEDED
B-2. PERFORM SITE GRADING. INSTALL BUILDING(S)
B-3. INSTALL SANITARY, STORM, WATER LINES, OTHER UTILITIES, GRAVEL BASE, AND CURB AND GUTTER, AS PER PLAN(S). INSTALL INLET PROTECTION ON ALL PROPOSED STORM INLET STRUCTURES AS INDICATED ON THE PLANS AS SOON AS THEY ARE INSTALLED.
B-4 PERFORM TEMPORARY SEEDING AS NEEDED ON ANY DISTURBED AREAS PER THE TIME REQUIREMENTS FOR TEMPORARY SEEDING SPECIFIED ON THIS DRAWING.
B-5 INSTALL PAVEMENT.

C. PERFORM FINAL GRADING:
C-1. PLACE TOPSOIL AND PERFORM FINAL RAKING AND GRADING ON ALL DISTURBED AREAS.
C-2. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED (SEEDED AND/OR MULCHED).
C-3. CLEAN UP SITE, AND ONCE SITE HAS REACHED FINAL STABILIZATION REMOVE ALL TEMPORARY BMPS.

NOTES: A) CARE WILL BE TAKEN NOT TO DISTURB ANY EXISTING NATURAL VEGETATION NOT INVOLVED IN THE CONSTRUCTION PROCESS, WHENEVER POSSIBLE. B) TIMELY INSPECTIONS OF THE EROSION CONTROL MEASURES WILL BE MADE, BY THE CONTRACTOR, EVERY 7 DAYS, AND/OR AFTER ANY RAINFALL OF AT LEAST 1/2" IN A 24-HOUR PERIOD. REPORTS MUST BE KEPT ON-SITE AND SUPPLIED TO THE GOVERNING AUTHORITY IF REQUESTED.

INSPECTION SCHEDULE

1. THE SITE WILL BE INSPECTED PER OHIO EPA PERMIT No. OHC000005:

PART III.G.2.i
I. INSPECTIONS. THE PERMITTEE SHALL ASSIGN "QUALIFIED INSPECTION PERSONNEL" TO CONDUCT INSPECTIONS TO ENSURE THAT THE CONTROL PRACTICES ARE FUNCTIONAL AND TO EVALUATE WHETHER THE SWP3 IS ADEQUATE AND PROPERLY IMPLEMENTED IN ACCORDANCE WITH THE SCHEDULE PROPOSED IN PART III.G.1.G OF THE OHC000005 PERMIT OR WHETHER ADDITIONAL CONTROL MEASURES ARE REQUIRED. AT A MINIMUM, PROCEDURES IN A SWP3 SHALL PROVIDE THAT ALL CONTROLS ON THE SITE ARE INSPECTED:
* AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24-HOUR PERIOD BY THE END OF THE NEXT CALENDAR DAY, EXCLUDING WEEKENDS AND HOLIDAYS UNLESS WORK IS SCHEDULED; AND
* ONCE EVERY SEVEN CALENDAR DAYS.

THE INSPECTION FREQUENCY MAY BE REDUCED TO AT LEAST ONCE EVERY MONTH FOR DORMANT SITES IF:
* THE ENTIRE SITE IS TEMPORARILY STABILIZED OR
* RUNOFF IS UNLIKELY DUE TO WEATHER CONDITIONS FOR EXTENDED PERIODS OF TIME (E.G. SITE IS COVERED WITH SNOW, ICE, OR THE GROUND IS FROZEN).

THE BEGINNING AND ENDING DATES OF ANY REDUCED INSPECTION FREQUENCY SHALL BE DOCUMENTED IN THE SWP3. ONCE A DEFINABLE AREA HAS ACHIEVED FINAL STABILIZATION, THE AREA MAY BE MARKED ON THE SWP3 AND NO FURTHER INSPECTION REQUIREMENTS SHALL APPLY TO THAT PORTION OF THE SITE.

FOLLOWING EACH INSPECTION, A CHECKLIST MUST BE COMPLETED AND SIGNED BY THE QUALIFIED INSPECTION PERSONNEL REPRESENTATIVE. AT A MINIMUM, THE INSPECTION REPORT SHALL INCLUDE:
i. THE INSPECTION DATE;
ii. NAMES, TITLES, AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION;
iii. WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY IF THE FIRST INSPECTION) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES), AND WHETHER ANY DISCHARGES OCCURRED;
iv. WEATHER INFORMATION AND A DESCRIPTION OF ANY DISCHARGES OCCURRING AT THE TIME OF THE INSPECTION;
v. LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE;
vi. LOCATION(S) OF BMPS THAT NEED TO BE MAINTAINED;
vii. LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION;
viii. LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION; AND
ix. CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO THE SWP3 NECESSARY AND IMPLEMENTATION DATES.

DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE SWP3 SHALL BE OBSERVED TO ENSURE THAT THOSE ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE VEHICLE TRACKING.

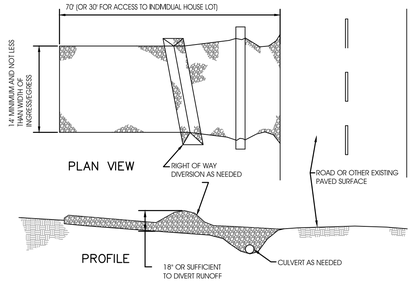
THE PERMITTEE SHALL MAINTAIN FOR THREE YEARS FOLLOWING THE SUBMITTAL OF A NOTICE OF TERMINATION FORM, A RECORD SUMMARIZING THE RESULTS OF THE INSPECTION, NAMES(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWP3 AND A CERTIFICATION AS TO WHETHER THE FACILITY IS IN COMPLIANCE WITH THE SWP3 AND THE PERMIT AND IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. THE RECORD AND CERTIFICATION SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT.

i. WHEN PRACTICES REQUIRE REPAIR OR MAINTENANCE. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE IS IN NEED OF REPAIR OR MAINTENANCE, WITH THE EXCEPTION OF A SEDIMENT SETTLING POND, IT SHALL BE REPAIRED OR MAINTAINED WITHIN 3 DAYS OF THE INSPECTION. SEDIMENT SETTLING PONDS SHALL BE REPAIRED OR MAINTAINED WITHIN 10 DAYS OF THE INSPECTION.

ii. WHEN PRACTICES FAIL TO PROVIDE THEIR INTENDED FUNCTION. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE FAILS TO PERFORM ITS INTENDED FUNCTION AND THAT ANOTHER, MORE APPROPRIATE CONTROL PRACTICE IS REQUIRED, THE SWP3 SHALL BE AMENDED AND THE NEW CONTROL PRACTICE SHALL BE INSTALLED WITHIN 10 DAYS OF THE INSPECTION.

iii. WHEN PRACTICES DEPICTED ON THE SWP3 ARE NOT INSTALLED. IF THE INSPECTION REVEALS THAT A CONTROL PRACTICE HAS NOT BEEN IMPLEMENTED IN ACCORDANCE WITH THE SCHEDULE CONTAINED IN PART III.G.1.H OF THIS PERMIT, THE CONTROL PRACTICE SHALL BE IMPLEMENTED WITHIN 10 DAYS FROM THE DATE OF THE INSPECTION. IF THE INSPECTION REVEALS THAT THE PLANNED CONTROL PRACTICE IS NOT NEEDED, THE RECORD SHALL CONTAIN A STATEMENT OF EXPLANATION AS TO WHY THE CONTROL PRACTICE IS NOT NEEDED.

2. VEGETATIVE PLANTINGS - SPRING PLANTINGS WILL BE CHECKED DURING SUMMER OR EARLY FALL.
3. REPAIRS - ANY EROSION CONTROL MEASURES, STRUCTURAL MEASURES, OR OTHER RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN 7 DAYS.
4. MOWING - DRAINAGE WAYS, DITCHES, AND OTHER AREAS THAT SUPPORT A DESIGNED FLOW OF WATER WILL BE MOWED REGULARLY TO MAINTAIN THAT FLOW.
5. FERTILIZATION - SEEDED AREAS WHERE THE SEED HAS NOT PRODUCED A GOOD COVER WILL BE INSPECTED AND FERTILIZED AS NECESSARY.



CONSTRUCTION ENTRANCE

1. STONE SIZE - 2" STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS, BUT NOT LESS THAN 70' (EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS - THE STONE LAYER SHALL BE AT LEAST 6" THICK.
4. WIDTH - THE ENTRANCE SHALL BE AT LEAST 10' WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. BEDDING - A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LBS. AND A MULLEN BURST STRENGTH OF AT LEAST 190 LBS.
6. CULVERT - A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE, IF NEEDED, TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES (IF DRIVE IS PLACED ACROSS A DITCH).
7. WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE, IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES (IF DRIVE IS PLACED ON A SLOPE).
8. MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
9. CONSTRUCTION ENTRANCE SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFFSITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
10. CONSTRUCTION ENTRANCES ARE INSTALLED TO MINIMIZE OFFSITE TRACKING OF SEDIMENTS. A STONE ACCESS DRIVE SHOULD BE INSTALLED AT EVERY POINT WHERE VEHICLES ENTER OR EXIT THE SITE. EVERY INDIVIDUAL LOT SHOULD ALSO HAVE ITS OWN DRIVE ONCE CONSTRUCTION ON THE LOT BEGINS.

NOTE: ALTERNATIVE STABILIZATION METHODS FOR CONSTRUCTION ENTRANCE/EXIT SUCH AS MANUFACTURED STEEL PLATES, GRID PLATES, ETC. OR STEEL PIPES/GRATINGS WILL ALSO BE CONSIDERED BUT WILL REQUIRE WRITTEN APPROVAL FROM THE OWNER PRIOR TO THE USE OF SUCH ALTERNATIVE METHODS AS ON-SITE CONSTRUCTION ENTRANCES/EXIT. ANY PROPOSED ALTERNATIVE METHODS SHALL SHALL BE SHOWN TO EFFECTIVELY REMOVE MUD AND DEBRIS FROM VEHICLE WHEELS PRIOR TO EXITING THE SITE.

NON-SEDIMENT POLLUTION CONTROL

1. CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES:

DISPOSAL AND HANDLING OF HAZARDOUS AND OTHER CONSTRUCTION WASTE

DO:
* PREVENT SPILLS
* USE PRODUCTS UP
* FOLLOW LABEL DIRECTIONS FOR DISPOSAL
* REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
* RECYCLE WASTE WHENEVER POSSIBLE

DONT
* DONT POUR INTO WATERWAYS, STORM DRAINS, OR ONTO THE GROUND
* DONT POUR DOWN THE SINK, FLOOR DRAIN, OR SEPTIC TANKS
* DONT BURY CHEMICALS OR CONTAINERS
* DONT BURN CHEMICALS OR CONTAINERS
* DONT MIX CHEMICALS TOGETHER

2. CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM, AND ANY HAZARDOUS MATERIALS TO BE USED ON SITE. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.

3. NO WASTE MATERIALS SHALL BE BURIED ON SITE. SITE PERSONNEL, INCLUDING SUBCONTRACTORS, SHALL BE NOTIFIED THAT NO CONSTRUCTION-RELATED MATERIALS ARE TO BE BURIED ON SITE.

4. MIXING, PUMPING, TRANSFERRING, OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH, OR STORM DRAIN.

5. EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS.

6. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER.

7. IF HAZARDOUS SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. CONTACT OHIO EPA (1-800-282-9378).

8. SPILLS OF 25 GAL. OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE.

9. STREETS NEED TO BE SWEPT AS OFTEN AS NECESSARY TO KEEP THEM CLEAN AND FREE FROM SEDIMENT. SEDIMENT TO BE SWEPT BACK ONTO THE LOT - NOT DOWN THE STORM SEWER.

10. STOCKPILES OF SOIL AND OTHER MATERIALS SHALL BE STORED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, AND SHALL HAVE EROSION CONTROL MATERIALS PLACED AROUND THEM.

11. ALL STREAM CROSSINGS SHALL BE CONSTRUCTED ENTIRELY OF NON-ERODIBLE MATERIAL.

PROCESS WASTEWATER/LEACHATE MANAGEMENT NOTE:

ALL PROCESS WASTEWATERS (e.g. EQUIPMENT WASHING, LEACHATE ASSOCIATED WITH ON–SITE WASTE DISPOSAL, AND CONCRETE WASH–OUTS) MUST BE COLLECTED AND DISPOSED OF PROPERLY (e.g. TO A PUBLICLY–OWNED TREATMENT WORKS). THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT ONLY AUTHORIZES THE DISCHARGE OF STORM WATER AND CERTAIN UNCONTAMINATED NON–STORM WATERS. THE DISCHARGE OF NON–STORM WATERS TO WATERS OF THE STATE MAY BE IN VIOLATION OF LOCAL, STATE, AND FEDERAL LAWS OR REGULATIONS.

HANDLING OF TOXIC OR HAZARDOUS MATERIALS NOTE:

NO SOLID, SANITARY, OR TOXIC WASTE IS TO BE DISPOSED OF ON THE PROJECT SITE. RECYCLING OF USED OR UNUSED HAZARDOUS MATERIALS SHALL NOT OCCUR ON SITE EITHER. AREAS DESIGNATED FOR CEMENT TRUCK WASHOUTS, AND VEHICLE FUELING SHALL NOT TAKE PLACE ON PARKING LOT BASE.

CONSTRUCTION CHEMICAL COMPOUNDS NOTE:

NO MIXING OR STORAGE OF CHEMICAL COMPOUNDS SUCH AS FERTILIZERS, LIME, ASPHALT, OR CONCRETE ARE PERMITTED TO TAKE PLACE ON–SITE. ALL MIXING SHALL TAKE PLACE BEFORE ENTERING THE SITE.

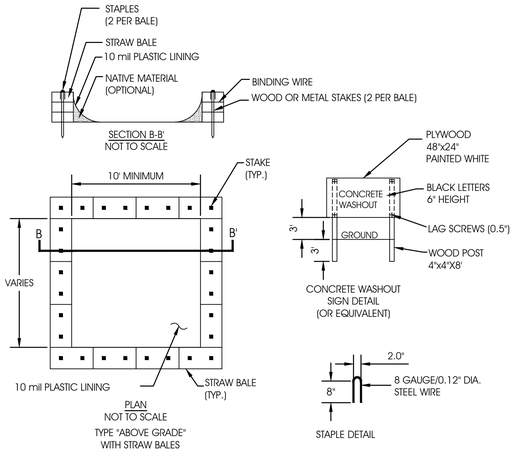
CONSTRUCTION & DEMOLITION DEBRIS NOTE:

ALL CONSTRUCTION AND 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. MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS (SEE OHIO ADMINISTRATIVE CODE 3745–20).

CONTAMINATED SOILS NOTE:

SOILS CONTAMINATED BY PETROLEUM OR OTHER CHEMICAL SPILLS SHALL BE HANDLED AND DISPOSED OF PROPERLY. ALL CONTAMINATED SOILS MUST BE TREATED AND/OR DISPOSED OF IN AN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITY OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITY (TSDFs). IF CONTAMINATION HAPPENS TO OCCUR, TARPS ARE TO BE USED TO PREVENT STORM WATER FROM COMING INTO CONTACT WITH THE MATERIAL.

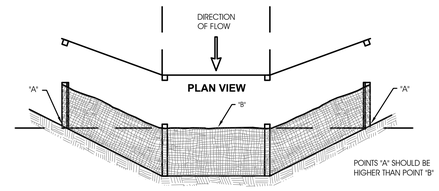
CONCRETE WASHOUT DETAIL



CONCRETE WASHOUT NOTE: CONCRETE WASHOUT OPERATIONS SHALL TAKE PLACE WITHIN THE PROPOSED PROJECT AREA UTILIZING THE CONTRACTOR'S PORTABLE CONCRETE WASHOUT CONTAINER OR WITHIN A BERMED/CONTAINED AREA. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE WASHOUT MATERIAL DOES NOT LEAVE THE WASHOUT AREA OR ENTER THE STORM SYSTEM. CONTRACTOR SHALL CLEAN UP AND PROPERLY DISPOSE OF ALL LEFTOVER WASHOUT MATERIAL.

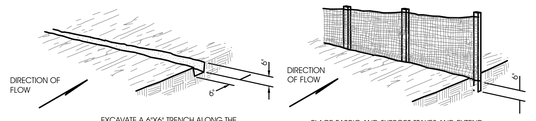
DUST CONTROL

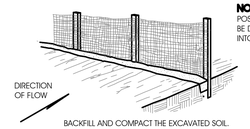
DUST CONTROL SHALL BE PROVIDED AS NEEDED TO PREVENT SEDIMENT FROM BECOMING AIRBORNE. MEASURES SHALL INCLUDE WATERING VIA A WATER TRUCK OR OTHER WATERING DEVICE AS NEEDED TO REDUCE AND/OR ELIMINATE AIRBORNE DUST CREATED BY CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES.



ELEVATION VIEW

PLACEMENT AND CONSTRUCTION OF DITCH CHECK FILTER FABRIC FENCE





NOTE: POSTS/SUPPORT STAKES SHALL BE DRIVEN A MINIMUM OF 1.6' INTO THE GROUND

PLACEMENT AND CONSTRUCTION OF PERIMETER FILTER FABRIC FENCE

CONSTRUCTION OF A FILTER BARRIER (SILT FENCE)

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.

3. TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.

4. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.

5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5' (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.

6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16" ABOVE THE ORIGINAL GROUND SURFACE.

7. THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6" DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.

8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8" OF CLOTH IS BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6" DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.

9. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.

10. MAINTENANCE - SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. ALL THE GAPS AND TEARS IN THE FENCE MUST BE ELIMINATED AND REPAIRED. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

CRITERIA FOR SILT FENCE MATERIAL:

1. FENCE POSTS - THE LENGTH SHALL BE A MINIMUM OF 48" LONG. WOOD POSTS WILL BE 2"-BY-2" HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 5'. POSTS/SUPPORT STAKES SHALL BE DRIVEN A MINIMUM OF 1.6" INTO THE GROUND.

2. SILT FENCE FABRIC SHALL CONFORM TO THE AASHTO SILT FENCE SPECIFICATION 100X AND SHALL HAVE A MINIMUM 100# GRAB TENSILE. SILT FENCE SHALL ALSO CONFORM TO THE MOST RECENT ODOT STANDARD FOR SEDIMENT/SILT FENCE (TABLE 712.09-1)

3. SILT FENCE SHALL BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PERMANENT STABILIZATION

ALL AREAS AT FINAL GRADE MUST BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF REACHING FINAL GRADE. THIS IS USUALLY ACCOMPLISHED BY USING SEED AND MULCH, BUT SPECIAL MEASURES ARE SOMETIMES REQUIRED. THIS IS PARTICULARLY TRUE IN DRAINAGE DITCHES/SWALES, LOW AREAS, DETENTION POND BOTTOMS AND SIDES OR ON STEEP SLOPES. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, THE INSTALLATION OF EROSION CONTROL BLANKETS AND/OR MATTING, ADDITION OF TOPSOIL, OR ROCK RIP-RAP. CONTRACTOR SHALL UTILIZE THESE AND ANY OTHER SPECIAL MEASURES AS NEEDED TO PERMANENTLY STABILIZE THE SITE. PERMANENT SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 AND AUGUST 1 TO SEPTEMBER 30. DORMANT SEEDING CAN BE DONE FROM NOVEMBER 20 TO MARCH 15. AT ALL OTHER TIMES OF THE YEAR, THE AREA SHOULD BE TEMPORARILY STABILIZED UNTIL A PERMANENT SEEDING CAN BE APPLIED.

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE YEAR OR MORE.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50' OF A SURFACE WATER OF THE STATE (STREAM, WATERWAY, WATER BODY, ETC.) AND AT FINAL GRADE	WITHIN 2 DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE.	WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

SOILS EXPOSED NOTE:

CONTRACTOR SHALL PLAN AND IMPLEMENT CONSTRUCTION AND GRADING ACTIVITIES TO MINIMIZE THE AMOUNT OF SOIL EXPOSED DURING CONSTRUCTION ACTIVITIES.

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STATE OF OHIO
ANDREW T. SHERMAN
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TEMPORARY SEEDING SPECIES SELECTION			
SEEDING DATES	SPECIES	LB./1000 SQ. FT.	PER ACRE
MARCH 1 TO AUGUST 15	OATS	3	4 BUSHELS
	TALL FESCUE	1	40 LBS.
	ANNUAL RYEGRASS	1	40 LBS.
	PERENNIAL RYEGRASS	1	40 LBS.
	TALL FESCUE	1	40 LBS.
	ANNUAL RYEGRASS	1	40 LBS.
AUGUST 16 TO NOVEMBER 1	RYE	3	2 BUSHELS
	TALL FESCUE	1	40 LBS.
	ANNUAL RYEGRASS	1	40 LBS.
	WHEAT	1	2 BUSHELS
	TALL FESCUE	1	40 LBS.
	ANNUAL RYEGRASS	1	40 LBS.
	PERENNIAL RYEGRASS	1	40 LBS.
	TALL FESCUE	1	40 LBS.
	ANNUAL RYEGRASS	1	40 LBS.
NOVEMBER 1 TO SPRING SEEDING	USE MULCH ONLY, SODDING PRACTICES OR DORMANT SEEDING		
NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.			

SPECIFICATIONS FOR TEMPORARY SEEDING

1. TO MINIMIZE COSTS OF TEMPORARY STABILIZATION, LEAVE NATURAL COVER IN PLACE FOR AS LONG AS POSSIBLE. ONLY DISTURB AREAS YOU INTEND TO WORK WITHIN THE NEXT 14 DAYS.

2. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.

3. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. HOWEVER, TEMPORARY SEEDING SHALL NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.

4. SOIL AMENDMENTS - APPLICATIONS OF TEMPORARY VEGETATION SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. SOIL TESTS SHOULD BE TAKEN ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.

5. SEEDING METHOD - SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY PLACED USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

MULCHING TEMPORARY SEEDING

1. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES AND WITH FAVORABLE SOIL CONDITIONS AND ON VERY FLAT AREAS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.

2. MATERIALS:

A. STRAW - IF STRAW IS USED, IT SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/ACRE OR 90 LBS./1,000 SQ. FT. (TWO TO THREE BALES). THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQ. FT. SECTIONS AND SPREAD TWO 45 LBS. BALES OF STRAW IN EACH SECTION.

B. HYDROSEEDERS - IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2,000 LB/AC. OR 46 LBS./1,000 SQ. FT.

C. OTHER - OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS/AC.

D. STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:

-MECHANICAL - A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED, BUT GENERALLY, BE LEFT LONGER THAN 6".

-MULCH NETTINGS - NETTINGS SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATION RUN OFF AND ON CRITICAL SLOPES.

-SYNTHETIC BINDERS - SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.

-WOOD CELLULOSE FIBER - WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LBS./AC. THE WOOD-CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS./1000 GAL.

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50' OF A SURFACE WATER OF THE STATE (STREAM, WATERWAY, WATER BODY, ETC.) AND NOT AT FINAL GRADE.	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS
ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN 1 YEAR, AND NOT WITHIN 50' OF A SURFACE WATER OF THE STATE (STREAM, WATERWAY, WATER BODY, ETC.)	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA FOR RESIDENTIAL SUBDIVISIONS, DISTURBED AREAS MUST BE STABILIZED AT LEAST 7 DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER
WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED.	

PERMANENT STABILIZATION

ODOT ITEM 659 SEEDING AND MULCHING, CLASS 1 (LAWN MIXTURE), AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 659, SEEDING AND MULCHING, EXCEPT AS HEREIN MODIFIED.

ALL DISTURBED AREAS OR AREAS DESIGNATED FOR SEEDING SHALL BE GRADED AND SEEDED AND SHALL HAVE A MINIMUM OF 6" OF TOPSOIL OVER THE ENTIRE AREA. TESTING THE PH OF ANY EXISTING OR IMPORTED TOPSOIL PER ODOT 659.02 SHALL BE WAIVED. THE AREA SHALL BE HAND-RAKED AND DRESSED READY FOR SEEDING. NO STONE OVER 1" IN SIZE PERMITTED IN THE TOP 6".

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL.

ITS THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE THE REQUIRED GERMINATION RATES AND ENSURE THE GRASS IS ESTABLISHED TO THE SATISFACTION OF THE OWNER WHICH MAY REQUIRE WATERING, REGRADING/ADDING TOPSOIL AND RESEEDING. ANY AREAS THAT HAVE ERODED OR WHERE NEW GRASS DID NOT GERMINATE SHALL BE ADDRESSED BY THE CONTRACTOR UNTIL THE AREAS ARE STABILIZED, SHAPED, AND DRAINED, AS INDICATED IN THE PLANS.

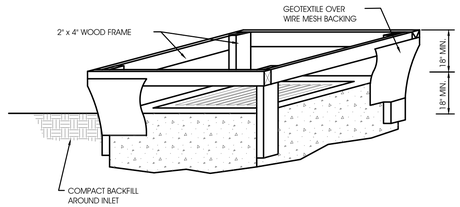
ANY DISTURBED AREA, OUTSIDE OF THE PROJECT WORK LIMITS, CAUSED BY THE CONTRACTOR'S WORK, SHALL BE RESTORED TO THE SATISFACTION OF THE PROPERTY OWNER AND PROJECT OWNER'S REPRESENTATIVE, AT THE CONTRACTOR'S SOLE EXPENSE.

THIS ITEM INCLUDES: TOPSOIL, SEEDING, MULCHING, COMMERCIAL FERTILIZER, WATER, AND REPAIR SEEDING AND MULCHING.

THE ABOVE SHALL BE INCIDENTAL TO THE PROJECT.

INLET PROTECTION FOR STORM STRUCTURES W/ GRATE

INLET PROTECTION MAY CONSIST OF SEDIMENT FENCE AND/OR DEVICES SUCH AS FLEX STORM INLET FILTERS, SEDCAGE (WWW.SEDCATCH.COM), DANDY BAGS, SEDIGUARD FILTERS, OR OTHER DEVICES (ALTERNATE PRODUCTS WHOSE PERFORMANCE IS EQUAL TO OR EXCEEDS THOSE LISTED) WHICH ARE EFFECTIVE AT MINIMIZING THE AMOUNT OF SEDIMENT ENTERING THE STRUCTURE . INSTALL INLET PROTECTION ON ALL PROPOSED YARD DRAINS, CATCH BASINS AND MANHOLES WITH GRATED LIDS AND TO ALL EXISTING STORM STRUCTURES WITH GRATED LIDS WITHIN THE PROJECT AREA WHICH MAY RECEIVE RUNOFF FROM THE CONSTRUCTION SITE.



INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.

2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH OF AT LEAST 18".

3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2" BY 4" CONSTRUCTION GRADE LUMBER. THE 2" BY 4" POST SHALL BE DRIVEN 1' INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2" BY 4" FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6" BELOW ADJACENT ROAD, IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.

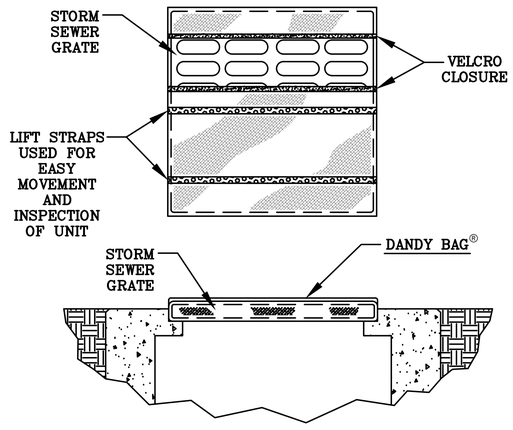
4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.

5. GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAY ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.

6. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.

7. A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION, AND IF RUNOFF BY PASSING THE INLET WILL NOT FLOW TO A SETTING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.

DANDY BAG®



DETAIL OF INLET SEDIMENT CONTROL DEVICE

DANDY BAG®
SPECIFICATIONS

NOTE: THE DANDY BAG® WILL BE **MANUFACTURED IN THE U.S.A.** FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

HI-FLOW DANDY BAG® (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistence	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	$1/min/m^2$ ($gal/min/ft^2$)	5907 (145)
Permittivity	ASTM D 4491	Sec^{-1}	2.1

*Note: All Dandy Bags® can be ordered with optional oil absorbent pillows

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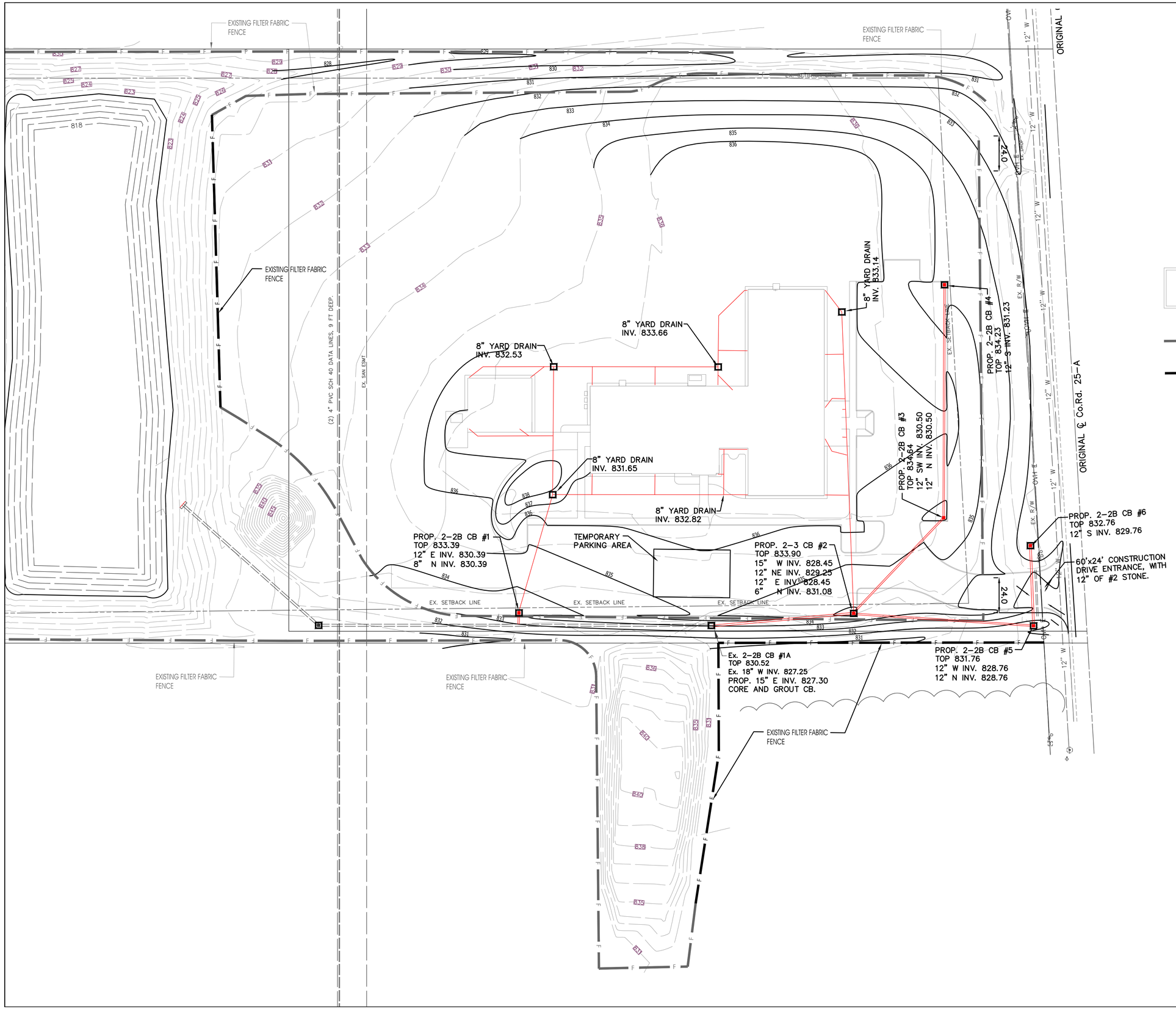

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SWPPP EROSION CONTROL PLAN

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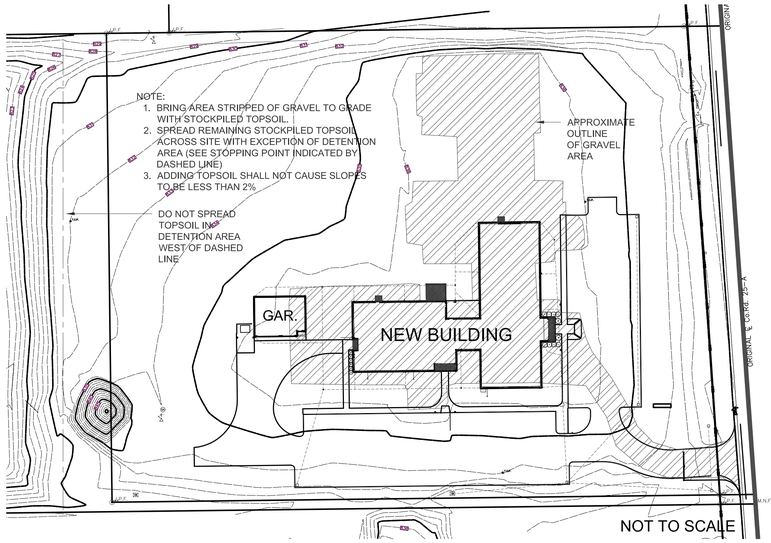
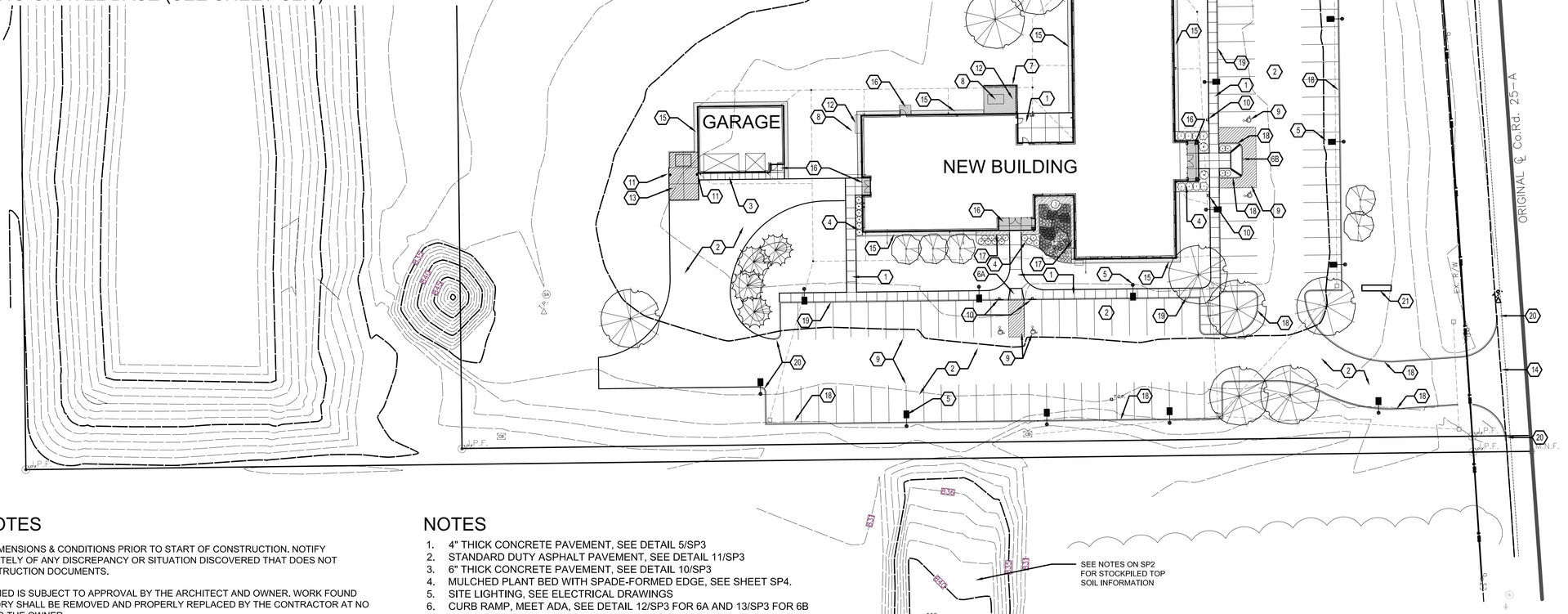


LOCATION OF EXISTING GRAVEL BASE (SEE SHEET C2.1)



GENERAL NOTES

A. FIELD VERIFY ALL DIMENSIONS & CONDITIONS PRIOR TO START OF CONSTRUCTION. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCY OR SITUATION DISCOVERED THAT DOES NOT CONFORM TO CONSTRUCTION DOCUMENTS.

B. ALL WORK PERFORMED IS SUBJECT TO APPROVAL BY THE ARCHITECT AND OWNER. WORK FOUND TO BE UNSATIFACTORY SHALL BE REMOVED AND PROPERLY REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

C. ALL ITEMS AND MATERIAL NOTED AS 'REMOVE' SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR OFF SITE. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER.

D. TEMPORARILY SUPPORT ALL WALLS, HEADERS, STRUCTURES, PIPING, DUCTWORK, CONDUIT, ETC., AS REQUIRED UNTIL FINAL SUPPORTS ARE IN PLACE.

E. PATCH & REPAIR ALL AREAS, SURFACES & MATERIALS TO CONDITION OF SURROUNDING AREA WHERE LEFT EXPOSED TO VIEW. NEW WALKS TO MEET EXISTING IN A SMOOTH AND CONTINUOUS CONDITION.

F. CLOSELY COORDINATE ALL WORK WITH THE OWNER AND WITH ALL OTHER CONTRACTORS HIRED BY THE OWNER. CLARIFY IN ADVANCE ANY QUESTIONS AS TO SCOPE OF WORK AND AREAS OF RESPONSIBILITY.

NOTES

1. 4" THICK CONCRETE PAVEMENT, SEE DETAIL 5/SP3
2. STANDARD DUTY ASPHALT PAVEMENT, SEE DETAIL 11/SP3
3. 6" THICK CONCRETE PAVEMENT, SEE DETAIL 10/SP3
4. MULCHED PLANT BED WITH SPADE-FORMED EDGE, SEE SHEET SP4.
5. SITE LIGHTING, SEE ELECTRICAL DRAWINGS
6. CURB RAMP, MEET ADA, SEE DETAIL 12/SP3 FOR 6A AND 13/SP3 FOR 6B
7. SCREEN WALL, SEE ARCHITECTURAL DRAWINGS
8. HVAC UNITS, SEE PLUMBING DRAWINGS
9. PAINT PAVEMENT AS SHOWN ON DRAWINGS, SEE DETAIL 2/SP3 FOR ACCESSIBLE PARKING SYMBOL AND SPECIFICATIONS FOR PAINT INFORMATION
10. ACCESSIBLE PARKING SIGN, SEE DETAIL 1/SP3
11. STEEL, CONCRETE FILLED BOLLARDS, SEE DETAIL 4/SP3
12. EXTERIOR CONCRETE EQUIPMENT PAD, SEE SHEET H3.3
13. 8" THICK CONCRETE PAVEMENT, SEE DETAIL 6/SP3
14. NEW PAVEMENTS TO MEET EXISTING IN A SMOOTH AND CONTINUOUS CONDITION
15. GRAVEL MOW STRIP WITH EDGING, SEE DETAIL 14/SP3
16. FROST PROOF SLAB, SEE STRUCTURAL DRAWINGS FOR DETAIL
17. STONE MULCH
18. BARRIER CURB, SEE DETAIL 8/SP3
19. INTEGRAL CURB, SEE DETAIL 7/SP3
20. TAPERED CURB, SEE DETAIL 9/SP3
21. SIGN WITH MASONRY, SEE ELECTRICAL DRAWINGS FOR CONDUIT INFORMATION

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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY
AND MENTAL HEALTH
1280 N COUNTY RD. 25A TROY, OHIO 45373

JACYN DESIGN GROUP

STATE OF OHIO
K. JOHN FREYTAG
412
REGISTERED
LANDSCAPE ARCHITECT

K. John Freytag
K. John Freytag
License No. 412
Expiration 12/31/21

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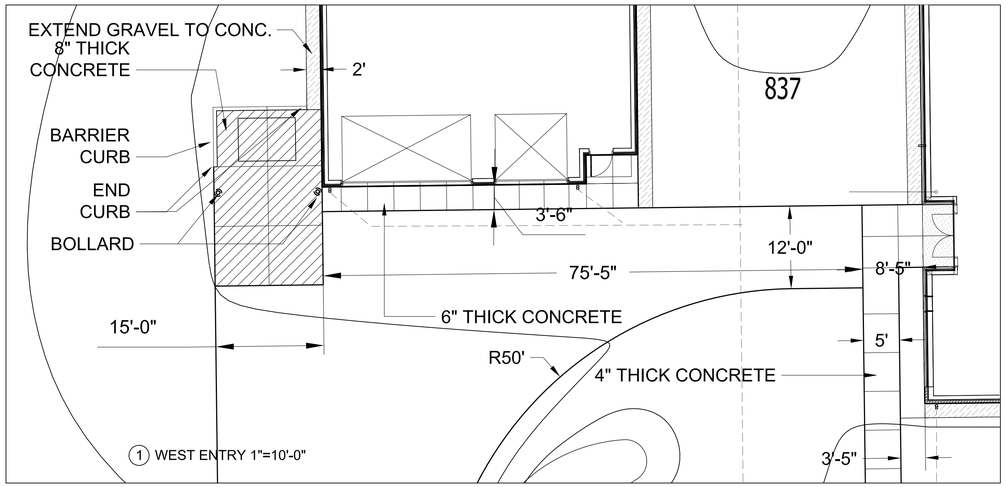
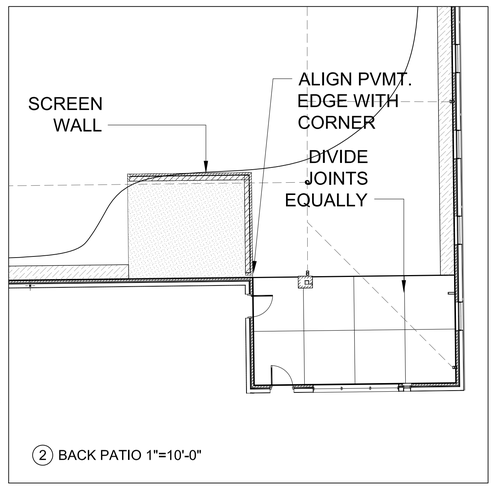
SITE NOTES

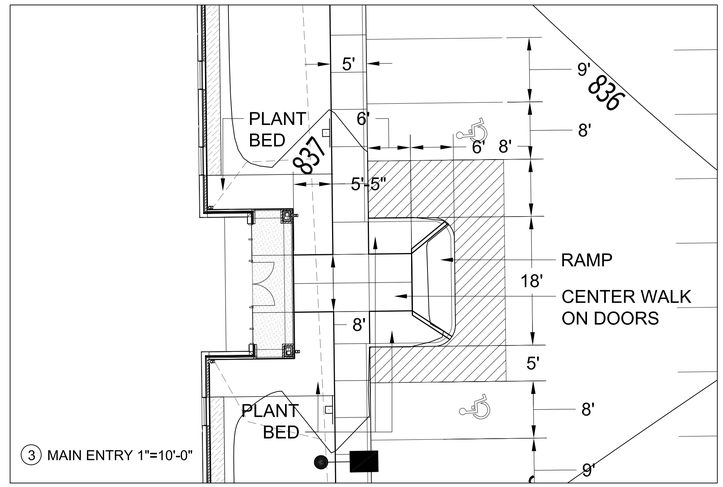
SP1



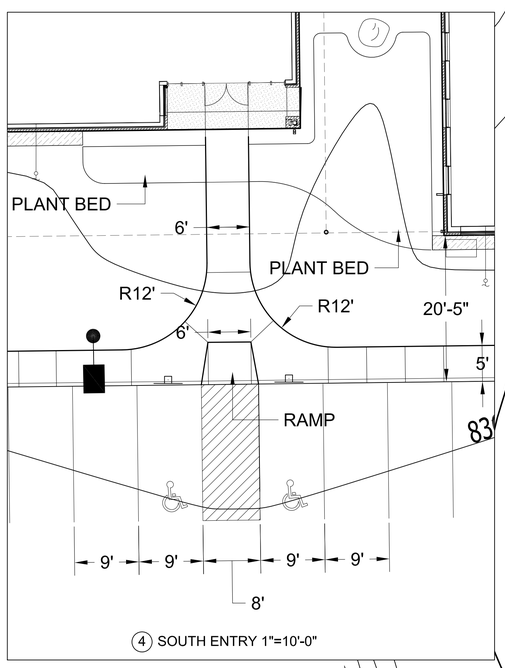
① WEST ENTRY 1"=10'-0"



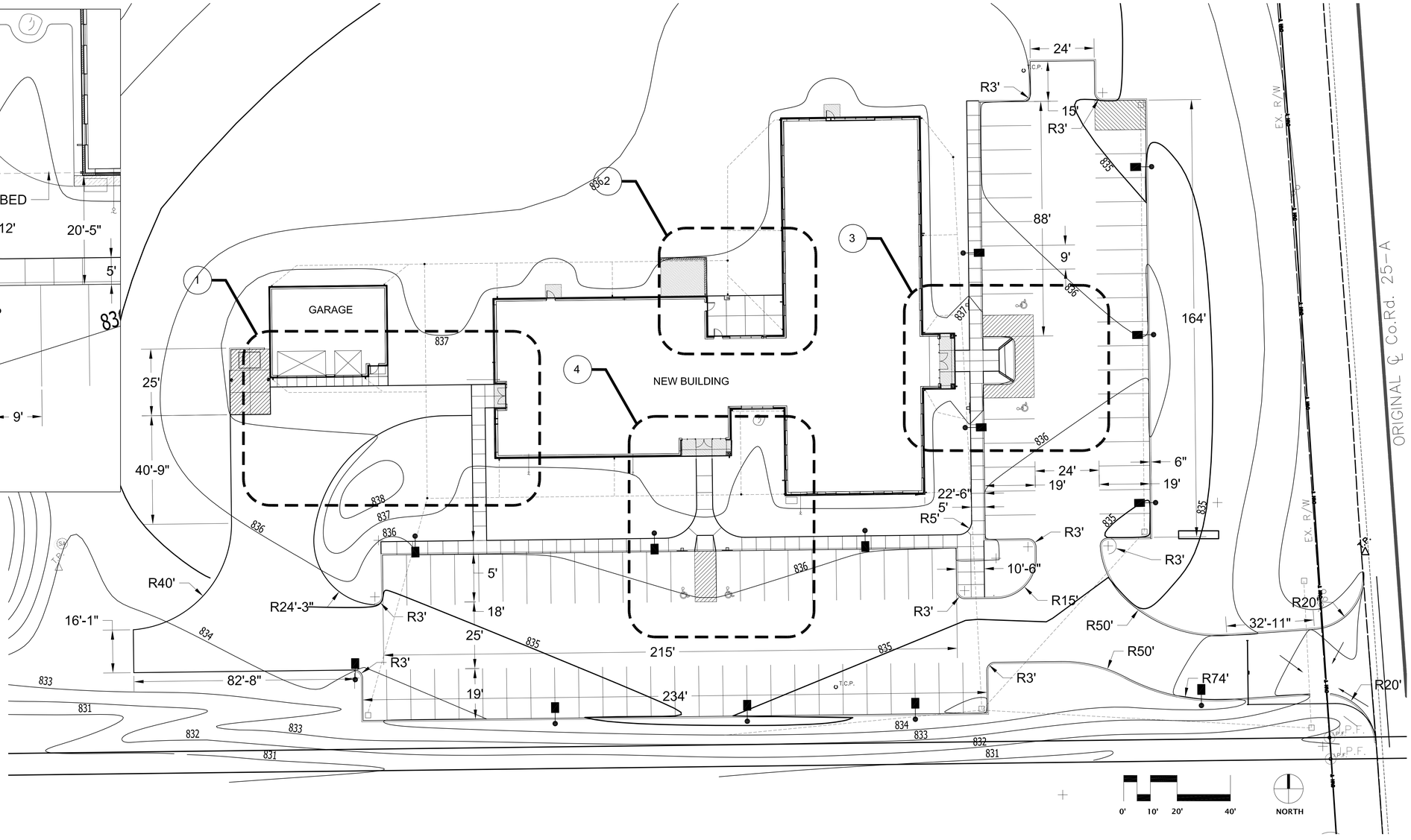
② BACK PATIO 1"=10'-0"



③ MAIN ENTRY 1"=10'-0"



④ SOUTH ENTRY 1"=10'-0"



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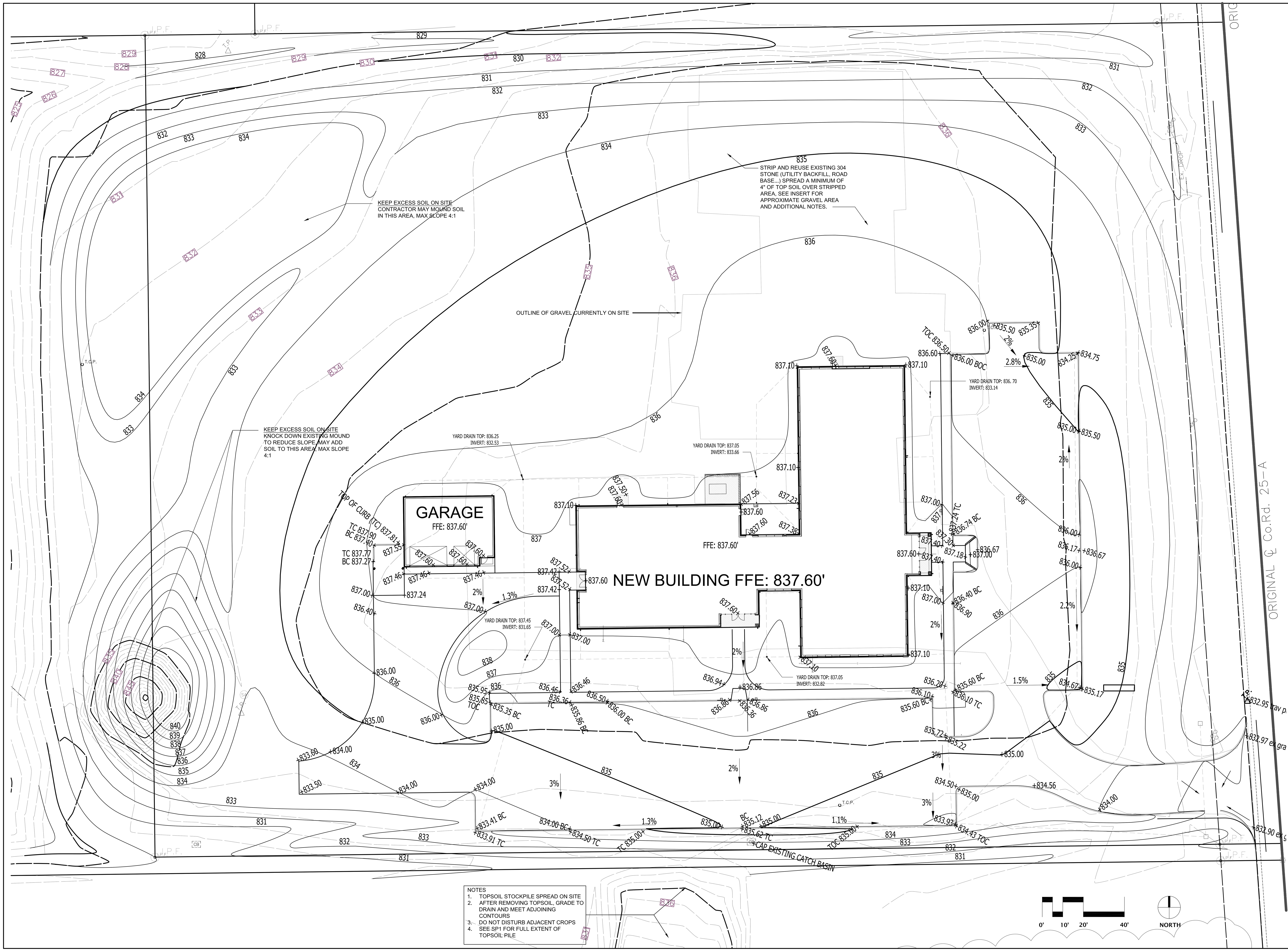
DIMENSIONS

SP1.2


KEEP EXCESS SOIL ON SITE
CONTRACTOR MAY MOUND SOIL
IN THIS AREA, MAX SLOPE 4:1
STRIP AND REUSE EXISTING 304
STONE (UTILITY BACKFILL, ROAD
BASE...) SPREAD A MINIMUM OF
4" OF TOP SOIL OVER STRIPPED
AREA, SEE INSERT FOR
APPROXIMATE GRAVEL AREA
AND ADDITIONAL NOTES.
OUTLINE OF GRAVEL CURRENTLY ON SITE
KEEP EXCESS SOIL ON SITE
KNOCK DOWN EXISTING MOUND
TO REDUCE SLOPE, MAY ADD
SOIL TO THIS AREA, MAX SLOPE
4:1
GARAGE
FFE: 837.60'
NEW BUILDING FFE: 837.60'
FFE: 837.60'
TOP OF CURB (TC) 837.81
YARD DRAIN TOP: 836.25
INVERT: 832.53
YARD DRAIN TOP: 837.05
INVERT: 833.66
YARD DRAIN TOP: 836. 70
INVERT: 833.14
YARD DRAIN TOP: 837.45
INVERT: 831.65
YARD DRAIN TOP: 837.05
INVERT: 832.82
CAP EXISTING CATCH BASIN
ORIGINAL ℄ Co.Rd. 25-A
NOTES
1. TOPSOIL STOCKPILE SPREAD ON SITE
2. AFTER REMOVING TOPSOIL, GRADE TO DRAIN AND MEET ADJOINING CONTOURS
3. DO NOT DISTURB ADJACENT CROPS
4. SEE SP1 FOR FULL EXTENT OF TOPSOIL PILE
0' 10' 20' 40'
NORTH

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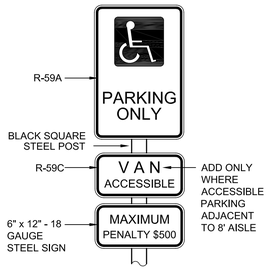
GRADING PLAN

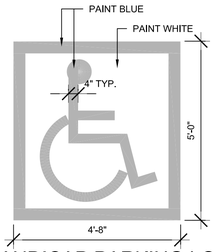
SP2

RESERVED PARKING FOR HANDICAPPED SIGNS

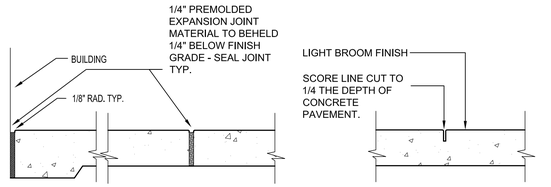
ODOT R-59A AND R-59C SIGNS SHALL BE PLACED ACCORDING TO DIAGRAM AT ALL HANDICAP STALLS AS SHOWN ON PLAN.
SIGNS SHALL BE LOCATED SO THEY CANNOT BE OBSCURED BY A VEHICAL PARKED IN THE SPACE.



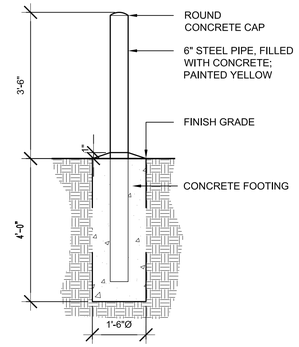
1 DIAGRAM FOR PLACEMENT OF HANDICAP SIGN
1/4"=1'-0"



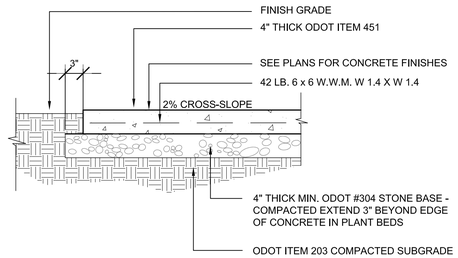
2 HANDICAP PARKING LOGO
1/2" = 1'-0"



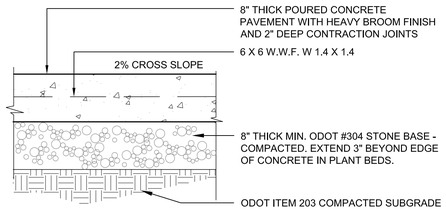
3 TYPICAL CONCRETE PAVEMENT JOINTS
1"=1'-0"



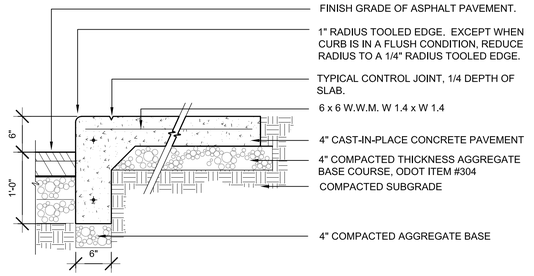
4 TYPICAL BOLLARD
1/2"=1'-0"



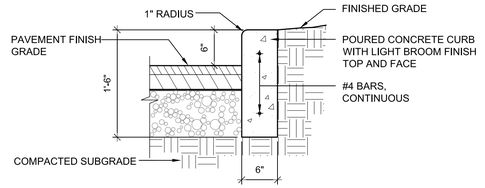
5 TYPICAL 4" THICK CONCRETE PAVEMENT DETAIL
1"=1'-0"



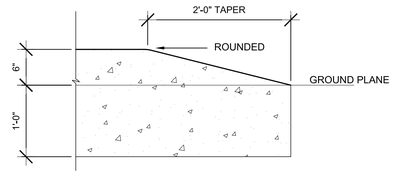
6 8" CONCRETE PAVEMENT DETAIL
1" = 1'-0"



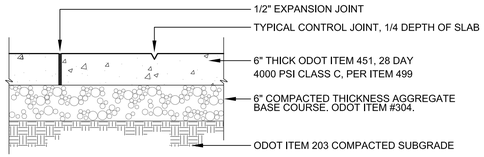
7 INTEGRAL CONCRETE CURB & WALK
1"=1'-0"



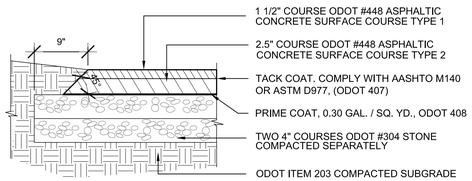
8 BARRIER CURB DETAIL
1"=1'-0"



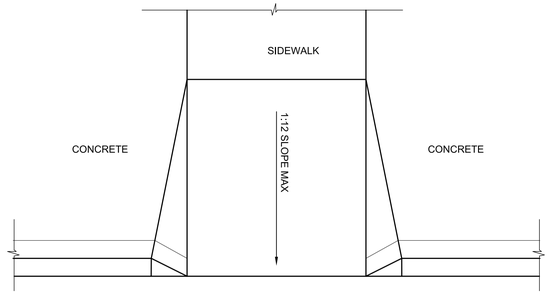
9 TAPERED CURB
1"=1'-0"



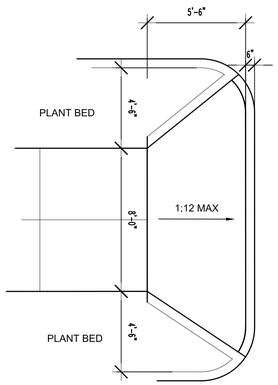
10 6" THICK CONCRETE PAVEMENT
1"=1'-0"



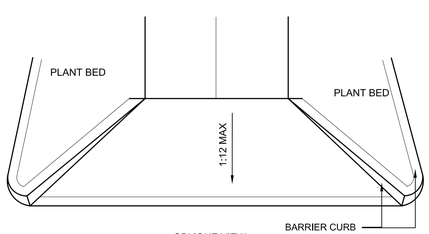
11 ASPHALT PAVING: STANDARD DUTY
1"=1'-0"



12 HANDICAP RAMP A
1/2" = 1' - 0"

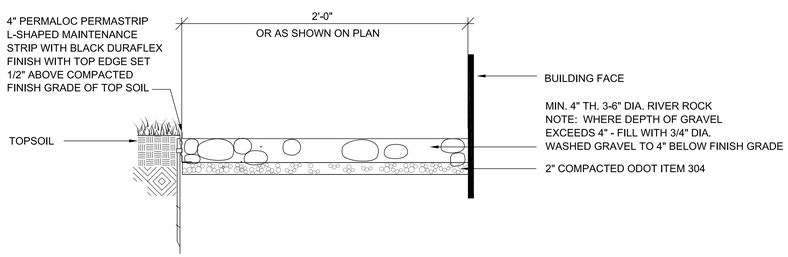


PLAN VIEW



OBLIQUE VIEW

13 HANDICAP RAMP B
1/4"=1'-0"



14 GRAVEL STRIP DETAIL
1"=1'-0"

NOTES:
1. 16' SECTIONS TO INCLUDE (5) 12" ALUM. STAKES
2. COMPACT GRADES ADJACENT TO EDGING TO AVOID SETTLING. FINISH GRADE TO BE 1/2" BELOW TOP OF EDGING.
3. CORNERS - CUT BASE OF MATERIAL TO FORM A CONTINUOUS CORNER.
4. PERMALOC PERMASTRIP AS MANUFACTURED BY PERMALOC CORPORATION, HOLLAND, MI. PHONE: 1-800-356-9960, 1-616-399-9600.

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DETAILS

SP3

QTY		BOTANICAL NAME	COMMON NAME	SIZE	ROOT
TREES					
3		ACER GRISEUM	PAPERBARK MAPLE	2" CAL.	B&B
3		ACER S. WRIGHT BROS.	WRIGHT BROS. SUGAR MAPLE	2" CAL.	B&B
2		AMELANCHIER X GR. 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	1.5" CAL.	B&B
2		CRATAEGUS V. 'WINTER KING'	WINTER KING HAWTHORN	1.5" CAL.	B&B
1		GINKGO 'AUTUMN GOLD' MALE ONLY	AUTUMN GOLD GINGKO	1.5" CAL.	B&B
1		LIRIODENDRON TULIPIFERA	TULIPTREE	2" CAL.	B&B
1		MAGNOLIA X BUTTERFLIES	BUTTERFLIES MAGNOLIA	1.5" CAL.	B&B
3		METASEQUOIA	DAWN REDWOOD	2" CAL.	B&B
4		PICEA G. DENSATA	BLACK HILLS SPRUCE	6' HEIGHT	B&B
3		PINUS STROBUS	WHITE PINE	6' HEIGHT	B&B
3		QUERCUS RUBRA	RED OAK	2" CAL.	B&B
SHRUBS					
6		HYDRANGEA P. 'JANE'	LITTLE LIME HYDRANGEA	18" SPREAD	#3 CONT.
16	1	ROSA 'MEIGGILI'	PEACH DRIFT ROSE	18"SPREAD	#3 CONT.
8		TAXUS CUSPIDATA 'GREEN WAVE'	GREEN WAVE YEW	15" SPREAD	B&B
2		VIBURNUM X BURKWOODII 'MOHAWK'	BURKWOOD MOHAWK VIBURNUM	24" SPREAD	B&B
PERENNIALS					
15	15	GERANIUM C. 'PURPLE PILLOW'	PURPLE PILLOW GERANIUM	CLUMP	#1 CONT.
A	24	THYMUS SERPYLLUM	MAGIC CARPET THYME	CLUMP	#1 CONT.
B	21	THYMUS PRAECOX 'PURPLE CARPET'	PURPLE CARPET CREEPING THYME	CLUMP	#1 CONT.
C	22	NEPETA X F. 'WALKER'S LOW'	WALKER'S LOW CATMINT	CLUMP	#1 CONT.
D	30	DIANTHUS G. 'FIRE WITCH'	FIRE WITCH DIANTHUS	CLUMP	#1 CONT.
E	9	THYMUS PSEUDOLANUGINOSUS	WOOLY THYME	CLUMP	#1 CONT.

PLANTING NOTES

A. INSTALL 3" LAYER OF SHREDDED WOOD BARK MULCH TO ALL PLANT BEDS UNLESS OTHERWISE NOTED.

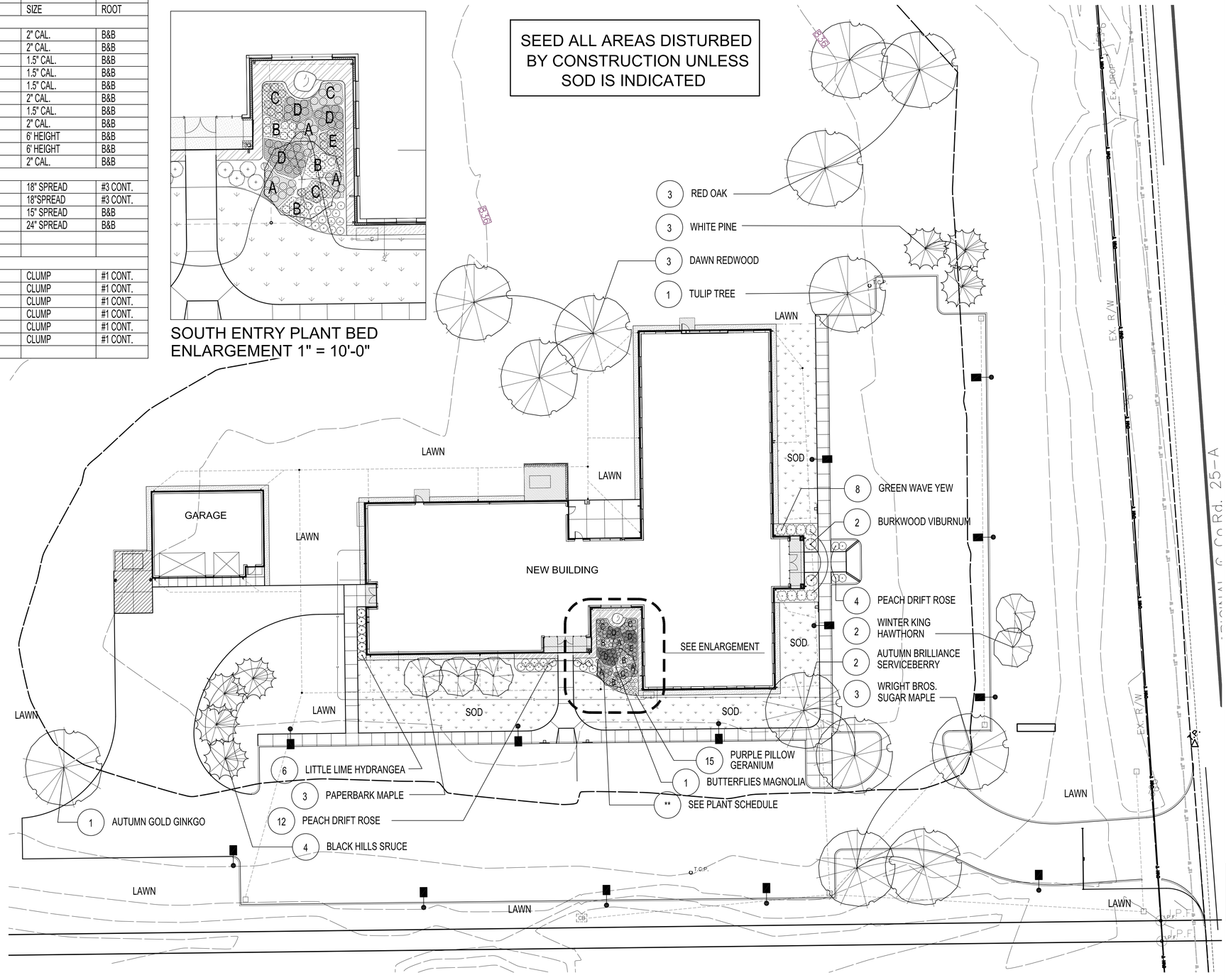
B. ALL PLANTS OCCURRING IN A CONTINUOUS ROW OR FORMAL ARRANGEMENT SHALL HAVE UNIFORM HEIGHT AND SPREAD AND HABIT OF GROWTH.

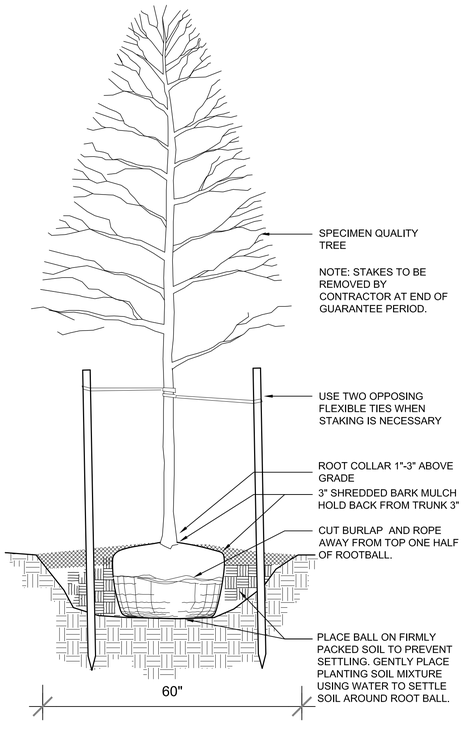
C. ALL SHRUB BEDS SHALL BE EXCAVATED AND BACKFILLED AS SHOWN ON DETAILS.

D. SEED AREAS LABELED LAWN. PLACE SOD AROUND BUILDING WHERE INDICATED ON LANDSCAPE PLAN.

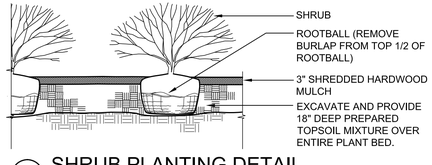
SOUTH ENTRY PLANT BED ENLARGEMENT 1" = 10'-0"

SEED ALL AREAS DISTURBED BY CONSTRUCTION UNLESS SOD IS INDICATED

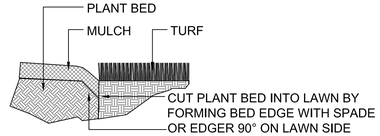




1 TREE PLANTING DETAIL
3/4"=1'-0"



2 SHRUB PLANTING DETAIL
1"=1'-0"



3 SPADE-FORMED PLANT BED EDGE
3/4"=1'-0"

0' 10' 20' 40' NORTH

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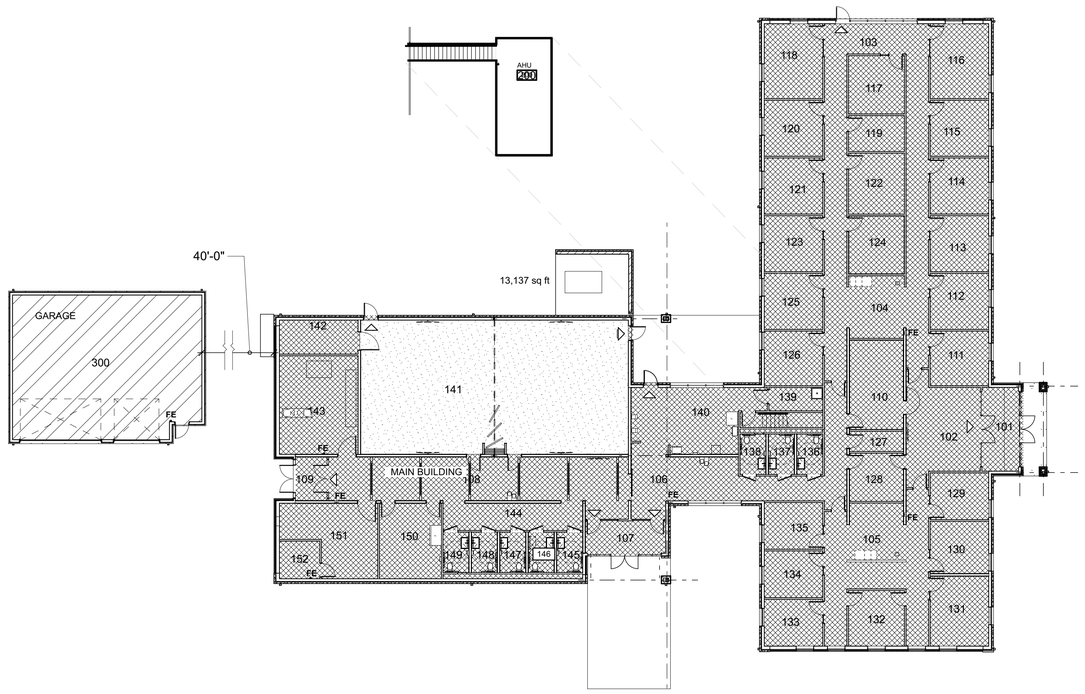
LANDSCAPE

SP4

A1 ROOM SIZE STUDY

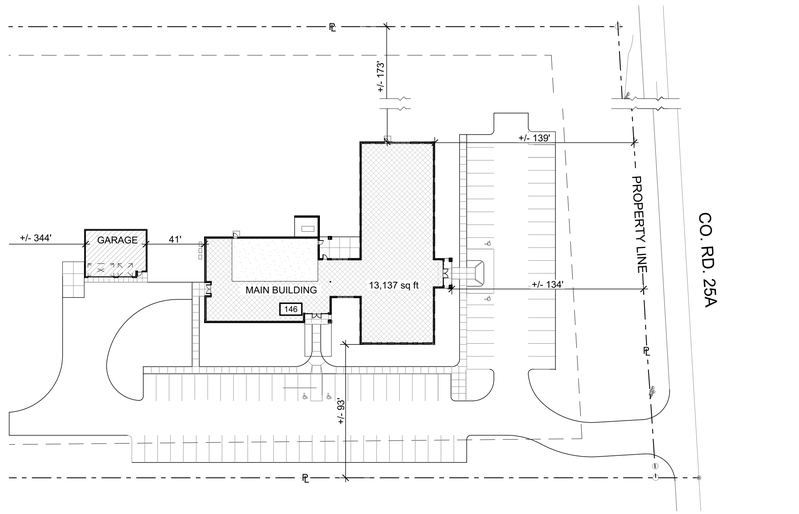
RM #	ROOM NAME	Area
101	VESTIBULE	159
102	WAITING	349
103	HALL	873
104	WK. ROOM	185
105	WK. ROOM	575
106	HALL	521
107	VESTIBULE	129
108	HALL	695
109	VEST	69
110	CONF.	241
111	OFFICE	159
112	OFFICE	163
113	OFFICE	163
114	OFFICE	163
115	OFFICE	162
116	OFFICE	218
117	OFFICE	162
118	EXEC. DIR.	218
119	REC. STOR.	100
120	OFFICE	163
121	OFFICE	163
122	REC. STOR.	169
123	OFFICE	163
124	IT. WK. ROOM	162
125	OFFICE	163
126	OFFICE	159
127	ELEC	54
128	OFFICE	129
129	OFFICE	136
130	REC.	152
131	DIR. OFF.	203
132	CONF.	154
133	OFFICE	135
134	OFFICE	136
135	OFFICE	136
136	REST	52
137	REST	52
138	REST	52
139	MOP SINK	62
140	BREAK	397
141	CONFERENCE	1,792
142	TABLE STORAGE	133
143	MECHANICAL	386
144	HALL	438
145	REST	52
146	FAM REST	52
147	REST	52
148	REST	52
149	REST	52
150	SERVING	332
151	GENERAL STORAGE	287
152	ELEC	296
200	AHU	312
300	MAINT. GARAGE	1,336
		13,868 sq ft



2 / A1.1 FLOOR CODE
SCALE: 1/16" = 1'-0"

EGRESS

FE FIRE EXTIGUISHER, REFER TO SPECIFICATIONS



1 / A1.1 DISTANCES BETWEEN BUILDING / PROPERTY LINES DIAGRAM
SCALE: 1" = 50'

N

OHIO BUILDING CODE INFORMATION

THE MAIN BUILDING IS A NON SEPARATED / MIXED USE AND OCCUPANCY FACILITY HOUSING ADMINISTRATION OFFICES (B) WITH RELATED CONFERENCE / TRAINING ROOMS (A-3). A DETACHED PARKING GARAGE (S-2) IS FOR PARKING AGENCY VEHICLES OUT OF THE WEATHER AND WILL NOT BE USED FOR VEHICLE MAINTENANCE.

THE MAIN BUILDING WILL BE FULLY FIRE SUPPRESSED. THE DETACHED PARKING GARAGE WILL NOT BE FIRE SUPPRESSED.

	NON SEPARATED MIXED USE AND OCCUPANCY B / A-3 SPRINKLERED	S-2 NON-SPRINKLERED
TYPE OF CONSTRUCTION	IIB	VB
ALLOWABLE HEIGHT TABLE 504.3	75'-0"	40'-0"
ALLOWABLE STORIES TABLE 504.4	3	1
ALLOWABLE AREA TABLE 506.2	38,000 SF	13,500SF
ACTUAL HEIGHT	30'-8" (MAX)	21'-0"
ACTUAL STORIES	1	1
ACTUAL AREA	13,137 SF	1, 314 SF

* CODE EDITIONS 2017 OBC, 2017 OMC, 2017 OPC, NFPA-13-2016

* ATTIC SPACE IS NOT USED FOR LIVING PURPOSES, STORAGE OR FUEL FIRED EQUIPMENT AND

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS
TYPE II B & TYPE V B

PRIMARY STRUCTURAL FRAME	0 HRS
BEARING WALL INTERIOR / EXTERIOR	0 HRS/ TABLE 602
NON BEARING EXTERIOR WALLS	TABLE 602
NON BEARING INTERIOR WALLS	0 HRS.
FLOOR CONSTRUCTION	0 HRS.
ROOF CONSTRUCTION	0 HRS.

OCCUPANT LOAD
TABLE 1004.1.2

BUSINESSS	13,137 SF - 1794 SF =	11,343 SF / 100 sf/occ =	114 occ
ASSEMBLY			
CONCENTRATED	1,794 SF / 7 sf/occ =		256 occ.
UNCONCENTRATED	1,794 SF / 15 sf/occ =		119 occ.

TWO MEANS OF EGRESS, DIRECTLY TO THE EXTERIOR, ARE PROVIDED FROM CONFERENCE CENTER.

TOTAL OCCUPANT LOAD FOR MAIN BUILDING (A-3 - 256 CONCENTRATED, B - 114) 370 occ.

STORAGE 1,314 SF / 200 sf/occ = 6 occ.

PLUMBING FIXTURE REQUIREMENTS
TABLE 2902.2
NOTE: ALL TOILET ROOMS ARE SINGLE OCCUPANT / NON GENDER SPECIFIC

	REQUIRED				PROVIDED
	ASSEMBLY (A3) BASED ON CONCENTRATED 128 FEMALE 128 MALE		BUSINESS (B) BASED ON OCCUPANT LOAD 66 FEMALE 66 MALE		
WATER CLOSETS					
	FEMALE (1 PER 65)	2	FEMALE (1 PER 50)	2	
	MALE (1 PER 125)	2	MALE (1 PER 50)	2	
TOTAL		4		4	8
LAVATORIES					
	FEMALE (1 PER200)	1	MALE (1 PER 50)	1	
	MALE (1 PER200)	1	MALE (1 PER 50)	1	
TOTAL		2		2	8
DRINKING FOUNTAIN	1 PER 500	1	1 PER 100	2	4
SERVICE SINK					1

POSTING OF ASSEMBLY OCCUPANT LOADS:
CONFERENCE 141 - CONCENTRATED 256 (MAX)

FIRE EXTINGUISHERS:
PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED PER OBC 906.
OCCUPANCY IS CONSIDERED ORDINARY HAZARD PER TABLE (906.3 (1))

STRUCTURAL DESIGN LOADS:
REFER TO SHEET S1.0 FOR STRUCTURAL DESIGN LOADS.

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FOR
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STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

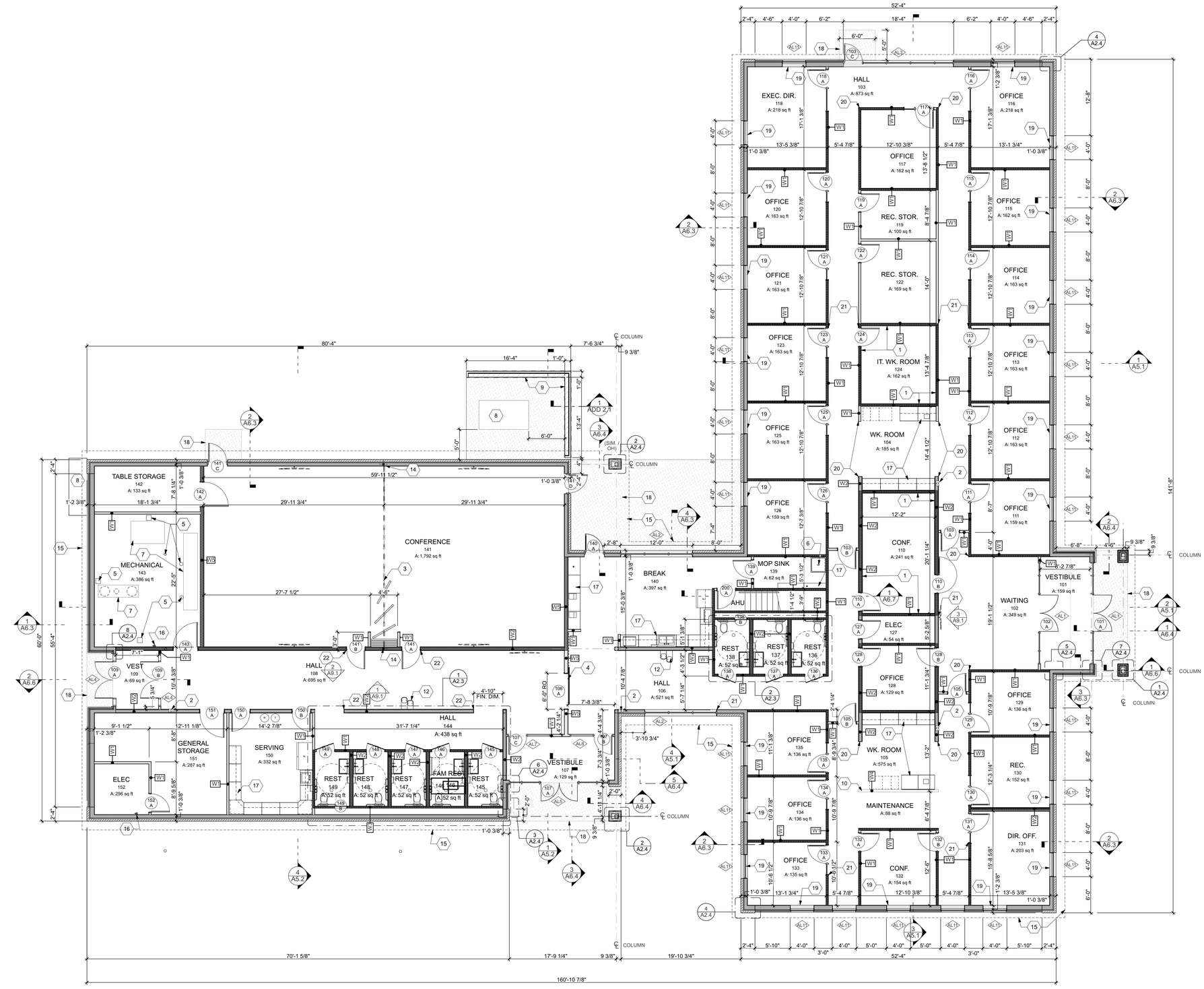
REVISIONS
FOR REBID

COMM. NUMBER	DATE
1615.04	05/12/21
DRAWN BY: AF	CHECKED BY: DF

CODE PLAN

A1.1

PLOT DATE: 5/13/21 @ 10:38 AM LAYOUT: A1.A1.1 | OVERALL PLANS - CODE PLAN FILENAME: 1615.04_ATC_Rebid FILE PATH: BIM360docs\1615.04_ATC_Rebid



1 A2.1 FLOOR PLAN
SCALE: 1/8" = 1'-0"

FLOOR PLAN NOTES

ALL NOTES MAY NOT BE REFERENCED ON THIS SHEET.

1. CONFERENCE ROOM 110 & IT. WK. ROOM 124 INCLUDES 3/8" OSB SHEATHING ON INTERIOR FACE OF STUD ON ALL WALLS. GYP. BD. FINISH OVER SHEATHING.
2. FULLY RECESSED FIRE EXTINGUISHER / CABINET. REFER TO DETAIL ON SHEET A8.2.
3. OPERABLE WALL, REFER TO SPECIFICATIONS.
4. OPERABLE SLIDING DOOR. REFER TO DETAIL.
5. FLOOR DRAIN, REFER TO PLUMBING DRAWINGS.
6. MOP SINK, REFER TO PLUMBING DRAWINGS.
7. NEW CONCRETE EQUIPMENT PAD. COORDINATE W/ HVAC DRAWINGS
8. EXTERIOR CONCRETE SLAB UNDER MECHANICAL EQUIPMENT. REFER TO STRUCTURAL AND MEP DRAWINGS AND COORDINATE WITH MEP CONTRACTOR.
9. 8'-0" HIGH CMU WALL FOR MECHANICAL EQUIP. SCREEN
10. 4'-0" STUD WALL W/ SOLID SURFACE CAP.
11. 2 LAYERS OF 5/8" GYP. @ VERTICAL LEG OF TRUSS W/ BATT SOUND ATTENUATION. REFER TO PLAN
12. DRINKING FOUNTAIN, REFER TO SPECIFICATIONS.
13. PLATFORM: 3/4" T & G FRT PLYWOOD ON 8" MTL STUDS w/ 1/2" GYP. BOARD ON THE BOTTOM, PLATFORM 7" LOWER AT STAIR LANDINGS. - SEE ROOF FRAMING PLAN.
14. TUBE STEEL COLUMN, REFER TO STRUCTURAL DWGS.
15. ROOF OVERHANG.
16. WALL MOUNTED FIRE EXTINGUISHER, REFER TO SPECIFICATIONS.
17. CASEWORK/EQUIPMENT, REFER TO EQUIPMENT DRAWINGS.
18. NEW CONCRETE STOOP / FROST SLAB. REFER TO STRUCTURAL DRAWINGS
19. WINDOW ROLLER SHADES PROVIDE BLOCKING AS NEEDED FOR SUPPORT, REFER TO SPECIFICATIONS.
20. CORNER GUARD, REFER TO SPECIFICATIONS.
21. GYPSUM BOARD CONTROL JOINT; REFER TO SPECIFICATIONS.
22. GYPSUM BOARD CONTROL JOINT; REFER TO INTERIOR ELEVATIONS AND SPECIFICATIONS.

FLOOR PLAN GENERAL NOTES

A. FLOOR PLAN DIMENSIONS FOR EXTERIOR WALLS ARE TO THE EXTERIOR FACE OF MASONRY AND FACE OF STUD.
B. FLOOR PLAN DIMENSIONS FOR INTERIOR WALLS ARE TO ONE SIDE OF METAL STUD (U.N.O)
C. EXTERIOR MASONRY VENEER SHALL BE RUNNING BOND UNLESS NOTED OTHERWISE.
D. DOOR FRAME LOCATED 4" FROM WALL AT HINGE SIDE, UNLESS NOTED OR DIMENSIONED OTHERWISE.
E. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
F. PROVIDE CONTINUOUS FOUNDATION INSULATION AROUND THE ENTIRE PERIMETER OF THE BUILDING. REFER TO WALL SECTIONS FOR DETAIL.
G. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
H. REFER TO EQUIPMENT PLANS FOR ALL MOUNTING HEIGHT OF CASEWORK.
I. SEE MOUNTING HEIGHT STANDARDS FOR ACCESSORIES AND MISC. EQUIPMENT MOUNTING HEIGHTS.
J. REFER TO REFLECTED CEILING PLANS FOR BULKHEAD/SOFFIT LOCATIONS AND DETAILS.
K. REFER TO DETAILS FOR TYPICAL COMMON CONTROL JOINTS AND
L. omit
M. CONTINUOUS BLOCKING SHALL BE INSTALLED IN ALL STUD WALLS FOR EQUIPMENT & CASEWORK MOUNTING. COORDINATE LOCATIONS REQUIRED PRIOR TO INSTALLATION.
N. SEE SHEET A7.1 FOR DOOR AND INTERIOR WINDOW SCHEDULE.
O. SEE SHEET A7.1 FOR EXTERIOR WINDOW TYPES.
P. SEE SHEET A7.1 FOR LOUVER TYPE.
Q. SEE SHEET A7.1 FOR ROOM FINISH SCHEDULE.
R. SEE SPECIFICATIONS FOR ROOM SIGNAGE.
S. SEE SPECIFICATIONS FOR DOOR HARDWARE SETS.
T. COORDINATE W/ OWNER ANY ELECTRICAL, PLUMBING AND/OR WOOD BLOCKING REQUIREMENTS OF ITEMS NOTED "OWNER PROVIDED".
U. REFER TO A8 DRAWINGS FOR EQUIPMENT PLANS.

LEGEND

REFER TO WALL SECTIONS, DETAILS AND INTERIOR WALL TYPES FOR WALL CONSTRUCTION

- (#) KEY NOTE, SEE ABOVE
- W2B INTERIOR WALL TYPE, REFER TO SHEET A2.3
- AL8 ALUMINUM FRAMED OPENING, REFER TO SHEET A7.1
- (#) DOOR OPENING, REFER TO DOOR SCHEDULE ON SHEET A7.1
- ACOUSTIC FIBERGLASS INSULATION

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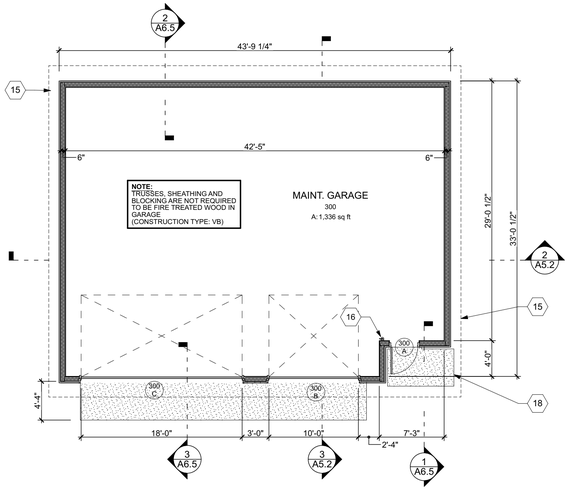
FIRST FLOOR PLAN

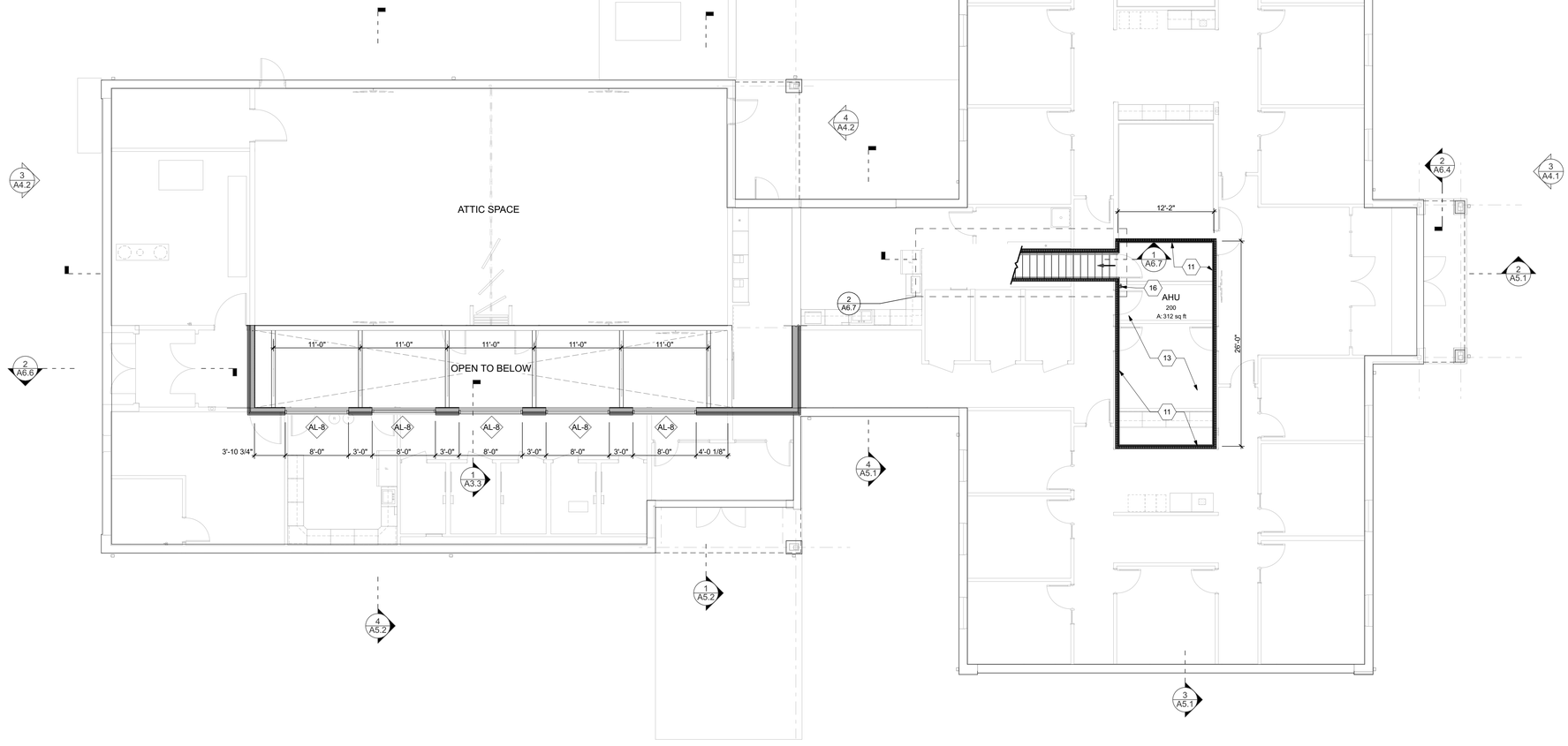
A2.1

PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A2-A2.1-FLOOR PLANS - FIRST FLOOR PLAN FILENAME: 1615.04_ATC_Rebid FILE PATH: BIM\cloud\ freytagnc - BIM\cloud os a Service\1615.04_ATC_Rebid



3 A2.2 GARAGE FLOOR PLAN

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



1 A2.2 ATTIC PLAN

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

N

FLOOR PLAN NOTES

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4. OPERABLE SLIDING DOOR. REFER TO DETAIL.
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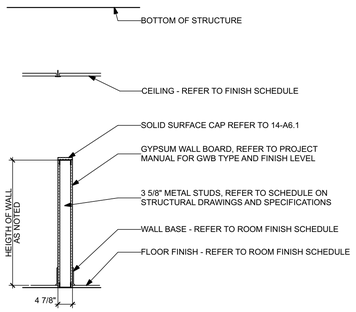
AF	DF

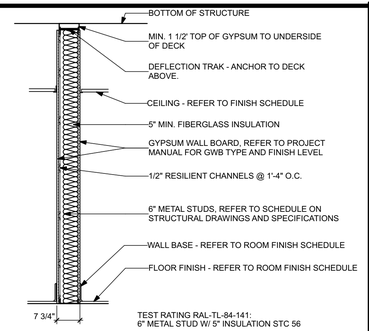
GARAGE AND AHU PLAN

A2.2

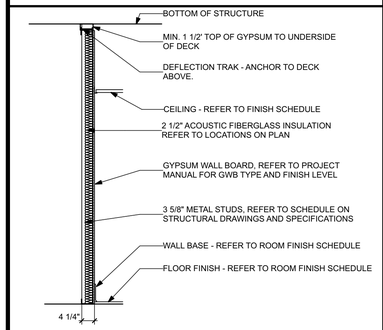
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A2-A2.2-FLOOR PLANS - GARAGE AND AHU PLAN FILENAME: 1615.04_AIC_Rebid FILE PATH: BIMcloud: freytagjnc - BIMcloud as a Service\1615.04_AIC_Rebid



WALL TYPE W4



WALL TYPE W5



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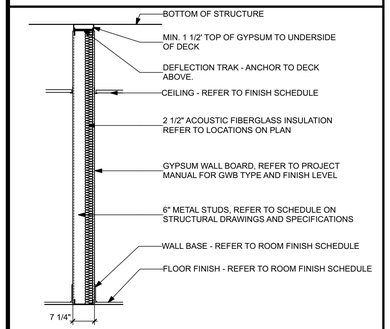

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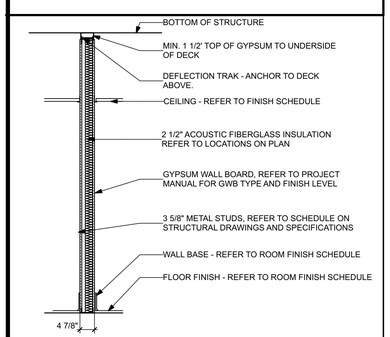
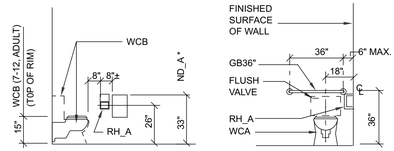


WALL TYPE W1

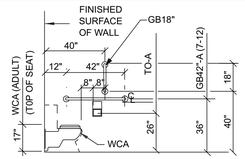
INTERIOR WALL TYPES

NOTE: WALL IS FINISH DIMENSION

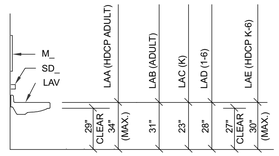


WCB -WATER CLOSET ADULT
* NAPKIN DISPOSAL MAY BE MOUNTED ON OPPOSITE WALL. SEE PLAN FOR LOCATION

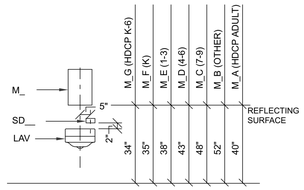
WCA -WATER CLOSET (HDCP - ADULT)
GB -GRAB BAR
RH -TOILET ROLL HOLDER
ND -SANITARY NAPKIN DISPOSAL
* NAPKIN DISPOSAL MAY BE MOUNTED ON OPPOSITE WALL. SEE PLAN FOR LOCATION



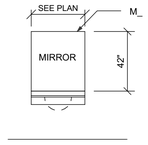
ACCESSIBLE ADULT LOCATION



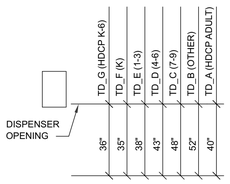
LA -LAVATORY



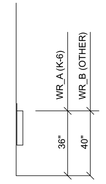
SD -SOAP DISPENSER (N.I.C)
M -MIRROR



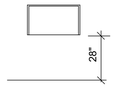
M -MIRROR OVER COUNTERTOP OR CABINET



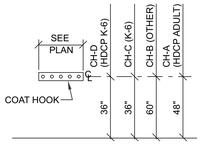
TD -PAPER TOWEL DISPENSER



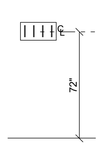
WR -WASTE RECEPTACLE SURFACE MOUNTED OR SEMI-RECESSED



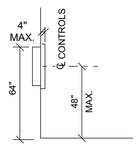
BCS - BABY CHANGING STATION



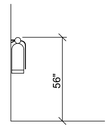
CH -COAT HOOKS



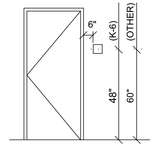
MH -MOP HOLDER



FEC -FIRE EXTINGUISHER CABINET



FE -FIRE EXTINGUISHER WALL HUNG



INTERIOR SIGN
REFER TO PROJECT MANUAL

NOTE:

1. MOUNTING HEIGHTS INDICATED ABOVE ARE BASED UPON TOILET ACCESSORIES SUPPLIED BY BRADLEY CORP. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MOUNTING HEIGHTS OF TOILET ACCESSORIES SUPPLIED BY OTHER MANUFACTURERS.
2. TOILET ACCESSORY DESIGNATIONS REFERS TO THE TYPE OF TOILET ACCESSORY (AS INDICATED IN THE SPECIFICATIONS) AND THE MOUNTING HEIGHTS. EX: TD1B INDICATES PAPER TOWEL DISPENSER TYPE 1 WITH A MOUNTING HEIGHT OF 52" (B).
3. REFER TO PLUMBING FIXTURE SCHEDULE FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

HDCP = HANDICAPPED

PLAN ENLARGEMENTS NOTES

ALL NOTES MAY NOT BE REFERENCED ON THIS SHEET.

1. ADA CLEAR FLOOR SPACE AT WATER CLOSETS.
2. ADA CLEAR FLOOR SPACE AT LAVATORIES.
3. 5'-0" ADA TURNING RADIUS.
4. FLOOR DRAIN, SLOPE FLOOR SLAB TO DRAIN 1/4" PER FOOT.
5. omit
6. ACCESS DOOR, REFER TO DOOR SCHEDULE AND SPECIFICATIONS.
7. DRINKING FOUNTAIN, REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS

PLAN ENLARGEMENT GENERAL NOTES

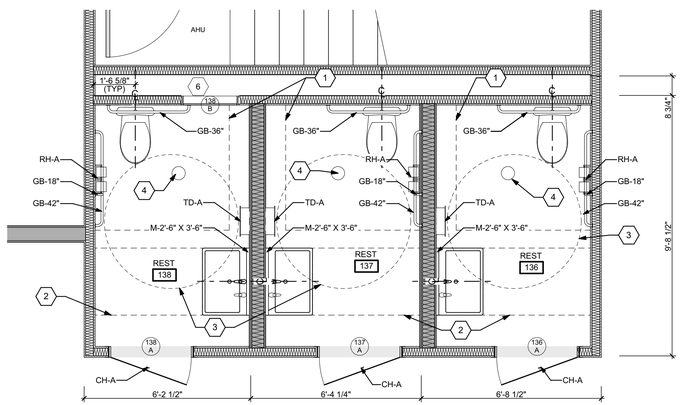
A. REFER TO THIS SHEET FOR ALL MOUNTING HEIGHTS.

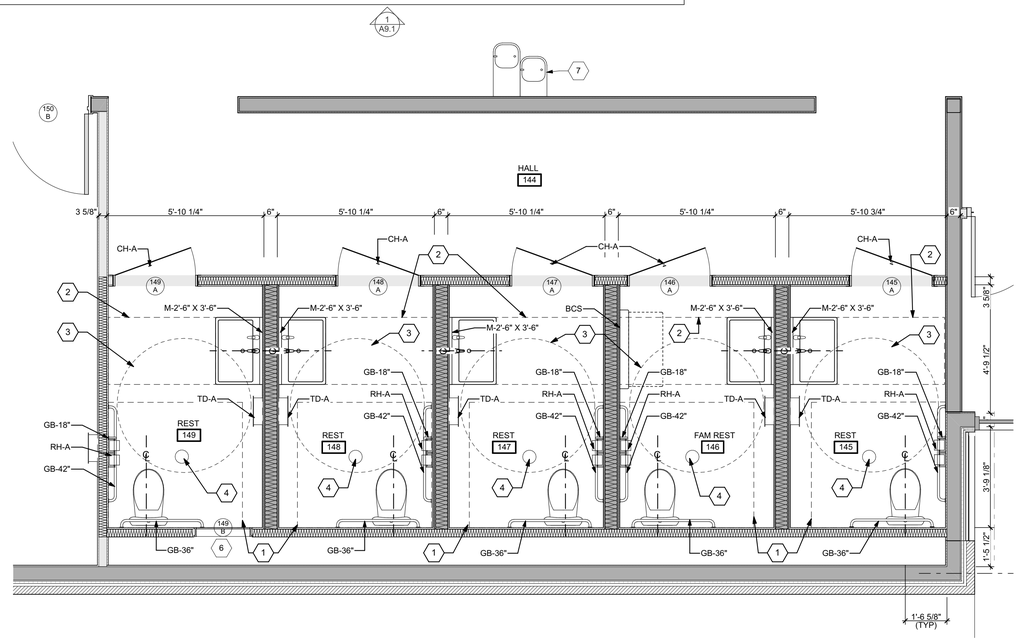
B. IN HANDICAP DESIGNATED TOILET STALLS, FLUSH VALVES SHALL ALWAYS BE LOCATED ON THE CLEAR FLOOR SPACE SIDE OF THE STALL PER ADA GUIDELINES.

C. REFER TO EQUIPMENT/CASEWORK PLANS FOR TOILET ACCESSORIES IN ROOMS NOT SHOWN AS ENLARGED PLANS.

D. PROVIDE WALL BLOCKING FOR ALL TOILET ACCESSORIES, AS REQUIRED. REFER TO MANUFACTURER'S INSTRUCTIONS.

E. WHERE PLUMBING FIXTURE REQUIRES WALL CARRIER, PROVIDE ALL NECESSARY BLOCKING AND ANCHORS, REFER TO PLUMBING DRAWINGS.





1 A2.3 ENLARGED RESTROOMS - 151, 152, 153, 154, 155
SCALE: 3/8" = 1'-0"

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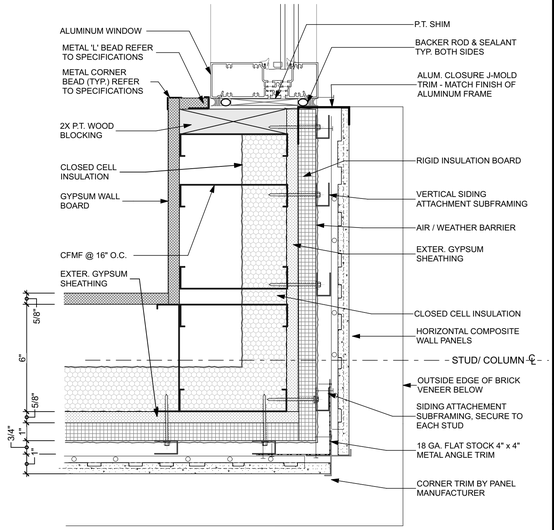
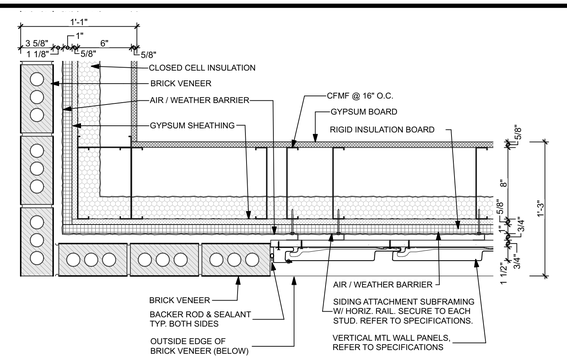
ENLARGED PLANS AND WALL TYPES

A2.3

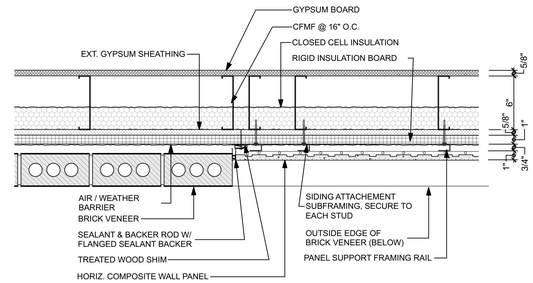
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A2-A2.3-FLOOR PLANS - ENLARGED PLANS AND WALL TYPES FILENAME: 1615.04_ARC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud cs a Service\1615.04_ARC_Rebid



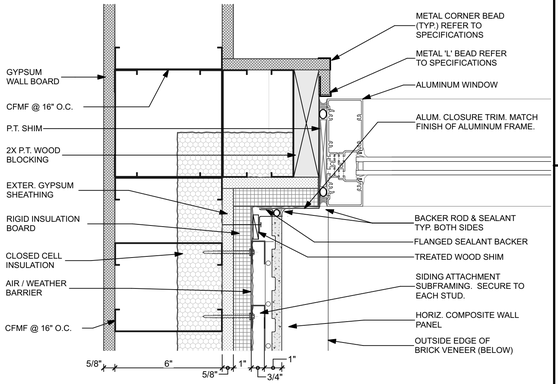
7 A2.4 **CORNER DETAIL**
SCALE: 3" = 1'-0"



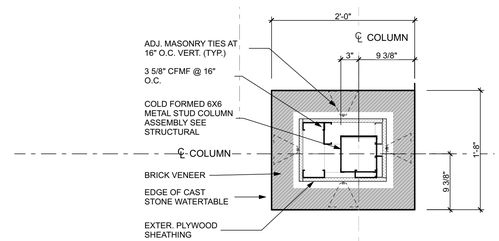
4 A2.4 **CORNER DETAIL**
SCALE: 1 1/2"= 1'-0"



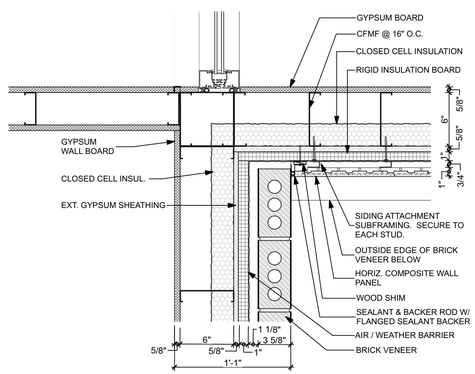
3 A2.4 **BRICK / SIDING TRANSITION DETAIL**
SCALE: 1 1/2"= 1'-0"



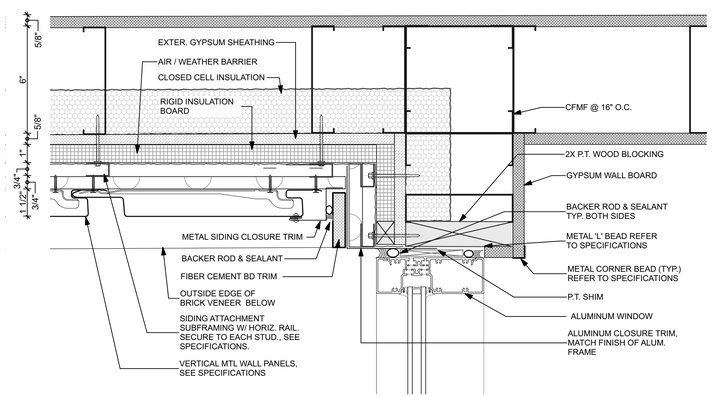
6 A2.4 **EXTERIOR JAMB DETAIL**
SCALE: 3" = 1'-0"



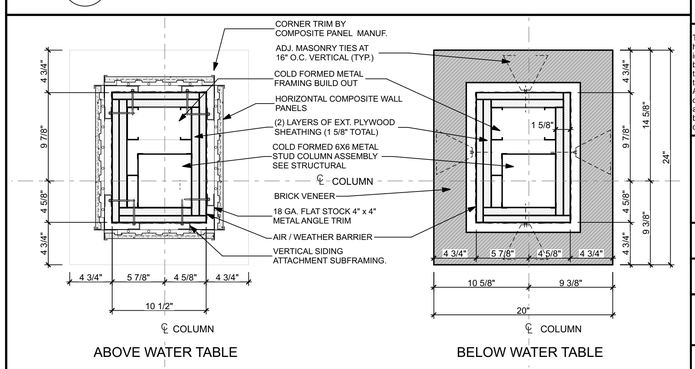
2 A2.4 **EXTERIOR COLUMN DETAIL**
SCALE: 1" = 1'-0"



5 A2.4 **INSIDE CORNER DETAIL**
SCALE: 1 1/2"= 1'-0"



8 A2.4 **JAMB DETAIL**
SCALE: 3" = 1'-0"



1 A2.4 **COLUMN DETAIL**
SCALE: 1 1/2"= 1'-0"

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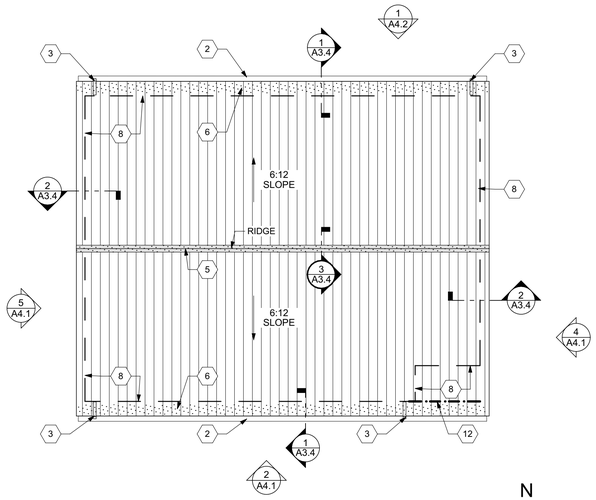
PLAN DETAILS

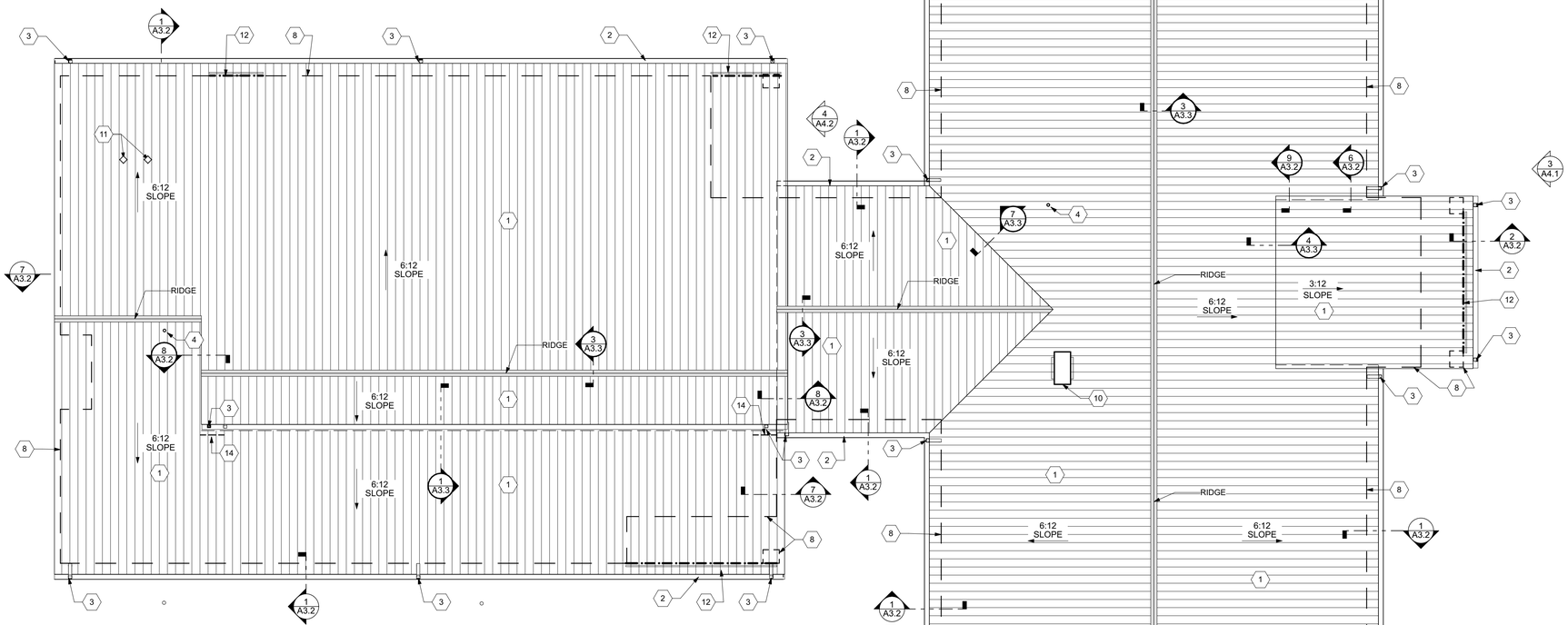
A2.4

PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A2-A2.4-FLOOR PLANS - PLAN DETAILS FILENAME: 1615.04_ATC_rbebd FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service\1615.04_ATC_Rebid



2 A3.1 GARAGE ROOF PLAN

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



1 A3.1 ROOF PLAN

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

ROOF KEY NOTES

ALL NOTES MAY NOT BE REFERENCED ON THIS SHEET.

1. METAL ROOF SYSTEM WITH AIR/WEATHER SELF-ADHERING UNDERLAYMENT ON ENTIRE ROOF SURFACE. REFER TO SPECIFICATIONS
2. PREFORMED METAL GUTTER. SEE PROFILE DETAIL AND SPECIFICATIONS
3. PREFORMED METAL DOWNSPOUT. SEE PROFILE DETAIL AND SPECIFICATIONS
4. VENT PIPE W/ BOOT, REFER TO PLUMBING DRAWINGS.
5. VENTED ROOF RIDGE
6. VENTED SOFFIT PANELS
8. BUILDING PROFILE BELOW
9. ROOF EDGE BELOW
10. EXHAUST PENTHOUSE / CURB. REFER TO CURB DETAIL 9/A3.3 AND COORDINATE WITH MECHANICAL DRAWINGS/EQUIPMENT SCHEDULE.
11. HOT FLUE PIPE, SEE FLUE DETAIL 5/A3.3 AND COORDINATE W/ MECHANICAL DRAWINGS
12. SNOW GUARD, REFER TO SPECIFICATIONS
13. not used
14. DIVERTER 'ZEE' AT DOWNSPOUT OUTLET ON LOWER ROOF - 3 SPACES MIN.

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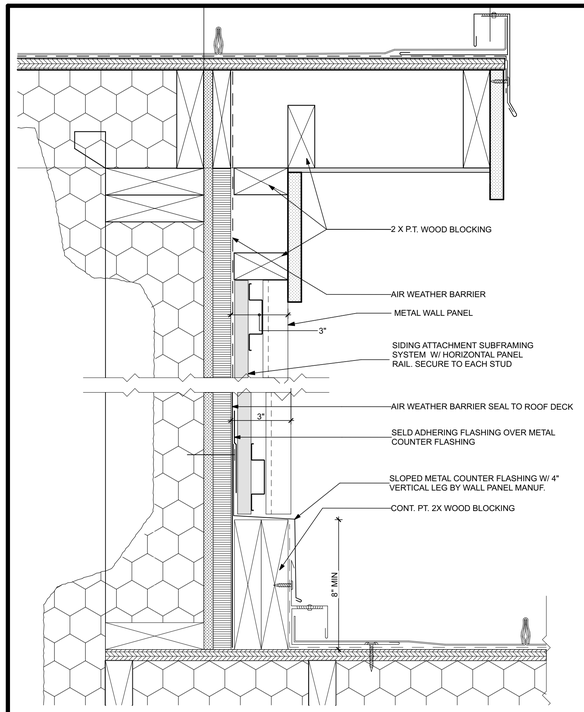
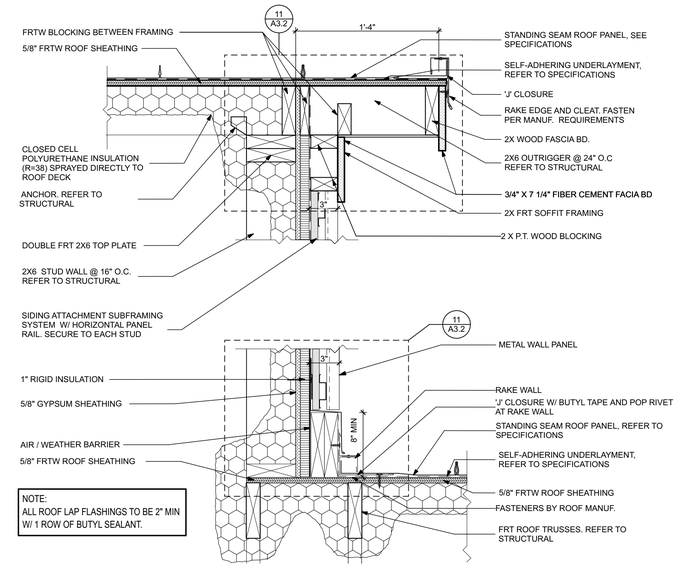
ROOF PLAN

A3.1

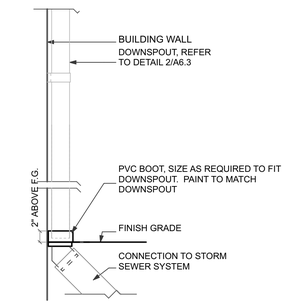
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A3-A3.1 ROOF - ROOF PLAN FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagnc - BIMcloud cas ca Services/1615.04_ATC_Rebid



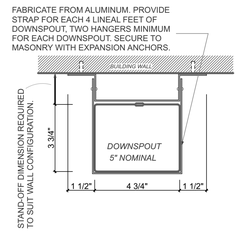
11 A3.2 **END RAKE ROOF DETAIL**
SCALE: 3" = 1'-0"



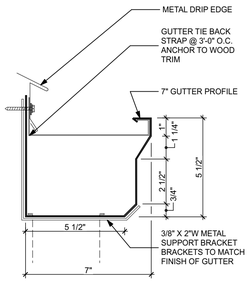
8 A3.2 **END RAKE ROOF DETAIL**
SCALE: 1 1/2"= 1'-0"



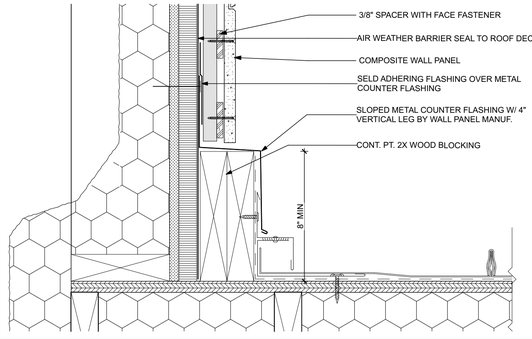
5 A3.2 **DOWNSPOUT BOOT DETAIL**
NOT TO SCALE



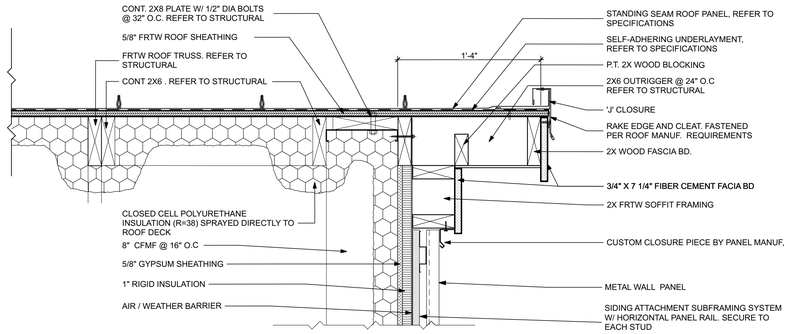
4 A3.2 **TYP. DOWNSPOUT**
SCALE: 3" = 1'-0"



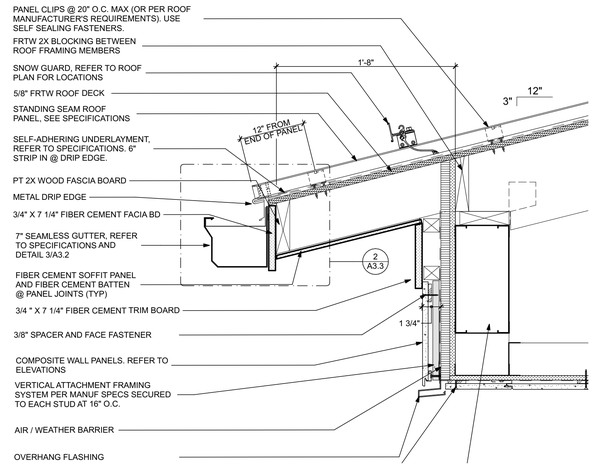
3 A3.2 **TYP. GUTTER DETAIL**
SCALE: 3" = 1'-0"



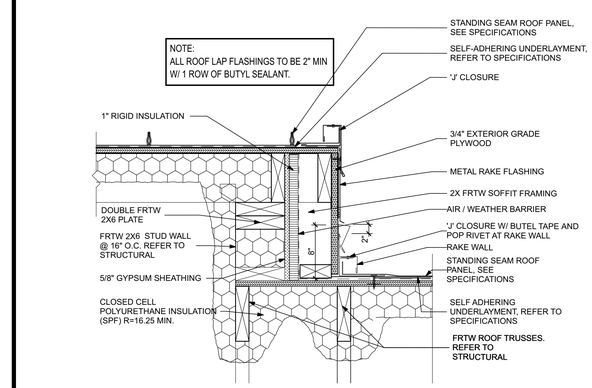
10 A3.2 **END RAKE ROOF DETAIL**
SCALE: 3" = 1'-0"



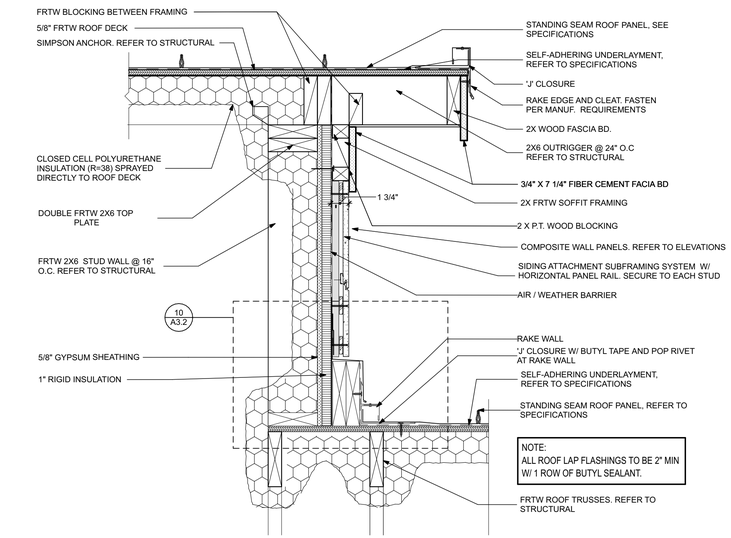
7 A3.2 **END RAKE DETAIL**
SCALE: 1 1/2"= 1'-0"



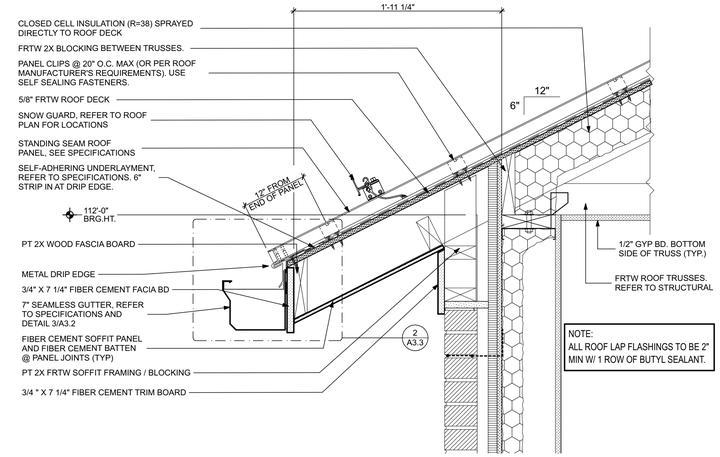
2 A3.2 **ENTRY EAVE DETAIL**
SCALE: 1 1/2"= 1'-0"



9 A3.2 **SHORT END RAKE DETAIL**
SCALE: 1 1/2"= 1'-0"



6 A3.2 **END RAKE ROOF DETAIL**
SCALE: 1 1/2"= 1'-0"



1 A3.2 **TYP. EAVE DETAIL**
SCALE: 1 1/2"= 1'-0"

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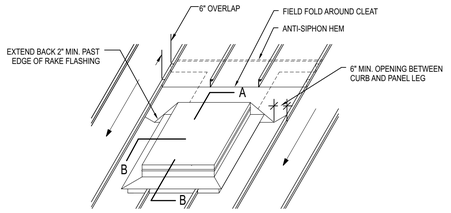
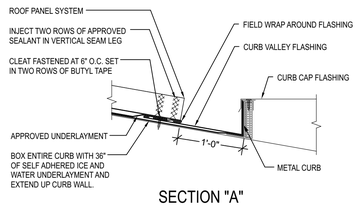
ROOF DETAILS

A3.2

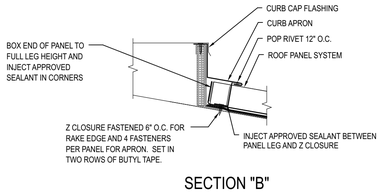
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A3/A3.2/ROOF DETAILS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagnc - BIMcloud cs a Service/1615.04_ATC_Rebid



CURB DETAIL INSTRUCTIONS
4'-0" WIDTH OR LESS



SECTION "A"



SECTION "B"

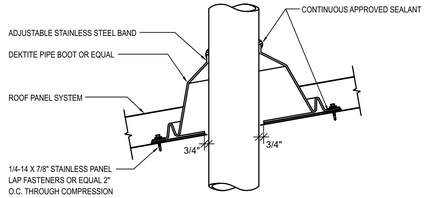
9 A3.3 CURB DETAIL
NOT TO SCALE

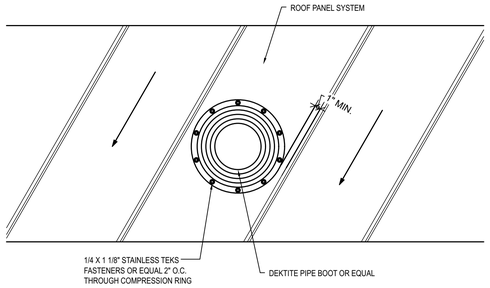
NOTE:
DO NOT ATTACH INTO SOLID SUBSTRATE BELOW.

BOOT SHALL NOT INTERSECT STANDING SEAM VERTICAL LEG.

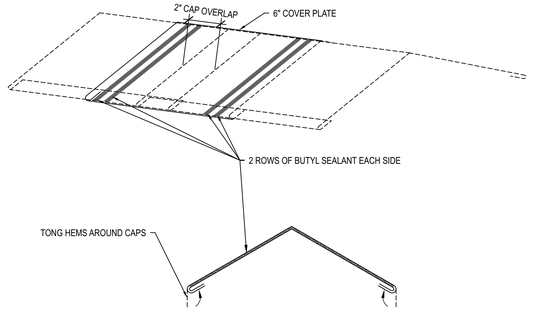
INSTALL IN FLAT AREA OF PANEL ONLY.

IF USING A SQUARE BOOT DETAIL, SET BOOT IN A DIAGONAL OR DIAMOND POSITION TO ENSURE WATER FLOW.



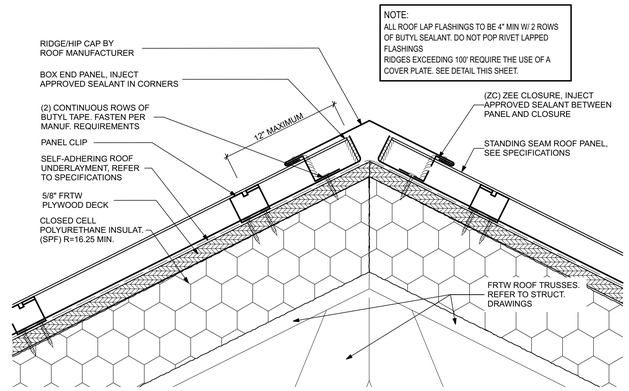


8 A3.3 BOOT DETAIL
NOT TO SCALE

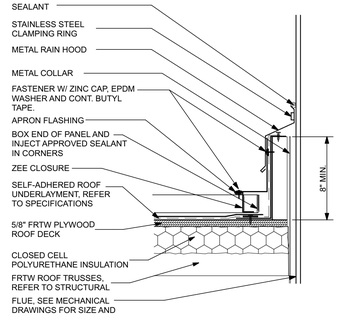


6 A3.3 RIDGE COVER PLATE
NOT TO SCALE

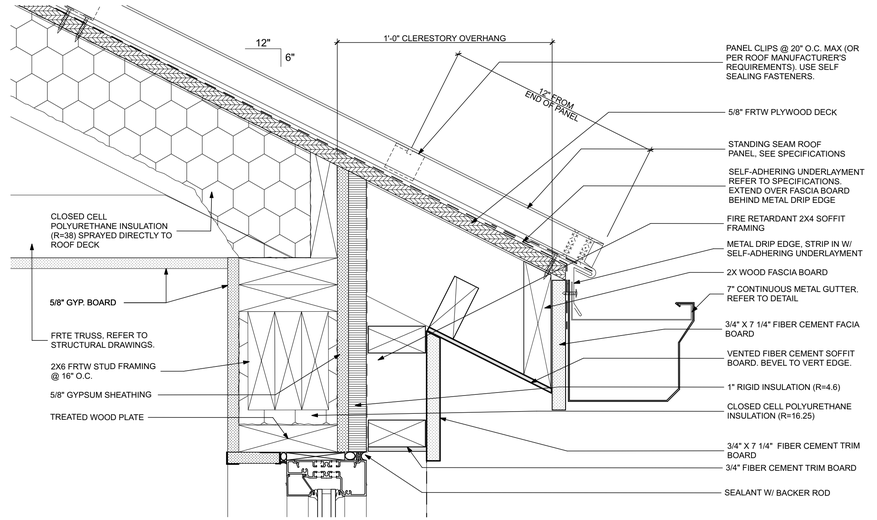
NOTE:
ALL ROOF LAP FLASHINGS TO BE 4" MIN W/ 2 ROWS OF BUTYL SEALANT, DO NOT POP RIVET LAPPED FLASHINGS
RIDGES EXCEEDING 100' REQUIRE THE USE OF A COVER PLATE. SEE DETAIL THIS SHEET.



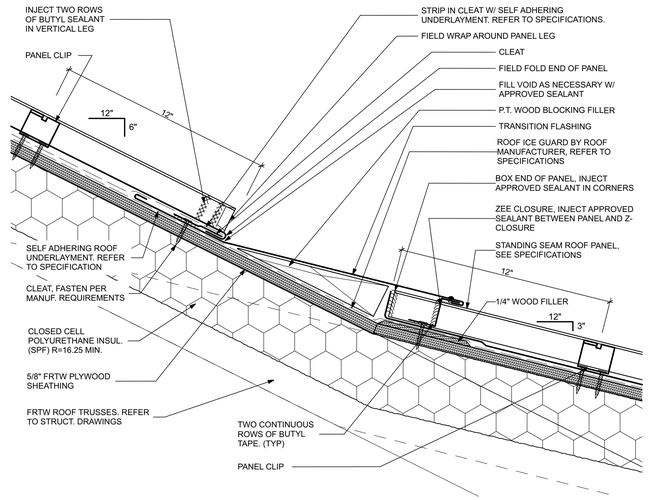
3 A3.3 RIDGE DETAIL
SCALE: 3" = 1'-0"



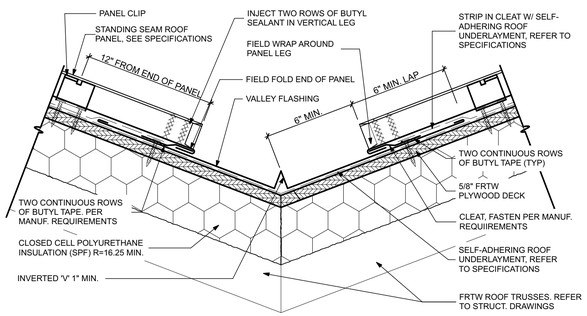
5 A3.3 FLUE DETAIL
SCALE: 1 1/2"= 1'-0"
COORDINATE WITH MECHANICAL DRAWINGS



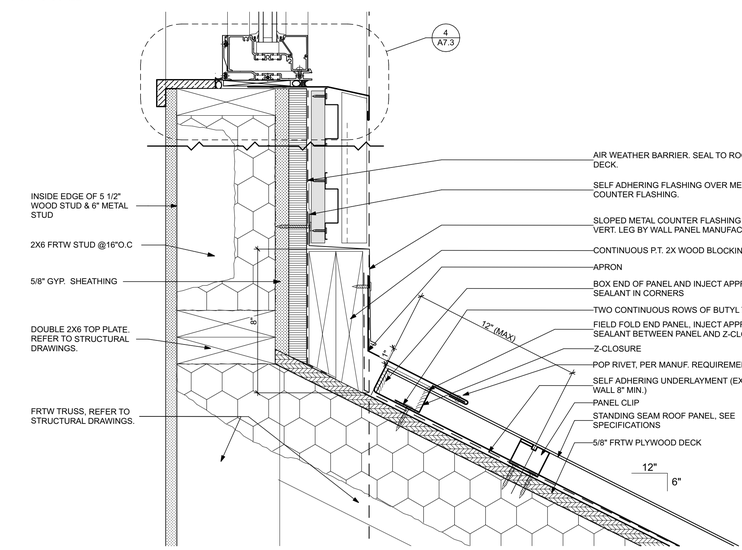
2 A3.3 CLERESTORY HEAD DETAIL
NOT TO SCALE



4 A3.3 END RAKE DETAIL
SCALE: 3" = 1'-0"



7 A3.3 VALLEY DETAIL
SCALE: 3" = 1'-0"



1 A3.3 CLERESTORY BASE
NOT TO SCALE

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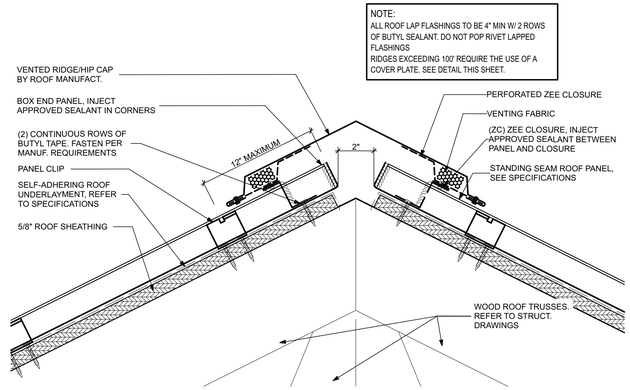
ROOF DETAILS

A3.3

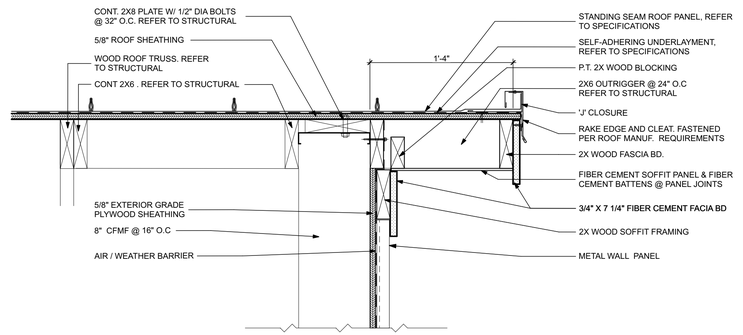
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A3-A3.3 ROOF : ROOF DETAILS FILENAME: 1615.04_ARC_Rebid FILE PATH: BMcloud: freytagrnc - BMcloud as a Service\1615.04_ARC_Rebid



3 A3.4

VENTED ROOF CAP DETAIL

SCALE: 3" = 1'-0"

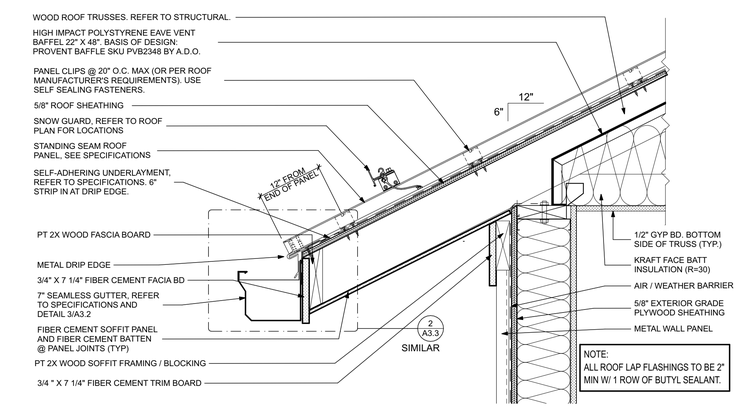


2 A3.4

RAKE DETAIL

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

NOTE:
TRUSSES, SHEATHING AND BLOCKING ARE NOT REQUIRED TO BE FIRE TREATED WOOD IN GARAGE.
(CONSTRUCTION TYPE: VB)



1 A3.4

EAVE DETAIL

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

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TROY, OHIO 45373

STATE OF OHIO
DANIEL J. FREYTAG
8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

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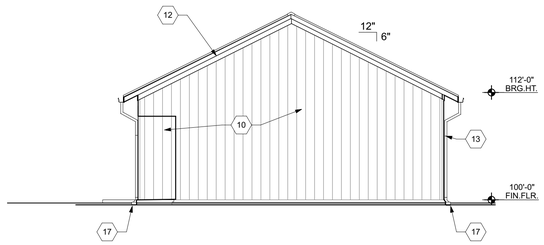
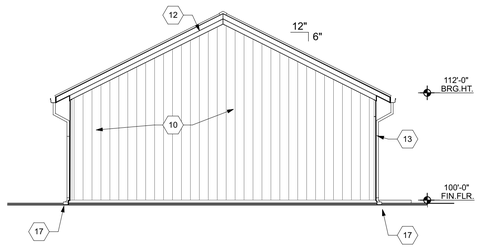
ROOF DETAILS

A3.4

PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A3:A3.4:ROOF - ROOF DETAILS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service/1615.04_ATC_Rebid



4 A4.1 EAST GARAGE ELEVATION
SCALE: 1/8" = 1'-0"



5 A4.1 WEST GARAGE ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION NOTES

ALL NOTES MAY NOT BE REFERENCED ON THIS SHEET.

1 FACE BRICK, FIELD COLOR #1.
2 FACE BRICK ACCENT BAND, COLOR #2.
3 ALUMINUM STOREFRONT ENTRY W/ INSULATED GLASS.
4 ALUMINUM STOREFRONT WINDOW W/ INSULATED GLASS WINDOWS.
5 LOUVER, SEE MECHANICAL DRAWINGS FOR SIZE AND REFER TO DETAIL A7.4.
6 STANDING SEAM METAL ROOF.
7 MASONRY WRAPPED COLUMN.
8 CAST STONE BAND.
9 HORIZONTAL SOLID COMPOSITE WALL CLADDING.
10 VERTICAL METAL PANEL SIDING.
11 OVERHEAD DOOR.
12 FASCIA BOARD.
13 GUTTER/DOWNSPOUTS.
14 CAST STONE COLUMN CAP, REFER TO SHEET A7.4.
15 CONTROL JOINT, TYPICAL.
16 MECH. ROOF EQUIPMENT, REFER TO MECHANICAL DRAWINGS.
17 DOWNSPOUT BOOT (TYP.), REFER TO PROJECT MANUAL.
18 SNOW GUARD, REFER TO SPECIFICATIONS.
19 SCREEN WALL, REFER TO DETAIL.
20 DIMENSIONAL CHARACTERS, REFER TO SPECIFICATIONS.

ELEVATION LEGEND

(#) KEY NOTE, SEE ABOVE
(AL#) ALUMINUM FRAMED OPENING, REFER TO SHEET A7.1
(B) SEE SHEET A7.1 FOR LOUVER TYPES
(C) SEE SHEET A7.1 FOR DOOR SCHEDULE

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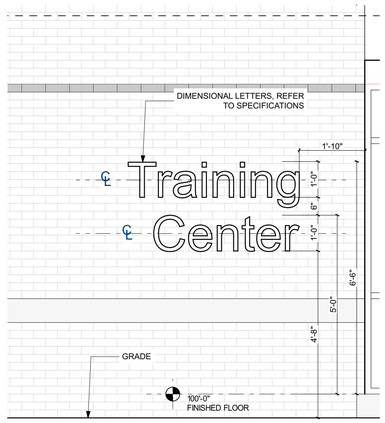
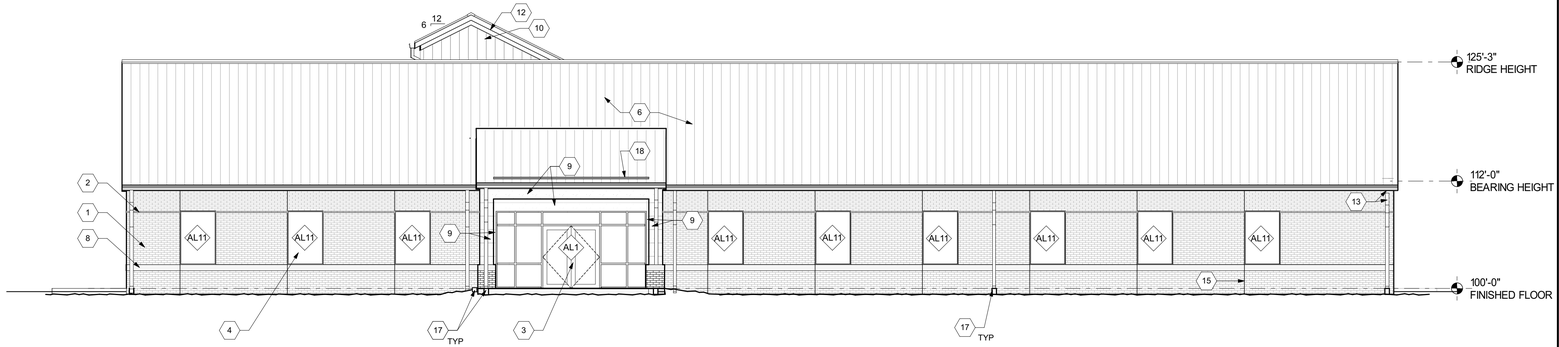
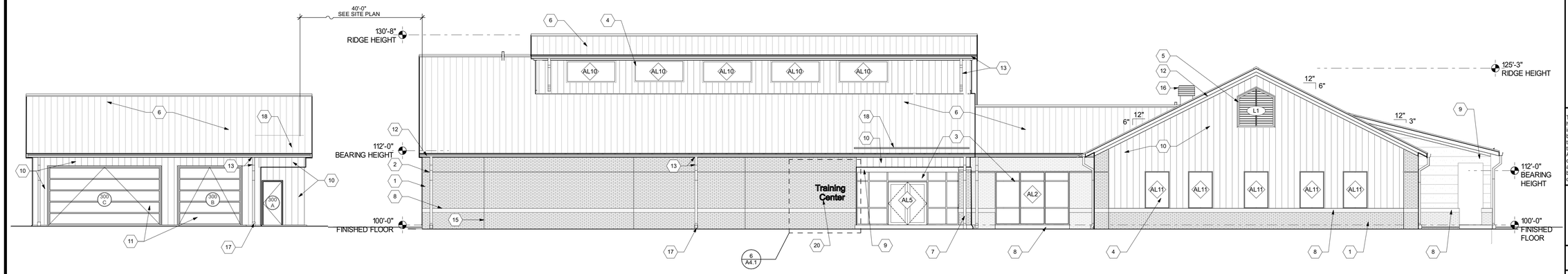


6 A4.1 BUILDING SIGNAGE
SCALE: 1/2" = 1'-0"



3 A4.1 EAST ELEVATION
SCALE: 1/8" = 1'-0"



2 A4.1 SOUTH GARAGE ELEVATION
SCALE: 1/8" = 1'-0"

1 A4.1 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

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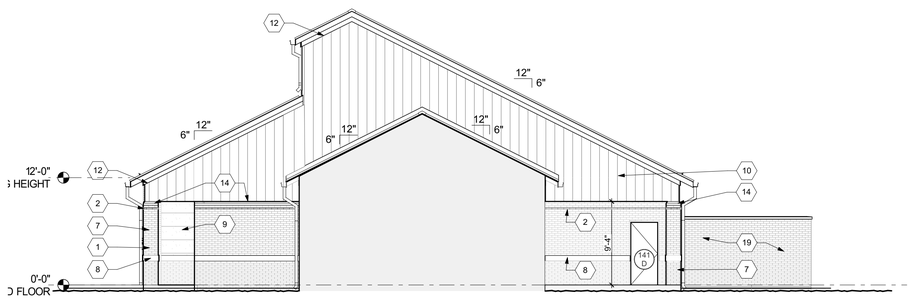
BUILDING ELEVATIONS

A4.1

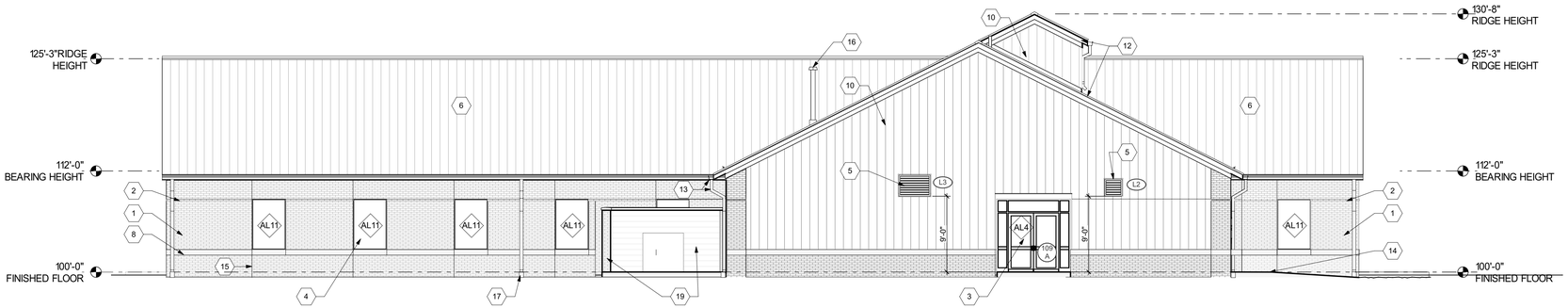
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A4-A4.1 EXTERIOR ELEVATIONS : BUILDING ELEVATIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service/1615.04_ATC_Rebid



4 A4.2

WEST INTERIOR ELEVATION

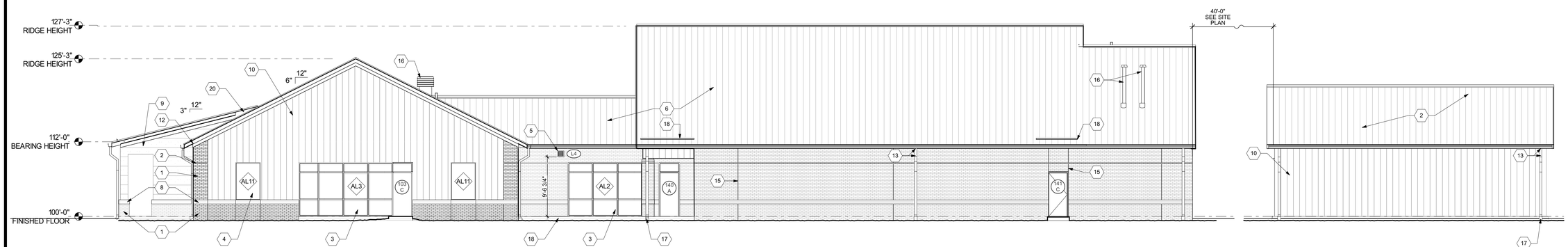
SCALE: 1/8" = 1'-0"



3 A4.2

WEST ELEVATION

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



2 A4.2

NORTH ELEVATION

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

1 A4.2

NORTH GARAGE ELEVATION

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

EXTERIOR ELEVATION NOTES

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13 GUTTER/DOWNSPOUTS.
14 CAST STONE COLUMN CAP, REFER TO SHEET A7.4.
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ELEVATION LEGEND

(#) KEY NOTE, SEE ABOVE
(AL#) ALUMINUM FRAMED OPENING, REFER TO SHEET A7.1
(B) SEE SHEET A7.1 FOR LOUVER TYPES
(C) SEE SHEET A7.1 FOR DOOR SCHEDULE

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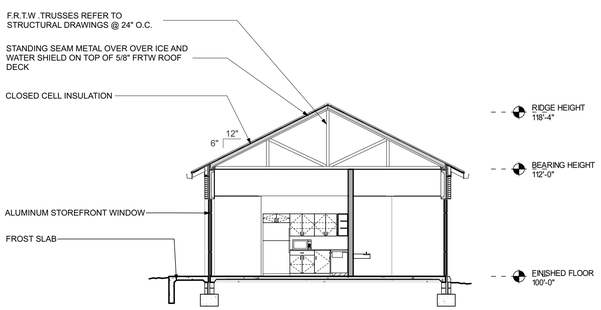
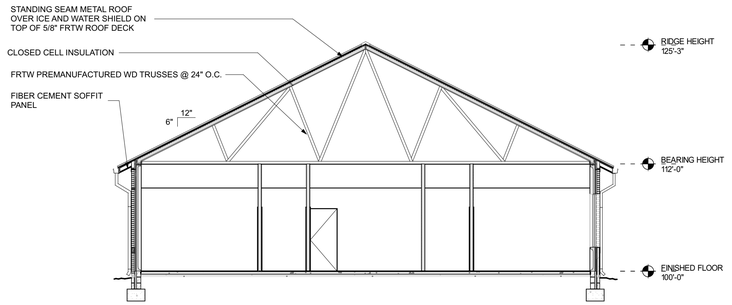
BUILDING ELEVATIONS

A4.2

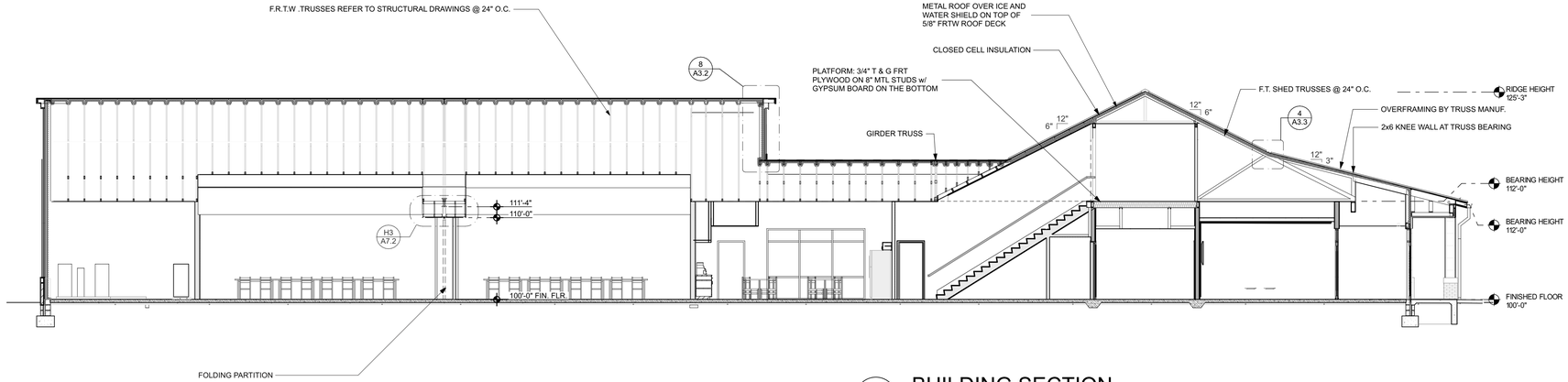
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A4.A4.2-EXTERIOR ELEVATIONS : BUILDING ELEVATIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service/1615.04_ATC_Rebid



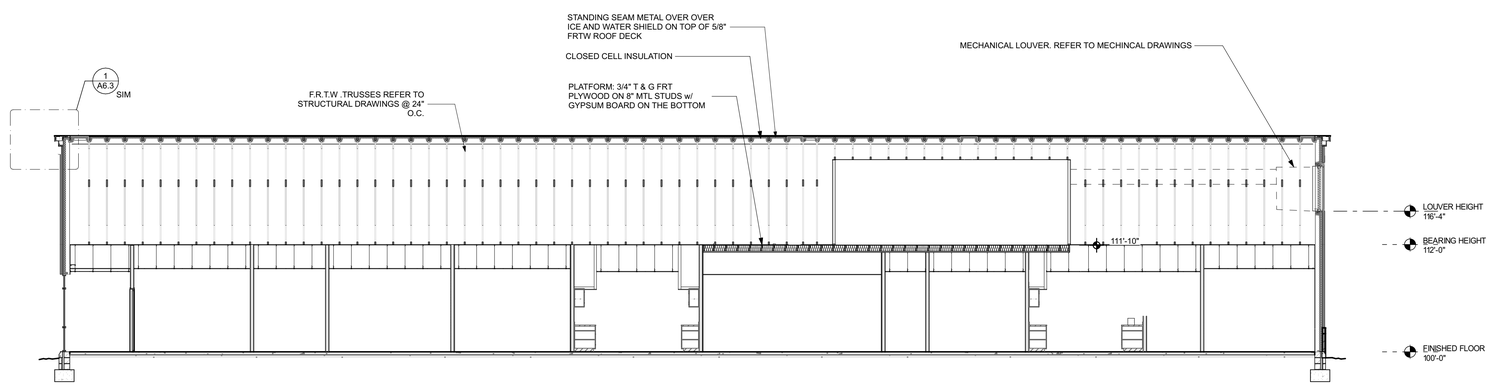
4 A5.1 **BUILDING SECTION**
SCALE: 1/8" = 1'-0"



1 A5.1 **BUILDING SECTION**
SCALE: 1/8" = 1'-0"



2 A5.1 **BUILDING SECTION**
SCALE: 1/8" = 1'-0"



3 A5.1 **BUILDING SECTION**
SCALE: 1/8" = 1'-0"

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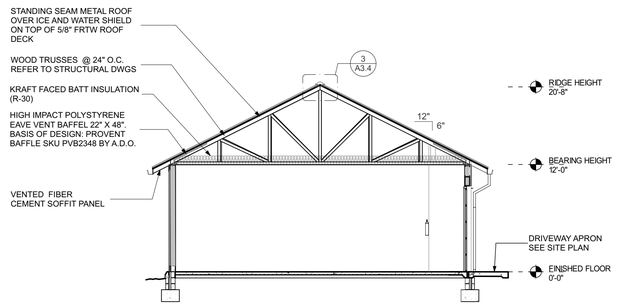
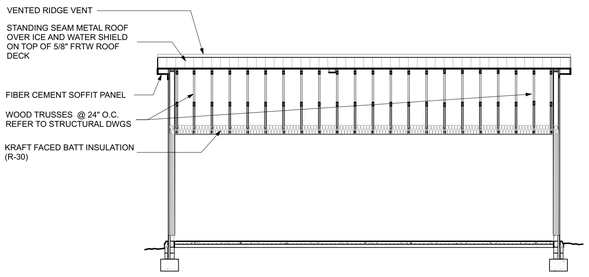
BUILDING SECTIONS

A5.1

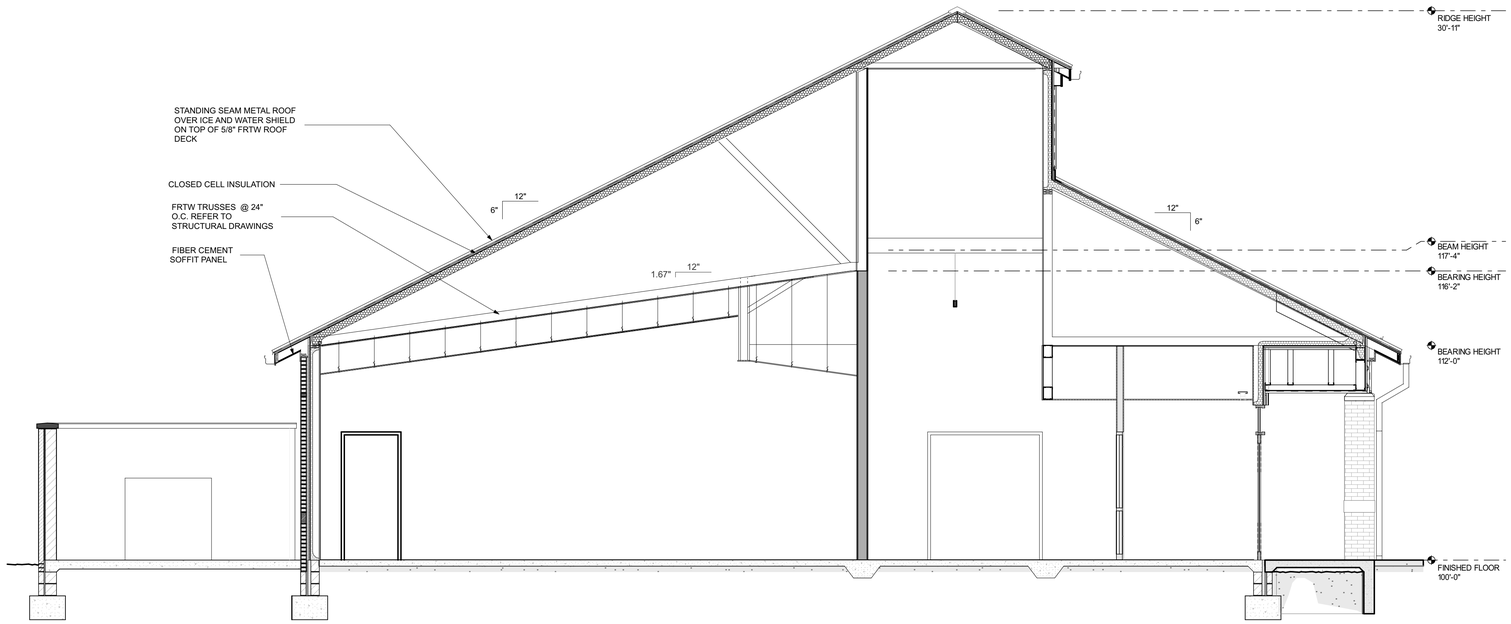
PLOT DATE: 5/13/21 @ 10:39 AM LAYOUT: A5-A5.1 BUILDING SECTIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service/1615.04_ATC_Rebid



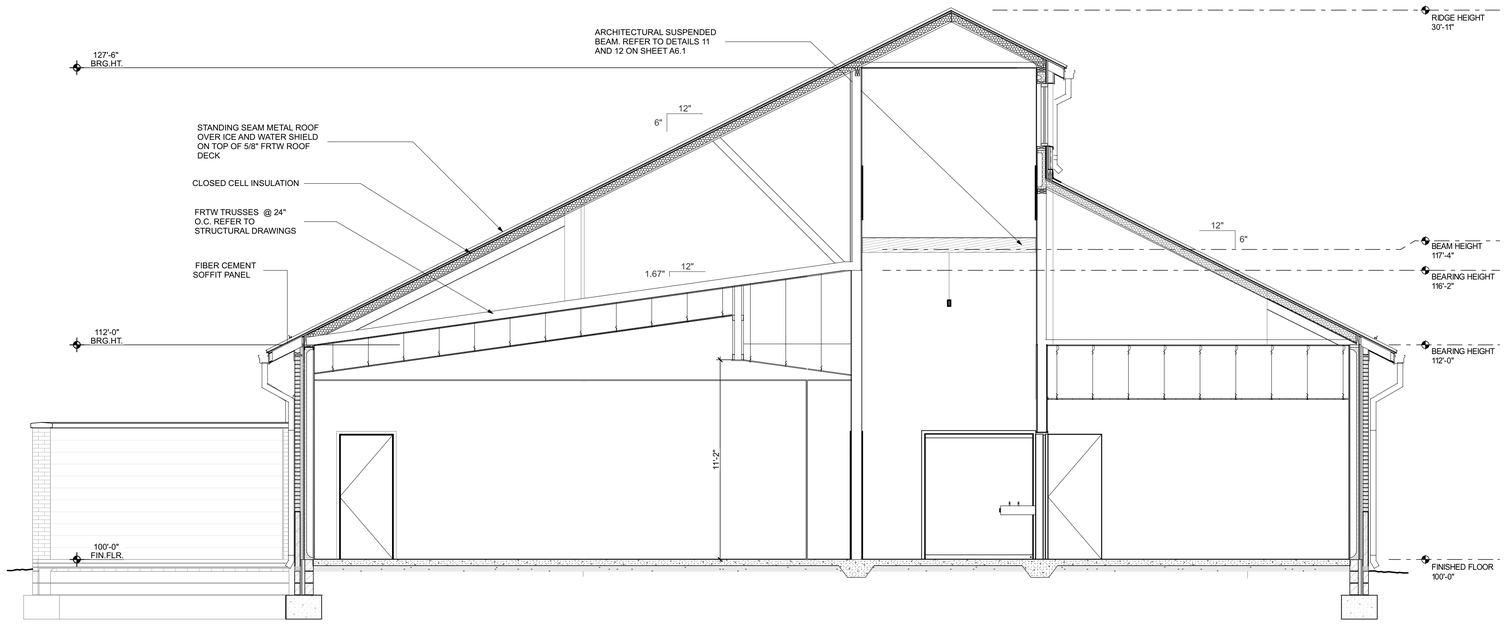
3 A5.2 **GARAGE SECTION**
SCALE: 1/8" = 1'-0"



2 A5.2 **GARAGE SECTION**
SCALE: 1/8" = 1'-0"



1 A5.2 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"



4 A5.2 **BUILDING SECTION**
SCALE: 1/4" = 1'-0"

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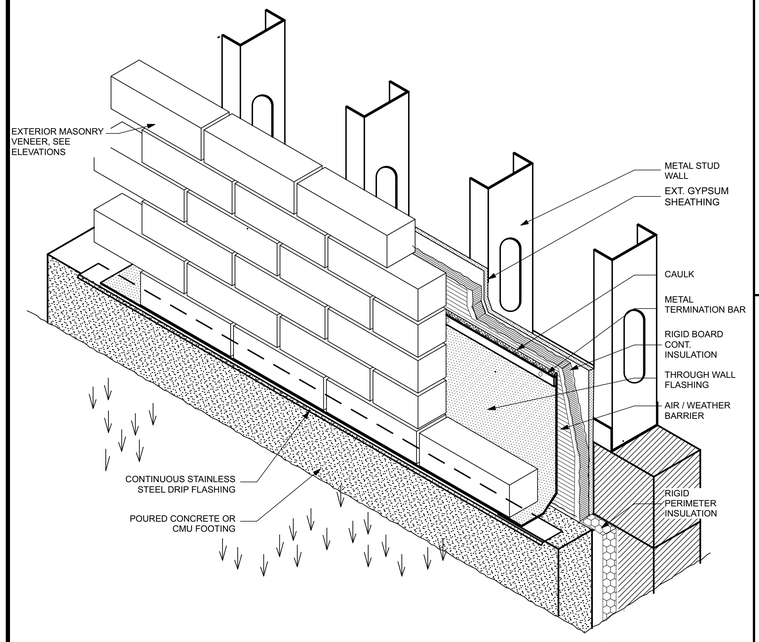
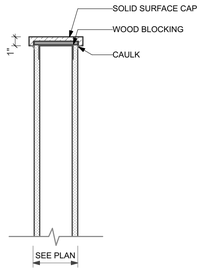
BUILDING SECTIONS

A5.2

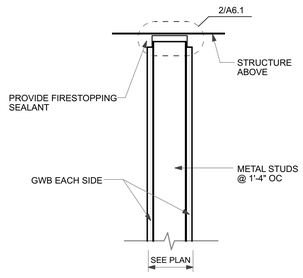
PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A5-A5.2-BUILDING SECTIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service\1615.04_ATC_Rebid



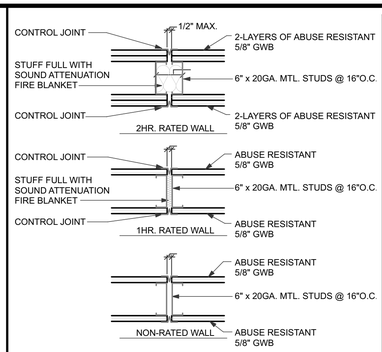
15 A6.1 TYPICAL THRU-WALL FLASHING AT FINISH GRADE
SCALE: 1-1/2" = 1'-0"



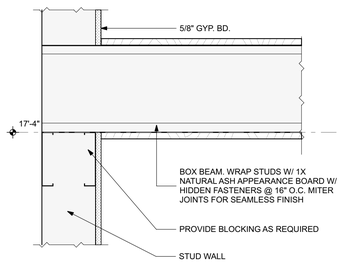
13 A6.1 WALL CAP DETAIL
SCALE: 1-1/2" = 1'-0"



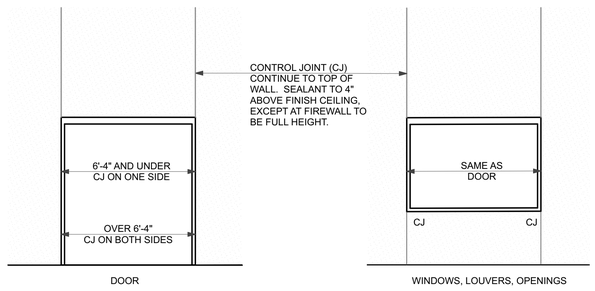
9 A6.1 STUD WALL TO DECK
SCALE: 1-1/2" = 1'-0"



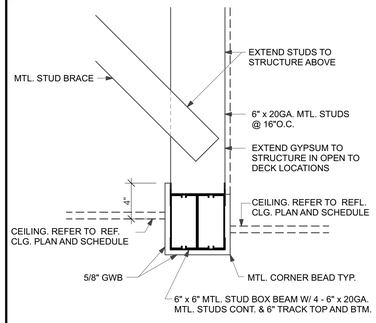
4 A6.1 STUD WALL CONTROL JOINT
SCALE: NOT TO SCALE



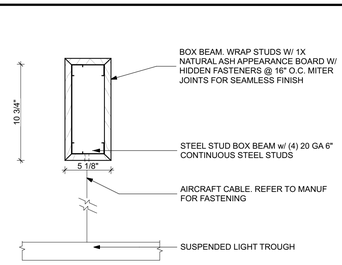
12 A6.1 BEAM DETAIL
SCALE: 1-1/2" = 1'-0"



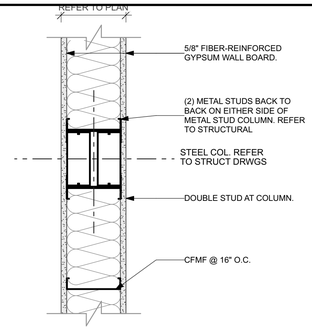
8 A6.1 GYP. BD. CONTROL JOINT LOCATION ELEVATIONS
NOT TO SCALE



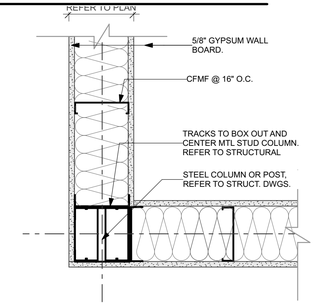
3 A6.1 TYP. BULKHEAD DETAIL
SCALE: 1-1/2" = 1'-0"



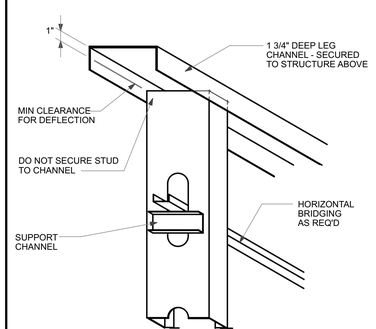
11 A6.1 SUSPENDED LIGHT: BEAM DETAIL
SCALE: 1-1/2" = 1'-0"



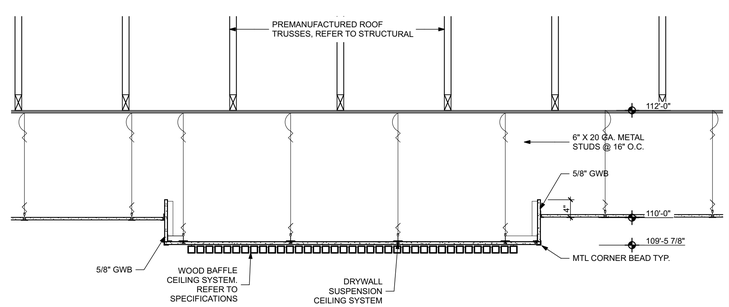
6 A6.1 STUD COL. DETAIL IN WALL
SCALE: 1-1/2" = 1'-0"



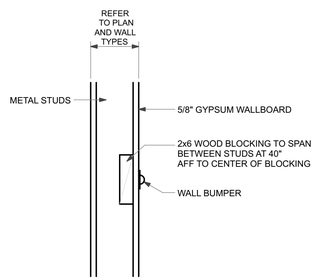
7 A6.1 STUD COL. DTL IN CORNER
SCALE: 1-1/2" = 1'-0"



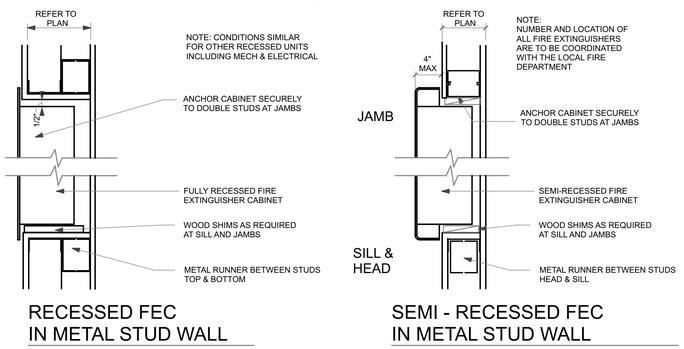
2 A6.1 TYP. TOP OF STUD WALL
SCALE: NOT TO SCALE



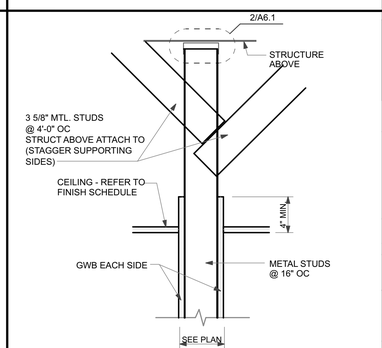
14 A6.1 ENTRY CEILING DETAIL
SCALE: 3/4" = 1'-0"



10 A6.1 WALL BUMPER DETAIL
SCALE: 1-1/2" = 1'-0"



5 A6.1 FIRE EXTINGUISHER CABINET (FEC) DETAILS
1 1/2"= 1'-0"



1 A6.1 METAL STUD WALL BRACING
SCALE: 1-1/2" = 1'-0"

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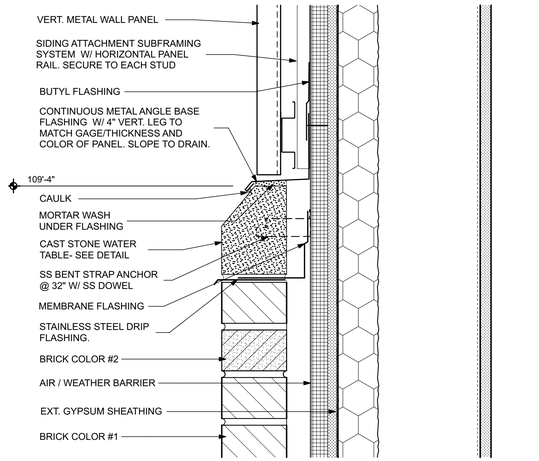
TYPICAL CONSTRUCTION DETAILS

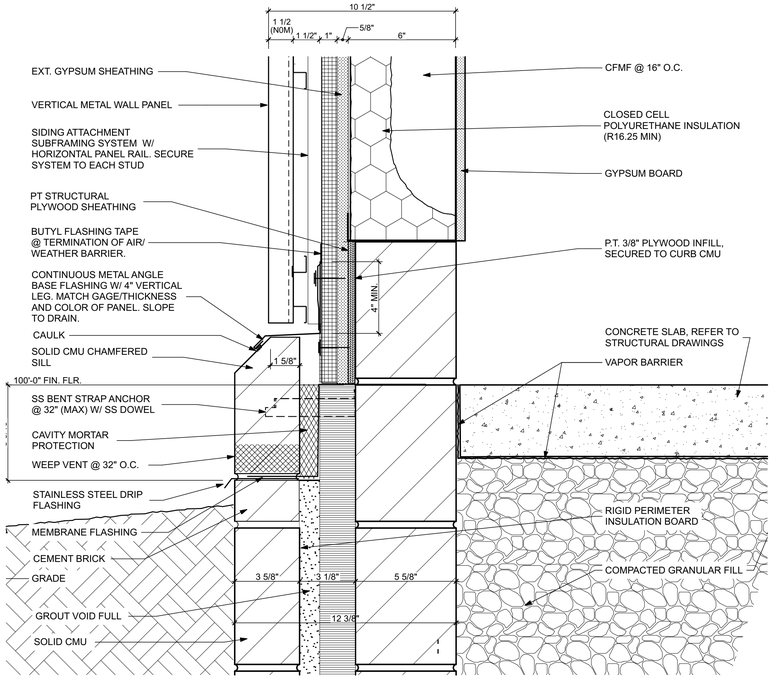
A6.1

PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A6-A6.1-WALL SECTIONS AND DETAILS - TYPICAL CONSTRUCTION DETAILS FILENAME: 1615.04_ARC_ReBid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service/1615.04_ARC_ReBid



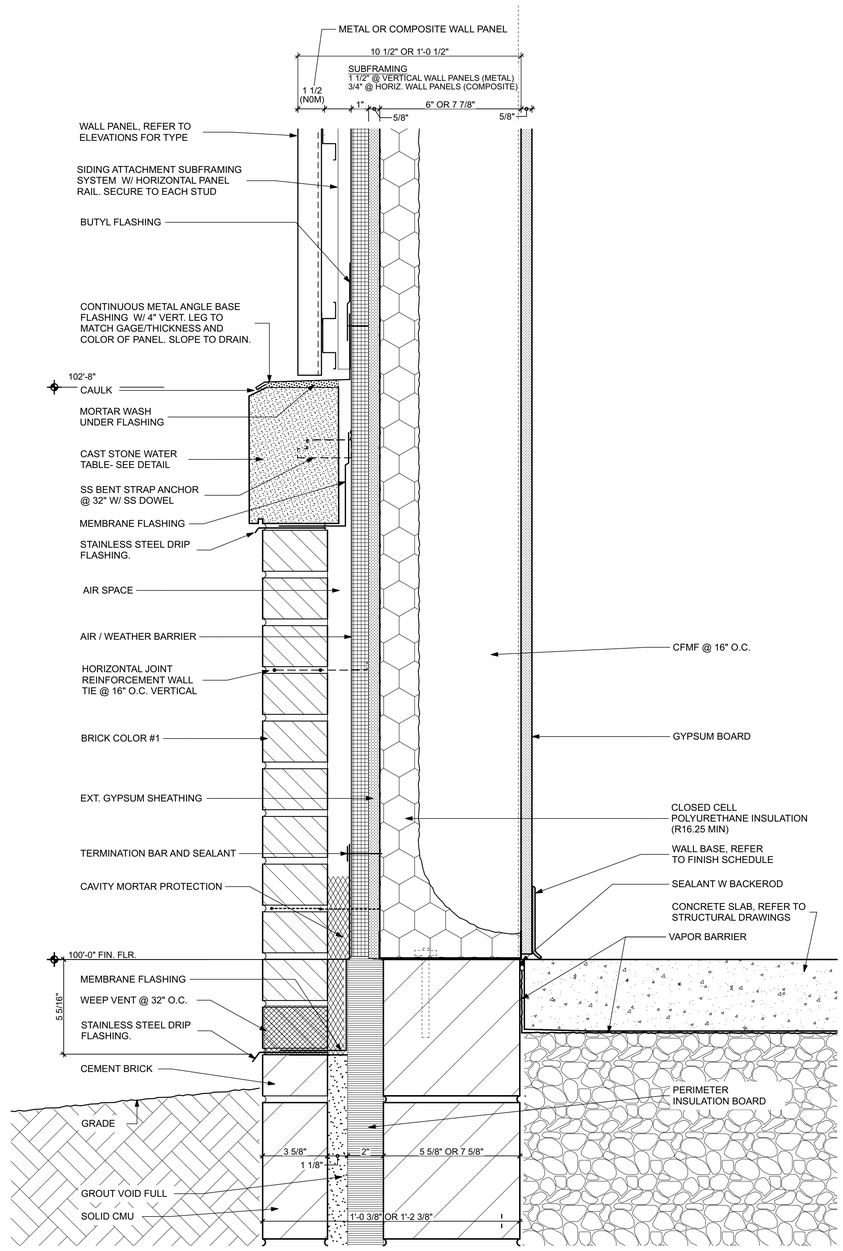
3 A6.2 **HIGH WALL CAP DETAIL**

SCALE: 3" = 1'-0"



2 A6.2 **TYPICAL WALL BASE DETAIL - GARAGE**

SCALE: 3" = 1'-0"



1 A6.2 **TYPICAL WALL BASE DETAIL - MAIN BUILDING**

SCALE: 3" = 1'-0"

FREYTAG & ASSOCIATES INC.
ARCHITECTS ENGINEERS
226 N. MIAMI AVE.
P.O. BOX 220
SIDNEY, OHIO 45365
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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY
AND MENTAL HEALTH

1280 N COUNTY RD. 25A TROY, OHIO 45373

STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

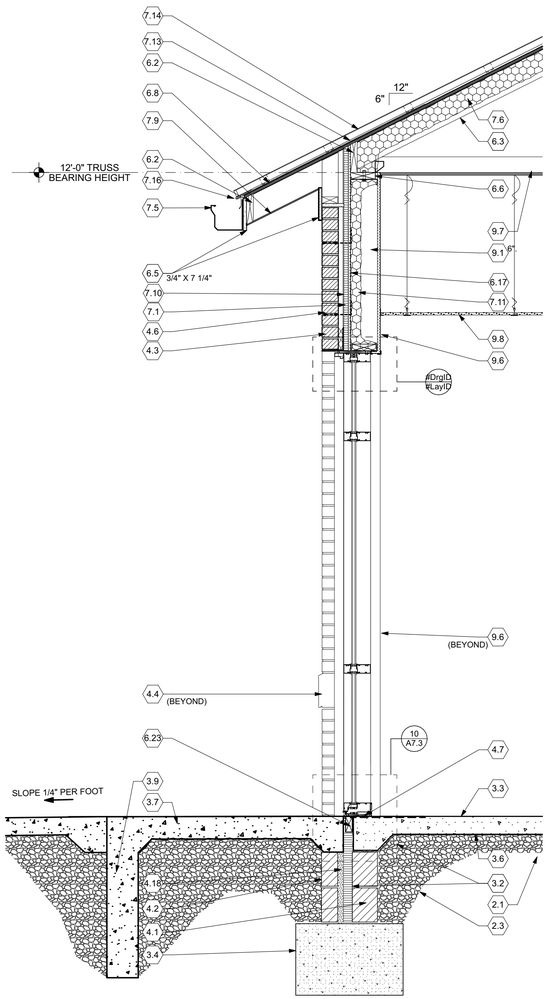
REVISIONS
FOR REBID

COMM. NUMBER	DATE
1615.04	05/12/21
DRAWN BY	CHECKED BY
AF	DF

WALL SECTIONS

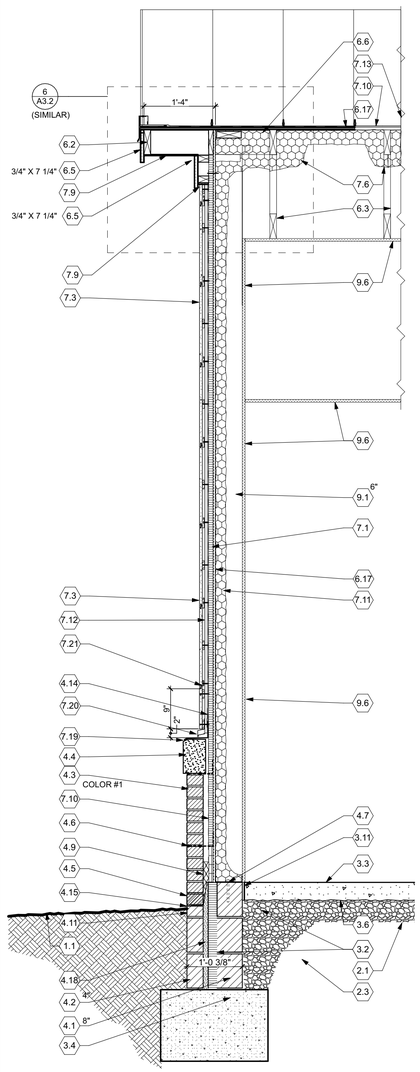
A6.2

PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A6-A6.2-WALL SECTIONS AND DETAILS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service\1615.04_ATC_Rebid



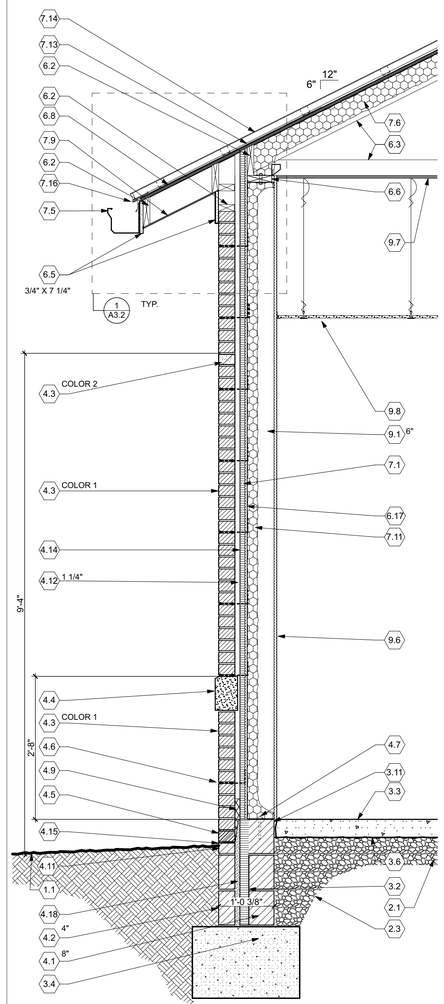
4 A6.3 WALL SECTION

SCALE: 3/4" = 1'-0"



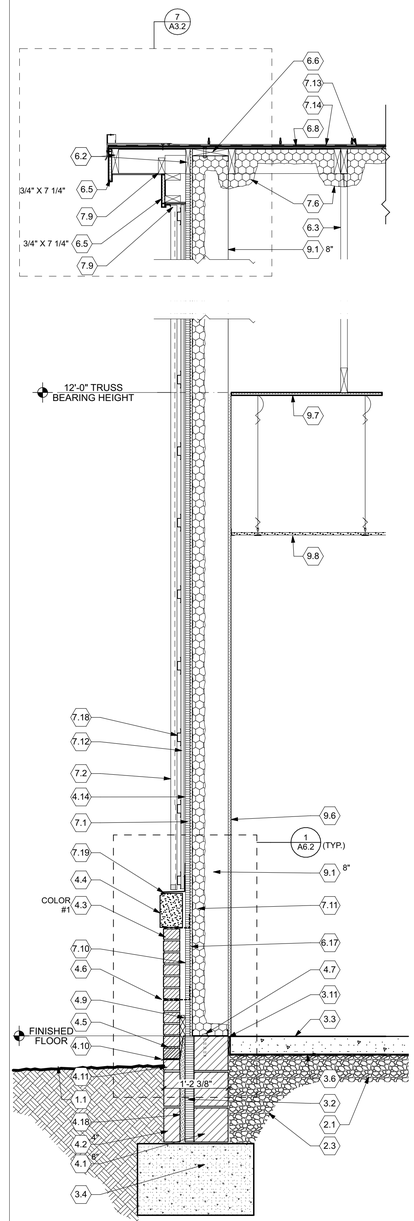
3 A6.3 RAINSCREEN WALL SECTION

SCALE: 3/4" = 1'-0"



2 A6.3 MASONRY WALL SECTION

SCALE: 3/4" = 1'-0"



1 A6.3 GABLE WALL SECTION

SCALE: 3/4" = 1'-0"

SECTION KEY NOTES

NOTE: ALL NOTES DO NOT OCCUR ON EVERY SHEET

1.1 GRADE, SEE SITE PLAN

2.1 4" MIN. COMPACTED GRAVEL BASE (TYPICAL). COORDINATE DEPTH REQUIRED W/ EXISTING CONDITION.
2.2 COMPACTED EARTH BACKFILL.
2.3 COMPACTED GRAVEL BACKFILL.
2.4 COMPACTED ENGINEERED FILL.
2.5 4" PERFORATED FOOTING TILE. 12" MIN GRAVEL BACKFILL COVER ON TOP OF PIPE.
2.6 COMPACTED AGGREGATE FILL.
2.7 DRAINAGE BACKFILL.

3.1 1/4" EXPANSION FILLER.
3.2 2" RIGID PERIMETER INSULATION, CONTINUOUS.
3.3 4" CONCRETE FLOOR SLAB. REFER TO STRUCTURAL DRAWINGS.
3.4 CONCRETE FOUNDATION FOOTING. REFER TO STRUCTURAL DETAILS FOR SIZE, TOP OF FOOTING AND REINFORCING.
3.5 THICKENED SLAB FOUNDATION. REFER TO STRUCTURAL DRAWINGS.
3.6 VAPOR BARRIER TURN UP TO TOP OF SLAB (TYPICAL), REFER TO SPECIFICATIONS.
3.7 CONCRETE FROST STOOP, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
3.8 EXTERIOR CONCRETE SLAB. REFER TO SITE DRAWINGS FOR DETAIL AND LOCATIONS
3.9 "TURN-DOWN" SLAB, REFER TO STRUCTURAL DRAWINGS.
3.10 FOAM GASKET SILL SEAL.
3.11 SEALANT @ PERIMETER OF SLAB/ FOUNDATION
3.12 TRAFFIC GRADE SEALANT
3.13 6" CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS

4.1 CONCRETE MASONRY UNIT (CMU). FOR CMU FOUNDATIONS, REFER TO STRUCTURAL FOR SIZE AND REINFORCING.
4.2 SOLID CONCRETE MASONRY UNIT (CMU).
4.3 FACE BRICK, REFER TO ELEVATIONS FOR TYPE.
4.4 CAST STONE, REFER TO DETAIL.
4.5 BASE WEEP/VENT @ 32" O.C. (MAX)
4.6 HORIZONTAL JOINT REINFORCEMENT WALL TIE AT 16 O.C. VERTICAL (MAX)
4.7 ANCHOR BOLTS. REFER TO STRUCTURAL DRAWINGS.
4.8 CONTINUOUS COPPER FABRIC FLASHING
4.9 CAVITY MORTAR PROTECTION
4.10 METAL THRU WALL FLASHING.
4.11 CONCRETE BRICK
4.12 AIRSPACE
4.13 RAIN SCREEN DRAINAGE PLANE.
4.14 AIR/WEATHER BARRIER SYSTEM, REFER TO SPECIFICATIONS.
4.15 STAINLESS STEEL DRIP FLASHING.
4.16 CONTINUOUS CMU BOND BEAM, REFER TO STRUCTURAL DRAWINGS
4.17 CONTINUOUS MEMBRANE FLASHING W/ TERMINATION BAR.
4.18 GROUT VOID FULL
4.19 FILL COURSES OF CMU W/ GROUT AND PROVIDE REINFORCING DOWELS, REFER TO STRUCTURAL DRAWINGS.

5.1 BEAM, REFER TO STRUCTURAL DRAWINGS.
5.2 BEAM AND PLATE, REFER TO STRUCTURAL DRAWINGS.
5.3 COLUMN, REFER TO STRUCTURAL DRAWINGS.
5.4 LINTEL, REFER TO STRUCTURAL DRAWINGS.
5.5 ANGLE, REFER TO STRUCTURAL DRAWINGS.

6.1 FIBER CEMENT TRIM.
6.2 FRT WOOD BLOCKING.
6.3 FRT WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS.
6.4 FRT DOUBLE BEARING PLATE.
6.5 FIBER CEMENT FASCIA BOARD.
6.6 FRT WOOD PLATE REFER TO STRUCTURAL.
6.7 2X6 FRT WOOD FRAMING @ 16" O.C. REFER TO STRUCTURAL NOTES.
6.8 5/8" FRT WOOD ROOF DECK. REFER TO STRUCTURAL DRAWINGS.
6.9 FRT WOOD OVERFRAMING @ 16" O.C. (U.N.O) REFER TO STRUCTURAL DRAWINGS.
6.10 3/4" FIBER CEMENT BOARD TRIM, CUT AS REQUIRED.
6.11 2X8 CEILING JOIST @ 24" O.C.
6.12 FRT WOOD HEADER, REFER TO STRUCTURAL DRAWINGS.
6.13 2X FRT WOOD RAFTERS. REFER TO STRUCTURAL DRAWINGS.
6.14 EXTERIOR WINDOW TRIM. REFER TO WINDOW DETAILS.
6.15 CEILING JOIST /ROOF RAFTER.
6.16 WOOD TRIM.
6.17 5/8" EXT. GYPSUM SHEATHING. REFER TO SPECIFICATIONS.
6.18 2X6 LADDER FRAMING (OUTLOOKER) @ 16" O.C.
6.19 PRE-MANUFACTURED FULL THERMAL BREAK LVL HEADER: REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS.
6.20 WOOD POST, REFER TO STRUCTURAL DRAWINGS.
6.21 WOOD BEARING PLATE. REFER TO STRUCTURAL DRAWINGS.
6.22 2X6 FRT WOOD FRAMING @ 24" O.C.
6.23 P.T. WOOD NAILER
6.24 FRTW EXTERIOR PLYWOOD SHEATHING / BLOCKING
6.25 WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS. GARAGE TRUSSES ARE **NOT** FRTW.
6.26 5/8" PLYWOOD ROOF SHEATHING, REFER TO SPECIFICATIONS
6.27 5/8" EXT. GRADE PLYWOOD WALL SHEATHING. REFER TO SPECIFICATIONS.
6.28 WOOD BLOCKING. GARAGE BLOCKING IS **NOT** FRTW.
6.29 WOOD PLATE. REFER TO STRUCTURAL. GARAGE BLOCKING IS **NOT** FRTW.

7.1 1" CONTINUOUS RIGID INSULATION. REFER TO SPECIFICATIONS.
7.2 WALL PANELS, REFER TO ELEVATIONS FOR STYLE AND SPECIFICATIONS.
7.3 HORIZ. COMPOSITE WALL PANEL. REFER TO ELEVATIONS AND SPECIFICATIONS
7.4 EXPANSION JOINT.
7.5 7" METAL GUTTER, REFER TO ROOF PLAN FOR DOWNSPOUT DETAIL.
7.6 CLOSED CELL INSULATION (R=38) SPRAYED DIRECTLY TO ROOF DECK.
7.7 SEALANT W/ BACKER ROD.
7.8 SEALANT, REFER TO SPECIFICATIONS
7.9 VENTED FIBER CEMENT SOFFIT PANEL.
7.10 AIR/WEATHER BARRIER. REFER TO SPECIFICATIONS
7.11 CLOSED CELL POLYURETHANE INSULATION (SPF) R=16.25 MIN.
7.12 SIDING ATTACHMENT SUBFRAMING. SECURED TO EACH STUD @ 16" O.C.
7.13 SELF ADHERING ROOF UNDERLAYMENT. REFER TO SPECIFICATIONS
7.14 STANDING SEAM METAL ROOF. REFER TO SPECIFICATIONS.
7.15 FIBERGLASS BATT INSULATION (R=38)
7.16 METAL DRIP EDGE.
7.17 SEALANT AT FLOOR PERIMETER, TYPICAL @ EXTERIOR MASONRY WALLS
7.18 HORIZONTAL PANEL RAIL ATTACHED TO VERTICAL SUBFRAMING.
7.19 CONTINUOUS METAL SIDING BASE FLASHING. REFER TO DETAILS AND SPECIFICATIONS.
7.20 COMPOSITE WALL PANEL TRANSITION FLASHING, BY PANEL MANUF.
7.21 COMPOSITE WALL PANEL STARTER TRACK BY PANEL MANUF.
7.22 KRAFT FACED CEILING BATT INSULATION (R-30)
7.23 6" WALL BATT INSULATION. (R-19)
7.24 HIGH IMPACT POLYSTYRENE EAVE VENT BAFFEL 22" X 48". BASIS OF DESIGN: PROVENT BAFFLE SKU PVB2348 BY A.D.O.

8.1 DOOR & FRAME. REFER TO DOOR SCHEDULE.
8.2 WINDOW, REFER TO FLOOR PLAN AND WINDOW ELEVATIONS FOR TYPE.
8.3 THRESHOLD BY DOOR MANUFACTURER, REFER TO DOOR DETAILS.
8.4 REFER TO ALUMINUM WINDOW ELEVATIONS AND SPECIFICATIONS.
8.5 ALUMINUM SUBSILL BY WINDOW MANUFACTURER. FINISH TO MATCH WINDOW.
8.6 SECTIONAL OVERHEAD DOOR, REFER TO DOOR SCHEDULE.
8.7 ALUMINUM OFFSET SNAP-TRIM. REFER TO EXTERIOR WINDOW DETAILS AND SPECIFICATIONS.

9.1 CFMF @16" O.C.
9.2 CFMF BRACING @ 48"O.C.
9.3 5/8" ABUSE RESISTANT GYPSUM BOARD, FULL HEIGHT
9.4 RUNNER @ 48"O.C. MAX.; 7/8" METAL FURRING CHANNELS CROSS FURRING @ 24"O.C. HANGER SPACING @ 4'-0"O.C. MAX.
9.5 WINDOW TRIM AND SILL. REFER TO WINDOW DETAILS.
9.6 5/8"GYPSUM BOARD
9.7 5/8" GYPSUM BOARD AT BOTTOM OF TRUSS (TYPICAL).
9.8 SUSPENDED ACOUSTICAL CEILING PANELS AND GRID.
9.9 METAL 'J' MOLD
9.10 WALL BASE, SEE FINISH SCHEDULE.
9.11 STEEL STUD BOX BEAM. REFER TO STRUCTURAL DRAWINGS
9.12 SUSPENDED GYPSUM CEILING

10.1 LOUVER, REFER TO MECHANICAL DRAWINGS AND SHEET A7.1
10.2 GRILLE, REFER TO MECHANICAL DRAWINGS.

12.0 CASEWORK, REFER TO EQUIPMENT DRAWINGS
12.1 WINDOW SHADES, REFER TO SPECIFICATIONS.

23.1 HVAC EQUIPMENT AND DUCTS, SEE HVAC DRAWINGS
23.2 PERFORATED STORM PIPE. REFER TO SITE DRAWINGS.
23.3 MECHANICAL LOUVER. REFER TO MECHANICAL DRAWINGS.

FREYTAG & ASSOCIATES INC.
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TROY, OHIO 45373

STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

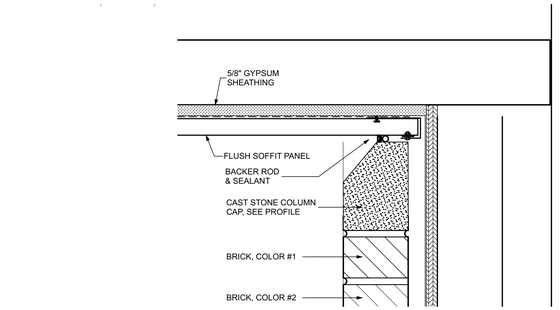
REVISIONS
FOR REBID

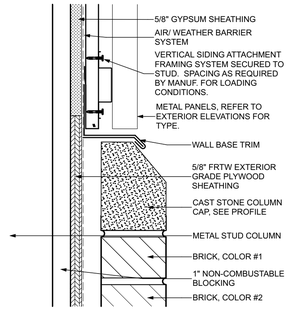
COMM. NUMBER	DATE
1615.04	05/12/21
DRAWN BY: AF	CHECKED BY: DF

WALL SECTIONS

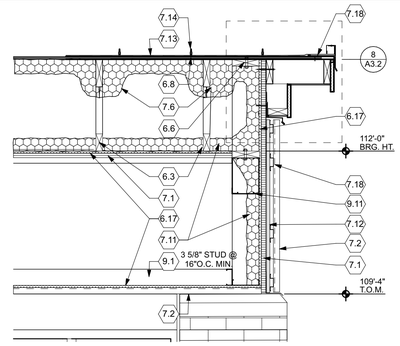
A6.3

PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A6-A6.3-WALL SECTIONS AND DETAILS : WALL SECTIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service\1615.04_ATC_Rebid

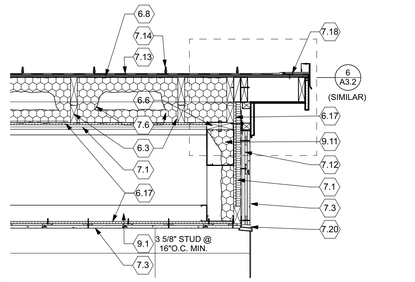




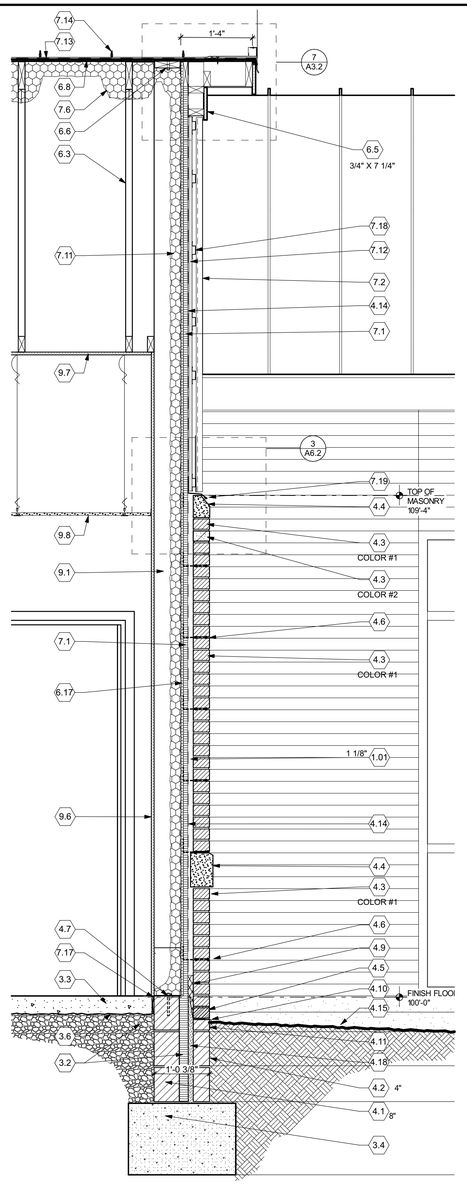
6 A6.4 MASONRY COLUMN DETAILS
SCALE: 3" = 1'-0"



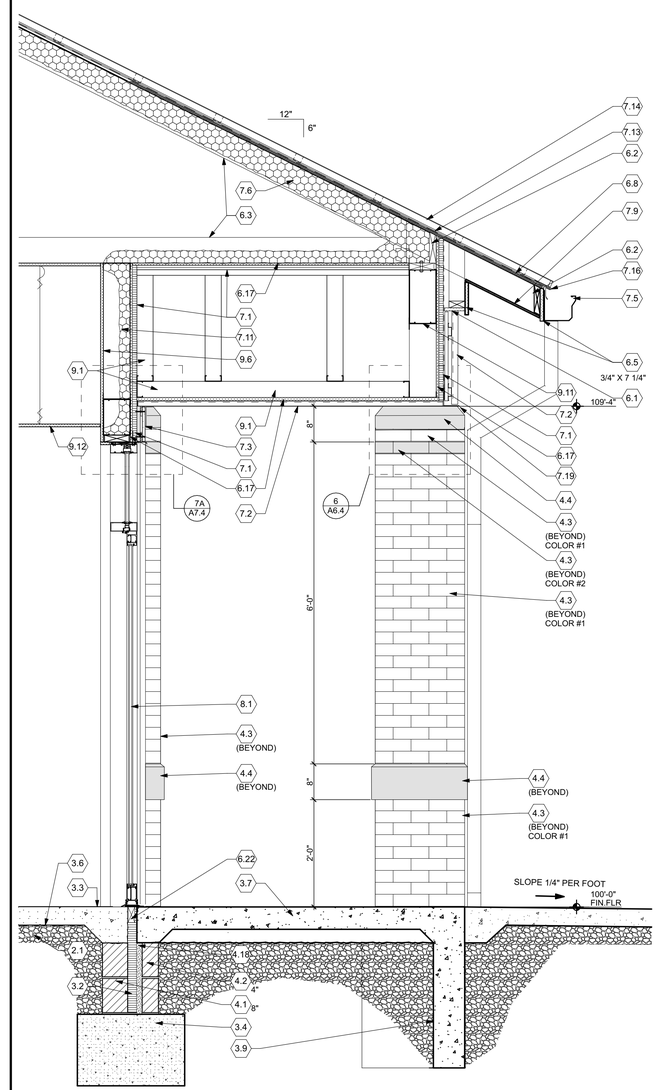
4 A6.4 SOUTH ENTRY EAVE
SCALE: 3/4" = 1'-0"



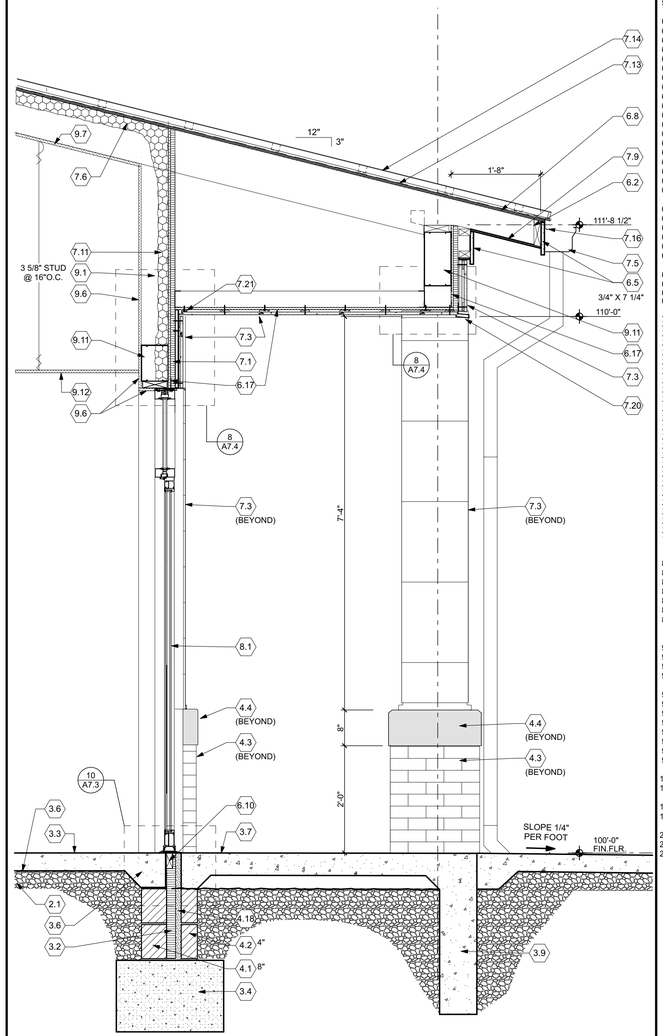
2 A6.4 EAST ENTRY SECTION
SCALE: 3/4" = 1'-0"



5 A6.4 END RIGGER @ SOUTH ENTRY
SCALE: 3/4" = 1'-0"



3 A6.4 SOUTH ENTRY SECTION
SCALE: 3/4" = 1'-0"



1 A6.4 EAST ENTRY CANOPY
SCALE: 3/4" = 1'-0"

SECTION KEY NOTES

NOTE: ALL NOTES DO NOT OCCUR ON EVERY SHEET

1.1 GRADE, SEE SITE PLAN

2.1 4" MIN. COMPACTED GRAVEL BASE (TYPICAL). COORDINATE DEPTH REQUIRED W/ EXISTING CONDITION.
2.2 COMPACTED EARTH BACKFILL.
2.3 COMPACTED GRAVEL BACKFILL.
2.4 COMPACTED ENGINEERED FILL.
2.5 4" PERFORATED FOOTING TILE. 12" MIN GRAVEL BACKFILL COVER ON TOP OF PIPE.
2.6 COMPACTED AGGREGATE FILL.
2.7 DRAINAGE BACKFILL.

3.1 1/4" EXPANSION FILLER.
3.2 2" RIGID PERIMETER INSULATION, CONTINUOUS.
3.3 4" CONCRETE FLOOR SLAB. REFER TO STRUCTURAL DRAWINGS.
3.4 CONCRETE FOUNDATION FOOTING. REFER TO STRUCTURAL DETAILS FOR SIZE, TOP OF FOOTING AND REINFORCING.
3.5 THICKENED SLAB FOUNDATION. REFER TO STRUCTURAL DRAWINGS.
3.6 VAPOR BARRIER TURN UP TO TOP OF SLAB (TYPICAL); REFER TO SPECIFICATIONS.
3.7 CONCRETE FROST STOOP. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
3.8 EXTERIOR CONCRETE SLAB. REFER TO SITE DRAWINGS FOR DETAIL AND LOCATIONS
3.9 "TURN-DOWN" SLAB, REFER TO STRUCTURAL DRAWINGS.
3.10 FOAM GASKET SILL SEAL.
3.11 SEALANT @ PERIMETER OF SLAB/ FOUNDATION
3.12 TRAFFIC GRADE SEALANT
3.13 6" CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS

4.1 CONCRETE MASONRY UNIT (CMU). FOR CMU FOUNDATIONS, REFER TO STRUCTURAL FOR SIZE AND REINFORCING.
4.2 SOLID CONCRETE MASONRY UNIT (CMU).
4.3 FACE BRICK, REFER TO ELEVATIONS FOR TYPE.
4.4 CAST STONE, REFER TO DETAIL.
4.5 BASE WEEP/VENT @ 32" O.C. (MAX).
4.6 HORIZONTAL JOINT REINFORCEMENT WALL TIE AT 16 O.C. VERTICAL (MAX)
4.7 ANCHOR BOLTS. REFER TO STRUCTURAL DRAWINGS.
4.8 CONTINUOUS COPPER FABRIC FLASHING
4.9 CAVITY MORTAR PROTECTION
4.10 METAL THRU WALL FLASHING.
4.11 CONCRETE BRICK
4.12 AIRSPACE
4.13 RAIN SCREEN DRAINAGE PLANE.
4.14 AIR/WEATHER BARRIER SYSTEM, REFER TO SPECIFICATIONS.
4.15 STAINLESS STEEL DRIP FLASHING.
4.16 CONTINUOUS CMU BOND BEAM, REFER TO STRUCTURAL DRAWINGS
4.17 CONTINUOUS MEMBRANE FLASHING W/ TERMINATION BAR.
4.18 GROUT VOID FULL
4.19 FILL COURSES OF CMU W/ GROUT AND PROVIDE REINFORCING DOWELS, REFER TO STRUCTURAL DRAWINGS.

5.1 BEAM, REFER TO STRUCTURAL DRAWINGS.
5.2 BEAM AND PLATE, REFER TO STRUCTURAL DRAWINGS.
5.3 COLUMN, REFER TO STRUCTURAL DRAWINGS.
5.4 LINTEL, REFER TO STRUCTURAL DRAWINGS.
5.5 ANGLE, REFER TO STRUCTURAL DRAWINGS.

6.1 FIBER CEMENT TRIM.
6.2 FRT WOOD BLOCKING.
6.3 FRT WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS.
6.4 FRT DOUBLE BEARING PLATE.
6.5 FIBER CEMENT FASCIA BOARD.
6.6 FRT WOOD PLATE REFER TO STRUCTURAL.
6.7 2X6 FRT WOOD FRAMING @ 16" O.C. REFER TO STRUCTURAL NOTES.
6.8 5/8" FRT WOOD ROOF DECK. REFER TO STRUCTURAL DRAWINGS.
6.9 FRT WOOD OVERFRAMING @ 16" O.C. (U.N.O) REFER TO STRUCTURAL DRAWINGS.
6.10 3/4" FIBER CEMENT BOARD TRIM, CUT AS REQUIRED.
6.11 2X8 CEILING JOIST @ 24" O.C.
6.12 FRT WOOD HEADER, REFER TO STRUCTURAL DRAWINGS.
6.13 2X FRT WOOD RAFTERS. REFER TO STRUCTURAL DRAWINGS.
6.14 EXTERIOR WINDOW TRIM. REFER TO WINDOW DETAILS.
6.15 CEILING JOIST /ROOF RAFTER.
6.16 WOOD TRIM.
6.17 5/8" EXT. GYPSUM SHEATHING. REFER TO SPECIFICATIONS.
6.18 2X6 LADDER FRAMING (OUTLOOKER) @ 16" O.C.
6.19 PRE-MANUFACTURED FULL THERMAL BREAK LVL HEADER: REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS.
6.20 WOOD POST, REFER TO STRUCTURAL DRAWINGS.
6.21 WOOD BEARING PLATE. REFER TO STRUCTURAL DRAWINGS.
6.22 2X6 FRT WOOD FRAMING @ 24" O.C.
6.23 P.T. WOOD NAILER
6.24 FRTW EXTERIOR PLYWOOD SHEATHING / BLOCKING
6.25 WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS. GARAGE TRUSSES ARE **NOT** FRTW.
6.26 5/8" PLYWOOD ROOF SHEATHING, REFER TO SPECIFICATIONS
6.27 5/8" EXT. GRADE PLYWOOD WALL SHEATHING. REFER TO SPECIFICATIONS.
6.28 WOOD BLOCKING. GARAGE BLOCKING IS **NOT** FRTW.
6.29 WOOD PLATE. REFER TO STRUCTURAL. GARAGE BLOCKING IS **NOT** FRTW.

7.1 1" CONTINUOUS RIGID INSULATION. REFER TO SPECIFICATIONS.
7.2 WALL PANELS, REFER TO ELEVATIONS FOR STYLE AND SPECIFICATIONS.
7.3 HORIZ. COMPOSITE WALL PANEL. REFER TO ELEVATIONS AND SPECIFICATIONS
7.4 EXPANSION JOINT.
7.5 7" METAL GUTTER, REFER TO ROOF PLAN FOR DOWNSPOUT DETAIL.
7.6 CLOSED CELL INSULATION (R=38) SPRAYED DIRECTLY TO ROOF DECK.
7.7 SEALANT W/ BACKER ROD.
7.8 SEALANT, REFER TO SPECIFICATIONS
7.9 VENTED FIBER CEMENT SOFFIT PANEL
7.10 AIR/WEATHER BARRIER. REFER TO SPECIFICATIONS
7.11 CLOSED CELL POLYURETHANE INSULATION (SPF) R=16.25 MIN.
7.12 SIDING ATTACHMENT SUBFRAMING SECURED TO EACH STUD @ 16" O.C.
7.13 SELF ADHERING ROOF UNDERLAYMENT, REFER TO SPECIFICATIONS
7.14 STANDING SEAM METAL ROOF. REFER TO SPECIFICATIONS.
7.15 FIBERGLASS BATT INSULATION (R=38)
7.16 METAL DRIP EDGE.
7.17 SEALANT AT FLOOR PERIMETER, TYPICAL @ EXTERIOR MASONRY WALLS
7.18 HORIZONTAL PANEL RAIL ATTACHED TO VERTICAL SUBFRAMING.
7.19 CONTINUOUS METAL SIDING BASE FLASHING, REFER TO DETAILS AND SPECIFICATIONS.
7.20 COMPOSITE WALL PANEL TRANSITION FLASHING, BY PANEL MANUF.
7.21 COMPOSITE WALL PANEL STARTER TRACK BY PANEL MANUF.
7.22 KRAFT FACED CEILING BATT INSULATION (R-30)
7.23 6" WALL BATT INSULATION. (R-19)
7.24 HIGH IMPACT POLYSTYRENE EAVE VENT BAFFEL 22" X 48". BASIS OF DESIGN: PROVENT BAFFLE SKU PVB2348 BY A.D.O.

8.1 DOOR & FRAME, REFER TO DOOR SCHEDULE.
8.2 WINDOW, REFER TO FLOOR PLAN AND WINDOW ELEVATIONS FOR TYPE.
8.3 THRESHOLD BY DOOR MANUFACTURER, REFER TO DOOR DETAILS.
8.4 REFER TO ALUMINUM WINDOW ELEVATIONS AND SPECIFICATIONS.
8.5 ALUMINUM SUBSILL BY WINDOW MANUFACTURER. FINISH TO MATCH WINDOW.
8.6 SECTIONAL OVERHEAD DOOR, REFER TO DOOR SCHEDULE.
8.7 ALUMINUM OFFSET SNAP-TRIM. REFER TO EXTERIOR WINDOW DETAILS AND SPECIFICATIONS.

9.1 CFMF @16" O.C.
9.2 CFMF BRACING @ 48"O.C.
9.3 5/8" ABUSE RESISTANT GYPSUM BOARD, FULL HEIGHT
9.4 RUNNER @ 48"O.C. MAX.; 7/8" METAL FURRING CHANNELS CROSS FURRING @ 24"O.C. HANGER SPACING @ 4'-0"O.C. MAX.
9.5 WINDOW TRIM AND SILL. REFER TO WINDOW DETAILS.
9.6 5/8"GYPSUM BOARD.
9.7 5/8" GYPSUM BOARD AT BOTTOM OF TRUSS (TYPICAL).
9.8 SUSPENDED ACOUSTICAL CEILING PANELS AND GRID.
9.9 METAL 'J' MOLD
9.10 WALL BASE, SEE FINISH SCHEDULE.
9.11 STEEL STUD BOX BEAM. REFER TO STRUCTURAL DRAWINGS
9.12 SUSPENDED GYPSUM CEILING

10.1 LOUVER, REFER TO MECHANICAL DRAWINGS AND SHEET A7.1
10.2 GRILLE, REFER TO MECHANICAL DRAWINGS.

12.0 CASEWORK, REFER TO EQUIPMENT DRAWINGS
12.1 WINDOW SHADES, REFER TO SPECIFICATIONS.

23.1 HVAC EQUIPMENT AND DUCTS, SEE HVAC DRAWINGS
23.2 PERFORATED STORM PIPE. REFER TO SITE DRAWINGS.
23.3 MECHANICAL LOUVER. REFER TO MECHANICAL DRAWINGS.

FREYTAG & ASSOCIATES INC.
ARCHITECTS ENGINEERS
226 N. MIAMI AVE.
P.O. BOX 220
SIDNEY, OHIO 45365
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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY AND MENTAL HEALTH
1280 N COUNTY RD. 25A TROY, OHIO 45373

STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

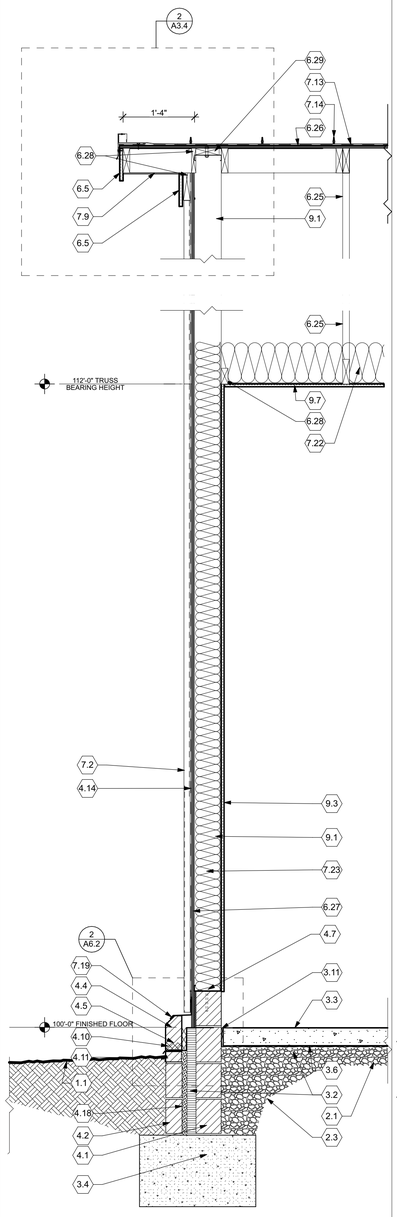
REVISIONS
FOR REBID

COMM. NUMBER	DATE
1615.04	05/12/21
DRAWN BY	CHECKED BY
AF	DF

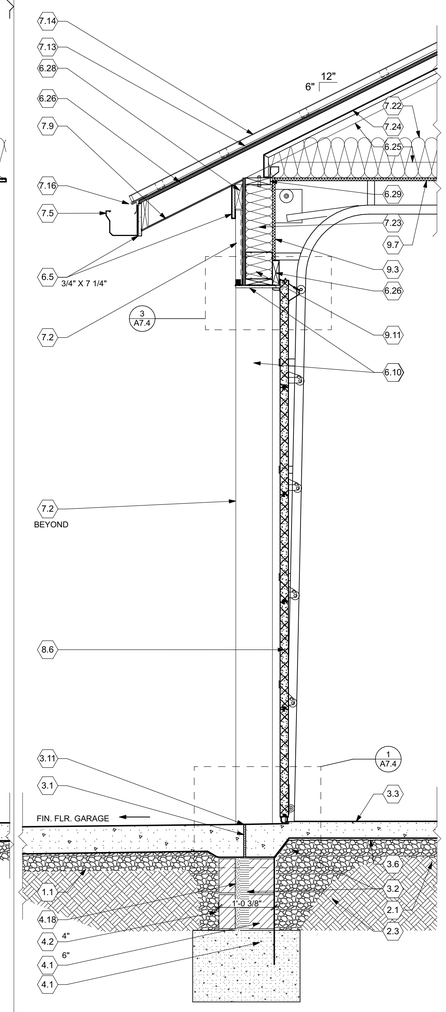
WALL SECTIONS

A6.4

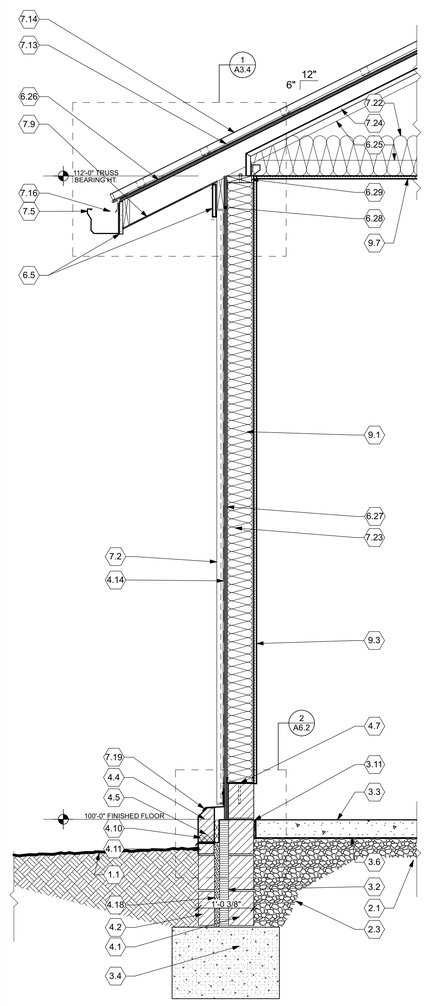
PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A6-A4-4 WALL SECTIONS AND DETAILS - WALL SECTIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service\1615.04_ATC_Rebid



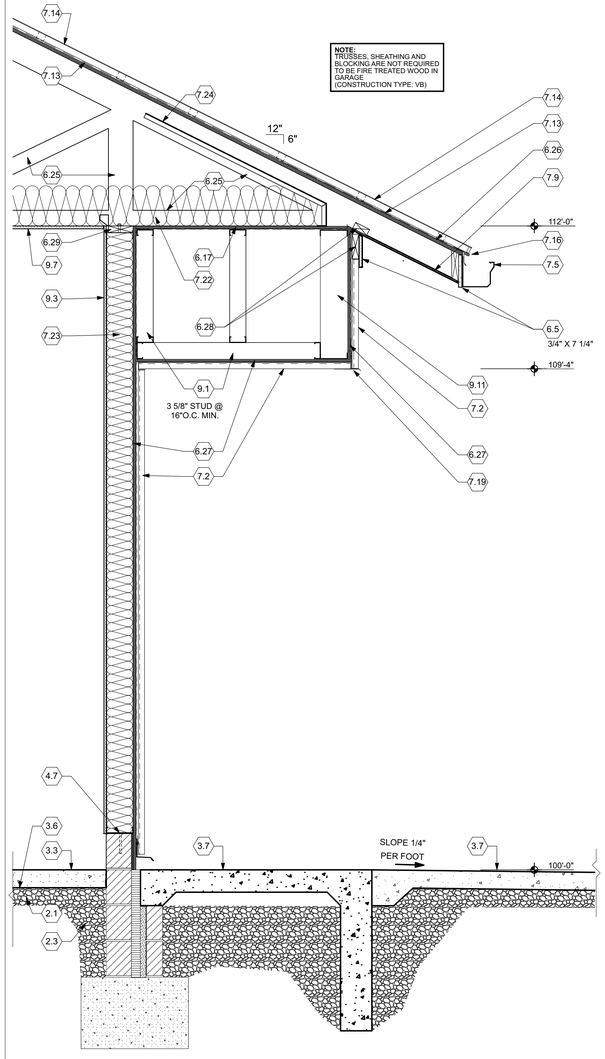
4 A6.5 GARAGE WALL SECTION
SCALE: 3/4" = 1'-0"



3 A6.5 GARAGE WALL SECTION
SCALE: 3/4" = 1'-0"



2 A6.5 GARAGE WALL SECTION
SCALE: 3/4" = 1'-0"



1 A6.5 WALL SECTION
SCALE: 3/4" = 1'-0"

SECTION KEY NOTES

NOTE: ALL NOTES DO NOT OCCUR ON EVERY SHEET

1.1 GRADE, SEE SITE PLAN

2.1 4" MIN. COMPACTED GRAVEL BASE (TYPICAL). COORDINATE DEPTH REQUIRED W/ EXISTING CONDITION.
2.2 COMPACTED EARTH BACKFILL.
2.3 COMPACTED GRAVEL BACKFILL.
2.4 COMPACTED ENGINEERED FILL.
2.5 4" PERFORATED FOOTING TILE. 12" MIN GRAVEL BACKFILL COVER ON TOP OF PIPE.
2.6 COMPACTED AGGREGATE FILL.
2.7 DRAINAGE BACKFILL.

3.1 1/4" EXPANSION FILLER.
3.2 2" RIGID PERIMETER INSULATION, CONTINUOUS.
3.3 4" CONCRETE FLOOR SLAB. REFER TO STRUCTURAL DRAWINGS.
3.4 CONCRETE FOUNDATION FOOTING. REFER TO STRUCTURAL DETAILS FOR SIZE, TOP OF FOOTING AND REINFORCING.
3.5 THICKENED SLAB FOUNDATION. REFER TO STRUCTURAL DRAWINGS.
3.6 VAPOR BARRIER TURN UP TO TOP OF SLAB (TYPICAL), REFER TO SPECIFICATIONS.
3.7 CONCRETE FROST STOOP, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
3.8 EXTERIOR CONCRETE SLAB. REFER TO SITE DRAWINGS FOR DETAIL AND LOCATIONS
3.9 "TURN-DOWN" SLAB, REFER TO STRUCTURAL DRAWINGS.
3.10 FOAM GASKET SILL SEAL.
3.11 SEALANT @ PERIMETER OF SLAB/ FOUNDATION
3.12 TRAFFIC GRADE SEALANT
3.13 6" CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS

4.1 CONCRETE MASONRY UNIT (CMU). FOR CMU FOUNDATIONS, REFER TO STRUCTURAL FOR SIZE AND REINFORCING.
4.2 SOLID CONCRETE MASONRY UNIT (CMU).
4.3 FACE BRICK, REFER TO ELEVATIONS FOR TYPE.
4.4 CAST STONE, REFER TO DETAIL.
4.5 BASE WEEP/VENT @ 32" O.C. (MAX)
4.6 HORIZONTAL JOINT REINFORCEMENT WALL TIE AT 16 O.C. VERTICAL (MAX)
4.7 ANCHOR BOLTS. REFER TO STRUCTURAL DRAWINGS.
4.8 CONTINUOUS COPPER FABRIC FLASHING
4.9 CAVITY MORTAR PROTECTION
4.10 METAL THRU WALL FLASHING.
4.11 CONCRETE BRICK
4.12 AIRSPACE
4.13 RAIN SCREEN DRAINAGE PLANE.
4.14 AIR/WEATHER BARRIER SYSTEM, REFER TO SPECIFICATIONS.
4.15 STAINLESS STEEL DRIP FLASHING.
4.16 CONTINUOUS CMU BOND BEAM, REFER TO STRUCTURAL DRAWINGS
4.17 CONTINUOUS MEMBRANE FLASHING W/ TERMINATION BAR.
4.18 GROUT VOID FULL
4.19 FILL COURSES OF CMU W/ GROUT AND PROVIDE REINFORCING DOWELS, REFER TO STRUCTURAL DRAWINGS.

5.1 BEAM, REFER TO STRUCTURAL DRAWINGS.
5.2 BEAM AND PLATE, REFER TO STRUCTURAL DRAWINGS.
5.3 COLUMN, REFER TO STRUCTURAL DRAWINGS.
5.4 LINTEL, REFER TO STRUCTURAL DRAWINGS.
5.5 ANGLE, REFER TO STRUCTURAL DRAWINGS.

6.1 FIBER CEMENT TRIM.
6.2 FRT WOOD BLOCKING.
6.3 FRT WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS.
6.4 FRT DOUBLE BEARING PLATE.
6.5 FIBER CEMENT FASCIA BOARD.
6.6 FRT WOOD PLATE REFER TO STRUCTURAL.
6.7 2X6 FRT WOOD FRAMING @ 16" O.C. REFER TO STRUCTURAL NOTES.
6.8 5/8" FRT WOOD ROOF DECK. REFER TO STRUCTURAL DRAWINGS.
6.9 FRT WOOD OVERFRAMING @ 16" O.C. (U.N.O) REFER TO STRUCTURAL DRAWINGS.
6.10 3/4" FIBER CEMENT BOARD TRIM, CUT AS REQUIRED.
6.11 2X8 CEILING JOIST @ 24" O.C.
6.12 FRT WOOD HEADER, REFER TO STRUCTURAL DRAWINGS.
6.13 2X FRT WOOD RAFTERS. REFER TO STRUCTURAL DRAWINGS.
6.14 EXTERIOR WINDOW TRIM. REFER TO WINDOW DETAILS.
6.15 CEILING JOIST /ROOF RAFTER.
6.16 WOOD TRIM.
6.17 5/8" EXT. GYPSUM SHEATHING. REFER TO SPECIFICATIONS.
6.18 2X6 LADDER FRAMING (OUTLOOKER) @ 16" O.C.
6.19 PRE-MANUFACTURED FULL THERMAL BREAK LVL HEADER: REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS.
6.20 WOOD POST, REFER TO STRUCTURAL DRAWINGS.
6.21 WOOD BEARING PLATE. REFER TO STRUCTURAL DRAWINGS.
6.22 2X6 FRT WOOD FRAMING @ 24" O.C.
6.23 P.T. WOOD NAILER
6.24 FRTW EXTERIOR PLYWOOD SHEATHING / BLOCKING
6.25 WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS. GARAGE TRUSSES ARE **NOT** FRTW.
6.26 5/8" PLYWOOD ROOF SHEATHING, REFER TO SPECIFICATIONS
6.27 5/8" EXT. GRADE PLYWOOD WALL SHEATHING. REFER TO SPECIFICATIONS.
6.28 WOOD BLOCKING. GARAGE BLOCKING IS **NOT** FRTW.
6.29 WOOD PLATE. REFER TO STRUCTURAL. GARAGE BLOCKING IS **NOT** FRTW.

7.1 1" CONTINUOUS RIGID INSULATION. REFER TO SPECIFICATIONS.
7.2 WALL PANELS, REFER TO ELEVATIONS FOR STYLE AND SPECIFICATIONS.
7.3 HORIZ. COMPOSITE WALL PANEL. REFER TO ELEVATIONS AND SPECIFICATIONS
7.4 EXPANSION JOINT.
7.5 7" METAL GUTTER, REFER TO ROOF PLAN FOR DOWNSPOUT DETAIL.
7.6 CLOSED CELL INSULATION (R=38) SPRAYED DIRECTLY TO ROOF DECK.
7.7 SEALANT W/ BACKER ROD.
7.8 SEALANT, REFER TO SPECIFICATIONS
7.9 VENTED FIBER CEMENT SOFFIT PANEL.
7.10 AIR/WEATHER BARRIER. REFER TO SPECIFICATIONS
7.11 CLOSED CELL POLYURETHANE INSULATION (SPF) R=16.25 MIN.
7.12 SIDING ATTACHMENT SUBFRAMING. SECURED TO EACH STUD @ 16" O.C.
7.13 SELF ADHERING ROOF UNDERLAYMENT, REFER TO SPECIFICATIONS
7.14 STANDING SEAM METAL ROOF. REFER TO SPECIFICATIONS.
7.15 FIBERGLASS BATT INSULATION (R=38)
7.16 METAL DRIP EDGE.
7.17 SEALANT AT FLOOR PERIMETER, TYPICAL @ EXTERIOR MASONRY WALLS
7.18 HORIZONTAL PANEL RAIL ATTACHED TO VERTICAL SUBFRAMING.
7.19 CONTINUOUS METAL SIDING BASE FLASHING, REFER TO DETAILS AND SPECIFICATIONS.
7.20 COMPOSITE WALL PANEL TRANSITION FLASHING, BY PANEL MANUF.
7.21 COMPOSITE WALL PANEL STARTER TRACK BY PANEL MANUF.
7.22 KRAFT FACED CEILING BATT INSULATION (R-30)
7.23 6" WALL BATT INSULATION. (R-19)
7.24 HIGH IMPACT POLYSTYRENE EAVE VENT BAFFEL 22" X 48". BASIS OF DESIGN: PROVENT BAFFLE SKU PVB2348 BY A.D.O.

8.1 DOOR & FRAME, REFER TO DOOR SCHEDULE.
8.2 WINDOW, REFER TO FLOOR PLAN AND WINDOW ELEVATIONS FOR TYPE.
8.3 THRESHOLD BY DOOR MANUFACTURER, REFER TO DOOR DETAILS.
8.4 REFER TO ALUMINUM WINDOW ELEVATIONS AND SPECIFICATIONS.
8.5 ALUMINUM SUBSILL BY WINDOW MANUFACTURER. FINISH TO MATCH WINDOW.
8.6 SECTIONAL OVERHEAD DOOR, REFER TO DOOR SCHEDULE.
8.7 ALUMINUM OFFSET SNAP-TRIM. REFER TO EXTERIOR WINDOW DETAILS AND SPECIFICATIONS.

9.1 CFMF @16" O.C.
9.2 CFMF BRACING @ 48"O.C.
9.3 5/8" ABUSE RESISTANT GYPSUM BOARD, FULL HEIGHT
9.4 RUNNER @ 48"O.C. MAX.; 7/8" METAL FURRING CHANNELS CROSS FURRING @ 24"O.C. HANGER SPACING @ 4'-0"O.C. MAX.
9.5 WINDOW TRIM AND SILL. REFER TO WINDOW DETAILS.
9.6 5/8"GYPSUM BOARD
9.7 5/8" GYPSUM BOARD AT BOTTOM OF TRUSS (TYPICAL).
9.8 SUSPENDED ACOUSTICAL CEILING PANELS AND GRID.
9.9 METAL 'J' MOLD
9.10 WALL BASE, SEE FINISH SCHEDULE.
9.11 STEEL STUD BOX BEAM. REFER TO STRUCTURAL DRAWINGS
9.12 SUSPENDED GYPSUM CEILING

10.1 LOUVER, REFER TO MECHANICAL DRAWINGS AND SHEET A7.1
10.2 GRILLE, REFER TO MECHANICAL DRAWINGS.

12.0 CASEWORK, REFER TO EQUIPMENT DRAWINGS
12.1 WINDOW SHADES, REFER TO SPECIFICATIONS.

23.1 HVAC EQUIPMENT AND DUCTS, SEE HVAC DRAWINGS
23.2 PERFORATED STORM PIPE. REFER TO SITE DRAWINGS.
23.3 MECHANICAL LOUVER. REFER TO MECHANICAL DRAWINGS.

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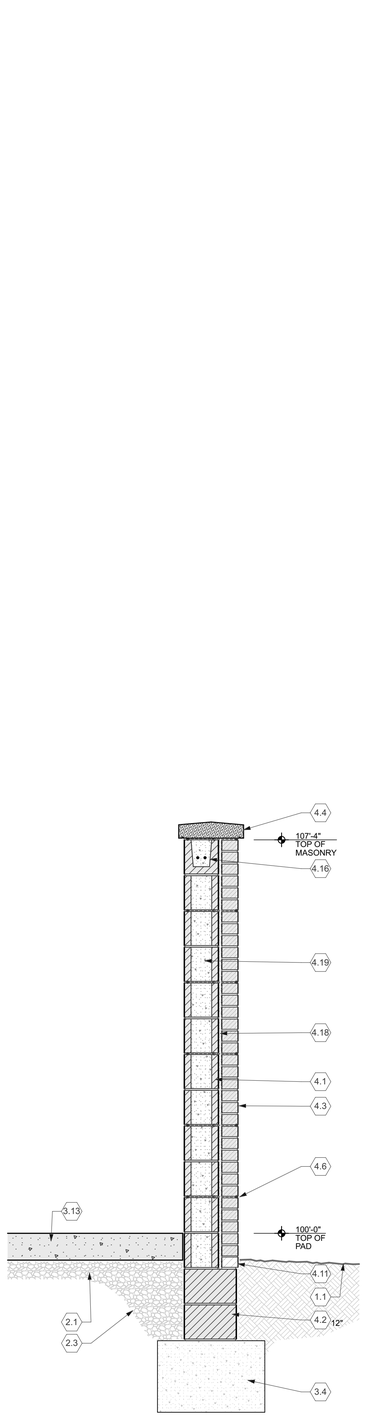
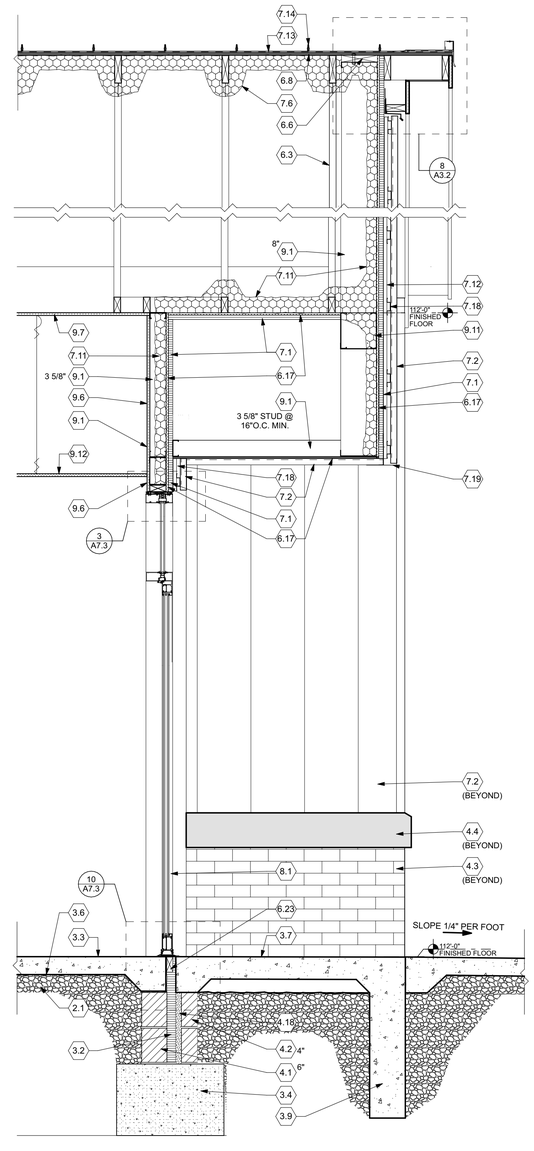
WALL SECTIONS

A6.5

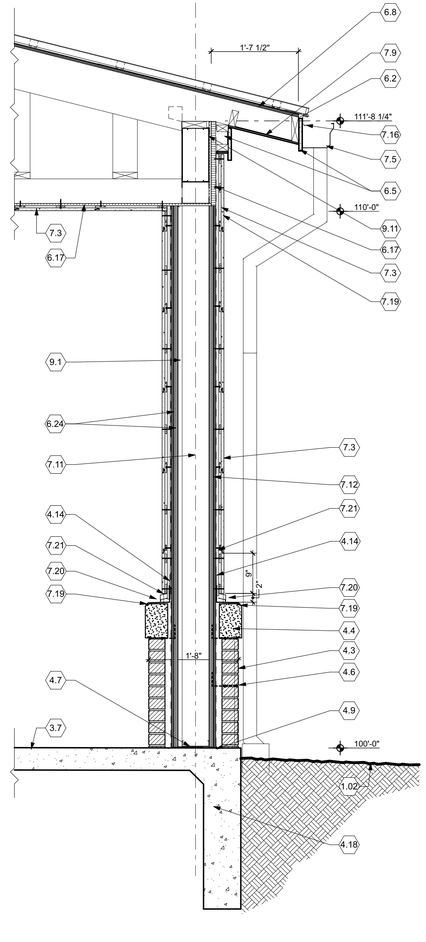
PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A6-A6.5-WALL SECTIONS AND DETAILS - WALL SECTIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagginc - BIMcloud as a Service\1615.04_ATC_Rebid



3 A6.6 SCREEN WALL SECTION
SCALE: 3/4" = 1'-0"



2 A6.6 WEST ENTRY SECTION
SCALE: 3/4" = 1'-0"



1 A6.6 FRONT COLUMN SECTION
SCALE: 3/4" = 1'-0"

SECTION KEY NOTES

NOTE: ALL NOTES DO NOT OCCUR ON EVERY SHEET

1.1 GRADE, SEE SITE PLAN

2.1 4" MIN. COMPACTED GRAVEL BASE (TYPICAL). COORDINATE DEPTH REQUIRED W/ EXISTING CONDITION.
2.2 COMPACTED EARTH BACKFILL.
2.3 COMPACTED GRAVEL BACKFILL.
2.4 COMPACTED ENGINEERED FILL.
2.5 4" PERFORATED FOOTING TILE. 12" MIN GRAVEL BACKFILL COVER ON TOP OF PIPE.
2.6 COMPACTED AGGREGATE FILL.
2.7 DRAINAGE BACKFILL.

3.1 1/4" EXPANSION FILLER.
3.2 2" RIGID PERIMETER INSULATION, CONTINUOUS.
3.3 4" CONCRETE FLOOR SLAB. REFER TO STRUCTURAL DRAWINGS.
3.4 CONCRETE FOUNDATION FOOTING. REFER TO STRUCTURAL DETAILS FOR SIZE, TOP OF FOOTING AND REINFORCING.
3.5 THICKENED SLAB FOUNDATION. REFER TO STRUCTURAL DRAWINGS.
3.6 VAPOR BARRIER TURN UP TO TOP OF SLAB (TYPICAL). REFER TO SPECIFICATIONS.
3.7 CONCRETE FROST STOOP. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
3.8 EXTERIOR CONCRETE SLAB. REFER TO SITE DRAWINGS FOR DETAIL AND LOCATIONS
3.9 "TURN-DOWN" SLAB. REFER TO STRUCTURAL DRAWINGS.
3.10 FOAM GASKET SILL SEAL.
3.11 SEALANT @ PERIMETER OF SLAB/ FOUNDATION
3.12 TRAFFIC GRADE SEALANT
3.13 6" CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS

4.1 CONCRETE MASONRY UNIT (CMU). FOR CMU FOUNDATIONS, REFER TO STRUCTURAL FOR SIZE AND REINFORCING.
4.2 SOLID CONCRETE MASONRY UNIT (CMU).
4.3 FACE BRICK. REFER TO ELEVATIONS FOR TYPE.
4.4 CAST STONE, REFER TO DETAIL.
4.5 BASE WEEP/VENT @ 32" O.C. (MAX)
4.6 HORIZONTAL JOINT REINFORCEMENT WALL TIE AT 16 O.C. VERTICAL (MAX)
4.7 ANCHOR BOLTS. REFER TO STRUCTURAL DRAWINGS.
4.8 CONTINUOUS COPPER FABRIC FLASHING
4.9 CAVITY MORTAR PROTECTION
4.10 METAL THRU WALL FLASHING.
4.11 CONCRETE BRICK
4.12 AIRSPACE
4.13 RAIN SCREEN DRAINAGE PLANE.
4.14 AIR/WEATHER BARRIER SYSTEM, REFER TO SPECIFICATIONS.
4.15 STAINLESS STEEL DRIP FLASHING.
4.16 CONTINUOUS CMU BOND BEAM, REFER TO STRUCTURAL DRAWINGS
4.17 CONTINUOUS MEMBRANE FLASHING W/ TERMINATION BAR.
4.18 GROUT VOID FULL
4.19 FILL COURSES OF CMU W/ GROUT AND PROVIDE REINFORCING DOWELS, REFER TO STRUCTURAL DRAWINGS.

5.1 BEAM, REFER TO STRUCTURAL DRAWINGS.
5.2 BEAM AND PLATE, REFER TO STRUCTURAL DRAWINGS.
5.3 COLUMN, REFER TO STRUCTURAL DRAWINGS.
5.4 LINTEL, REFER TO STRUCTURAL DRAWINGS.
5.5 ANGLE, REFER TO STRUCTURAL DRAWINGS.

6.1 FIBER CEMENT TRIM.
6.2 FRT WOOD BLOCKING.
6.3 FRT WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS.
6.4 FRT DOUBLE BEARING PLATE.
6.5 FIBER CEMENT FASCIA BOARD.
6.6 FRT WOOD PLATE REFER TO STRUCTURAL.
6.7 2X6 FRT WOOD FRAMING @ 16" O.C. REFER TO STRUCTURAL NOTES.
6.8 5/8" FRT WOOD ROOF DECK. REFER TO STRUCTURAL DRAWINGS.
6.9 FRT WOOD OVERFRAMING @ 16" O.C. (U.N.O) REFER TO STRUCTURAL DRAWINGS.
6.10 3/4" FIBER CEMENT BOARD TRIM, CUT AS REQUIRED.
6.11 2X8 CEILING JOIST @ 24" O.C.
6.12 FRT WOOD HEADER. REFER TO STRUCTURAL DRAWINGS.
6.13 2X FRT WOOD RAFTERS. REFER TO STRUCTURAL DRAWINGS.
6.14 EXTERIOR WINDOW TRIM. REFER TO WINDOW DETAILS.
6.15 CEILING JOIST /ROOF RAFTER.
6.16 WOOD TRIM.
6.17 5/8" EXT. GYPSUM SHEATHING. REFER TO SPECIFICATIONS.
6.18 2X6 LADDER FRAMING (OUTLOOKER) @ 16" O.C.
6.19 PRE-MANUFACTURED FULL THERMAL BREAK LVL HEADER: REFER TO STRUCTURAL DRAWINGS AND SPECIFICATIONS.
6.20 WOOD POST, REFER TO STRUCTURAL DRAWINGS.
6.21 WOOD BEARING PLATE. REFER TO STRUCTURAL DRAWINGS.
6.22 2X6 FRT WOOD FRAMING @ 24" O.C.
6.23 P.T. WOOD NAILER
6.24 FRTW EXTERIOR PLYWOOD SHEATHING / BLOCKING
6.25 WOOD ROOF TRUSSES, REFER TO STRUCTURAL DRAWINGS. GARAGE TRUSSES ARE **NOT** FRTW.
6.26 5/8" PLYWOOD ROOF SHEATHING, REFER TO SPECIFICATIONS
6.27 5/8" EXT. GRADE PLYWOOD WALL SHEATHING. REFER TO SPECIFICATIONS.
6.28 WOOD BLOCKING. GARAGE BLOCKING IS **NOT** FRTW.
6.29 WOOD PLATE. REFER TO STRUCTURAL. GARAGE BLOCKING IS **NOT** FRTW.

7.1 1" CONTINUOUS RIGID INSULATION. REFER TO SPECIFICATIONS.
7.2 WALL PANELS, REFER TO ELEVATIONS FOR STYLE AND SPECIFICATIONS.
7.3 HORIZ. COMPOSITE WALL PANEL. REFER TO ELEVATIONS AND SPECIFICATIONS
7.4 EXPANSION JOINT.
7.5 7" METAL GUTTER, REFER TO ROOF PLAN FOR DOWNSPOUT DETAIL.
7.6 CLOSED CELL INSULATION (R=38) SPRAYED DIRECTLY TO ROOF DECK.
7.7 SEALANT W/ BACKER ROD.
7.8 SEALANT, REFER TO SPECIFICATIONS
7.9 VENTED FIBER CEMENT SOFFIT PANEL.
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7.11 CLOSED CELL POLYURETHANE INSULATION (SPF) R=16.25 MIN.
7.12 SIDING ATTACHMENT SUBFRAMING. SECURED TO EACH STUD @ 16" O.C.
7.13 SELF ADHERING ROOF UNDERLAYMENT. REFER TO SPECIFICATIONS
7.14 STANDING SEAM METAL ROOF. REFER TO SPECIFICATIONS.
7.15 FIBERGLASS BATT INSULATION (R=38)
7.16 METAL DRIP EDGE.
7.17 SEALANT AT FLOOR PERIMETER, TYPICAL @ EXTERIOR MASONRY WALLS
7.18 HORIZONTAL PANEL RAIL ATTACHED TO VERTICAL SUBFRAMING.
7.19 CONTINUOUS METAL SIDING BASE FLASHING. REFER TO DETAILS AND SPECIFICATIONS.
7.20 COMPOSITE WALL PANEL TRANSITION FLASHING, BY PANEL MANUF.
7.21 COMPOSITE WALL PANEL STARTER TRACK BY PANEL MANUF.
7.22 KRAFT FACED CEILING BATT INSULATION (R-30)
7.23 6" WALL BATT INSULATION. (R-19)
7.24 HIGH IMPACT POLYSTYRENE EAVE VENT BAFFEL 22" X 48". BASIS OF DESIGN: PROVENT BAFFLE SKU PVB2348 BY A.D.O.

8.1 DOOR & FRAME, REFER TO DOOR SCHEDULE.
8.2 WINDOW, REFER TO FLOOR PLAN AND WINDOW ELEVATIONS FOR TYPE.
8.3 THRESHOLD BY DOOR MANUFACTURER, REFER TO DOOR DETAILS.
8.4 REFER TO ALUMINUM WINDOW ELEVATIONS AND SPECIFICATIONS.
8.5 ALUMINUM SUBSILL BY WINDOW MANUFACTURER. FINISH TO MATCH WINDOW.
8.6 SECTIONAL OVERHEAD DOOR, REFER TO DOOR SCHEDULE.
8.7 ALUMINUM OFFSET SNAP-TRIM. REFER TO EXTERIOR WINDOW DETAILS AND SPECIFICATIONS.

9.1 CFMF @16" O.C.
9.2 CFMF BRACING @ 48"O.C.
9.3 5/8" ABUSE RESISTANT GYPSUM BOARD, FULL HEIGHT
9.4 RUNNER @ 48"O.C. MAX.; 7/8" METAL FURRING CHANNELS CROSS FURRING @ 24"O.C. HANGER SPACING @ 4'-0"O.C. MAX.
9.5 WINDOW TRIM AND SILL. REFER TO WINDOW DETAILS.
9.6 5/8"GYPSUM BOARD
9.7 5/8" GYPSUM BOARD AT BOTTOM OF TRUSS (TYPICAL).
9.8 SUSPENDED ACOUSTICAL CEILING PANELS AND GRID.
9.9 METAL 'J' MOLD
9.10 WALL BASE, SEE FINISH SCHEDULE.
9.11 STEEL STUD BOX BEAM. REFER TO STRUCTURAL DRAWINGS
9.12 SUSPENDED GYPSUM CEILING

10.1 LOUVER. REFER TO MECHANICAL DRAWINGS AND SHEET A7.1
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12.0 CASEWORK, REFER TO EQUIPMENT DRAWINGS
12.1 WINDOW SHADES, REFER TO SPECIFICATIONS.

23.1 HVAC EQUIPMENT AND DUCTS, SEE HVAC DRAWINGS
23.2 PERFORATED STORM PIPE. REFER TO SITE DRAWINGS.
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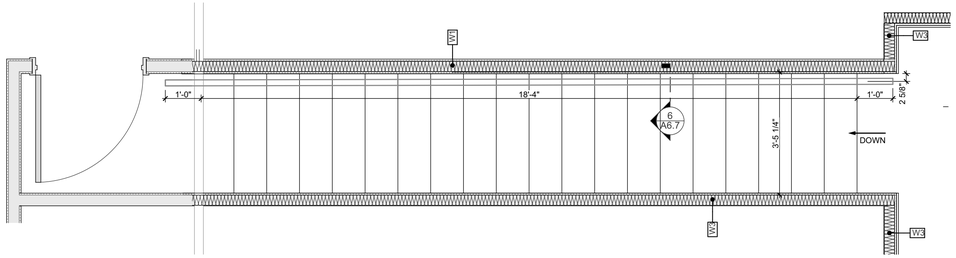
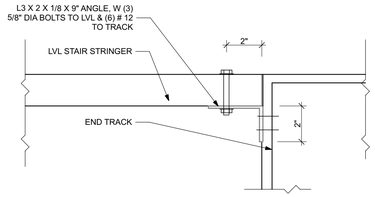
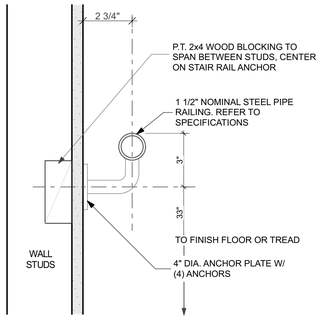


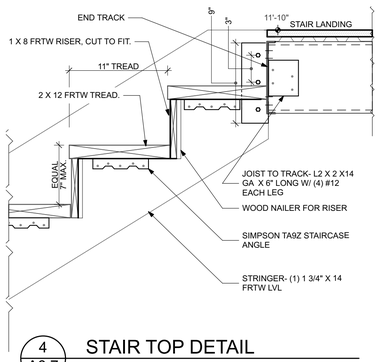
2 A6.7 ENLARGED STAIR PLAN
SCALE: 1/2" = 1'-0"



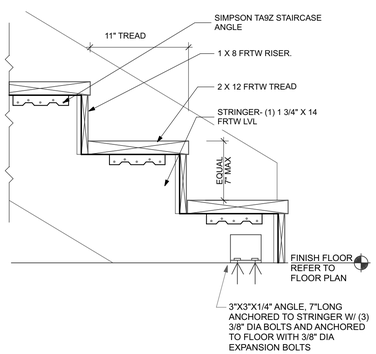
5 A6.7 DETAIL @ STAIR STRINGER
SCALE: 3" = 1'-0"



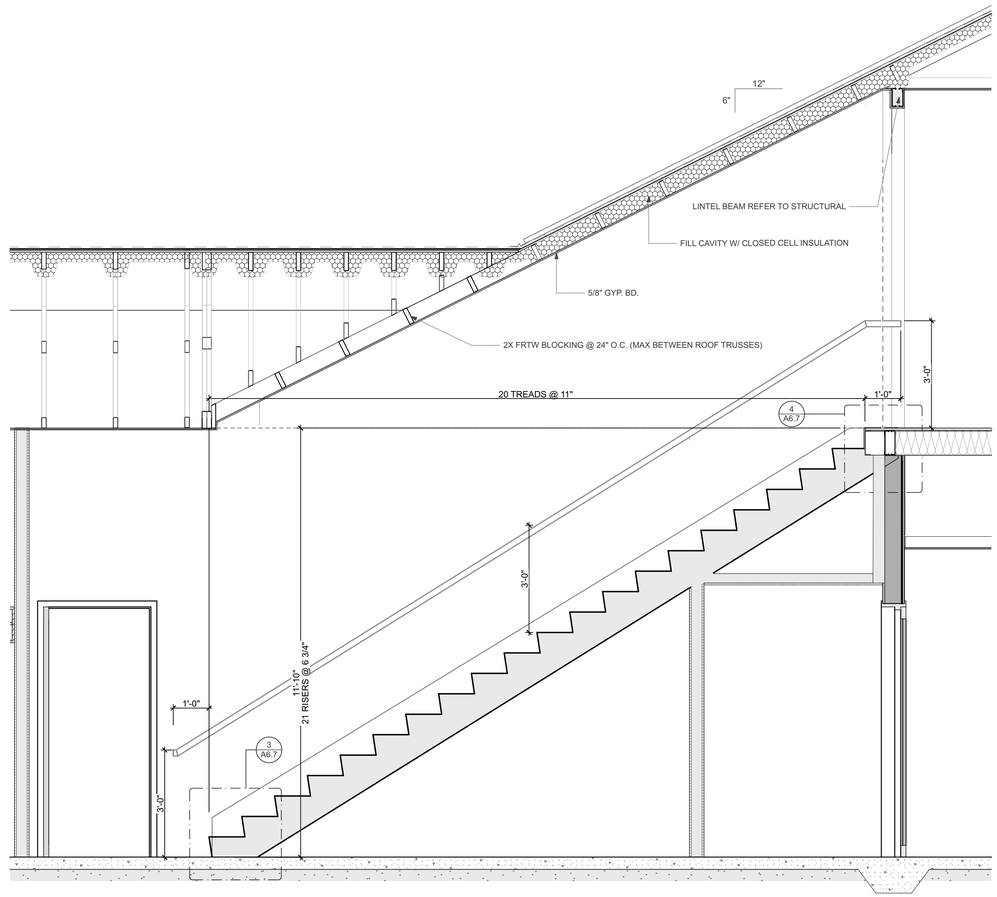
6 A6.7 STAIR HANDRAIL DETAIL
SCALE: 3" = 1'-0"



4 A6.7 STAIR TOP DETAIL
SCALE: 1-1/2" = 1'-0"



3 A6.7 STAIR BOTTOM DETAIL
SCALE: 1-1/2" = 1'-0"



1 A6.7 STAIR SECTION
SCALE: 1/2" = 1'-0"

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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY
AND MENTAL HEALTH
1280 N COUNTY RD. 25A
TROY, OHIO 45373

STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

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COMM. NUMBER	DATE
1615.04	05/12/21
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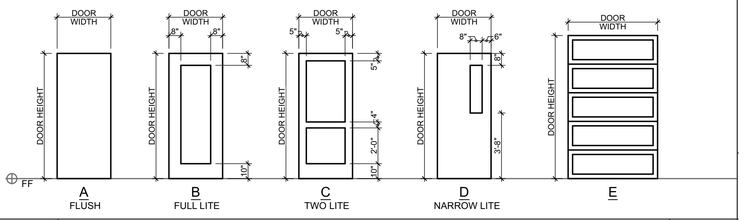
AF	DF

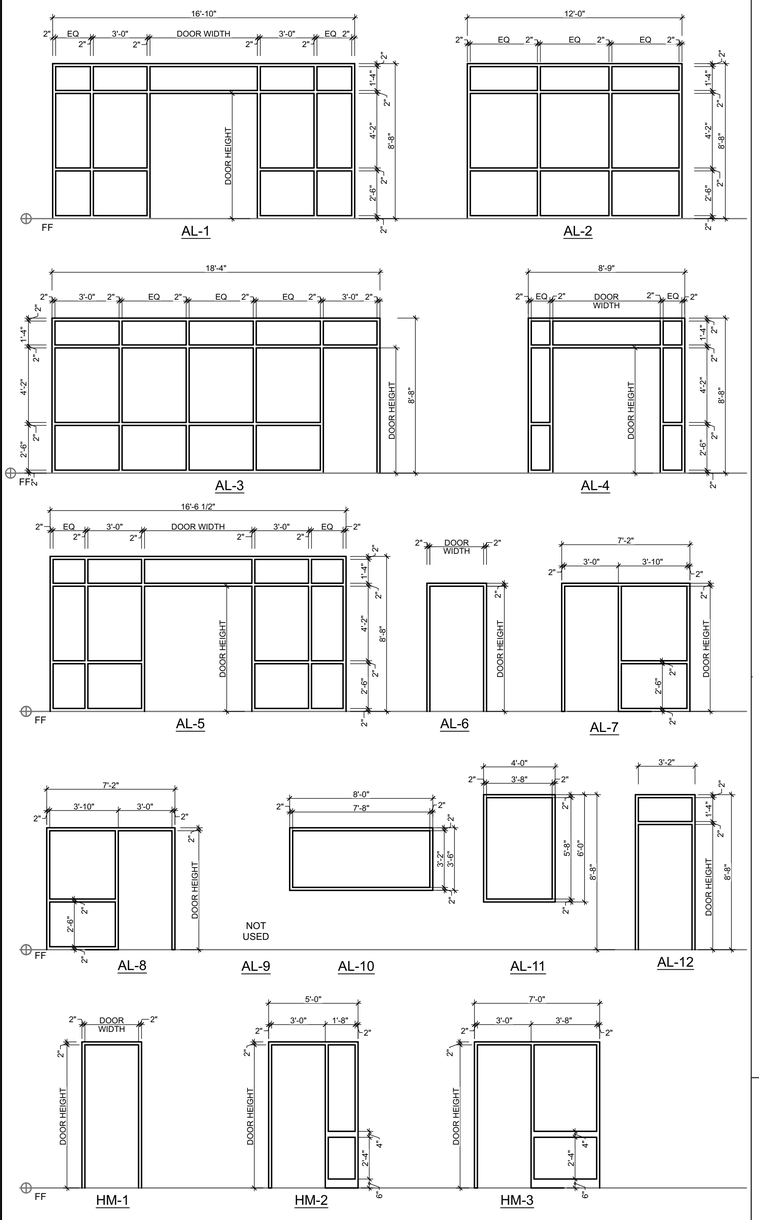
STAIR DETAILS

A6.7

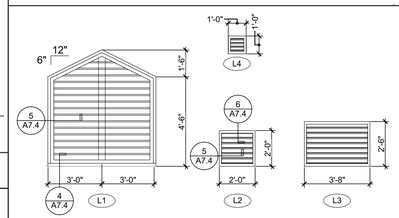
PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A6-A6.7-WALL SECTIONS AND DETAILS : STAIR DETAILS FILENAME: 1615.04_ARC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service\1615.04_ARC_Rebid



1 DOOR TYPES 1/4" = 1'- 0"



2 FRAME TYPES 1/4" = 1'- 0"



4 LOUVER TYPES 1/4" = 1'- 0"

ROOM FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	BASE	WALL FINISH				CEILING	NOTES
				EAST	NORTH	SOUTH	WEST		
101	VESTIBULE	CT-2	RB	G-P	G-P	G-P	G-P	G-P	
102	WAITING	T-1	T-1	G-P	G-P	G-P	G-P	A-1/G-P; A-4	1
103	HALL	LVT	RB	G-P	G-P	G-P	G-P	A-1/G-P	2
104	WK. ROOM	LVT	RB	G-P	G-P	G-P	G-P	A-1/G-P	1
105	WK. ROOM	LVT	RB	G-P	G-P	G-P	G-P	A-1/G-P	1
106	HALL	LVT	RB	G-P	G-P/T-2/VWC	G-P	G-P	A-2/G-P	1, 2, 3
107	VESTIBULE	CT-2	RB	G-P	G-P	G-P	G-P	G-P	
108	HALL	LVT	RB	G-P	G-P/AWT	G-P/T-2/VWC	G-P	G-P	3
109	VEST	CT-2	RB	G-P	G-P	G-P	G-P	G-P	
110	CONF.	CT	RB	G-P	G-P	G-P	G-P	A-1/G-P	1
111	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
112	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
113	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
114	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
115	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
116	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
117	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
118	EXEC. DIR.	CT	RB	G-P	G-P	G-P	G-P	A-2	4
119	REC. STOR.	LVT	RB	G-P	G-P	G-P	G-P	A-3	
120	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
121	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
122	REC. STOR.	LVT	RB	G-P	G-P	G-P	G-P	A-3	1
123	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
124	IT. WK. ROOM	LVT	RB	G-P	G-P	G-P	G-P	A-2	
125	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
126	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
127	ELEC	CONC	RB	G-P	G-P	G-P	G-P	A-3	
128	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
129	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
130	REC.	CT	RB	G-P	G-P	G-P	G-P	A-2	
131	DIR. OFF.	CT	RB	G-P	G-P	G-P	G-P	A-2	4
132	CONF.	CT	RB	G-P	G-P	G-P	G-P	A-2	4
133	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
134	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
135	OFFICE	CT	RB	G-P	G-P	G-P	G-P	A-2	4
136	REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
137	REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
138	REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
139	MOP SINK	CONC	RB	G-P	G-P	G-P	G-P	A-3	
140	BREAK	LVT	RB	G-P/T-2	G-P	G-P/T-2	G-P/T-2	A-2/G-P	1, 2, 3
141	CONFERENCE	LVT	RB	G-P	G-P	G-P	G-P	A-2/G-P	1, 4
142	TABLE STORAGE	LVT	RB	G-P	G-P	G-P	G-P	A-3	
143	MECHANICAL	CONC	RB	G-P	G-P	G-P	G-P	G-P	
144	HALL	LVT	RB	G-P	G/VWC	G-P	G-P	G-P	
145	REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
146	FAM REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
147	REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
148	REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
149	REST	LVT	RB	G-P/T-2	G-P/T-2	G-P/T-2	G-P/T-2	G-P	5
150	SERVING	LVT	RB	G-P/T-2	G-P	G-P/T-2	G-P/T-2	A-2	3
151	GENERAL STORAGE	CONC	RB	G-P	G-P	G-P	G-P	A-3	
152	ELEC	CONC	RB	G-P	G-P	G-P	G-P	A-3	
200	AHU	CONC	RB	G-P	G-P	G-P	G-P	G-P	
300	MAINT. GARAGE	CONC	-	-	-	-	-	-	

ROOM FINISH SCHEDULE NOTES:

1. REFER TO THE REFLECTED CEILING PLANS.
2. PAINT UNDERSIDE OF GYP CEILING ACCENT COLOR AS SELECTED BY ARCHITECT.
3. REFER TO CASEWORK/INTERIOR ELEVATIONS.
4. TWO WALLS TO BE PAINTED ACCENT COLOR AS SELECTED BY ARCHITECT.
5. PROVIDE 4'-0"H WAINSCOT AROUND PERIMETER OF ROOM.

ROOM FINISH SCHEDULE GENERAL NOTES:

A. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHOULD DO SO UNDER THE CENTERLINE OF THE DOOR, U.N.O.
B. PAINT ALL HOLLOW METAL DOOR FRAMES/ BORROWED LITES TO MATCH ADJACENT WALL COLOR.
C. WHERE DISSIMILAR FLOOR MATERIALS MEET AT DIFFERENT HEIGHT, PROVIDE APPROVED FLOOR TRANSITION.

ROOM FINISH SCHEDULE ABBREVIATIONS:

REFER TO PROJECT MANUAL

SYM	DESCRIPTION	SPEC.
FLOORS:		
CT	CARPET TILE	096813
CONC	SEALED CONCRETE	033000
LVT	LUXURY VINYL TILE	096519
T	TILE	093000
BASE:		
RB	RESILIENT BASE	096513
T	TILE	093000
WALLS:		
G-P	PAINTED GYPSUM BOARD	099123
T	TILE	093000
VWC	VINYL WALL COVERING	097720
CEILINGS:		
A	ACOUSTICAL CEILING TILE	095113
G-P	PAINTED GYPSUM BOARD	099123

DOOR SCHEDULE

RM	TAG	DOOR						FRAME				DETAIL			Fire Rating	Hardware Set	Remarks	
			W	HT	MATL	TYPE	GLZ	MATL	EL	GLZ	DEPTH	HEAD	JAMB	SILL				
101	A	PR	3'-0"	7'-0"	AL	C	ITC	AL	AL-1	ITC	6"	8/A7.4	7/A2.4	10/A7.3	-	002		
102	A	PR	3'-0"	7'-0"	AL	C	TC	AL	AL-1	TC	4 1/2"	H5	J5	-	-	007		
103	A		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	5 7/8"	H1	J1		-	018		
103	B		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	5 7/8"	H1	J1		-	019		
103	C		3'-0"	7'-0"	AL	C	ITC	AL	AL-3	ITC	6"	3/A7.3	3/A7.3	10/A7.3	-	003		
105	A		3'-0"	7'-0"	WD	B	TC	HM	HM-1	TC	5 7/8"	H1	J1		-	018		
105	B		3'-0"	7'-0"	WD	B	TC	HM	HM-1	TC	5 7/8"	H1	J1		-	019		
106	A		6'-6"	7'-0"	-	H	-	-		-	-	12/A7.3	-	13/A7.3	-	024	2.	
107	A	PR	3'-0"	7'-0"	AL	C	ITC	AL	AL-5	ITC	6"	7/A7.4	6/A2.4 / 5/A7.3	10/A7.3	-	001		
107	B		3'-0"	7'-0"	AL	B	TC	AL	AL-8	TC	4 1/2"	H5	J5		-	009		
107	C		3'-0"	7'-0"	AL	B	TC	AL	AL-7	TC	4 1/2"	H5	J5		-	009		
109	A	PR	3'-0"	7'-0"	AL	C	ITC	AL	AL-4	ITC	6"	3/A7.3	8/A2.4	10/A7.3	-	002		
109	B	PR	3'-0"	7'-0"	AL	C	TC	AL	AL-4	TC	4 1/2"	H5	J5		-	022		
110	A		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	8 7/8"	H7	J7		-	013		
110	B		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	8 7/8"	H7	J7		-	013A		
111	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
112	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
113	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
114	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
115	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
116	A		3'-0"	7'-0"	WD	B	TC	HM	HM-3	TC	5 7/8"	H1/H2	J1/J2		-	016		
117	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
118	A		3'-0"	7'-0"	WD	B	TC	HM	HM-3	TC	5 7/8"	H1/H2	J1/J2		-	016		
119	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	012		
120	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
121	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
122	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	012		
123	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
124	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 1/4"	H6	J6		-	016		
125	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
126	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
127	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	8 1/4"	H1	J1		-	012		
128	A		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	8 1/4"	H1	J1		-	017		
128	B		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	8 1/4"	H1	J1		-	017		
129	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
130	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
131	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
132	A		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	5 7/8"	H1	J1		-	016		
132	B		3'-0"	7'-0"	WD	B	TC	HM	HM-1	-	5 7/8"	H1	J1		-	016		
133	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
134	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
135	A		3'-0"	7'-0"	WD	B	TC	HM	HM-2	TC	5 7/8"	H1/H2	J1/J2		-	016		
136	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	021		
137	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	020		
138	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	021		
138	B		2'-0"	2'-8"	-	-	-	-	-	-	-	-	-	-	-	-	1.	
139	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	013		
140	A		3'-0"	7'-0"	AL	C	ITC	AL	AL-12	ITC	6"	6/A7.3	5/A7.3	S1	-	006		
141	A		3'-0"	7'-0"	WD	D	TC	HM	HM-1	-	8 1/4"	H1	J1		-	008		
141	B		3'-0"	7'-0"	WD	D	TC	HM	HM-1	-	8 1/4"	H1	J1		-	008		
141	C		3'-0"	7'-0"	AL	A	-	AL	AL-6	-	6"	6/A7.3	5/A7.3	S1	-	004	3.	
141	D		3'-0"	7'-0"	AL	A	-	AL	AL-6	-	6"	6/A7.3	5/A7.3	S1	-	004	3.	
142	A		4'-0"	7'-0"	WD	A	-	HM	HM-1	-	8 3/4"	H1	J1		-	015		
143	A		4'-0"	7'-0"	WD	A	-	HM	HM-1	-	8 1/4"	H1	J1		-	014		
145	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	020		
146	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	021		
147	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	021		
148	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	020		
149	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	020		
149	B		2'-0"	2'-8"	-	-	-	-	-	-	-	-	-	-	-	011	1.	
150	A		3'-0"	7'-0"	WD	D	-	HM	HM-1	-	8 1/4"	H1	J1		-	010		
150	B		3'-0"	7'-0"	WD	D	-	HM	HM-1	-	8 1/4"	H1	J1		-	010		
151	A		4'-0"	7'-0"	WD	A	-	HM	HM-1	-	8 1/4"	H1	J1		-	014		
152	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	013		
200.	A		3'-0"	7'-0"	WD	A	-	HM	HM-1	-	5 7/8"	H1	J1		-	012		
300	A		3'-0"	7'-0"	FRP	A	-	AL	AL-6	-	6"	3/A7.3	2/A7.3	S1	-	005		
300	B	OHD	10'-0"	9'-4"	-	E	-	-		-	-	3/A7.4	2/A7.4	1/A7.4	-	023		
300	C	OHD	18'-0"	9'-4"	-	E	-	-		-	-	3/A7.4	2/A7.4	1/A7.4	-	023		

DOOR SCHEDULE NOTES:

1. PRE-MANUFACTURED ACCESS DOOR, REFER TO SPECIFICATIONS.
2. SLIDING BARN DOOR, DOOR REQUIRED TO BE LARGER THAN FINISH OPENING. REFER TO SPECIFICATIONS.
3. PROVIDE SOUND SEALS AT HEAD / JAMB.

DOOR SCHEDULE GENERAL NOTE:

REFER TO SPECIFICATIONS FOR DOOR HARDWARE.

DOOR SCHEDULE ABBREVIATIONS:

PR PAIR OF DOORS
OHD OVERHEAD DOORS

MATERIALS

AL ALUMINUM
FRP FIBER REINFORCED PLASTIC
HM HOLLOW METAL
WD WOOD

GLAZING

ITT INSULATED TEMPERED TINTED
TC TEMPERED CLEAR

FREYTAG & ASSOCIATES INC.
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Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

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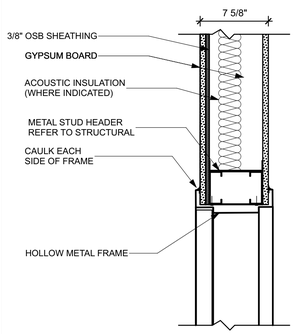
DRAWN BY	CHECKED BY
AF	DF

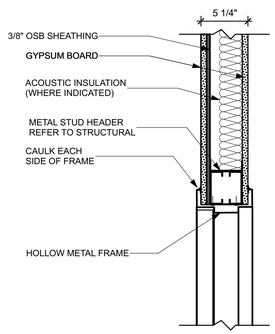
SCHEDULES

A7.1

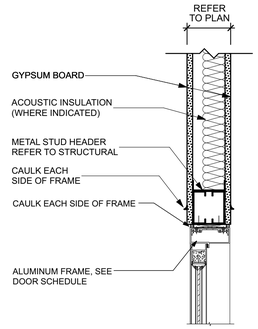
PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A7.A7.1 ROOM AND OPENING SCHEDULES FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytaginc - BIMcloud (as a Service)1615.04_ATC_Rebid



H7 | HEAD DETAIL | 1 1/2" = 1'-0"



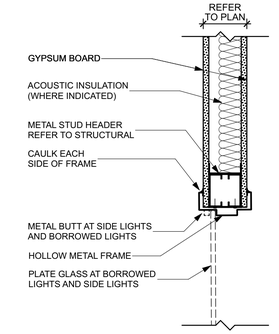
H6 | HEAD DETAIL | 1 1/2" = 1'-0"



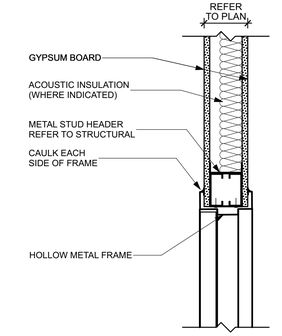
H5 | HEAD DETAIL | 1 1/2" = 1'-0"

NOT USED

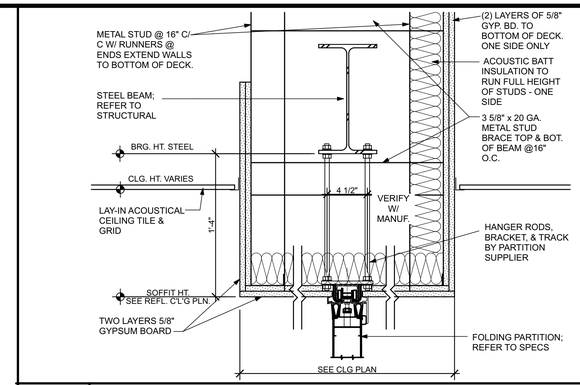
H4 | HEAD DETAIL | 1 1/2" = 1'-0"



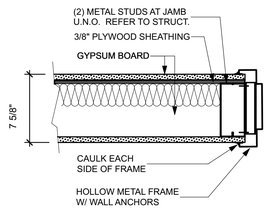
H2 | HEAD DETAIL | 1 1/2" = 1'-0"



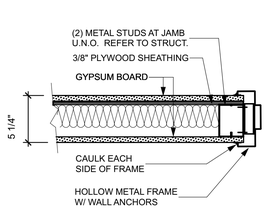
H1 | HEAD DETAIL | 1 1/2" = 1'-0"



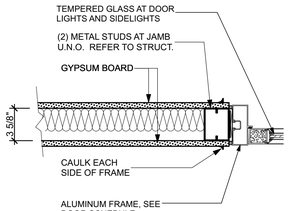
H3 | HEAD DETAIL | 1 1/2" = 1'-0"



J7 | JAMB DETAIL | 1 1/2" = 1'-0"



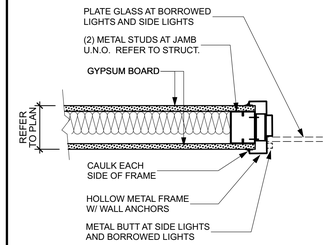
J6 | JAMB DETAIL | 1 1/2" = 1'-0"



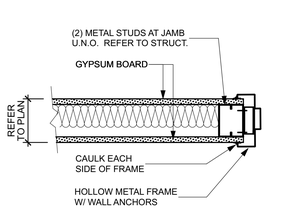
J5 | JAMB DETAIL | 1 1/2" = 1'-0"

NOT USED

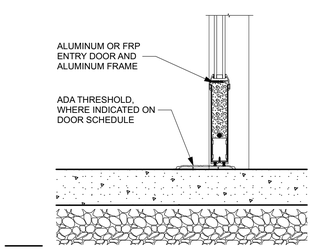
J4 | JAMB DETAIL | 1 1/2" = 1'-0"



J2 | JAMB DETAIL | 1 1/2" = 1'-0"



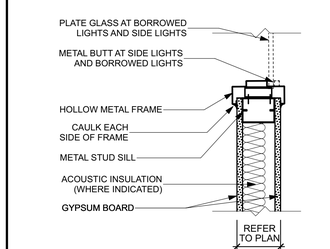
J1 | JAMB DETAIL | 1 1/2" = 1'-0"



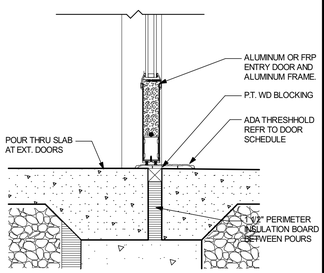
S5 | SILL DETAIL | 1 1/2" = 1'-0"

NOT USED

S4 | SILL DETAIL | 1 1/2" = 1'-0"



S2 | SILL DETAIL | 1 1/2" = 1'-0"



S1 | SILL DETAIL | 1 1/2" = 1'-0"

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1280 N COUNTY RD. 25A TROY, OHIO 45373

STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

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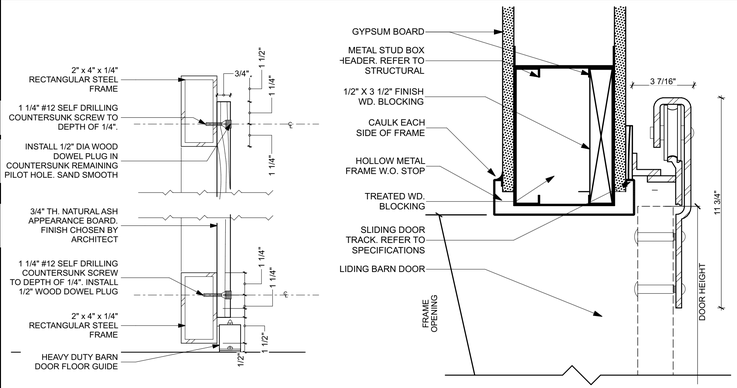
HEAD JAMB AND SILL DETAILS

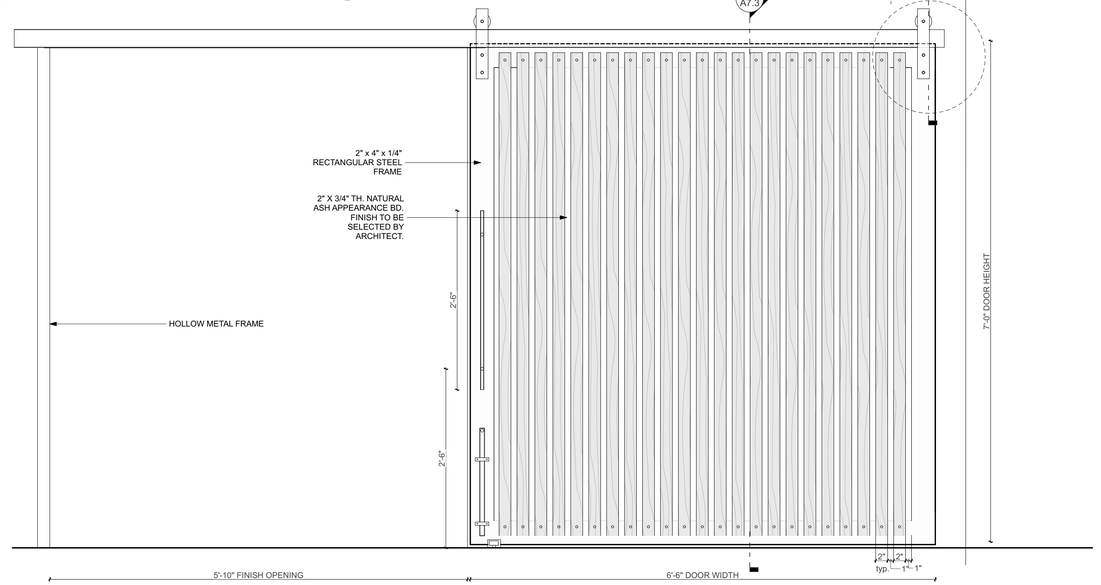
A7.2

PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A7-A7.2-ROOM AND OPENING SCHEDULES - HEAD JAMB AND SILL DETAILS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagnc - BIMcloud as a Service/1615.04_ATC_Rebid

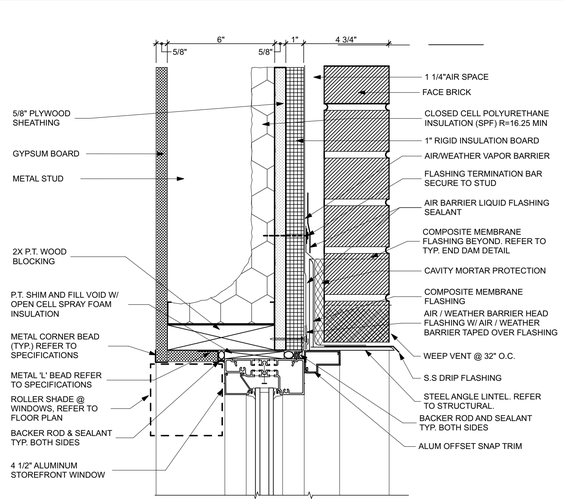


13 A7.3 **SILL DETAILS**
SCALE: 3" = 1'-0"

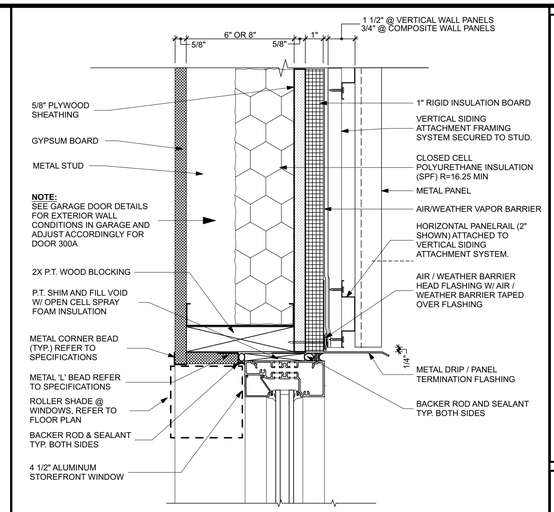
12 A7.3 **HEAD DETAIL**
SCALE: 3" = 1'-0"



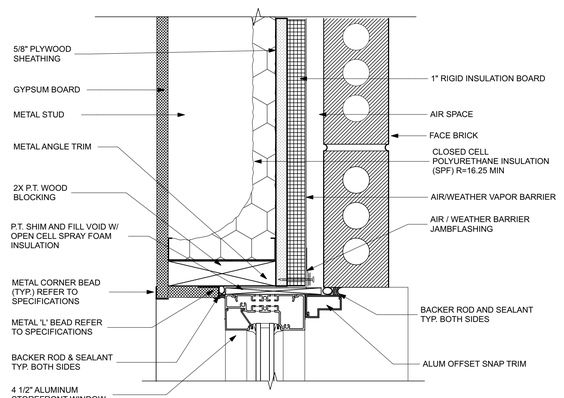
11 A7.3 **SLIDING DOOR DETAIL**
SCALE: 1" = 1'-0"



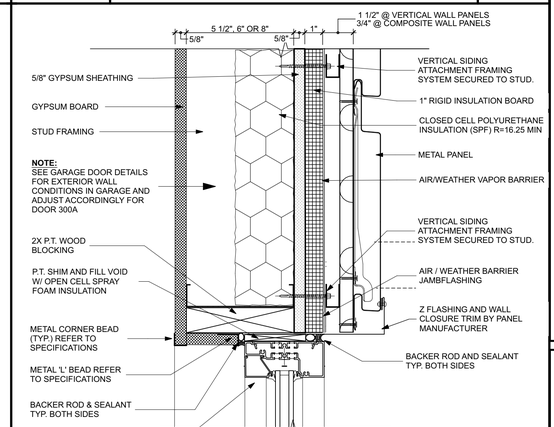
6 | HEAD DETAIL | 3" = 1'- 0"



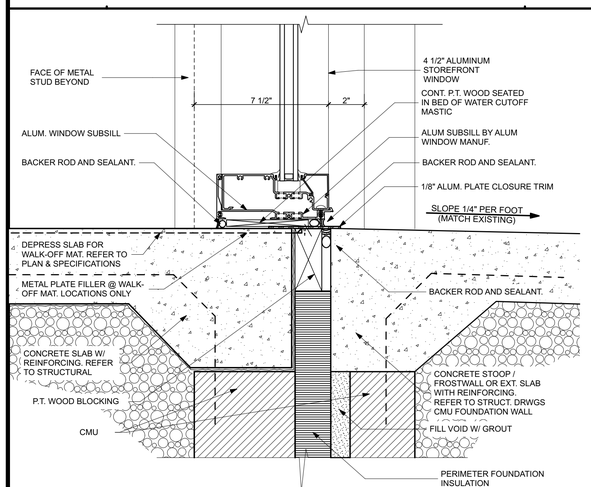
3 | HEAD DETAIL | 3" = 1'- 0"



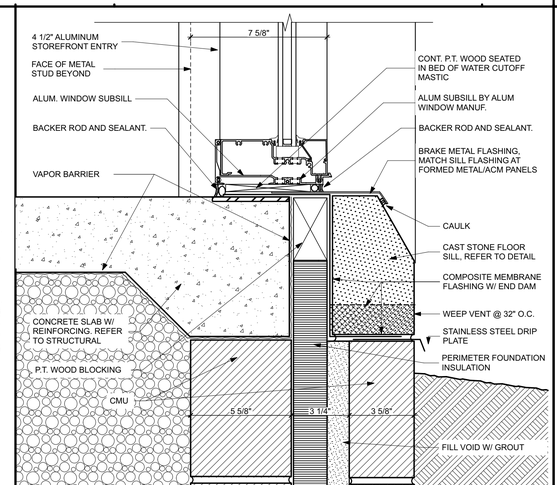
5 | JAMB DETAIL | 3" = 1'- 0"



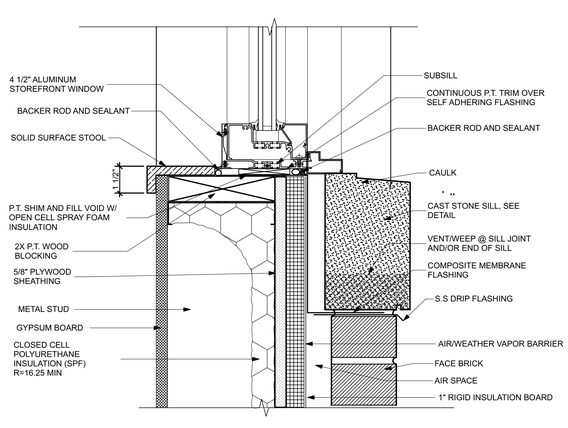
2 | JAMB DETAIL | 3" = 1'- 0"



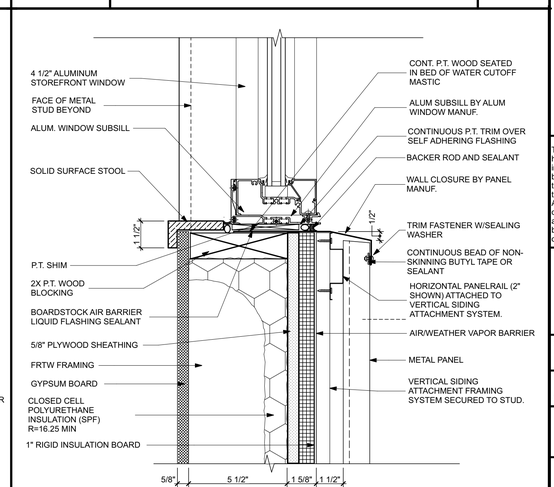
10 | SILL DETAIL | 3" = 1'- 0"



7 | SILL DETAIL | 3" = 1'- 0"



4 | SILL DETAIL | 3" = 1'- 0"



4 | SILL DETAIL | 3" = 1'- 0"

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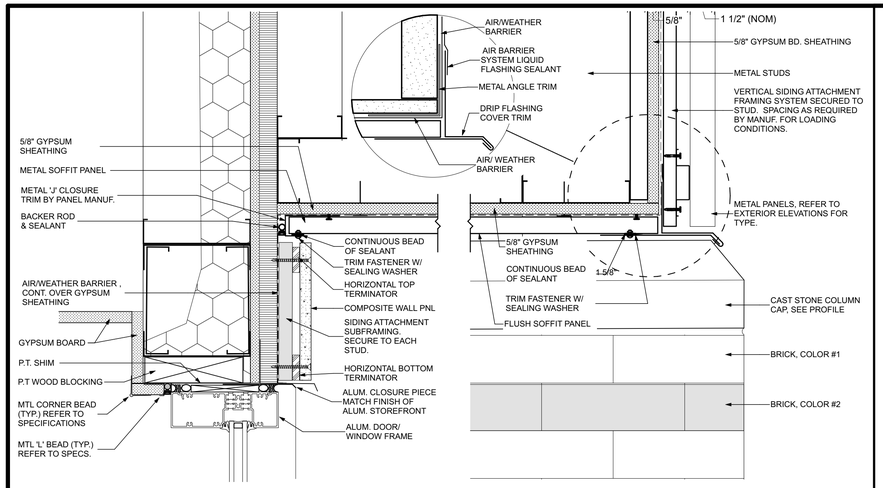
HEAD JAMB AND SILL DETAILS

A7.3

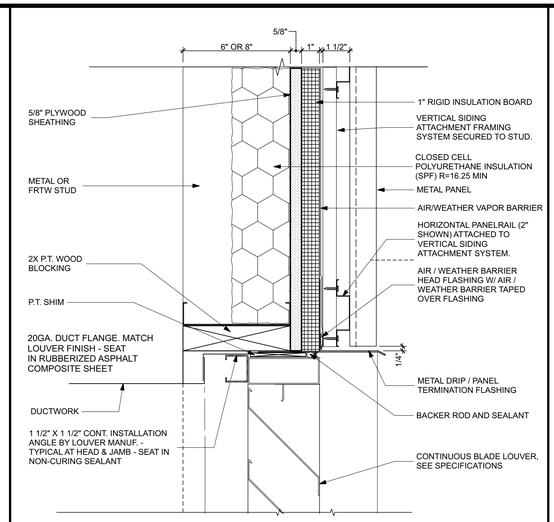
PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A7-A7.3 ROOM AND OPENING SCHEDULES : HEAD JAMB AND SILL DETAILS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagnc - BIMcloud as a Service\1615.04_ATC_Rebid



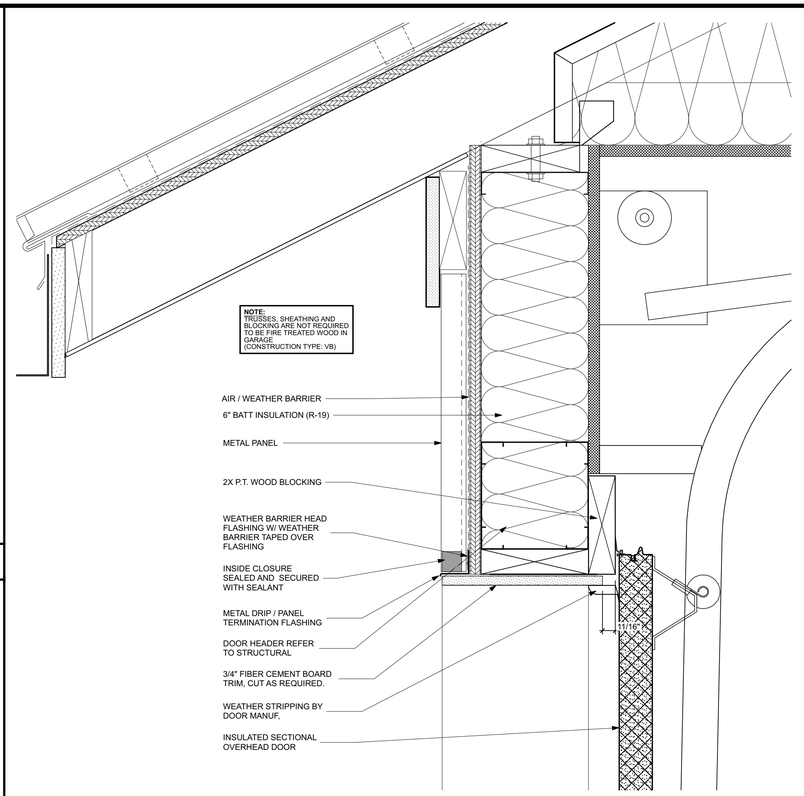
A. HEAD DETAIL

B. SOFFIT DETAIL

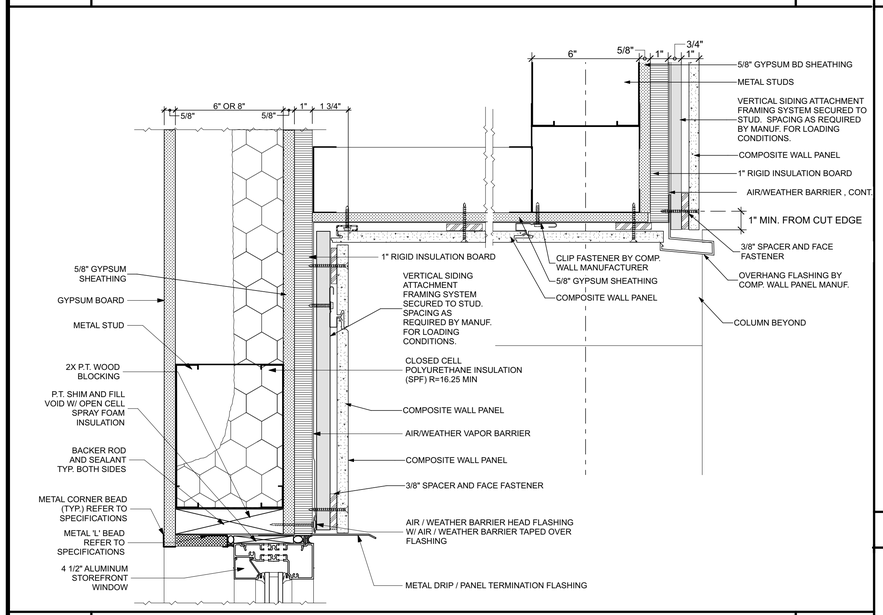
7	ENTRY DETAIL	3" = 1'- 0"



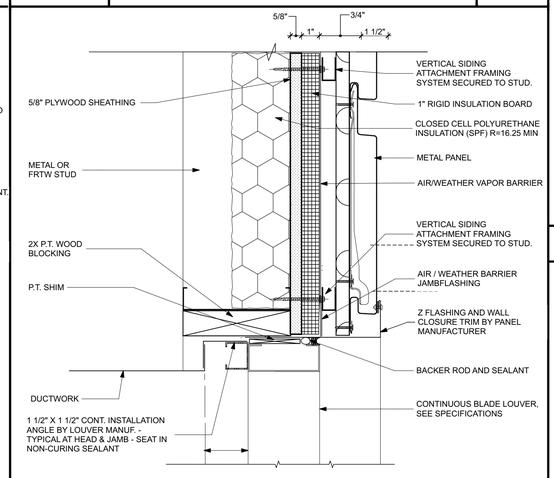
6	HEAD DETAIL	3" = 1'- 0"



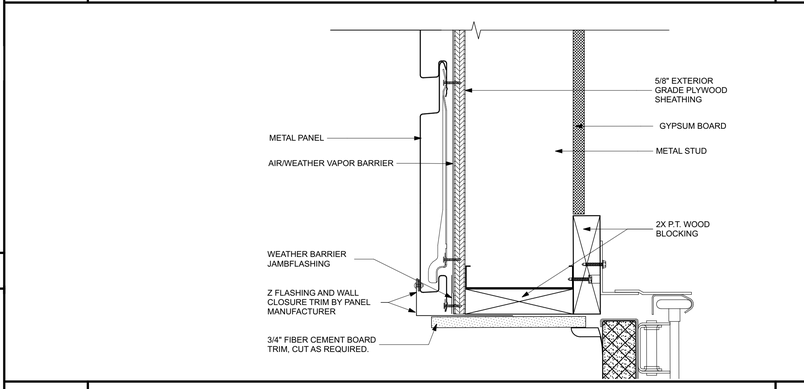
3	HEAD DETAIL	3" = 1'- 0"



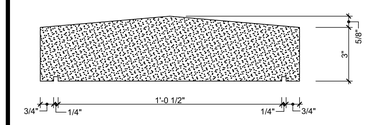
8	ENTRY DETAIL	3" = 1'- 0"



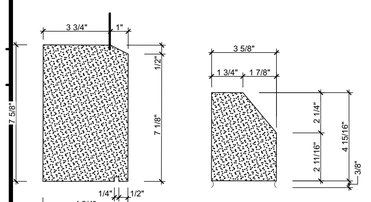
5	JAMB DETAIL	3" = 1'- 0"



2	JAMB DETAIL	3" = 1'- 0"

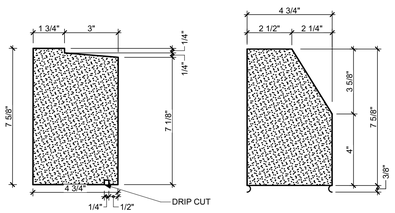


SCREEN WALL CAP



WATER TABLE

COLUMN CAP BAND

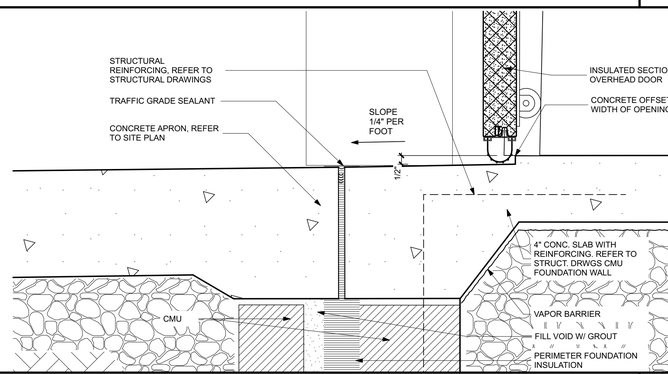


WINDOW SILL DETAIL

FLOOR SILL DETAIL

9	STONE SILL DETAILS	3" = 1'- 0"

4	SILL DETAIL	3" = 1'- 0"



1	SILL DETAIL	3" = 1'- 0"

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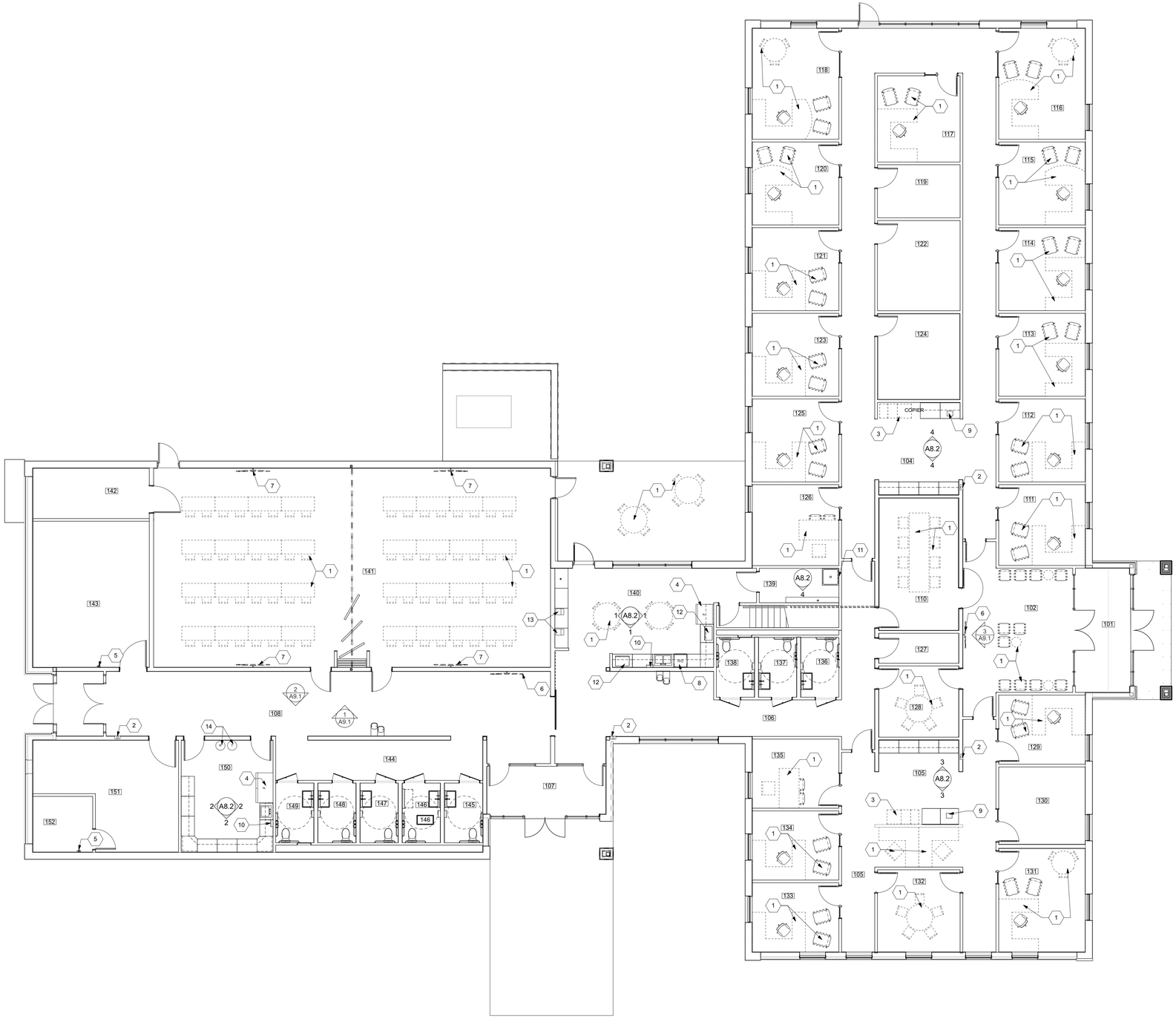
AF	DF

EXTERIOR DETAILS

A7.4

PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A7-A7.4/ROOM AND OPENING SCHEDULES - EXTERIOR DETAILS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagjnc - BIMcloud as a Service\1615.04_ATC_Rebid



1 A8.1 EQUIPMENT PLAN
SCALE: 1/8" = 1'-0"

EQUIPMENT PLAN NOTES

ALL NOTES MAY NOT BE REFERENCED ON THIS SHEET.

1 FURNITURE, BY OWNER.
2 FULLY RECESSED FIRE EXTINGUISHER / CABINET. REFER TO DETAIL ON SHEET A8.2.
3 PRINTER/COPIER, BY OWNER.
4 REFRIGERATOR, BY OWNER.
5 WALL MOUNTED FIRE EXTINGUISHER, REFER TO SPECIFICATIONS.
6 DIGITAL DISPLAY BOARD, REFER TO TECHNOLOGY DRAWINGS.
7 TV MONITOR, REFER TO TECHNOLOGY DRAWINGS.
8 DISHWASHER, BY OWNER.
9 POSTAGE METER, BY OWNER.
10 PAPER TOWEL DISPENSER, REFER TO SPECIFICATIONS.
11 BROOM AND MOP HOLDER. REFER TO MOUNTING HEIGHTS ON SHEET A2.3. REFER TO SPECIFICATIONS.
12 MICROWAVE, BY OWNER.
13 COFFEE MAKER, BY OWNER.
14 TRASH/RECYCLE RECEPTACLE, BY OWNER.

EQUIPMENT/ELEVATIONS GENERAL NOTES

1 ALL BASE CABINETS TO HAVE COUNTERTOPS WITH 4" H BACKSPLASH AND END-SPLASH AS REQUIRED, U.N.O.

2 PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.

3 ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.

4 CASEWORK INSTALL SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL AND DATA LINES/CONDUITS/OUTLETS.

5 CASEWORK INSTALLER SHALL SHALL CAULK BETWEEN COUNTERS, END-SPLASH AND WALLS.

6 ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF, U.N.O.

7 FIELD VERIFY LENGTH, AFTER FIELD MEASUREMENTS, REDUCE CABINET FILLER AND INCREASE STANDARD CABINET SIZES WHERE POSSIBLE. MAINTAIN MANUFACTURERS RECOMMENDED DESIGN FILLER PLACEMENTS AND SIZES.

8 REFER TO REFLECTED CEILING PLANS FOR CEILING MOUNTED EQUIPMENT. REFER TO SPECIFICATIONS AND COORDINATE WITH ELECTRICAL DRAWINGS.

9 REFER TO DETAIL SHEETS FOR MOUNTING HEIGHTS.

10 PROVIDE WOOD BLOCKING FOR ALL EQUIPMENT ITEMS INDICATED AS REQUIRED BY MANUFACTURER.

11 FOLLOW MANUFACTURER'S RECOMMENDATIONS AND NOTIFY ARCHITECT IN WRITING PRIOR TO SHOP DRAWING SUBMITTAL OF ANY DETAILS IN CONFLICT WITH MANUFACTURER'S RECOMMENDATIONS.

12 ALL LONG SPAN COUNTERTOPS SHALL HAVE ADDITIONAL INTERMEDIATE SUPPORT AS REQUIRED BY CASEWORK MANUFACTURER.

13 REFER TO SHEET A7.1 FOR CASEWORK SCHEDULE.

EQUIPMENT LEGEND

A2.# # FULL WALL ROOM ELEVATION

A8.# PARTIAL WALL ELEVATION

10129 — CASEWORK ITEM, SEE SCHEDULE ON A8.0
CASEWORK NOMINAL WIDTH (SIDE TO SIDE)
363024 — CASEWORK NOMINAL DEPTH (BACK TO FRONT)
CASEWORK NOMINAL HEIGHT (INCLUDING COUNTER)

* INDICATES TALL CASEWORK, 54" AFF OR ABOVE

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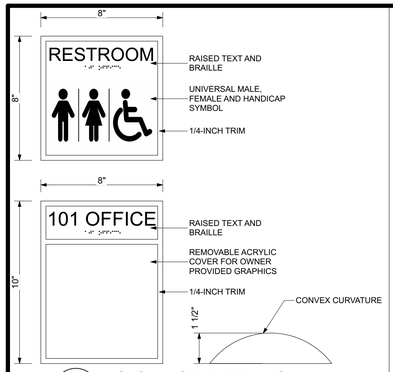
EQUIPMENT PLAN

A8.1

PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A8:A8.1:CASEWORK AND EQUIPMENT - EQUIPMENT PLAN FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service/1615.04_ATC_Rebid



11 A8.2 SIGNAGE DETAILS

NOT TO SCALE

CASEWORK SCHEDULE

DRAWING ID	MANUFACTURER ID	CASEWORK MANUFACTURER (BASIS OF DESIGN)	DESCRIPTION	MODIFICATION/OPTIONS	PLUMBING/MECHANICAL CONNECTIONS	ELECTRICAL CONNECTIONS	NOTES
10196	101200	STEVENS	BASE BLIND CORNER - RIGHT HINGE DOOR, ADJUSTABLE SHELF				
10339	10339	STEVENS	DRAWER - TOP DRAWER: 6.125"H FRONT, 2 EQUAL DRAWERS				
10430	10430	STEVENS	BASE COMBINATION STORAGE - DRAWER: 6.125"H FRONT, 2 DOORS, 1 ADJUSTABLE SHELF				
10475	10475	STEVENS	SINK BASE - 2 DOORS, REMOVABLE BACK		SINK BY PLUMBING CONTRACTOR		
15103	15103	STEVENS	ABOVE REFRIGERATOR STORAGE - 2 DOORS				
15129	15129	STEVENS	WALL SHELF - 2 DOORS, ADJUSTABLE SHELVES				12"H-18"H: 0 ADJ. SHELVES 25"H: 1 ADJ. SHELF 30"H-36"H: 2 ADJ. SHELVES 42"H-47"H: 3 ADJ. SHELVES
15211	15211	STEVENS	WALL CORNER - RIGHT HINGE DOOR, FIXED SHELVES				25"H: 1 SHELF 30"H-36"H: 2 SHELVES 42"H-47"H: 3 SHELVES
15212	15212	STEVENS	WALL CORNER - LEFT HINGE DOOR, FIXED SHELVES				25"H: 1 SHELF 30"H-36"H: 2 SHELVES 42"H-47"H: 3 SHELVES
15404	15404	STEVENS	WALL SHELVING - XV87 SERIES SUPER DUTY, STAINLESS STEEL; STAINLESS STEEL UPRIGHTS AND BRACKETS, 1" TFL SHELVING WITH EDGEBANDING				
25129	25129	STEVENS	TALL SHELF - 2 DOORS, 4 ADJUSTABLE SHELVES, 1 FIXED SHELF				

EQUIPMENT/ELEVATIONS GENERAL NOTES

1. ALL BASE CABINETS TO HAVE COUNTERTOPS WITH 4" H BACKSPLASH AND END-SPLASH AS REQUIRED, U.N.O.
2. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.
3. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
4. CASEWORK INSTALL SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL AND DATA LINES/CONDUITS/OUTLETS.
5. CASEWORK INSTALLER SHALL SHALL CAULK BETWEEN COUNTERS, END-SPLASH AND WALLS.
6. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF, U.N.O.
7. FIELD VERIFY LENGTH, AFTER FIELD MEASUREMENTS, REDUCE CABINET FILLER AND INCREASE STANDARD CABINET SIZES WHERE POSSIBLE. MAINTAIN MANUFACTURERS RECOMMENDED DESIGN FILLER PLACEMENTS AND SIZES.
8. REFER TO REFLECTED CEILING PLANS FOR CEILING MOUNTED EQUIPMENT. REFER TO SPECIFICATIONS AND COORDINATE WITH ELECTRICAL DRAWINGS.
9. REFER TO DETAIL SHEETS FOR MOUNTING HEIGHTS.
10. PROVIDE WOOD BLOCKING FOR ALL EQUIPMENT ITEMS INDICATED AS REQUIRED BY MANUFACTURER.
11. FOLLOW MANUFACTURER'S RECOMMENDATIONS AND NOTIFY ARCHITECT IN WRITING PRIOR TO SHOP DRAWING SUBMITTAL OF ANY DETAILS IN CONFLICT WITH MANUFACTURER'S RECOMMENDATIONS.
12. ALL LONG SPAN COUNTERTOPS SHALL HAVE ADDITIONAL INTERMEDIATE SUPPORT AS REQUIRED BY CASEWORK MANUFACTURER.
13. REFER TO SHEET A7.1 FOR CASEWORK SCHEDULE.

EQUIPMENT LEGEND

A2.# / # FULL WALL ROOM ELEVATION

/ A8.# PARTIAL WALL ELEVATION

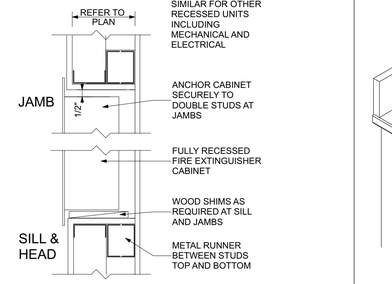
10129 — CASEWORK ITEM, SEE SCHEDULE ON A8.0

363024 — CASEWORK NOMINAL WIDTH (SIDE TO SIDE)

CASEWORK NOMINAL DEPTH (BACK TO FRONT)

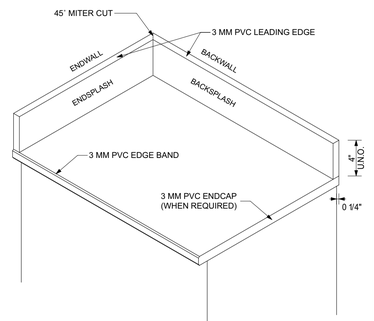
CASEWORK NOMINAL HEIGHT (INCLUDING COUNTER)

* INDICATES TALL CASEWORK, 54" AFF OR ABOVE



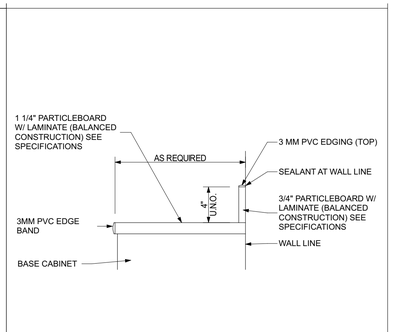
10 A8.2 RECESSED FEC

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



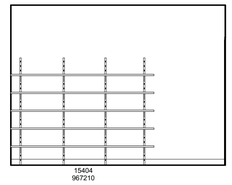
9 A8.2 COUNTERTOP REQUIREMENTS

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



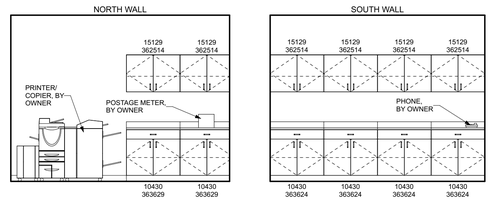
8 A8.2 COUNTERTOP DETAIL

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



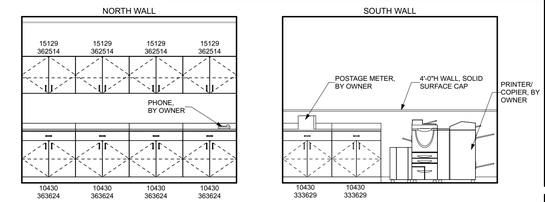
5 A8.2 143 MOP SINK

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



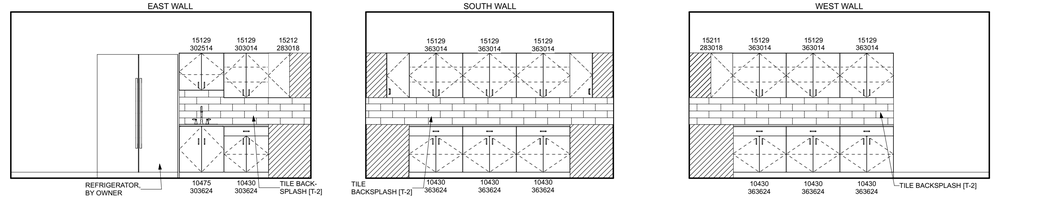
4 A8.2 104 WORKROOM

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



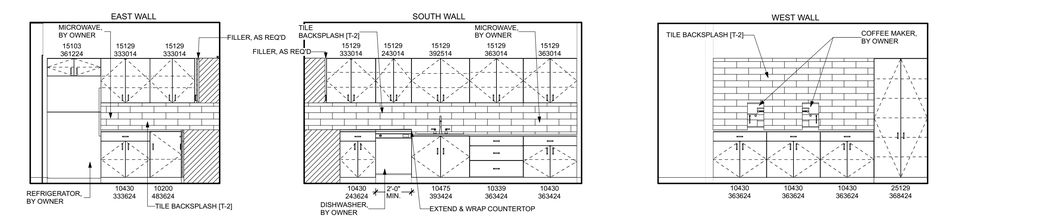
3 A8.2 105 WORKROOM

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



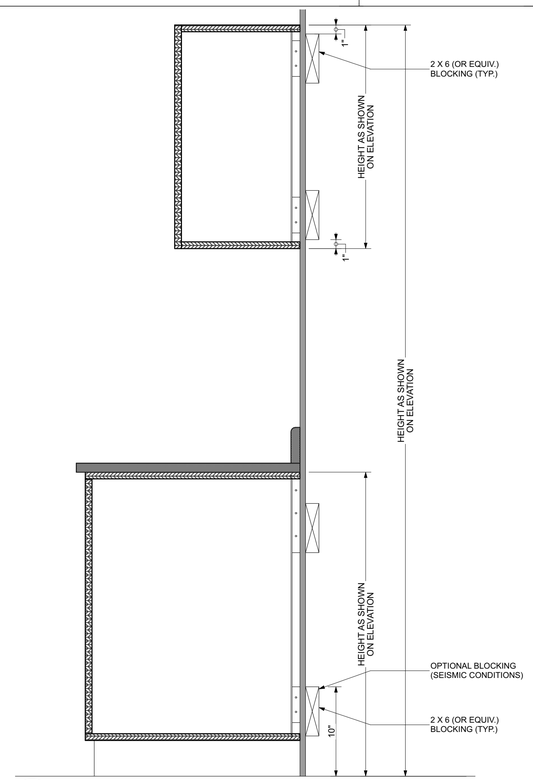
2 A8.2 156 SERVING

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



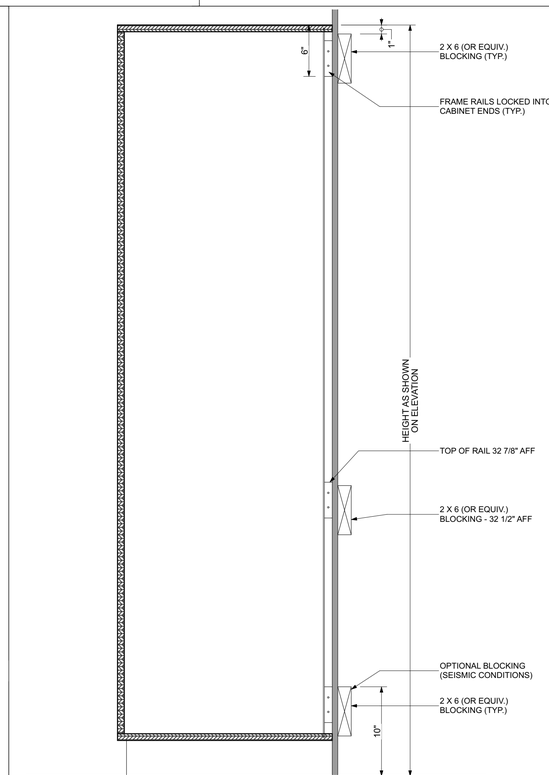
1 A8.2 144 BREAK ROOM

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



7 A8.2 CASEWORK BLOCKING LOCATIONS: BASE/WALL

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



6 A8.2 CASEWORK BLOCKING LOCATIONS: TALL

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

FREYTAG & ASSOCIATES INC. ARCHITECTS ENGINEERS
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SIDNEY, OHIO 45365
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ADMINISTRATION AND TRAINING CENTER FOR TRI COUNTY BOARD OF RECOVERY AND MENTAL HEALTH

1280 N COUNTY RD. 25A TROY, OHIO 45373

STATE OF OHIO
DANIEL J. FREYTAG 8533
REGISTERED ARCHITECT

Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

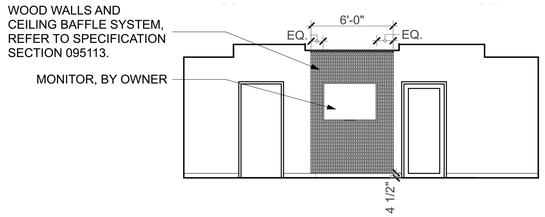
REVISIONS
FOR REBID

COMM. NUMBER	DATE
1615.04	05/12/21
DRAWN BY	CHECKED BY
AF	DF

CASEWORK ELEVATIONS & DETAILS

A8.2

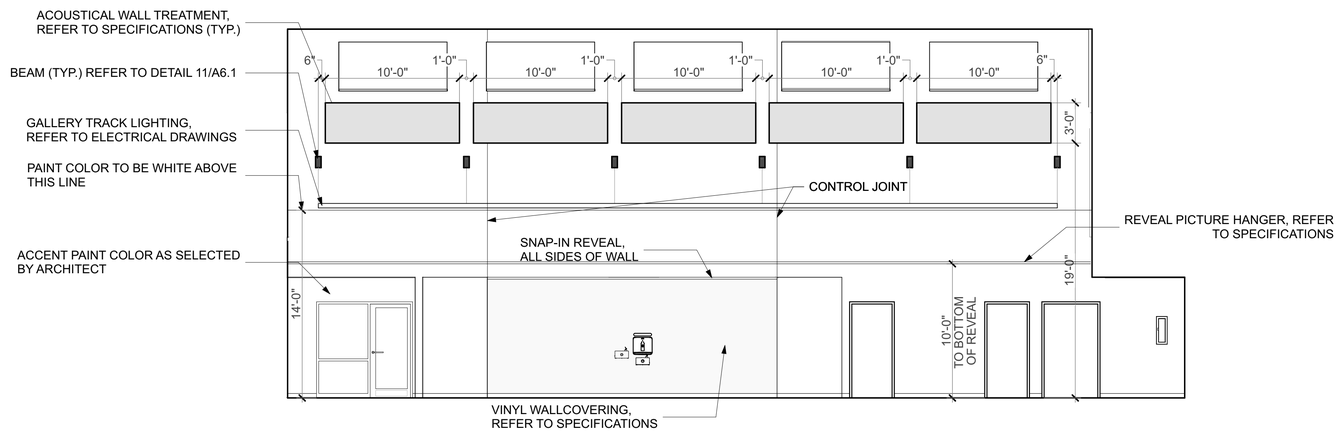
PLOT DATE: 5/13/21 @ 10:40 AM LAYOUT: A8-A8.2-CASEWORK AND EQUIPMENT - CASEWORK ELEVATIONS & DETAILS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service/1615.04_ATC_Rebid



3 A9.1

102 WEST ELEVATION

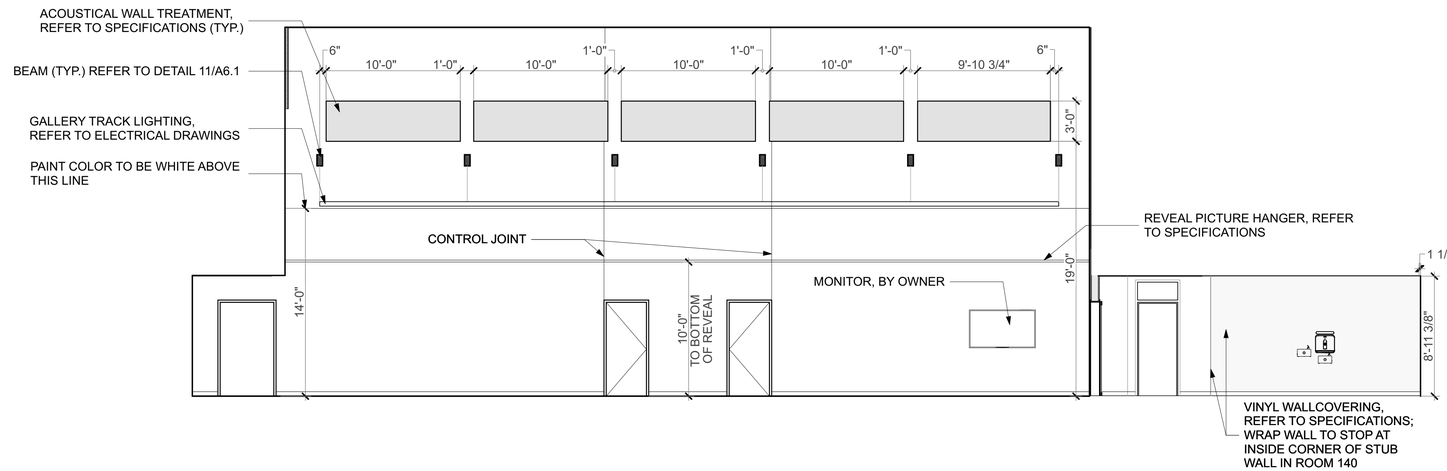
SCALE: 3/16" = 1'-0"



2 A9.1

108 SOUTH ELEVATION

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



1 A9.1

108 NORTH ELEVATION

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

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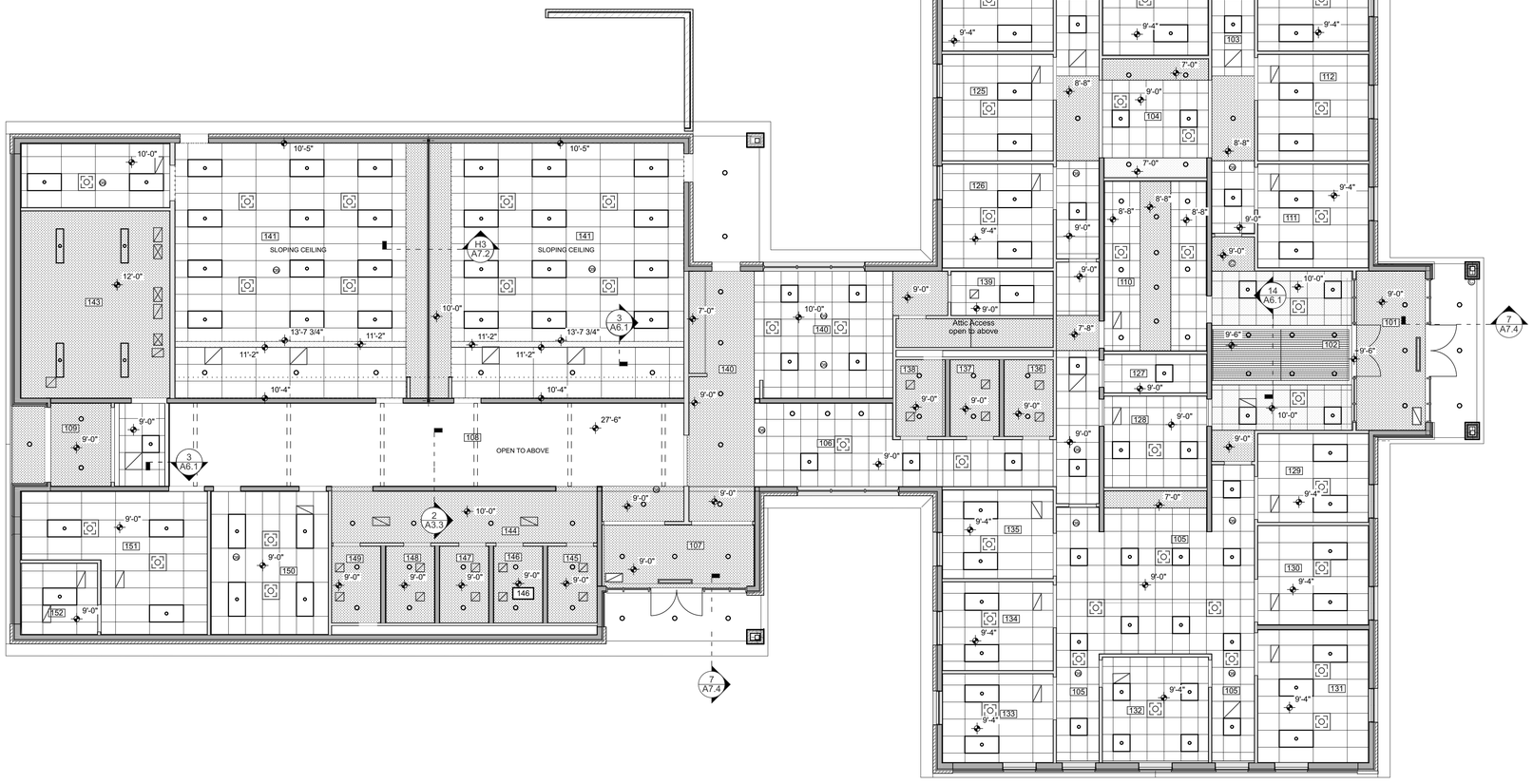
DRAWN BY	CHECKED BY
AF	DF

INTERIOR ELEVATIONS

A9.1

PLOT DATE: 5/13/21 @ 10:47 AM LAYOUT: A9-A9.1-INTERIOR ELEVATIONS FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytagarc - BIMcloud as a Service\1615.04_ATC_Rebid



REFLECTED CEILING GENERAL NOTES

A. COORDINATE CEILING LAYOUT WITH LIGHT FIXTURES, MECHANICAL DEVICES AND OTHER CEILING PENETRATIONS OR CEILING MOUNTED EQUIPMENT, INCLUDING FIRE SUPPRESSION SYSTEM. REFER TO HVAC / ELECTRICAL DRAWINGS.

B. REFER TO ROOM FINISH SCHEDULE AND SPECIFICATIONS FOR CEILING TYPES AND FINISH.

REFLECTED CEILING PLAN LEGEND

C110	ROOM DESIGNATION NUMBER
9'-2"	CEILING HEIGHT TO FINISH SURFACE A.F.F.
	RECESSED CEILING 2' x 2' FIXTURE
	RECESSED CEILING 2' x 4' FIXTURE
	RECESSED CAN LIGHT
	SUSPENDED LIGHT FIXTURE
	CEILING MOUNTED LIGHT FIXTURE
	ACOUSTIC CEILING TILE AND GRID
	LINEAR CEILING, REFER TO SPECIFICATIONS
	GYPSUM DRYWALL CEILING, SUSPENDED GYPSUM CEILING, OR GYPSUM BULKHEAD
	CEILING DEVICES. REFER TO MECHANICAL DRAWINGS
OS	CEILING MOUNTED OCCUPANCY SENSOR, COORDINATE W/ ELECTRICAL DRAWINGS

1 A10.1 REFLECTED CEILING PLANS
SCALE: 1/8" = 1'-0"

N

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Daniel J. Freytag, License #8533
Expiration Date: 12/31/2021

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REFLECTED CEILING PLAN

A10.1

PLOT DATE: 5/13/21 @ 10:41 AM LAYOUT: A10.A10.1-REFLECTED CEILING - REFLECTED CEILING PLAN FILENAME: 1615.04_ATC_Rebid FILE PATH: BIMcloud: freytaginc - BIMcloud as a Service/1615.04_ATC_Rebid

GENERAL STRUCTURAL NOTES

GENERAL

1. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE CONSTRUCTION IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, SHEETING, TEMPORARY BRACING, GUYS, OR TIEDOWNS WHICH MIGHT BE NECESSARY. SUCH MATERIAL IS TO REMAIN THE CONTRACTOR'S PROPERTY AFTER COMPLETION OF THE PROJECT.
2. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
3. MECHANICAL EQUIPMENT LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO MECHANICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR IS TO OBTAIN APPROVAL OF MECHANICAL AND OTHER TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXCESS COST RELATED TO VARIATION IN MECHANICAL REQUIREMENTS TO BE BORNE BY MECHANICAL CONTRACTOR.
4. DO NOT SCALE THE DRAWINGS WHERE DIMENSIONS ARE NOT SPECIFICALLY GIVEN. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND ELEVATIONS NOT SHOWN. COORDINATE ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE NOT INTENDED TO AUGMENT, NOR SUPERSEDE THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
5. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE ARCHITECT IMMEDIATELY WHERE CONFLICTS EXIST WITHIN THE DRAWINGS OR BETWEEN THE DRAWINGS AND FIELD CONDITIONS.
6. THROUGHOUT THESE PLANS, THE TERM "PROVIDE" IS DEFINED AS "SUPPLY AND INSTALL".
7. SHOP DRAWINGS ARE TO BE SUBMITTED BY COMPLETE ERECTION PHASE OR SEQUENCE. LIMITS OF EACH INDIVIDUAL ERECTION PHASE OR SEQUENCE ARE TO BE CLEARLY INDICATED ON THE PLANS. INCOMPLETE OR PIECEMEAL SHOP DRAWINGS WILL BE RETURNED PRIOR TO REVIEW. RESUBMITTALS ARE TO HAVE REVISIONS CLEARLY MARKED OR IDENTIFIED. THE CONTRACTOR SHALL REVIEW AND ACCEPT FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS. ALL SHOP DRAWINGS MUST BEAR THE APPROVAL STAMP OF THE CONTRACTOR PRIOR TO REVIEW BY THE ARCHITECT OR ENGINEER.
8. PREFABRICATED ITEMS SHOWN ON THE STRUCTURAL DRAWINGS ARE REFERENCED FOR GENERAL COORDINATION PURPOSES ONLY, AND MAY INCLUDE BUT NOT BE LIMITED TO: STAIRS, HANDRAILS, CURTAIN WALLS, STOREFRONT SYSTEMS, AWNINGS, COLD-FORMED METAL FRAMING, AND PREFABRICATED FRAMING MEMBERS. THESE SYSTEMS SHALL BE DESIGNED, FURNISHED, AND INSTALLED AS REQUIRED BY OTHER PORTIONS OF THE CONTRACT DOCUMENTS. JEZERINAC GEERS WILL REVIEW THE DESIGN METHODOLOGY, LOADS, AND INSTALLATION DETAILS AS PART OF THE SHOP DRAWING REVIEW PROCESS, AND MAY REQUEST A SEALED CALCULATION PACKAGE FOR REVIEW.
9. SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THE GENERAL STRUCTURAL NOTES, THE SPECIFICATIONS OR WITH EACH OTHER, THE STRICTEST PROVISION WILL GOVERN.
10. CODE INFORMATION

- GOVERNING CODE:	2017 OHIO BUILDING CODE
- BUILDING RISK CATEGORY:	CATEGORY II
FLOOR LIVE LOADS (WITH ALLOWABLE REDUCTIONS WERE APPLICABLE)	
- OFFICES	50 PSF
- STAIRS & EXITS	100 PSF
- ASSEMBLY	100 PSF
- MECHANICAL	125 PSF
- PARTITION ALLOWANCE	15 PSF
ROOF LIVE LOADS	
- ORDINARY FLAT, PITCHED, AND CURVED ROOFS	20 PSF
SNOW LOADS	
- GROUND SNOW LOAD (Pg)	20 PSF
- FLAT ROOF SNOW LOAD (Pf)	20 PSF
- SNOW EXPOSURE FACTOR (Ce)	1.0
- SNOW LOAD IMPORTANCE FACTOR (Is)	1.0
- THERMAL FACTOR (Ct)	1.0
- SNOW DRIFTING	SEE PLAN
WIND LOADS	
- WIND IMPORTANCE FACTOR	1.0
- BASIC ULTIMATE WIND SPEED (V ult)	115 MPH
- BASIC ALLOWABLE WIND SPEED (V asd)	90 PSF
- SITE EXPOSURE CATEGORY	C
- INTERNAL PRESSURE COEFFICIENT	+/- 0.18
SEISMIC LOADS:	
- SEISMIC IMPORTANCE FACTOR	1.0
- MAPPED SPECTRAL RESPONSE ACCELERATION (Ss)	0.224
- MAPPED SPECTRAL RESPONSE ACCELERATION (S1)	0.069
- SEISMIC SITE CLASS	D
- DESIGN SPECTRAL RESPONSE ACCELERATION (Sds)	0.239
- DESIGN SPECTRAL RESPONSE ACCELERATION (Sd1)	0.111
- SEISMIC DESIGN CATEGORY	B
- RESPONSE MODIFICATION COEFFICIENT (R)	3.0
- SEISMIC RESPONSE COEFFICIENT (Cs)	0.XXX
- SEISMIC DESIGN BASE SHEAR (V)	XX.X K
- ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
- BASIC SEISMIC FORCE-RESISTING SYSTEM:	STEEL SYSTEMS NOT SPECIFICALLY DETAILED
SPECIAL LOADS	
- INTERIOR WALLS & PARTITIONS	5 PSF HORIZONTAL
- HANDRAIL LOADS (ANY DIRECTION)	50 PLF/200# CONC.
GEOTECHNICAL:	
- GEOTECHNICAL ENGINEER:	INTERTEK PSI
- REFERENCE REPORT I.D. OR NUMBER:	01051337
- REFERENCE REPORT DATE:	10/15/2018
- ALLOWABLE DESIGN BEARING PRESSURE:	3,000 PSF
- FOUNDATION TYPE:	SHALLOW SPREAD FOOTING

REINFORCED CONCRETE

1. SPECIFICATIONS: IN GENERAL, COMPLY WITH ACI-301-16, "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
2. MATERIALS:
   A. STRUCTURAL CONCRETE:

MIX USAGE	f'c (PSI)	MAX w/cm	AIR CONTENT
LEAN CONCRETE	1,500	---	---
FOOTINGS & INTERIOR COLUMN PIERS	3,500	0.55	---
INTERIOR SLABS ON GRADE	3,500	0.50	---
INTERIOR SLABS ON GRADE WHICH RECEIVE MOISTURE-SENSITIVE FLOOR COVERINGS	4,000	0.45	---
INTERIOR SLABS ON METAL DECK	3,500	0.45	---
EXTERIOR FOUNDATION STEMWALLS, EXTERIOR FOUNDATION WALLS, & EXTERIOR COLUMN PIERS	4,500	0.45	5%-7%
EXTERIOR UNREINFORCED SLABS ON GRADE & EXTERIOR CONCRETE NOT SUBJECT TO DEICERS	4,500	0.45	5%-7%

   B. ALL DEFORMED REINFORCING BARS: FY = 60,000 PSI.
   C. CEMENT: PORTLAND CEMENT, ASTM C150, TYPE 1. ALL CEMENT FOR CONCRETE EXPOSED TO VIEW IS TO BE FROM THE SAME MILL.
   D. AGGREGATES: ASTM C33, USE SIZE NO. 57 FOR ALL MIXES UNLESS NOTED OTHERWISE.
   E. ADMIXTURES:
      1. WATER-REDUCING, LOW AND MID RANGE: ASTM C494, TYPE A OR D.
      2. HIGH-RANGE WATER REDUCING, SUPERPLASTICIZER: ASTM C494, TYPE F OR G.
   F. AIR-ENTRAINING: ASTM C260.
   G. FLY-ASH: ASTM C618, TYPE C OR F.
   H. NON-CHLORIDE, NON-CORROSIVE ACCELERATOR: ASTM C494, TYPE C OR E.
   I. VAPOR RETARDER SHALL CONFORM TO ASTM E1745 "STANDARD SPECIFICATION FOR PLASTIC WATER VAPOR RETARDERS USED IN CONTACT WITH SOIL OR GRANULAR FILL UNDER CONCRETE SLABS", CLASS A.
   J. VAPOR RETARDER SHALL BE INSTALLED IN ACCORDANCE WITH ASTM E1643 "STANDARD PRACTICE FOR INSTALLATION OF WATER VAPOR RETARDERS USED IN CONTACT WITH EARTH OR GRANULAR FILL UNDER CONCRETE SLABS. THE VAPOR RETARDER/BARRIER SHALL BE A MINIMUM OF 10 MILS THICK AND PLACED DIRECTLY ON THE GRANULAR FILL, BELOW THE CONCRETE FLOOR SLAB. LAP JOINTS A MINIMUM OF 6 INCHES AND SEAL WITH MANUFACTURER'S RECOMMENDED TAPE OR ADHESIVE.
3. FIELD MANUAL: PROVIDE AT LEAST ONE COPY OF THE ACI FIELD REFERENCE MANUAL, SP-15 IN THE FIELD OFFICE AT ALL TIMES.
4. SUBMITTALS:
   A. SUBMIT A MIX DESIGN FOR EACH MIXTURE USAGE REQUIRED FOR THE PROJECT. CONCRETE PROPORTIONS ARE TO BE ESTABLISHED ON THE BASIS OF PREVIOUS FIELD EXPERIENCE OR TRIAL MIXTURES.
   B. SUBMIT PLACING DRAWINGS FOR ALL REINFORCING. INDICATE STRENGTH, SIZE, AND DETAILS OF ALL BAR REINFORCING.
   C. SUBMIT PRODUCT LITERATURE FOR ADMIXTURES AND CURING COMPOUNDS PROPOSED FOR USE.
   D. SUBMIT REPORTS OF ALL REQUIRED TESTING AND INSPECTIONS.
5. CONTINGENCIES:
   A. PROVIDE 1 TON OF REINFORCING BARS TO BE USED AS DIRECTED BY THE ARCHITECT/ENGINEER. COLD BEND IN THE FIELD, IF REQUIRED.
   B. PROVIDE LEAN CONCRETE UNDER FOUNDATIONS FOR ACCIDENTAL OVER EXCAVATION, SOFT SPOTS, AND UTILITY TRENCHES.
6. OPENINGS:
   A. OPENINGS SHOWN ARE FOR BIDDING PURPOSES ONLY. RECONCILE THEIR EXACT SIZE AND LOCATION WITH ARCHITECTURAL, MECHANICAL AND OTHER REQUIREMENTS BEFORE PROCEEDING WITH WORK.
   B. PROVIDE 2 NO. 5 BARS (PER CURTAIN) AROUND ALL WALL OPENINGS, EXTENDING TWO FEET BEYOND OPENING IN EVERY DIRECTION. OPENINGS IN WALLS NOT EXCEEDING 12" x 12" MAY BE SLEEVED AS REQUIRED BY WORKING THE REINFORCING STEEL AROUND THEM.
   C. IF ANY OPENING NOT SHOWN ON THE PLANS IS REQUIRED, SECURE APPROVAL OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING.
7. FOOTINGS, PIERS, WALLS:
   A. DOWELS IN FOOTINGS TO MATCH VERTICAL PIER OR WALL REINFORCING.
   B. PROVIDE CORNER BARS AT WALL AND FOOTING CORNERS TO MATCH HORIZONTAL REINFORCING. MINIMUM LENGTH OF EACH LEG - 36 BAR DIAMETERS.
   C. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL BOTH ADJACENT FLOOR SLABS ARE IN PLACE.
8. SPLICES:
   A. LAP SPLICE REINFORCING BARS AS SCHEDULED. MINIMUM LAP = 36 DIAMETERS.
9. CONSTRUCTION JOINTS:
   A. CONSTRUCTION JOINTS PERMITTED ONLY WHERE SHOWN OR AS APPROVED BY THE STRUCTURAL ENGINEER.
10. FINISHES:
   A. PER ACI 117, SURFACES OF INTERIOR SLABS ON GRADE ARE TO BE FINISHED TO THE FOLLOWING TOLERANCES: FLOOR FLATNESS F(f)=30 AND LEVELNESS F(l)=20 UNLESS NOTED OTHERWISE IN SPECIFICATIONS.
   B. TYPICAL INTERIOR FLOOR AREAS TO RECEIVE CARPET, RESILIENT FLOOR COVERING, OR TO REMAIN EXPOSED - TROWELED FINISH.
   C. INTERIOR FLOOR AREAS TO RECEIVE QUARRY TILE OR CERAMIC TILE - FLOATED FINISH.
   D. EXTERIOR SLABS - BROOM FINISH.
11. CURING:
   A. CURING IS TO COMMENCE IMMEDIATELY AFTER CONCRETE PLACEMENT AND CONTINUE FOR AT LEAST 7 DAYS. DO NOT ALLOW CURING TO BE DELAYED OVERNIGHT.
   B. INTERIOR SLABS TO RECEIVE QUARRY TILE OR CERAMIC TILE ARE TO BE MOIST-CURED WITHOUT THE USE OF A CURING COMPOUND.
   C. ALL OTHER SLABS MAY BE EITHER MOIST-CURED OR RECEIVE AN APPLICATION OF CURING COMPOUND.
12. FIELD QUALITY CONTROL:
   A. OBTAIN CONCRETE FOR REQUIRED TESTS AT POINT OF PLACEMENT. IF CONCRETE IS PUMPED, OBTAIN CONCRETE AT DISCHARGE END.
   B. FOR EACH CLASS OF CONCRETE, OTHER THAN LEAN CONCRETE, PERFORM ONE STRENGTH TEST FOR EACH 50 YARDS, OR FRACTION THEREOF, FOR ONE DAY PLACEMENT.
   C. DETERMINE SLUMP FOR EACH STRENGTH TEST.
   D. DETERMINE AIR CONTENT FOR EACH STRENGTH TEST OF EXTERIOR EXPOSED CONCRETE.
   E. MAINTAIN RECORDS OF ALL TESTS INDICATING EXACT LOCATION OF THE STRUCTURE REPRESENTED BY EACH TEST.

MASONRY

1. MATERIALS:
   A. CONCRETE BLOCK: ASTM C90 (HOLLOW AND SOLID), MINIMUM NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS = 2,600 PSI.
   B. MORTAR: ASTM 270 TYPE S, MINIMUM COMPRESSIVE STRENGTH = 1,800 PSI
   C. GROUT FOR BOND BEAM AND CORE FILL: ASTM C476, COARSE TYPE WITH f'c = 2,500 PSI MIN.
   D. DESIGN COMPRESSIVE STRENGTH OF MASONRY SYSTEM: f'm = 2,250 PSI
   E. HORIZONTAL JOINT REINFORCING: STANDARD LADDER TYPE, 9 GA., MILL GALVANIZED FINISH. PROVIDE AT 8" O.C. BELOW GRADE, AND 16" O.C. ABOVE GRADE, UNLESS NOTED OTHERWISE.
2. CONTROL JOINTS:
   A. PROVIDE CONTROL JOINTS IN ALL MASONRY WALLS AT A SPACING NOT TO EXCEED THREE TIMES THE WALL HEIGHT OR 24 FEET ON CENTER, WHICHEVER IS SMALLER. IN ADDITION, PROVIDE CONTROL JOINTS AT THE ENDS OF LINTELS, CHANGES IN WALL HEIGHT, CHANGES IN WALL THICKNESS, WITHIN 2 FEET OF WALL CORNERS AND INTERSECTIONS, TRANSITIONS FROM INTERIOR WALL TO EXTERIOR WALL, AND TRANSITIONS FROM WALL BEARING ON FOUNDATION TO WALL BEARING ON FLOOR SLAB.
3. MISCELLANEOUS:
   A. PROVIDE 100% SOLID CMU BEARING, MINIMUM 3 COURSES UNDER BEAMS, 2 COURSES UNDER JOISTS, UNLESS DETAILED OTHERWISE.
   B. PROVIDE SOLID OR GROUT-FILLED CMU FOR ALL BELOW-GRADE FOUNDATION WALLS.
   C. FILL CORE SOLID AROUND CAST-IN ANCHOR RODS.
   D. PROVIDE SOLID CMU OR SOLIDLY FILLED HOLLOW CMU AT ALL EPOXY ANCHOR AND WEDGE ANCHOR LOCATIONS. EXTEND SOLID AREA AT LEAST 8" IN ALL DIRECTIONS FROM CENTER OF ANCHOR.
   E. SET WELD PLATES IN BOND BEAMS AFTER THE GROUT IS PLACED, BUT WHILE IT IS STILL PLASTIC.
   F. FILL ALL BEARING POCKETS AROUND BEAM AND JOIST SEATS WITH SOLID CMU.
   G. HOLLOW MASONRY UNITS TO BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. WEBS ARE TO ALSO BE BEDDED IN ALL COURSES OF PIERS, PILASTERS, THE STARTING COURSE ON FOOTINGS, AND WHEN ADJACENT TO CELLS OR CAVITIES TO BE REINFORCED OR FILLED WITH CONCRETE OR GROUT. SOLID UNITS TO BE LAID WITH FULL HEAD AND BED JOINTS.
   H. PROVIDE APPROPRIATE MASONRY ANCHORS AT 16" O.C. MAX. TO TIE MASONRY TO ABUTTING STEEL COLUMNS, STEEL BEAM WEBS, AND ALL ABUTTING CONCRETE SURFACES.
   I. MINIMUM EMBEDMENT FOR WEDGE ANCHORS IS TO BE 7 BOLT DIAMETERS, UNLESS DESIGNATED OTHERWISE. MINIMUM EMBEDMENT FOR EPOXY ANCHORS IS TO BE 9 BOLT DIAMETERS, UNLESS DESIGNATED OTHERWISE.
   J. WHERE HOLLOW MASONRY UNITS ARE USED ABOVE HOLLOW MASONRY UNITS OF A DIFFERENT THICKNESS, PROVIDE A CONTINUOUS COURSE OF SOLID MASONRY AT LEAST 8" HIGH BELOW THE TRANSITION.
   K. AT CORBELLED WALLS, USE SOLID MASONRY FOR THE COURSE BELOW THE FIRST CORBEL AND FOR EACH CORBELLED COURSE. MAXIMUM CORBEL PER COURSE = 1", UNLESS DETAILED OTHERWISE.
   L. LAP SPLICE REINFORCING BARS AS SCHEDULED. MINIMUM LAP = 48 BAR DIAMETERS.
   M. ALL GROUTING OF MASONRY WALLS IS TO BE BY THE LOW-LIFT GROUTING METHOD (MAXIMUM LIFT HEIGHT 5'-0"), UNLESS CLEAN-OUTS AND INSPECTIONS ARE PROVIDED.

STRUCTURAL STEEL

1. MATERIALS:
   A. STRUCTURAL STEEL WIDE FLANGE SHAPES: ASTM A992, Fy = 50 KSI
   B. STRUCTURAL STEEL CHANNELS, ANGLES, ETC.: ASTM A36, Fy = 36 KSI
   C. STRUCTURAL STEEL PLATES: UNLESS NOTED OTHERWISE - ASTM A36, Fy = 36 KSI; ASTM A529 OR A572, Fy = 50 KSI, WHERE NOTED
   D. HIGH STRENGTH BOLTS: ASTM A325 OR A490
   E. ANCHOR RODS: ASTM F1554, GRADE 36, UNLESS NOTED OTHERWISE
   F. ELECTRODES: SERIES E70
   G. RECTANGULAR HSS: ASTM A500, GRADE C, FY = 50 KSI
   H. ROUND HSS: ASTM A500, GRADE C, FY = 46 KSI
   I. STRUCTURAL PIPES: ASTM A53, GRADE B, FY = 35 KSI
   J. SHEAR STUDS: ASTM A108, FY = 60 KSI
   K. DEFORMED BAR ANCHORS: ASTM A496, Fy = 70 KSI
2. SPECIFICATIONS:
   A. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS D1.1. UNLESS SPECIFICALLY SHOWN OTHERWISE, DESIGN, FABRICATION AND ERECTION TO BE GOVERNED BY THE LATEST REVISIONS OF:
      1. AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
      2. AISC CODE OF STANDARD PRACTICE.
      3. STRUCTURAL WELDING CODE, AWS D1.1 OF THE AMERICAN WELDING SOCIETY.
      4. SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
3. SUBMITTALS:
   A. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL WHICH INCLUDE ERECTION PLANS, CONNECTION DETAILS, AND SHOP DETAILS INDICATING CUTS, COPES, CAMBERS, CONNECTIONS, HOLES, THREADED FASTENER TYPES AND SIZES, AND SIZES AND LENGTHS OF WELDS.
   B. INDICATE MATERIAL SPECIFICATIONS, STRENGTHS, AND FINISHES.
4. CONNECTIONS:
   A. FIELD CONNECTIONS ARE TO BE BOLTED, EXCEPT AS INDICATED OTHERWISE. SHOP CONNECTIONS MAY BE WELDED OR BOLTED.
   B. CONNECTIONS ARE TO BE DESIGNED BY THE FABRICATOR TO DEVELOP EITHER 100% OF THE FULL UNIFORM LOAD CAPACITY OF THE MEMBER, OR THE FORCES SHOWN ON THE PLANS. COMPOSITE BEAM CONNECTIONS ARE TO BE DESIGNED FOR 150% OF THE UNIFORM LOAD CAPACITY OF THE MEMBER, OR THE FORCES SHOWN ON THE PLANS. MINIMUM CONNECTION CAPACITY TO BE 15 KIPS. FOLLOW INSTRUCTIONS ON DRAWINGS FOR GENERAL ARRANGEMENT OR PARTICULAR DETAILS.
   C. MISCELLANEOUS STEEL MEMBERS (ANGLES, CHANNELS, ETC.) THAT SUPPORT DECK AROUND THE PERIMETER OF A FLOOR OR ROOF SHALL BE CONTINUOUS. WHERE SPLICES IN THESE MEMBERS MUST OCCUR TO FACILITATE ERECTION, PROVIDE PARTIAL PENETRATION SQUARE GROOVE WELD (BUTT JOINT) W/ 3/16" EFFECTIVE THROAT ON ONE SIDE, EACH LEG.
5. COATINGS:
   A. DO NOT PAINT STEEL OR ANCHOR RODS WHICH WILL BE ENCASED IN CONCRETE OR MASONRY, NOR ANY STEEL WHICH IS SCHEDULED TO RECEIVE SPRAY-APPLIED OR INTUMESCENT-MASTIC FIREPROOFING.
   B. PAINT ALL INTERIOR EXPOSED STEEL (INCLUDING INTERIOR LINTELS) WITH TWO COATS OF RED-OXIDE PRIMER.
   C. HOT-DIP GALVANIZE ALL EXTERIOR STEEL (INCLUDING LINTELS AND BRICK SHELF ANGLES).
   D. PROVIDE A FIELD-APPLIED COAT OF ASPHALT-MASTIC PAINT FOR ALL BELOW-GRADE STEEL (INCLUDING ANCHOR RODS, NUTS, WASHERS, BASE PLATES, AND THE BELOW-GRADE PORTION OF COLUMNS) WHICH IS NOT FULLY ENCASED IN CONCRETE.
   E. INTERIOR NON-EXPOSED STEEL NEED NOT BE PRIME PAINTED.
6. MISCELLANEOUS:
   A. PROVIDE HOLES FOR OTHERS. IF OPENING IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, OBTAIN PRIOR APPROVAL.
   B. STEEL SUPPORTING OR CONNECTING TO MECHANICAL AND OTHER EQUIPMENT AND ROOF OPENINGS AS SHOWN ON ARCHITECTURAL, MECHANICAL AND/OR ON STRUCTURAL DRAWINGS IS SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR IS TO RECONCILE EXACT SIZE AND LOCATION WITH MECHANICAL AND OTHER REQUIREMENTS BEFORE PROCEEDING WITH THIS WORK.
   C. GROUT UNDER BEARING PLATES TO BE NON-METALLIC, NON-SHRINKING TYPE.
   D. STEEL BELOW GRADE TO BE PROTECTED BY A MINIMUM OF 3" OF CONCRETE, 4" OF SOLID MASONRY, OR A FIELD-APPLIED COAT OF ASPHALT-MASTIC PAINT.
   E. PROVIDE 1/4" THICK SETTING PLATES FOR ALL BEAMS AND BEAM LINTELS BEARING ON MASONRY OR CONCRETE WHICH DO NOT REQUIRE A THICKER BEARING PLATE.
   F. PROVIDE HEAVY PLATE WASHERS AT ALL ANCHOR RODS.
   G. FINISH ENDS OF ALL COLUMNS, STIFFENERS AND ALL OTHER MEMBERS IN DIRECT BEARING.
   H. PROVIDE BOLT HOLES FOR WOOD NAILERS AND JOISTS BOLTED TO BEAMS.
   I. PROVIDE ATTACHMENT FOR JOINING EXTENDED JOIST BOTTOM CHORDS.
   J. STEEL IN CONTACT WITH PRESSURE-TREATED LUMBER IS TO BE PROTECTED FROM CORROSION FROM PRESERVATIVE CHEMICALS WITH A 20 MIL (MIN.) VAPOR BARRIER. BOLTS AND SCREWS THROUGH PRESSURE-TREATED LUMBER ARE TO BE HOT DIPPED GALVANIZED PER ASTM A153 WITH A MINIMUM G185 COATING OR STAINLESS STEEL WITH CHEMICAL COMPOSITION CONFORMING TO AISI 303/304 OR AISI 316.
   K. PROVIDE MISCELLANEOUS ANGLES OR CHANNELS TO SUPPORT DECK EDGES AROUND COLUMNS THAT EXTEND THROUGH THE DECK.
   L. PROVIDE ADDITIONAL SUPPORT FOR ALL DECK OPENINGS THAT ARE EQUAL TO OR GREATER THAN 12" IN WIDTH OR DIAMETER. NOT ALL DECK OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE SIZE AND LOCATION WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND OTHER TRADES.
   M. SEE ARCHITECTURAL SECTIONS AND DETAILS FOR ALL MISCELLANEOUS STRUCTURAL STEEL NOT OTHERWISE INDICATED IN THE STRUCTURAL DRAWINGS.
7. FIELD QUALITY CONTROL:
   A. INSPECTION AGENCY IS TO PERFORM INSPECTION OF BOLTED CONNECTIONS PER THE REQUIREMENTS OF AISC SPECIFICATION FOR STRUCTURAL JOINTS.
8. CONTINGENCY:
   A. PROVIDE AND ERECT XX TONS OF STRUCTURAL AND/OR MISCELLANEOUS STEEL (STRUCTURAL SHAPES, ANGLES, PLATES, ETC.) TO BE USED AS DIRECTED BY THE ARCHITECT/ENGINEER. CONNECTIONS TO BE FIELD-WELDED IF REQUIRED.

METAL DECK

1. MATERIALS:
   A. GALVANIZED SHEET STEEL: ASTM A653
   B. FLOOR DECK: 9/16" DEEP, CONFORM, GALVANIZED.
2. SPECIFICATIONS:
   A. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS. DESIGN, FABRICATION, AND ERECTION TO BE GOVERNED BY THE LATEST REVISIONS OF:
      1. AISI "SPECIFICATION OF THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
      2. STRUCTURAL WELDING CODE, AWS D1.3 OF THE AMERICAN WELDING SOCIETY.
      3. SDI "DESIGN MANUAL FOR FLOOR DECK AND ROOF DECKS".
3. CONNECTIONS:
   A. DECK TO COLD-FORMED FRAMING: #12 SCREWS.
   B. SIDE LAP FASTENING: #10 SCREWS.
4. FINISH:
   A. GALVANIZED: CONFORM TO ASTM A653, G60.
5. METAL DECK AS FORMWORK:
   A. IN METAL DECK APPLICATIONS WHICH RECEIVE CONCRETE FILL, THE DECK IS DESIGNED TO SUPPORT THE SELF WEIGHT OF DECK, CONCRETE, AND A UNIFORM CONSTRUCTION LIVE LOAD OF 20 PSF WHICH IS CONSIDERED ADEQUATE FOR TYPICAL CONSTRUCTION APPLICATIONS THAT CONSIST OF CONCRETE TRANSPORT AND PLACEMENT BY HOSE AND CONCRETE FINISHING USING HAND TOOLS. BULK DUMPING OF CONCRETE USING BUCKETS, CHUTES OR HANDCARTS, OR THE USE OF HEAVIER MOTORIZED FINISHING EQUIPMENT SUCH AS POWER SCREEDS MAY REQUIRE REDESIGN OF THE DECK. NOTIFY THE E.O.R. ONCE MEANS-AND-METHODS OF CONCRETE PLACEMENT ARE ESTABLISHED.
6. MISCELLANEOUS:
   A. UNITS ARE TO BE CONTINUOUS OVER AT LEAST THREE SPANS. WHERE FEWER THAN THREE SPANS ARE NEEDED, GAGE IS TO BE INCREASED AS REQUIRED TO OBTAIN THE SAME DESIGN STRENGTH AS THE THREE-SPAN CONDITION. END LAPS ARE ONLY BE LOCATED OVER SUPPORTS.
   B. FIELD CUTTING TO BE PERFORMED WITH A SAW.
   C. METAL DECK SHOULD BE PROTECTED FROM CORROSION FROM PRESERVATIVE CHEMICALS IN PRESSURE-TREATED LUMBER WITH A MINIMUM 20 MIL VAPOR BARRIER. ALL FASTENERS AND CONNECTORS IN CONTACT WITH PRESSURE-TREATED LUMBER ARE TO BE HOT DIPPED GALVANIZED PER ASTM A153 AND ASTM A123 WITH A MINIMUM G185 COATING.
   D. PROVIDE ADDITIONAL SUPPORT FOR ALL DECK OPENINGS THAT ARE EQUAL TO OR GREATER THAN 12" IN WIDTH OR DIAMETER. NOT ALL DECK OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE SIZE AND LOCATION WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND OTHER TRADES.

COLD FORMED METAL FRAMING

1. MATERIALS:
   A. COLD-FORMED METAL STUDS AND JOISTS SHOWN ON THE CONTRACT DOCUMENTS ARE DESIGNATED BY "DEPTH", "SHAPE", "WIDTH", AND "THICKNESS" AS FOLLOWS:
      1. DEPTH: 362 (3-5/8"), 600 (6"), 800 (8"), ETC.
      2. SHAPE: S (C-SHAPE), T (TRACK), U (CHANNEL)
      3. WIDTH: 125 (1-1/4"), 162 (1-5/8"), 200 (2"), ETC.
      4. THICKNESS: -43 (18 GA.), -54 (16 GA.), -68 (14 GA.), -97 (12 GA.)
      EXAMPLE: 600S162-54 = 6" C-SHAPE, 1 5/8" FLANGE, 16 GA.
   B. ALL 18 GA AND LIGHTER STUDS TO BE 33 KSI MATERIAL; ALL 16 GA AND HEAVIER STUDS TO BE 50 KSI MATERIAL.
   C. ALL TRACKS AND ACCESSORIES: FY = 33 KSI MINIMUM.
2. SPECIFICATIONS:
   A. WELDING PERSONNEL AND PROCEDURES ARE TO BE QUALIFIED PER AWS. DESIGN, FABRICATION, AND ERECTION TO BE GOVERNED BY LATEST REVISIONS OF:
      1. AISI "SPECIFICATION OF THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
      2. STRUCTURAL WELDING CODE, AWS D1.3 OF THE AMERICAN WELDING SOCIETY.
3. SUBMITTALS:
   A. SUBMIT MANUFACTURER'S STANDARD PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF COLD-FORMED METAL FRAMING AND ACCESSORY REQUIRED.
   B. SUBMIT FULLY DIMENSIONED ERECTION PLANS AND CONNECTION DETAILS INDICATING ALL COMPONENT AND MEMBER LOCATIONS, ORIENTATION, AND LAYOUT. PLANS TO INCLUDE MEMBER SIZES, TYPES, GAGE DESIGNATIONS, QUANTITY AND SPACING. ALSO INCLUDE DETAILS OF CONNECTIONS NOTED SCREW TYPES, QUANTITIES, LOCATIONS, WELD SIZES, LENGTHS, AND LOCATIONS, AND ADDITIONAL STRAPPING, BRACING, OR ACCESSORIES REQUIRED FOR A PROPER AND COMPLETE INSTALLATION.
4. CONNECTIONS:
   A. FIELD CONNECTIONS MAY BE EITHER WELDED OR SCREWED, EXCEPT AS SPECIFICALLY DETAILED OTHERWISE.
   B. WELD SIZE TO BE 1/8" WITH AWS TYPE 6013 OR 7014 ROD.
   C. EXCEPT AS NOTED OTHERWISE, MECHANICAL FASTENERS TO BE SELF TAPPING #10-16 SCREWS.
5. FINISH:
   A. ALL MATERIAL TO BE GALVANIZED COATED IN ACCORDANCE WITH ASTM A525 G-60.
   B. TOUCH-UP FIELD WELDS WITH ZINC RICH PAINT.
6. MISCELLANEOUS:
   A. ALL FIELD CUTTING TO BE PERFORMED WITH A SAW.
   B. TRACKS TO BE SECURELY ANCHORED TO SUPPORTING STRUCTURE WITH WELD OR SCREW AT EACH SIDE OF TRACKS.
   C. PROVIDE HORIZONTAL BRIDGING AT 6'-0" O.C. MAX. FOR ALL STUD WALLS UNLESS NOTED OTHERWISE. BRIDGING IS NOT REQUIRED FOR PORTIONS OF INTERIOR NON-LOADBEARING STUD WALLS WHERE BOTH SIDES ARE FACED WITH SHEATHING.
   D. JOISTS TO BE LOCATED DIRECTLY OVER BEARING WALL STUDS UNLESS A LOAD DISTRIBUTION MEMBER IS PROVIDED AT THE TOP TRACK.
   E. BEARING WALL STUDS ARE TO BE LOCATED DIRECTLY BELOW JOIST OR ROOF TRUSS BEARING UNLESS A LOAD DISTRIBUTION MEMBER IS PROVIDED AT THE TOP TRACK.
   F. END BLOCKING OR CONTINUOUS TRACK IS TO BE PROVIDED WHERE JOIST ENDS ARE NOT OTHERWISE RESTRAINED FROM ROTATION.
   G. WEB PUNCH-OUTS FOR BEAMS, JOISTS, AND RAFTERS ARE TO BE LOCATED A MINIMUM OF 10" AWAY FROM BEARING AND CONCENTRATED LOAD LOCATIONS. IF A PUNCH-OUT FALLS WITHIN 10" OF THESE LOCATIONS, PROVIDE REINFORCEMENT FOR THE MEMBER AS REQUIRED. ALTERNATELY, UN-PUNCHED SECTIONS MAY BE PROVIDED FOR BEAMS, JOISTS, AND RAFTERS.
   H. EACH MEMBER OF MULTIPLE MEMBER COLUMNS ARE TO BE SCREWED TOGETHER USING FULL-HEIGHT TRACKS AND #10 SCREWS AT 12" O.C. ALTERNATELY, MULTIPLE MEMBER COLUMNS MAY BE WELDED TOGETHER WITH A 1" WELD AT 18" ON CENTER, EACH SIDE, EACH PIECE, FOR THE FULL LENGTH OF THE COLUMN.

STRUCTURAL LUMBER

1. MATERIALS:
   A. STRUCTURAL LUMBER: ALL DESIGN VALUES PER 2015 NFPA NATIONAL DESIGN SPECIFICATION. ANY SUBSTITUTIONS ARE TO MEET MINIMUM DESIGN VALUES OF ABOVE MEMBERS. UNLESS NOTED OTHERWISE FRAMING MATERIALS SHALL BE:
      1) BEAMS, HEADERS, JOISTS, AND RAFTERS - SPRUCE-PINE-FIR NO.1/NO.2
      2) WALL STUDS 2x4 OR 2x6 - SPRUCE-PINE-FIR "STUD" GRADE.
      3) MICRO=LAM (M=L) OR LAMINATED VENEER LUMBER (LVL): Fb = 2,600 PSI, Fv = 285 PSI, Fc (PERP.) = 750 PSI, E = 1,900 KSI.
      4) PARALLAM OR PARALLEL STRAND LUMBER (PSL)
         a. BEAMS: Fb = 2,900 PSI, Fv = 290 PSI, Fc (PERP.) = 750 PSI, E = 2,000 KSI.
         b. COLUMNS: Fb = 2,400 PSI, Fv = 190 PSI, Fc (PERP.) = 545 PSI, E = 1,800 KSI.
      5) LAMINATED STRAND LUMBER (LSL) BEAMS: Fb = 2360 PSI, Fv = 410, Fc (PERP.) = 875 PSI, E = 1,550 KSI.
      6) PREFABRICATED WOOD I-JOIST — CAPACITIES AND DESIGN PROVISIONS SHALL BE AS ESTABLISHED AND MONITORED IN ACCORDANCE WITH ASTM D5055.
      7) ENGINEERED WOOD RIM BOARD — SHALL CONFORM TO APA PRR-410
      8) DECKING AND SHEATHING (OSB OR PLYWOOD):
         FLOORS: 3/4" NOMINAL APA RATED STURD-I-FLOOR, 48/24, EXP. 1, TONGUE AND GROOVE
         ROOFS: 19/32 (5/8" NOMINAL) APA RATED SHEATHING, 32/16, EXPOSURE 1
         WALL SHEATHING: 7/16" APA RATED SHEATHING, WALL-24, EXPOSURE 1
      9) GLUE-LAMINATED BEAMS: SOUTHERN PINE, 24F-V5.
      10) SOLID WOOD DECKING: 2x6 DOUGLAS FIR/LARCH, GRADE AND DESIGN VALUES AS REQUIRED FOR SPANS. SURFACE - SMOOTH; RANDOM LENGTH; CENTER AND END MATCHED.
      11) COMPOSITE INSULATED ROOF PANELS: 7/16" OSB SKINS EACH FACE WITH EXPANDED POLYSTYRENE FOAM INSULATED CORE. CORE THICKNESS AS DEFINED ON DOCUMENTS.
   B. ALL LUMBER IN CONTACT WITH CONCRETE, MASONRY, GROUND/SOIL, OR USED IN CONDITIONS WITH MOISTURE PRESENT, IS TO BE PRESSURE-TREATED TO RESIST DECAY. PRESERVATIVES USED FOR PRESSURE TREATMENT ARE TO BE ALKALINE COPPER QUAT, ACQ-C OR ACQ-D. OTHER PRESERVATIVES PROPOSED FOR USE ARE TO BE SUBMITTED FOR REVIEW PRIOR TO ERECTION OR INSTALLATION ON THE PROJECT.
   C. FIRE-RETARDANT-TREATED WOOD PRODUCTS — MUST CONFORM TO ASTM D5664 FOR LUMBER AND ASTM D5516 FOR PLYWOOD.
2. SPECIFICATIONS:
   A. UNLESS SPECIFICALLY SHOWN OTHERWISE, DESIGN, FABRICATION AND ERECTION ARE TO BE GOVERNED BY THE LATEST REVISIONS OF:
      1. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION.
      2. U.S. PRODUCT STANDARD PS-1 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD.
      3. APA PS 2-18, PERFORMANCE STANDARD FOR WOOD STRUCTURAL PANELS.
      4. APA DESIGN/CONSTRUCTION GUIDE - RESIDENTIAL AND COMMERCIAL.
3. CONNECTIONS:
   A. CONNECTIONS FOR WOOD MEMBERS SHALL BE MINIMALLY FASTENED AS PRESCRIBED IN TABLE 2304.10.1 OF THE REFERENCED BUILDING CODE UNLESS DETAILED OTHERWISE. ALL NAILS ARE TO BE COMMON WIRE NAILS, UNLESS SPECIFICALLY NOTED OTHERWISE.
   B. FOUNDATION PLATES ON CONCRETE OR MASONRY WALLS SHALL BE PRESSURE TREATED LUMBER, SYP #2 GRADE MINIMUM. SILLS SHALL BE ANCHORED TO CONCRETE OR MASONRY WITH ½" DIAMETER x 12" LONG ANCHOR RODS SPACED AT 48" O.C. MAXIMUM, UNLESS NOTED OTHERWISE. THERE SHALL BE A MINIMUM OF 3 BOLTS PER SILL PIECE WITH ONE BOLT LOCATED WITHIN 12" OF EACH END OF EACH PIECE. DO NOT PROVIDE A SILL PLATE SPLICE UNDER ANY POST OR STUD. SEE SHEARWALL SCHEDULE AND DETAILS FOR ADDITIONAL REQUIREMENTS.
   C. JOISTS TO BEAMS OR JOISTS TO TRUSSES - 16 GA. STD. JOIST HANGERS, UNLESS SHOWN OTHERWISE. BEAMS TO BEAMS - 16 GA. BEAM HANGERS, UNLESS SHOWN OTHERWISE.
   D. ALL HANGERS, STRAPS, CAPS, BASES, HOLDOWNS, TIES OR OTHER CONNECTORS IN CONTACT WITH PRESSURE-TREATED LUMBER ARE TO BE BATCH/POST HOT DIPPED GALVANIZED PER ASTM A123 WITH A MINIMUM G185 COATING OR STAINLESS STEEL WITH CHEMICAL COMPOSITION CONFORMING TO AISI 303/304 OR AISI 316.
   E. ALL FASTENERS INCLUDING NAILS, ANCHOR RODS, POWDER ACTUATED FASTENERS, SCREWS, BOLTS, AND THREADED RODS, IN CONTACT WITH PRESSURE TREATED LUMBER ARE TO BE HOT DIPPED GALVANIZED PER ASTM A153 WITH A MINIMUM G185 COATING OR STAINLESS STEEL WITH CHEMICAL COMPOSITION CONFORMING TO AISI 303/304 OR AISI 316. FASTENERS AND CONNECTORS ARE TO BE OF THE SAME MATERIAL, STAINLESS STEEL OR HOT DIPPED GALVANIZED, DO NOT MIX MATERIALS.
   F. ALL MECHANICAL ANCHORS INCLUDING WEDGE ANCHORS AND SLEEVE ANCHORS IN CONTACT WITH PRESSURE TREATED LUMBER ARE TO BE STAINLESS STEEL WITH CHEMICAL COMPOSITION CONFORMING TO AISI 303/304 OR AISI 316.
   G. SHEATHING TO FRAMING:
      1. FLOORS - GLUED AND NAILED WITH ADHESIVES MEETING APA SPECIFICATIONS APG-01 AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, USE 10d COMMON NAILS AT 6" ON CENTER AT PANEL EDGES AND 12" ON CENTER AT INTERMEDIATE SUPPORTS (UNO).
      2. ROOFS - USE 10d NAILS AT 6" ON CENTER AT PANEL EDGES AND 12" ON CENTER AT INTERMEDIATE SUPPORTS (UNO).
      3. STUD WALLS - USE 8d COMMON OR GALVANIZED BOX NAILS AT 6" ON CENTER AT PANEL EDGES AND 12" ON CENTER AT INTERMEDIATE SUPPORTS (UNO). SEE SHEARWALL SCHEDULES FOR ADDITIONAL FASTENING REQUIREMENTS.
      4. CFMF — USE 1-5/16" LONG #10-16 PILOT POINT SCREWS WITH WINGS.
      5. GYPSUM-SHEATHED WALLS - USE 6d COOLER OR No. 6 x 1-1/4" TYPE S OR W SCREWS AT 7" ON CENTER AT PANEL EDGES AND 7" ON CENTER AT INTERMEDIATE SUPPORTS (UNO).
   H. TRUSS TO WALL OR RAFTERS TO WALL - STANDARD HURRICANE ANCHORS AT EACH BEARING POINT. ADDITIONAL ANCHORS MAY BE REQUIRED BASED UPON FINAL LAYOUT AND DESIGN BY THE TRUSS MANUFACTURER DURING THE SHOP DRAWING PROCESS.
4. MISCELLANEOUS:
   A. PROVIDE ONE LINE OF SOLID BLOCKING OR CROSS BRIDGING AT 8'-0" O/C MAX. FOR ALL FLOOR JOISTS. USE SOLID BLOCKING AT ALL JOIST AND RAFTER BEARINGS.
   B. PROVIDE SOLID BLOCKING AT MID-HEIGHT OF WALLS FOR EACH OF THE FOLLOWING CONDITIONS: EXTERIOR STUD WALLS, INTERIOR BEARING PARTITIONS, AND ALL WALL FRAMING WHICH IS NOT SHEATHED ON EACH SIDE WITH GYPSUM OR WOOD SHEATHING.
   C. USE SINGLE JACK STUDS UNDER BEAM AND HEADER BEARINGS FOR ROUGH OPENINGS UP AND INCLUDING 4'-0", AND DOUBLE JACK STUDS UNDER BEAM AND HEADER BEARINGS FOR SPANS GREATER THAN 4'-0", UNLESS SHOWN OTHERWISE.
   D. APPLY CONTINUOUS BEAD OF GLUE ON JOISTS AND GROOVE OF TONGUE-AND-GROOVE PANELS.
   E. PROVIDE TEMPORARY CONSTRUCTION EXPANSION JOINTS IN ALL WOOD STRUCTURAL PANEL FLOOR AND ROOF DIAPHRAGMS IN 80'-0" MAXIMUM INTERVALS IN ACCORDANCE WITH AMERICAN PLYWOOD ASSOCIATION'S (APA) TECHNICAL DOCUMENT U425.
   F. BEFORE APPLYING FINISH FLOORING, SET NAILS 1/8" BUT DO NOT FILL, AND LIGHTLY SAND ANY SURFACE ROUGHNESS, PARTICULARLY AT JOINTS AND AROUND NAILS.
   G. EACH MEMBER OF MULTIPLE MEMBER BEAMS AND COLUMNS ARE TO BE NAILED TOGETHER WITH 2 ROWS OF 10d NAILS AT 6" ON CENTER, STAGGERED, THE FULL LENGTH OF THE MEMBER. FOR MULTIPLE MEMBER LVL OR LSL PRODUCTS, FOLLOW MINIMUM FASTENING REQUIREMENTS OF THE MANUFACTURER.

ENGINEERED WOOD TRUSSES

1. MATERIALS:
   A. LUMBER: AS REQUIRED BY THE TRUSS MANUFACTURER. MINIMUM GRADE TO BE SYP NO. 2 KD 15 PERCENT MC, EXCEPT FOR WEBS, WHICH MAY BE MINIMUM GRADE OF SYP NO. 3, KD 15 PERCENT MC.
   B. CONNECTIONS: ALL INTERNAL TRUSS CONNECTIONS ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER. CONNECTORS ARE TO BE DEFORMED PLATE TYPE, OF MINIMUM 20 GAUGE GALVANIZED STEEL SHEET. ALL JOINTS ARE TO BE DESIGNED USING METHODS AS SET FORTH IN TPI STANDARDS.
   C. ALL HANGERS, STRAPS, CAPS, BASES, HOLDOWNS, TIES OR OTHER CONNECTORS IN CONTACT WITH PRESSURE-TREATED LUMBER ARE TO BE BATCH/POST HOT DIPPED GALVANIZED PER ASTM A123 WITH A MINIMUM G185 COATING OR STAINLESS STEEL WITH CHEMICAL COMPOSITION CONFORMING TO AISI 303/304 OR AISI 316.
   D. ALL FASTENERS INCLUDING NAILS, ANCHOR RODS, POWDER ACTUATED FASTENERS, SCREWS, BOLTS, AND THREADED RODS, IN CONTACT WITH PRESSURE TREATED LUMBER ARE TO BE HOT DIPPED GALVANIZED PER ASTM A153 WITH A MINIMUM G185 COATING OR STAINLESS STEEL WITH CHEMICAL COMPOSITION CONFORMING TO AISI 303/304 OR AISI 316. FASTENERS AND CONNECTORS ARE TO BE OF THE SAME MATERIAL, STAINLESS STEEL OR HOT DIPPED GALVANIZED, DO NOT MIX MATERIALS.
   E. SPECIFICATIONS AND REFERENCE STANDARDS: UNLESS SPECIFICALLY SHOWN OTHERWISE, DESIGN, FABRICATION, ERECTION, HANDLING AND BRACING REQUIREMENTS ARE TO BE GOVERNED BY THE LATEST REVISIONS OF:
      1. NATIONAL DESIGN SPECIFICATIONS FOR STRESS-GRADE LUMBER AND ITS FASTENINGS.
      2. TIMBER CONSTRUCTION STANDARDS.
      3. DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES.
      4. TRUSS PLATE INSTITUTE PUBLICATION-BTW BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS EXCEPT AS NOTED BELOW.
2. DESIGN:
   A. ALL TRUSSES ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER FOR THE FOLLOWING LOADS:

ROOFS:	
- TOP CHORD DEAD LOAD:	15 PSF
- TOP CHORD LIVE LOAD:	20 PSF
- BOTTOM CHORD DEAD LOAD:	10 PSF
- BOTTOM CHORD LIVE LOAD:	0 PSF
LIVE LOAD DEFLECTION LIMIT:	L/360

   ADDITIONAL DEAD LOADS:
   TRUSS DESIGNER SHALL INCLUDE ADDITIONAL WEIGHT OF DEAD LOADS APPLIED TO TRUSSES FROM OVER-FRAMED AREAS INDICATED ON PLANS. WHERE TRUSSES ARE INDICATED TO SUPPORT BRICK VENEER, LIMIT TRUSS DEFLECTION TO L/600.

   SNOW LOADS:
   IN ACCORDANCE WITH ASCE 7-10 USING THE CRITERIA DEFINED IN THE "DESIGN LOADS" SECTION OF THE GENERAL STRUCTURAL NOTES. SNOW LOADS ARE TO INCLUDE THE EFFECTS OF "UNBALANCED SNOW LOADS FOR HIP AND GABLE ROOFS".

   WIND LOADS:
   IN ACCORDANCE WITH ASCE 7-10 USING THE CRITERIA DEFINED IN THE "DESIGN LOADS" SECTION OF THE GENERAL STRUCTURAL NOTES. TRUSSES ARE TO BE DESIGNED FOR "COMPONENTS AND CLADDING" WIND LOADS UNLESS NOTED OTHERWISE.

   OTHER LATERAL LOADS:
   SEE PLANS AND DETAILS FOR DRAG STRUT LOCATIONS AND LOADING REQUIREMENTS.

   SPECIAL LOADS:
   SEE PLANS AND ELEVATIONS FOR ADDITIONAL LOADS TO BE CONSIDERED IN THE TRUSS DESIGN.
   B. WHERE TRUSSES ARE REQUIRED TO FRAME INTO OTHER TRUSSES, DESIGN OF THE CONNECTIONS ARE TO BE THE RESPONSIBILITY OF THE TRUSS SUPPLIER. THE TRUSS SUPPLIER IS TO MAKE NECESSARY PROVISIONS IN THE SUPPORTING TRUSS TO ACCEPT THE TYPE OF HANGER REQUIRED.
   C. THE DESIGN OF ALL WEB MEMBER PERMANENT BRACING REQUIRED FOR THE STRUCTURAL ADEQUACY OF THE TRUSSES, IS TO BE THE SOLE RESPONSIBILITY OF THE TRUSS SUPPLIER.
   D. ADDITIONAL PERMANENT BRACE SIZES AND CONNECTIONS, NOT PROVIDED BY THE SHEATHING SHOWN ON THE CONSTRUCTION DRAWINGS, ARE TO BE THE SOLE RESPONSIBILITY OF THE TRUSS SUPPLIER. THIS BRACING CAN INCLUDE, BUT IS NOT LIMITED TO, TOP CHORD BRACING FOR TRUSSES WITH PIGGY-BACKS, AND INTERMEDIATE BRACES FOR GABLE TRUSS WEB MEMBERS.
3. SUBMITTALS:
   A. TRUSS DESIGNS ARE TO BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. TRUSS SUBMITTAL IS TO INCLUDE THE FOLLOWING INFORMATION:
      1. DESIGN INFORMATION FOR EACH TYPE OF TRUSS SUPPLIED.
      2. LAYOUT DRAWING INDICATING LOCATION OF EACH SPECIFIC TRUSS TYPE AND ANY PERMANENT HORIZONTAL BRACING MEMBERS.
      3. PERMANENT MEMBER BRACE LOCATIONS, BRACE SIZES, AND CONNECTIONS.
      4. TRUSS HANGER TYPE AND LOCATION, FOR ALL TRUSSES FRAMING INTO TRUSSES.
      5. TRUSS DESIGNS AND LAYOUT DRAWING STAMPED BY A REGISTERED PROFESSIONAL ENGINEER, IN THE STATE OF PROJECT LOCATION.
   B. SUBMITTALS WHICH DO NOT INCLUDE THE ABOVE LISTED INFORMATION WILL BE RETURNED TO THE CONTRACTOR PRIOR TO REVIEW.
4. MISCELLANEOUS:
   A. ALL GIRDER TRUSSES ARE TO BE 2-PLY MINIMUM.
   B. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE APPROVED TRUSS SHOP DRAWINGS, ALL MEMBERS OF MULTIPLE TRUSSES ARE TO BE NAILED TOGETHER WITH 10d COMMON NAILS AT 8" O.C., FOR DOUBLE TRUSSES, OR WITH 16d COMMON NAILS AT 8" O.C. FROM EACH SIDE, FOR TRIPLE TRUSSES.

POST-INSTALLED ANCHOR SYSTEMS

1. GENERAL:
   A. LISTED ANCHOR PRODUCTS PROVIDED BELOW ARE NOT TO BE USED AS INTERCHANGEABLE PRODUCTS. EACH ANCHOR HAS DEFINED CAPACITIES BASED UPON TESTED PERFORMANCE WITH APPLICABLE SAFETY FACTORS AND WILL VARY ACROSS MANUFACTURERS. TYPES OF ANCHORS INDICATED THROUGHOUT THE DESIGN DOCUMENTS ARE DETAILED FOR THEIR SPECIFIC PURPOSE AND CAPACITY. SUBSTITUTION OF ANCHORS FROM THOSE SPECIFIED ARE ONLY ALLOWED AFTER ENGINEER REVIEW AND APPROVAL OR AMENDMENT FROM WRITTEN REQUEST BY THE CONTRACTOR.
   B. PROVIDE ANCHORAGE MATCHING MANUFACTURER, TYPE, DIAMETER, EMBEDMENT, AND BASE MATERIAL AS INDICATED IN THE DOCUMENTS.
   C. ALL POST-INSTALLED ANCHORS TO BE HAMMER DRILLED. FOLLOW ALL HOLE CLEANING AND INSTALLATION INSTRUCTIONS AS STIPULATED BY THE ANCHOR MANUFACTURER. FOLLOW ALL OSHA GUIDELINES FOR CONCRETE DRILLING AS IT PERTAINS TO SILICA DUST.
   D. INSTALLATION OF ADHESIVE ANCHORS MUST BE PERFORMED BY PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS THROUGH MANUFACTURER TRAINING PROGRAMS.
   E. INSTALLATION OF ADHESIVE ANCHORS IN THE HORIZONTAL OR UPWARDLY INCLINED ORIENTATION AND WHERE SUPPORTING SUSTAINED TENSION LOADS SHALL BE INSTALLED BY CERTIFIED PERSONNEL BY ACI/CRSI INSTALLATION PROGRAMS.
   F. MINIMUM CONCRETE AGE FOR POST-INSTALLED ADHESIVE ANCHORS SHALL BE NOT LESS THAN 28 DAYS.
   G. ALL ANCHORS IN CONTACT WITH PRESSURE TREATED LUMBER ARE TO BE HOT DIPPED GALVANIZED PER ASTM A153 WITH A MINIMUM G185 COATING OR STAINLESS STEEL WITH CHEMICAL COMPOSITION CONFORMING TO AISI 303/304 OR AISI 316. FASTENERS AND CONNECTORS ARE TO BE OF THE SAME MATERIAL, STAINLESS STEEL OR HOT DIPPED GALVANIZED, DO NOT MIX MATERIALS.
2. ANCHORAGE TO CONCRETE
   A. ACCEPTABLE MECHANICAL EXPANSION ANCHORAGE SYSTEMS:
      1. DEWALT POWER STUD +SDI WEDGE EXPANSION ANCHOR
      2. HILTI KWIK BOLT 3 EXPANSION ANCHOR
      3. HILTI KWIK BOLT TZ EXPANSION ANCHOR
      4. SIMPSON STRONG-BOLT 2 WEDGE EXPANSION ANCHOR
   B. ACCEPTABLE MECHANICAL SLEEVE ANCHORAGE SYSTEMS: (MAY NOT BE USED TO SECURE MAIN BUILDING FRAME COMPONENTS)
      1. DEWALT LOK-BOLT AS SLEEVE ANCHOR
      2. HILTI HLC SLEEVE ANCHOR
      3. SIMPSON SLEEVE-ALL SLEEVE ANCHOR
   C. ACCEPTABLE MECHANICAL SCREW ANCHORAGE SYSTEMS:
      1. DEWALT SCREW-BOLT+
      2. HILTI KWIK HUS-EZ SCREW ANCHOR
      3. SIMPSON TITEN HD SCREW ANCHOR
   D. ACCEPTABLE ADHESIVE ANCHORAGE SYSTEMS:
      1. DEWALT AC200+ ADHESIVE FOR REINFORCING BAR
      2. DEWALT PURE50+ ADHESIVE FOR THREADED ROD AND REINFORCING BAR
      3. DEWALT PURE110+ ADHESIVE FOR THREADED ROD AND REINFORCING BAR
      4. HILTI HIT-HY 200 ADHESIVE FOR THREADED ROD, REINFORCING BAR, AND HILTI SPECIFIC ROD AND INSERT SYSTEMS.
      5. HILTI HIT-RE 500 ADHESIVE FOR THREADED ROD AND REINFORCING BAR.
      6. HILTI HIT-RE 100 ADHESIVE FOR THREADED ROD AND REINFORCING BAR.
      7. SIMPSON AT-XP ADHESIVE FOR THREADED ROD AND REINFORCING BAR.
3. ANCHORAGE TO CONCRETE MASONRY OR BRICK MASONRY AS INDICATED:
   A. FOLLOW ALL MANUFACTURERS INSTALLATION INSTRUCTIONS IN REGARD TO LOCATION OF ANCHORS AWAY FROM HEAD JOINTS, MINIMUM EDGE DISTANCES, AND MINIMUM ANCHOR SPACING.
   B. ACCEPTABLE MECHANICAL EXPANSION ANCHORAGE SYSTEMS:
      1. DEWALT POWER STUD +SDI WEDGE EXPANSION ANCHOR IN GROUT FILLED OR SOLID CONCRETE MASONRY
      2. HILTI KWIK BOLT 3 EXPANSION ANCHOR IN GROUT FILLED OR SOLID CONCRETE MASONRY
      3. SIMPSON STRONG-BOLT 2 WEDGE EXPANSION ANCHOR IN GROUT FILLED OR SOLID CONCRETE MASONRY
   C. ACCEPTABLE MECHANICAL SLEEVE ANCHORAGE SYSTEMS: (MAY NOT BE USED TO SECURE MAIN BUILDING FRAME COMPONENTS)
      1. DEWALT LOK-BOLT AS SLEEVE ANCHOR IN GROUT FILLED, SOLID, OR HOLLOW CONCRETE MASONRY, AND SOLID BRICK MASONRY
      2. HILTI HLC SLEEVE ANCHOR IN GROUT FILLED, SOLID, OR HOLLOW CONCRETE MASONRY, AND SOLID BRICK MASONRY
      3. SIMPSON SLEEVE-ALL SLEEVE ANCHOR IN GROUT FILLED OR SOLID CONCRETE MASONRY
   D. ACCEPTABLE MECHANICAL SCREW ANCHORAGE SYSTEMS:
      1. HILTI KWIK HUS-EZ SCREW ANCHOR IN GROUT FILLED OR SOLID CONCRETE MASONRY
      2. DEWALT SCREW-BOLT+ SCREW ANCHOR IN GROUT FILLED OR SOLID CONCRETE MASONRY AND BRICK MASONRY
      3. SIMPSON TITEN HD SCREW ANCHOR IN GROUT FILLED, SOLID, OR HOLLOW CONCRETE MASONRY
   E. ACCEPTABLE ADHESIVE ANCHORAGE SYSTEMS:
      1. DEWALT AC100+ GOLD FOR THREADED ROD AND REINFORCING BAR IN GROUT FILLED MASONRY CONSTRUCTION. USE WITH SCREEN TUBES IN HOLLOW MASONRY CONSTRUCTION.
      2. HILTI HIT-HY 270 ADHESIVE FOR THREADED ROD, REINFORCING BAR, AND HILTI SPECIFIC ROD AND INSERT SYSTEMS IN GROUT FILLED OR SOLID CONCRETE MASONRY CONSTRUCTION. USE WITH SCREEN TUBES IN HOLLOW MASONRY, MULIT-WYTHE MASONRY, OR BRICK WITH HOLES CONSTRUCTION.
      3. SIMPSON SET-XP ADHESIVE FOR THREADED ROD AND REINFORCING BAR IN GROUT FILLED, SOLID, AND HOLLOW CONCRETE MASONRY.

LAP SPLICE SCHEDULE FOR CONCRETE REINFORCING

3,000 psi & 3,500 psi CONCRETE UNCOATED REINFORCING BARS (TOP BARS / OTHER BARS)

BAR SIZE	3/4" CLR.	1 1/2" CLR. AND GREATER
#4	3'-1" / 2'-4"	3'-1" / 2'-4"
#5	3'-10" / 3'-0"	3'-10" / 3'-0"
#6	4'-8" / 3'-7"	4'-8" / 3'-7"
#7	7'-6" / 5'-9"	6'-9" / 5'-2"
#8	9'-3" / 7'-1"	7'-9" / 5'-11"
#9	11'-2" / 8'-7"	8'-8" / 6'-8"
#10	13'-6" / 10'-4"	9'-10" / 7'-6"
#11	15'-10" / 12'-2"	10'-11" / 8'-4"

LAP SPLICE SCHEDULE FOR CONCRETE REINFORCING

4,000 psi & 4,500 psi CONCRETE UNCOATED REINFORCING BARS (TOP BARS / OTHER BARS)

BAR SIZE	3/4" CLR.	1 1/2" CLR. AND GREATER
#4	2'-8" / 2'-1"	2'-8" / 2'-1"
#5	3'-4" / 2'-7"	3'-4" / 2'-7"
#6	4'-0" / 3'-1"	4'-0" / 3'-1"
#7	6'-6" / 5'-0"	5'-10" / 4'-6"
#8	8'-0" / 6'-2"	6'-8" / 5'-2"
#9	9'-8" / 7'-6"	7'-6" / 5'-10"
#10	11'-8" / 9'-0"	8'-6" / 6'-6"
#11	13'-8" / 10'-6"	9'-5" / 7'-3"

1. TOP BARS / OTHER BARS — TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.
2. BAR SPACING TO BE A MINIMUM OF THREE DIAMETERS UNLESS NOTED OR SCHEDULED OTHERWISE.
3. APPLICABLE ONLY FOR 60 KSI STEEL AND NORMAL WEIGHT CONCRETE.
4. IN LIEU OF LAP SPLICING, BARS MAY BE SPLICED BY MECHANICAL MEANS WHICH DEVELOP AT LEAST 125% OF THE BAR'S SPECIFIED YIELD STRENGTH.

REINFORCING COVER/TOLERANCE (#3 - #11 BARS)

EXPOSURE CONDITION	MIN. COVER (U.N.O.)	PLACEMENT TOLERANCE
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"	0", +3"
EXPOSED TO EARTH OR WEATHER - #5 AND SMALLER BARS: - #6 AND LARGER BARS:	1-1/2" 2"	-1/4", +1/2" -1/4", +1/2"
NEITHER EXPOSED TO WEATHER, NOR IN CONTACT WITH GROUND - SLABS AND WALLS: - BEAMS, COLUMNS, & PIERS: (TO TIES OR STIRRUPS)	3/4" 1-1/2"	-1/4", +3/8" -1/4", +1/2"

"-" INDICATES TOLERANCE TOWARDS MEMBER FACE.
"+" INDICATES TOLERANCE AWAY FROM MEMBER FACE.

STATEMENT OF SPECIAL INSPECTIONS

IN ACCORDANCE WITH CHAPTER 17 OF THE REFERENCE BUILDING CODE, THE OWNER SHALL EMPLOY INSPECTION AGENCIES TO PERFORM SPECIAL INSPECTIONS DURING CONSTRUCTION INCLUDING INSPECTIONS OF SHOP-FABRICATED ITEMS WHEN APPLICABLE. ALL INSPECTION AGENCIES, INCLUDING FABRICATION FACILITIES, WHEN REQUIRED, SHALL BE QUALIFIED AND APPROVED BY THE BUILDING OFFICIAL. REFER TO OTHER DISCIPLINES FOR SPECIAL INSPECTIONS OF NON-STRUCTURAL SYSTEMS.

TABLE 1 STATEMENT OF SPECIAL INSPECTIONS FOR STRUCTURAL DISCIPLINE

REQUIRED SPECIAL INSPECTIONS AND TESTS FOR SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	---	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	---	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	---	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	---
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	---	X

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT.	---	X
2. REINFORCING BAR WELDING:		
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706.	---	X
B. INSPECT SINGLE PASS FILLET WELDS, MAXIMUM 5/16".	---	X
C. INSPECT ALL OTHER WELDS.	X	---
3. INSPECT ANCHORS CAST IN CONCRETE.	---	X
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.		
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	---
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4A.	---	X
5. VERIFY USE OF REQUIRED DESIGN MIX.	---	X
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	---
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	---
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	---	X
9. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	---	X

'LEVEL A' QUALITY ASSURANCE REQUIRED SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. PRIOR TO CONSTRUCTION, VERIFY CERTIFICATES OF COMPLIANCE USED IN MASONRY CONSTRUCTION.	---	X

'LEVEL B' QUALITY ASSURANCE REQUIRED SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION

MINIMUM TESTS

VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH ARTICLE 1.5.B.1.b.3 FOR SELF CONSOLIDATING GROUT

VERIFICATION OF f'_m AND f'_{AAC} IN ACCORDANCE WITH ARTICLE 1.4B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.

MINIMUM SPECIAL INSPECTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS.	---	X
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
A. PROPORTIONS OF SITE-PREPARED MORTAR.	---	X
B. CONSTRUCTION OF MORTAR JOINTS.	---	X
C. LOCATION OF REINFORCEMENT AND CONNECTORS.	---	X
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:		
A. GROUT SPACE.	---	X
B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS.	---	X
C. PLACEMENT OF REINFORCEMENT AND CONNECTORS.	---	X
D. PROPORTIONS OF SITE-PREPARED GROUT.	---	X
E. CONSTRUCTION OF MORTAR JOINTS.	---	X
4. VERIFY DURING CONSTRUCTION:		
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	---	X
B. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	---	X
C. WELDING OF REINFORCEMENT.	---	X
D. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40° F) OR HOT WEATHER (TEMPERATURE ABOVE 90° F)	---	X
E. PLACEMENT OF GROUT.	---	X
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS.	---	X

REQUIRED SPECIAL INSPECTIONS AND TESTS OF COLD-FORMED STEEL — LIGHT FRAME CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. WELDING OPERATIONS OF ELEMENTS OF THE MAIN WINDFORCE-RESISTING SYSTEM	---	X
2. SCREW ATTACHMENT, BOLTING, ANCHORING, AND OTHER FASTENING OF ELEMENTS OF THE MAIN WINDFORCE-RESISTING SYSTEM, INCLUDING SHEAR WALLS, BRACES, DIAPHRAGMS, COLLECTORS (DRAG STRUTS) AND HOLD-DOWNS.	---	X

COMPONENTS AND CLADDING WIND LOAD SCHEDULE

WALL ELEMENTS

TRIB AREA	POSITIVE PRESSURE	NEGATIVE PRESSURE	NEGATIVE WITHIN 5 FT. OF CORNERS
10 SQ. FT.	25 PSF	-27 PSF	-33 PSF
20 SQ. FT.	24 PSF	-25 PSF	-31 PSF
50 SQ. FT.	22 PSF	-24 PSF	-28 PSF
100 SQ. FT.	21 PSF	-24 PSF	-26 PSF
500 SQ. FT.	19 PSF	-21 PSF	-21 PSF

ROOF ELEMENTS

TRIB AREA	UPLIFT PRESSURE	UPLIFT WITHIN 5 FT. OF EDGES	UPLIFT WITHIN 5 FT. OF CORNERS
10 SQ. FT.	-23 PSF	-40 PSF	-59 PSF
20 SQ. FT.	-22 PSF	-37 PSF	-55 PSF
50 SQ. FT.	-22 PSF	-32 PSF	-50 PSF
100 SQ. FT.	-22 PSF	-29 PSF	-46 PSF

1. LINEAR INTERPOLATION IS ACCEPTABLE FOR TRIBUTARY AREAS BETWEEN THOSE SHOWN.
2. NET UPLIFT ON OPEN-WEB STEEL JOISTS MAY BE TAKEN AS 12 PSF LESS THAN THE PRESSURES SHOWN.

Jezerinac Geers
Structural Engineering

PROJECT # 18.05.069
DESIGNED BY RG
DRAWN BY CAD
CHECKED BY

DOCUMENT STATUS
☐ PROGRESS
☒ BIDDING
☐ PERMIT
☐ CONSTRUCTION

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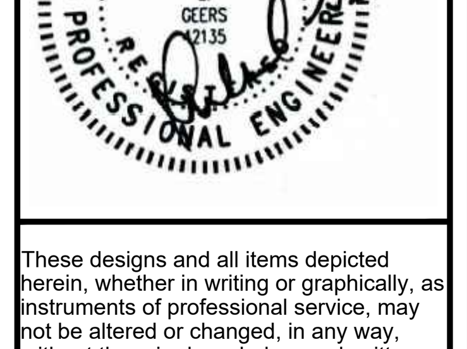
1280 N COUNTY RD. 25A TROY, OHIO 45373



REVISIONS
Re-Bid

COMM. NUMBER	DATE
1615.04	05/12/2021
DRAWN BY	CHECKED BY
JGA	--

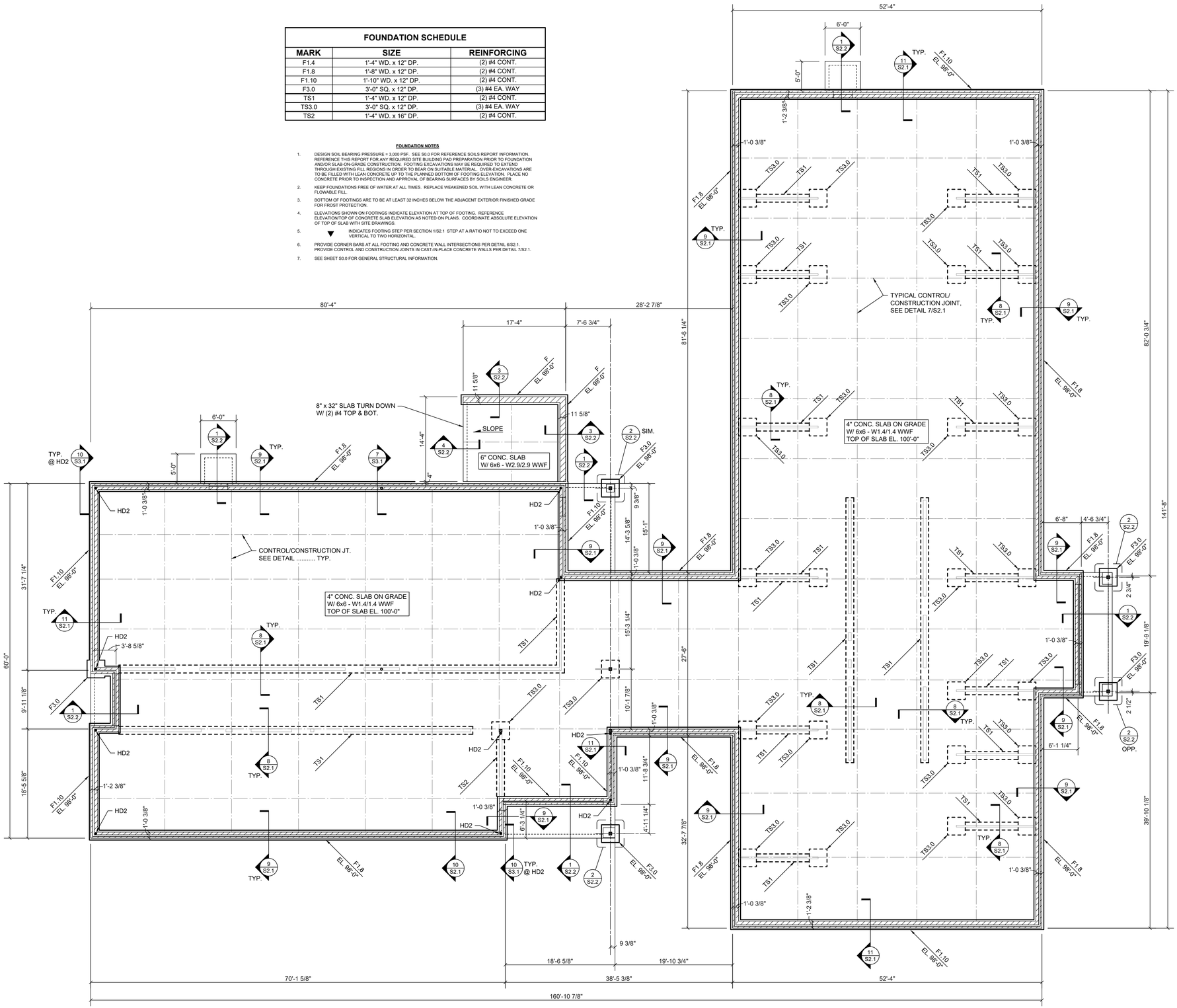
GENERAL STRUCTURAL NOTES AND DESIGN CRITERIA

S0.0

FOUNDATION SCHEDULE		
MARK	SIZE	REINFORCING
F1.4	1'-4" WD. x 12" DP.	(2) #4 CONT.
F1.8	1'-8" WD. x 12" DP.	(2) #4 CONT.
F1.10	1'-10" WD. x 12" DP.	(2) #4 CONT.
F3.0	3'-0" SQ. x 12" DP.	(3) #4 EA. WAY
TS1	1'-4" WD. x 12" DP.	(2) #4 CONT.
TS3.0	3'-0" SQ. x 12" DP.	(3) #4 EA. WAY
TS2	1'-4" WD. x 16" DP.	(2) #4 CONT.

FOUNDATION NOTES

1. DESIGN SOIL BEARING PRESSURE = 3,000 PSF. SEE S0.0 FOR REFERENCE SOILS REPORT INFORMATION. REFERENCE THIS REPORT FOR ANY REQUIRED SITE BUILDING PAD PREPARATION PRIOR TO FOUNDATION AND/OR SLAB-ON-GRADE CONSTRUCTION. FOOTING EXCAVATIONS MAY BE REQUIRED TO EXTEND THROUGH EXISTING FILL REGIONS IN ORDER TO BEAR ON SUITABLE MATERIAL. OVER-EXCAVATIONS ARE TO BE FILLED WITH LEAN CONCRETE UP TO THE PLANNED BOTTOM OF FOOTING ELEVATION. PLACE NO CONCRETE PRIOR TO INSPECTION AND APPROVAL OF BEARING SURFACES BY SOILS ENGINEER.
2. KEEP FOUNDATIONS FREE OF WATER AT ALL TIMES. REPLACE WEAKENED SOIL WITH LEAN CONCRETE OR FLOWABLE FILL.
3. BOTTOM OF FOOTINGS ARE TO BE AT LEAST 32 INCHES BELOW THE ADJACENT EXTERIOR FINISHED GRADE FOR FROST PROTECTION.
4. ELEVATIONS SHOWN ON FOOTINGS INDICATE ELEVATION AT TOP OF FOOTING. REFERENCE ELEVATION/TOP OF CONCRETE SLAB ELEVATION AS NOTED ON PLANS. COORDINATE ABSOLUTE ELEVATION OF TOP OF SLAB WITH SITE DRAWINGS.
5. ▼ INDICATES FOOTING STEP PER SECTION 1/S2.1 STEP AT A RATIO NOT TO EXCEED ONE VERTICAL TO TWO HORIZONTAL.
6. PROVIDE CORNER BARS AT ALL FOOTING AND CONCRETE WALL INTERSECTIONS PER DETAIL 6/S2.1. PROVIDE CONTROL AND CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE WALLS PER DETAIL 7/S2.1.
7. SEE SHEET S0.0 FOR GENERAL STRUCTURAL INFORMATION.



FOUNDATION PLAN
1/8" = 1'-0"

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STATE OF OHIO
RICHARD E GEERS 71135
REGISTERED PROFESSIONAL ENGINEER

REVISIONS
Re-Bid

COMM. NUMBER	DATE
1615.04	05/12/2021
DRAWN BY	CHECKED BY
JGA	--

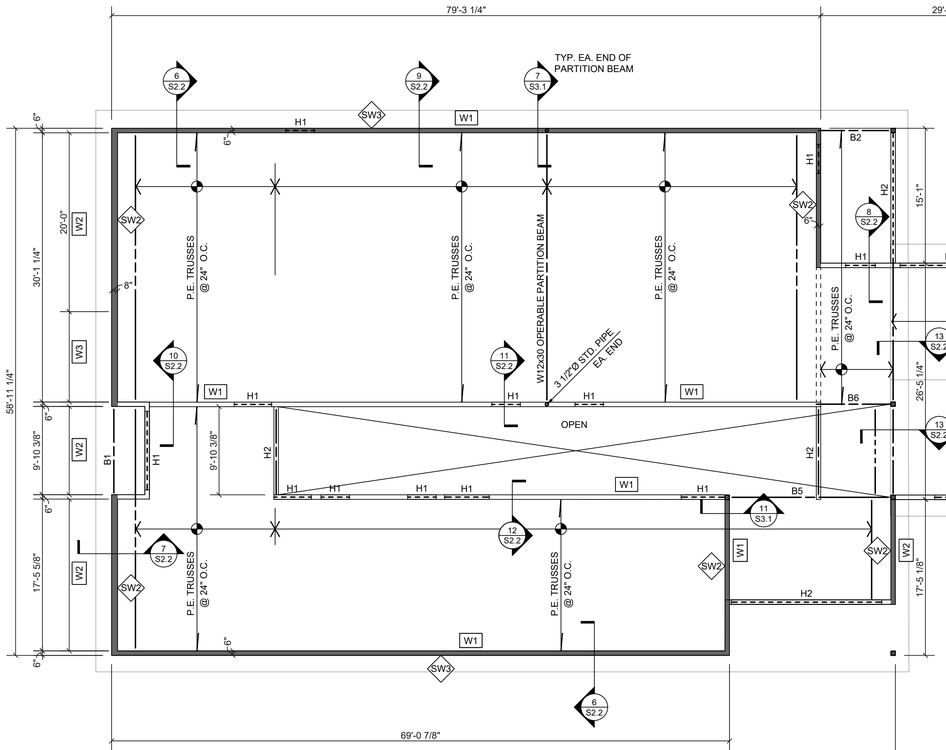
FOUNDATION PLAN

S1.0

LIGHT GAGE BEAM AND HEADER SCHEDULE (PER 4/S3.1)

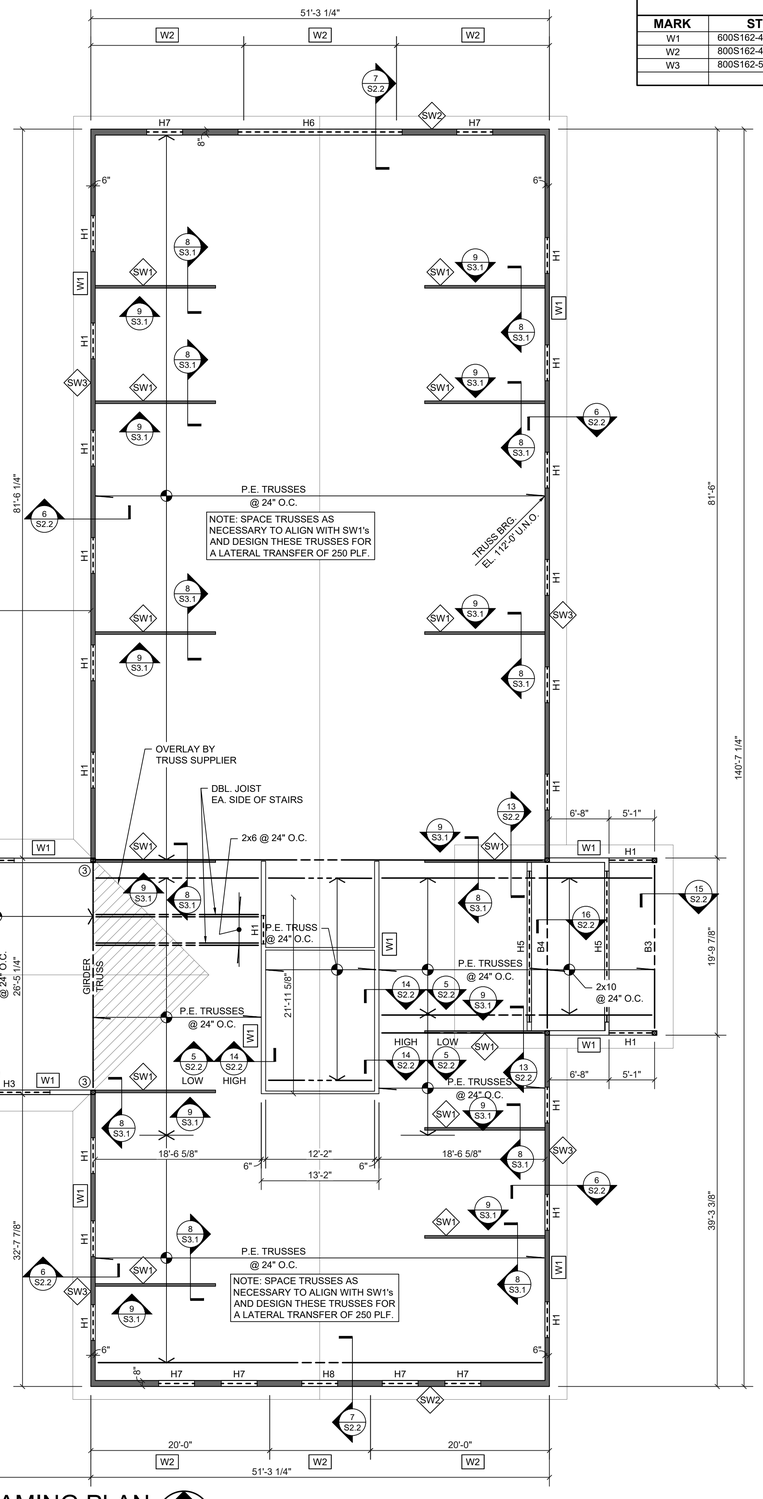
MARK	TRACK (T & B)	HEADER BOXED (SIDES)	FULL HEIGHT JAMB STUDS	COMMENTS
H1	600T 125-54	(2) 600S 162-54	(2) 600S 162-43	
H2	600T 125-54	(2) 800S 162-54	(2) 600S 162-54	
H3	600T 125-54	(2) 1000S 162-68	(2) 600S 162-54	
H4	600T 125-68	(2) 1200S 200-97	(3) 600S 162-54	
H5	(3) 800T 125-68	(2) 800S 162-54	(2) 600S 162-54	
H6	(3) 800T 125-97	(2) 1200S 200-68	(3) 600S 162-68	
H7	(2) 800T 125-54	(2) 800S 162-54	(2) 800S 162-43	
H8	(2) 800T 125-54	(2) 800S 162-54	(2) 800S 162-54	
H9	(2) 600T 125-97	(2) 1400S 200-97	(2) 600S 162-54	
H10	(2) 600T 125-68	(2) 800S 162-68	(2) 600S 162-54	
B1	(2) 800T 125-68	(2) 800S 162-68	(2) 800S 200-97	
B2	(2) 600T 125-54	(2) 800S 162-54	(2) 600S 162-54	
B3	(2) 600T 125-68	(2) 1200S 200-68	(2) 600S 162-54	
B4	(2) 600T 125-68	(2) 1400S 200-97	(2) 600S 162-54	
B5	(2) 600T 125-68	(2) 1200S 200-97	(2) 600S 162-54	
B6	(2) 600T 125-68	(2) 1800S 162-68	(2) 600S 162-54	

H6



LIGHT GAGE HEADER ATTACHMENT SCHEDULE (PER 4/S3.1)

MARK	HEADER TO JAMB STUD	#12 SCREWS	TOP & BOT. TRACK TO JAMB STUDS	#12 SCREWS	COMMENTS
H1	600T 125-68 x 6"	5	N/R		
H2	600T 125-68 x 8"	6	N/R		
H3	600T 125-68 x 10"	10	L2 x 2 x 14 GA x 4"	(3) EA. LEG	
H4	600T 125-68 x 12"	12	N/R		
H5	600T 125-68 x 8"	6	L2 x 2 x 14 GA x 4"	(3) EA. LEG	
H6	600T 125-68 x 12"	8	L2 x 2 x 14 GA x 6"	(3) EA. LEG	
H7	600T 125-68 x 8"	6	L2 x 2 x 14 GA x 6"	(3) EA. LEG	
H8	600T 125-68 x 8"	6	L2 x 2 x 14 GA x 6"	(3) EA. LEG	
H9	600T 125-68 x 14"	14	L2 x 2 x 14 GA x 6"	(3) EA. LEG	
H10	600T 125-68 x 8"	8	N/R	-	
B1	800T 125-68 x 8"	6	L2 x 2 x 14 GA x 6"	(4) EA. LEG	SEE DETAIL 4/S3.1
B2	600T 125-68 x 8"	6	N/R	-	
B3	600T 125-68 x 12"	8	N/R	-	
B4	600T 125-68 x 14"	14	N/R	-	
B5	600T 125-68 x 12"	12	N/R	-	
B6	600T 125-68 x 8"	8	N/R	-	



ROOF FRAMING PLAN

1/8" = 1'-0"

AT CONTRACTORS OPTION. LIGHT GAGE STEEL TRUSSES, ENGINEERED BY SUPPLIER MAY BE SUBSTITUTED FOR WOOD TRUSSES, ALL AREAS.

STUD WALL SCHEDULE

MARK	STUDS	SILL TRACK	TOP TRACK	COMMENTS
W1	600S162-43 @ 16" O.C.	600T125-43	600T125-54	
W2	800S162-43 @ 16" O.C.	800T125-43	800T125-54	
W3	800S162-54 @ 16" O.C.	800T125-43	800T125-54	

FLOOR FRAMING NOTES

1. DESIGN LIVE LOADS:

MECHANICAL	125 PSF
STAIRS AND EXITS	100 PSF

2. FLOOR CONSTRUCTION:
   ¾" T & G FRT PLYWOOS ON 0.6" x 22 GA. METAL FORM DECK.
3. H# INDICATES HEADER FOR WALL OPENINGS PER SCHEDULE ON SHEET S1.1. SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND DETAIL 4/S3.1 FOR STANDARD HEADER CONSTRUCTION.
4. SEE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT INDICATED HEREIN.
5. SEE SHEET S0.0 FOR GENERAL STRUCTURAL INFORMATION.

ROOF FRAMING NOTES

1. DESIGN LIVE LOADS:

SLOPED ROOF LIVE	16 PSF
FLAT ROOF SNOW	20 PSF + DRIFT
SLOPED ROOF SNOW	15 PSF
WIND (ASD NET UPLIFT)	15 PSF
COLLATERAL	5 PSF

2. ROOF CONSTRUCTION:
   5/8" NOMINAL APA RATED SHEATHING ON PRE-ENGINEERED FRT WOOD TRUSSES OR 2x FRAMING. UNLESS NOTED OTHERWISE, FASTEN SHEATHING TO SUPPORTS AS INDICATED IN THE GENERAL STRUCTURAL NOTES.
3. INDICATES INFILL FRAMING LOCATION. VALLEY SET TRUSSES MAY BE SUBSTITUTED AT CONTRACTOR'S OPTION. INFILL FRAMING IS TO UNIFORMLY DISTRIBUTE LOADING TO UNDERLYING ROOF WITH A MAXIMUM SUPPORT SPACING OF 2'-0". DO NOT STICK-BUILD WITH RIDGE BEAM AND RAFTERS.
4. TOP OF STEEL / TRUSS BEARING ELEVATION = 112'-0" UNLESS NOTED OTHERWISE. REFERENCE ELEVATION 100'-0" = TOP OF FIRST FLOOR SLAB ON GRADE.
5. B# INDICATES BEAM PER SCHEDULE ON SHEET S1.1. SEE DETAIL 4/S3.1 FOR TYPICAL BEAM BEARING SUPPORTS.
6. H# INDICATES HEADER FOR WALL OPENINGS PER SCHEDULE ON SHEET S1.1. SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND DETAIL 4/S3.1 FOR STANDARD HEADER CONSTRUCTION.
7. ⊠ INDICATES COLUMN/POST PER BEAM/HEADER SCHEDULE.
8. ○ INDICATES THE NUMBER OF METAL STUDS REQUIRED TO CREATE A STUD COLUMN SUPPORT UNDER BEAM OR GIRDER BEARING. PROVIDE A MINIMUM OF (2)-6", 18 GAGE STUDS AT ALL BEAMS AND GIRDER TRUSSES, UNLESS NOTED OTHERWISE.
9. INDICATES FRAMED SHEARWALL. SEE SHEET S3.1 FOR FRAMED SHEARWALL SCHEDULE AND TYPICAL DETAILS.
10. \+ INDICATES FRAMED SHEARWALL HOLDOWN. SEE SHEET S3.1 FOR HOLDOWN SCHEDULE. HOLDOWNS INDICATED ARE TO BE INSTALLED AT THE BASE OF WALL FRAMING SUPPORTING THIS PLAN LEVELS STRUCTURE.
11. SEE ARCHITECTURAL DRAWINGS FOR ANY DIMENSIONS NOT INDICATED HEREIN.
12. SEE SHEET S0.0 FOR GENERAL STRUCTURAL INFORMATION.

MEZZANINE FRAMING PLAN

SHEAR WALL SCHEDULE

MARK	SHEATHING PANEL	PANEL APPLICATION	SHEATHING PANEL FASTENING			SOLE PLATE ANCHORAGE	ADDITIONAL REQUIREMENTS
			FASTENER	PANEL EDGES	PANEL FIELD		
SW1	5/8" GYPSUM	TWO SIDES	6d COOLER	7"	7"	0.177" DIA. PAF @ 16" O. C.	
SW2	1/2" GYP EXTERIOR SIDE 5/8" GYP INTERIOR SIDE	TWO SIDES	5d COOLER @ 1/2" GYP. BD. 6d COOLER @ 5/8" GYP. BD.	4"	4"	1/2"Ø X 12" ANCHOR BOLTS @ 24" O.C.	
SW3	1/2" GYPSUM	ONE SIDE	5d COOLER	7"	7"	0.145"Ø PAF @ 16" O.C.	

SHEARWALL SCHEDULE NOTES:

1. 'APA RATED' SHEATHING INCLUDES PLYWOOD OR ORIENTED STRAND BOARD (OSB) MATERIALS AS RATED BY THE AMERICAN PLYWOOD ASSOCIATION (APA).
2. ALL PANEL EDGES SHALL BE LOCATED ON STUDS, BLOCKING, BLOCKING LAID FLATWAYS AGAINST SHEATHING, PLATES, OR RIM BOARD.
3. FASTENER SUBSTITUTIONS ARE NOT PERMITTED, UNLESS APPROVED ENGINEER REVIEW IS COMPLETED AT CONTRACTOR'S EXPENSE.
4. PROVIDE SIMPSON BPSS/8-6 PLATE WASHERS AT ALL SILL PLATE ANCHORS ATTACHING BOTTOM OF SHEAR WALL TO FOUNDATION OR CONCRETE SLAB. NEAREST EDGE OF PLATE WASHERS SHALL BE LOCATED NO FARTHER THAN 1/2-INCH FROM INSIDE FACE OF SHEAR WALL SHEATHING.
5. SEE HOLD DOWN SCHEDULE FOR SHEARWALL BOUNDARY STUDS TO BE LOCATED ON EACH END OF WALL.
6. COORDINATE SOLE PLATE ANCHORAGES WITH TYPICAL CONSTRUCTION DETAILS INDICATED THROUGHOUT STRUCTURAL DRAWINGS.
7. ALL SHEARWALL TOP PLATES MUST BE A MINIMUM OF TWO IN NUMBER, HAVE STAGGERED SPLICED LOCATIONS, AND OCCUR OVER STUD LOCATIONS. SEE STRUCTURAL DETAILS FOR TRIPLE TOP PLATE REQUIREMENTS, IF ANY. SEE XSXXX FOR TYPICAL TOP PLATE SPLICING DETAIL.
8. CAST-IN-PLACE (CIP) ANCHORS SHALL BE EMBEDDED IN CONCRETE A MINIMUM OF 6".

SHEARWALL HOLDOWN SCHEDULE

MARK	HOLDOWN (LOCATE EA. END)	SHEARWALL BOUNDARY END STUDS/POSTS
HD1	S/HTT14	2
HD2	S/HTT14	2

SHEARWALL SCHEDULE NOTES:

1. ALL HOLDOWNS INDICATED ARE MANUFACTURED BY SIMPSON STRONG TIE®. FOLLOW ALL MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
2. 'BOUNDARY END STUDS' ARE STUD PACKS OR COLUMNS LOCATED AT THE EACH END OF SHEARWALLS. STUDS SHALL BE OF SAME SIZE AND MATERIAL WITH THE WALL THEY ARE INTEGRAL WITH.
3. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONAL LENGTHS OF ALL WALLS INDICATED AS SHEARWALLS. LOCATE BOUNDARY END STUDS/POSTS AT THE END OF WALLS MARKED AS SHEAR WALLS. SEE DETAIL BLOW UPS OF WALL INTERSECTIONS AND LOCATION OF STUD/POSTS.

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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY
AND MENTAL HEALTH

280 N COUNTY RD. 25A
TROY, OHIO 45373

REVISIONS

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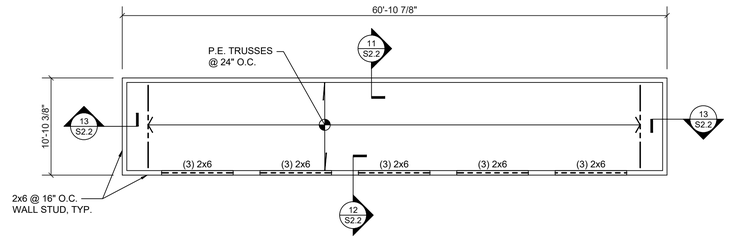
1615.04	05/12/2021
DRAWN BY: JGA	CHECKED BY: --

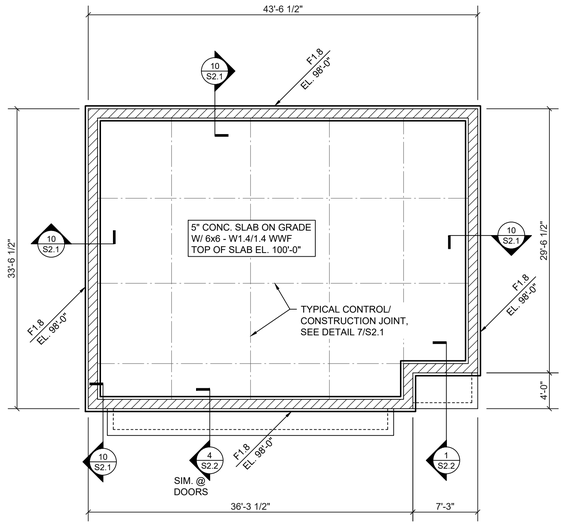
ROOF FRAMING PLAN

S1.1



CLEAR STORY ROOF FRAMING PLAN

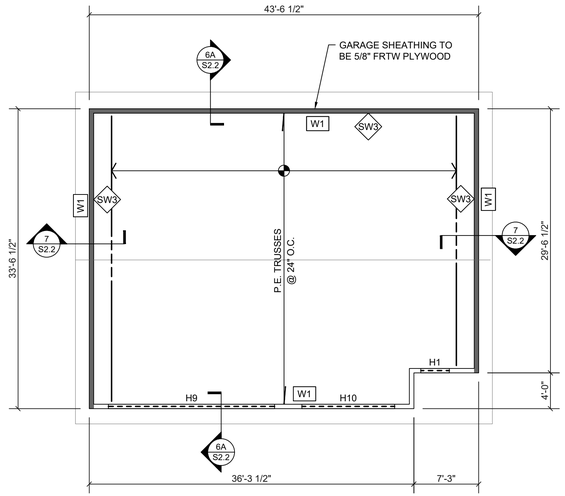
1/8" = 1'-0"



GARAGE FOUNDATION PLAN

1/8" = 1'-0"

FOUNDATION SCHEDULE		
MARK	**SIZE**	**REINFORCING**
F1.4	1'-4" WD. x 12" DP.	(2) #4 CONT.
F1.8	1'-8" WD. x 12" DP.	(2) #4 CONT.
F1.10	1'-10" WD. x 12" DP.	(2) #4 CONT.
TS1	1'-4" WD. x 12" DP.	(2) #4 CONT.



GARAGE ROOF FRAMING PLAN

1/8" = 1'-0"

SEE S1.1 FOR ROOF FRAMING NOTES.

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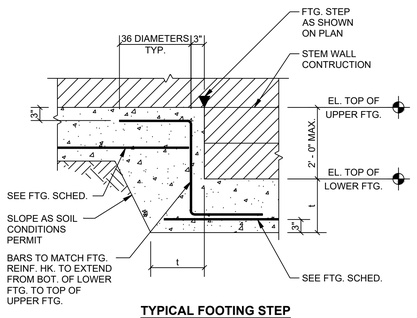
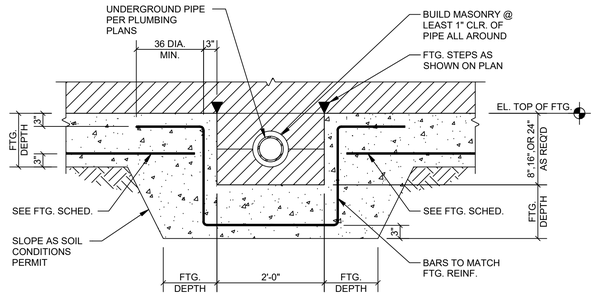
GARAGE PLANS

S1.2



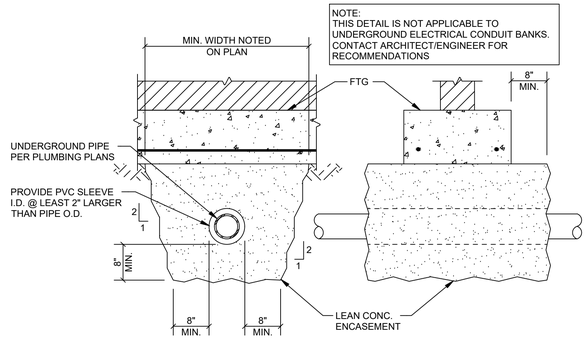
TYPICAL FOOTING STEP

SECTION 1 — 3/4" = 1'-0"



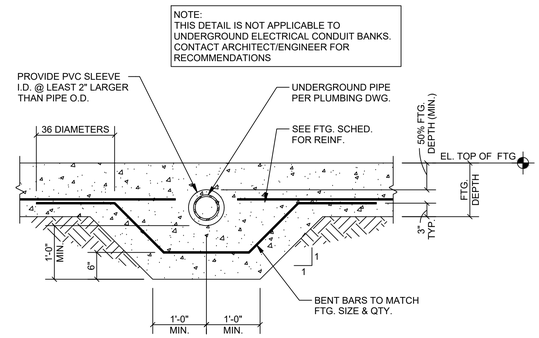
TYPICAL FOOTING TRENCH FOR UNDERGROUND PLUMBING

SECTION 2 — 3/4" = 1'-0"



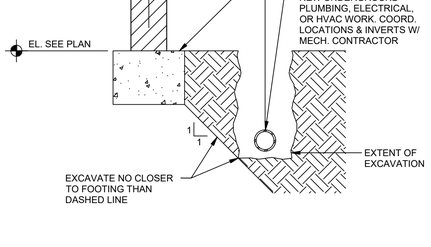
TYPICAL PLUMBING UNDER FOOTING

SECTION 3 — 3/4" = 1'-0"



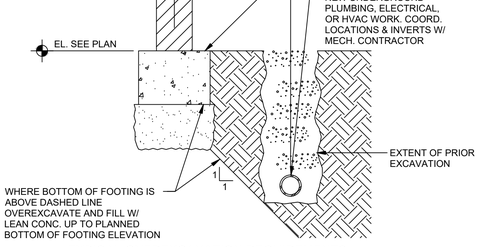
TYPICAL PLUMBING THROUGH FOOTING

SECTION 4 — 3/4" = 1'-0"



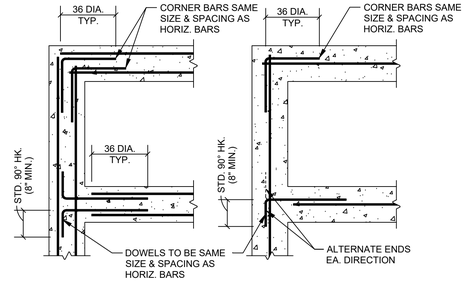
TYPICAL EXCAVATION CLEARANCE REQUIREMENTS AT NEW UNDERGROUND WORK

SECTION 5 — 3/4" = 1'-0"

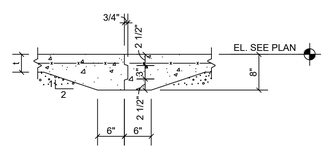


TYPICAL OVEREXCAVATION REQUIREMENTS AT IN-PLACE UNDERGROUND WORK

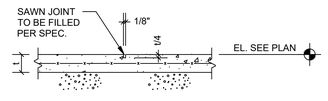
SECTION 6 — 3/4" = 1'-0"



TYPICAL CORNER BARS FOR CONCRETE WALL AND FOOTING CONSTRUCTION

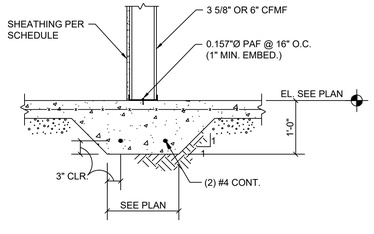


TYPICAL FLOOR CONSTRUCTION JOINT

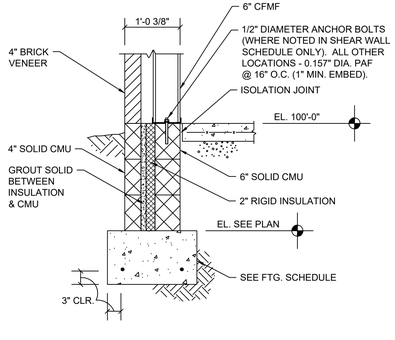


TYPICAL FLOOR CONTROL JOINT

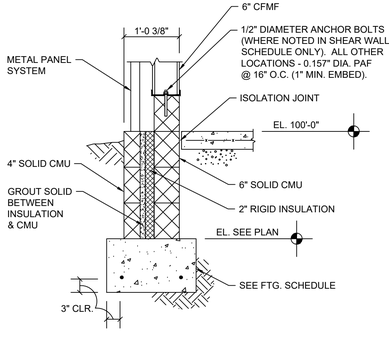
SECTION 7 — 3/4" = 1'-0"



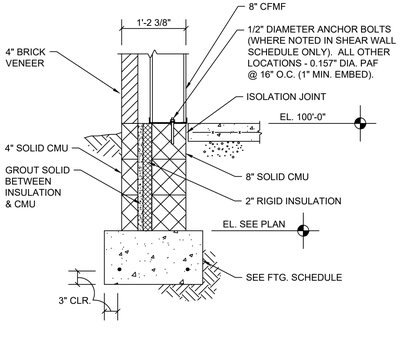
SECTION 8 — 3/4" = 1'-0"



SECTION 9 — 3/4" = 1'-0"



SECTION 10 — 3/4" = 1'-0"



SECTION 11 — 3/4" = 1'-0"

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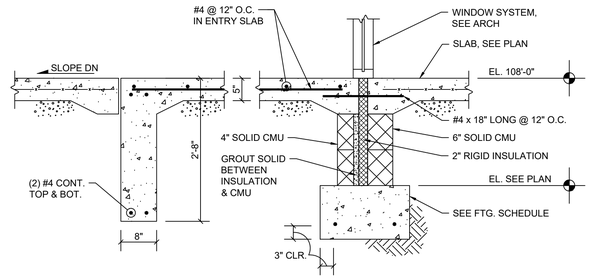
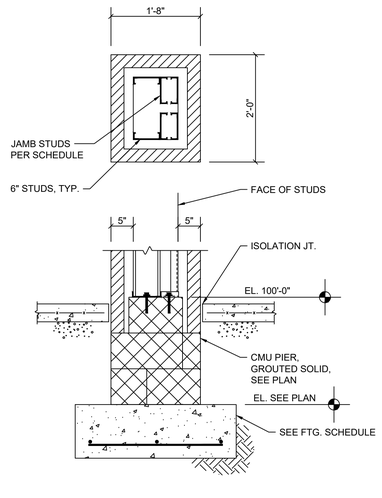
FOUNDATION DETAILS

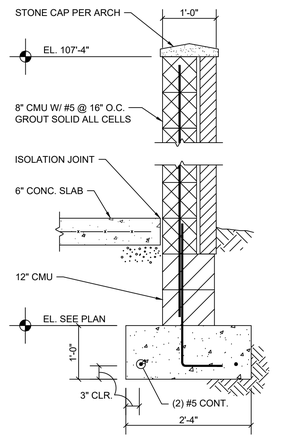
S2.1



SECTION 1
3/4" = 1'-0"



SECTION 2
3/4" = 1'-0"



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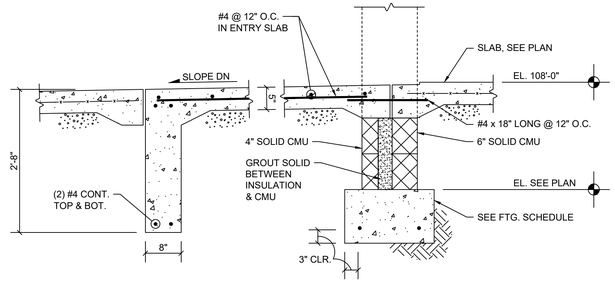
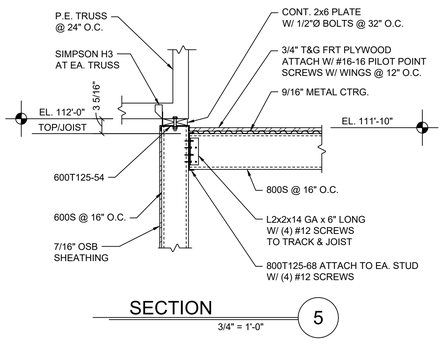
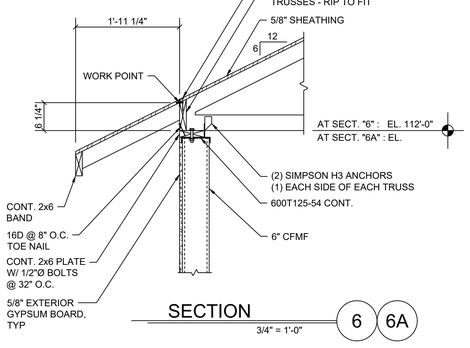


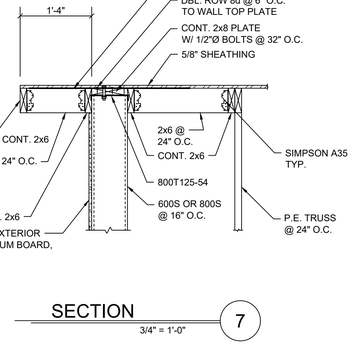
SECTION 4
3/4" = 1'-0"



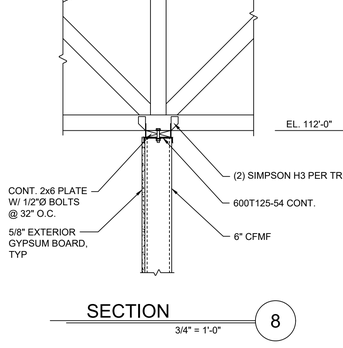
SECTION 5
3/4" = 1'-0"



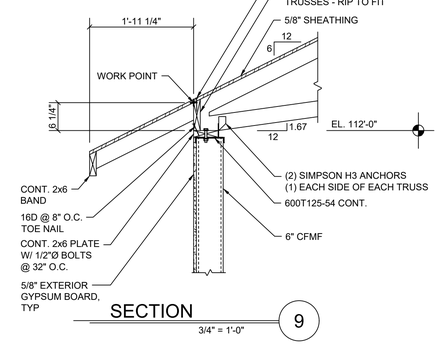
SECTION 6 6A
3/4" = 1'-0"



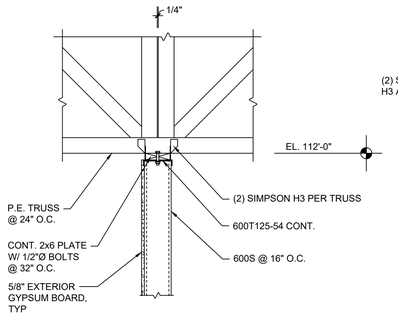
SECTION 7
3/4" = 1'-0"



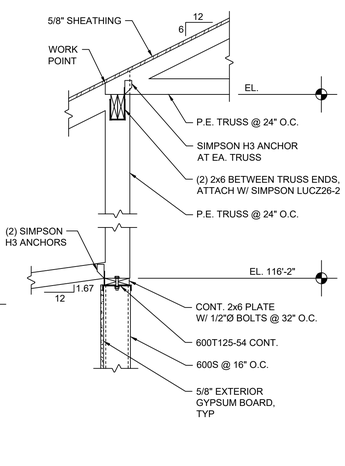
SECTION 8
3/4" = 1'-0"



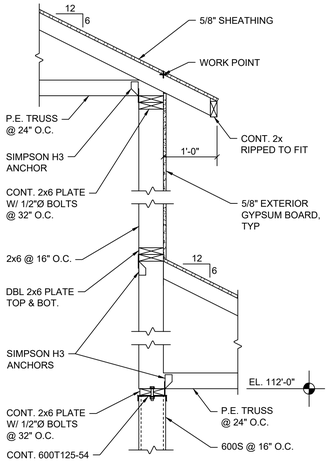
SECTION 9
3/4" = 1'-0"



SECTION 10
3/4" = 1'-0"



SECTION 11
3/4" = 1'-0"



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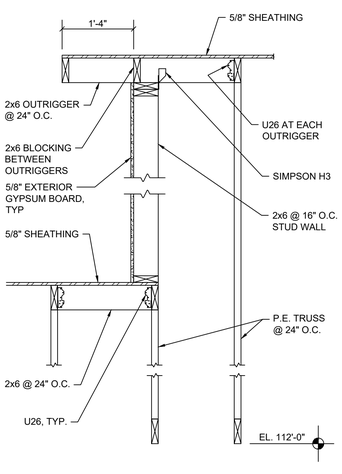

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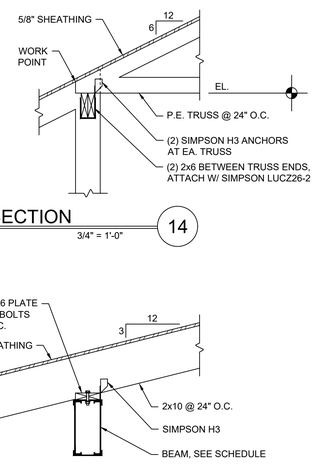

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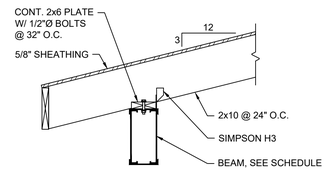

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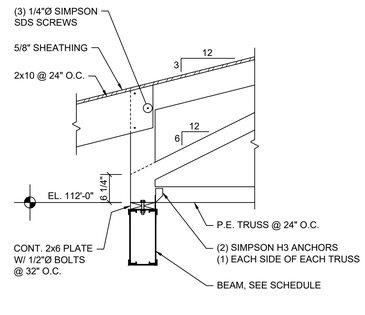

SECTION 16
3/4" = 1'-0"

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FOR
TRI COUNTY BOARD OF RECOVERY
AND MENTAL HEALTH

1280 N COUNTY RD. 25A
TROY, OHIO 45373

STATE OF OHIO
RICHARD E. GEERS 71135
REGISTERED PROFESSIONAL ENGINEER

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Re-Bid

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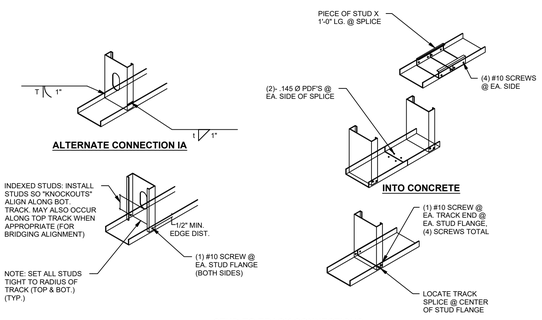
JGA	--

FRAMING DETAILS

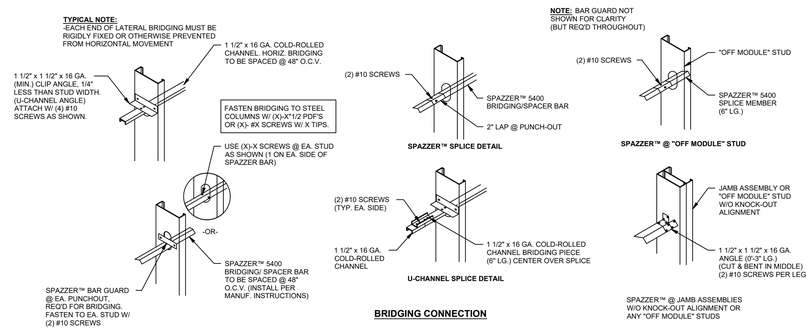
S2.2



ALTERNATE CONNECTION IA

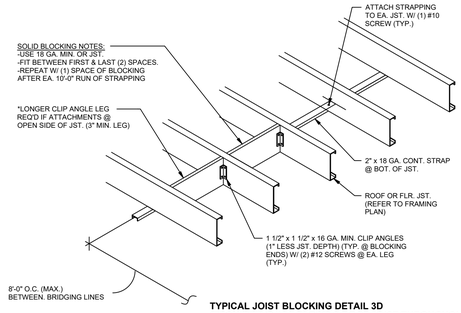
STUD-TO-TRACK CONNECTIONS

SECTION 1 — 3/4" = 1'-0"



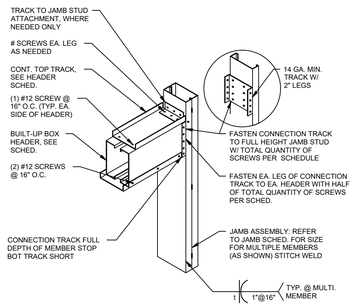
BRIDGING CONNECTION

SECTION 2 — 3/4" = 1'-0"

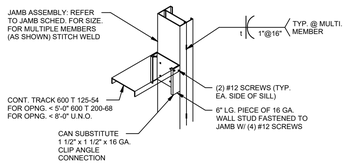


TYPICAL JOIST BLOCKING DETAIL 3D
(REQUIRED @ ALL FLOOR & ROOF JOIST THROUGHOUT)

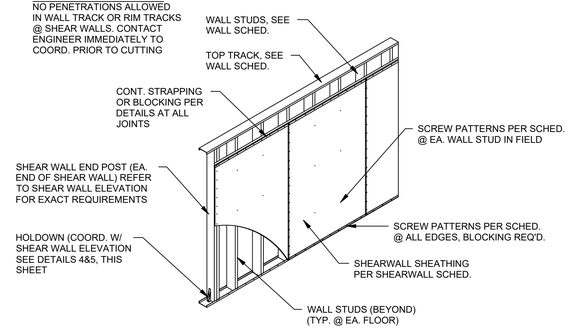
SECTION 3 — 3/4" = 1'-0"



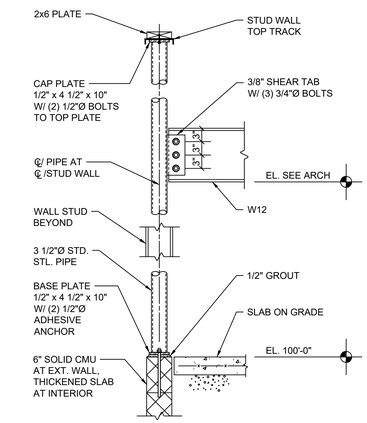
TYPICAL BOX HEADER CONNECTION



TYPICAL SILL CONNECTION



TYPICAL SHEARWALL CONNECTION REQUIREMENTS



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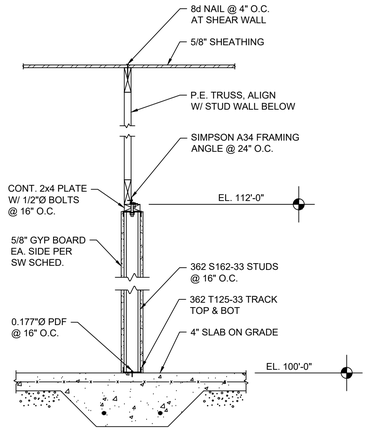
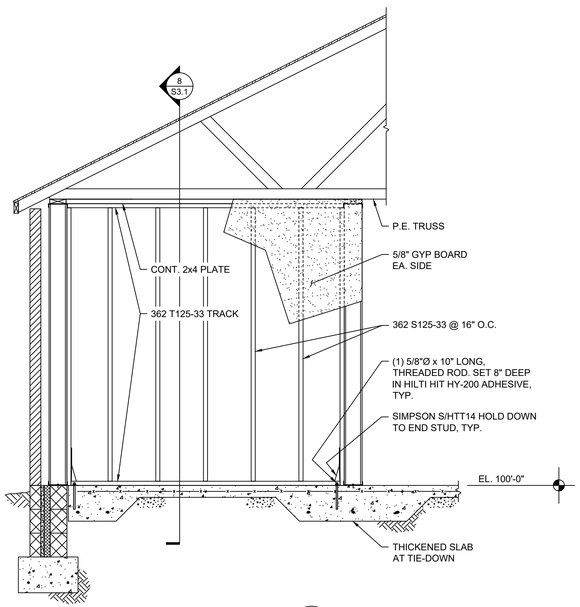
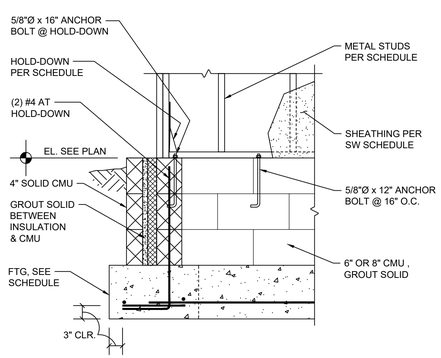


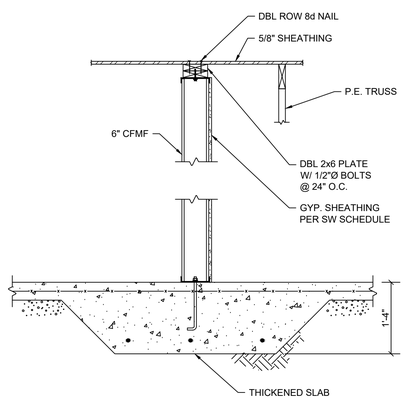
SECTION 8 — 3/4" = 1'-0"



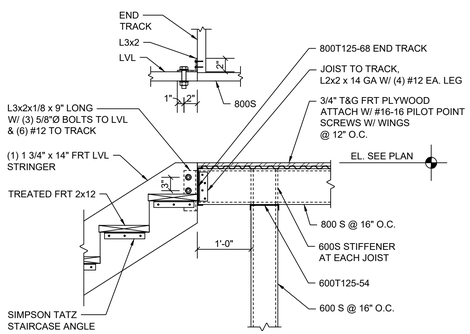
SECTION 9 — 1/2" = 1'-0"



SECTION 10 — 3/4" = 1'-0"



SECTION 11 — 3/4" = 1'-0"



SECTION 12 — 3/4" = 1'-0"

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STATE OF OHIO — RICHARD E. GEERS — 73135 — REGISTERED PROFESSIONAL ENGINEER

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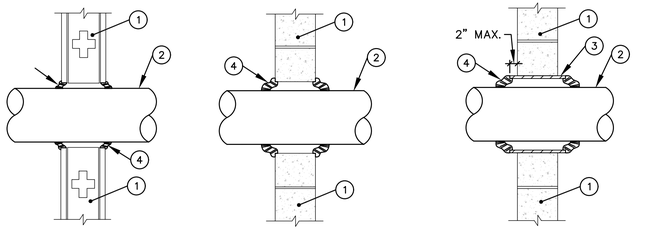
FRAMING DETAILS

S3.1



(1) FULL HEIGHT INTERIOR WALL.

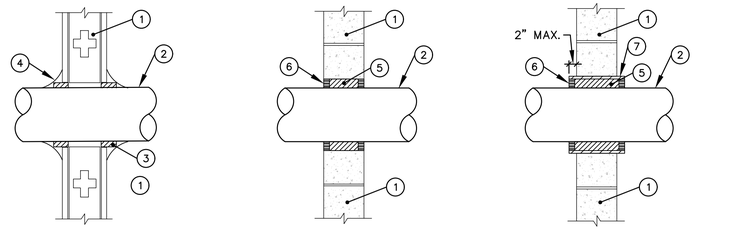
(2) PIPE OR TUBING.

(3) SCHEDULE 40 STEEL PIPE SLEEVE CAST OR GROUTED INTO WALL ASSEMBLY. ENDS FLUSH OR MAX. 2" BEYOND WALL SURFACE.

(4) CAULK TO FILL VOID AT WALL/SLEEVE OPENING TO PREVENT THE PASSAGE OF SMOKE.

1 PIPE PENETRATIONS THRU NON-RATED WALLS

N.T.S.



FIRESTOPPING MATERIALS/INSTALLATION

- MANUFACTURERS: 3M FIRE PROTECTION PRODUCTS HILTI FIRESTOP SYSTEMS
- FIRESTOPPING MATERIAL INSTALLATION SHALL BE PER THE MANUFACTURERS DETAILED INSTALLATION DIAGRAMS AND INSTRUCTIONS.
- F-RATING OF PENETRATION SHALL BE NO LESS THAN THE FIRE RATING OF THE WALL.
- SUBMITTAL SHALL INCLUDE PRODUCT DATA AND DETAILED INSTALLATION SYSTEM DIAGRAMS.

(1) RATED WALL ASSEMBLY.

(2) METALLIC PIPE OR TUBING.

(3) APPROVED FIRESTOPPING VOID/CAVITY MATERIAL.

(4) APPROVED FIRESTOPPING CAULK OR SEALANT.

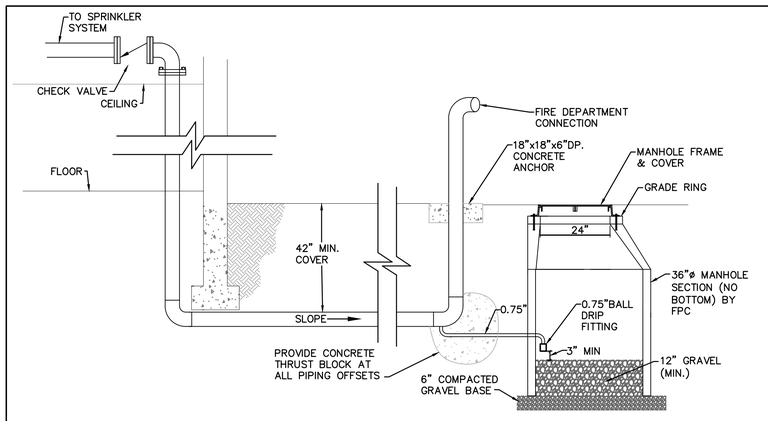
(5) PACKING MATERIAL, MINERAL WOOL BATT INSULATION.

(6) APPROVED FIRESTOPPING CAULK OR SEALANT FLUSH WITH SURFACE OF WALL OR EDGE OF SLEEVE.

(7) SCHEDULE 40 STEEL PIPE SLEEVE CAST OR GROUTED INTO WALL ASSEMBLY. ENDS FLUSH OR MAX. 2" BEYOND WALL SURFACE.

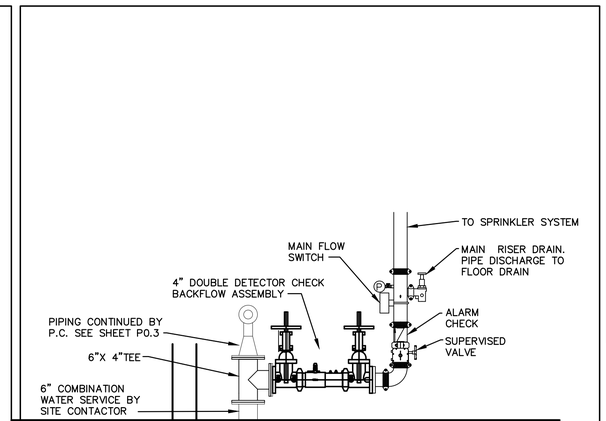
2 PIPE PENETRATIONS THRU FIRE RATED WALLS

N.T.S.



4 REMOTE FIRE DEPT. CONNECTION SCHEMATIC

N.T.S.



3 FIRE SERVICE DETAIL

N.T.S.

DESIGN CRITERIA

1. DESIGN AND INSTALLATION OF SERVICE MAIN AND WET PIPE SPRINKLER SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF THE 2017 OHIO BUILDING CODE, N.F.P.A. 13 (2016 EDITION), AND ALL AUTHORITIES HAVING JURISDICTION (AHJ).
2. WORKING PLANS AND HYDRAULIC CALCULATIONS SHALL BE PREPARED, SUBMITTED, AND APPROVED PRIOR TO INSTALLATION, BY THE FIRE SUPPRESSION CONTRACTOR. PLANS SHALL INCLUDE ALL ITEMS LISTED IN N.F.P.A. 13.
3. WATER SUPPLY DATA: THE FIRE SUPPRESSION CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A FLOW TEST TO OBTAIN CURRENT WATER SUPPLY DATA FROM THE NEW WATER DISTRIBUTION SYSTEM FOR USE IN THE HYDRAULIC CALCULATIONS.
4. HYDRAULIC DESIGN CRITERIA FOR LIGHT HAZARD AREAS: (ALL AREAS EXCEPT WHERE NOTED OTHERWISE)

DENSITY:	0.10 GPM/SQ.FT.
DESIGN AREA:	MOST DEMANDING 1500 SQ. FT. (REDUCTION WITH QUICK RESPONSE HEADS PERMITTED)
MAX. SPRINKLER COVERAGE:	225 SQ. FT./HEAD
HOSE DEMAND:	100 GPM
DURATION:	30 MINUTES

5. HYDRAULIC DESIGN CRITERIA FOR ORDINARY HAZARD (GROUP 1) AREAS: (STORAGE ROOMS, MECHANICAL ROOMS, JANITOR'S ROOMS, KITCHEN, COMMUNICATION ROOMS)

DENSITY:	0.15 GPM/SQ.FT.
DESIGN AREA:	MOST DEMANDING 1500 SQ. FT.
MAX. SPRINKLER COVERAGE:	130 SQ. FT./HEAD
HOSE DEMAND:	250 GPM
DURATION:	60 MINUTES

6. ALL SPRINKLER HEADS SHALL BE QUICK RESPONSE TYPE.
7. SPRINKLER HEADS IN AREAS WITH FINISHED CEILINGS SHALL BE CONCEALED PENDENT TYPE WITH FLAT PLATE AND WHITE FINISH.
8. SPRINKLER HEADS IN AREAS WITH NO CEILINGS SHALL BE BRASS UPRIGHTS. SIDEWALL SPRINKLER HEADS MAY ALSO BE USED IN STAIRWELLS WHERE PROPER COVERAGE CAN BE PROVIDED.

GENERAL NOTES

A. PROVIDE A COMPLETE SPRINKLER SYSTEM THROUGHOUT THE BUILDING. BUILDING SHALL BE CONSIDERED FULLY SUPPRESSED AT COMPLETION OF PROJECT.

B. ALL FIRE SUPPRESSION EQUIPMENT SHALL BE UL LISTED FOR FIRE SUPPRESSION SERVICE.

PROVIDE A FIRE WATCH IN ACCORDANCE WITH "AHJ" REQUIREMENTS.

C. ALL FIRE SUPPRESSION SYSTEMS (SERVICE MAIN, FIRE DEPT. CONNECTION, SPRINKLER SYSTEM, INSPECTOR TEST, DRAIN, ETC.) SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR 2 HOURS WITH NO VISIBLE LEAKAGE. ALL CONCEALED PIPING SHALL BE AIR TESTED, WITH NO LEAKAGE, PRIOR TO FILLING SYSTEM WITH WATER. THE FIRE PROTECTION CONTRACTOR SHALL NOTIFY ALL AUTHORITIES HAVING JURISDICTION 24 HOURS PRIOR TO THE TEST TO ALLOW AHJ TO WITNESS ALL TESTS.

D. ALL VALVES CONTROLLING WATER SUPPLIES SHALL BE PROVIDED WITH TAMPER SWITCHES (SEE NOTE E).

E. THE FIRE SPRINKLER SYSTEM SHALL BE SUPERVISED BY AN APPROVED CENTRAL STATION FIRE ALARM SYSTEM IN ACCORDANCE WITH O.B.C. AND N.F.P.A. 72.

F. THE FIRE SUPPRESSION CONTRACTOR SHALL COORDINATE WIRING OF ELECTRICAL FIRE SUPPRESSION DEVICES AND EQUIPMENT WITH THE ELECTRICAL AND/OR FIRE ALARM CONTRACTOR. ALL FIRE ALARM WIRING BY ELECTRICAL CONTRACTOR. ALL DEVICES SHALL BE FURNISHED AND INSTALLED BY THE FIRE SUPPRESSION CONTRACTOR.

G. THE FIRE SUPPRESSION CONTRACTOR SHALL COORDINATE THE LAYOUT OF THE FIRE SUPPRESSION SYSTEM WITH ALL TRADES PRIOR TO INSTALLATION.

H. THE FIRE SUPPRESSION CONTRACTOR SHALL CENTER (WITHIN 1") ALL CONCEALED SPRINKLER HEADS INSTALLED IN ACOUSTICAL LAY-IN CEILING TILES. ALL PENDENT SPRINKLER HEADS IN CEILINGS SHALL BE SYMMETRICAL WITH LIGHTING AND AIR DEVICES.

I. VERIFY THE LOCATION AND TYPE OF FIRE DEPARTMENT CONNECTION WITH THE FIRE DEPARTMENT.

J. LOCAL SPRINKLER ALARM AND REMOTE ALARM AND SUPERVISION SHALL BE THRU THE FIRE ALARM SYSTEM PROVIDED BY THE E.C.

K. CONCEALED, NONCOMBUSTIBLE ATTIC SPACES DO NOT REQUIRE SPRINKLERS.

L. FINAL APPROVAL IS SUBJECT TO ACCEPTANCE AND TESTING BY ALL AHJ.

FIRE SUPPRESSION PIPING

GENERAL NOTES:

PIPING SHALL CONFORM TO OBC REQUIREMENTS.

PIPING INSTALLATION AND TESTING SHALL COMPLY WITH NFPA 13 (2016 EDITION).

PROVIDE PIPING SLEEVES AT WALLS IN NEW CONSTRUCTION.

PIPING SHALL BE PITCHED FOR DRAINAGE.

PROVIDE DIELECTRIC FITTINGS FOR TRANSITIONS BETWEEN FERROUS AND NON-FERROUS PIPING SYSTEMS.

CLOSE OPEN ENDS OF PIPING DURING CONSTRUCTION.

PIPE AND TUBING SHALL BE CUT AND FABRICATED TO FIELD MEASUREMENTS AND RUN PARALLEL TO NORMAL BUILDING LINES. PIPE INTERIOR SHALL BE CLEANED OF FOREIGN MATTER AND BURRS BEFORE ERECTION OF PIPE.

PIPING SHALL NOT BE RUN ABOVE ELECTRICAL SWITCHGEAR OR PANELBOARDS, NOR ABOVE THE ACCESS SPACE OF SUCH EQUIPMENT – NEC ARTICLE 384.

PIPING SYSTEM	TYPE
FIRE SUPPRESSION PIPING	S2, S3
WET PIPE SPRINKLER 2" AND LARGER	S1, S2, S3
WET PIPE SPRINKLER 2" AND SMALLER	S2,
FINAL CONNECTION TO SPRINKLER HEAD	F1
UNDERGROUND PIPING TO FDC	P1

TYPE	DESCRIPTION	TYPE	DESCRIPTION
S1	**ROLL GROOVED BLACK STEEL** SCHEDULE 10, ASTM A135 OR ASTM A795 MALLEABLE/DUCTILE FITTINGS NITRILE /EPDM GASKETS ASTM A47/A47M OR A536	S3	**ROLL/CUT GROOVED BLACK STEEL** SCHEDULE 40, ASTM A53 OR ASTM A795 MALLEABLE/DUCTILE FITTINGS NITRILE /EPDM GASKETS ASTM A47/A47M OR A536
S2	**THREADED BLACK STEEL** SCHEDULE 40, ASTM A53 OR ASTM A795, 150 LB. MALLEABLE OR C.I. SCREWED FITTINGS	F1	**FLEXIBLE SPRINKLER HOSE FITTING** 36" LENGTH MAXIMUM FULLY STAINLESS STEEL FLEXIBLE HOSE WITH CEILING BRACKET UL 2443 AND FM 1637 175 PSI RATING FOLLOW FM STANDARDS FOR BEND RADIUS AND NUMBER OF BENDS
		P1	**PVC AWWA C900 CLASS 200, DR18,** BELL AND SPIGOT FABRICATED FITTINGS WITH ELASTROMERIC GASKET, UL1285

GENERAL LEGEND

EC	ELECTRICAL CONTRACTOR.
FC	FIRE PROTECTION CONTRACTOR.
GC	GENERAL CONTRACTOR.
HC	HVAC CONTRACTOR.
PC	PLUMBING CONTRACTOR.
TC	TEMPERATURE CONTROLS CONTRACTOR.
NIC	NOT IN CONTRACT.
AFF	ABOVE FINISHED FLOOR – TO BOTTOM OF ITEM UNLESS INDICATED OTHERWISE IN DRAWING.
EM	EMERGENCY.
MH	MOUNTING HEIGHT.
S	SURFACE MOUNTED.
(3)	NOTE SYMBOL – APPLIES ONLY TO SHEET ON WHICH IS SHOWN.
(2)	DETAIL NOTE SYMBOL – APPLIES ONLY TO DETAIL ON WHICH IS SHOWN.
- - - - -	ITEM TO BE REMOVED.
———	EXISTING ITEM TO REMAIN.
———	NEW ITEM.

FIRE SUPPRESSION

—F—	FIRE SUPPRESSION SYSTEM
—S—	SPRINKLER SYSTEM
	VALVE
	VALVE ON RISER
	CHECK VALVE, SWING GATE
	SUPERVISED VALVE
FS	FLOW SWITCH
	CAP
	CONNECTION, BOTTOM
	CONNECTION, TOP
	ELBOW, 90 deg., LONG RADIUS
	ELBOW, 45 deg.
	ELBOW, TURNED UP
	ELBOW, TURNED DOWN
	TEE
	TEE, OUTLET UP
	TEE, OUTLET DOWN
	UNION, SCREWED
	STRAINER
	STRAINER, BLOW OFF
P	PRESSURE GAUGE
	UPRIGHT SPRINKLER
	CONCEALED SPRINKLER
	SIDEWALL SPRINKLER

INDEX OF DRAWINGS

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STATE OF OHIO JEFFREY D. ZELINSKI 63822 REGISTERED PROFESSIONAL ENGINEER

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REBID

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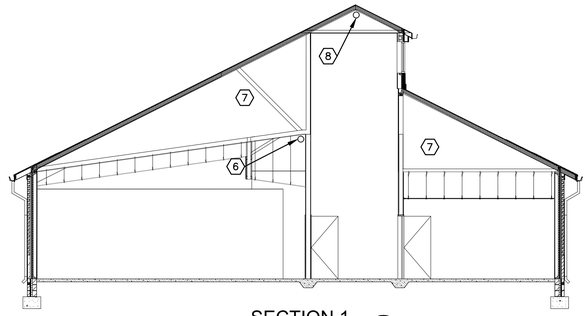
DEG	JDZ

LEGENDS, SCHEDULES & DETAILS

F0.1



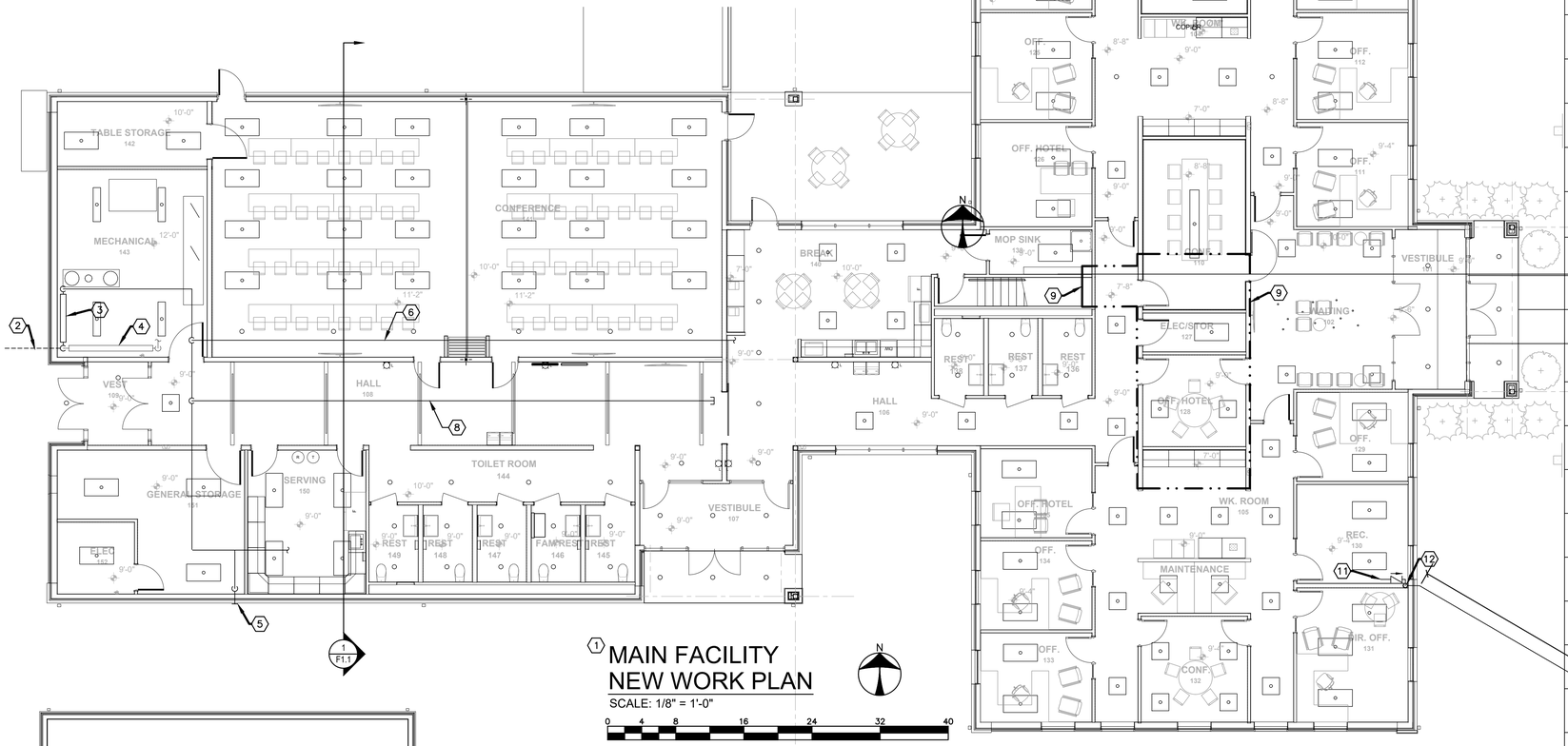
SECTION 1

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

1 / F1.1

CONSTRUCTION NOTES

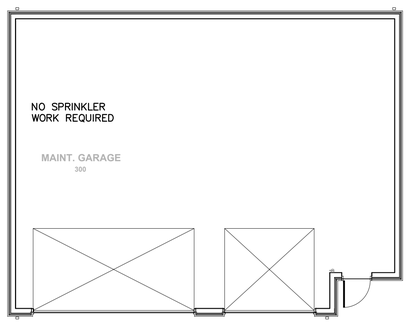
1. MAIN FACILITY TO BE PROVIDED WITH A COMPLETE, FULLY SUPPRESSED SPRINKLER SYSTEM. ATTIC SPACES DO NOT REQUIRE SPRINKLER COVERAGE.
2. COMBINATION FIRE/DOMESTIC WATER SERVICE BY SITE UTILITY CONTRACTOR.
3. FIRE SERVICE. SEE DETAIL SHEET F0.1.
4. DOMESTIC WATER SERVICE BY P.C. SEE DETAIL SHEET P0.3.
5. 5" STORTZ FIRE DEPARTMENT CONNECTION.
6. SPRINKLER MAIN IN SOFFIT.
7. ATTIC SPACE (TYP.), NO SPRINKLER COVERAGE REQUIRED.
8. SPRINKLER PIPE AT PEAK WITH UPRIGHT HEADS.
9. SECOND FLOOR MECHANICAL ROOM ABOVE. SEE PLAN THIS SHEET.
10. SECOND FLOOR MECHANICAL ROOM. PROVIDE FULL SUPPRESSION.
11. FROM SPRINKLER SYSTEM.
12. DROP 4" DOWN IN WALL TO BELOW GRADE AND OUT TO FIRE DEPARTMENT CONNECTION. SEE REMOTE FIRE DEPT. CONNECTION SCHEMATIC SHEET F0.1
13. FREE-STANDING FIRE DEPARTMENT CONNECTION. SEE CIVIL SITE PLAN FOR LOCATION AND FIRE HYDRANT LOCATION. LOCATE FIRE DEPARTMENT CONNECTION WITHIN 75 LF OF FIRE HYDRANT. SEE REMOTE FIRE DEPT. CONNECTION SCHEMATIC SHEET F0.1



1 MAIN FACILITY
NEW WORK PLAN

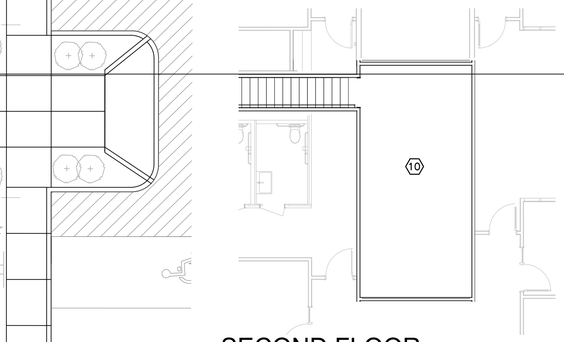
SCALE: 1/8" = 1'-0"

0 4 8 16 24 32 40



GARAGE PLAN

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



SECOND FLOOR
MECHANICAL ROOM PLAN

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

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FIRE PROTECTION PLAN

F1.1

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE DESCRIPTION	FIXTURE	SERVICES H.W.	SERVICES C.W.	SERVICES SAN.	SERVICES VENT	MTG. HGT.	TRIM REQUIREMENTS SUPPLY	STOPS	WASTE	TRAP	CARRIERS	ACCESSORIES	NOTES
W1	WATER CLOSET/ VIT. CHINA/ WALL HUNG/ ELONGATED/ SIPHON JET/ ELECTRONIC HARDWIRED FLUSH VALVE/ DUAL FLUSH – 1.6/1.1 GPF/ ACCESSIBLE	AMERICAN STANDARD # 2257.001	–	1"	4"	2"	17"	SLOAN ECOS # 111–1.6/1.1	UNIT	UNIT	INTEGRAL	ZURN # Z1208–N42	AM. STAND. # 5905.100 SLOAN #EL–451	1., 6.
L1	LAVATORY/ VIT. CHINA/ WALL HUNG/ / ELECTRONIC FAUCET/ 0.5 GPM/ ASSE 1070 DEVICE/ PLUG–IN TRANSFORMER/ VIT. CHINA SHROUD	AMERICAN STANDARD # 9134004EC & # 0059.020EC	0.5"	0.5"	1.5"	1.25"	34"	SLOAN # ETF–600–PLG–BDT–CP –0.5GPM–MLM–IR–FCT	MCGUIRE # LFBV1705	MCGUIRE # 155A	MCGUIRE # 8902	ZURN # Z1231		5.
S1	SINK/ ST. ST./ UNDERMOUNT/ DOUBLE BOWL/ PERFECT DRAIN/ SINGLE LEVER FAUCET WITH PULL DOWN SPRAY/GARBAGE DISPOSAL/ ACCESSIBLE	ELKAY # ELUHAD311855PD	0.5"	0.5"	1.5"	1.25"	–	AMERICAN STANDARD # 4332.310	MCGUIRE # LFBV1705	UNIT	MCGUIRE # 8912 & # 111	---	INSINKERATOR # EVOLUTION COMPACT	2.
S2	SINK/ ST. ST./ DROP–IN/ SINGLE BOWL/ SINGLE LEVER FAUCET WITH PULL DOWN SPRAY/ BASKET STRAINER	ELKAY # LR2219PD	0.5"	0.5"	1.5"	1.25"	–	AMERICAN STANDARD # 4332.310	MCGUIRE # LFBV1705	UNIT	MCGUIRE # 8912	---		2.
F1	DRINKING FOUNTIAN/ ST. ST./ WALL HUNG/ BI–LEVEL/ BOTTLE FILLER/ COOLER/ TOUCHLESS ACTIVATION/ ACCESSIBLE	ELKAY # LZOOTL8WSLK	–	0.5"	1.5"	1.25"	34" TO LOW BBLR.	UNIT	MCGUIRE # LFBV170	UNIT	MCGUIRE # 8902	UNIT		
U1	UTILITY WALL BOX/ TOP INLET QUARTER TURN BALL VALVES WITH WATER HAMMER ARRESTORS/ DRAIN OPENING. (QTY. 1 COLD WATER VALVE) FOR FUTURE ICE MACHINE	OATEY # 38101	–	0.5" (1)	2"	1.5"	12"	UNIT (ONLY CW INSTALLED)	VALVES ABOVE CLG.	---	---	---	---	3.
U2	ICE MAKER CONNECTION BOX/ 1/4 TURN BALL VALVE/ METAL BOX WITH FACEPLATE/ 6.75" SQ	OATEY # 38689 W # 38686 FACEPLATE	–	0.5"	–	–	24"	UNIT	VALVES ABOVE CLG.	--	--	--	--	
U3	COFFEE MAKER CONNECTION BOX/ 1/4 TURN BALL VALVE/ METAL BOX WITH FACEPLATE/ 6.75" SQ	OATEY # 38689 W # 38686 FACEPLATE	–	0.5"	–	–	38" BTM OF BOX	UNIT	VALVES ABOVE CLG.	--	--	--	--	
HB1	WALL HYDRANT BOX/EXTERIOR/ANTI–SIPHON/FREEZE PROOF	WOODFORD # B65	–	0.75"	–	–	–	---	---	---	---	---	---	
M1	MOP SINK/ MOLDED STONE/ FLOOR SET/ 24" SQ./ SIDE FRONT DROP TYPE/ ST. ST. CAP/ WALL MOUNTED FAUCET/ S.S. BACKSPLASH	STERN–WILLIAMS # HL–1810–BP	0.5"	0.5"	3"	1.5"	36" TO Ç SUPPLY	AM. STAND. # 8354.112	INTEGRAL	UNIT	SAME AS DWV	---	---	4.

EQUALS
AMERICAN STANDARD CHINA – KOHLER, ZURN
AMERICAN STANDARD FAUCETS – KOHLER, ZURN, CHICAGO FAUCET.
SLOAN – ZURN
ELKAY – JUST, ADVANCED TABCO,
ELKAY DRININKING FOUNTAINS – OASIS, MURDOCK, SUNROC, HAWS,
WOODFORD – ZURN, J.R.SMITH,
J.R.SMITH – WADE, MI–FAB, ZURN, WATTS, JOSAM
MCGUIRE – WATTS, BRASSCRAFT
OATEY – GUY GRAY
STERN–WMS. – FIAT, CREATIVE INDUSTRIES

NOTES
1. SEE SOIL, WASTE, AND VENT DIAGRAMS FOR CARRIERS.
2. COORDINATE ROUGH–IN WITH CASEWORK SUPPLIER.
3. MOUNT BOX AS LOW AS P TRAP ALLOWS.
4. TRAP SAME MATERIAL AS SANITARY PIPING.
5. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE ROUGH–IN WITH SHROUD.
6. PROVIDE TRANSFORMER FOR FLUSH VALVES, SLOAN # EL–451 (1 PER BANK OF WATER CLOSETS). TURN TRANSFORMER OVER TO E.C. WHO WILL MOUNT AND POWER UNIT. P.C. SHALL PROVIDE ALL LOW VOLTAGE WIRING FROM TRANSFORMER TO FLUSH VALVES.

PLUMBING DRAIN AND CLEANOUT SCHEDULE

DRAIN TYPES
FD – FLOOR DRAIN
FS – FLOOR SINK

CLEANOUT TYPES
FCO – FLOOR CLEANOUT
WCO – WALL CLEANOUT

ITEM	DRAIN DESCRIPTION	MANUFACTURER	OUTLET SIZE	FEATURES ANCHOR FLANGE	FEATURES FLASHING CLAMP	FEATURES UNDERDECK CLAMP	FEATURES SUMP RECEIVER	FEATURES DOUBLE DRAINAGE	FEATURES SEDIMNT BUCKET	STRAINER TOP/STRAINER SIZE	STRAINER FLAT	STRAINER DOME	STRAINER FUNNEL	STRAINER OPEN (NO GRATE)	STRAINER ADJUSTABLE	STRAINER	NOTES
FD1	FLOOR DRAIN/ CAST IRON BODY/ NICKEL BRONZE STRAINER	J.R.SMITH # 2005–03–C06NB	3"	●				●		6"ø	●				●		1
FD2	FLOOR DRAIN/ CAST IRON BODY AND STRAINER/FLAT BOTTOM STRAINER	J.R.SMITH # 2633–04	4"				●			10" SQ.				●			
FD1	FLOOR DRAIN/ CAST IRON BODY & STRAINER	J.R.SMITH # 2005–03–D07–CI	3"	●				●		7"ø	●				●		1
FCO	CLEANOUT/ FLOOR SET/ NICKEL BRONZE TOP/ CAST IRON BODY/ MIP THREADED CONN./ PP PLUG	SIOUX CHIEF # 834 SERIES									●						2.
WCO	CLEANOUT/ WALL MOUNTED/ ST.ST. COVER WITH THREADED BOLT AND PP PLUG	SIOUX CHIEF # 873–P SERIES								6.5"ø	●						2.

NOTES
1. PROVIDE ASSE 1072 TRAP SEAL PROTECTION DEVICE EQUAL TO MIFAB "MI–GARD" OR J.R.SMITH # 2692
2. CLEANOUT TO BE SAME SIZE AS PIPING FOR PIPING UP TO 4", AND 4" FOR LARGER PIPE SIZES.

GENERAL NOTES - PLUMBING

A. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE OHIO BUILDING AND PLUMBING CODES, INCLUDING REFERENCED CODES AND STANDARDS.

B. OBTAIN A PLUMBING PERMIT AND SECURE INSPECTION AND APPROVAL OF THE CODE OFFICIAL.

E. COORDINATE EACH ROUGH–IN INSTALLATION REQUIREMENTS AND LOCATIONS WITH OTHER TRADES, ACTUAL EQUIPMENT OR CABINETRY PROVIDED AND FIELD CONDITIONS BEFORE PERFORMING WORK.

F. REFER TO ARCHITECTURAL CODE PLANS FOR LOCATIONS OF FIRE WALLS AND SMOKE PARTITIONS.
IN SMOKE PARTITIONS FILL SPACE AROUND PENETRATIONS WITH AN APPROVED MATERIAL TO LIMIT THE FREE PASSAGE OF SMOKE.
IN FIRE WALLS SEAL ALL PENETRATIONS WITH AN APPROVED FIRE STOPPING PRODUCT, SEE SPECIFICATIONS.

G. REFER TO DIAGRAMS, DETAILS, AND SCHEDULES FOR PIPING AND PIPE SIZES NOT SHOWN ON PLAN OR ON DIAGRAMS.

H. ALL PIPING IS ABOVE THE CEILING (AT THE CEILING IN EXPOSED STRUCTURE AREAS) UNLESS OTHERWISE INDICATED ON PLAN.

I. ALL EQUIPMENT AND MATERIAL REQUIRED FOR COMPLETE AND FUNCTIONAL PLUMBING SYSTEMS ARE INCLUDED IN THE CONTRACT. THE WORK SCOPE IN THE PROJECT MANUAL DEFINES THE FINAL CONTRACTUAL RESPONSIBILITY TO PROVIDE SUPPORTING EQUIPMENT, MATERIALS, FINISHING, UTILITY COST, ETC (EXAMPLES: CONCRETE PADS, PAINTING, TEMPORARY ELECTRIC/GAS COSTS) FOR THE PLUMBING SYSTEMS. THE WORK SCOPE TAKES PRECEDENCE OVER OTHER SPECIFICATION SECTIONS OR DRAWING REQUIREMENTS.

GENERAL REQUIREMENTS

1. PROVIDE COMPLETE AND FUNCTIONAL PLUMBING SYSTEMS PER PLANS INCLUDING FURNISHING, INSTALLING, TESTING AND WARRANTY OF ALL WORK.
2. WORK SHALL BE IN ACCORDANCE WITH THE 2017 OHIO BUILDING AND OHIO PLUMBING CODES INCLUDING REFERENCED CODES AND STANDARDS, ALL FEDERAL AND LOCAL CODES AND ALL APPLICABLE LAWS, ORDINANCES AND REGULATIONS.
3. WORK SHALL BE PERFORMED USING BEST QUALITY INSTALLATION PRACTICE BY A QUALIFIED TRADE CONTRACTOR AND THEIR QUALIFIED SUBCONTRACTORS. ALL CONTRACTORS SHALL BE LICENSED AND BE BONDED FOR THE WORK.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA AND OWNER SAFETY STANDARDS AND PRACTICES. ALL ON SITE PERSONNEL SHALL BE SAFETY TRAINED AND OWNER CERTIFIED.
5. OBTAIN REQUIRED PERMITS RELATED TO THE WORK AND PAY ALL PERMIT AND INSPECTION FEES.
6. THE AUTHORITY HAVING JURISDICTION SHALL INSPECT AND APPROVE ALL WORK. PROVIDE A FINAL CERTIFICATE OF APPROVAL FROM THE AUTHORITY HAVING JURISDICTION AND PRESENT TO THE OWNER BEFORE REQUESTING FINAL PAYMENT AND RELEASE OF RETAINAGE.
7. PROTECT ALL FURNISHED MATERIAL AND EQUIPMENT FROM THEFT AND DETERIORATION OR CONTAMINATION DUE TO WEATHER OR CONSTRUCTION ACTIVITIES.
8. PROTECT OWNER'S PROPERTY AND PROPERTY OF OTHER CONTRACTORS.
9. REMOVE ALL CONSTRUCTION DEBRIS FROM SITE. RECYCLE DEBRIS WHERE POSSIBLE. DISPOSE OF ALL HAZARDOUS MATERIAL IN ACCORDANCE WITH ENVIRONMENTAL LAWS.
10. PROVIDE ALL CUTTING AND PATCHING REQUIRED TO INSTALL MATERIAL AND EQUIPMENT.
11. PROVIDE APPROPRIATE FIRESTOPPING SYSTEM FOR ANNULAR SPACE OPENINGS AROUND PIPE PENETRATIONS THROUGH FIRE RESISTANCE RATED CONSTRUCTION. ANNULAR SPACE OPENINGS AT PIPE PENETRATIONS IN NON RATED CONSTRUCTION TO BE CLOSED AIR AND WATER TIGHT.
12. MATERIALS AND EQUIPMENT SHALL BE ONE OF THE BRAND OR MANUFACTURERS LISTED OR AN APPROVED EQUAL.
13. ELECTRONIC SHOP DRAWINGS SHALL BE PROVIDED IN .PDF FORMAT FOR THE ENGINEER'S APPROVAL FOR ALL MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL BE SPECIFICALLY EDITED TO ELIMINATE SUPERFLUOUS INFORMATION AND SHALL CLEARLY SHOW SPECIFICS FOR THE MATERIAL AND EQUIPMENT PROVIDED.
14. COORDINATE INSTALLATION OF ACTUAL EQUIPMENT AND SYSTEMS PROVIDED WITH OTHER TRADES AND NEW OR EXISTING CONDITIONS.
15. PROVIDE FINAL INSTALLATION DRAWINGS TO THE OWNER IN BOUND PAPER AS WELL AS ELECTRONIC FORMAT FOR RECORD.
16. INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
17. INSTALL ALL MATERIAL AND EQUIPMENT TO PROVIDE REQUIRED CLEARANCES TO MEET CODE REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS AND MAINTENANCE SERVICE.
18. ALL WORK AREAS SHALL BE CLEANED TO MATCH ORIGINAL CONDITION.
19. MAINTAIN RECORD DRAWINGS AND PROVIDE TO THE OWNER OR HIS AGENT.
20. PROVIDE TWO (2) BOUND, PAPER COPIES OF ALL OPERATING AND MAINTENANCE MANUALS. PROVIDE AN ELECTRONIC COPY OF THE OPERATING AND MAINTENANCE MANUAL.
21. PROVIDE WARRANTY FOR ALL WORKMANSHIP, EQUIPMENT AND MATERIAL. WARRANTY SHALL BE 1 YEAR FOR PARTS AND LABOR, PROVIDE EXTENDED WARRANTY PERIOD FOR PARTS AND/OR LABOR AS IDENTIFIED OR AS STANDARD FOR CERTAIN ITEMS OF EQUIPMENT.

GENERAL LEGEND

EC	ELECTRICAL CONTRACTOR.
FC	FIRE PROTECTION CONTRACTOR.
GC	GENERAL CONTRACTOR.
HC	HVAC CONTRACTOR.
PC	PLUMBING CONTRACTOR.
TC	TEMPERATURE CONTROLS CONTRACTOR.
NIC	NOT IN CONTRACT.
AFF	ABOVE FINISHED FLOOR – TO BOTTOM OF ITEM UNLESS INDICATED OTHERWISE IN DRAWING.
ES	EQUIPMENT SUPPLIER.
③	NOTE SYMBOL – APPLIES ONLY TO SHEET ON WHICH IS SHOWN.
②	DETAIL NOTE SYMBOL – APPLIES ONLY TO DETAIL ON WHICH IS SHOWN.
H–1	EQUIPMENT REFERENCE SYMBOL. ELECTRICAL CONNECTION REQUIRED.
H–1	EQUIPMENT REFERENCE SYMBOL. NO ELECTRICAL CONNECTION REQUIRED.
	CONNECTION, NEW TO EXISTING.
FD1	"UP TO" SYMBOL – INDICATES ITEM SERVED ON FLOOR ABOVE.
	1 HOUR FIRE PROTECTION SEE SPECIFICATION FOR PENETRATION DETAILS.
	2 HOUR FIRE PROTECTION SEE SPECIFICATION FOR PENETRATION DETAILS.
	3 HOUR FIRE PROTECTION SEE SPECIFICATION FOR PENETRATION DETAILS.

PLUMBING LEGEND

	SANITARY DRAIN ABOVE FLOOR OR GRADE
	VENT
	COLD WATER
	HOT WATER
	HOT WATER RETURN
G	NATURAL GAS
C.O.	CLEAN OUT
	SHUT–OFF VALVE, SEE SCHEDULE FOR TYPE
	CHECK VALVE
	BALANCING VALVE
	VALVE ON RISER
	UNION, SCREWED
R	REGULATOR
P	PRESSURE GAUGE
T	TEMPERATURE GAUGE
	CONNECTION, BOTTOM
	CONNECTION, TOP
	INDICATES DIRECTION OF FLOW
	CAP
V.R.	VENT RISER
V.T.R.	VENT THRU ROOF
S.S.	SOIL STACK
V.S.	VENT STACK

INDEX OF DRAWINGS

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PROFESSIONAL ENGINEER

REVISIONS
REBID

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1615.04	5/12/2021
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LEGENDS & SCHEDULES

P0.1

VALVE SCHEDULE

GENERAL NOTES FOR VALVES:

QUALITY ASSURANCE
VALVES SHALL COMPLY WITH ANSI, ASTM AND ASME.

VALVES ON DOMESTIC WATER SYSTEMS SHALL BE "LEAD FREE" IN ACCORDANCE WITH THE FEDERAL SAFE WATER ACT (S3874) DEFINITION AND CONFORM TO NSF 61.

GROOVED END VALVES SHALL CONFORM TO ANSI/AWWA C-606.

PRODUCTS
WORKING PRESSURES SHALL EXCEED THOSE IMPOSED BY THE SERVICE APPLIED.

VALVES WHICH ARE INSULATED SHALL HAVE EXTENDED SHAFTS.

PROVIDE FLOW MEASURING GAUGES WITH COCKS, HOSES & CONNECTORS FOR BALANCING VALVES. PROVIDE METERING TOOL.

PROVIDE HOSE ADAPTORS ON DRAIN VALVES.

SWEAT END VALVES OF EQUAL CONSTRUCTION ARE ACCEPTABLE IN LIEU OF SCREWED ENDS.

IN MECHANICALLY JOINED SYSTEMS, VALVES OF EQUAL CONSTRUCTION WITH COMPATIBLE ENDS ARE ACCEPTABLE AND MAY BE MANUFACTURED BY THE COUPLING MANUFACTURER.

VALVE MANUFACTURERS:
BALL VALVES – NIBCO, WATTS, MILWAUKEE, APOLLO, CONBRACO, CRANE.
BALANCING VALVES – BELL & GOSSETT, ARMSTRONG, WATTS.
CHECK VALVES – NIBCO, STOCKHAM, WATTS.

EXECUTION
VALVES SHALL BE INSTALLED WITH STEM ABOVE CENTERLINE OF PIPE.

PIPING SYSTEM	VALVE TYPE					
	BUTTERFLY	BALL	CHECK	GATE	BALANCING	LUB. PLUG
DOMESTIC WATER SERVICE 2" AND LARGER				D18		
DOMESTIC WATER (CW, HW, & HWR) 2" AND SMALLER		B11	C11		E11	
DOMESTIC WATER (CW, HW, & HWR) 2.5" & LARGER		B14	C12			
INTERIOR NATURAL GAS 4" AND SMALLER		B17				
EXTERIOR NATURAL GAS 3" AND SMALLER		B18				

TYPE	DESCRIPTION	TYPE	DESCRIPTION	TYPE	DESCRIPTION
B11	NIBCO T-585-80-LF, 150 W.S.P., TWO-PIECE BRONZE BODY, SCREWED ENDS, BRONZE BALL AND BRONZE STEM, TFE SEAT AND SEAL, HANDLE. NSF/ASME 61	B18	NIBCO T-585(OR 580)-70-UL, 600 PSI NON-SHOCK COLD, 2 PIECE, BRONZE BODY, SCREWED ENDS, FULL PORT, BRASS BALL, TFE SEAT, HANDLE. UL LISTED FOR GAS. ASME B16.33	D18	KENNEDY KS-FW 8068A, 200 PSI, NSF 61 EPOXY COATED CAST IRON BODY, RESILIENT WEDGE, O.S.& Y., FLANGED ENDS
B14	APOLLO 70LF-240, 150 WSP TWO-PIECE, LEAD-FREE BRONZE BODY, 316 STAINLESS STEEL BALL AND STEM, STANDARD PORT, TEFLON SEAT AND SEAL, HANDLE, NSF/ASME 61	C11	NIBCO T-413-Y-LF, 125 W.S.P., BRONZE BODY, SCREWED ENDS, RENEWABLE BRONZE SWING DISC WITH TFE SEAT RING. NSF 61	E11	BELL & GOSSETT CB-1LF 400 PSI, BRONZE BODY WITH BRASS BALL, SCREW CONNECTION, READOUT & DRAIN PORTS, TFE SEATS, CALIBRATED NAMEPLATE, HANDLE WITH MEMORY STOP, NSF/ASME 61
B17	NIBCO T-FP-600A, 600 PSI NON-SHOCK COLD., 2 PIECE, BRASS BODY, SCREWED ENDS, FULL PORT, BRASS BALL, TFE SEAT, HANDLE. UL LISTED FOR GAS. ASME B16.44	C12	NIBCO T-938-33, 250 PSI WORKING WATER PRESSURE., DUCTILE IRON BODY, STAINLESS STEEL TRIM, FLANGED ENDS, RENEWABLE STAINLESS STEEL SWING DISC AND SEAT RING. NSF/ANSI 61-8		

PIPE INSULATION SCHEDULE - PLUMBING

GENERAL NOTES FOR PIPE INSULATION:

QUALITY ASSURANCE
FIRE, SMOKE RATINGS: FLAME SPREAD RATING OF 25 OR LESS, SMOKE DEVELOPED RATING OF 50 OR LESS.

THICKNESSES SHALL CONFORM TO ASHRAE 90.1-2010 MINIMUMS.

GREEN GUARD INDOOR AIR QUALITY CERTIFIED.

EXECUTION
INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.

COLD SERVICE PIPE INSULATION AND VAPOR BARRIER/JACKET TO BE CONTINUOUS THRU FLOOR AND WALL SLEEVES AT ALL PIPE DEVICES AND PUMP CASINGS.

INSULATION AND VAPOR BARRIER TO BE CONTINUOUS AT PIPE HANGERS AND SUPPORTS ON HORIZONTAL PIPING. PROVIDE HARDWOOD INSERT SUPPORT FOR PIPES 2.5" AND LARGER.

VERTICAL PIPE SUPPORTS SHALL ATTACH DIRECTLY TO PIPE. INSULATE SUPPORT AND OTHER SURFACES WITH FLEXIBLE CLOSED CELL INSULATION, SAME THICKNESS AS SYSTEM INSULATION ON COLD SERVICE PIPES TO PREVENT CONDENSATION.

INSULATION MAY BE OMITTED ON HOT WATER VALVES AND DEVICES 2" AND SMALLER PIPE SIZE.

ABOVE GRADE SANITARY DRAINAGE RECEIVING CONDENSATE SHALL BE INSULATED AS INDICATED BELOW FOR CONDENSATE DRAINAGE. WHERE THE DRAIN SUMP IS EXPOSED ON THE FLOOR BELOW, IT TOO SHALL BE INSULATED WITH 1" INSULATION.

SYSTEM & SIZE	INSULATION THICKNESS	TYPE	LOCATION
DOMESTIC COLD WATER 1.5" & SMALLER	0.5"	F1	INTERIOR
DOMESTIC COLD WATER 2" & LARGER	1"	F1	INTERIOR
DOMESTIC HOT WATER, TEMPERED WATER, & HOT WATER RETURN 1.25" AND SMALLER	1"	F1	INTERIOR
DOMESTIC HOT WATER & HOT WATER RETURN 1.5" AND LARGER	1.5"	F1	INTERIOR

TYPE	BASIS OF DESIGN	APPROVED EQUALS	DESCRIPTION
F1	OWENS-CORNING SSL1-ASJ	KNAUF 1000° PIPE, JOHNS MANVILLE MICRO-LOK HP	* INORGANIC GLASS FIBER WITH RESIN BONDING. * K=0.24 @ 100 DEG. F. * 3.5 – 5.5 PCF. * PREFORMED TUBULAR. * WHITE FSRK JACKET. * LONGITUDINAL LAP WITH SELF-SEALING ADHESIVE. * ELBOWS, TEES, VALVES, CAPS, ETC., WHITE ONE PIECE, PREMOLDED 25/50 0.20" PVC FITTING COVERS WITH HIGH DENSITY FIBERGLASS INSULATION INSERTS SAME THICKNESS, K=0.26 EQUAL TO ZESTON OR PROTO.

BUILDING DRAIN SYSTEMS SCHEDULE SANITARY WASTE & VENT

GENERAL NOTES:

QUALITY ASSURANCE
PIPING SHALL CONFORM TO OBC REQUIREMENTS.

PIPING SHALL COMPLY WITH ASME B31.9 "BUILDING SERVICES PIPING".

INSTALL CAST-IRON SOIL PIPING ACCORDING TO CISPI'S "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK," CHAPTER IV, "INSTALLATION OF CAST IRON SOIL PIPE AND FITTINGS."

ON PIPING 5" AND LARGER PROVIDE BRACING AT EVERY BRANCH OPENING OR CHANGE IN DIRECTION AS REQUIRED BY CISPI'S "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK," CHAPTER IV, "INSTALLATION OF CAST IRON SOIL PIPE AND FITTINGS."

INSTALL PVC SOIL AND WASTE DRAINAGE AND VENT PIPING ACCORDING TO ASTM D 2665.

PRODUCTS
PVC PIPING SHALL NOT BE USED IN SPACES USED AS PLENUMS.

EXECUTION
PIPE AND TUBING SHALL BE CUT AND FABRICATED TO FIELD MEASUREMENTS AND RUN PARALLEL TO NORMAL BUILDING LINES. PIPE INTERIOR SHALL BE CLEANED OF FOREIGN MATTER AND BURRS BEFORE ERECTION OF PIPE.

ANNULAR SPACE AROUND PIPING THRU ALL WALLS SHALL BE SEALED OFF WITH PERMANENT PLIABLE CAULKING OR APPROVED PATCHING SEALANT.

PROVIDE PIPING SLEEVES AT FLOORS, WALLS & ROOFS IN NEW CONSTRUCTION. EXISTING WALLS TO BE SAW CUT TO PASS NEW PIPING.

PIPING SHALL NOT BE RUN ABOVE ELECTRICAL SWITCHGEAR OR PANELBOARDS, NOR ABOVE THE ACCESS SPACE OF SUCH EQUIPMENT – NEC ARTICLE 384.

LAY BURIED BUILDING DRAINAGE PIPING BEGINNING AT LOW POINT OF EACH SYSTEM. INSTALL TRUE TO GRADES AND ALIGNMENT INDICATED, WITH UNBROKEN CONTINUITY OF INVERT.

SUPPORT PIPING FROM BUILDING STRUCTURE WITH RODS, ANGLES & CLAMPS ATTACHED TO STRUCTURE. HANG PIPING WITH CLEVIS HANGER OR ROLLER SUPPORTS. HANGERS SHALL BE INSTALLED ON CENTERS AS RECOMMENDED BY MANUFACTURER.

SLOPE DRAINAGE PIPING AT 1/4" PER FOOT (2%) FOR PIPING SMALLER THAN 3" AND 1/8" PER FOOT (1%) FOR PIPING 3" AND LARGER.

VENT PIPING SHALL BE PITCHED FOR DRAINAGE.

CLOSE OPEN ENDS OF PIPING DURING CONSTRUCTION.

COUPLINGS AND GASKETS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

MAKE CHANGES IN DIRECTION FOR SOIL AND WASTE DRAINAGE AND VENT PIPING USING APPROPRIATE BRANCHES, BENDS, AND LONG-SWEEP BENDS. SANITARY TEES AND SHORT-SWEEP 1/4 BENDS MAY BE USED ON VERTICAL STACKS IF CHANGE IN DIRECTION OF FLOW IS FROM HORIZONTAL TO VERTICAL.

DO NOT ENCLOSE, COVER, OR PUT PIPING INTO OPERATION UNTIL IT IS INSPECTED AND APPROVED BY AUTHORITIES HAVING JURISDICTION.

TESTING
PIPING SHALL BE TESTED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

PIPING SYSTEM	TYPE
SANITARY PIPING BELOW FLOOR SLAB IN GRADE	P1
SANITARY & VENT PIPING ABOVE THE FLOOR	CI1

TYPE	DESCRIPTION	TYPE	DESCRIPTION
CI1	**NO-HUB CAST IRON (STD)** SERVICE WEIGHT ASTM A888 OR CISPI 301 SHEILDED COUPLINGS ASTM C1277 OR CISPI 310 RUBBER SLEEVE ASTM C564	P1	**PVC** SCHEDULE 40 PVC ASTM D2665 AND D2321 DWV FITTINGS, ASTM D3311 GLUED JOINTS

BUILDING SUPPLY SYSTEMS SCHEDULE WATER & GAS

GENERAL NOTES:

QUALITY ASSURANCE
PIPING SHALL CONFORM TO OBC REQUIREMENTS.

PIPING SHALL COMPLY WITH ASME B31.9 "BUILDING SERVICES PIPING".

ALL COMPONENTS OF DOMESTIC WATER SYSTEMS (CW, HW, & HWR) SHALL BE "LEAD FREE" IN ACCORDANCE WITH THE FEDERAL SAFE WATER ACT (S3874) DEFINITION AND CONFORM TO NSF 61.

PRODUCTS
DIELECTRIC CONNECTORS SHALL BE PROVIDED AT CONNECTIONS BETWEEN FERROUS & COPPER PIPING.

GAS PRESSURE REGULATORS SHALL BE CAST IRON SELF-OPERATING SPRING LOADED TYPE. VALVE 125 PSI. SPRING AND DIAPHRAGM CASINGS SHALL BE ALUMINUM. REGULATOR SHALL HAVE AN INTERNAL RELIEF VALVE ASSEMBLY, TAPPED VENT CONNECTION WITH REMOVABLE SCREEN ON THE SPRING CASING AND AN EXTERNAL PILOT OPERATOR TO AFFORD A 5% MAXIMUM DROOP. OVER-PRESSURE PROTECTION SHALL BE TEN TIMES THE INLET PRESSURE (OR HIGHER AS MAY BE REQUIRED BY THE GAS COMPANY). FISHER TYPE S102 OR S202 OR EQUAL BY SPRAGUE OR EQUIMETER.

UNIONS
COPPER TUBING – WROUGHT OR CAST COPPER, CLASS 150, SOLDERED ENDS THREADED STEEL PIPE – MALLEABLE IRON W/GROUND SEAT, 300 LB SCREWED ENDS.

MECHANICALLY FORMED TEES AND COUPLINGS (T-DRILL) ARE NOT PERMITTED.

EXECUTION
PIPE AND TUBING SHALL BE CUT AND FABRICATED TO FIELD MEASUREMENTS AND RUN PARALLEL TO NORMAL BUILDING LINES. PIPE INTERIOR SHALL BE CLEANED OF FOREIGN MATTER AND BURRS BEFORE ERECTION OF PIPE.

ANNULAR SPACE AROUND PIPING THRU ALL WALLS SHALL BE SEALED OFF WITH PERMANENT PLIABLE CAULKING OR APPROVED PATCHING SEALANT.

PROVIDE PIPING SLEEVES AT FLOORS, WALLS & ROOFS IN NEW CONSTRUCTION. EXISTING WALLS TO BE SAW CUT TO PASS NEW PIPING.

PIPING SHALL NOT BE RUN ABOVE ELECTRICAL SWITCHGEAR OR PANELBOARDS, NOR ABOVE THE ACCESS SPACE OF SUCH EQUIPMENT – NEC ARTICLE 384.

PIPING SHALL BE PITCHED FOR DRAINAGE.

CLOSE OPEN ENDS OF PIPING DURING CONSTRUCTION.

MECHANICAL JOINT PIPING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

GAS PRESSURE REGULATORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE VALVED GAUGE TAPS UPSTREAM AND DOWNSTREAM OF THE REGULATOR. VENT PIPING SHALL BE EXTENDED INDIVIDUALLY FROM EACH REGULATOR AND GAS VENTING DEVICE TO OUTSIDE THE BUILDING IN AN APPROVED LOCATION.

SUPPORT PIPING FROM BUILDING STRUCTURE WITH RODS, ANGLES & CLAMPS ATTACHED TO STRUCTURE. HANG PIPING WITH CLEVIS HANGER OR ROLLER SUPPORTS. HANGERS SHALL BE INSTALLED ON CENTERS AS RECOMMENDED BY MANUFACTURER.

CLEAN INTERIOR WATER PIPING AFTER INSTALLATION BY FLUSHING WITH CLEAN POTABLE WATER TO CLEAR ALL INTERNAL DEBRIS.

ALL NEW AND EXISTING DOMESTIC WATER PIPING SHALL BE DISINFECTED IN CONFORMANCE WITH AWWA C651-86. DOMESTIC WATER PIPING SHALL BE SANITIZED PRIOR TO PUTTING SYSTEM IN OPERATION

EXTERIOR NATURAL GAS PIPING SHALL BE PAINTED WITH 2 COATED OF EXTERIOR GRADE PAINT FOR PROTECTION.

TESTING
DOMESTIC WATER PIPING – 125 PSI FOR MIN. 6 HOURS AT THE LOW POINT IN THE SYSTEM.

NATURAL GAS PIPING – 100 PSI COMPRESSED AIR FOR 6 HOURS.

PIPING SYSTEM	TYPE
DOMESTIC WATER SERVICE PIPING 3" AND LARGER	D1
DOMESTIC HOT, COLD & RECIRCULATING WATER	C1, C5
NATURAL GAS LESS THAN 5 PSI PRESSURE	S1, S2
NATURAL GAS 5 PSI PRESSURE OR MORE	S1
MISCELLANEOUS UNDERGROUND NATURAL GAS (OUTSIDE OF BLDG.)	PE1

TYPE	DESCRIPTION	TYPE	DESCRIPTION
C1	**SOLDERED COPPER** TYPE "L" HARD COPPER ASTM B88 WROUGHT COPPER OR CAST BRONZE FITTINGS 95-5 SOLDER	S1	**WELDED BLACK STEEL** SCHEDULE 40, ASTM A53 TYPE E WROUGHT-STEEL WELDING FITTINGS: ASTM A 234/A 234M 150 LB. C.I. FITTINGS
C5	**PRESS-FIT COPPER** TYPE "L" HARD COPPER ASTM B88 COPPER OR BRONZE FITTINGS ASTM B16.18 OR B16.22 250 DEG. F. EPDM SEALS	S2	**THREADED BLACK STEEL** SCHEDULE 40, ASTM A53 TYPE F 150 LB. C.I. FITTINGS
D1	**DUCTILE IRON** ANSI A21.51 & AWWA CLASS 53 OR 51 250 LB. FITTINGS FLANGED FITTINGS	PE1	**POLYETHYLENE** PE 2306, 2406 TYPE II GRADE 3, PE 3406, 3408 TYPE III, ASTM D2513 HEAT FUSION JOINTS

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STATE OF OHIO – JEFFREY D. ZELINSKI 63822 – REGISTERED PROFESSIONAL ENGINEER

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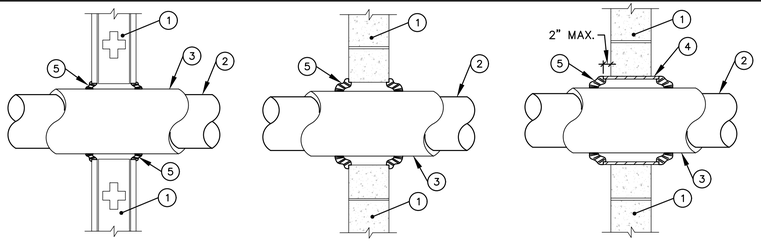
SCHEDULES

P0.2



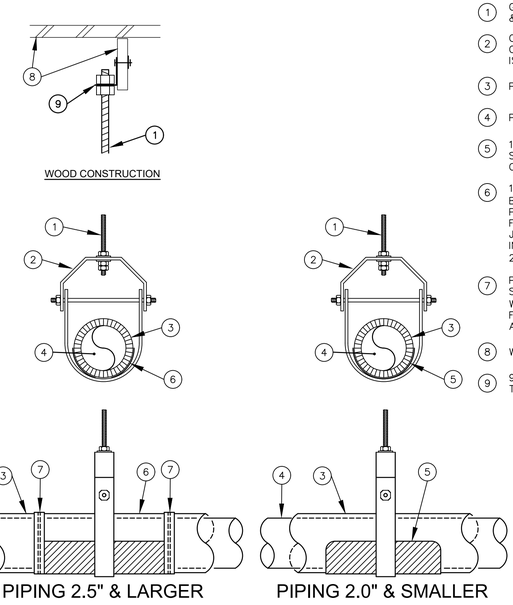
GYPSUM CONSTRUCTION
ALL PIPE SIZES

CONCRETE/MASONRY CONSTRUCTION
1/2" - 1-1/2" PIPES

CONCRETE/MASONRY CONSTRUCTION
2" AND LARGER PIPES

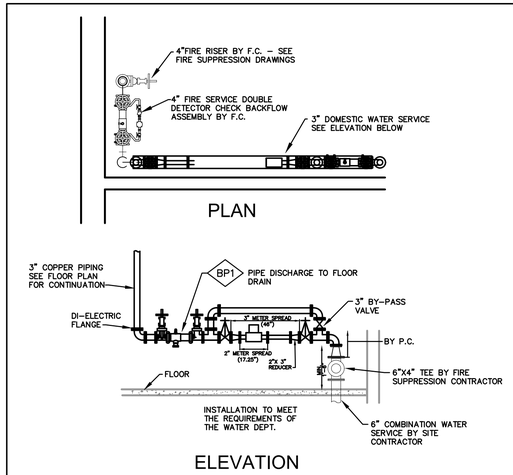
1. FULL HEIGHT INTERIOR WALL.
2. PIPE OR TUBING.
3. PIPE INSULATION, CONTINUOUS THROUGH WALL OPENING, SEE SCHEDULE FOR THICKNESS.
4. SCHEDULE 40 STEEL PIPE SLEEVE CAST OR GROUTED INTO WALL ASSEMBLY. ENDS FLUSH OR MAX. 2" BEYOND WALL SURFACE.
5. CAULK TO FILL VOID AT WALL/SLEEVE OPENING TO RESIST THE PASSAGE OF SMOKE.

2 PIPE PENETRATIONS THRU NON-RATED WALL
N.T.S.

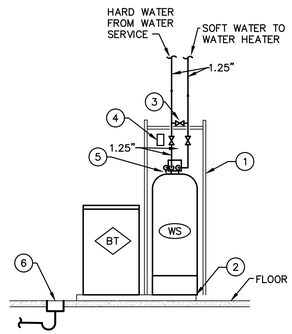


1. GALVANIZED THREADED ROD. ADJUST NUTS & RODS FOR PROPER ELEVATION.
2. CLEVIS PIPE HANGER. HANGER SHALL BE COPPER PLATED FOR COPPER PIPE TO ISOLATE DISSIMILAR METALS.
3. PIPE INSULATION.
4. PIPE.
5. 12" LONG, 18 GA. GALVANIZED INSULATION SHIELD. EQUAL TO ANVIL FIG. 168. CONTINUOUS INSULATION.
6. 18" LONG INSULATED PIPE SADDLES. BUCKAROOS "TRU-BALANCE" OR EQUAL. PROVIDE WITH 3.75 LB. DENSITY PNENOLIC FOAM INSULATION WITH VAPOR RETARDER JACKET & BOTTOM GALVANIZED METAL INSULATION SHIELD. SADDLES TO MEET 25/50 FLAME/SMOKE RATING.
7. PIPE INSULATION AND SADDLE INSULATION SHALL BE TIGHTLY ABUTTED TOGETHER. SEAL WITH 4" WIDE VAPOR RETARDER TAPE WITH FACTORY APPLIED JACKET WITH ACRYLIC ADHESIVE TO ASSURE VAPORTIGHT SEAL.
8. WOOD DECK & BEAM.
9. 90 DEGREE SIDE BEAM BRACKET WITH THREADED ROD INTO WOOD.

1 PIPE HANGERS — CLEVIS HANGER, INSULATED PIPE
N.T.S.



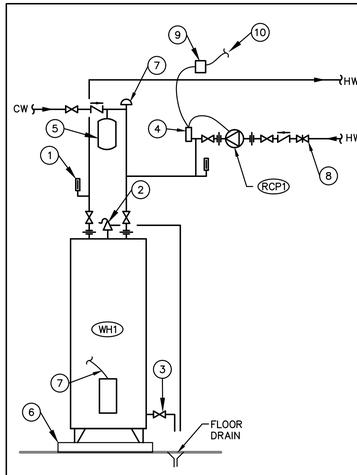
5 WATER SERVICE DETAIL
N.T.S.



DETAIL NOTES

1. PROVIDE "UNISTRUT" FRAME TO SUPPORT PIPING. SECURE FRAME TO PAD AT THE BOTTOM AND TO WALL AT THE TOP. PROVIDE HORIZONTAL FRAME MEMBERS TO SUPPORT HORIZONTAL PIPING. SECURE PIPING TO FRAME WITH PIPING CLAMPS. PIPING TO BE HAVE CONTINUOUS INSULATION AT SUPPORTS.
2. 4" CONCRETE PAD BY P.C. PROVIDE SURFACE APPLIED TREATMENT TO MINIMIZE DETERIORATION FROM SALT.
3. BY-PASS/BLENDING VALVE.
4. E.C. SHALL PROVIDE 120V RECEPTACLE FOR EACH TANK TRANSFORMER PLUG. COORDINATE LOCATION FOR SURFACE MOUNTING.
5. PIPE BACKWASH DISCHARGE TO LOCAL FLOOR SINK (TYP. EACH TANK).
6. FLOOR SINK OR DRAIN. NO GRATE.

4 DOMESTIC WATER SOFTENER SCHEMATIC
N.T.S.



DETAIL NOTES

1. THERMOMETER. (TYPICAL)
2. T&P SAFETY RELIEF VALVE. PIPE DISCHARGE TO FLOOR DRAIN W/ MIN. 2" AIR GAP.
3. DRAIN VALVE. PIPE DISCHARGE TO FLOOR DRAIN W/ MIN. 2" AIR GAP.
4. IMMERSION STAT TO CONTROL RECIRC. PUMP.
5. EXPANSION TANK. AMTROL # ST-5-C OR EQUAL.
6. 4" CONCRETE PAD, BY G.C.
7. VACUUM RELIEF VALVE.
8. BALANCING VALVE. BALANCE AT 1.25 GPM.
9. DDC SYSTEM CONTACT (BY CONTROLS CONTRACTOR) TO PROVIDE 7 DAY TIMER CONTROL.
10. ELECTRICAL POWER CONNECTION BY E.C.

3 DOMESTIC WATER HEATER - ELECTRIC FLOOR SET
N.T.S.

EQUIPMENT LIST

BP1	3" DOMESTIC WATER SERVICE REDUCED PRESSURE BACKFLOW PREVENTER. ASSE 1013 WATTS # 957 REFER TO SPECIFICATIONS FOR ADDITIONAL ACCEPTABLE MANUFACTURERS.
BP2	0.75" REDUCED PRESSURE BACKFLOW PREVENTER. SERVES HEATING HW SYSTEM. ASSE 1013 WATTS # LF009-QT REFER TO SPECIFICATIONS FOR ADDITIONAL ACCEPTABLE MANUFACTURERS.
BT	WATER SOFTENING BRINE TANK DIMENSIONS - 16"ø X 43" HIGH FURNISHED WITH WATER SOFTENER

POWERED EQUIPMENT

WS — SIMPLEX WATER SOFTENER
CONT. FLOW @ 11 PSI LOSS - 9 GPM
PEAK FLOW @ 15 PSI LOSS - 11 GPM
GRAIN CAP. - 30,000 GRAINS @ 15 LBS. SALT
RESIN VOLUME - 1 CF
ELECTRICAL - 120V/1PH, PLUG & CORD (1 REC./TANK)
BASIS OF DESIGN - CULLIGAN #HE1-9IN DF, REFER TO SPECIFICATIONS FOR ADDITIONAL ACCEPTABLE MANUFACTURERS.

WH1 — WATER HEATER #1, ELECTRIC.
STORAGE - 30 GALLONS NOM.
ELEMENTS - (2)-4KW, WIRED FOR SIMULTANEOUS USE.
ELECTRICAL - 208V/3PH
BASIS OF DESIGN - RHEEM # PRO+E30 WITH FACTORY INSTALLED HEAT TRAPS OR APPROVED EQUAL.

RCP1 — HOT WATER RECIRC. PUMP #1
CAPACITY - 1.25 GPM @ 9.5 FT. HD
ELECTRICAL - 120V/1PH 55 WATT, 0.48 AMPS
BASIS OF DESIGN - BELL & GOSSETT NBF-12U OR APPROVED EQUAL.

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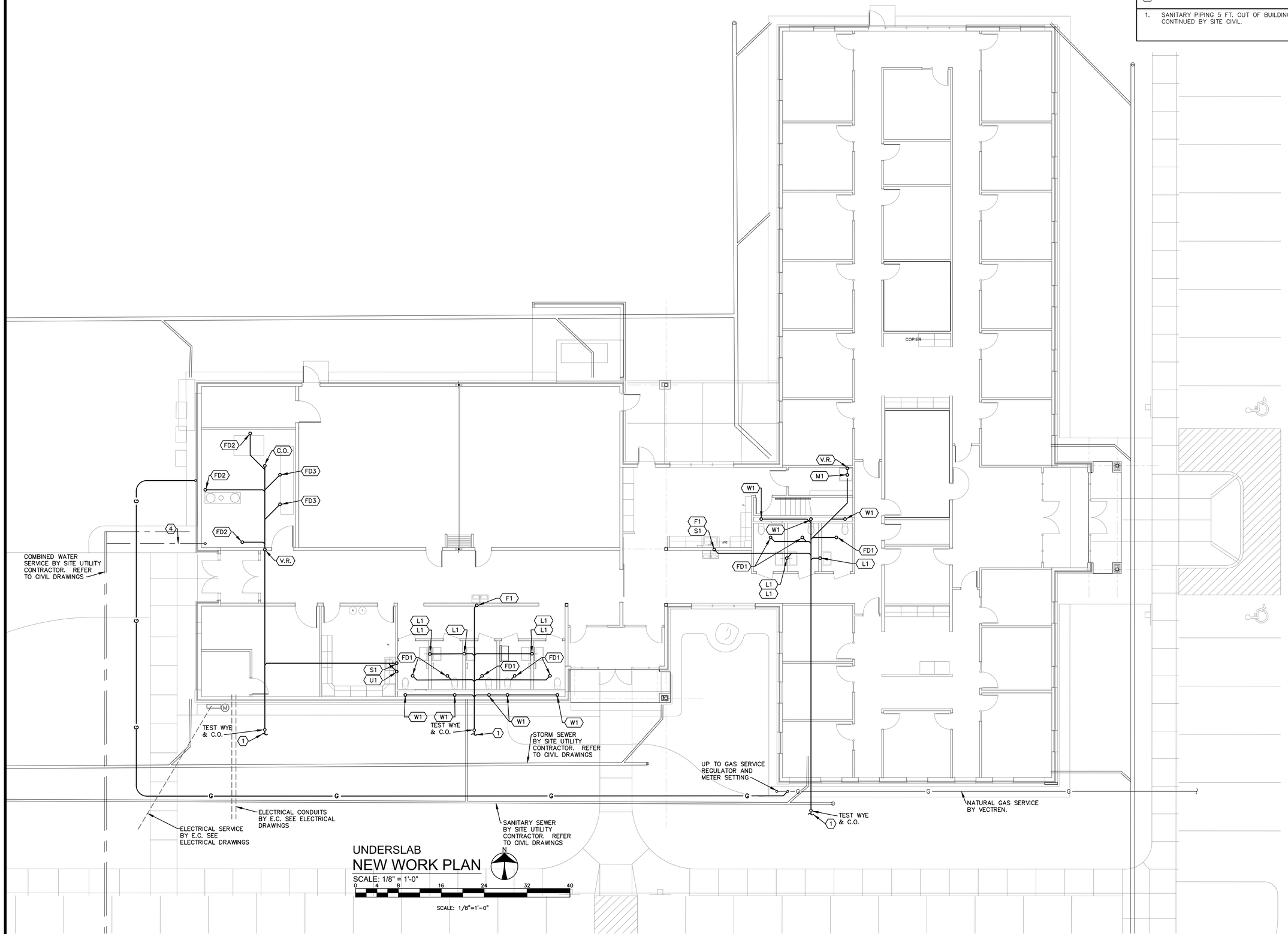
DETAILS

P0.3

CONSTRUCTION NOTES

1. SANITARY PIPING 5 FT. OUT OF BUILDING. PIPING CONTINUED BY SITE CIVIL.



UNDERSLAB
NEW WORK PLAN

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

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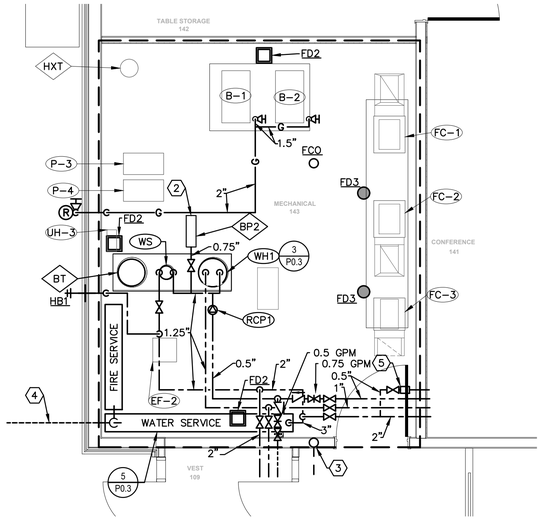
UNDERSLAB PLAN

P1.0

CONSTRUCTION NOTES

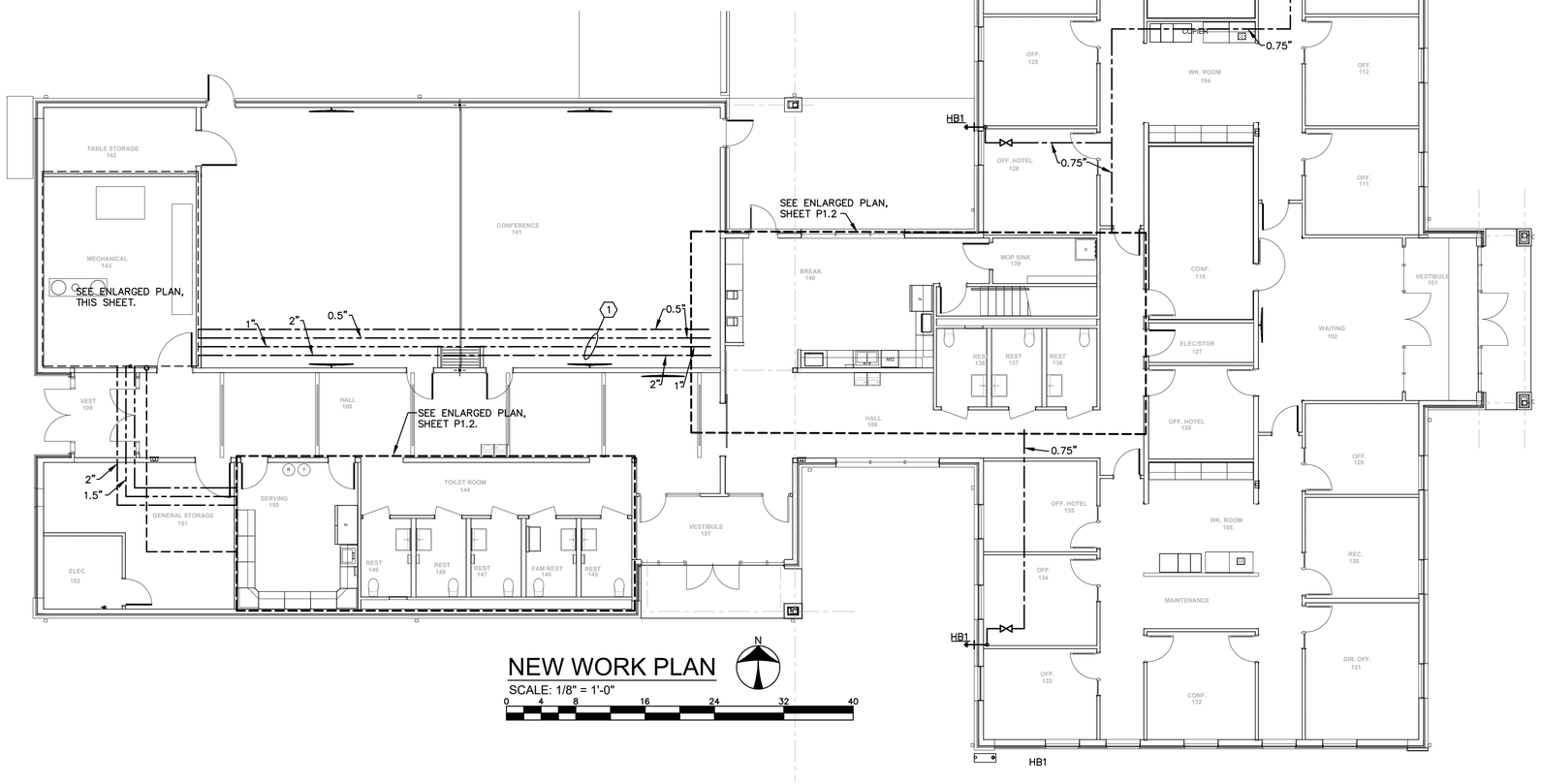
1. WATER PIPING RUN IN ABOVE CEILING SOFFIT.
2. PIPING CONTINUED BY H.C.
3. 3" VENT THRU ROOF.
4. COMBINED FIRE AND DOMESTIC WATER SERVICE. SEE SITE UTILITY PLANS.
5. PROVIDE 0.5" ASSE 1022 BACKFLOW PREVENTER (FOR COFFEE MAKER CONNECTION), WATTS # SD-3 OR APPROVED EQUAL. PIPE DISCHARGE TO NEAREST FLOOR DRAIN.



ENLARGED MECH. ROOM PLAN

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

0 2 4 8 12 16 20



NEW WORK PLAN

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

0 4 8 16 24 32 40

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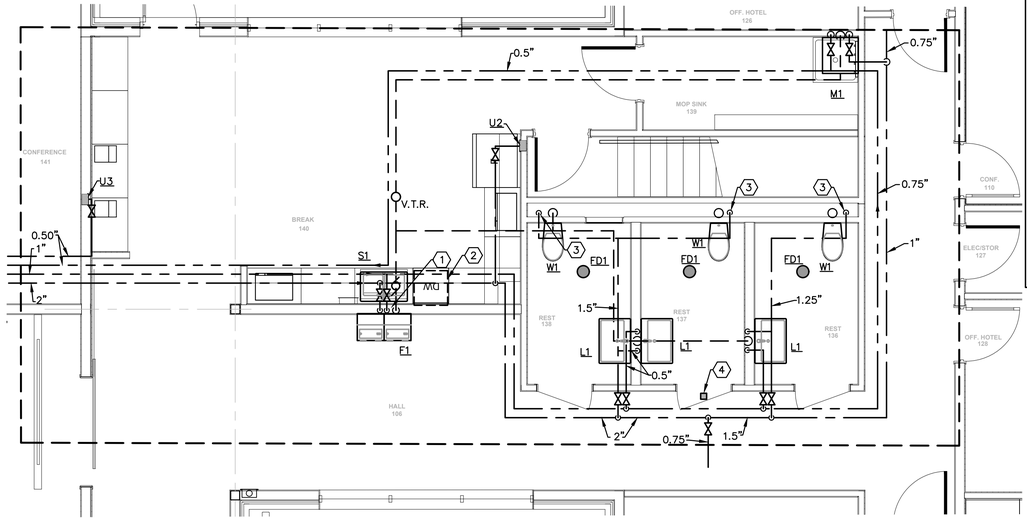
FIRST FLOOR PLAN

P1.1

CONSTRUCTION NOTES

1. PROVIDE A SECOND SUPPLY STOP ON HOT WATER RISER TO SERVE DISHWASHER.
2. UNDERCOUNTER DISHWASHER. CONNECT TO HOT WATER FROM ADJACENT SINK AND EXTEND WASTE TO THE INLET SIDE OF THE TRAP ON THE ADJACENT SINK. PROVIDE AIR GAP FITTING (DEARBORN # DB-CP-4P) ON WASTE.
3. PROVIDE WATER HAMMER ARRESTOR AT TOP OF DROP.
4. TRANSFORMER FOR FLUSH VALVES, SLOAN # EL-451, MOUNTED ABOVE THE CEILING. TURN TRANSFORMER OVER TO E.C. WHO WILL MOUNT AND POWER UNIT. P.C. SHALL PROVIDE ALL LOW VOLTAGE WIRING FROM TRANSFORMER TO FLUSH VALVES. A MAXIMUM OF 10 FLUSH VALVES ARE ALLOWED ON EACH TRANSFORMER. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
5. TRANSFORMER FOR FLUSH VALVES, SLOAN # EL-451, MOUNTED LOW IN CHASE NEAR ACCESS PANEL. TURN TRANSFORMER OVER TO E.C. WHO WILL MOUNT AND POWER UNIT. P.C. SHALL PROVIDE ALL LOW VOLTAGE WIRING FROM TRANSFORMER TO FLUSH VALVES. A MAXIMUM OF 10 FLUSH VALVES ARE ALLOWED ON EACH TRANSFORMER. FOLLOW MANUFACTURER'S RECOMMENDATIONS.



BOARD OFFICE PLUMBING

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

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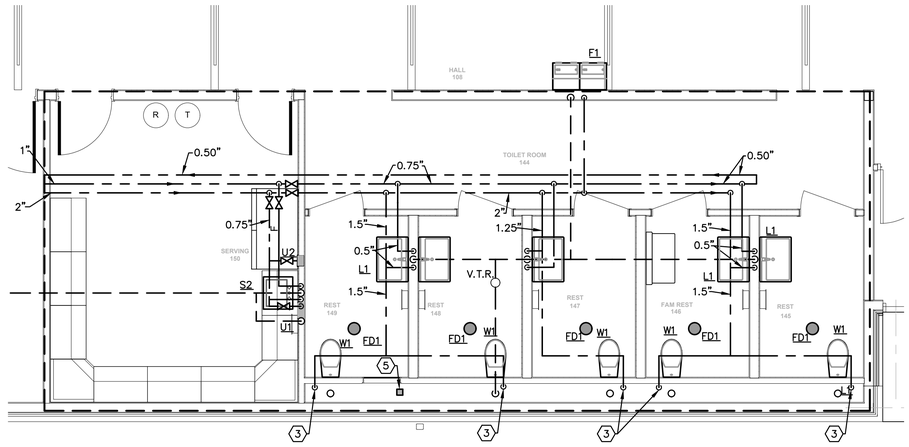

CONFERENCE CENTER PLUMBING

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

0 2 4 8 12 16 20

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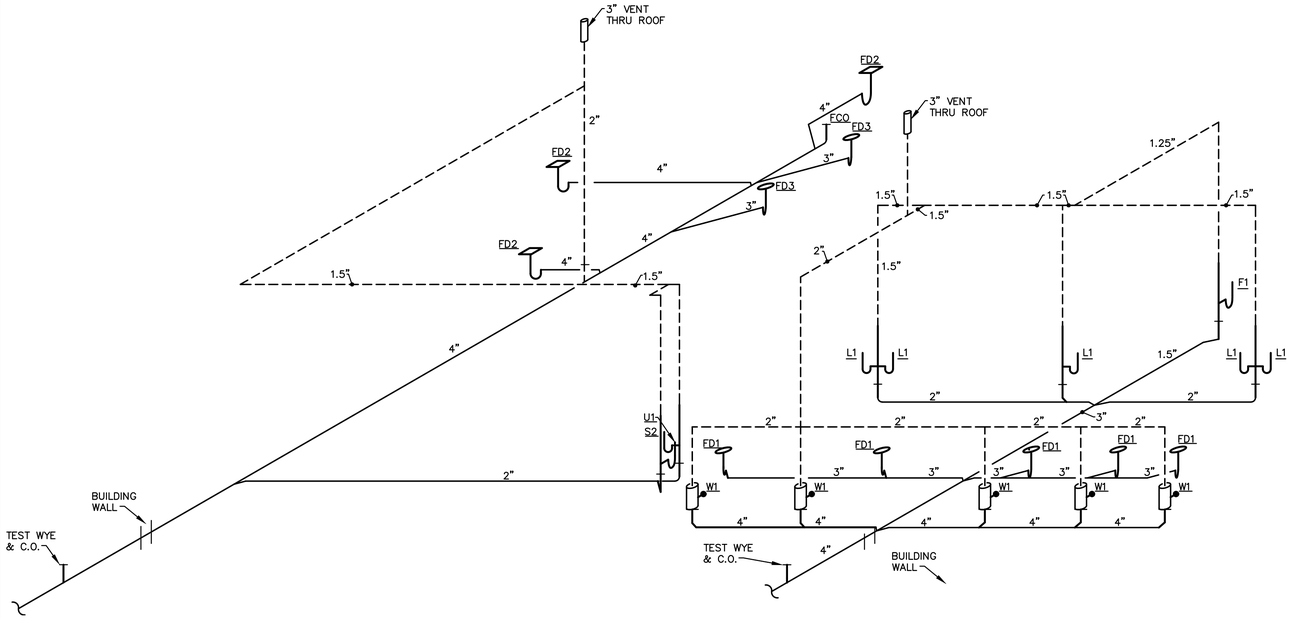
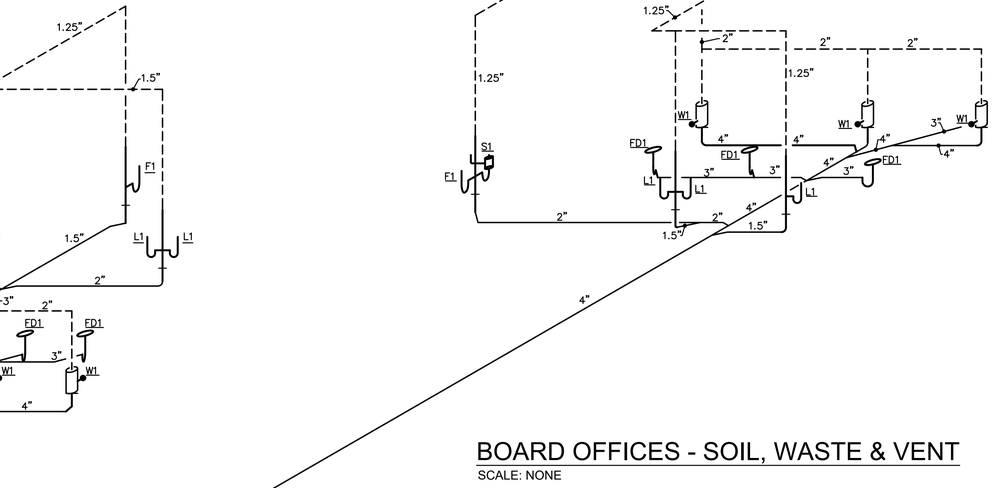
ENLARGED AREA PLANS

P1.2



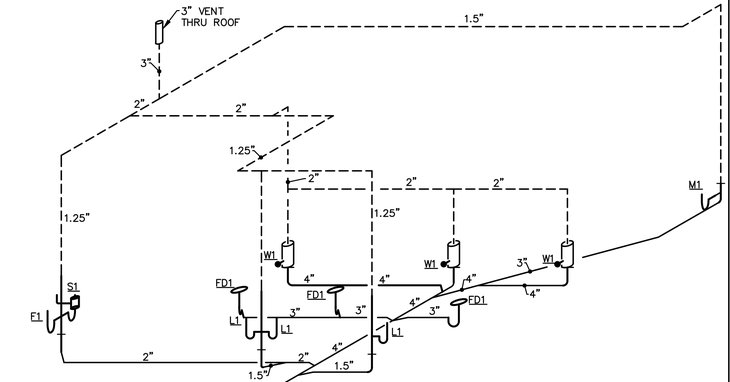
MECHANICAL ROOM - SOIL, WASTE & VENT

SCALE: NONE



CONFERENCE CENTER - SOIL, WASTE & VENT

SCALE: NONE



BOARD OFFICES - SOIL, WASTE & VENT

SCALE: NONE

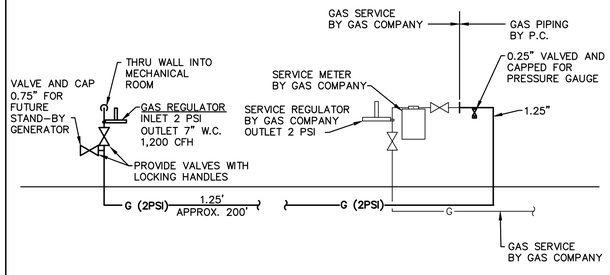
1 DRAIN, WASTE, AND VENT DIAGRAMS

N.T.S.

GAS LOAD SCHEDULE

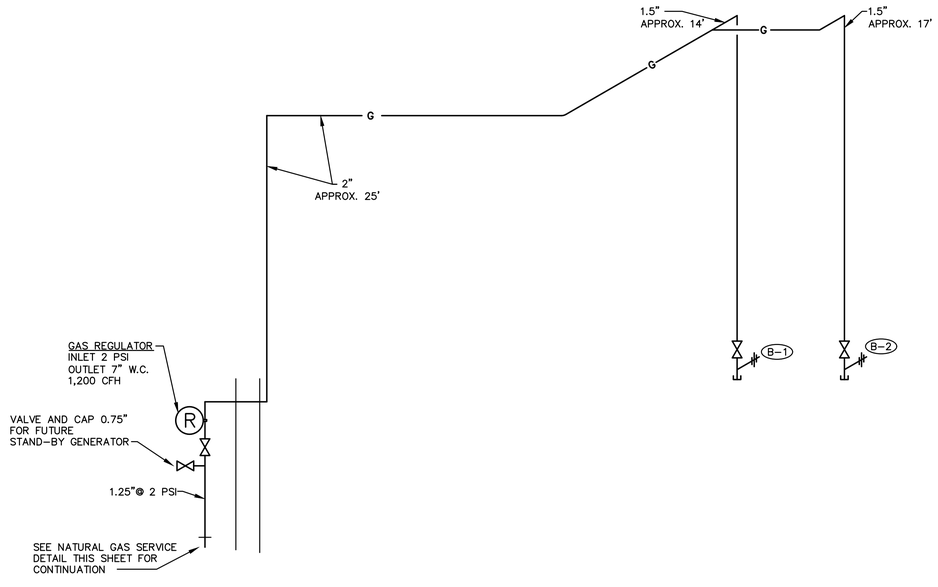
GAS PIPING SIZING NOTE
- PIPING SIZED USING THE LONGEST LENGTH METHOD.
- HIGH PRESSURE (2 PSI) GAS PIPING SIZED USING TABLE 402.4(22) OF THE 2015 IFC.
- LOW PRESSURE (7"W.C.) GAS PIPING SIZED USING TABLE 402.4(2) OF THE 2015 IFC.

ITEM	LOAD
BOILERS (2 @ 600 EA.)(B1 & B2)	1,200 CFH
FUTURE STAND-BY GENERATOR	310 CFH
TOTAL	1,510 CFH



4 NATURAL GAS SERVICE RISER

N.T.S.

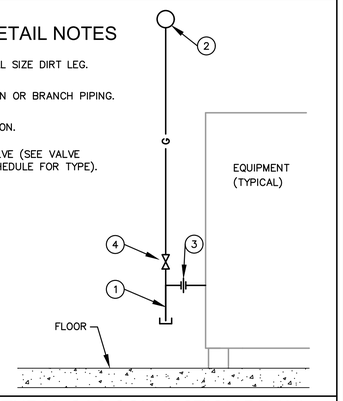


3 NATURAL GAS PIPING SCHEMATIC

N.T.S.

DETAIL NOTES

1. FULL SIZE DIRT LEG.
2. MAIN OR BRANCH PIPING.
3. UNION.
4. VALVE (SEE VALVE SCHEDULE FOR TYPE).



2 NATURAL GAS CONNECTION DETAIL

N.T.S.

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D.W.V. DIAGRAMS AND GAS DETAILS

P2.1

GENERAL NOTES - HVAC

1. PROVIDE COMPLETE AND FUNCTIONAL HVAC SYSTEMS PER HVAC PLANS INCLUDING FURNISHING, INSTALLING, TESTING AND WARRANTY OF ALL WORK.
2. WORK SHALL BE IN ACCORDANCE WITH THE 2017 OHIO BUILDING AND MECHANICAL CODES INCLUDING REFERENCED CODES AND STANDARDS, ALL FEDERAL, STATE, AND LOCAL CODES AND ALL APPLICABLE LAWS, ORDINANCES AND REGULATIONS.
3. WORK SHALL BE PERFORMED USING BEST QUALITY INSTALLATION PRACTICE BY A QUALIFIED TRADE CONTRACTOR AND THEIR QUALIFIED SUBCONTRACTORS. ALL CONTRACTORS SHALL BE LICENSED AND BE BONDED FOR THE WORK.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA AND OWNER SAFETY STANDARDS AND PRACTICES. ALL ON SITE PERSONNEL SHALL BE SAFETY TRAINED AND OWNER CERTIFIED.
5. OBTAIN REQUIRED PERMITS RELATED TO THE WORK AND PAY ALL PERMIT AND INSPECTION FEES.
6. THE AUTHORITY HAVING JURISDICTION SHALL INSPECT AND APPROVE ALL WORK. PROVIDE A FINAL CERTIFICATE OF APPROVAL FROM THE AUTHORITY HAVING JURISDICTION AND PRESENT TO THE OWNER BEFORE REQUESTING FINAL PAYMENT AND RELEASE OF RETAINAGE.
7. ALL EQUIPMENT AND MATERIAL REQUIRED FOR COMPLETE AND FUNCTIONAL HVAC SYSTEMS ARE INCLUDED IN THE CONTRACT.

GENERAL REQUIREMENTS - HVAC

1. PROTECT ALL FURNISHED MATERIAL AND EQUIPMENT FROM THEFT AND DETERIORATION OR CONTAMINATION DUE TO WEATHER OR CONSTRUCTION ACTIVITIES.
2. PROTECT OWNERS PROPERTY AND PROPERTY OF OTHER CONTRACTORS.
3. REMOVE ALL CONSTRUCTION DEBRIS FROM SITE. RECYCLE DEBRIS WHERE POSSIBLE. DISPOSE OF ALL HAZARDOUS MATERIAL IN ACCORDANCE WITH ENVIRONMENTAL LAWS.
4. PROVIDE ALL CUTTING AND PATCHING REQUIRED TO INSTALL MATERIAL AND EQUIPMENT.
5. EXISTING ROOF PATCHING SHALL BE SUBCONTRACTED TO A BONDED ROOFING CONTRACTOR FAMILIAR WITH THE ROOFING SYSTEM. MAINTAIN ANY REMAINING ROOF WARRANTY.
6. PROVIDE APPROPRIATE FIRESTOPPING SYSTEM FOR ANNULAR SPACE OPENINGS AROUND DUCT AND PIPE PENETRATIONS THROUGH FIRE RESISTANCE RATED CONSTRUCTION. ANNULAR SPACE OPENINGS AT DUCT OR PIPE PENETRATIONS IN NON RATED CONSTRUCTION TO BE CLOSED AIR AND WATER TIGHT.
7. MATERIALS AND EQUIPMENT SHALL BE ONE OF THE BRAND OR MANUFACTURERS LISTED OR AN APPROVED EQUAL.
8. ELECTRONIC SHOP DRAWINGS SHALL BE PROVIDED IN .PDF FORMAT FOR THE ENGINEER'S APPROVAL FOR ALL MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL BE SPECIFICALLY EDITED TO ELIMINATE SUPERFLUOUS INFORMATION AND SHALL CLEARLY SHOW SPECIFICS FOR THE MATERIAL AND EQUIPMENT PROVIDED.
9. COORDINATE INSTALLATION OF ACTUAL EQUIPMENT AND SYSTEMS PROVIDED WITH OTHER TRADES AND NEW OR EXISTING CONDITIONS.
10. INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. PROVIDE REQUIRED CLEARANCES TO MEET CODE REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS AND MAINTENANCE SERVICE.
11. ALL WORK AREAS SHALL BE CLEANED TO MATCH ORIGINAL CONDITION.
12. PROVIDE TESTING, ADJUSTING AND BALANCING (TAB) REPORTS FOR AIR AND WATER SYSTEMS. A CERTIFIED AABC OR NEBB FIRM SHALL PROVIDE THE BALANCE.
13. PROVIDE FINAL COORDINATION/INSTALLATION DRAWINGS TO THE OWNER IN BOUND PAPER AS WELL AS ELECTRONIC FORMAT FOR RECORD.
14. MAINTAIN RECORD DRAWINGS AND PROVIDE TO THE OWNER OR HIS AGENT.
15. PROVIDE TWO (2) BOUND, PAPER COPIES OF ALL OPERATING AND MAINTENANCE MANUALS. PROVIDE AN ELECTRONIC COPY OF THE OPERATING AND MAINTENANCE MANUAL.
16. PROVIDE WARRANTY FOR ALL WORKMANSHIP, EQUIPMENT AND MATERIAL. WARRANTY SHALL BE 1 YEAR FOR PART AND LABOR, PROVIDE EXTENDED WARRANTY PERIOD FOR PARTS AND/OR LABOR AS IDENTIFIED OR AS STANDARD FOR CERTAIN ITEMS OF EQUIPMENT.
17. PROVIDE TRAINING AND MAINTENANCE INSTRUCTION FOR SYSTEMS AND EQUIPMENT TO THE OWNER. TRAINING SHALL BE 16 HOURS OF TIME WITH MAXIMUM TRAINING PERIOD OF 4 HOURS.

PIPING LEGEND

- INDICATES DIRECTION OF FLOW
- H — HOT WATER SUPPLY
- — H — HOT WATER RETURN
- CD — CONDENSATE DRAIN
- L — REFRIGERANT – LIQUID
- S — REFRIGERANT – SUCTION
- HPG — REFRIGERANT – HIGH/LOW PRESSURE GAS
- SHUT–OFF VALVE, SEE SCHEDULE FOR TYPE
- CHECK VALVE
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- PRESSURE REDUCING VALVE
- TWO–WAY CONTROL VALVE
- THREE–WAY CONTROL VALVE
- PRESSURE RELIEF VALVE
- FLEXIBLE PIPE CONNECTOR
- STRAINER, Y–TYPE
- CAP
- PIPE HOSE THREAD CONNECTION
- CONNECTION, BOTTOM
- CONNECTION, TOP
- CONNECTION, SIDE
- ELBOW, 90°, LONG RADIUS
- ELBOW, 45°
- ELBOW, TURNED UP
- ELBOW, TURNED DOWN
- REDUCER
- UNION, SCREWED
- P — PRESSURE GAUGE
- TEMPERATURE GAUGE
- MV — AIR VENT
  MV = MANUAL
  AV = AUTOMATIC

DUCTWORK LEGEND

- 20/12 / 20/12 — RECTANGULAR DUCT
  FIRST FIGURE IS SIDE SHOWN
- 10"ø / 10"ø — ROUND DUCT
  DIAMETER INDICATED
- DUCT WITH INTERIOR ACOUSTIC LINER
- FLEXIBLE FABRIC DUCT CONNECTION
- INSULATED FLEXIBLE DUCT
- R — CHANGE OF ELEVATION
  R = RISE, D = DROP
- ELBOW WITH TURNING VANES
- 20/12 — ROUND RUNOUT DUCT TAP TO RECTANGULAR DUCT WITH SPIN–IN FITTING, SEE DETAIL
- 10"ø — ROUND RUNOUT DUCT FITTING IN ROUND DUCT MAIN
- VOLUME DAMPER
- FD — FIRE DAMPER
- SD — SMOKE DAMPER
- FS — COMBINATION FIRE/SMOKE DAMPER
- S — DUCT MOUNTED SMOKE DETECTOR
- SUPPLY DUCT SECTION – RISE, DROP
- RETURN DUCT SECTION – RISE, DROP
- VARIABLE AIR VOLUME UNIT WITH REHEAT COIL
- VARIABLE AIR VOLUME UNIT WITHOUT REHEAT COIL
- S1–8" / 300 — SUPPLY AIR DEVICE S1
  SEE SCHEDULE AND DETAIL
  8" = NECK SIZE
  300 = REQUIRED AIR FLOW (CFM)
- R1 — TRANSFER AIR DEVICE
  24"X24" WITH PLENUM
  R1 DEVICE TAG, SEE SCHEDULE AND DETAIL
- R1 — TRANSFER AIR DEVICE
  24"X12" WITH PLENUM
  R1 DEVICE TAG, SEE SCHEDULE AND DETAIL
- R1 / 300 — RETURN/EXHAUST/TRANSFER GRILLE R1
  R1 = DEVICE TAG, SEE SCHEDULE AND DETAIL
  300 = REQUIRED AIR FLOW (CFM)
  DEVICE SIZE AS DEPICTED ON DRAWINGS OR AS INDICATED IN AIR DEVICE SCHEDULE
- S2–24/12 / 300–8'6" — SIDEWALL AIR DEVICE
  SEE AIR DEVICE SCHEDULE
  24/12 = DEVICE SIZE
  300 = AIR FLOW (CFM)
  8'6" = MOUNTING HEIGHT (AFF)
- S3–6" / 150–2 — LINEAR SLOT PLENUM
  S3 – DEVICE TAG, SEE AIR DEVICE SCHEDULE
  6" = ROUND DUCT CONNECTION SIZE
  150 = AIR FLOW (CFM)
  2 = NO. OF SLOTS
- (E) / 120 — EXISTING AIR DEVICE
  REBALANCE TO AIR FLOW INDICATED
- T — ROOM TEMPERATURE SENSOR
- CO2 — ROOM CO2 SENSOR
  (MAY BE IN COMMON HOUSING W/ TEMP.)
- T — THERMOSTAT

GENERAL LEGEND

EC	ELECTRICAL CONTRACTOR.
FC	FIRE PROTECTION CONTRACTOR.
GC	GENERAL CONTRACTOR.
HC	HVAC CONTRACTOR.
PC	PLUMBING CONTRACTOR.
TC	TEMPERATURE CONTROLS CONTRACTOR.
NIC	NOT IN CONTRACT.
AFF	ABOVE FINISHED FLOOR – TO BOTTOM OF ITEM UNLESS INDICATED OTHERWISE IN DRAWING.
(E)	EXISTING.
ES	EQUIPMENT SUPPLIER.
EM	EMERGENCY.
MH	MOUNTING HEIGHT.
S	SURFACE MOUNTED.
WP	WEATHER PROOF.
3	NOTE SYMBOL – APPLIES ONLY TO SHEET ON WHICH IS SHOWN.
2	DETAIL NOTE SYMBOL – APPLIES ONLY TO DETAIL ON WHICH IS SHOWN.
H–1	EQUIPMENT REFERENCE SYMBOL. ELECTRICAL CONNECTION REQUIRED.
H–1	EQUIPMENT REFERENCE SYMBOL. NO ELECTRICAL CONNECTION REQUIRED.
123	ROOM NUMBER.
B / H2	DETAIL SYMBOL DETAIL "B" SHOWN ON SHEET H2.
A / H1	SECTION SYMBOL SECTION "A" DESIGNATION, SHOWN ON SHEET H1.
	CONNECTION, NEW TO EXISTING.
FD1	"UP TO" SYMBOL – INDICATES ITEM SERVED ON FLOOR ABOVE.
	1 HOUR FIRE PROTECTION SEE SPECIFICATION FOR PENETRATION DETAILS.
	2 HOUR FIRE PROTECTION SEE SPECIFICATION FOR PENETRATION DETAILS.
	3 HOUR FIRE PROTECTION SEE SPECIFICATION FOR PENETRATION DETAILS.
	ITEM TO BE REMOVED.
	EXISTING ITEM TO REMAIN.
	NEW ITEM.

INDEX OF DRAWINGS

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REVISIONS
REBID

COMM. NUMBER	DATE
1615.04	5/12/2021
DRAWN BY: DJZ	CHECKED BY: JDZ

LEGENDS & GENERAL REQUIREMENTS

H0.1

DUCT INSULATION SCHEDULE 0713

QUALITY ASSURANCE
INSULATION SHALL MEET NFPA 255, 25 FLAME SPREAD & 50 SMOKE DEVELOPMENT, UL 181, NFPA 90A/90B, ASTM 1136, AND ASTM E84.

MINIMUM INSULATION THICKNESS SHALL COMPLY WITH ASHRAE 90.1–2010.

PRODUCTS
– PROTECTIVE METAL JACKET COVERS – 0.016" ALUMINUM.

EXECUTION
– INSULATION SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

– DUCTWORK SHALL BE SEALED PRIOR TO INSTALLATION OF INSULATION.

– ALL EXTERIOR DUCT INSULATION SHALL BE SEALED WATERTIGHT.

– REINSULATE DUCTWORK WHERE EXISTING INSULATION IS DAMAGED IN CONNECTION OF NEW DUCTWORK.

– ALL INSULATION VAPOR BARRIERS SHALL BE MAINTAINED.

– ADHESIVE SHALL BE APPLIED TO AID INSTALLATION.

– REQUIRED INTERNAL DUCT LINING IS INDICATED ON DRAWINGS. LINED DUCTWORK NEED NOT BE FURTHER INSULATED.

– DUCT COILS, REHEAT BOX COILS, CONTROL DAMPER, FIRE DAMPERS & SMOKE DAMPERS SHALL BE INSULATED IF SYSTEM INSULATION IS INDICATED.

– ALL INSULATION SHALL BE MARKED WITH MANUFACTURER, "R" VALUE, FLAME SPREAD & SMOKE DEVELOPMENT.

SYSTEM	INSULATION THICKNESS	TYPE	LOCATION	NOTES
SUPPLY AIR DUCT	1.5"	1	CONCEALED	
SUPPLY AIR DUCT	2"	2	EXPOSED	
SUPPLY AIR DUCT	2"	1	IN ATTIC	
OUTDOOR AIR DUCT & PLENUMS	2"	1	IN ATTIC	
OUTDOOR AIR DUCT & PLENUMS	2"	2	EXPOSED	
RETURN AIR DUCT	1"	3	AHU–1	
RETURN AIR DUCT	1"	1	FC–1, FC–2, FC–3	
TRANSFER AIR DUCT	1"	3	CONCEALED	
AHU RELIEF AIR DUCT & PLENUMS	2"	1	IN ATTIC	
EXHAUST AIR DUCT	–	–	CONCEALED	
EXHAUST AIR DUCT	–	–	IN ATTIC	

TYPE	BASIS OF DESIGN	APPROVED EQUALS	DESCRIPTION
1	OWENS–CORNING SOFTR TYPE 75	KNAUF JM CERTAIN TEED	MATERIAL FIBERGLASS DUCT WRAP ON DUCT K = 0.30 @ 75 DEG. F. DENSITY – 0.75 PCF JACKET – FOIL REINFORCED JOINTS – OVERLAPPING STAPLE ALL JOINTS AT 6" CENTERS. FASTENERS – MECHANICAL ON 24" & WIDER DUCT. ADHESIVE – NONE TAPE – 3" WIDE
2	OWENS–CORNING TYPE 703	KNAUF JM CERTAIN TEED	MATERIAL FIBERGLASS BOARD ON DUCT K = 0.23 @ 75 DEG. F. DENSITY – 3.0 PCF JACKET – ASJ JOINTS – BUTT FASTENERS – METAL PINS & CLIPS ON 12" CENTERS ADHESIVE – NONE TAPE – 3" WIDE VAPOR PATCHED
3	OWENS–CORNING QUIET R TYPE 300	KNAUF JM CERTAIN TEED	MATERIAL FIBERGLASS BOARD LINER K = 0.23 @ 75 DEG. F. DENSITY – 3.0 PCF JACKET – NONE JOINTS – BUTT FASTENERS – METAL PINS & CLIPS ON 12" CENTERS ADHESIVE – NONE TAPE – NONE

VALVE SCHEDULE 0523

GENERAL NOTES FOR VALVES:

QUALITY ASSURANCE
VALVES SHALL COMPLY WITH ALL APPLICABLE ANSI, ASTM AND ASME STANDARDS.

PRODUCTS
VALVES LISTED BELOW ARE SHUT–OFF, BALANCING, CHECK & DRAIN SHUT–OFF FOR HOT WATER, CHILLED WATER PIPING AND STEAM & CONDENSATE RETURN PIPING SYSTEMS.

WORKING PRESSURES SHALL EXCEED THOSE IMPOSED BY THE SERVICE APPLIED.

VALVES LOCATED IN INSULATED PIPING SHALL HAVE EXTENDED SHAFTS AND/OR OPERATING HANDLES.

PROVIDE FLOW MEASURING GAUGES WITH COCKS, HOSES & CONNECTORS FOR BALANCING VALVES. PROVIDE METERING TOOL.

PROVIDE INSULATION BOXES ON BALANCING VALVES ON CHILLED WATER PIPING.

"E1" VALVES ARE ONLY TO BE UTILIZED ON RUNOUT PIPES TO HEATING OR COOLING DEVICES.

VALVE MANUFACTURERS:
SHUT–OFF VALVES – ANVIL, APOLLO, CONBRACO, CRANE, MILWAUKEE, NIBCO, WATTS
CHECK VALVES – NIBCO, STOCKHAM, WATTS
BALANCING VALVES – BELL & GOSSETT, ARMSTRONG, WATTS

EXECUTION
VALVES SHALL BE INSTALLED WITH STEM ABOVE CENTERLINE OF PIPE.

INTERNALS SHALL BE REMOVED AND THE REMAINING PORTIONS PROTECTED AGAINST HEAT DAMAGE DURING SOLDERING AND/OR BRAZING.

PROVIDE HOSE–THREAD ADAPTERS ON DRAIN VALVES NOT PIPED TO DRAINAGE POINT.

PACKING GLANDS SHALL BE TIGHTENED BEFORE PLACING IN SERVICE.

PIPING SYSTEM		VALVE TYPE			
		SHUT–OFF		CHECK	BALANCING
HOT WATER – 0.50" TO 2.5"		B1		C1	E1, E2
TYPE	DESCRIPTION	TYPE	DESCRIPTION	TYPE	DESCRIPTION
B1	**BALL VALVE** NIBCO T–580–70/T–585–70 150 W.W.P. 2–PIECE FULL PORT BRONZE BODY THREADED/PRESS ENDS CHROME PLATED BRONZE BALL/BRONZE STEM TFE SEAT AND SEAL HANDLE.	C1	**CHECK VALVE** NIBCO T–413–Y 125 W.W.P. BRONZE BODY Y–PATTERN, THREADED ENDS, RENEWABLE BRONZE SWING DISC TFE SEAT RING	E1	**BALANCING VALVE** BELL & GOSSETT MODEL CB 125 W.W.P. BRONZE BODY BRASS BALL THREADED ENDS READOUT & DRAIN PORTS TFE SEATS CALIBRATED NAMEPLATE HANDLE WITH MEMORY STOP
				E2	**BALANCING VALVE** BELL & GOSSETT MODEL CB 125 W.W.P. CAST IRON BODY BRASS BALL FLANGED OR GROOVED ENDS READOUT & DRAIN PORTS TFE SEATS CALIBRATED NAMEPLATE HANDLE WITH MEMORY STOP

PIPE INSULATION SCHEDULE

QUALITY ASSURANCE
PRODUCTS SHALL COMPLY WITH ASTM E84 FIRE, SMOKE RATINGS:
– INDOORS – FLAME SPREAD RATING OF 25 OR LESS, SMOKE DEVELOPED RATING OF 50 OR LESS.
– OUTDOORS – FLAME SPREAD RATING OF 75 OR LESS, SMOKE DEVELOPED RATING OF 150 OR LESS.

GREEN GUARD INDOOR AIR QUALITY CERTIFIED.

THICKNESSES SHALL COMPLY WITH MOST CURRENT VERSION OF ASHRAE 90.1.

PRODUCTS
REQUIREMENTS ARE FOR BOTH SUPPLY & RETURN SYSTEMS.

MANUFACTURERS:
FIBERGLASS – JOHNS MANVILLE, OWENS CORNING, KNAUF, MANSON INSULATION
CALCIUM SILICATE – PABCO, CALSILITE, JOHNS MANVILLE (IIG)
FLEXIBLE ELASTOMERIC – AEROFLEX, ARMACELL, RUBATEX
POLYISOCYANURATE – ITW

EXECUTION
INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.

COLD SERVICE PIPE INSULATION AND VAPOR BARRIER/JACKET TO BE CONTINUOUS THRU FLOOR AND WALL SLEEVES AT ALL PIPE DEVICES AND PUMP CASINGS.

INSULATION AND VAPOR BARRIER TO BE CONTINUOUS AT PIPE HANGERS AND SUPPORTS ON HORIZONTAL PIPING.

VERTICAL PIPE SUPPORTS SHALL ATTACH DIRECTLY TO PIPE. INSULATE SUPPORT AND OTHER SURFACES WITH FLEXIBLE CLOSED CELL INSULATION, SAME THICKNESS AS SYSTEM INSULATION ON COLD SERVICE PIPES TO PREVENT CONDENSATION.

EXISTING PIPE INSULATION THAT IS DAMAGED, REMOVED OR NOT PRESENT WITHIN THE CONSTRUCTION AREA SHALL BE INSULATED PER SCHEDULE FOR THE SYSTEM SERVICE INDICATED.

INSULATION MAY BE OMITTED ON HOT WATER VALVES AND DEVICES 2" AND SMALLER PIPE SIZE (EXCEPT WITHIN 12" OF AIR REHEAT BOXES), HOT WATER PIPING WITHIN UNIT HEATERS, EXPOSED COOLING COIL CONDENSATE PIPING AND SAFETY RELIEF VALVE PIPING. SEE HEATING COIL PIPING DETAIL.

SYSTEM & SIZE	INSULATION THICKNESS	TYPE	LOCATION
HOT WATER, ≤ 1.25"	1.5"	F1	INTERIOR
HOT WATER, ≥ 1.5"	2"	F1	INTERIOR
DOMESTIC MAKE–UP WATER	0.50"	F1	INTERIOR
REFRIGERANT LIQUID	0.75"	E1	INTERIOR/EXTERIOR
REFRIGERANT SUCTION	0.75"	E1	INTERIOR/EXTERIOR
COOLING COIL CONDENSATE	0.50"	F1	INTERIOR

TYPE	BASIS OF DESIGN	APPROVED EQUALS	DESCRIPTION
F1	OWENS CORNING #ALL SERVICE JACKET	– KNAUF #1000° PIPE, – JOHNS MANVILLE #MICRO–LOK HP	* PREFORMED, TUBULAR, INORGANIC GLASS FIBER WITH RESIN BONDING. * K=0.24 @ 100 DEG. F. * 3.5 – 5.5 PCF. * WHITE FSRK JACKET. * LONGITUDINAL LAP, SELF–SEALING ADHESIVE. * ELBOWS, TEES, VALVES, CAPS, ETC., WHITE ONE PIECE, PREMOLDED 25/50 0.20" PVC FITTING COVERS WITH HIGH DENSITY FIBERGLASS INSULATION INSERTS SAME THICKNESS, K=0.26 EQUAL TO ZESTON OR PROTO.
E1	ARMACELL #AP ARMAFLEX FS	– AEROFLEX – RUBATEX	* FLEXIBLE, PRE–FORMED, CLOSED CELL, ELASTOMERIC TUBULAR INSULATION. * CLEAN PIPE SURFACE WITH DENATURED ALCOHOL PRIOR TO INSULATING. * K=0.25 @ 75 DEG. F. * 25/50 FLAME/SMOKE RATING. * PROVIDE 0.20" ROLL ALLOY ALUMINUM EMBOSSED JACKET, SEAM SIDE DOWN WITH 0.50" WIDE, 0.015" S.S. STRAP AND SEALS EQUAL TO PABCO–CHILDERS METALS/GERRARD.

NOTE: ALUMINUM JACKET REQUIRED ONLY ON EXTERIOR PIPE.

DUCT CONSTRUCTION AND SEALING 3113

- FOLLOW SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE – THIRD EDITION.
- DUCT TO BE HOT DIPPED, GALVANIZED BOTH SIDES, G90 PER ASTM A653 EXCEPT WHERE NOTED OTHERWISE.
  EXPOSED DUCTWORK IN FINISHED AREAS TO BE PAINTED SHALL BE HOT DIPPED, HEAT TREATED GALVANEALED BOTH SIDES, UNIFORM GRAY MATTE APPEARANCE, A40 PER ASTM A653.
- ROUND OR FLAT OVAL DUCTWORK (2" S.P. AND HIGHER)
  - CONTINUOUS HELICAL (SPIRAL) LOCK SEAM CONSTRUCTION WITH SLIP CONNECTIONS. GASKETED FLANGES ARE NOT ACCEPTABLE.
  - USE 45 DEG. LATERAL TEE WHEREVER POSSIBLE.
  - 90 DEG. TEES SHALL BE CONICAL.
  - DIE STAMPED ELBOWS, r/D = 1.5 (MIN.)
  - RADIUSED, ANGLED (15 DEG. MAX.) OR MITERED (15 DEG. MAX.) OFFSETS
  - CONCENTRIC TRANSITIONS, 0 = 45 DEG. MAX.
  - ECCENTRIC TRANSITIONS, 0 = 30 DEG. MAX.
- ROUND DUCTWORK (1" S.P. OR LESS) SAME AS ABOVE EXCEPT:
  - LONGITUDINAL SEALED SEAM ACCEPTABLE AT FINAL AIR DEVICE ONLY.
  - STANDARD TEES ALLOWED.
  - SEGMENTED ELBOWS ALLOWED.
- RECTANGULAR DUCTWORK (2" S.P. AND HIGHER)
  - FLAT SLIP, STANDING DRIVE OR GASKETED DUCT SYSTEM JOINTS.
  - RADIUS OR SQUARE THROAT WITH DOUBLE WALL TURNING VANES ELBOW.
  - 45 DEG. ENTRY OR CONICAL SPIN IN BRANCH CONNECTIONS.
  - RADIUSED, ANGLED (15 DEG. MAX.) OR MITERED (15 DEG. MAX.) OFFSETS.
  - CONCENTRIC TRANSITIONS, 0 = 45 DEG. MAX.
  - ECCENTRIC TRANSITIONS, 0 = 30 DEG. MAX.
  - BRANCH DUCTS SHALL BE CONICAL TEE FITTINGS.
  - SQUARE THROAT, RADIUS HEEL 90 DEG. ELBOWS ARE NOT PERMITTED WITHOUT THE USE OF TURNING VANES.
- RECTANGULAR DUCTWORK (1" S.P. OR LESS) SAME AS ABOVE EXCEPT:
  - TURNING VANES IN ELBOWS NOT REQUIRED FOR AIR VELOCITIES LESS THAN 800 FPM.
  - STRAIGHT TAP AND STANDARD SPIN IN BRANCH CONNECTIONS PERMITTED.

  DUCT HANGER SUPPORTS SHALL DIRECTLY ATTACH TO DUCTWORK. EXTERIOR DUCT INSULATION WRAP SHALL BE APPLIED OVER DUCT AND HANGER SUPPORTS. ANGLE OR UNISTRUT SUPPORTS SHALL BE INSULATED A MINIMUM OF 4" BEYOND DUCT BEARING POINT TO PREVENT CONDENSATION.
- FLEXIBLE DUCTWORK (SUPPLY/RETURN/TRANSFER/EXHAUST)
  - CHLORINATED POLYETHYLENE INNER FABRIC – BLACK COLOR
  - R = 4.2 (MIN.) FIBERGLASS INSULATION.
  - REINFORCED METALIZED VAPOR BARRIER, 0.05 PERM.
  - UL 181, CLASS 1 DUCT, MEET NFPA 90A & 90B.
  - PROVIDE MANUFACTURERED DUCT SUPPORTS AT 90 DEGREE ELBOWS TO CEILING AIR DEVICES.
  - FLAME SPREAD LESS THAN 25, SMOKE DEVELOPMENT LESS THAN 50.

DUCT SYSTEM	SMACNA CLASS.		NOTES
	S.P. CONSTR.	SEAL CLASS	
RETURN AIR	–2"	A	
EXHAUST AIR	–2"	A	
AIR TRANSFER	–1"	NOT REQ'D	
SUPPLY AIR VAV UPSTREAM	+4"	A	
SUPPLY AIR VAV DOWNSTREAM	+1"	A	
SUPPLY AIR CONSTANT VOLUME	+3"	A	
FLEXIBLE DUCT – SUPPLY	+10" –5"	N.A.	

PIPING SYSTEMS - HVAC 2000

GENERAL NOTES:

QUALITY ASSURANCE
PIPING SHALL CONFORM TO OBC REQUIREMENTS.

PIPING SHALL COMPLY WITH ASME B31.9 "BUILDING SERVICES PIPING".

WELDING PROCEDURES & TESTING SHALL COMPLY WITH ANSI STANDARD B31.1.0.

PRODUCTS
REINFORCED FORGED WELDING OUTLETS EQUAL TO BONNET WELDOLET AND THREADOLET MAY BE USED WHERE BRANCH IS TWO SIZES SMALLER THAN THE MAIN.

DIELECTRIC CONNECTORS SHALL BE PROVIDED AT CONNECTIONS BETWEEN FERROUS & COPPER PIPING.

PIPING WITHIN 2'–0" OF SMALL HEATING/COOLING UNITS MAY BE TYPE "C3" PIPING.

MECHANICALLY FORMED TEES AND COUPLING (T–DRILL) ARE NOT PERMITTED.

MECHANICAL JOINT PIPING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURED RECOMMENDATIONS.

UNIONS:
COPPER TUBING – WROUGHT OR CAST COPPER, CLASS 150, SOLDERED ENDS
THREADED STEEL PIPE – MALLEABLE IRON W/GROUND SEAT, 300 LB SCREWED ENDS

FLANGES:
COPPER TUBING – CLASS 150 CAST COPPER ALLOY, SOLDERED
STEEL PIPE – CLASS 150 SLIP–ON OR WELD NECK
GASKETS – 1/16" THICK FULL FACE COMPRESSED SHEET GASKET SUITABLE FOR PRESSURE AND TEMPERATURE RANGES OF THE APPLICATION

BULB WELLS FOR TEMPERATURE SENSING SPECIFIED IN THE CONTROLS AND INSTRUMENTATION SECTION SHALL BE FURNISHED BY THE CONTROL SUBCONTRACTOR AND INSTALLED BY THE PIPING CONTRACTOR. OTHER TYPES OF CONTROL DEVICES (DIFFERENTIAL PRESSURE SWITCHES, FLOW METERS, ETC.) SHALL ALSO BE INSTALLED BY THE PIPING CONTRACTOR. DEVICES, FITTINGS (TEES, WELDOLETS, THREADOLETS), LOCATIONS AND INSTALLATION DETAILS SHALL BE CLOSELY COORDINATED WITH THE CONTROLS SUBCONTRACTOR AND DEVICE MANUFACTURER'S INSTRUCTIONS.

AUTOMATIC CONTROL VALVES SHALL BE FURNISHED BY THE CONTROLS SUBCONTRACTOR FOR INSTALLATION BY THE HVAC PIPING CONTRACTOR. FLARE FITTINGS FOR FLARE END VALVES SHALL BE PROVIDED BY THE HVAC PIPING CONTRACTOR.

EXECUTION
PIPE AND TUBING SHALL BE CUT AND FABRICATED TO FIELD MEASUREMENTS AND RUN PARALLEL TO NORMAL BUILDING LINES. PIPE INTERIOR SHALL BE CLEANED OF FOREIGN MATTER AND BURRS BEFORE ERECTION OF PIPE.

SUPPORT PIPING FROM BUILDING STRUCTURE WITH RODS, ANGLES & CLAMPS ATTACHED TO STRUCTURE. HANG PIPING WITH CLEVIS HANGER OR ROLLER SUPPORTS. HANGERS SHALL BE INSTALLED ON CENTERS AS RECOMMENDED BY MANUFACTURER.

PIPING SHALL BE PITCHED FOR DRAINAGE. THE LOW POINTS SHALL BE FITTED WITH A 3/4" BALL DRAIN VALVE WITH HOSE THREAD ADAPTOR.

PROVIDE PIPING SLEEVES AT FLOORS, WALLS & ROOFS IN NEW CONSTRUCTION. EXISTING WALL TO BE SAW CUT TO PASS NEW PIPING.

PIPING SHALL NOT BE RUN ABOVE ELECTRICAL SWITCHGEAR OR PANELBOARDS, NOR ABOVE THE ACCESS SPACE OF SUCH EQUIPMENT – NEC ARTICLE 384.

ANNULAR SPACE AROUND PIPING THRU ALL WALLS SHALL BE SEALED OFF WITH PERMANENT PLIABLE CAULKING OR APPROVED PATCHING SEALANT.

CLOSE OPEN ENDS OF PIPING DURING CONSTRUCTION.

CLEAN INTERIOR PIPING AFTER INSTALLATION BY FLUSHING WITH CLEAN POTABLE WATER TO CLEAR ALL INTERNAL DEBRIS.

TESTING
PIPING SHALL BE AIR TESTED AT 50% HIGHER THAN MAXIMUM SYSTEM OPERATING PRESSURE FOR EIGHT (8) HOURS BEFORE FLUSHING.

IDENTIFICATION & MARKING
PLASTIC SNAP–ON PIPE MARKERS SHALL BE INSTALLED ON PIPING INDICATING SERVICE AND DIRECTION OF FLOW.

PIPING SYSTEM	TYPE
HOT WATER – 0.50" TO 2.5"	C1, C5
COLD WATER MAKE–UP	C1, C5
COIL CONDENSATE DRAINAGE	C3

TYPE	DESCRIPTION	TYPE	DESCRIPTION
C1	**SOLDERED COPPER** TYPE "L" HARD COPPER ASTM B88 WROUGHT COPPER OR CAST BRONZE FITTINGS 95–5 SOLDER	C3	**SOLDERED COPPER** TYPE "DWV" HARD COPPER ASTM B88 CAST DWV COPPER FITTINGS 95–5 SOLDER
		C5	**PRESS–FIT COPPER** TYPE "L" HARD COPPER ASTM B88 WROUGHT COPPER ASTM B75 C12200 FITTINGS 250 DEG. F. EPDM SEALS

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FOR
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AND MENTAL HEALTH
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STATE OF OHIO
JEFFREY D. ZELINSKI
63822
REGISTERED PROFESSIONAL ENGINEER

REVISIONS
REBID

COMM. NUMBER	DATE
1615.04	5/12/2021
DRAWN BY	CHECKED BY
DJZ	JDZ

SCHEDULES

H0.2

FAN & ROOF VENTILATOR SCHEDULE — 3400

BASIS OF DESIGN – GREENHECK — E.S.P. – EXTERNAL STATIC PRESSURE
REFER TO SPECIFICATIONS FOR OTHER MANUFACTURERS

VFD DRIVEN MOTORS SHALL BE PROVIDED WITH SHAFT GROUNDING RINGS, VFD DUTY MOTORS.

REFER TO INSTALLATION DETAILS.

TAG	SERVICE	AREA	DESCRIPTION	MODEL NUMBER & SIZE GREENHECK	DIMENSIONS (L x W x H)	CAPACITY		ELECTRICAL			ELECTRIC			DRIVE TYPE		MOUNTING				APPLICATION				ACCESSORIES & OPTIONS								CONTROLS					
						AIRFLOW (CFM)	E.S.P. (IN. W.C.)	MOTOR RPM	MOTOR HP	V/PH	DISCONNECT WITH FAN	DISCONNECT BY E.C.	VFD	ECM	DIRECT	BELT	ROOF CURB	BASE/FLOOR	SUSPENDED, INLINE	WALL	CEILING	UL 762 GREASE RATED	UL 864 SMOKE CONTROL	HIGH TEMP (ABOVE≤ 200°F)	EXPLOSION PROOF	VIBRATION ISOLATION	INSULATION HOUSING	THERMAL CONTROL	SLOPING ROOF CURB	HINGED ROOF CURB	CURB EXTENSION	POWDER COAT FINISH	EPOXY INTERIOR FINISH	DDC CONTROLLED	DDC	DIAL SPEED CONTROLLER	MOTORIZED DAMPER	GRAVITY DAMPER	NOTES
EF–1	RESTROOM	MAIN BLDG.	INLINE DIRECT DRIVE CENTRIFUGAL	SQ–95–VG	16"x15"x15"	400	0.5	1,514	1/6	120/1	•			•	•				•							•									•	•			1
EF–2	RESTROOM	MECH RM.	INLINE DIRECT DRIVE CENTRIFUGAL	SQ–120–VG	21"x19"x19"	1080	0.75	1,649	1/2	120/1	•			•	•				•							•									•	•			1
EH–1	RELIEF AIR	ROOF	LOUVERED PENTHOUSE	WIH – 24"x48"	24"L x 48"W	7,580	–	–	–	–							•											•										

NOTES

1. DIAL SPEED CONTROLLER MOUNTED REMOTE ON WALL. REFER TO HVAC PLANS FOR LOCATION.

AIR DEVICE SCHEDULE — 3713

GENERAL NOTES:

AIR DEVICES BASED ON PRICE, LOUVERS BASED ON GREENHECK.
REFER TO SPECIFICATIONS FOR OTHER MANUFACTURERS.

MAXIMUM SOUND LEVEL OF NC–25 AT INDICATED AIR FLOW.

BALANCING DAMPER GENERALLY PROVIDED IN DUCT, NOT AT DEVICE.

STANDARD WHITE BAKED ACRYLIC FINISH UNLESS NOTED OTHERWISE.

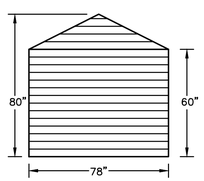
DIFFUSERS SHALL BE 4–WAY THROW UNLESS OTHERWISE NOTED OR INDICATED ON DRAWINGS.

VERIFY CEILING TYPE AND PROVIDE APPROPRIATE MOUNTING FRAME WHERE REQUIRED FOR OTHER THAN LAY–IN APPLICATION OR IN LINE "T" BAR.

TAG	DESCRIPTION	MODEL NO.	MATERIAL	ACCESSORIES	NOTES
S1	2'X2' SQUARE PLAQUE DIFFUSER LAY–IN FRAME ROUND DUCT CONNECTION	SPD	STEEL	INSULATED BACKPAN (STYLE 31)	
S2	LOUVERED SUPPLY GRILLE DOUBLE DEFLECTION W/ LONG FRONT BLADES, 3/4" BLADE SPACING	520	STEEL	SURFACE MOUNT FRAME OPPOSED BLADE VOLUME DAMPER	2
S3	2'X2' SQUARE PLAQUE DIFFUSER LAY–IN FRAME ROUND DUCT CONNECTION	SPD	STEEL	INSULATED BACKPAN (STYLE 31) RADIAL VOLUME DAMPER	
S4	LINEAR SLOT TYPE WITH PLENUM (2) 1.5" SLOTS ADJUSTABLE 2' OR 4' LENGTH ROUND/OVAL DUCT CONNECTION	TBD2	STEEL	INSULATED PLENUM	
R1	RETURN/EXHAUST/TRANSFER GRILLE DEVICE SIZE – 24" X 24" 1/2" X 1/2" X 1/2" DEEP EGGCRATE	80	ALUMIN.	LAY–IN FRAME	
R2	RETURN/EXHAUST/TRANSFER GRILLE DEVICE SIZE – 24" X 12" 1/2" X 1/2" X 1/2" DEEP EGGCRATE	80	ALUMIN.	LAY–IN FRAME	
R3	RETURN/EXHAUST/TRANSFER GRILLE DEVICE SIZE – 12" X 12" 1/2" X 1/2" X 1/2" DEEP EGGCRATE	80	ALUMIN.	SURFACE MOUNT FRAME OPPOSED BLADE VOLUME DAMPER	1
R4	LOUVERED FACE RETURN GRILLE DEVICE SIZE – INDICATED ON PLAN 45° HORIZONTAL BLADES 1/2" SPACING	535	STEEL	SURFACE MOUNT FRAME	2
R5	RETURN/EXHAUST/TRANSFER GRILLE DEVICE SIZE – 24" X 12" 1/2" X 1/2" X 1/2" DEEP EGGCRATE	80	ALUMIN.	SURFACE MOUNT FRAME	
R6	RETURN/EXHAUST/TRANSFER GRILLE DEVICE SIZE – 24" X 12" 1/2" X 1/2" X 1/2" DEEP EGGCRATE	80	ALUMIN.	SURFACE MOUNT FRAME OPPOSED BLADE VOLUME DAMPER	
L1	FIXED BLADE LOUVER WITH TRIANGULAR LOUVER TOP. W = 78"/H = 80"/ H1 = 60" FRAME SIZE – 4" DEEP MIN. 50% FREE AREA	ESD–435	ALUMIN.	BLACK BIRDSCREEN	3, 4
L2	FIXED BLADE LOUVER DEVICE SIZE – 24"x24" LOUVER FRAME SIZE – 4" DEEP MIN. 50% FREE AREA	ESD–435	ALUMIN.	BLACK BIRDSCREEN	3
L3	FIXED BLADE LOUVER DEVICE SIZE – 44"x30" LOUVER FRAME SIZE – 4" DEEP MIN. 50% FREE AREA	ESD–435	ALUMIN.	BLACK BIRDSCREEN	3
L4	FIXED BLADE LOUVER DEVICE SIZE – 12"x12" LOUVER FRAME SIZE – 4" DEEP MIN. 50% FREE AREA	ESD–435	ALUMIN.	BLACK BIRDSCREEN	3

NOTES

1. DEVICE TO BE SURFACE MOUNTED IN CENTER OF ACOUSTIC CEILING PAD FOR LAY–IN APPLICATION.
2. GRILLE COLOR WHITE.
3. LOUVER PROVIDED BY H.C., TURN OVER TO G.C. FOR INSTALLATION. DUCT CONNECTION BY H.C.
4. SEE LOUVER DRAWING BELOW.



LOUVER "L1" DETAIL
SCALE: NONE

ELECTRIC FINNED TUBE CONVECTOR SCHEDULE

GENERAL NOTES
BASIS OF DESIGN – INDEECO

TAG	FIN TUBE MODEL	LOAD DATA			APPROX. DIMENSIONS			COLOR	NOTES
		KW/FT	TOTAL KW	V/PH	LENGTH (IN)	DEPTH (IN)	HEIGHT (IN)		
FT1	BCI–906U00200BW–738	0.1	0.2	120/1	29"	2–1/2"	6–1/8"	BY ARCT.	1, 2

NOTES:

1. INTEGRAL CONTROLS.
2. DISCONNECT SWITCH WITH UNIT.

FAN COIL UNIT SCHEDULE

UNIT NO.	DESCRIPTION	MOUNTING	CONDENSING UNIT	SUPPLY AIRFLOW (CFM)	RETURN AIRFLOW (CFM)	S.P.	COOLING CAPACITY				HEATING CAPACITY (HEAT PUMP)		HEATING CAPACITY (ELECTRIC)		REFRIGERANT PIPING		DRAIN PIPE SIZE	DIMENSION			ELECTRICAL REQUIREMETNS			UNIT WEIGHT	INDOOR UNIT DAIKIN MODEL NO.	NOTES
							SENS. MBH	TOTAL MBH	ENT. AIR DB	ENT. AIR WB	TOTAL MBH	ENT. AIR	TOTAL kW	ENT. AIR	GAS	LIQUID		W (IN.)	D (IN.)	H (IN.)	V/PH	MCA	MOCP	LBS		
FC–1	MULTI–POSITION AIR HANDLER	VERTICAL	CD–1	1,800	1,360	0.9"	41.3	60	80	66	66	53	25	53	5/8"	3/8"	3/4"	24–5/8	21	58	208/1	8.6	15	167	FXTQ60TAVJUD	1–6
FC–2	MULTI–POSITION AIR HANDLER	VERTICAL	CD–2	1,800	1,360	0.9"	41.3	60	80	66	66	53	25	53	5/8"	3/8"	3/4"	24–5/8	21	58	208/1	8.6	15	167	FXTQ60TAVJUD	1–6
FC–3	MULTI–POSITION AIR HANDLER	VERTICAL	CD–3	1,520	1,310	0.9"	31.1	48	78	65	54	61	19	61	5/8"	3/8"	3/4"	21–7/32	21	53	208/1	6.5	15	150	FXTQ48TAVJUD	1–6

NOTES:

1. 24VAC POWER/CONTROL WIRING FROM OUTDOOR UNIT TO INDOOR UNIT AND FROM HOT WATER COIL HEATER TO INDOOR UNIT BY H.C.
2. COOLING CAPACITIES BASED ON 95°F OUTDOOR AIR TEMP, HEATING BASED UPON 0°F OUTDOOR AIR TEMP.
3. PROVIDE FLUSH MOUNT REMOTE TEMPERATURE SENSOR.
4. PROVIDE BACnet INTERFACE.
5. PROVIDE LOW AMBIENT COOLING ACCESSORIES.
6. IONIZATION SYSTEM: GLOBAL PLASMA SOLUTIONS MODEL #GPS–FC24–AC OR EQUAL BY PLASMA AIR.

CONDENSING UNIT SCHEDULE

UNIT NO.	UNIT SERVED	COOLING CAPACITY	HEATING CAPACITY	ELECTRIC SERVICE			REFRIGERANT PIPING		REFRIGERANT	UNIT DIMENSIONS			UNIT WEIGHT	DAIKIN MODEL NO.	NOTES
		MBH @ 95°F	MBH @ 47°F	MCA	MOCP	V/PH	GAS	LIQUID	TYPE	W (IN.)	D (IN.)	H (IN.)	LBS		
CD–1	FC–1	57.5	57	29.1	35	208/1	3/4"	3/8"	R–410A	35–7/16	12–5/8	52–15/16	225	RXTQ60TAVJUA	1, 2
CD–2	FC–2	57.5	57	29.1	35	208/1	3/4"	3/8"	R–410A	35–7/16	12–5/8	52–15/16	225	RXTQ60TAVJUA	1, 2
CD–3	FC–3	45.5	49.5	29.1	35	208/1	5/8"	3/8"	R–410A	37	12–5/8	39	176	RXTQ48TAVJUA	1, 2

NOTES:

1. INVERTER SCROLL COMPRESSOR.
2. PROVIDE REFRIGERANT LINE SETS AND HAIL GUARDS.

FAN COIL UNIT VENTILATION SCHEDULE

GENERAL NOTES:
OA CALCULATION COMPLIES WITH OMC CHAPTER 4.

CALCULATIONS:
$V_{BZ} = R_P * P_Z + R_A * A_Z$ (EQUATION 4–1)
$V_{OZ} = V_{BZ} / E_Z$ (EQUATION 4–2)

UNIT	AREA SERVED	FUNCTION OF SPACE	A_Z - AREA (FT²)	P_Z - OCCUPANCY (# PEOPLE)	ASHRAE 62.1-2010 REQUIREMENTS					VENTILATION PROVIDED	NOTE
					R_A - AREA OA (CFM/FT²)	R_P - OCCUPANCY OA (CFM/PERSON)	V_{BZ} - CODE OA (CFM)	Ez	V_{OZ} - CORRECTED OA (CFM)		
FC–1	CONFERENCE ROOM 1	CONFERENCE	900	60	0.06	5	354	0.8	440	440	
FC–2	CONFERENCE ROOM 2	CONFERENCE	900	60	0.06	5	354	0.8	440	440	
FC–3	SUPPORT AREA	CORRIDOR/STORAGE	1840	4	0.06	5	130	0.8	160	200	

NOTES:

ELECTRIC UNIT HEATER SCHEDULE

GENERAL NOTES
HEATING CAPACITY BASED ON 70°F ΔT AIR TEMPERATURE DIFFERENCE.

UNIT NO.	DESCRIPTION	MANUFACTURER/MODEL	MOUNTING	CAPACITY (MBH)	KW	AIR FLOW (CFM)	APPROX. DIMENSIONS			VOLTAGE/ PHASE	NOTES
							L (IN.)	D (IN.)	H (IN.)		
UH–2	WALL MOUNTED UNIT HEATER	INDEECO WAI	WALL MOUNTED	13.7	4	160	16–1/16"	4–5/16"	19–7/8"	208/1	1–4
UH–3	VERTICAL MOUNTED FAN FORCED UNIT HEATER	INDEECO P–961U5000V–T	WALL SUSPENDED	12.7	3.75	275	14–1/2"	9"	14–1/2"	208/1	4–6

NOTES:

1. COLOR BY ARCHITECT.
2. SURFANCE MOUNTING FRAME – #933–124501.
3. INTEGRAL THERMOSTAT.
4. DISCONNECT WITH UNIT.
5. MOUNT UNIT 9' A.F.F.
6. CONTROLS BUILT–IN WITH UNIT.

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EQUIPMENT SCHEDULES

H0.3

VARIABLE FREQUENCY DRIVES

GENERAL NOTES

ALL VFD'S SHALL BE FROM THE SAME MANUFACTURER

ALL VFD'S SHALL HAVE A BACNET COMMUNICATION CARD

VFD'S FULL LOAD AMPS SHALL BE EQUAL TO OR GREATER THAN THE SUM OF THE INDIVIDUAL MOTOR FULL LOAD AMPS

FURNISHED BY H.C., INSTALLED BY E.C.

TAG	SERVICE	ENCLOSURE	H.P.
VFD-P-3	P-3	NEMA 1	1.5
VFD-P-4	P-4	NEMA 1	1.5

HYDRONIC UNIT HEATER SCHEDULE

GENERAL NOTES

HEATING CAPACITY BASED ON 70°F ΔT AIR TEMPERATURE DIFFERENCE.

FLUID FLOW BASED ON 160 EWT AND 140 LWT.

5.0 FT. HEAD MAX. WATER PRESSURE DROP.

VERIFY/COORDINATE CABINET DIMENSIONS, MOUNTING & RECESS REQUIREMENTS WITH ARCHITECTURAL DWGS. PRIOR TO ORDERING.

LINTELS IN MASONRY WALL FOR FULL & SEMI-RECESSED UNIT WALL OPENINGS PROVIDED BY GENERAL CONTRACTOR.

UNIT NO.	DESCRIPTION	MANUFACTURER/MODEL	MOUNTING	CABINET STYLE	SIZE	OUTPUT (MBH)	AIR FLOW (CFM)	FLUID FLOW (GPM)	APPROX. DIMENSIONS			RUNOUT SIZE (IN.)	VOLTAGE/ PHASE	MOTOR H.P.	COIL CV.	NOTES
									L (IN.)	W (IN.)	H (IN.)					
UH-1	CABINET UNIT HEATER	TRANE FORCE-FLO	HORIZONTAL, CONCEALED	C	04	25.6	388	2.6	27-3/16	33-1/16	10 1/16	0.75"	120/1	77 W	1.3	1

NOTES:

1. HIGH STATIC MOTOR OPTION.
2. 2-ROW COIL.

VARIABLE AIR VOLUME UNIT SCHEDULE

GENERAL NOTES

UNITS ARE VARIABLE AIR VOLUME, HOT WATER REHEAT

UNITS HAVE DUAL MINIMUM AIR FLOW DEPENDING ON HOT WATER HEATING AVAILABILITY

DESIGN BASIS- PRICE MODEL SDV

UNITS INCLUDE FIELD CONFIG. 2- OR 3-WAY CONTROL VALVES

ENTERING WATER TEMP. (DEG. F) 160
WATER TEMP. DROP (DEG. F) 20
MAX WATER PRESSURE DROP 5' FT. HD.

ENTERING AIR TEMP. (DEG. F) 51
MAX AIR PRES. DROP INCL. HW COIL 0.75" S.P.

MAX. NC 25, WITH 10db ROOM ABSORBTION AT 1.5" SP AND MAX. AIR FLOW

UNIT. NO.	INLET SIZE	COOLING MAX.(CFM)	COOLING MIN.(CFM)	HEATING CFM	MBH	GPM	LAT	S&R PIPING	VALVE CV	SEE NOTES
1-1	8	560	115	395	18.8	1.9	95	0.75	0.9	1
1-2	6	330	70	235	11.2	1.1	95	0.75	0.5	
1-3	8	600	120	420	20.0	2.0	95	0.75	1.0	1
1-4	7	400	80	280	13.3	1.3	95	0.75	0.6	
1-5	6	300	60	210	10.0	1.0	95	0.75	0.5	
1-6	8	600	120	420	20.0	2.0	95	0.75	1.0	1
1-7	5	160	35	115	5.5	0.5	95	0.75	0.3	
1-8	6	300	60	210	10.0	1.0	95	0.75	0.5	
1-9	7	400	80	280	13.3	1.3	95	0.75	0.6	
1-10	8	600	120	420	20.0	2.0	95	0.75	1.0	1
1-11	6	350	70	245	11.6	1.2	95	0.75	0.6	
1-12	7	380	80	270	12.8	1.3	95	0.75	0.6	
1-13	7	375	75	265	12.6	1.3	95	0.75	0.6	
1-14	5	110	25	110	5.2	0.5	95	0.75	0.3	
1-15	6	330	70	235	11.2	1.1	95	0.75	0.5	
1-16	5	190	40	135	6.4	0.6	95	0.75	0.3	
1-17	7	400	80	280	13.3	1.3	95	0.75	0.6	
1-18	6	345	70	245	11.6	1.2	95	0.75	0.6	
1-19	6	300	60	210	10.0	1.0	95	0.75	0.5	
1-20	5	250	50	175	8.3	0.8	95	0.75	0.4	

NOTES:

1. UNIT TO HAVE 3-WAY CONTROL VALVE.

FAN POWERED VARIABLE AIR VOLUME TERMINAL BOXES

GENERAL NOTES

UNITS ARE VARIABLE AIR VOLUME, FAN POWERED HOT WATER REHEAT

DESIGN BASIS - PRICE MODEL FDV

MAX NC 25, WITH 10bd ROOM ABSORBTION AT 1.5" SP AND MAX. AIR FLOW

UNITS INCLUDE FIELD CONFIG. 2-WAY CONTROL VALVES, UNLESS OTHERWISE NOTED.

ENTERING WATER TEMP. (DEG F) 160
WATER TEMP. DROP (DEG F) 20
MAX WATER PRESSURE DROP 5' FT. HD

ENTERING AIR TEMP. (DEG. F) 51
LEAVING AIR TEMP. (DEG. F) 95
MAX. AIR PRESS DROP INCL. COIL 0.6" W.C.

FAN VOLTAGE 120V/1PH
FAN EXTERNAL S.P. 0.5"W.C.

UNIT NO.	INLET SIZE	PRIMARY AIR MAX. (CFM)	PRIMARY AIR MIN. (CFM)	COIL HEATING CAPACITY					SEE NOTES
				MBH	GPM	FAN CFM	HP	ELEC.	
1-21	8	400	0	19.1	1.9	400	1/8	120/1	

HYDRONIC PUMPS SCHEDULE 2123

BASIS OF DESIGN - BELL & GOSSETT
EQUAL BY: ARMSTRONG, PATTERSON, PENTAIR, TACO

NOTES:
1. VFD BY H.C.
2. SEE PUMP MOUNTING DETAIL - DETAIL 1, SHEET H3.4.
3. SEE PUMP MOUNTING DETAIL - DETAIL 3, SHEET H3.4.

TAG	SERVICE	DESCRIPTION	MODEL NUMBER & SIZE	CAPACITY		MOTOR		NOTES
				GPM	FT HD	HP	VOLT/PHASE	
P-1	PRIMARY HOT WATER	PIPE MOUNTED INLINE	E-60 1.5X1.5X6.25	54	20	0.75	208/3	3
P-2	PRIMARY HOT WATER	PIPE MOUNTED INLINE	E-60 1.5X1.5X6.25	54	20	0.75	208/3	3
P-3	SECONDARY HOT WATER	BASE MOUNTED, END SUCTION	E-1510 1.25AD-ES	55	45	1.5	208/3	1, 2
P-4	SECONDARY HOT WATER	BASE MOUNTED, END SUCTION	E-1510 1.25AD-ES	55	45	1.5	208/3	1, 2

DUCT MOUNTED HOT WATER REHEAT COILS

GENERAL NOTES

DESIGN BASIS - USA COIL AIR
ENTERING WATER TEMPERATURE: 160°F
LEAVING WATER TEMPERATURE: 140°F

UNIT NO.	MODEL	AIRFLOW (CFM)	VELOCITY (FPM)	COIL HEATING CAPACITY			AIR PRESSURE DROP (IN. WC.)	WATER PRESSURE DROP (FT. HD.)	COIL ROWS/FPI	S&R PIPING	DIMENSIONS		SEE NOTES
				MBH	GPM	EAT/LAT					WIDTH	DEPTH	
HC-1	F58-208-21X26-02B	1800	475	85.1	8.55	53/97	0.14	8.4	2/8	1"	26	21	
HC-2	F58-208-21X26-02B	1800	475	85.1	8.55	53/97	0.14	8.4	2/8	1"	26	21	
HC-3	F58-208-21X27-02B	1520	386	71.5	7.14	61/105	0.1	6.15	2/8	1"	27	21	

CONDENSING BOILER SCHEDULE

BASIS OF DESIGN: HYDROTHERM

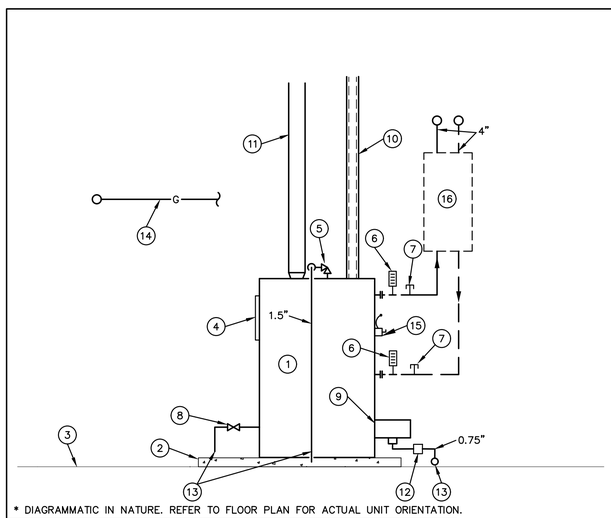
NOTES:

1. ALTERNATE BOILER MANUFACTURERS THAT EXCEED THE SCHEDULED MAXIMUM WATER PRESSURE DROP SHALL ALSO INCLUDE PUMP SIZE INCREASE.

UNIT	LOCATION	TYPE	GROSS INPUT (MBH)	GROSS OUTPUT (MBH)	GPM	E.W.T. (°F)	L.W.T. (°F)	MIN. EFF.	INTAKE SIZE	FLUE SIZE	MAX. WATER PRESSURE DROP (FT. HD.)	MOTOR		MANUFACTURER	MODEL NO.	NOTES
												F.L.A.	VOLT/PHASE			
B-1	MECH ROOM	CONDENSING HOT WATER	600	540	54	140	160	90%	6"ø	6"ø	1.75	13.1	120/1	HYDROTHERM	KN-6	1
B-2	MECH ROOM	CONDENSING HOT WATER	600	540	54	140	160	90%	6"ø	6"ø	1.75	13.1	120/1	HYDROTHERM	KN-6	1

EQUIPMENT NOTES

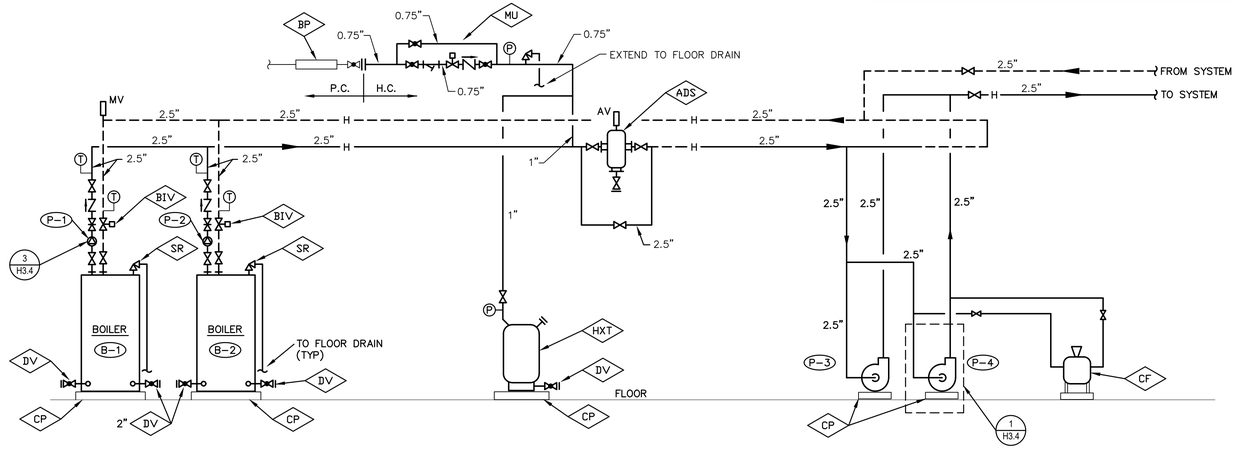
ADS	AIR/DIRT SEPARATOR, 3" SIZE.
SR	SAFETY RELIEF VALVE. SET AT 50 PSI. EXTEND DISCHARGE TO FLOOR DRAIN.
HXT	HOT WATER EXPANSION TANK WESSELS NLAP-100 BLADDER TYPE. 25 GALLON TANK SIZE, FULL ACCEPTANCE. APPROXIMATE DIMENSIONS 16"D.x32"T. 77 LBS. SHIPPING WEIGHT. 12 PSI INITIAL CHARGE, 35 PSI MAX. OPERATING PRESSURE.
CP	CONCRETE PAD BY H.C.
CF	CHEMICAL FEEDER
BP	BACKFLOW PREVENTER BY P.C.
MUW	MAKE-UP WATER ASSEMBLY. 0.75" VALVE, STRAINER, AUTO. VALVE (EQUAL TO B&G B7-12 SET AT 12 PSI), VALVE. PROVIDE 1" VALVED BYPASS FOR FILL.
BIV	BOILER ISOLATION VALVE.
DV	DRAIN VALVE



1. HOT WATER BOILER.
2. NEW CONCRETE PAD.
3. FLOOR.
4. BOILER CONTROL PANEL.
5. SAFETY RELIEF VALVE PROVIDED WITH BOILER.
6. THERMOMETER.
7. PRESSURE/TEMPERATURE TEST PLUG.
8. 1.5" DRAIN VALVE.
9. EXHAUST VENT AND CONDENSATE ASSEMBLY.
10. 6"ø DOUBLE WALL STAINLESS STEEL INNER WALL, TYPE AL29-4C; OUTER WALL, TYPE 304.
11. 6"ø COMBUSTION AIR INTAKE DUCT.
12. CONDENSATE NEUTRALIZER CARTRIDGE.
13. EXTEND PIPE TO DRAIN. TERMINATE IN DRAIN.
14. GAS PIPE TO GAS TRAIN BY P.C.
15. ELECTRICAL POWER CONNECTION.
16. REFER TO HOT WATER DIAGRAM, THIS SHEET, FOR VALVES, PUMPS, ETC.

* DIAGRAMMATIC IN NATURE. REFER TO FLOOR PLAN FOR ACTUAL UNIT ORIENTATION.

1 HOT WATER BOILER - CONDENSING TYPE
N.T.S.



HOT WATER PIPING
N.T.S.

FREYTAG & ASSOCIATES INC.
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ADMINISTRATION AND TRAINING CENTER
FOR
TRI COUNTY BOARD OF RECOVERY AND MENTAL HEALTH
1280 N COUNTY RD. 25A TROY, OHIO 45373

NAUMAN & ZELINSKI LLC.
204 S. Ludlow St. Ste. 400
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STATE OF OHIO JEFFREY D. ZELINSKI 63822 REGISTERED PROFESSIONAL ENGINEER

REVISIONS
REBID

COMM. NUMBER	DATE
1615.04	5/12/2021
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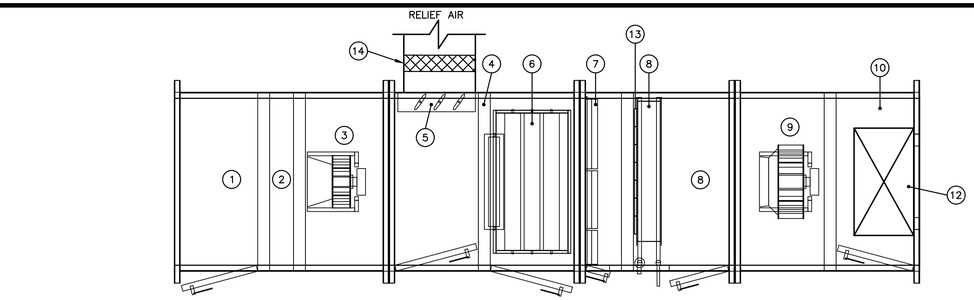
DJZ	JDZ

EQUIPMENT SCHEDULES

H0.4



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

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

1. RETURN PLENUM. ACCESS DOOR: 26"W x 56"H
2. ACCESS SECTION – 12". REMOVABLE PANELS.
3. RETURN AIR FAN – QTY. 1.
4. ECONOMIZER SECTION W/ACCESS DOORS. RELIEF PLENUM DOOR: 28"W x 52"H MIXING PLENUM DOOR: 28"W x 52"H
5. RELIEF AIR OPENING W/DAMPER.
6. OUTSIDE AIR OPENING W/DAMPER.
7. COMBINATION PANEL FILTER SECTION. ACCESS DOOR: 8"W x 56"H
8. DIRECT EXPANSION COIL. ACCESS DOOR: 20"W x 50"H.
9. SUPPLY FAN – QTY. 1.
10. SUPPLY PLENUM.
11. 6" BASE RAIL.
12. SUPPLY AIR OPENING, TOP OF PLENUM. SUPPLY AIR OPENING SIZE: 36"/20" ACCESS DOOR: 26"W x 52"H
13. IONIZATION BAR. MOUNT ON TOP INTAKE OF DX COOLING COIL. QTY. 7 IONIZATION BARS
14. FLEXIBLE DUCT CONNECTION. TYPICAL.

AIR HANDLING UNIT SCHEDULE

UNIT NUMBER	AHU–1
AREA SERVED	BOARD OFFICES
UNIT LOCATION	MECH. ROOM
DESCRIPTION	VARIABLE AIR VOLUME
MANUF./SIZE LENGTH/WIDTH/HEIGHT	DAIKIN #CAH017GDCM 250"/60"/60"
SUPPLY FAN	
FAN TYPE	ECM
TOTAL AIR FLOW (CFM)	7,580
EXTERNAL S.P. (INCHES W.G.)	1.5"
NUMBER OF FANS	1
MOTOR H.P (EACH)	7.3
V–PH (EACH)	208/3
FILTERS	
PRE–FILTER TYPE	2" MERV 8
FINAL FILTER TYPE	4" MERV 13
COOLING COIL – DIRECT EXPANSION	
AIR FLOW (CFM)	7,585
MIN. FACE AREA (SQ. FT)	15.7
TOTAL CAPACITY (MBH)	285
SENS. CAPACITY (MBH)	175
ENT. AIR TEMP (DB/WB)	77.5/66.5
LVG. AIR TEMP (DB/WB)	55.6/54.1
MAX. AP DROP (INCHES W.G.)	0.59"
DIRECT EXPANSION COIL MODEL	5EJ1240B
RETURN FAN	
FAN TYPE	ECM
TOTAL AIR FLOW (CFM)	7,180
TOTAL S.P. (INCHES W.G.)	0.5"
NUMBER OF FANS	1
MOTOR H.P (EACH)	6.7
V–PH (EACH)	208/3
MIN. OUTSIDE AIR	915/12.5%

NOTES:
1. IONIZATION SYSTEM ON INTAKE OF DX COIL. GPS MODEL #GPS–IMOD. OR EQUAL BY PLASMA AIR.

AIR HANDLER CONDENSING UNIT SCHEDULE

BASIS OF DESIGN: DIAKIN

UNIT NO.	UNIT SERVED	COOLING CAPACITY	ELECTRIC SERVICE			REFRIGERANT PIPING					DISTANCE TO AHU	REFRIGERANT	UNIT DIMENSIONS			UNIT WEIGHT	DAIKIN MODEL NO.	NOTES
		MBH @ 95°F	MCA	MOCP	V/PH	SUCTION	LIQUID	HOT GAS BYPASS	# OF COMPRESSORS	# OF CIRCUITS	FT	TYPE	W	D	H	LBS		
ACU–1	AHU–1	274	125.9	175	208/3	1–5/8"	7/8"	7/8"	3	2	150	R–410A	99"	58"	56"	1,853	RCS025D	1–5

NOTES:
1. HOT GAS BYPASS KIT, ONE CIRCUIT ONLY.
2. PROVIDE REFRIGERANT LINE KITS.
3. DISCONNECT SWITCH WITH UNIT.
4. HAIL PROTECTION AND VANDAL GUARD.
5. PROVIDE SOUND BLANKETS ON COMPRESSORS.

Building: Tri County Administration and Training Center
System Tag/Name: AHU-1
Operating Condition Description: Variable Volume
Units (select from pull-down list) IP

Inputs for System	Name	Units	w/o diversity System	Diversity	w/ diversity System	
Floor area served by system	As	sf	8,000			Default entry has been overridden.
Population of area served by system	Ps	P	60	D 100%	60	Default entry has been overridden.
Design primary supply fan airflow rate	Vpsd	cfm	7,580	100%	7,580	Default entry has been overridden.
OA req'd per unit area for system (Weighted average)	Ras	cfm/sf	0.06			Default entry has been overridden.
OA req'd per person for system area (Weighted average)	Rps	cfm/p	5.0			Default entry has been overridden.
Percent increase in Vbz over minimum required			0%			

Check Figures
7.5 P/1000 sf
0.95 cfm/sf
0.06 ave cfm/sf
5.00 ave cfm/p

Administration Side — Potentially Critical Zones

Inputs for Potentially Critical Zones			Breakroom 144	Restroom 140-142	Hall 106	Office 128	Office 127	Office 125	Office 123	Office 121	Exec Direct 119	Rec Storage 124	Office 118	IT Work 126	Office 117	Office 116	Office 115	Office 114	Office 113	Office 112	Rec Storage 120	Work Rm 104	Conference 111	Waiting 102	Office Hotel 131	Office 138	Office 137	Office 136	Work room 105	North Hall 103	Office 132	Rec 133	Director 134	Conference 135	North Hall Wall 103	Mop 143	Totals/averages
Zone Name		Zone title turns purple italic for critical zone(s)																																		
Zone Tag																																				
Occupancy Category		Select from pull-down list:	Office space	Restroom	Corridors	Office Space	Office space	Office space	Office space	Office space	Office space	Storage rooms	Office space	Office space	Office space	Office space	Office space	Office space	Office space	Office space	Storage rooms	Office space	Conference/meeting	Reception areas	Office space	Office space	Office space	Office space	Office space	Corridors	Office space	Office space	Office space	Conference/meeting	Corridors	Restroom	
Floor Area of zone	Az	sf	375	247	472	163	163	163	163	163	215	170	163	163	192	163	163	163	163	163	100	185	248	340	134	136	136	136	164	450	134	152	207	155	156	75	6,535 total sf
Design population of zone	Pz	P	12	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	8	11	1	1	1	1	1	0	1	1	2	5	0	0	60 total P
Design total supply to zone (primary plus local recirculated)	Vdzd	cfm	560	0	330	200	200	200	200	200	300	150	150	160	300	200	200	200	200	200	100	350	380	375	110	165	165	190	400	200	165	180	300	250	300	0	7,580 total cfm
Induction Terminal Unit, Dual Fan Dual Duct or Transfer Fan?		Select from pull-down list or leave blank if N/A:																																		
Frac. of local recirc. air that is representative of system RA	Er																																			1.00 average
Inputs for Operating Condition Analyzed																																				
Percent of total design airflow rate at conditioned analyzed	Ds	%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100% average
Air distribution type at conditioned analyzed		Select from pull-down list:	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	CSCRH	
Zone air distribution effectiveness at conditioned analyzed	Ez		0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80 average
Primary air fraction of supply air at conditioned analyzed	Ep																																			1.00 average

Max. need to manually edit Ds

Results				
System Ventilation Efficiency	Ev			**0.85**
Outdoor air intake required for system	Vot	cfm		**912**
Outdoor air per unit floor area	Vot/As	cfm/sf		**0.11**
Outdoor air per person served by system (including diversity)	Vot/Ps	cfm/p		**15.2**
Outdoor air as a % of design primary supply air	Ypd	%		**12%**

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STATE OF OHIO — JEFFREY D. ZELINSKI 63822 — REGISTERED PROFESSIONAL ENGINEER

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REBID

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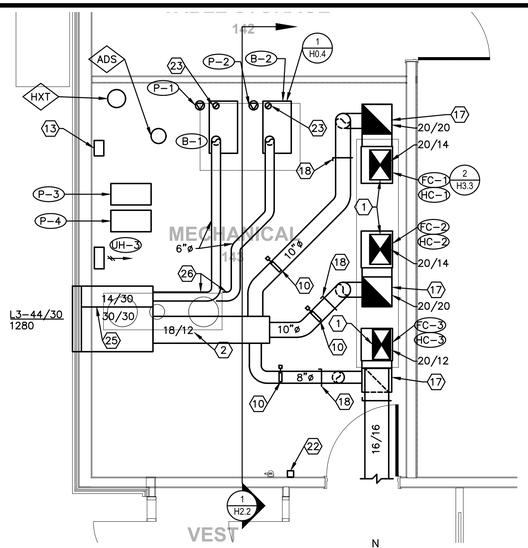
DRAWN BY: DJZ	CHECKED BY: JDZ

AHU-1

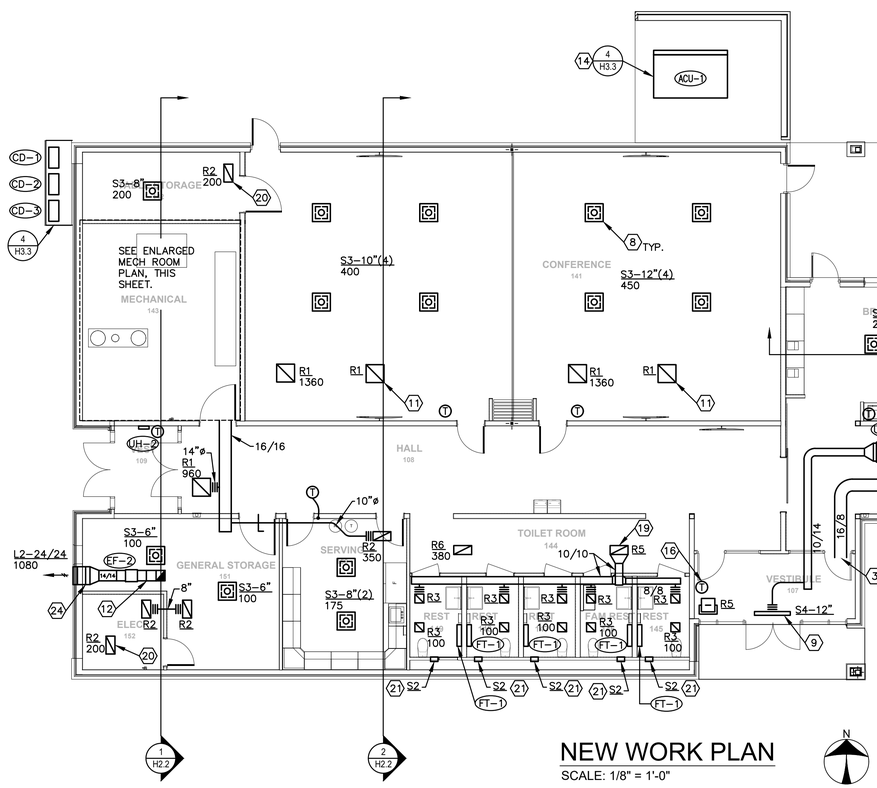
H0.5



ENLARGED MECH. ROOM PLAN

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

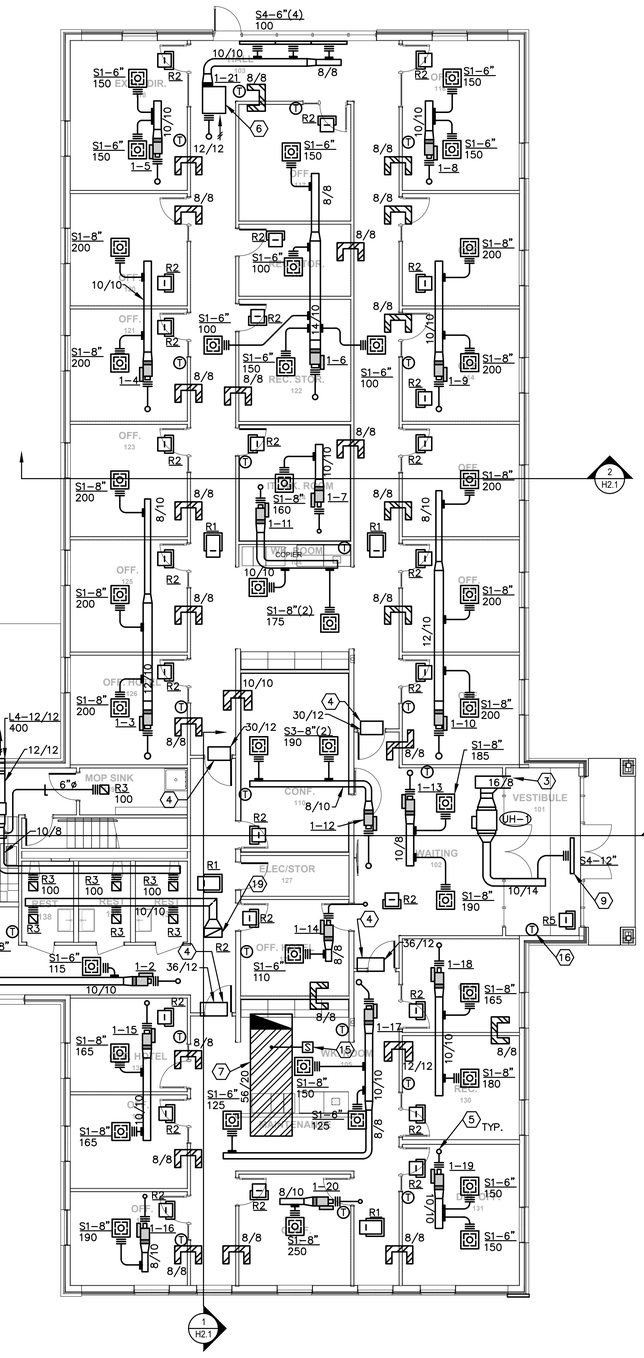
SCALE: 1/4"=1'-0"



NEW WORK PLAN

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

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



CONSTRUCTION NOTES

1. SUPPLY DISCHARGE OFF FAN COIL UNITS UP TO DUCT MOUNTED HOT WATER COIL. SEE SECTION 1, SHEET H2.2 AND DETAIL 2, H3.3 FOR COIL LOCATION.
2. COMBUSTION AIR DUCT, RUN HIGH IN SPACE.
3. DUCT OPEN TO ABOVE CEILING PLENUM.
4. 36/12 TRANSFER DUCT.
5. VAV TERMINAL UNIT DUCT DROP FROM ATTIC. SEE H1.2, TYPICAL FOR ALL UNITS.
6. FAN POWERED VAV. FAN INLET OPEN TO ABOVE CEILING PLENUM.
7. RETURN DUCT UP TO AHU-1. DUCT HORIZONTAL RUN SHALL BE A MINIMUM OF 12'. DUCT SHALL BE INTERNALLY LINED.
8. DUCT RUN IN ATTIC SPACE. SEE H1.2. TYPICAL.
9. DEVICE MOUNTED CENTERED INFRONT OF DOOR. DEVICE IS MOUNTED IN DRYWALL CEILING. PROVIDE NECESSARY ACCESSORIES FOR SURFACE MOUNTING.
10. 2 POSITION CONTROL DAMPER.
11. RETURN GRILLE FOR TRANSFER AIR. SEE SECTION 2, H2.2.
12. RUN HIGH IN SPACE.
13. DDC CONTROL PANEL.
14. EXTERIOR EQUIPMENT PAD BY G.C. COORDINATE CONCRETE PAD SIZE WITH UNIT RECOMMENDED CLEARANCES.
15. DUCT SMOKE DETECTOR, FURNISHED BY E.C., INSTALLED BY H.C.
16. UNIT HEATER TEMPERATURE SENSOR. BLANK STAINLESS STEEL COVER PLATE WITH CONCEALED THERMISTOR.
17. FILTER FRAME ASSEMBLY IN RETURN DUCT VERTICAL DROP. CAMFIL GLIDEPACK-MULTITRACK13. PROVIDE ONE, 2" MERV 8 FILTER. MOUNT FILTER FRAME ASSEMBLY SO ACCESS DOOR SWINGS OPEN DOWN.
18. BALANCING DAMPER. BALANCE TO AIRFLOW INDICATED ON VENTILATION SCHEDULE FOR FAN COIL UNITS. SEE SHEET H0.3.
19. TRANSFER AIR GRILLE TO RESTROOMS. RUN DUCTWORK ABOVE CEILING.
20. AIR DEVICE TO INCLUDE OPPOSED BLADE VOLUME DAMPER ACCESSORY.
21. PROVIDE TWO (2) "S2" SUPPLY GRILLES IN RESTROOM. MOUNT ONE GRILLE WITH BOTTOM AT 8" A.F.F. AND MOUNT THE SECOND GRILLE WITH TOP AT 8" BELOW CEILING. DUCT GRILLES THROUGH WALL AND TERMINATE DUCT OPEN TO PLUMBING CHASE.
22. EF-2 REMOTE FAN SPEED CONTROLLER FOR BALANCING.
23. BOILER FLUE UP THROUGH ROOF.
24. EXHAUST DAMPER BY T.C.
25. SHEETMETAL SEPARATION PANEL INSIDE OF LOUVER PLENUM. PROVIDE AT DIMENSIONS SHOWN.
26. COMBUSTION AIR DUCTS. DUCTS RUN ON TOP OF ONE ANOTHER.

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STATE OF OHIO REGISTERED ARCHITECT JEFFREY D. ZELINSKI 63822

REVISIONS
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1615.04	5/12/2021
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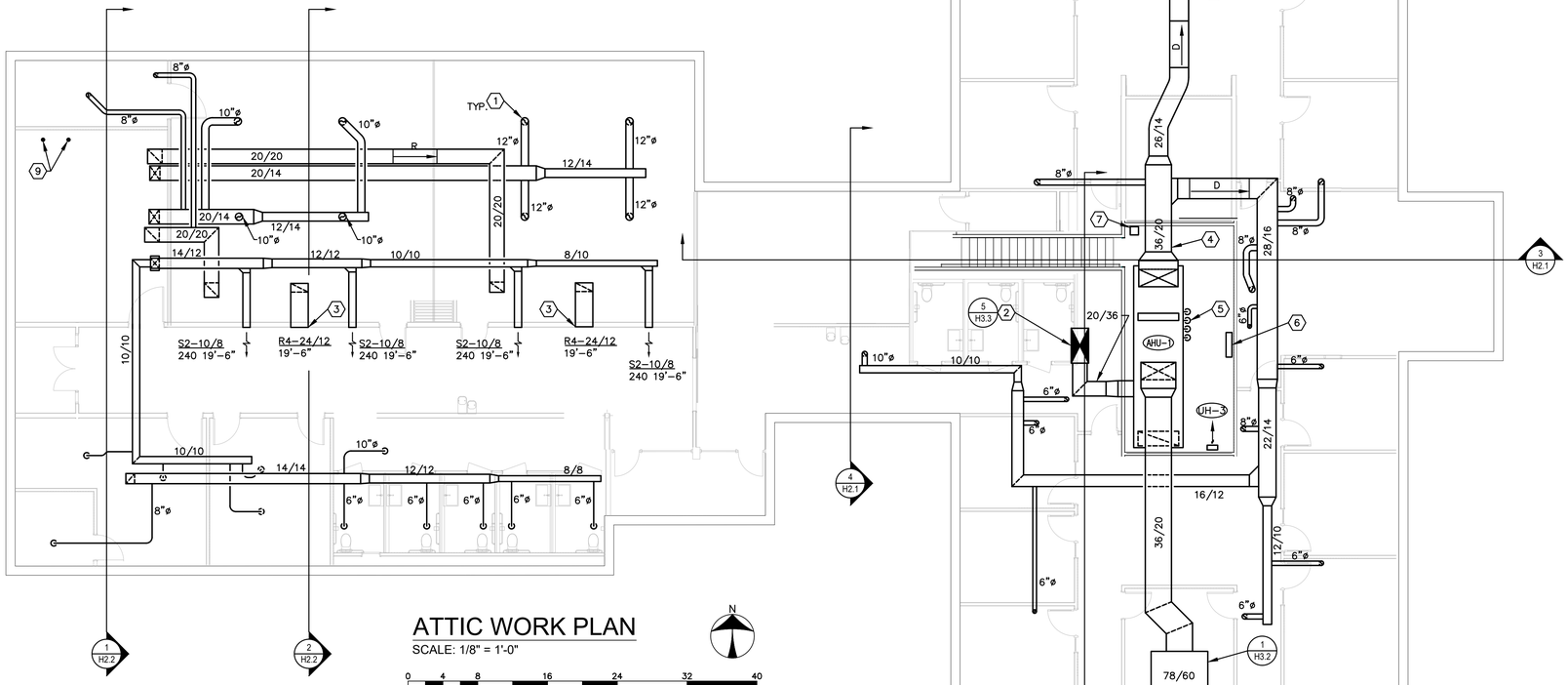
DJZ	JDZ

FIRST FLOOR PLAN - DUCTWORK

H1.1

CONSTRUCTION NOTES

1. DUCT DROP TO BELOW. SEE H1.1. TYPICAL FOR ALL DROPS.
2. RELIEF AIR DUCT UP TO EXHAUST HOOD "EH–1". DUCT TRANSITION TO 48/24 IN VERTICAL RISE IN ATTIC SPACE.
3. TRANSFER AIR DUCT, SEE SECTION 2, SHEET H2.2.
4. RUN DUCT TIGHT TO MECHANICAL ROOM CEILING.
5. REFRIGERANT PIPE CONNECTION TO AHU–1.
6. DDC CONTROL PANEL.
7. EF–1 REMOTE FAN SPEED CONTROLLER FOR BALANCING.
8. DUCT STATIC PRESSURE SENSOR.
9. BOILER FLUES UP THROUGH ROOF.
10. SEE LOUVER "L1" DETAIL SHEET H0.3. PROVIDE SHEETMETAL BLANKOFF PANEL AND INSULATION ON TRIANGULAR PORTION OF LOUVER.



ATTIC WORK PLAN

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

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63822
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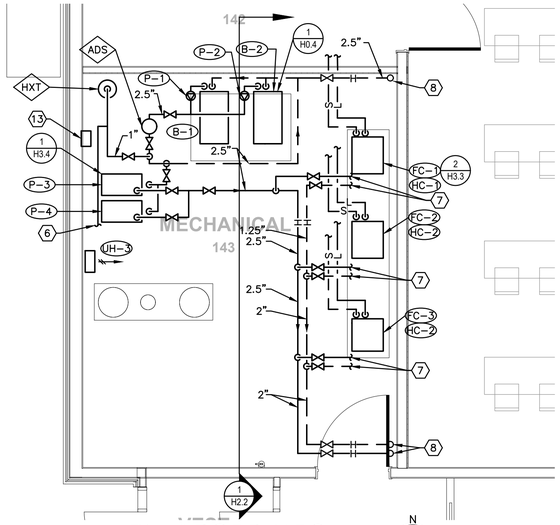
ATTIC PLAN - DUCTWORK

H1.2

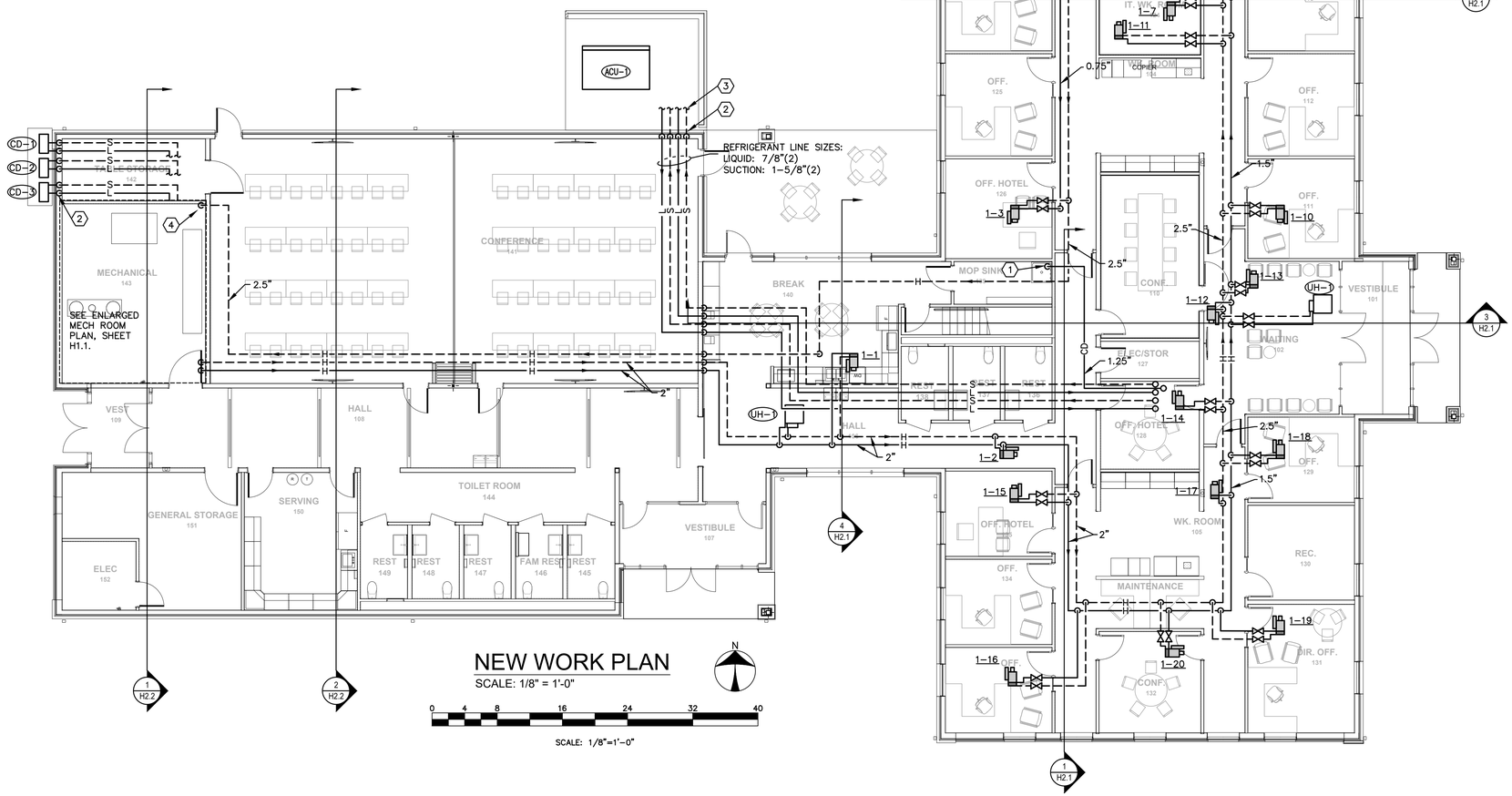


ENLARGED MECH. ROOM PLAN

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

0 2 4 8 12 16 20

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



NEW WORK PLAN

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

0 4 8 16 24 32 40

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

CONSTRUCTION NOTES

1. ROUTE AHU-1 CONDENSATE DRAIN PIPE TO MOP SINK. TERMINATE PIPE IN MOP SINK.
2. REFRIGERANT PIPING DOWN IN WALL.
3. CONNECT REFRIGERANT PIPING TO ACU-1 CIRCUITS. SUPPORT PIPE ON GRADE.
4. PIPING DOWN, SEE H1.1.
5. DIFFERENTIAL PRESSURE SENSOR.
6. EXTEND MAKEUP WATER TO BUILDING SERVICE. SEE HOT WATER DIAGRAM FOR DETAILS.
7. EXTEND HOT WATER SERVICE TO DUCT MOUNTED HEATING COILS.
8. HOT WATER PIPING UP INTO ATTIC SPACE.

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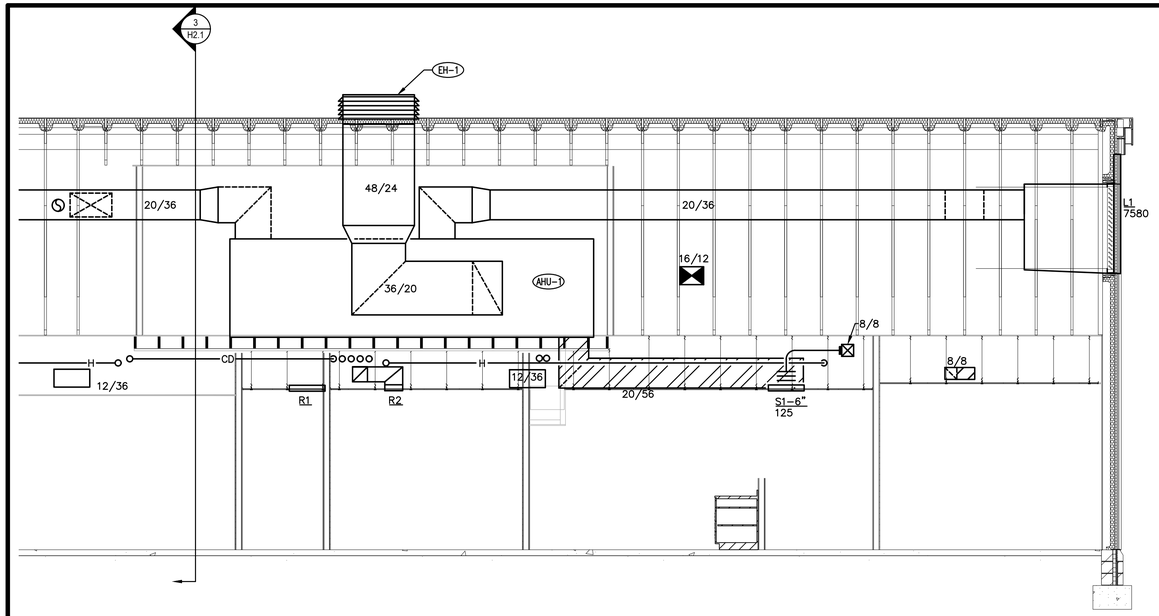
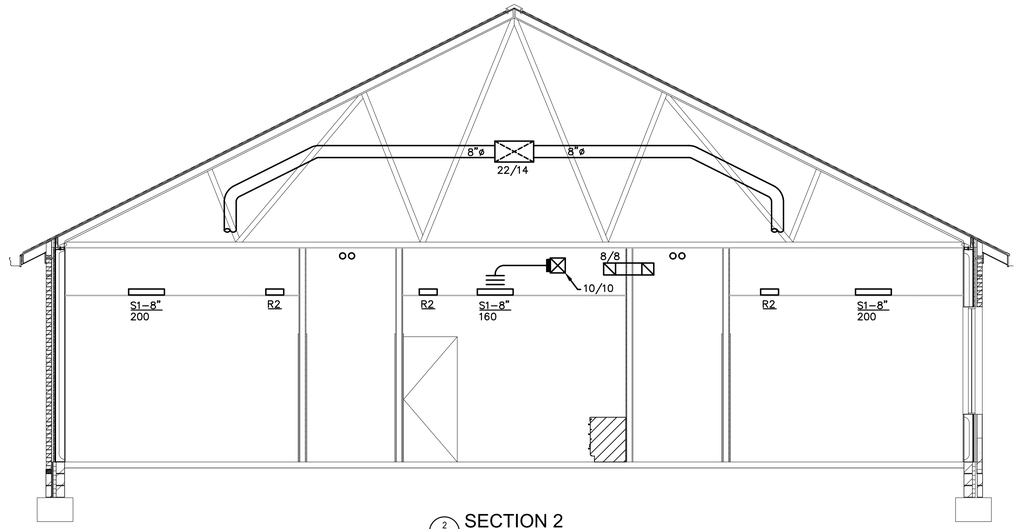
FIRST FLOOR PLAN - PIPING

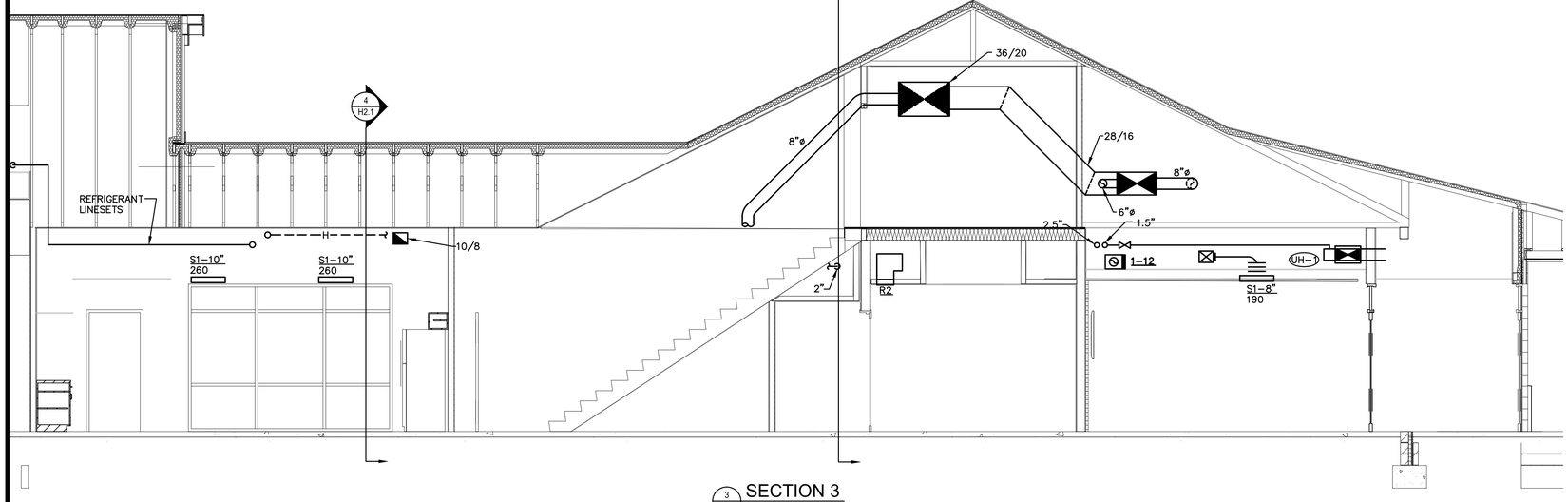
H1.3



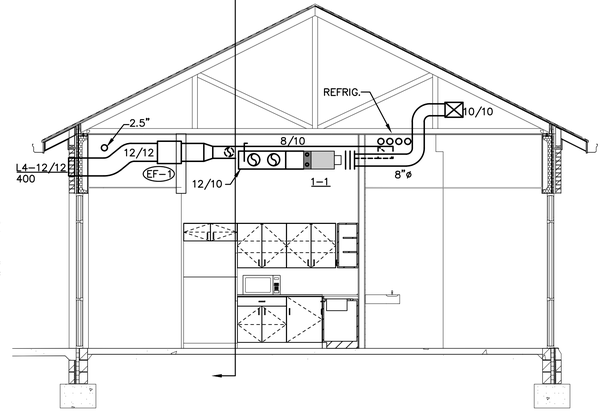
1 H2.1 SECTION 1
1/4" = 1'-0"



2 H2.1 SECTION 2
1/4" = 1'-0"



3 H2.1 SECTION 3
1/4" = 1'-0"



4 H2.1 SECTION 4
1/4" = 1'-0"

0 2 4 8 12 16 20

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

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TWO THOUSAND
PROFESSIONAL

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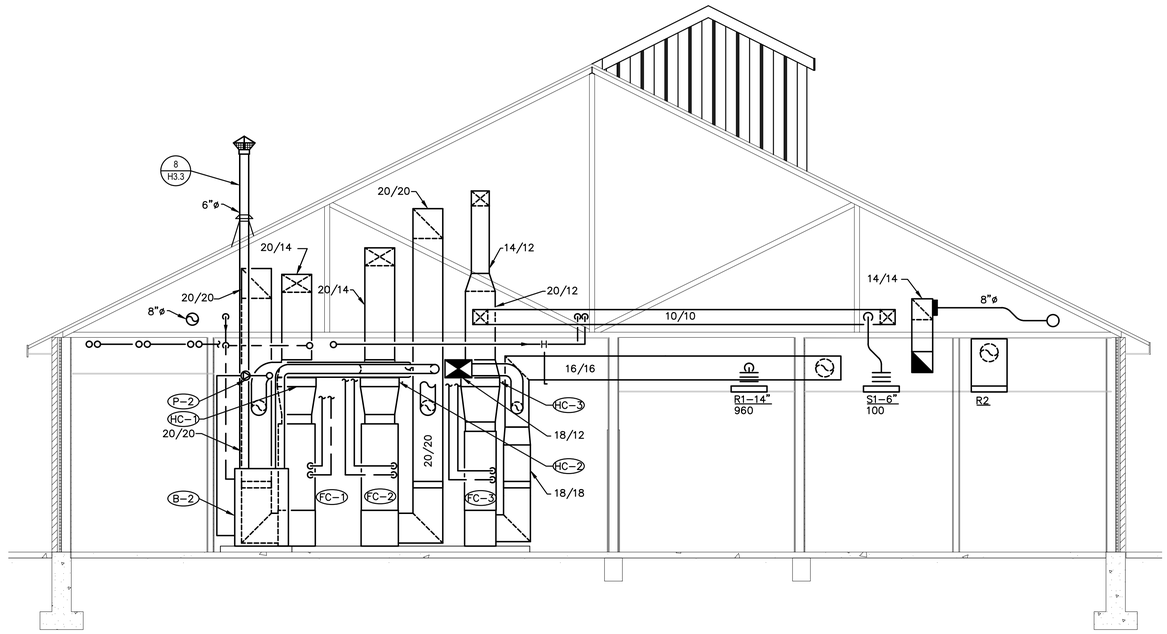
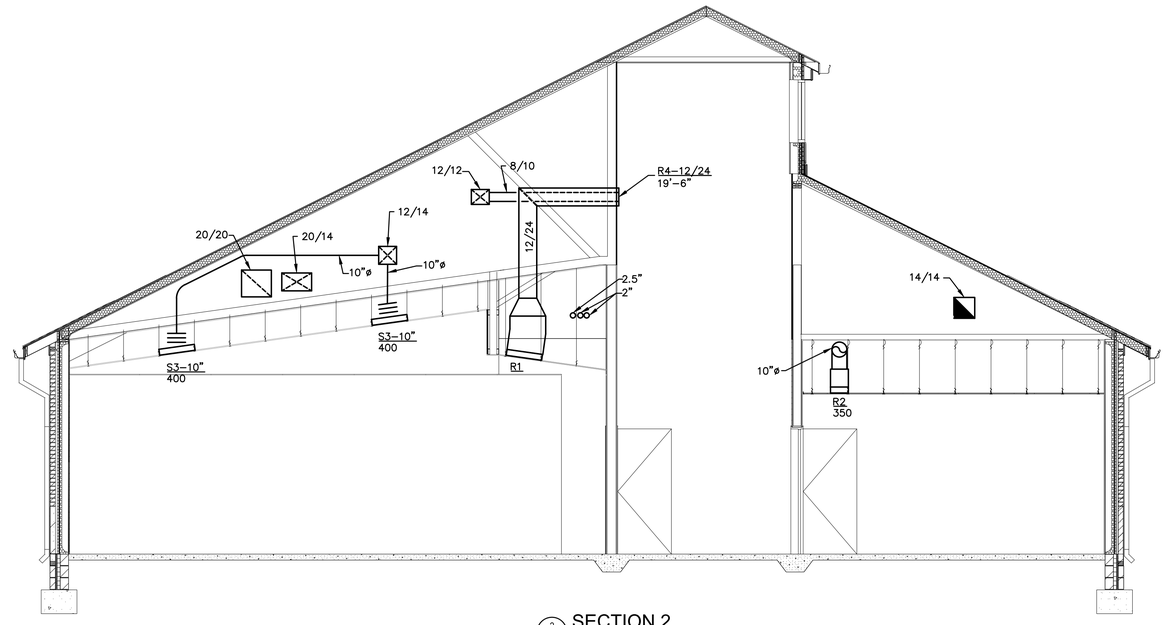
SECTIONS

H2.1



1 H2.1 SECTION 1
1/4" = 1'–0"



2 H2.1 SECTION 2
1/4" = 1'–0"

0 2 4 8 12 16 20

SCALE: 1/4"=1'–0"

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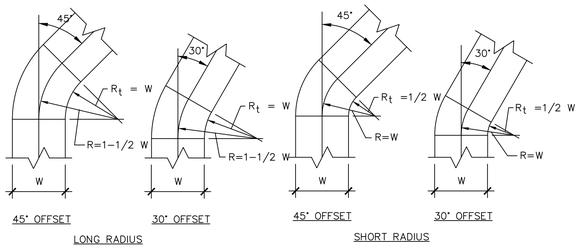
SECTIONS

H2.2

3113

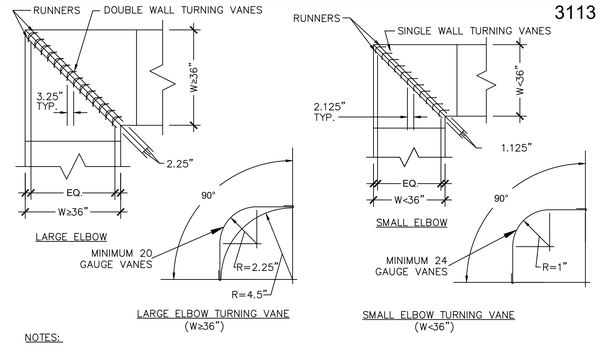


NOTES:

1. USE ONLY LONG RADIUS ELBOWS ON KITCHEN HOOD AND DISHWASHER HOOD EXHAUST DUCTWORK.
2. USE LONG RADIUS ELBOWS ON ALL DUCTWORK SYSTEMS WHERE POSSIBLE OR UNLESS OTHERWISE INDICATED.
3. ONLY WHEN IT IS IMPOSSIBLE TO USE LONG RADIUS ELBOWS, USE LARGEST POSSIBLE RADIUS WITH A MINIMUM RADIUS EQUAL TO THAT OF A SHORT RADIUS ELBOW.

1 RECTANGULAR 45° & 30° RADIUS ELBOW
N.T.S.

3113

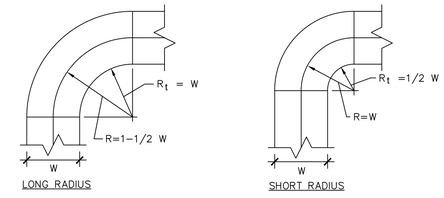


NOTES:

1. ALL VANES SHALL BE SECURE AND STABLE IN OPERATING POSITION.
2. VANES SHALL BE SECURELY FASTENED TO RUNNERS.
3. INSTALL VANES IN SECTIONS OR USE TIE RODS TO LIMIT THE UNBRACED LENGTH TO 60".
4. VANES ARE NOT TO HAVE TRAILING EDGES.

2 RECTANGULAR 90° MITERED ELBOW
N.T.S.

3113



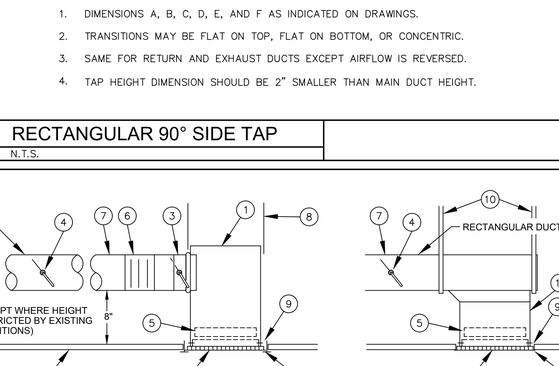
NOTES:

1. USE ONLY LONG RADIUS ELBOWS ON KITCHEN HOOD AND DISHWASHER HOOD EXHAUST DUCTWORK.
2. USE LONG RADIUS ELBOWS ON ALL DUCTWORK SYSTEMS WHERE POSSIBLE OR UNLESS OTHERWISE INDICATED.
3. ONLY WHEN IT IS IMPOSSIBLE TO USE LONG RADIUS ELBOWS, USE LARGEST POSSIBLE RADIUS WITH A MINIMUM RADIUS EQUAL TO THAT OF A SHORT RADIUS ELBOW.

NOTE:
ELBOWS WITH 90 DEGREE SQUARE ON INSIDE RADIUS ARE NOT ACCEPTABLE.

3 RECTANGULAR 90° RADIUS ELBOW
N.T.S.

3113

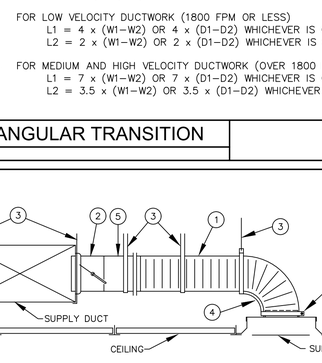


NOTES:

1. DIMENSIONS A, B, C, D, E, AND F AS INDICATED ON DRAWINGS.
2. TRANSITIONS MAY BE FLAT ON TOP, FLAT ON BOTTOM, OR CONCENTRIC.
3. SAME FOR RETURN AND EXHAUST DUCTS EXCEPT AIRFLOW IS REVERSED.
4. TAP HEIGHT DIMENSION SHOULD BE 2" SMALLER THAN MAIN DUCT HEIGHT.

4 RECTANGULAR 90° SIDE TAP
N.T.S.

3113

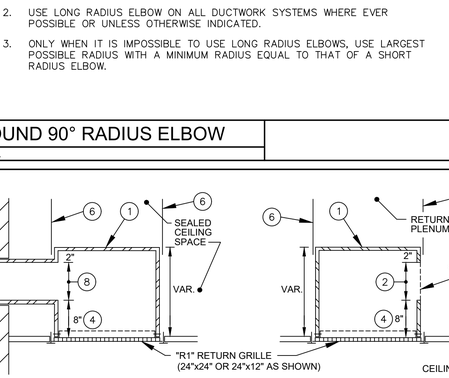


NOTES:

1. DIMENSIONS W1, W2, D1, AND D2 AS INDICATED ON THE DRAWINGS.
2. FOR LOW VELOCITY DUCTWORK (1800 FPM OR LESS)
   L1 = 4 x (W1–W2) OR 4 x (D1–D2) WHICHEVER IS GREATER.
   L2 = 2 x (W1–W2) OR 2 x (D1–D2) WHICHEVER IS GREATER.
3. FOR MEDIUM AND HIGH VELOCITY DUCTWORK (OVER 1800 FPM)
   L1 = 7 x (W1–W2) OR 7 x (D1–D2) WHICHEVER IS GREATER.
   L2 = 3.5 x (W1–W2) OR 3.5 x (D1–D2) WHICHEVER IS GREATER.

5 RECTANGULAR TRANSITION
N.T.S.

3113



NOTES:

1. DIMENSION D AS SHOWN ON THE DRAWINGS.
2. USE LONG RADIUS ELBOW ON ALL DUCTWORK SYSTEMS WHERE EVER POSSIBLE OR UNLESS OTHERWISE INDICATED.
3. ONLY WHEN IT IS IMPOSSIBLE TO USE LONG RADIUS ELBOWS, USE LARGEST POSSIBLE RADIUS WITH A MINIMUM RADIUS EQUAL TO THAT OF A SHORT RADIUS ELBOW.

6 ROUND 90° RADIUS ELBOW
N.T.S.

3713

1. PLENUM – SIZE TO MATCH GRILLE. PAINT INTERIOR OF PLENUM FLAT BLACK.
2. EXHAUST/RETURN GRILLE FRAME TO MATCH CEILING CONDITION.
3. SPIN–IN FITTING WITH BALANCING DAMPER, USE FOR ALL ACCESSIBLE CEILINGS.
4. PROVIDE REMOTE BALANCING DAMPER IN BRANCH DUCT ABOVE ACCESSIBLE CEILING FOR EACH GRILLE WHERE GRILLE IS INSTALLED ABOVE INACCESSIBLE CEILING (PREFERRED).
5. PROVIDE BALANCING DAMPER AT DEVICE ONLY WHERE DUCT MOUNTED DAMPER CANNOT BE PROVIDED DUE TO INACCESSIBLE CEILING.
6. FLEXIBLE DUCT ACCEPTABLE ABOVE ACCESSIBLE CEILING ONLY. MAX. 2 FT., REFER TO CEILING DIFFUSER DETAIL FOR INSTALLATION REQUIREMENTS.
7. SHEETMETAL DUCT.
8. SUPPORT PLENUM FROM STRUCTURE WITH DUCT STRAP HANGERS.
9. FASTEN SHEETMETAL PLENUM OR DUCT TO AIR DEVICE, EACH SIDE.
10. DUCT STRAP HANGER.
11. VIEWABLE PORTION OF DUCT INTERIOR TO BE PAINTED FLAT BLACK.

7 EXHAUST/RETURN GRILLE - DUCTED
N.T.S.

3713

1. FLEXIBLE DUCT SAME DIAMETER AS DIFFUSER INLET (ABOVE ACCESSIBLE CEILING ONLY USE SHEETMETAL ONLY ABOVE INACCESSIBLE CEILING). 7 FT. MAXIMUM LENGTH. STRETCH TO MINIMUM 90% OF FULLY EXTENDED LENGTH. ADDITIONAL HANGER REQUIRED IF DUCT LENGTH EXCEEDS 4 FT.
2. SPIN–IN BRANCH TAP FITTING, STRAIGHT SIDE, WITH MANUAL DAMPER. DAMPER SHAFT IN HORIZONTAL. INTEGRAL INSULATION GUARD SLEEVE REQUIRED FOR TAP FITTING TO MAIN DUCT WITH INTERNAL INSULATION.
3. DUCT STRAP HANGER. ATTACH TO STRUCTURE. PER SMACNA.
4. 90 DEGREE FLEXIBLE ELBOW SUPPORT BY FLEXRIGHT, FLEXFLOW OR SMARTFLOW. PROVIDE WITH DRAWBANDS, UL–2043 RATING.
5. SHEETMETAL DUCT, SAME DIAMETER AS DIFFUSER INLET, LONGITUDINAL OR SPIRAL LOCK SEAM, 0.50" S.P. CONSTRUCTION. PROVIDE EXTERIOR INSULATION, 1.5" THICKNESS, 0.75" DENSITY FIBERGLASS WITH FOIL/KRAFT PAPER JACKET.

8 CEILING DIFFUSER
N.T.S.

3713

1. 24"x24" OR 24"x12" NOMINAL SHEET METAL PLENUM LINED WITH 1/2" BLACK FIBERGLASS DUCT LINER.
2. 24"x12" GRILLE SIZE – 6" HIGH x FULL WIDTH
   24"x24" GRILLE SIZE – 12" HIGH x FULL WIDTH
3. EXTEND LINED RETURN AIR DUCT THRU WALL TO RETURN AIR PLENUM WHERE REQUIRED FOR FULL HEIGHT WALLS.
4. MINIMUM HEIGHT, EXCEPT WHERE HEIGHT IS RESTRICTED BY EXISTING CONDITIONS.
5. OPEN TO PLENUM ABOVE CEILING.
6. SUPPORT PLENUM FROM STRUCTURE WITH DUCT STRAP HANGERS.
7. FRAME OPENING THROUGH WALL AS REQUIRED AND SEAL WALL PENETRATION SMOKE TIGHT.
8. 24"x12" GRILLE SIZE – 10" HIGH x 14" WIDTH
   24"x24" GRILLE SIZE – 20" HIGH x 14" WIDTH

9 TRANSFER AIR GRILLE/PLENUM
N.T.S.

FREYTAG & ASSOCIATES INC.
ARCHITECTS ENGINEERS
226 N. MIAMI AVE.
P.O. BOX 220
SIDNEY, OHIO 45365
TELEPHONE (937) 492-6983
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NAUMAN & ZELINSKI LLC.
204 S. Ludlow St. Ste. 400
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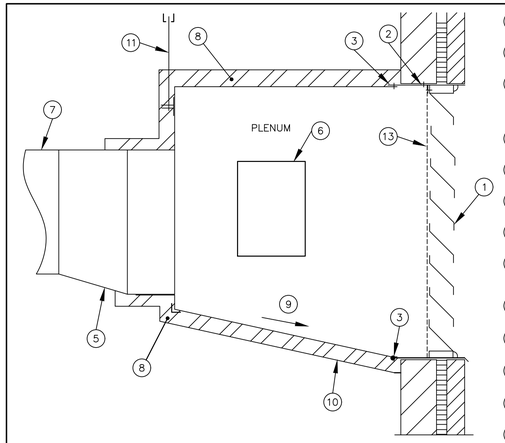
STATE OF OHIO JEFFREY D. ZELINSKI 63822 REGISTERED PROFESSIONAL ENGINEER

REVISIONS
REBID

COMM. NUMBER	DATE
1615.04	5/12/2021
DRAWN BY: DJZ	CHECKED BY: JDZ

DETAILS

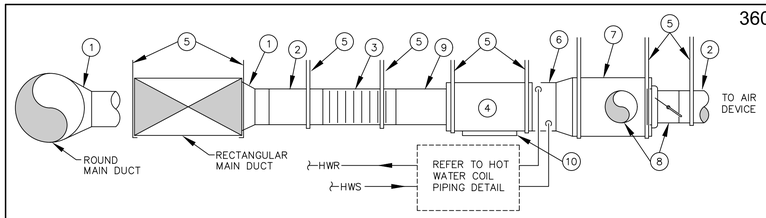
H3.1



1. LOUVER BY G.C. SEE ARCH. DWGS.
2. SLEEVE WITH FLANGE PROVIDED BY G.C.
3. OVERLAP FLANGE CONNECTION TO WALL LOUVER FLANGE. PLENUM FLANGE TO CONNECT ON INTERIOR OF LOUVER FLANGE ALONG BOTTOM SEAL AND TO BE WELDED. SEAL ALL JOINTS, ALL FOUR SIDES.
4. NOTE DELETED.
5. DUCT TRANSITION.
6. ACCESS DOOR.
7. SHEETMETAL FRESH AIR OR VENT AIR DUCT.
8. INSULATE PLENUM ON EXTERIOR. INSULATE ALL OUTSIDE AIR DUCTWORK. INSULATE VENT DUCT BACK TO DAMPER. DAMPER TO BE CLOSE TO AHU FOR ACCESSIBILITY.
9. SLOPE BOTTOM OF PLENUM MINIMUM OF 1/8" PER FOOT BACK TO LOUVER FOR DRAINAGE.
10. BOTTOM OF PLENUM SHALL BE WELDED STAINLESS STEEL, UP TO MINIMUM 6" ABOVE BOTTOM OF PLENUM.
11. SUPPORT PLENUM FROM STRUCTURAL MEMBERS. USE SUPPLEMENTAL ANGLES, CHANNELS AND THREADED RODS.
12. NOTE DELETED.
13. PROVIDE BLACK BIRDSCREEN BEHIND LOUVER.

1 AH SYSTEMS LOUVER CONNECTION – OA PLENUM
N.T.S.

3600



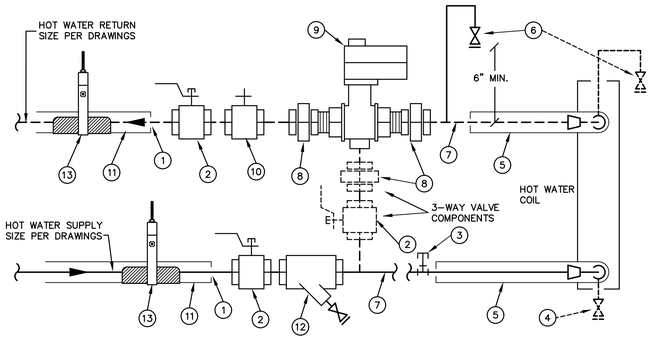
1. CONICAL TEE BRANCH FITTING.
2. ROUND SHEET METAL BRANCH DUCT. LENGTH AS REQUIRED. INSULATED.
3. INSULATED FLEXIBLE DUCT, 4' MAXIMUM LENGTH. STRETCH TO MINIMUM 90% OF FULLY EXTENDED LENGTH. DUCT SHALL BE FLEXMASTER TL–M ALUMINUM SPIRAL LINER WITH 1.5" INSULATION.
4. VAV REHEAT AIRFLOW CONTROL UNIT.
5. DUCT STRAP HANGER. ATTACH TO STRUCTURAL ELEMENTS.
6. HOT WATER REHEAT COIL. TERMINATE PIPE INSULATION AT FACE OF COIL. EXTEND DUCT INSULATION AROUND COIL PIPE INSULATION AND PROVIDE VAPOR BARRIER TAPE.
7. LOW PRESSURE RECTANGULAR SUPPLY DUCT. WHERE NOT SIZED ON THE DRAWINGS, SIZE TO MATCH COIL DIMENSIONS EXCEPT TRANSITION DUCT HEIGHT TO BE 2" HIGHER THAN LARGEST SPIN–IN BRANCH TAP FITTING.
8. SPIN–IN BRANCH TAP FITTING, STRAIGHT SIDE WITH MANUAL DAMPER AND INTEGRAL INSULATION GUARD SLEEVE.
9. 24" LONG SHEETMETAL AT BOX INLET – REDUCE LENGTH ONLY WHERE REQUIRED BY FIELD CONDITIONS.
10. ACCESS DOOR. LOCATE ON UNITS WITH REHEAT COILS ONLY.

NOTE: COORDINATE WITH OTHER TRADES AND INSTALL VAV BOXES TO PROVIDE 18" SIDE AND UNOBSTRUCTED BOTTOM CLEARANCE TO CONTROLLER, ACTUATORS AND VALVES FOR MAINTENANCE. COORDINATE TO INSURE ACCESS IS PROVIDED BY SIMPLE REMOVAL OF ADJACENT UNRESTRICTED CEILING TILES (FREE OF CEILING MOUNTED DEVICES) WITHOUT NEED TO REMOVE LIGHTS OR CEILING GRID. ACCESS DOOR ON BOX IS FOR INSPECTION AND UPSTREAM COIL CLEANING. ACCESS DOOR USE IS RARE AND REMOVAL OF LIGHTS OR CEILING GRID TO GAIN ACCESS IS ACCEPTABLE.

MARK DESIGNATIONS AS SHOWN ON DRAWINGS ON ALL VAV BOXES WITH 2" HIGH PAINTED STENCIL LETTERING.

3 VARIABLE AIR VOLUME UNIT W/ REHEAT COIL
N.T.S.

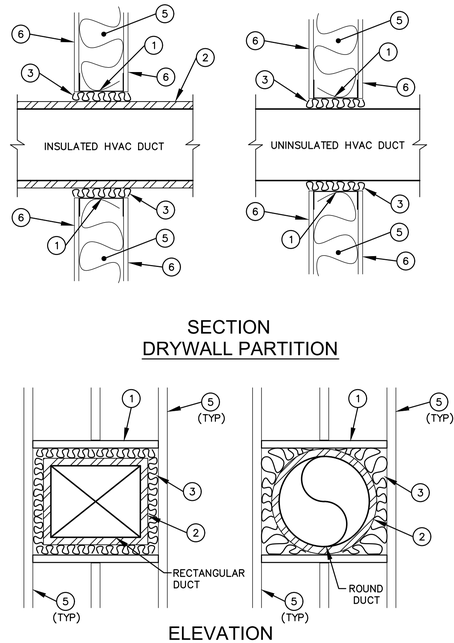
3600



1. PIPE INSULATION NOT REQUIRED AT VALVE/CONTROLS EXCEPT AS NOTED.
2. SHUT–OFF VALVE PER VALVE SCHEDULE. VALVE SIZE PER VAV AIR TERMINAL UNIT SCHEDULE.
3. PRESSURE TEMPERATURE P/T TEST PLUG, 0.50" NPT, NORDEL CORE WITH CAP RETAINER STRAP.
4. 0.50" BALL DRAIN VALVE WITH CAPPED HOSE THREAD, MIN. 4" BELOW PIPE OR COIL. LOCATE AT COIL WHERE COIL IS BELOW SUPPLY PIPE.
5. INSULATE PIPE, MINIMUM 12" FROM COIL ON REHEAT BOX TO PREVENT CONDENSATION. PER INSULATION SCHEDULE
6. 0.50" MANUAL AIR VENT/BALL VALVE WITH CAPPED HOSE THREAD AND CAP. OUTLET MINIMUM 6" ABOVE PIPE. PROVIDE AT COIL WHERE COIL IS ABOVE RETURN PIPE.
7. RUNOUT PIPING – COPPER, SIZED TO MATCH SCHEDULE. PROVIDE REDUCER AT UNIT FOR COIL CONNECTION.
8. UNION.
9. CONTROL VALVE – 2–WAY OR 3–WAY WITH ELECTRONIC MODULATING ACTUATOR.
10. BALANCING VALVE. REFER TO VALVE SCHEDULE.
11. PIPE INSULATION PER SCHEDULE.
12. Y–STRAINER WITH BLOW DOWN VALVE AND THREADED CAP.
13. LOCATE PIPE HANGER AND INSULATION SHIELD UPSTREAM OF VALVE ASSEMBLY COMPONENTS. HANGER NOT TO BE IN CONTACT WITH EXPOSED PIPE.

5 HOT WATER COIL PIPING — FOR REHEAT COILS
N.T.S.

3113



SECTION DRYWALL PARTITION

SECTION MASONRY WALL

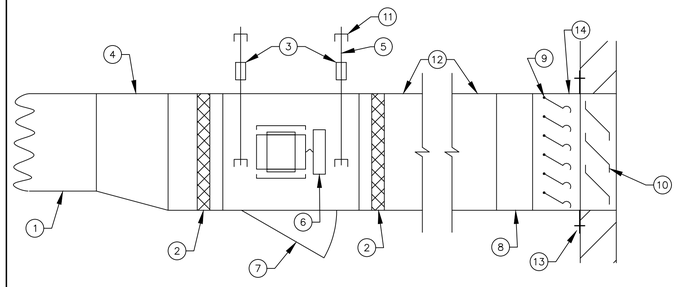
ELEVATION DRYWALL PARTITION

ELEVATION MASONRY WALL

1. WALL OPENING WITH FRAMING BY G.C.
2. DUCT INSULATION, SEE SCHEDULE FOR THICKNESS.
3. FILL VOID WITH 1.5" THICK, 0.75 P FIBERGLASS BATT INSULATION.
4. LINTEL BY G.C.
5. WOOD OR METAL STUDS AT 16" O.C. BY G.C.
6. DRYWALL BY G.C.
7. MASONRY WALL BY G.C.
8. FRAMED MASONRY OPENING BY G.C.

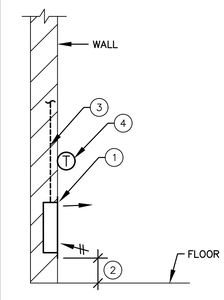
2 DUCT SEALING THRU NON-FIRE RATED WALL — * NEW CONSTRUCTION, FRAMED OPENING, DUCT SIDE OR DIA. ≥ 12"
N.T.S.

3400



1. EXHAUST DUCT
2. FLEXIBLE DUCT CONNECTION VIBRATION ISOLATORS
3. VIBRATION ISOLATORS
4. TRANSITION TO EXHAUST FAN INLET SIZE
5. THREADED ROD
6. BELT GUARD
7. ACCESS DOOR
8. TRANSITION TO LOUVER SIZE
9. MOTORIZED DAMPER BY T.C.
10. LOUVER BY G.C. DUCT CONNECTION BY H.C.
11. STEEL CHANNEL. ATTACH TO STRUCTURE
12. DISCHARGE DUCT IS SAME SIZE AS FAN OUTLET
13. FASTEN DUCT TO WALL ON ALL FOUR SIDES. CAULK TO SEAL AIRTIGHT
14. INSULATE EXTERIOR OF DUCT TO PREVENT COLD DUCT SURFACES INSIDE OF BLDG.

4 INLINE EXHAUST FAN — EXTERIOR WALL OUTLET
N.T.S.



1. WALL MOUNTED, RECESSED UNIT HEATER.
2. MOUNT 6" A.F.F.
3. ELECTRICAL WIRING BY E.C.
4. THERMOSTAT WIRED BY E.C.

6 WALL MOUNTED ELECTRIC UNIT HEATER
N.T.S.

FREYTAG & ASSOCIATES INC.
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STATE OF OHIO — JEFFREY D. ZELINSKI 63822 — REGISTERED PROFESSIONAL ENGINEER

REVISIONS
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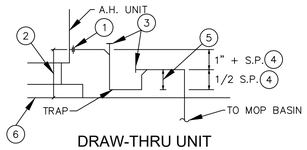
DRAWN BY	CHECKED BY
	JDZ

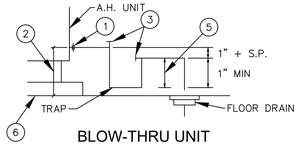
DETAILS

H3.2

7313



DRAW-THRU UNIT



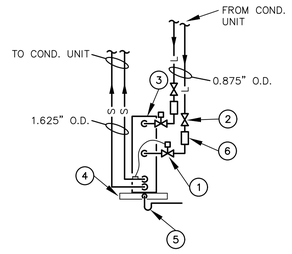
BLOW-THRU UNIT

1. DRAIN PIPE SAME SIZE AS UNIT DRAIN PAN CONNECTION.
2. VERIFY REQUIRED HEIGHT FOR DRAIN PIPE AND TRAP INSTALLATION. PROVIDE ADDITIONAL BEAMS OR BACK–TO–BACK CHANNELS UNDER UNIT. IF REQUIRED, TO ATTAIN REQUIRED DIMENSION.
3. TEE WITH CLEANOUT PLUG.
4. 4" MINIMUM CENTERLINE TO CENTERLINE.
5. DRAIN CENTERLINE DIMENSION NOT LESS THAN SUPPLY FAN T.S.P. (INCH W.G.) + 2".
6. CONCRETE PAD OR STEEL BASE. SEE FLOOR PLANS.

1 COOLING COIL CONDENSATE PIPING

N.T.S.

7313



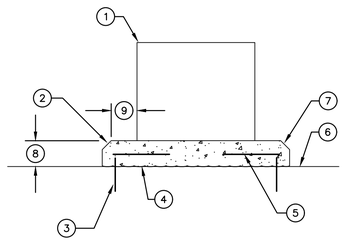
1. THERMOSTATIC EXPANSION VALVE.
2. VALVE.
3. REFRIGERANT COIL.
4. DRAIN PAN.
5. TRAP. SEE DETAIL.
6. FILTER DRIER.

REFRIGERATION PIPING BASED ON TWO SEPARATE REFRIGERATION CIRCUITS WITH INTERTWINED COIL ALONG WITH HOT GAS BY–PASS. CONTRACTOR TO VERIFY/COORDINATE PIPE SIZES WITH EQUIPMENT PROVIDED.

3 A.H. UNIT REFRIGERANT COOLING COIL

N.T.S.

0530



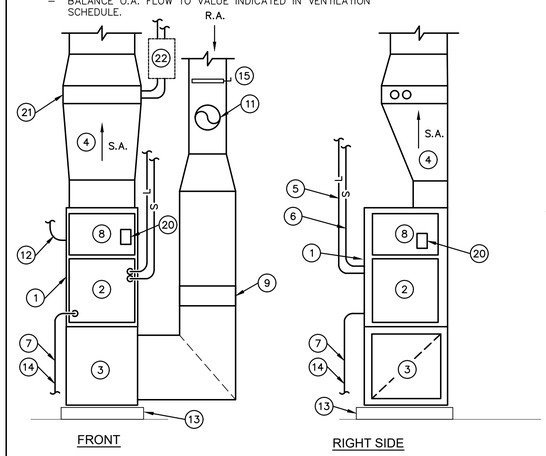
1. OUTLINE OF EQUIPMENT.
2. 4000 PSI CONCRETE.
3. 1–#4 DOWEL, 6" LONG, EACH CORNER.
4. ROUGHEN SLAB & APPLY BONDING AGENT.
5. STEEL REINFORCING MESH.
6. FINISHED CONCRETE FLOOR.
7. 45 DEG. CHAMFER ALL AROUND.
8. 4" THICK CONCRETE SLAB.
9. PROVIDE MINIMUM DISTANCE OF 2" FROM SLAB EDGE.

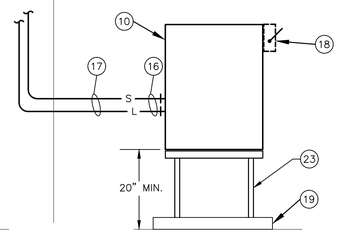
NOTE: OVERALL DIMENSION TO BE DETERMINED BY CONTRACTOR.

6 INTERIOR CONCRETE EQUIPMENT PAD

N.T.S.

NOTES:
– REFER TO PLAN FOR DUCT SIZES.
– BALANCE O.A. FLOW TO VALUE INDICATED IN VENTILATION SCHEDULE.



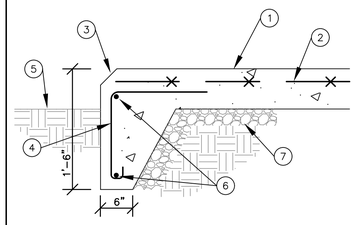


1. INDOOR MULTI–POSITION AIR HANDLER.
2. COOLING/HEATING COIL SECTION.
3. RETURN AIR PLENUM.
4. SUPPLY AIR DUCTWORK.
5. INSULATED LIQUID LINE.
6. INSULATED SUCTION LINE.
7. 0.75" COOLING COIL DRAIN PIPE. ROUTE TO FLOOR DRAIN.
8. FAN SECTION.
9. FILTER FRAME ASSEMBLY – CAMFIL GLIDEPACK–MULTITRACK13 – 2" MERV 8 FILTER.
10. OUTDOOR CONDENSING UNIT.
11. OUTDOOR AIR CONNECTION TO RETURN DUCT.
12. POWER CONNECTION BY E.C.
13. 4" HIGH CONCRETE EQUIPMENT PAD BY H.C.
14. PROVIDE TRAP ON CONDENSATE LINE. SEE CONDENSATE TRAP DETAIL.
15. PROVIDE BALANCING DAMPERS FOR OUTDOOR AND RETURN AIR DUCTWORK. BALANCE TO VALUES INDICATED IN VENTILATION SCHEDULE.
16. INSULATED SUCTION, LIQUID REFRIGERANT PIPING LINE SETS WITH QUICK CONNECTS.
17. PIPING TO INDOOR UNIT.
18. DISCONNECT SWITCH, ELECTRICAL POWER FEED BY E.C.
19. EXTERIOR CONCRETE EQUIPMENT PAD BY H.C.
20. IONIZATION SYSTEM, GLOBAL PLASMA SOLUTIONS #GPS–FC24–AC. MOUNT ON BLOWER HOUSING PER MANUFACTURE'S RECOMMENDATION.
21. DUCT MOUNTED HOT WATER COIL.
22. HOT WATER COIL CONNECTION. SEE DETAIL 5, SHEET H3.2.
23. PROVIDE GALVANIZED UNISTRUT FRAME TO RAISE CONDENSING UNIT A MINIMUM 20" ABOVE GRADE.

2 MULTIPOSITION AIR HANDLER

N.T.S.

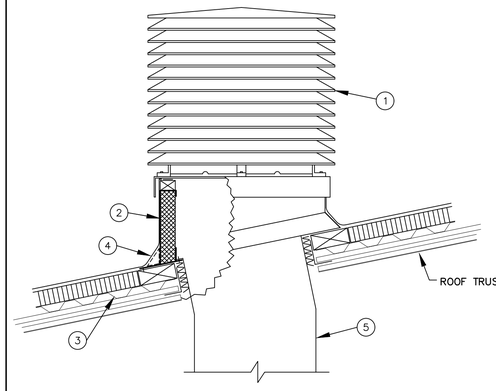
0530



1. 6" THICK CONCRETE PAD. 3500 PSI.
2. 6"x6" STEEL ROADWAY MESH.
3. CHAMFERED EDGES.
4. #4 STEEL RE–BAR. 24" ON CENTER.
5. GRADE.
6. #4 STEEL RE–BAR CONTINUOUS.
7. COMPACTED #57 CRUSHED GRAVEL FILL.

4 EXTERIOR EQUIPMENT PAD

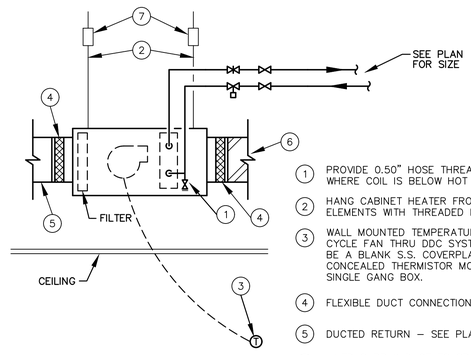
N.T.S.



1. ROOF MOUNTED VENTILATOR WITH BIRDSCREEN. ALUMINUM CONSTRUCTION. SEE FAN & VENTILATOR SCHEDULE FOR INFO.
2. PREFABRICATED ROOF CURB. SEE DETAIL.
3. ROOF DECK.
4. CURB FLASHING BY G.C.
5. FOR ROOF OPENING AND DUCT SIZE, SEE PLANS OR SCHEDULE.

5 LOUVERED PENTHOUSE

N.T.S.

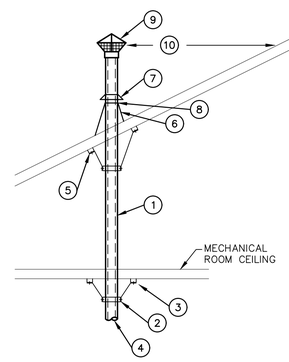


NOTES: – DISCONNECT SWITCH PROVIDED BY E.C.

1. PROVIDE 0.50" HOSE THREAD DRAIN VALVE WHERE COIL IS BELOW HOT WATER PIPING.
2. HANG CABINET HEATER FROM STRUCTURAL ELEMENTS WITH THREADED ROD.
3. WALL MOUNTED TEMPERATURE SENSOR TO CYCLE FAN THRU DDC SYSTEM. SENSOR SHALL BE A BLANK S.S. COVERPLATE WITH CONCEALED THERMISTOR MOUNTED ON A SINGLE GANG BOX.
4. FLEXIBLE DUCT CONNECTION.
5. DUCTED RETURN – SEE PLANS.
6. LINED SUPPLY DUCT TO GRILLE OR DIFFUSER – SEE PLANS.
7. NEOPRENE ISOLATOR.

7 CABINET UNIT HEATER ABOVE CEILING

N.T.S.



1. 6"ø DOUBLE WALL STAINLESS STEEL. INNER WALL, TYPE AL29–4C; OUTER WALL, TYPE 304.
2. STEEL SUPPORT RING.
3. UNISTRUT SUPPORTS. ANCHOR TO STRUCTURE.
4. FLUE FROM BOILER.
5. ANCHOR UNISTRUT TO ROOF TRUSS.
6. ALUMINUM FLASHING CONE. SEAL AROUND FLASHING CONE WATER TIGHT.
7. ALUMINUM STORM COLLAR.
8. SEAL AROUND CONNECTION TO BOILER FLUE.
9. VENT CAP WITH BIRDSCREEN, TYPICAL.
10. MINIMUM 3' HORIZONTAL DISTANCE FROM VENT CAP TO ROOF.

8 BOILER FLUE

N.T.S.

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STATE OF OHIO JEFFREY D. ZELINSKI 63822 REGISTERED PROFESSIONAL ENGINEER

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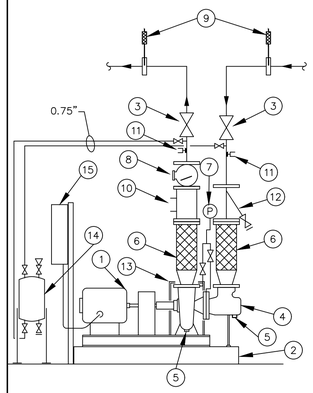
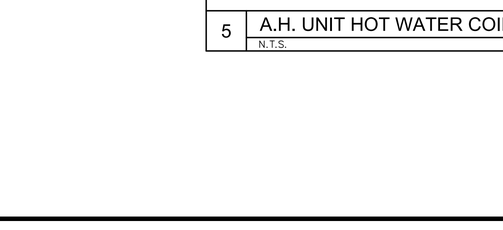
2123



1. BASE MOUNTED END SUCTION CENTRIFUGAL PUMP WITH INTEGRAL BASE.
2. CONCRETE EQUIPMENT PAD BY H.C. GROUT PUMP BASE.
3. SHUT–OFF VALVE.
4. SUCTION DIFFUSER W/ INTEGRAL FINE MESH START–UP STRAINER AND ADJUSTABLE SUPPORT. REMOVE MESH STRAINER AFTER START–UP.
5. DRAIN PLUG.
6. FLEXIDUCER CONNECTOR.
7. PRESSURE GAUGE, PIPING, AND VALVES.
8. CHECK VALVE.
9. COMBINATION SPRING ISOLATOR/PIPE HANGER.
10. BALANCING VALVE NOT REQUIRED ON VARIABLE FLOW (VFD) DRIVEN PUMPS.
11. PRESSURE–TEMPERATURE TEST PLUG.
12. WYE STRAINER WITH 0.75" BALL BLOW–OFF VALVE AND CAPPED HOSE THREAD.
13. REMOVABLE RIGID INSULATION ENCLOSURE AROUND PUMP CASING – CHILLED SERVICES ONLY.
14. 5 GALLON CHEMICAL FILTER FEEDER WITH 12" HIGH STAND. PROVIDE ON ONE PUMP PER SYSTEM.
15. PUMP VFD BY H.C. MOUNT ON FIELD ASSEMBLED UNISTRUT FRAME.

1 BASE MOUNTED PUMP W/ SHOT FEEDER
N.T.S.

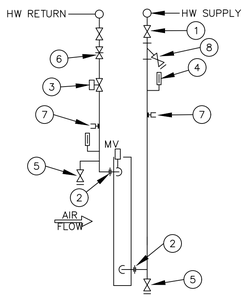
2123



1. PIPE MOUNTED CENTRIFUGAL PUMP.
2. REDUCER, IF REQUIRED.
3. PIPE HANGER.
4. PRESSURE/TEMPERATURE TEST PLUG.
5. THREADED ROD.
6. VIBRATION ISOLATOR.
7. STRAINER.
8. SHUT–OFF VALVE.
9. CHECK VALVE.
10. BALANCING VALVE.
11. STARTER BY E.C.
12. ATTACH TO STRUCTURE.

3 PIPE MOUNTED PUMP
N.T.S.

7313

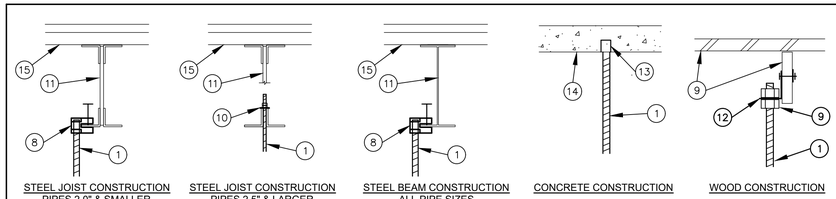


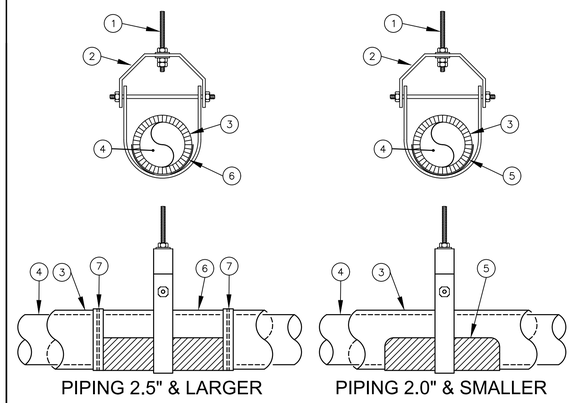
1. SHUT–OFF VALVE.
2. UNION.
3. AUTOMATIC 2–WAY CONTROL VALVE. NORMALLY OPEN THRU COIL.
4. THERMOMETER.
5. 0.75" BALL DRAIN VALVE AND CAPPED HOSE THREAD.
6. BALANCING VALVE.
7. PRESSURE–TEMPERATURE TEST PLUG.
8. WYE STRAINER WITH 0.75" BALL BLOW–OFF VALVE AND CAPPED HOSE THREAD.

NOTE: DETAIL IS SHOWN FOR ONE COIL UNIT. TWO COIL UNIT SHALL HAVE FULL SIZE COIL SHUT–OFF VALVES, MANUAL AIR VENTS & UNIIONS ON EACH COIL.

5 A.H. UNIT HOT WATER COIL-2 WAY VALVE
N.T.S.

2113

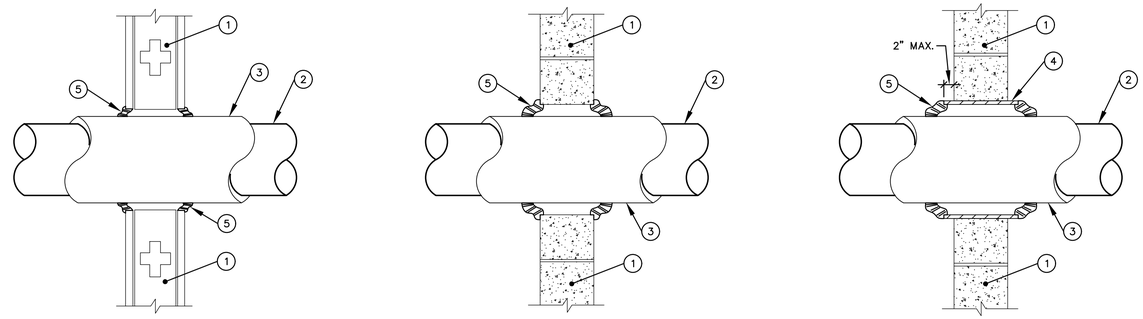




1. GALVANIZED THREADED ROD. ADJUST NUTS & RODS FOR PROPER ELEVATION.
2. STEEL CLEVIS PIPE HANGER. EQUAL TO ANVIL FIG. 260.
3. PIPE INSULATION.
4. PIPE.
5. 12" LONG, 18 GA. GALVANIZED INSULATION SHIELD. EQUAL TO ANVIL FIG. 168. CONTINUOUS INSULATION.
6. 18" LONG INSULATED PIPE SADDLES. BUCKAROOS TRU–BALANCE 3300E OR EQUAL. PROVIDE WITH 3 LB. DENSITY POLYISOCYANURATE INSULATION WITH VAPOR RETARDER JACKET & BOTTOM GALVANIZED METAL INSULATION SHIELD. SADDLES TO MEET 25/50 FLAME/SMOKE RATING.
7. PIPE INSULATION AND SADDLE INSULATION SHALL BE TIGHTLY ABUTTED TOGETHER. SEAL WITH 4" WIDE VAPOR RETARDER TAPE WITH FACTORY APPLIED JACKET WITH ACRYLIC ADHESIVE TO ASSURE VAPORTIGHT SEAL.
8. THREADED ROD BEAM CLAMP.
9. WOOD DECK & BEAM.
10. RETAINING NUTS & WASHERS.
11. STEEL JOIST OR BEAM.
12. 90 DEGREE SIDE BEAM BRACKET WITH THREADED ROD INTO WOOD.
13. CONCRETE EXPANSION ANCHOR OR CONCRETE INSERT IN NEW CONSTRUCTION.
14. CONCRETE SLAB OR PLANK.
15. METAL DECKING. DIRECT ATTACHMENT TO DECKING IS PROHIBITED. PROVIDE SUPPLEMENTAL STEEL ANGLES OR UNISTRUT WHERE REQUIRED FOR PROPER HANGER SPACING OR IN LIEU OF ATTACHMENTS SHOWN.

3 PIPE HANGERS
N.T.S.
CLEVIS HANGER, INSULATED PIPE

2113



GYPSUM CONSTRUCTION
ALL PIPE SIZES

CONCRETE/MASONRY CONSTRUCTION
1/2" – 1–1/2" PIPES

CONCRETE/MASONRY CONSTRUCTION
2" AND LARGER PIPES

1. FULL HEIGHT INTERIOR WALL.
2. PIPE OR TUBING.
3. PIPE INSULATION, CONTINUOUS THROUGH WALL OPENING, SEE SCHEDULE FOR THICKNESS.
4. SCHEDULE 40 STEEL PIPE SLEEVE CAST OR GROUTED INTO WALL ASSEMBLY. ENDS FLUSH OR MAX. 2" BEYOND WALL SURFACE.
5. CAULK TO FILL VOID AT WALL/SLEEVE OPENING.

4 PIPE PENETRATIONS THRU NON-RATED WALL
N.T.S.

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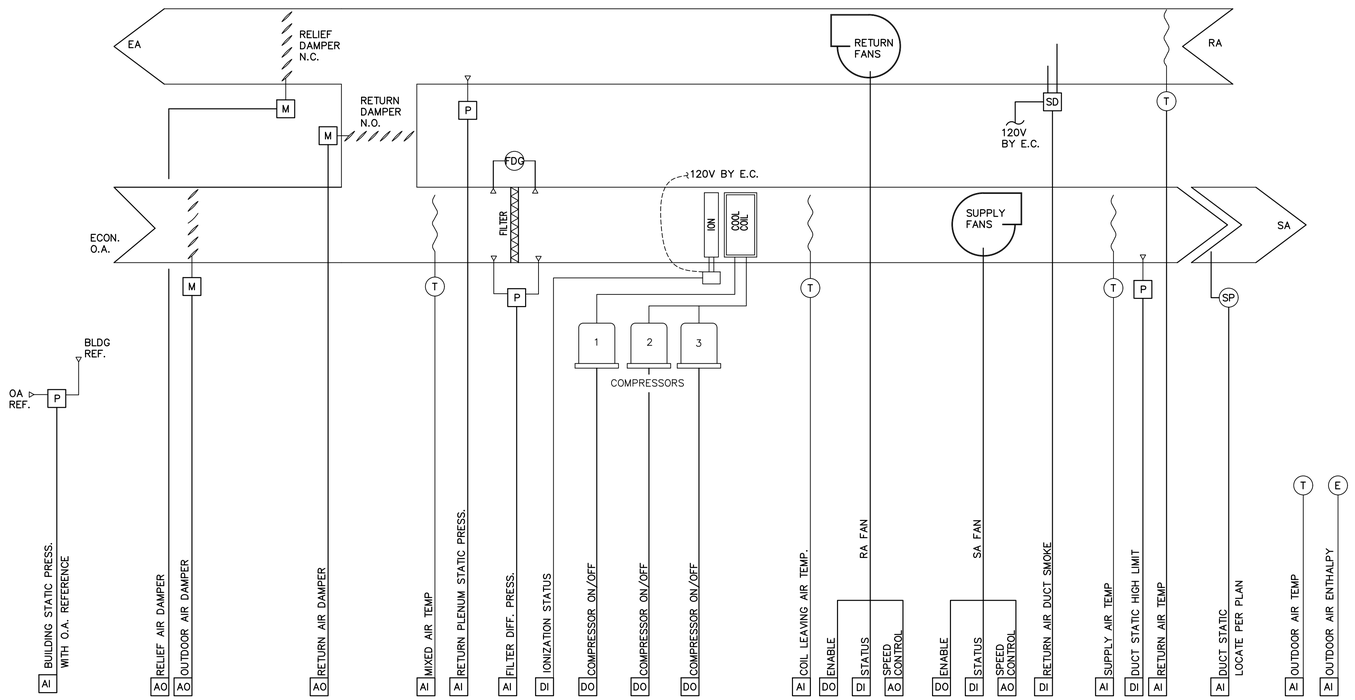

AIR HANDLING UNIT CONTROL DIAGRAM

SCALE: NTS

SEQUENCE OF OPERATION

OCCUPIED / UNOCCUPIED OPERATION

THE AIR HANDLING SYSTEM SHALL OPERATE IN AN OCCUPIED OR UNOCCUPIED MODE OF OPERATION, BASED ON A CALENDAR AND TIME OF DAY ADJUSTABLE SCHEDULE. THE SYSTEM SHALL ALLOW SCHEDULING FOR DAILY AND WEEKEND SCHEDULING.

UNOCCUPIED SETBACK MODE (OAT >39 DEG F, <60 DEG F)

DURING THE UNOCCUPIED MODE WHEN THE OUTSIDE AIR TEMPERATURE IS BETWEEN 40 AND 60 DEGREES F, THE SUPPLY AND RETURN FANS SHALL BE OFF. THE OUTSIDE AND RELIEF AIR DAMPERS SHALL BE CLOSED, THE RETURN DAMPERS FULL OPEN.

IF ANY SPACE TEMPERATURE ON THE SYSTEM DROPS BELOW 62 DEG. F (ADJ) THE SUPPLY AND RETURN FANS SHALL START AND CONTROL TO THEIR STATIC PRESSURE SET POINTS. OUTSIDE AND RELIEF AIR DAMPERS SHALL REMAIN CLOSED AND MECHANICAL COOLING DISABLED. THE RESPECTIVE ROOM REHEAT TERMINAL UNIT SHALL OPERATE TO MAINTAIN ROOM SETPOINT.

WHEN THE SPACE TEMPERATURE RISES ABOVE 65 DEG F. THE SUPPLY AND RETURN FANS SHALL CYCLE OFF.

UNOCCUPIED SETBACK MODE (OAT < 38 DEG F)

DURING THE UNOCCUPIED MODE WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN 38 DEG F. THE SUPPLY FANS SHALL BE OFF. THE OUTSIDE AND RELIEF AIR DAMPERS SHALL BE CLOSED, RETURN AIR DAMPERS FULL OPEN. THE RETURN FANS SHALL OPERATE AT 50% SPEED TO PRESSURIZE THE MIXED AIR CHAMBER AND PROVIDE LIMITED AIR FLOW DOWNSTREAM.

IF ANY SPACE TEMPERATURE ON THE SYSTEM DROPS BELOW 62 DEG. F (ADJ) THE SUPPLY AND RETURN FANS SHALL START AND CONTROL TO THEIR STATIC PRESSURE SET POINTS. OUTSIDE AND RELIEF AIR DAMPERS SHALL REMAIN CLOSED AND MECHANICAL COOLING DISABLED. THE RESPECTIVE ROOM REHEAT TERMINAL UNIT SHALL OPERATE TO MAINTAIN ROOM SETPOINT.

WHEN THE SPACE TEMPERATURE RISES ABOVE 65 DEG F. THE SUPPLY AND RETURN FANS SHALL CYCLE OFF.

SEQUENCE OF OPERATION CONT.

UNOCCUPIED SET UP MODE (OAT > 60 DEG F)

DURING THE UNOCCUPIED MODE WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN 60 DEG F THE UNIT SHALL ENTER THE TEMPERATURE SET UP MODE. THE SUPPLY AND RETURN FANS SHALL BE OFF. THE OUTSIDE AND RELIEF AIR DAMPERS SHALL BE CLOSED, RETURN AIR DAMPERS FULL OPEN.

IF ANY SPACE TEMPERATURE ON THE SYSTEM RISES ABOVE 82 DEG F., THE SUPPLY AND RETURN FANS SHALL START AND CONTROL TO THEIR STATIC PRESSURE SET POINTS. OUTSIDE AND RELIEF AIR DAMPERS SHALL REMAIN CLOSED. THE CONDENSING UNIT COMPRESSORS SHALL BE STAGED TO MAINTAIN A 55 DEG F UNIT SUPPLY AIR TEMPERATURE.

WHEN THE SPACE TEMPERATURE REACHES 78 DEG F THE SUPPLY AND RETURN FANS SHALL CYCLE OFF.

MORNING START-UP CYCLES

THE PROGRAM SHALL BE CAPABLE OF AN OPTIMAL START SEQUENCE THAT SHALL START THE SYSTEMS, AS INDICATED BELOW, IN ADVANCE OF THE OCCUPIED TIME.

MORNING WARM UP

THE UNIT FANS SHALL START AND CONTROL TO THEIR STATIC PRESSURE SET POINTS. THE OUTSIDE AND RELIEF AIR DAMPERS SHALL BE CLOSED. RETURN DAMPERS SHALL BE FULL OPEN.

VAV TERMINAL UNITS SHALL OPERATE PER VAV SEQUENCE TO MAINTAIN ROOM SET–POINT.

MORNING COOL DOWN

THE UNIT FANS SHALL START AND CONTROL TO THEIR STATIC PRESSURE SET POINTS. THE CONDENSING UNIT COMPRESSORS SHALL BE STAGED ON TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 55 DEG F. THE OUTSIDE AND RELIEF AIR DAMPERS SHALL BE FULLY CLOSED, RETURN AIR DAMPERS FULLY OPEN, UNLESS THE OUTSIDE AIR TEMPERATURE IS SUCH THAT THE ECONOMIZER CYCLE CAN BE USED.

VAV TERMINAL UNITS SHALL OPERATE PER VAV SEQUENCE TO MAINTAIN ROOM SET–POINT.

OCCUPIED MODE

WHEN INDEXED TO THE OCCUPIED MODE THE OUTSIDE AND RETURN AIR DAMPERS SHALL MODULATE TO THEIR OCCUPIED POSITION. OUTSIDE AIR DAMPERS SHALL OPEN ACCORDING TO PROVIDE THE MINIMUM OUTDOOR VENTILATION AIR PER THE AIR HANDLING UNIT SCHEDULE AND AS BALANCED BY THE BALANCING CONTRACTOR.

THE ECONOMIZER DAMPERS (ECON. OPERATION), AND STAGED COMPRESSORS SHALL MODULATE IN SEQUENCE, WITHOUT OVERLAP, TO MAINTAIN THE SUPPLY AIR TEMPERATURE (SAT) SET POINT 55'F.

OUTSIDE AIR ECONOMIZER

THE ECONOMIZER SHALL BE ENABLED/DISABLED FROM THE GLOBAL OUTSIDE AIR TEMPERATURE SENSOR AND ENTHALPY SENSOR. WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 70 DEG F. AND THE ENTHALPY IS BELOW 28 BTU/LB, THE ECONOMIZER SHALL BE ENABLED. ABOVE EITHER VALUE THE ECONOMIZER SHALL BE DISABLED.

DURING ECONOMIZER CYCLE THE MINIMUM OUTSIDE AIR DAMPERS SHALL REMAIN 100% OPEN AND THE ECONOMIZER DAMPERS SHALL BE MODULATED OPEN AS REQUIRED TO MAINTAIN THE UNIT DISCHARGE AIR SET POINT. THE RETURN AIR DAMPERS SHALL INVERSELY TRACK THE OUTSIDE AIR DAMPERS AND THE RELIEF AIR DAMPERS SHALL BE MODULATE TO MAINTAIN BUILDING STATIC PRESSURE SET POINT (SEE BELOW).

PROVIDE A MIXED AIR TEMPERATURE SENSOR FOR LOW LIMIT CONTROL SET AT 50 DEG F. TO PREVENT OVER–OPENING THE OUTSIDE AIR DAMPERS.

RELIEF AIR DAMPER

THE RELIEF AIR DAMPER SHALL BE MODULATE TO MAINTAIN THE BUILDING STATIC PRESSURE SET POINT. INITIAL SET POINT SHALL BE 0.01 INCHES OF WATER COLUMN.

FAN VOLUME CONTROL

SUPPLY FANS
THROUGH THE ECM FAN CONTROLLER THE FAN SPEED SHALL BE MODULATED TO MAINTAIN A DUCT STATIC PRESSURE SENSOR (LOCATION SHOWN ON THE DRAWINGS). INITIAL SET POINT SHALL BE 1 INCH STATIC BUT SHALL BE ADJUSTED TO THE LOWEST POSSIBLE READING BY THE BALANCING CONTRACTOR.

THE DUCT STATIC PRESSURE SHALL BE RESET BASED VAV TERMINAL UNIT DAMPER POSITIONS. IF ANY ONE VAV TERMINAL DAMPER EXCEEDS 95% OPEN THE STATIC PRESSURE SET POINT SHALL INCREASE BY 0.1" W.C. IF ALL DAMPER POSITIONS ARE LESS THAN 95% OPEN THEN THE SET POINT SHALL BE REDUCED BY 0.1". DAMPER POSITIONS SHALL BE POLLED AND SETPOINT RESET SHALL OCCUR EVERY 5 MINUTES. STATIC PRESSURE SET POINT RESET SHALL HAVE A MINIMUM AND MAXIMUM RESET RANGE INITIALLY SET AT 0.5" MINIMUM AND 1.5" MAXIMUM. THE REST RANGE LIMITS SHALL BE DISPLAYED ON THE DDC AHU GRAPIC AND ADJUSTABLE BY THE SYSTEM OPERATOR. THE SYSTEM OPERATION SHALL ALSO BE ABLE TO REMOVE SPECIFIC VAV UNITS FROM THE RESET SEQUENCE VIA THE SYSTEM GRAPHICS.

RETURN FANS
THROUGH THE ECM FAN CONTROLLER THE FAN SPEED SHALL BE MODULATED TO MAINTAIN THE RETURN FAN DISCHARGE PLENUM POSITIVE STATIC PRESSURE SET POINT. STATIC SET POINT SHALL BE DETERMINED BY THE BALANCING CONTRACTOR WITH THE UNIT IN THE MINIMUM OUTDOOR AIR POSITION.

SAFETIES

THE FOLLOWING SAFTIES SHALL BE PROVIDED TO STOP THE AIR HANDLING UNIT SUPPLY AND RETURN FANS AND POSITION CONTROL DEVICES TO THEIR "FAIL SAFE" POSITION, I.E. OUTSIDE AND RELIEF DAMPERS CLOSED, RETURN DAMPERS OPEN.

SUPPLY DUCT HIGH STATIC – SET POINT 4" (ADJ)
RETURN AIR SMOKE DETECTOR.

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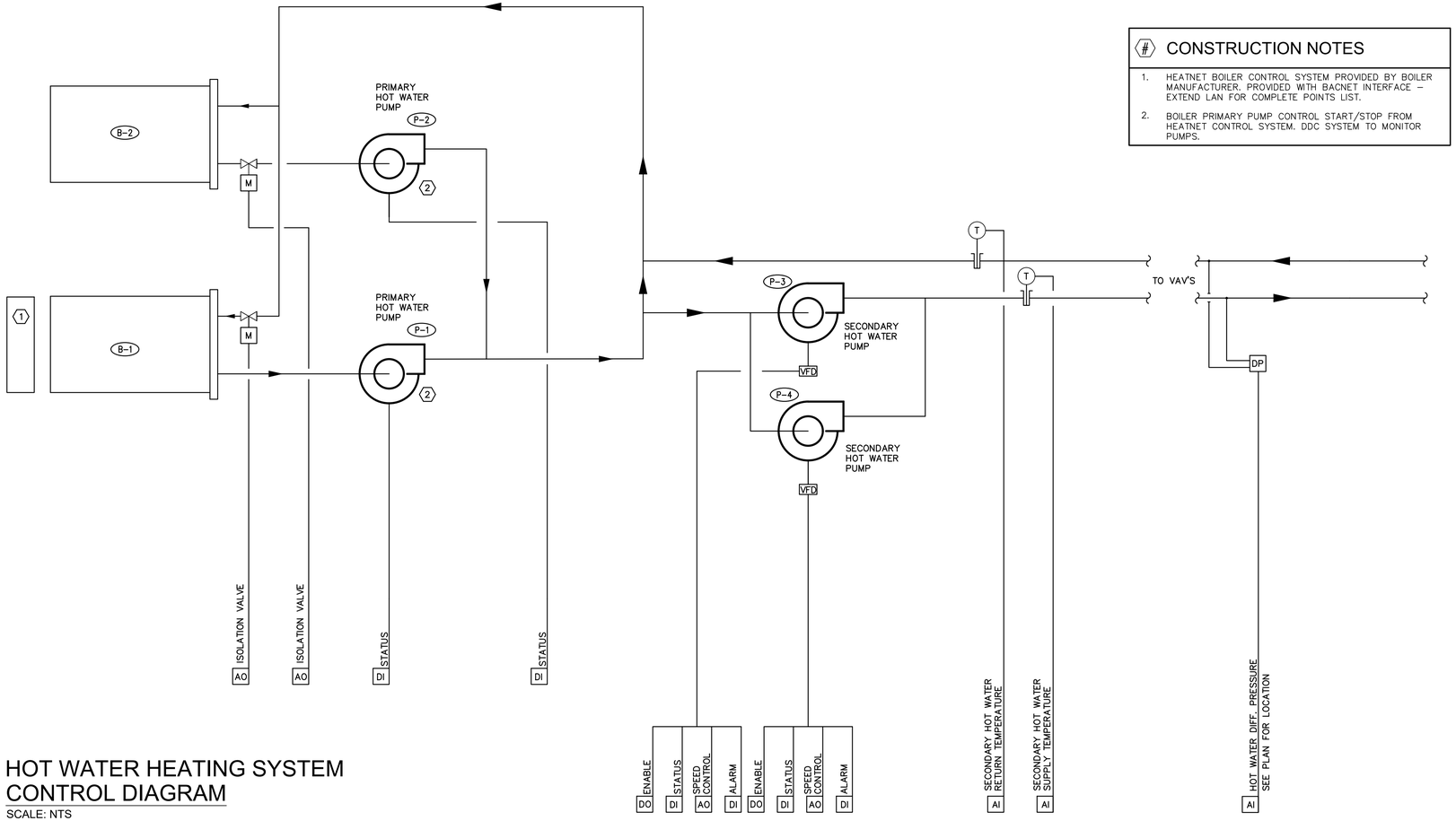

HOT WATER HEATING SYSTEM CONTROL DIAGRAM

SCALE: NTS

CONSTRUCTION NOTES

1. HEATNET BOILER CONTROL SYSTEM PROVIDED BY BOILER MANUFACTURER. PROVIDED WITH BACNET INTERFACE – EXTEND LAN FOR COMPLETE POINTS LIST.
2. BOILER PRIMARY PUMP CONTROL START/STOP FROM HEATNET CONTROL SYSTEM. DDC SYSTEM TO MONITOR PUMPS.

SEQUENCE OF OPERATION

BOILERS & PRIMARY HOT WATER PUMPING

SYSTEM DESCRIPTION –
THE HEATING HOT WATER SYSTEM CONSISTS OF TWO BOILERS, EACH BOILER AND SECONDARY HOT WATER PUMP ARE SIZED FOR 100% CAPACITY. CONSTANT FLOW PRIMARY, VARIABLE FLOW SECONDARY PUMPING SYSTEM WILL PROVIDE HOT WATER TO TERMINAL UNITS. CONTROL SHALL BE THRU A BOILER CONTROL SYSTEM PROVIDED WITH THE BOILERS. THE BOILER SYSTEM CONTROLLER SHALL BE BACNET COMPATIBLE WITH ALL POINTS FULLY SHARED. THIS CONTROLLER SHALL STAGE BOILERS AND PRIMARY PUMPS TO MAINTAIN A SECONDARY SYSTEM SUPPLY TEMP. BASED ON A RESET SCHEDULE.

SEQUENCING –
THE TWO BOILERS ARE REDUNDANT AND SHALL OPERATE ON A LEAD/LAG/STAND–BY MODE. LEAD/LAG/STAND–BY STATUS IS TO BE ROTATED ON A MONTHLY BASIS THROUGH THE BOILER CONTROLLER.

ENABLE –
1. THE HEATING HOT WATER SYSTEM BOILERS AND PUMPS SHALL OPERATE ON AN ENABLED/DISABLE SEQUENCE. THE SYSTEM SHALL BE ENABLED FROM THE DDC SYSTEM WHEN ANY OF THE FOLLOWING OCCURS:
   1. THREE OR MORE VAV TERMINAL UNITS OR UNIT HEATERS CALL FOR HEAT.
   2. THE OUTDOOR AIR TEMPERATURE DROPS BELOW 60 DEG F.
   3. THE SYSTEM SHALL BE DISABLED ON A RISE IN OUTDOOR AIR TEMPERATURE TO 65 DEG. F. (ADJ) AND TERMINAL UNITS ARE SATISFIED FOR MORE THAN 1 HOUR.

2. AN INTEGRAL FLOW SENSING DEVICE IN EACH BOILER SHALL PROVE FLOW BEFORE THE BURNER OPERATES. IF THE BOILER IS COMMANDED ON AND FLOW STOPS, AN ALARM SHALL BE INITIATED AT THE DDC CONSOLE.

CONTROL –
1. MODULATION STAGING – WHEN THE SYSTEM IS ENABLED, THE HOT WATER BOILER CONTROLLER SHALL MODULATE BURNERS AND PROVIDE STAGING STRATEGIES TO MAINTAIN THE SECONDARY HOT WATER SUPPLY TEMPERATURE SET POINT. THE LEAD BOILER SHALL FIRE UP TO 100% (ADJ.) BEFORE CALLING FOR LAG BOILER. ONCE LAG BOILER IS ENABLED, BOTH BOILERS SHALL MODULATE SIMULTANEOUSLY.

2. PRIMARY HOT WATER PUMP OPERATION SHALL BE CONTROLLED THROUGH THE BOILER CONTROLLER. STATUS OF THE PUMPS SHALL BE MONITORED. THE BOILER CONTROLLER SHALL ALSO DIRECTLY CONTROL COMBUSTION AIR DAMPERS (PROVIDED AND WIRED BY THE BOILER SUPPLIER) TO PROVIDE COMBUSTION AIR ON AN ACTIVE BOILER.

3. HOT WATER SUPPLY TEMPERATURE SET POINT RESET SCHEDULE –
PROVIDE LINEAR RESET BASED ON THE FOLLOWING:
- 60 DEG F OUTDOOR AIR TEMP. AND ABOVE, HWST = 120 DEG F.
- 0 DEG F OUTDOOR AIR TEMP. AND BELOW, HWST = 160 DEG F.

POINT INFORMATION AVAILABLE VIA BACNET INTEGRATION FROM THE BOILER CONTROLLER SHALL INCLUDE:
- PUMP ENABLE/DISABLE
- PUMP STATUS
- PUMP ALARM
- PUMP SPEED
- BOILER ENABLE/DISABLE
- BOILER STATUS
- BOILER OUTPUT %
- BOILER ALARM
- BOILER SUPPLY TEMPERATURE
- OUTDOOR AIR TEMPERATURE
- PRIMARY SYSTEM SUPPLY/RETURN TEMPERATURE
- HOT WATER SUPPLY TEMPERATURE SETPOINT

ALARMS & MONITORING POINTS VIA BACNET SHALL INCLUDE:
- PUMP COMMAND VS STATUS MISMATCH
- BOILER COMMAND VS. STATUS MISMATCH
- PRIMARY HOT WATER PUMPS NO FLOW ALARM
- LOW SUPPLY WATER TEMPERATURE ALARM
- LOW/HIGH SYSTEM DIFFERENTIAL PRESSURE ALARM

SEQUENCE OF OPERATION

SECONDARY HOT WATER PUMPING

SECONDARY PUMPING SYSTEM: NEW P–3, P–4 SHALL MODULATE PUMP MOTOR VFD TO MAINTAIN A MINIMUM DIFFERENTIAL PRESSURE SET POINT IN THE NEW HOT WATER PIPING SYSTEM. THE PUMPS SHALL OPERATE IN A LEAD/LAG ARRANGEMENT WITH ONE PUMP FULLY REDUNDANT.

SEQUENCING –
THE LEAD/LAG STATUS OF EACH PUMP SHALL BE ROTATED ON A MONTHLY BASIS.

ENABLING –
THE LEAD SECONDARY PUMP SHALL BE ENABLED WHEN THE HEATING SYSTEM IS ENABLED (SEE ABOVE), START LAG PUMP ON ALARM/LOSS OF FLOW OF LEAD PUMP.

CONTROL –
1. PUMP VFD SPEED SHALL BE MODULATED TO MAINTAIN THE DIFF. PRESSURE SET POINT, INITIALLY SET TO 15 PSI (ADJ.), TO BE DETERMINED BY BALANCING CONTRACTOR.

2. THE PUMP SHALL RUN FOR A MINIMUM OF 1 HOUR (ADJ) AFTER HOT WATER SYSTEM HAS BEEN DISABLED BEFORE BEING SHUT OFF.

COMMANDS/DISPLAYS –
- PUMP ENABLE/DISABLE
- PUMP STATUS
- PUMP SPEED
- PUMP VFD ALARM
- SECONDARY SYSTEM SUPPLY/RETURN TEMPERATURE
- DIFFERENTIAL PRESSURE
- DIFFERENTIAL PRESSURE SETPOINT

ALARMS & MONITORING POINTS –
- PUMP COMMAND VS STATUS MISMATCH
- SECONDARY HOT WATER PUMPS NO FLOW ALARM
- LOW SUPPLY WATER TEMPERATURE ALARM
- LOW/HIGH SYSTEM DIFFERENTIAL PRESSURE ALARM

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FOR
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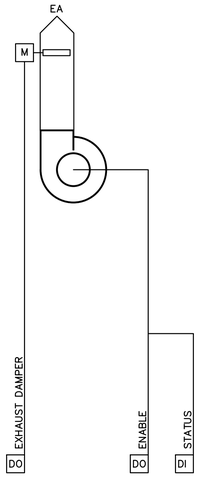
STATE OF OHIO – JEFFREY D. ZELINSKI – 63822 – REGISTERED PROFESSIONAL ENGINEER

REVISIONS
REBID

COMM. NUMBER	DATE
1615.04	5/12/2021
DRAWN BY	CHECKED BY
DJZ	JDZ

CONTROLS

H4.2



SEQUENCE OF OPERATION

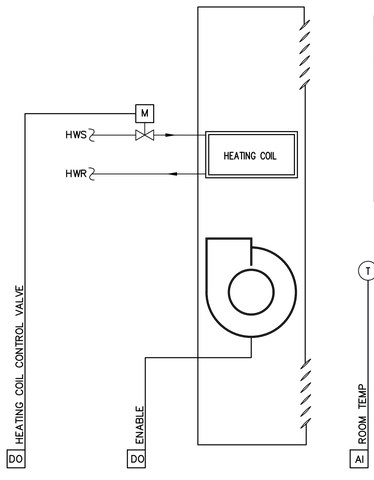
FAN OPERATION EF-1,2

DURING THE OCCUPIED PERIOD THE DDC SYSTEM SHALL OPEN THE EXHAUST DAMPER AND THE FAN WILL BE COMMANDED TO RUN CONTINUOUSLY. FAN WILL BE OFF DURING UNOCCUPIED AND WARM UP/COOL DOWN PERIODS. WHEN THE FAN IS OFF, THE EXHAUST DAMPER SHALL BE CLOSED. DDC SHALL MONITOR THE FAN STATUS.

EACH FAN SHALL HAVE AN INDEPENDENT OCCUPIED/UNOCCUPIED SCHEDULE.

FAN CONTROL DIAGRAM

SCALE: NTS



SEQUENCE OF OPERATION

UNIT OPERATION - UH-1, 2, 3

HEATERS SHALL OPERATE BASED ON A RESPECTIVE ROOM TEMPERATURE SENSOR. UPON A CALL FOR HEAT THE DDC SYSTEM SHALL OPEN THE TWO POSITION CONTROL VALVE AND START THE FAN.

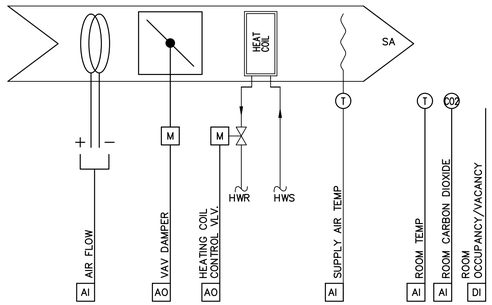
WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 32 DEG F THE TWO POSITION VALVE SHALL REMAIN OPEN AND THE UNIT FAN SHALL CYCLE ON A CALL FOR ROOM HEATING.

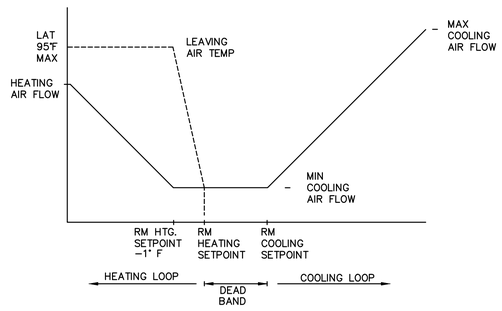
WHEN THE ROOM TEMPERATURE REACHES SET POINT THE FAN SHALL STOP, AND AFTER A 5 MINUTE DELAY THE CONTROL VALVE SHALL CLOSE.

(T) STAINLESS STEEL BLANK COVER PLATE WITH CONCEALED THERMISTOR.

CABINET AND UNIT HEATER CONTROL DIAGRAM

SCALE: NTS





SEQUENCE OF OPERATION

A. THE VAV BOX MANUFACTURER SHALL INCLUDE PNEUMATIC FLOW TAPS FROM THE AIR FLOW SENSOR ON THE BOX INLET AND AN INTEGRAL DAMPER WITH PROTRUDING SHAFT. ALL OTHER CONTROL COMPONENTS SHALL BE FURNISHED BY THE T.C. REHEAT BOXES SHALL BE PROVIDED WITH A 2–WAY MODULATING VALVE (EXCEPT WHERE NOTED TO BE 3–WAY TYPE) FURNISHED IN THIS DDC WORK.

B. EACH TERMINAL UNIT SHALL OPERATE IN AN "OCCUPIED" OR "UNOCCUPIED" MODE OF OPERATION. OCCUPIED AND UNOCCUPIED SHALL BE DETERMINED FROM THE RESPECTIVE AIR HANDLING SYSTEM. ROOM TEMPERATURE SET POINTS:

OCCUPIED: COOLING 72° F, HEATING 70° F

UNOCCUPIED: COOLING 82° F, HEATING 62°F

C. AS THE SPACE TEMPERATURE RISES ABOVE THE COOLING SET POINT THE AIR FLOW DAMPER SHALL MODULATE FROM THE MINIMUM TO THE MAXIMUM COOLING AIRFLOW. THE REHEAT COIL VALVE SHALL BE FULLY CLOSED.

AS THE SPACE TEMPERATURE DROPS TOWARDS THE COOLING SET POINT THE AIR FLOW DAMPER SHALL MODULATE FROM THE MAXIMUM TO THE MINIMUM FLOW RATE.

UPON AN CONTINUED DROP IN SPACE TEMPERATURE, THROUGH A DEADBAND THE TERMINAL UNIT SHALL THEN ENTER THE HEATING MODE. THE AIR FLOW SHALL BE SET AT THE MINIMUM FLOW AND THE REHEAT VALVE SHALL BE MODULATED TOWARDS THE OPEN POSITION. THE UNIT DISCHARGE AIR TEMPERATURE SHALL BE RESET VIA A PID LOOP FROM 55 DEG. F UP T 95 DEG F BASED ON ROOM TEMPERATURE BELOW THE HEATING SET POINT.

AS THE SPACE TEMPERATURE CONTINUES TO DROP THE AIR FLOW SET POINT SHALL BE INCREASED TOWARD THE HEATING AIR FLOW SET POINT. THE MAXIMUM DISCHARGE AIR TEMPERATURE SHALL REMAIN LIMITED TO 95° F.

D. DISCHARGE AIR TEMPERATURE SENSOR – PROVIDE A DISCHARGE AIR TEMPERATURE SENSOR IN THE SUPPLY DUCT (FIELD INSTALLED BY THE TEMPERATURE CONTROL SUBCONTRACTOR) FOR EACH REHEAT BOX FOR CONTROL, MONITORING AND TROUBLE SHOOTING PURPOSES. THE SENSOR SHALL BE A PRECISION THERMISTOR TYPE, WITH ACCURACY OF + OR – 0.5 DEG. F., MAXIMUM.

SINGLE DUCT TERMINAL UNIT CONTROL DIAGRAM

SCALE: NTS

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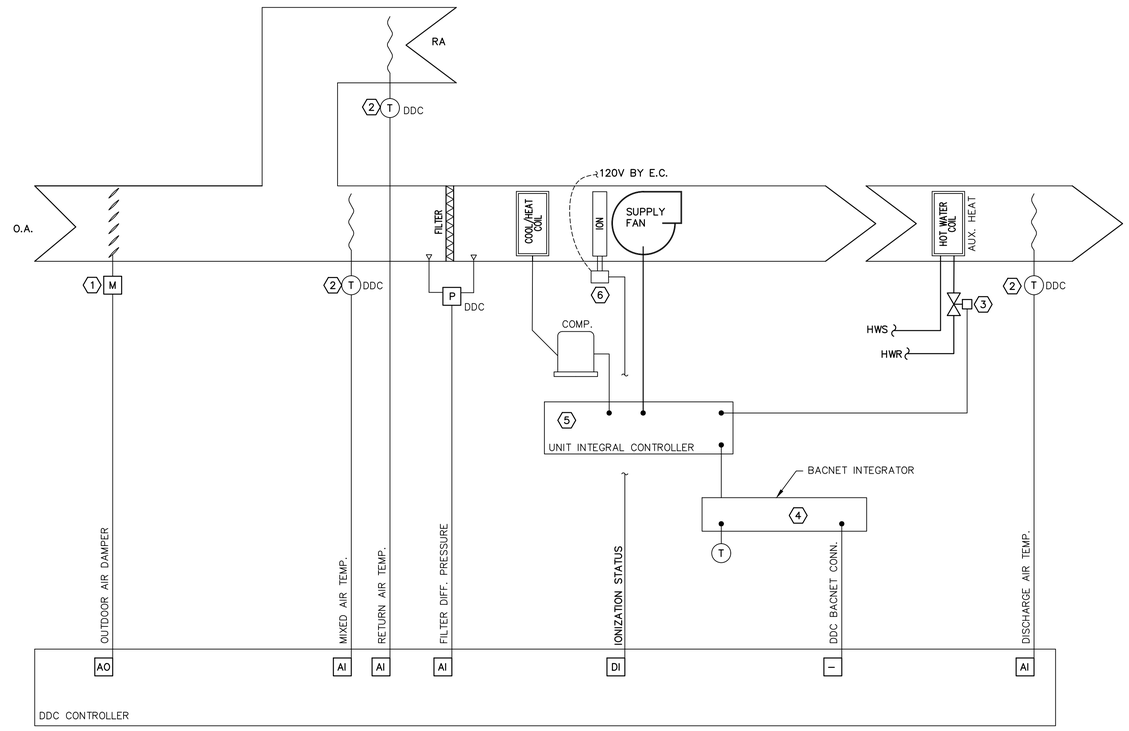
H4.3



SPLIT SYSTEM CONTROL DIAGRAM

SCALE: NTS

SEQUENCE OF OPERATION

OCCUPIED / UNOCCUPIED OPERATION

THE AIR HANDLING SYSTEM SHALL OPERATE IN AN OCCUPIED OR UNOCCUPIED MODE OF OPERATION, BASED ON A CALENDAR AND TIME OF DAY ADJUSTABLE SCHEDULE. THE SYSTEM SHALL ALLOW SCHEDULING FOR DAILY AND WEEKEND SCHEDULING. EACH UNIT SHALL HAVE AN INDEPENDENT SCHEDULE.

UNOCCUPIED SETBACK MODE (OAT <60 DEG F)

DURING THE UNOCCUPIED MODE WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN 60 DEGREES F, THE SUPPLY FAN SHALL BE OFF. THE OUTSIDE AIR DAMPER SHALL BE CLOSED.

IF THE SPACE TEMPERATURE ON THE SYSTEM DROPS BELOW 62 DEG. F (ADJ) THE SUPPLY FAN SHALL START. OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND MECHANICAL HEAT PUMP SHALL ACTIVATE TO RAISE THE SPACE TEMPERATURE.

WHEN THE SPACE TEMPERATURE RISES ABOVE 65 DEG F. THE SUPPLY FAN SHALL CYCLE OFF.

UNOCCUPIED SET UP MODE (OAT > 60 DEG F)

DURING THE UNOCCUPIED MODE WHEN THE OUTSIDE AIR TEMPERATURE IS GREATER THAN 60 DEG F THE UNIT SHALL ENTER THE TEMPERATURE SET UP MODE. THE SUPPLY FAN SHALL BE OFF. THE OUTSIDE AIR DAMPER SHALL BE CLOSED.

IF THE SPACE TEMPERATURE ON THE SYSTEM RISES ABOVE 82 DEG F., THE SUPPLY FAN SHALL START AND OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. THE CONDENSING UNIT SHALL BE ACTIVATED TO MAINTAIN A ROOM AIR TEMPERATURE SET POINT.

WHEN THE SPACE TEMPERATURE REACHES 78 DEG F THE SUPPLY FAN SHALL CYCLE OFF.

MORNING START-UP CYCLES

THE PROGRAM SHALL BE CAPABLE OF AN OPTIMAL START SEQUENCE THAT SHALL START THE SYSTEMS, AS INDICATED BELOW, IN ADVANCE OF THE OCCUPIED TIME.

MORNING WARM UP

THE UNIT FAN SHALL START, THE OUTSIDE AIR DAMPER SHALL BE CLOSED.

HEAT PUMP SHALL OPERATE TO WARM SPACE TEMPERATURE TO THE OCCUPIED SET POINT.

MORNING COOL DOWN

THE UNIT FAN SHALL START AND THE CONDENSING UNIT SHALL BE ACTIVATED ON TO COOL THE SPACE TO ITS OCCUPIED SET POINT. THE OUTSIDE AIR DAMPER SHALL BE FULLY CLOSED.

OCCUPIED MODE

WHEN INDEXED TO THE OCCUPIED MODE THE OUTSIDE AIR DAMPER SHALL MODULATE TO ITS OCCUPIED POSITION. OUTSIDE AIR DAMPERS SHALL OPEN ACCORDINGLY TO PROVIDE THE MINIMUM OUTDOOR VENTILATION AIR PER THE AIR HANDLING UNIT SCHEDULE AND AS BALANCED BY THE BALANCING CONTRACTOR.

THE HEAT PUMP COMPRESSOR SHALL MODULATE AND SWITCH BETWEEN HEATING AND COOLING TO MAINTAIN ROOM SET-POINT. IF DURING HEATING MODE, THE ROOM TEMPERATURE IS NOT SATISFIED AFTER 30 MINUTES (ADJ.), THE AUXILIARY HEATING HOT WATER COIL VALVE SHALL OPEN.

(#) CONSTRUCTION NOTES

1. OUTDOOR AIR DAMPER/ACTUATOR PROVIDED BY T.C.
2. TEMPERATURE SENSOR PROVIDED BY T.C.
3. 2–POSITION CONTROL VALVE PROVIDED BY T.C., WIRED TO FAN COIL CONTROLLER BY T.C.
4. BACNET–MSTP INTEGRATOR
5. UNIT INTEGRAL CONTROLLER. ALL WIRING TO/FROM COMPONENTS BY T.C.
6. CONNECT TO ION DRY CONTACTS.

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LIGHTING FIXTURE SCHEDULE

FIXTURE SYMBOL	LUMINAIRE QUANTITY: FLUORESCENT	INCANDESCENT	L.E.D.	LOW VOLTAGE	WATTS/FIXTURE	FIXTURE LUMEN RATING / COLOR TEMP	FIXTURE VOLTAGE	MANUFACTURER & CATALOG NO.	OTHER ACCEPTABLE MANUFACTURERS	DIFFUSING MEDIA	TRIM COLOR: WHITE	BLACK	ALUMINUM	BRONZE	STANDARD	SEE NOTE	MOUNTING (S - SURFACE, R- RECESSED, SM- STEM MTD., WM- WALL MTD., C- CHAIN MTD., UC- UNDER CAB, CS- CLG. SURF.)	SIZE (IN.): DIAMETER OR WIDTH	LENGTH	DEPTH	SEE NOTE
A1							120	A-LIGHT #ALG2-RJ-50'-LH-D-35-U-S-W-D-D-E	CORONET (MAGNETO), TechoLED		•										5
A1d			•		44	500 LUMEN/FT / 3500K	DC	A-LIGHT #STRIDE SQ REGULAR HIGH OUTPUT 3500K 80 CRI 4FT	CORONET (MAGNETO), TechoLED		•						DIRECT IN CHANNEL		48		6,7
A1i			•		17	1100 LUMENS / 3500K	DC	A-LIGHT #PACE 55 DEGREE HIGH OUTPUT 3500K 80 CRI	CORONET (MAGNETO), TechoLED		•						INDIRECT IN CHANNEL		12		6
A1t			•		19	1100 LUMENS / 3500K	DC	A-LIGHT #ALTA 55 35 DEGREE HIGH OUTPUT 3500K 90 CRI	CORONET (MAGNETO), TechoLED		•										6
B1			•		39	4200 LUMENS / 3500K	UNV	COLUMBIA #LCAT24-35LWG-EDU	LITHONIA, DAYBRITE	CURVED ACRYLIC LENS	•						R	24	48	4	1
B2			•		29	3300 LUMENS / 3500K	UNV	COLUMBIA #CBT24-LS35	LITHONIA, DAYBRITE	WHITE ACRYLIC DIFFUSER	•						R	24	48	1.5	1
C1			•		40	4200 LUMENS	UNV	COLUMBIA #CSL4-4035	LITHONIA, PHILIPS	LENSED STRIP							WM or Suspended	2.5	48	2.5	
F1			•		15	1000 LUMENS / 3500K	UNV	PRESCOLITE #LC6SL-6LCSL10L35K8WH	LITHONIA, PHILIPS	CLEAR ALZAK REFLECTOR	•						R	6	DIA	8	1,7
F2			•		15	580 LUMENS	UNV	GREEN CREATIVE #58026	LITHONIA, NORA	MATTE WHITE LENS	•						R	4	DIA	2	1
F3			•		11	800 LUMENS / 3000K	120	LITHONIA #6JBK-ADJ-30K-90CRI-MW	PRESCOLITE, GE	ADJUSTABLE-WHITE LENS	•						R	6	DIA	5	
FL1			•		54	7300 LUMENS / 4000K	120	LITHONIA #TFX1-LED-40K-MVOLT-THK-DDBXDM6	HUBBELL, PHILIPS	ADJUSTABLE FLOOD LIGHT				•			KNUCKLE MOUNT ON RIGID CONDUIT	10	10	3	9
K1			•		25	3000 LUMENS / 4000K	UNV	LITHONIA # ARC1 LED-P2-40K-MVOLT-E4WH-PE-DDBXD	HUBBELL, PHILIPS					•			WM 10'-0"	11	5	6.5	
K1E			•		25	3000 LUMENS / 4000K	UNV	LITHONIA # ARC1 LED-P2-40K-MVOLT-E4WH-PE-E4WH-DDBXD	HUBBELL, PHILIPS					•			WM 10'-0"	11	5	6.5	1
K2			•		14	1200 LUMENS / 4000K	120	LITHONIA #OVWP LED 40K 120 PE DDB M4	HUBBELL, PHILIPS								WM 9'-0"	5.5	9	3	2
PL1			•		72	9800 LUMENS / 4000K	UNV	LITHONIA #RSX1 LED-P2-40K-R3-MVOLT-SPA-DDBXD	HUBBELL, PHILIPS					•			20'-0" (5" SQUARE) STEEL POLE				3
EM	•		•		5	180	120	CONTECH #EL2HALEDEM	LITHONIA, EMERGI-LITE	EM EGRESS	•						S				
X1	•						120	CONTECH #EXR2HRLEDEM-P	LITHONIA, EMERGI-LITE	EM/EXIT RED LETTERS ON WHITE	•						S				

SCHEDULE NOTES:

1. FIXTURE TAG WITH "E" POSTSCRIPT SHALL HAVE INTEGRAL EMERGENCY BATTERY BACKUP.
2. FIXTURE SHALL HAVE INTEGRAL PHOTOCELL CONTROL.
3. REFER TO POLE BASE DETAIL, SHEET E0.3.
4. FIXTURE LISTED/SOLD @ WWW.YLIGHTING.COM
5. PROVIDE MINIMUM 50' RUN OF FIXTURE CHANNEL AND QUANTITY OF DRIVERS AS REQUIRED TO SUPPORT FIXTURES SHOWN. PROVIDE CABLE SUSPENSION FROM CEILING STRUCTURE AND POWER FEEDS/CABLE SUSPENSION FROM SUPPORT BEAMS IN HALL. PROVIDE EMERGENCY BATTERY BACKUP TO SUPPORT DOWNLIGHT FIXTURE(S) INDICATED ON PLAN.
6. REFER TO LIGHTING PLAN FOR QUANTITY OF FIXTURES REQUIRED.
7. FIXTURE TAG "E" POSTSCRIPT INDICATES FIXTURE SUPPORTED FROM REMOTE EMERGENCY BATTERY BACKUP, WHERE NOTED.
8. STANDARD FIXTURE COLOR SELECTED BY ARCHITECT.
9. PROVIDE RIGID GALVANIZED CONDUIT STUB UP FROM 12" DIA. CONCRETE BASE (ELEVATED 4" ABOVE FINISH GRADE) FOR MOUNTING OF FLOODLIGHT.

GENERAL NOTES

A. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2017 OHIO BUILDING CODE AND 2017 NEC, INCLUDING REFERENCED CODES AND STANDARDS, ALL LOCAL AND STATE CODES AND MEET APPROVAL OF AUTHORITIES HAVING JURISDICTION.

B. BIDDERS SHALL INSPECT PROJECT SITE EXISTING CONDITIONS DURING BIDDING.

C. INCLUDE PAYMENT OF ALL PERMIT AND INSPECTION FEES AND OBTAIN AN ELECTRICAL PERMIT AND SECURE INSPECTION AND APPROVAL OF THE CODE OFFICIAL.

D. SUBMIT AN ELECTRONIC COPY OF SUBMITTAL DATA AND DESCRIPTIVE LITERATURE IN .PDF FORMAT FOR ALL FIXTURES AND EQUIPMENT.

E. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY AND REPRESENT THE BEST PRACTICES OF THE INDUSTRY.

F. COORDINATE INSTALLATION WITH OTHER TRADES; PROVIDE OFFSETS AS REQUIRED.

G. INSTALL ALL MATERIALS AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.

H. COORDINATE EACH ROUGH-IN INSTALLATION REQUIREMENTS AND LOCATIONS WITH OTHER TRADES, ACTUAL EQUIPMENT OR CABINETRY PROVIDED AND FIELD CONDITIONS BEFORE PERFORMING WORK.

I. REFER TO ARCHITECTURAL DRAWING ELEVATIONS FOR MOUNTING LOCATION INFORMATION, ARRANGEMENT AND HEIGHT FOR ALL DEVICES AT FURNISHINGS, CASEWORK, ETC.

J. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES. WHERE DISCREPANCIES MAY OCCUR BETWEEN THE ELECTRICAL PLANS AND THE ARCHITECTURAL CEILING PLANS ON QUANTITY OF FIXTURES, THE ELECTRICAL PLANS SHALL TAKE PRECEDENCE. COORDINATE FIXTURE LOCATIONS WITH OTHER TRADES TO AVOID CONFLICTS WITH PIPING AND DUCTWORK.

K. ALL EQUIPMENT AND MATERIAL REQUIRED FOR COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS SHALL BE INCLUDED IN THE CONTRACT.

INDEX OF DRAWINGS

ELECTRICAL LEGEND CONT'D

- (OS) CEILING MOUNTED LIGHTING CONTROL OCCUPANCY SENSOR. WHERE SUBSCRIPT IS SHOWN, IE: "103", INDICATES MULTIPLE SENSORS WIRED TOGETHER TO CONTROL HALLWAY/CORRIDOR LIGHTING.
- (ER) EMERGENCY LIGHTING RELAY TO ENABLE AUTOMATIC LIGHTING CONTROL OF FIXTURE (ON STANDBY POWER CIRCUIT) FROM ROOM/AREA LIGHTING CONTROLS ON NORMAL POWER CIRCUIT.
- SINGLE POLE WALL SWITCH (46" M.H.).
- TWO POLE WALL SWITCH (46" M.H.).
- THREE-WAY WALL SWITCH (46" M.H.).
- LIGHTING CONTROL WALLBOX TYPE OCCUPANCY SENSOR/SWITCH. ONE-GANG ASSEMBLY (46" M.H.).
- LIGHTING CONTROL WALLBOX TYPE VACANCY SENSOR/SWITCH. ONE-GANG ASSEMBLY (46" M.H.).
- LIGHTING DIMMER SWITCH WITH PRESET SLIDE CONTROL AND ON/OFF BUTTON (46" M.H.) 600 WATT LOW VOLTAGE TYPE (0-10V) COMPATIBLE WITH LED LIGHTING PROVIDED.
- FLUSH FRACTIONAL HORSEPOWER MOTOR STARTER WITH NEON PILOT LIGHT. ONE-GANG ASSEMBLY (46" M.H.).
- HP RATED WALL SWITCH (46" M.H.).
- DISCONNECT SWITCH.
- MOTOR STARTER.
- COMBINATION MOTOR STARTER AND DISCONNECT SWITCH.
- ELECTRIC MOTOR.
- (UH) UNIT HEATER.
- (FC) FAN COIL UNIT.
- CIRCUIT BREAKER PANEL, FLUSH MOUNTED.
- CIRCUIT BREAKER PANEL, SURFACE MOUNTED.
- (T) LINE VOLTAGE THERMOSTAT.
- [W] WIRELESS ACCESS POINT (CEILING MOUNTED) NO ROUGH-IN BY E.C. REQUIRED.
- TELEPHONE/DATA OUTLET (18" M.H.). (REFER TO DETAILS ON TECHNOLOGY DRAWINGS).
- TELEPHONE/DATA OUTLET (46" M.H. OR ABOVE COUNTER HEIGHT, COORDINATE WITH CASEWORK). (REFER TO DETAILS ON TECHNOLOGY DRAWINGS).
- [F] FIRE ALARM HORN & SIGNAL LIGHT (80" A.F.F.), CANDELA RATING OF STROBE SHALL BE DETERMINED BY AREA OF COVERAGE BY F.A. SYSTEM DESIGNER. BATTERY SIZING CALCS SHALL BE BASED ON 110 CANDELA FOR EACH DEVICE.
- [L] FIRE ALARM SIGNALING LIGHT (80" A.F.F.), CANDELA RATING OF STROBE SHALL BE DETERMINED BY AREA OF COVERAGE BY F.A. SYSTEM DESIGNER.
- [F] FIRE ALARM SENDING STATION (46" M.H.).
- [S] CEILING MOUNTED SMOKE DETECTOR.
- [S] S/R DUCT MOUNTED SMOKE DETECTOR (S/SUPPLY, R/RETURN).
- [W] WATER FLOW SWITCH.
- [V] VALVE SUPERVISORY SWITCH.
- [C] ADDRESSABLE FIRE ALARM CONTROL / RELAY / MONITORING MODULE (FOR INTERFACE WITH DOOR ACCESS CONTROL SYSTEM)
- [A] ELECTRIC DOOR OPERATOR, INCLUDING RELAYS, OPERATING SWITCHES AND LIMIT SWITCHES SHALL BE FURNISHED BY THE DOOR EQUIPMENT SUPPLIER AND INSTALLED BY THE E.C. IN ACCORDANCE WITH APPROVED WIRING DIAGRAMS BY THE EQUIPMENT SUPPLIER (120 VOLT SINGLE PHASE OPERATION).
- [P] PUSHPLATE DOOR CONTROLS FURNISHED BY THE DOOR EQUIPMENT SUPPLIER AND INSTALLED BY THE E.C. (30" M.H.).
- (SC) FLUSH MOUNTED CEILING SPEAKER.
- CONDUIT SLEEVE THRU WALL TO CORRIDOR ABOVE ACCESSIBLE CEILING FOR PASSAGE OF SYSTEMS CABLING. SUBSCRIPT NUMBER INDICATES CONDUIT SIZE. FIRESTOP OPENING.
- (IC) VIDEO INTERCOM SYSTEM ROUGH-IN (REFER TO DETAILS ON TECHNOLOGY DRAWINGS).
- SECURITY SYSTEM CAMERA ROUGH-IN (REFER TO DETAILS ON TECHNOLOGY DRAWINGS).
- (DC) SECURITY SYSTEM DOOR CONTACT ROUGH-IN (REFER TO DETAILS ON TECHNOLOGY DRAWINGS).
- (CR) CARD READER SYSTEM ROUGH-INS (REFER TO DETAILS ON TECHNOLOGY DRAWINGS).

GENERAL LEGEND

EC	ELECTRICAL CONTRACT.
FC	FIRE PROTECTION CONTRACTOR.
GC	GENERAL CONTRACTOR.
HC	HVAC CONTRACTOR.
PC	PLUMBING CONTRACTOR.
TC	TEMPERATURE CONTROLS CONTRACTOR.
NIC	NOT IN CONTRACT.
AFF	ABOVE FINISHED FLOOR – TO BOTTOM OF ITEM UNLESS INDICATED OTHERWISE IN DRAWING.
(E)	EXISTING.
ES	EQUIPMENT SUPPLIER.
EM	EMERGENCY.
MH	MOUNTING HEIGHT.
S	SURFACE MOUNTED.
WP	WEATHER PROOF.
(3)	NOTE SYMBOL – APPLIES ONLY TO SHEET ON WHICH IS SHOWN.
(2)	DETAIL NOTE SYMBOL – APPLIES ONLY TO DETAIL ON WHICH IS SHOWN.
(H-1)	EQUIPMENT REFERENCE SYMBOL. ELECTRICAL CONNECTION REQUIRED.
123	ROOM NUMBER.
B / H2	DETAIL SYMBOL DETAIL "B" SHOWN ON SHEET H2.
A / H1	SECTION SYMBOL SECTION "A" DESIGNATION, SHOWN ON SHEET H1.
- - - -	ITEM TO BE REMOVED.
———	EXISTING ITEM TO REMAIN.
———	NEW ITEM.

ELECTRICAL LEGEND

- ELECTRICAL CONNECTION REQUIRED.
- EXIT LIGHTING FIXTURE. ARROWS AS INDICATED.
- H1 B1 a b — LIGHTING FIXTURE:
CAPITAL LETTER DENOTES FIXTURE TYPE.
LOWER CASE LETTER DENOTES SWITCHING ARRANGEMENT.
- H1 B1 — LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BACKUP TO ILLUMINATE FIXTURE FOR A MINIMUM OF 90 MINUTES. FIXTURE ALSO CONNECTED TO STANDBY POWER CIRCUIT.
- A-1&2 — EACH ARROWHEAD REPRESENTS ONE COMPLETE CIRCUIT; CAPITAL LETTER DENOTES PANEL; NUMBER DENOTES CIRCUIT.
- ——— WIRE & CONDUIT IN WALL OR ABOVE CEILING.
- - - - - WIRE & CONDUIT IN OR BELOW SLAB OR BELOW GRADE.
- (J) JUNCTION BOX.
- 20A-125V DUPLEX RECEPTACLE, NEMA 5-20R (18" M.H.).
- 20A-125V DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, (18" M.H.) TWO-GANG ASSEMBLY.
- 20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, (46" M.H.).
- U — 20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH DUPLEX USB CHARGING PORTS (18"M.H.)
- GF — 20A-125V DUPLEX RECEPTACLE, NEMA 5-20R, WITH GROUND FAULT CIRCUIT INTERRUPTER (18" M.H.).
- WP/GF — 20A-125V WEATHERPROOF DUPLEX RECEPTACLE, NEMA 5-20R, WITH GROUND FAULT CIRCUIT INTERRUPTER (18" M.H.), WITH HUBBELL #WP26M CAST ALUMINUM "WHILE-IN-USE" COVER.
- GANGABLE NON-METALLIC FLUSH FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE. ROUTE 3/4" POWER CONDUIT IN FLOOR SLAB TO FIXED WALL LOCATION SHOWN TO ROUTE CIRCUIT OVERHEAD TO PANEL INDICATED. FLOOR BOX EQUAL TO WIREMOLD #880MP SERIES, TRIM SELECTED BY ARCHITECT. WHERE NOTED, PROVIDE ADDITIONAL GANG(S) AND CONDUIT FOR DATA.
- [T] FLUSH WALL MOUNTED AV INTERFACE BOX WITH DUPLEX RECEPTACLE AND TWO 1.25" CONDUITS TO ABOVE ACCESSIBLE CEILING. 14.25"x14.25"x4"DP. WITH WHITE FLUSH COVER. CHIEF #PAC526FCW OR EQUAL BY "FSR". 55"M.H.
- [TV] WALL MONITOR OUTLET ASSEMBLY CONSISTING OF RECESSED DUPLEX RECEPTACLE AND DATA BOX MOUNTED DIRECTLY ADJACENT TO EACH OTHER. REFER TO TECHNOLOGY DRAWINGS FOR MOUNTING HEIGHT AND LOCATION.

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STATE OF OHIO — JEFFREY D. ZELINSKI 63822 — REGISTERED ARCHITECT

REVISIONS
REBID

COMM. NUMBER	DATE
1615.04	5/12/2021
DRAWN BY: TCR	CHECKED BY: TCR

LEGEND & SCHEDULES

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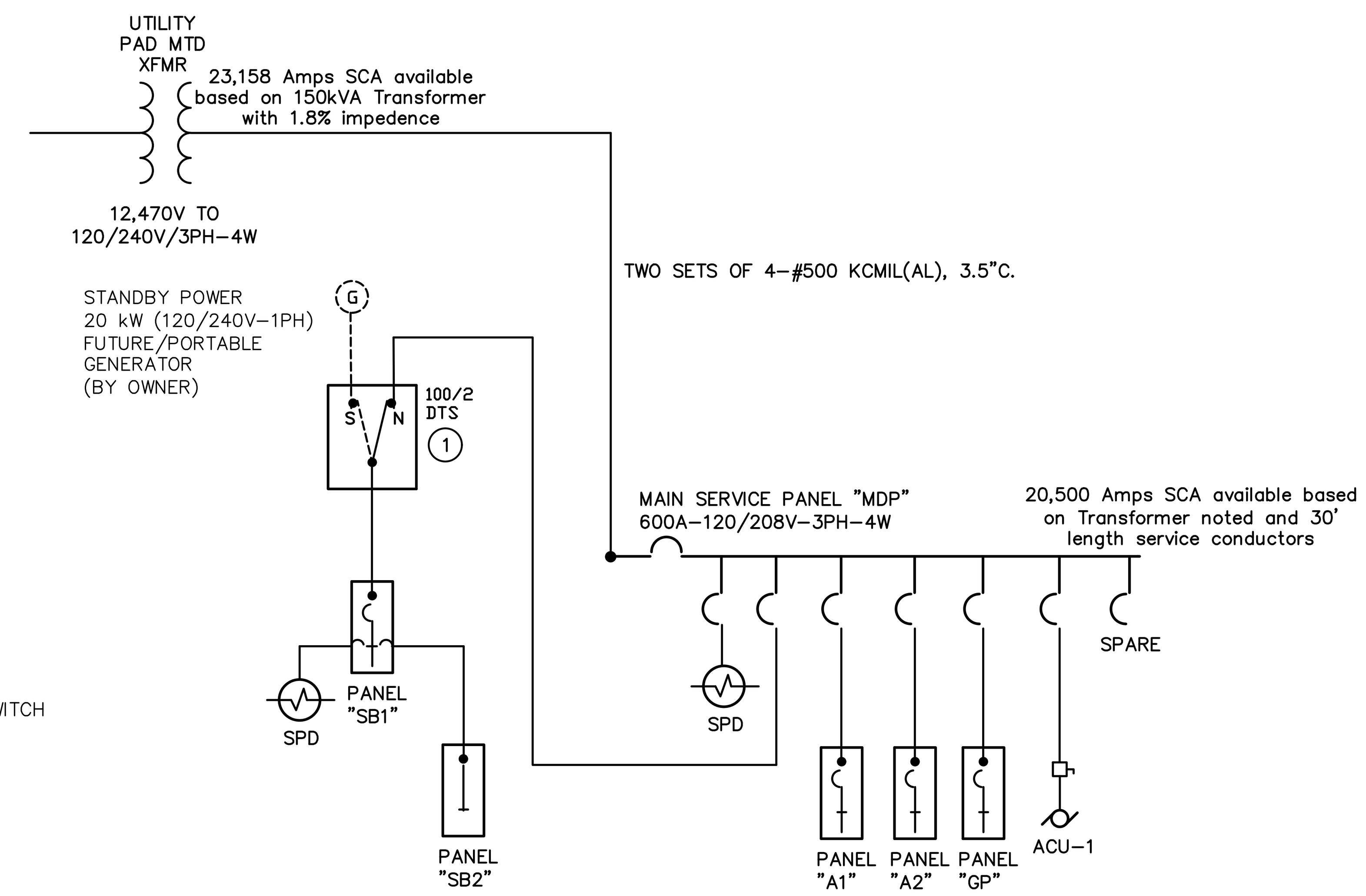

DIAGRAM NOTES

1. NEMA '1' DOUBLE THROW SWITCH

ELECTRIC SINGLELINE DIAGRAM

SCALE: NONE

MOTORS, STARTERS, DISCONNECTS & CONTROLS

MOTOR NUMBER	CIRCUIT NUMBER	NAMEPLATE	HP (KVA OR FLA)	120V-1PH	208V-3PH	208V-1PH	480V-1PH	480V-3PH	LOCATION	STARTER: NEMA SIZE	STARTER TYPE: MANUAL	MAGNETIC	BUILT-IN MOTOR O/L	VFD	VFD w/BYPASS	STARTER LOCATION: NEAR MOTOR	MOTOR CONT. CNTR.	EQUIP. CONT. PANEL	ROOM NUMBER	SEE NOTE	FURNISHED BY	DISCONNECT MEANS TYPE: DISC. SWITCH	MANUAL STARTER	RECEPTACLE	BREAKER	FUSIBLE	DISCONNECT LOCATION: NEAR MOTOR	MOTOR CONT. CNTR.	EQUIP. CONT. PANEL	PANELBOARD	SEE NOTE	FURNISHED BY	CONTROL: INTERLOCK W/ MOTOR NO. BY E.C.	MANUAL AT STARTER	INTEGRAL W/ EQUIP.	BY H.C.	SEE NOTE	FEEDER: NO. OF CONDUCTORS	WIRE SIZE	GRD. SIZE	CONDUIT SIZE	SEE NOTE
AH-1S	A2-49/53	AH1 SUPPLY FAN	7.5 HP		●				ATTIC					●							HC	●					●					EC				●		3	10	10	.75	
AH-1R	A2-50/54	AH1 RETURN FAN	7 HP		●				ATTIC					●							HC	●					●					EC				●		3	10	10	.75	
ACU-1	MDP-6	AC UNIT #1	126 MCA 175 MOCP		●				ON GRADE									●			HC	●					●					EC				●		3	1/0	6	1.5	
FC-1	A1-47/49	FAN COIL #1	9 MCA 15 MOCP			●			MECH ROOM				●					●			HC	●					●					EC				●		2	12	12	.5	
FC-2	A1-48/50	FAN COIL #2	9 MCA 15 MOCP			●			MECH ROOM				●					●			HC	●					●					EC				●		2	12	12	.5	
FC-3	SB1-23/25	FAN COIL #3	7 MCA 15 MOCP			●			MECH ROOM				●					●			HC	●					●					EC				●		2	12	12	.5	
CD-1	A1-51/53	CONDENSING UNIT 1	30 MCA 35 MOCP			●			ON GRADE				●					●			HC	●					●					EC				●		2	10	10	.5	
CD-2	A1-52/54	CONDENSING UNIT 2	30 MCA 35 MOCP			●			ON GRADE				●					●			HC	●					●					EC				●		2	10	10	.5	
CD-3	SB1-27/29	CONDENSING UNIT 3	30 MCA 35 MOCP			●			ON GRADE				●					●			HC	●					●					EC				●		2	10	10	.5	
EF-1	A2-	EXHAUST FAN 1	1/6 HP	●					ROOF			●									EC	●					●					EC				●		2	12	12	.5	
EF-2	A1-29	EXHAUST FAN 2	1/2 HP	●					MECH ROOM			●				●					EC	●					●					EC				●		2	12	12	.5	
UH-1	A2-	UNIT HEATER 1	100 W	●					VARIOUS/PER PLAN																																	
UH-2	A1-30/32	UNIT HEATER 2	4 KW			●			VESTIBULE																																	
UH-3	per plan	UNIT HEATER 3	3.75 KW			●			MECH ROOM/ATTIC																																	
FT-1	SB1-2	FIN TUBE HEATER	200 W	●					VARIOUS/PER PLAN																																	
P-1	A1-35/39	PRI HW PUMP 1	3/4 HP		●				MECH ROOM			●				●					EC	●					●					EC				●		3	10	10	.75	
P-2	A1-41/45	PRI HW PUMP 2	3/4 HP		●				MECH ROOM			●				●					EC	●					●					EC				●		3	10	10	.75	
P-3	A1-36/40	SEC HW PUMP 3	1.5 HP		●				MECH ROOM					●							HC	●					●					EC				●		3	10	10	.75	
P-4	A1-42/46	SEC HW PUMP 4	1.5 HP		●				MECH ROOM					●							HC	●					●					EC				●		3	10	10	.75	
B-1	A1-33	BOILER 1	14 FLA	●					MECH ROOM									●			HC	●					●					EC				●		2	12	12	.5	
B-2	A1-34	BOILER 2	14 FLA	●					MECH ROOM									●			HC	●					●					EC				●		2	12	12	.5	
RCP-1	A1-31	HW RECIRC PUMP		●					MECH ROOM													●					●					EC				●		2	12	12	.5	

NOTES:

1.

MAIN DISTRIBUTION PANEL "MDP" (22K AIC Rating)

SPEC. REFERENCE NO.:
MAIN BUSSING: 600 AMPS
FEEDER SIZE: SEE SINGLE-LINE
CONNECTED LOAD: 169 KW
DEMAND LOAD: 135 KW (375 AMPS)
VOLTAGE: 208Y/120V-3PH-4W

SWITCH OR UNIT NO.	NAMEPLATE	APPROX. CONNECTED KVA LOAD	OVERCURRENT PROTECTION: FRAME SIZE	POLES	TRIP RATING	SEE NOTE	FEEDER: NUMBER OF CONDUCTORS	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
1	MAIN BREAKER		600	3	600					
2	PANEL "A1"	52	225	3	225		4	300 (AL)	4	3
3	PANEL "A2"	44	225	3	225		4	300 (AL)	4	3
4	STANDBY MTS ("SB1" & "SB2")	26	100	2	100		3	2 (CU)	8	1.25
5	PANEL "GP"	2	100	2	100		3	1 (AL)	8	1.25
6	ACU-1	45	200	3	175		3	3/0(CU)	6	2
7	SPARE		225	3	225					
8	SPD		60	3	60					

NOTES:

1.

2.

PANEL "A1"

MOUNTING: SURFACE (22K AIC Rating)
CONN. LOAD: 52 KW
DEMAND LOAD: 41 KW (114 AMPS)
MAINS: 225A M.L.O.
VOLTAGE: 208Y/120V-3PH-4W

REMARKS	DEMAND KVA	CONNECTED KVA	BKR.	CKT. NO.	CKT. NO.	BKR.	CONNECTED KVA	DEMAND KVA	REMARKS
SITE LTG		1.0-L	20/1	1	2	20/1	1.0-L		BREAK/HALL
MECH RM.		1.0-R	20/1	3	4	20/1	1.0-L		CONF RMS
145		1.0-R	20/1	5	6	20/1	0.2-R		156
145		1.0-R	20/1	7	8	20/1	0.2-R		156
145		1.0-R	20/1	9	10	20/1	0.4-R		156
145		0.6-R	20/1	11	12	20/1	0.2-R		156
145		1.0-R	20/1	13	14	20/1	0.4-R		156
145		1.0-R	20/1	15	16	20/1	0.2-R		156
145		1.0-R	20/1	17	18	20/1	0.5-M		ADA DOOR
145		0.6-R	20/1	19	20	20/1			SPARE
EXT. REC.		1.2-R	20/1	21	22	20/1			SPARE
108, 157, 158		1.2-R	20/1	23	24	20/1			SPARE
TLT RMS		1.2-R	20/1	25	26	20/1			SPARE
SPARE			20/1	27	28	20/1			SPARE
EF-2		0.8-M	20/1	29	30	30/2	4.0-H		UH-2
RCP-1		0.5-M	20/1	31	32	–			
B-1		1.4-M	20/1	33	34	20/1	1.4-M		B-2
P-1		1.0-M	20/3	35	36	20/3	2.0-M		P-3
			–	37	38	–			
			–	39	40	–			
P-2		1.0-M	20/3	41	42	20/3	2.0-M		P-4
			–	43	44	–			
			–	45	46	–			
FC-1		1.5-M	15/2	47	48	15/2	1.5-M		FC-2
			–	49	50	–			
CD-1		5.0-M	35/2	51	52	35/2	5.0-M		CD-2
			–	53	54	–			

PANEL "A2"

MOUNTING: SURFACE (10K AIC Rating)
CONN. LOAD: 44 KW
DEMAND LOAD: 35 KW (98 AMPS)
MAINS: 225A M.L.O.
VOLTAGE: 208Y/120V-3PH-4W

REMARKS	DEMAND KVA	CONNECTED KVA	BKR.	CKT. NO.	CKT. NO.	BKR.	CONNECTED KVA	DEMAND KVA	REMARKS
W OFFICE LTG		1.2-L	20/1	1	2	20/1	1.5-L		S OFFICE LTG
UH1/FC		0.6-M	20/1	3	4	20/1	1.2-R		112
111		1.6-R	20/1	5	6	20/1	1.2-R		113
103		1.4-R	20/1	7	8	20/1	1.2-R		114
104		1.0-R	20/1	9	10	20/1	1.2-R		115
104		0.5-R	20/1	11	12	20/1	1.2-R		116
118, 120, 124		1.6-R	20/1	13	14	20/1	1.2-R		117
102, 130		0.8-R	20/1	15	16	20/1	1.6-R		119
132		1.2-R	20/1	17	18	20/1	1.2-R		121
133		1.4-R	20/1	19	20	20/1	1.2-R		123
134		1.4-R	20/1	21	22	20/1	1.2-R		125
105		0.5-R	20/1	23	24	20/1	1.2-R		127
135		1.6-R	20/1	25	26	20/1	1.2-R		128
105		0.6-R	20/1	27	28	20/1	0.8-R		144 FRIDGE
136		1.4-R	20/1	29	30	20/1	1.2-R		144 MICRO
137		1.2-R	20/1	31	32	20/1	0.4-R		144
138		1.2-R	20/1	33	34	20/1	1.0-R		144 DISHWASH
106		1.2-R	20/1	35	36	20/1	0.2-R		144
131		1.2-R	20/1	37	38	20/1	1.2-R		144 MICRO
ADA DOOR		0.5-M	20/1	39	40	20/1	0.2-R		144 COFFEE
SPARE			20/1	41	42	20/1	0.4-R		144 COFFEE
SPARE			20/1	43	44	20/1			SPARE
SPARE			20/1	45	46	20/1			SPARE
SPARE			20/1	47	48	20/1			SPARE
SPARE			20/1	49	50	20/1			SPARE
SPARE			20/1	51	52	20/1			SPARE
SPARE			20/1	53	54	20/1			SPARE

PANEL "SB1"

MOUNTING: SURFACE (22K AIC Rating)
CONN. LOAD: 26 KW
DEMAND LOAD: 16 KW (67 AMPS @ 240V-1PH)
MAINS: 100A M.B. (F.T.L.)
VOLTAGE: 120/208V-1PH-3W

REMARKS	DEMAND KVA	CONNECTED KVA	BKR.	CKT. NO.	CKT. NO.	BKR.	CONNECTED KVA	DEMAND KVA	REMARKS
EXT./VEST LTS		0.5-L	20/1	1	2	20/1	1.0-H		FT-1
TLT FLUSH VALVES		0.2-C	20/1	3	4	20/1	0.4-C		F.A. PNL
LTS		0.6-L	20/1	5	6	20/1			SPARE
SPARE			20/1	7	8	20/1			SPARE
SPARE			20/1	9	10	20/1			SPARE
SPACE			–	11	12	–			SPACE
SPACE			–	13	14	–			SPACE
SPACE			–	15	16	–			SPACE
SPACE			–	17	18	–			SPACE
SPACE			–	19	20	–			SPACE
SPACE			–	21	22	30/2	3.75-H		UH-3
FC-3		1.5-M	15/2	23	24	–			
			–	25	26	20/1			
CD-3		5.0-M	35/2	27	28	30/2			SPD
			–	29	30	–			

PANEL "SB2"

MOUNTING: SURFACE (10K AIC Rating)
CONN. LOAD: 13 KW
DEMAND LOAD: 6 KW (25 AMPS)
MAINS: 100A M.L.O.
VOLTAGE: 120/208V-1PH-3W

REMARKS	DEMAND KVA	CONNECTED KVA	BKR.	CKT. NO.	CKT. NO.	BKR.	CONNECTED KVA	DEMAND KVA	REMARKS
TLT. FLUSH VALVES		0.2-C	20/1	1	2	20/1	1.2-C/R		DDC/MECH
IT 136		1.0-R	20/1	3	4	30/1	2.8-R		IT RACK
IT 136		0.6-R	20/1	5	6	30/1	2.8-R		IT RACK
IT 136		0.6-R	20/1	7	8	20/1	1.0-R		IT 136
IT 136		0.6-R	20/1	9	10	20/1	1.0-R		IT 136
SPARE			20/1	11	12	20/1	0.6-L		LTS
SPARE			20/1	13	14	20/1			SPARE
SPARE			20/1	15	16	20/1			SPARE
SPARE			20/1	17	18	20/1			SPARE
SPARE			20/1	19	20	20/1			SPARE
SPACE			–	21	22	–			SPACE
SPACE			–	23	24	–			SPACE
SPACE			–	25	26	–			SPACE
SPACE			–	27	28	30/2	3.75-H		UH-3
SPACE			–	29	30	–			

PANEL "GP"

MOUNTING: SURFACE-GARAGE (10K AIC Rating)
CONN. LOAD: 2.2 KW
DEMAND LOAD: 1.2 KW (3 AMPS)
MAINS: 100A M.B.
VOLTAGE: 120/208V-1PH-3W

REMARKS	DEMAND KVA	CONNECTED KVA	BKR.	CKT. NO.	CKT. NO.	BKR.	CONNECTED KVA	DEMAND KVA	REMARKS
GAR. LTG.		0.2-L	20/1	1	2	20/1	1.0-R	0.4-R	O/H DOORS
GAR. REC		0.6-R	20/1	3	4	20/1	0.4-R		EXT. REC
			20/1	5	6	20/1			
			20/1	7	8	20/1			
			20/1	9	10	20/1			
			20/1	11	12	20/1			
			20/1	13	14	20/1			
			20/1	15	16	20/1			
			20/1	17	18	20/1			
			20/1	19	20	20/1			
			20/1	21	22	20/1			
			20/1	23	24	20/1			

ABBREVIATIONS:
L- LIGHTS, R- RECEPTACLES, M-MOTORS, H- RESISTANCE HEAT, C- CONTROL,
M.L.O.-MAIN LUGS ONLY, D.S.L.- DOUBLE SET OF LUGS, M.B.- MAIN BREAKER,
L.C.- LOCKING CLIP ON BREAKER

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SINGLELINE & SCHEDULES

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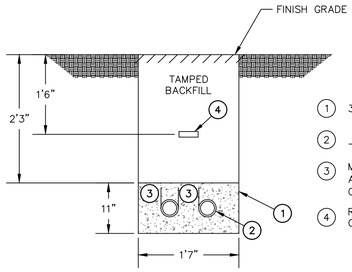
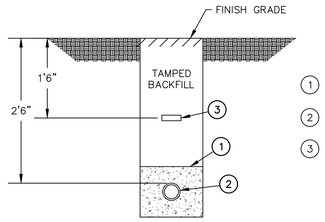


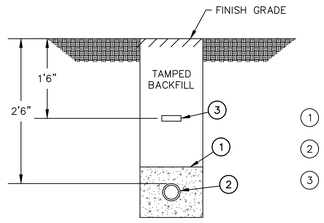
1. 3000 LB. CONCRETE.
2. __" I.D. DUCTS. SCHEDULE 40 PVC.
3. MIN. 3" SPACING BETWEEN CONDUITS (TYPICAL) AND MIN. 3"ENCASEMENT (TYPICAL). PROVIDE CONDUIT SPACERS 6'–0" O.C.
4. RED DYE, RED DUST OR YELLOW MARKER TAPE ON COMPACTED FILL.

UNDERGROUND DUCTS
N.T.S.



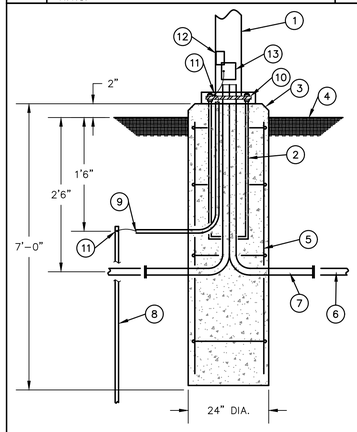
1. 3000 LB. CONCRETE ENCASEMENT. 3" MIN. FROM OUTSIDE OF DUCT.
2. SCHEDULE 40 PVC DUCT. SIZE AS NOTED ON PLANS.
3. RED DYE, RED DUST OR YELLOW MARKER TAPE ON COMPACTED FILL.

UNDERGROUND DUCT
N.T.S.



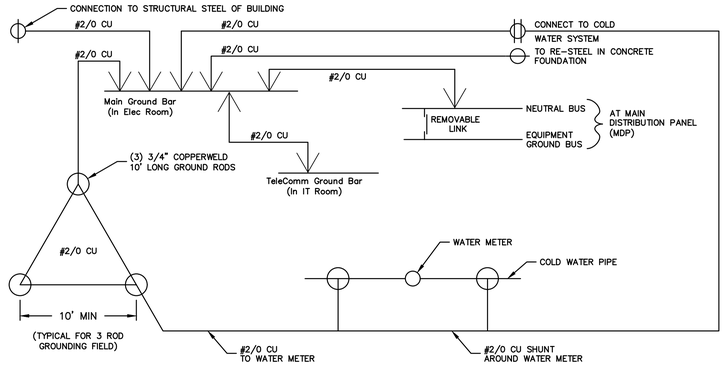
1. MIN. 3" SAND ENCASEMENT.
2. DIRECT BURIAL DUCT, RIGID SCHEDULE 40 PVC. SIZE AS NOTED ON PLANS.
3. YELLOW MARKER TAPE ON COMPACTED FILL.

DIRECT BURIAL UNDERGROUND DUCT
N.T.S.



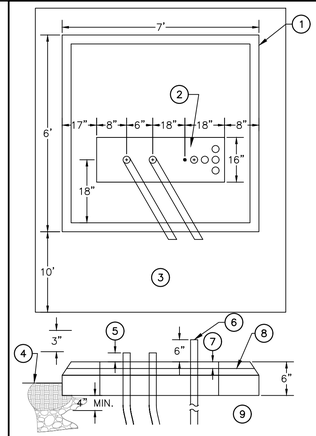
1. SEE FIXTURE SCHEDULE FOR POLE AND FIXTURE ASSEMBLY.
2. ANCHOR BOLTS BY POLE SUPPLIER, WELD TO REBARS.
3. CHAMFERED EDGE.
4. FINISH GRADE, COMPACT TO 95%.
5. SIX #4 REINFORCING BARS VERTICALLY ON #3 STIRRUPS AT 18" O.C.
6. PVC CONDUIT, SCHEDULE 40.
7. RIGID GALVANIZED STEEL CONDUIT.
8. GROUND ROD.
9. 0.50" PVC GROUND CONDUCTOR SLEEVE WITH #8 GROUND CONDUCTOR.
10. BASE PLATE, LEVELING NUTS, GROUT BASE.
11. EXOTHERMICALLY WELDEED GROUND CONNECTION.
12. LIGHTNING ARRESTOR.
13. HANDHOLE.

TYPICAL POLE BASE DETAIL
N.T.S.



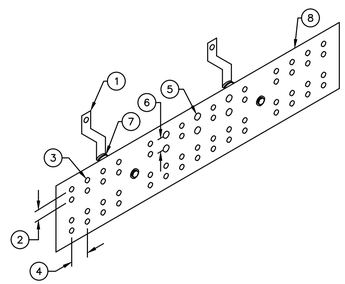
•DIVISION 16 SHALL FOLLOW THIS DETAIL FOR PROPER GROUNDING CONNECTIONS

GROUNDING DETAIL
N.T.S.



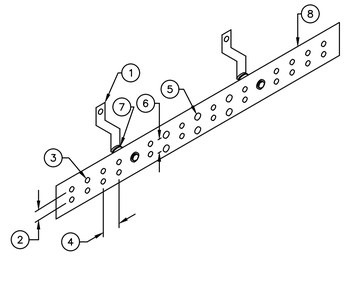
1. 1" CHAMFER
2. AREA FOR SECONDARY CONDUITS AND CONDUCTORS
3. ALLOW UNOBSTRUCTED AREA 10' IN FRONT OF TRANSFORMER FOR SWITCHING.
4. FINAL GRADE
5. 2" MINIMUM, 3" MAXIMUM.
6. 5/8" X 8' CW GROUND ROD.
7. 2" CLEAR
8. #4 OR EQUIVALENT @ 12" EACH WAY TOP.
9. TWO 5" (MINIMUM SIZE) NON–METALLIC CONDUITS (TYPE II HEAVY OR EQUAL)

TRANSFORMER PAD DETAIL
N.T.S.



1. WALL MOUNTING BRACKET(S)
2. 5/8" (TYPICAL)
3. 5/16" DIA. HOLE (TYPICAL)
4. 1–1/8" (TYPICAL)
5. 7/16" DIA. HOLE (TYPICAL)
6. 1" (TYPICAL)
7. STANDOFF INSULATOR(S)
8. 1/4"x4"x16"L COPPER GROUND BAR

MAIN ELECTRIC ROOM GROUND BAR
N.T.S.



1. WALL MOUNTING BRACKET(S)
2. 5/8" (TYPICAL)
3. 5/16" DIA. HOLE (TYPICAL)
4. 1–1/8" (TYPICAL)
5. 7/16" DIA. HOLE (TYPICAL)
6. 1" (TYPICAL)
7. STANDOFF INSULATOR(S)
8. 1/4"x2"x12"L COPPER GROUND BAR

TELECOMMUNICATIONS MAIN GROUND BAR
N.T.S.

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STATE OF OHIO
JEFFREY D. ZELINSKI
63822
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DETAILS

E0.3

CONSTRUCTION NOTES

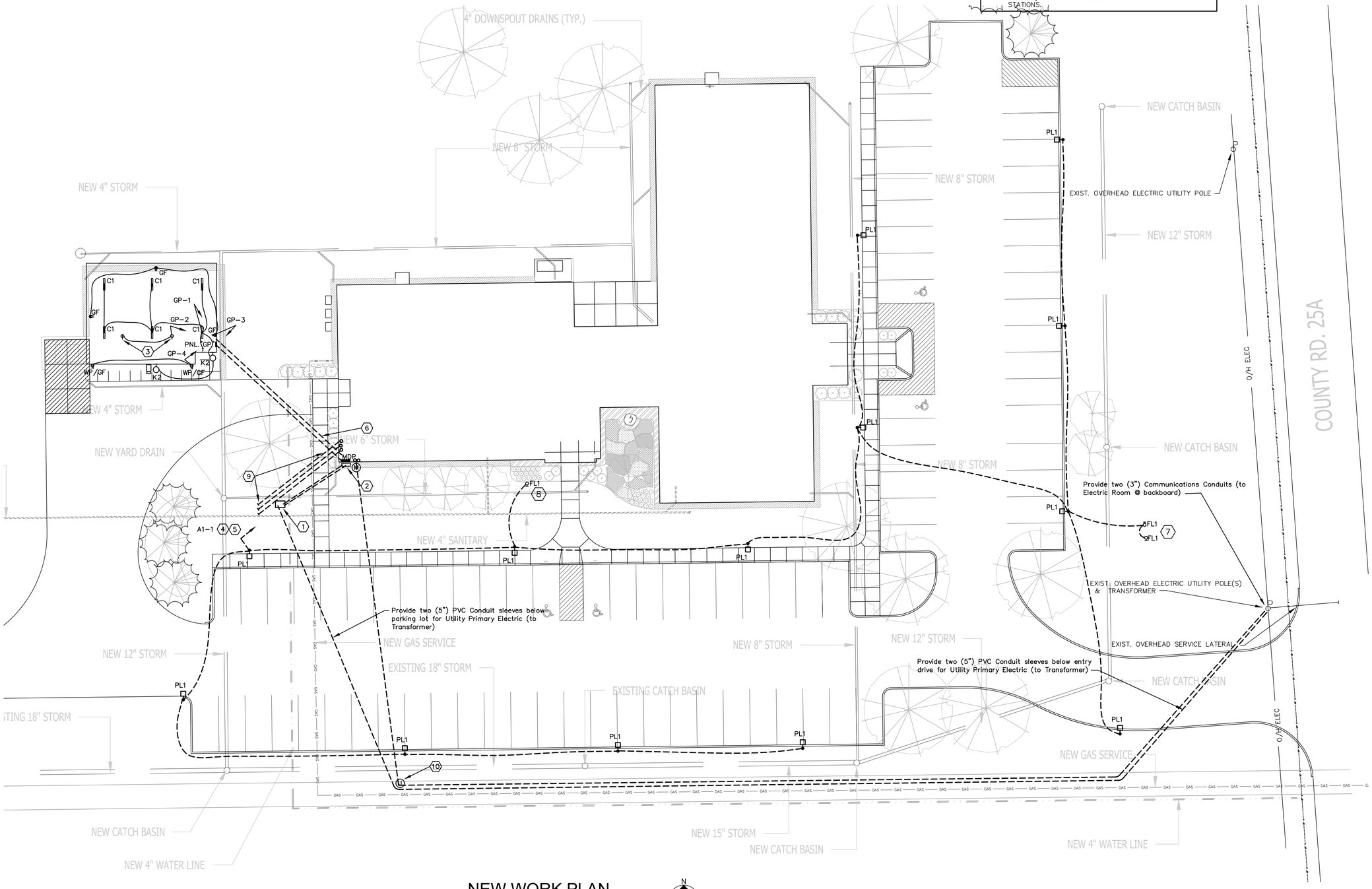
1. NEW DP&L PADMOUNT TRANSFORMER. PROVIDE TRANSFORMER PAD PER DP&L REQUIREMENTS.
2. PROVIDE CT CABINET AND METERING SOCKET/METERING CONDUIT FROM CT CABINET PER DP&L REQUIREMENTS.
3. PROVIDE RECEPTACLE AT CEILING/BOTTOM OF ROOF TRUSS FOR FUTURE DOOR OPERATOR, CENTER ON O/H DOOR LOCATION.
4. CIRCUIT THRU EXTERIOR LIGHTING CONTROLLER, PHOTOCELL ON/OFF WITH TIMECLOCK OVER-RIDE.
5. UTILIZE #10 AWG CONDUCTORS, 1"C. REFER TO DIRECT BURIED UNDERGROUND DUCT DETAIL, SHEET E0.3.

CONSTRUCTION NOTES (Cont'd)

6. PROVIDE TWO 1"C. FROM GARAGE TO ELECTRIC ROOM/OR MECHANICAL ROOM FOR SECURITY CAMERA/SYSTEMS WIRING PATHWAY.
7. COORDINATE LOCATION OF GROUND MOUNTED FLOOD LIGHT(S) FOR GROUND MOUNTED SIGNAGE WITH ARCHITECT. LIGHTS AND ASSOCIATED CIRCUITRY PROVIDED UNDER SIGNAGE ALLOWANCE, SHOWN HERE FOR REFERENCE.
8. COORDINATE LOCATION AND AIMING OF GROUND MOUNTED FLOOD LIGHT FOR BUILDING MOUNTED SIGNAGE WITH ARCHITECT.
9. PROVIDE THREE (3) 1" CONDUITS STUBBED OUT FROM ELECTRIC ROOM TO BEYOND SIDEWALK (CAPPED AND MARKED) FOR FUTURE ELECTRIC VEHICLE CHARGING STATIONS.

CONSTRUCTION NOTES (Cont'd)

10. PROVIDE PULLBOX(ES) AS REQUIRED FOR COMMUNICATIONS DUCTS. (OPEN BOTTOM, 18"x24" QUAZITE), BOLTED COVER WITH "COMMUNICATIONS" EMBOSSED ON TOP. COORDINATE REQUIREMENTS WITH MAXIMUM PULL LENGTHS ALLOWED.



NEW WORK PLAN

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

N

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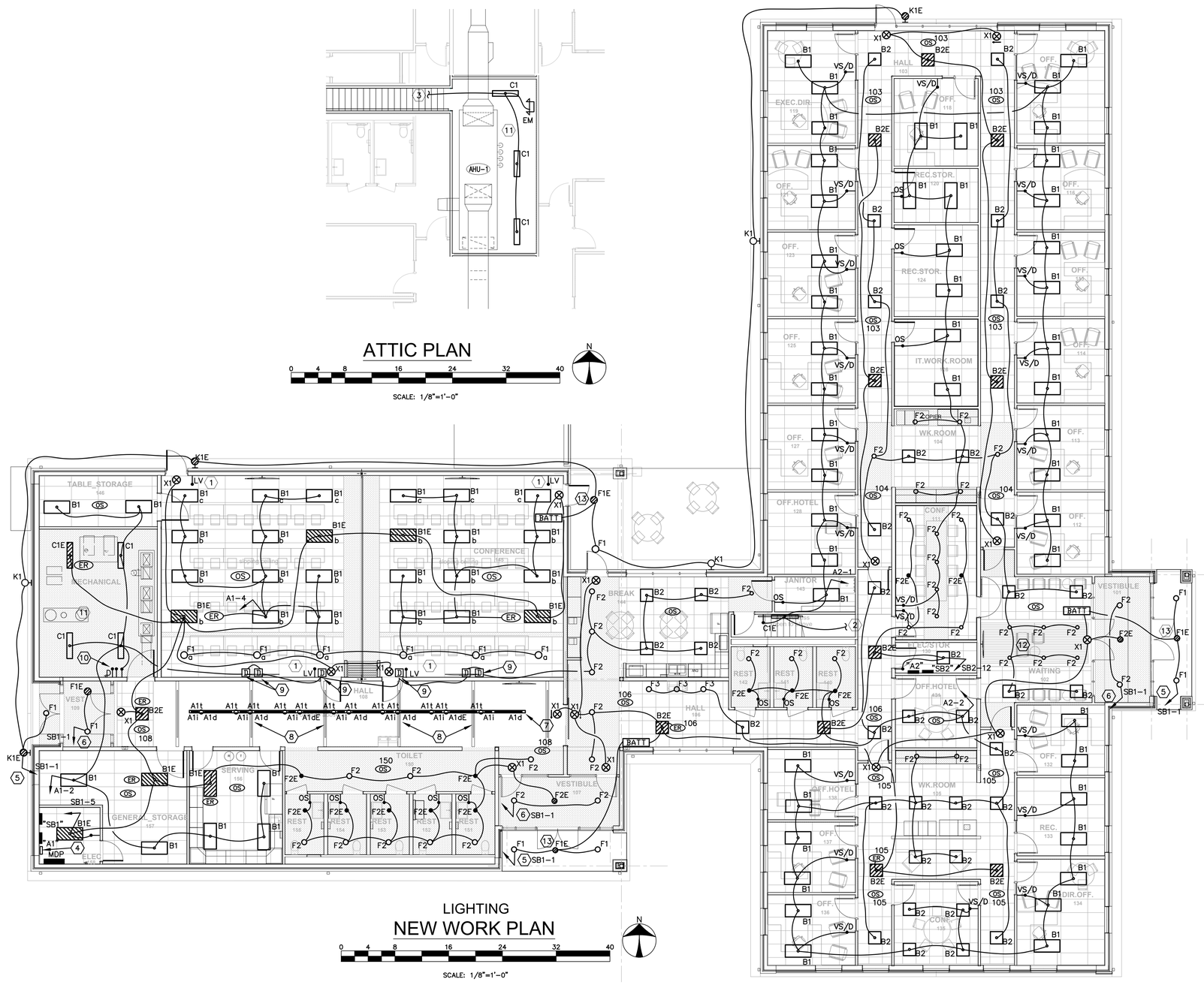
SITE PLAN

E1.1

ATTIC PLAN

0 4 8 16 24 32 40

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



LIGHTING
NEW WORK PLAN

0 4 8 16 24 32 40

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

CONSTRUCTION NOTES

1. PROVIDE LOW VOLTAGE LIGHTING CONTROLS SYSTEM (ROOM CONTROLLER) TO ENABLE ZONED DIMMING/ON/OFF CONTROL AS WELL AS ROOM PARTITIONING CONTROL AND VACANCY SENSOR CONTROL (MANUAL ON/AUTOMATIC OFF VIA ROOM OCCUPANCY SENSOR(S)). INCLUDE EMERGENCY LIGHTING CONTROL RELAY TO ALLOW CONTROL OF EMERGENCY EGRESS LIGHTING WITH NORMAL LIGHTING FIXTURES. EQUAL TO nLIGHT OR HUBBELL LIGHTING CONTROLS.
2. CONNECT TO ATTIC LIGHTS ABOVE.
3. CONNECT ATTIC LIGHTS TO SWITCHED STAIRWELL LIGHT BELOW.
4. EXTERIOR LIGHTING CONTACTOR/CONTROLLER. PHOTOCELL ON/OFF. PROVIDE FOUR ZONES/CONTACTORS. ONE ZONE FOR EXTERIOR BUILDING MOUNTED LIGHTING, ONE ZONE FOR INTERIOR VESTIBULES, ONE ZONE FOR PARKING LOT POLE MOUNTED LIGHTING, ONE SPARE. PROVIDE DEDICATED 20A–120V CIRCUIT FOR EACH ZONE.
5. CONNECT TO EXTERIOR LIGHTING CONTACTOR FOR EXTERIOR BUILDING MOUNTED LIGHTING CIRCUIT.
6. CONNECT TO EXTERIOR LIGHTING CONTACTOR FOR VESTIBULE LIGHTING CIRCUIT.
7. "A1" LINEAR LIGHTING FIXTURE CHANNEL, SUSPENDED FROM ARTIFICIAL BEAMS AND FROM CEILING STRUCTURE ABOVE WITH AIRCRAFT CABLE. ROUTE POWER FROM REMOTE DRIVERS (LOCATED ABOVE CEILING IN CONFERENCE ROOMS) THRU BEAM CHANNEL TO FIXTURE ASSEMBLY. COORDINATE FINAL MOUNTING HEIGHT/LOCATION WITH ARCHITECT/OWNER PRIOR TO ROUGH–IN.
8. BEAM SUPPORT FOR FIXTURE MOUNTING/ROUTING OF FIXTURE CIRCUITRY.
9. REMOTE DRIVER FOR "A1" FIXTURE ASSEMBLY (REMOTE BATTERY BACKUP, AS REQUIRED). CONTROL LIGHTS (ON/OFF) FROM HALL 108 OCCUPANCY SENSOR(S). PROVIDE LOW VOLTAGE DIMMERS IN ADJACENT MECHANICAL ROOM.
10. LOW VOLTAGE DIMMERS FOR HALL 108 LIGHTING CONTROL.
11. COORDINATE MOUNTING HEIGHT/LOCATION OF SUSPENDED FIXTURES IN MECHANICAL ROOM WITH H.C. TO AVOID CONFLICTS WITH DUCTWORK, PIPING, ETC.
12. COORDINATE MOUNTING HEIGHT/LOCATION OF SUSPENDED FIXTURE WITH ARCHITECT/OWNER PRIOR TO ROUGH–IN.
13. PROVIDE REMOTE BATTERY FOR EXTERIOR FIXTURE FOR EMERGENCY EGRESS LIGHTING. LOCATE BATTERY ABOVE ACCESSIBLE INTERIOR CEILING. PROVIDE HOT LEG TO BATTERY AHEAD OF EXTERIOR LIGHTING CONTROLS. FIXTURE CONTROLLED BY PHOTOCELL.

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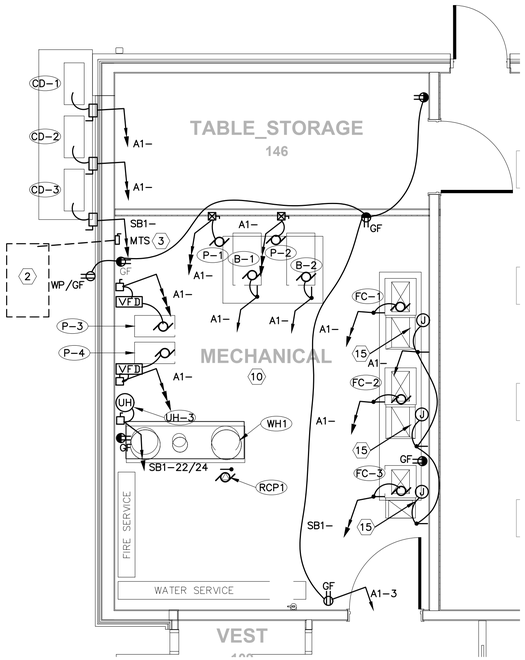
NEW WORK PLAN
LIGHTING

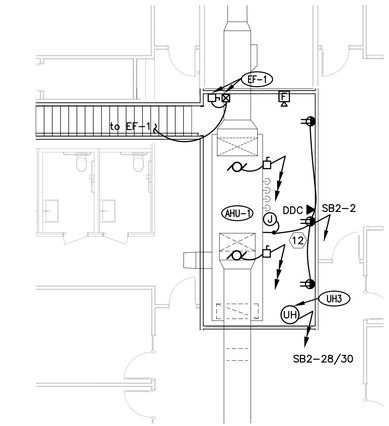
E2.1



ENLARGED MECH. ROOM PLAN

0 2 4 8 12 16 20

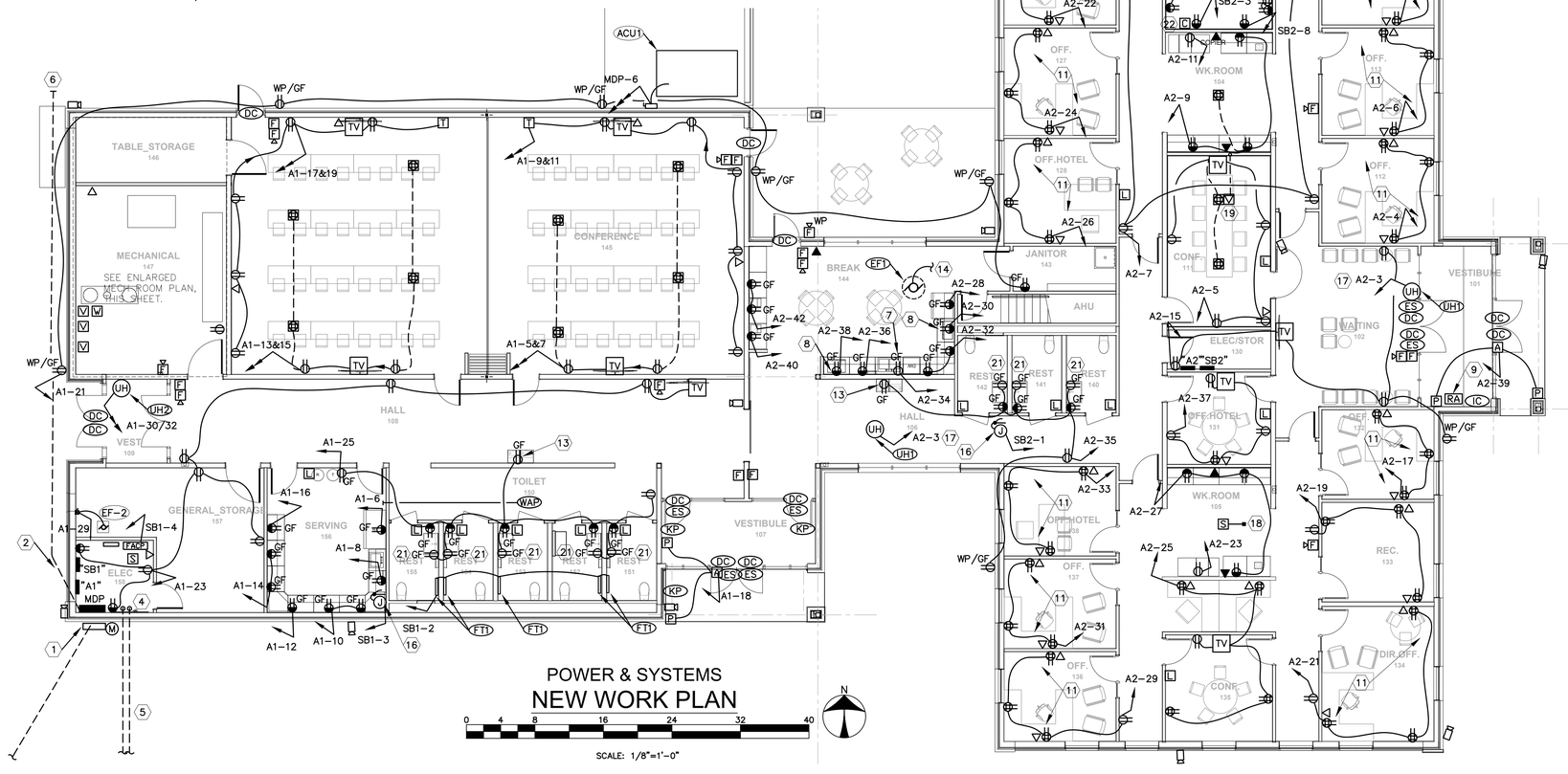
SCALE: 1/4"=1'-0"



ATTIC PLAN

0 4 8 16 24 32 40

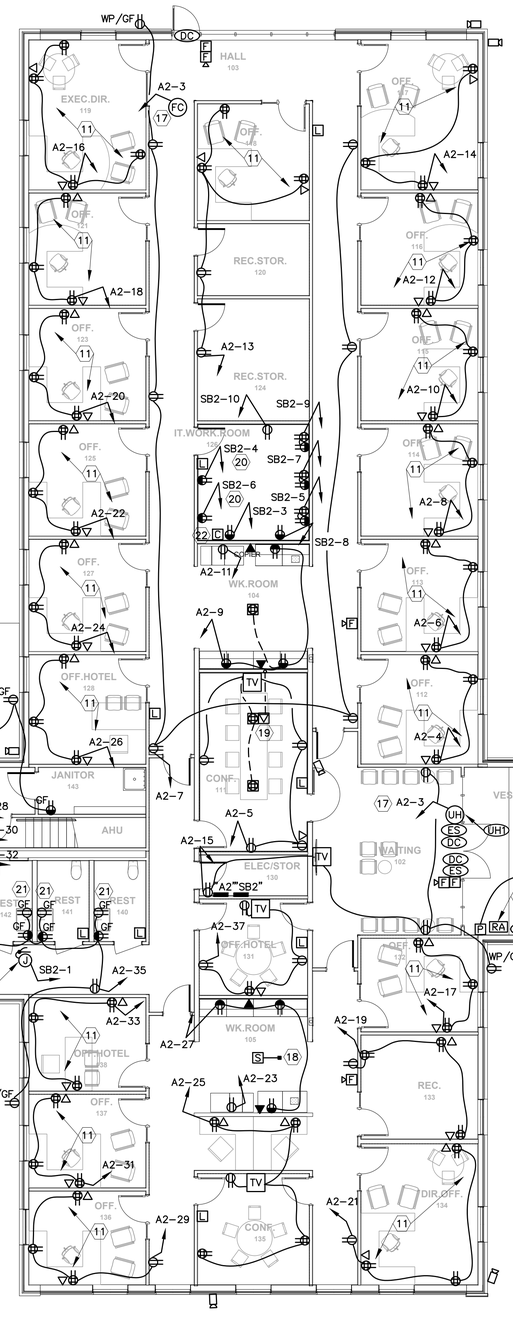
SCALE: 1/8"=1'-0"



POWER & SYSTEMS NEW WORK PLAN

0 4 8 16 24 32 40

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



GENERAL NOTES

A. TECHNOLOGY DEVICES ARE SHOWN FOR GENERAL ROUGH-IN COORDINATION WITH ASSOCIATED WIRING DEVICE PURPOSES. THE E.C. SHALL REFER TO TECHNOLOGY DRAWINGS FOR ROUGH-IN REQUIREMENTS, BOXES, CONDUITS, ETC.

B. WERE DATA DEVICES ARE SHOWN ADJACENT TO RECEPTACLE(S), THE RECEPTACLE/DATA BOXES SHALL BE LOCATED DIRECTLY ADJACENT TO EACH OTHER AND AT THE SAME MOUNTING HEIGHT.

C. REFER TO TECHNOLOGY DRAWINGS FOR LOW VOLTAGE CABLING PATHWAYS, CABLE RACKS, SLEEVE REQUIREMENTS, GROUNDING, ETC.

D. RECEPTACLE BRANCH CIRCUITRY HOMERUNS SHALL BE IN EMT TO A COMMON JUNCTION BOX IN EACH ROOM WITH MC CABLE BRANCHED OUT TO DROP DOWN TO RECEPTACLE(S). NO HORIZONTAL RUNS OF MC CABLE IN WALLS EXCEPT WHERE DEVICES ARE LOCATED BELOW WINDOWS.

(#) CONSTRUCTION NOTES

1. UTILITY C/T CABINET AND METERING PER DP&L SPECIFICATIONS.
2. FUTURE STANDBY GENERATOR LOCATION. PROVIDE 2" CONDUIT STUB FROM DOUBLE THROW SWITCH TO BELOW EXTERIOR GRADE (CAPPED). PROVIDE TWO 1" CONDUIT STUBS FROM MECH. ROOM TO BELOW EXTERIOR GRADE (CAPPED)
3. 100A/2P DOUBLE THROW SWITCH FOR TRANSFER TO PORTABLE GENERATOR. (LOCATION FOR FUTURE STANDBY GENERATOR A.T.S.). PROVIDE 2" RIGID CONDUIT SLEEVE THRU WALL, CAPPED ON BOTH ENDS, FOR ROUTING OF PORTABLE GENERATOR CONNECTIONS.
4. 4'x8'x3/4" COMMUNICATIONS BACKBOARD.
5. TWO 3" PVC UNDERGROUND TELE/COMMUNICATIONS SERVICE CONDUITS FROM RISER POLE, REFER TO SITE PLAN.
6. 2-1/2" PVC CONDUIT STUBBED OUT BEYOND BUILDING FOUNDATION FROM "MDP" FOR FUTURE PANEL/BUILDING ADDITION.
7. MOUNT RECEPTACLE IN BASE CABINET ADJACENT TO DISHWASHER. PROVIDE MATCHING CORD AND PLUG CONNECTION ON DISHWASHER UNIT.
8. COORDINATE MOUNTING HEIGHT/LOCATION OF RECEPTACLE FOR MICROWAVE. REFER TO ARCHITECTURAL CASEWORK ELEVATIONS.
9. FIRE ALARM SYSTEM REMOTE ANNUNCIATOR.
10. REFER TO MOTOR/STARTER SCHEDULE FOR CIRCUITRY TO MECHANICAL/PLUMBING EQUIPMENT.
11. ALL RECEPTACLE/DATA ROUGH-INS LOCATED IN PRIVATE OFFICE MOUNTED AT 32" A.F.F. (TO BOTTOM OF DEVICE).
12. PROVIDE 120V CIRCUIT CONNECTION AT UNIT FOR UNIT MOUNTED SERVICE RECEPTACLE/LIGHTS. COORDINATE INSTALLATION WITH H.C.
13. COORDINATE RECEPTACLE ROUGH-IN FOR WATER COOLER WITH P.C. (RECEPTACLE CONCEALED WITHIN COOLER HOUSING).
14. STARTER FOR (ROOF MOUNTED) EXHAUST FAN LOCATED IN ATTIC. COORDINATE INSTALLATION/DAMPER CONTROL WIRING WITH H.C.
15. PROVIDE 120V CIRCUIT AT UNIT(S) FOR AIR CLEANER, COORDINATE INSTALLATION REQUIREMENTS WITH H.C.
16. PROVIDE 120V CIRCUIT AND LOCAL DISCONNECT ABOVE ACCESSIBLE CEILING FOR POWER TO FLUSH VALVE CONTROL TRANSFORMER. COORDINATE LOCATION WITH P.C.
17. SHARE SAME CIRCUIT FOR UNIT HEATER(S)/FAN COIL UNIT PROVIDE LOCAL TOGGLE TYPE DISCONNECT SWITCH AT UNIT.
18. COORDINATE DUCT SMOKE DETECTOR INSTALLATION/LOCATION WITH H.C.
19. PROVIDE ADDITIONAL TWO-GANG FLOOR BOX WITH 1.25" CONDUIT TO ABOVE CEILING FOR DATA.
20. COORDINATE RECEPTACLE/POWER REQUIREMENTS FOR DATA RACKS (UPS) AND WALL MOUNTED SYSTEMS/TECHNOLOGY EQUIPMENT WITH TECHNOLOGY SYSTEMS VENDOR(S). LOCATE TECHNOLOGY ROOM GROUND BAR ON WALL ABOVE DATA RACK(S), REFER TO GROUNDING DETAIL, SHEET E0.3.
21. PROVIDE GFCI RECEPTACLE BELOW SINK FOR FAUCET CONTROLS. COORDINATE LOCATION WITH CABINETRY AND P.C. FOR CORD/PLUG CONNECTION.
22. PROVIDE AUXILIARY CONTROL RELAY FROM FIRE ALARM SYSTEM FOR INTERFACE WITH ACCESS CONTROL SYSTEM (IF REQUIRED).

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NEW WORK PLAN
POWER

E3.1

ABBREVIATIONS

A	AMPERES
AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFC	ABOVE FINISHED CEILING
AL	ALUMINUM
ANNUN	ANNUNCIATOR
ARCH	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GUAGE
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
C	CONDUIT
CAT	CATEGORY
CKT	CIRCUIT
CLG	CEILING
CO	COMMUNICATIONS OUTLET
CU	COPPER
C/B	CIRCUIT BREAKER
C/T	CURRENT TRANSFORMERS
Δ	DELTA
DPDT	DOUBLE POLE DOUBLE TRANSFER
DWG	DRAWING
FT	FEET
G	GROUND
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED GROUND
KVA	KILOVOLT - AMPERES
KW	KILOWATTS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MER	MAIN EQUIPMENT ROOM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NC	NORMALLY CLOSED
NL	NIGHT LIGHT CIRCUIT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
R	RECESSED
SCR	SHORT CIRCUIT RATING
SURF	SURFACE
TER	TELECOMMUNICATIONS EQUIP. ROOM
TR	TELECOMMUNICATIONS ROOM
UNIV	UNIVERSAL
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
W	WATTS
WP	WEATHERPROOF
WPG	WEATHERPROOF WITH GROUND
XFMR	TRANSFORMER
Y	WYE

SURFACE MOUNTED RACEWAY NOTE:

SURFACE MOUNTED RACEWAY SHALL BE USED BELOW LAY-IN CEILING IN REMOLDED AREA WHERE CONDUIT, WIRING AND DEVICES CANNOT BE CONCEALED. PROVIDE WIREMOLD 4000 SERIES OR EQUAL, UON. PROVIDE COMPLETE WITH ALL FITTINGS, BARRIERS, COVERS AND MOUNTING ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER. COORDINATE ROUTING OF RACEWAY WITH ARCHITECT PRIOR TO ROUGH-IN.

TECHNOLOGY SYMBOLS AND DEVICE LEGEND

NOTE: ALL SYMBOLS AND ABBREVIATIONS ARE SUBJECT TO MODIFICATION ON OTHER DRAWINGS. ALL SYMBOLS AND/OR ABBREVIATIONS MAY NOT BE NECESSARILY USED ON THIS PROJECT

SYMBOL	SECTION	DESCRIPTION	BACKBOX	CONDUIT	MOUNTING HEIGHT
CM	270528	CABLE MANAGEMENT SYSTEM PATHWAY	N/A	N/A	ABOVE CEILING
	270536	WIRE MESH OR SOLID BOTTOM CABLE TRAY SYSTEM (REFER TO PLANS), 12"Wx4"D UNLESS OTHERWISE. MOUNTING HEIGHT IS TO BOTTOM OF TRAY. HEIGHT VARIES, REFER TO PLANS FOR ADDITIONAL INFORMATION.	N/A	N/A	ABOVE CEILING
	270536	TELECOMMUNICATIONS SLEEVE. UNLESS OTHERWISE NOTED, PROVIDE TWO 1" SLEEVES FROM THE CORRIDOR INTO EVERY ROOM. ONE SHALL BE FOR UTP CABLING AND THE OTHER FOR SECURITY, CENTRAL SOUND, AND CATV CABLING.	N/A	N/A	ABOVE CEILING
	271300	DMARC LOCATION FOR ALL TELECOMMUNICATION AND DATA SERVICES.	N/A	(4) 4" CONDUIT STUBBED TO AFF	48" AFF OR AS NOTED
FOMMxx	271300 271500	FIBER OPTIC CABLE OM4 LASER OPTIMIZED MULTI MODE. "xx" INDICATES STRAND COUNT.	N/A	N/A	N/A
FFSMxx	271300 271500	FIBER OPTIC CABLE OS2 SINGLE MODE. "xx" INCIDATES STRAND COUNT.	N/A	N/A	N/A
Txx	271300 271500	COPPER CABLE CAT 5 UTP. "xx" INDICATES PAIR COUNT.	N/A	N/A	N/A
WP	271500 273123	WALLPHONE OUTLET. REFER TO THE FACEPLATE DETAILS FOR ADDITIONAL INFORMATION. PROVIDE A TELEPHONE HANDSET. WP/AR - WALL PHONE FOR AREA OF REFUGE, COORDINATE WITH FIRE ALARM CONTRACTOR.	5" SQUARE BY 3" DEEP (MIN) WITH SINGLE-GANG BOX	(1) 1" CONDUIT STUBBED TO ABOVE CEILING	44" AFF OR AS NOTED
	271500 273123	PHONE/DATA OUTLET. REFER TO THE FACEPLATE DETAILS FOR ADDITIONAL INFORMATION. PROVIDE A TELEPHONE HANDSET.	5" SQUARE BY 3" DEEP (MIN) WITH SINGLE-GANG BOX	(1) 1" CONDUIT STUBBED TO ABOVE CEILING	18" AFF OR AS NOTED
#	271500	DATA OUTLET. "#" SUBSCRIPT INDICATES QUANTITY OF CABLES/JACKS REQUIRED (BLANK IMPLIES ONE). REFER TO THE FACEPLATE DETAILS FOR ADDITIONAL INFORMATION.	5" SQUARE BY 3" DEEP (MIN) WITH SINGLE-GANG BOX	(2) 1-1/4" CONDUITS STUBBED TO ABOVE CEILING	18" AFF OR AS NOTED
#	271500	DATA CEILING OUTLET. "#" SUBSCRIPT INDICATES QUANTITY OF CABLES/JACKS REQUIRED (BLANK IMPLIES ONE). REFER TO FACEPLATE DETAILS FOR ADDITIONAL INFORMATION.	4 11/16" X 4 11/16" X 2 1/8", EQUIPPED WITH A 2-GANG COVER/PLASTER RING WHEN INSTALLED WITH CONDUIT.	(2) 1-1/4" CONDUITS STUBBED TO ABOVE CEILING	CEILING
	271500	DATA FLOOR OUTLET. "#" SUBSCRIPT INDICATES QUANTITY OF CABLES/JACKS REQUIRED (BLANK IMPLIES ONLY ONE). FLOOR BOX OR POKE THROUGH SPECIFIED ON THE POWER PLANS UNLESS OTHERWISE NOTED.	COMBINATION POWER & LOW VOLTAGE FLOOR BOX	(2) 1-1/4" CONDUITS STUBBED TO ABOVE CEILING	FLOOR
AV1	271500	PRESENTATION POINT OUTLET LOCATION. REFER TO THE FACEPLATE DETAILS AND CONNECTIVITY DETAILS FOR ADDITIONAL INFORMATION. PROVIDE A TELEPHONE HANDSET.	5" SQUARE BY 3" DEEP (MIN) WITH SINGLE-GANG BOX	(2) 1-1/4" CONDUITS STUBBED TO ABOVE CEILING	18" AFF OR AS NOTED
AV2	271500	DISPLAY OUTLET LOCATION. REFER TO THE FACEPLATE DETAILS AND CONNECTIVITY DETAILS FOR ADDITIONAL INFORMATION. -IF P INDICATES OUTLET FOR INTERACTIVE FLAT PANEL, MOUNTED AT 60" AFF. COORDINATE WITH MOUNTING BRACKET AND ARCHITECTURAL.	5" SQUARE BY 3" DEEP (MIN) WITH SINGLE-GANG BOX	(2) 1-1/4" CONDUITS STUBBED TO ABOVE CEILING	SEE DETAILS
AV#	271500	DISPLAY MONITOR OUTLET. REFER TO THE FACEPLATE DETAILS AND CONNECTIVITY DETAILS FOR ADDITIONAL INFORMATION. REFER TO THE PLAN CODED NOTES FOR DEVICE REQUIREMENTS.	5" SQUARE BY 3" DEEP (MIN) WITH SINGLE-GANG BOX	(2) 1-1/4" CONDUITS STUBBED TO ABOVE CEILING	REFER TO PLANS
AP	271500 272133	WIRELSS ACCESS POINT CABLING LOCATION. PROVIDE WITH 30' OF CABLE COILED ABOVE THE ACCESSIBLE CEILING.	2-PORT BISCUIT BLOCK	N/A	N/A
AP	271500 272133	WIRELSS ACCESS POINT WALL MOUNT CABLING LOCATION. PROVIDE WITH 30' OF CABLE COILED ABOVE THE ACCESSIBLE CEILING.	5" SQUARE BY 3" DEEP (MIN) WITH SINGLE-GANG BOX	(1) 1-1/4" CONDUITS STUBBED TO ABOVE CEILING	96" AFF OR AS NOTED
IM	281333	MASTER INTERCOM STATION. ALL OTHERS CALL THIS ONE.	5" SQUARE BY 3" DEEP (MIN) WITH DUAL-GANG MUDRING	(1) 1" CONDUIT STUBBED TO ABOVE CEILING	FLOOR
	281333	AV INTERCOM STATION WITH INTEGRATED PROXIMITY CARD READER, "V" INDICATES VIDEO	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	FLOOR
	281600	WALL-MOUNTED SECURITY MOTION DETECTOR.	SINGLE GANG	(1) 1" CONDUIT STUBBED TO ABOVE CEILING	FLOOR
	281600	CEILING-MOUNTED SECURITY MOTION DETECTOR.	N/A	N/A	FLOOR
	281600	PROXIMITY CARD READER.	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	FLOOR
	281600	ELECTRIC LOCK FURNISHED WITH DOOR HARDWARE.	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	FLOOR
	281600	SECURITY DOOR CONTACT.	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	FLOOR
EL LB ES	281600	ELECTRIC LATCH, LATCH BOLT MONITOR, ELECTRIC SWITCH	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	REFER TO SECURITY DEVICE ROUGH-IN DETAIL	FLOOR
PB	**281600**	PANIC BUTTON.	REFER TO PLANS	REFER TO PLANS	REFER TO PLANS
DR	281600	DOOR RELEASE STATION.	REFER TO PLANS	REFER TO PLANS	REFER TO PLANS
CC LD	281600	LOCK DOWN BUTTON.	REFER TO PLANS	REFER TO PLANS	REFER TO PLANS
	282300 271500	CEILING-MOUNT, IP-CCTV CAMERA. PROVIDE (1) UTP CABLE AND SURFACE MOUNTED OUTLET.	N/A	N/A	CEILING
EXT	282300 271500	WALL MOUNT, IP-CCTV CAMERA ON THE EXTERIOR OF THE BUILDING. PROVIDE (1) UTP CABLE AND SURFACE MOUNTED OUTLET.	REFER TO PLANS	(1) 1" CONDUIT STUBBED TO ABOVE CEILING	SEE DETAILS
INT	282300 271500	WALL MOUNT, IP-CCTV CAMERA ON THE INTERIOR OF THE BUILDING. PROVIDE (1) UTP CABLE AND SURFACE MOUNTED OUTLET.	REFER TO PLANS	(1) 1" CONDUIT STUBBED TO ABOVE CEILING	SEE DETAILS

AUDIO VISUAL SYSTEM ROUGH IN AND INFRASTRUCTURE RECOMMENDATIONS:

1. LARGE DISPLAYS (70"AND UP): BACK BOX WITH AC RECEPTACLES AND SURGE PROTECTION WITH FLANGE AND COVER CHIEF PAC525FBP2; PROVIDE A MINIMUM OF ONE NETWORK DATA DROP FOR DISPLAY. (ONE NETWORK DROP FOR WIRELESS GATEWAY).
2. DIGITAL SIGNAGE DISPLAYS: BACK BOX WITH FLANGE AND COVER CHIEF PAC525FCW OR CHIEF PAC525FBP2 AC RECEPTACLES AND SURGE PROTECTION WITH FLANGE AND COVER; PROVIDE A MINIMUM OF TWO NETWORK DATA DROPS ONE FOR DISPLAY ONE FOR SIGNAGE PLAYER.
3. DISPLAYS (70" AND BELOW): BACK BOX WITH FLANGE AND COVER CHIEF PAC525FCW OR CHIEF PAC525FBP2 AC RECEPTACLES AND SURGE PROTECTION WITH FLANGE AND COVER; PROVIDE A MINIMUM OF ONE NETWORK DATA DROP FOR DISPLAY. (ONE NETWORK DROP FOR WIRELESS GATEWAY).
4. AUDIO INPUT PLATE: (PASSIVE) 2 GANG BOX WITH PLASTER RING TOTAL DEPTH OF AT LEAST 3 1/2".
5. DIGITAL MEDIA PLATE: (ACTIVE) MIDDLE ATLANTIC EVOLUTION 4-GANG WALL BOX OR 8-GANG WALL BOX.
6. DANTE I/O PLATE: (ACTIVE) MIDDLE ATLANTIC EVOLUTION 4-GANG WALL BOX OR 8-GANG WALL BOX.
7. SDI CAMERA: SINGLE OR 2 GANG BOX WITH PLASTER RING TOTAL DEPTH OF AT LEAST 3 1/2".
8. AV CONTROL TOUCH PANEL: 2 GANG BOX WITH PLASTER RING TOTAL DEPTH OF AT LEAST 3 1/2".
9. AUDIO VISUAL FLOOR POKE THRU MIDDLE ATLANTIC EVOLUTION 8"" OR 10" POKE THRU WITH RECEPTACLES, COVER AND INTERIOR PLATE OPTIONS.

PRESENTATION TECHNOLOGY MOCK-UP ROOM

A MOCK-UP AND MEETING SHALL OCCUR FOR TYPICAL PRESENTATION WALL TECHNOLOGY WHERE INTERACTIVE PROJECTORS AND/OR INTERACTIVE FLAT PANELS OCCUR. WALL SHALL BE FINISHED AND PROJECTOR MARKERBOARD AND/OR VISUAL WALL DISPLAY WALLCOVERING, INTERACTIVE PROJECTOR AND/OR INTERACTIVE FLAT PANEL, DATA AND AV CONNECTIVITY, ELECTRICAL AND ALL ACCESSORIES SHALL BE INSTALLED. CONSTRUCTION MANAGER, ARCHITECT, PROJECTOR MARKERBOARD AND/OR VISUAL DISPLAY WALLCOVERING INSTALLER/CONTRACTOR, TECHNOLOGY INSTALLER/CONTRACTOR, AND ELECTRICAL INSTALLER/CONTRACTOR SHALL BE PRESENT TO REVIEW MOCK-UP. PURPOSE OF MOCK-UP IS TO CONFIRM INTERACTIVE TECHNOLOGY IS FUNCTIONING AS NTENDED, THAT THERE IS PROPER COORDINATION BETWEEN THE WALL SURFACE, THE PROJECTOR MARKERBOARD OR VISUAL DISPLAY WALLCOVERING AND THE INTERACTIVE PROJECTOR AND/OR INTERACTIVE FLAT PANEL. ALL FINAL MOUNTING HEIGHTS FOR DIFFERENT ROOMS AND SPACES SHALL BE CONFIRMED AT THE MOCK-UP REVIEW.

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TECHNOLOGY LEGENDS AND NOTES

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GENERAL NOTES

1. ANY ADDITIONAL SLEEVES AND/OR PENETRATIONS REQUIRED FOR THE INSTALLATION OF LOW VOLTAGE SYSTEM CABLING NOT SHOWN ON THESE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INSTALLING THE LOW VOLTAGE SYSTEM.
2. UNDER NO CIRCUMSTANCE SHALL ANY LOW VOLTAGE SYSTEM'S CABLES BE LOCATED IN A PATHWAY CONTAINING ANY OTHER SYSTEM'S CABLING. PROVIDE FIRE□RATED SLEEVES AT ALL FIRE WALL PENETRATIONS AND WALL PENETRATIONS WHERE THE WALL EXTENDS ALL THE WAY TO THE DECK ABOVE.
3. ALL CATEGORY RATED CABLES MAY BE ROUTED IN THE SAME PATHWAY.
4. REFER TO THE ARCHITECTURAL INTERIOR ELEVATIONS FOR DEVICE LOCATIONS AND MOUNTING HEIGHTS WHEN LOCATED AT OR ABOVE CASEWORK. COORDINATE EXACT DEVICE LOCATIONS PRIOR TO ROUGH□IN.
5. CONDUITS AND PULL BOXES SHALL CONFORM TO THE LATEST EDITION OF TIA 568. IN GENERAL, CONDUITS SHALL: a. NOT HAVE MORE THAN (2) 90 DEGREE BENDS BETWEEN PULL POINTS. b. NOT HAVE MORE THAN 100' BETWEEN PULL POINTS. c.NOT HAVE A PULL BOX INSTALLED IN PLACE OF A 90 DEGREE BEND.
6. ALL CONDUITS SHALL BE BUSHED AT BOTH ENDS AND PROVIDED WITH A PULL STRING FOR FUTURE CABLE PLACEMENT. CONDUITS SCHEDULED TO BE STUBBED ABOVE THE CEILING SHALL BE TERMINATED PERPENDICULAR TO THE WALL SURFACE. CONDUITS SCHEDULED TO BE ROUTED TO THE CABLE TRAY SHALL EXIT THE WALL CAVITY PERPENDICULAR TO THE SURFACE. CONDUITS SHALL TERMINATE ABOVE THE EDGE OF THE CABLE TRAY.
7. IN ROOMS WITH OPEN CEILINGS, CONDUITS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALLS. ANGLED CONDUITS WILL NOT BE PERMITTED.
8. CONTRACTORS SHALL FIELD COORDINATE ALL DEVICE LOCATIONS PRIOR TO SURFACE MOUNTING EMT CONDUITS OR RACEWAY.
9. ANY LOW VOLTAGE CABLING IN AN OPEN□CEILING AREA (EXAMPLE GYMNASIUM) SHALL BE INSTALLED WITHIN CONDUIT BACK TO AN ACCESSIBLE CEILING WITH CABLE TRAY. ALL CONDUIT SHALL BE PAINTED TO MATCH THE SURROUNDING AREAS.
10. CABLING ASSOCIATED WITH THE WIRELESS ACCESS POINTS SHALL BE PROVIDED WITH A COIL OF CABLE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST THE LOCATIONS OF THE WIRELESS ACCESS POINTS, AS REQUIRED, AFTER CONDUCTING A SITE VERIFICATION SURVEY TO ENSURE COVERAGE THROUGHOUT THE FACILITY.
11. THE CONTRACTOR SHALL PROVIDE AS□BUILT DRAWINGS WITH ALL FINAL OUTLET LABELING SHOWN ON THE FLOOR PLANS.
12. TECHNOLOGY OUTLETS ARE TO BE WITHIN 6" OF AN ELECTRICAL POWER RECEPTACLE.
13. ALL HORIZONTAL AND BACKBONE LOW VOLTAGE CABLING SHALL BE PLENUM RATED. ANY LOW VOLTAGE DEVICE INSTALLED ABOVE THE FINISHED CEILING SHALL BE PLENUM RATED.
14. ALL HORIZONTAL CABLING INSTALLED UNDER THE FLOOR SLAB SHALL BE WET□LISTED. CONCEAL CABLING WITHIN CONDUIT BACK TO THE TERMINATION LOCATION OR TRANSITION TO PLENUM RATED CABLING ABOVE THE CEILING.
15. ALL OUTLET BOXES AND CONDUIT/RACEWAYS ASSOCIATED WITH OUTLET BOXES TO BE PROVIDED BY THE DIVISION 26 CONTRACTOR. ALL CABLE MANAGEMENT SYSTEMS WHERE OPEN WIRING IS INSTALLED SHALL BE THE RESPONSIBILITY OF THE DIVISION 27 CONTRACTOR.
16. ALL CONDUIT SLEEVES SHOWN ON BID DOCUMENTS TO BE PROVIDED BY DIVISION 26 CONTRACTOR. ALL CONDUIT SLEEVES THRU WALLS AND FLOORS, NOT SPECIFICALLY SHOWN ON DRAWINGS BUT REQUIRED FOR COMPLIANT INSTALLATION OF CABLING SHALL BE PROVIDED BY THE DIVISION 27 CONTRACTOR AS PART OF THEIR SCOPE OF WORK.
17. ANNULAR SPACE AROUND DUCTWORK, PIPING, CONDUIT AND OTHER SIMILAR PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE FIRESTOPPED TO RETARD THE PASSAGE OF FIRE AND SMOKE. REFER TO SPECIFICATION SECTION 07 84 13 PENETRATION FIRESTOPPING FOR COMPLETE REQUIREMENTS.
18. THE DIVISION 27 CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE AND THOROUGH COORDINATION OF ALL PATHWAYS BEING PROVIDED BY THE DIVISION 26 CONTRACTOR. ANY PATHWAYS THAT ARE PROVIDED THAT CAUSE CABLING INSTALLATION TO BE NONCOMPLIANT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE INSTALLATION OF CABLING.
19. THE DIVISION 27 CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL POWER REQUIREMENTS WITHIN THE TECHNOLOGY ROOM(S) WITH THE DIVISION 26 CONTRACTOR PRIOR TO ROUGH-INS AND BUILD-OUT OF EACH TECH ROOM. THE DIVISION 27 CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SIGNED-OFF DETAILED COORDINATION DRAWINGS INCLUDING ALL FIRE SUPPRESSION, PLUMBING, HVAC, ELECTRICAL, AND TECHNOLOGY WORK WITHIN THE ROOM(S). THE COORDINATION DRAWINGS SHALL SHOW FLOOR PLANS AND WALL ELEVATIONS INCLUDING ALL TRADES' WORK WITHIN THE SPACE(S) PRIOR TO ANY TRADES WORKING WITHIN THE SPACE(S).
20. THE DRAWINGS INDICATE THE QUANTITY, TYPE AND GENERAL LOCATION OF VOICE/DATA/CATV/VIDEO OUTLETS REQUIRED IN EACH SPACE. A FINAL DEVICE LOCATION PLAN FOR EACH SPACE WILL BE ISSUED PRIOR TO START OF THE INSTALLATION. THE TECHNOLOGY CONTRACTOR SHALL INCLUDE IN THE BID ANY COSTS ASSOCIATED WITH FINAL DEVICE LOCATIONS AS THERE WILL BE NO ALLOWANCE AFTER AWARD OF CONTRACT.
21. THE DIVISION 26 CONTRACTOR WILL PROVIDE THE CABLING PATHWAYS AND POWER FOR TECHNOLOGY SYSTEMS. THE DIV. 27 & 28 CONTRACTOR SHALL INCLUDE IN THE BID, COSTS TO OBTAIN AND REVIEW THE FINAL DIVISION 26 DRAWINGS AND TO HAVE DEDICATED PRECONSTRUCTION MEETINGS WITH THE DIVISION 26 CONTRACTOR AND CONSTRUCTION MANAGER. THE PURPOSE IS TO VERIFY AND CONFIRM THAT THE DIVISION 26 CONTRACTOR'S MEANS AND METHODS ARE COORDINATED WITH THE DIV. 27 & 28 CONTRACTOR'S INSTALLATION METHODS PRIOR TO START OF CONSTRUCTION. THE DIV. 27 & 28 CONTRACTOR SHALL IMMEDIATELY BRING ANY ISSUES TO THE ATTENTION OF THE CONSTRUCTION MANAGER. IN ADDITION, THE DIV. 27 & 28 CONTRACTOR SHALL INCLUDE COST TO WALK THROUGH EACH BUILDING DURING THE PATHWAY ROUGH-IN PHASE TO VERIFY INSTALLATION WILL ACCOMMODATE THE CABLING PHASE OF THE PROJECT.
22. A 3.5" DEEP MASONRY BOX (PROVIDED BY DIVISION 26) SHALL BE USED IN CMU WALLS.
23. FIRESTOPPING ASSEMBLIES SHALL BE PROVIDED AT PENETRATIONS OF CONDUITS, BUS DUCTS, CABLES, CABLE TRAYS AND OTHER ELECTRICAL ITEMS THRU FIRE RATED FLOORS, FIRE RATED FLOOR-CEILING AND ROOF CEILING ASSEMBLIES, FIRE RATED WALLS AND PARTITIONS AND FIRE RATED SHAFT WALLS AND PARTITIONS. IN ADDITION, FIRESTOPPING ASSEMBLIES SHALL BE PROVIDED AT PENETRATIONS THRU 0-HOUR RATED FLOORS. REFER TO SPECIFICATION SECTION 07 84 13 PENETRATION FIRESTOPPING FOR COMPLETE REQUIREMENTS.
24. IT IS STRONGLY RECOMMENDED THAT ALL BIDDERS VISIT AND EXAMINE THE SITE. NO ADDITIONAL COMPENSATION WILL BE AWARDED FOR ANY DEVIATIONS OR DISCREPANCIES TO THESE PLANS. THE CONTRACTOR WILL FAMILIARIZE HIMSELF WITH ALL CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. THE CONTRACTOR SHALL REPORT ANY MAJOR DISCREPANCIES TO THE PROJECT ENGINEER. FAILURE TO DO SO SHALL BE DEEMED AS ACCEPTANCE OF EXISTING CONDITIONS.
25. ANY DISCREPANCIES BETWEEN DRAWINGS AND SPECIFICATIONS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DURING THE BIDDING PERIOD NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE BROUGHT SAID DISCREPANCIES TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PERIOD OR OF ANY ERROR ON THE CONTRACTOR'S PART.
26. ALL WORK REQUIRING POWER OR COMMUNICATION OUTAGES OR DISRUPTION OF OWNER FUNCTIONS SHALL BE COORDINATED WITH THE PROJECT ENGINEER, OWNER AND OWNER ITS DEPARTMENT AND SCHEDULED AT SUCH A TIME AS TO MINIMIZE DISRUPTION. REQUESTS FOR, NOTIFICATIONS OF, AND APPROVALS FOR OUTAGES AND DISRUPTIONS SHALL BE MADE TO OWNER AND THE ENGINEER IN WRITING, 2 WEEKS PRIOR TO THE REQUESTED OUTAGE DATE. OUTAGES SHALL NORMALLY OCCUR DURING THE OWNER'S "OFF" HOURS.
27. THE CONTRACTOR SHALL INCLUDE ALL ADDITIONAL COSTS FOR PREMIUM TIME WORK THAT MUST BE PERFORMED DURING OWNER "OFF" HOURS. NO ADDITIONAL COMPENSATION WILL BE AWARDED FOR OVERTIME WORK.
28. THE DIVISION 27 CONTRACTOR’S DESIGNATED PROJECT REGISTERED COMMUNICATION DISTRIBUTION DESIGNER (RCDD) SHALL BE RESPONSIBLE FOR VERIFYING THE ROUTING AND SIZING OF CABLE TRAY, CHANNELS, WIRE WAYS, CONDUITS, ETC. AS REQUIRED TO MEET THE INTENT OF THE SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT THIRTY (30) DAYS BEFORE INSTALLATION BEGINS, FOR THE ENGINEER’S AND OWNER’S REVIEW AND ACCEPTANCE, DRAWINGS INDICATING RACEWAY, CABLE TRAY, AND CONDUIT ROUTING, SIZE, CABLE FILLS, AND LADDER RACK LAYOUT IN ALL MER, TR ROOMS AND CABINETS USED FOR MERS OR TRS.
29. THE DIVISION 27 CONTRACTOR’S DESIGNATED PROJECT REGISTERED COMMUNICATION DISTRIBUTION DESIGNER (RCDD) SHALL BE RESPONSIBLE FOR COORDINATING ALL POWER REQUIREMENTS WITHIN THE TECHNOLOGY ROOM(S) AND CABINETS WITH THE DIVISION 26 CONTRACTOR AND THE OWNER ITS DEPARTMENT PRIOR TO ROUGH-INS AND BUILD-OUT OF EACH TECH ROOM. THE DIVISION 27 CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SIGNED-OFF, BY EACH TRADE, DETAILED COORDINATION DRAWINGS INCLUDING ALL FIRE SUPPRESSION, PLUMBING, HVAC, ELECTRICAL, AND TECHNOLOGY WORK WITHIN THE ROOM(S). THE COORDINATION DRAWINGS SHALL SHOW FLOOR PLANS AND WALL ELEVATIONS INCLUDING ALL TRADES' WORK WITHIN THE SPACE(S). THE DIVISION 27 CONTRACTOR'S RCDD SHALL SUBMIT THE PLANS THIRTY (30) DAYS BEFORE INSTALLATION BEGINS WITHIN THE SPACES(S) BY ANY TRADES, FOR THE ENGINEER’S AND OWNER’S REVIEW AND ACCEPTANCE.
30. THE DIVISION 26 CONTRACTOR WILL PROVIDE THE CABLING PATHWAYS, PER THE DIVISION 27 SPECIFICATIONS, AND POWER FOR THE TECHNOLOGY SYSTEMS. THE DIVISION 27 & 28 CONTRACTOR SHALL INCLUDE IN THEIR BIDS, COST TO OBTAIN AND REVIEW THE FINAL DIVISION 26 DRAWINGS AND TO HAVE DEDICATED PRECONSTRUCTION MEETINGS WITH THE DIVISION 26 CONTRACTOR, CONSTRUCTION MANAGER, AND THE OWNER ITS DEPARTMENT. THE PURPOSE IS TO VERIFY AND CONFIRM THAT THE DIVISION 26 CONTRACTOR'S MEANS AND METHODS ARE COORDINATED WITH THE DIVISION 27 & 28 CONTRACTOR'S INSTALLATION METHODS PRIOR TO START OF CONSTRUCTION. THE DIVISION 27 & 28 CONTRACTOR SHALL IMMEDIATELY BRING ANY ISSUES TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER ITS DEPARTMENT. IN ADDITION, THE RCDD OF THE DIVISION 27 & 28 CONTRACTOR SHALL INCLUDE COST TO WALK THROUGH THE BUILDING DURING THE PATHWAY ROUGH-IN PHASE TO VERIFY INSTALLATION WILL ACCOMMODATE THE CABLING PHASE OF THE PROJECT .
31. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER CONSTRUCTION TRADES FOR ADDITIONAL ELECTRICAL AND COMMUNICATION WORK INCLUDED IN DIVISION 26, 27, 28 CONTRACT.
32. ALL OUTLET BOXES, CONDUITS, RACEWAY, AND CABLE TRAYS ASSOCIATED WITH OUTLET BOXES TO BE PROVIDED BY THE DIVISION 26 CONTRACTOR PER THE DIVISION 27 SPECIFICATIONS. ALL CABLE MANAGEMENT SYSTEMS WHERE OPEN WIRING IS INSTALLED SHALL BE THE RESPONSIBILITY OF THE DIVISION 27 CONTRACTOR.
33. A 3.5" DEEP MASONRY BOX (PROVIDED BY DIVISION 26) SHALL BE USED IN CMU WALLS.
34. COORDINATE EXACT LOCATIONS OF EQUIPMENT WITH OTHER TRADES. VERIFY EXACT WIRING AND CONNECTION REQUIREMENTS WITH SUBMITTAL DOCUMENTS BEFORE INSTALLATION. SPECIALTY OUTLET TYPES SHALL BE VERIFIED BEFORE ORDERING. ALL ELECTRICAL AND COMMUNICATION WORK SHOWN HERE MUST BE VERIFIED AND COORDINATED IN FIELD BEFORE INSTALLATION .
35. IT IS NOT INTENDED THAT THE PLANS INDICATE ALL THE NECESSARY BENDS OFFSETS, PULL BOXES AND OBSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL HIS/HER WORK TO CONFORM TO THE STRUCTURE, MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.
36. SYSTEM INSTALLATION SHALL BE CAREFULLY COORDINATED TO MINIMIZE CONFLICT WITH EXISTING BUILDING UTILITIES AND UTILITIES INSTALLED AS PART OF THIS PROJECT. PROVIDE ALL OFFSETS, SYSTEM FITTINGS, JUNCTION BOXES, ETC. AS REQUIRED
37. REFER TO THE SPECIFICATIONS 27 05 26 REGARDING GROUNDING ISSUES. SCOPE INCLUDES VERIFICATION OF ALL EXISTING BUILDING SERVICE GROUNDS AND GROUND RESISTANCE MEASUREMENTS. A SUMMARY REPORT AND DIAGRAM OF THE GROUNDING SYSTEM SHALL BE PROVIDED TO THE OWNER ITS DEPARTMENT 10 DAYS PRIER TO THE ACCEPTANCE OF THE COMMUNICATION SYSTEM PER 27 05 26. SERVICE GROUNDS SHALL BE INTERPRETED TO MEAN BUILDING TELECOMMUNICATIONS SERVICE ISOLATED GROUNDS
38. ALL COMMUNICATION WORK SHALL BE INSTALLED BY CERTIFIED CONTRACTORS AND THEIR EMPLOYEES THAT HAVE BEEN APPROVED TO WORK ON OWNER COMMUNICATION SYSTEMS PER THE PROJECT SPECIFICATIONS
39. ALL CONNECTIVITY AND CABLING WILL BE INSTALLED WITHIN THE CONTEXT OF THE PROJECT. NOTE THAT THIS CONTRACT WILL PROVIDE A COMPLETE VERTICAL AND HORIZONTAL PATHWAY SYSTEM THROUGH THE INSTALLATION OF SLEEVES, CONDUITS, RACEWAYS, CABLE TRAY, ETC.
40. REFER TO THE ARCHITECTURAL INTERIOR ELEVATIONS FOR THE DEVICE LOCATIONS AND MOUNTING HEIGHTS WHEN LOCATED AT OR ABOVE CASEWORK. COORDINATE EXACT DEVICE LOCATIONS PRIOR TO ROUGH-IN.
41. ALL INSTALLATIONS SHALL BE ADA COMPLIANT
42. CONTRACTOR SHALL PROTECT ALL EXISTING AND NEW CONSTRUCTION FROM DAMAGE.
43. EXISTING CEILINGS, WALLS, FLOORS AND ALL OTHER BUILDING COMPONENTS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. ALL DAMAGES TO THE BUILDING OR IT'S CONTENTS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE TO THE OWNERS SATISFACTION.
44. ALL CONDUIT SLEEVES AND/OR PENETRATIONS THRU WALLS AND FLOORS REQUIRED FOR THE INSTALLATION OF LOW VOLTAGE SYSTEM CABLING SHOWN ON THE BID DOCUMENTS TO BE PROVIDED BY THE DIVISION 26 CONTRACTOR. ALL CONDUIT SLEEVES AND/OR PENETRATIONS THRU WALLS AND FLOORS REQUIRED FOR THE INSTALLATION OF LOW VOLTAGE SYSTEM CABLING, NOT SPECIFICALLY SHOWN ON DRAWINGS BUT REQUIRED FOR COMPLIANT INSTALLATION OF CABLING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR INSTALLING THE LOW VOLTAGE SYSTEM AS PART OF THEIR SCOPE OF WORK.
45. PROVIDE ALL CORE DRILLING, CUTTING, AND PATCHING AND RESTORATION OF ALL FINISHED AREAS REQUIRED TO INSTALL ALL CONDUITS, SLEEVES, BOXES, ETC. SEAL ALL CORE DRILLS AFTER RACEWAY, CONDUITS, ETC. ARE INSTALLED.
46. PROVIDE FIRE RATED SLEEVES AT ALL FIRE WALL PENETRATIONS AND WALL PENETRATIONS WHERE THE WALL EXTENDS ALL THE WAY TO THE DECK ABOVE.
47. FIRE STOPPING ASSEMBLIES SHALL BE PROVIDED AT PENETRATIONS OF CONDUITS, BUS DUCTS, CABLE TRAYS AND OTHER ELECTRICAL ITEMS THRU FIRE RATED FLOORS, FIRE RATED FLOOR-CEILING AND ROOF CEILING ASSEMBLIES, FIRE RATED WALLS AND PARTITIONS AND FIRE RATED SHAFT WALLS AND PARTITIONS. IN ADDITION, FIRE STOPPING ASSEMBLIES SHALL BE PROVIDED AT PENETRATIONS THROUGH 0-HOUR RATED FLOORS. REFER TO SPECIFICATIONS RELATED TO PENETRATION FIRE STOPPING FOR COMPLETE REQUIREMENTS.
48. CONTRACTOR WILL PROVIDE ALL NEW PATHWAY WITHIN THE RENOVATION AREA TO THE MER ROOM AND TRS.
49. ALL COMMUNICATION CABLES WILL BE INSTALLED IN CONDUITS, RACEWAYS, OR CABLE TRAY WITH SOLID BOTTOMS AND SIDES IF THE CABLE PATHWAY IS NOT INSTALLED ABOVE LAY IN CEILINGS UNLESS NOTED OTHERWISE.
50. IN ROOMS WITH OPEN CEILINGS, CONDUITS AND CABLE TRAYS WITH SOLID BOTTOMS AND SOLID SIDES SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALLS. ANGLED CONDUITS WILL NOT BE PERMITTED.
51. UNDER NO CIRCUMSTANCES SHALL ANY DATA, OR VOICE CABLES BE LOCATED IN A PATHWAY CONTAINING ANY OTHER SYSTEM'S CABLING.
52. ALL CABLES INSTALLED SHALL BE PROTECTED FROM EXPOSURE TO PAINT OR ANY OTHER FOREIGN MATERIAL THAT WOULD NEGATIVELY IMPACT THE VALIDITY OF THE MANUFACTURER'S PERFORMANCE WARRANTY. IF ANY CABLE IS EXPOSED TO PAINT AT ANY POINT REGARDLESS OF THE AMOUNT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE CABLE(S) AFFECTED AND WILL REPLACE THE CABLE(S) AT NO COST TO THE OWNER PER THE INSTALLATION SPECIFICATIONS INCLUDING TESTING.
53. COORDINATE LOCATION AND ELEVATION OF CABLE TRAY WITH DIVISION 21, 22 AND 23 CONTRACTORS. CABLE TRAY SHOULD BE LOCATED BELOW DIVISION 21, 22 AND 23 EQUIPMENT DIRECTLY ABOVE CEILING GRID. DO NOT LOCATE CABLE TRAY OVER TOP OF LIGHT FIXTURES.
54. CONTRACTOR WILL PROVIDE CABLE TRAY PER SPECIFICATIONS FOR ALL PATHWAYS WHERE THE CABLE COUNT IS 18 OR MORE CABLES.
55. IN ROOMS AND HALLWAYS WHERE CABLE TRAY IS PRESENT ALL COMMUNICATION CONDUITS SHALL BE EXTENDED TO WITHIN 10" OF THE CABLE TRAY AND 3" ABOVE THE TOP OF THE SIDE OF THE CABLE TRAY. THE CONDUIT WILL BE BONDED WITH A NUMBER 6" GROUND WIRE TO THE CABLE TRAY.
56. PRIOR TO THE INSTALLATION OF ANY EXPOSED CONDUITS OR BOXES, THE PLACEMENT AND CONDUIT ROUTING SHALL BE REVIEWED AND APPROVED BY THE OWNER
57. ALL EXPOSED CONDUITS, RACEWAYS, BOXES, ETC. SHALL BE PAINTED. PAINT COLORS SHALL BE COORDINATED WITH THE OWNE
58. CONTRACTOR MAY USE EXISTING CONDUIT, IF AFTER INSTALLATION OF ALL NEW CABLE, THE CONDUIT IS NOT MORE THAN 40% FULL OTHERWISE THE CONTRACTOR WILL ESTABLISH A SEPARATE CONDUIT PATHWAY PER SPECIFICATIONS.
59. ANY CONDUIT INSTALLED NEW FOR COMMUNICATION CABLE PATHWAY WILL NOT BE MORE THAN 40% FULL.
60. PROVIDE LONG SWEEP BENDS ON CONDUITS 2" AND LARGER PER SPECIFICATIONS. LB FITTINGS SHALL NOT BE USED FOR COMMUNICATION CONDUITS.
61. ALL OSP CABLES WILL BE INSTALLED IN GALVANIZED RIGID CONDUIT FROM FIVE (5) FEET OUTSIDE THE BUILDING FOUNDATION TO THE MER ROOM SERVING AS THE POINT OF ENTRY.
62. ALL CONDUIT RUNS SHALL HAVE A PULL STRING INSTALLED. A PULL STRING SHALL REMAIN IN ALL CONDUITS AFTER CABLES ARE INSTALLED IN THE CONDUIT. ALL CONDUITS SHALL HAVE BUSHED ENDS WHEN TERMINATED INTO A BOX
63. PROVIDE PULL BOXES WHERE SHOWN AS WELL AS PER DESCRIPTION IN THE SPECIFICATIONS. A PULL BOX SHALL BE PROVIDED IF MORE THAN 2-90 DEGREE BENDS OCCUR IN A RUN. NOTE THAT PULL BOXES SHOULD BE LOCATED A MINIMUM OF 2FT BACK FROM BENDS. DO NOT USE A PULL BOX IN THE CORNER OF ANY TURNS
64. PILLBOXES SHALL BE STEEL. NEMA 1 FOR INDOOR USE. PILLBOXES INSTALLED IN MECHANICAL ROOMS, CUSTODIAL CLOSETS OR USED FOR OSP CABLES WILL BE NEMA3R FOR WET AND DAMP LOCATIONS. BOXES SHALL NOT HAVE ANY OPEN KNOCKOUTS. PULL BOXES 18" X 18" AND LARGER WILL HAVE HINGED COVER
65. CONTRACTOR WILL INSTALL J-HOOKS AT NO GREATER DISTANCE THAN 4 FEET APART TO ALL NEW, EXISTING AND FUTURE LOCATIONS. IF AN EXISTING PATHWAY THAT USES J-HOOKS IS PRESENT, THE CONTRACTOR MAY USE THE PATHWAY IF THE J-HOOKS WILL NOT BE MORE THAN 40% FULL AFTER THE NEW CABLE IS INSTALLED OTHERWISE THE CONTRACTOR WILL ESTABLISH A SEPARATE PATHWAY PER SPECIFICATIONS. NO MORE THAN 18 DATA CABLES MAY BE SUPPORTED BY A J-HOOK PATHWAY.
66. CONTRACTOR MAY USE EXISTING RACEWAY IF AFTER INSTALLATION OF ALL NEW CABLE THE RACEWAY IS NOT MORE THAN 40% FULL OTHERWISE THE CONTRACTOR WILL ESTABLISH A SEPARATE RACEWAY PATHWAY PER SPECIFICATIONS BELOW THE CEILINGS WHERE ASBESTOS IS LOCATED.
67. RACEWAY INSTALLED FOR A NEW CABLE PATHWAY MAY NOT BE MORE THAN 40% FULL AFTER THE INSTALLATION OF ALL NEW CABLE.
68. DATA/COM/TV IDENTIFICATION LABELING ARE TO BE FOLLOWED IN CONJUNCTION WITH THE INSTALLATION SPREADSHEETS FURNISHED BY OWNER ITS DEPARTMENT.
69. ALL OUTLET BOXES FOR DATA, VOICE AND AV SHALL BE A 5" SQUARE BY 3" DEEP (MIN) WITH SINGLE GANG MUD RING, UNLESS NOTED OTHERWISE, WITH TWO DEDICATED VERTICAL 1-1/4" CONDUIT ENTERING AT THE TOP OF THE BOX OR THE BOTTOM OF THE BOX IF THE BOX IS FED FROM THE FLOOR BELOW. NO HORIZONTAL CONDUIT CONNECTIONS SHALL BE PERMITTED UNLESS OTHER WISE NOTED ON THE DRAWINGS.
70. ALL OUTLET BOXES FOR WIRELESS ACCESS POINTS SHALL BE A 5" SQUARE BY 3" DEEP (MIN) WITH SINGLE GANG MUD RING WITH ONE DEDICATED VERTICAL 1-1/4" CONDUIT ENTERING AT AN OFFSET TO THE BOX
71. ALL OUTLET BOXES FOR SECURITY CAMERAS SHALL BE A 5" SQUARE BY 3" DEEP (MIN) WITH SINGLE GANG MUD RING WITH ONE DEDICATED VERTICAL 1-1/4" CONDUIT ENTERING AT AN OFFSET TO THE BOX.
72. TECHNOLOGY OUTLETS ARE TO BE WITHIN 6" OF AN ELECTRICAL POWER RECEPTACLE UNLESS NOTED OTHERWISE.
73. PRIOR TO INSTALLATION OF EQUIPMENT RACKS AND CABINETS, VERIFY PLACEMENT AND LAYOUT WITH OWNER ITS DEPARTMENT FOR APPROVAL.
74. PROVIDE LOCKING CLIPS ON ALL CIRCUIT BREAKERS SERVING TELECOMMUNICATION EQUIPMENT FROM EXISTING OR NEW PANELS OUTSIDE THE MER AND TRS.
75. ALL PATCH CORDS AND WORK STATION CABLES WILL BE END-TO-END SOLUTION AS REQUIRED BY THE SPECIFICATIONS.

OSP CABLE DEMOLITION AND INSTALLATION NOTES

1. ALL MODIFICATIONS AND DEMOLITION OF OSP FIBER AND COPPER COMMUNICATION CABLES WILL BE COMPLETED BY A DATA CONTRACTOR APPROVED BY THE TECHNOLOGY CONSULTANT TO WORK ON THE COMMUNICATION SYSTEMS AND THE CONTRACTOR'S EMPLOYEES POSSESSING THE REQUIRED CREDENTIALS TO WORK ON THE COMMUNICATION SYSTEMS.
2. ALL DEVICES AND MISCELLANEOUS EXISTING CONDITIONS SHOWN ON THE DEMOLITION AND INSTALLATION PLANS ARE THE RESULT OF FIELD INSPECTIONS AND NOT INTENDED TO REPRESENT EXACT FIELD CONDITIONS, BUT RATHER THE EXTENT OF COMMUNICATION SYSTEM DEMOLITION AND INSTALLATION. THE COMMUNICATION CONTRACTOR SHALL FIELD VERIFY THE EXTENT OF THE DEMOLITION PRIOR TO SUBMITTING A BID.
3. ANY EXISTING OSP FIBER CABLES MUST BE TESTED PER STANDARDS AND THE TEST RESULTS TURNED OVER TO THE TECHNOLOGY CONSULTANT PRIOR TO MOVING THE CABLE BY THE CONTRACTOR. TESTING WILL BE COMPLETED FROM THE FIBER STRANDS TERMINATION POINTS IN THE BUILDING.
4. FAILURE TO TEST THE FIBER AND TURN OVER THE TEST RESULTS PRIOR TO MOVING THE CABLE THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY AND ALL COSTS FOR REPLACEMENT OF THE FIBER CABLE AND ALL COMPONENTS IF THE FIBER STRANDS DO NOT MEET OR EXCEED STANDARDS WHEN RE-INSTALLED.
5. ALL WORK REQUIRING COMMUNICATION OUTAGES OR DISRUPTION OF FUNCTIONS SHALL BE COORDINATED WITH THE PROJECT ENGINEER AND SCHEDULED AT SUCH A TIME AS TO MINIMIZE DISRUPTION. REQUESTS FOR, NOTIFICATIONS OF, AND APPROVALS FOR OUTAGES AND DISRUPTIONS SHALL BE MADE TO THE CONSTRUCTION MANAGER, OWNER AND THE TECHNOLOGY CONSULTANT IN WRITING, 2 WEEKS PRIOR TO THE REQUESTED OUTAGE DATE. OUTAGES SHALL NORMALLY OCCUR DURING "OFF" HOURS.
6. THE CONTRACTOR SHALL INCLUDE ALL ADDITIONAL COSTS FOR PREMIUM TIME WORK THAT MUST BE PERFORMED DURING OWNER "OFF" HOURS. NO ADDITIONAL COMPENSATION WILL BE AWARDED FOR OVERTIME WORK.
7. THE CONTRACTOR SHALL INCLUDE ALL ADDITIONAL COSTS INCURRED AS REQUIRED TO MEET ALL ACCESS REQUIREMENTS TO CONTROLLED AREAS. THE CONTRACTOR SHALL COORDINATE AND MEET ALL ACCESS REQUIREMENTS TO CONTROLLED AREAS. ALL COMMUNICATION MANHOLES SHALL BE CONSIDERED AS CONFINED SPACES.
8. CONTRACTOR WILL PROVIDE ALL EQUIPMENT REQUIRED TO ENTER THE COMMUNICATION MANHOLES FOR THE USE OF THE PROJECT ENGINEER AND OWNER TO USE FOR ENTERING INTO AND THE INSPECTION OF THE WORK IN ALL COMMUNICATION MANHOLES.
9. ALL CABLES AND EQUIPMENT ARE TO BE PER THE PROJECT EQUIPMENT SCHEDULE AND CABLE SCHEDULE.
10. PRIOR TO THE BEGINNING OF ANY WORK ON THE FIBER CABLES AND THE COPPER CABLES A MEETING WILL BE HELD WITH THE CABLE CONTRACTOR'S PROJECT MANAGER, THE CONTRACTOR'S SUPERVISOR THAT WILL BE ON SITE DURING THE WORK, THE ACTUAL TECHNICIANS DOING THE CABLE WORK, OWNER AND THE PROJECT ENGINEER. THE MEETING WILL BE HELD AT LEAST TWO WEEKS PRIOR TO THE BEGINNING OF THE CABLE WORK.
11. ACCESS TO ALL COMMUNICATION MANHOLES AND PULL BOXES MUST BE MAINTAINED AT ALL TIMES FOR COMMUNICATION CREWS WORKING ON THIS AND OTHER PROJECTS.
12. DEMOLITION ACTIVITIES OF THE OSP CABLES AND CABINET WILL NOT BEGIN UNTIL THE NEW DMARC IS 100% BUILT OUT AND READY TO RECEIVE NEW OSP CABLES.
13. CONTRACTOR WILL INVESTIGATE ANY EXISTING SPLICE CASE AND OBTAIN ALL NECESSARY PARTS TO MODIFY THE CASE AND TO COMPLETE THE SPLICE WORK IN THE EXISTING FIBER CASE. ALL PARTS WILL BE ON SITE TWO WEEKS PRIOR TO INSTALLATION BEGINNING FOR INSPECTION AND VERIFICATION BY THE PROJECT ENGINEER AND THE OWNER. CONTRACTOR IS RESPONSIBLE TO PROVIDE A PERMANENT SEAL IN THE ANY EXISTING FIBER SPLICE CASE WHEN THE WORK IS COMPLETE.
14. IF THE FIBER SPLICE CASE CAN NOT BE PROPERLY SEALED THE CONTRACTOR WILL REPLACE THE SPLICE CASE.
15. IF ANY EXISTING CABLE NEEDS REMOVED, THE DATA CONTRACTOR WILL HAVE 72 HOURS FROM THE POINT THE OSP VOICE AND DATA CABLE IS REMOVED AND ALL NEW CABLES ARE 100% INSTALLED TESTED ALL PUNCH LISTS COMPLETE AND THE CABLES ARE PLACED IN SERVICE BY THE ITS DEPARTMENT.
16. ANY EXISTING/ABANDONED CABLE SHALL BE REMOVED BY THE DATA CONTRACTOR
17. PROVIDE A FORTY FOOT CABLE LOOP IN THE MANHOLE ON EACH CABLE. INSTALL THE CABLE LOOPS ON OSP FIBER STORAGE RINGS IN THE MANHOLE. PROPERLY SUPPORT THE FIBER CABLES, STORAGE RINGS AND THE FIBER SPLICE CASE OFF THE MANHOLE FLOORS USING INWESCO #10B61 PLASTIC CABLE RACK HOOKS. PROVIDE 40 FEET FIBER CABLE LOOP ON EACH FIBER CABLE IN THE MER ON AN ISP FIBER STORAGE SPOOL/RING.
18. FUSION SPLICE THE SM FIBER STRAND CABLES FIRST, THEN FUSION SPLICE THE MM FIBER STRAND CABLES
19. PROVIDE SUPPORT FIRMLY ATTACHED TO THE COMMUNICATION MANHOLE WALLS AT EACH END OF ALL FIBER SPLICE CASES USING INWESCO #10B61 PLASTIC CABLE RACK HOOKS.
20. CONTRACTOR WILL NOTIFY PROJECT ENGINEER TO ARRANGE FOR A VISIBLE INSPECTION WHEN ALL SPLICING IS COMPLETE PRIOR TO CLOSING OF THE SPLICE CASE, AND AGAIN AFTER THE CABLES AND SPLICE CABLES LABELED AND PROPERLY SUPPORTED. ONCE THE VISUAL INSPECTION IS COMPLETE AND ANY DEFICIENCIES HAVE BEEN CORRECTED IN THE COMMUNICATION MANHOLES AND PULLBOXES THE CONTRACTOR WILL BE AUTHORIZED TO TERMINATE THE FIBER.
21. ALL FIBER CABLES WILL BE TESTED BY TIER 2 STANDARDS AND ALSO POWER SUM.
22. THE CABLE CONTRACTOR WILL CORRECT ANY AND ALL DEFICIENCIES IN THE FIBER WORK AS IDENTIFIED BY TESTING OR VISIBLE INSPECTION AS DETERMINED BY THE PROJECT ENGINEER. THE PROJECT ENGINEER WILL MAKE THE FINAL DETERMINATION IF THE WORK IS COMPLETE AND ACCEPTED.
23. TERMINATE COPPER OSP CABLE ON LIGHTENING PROTECTOR. LIGHTENING PROTECTOR TO BE INSTALLED AND GROUNDED TO THE TMGB USING A #2 GROUND WIRE. THE INSTALLATION LOCATION OF THE LIGHTENING PROTECTOR TO BE COORDINATED WITH THE PROJECT ENGINEER AND THE OWNER.
24. COPPER CABLE SLACK SHALL BE WRAPPED AROUND THE PERIMETER OF THE COMMUNICATION MANHOLE. FIRMLY ATTACH TO THE COMMUNICATION MANHOLE WALLS AND PROVIDE SUPPORTS TO EACH END OF THE SPLICE CASE ATTACHING THE SPLICE CASE TO THE CM WALLS PROPERLY SUPPORTED OFF THE MANHOLE FLOOR USING INWESCO #10B61 PLASTIC CABLE RACK HOOKS.
25. LABEL THE COPPER CABLE AT THE POINT IT LEAVES THE SPLICE CASE USING A METAL TAG.
26. CONTRACTOR WILL NOTIFY PROJECT ENGINEER TO ARRANGE FOR A VISIBLE INSPECTION WHEN ALL SPLICING IS COMPLETE, CABLES AND SPLICE CASES LABELED AND PROPERLY SUPPORTED. ONCE THE VISUAL INSPECTION IS COMPLETE AND ANY DEFICIENCIES HAVE BEEN CORRECTED THE PROJECT ENGINEER WILL INSTRUCT THE CABLE CONTRACTOR TO TEST ALL COPPER PAIRS PER SPECIFICATIONS. PROVIDE TEST RESULTS TO PROJECT ENGINEER FOR REVIEW AND ACCEPTANCE.

TECHNOLOGY AND AV SYSTEM ROUGH IN AND INFRASTRUCTURE RECOMMENDATION INSTALLATION NOTES

1. DATA/COM/TV IDENTIFICATION LABELING ARE TO BE CONFIRMED BY OWNER.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL AND DATA/COM ROUGH-IN LOCATIONS WITH THE FURNITURE CONTRACTOR AND OWNER PRIOR TO INSTALLATION IN ORDER TO AVOID CONFLICTS WITH FURNITURE INSTALLATIONS.
3. IN ROOMS AND HALLWAYS WHERE CABLE TRAY IS PRESENT ALL COMMUNICATION CONDUITS SHALL BE EXTENDED TO WITHIN 10" OF THE CABLE TRAY AND BONDED WITH A NUMBER 6" GROUND WIRE.
4. INSTALL A 1.5" CONDUIT INTO THE FIRE ALARM CONTROL PANEL FROM THE MER ROOM. LOCATION OF CONDUIT PENETRATION INTO FIRE ALARM CABINET TO BE COORDINATED WITH FIRE ALARM CONTRACTOR. THE DATA FOR THE FIRE ALARM DIALER IS TO BE INSTALLED IN THE FIRE ALARM PANEL WITH A JACK ONLY WITH A THREE FOOT CABLE COIL. THE 6 STRAND MM FIBER TO BE TERMINATED IN A FIBER MODULAR CARTRIDGE SECURED TO THE INSIDE OF THE FIRE ALARM CABINET, THE FIBER CABLE IS TO BE SECURED TO THE INSIDE OF THE FIRE ALARM CABINET AND TO BE ROUTED SO IT IS OUT OF THE WAY OF THE FIRE ALARM WIRES.
5. INSTALL A 1" CONDUIT INTO THE PASSENGER ELEVATOR CONTROL CABINET FROM THE COMMUNICATION PATHWAY. LOCATION OF CONDUIT PENETRATION INTO ELEVATOR CONTROL CABINET TO BE COORDINATED WITH ELEVATOR CONTRACTOR. THE DATA FOR THE ELEVATOR IS TO BE INSTALLED IN THE ELEVATOR CONTROL CABINET WITH A JACK ONLY WITH A THREE FOOT CABLE COIL.
6. NSTALL A 1-1/4" CONDUIT INTO A 5" SQUARE 3" DEEP BACK BOX WITHIN A FOOT OF THE ENVIRONMENTAL CONTROL PANEL FROM THE COMMUNICATION PATHWAY. FROM THE BACK BOX WITH A BLANK COVER INSTALL A 1" CONDUIT INTO THE ENVIRONMENTAL CONTROL CABINET, THE LOCATION OF CONDUIT PENETRATION INTO THE ENVIRONMENTAL CABINET TO BE COORDINATED WITH THE ENVIRONMENTAL CONTROLS CONTRACTOR. THE DATA FOR THE ENVIRONMENTAL CONTROLS IS TO BE INSTALLED IN THE BACK BOX THE ENVIRONMENTAL CABINET WITH A DATA JACK ONLY WITH A ONE FOOT CABLE COIL. INSTALL A PATCH CABLE FROM THE JACK INTO THE ENVIRONMENTAL CONTROL CABINET.
7. FROM THE ENVIRONMENTAL CONTROL BACK BOX INSTALL A 1" CONDUIT TO A 5" SQUARE 3" DEEP BACK BOX WITH A SINGLE GANG MUD RING. INSTALL A DATA IN A FACEPLATE.
8. INSTALL A 1-1/4" CONDUIT INTO A 5" SQUARE 3" DEEP BACK BOX WITHIN A FOOT OF THE BAS CABINET FROM THE COMMUNICATION PATHWAY. FROM THE BACK BOX WITH A BLANK COVER INSTALL A 1" CONDUIT INTO THE BAS CABINET, THE LOCATION OF CONDUIT PENETRATION INTO THE BAS CABINET TO BE COORDINATED WITH OWNER CAMPUS OPERATIONS. THE DATA FOR THE BAS CABINET IS TO BE INSTALLED IN THE BACK BOX FOR THE BAS CABINET WITH A DATA JACK ONLY WITH A ONE FOOT CABLE COIL. INSTALL A PATCH CABLE FROM THE JACK INTO THE BAS CABINET.
9. ENT CONDUIT ROUTED ABOVE THE DRYWALL CEILING.
10. PROVIDE ONE VERTICAL 12" CABLE LADDER FLOOR TO CEILING FOR EACH TWO (2) CONDUIT SLEEVES OR EZPATHS. CORE SLEEVES IN A SINGLE ROW, 6" ON CENTER AS CLOSE TO THE WALL AS POSSIBLE. ADD CORES AS REQUIRED. PROVIDE AN MINIMUM OF ONE 12" LADDER TRAY PER AREA.
11. ALL VOICE AND DATA CABLE INSTALLED IN FLOOR BOXES ON THE FIRST FLOOR OR ROUTED BELOW THE FLOOR IN UNEXCAVATED AREAS WILL BE CAT 6A GEL FILLED CABLE.
12. FIELD VERIFY DATA AND "DATA" LOCATIONS MOUNTED ON OR ABOVE THE CEILING WITH OWNER PRIOR TO INSTALLATION.
13. EACH COMMUNICATIONS OUTLET SHALL BE A 5" SQUARE DOUBLE GANG DEEP (3" DEEP) BOX WITH RAISED SINGLE GANG PLASTER RING AS REQUIRED AND TWO 1.25" CONDUIT STUBBED OUT ABOVE THE SUSPENDED CEILING INTO THE BAR JOIST AREA, OR STUBBED OUT BELOW THE FLOOR INTO THE BAR JOIST AREA BELOW AS INDICATED ON THE DRAWINGS. CONDUIT TO TURN TOWARDS THE MAIN CABLE ROUTING PATH OR CABLE TRAY AND HAVE AN INSULATED BUSHING INSTALLED.
14. PROVIDE STAINLESS STEEL BLANK COVERS OVER OUTLETS NOT USED AT THIS POINT.
15. ALL OUTLET BOXES FOR SECURITY CAMERAS SHALL BE A 5" SQUARE BY 3" DEEP (MIN) WITH SINGLE GANG MUD RING WITH ONE DEDICATED VERTICAL 1-1/4" CONDUIT ENTERING AT AN OFFSET TO THE BOX.
16. IF THE DATA FOR THE CAMERA IS TO BE INSTALLED IN JUNCTION BOX, THE CABLE WILL HAVE A ONE FOOT COIL PROPERLY INSTALLED IN THE JUNCTION BOX WITH A DATA JACK ONLY. CONTRACTOR TO INSTALL THE CAMERA WITH THE CORRECT CEILING MOUNT AND THE TWO FOOT PATCH CORD. PATCH CORDS WILL NOT BE EXPOSED AND WILL BE IN SEAL TIGHT IF THE CAMERA IS MOUNTED NEXT TO OR SEPARATE FROM THE JUNCTION BOX.
17. PROVIDE A 1" CONDUIT SLEEVE, WITH PROTECTIVE BUSHINGS ON EACH END, THROUGH THE EXTERIOR WALL AT A LOCATION IDENTIFIED BY THE ENGINEER AND THE OWNER. THE CONTRACTOR WILL SECURE THE CONDUIT IN THE SLEEVE AND THE SURROUNDING WALL WILL BE SEALED TO PREVENT ANY MOISTURE OR BUGS FROM ENTERING THE BUILDING. CONDUITS WILL BE MECHANICALLY HELD IN PLACE. THE CONDUIT SLEEVE WILL BE FROM THE EXTERIOR CAMERA ENCLOSURE TO A NEW CAMERA INTERIOR ENCLOSURE 6" X 6" X 4" SECURITY SCREW COVER JUNCTION BOX TO ALLOW PASSAGE OF THE DATA PATCH CABLE. USE FIRE RATED CAULK TO SEAL CONDUIT SLEEVE. INSTALL THE DATA OUTLET INSIDE THE CAMERA INTERIOR 6" X 6" X 4" SECURITY SCREW COVER JUNCTION BOX.
18. SECURELY MOUNT THE EXTERIOR CAMERA ENCLOSURE TO A CUSTOM (PAINTED) STEEL SUPPORT THAT IS SECURED TO THE BUILDING STRUCTURE WITH A MINIMUM PENETRATION THROUGH THE METAL SIDING.
19. THE CONTRACTOR SHALL PROVIDE CAMERA LICENSES FOR EACH NEW INSTALLED CAMERA.
20. THE CONTRACTOR IS RESPONSIBLE FOR PROGRAMMING THE CAMERAS.
21. THE CONTRACTOR IS RESPONSIBLE FOR AIMING THE CAMERAS INITIALLY.
22. AFTER FINAL CHECKOUT AND CAMERAS ARE OPERATIONAL, CONTRACTOR SHALL FINAL AIM ALL CAMERAS PER OWNER DIRECTIONS.
23. IF THE DATA FOR THE INDOOR CEILING OR WALL MOUNTED CAMERA IS TO BE INSTALLED IN A JUNCTION BOX, THE CABLE WILL HAVE A ONE FOOT COIL PROPERLY INSTALLED IN THE JUNCTION BOX WITH A DATA JACK ONLY.
24. IF THE DATA FOR AN INDOOR CAMERA IS TO BE INSTALLED ABOVE A DROP CEILING, THE CABLE WILL HAVE A 15 FOOT COIL PROPERLY SUPPORTED FROM BUILDING STRUCTURE WITH A DATA JACK ONLY.

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TECHNOLOGY NOTES

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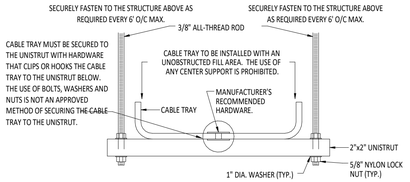
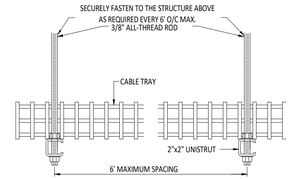
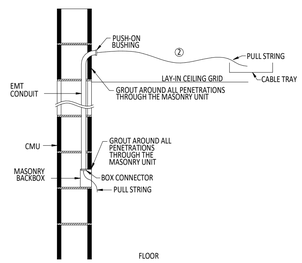




CABLE TRAY INSTALLATION DETAILS



TYPICAL OUTLET ROUGH-IN DETAIL

KEYED NOTES

1.- THIS DETAIL IS TYPICAL FOR ALL TECHNOLOGY ROUGH-INS INCLUDING CONDUITS STUBBED ABOVE THE CEILING AND CONDUITS ROUTED TO THE CABLE TRAY.

2.- CABLES ROUTED TO THE CABLE TRAY SHALL BE SUPPORTED AS REQUIRED ON 5' CENTERS.

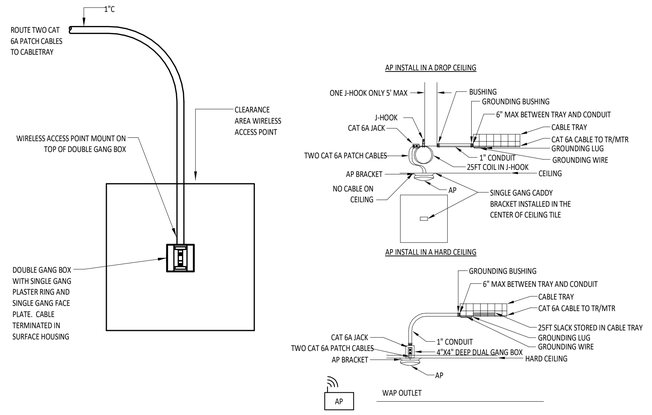
GENERAL NOTES

A.- GROUT AROUND ALL PENETRATIONS OF MASONRY OR DRYWALL SURFACES SO THERE ARE NO GAPS BETWEEN CONDUIT AND/OR BACK BOXES AND WALL PENETRATIONS.

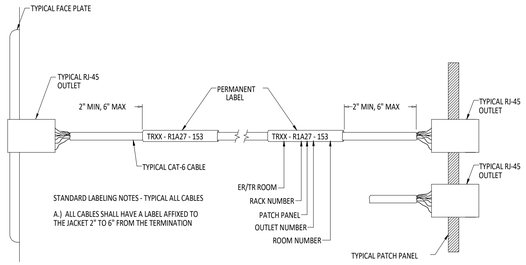
B.- PULL STRINGS SHALL BE INSTALLED BETWEEN ALL PORTIONS OF THE BACK BOX AND CONDUIT RUNS.

C.- ALL CONDUIT CONNECTIONS TO BACK BOXES SHALL BE COMPLETED WITH CONDUIT TO BOX CONNECTORS.

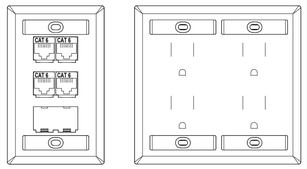
D.- ALL CONDUIT SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.



WAP OUTLET



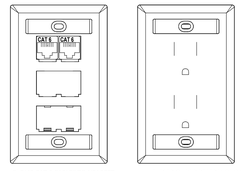
TYPICAL CABLE LABELING AT OUTLET AND PATCH PANEL



(4) RJ45 CAT 6 CABLES TO NEAREST T.R., 4-DATA
1-GANG FACEPLATE BACK BOX @ 18" A.F.F. UNLESS OTHERWISE NOTED AND DOUBLE DUPLEX ELECTRICAL RECEPTACLE

ELECTRIC - FOR REFERENCE ONLY

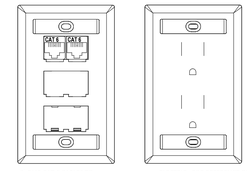
4D DATA OUTLET



(2) RJ45 CAT 6 CABLES TO NEAREST T.R., 2-DATA
1-GANG FACEPLATE BACK BOX @ 18" A.F.F. UNLESS OTHERWISE NOTED AND DUPLEX ELECTRICAL RECEPTACLE
PROVIDE TELEPHONE HANDSET

ELECTRIC - FOR REFERENCE ONLY

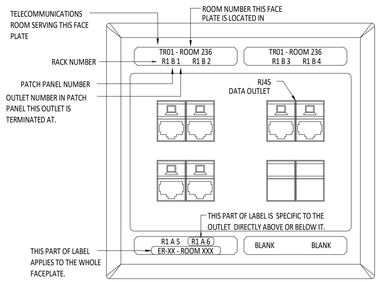
PHONE/DATA OUTLET



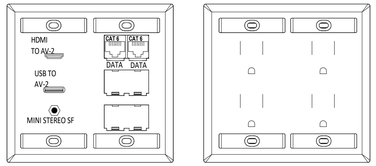
(2) RJ45 CAT 6 CABLES TO NEAREST T.R., 2-DATA
1-GANG FACEPLATE BACK BOX @ 18" A.F.F. UNLESS OTHERWISE NOTED AND DUPLEX ELECTRICAL RECEPTACLE

ELECTRIC - FOR REFERENCE ONLY

2D DATA OUTLET



VOICE/DATA OUTLET LABELING



(2) RJ45 CAT 6 PLENUM TO NEAREST T.R., 2-DATA

(1) USB + EXTENDER KIT TO AV-2 LOCATION

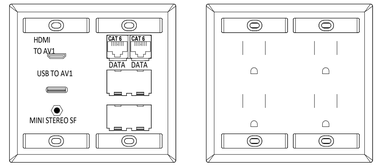
(1) HDMI + EXTENDER KIT TO AV-2 LOCATION

(1) 3.5 MM STEREO TO SF LOCATION

2-GANG BACK BOX @ 18" A.F.F. UNLESS OTHERWISE NOTED AND DOUBLE DUPLEX ELECTRICAL RECEPTACLE
PROVIDE TELEPHONE HANDSET

ELECTRIC - FOR REFERENCE ONLY

AV1 DATA A/V OUTLET



(2) RJ45 CAT 6 PLENUM TO NEAREST T.R., 2-DATA

(1) USB + EXTENDER KIT TO AV1 LOCATION

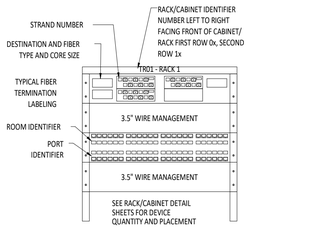
(1) HDMI + EXTENDER KIT TO AV1 LOCATION

(1) 3.5 MM STEREO TO SF LOCATION

2-GANG BACK BOX @ 84" A.F.F. UNLESS OTHERWISE NOTED AND DOUBLE DUPLEX ELECTRICAL RECEPTACLE

ELECTRIC - FOR REFERENCE ONLY

AV2 DATA A/V OUTLET



ER / TR EQUIPMENT LABELING

TYPICAL CEILING CCTV CAMERA OUTLET
- 10' CABLE COILED ABOVE ACCESSIBLE CEILING
- (1) CAT 6 CABLE TO TR AS INDICATED ON PLANS
- LABEL AS SHOWN

TYPICAL WALL CCTV CAMERA OUTLET
- MOUNTED WITHIN BACKBOX
- (1) CAT 6 CABLE TO TR AS INDICATED ON PLANS
- LABEL AS SHOWN

CCTV CAMERA OUTLET

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FACEPLATE DETAIL

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GENERAL NOTES:

1.) OFFICES/CLASSROOMS - (1) 2" SLEEVES FROM THROUGH WALL BETWEEN CORRIDOR AND OFFICES/CLASSROOMS, ABOVE CEILING. INSTALL SLEEVES TO ENSURE SHORTEST ROUT TO NEAREST CLOSET.

2.) SEE ELECTRICAL DRAWINGS FOR DEVICE BOX LOCATIONS.

3.) ROUTE CABLING ABOVE CEILING J-HOOKS DOWN ONE SIDE OF EACH CORRIDOR, IF CEILING IS EXPOSED - CONDUIT ; IF DROP CEILING - 'J' HOOKS.

4.) ALL PENETRATIONS / SLEEVES THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRESTOPPED PER CODE. REFER TO FIRESTOPPING SPECIFICATION 270525.

5.) CABLES NOT IN CONDUIT ARE TO BE SUPPORTED FROM THE STRUCTURE ABOVE WITH 'J' HOOKS UNLESS OTHERWISE NOTED OR SPECIFIED - SPACE MAX. 5' APART.

6.) DISPLAY OUTLET TO BE COORDINATED WITH MOUNTING BRACKET. COORDINATE WITH ARCHITECTURAL AND ELECTRICAL.

7.) ALL EXTERIOR CAMERAS SHALL BE MOUNTED BETWEEN 10-12FT ABOVE GROUND, COORDINATE WITH ARCHITECTURAL.

8.) ALL INTERIOR WALL MOUNT CAMERAS SHALL BE MOUNTED BETWEEN 8-12FT AFF, COORDINATE WITH ARCHITECTURAL.

9.) ALL MASTER INTERCOMS SHALL HAVE THE ABILITY TO RELEASE ALL DOORS TIED TO THE DOOR INTERCOM SYSTEM.

10.) THE DOOR INTERCOM SYSTEM SHALL ENABLE 8 MOBILE DEVICES TO RELEASE THE DOORS CONNECTED TO THE DOOR INTERCOM SYSTEM.

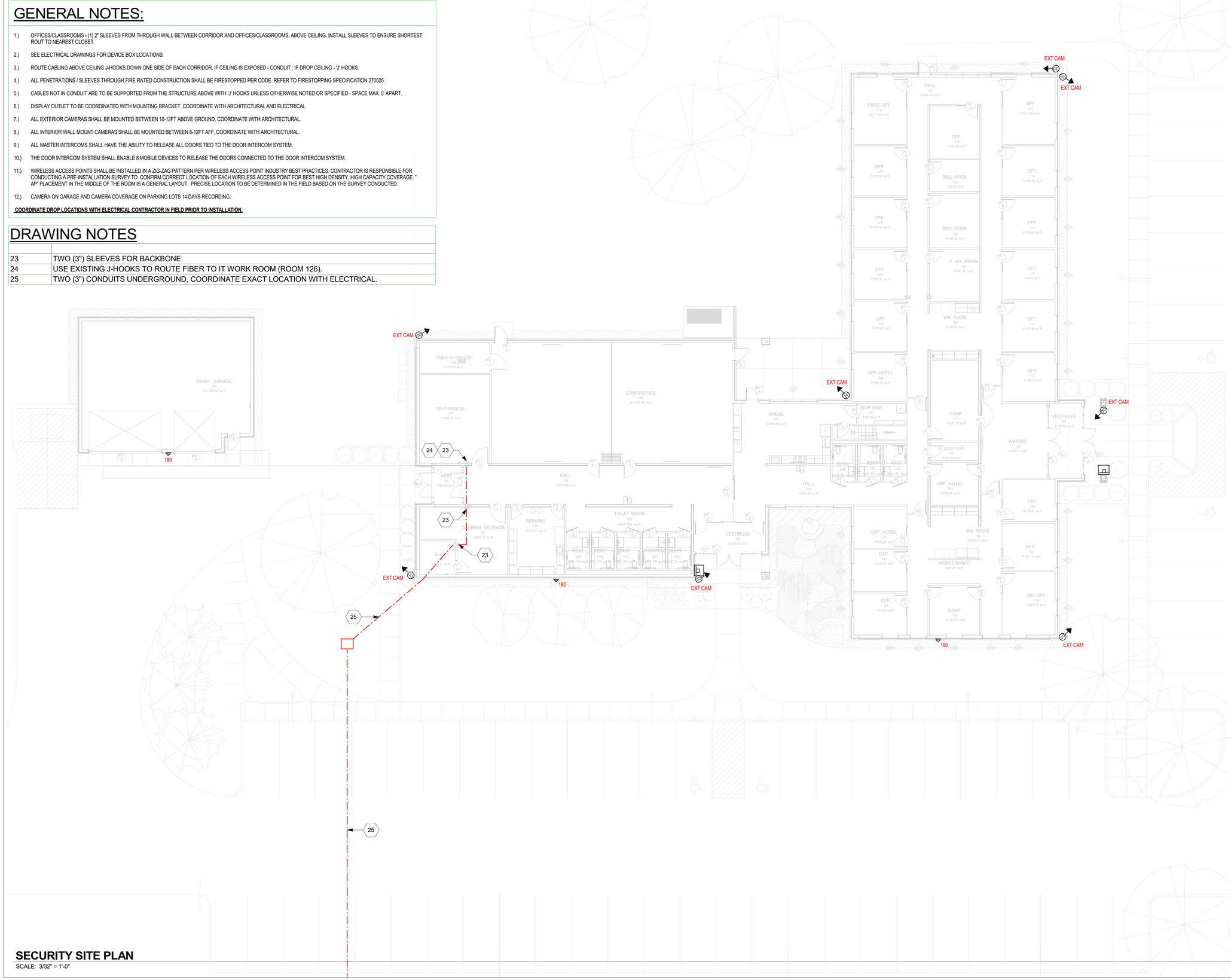
11.) WIRELESS ACCESS POINTS SHALL BE INSTALLED IN A ZIG-ZAG PATTERN PER WIRELESS ACCESS POINT INDUSTRY BEST PRACTICES. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A PRE-INSTALLATION SURVEY TO CONFIRM CORRECT LOCATION OF EACH WIRELESS ACCESS POINT FOR BEST HIGH DENSITY, HIGH CAPACITY COVERAGE. " AP" PLACEMENT IN THE MIDDLE OF THE ROOM IS A GENERAL LAYOUT. PRECISE LOCATION TO BE DETERMINED IN THE FIELD BASED ON THE SURVEY CONDUCTED.

12.) CAMERA ON GARAGE AND CAMERA COVERAGE ON PARKING LOTS 14 DAYS RECORDING.

COORDINATE DROP LOCATIONS WITH ELECTRICAL CONTRACTOR IN FIELD PRIOR TO INSTALLATION.

DRAWING NOTES

23	TWO (3") SLEEVES FOR BACKBONE.
24	USE EXISTING J-HOOKS TO ROUTE FIBER TO IT WORK ROOM (ROOM 126).
25	TWO (3") CONDUITS UNDERGROUND, COORDINATE EXACT LOCATION WITH ELECTRICAL.



SECURITY SITE PLAN

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

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SECURITY SITE PLAN

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6.) DISPLAY OUTLET TO BE COORDINATED WITH MOUNTING BRACKET. COORDINATE WITH ARCHITECTURAL AND ELECTRICAL.

7.) ALL EXTERIOR CAMERAS SHALL BE MOUNTED BETWEEN 10-12FT ABOVE GROUND, COORDINATE WITH ARCHITECTURAL.

8.) ALL INTERIOR WALL MOUNT CAMERAS SHALL BE MOUNTED BETWEEN 8-12FT AFF, COORDINATE WITH ARCHITECTURAL.

9.) ALL MASTER INTERCOMS SHALL HAVE THE ABILITY TO RELEASE ALL DOORS TIED TO THE DOOR INTERCOM SYSTEM.

10.) THE DOOR INTERCOM SYSTEM SHALL ENABLE 8 MOBILE DEVICES TO RELEASE THE DOORS CONNECTED TO THE DOOR INTERCOM SYSTEM.

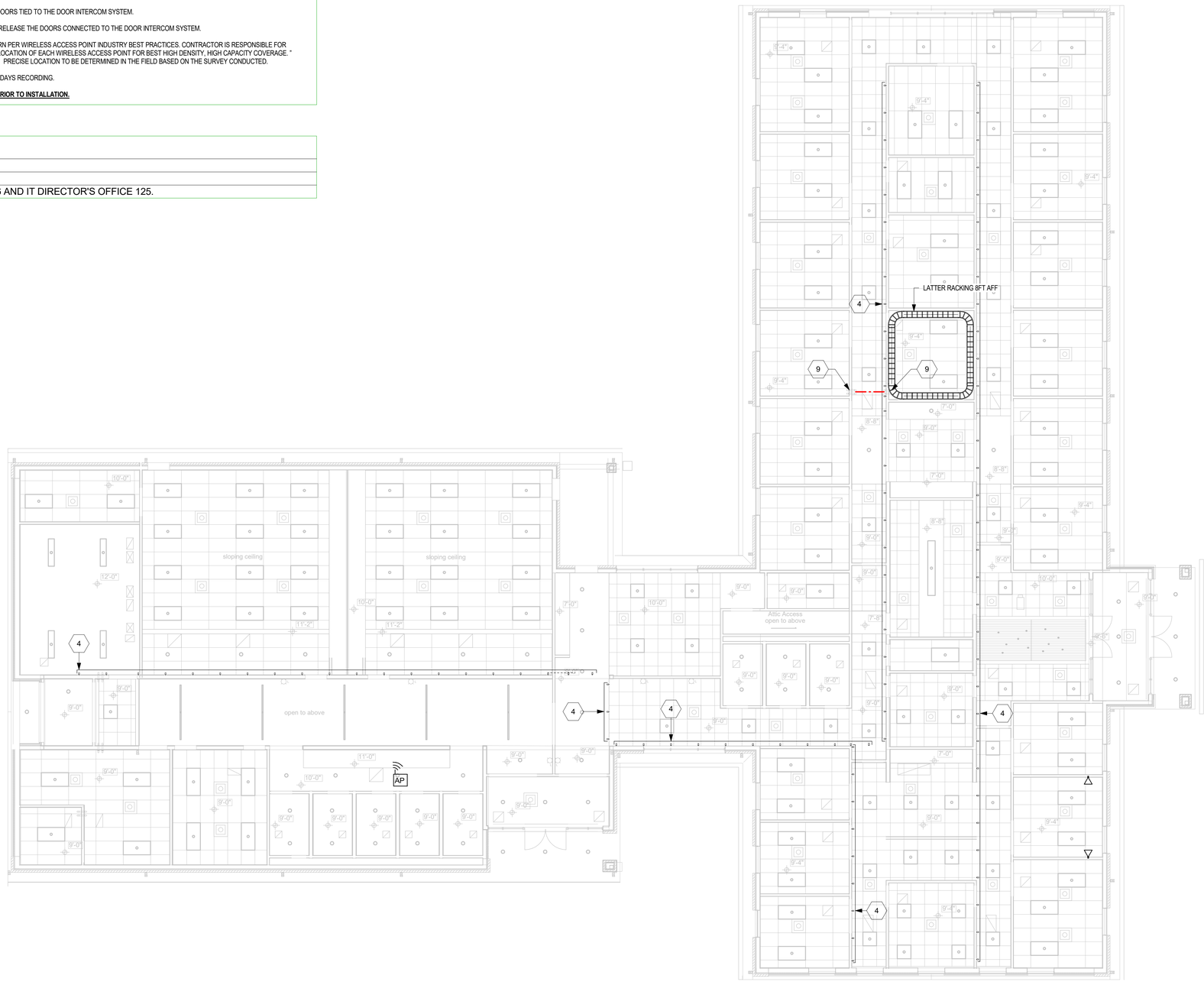
11.) WIRELESS ACCESS POINTS SHALL BE INSTALLED IN A ZIG-ZAG PATTERN PER WIRELESS ACCESS POINT INDUSTRY BEST PRACTICES. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A PRE-INSTALLATION SURVEY TO CONFIRM CORRECT LOCATION OF EACH WIRELESS ACCESS POINT FOR BEST HIGH DENSITY, HIGH CAPACITY COVERAGE. " AP" PLACEMENT IN THE MIDDLE OF THE ROOM IS A GENERAL LAYOUT. PRECISE LOCATION TO BE DETERMINED IN THE FIELD BASED ON THE SURVEY CONDUCTED.

12.) CAMERA ON GARAGE AND CAMERA COVERAGE ON PARKING LOTS 14 DAYS RECORDING.

COORDINATE DROP LOCATIONS WITH ELECTRICAL CONTRACTOR IN FIELD PRIOR TO INSTALLATION.

DRAWING NOTES

4	J-HOOKS.
9	(2) 3" SLEEVES INTO IT WK ROOM 126 AND IT DIRECTOR'S OFFICE 125.



CABLE PATHWAY PLAN FIRST FLOOR

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

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ADMINISTRATION AND TRAINING CENTER
FOR TRI COUNTY BOARD OF RECOVERY AND MENTAL HEALTH

1280 N COUNTY RD. 25A, TROY, OHIO 45373

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FIRST FLOOR CABLE PATHWAY PLAN

T0.11

GENERAL NOTES:

1.) OFFICES/CLASSROOMS - (1) 2" SLEEVES FROM THROUGH WALL BETWEEN CORRIDOR AND OFFICES/CLASSROOMS, ABOVE CEILING. INSTALL SLEEVES TO ENSURE SHORTEST ROUT TO NEAREST CLOSET.

2.) SEE ELECTRICAL DRAWINGS FOR DEVICE BOX LOCATIONS.

3.) ROUTE CABLING ABOVE CEILING J-HOOKS DOWN ONE SIDE OF EACH CORRIDOR, IF CEILING IS EXPOSED - CONDUIT ; IF DROP CEILING - 'J' HOOKS.

4.) ALL PENETRATIONS / SLEEVES THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRESTOPPED PER CODE. REFER TO FIRESTOPPING SPECIFICATION 270525.

5.) CABLES NOT IN CONDUIT ARE TO BE SUPPORTED FROM THE STRUCTURE ABOVE WITH 'J' HOOKS UNLESS OTHERWISE NOTED OR SPECIFIED - SPACE MAX. 5' APART.

6.) DISPLAY OUTLET TO BE COORDINATED WITH MOUNTING BRACKET. COORDINATE WITH ARCHITECTURAL AND ELECTRICAL.

7.) ALL EXTERIOR CAMERAS SHALL BE MOUNTED BETWEEN 10-12FT ABOVE GROUND, COORDINATE WITH ARCHITECTURAL.

8.) ALL INTERIOR WALL MOUNT CAMERAS SHALL BE MOUNTED BETWEEN 8-12FT AFF, COORDINATE WITH ARCHITECTURAL.

9.) ALL MASTER INTERCOMS SHALL HAVE THE ABILITY TO RELEASE ALL DOORS TIED TO THE DOOR INTERCOM SYSTEM.

10.) THE DOOR INTERCOM SYSTEM SHALL ENABLE 8 MOBILE DEVICES TO RELEASE THE DOORS CONNECTED TO THE DOOR INTERCOM SYSTEM.

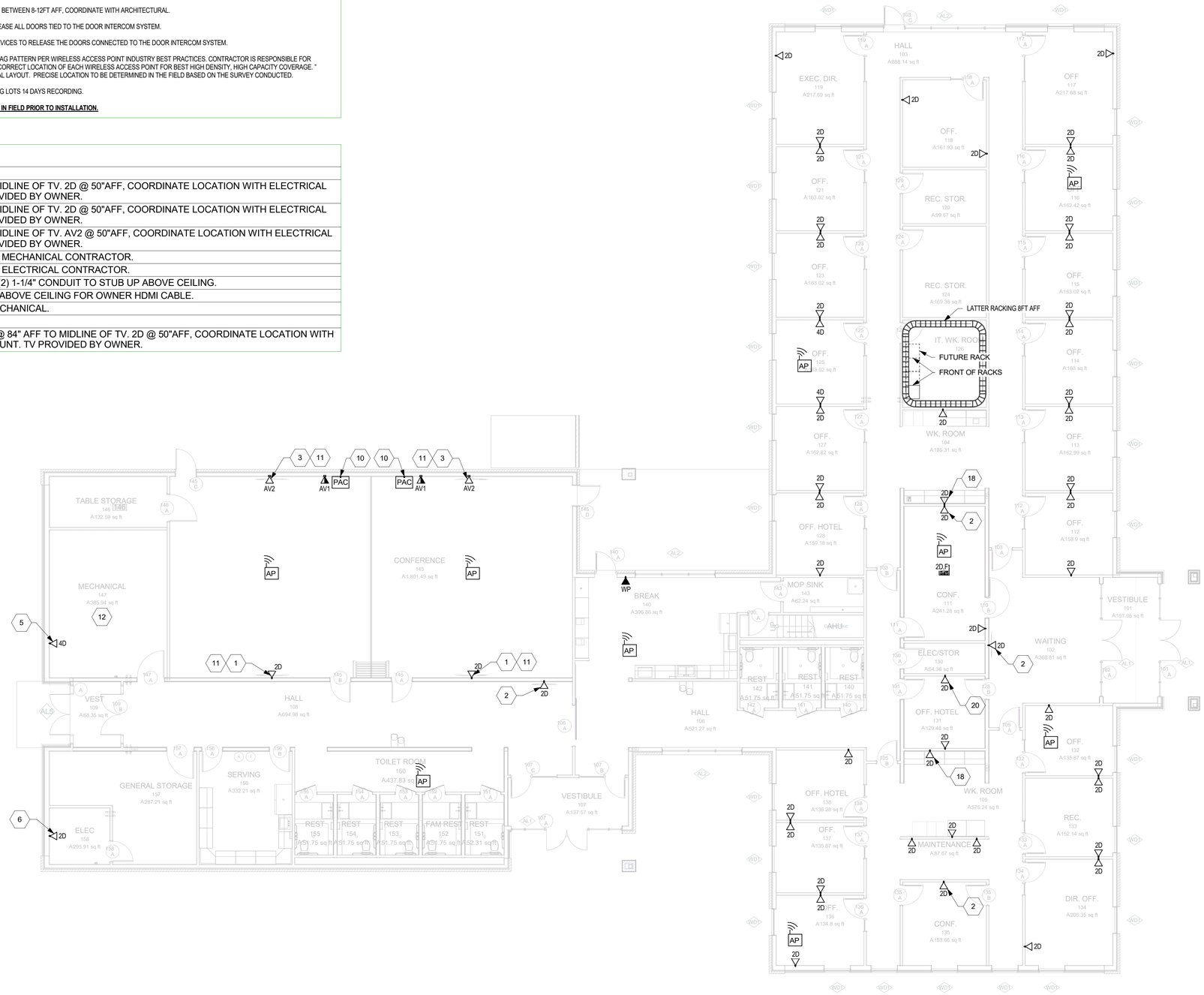
11.) WIRELESS ACCESS POINTS SHALL BE INSTALLED IN A ZIG-ZAG PATTERN PER WIRELESS ACCESS POINT INDUSTRY BEST PRACTICES. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A PRE-INSTALLATION SURVEY TO CONFIRM CORRECT LOCATION OF EACH WIRELESS ACCESS POINT FOR BEST HIGH DENSITY, HIGH CAPACITY COVERAGE. " AP" PLACEMENT IN THE MIDDLE OF THE ROOM IS A GENERAL LAYOUT. PRECISE LOCATION TO BE DETERMINED IN THE FIELD BASED ON THE SURVEY CONDUCTED.

12.) CAMERA ON GARAGE AND CAMERA COVERAGE ON PARKING LOTS 14 DAYS RECORDING.

COORDINATE DROP LOCATIONS WITH ELECTRICAL CONTRACTOR IN FIELD PRIOR TO INSTALLATION.

DRAWING NOTES

1	70" TV MOUNT @ 60" AFF TO MIDLINE OF TV. 2D @ 50"AFF, COORDINATE LOCATION WITH ELECTRICAL AND DISPLAY MOUNT. TV PROVIDED BY OWNER.
2	65" TV MOUNT @ 84" AFF TO MIDLINE OF TV. 2D @ 50"AFF, COORDINATE LOCATION WITH ELECTRICAL AND DISPLAY MOUNT. TV PROVIDED BY OWNER.
3	85" TV MOUNT @ 60" AFF TO MIDLINE OF TV. AV2 @ 50"AFF, COORDINATE LOCATION WITH ELECTRICAL AND DISPLAY MOUNT. TV PROVIDED BY OWNER.
5	COORDINATE LOCATION WITH MECHANICAL CONTRACTOR.
6	COORDINATE LOCATION WITH ELECTRICAL CONTRACTOR.
10	PAC 526 BOX @ 55" AFF WITH (2) 1-1/4" CONDUIT TO STUB UP ABOVE CEILING.
11	ADD (1) 1" CONDUIT STUBBED ABOVE CEILING FOR OWNER HDMI CABLE.
12	DATA IN ATTIC SPACE FOR MECHANICAL.
18	MOUNTED 44" AFF.
20	40"-60" (SIZE TBD) TV MOUNT @ 84" AFF TO MIDLINE OF TV. 2D @ 50"AFF, COORDINATE LOCATION WITH ELECTRICAL AND DISPLAY MOUNT. TV PROVIDED BY OWNER.



TECHNOLOGY FIRST FLOOR

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

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FIRST FLOOR
TECHNOLOGY PLAN

T1.01

GENERAL NOTES:

1.) OFFICES/CLASSROOMS - (1) 2" SLEEVES FROM THROUGH WALL BETWEEN CORRIDOR AND OFFICES/CLASSROOMS, ABOVE CEILING. INSTALL SLEEVES TO ENSURE SHORTEST ROUT TO NEAREST CLOSET.

2.) SEE ELECTRICAL DRAWINGS FOR DEVICE BOX LOCATIONS.

3.) ROUTE CABLING ABOVE CEILING J-HOOKS DOWN ONE SIDE OF EACH CORRIDOR, IF CEILING IS EXPOSED - CONDUIT ; IF DROP CEILING - 'J' HOOKS.

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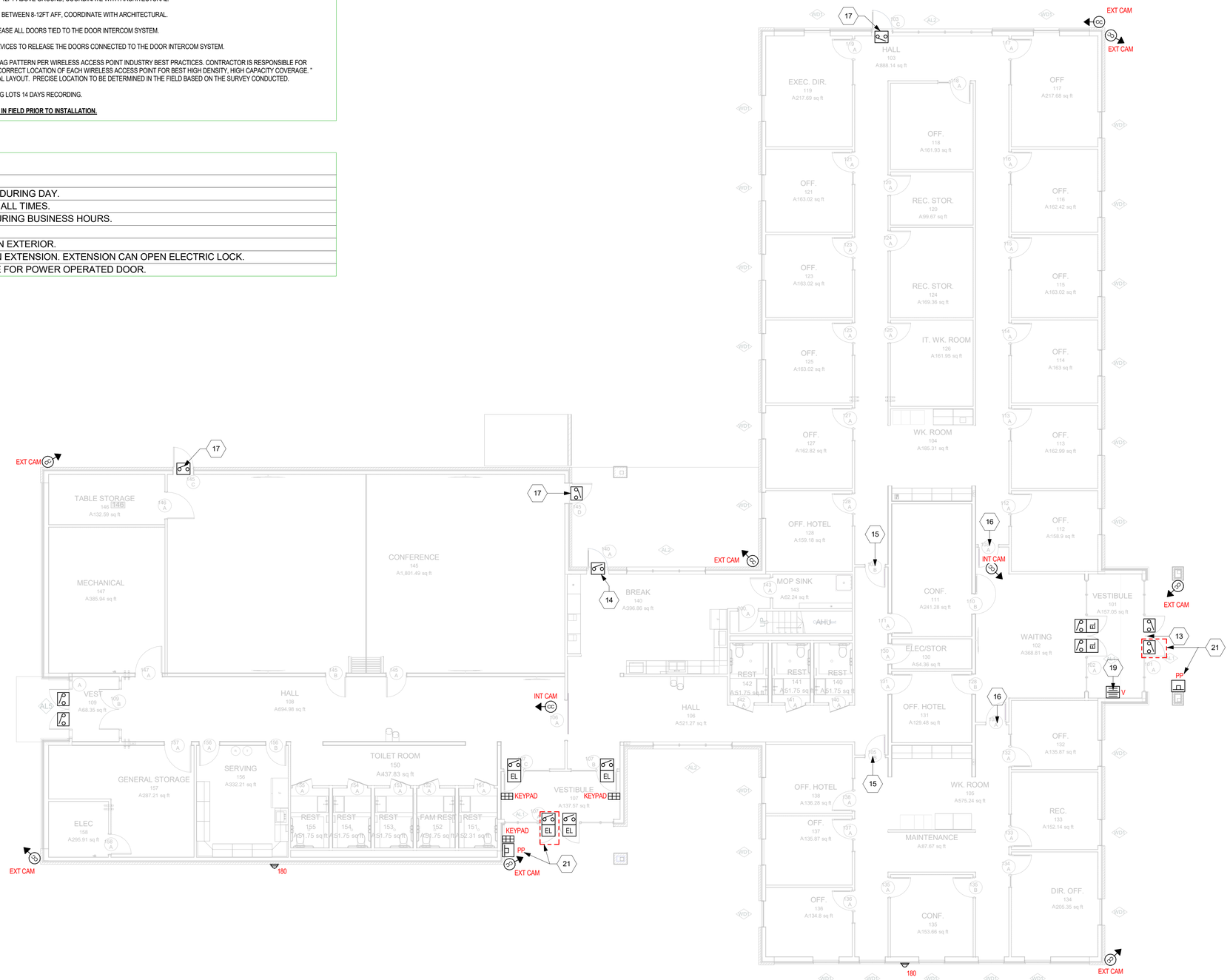
12.) CAMERA ON GARAGE AND CAMERA COVERAGE ON PARKING LOTS 14 DAYS RECORDING.

COORDINATE DROP LOCATIONS WITH ELECTRICAL CONTRACTOR IN FIELD PRIOR TO INSTALLATION.

DRAWING NOTES

13	MECHANICAL KEY UNLOCKED DURING DAY.
14	MECHANICAL KEY LOCKED AT ALL TIMES.
15	KEYED. PHYSICALLY OPEN DURING BUSINESS HOURS.
16	CLOSED AND LOCKED.
17	EXIT ONLY. NO HARDWARE ON EXTERIOR.
19	WANT TO BE ABLE TO CALL AN EXTENSION. EXTENSION CAN OPEN ELECTRIC LOCK.
21	DOOR OPERATOR PUSHPLATE FOR POWER OPERATED DOOR.



SECURITY FIRST FLOOR

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

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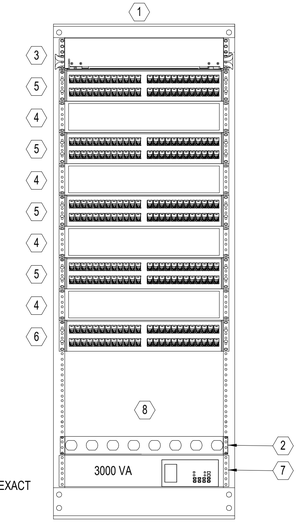
FIRST FLOOR SECURITY PLAN

T2.01

KEYED NOTES:

1. WALL MOUNTED RACK.
2. (1) 6' HORIZONTAL PLUGGING STRIP (PER SPECIFICATIONS).
3. NEW FIBER LIU.
4. NEW 2U HORIZONTAL WIRE MANAGER.
5. NEW 2U 48 PORT PATCH PANEL.
6. SPACE ALLOCATED FOR NETWORK ELECTRONICS (BY OWNER).
7. RACK MOUNTED UPS (PER SPECIFICATIONS).
8. SPACE ALLOCATED FOR FUTURE NETWORK EXPANSION



NOTES:

A.- PATCH PANEL AND SWITCH LAYOUT IS FOR REF ONLY EXACT COUNT TO BE DETERMINED BASED ON FLOOR PLANS.

TYPICAL WALL RACK ELEVATION

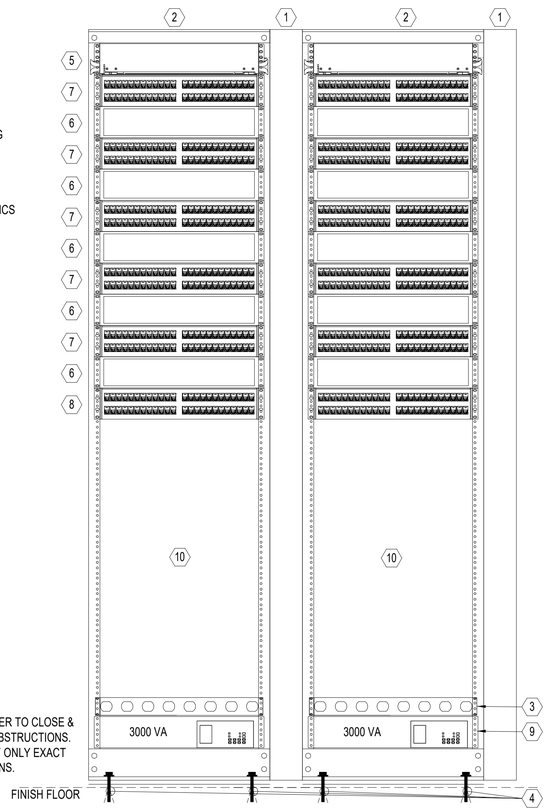
SCALE: 1/2" = 1'-0"

KEY NOTES:

1. 18" WIDE CABLE RUNWAY PER SPECIFICATIONS.
2. TELECOMMUNICATIONS GROUNDING BUSBAR "TMGB" AT 96" AFF.
3. 4'X8' AC GRADE PLYWOOD BACKBOARD. MOUNT BOARDS 6" AFF WITH "A" SIDE FACING TOWARDS USER. CONTRACTOR SHALL PAINT ALL SIDES WITH FIRE RETARDANT PAINT (TYPICAL).
4. FREE-STANDING 4-POST TELECOMMUNICATIONS RACK FOR NETWORK DISTRIBUTION (PER SPECIFICATIONS).
5. WALL MOUNTED 18" WIDE CABLE RUNWAY FOR VERTICAL ROUTING OF CABLING.
6. PROVIDE (4) 4" FIRE-RATED CONDUIT SLEEVES TO CABLE TRAY FROM HALLWAY, PROVIDE RADIUSED WATERFALL AT TERMINATION TO MAINTAIN MINIMUM CABLE BEND RADIUS.
7. ACCESS CONTROL SYSTEM PANEL.
8. ACCESS CONTROL SYSTEM POWER SUPPLY.
9. CONDUITS FOR CABLE ROUTING.
10. WALL MOUNTED TELECOMMUNICATIONS RACK FOR NETWORK DISTRIBUTION (PER SPECIFICATIONS).

KEYED NOTES:

1. 6" WIDE DUAL SIDED WIRE MANAGEMENT.
2. 19" FREE STANDING 4-POST RELAY RACK.
3. (1) 6' HORIZONTAL PLUGGING STRIP (PER SPECIFICATIONS).
4. BOND EACH RACK WITH A DEDICATED BONDING CONDUCTOR WITH A #6 AWG.
5. NEW FIBER LIU.
6. NEW 2U HORIZONTAL WIRE MANAGER.
7. NEW 2U 48 PORT PATCH PANEL.
8. SPACE ALLOCATED FOR NETWORK ELECTRONICS (BY OWNER).
9. RACK MOUNTED UPS (PER SPECIFICATIONS).
10. SPACE ALLOCATED FOR FUTURE NETWORK EXPANSION

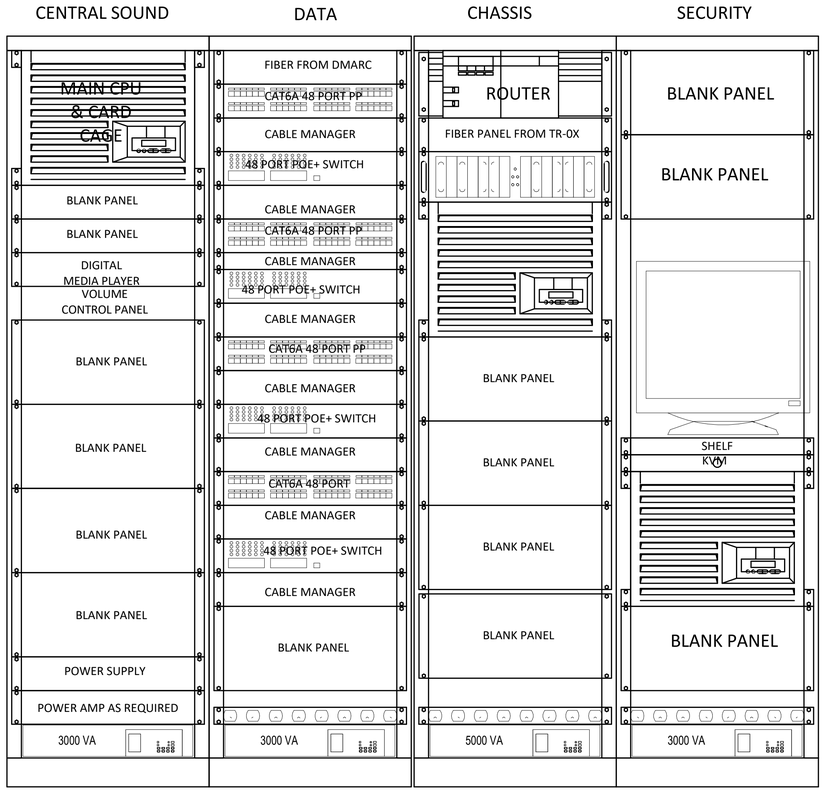


NOTES:

A.- RECESS THE CABINET MOUNTING RAILS IN ORDER TO CLOSE & LOCK THE FRONT & REAR DOORS WITHOUT ANY OBSTRUCTIONS.
B.- PATCH PANEL AND SWITCH LAYOUT IS FOR REF ONLY EXACT COUNT TO BE DETERMINED BASED ON FLOOR PLANS.

TYPICAL TR RACK ELEVATION

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



NOTES:

A.- PROVIDE REAR VERTICAL POWER STRIP WITHIN CABINET AND CONNECT TO CIRCUIT FRONT CENTRAL UPS.
B.- RECESS THE CABINET MOUNTING RAILS IN ORDER TO CLOSE & LOCK THE FRONT & REAR DOORS WITHOUT ANY OBSTRUCTIONS.
C.- PATCH PANEL AND SWITCH LAYOUT IS FOR REFERENCE ONLY, EXACT COUNT TO BE DETERMINED BASED ON FLOOR PLANS.

TYPICAL MER RACK ELEVATION

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

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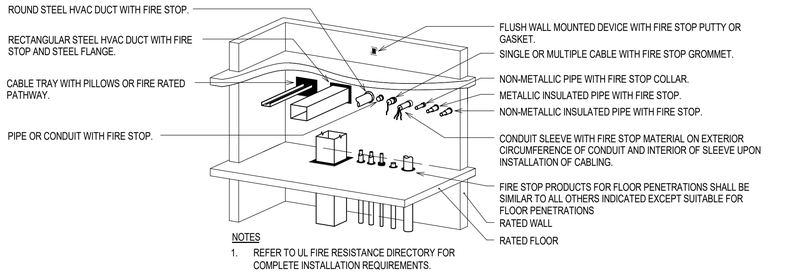
TECHNOLOGY ROOMS AND ELEVATIONS

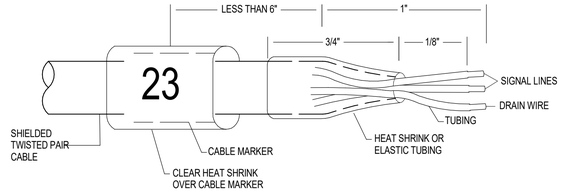
T3.01



NOTES

1. REFER TO UL FIRE RESISTANCE DIRECTORY FOR COMPLETE INSTALLATION REQUIREMENTS.

TYPICAL FIRESTOPPING DETAIL



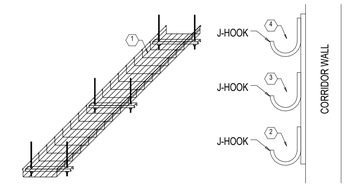
NOTES:

1. ALL CABLES TO BE LABELED, WITH LABEL SECURED AND PROTECTED BY CLEAR HEAT SHRINK.
2. ALL DRAIN WIRES TO BE SERVED WITH CLEAR HEAT SHRINK OR INSULATING TUBING. WRAP UNUSED DRAIN WIRES UNDER END DRESS BOOT.
3. REQUIRED AT EACH CABLE TERMINATION IN RACKS, TERMINAL BOXES AND AT WALL PLATES.

STANDARD PREPARATION FOR ALL TERMINATIONS

KEYED NOTES

1.- CABLING WITHIN CABLE TRAY.
2.- SPACE FOR CENTRAL SOUND SYSTEM CABLING.
3.- SPACE FOR HORIZONTAL INTRUSION DETECTION AND ACCESS CONTROL CABLING.
4.- SPACE FOR TEMPERATURE CONTROL CABLING.



GENERAL NOTES

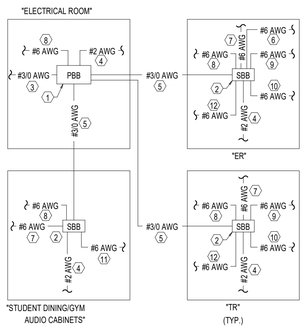
A.- ALL UTP CABLING MUST BE PROTECTED FROM PAINT, JOINT COMPOUND, CHEMICALS, ETC. FOR WARRANTY INTEGRITY. IT IS THE RESPONSIBILITY OF THE DIV. 27 CONTRACTOR TO REPLACE ANY CABLE(S) THAT CANNOT BE WARRANTED DUE TO THESE CONDITIONS BEING VISIBLY PRESENT.

B.- CABLE TRAY MAY BE WALL MOUNTED OR TRAPEZE MOUNTED FROM THE BUILDING STRUCTURE. ALL ROUTING SHALL BE CLOSELY COORDINATED WITH THE MECHANICAL CONTRACTOR.

C.- THE CONTRACTOR IS RESPONSIBLE FOR ALL CROSSES, TEES, 90-DEGREE TURNS, AND ELEVATION CHANGES.

D.- WALL MOUNTED J-HOOKS SHALL BE INSTALLED A MINIMUM OF 12" ABOVE THE TOP OF THE CABLE TRAY.

CABLE INSTALLATION DETAIL



KEYED NOTES

1.- PRIMARY BONDING BUSBAR (PBB) LOCATION TO BE COORDINATED WITH THE MAIN SWITCH GEAR SUPPLIER.

2.- SECONDARY BONDING BUSBAR (SBB). LOCATION TO BE COORDINATED WITH THE DIVISION 27 COMMUNICATIONS CABLING CONTRACTOR.

3.- #3/0 CONDUCTOR BONDED TO THE BUILDING'S MAIN ELECTRICAL SERVICE GROUND.

4.- #2 CONDUCTOR EXOTHERMICALLY WELDED TO THE BUILDING STEEL IF PRESENT.

5.- #3/0 TELECOMMUNICATIONS BONDING BACKBONE BARE CONDUCTOR.

6.- PROVIDE A #6 CONDUCTOR BONDED TO EACH TECHNOLOGY SERVICE PROVIDER CABLE ENTERING THE BUILDING.

7.- #6 CONDUCTOR BONDED TO THE CORRIDOR CABLE TRAY OUTSIDE OF THE TECHNOLOGY ROOM SHOWN. THIS BONDING CONDUCTOR IS NOT REQUIRED IF THE TELECOMMUNICATIONS BONDING BACKBONE WAS ROUTED TO THE ASSOCIATED TECHNOLOGY ROOM THROUGH THIS CABLE TRAY.

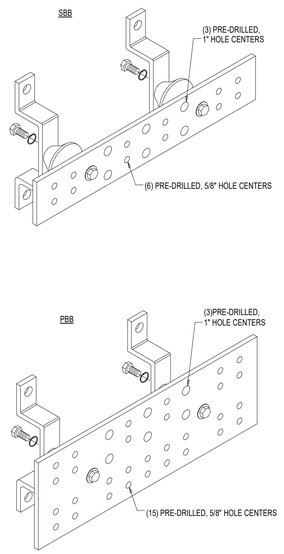
8.- #6 CONDUCTOR BONDED TO ANY METALLIC CONDUIT ENTERING THE ROOM CONTAINING TECHNOLOGY CABLING THAT DOES NOT CONTAIN A BONDING CONDUCTOR.

9.- #6 CONDUCTOR BONDED TO THE CABLE LADDER LOCATED IN THE TECHNOLOGY ROOM. IF THE CABLE LADDER INSTALLED DOES NOT PROVIDE A CONTINUOUS GROUND PATH, EACH CABLE LADDER SEGMENT SHALL BE BONDED TOGETHER WITH A #6 CONDUCTOR.

10.- PROVIDE A #6 CONDUCTOR BONDED TO ANY PIECE OF TECHNOLOGY EQUIPMENT INSTALLED WITHIN THE "ER" OR "TR" THAT HAS A GROUNDING LUG OR IS RECOMMENDED BY THE MANUFACTURER TO BE GROUNDED.

11.- PROVIDE A #6 CONDUCTOR BONDED TO THE AUDIO SYSTEMS CABINET.

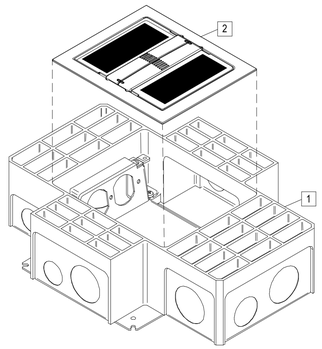
12.- PROVIDE A #6 CONDUCTOR BONDED TO EACH OF THE TECHNOLOGY RACKS AND/OR CABINETS WITHIN THE ROOM.



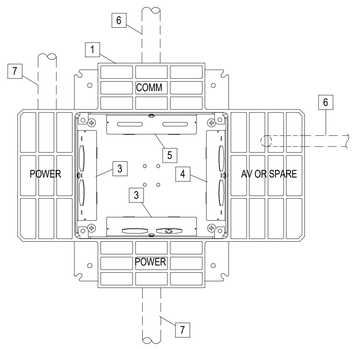
TECHNICAL GROUNDING RISER DIAGRAM

FLOOR BOX KEY NOTES

1. MULTI-SERVICE MULTIMEDIA FLOORBOX, WIREMOLD INFLOOR SYSTEMS RFB4 (4) COMPARTMENT SHALLOW STAMPED STEEL COMBINATION BOX. INSTALL FLOOR BOX IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND AS FOLLOWS: ASSEMBLE BOX. SEAL SIDE AND BOTTOM SEAMS BETWEEN BOX SECTIONS WITH DUCT TAPE CONCRETE TIGHT. SET BOX ON TOP OF VAPOR BARRIER AND LEVEL. SET BOX HEIGHT TO BE FLUSH WITH SLAB.
2. PROVIDE COVER FOR WIREMOLD RFB4 FLOORBOX. COORDINATE COLOR WITH ARCHITECT PRIOR TO PURCHASING.
3. STANDARD DUPLEX RECEPTACLE PLATE WITH (2) 120 VAC OUTLET RECEPTACLES. SEE ELECTRICAL PLANS FOR CIRCUITING REQUIREMENTS.
4. PROVIDE BLANK COVER PLATE.
5. PROVIDE DUPLEX MOUNTING FRAME UNDER STANDARD DUPLEX PLATE WITH COMMUNICATIONS OUTLET COUPLERS & JACKS AS REQUIRED. REFER TO FLOOR PLANS FOR COMMUNICATION OUTLET COUNT REQUIRED.
6. 1-1/4" COMMUNICATIONS SYSTEMS CONDUIT, RUN SCHEDULE 40 PVC (IN SLAB) TO NEAREST WALL, CONVERT TO EMT AT 4" ABOVE SLAB, AND STUB ABOVE CEILING WITH PLASTIC INSULATING BUSHING.
7. POWER CONDUIT WITH WATERTIGHT FITTINGS, SEE ELECTRICAL DRAWINGS FOR CONDUIT SIZE, WIRING, AND CIRCUITING INFORMATION.

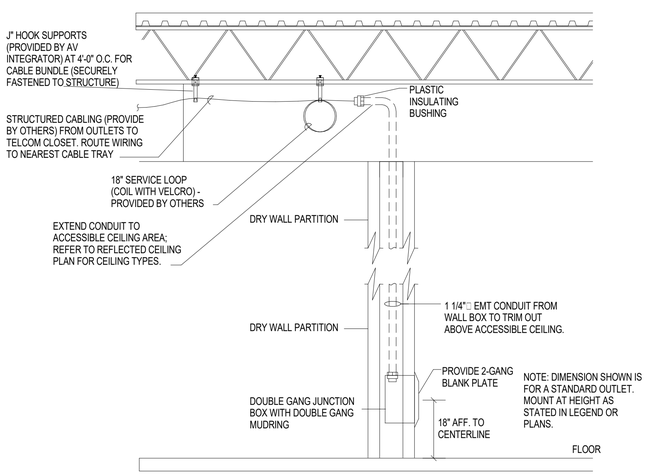


WIREMOLD MODEL No. RFB4



PLAN VIEW

TYPICAL FLOOR BOX DETAIL



TYPICAL WALL-MOUNTED A/V OUTLET ROUGH-IN DETAIL

SCALE: NONE

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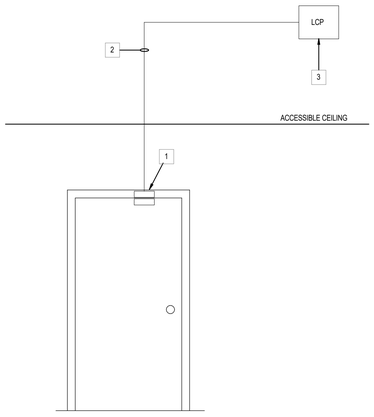
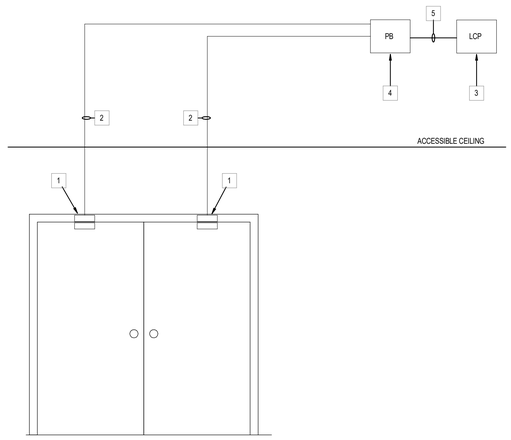


SECURITY SINGLE DOOR WITH DOOR CONTACT DETAIL

SCALE = NONE

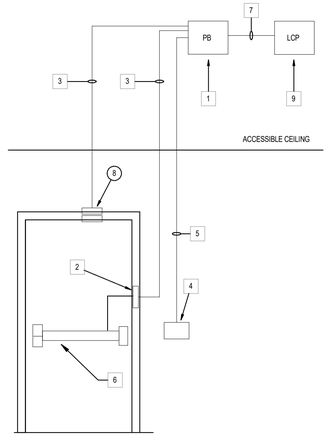
1. PROVIDE DOOR POSITION SWITCH IN DOOR FRAME OR HATCH. NOTE: INSTALLATIONS ON DOORS WITH CONCRETE FILLED HEADERS WILL REQUIRE A SEPARATE PENETRATION (FROM THE DOOR LOCK) FOR THE DOOR SWITCH.
2. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. PROVIDE CONDUIT WHEREVER CABLING MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.
3. LOCAL CONTROL PANEL LOCATED IN TELECOMMUNICATIONS ROOM.



SECURITY DOUBLE DOOR WITH DOOR CONTACTS DETAIL

SCALE = NONE

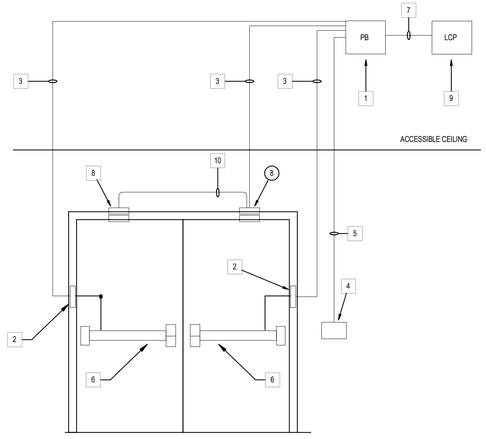
1. PROVIDE DOOR POSITION SWITCH IN DOOR FRAME. NOTE: INSTALLATIONS ON DOORS WITH CONCRETE FILLED HEADERS WILL REQUIRE A SEPARATE PENETRATION (FROM THE DOOR LOCK) FOR THE DOOR SWITCH.
2. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. PROVIDE CONDUIT WHEREVER CABLING MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.
3. LOCAL CONTROL PANEL LOCATED IN TELECOMMUNICATIONS ROOM.
4. PROVIDE THE JUNCTION BOX ON THE SECURE SIDE OF THE DOOR ABOVE ACCESSIBLE CEILING AND IN A LOCATION THAT PROVIDES EASY ACCESS FOR CONNECTING AND SERVICE.
5. PROVIDE 1-1/4" CONDUIT WHEREVER CABLING MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.



SECURITY SINGLE DOOR WITH CARD READER DETAIL

SCALE = NONE

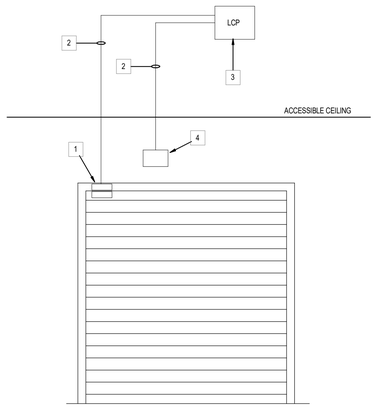
1. PROVIDE THE JUNCTION BOX ON THE SECURE SIDE OF THE DOOR ABOVE ACCESSIBLE CEILING AND IN A LOCATION THAT PROVIDES EASY ACCESS FOR CONNECTING AND SERVICE.
2. SECURITRON EPT POWER TRANSFER DEVICE (OR ENGINEERED APPROVED EQUAL).
3. PROVIDE 1" CONDUIT INTO JUNCTION BOX.
4. PROVIDE 4" X 4" X 2 1/8 " DEEP OUTLET BOX WITH SINGLE GANG PLASTER RING "FLUSH" WITH OUTSIDE WALL SURFACE FOR CARD READER, LOCATED ON PUBLIC SIDE OF DOOR. VERIFY ACTUAL BACKBOX REQUIREMENT WITH ACCESS CONTROL CONTRACTOR.
5. PROVIDE 1" CONDUIT INTO JUNCTION BOX.
6. ELECTRICALLY HELD PANIC HARDWARE BY OTHERS. (REFER TO FLOOR PLANS FOR DELAYED EGRESS)
7. PROVIDE 1-1/4" CONDUIT WHEREVER CABLING MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.
8. INSTALL DOOR POSITION SWITCH IN DOOR FRAME. NOTE: INSTALLATIONS ON DOORS WITH CONCRETE FILLED HEADERS WILL REQUIRE A SEPARATE PENETRATION (FROM THE DOOR LOCK) FOR THE DOOR SWITCH.
9. LOCAL CONTROL PANEL LOCATED IN TELECOMMUNICATIONS ROOM.



SECURITY DOUBLE DOOR WITH CARD READER DETAIL

SCALE = NONE

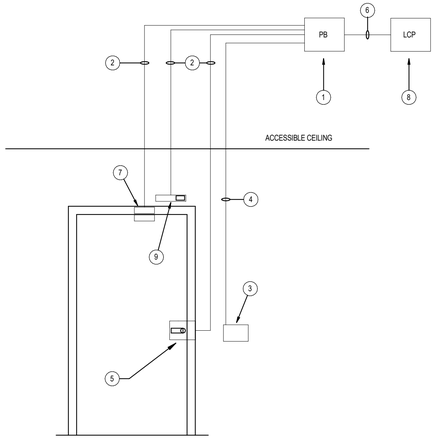
1. PROVIDE THE JUNCTION BOX ON THE SECURE SIDE OF THE DOOR ABOVE ACCESSIBLE CEILING AND IN A LOCATION THAT PROVIDES EASY ACCESS FOR CONNECTING AND SERVICE.
2. SECURITRON EPT POWER TRANSFER DEVICE (OR ENGINEERED APPROVED EQUAL).
3. PROVIDE 1" CONDUIT INTO JUNCTION BOX.
4. PROVIDE 4" X 4" X 2 1/8 " DEEP OUTLET BOX WITH SINGLE GANG PLASTER RING "FLUSH" WITH OUTSIDE WALL SURFACE FOR CARD READER, LOCATED ON PUBLIC SIDE OF DOOR. VERIFY ACTUAL BACKBOX REQUIREMENT WITH ACCESS CONTROL CONTRACTOR.
5. PROVIDE 1" CONDUIT INTO JUNCTION BOX.
6. ELECTRICALLY HELD PANIC HARDWARE BY OTHERS. (REFER TO FLOOR PLANS FOR DELAYED EGRESS)
7. PROVIDE 1-1/4" CONDUIT WHEREVER CABLING MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.
8. INSTALL DOOR POSITION SWITCH IN DOOR FRAME. NOTE: INSTALLATIONS ON DOORS WITH CONCRETE FILLED HEADERS WILL REQUIRE A SEPARATE PENETRATION (FROM THE DOOR LOCK) FOR THE DOOR SWITCH.
9. LOCAL CONTROL PANEL LOCATED IN TELECOMMUNICATIONS ROOM.
10. PROVIDE A 3/4" CONDUIT.



SECURITY ROLL UP DOOR DETAIL

SCALE = NONE

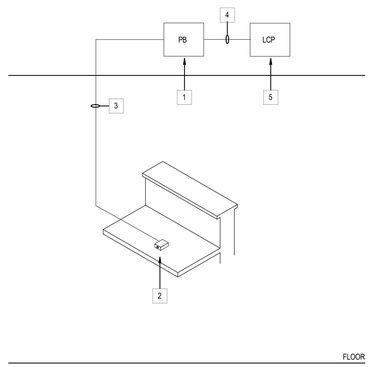
1. PROVIDE DOOR POSITION SWITCH IN DOOR FRAME. NOTE: INSTALLATIONS ON DOORS WITH CONCRETE FILLED HEADERS WILL REQUIRE A SEPARATE PENETRATION (FROM THE DOOR LOCK) FOR THE DOOR SWITCH.
2. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. PROVIDE CONDUIT WHEREVER CABLING MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.
3. LOCAL CONTROL PANEL LOCATED IN TELECOMMUNICATIONS ROOM.
4. PROVIDE REQUIRED CABLING TO GARAGE DOOR OPERATOR FOR DOOR CONTROL INTERFACE. COORDINATE EXACT REQUIREMENTS WITH DOOR MANUFACTURER.



SINGLE DOOR ELECTRIC STRIKE SECURITY DETAIL

SCALE = NONE

1. PROVIDE THE JUNCTION BOX ON THE SECURE SIDE OF THE DOOR AND IN A LOCATION THAT PROVIDES EASY ACCESS FOR CONNECTING AND SERVICE.
2. PROVIDE 1" CONDUIT INTO JUNCTION BOX.
3. PROVIDE 4" X 4" X 2 1/8 " DEEP OUTLET BOX WITH DOUBLE GANG PLASTER RING "FLUSH" WITH OUTSIDE WALL SURFACE FOR CARD READER, LOCATED ON PUBLIC SIDE OF DOOR.
4. PROVIDE 1" CONDUIT.
5. ELECTRIC STRIKE BY OTHERS.
6. PROVIDE 1-1/4" CONDUIT WHEREVER CABLE MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.
7. INSTALL DOOR POSITION SWITCH IN DOOR FRAME. NOTE: INSTALLATIONS ON DOORS WITH CONCRETE FILLED HEADERS WILL REQUIRE A SEPARATE PENETRATION (FROM THE DOOR LOCK) FOR THE DOOR SWITCH.
8. LOCAL CONTROL PANEL LOCATED IN TELECOMMUNICATIONS ROOM.
9. REQUEST TO EXIT MOTION DETECTOR.



PUSH BUTTON SECURITY DETAIL

SCALE = NONE

1. PROVIDE THE JUNCTION BOX ON THE SECURE SIDE OF THE DOOR ABOVE ACCESSIBLE CEILING AND IN A LOCATION THAT PROVIDES EASY ACCESS FOR CONNECTING AND SERVICE.
2. COORDINATE EXACT LOCATION OF PANIC BUTTON IN FIELD WITH OWNER PRIOR TO INSTALLATION.
3. PROVIDE 1" CONDUIT INTO JUNCTION BOX.
4. PROVIDE 1-1/4" CONDUIT WHEREVER CABLING MUST BE ROUTED ABOVE AN INACCESSIBLE CEILING OR UNSECURE PATHWAY.
5. LOCAL CONTROL PANEL LOCATED IN TELECOMMUNICATIONS ROOM.

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SEQUENCE OF OPERATION FOR DOORS EQUIPPED WITH ELECTRIC LATCH RETRACTION AND AUTOMATIC DOOR OPERATORS

1) VESTIBULE EXTERIOR DOOR OPERATOR PUSH PLATES: PUSH PLATE LOCATED ON BUILDING EXTERIOR IS TO BE WIRED THROUGH RELAY ON ACCESS CONTROLLER AND PROGRAMMED AS FOLLOWS:

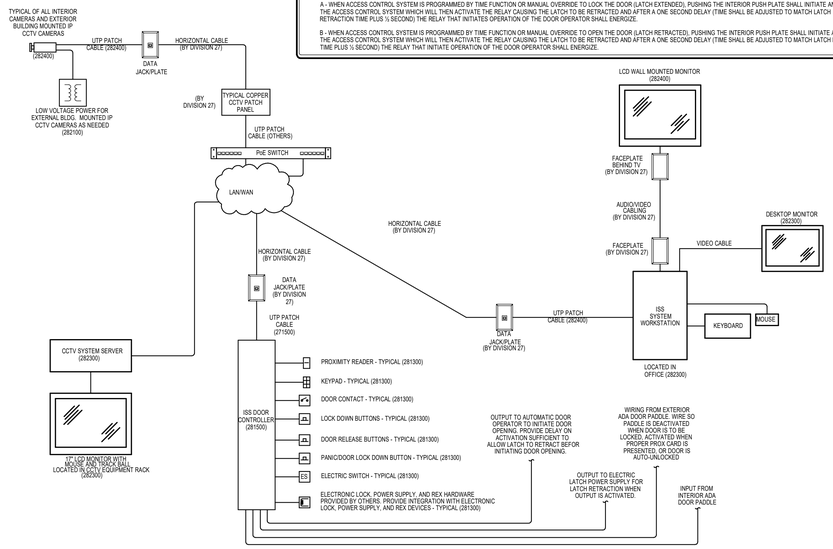
A - WHEN ACCESS CONTROL SYSTEM IS PROGRAMMED BY TIME FUNCTION OR MANUAL OVERRIDE TO LOCK THE DOOR (LATCH EXTENDED), THE EXTERIOR PUSH PLATE SHALL BE DEACTIVATED PREVENTING DOOR OPERATOR MOTOR FROM FUNCTIONING.

B - WHEN ACCESS CONTROL SYSTEM IS PROGRAMMED BY TIME FUNCTION OR MANUAL OVERRIDE TO OPEN THE DOOR (LATCH RETRACTED), THE EXTERIOR PUSH PLATE SHALL BE ACTIVATED ALLOWING THE DOOR OPERATOR MOTOR TO FUNCTION WHEN THE PLATE IS PUSHED.

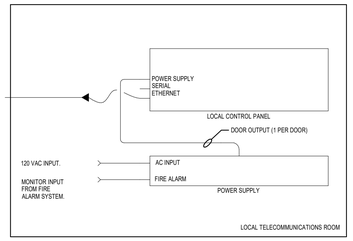
2) VESTIBULE INTERIOR DOOR OPERATOR PUSH PLATES: INTERIOR PUSH PLATE(S) ARE TO BE WIRED TO AN INPUT POINT(S) ON THE ACCESS CONTROLLER INPUT BOARD. THESE INPUTS ARE TO BE PROGRAMMED TO OPERATE SEPARATE OUTPUT RELAYS WHICH CONTROL THE LATCH RETRACTION AND THE DOOR OPERATOR AS FOLLOWS:

A - WHEN ACCESS CONTROL SYSTEM IS PROGRAMMED BY TIME FUNCTION OR MANUAL OVERRIDE TO LOCK THE DOOR (LATCH EXTENDED), PUSHING THE INTERIOR PUSH PLATE SHALL INITIATE AN INPUT TO THE ACCESS CONTROL SYSTEM WHICH WILL THEN ACTIVATE THE RELAY CAUSING THE LATCH TO BE RETRACTED AND AFTER A ONE SECOND DELAY (TIME SHALL BE ADJUSTED TO MATCH LATCH RETRACTION TIME PLUS ½ SECOND) THE RELAY THAT INITIATES OPERATION OF THE DOOR OPERATOR SHALL ENERGIZE.

B - WHEN ACCESS CONTROL SYSTEM IS PROGRAMMED BY TIME FUNCTION OR MANUAL OVERRIDE TO OPEN THE DOOR (LATCH RETRACTED), PUSHING THE INTERIOR PUSH PLATE SHALL INITIATE AN INPUT TO THE ACCESS CONTROL SYSTEM WHICH WILL THEN ACTIVATE THE RELAY CAUSING THE LATCH TO BE RETRACTED AND AFTER A ONE SECOND DELAY (TIME SHALL BE ADJUSTED TO MATCH LATCH RETRACTION TIME PLUS ½ SECOND) THE RELAY THAT INITIATE OPERATION OF THE DOOR OPERATOR SHALL ENERGIZE.



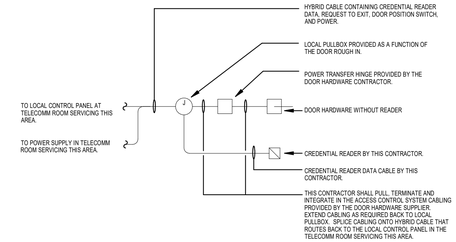
INTEGRATED SECURITY SYSTEM DETAIL

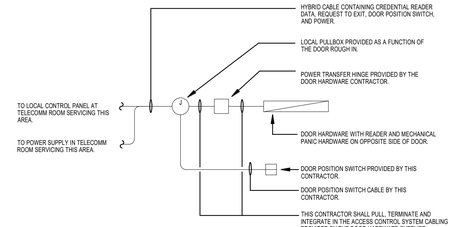


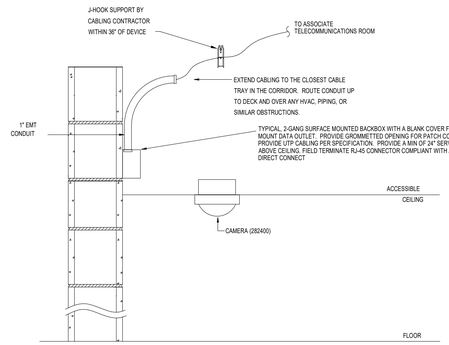
RISER DIAGRAM NOTES:

1. CARD ACCESS CONTRACTOR SHALL VERIFY EXACT CABLING REQUIREMENTS PRIOR TO INSTALLATION.
2. DIAGRAM IS REPRESENTATIONAL ONLY. CARD ACCESS CONTRACTOR SHALL SUBMIT FOR APPROVAL PROJECT SPECIFIC RISER DIAGRAM AND INSTALL PER MANUFACTURERS RECOMMENDATIONS.
3. ALL INSTALLATION MATERIALS AND WORKMANSHIP SHALL BE PER LOCAL, STATE AND FEDERAL CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO NFPA 70 (NEC) AND NFPA 101.
4. CARD ACCESS CONTRACTOR SHALL COORDINATE EXACT POWER SUPPLY CONNECTIONS WITH THE ELECTRICAL CONTRACTOR.
5. CARD ACCESS CONTRACTOR SHALL PROVIDE ALL JUMPERS AND CABLING REQUIRED TO COMPLETE THE ALL INTERCONNECTIONS OF THE SYSTEM. ALL ETHERNET NETWORK CABLING BOTH COPPER AND FIBER SHALL BE COMPLIANT WITH THE STRUCTURED CABLING SYSTEM SPECIFICATION, SECTION 271500, AND SHALL MATCH THE MANUFACTURER AND PERFORMANCE RATING OF THE STRUCTURED CABLING REQUIREMENTS. VERIFY THESE REQUIREMENTS WITH THE STRUCTURED CABLING CONTRACTOR.
6. CARD ACCESS CONTRACTOR SHALL REVIEW JOB SPECIFIC CONFIGURATION AND PROVIDE POWER SUPPLIES AS REQUIRED, ALLOWING 20% SPARE CAPACITY PER POWER SUPPLY PER POWER SUPPLY LOCATION.

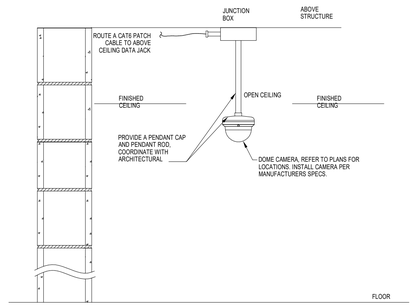
ACCESS CONTROL SYSTEM RISER DIAGRAM



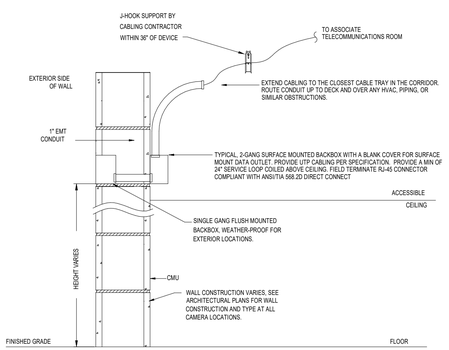




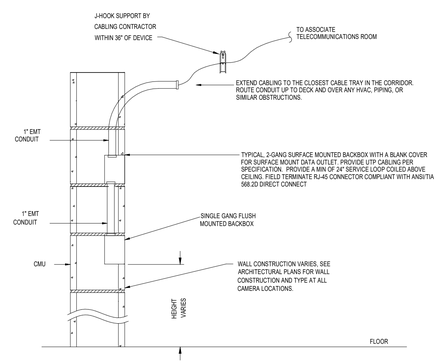
INTERIOR - CEILING SURFACE



INTERIOR - PENDANT



EXTERIOR - WALL MOUNTED



INTERIOR - WALL MOUNTED

CAMERA MOUNTING DETAILS

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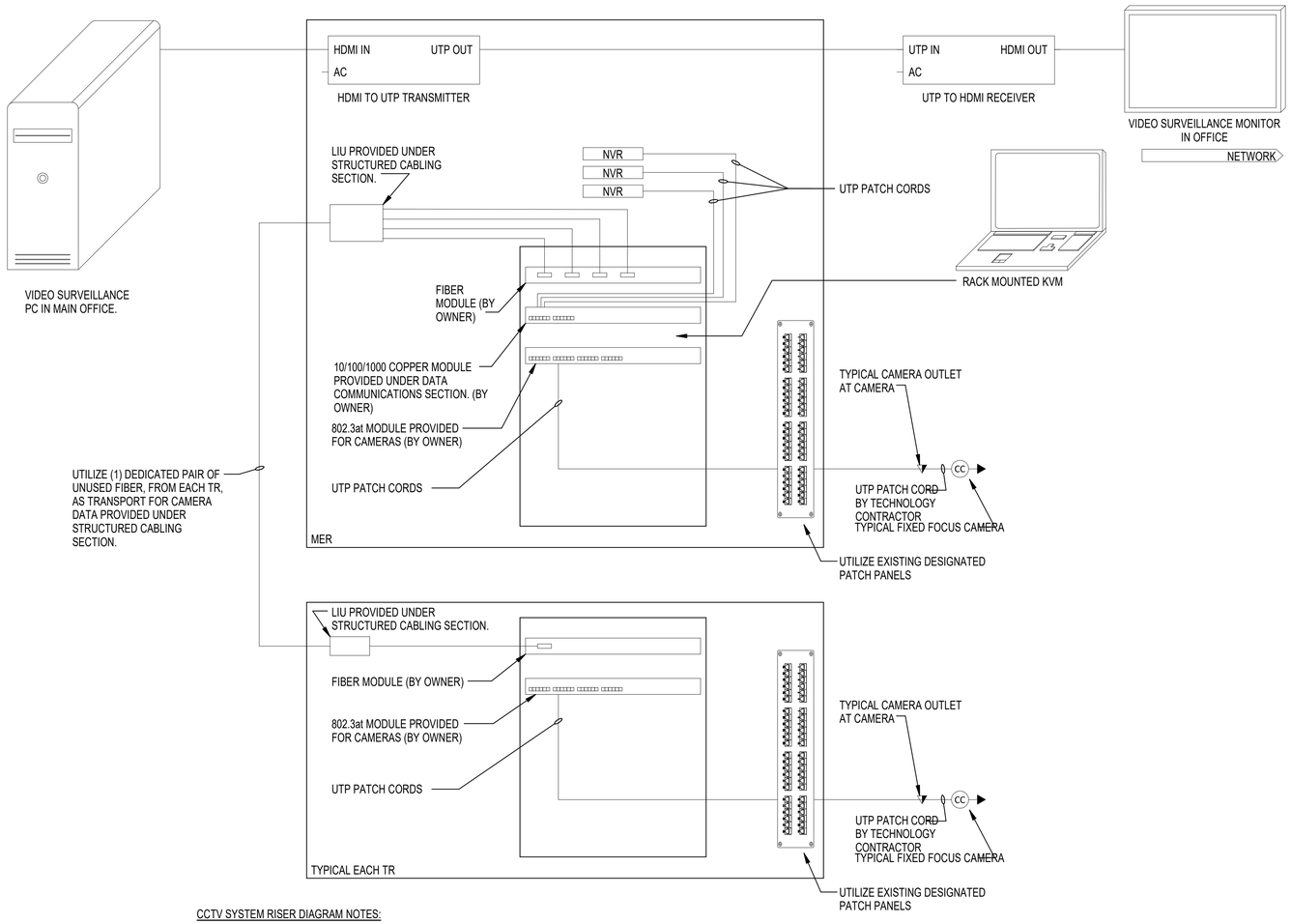

CCTV SYSTEM RISER DIAGRAM NOTES:

1. CONTRACTOR SHALL VERIFY EXACT CABLING REQUIREMENTS PRIOR TO INSTALLATION.
2. DIAGRAM IS REPRESENTATIONAL ONLY. CONTRACTOR SHALL SUBMIT FOR APPROVAL PROJECT SPECIFIC RISER DIAGRAM AND INSTALL PER MANUFACTURERS RECOMMENDATIONS.
3. ALL INSTALLATION MATERIALS AND WORKMANSHIP SHALL BE PER LOCAL, STATE AND FEDERAL CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO NFPA 70 (NEC) AND NFPA 101, AND ASSOCIATED STANDARDS, E.G. EIA/TIA 568 AND IEEE 802.3.
4. CONTRACTOR SHALL COORDINATE EXACT POWER SUPPLY CONNECTIONS AND CIRCUIT TO UPS AND ASSOCIATED PDU'S BEING SUPPLIED UNDER THE SCOPE OF THIS CONTRACT.
5. CONTRACTOR SHALL PROVIDE ALL JUMPERS AND CABLING REQUIRED TO COMPLETE THE ALL INTERCONNECTIONS OF THE SYSTEM. ALL ETHERNET NETWORK OR OTHER STRUCTURED CABLING BOTH COPPER AND FIBER SHALL BE COMPLIANT WITH THE STRUCTURED CABLING SYSTEM SPECIFICATION, SECTION 27 10 00, AND SHALL MATCH THE MANUFACTURER AND PERFORMANCE RATING OF THE STRUCTURED CABLING REQUIREMENTS.

CCTV SYSTEM CONNECTIVITY DIAGRAM

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