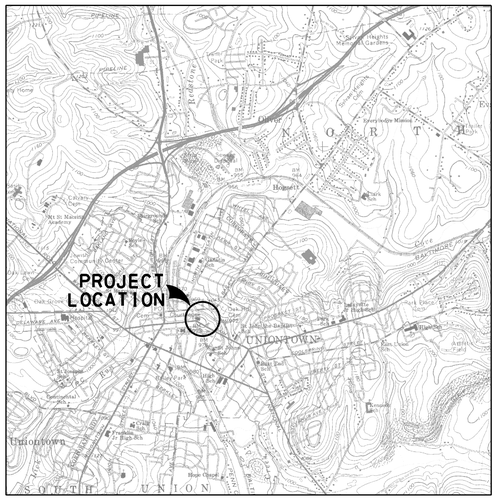
THE FAYETTE COUNTY COURTHOUSE CONNECTOR BRIDGE TO ADJACENT FEREN'S BUILDING



LOCATION MAP
Scale: 1:=2000'

SITUATE AT
61 EAST MAIN STREET
97 EAST MAIN STREET
THE CITY OF UNIONTOWN
FAYETTE COUNTY, PA

PREPARED FOR
THE FAYETTE COUNTY
BOARD OF COMMISSIONERS

TAX MAP PARCEL: 38-04-0190

Date: 01-2022

PROJECT DIRECTORY

OWNER
THE FAYETTE COUNTY COMMISSIONERS
61 EAST MAIN STREET
UNIONTOWN, PA 15317

CONTACT: DAVE LOHR, CHAIRMAN, COUNTY COMMISSIONER
PHONE: 724-430-1200 EXT. 1602
EMAIL: DLOHR@FAYETTEPA.ORG

ARCHITECT
RSSC ARCHITECTURE
ROSS SCHONDER STERZINGER CUPCHECK, P.C.
5500 BROOKTREE ROAD, SUITE 300
WEXFORD, PA 15090

CONTACT: JAMES ROOS, RA, PROJECT ARCHITECT
PHONE: 724-933-9100
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EMAIL: JDR@RSSCARCH.COM

CIVIL ENGINEER
GIBSON-THOMAS ENGINEERING CO., INC.
2200 UNIVERSITY DRIVE
SUITE 1
LEMONT FURNACE, PA 15456

CONTACT: CLAYTON VANVERTH, PE, PROJECT MANAGER
PHONE: 724-323-8020
EMAIL: CLAYTON.VANVERTH@GIBSON-THOMAS.COM

CODE INFORMATION

COMPLIANCE PATH
2015 IBC
ACCESSIBILITY: 2015 IBC, CHAPTER 11 & APPENDIX E
ICC A1 17.1 2009

GENERAL
OCCUPANCY CLASSIFICATION

COURTHOUSE	ASSEMBLY A-3/BUSINESS B
CONNECTOR	MISCELLANEOUS GROUP U/BUSINESS B
FERENS BUILDING	BUSINESS B

CONSTRUCTION TYPE: IIB CONSTRUCTION/NON-SPRINKLERED

BUILDING AREA: 640 SF ALLOWABLE PER TABLE 506.2: 8,500 SF
BUILDING HEIGHT: 20 FT ALLOWABLE PER TABLE 504.3: 55FT
NUMBER OF STORIES ABOVE GRADE PLANE: ONE

FIRE RESISTANCE RATING FOR BUILDING ELEMENTS (TABLE 601)

FOR IIB CONSTRUCTION, A ZERO HOUR RATING IS PERMITTED FOR ALL BUILDING ELEMENTS

THE CONNECTOR STRUCTURE IS CONSIDERED A SEPARATE BUILDING, AND THE EXISTING BUILDING EXTERIOR WALLS WOULD THEN BE FIRE WALLS, PER TABLE 706.4, EXCEPTION a, TYPE II CONSTRUCTION SHALL BE PERMITTED TO HAVE A TWO-HOUR FIRE RESISTANCE RATING. WINDOW OPENINGS AND DOORS AT THE WALL INTERFACE WITIH THE CONNECTOR SHALL BE TWO-HOUR RATED.

DRAWING LIST

G001	COVER SHEET	S000	GENERAL NOTES, ABBREVIATIONS AND SYMBOLS LEGEND
C101	GENERAL EXISTING CONDITIONS PLAN	S100	FOUNDATION PLAN
C102	SITE DEMOLITION PLAN	S101	FIRST FLOOR FRAMING PLAN
C103	SITE PLAN	S102	ROOF FRAMING PLAN
C104	GRADING PLAN	S200	FOUNDATION TYPICAL DETAILS
C105	LANDSCAPE PLAN	S201	FOUNDATION SECTIONS
C106	SITE DETAILS	S300	FRAMING TYPICAL DETAILS
C107	SITE DETAILS	S301	FRAMING SECTIONS
C108	SITE DETAILS		
C109	SITE DETAILS	M001	MECHANICAL DATA SHEET
C110	LANDSCAPE DETAILS	M002	MECHANICAL SPECIFICATIONS
ESC101	E&S CONTROL PLAN	M201	FIRST FLOOR MECHANICAL PLAN
ESC102	E&S CONTROL NOTES		
ESC103	E&S CONTROL MAINTENANCE NOTES	E001	ELECTRICAL DATA SHEET
ESC104	E&S CONTROL DETAILS	E002	ELECTRICAL SPECIFICATIONS
PCSM101	PCSM PLAN PREDEVELOPMENT	E003	ELECTRICAL SPECIFICATIONS
PCSM102	PCSM PLAN POSTDEVELOPMENT	E101	FIRST FLOOR ELECTRICAL DEMOLITION PLAN
		E201	FIRST FLOOR LIGHTING PLAN
A101	DEMOLITION PLAN, FLOOR PLAN, AND WALL TYPES	E301	FIRST FLOOR POWER PLAN
A102	ROOF PLAN AND CEILING PLAN	E501	ELECTRICAL DETAILS AND RISERS
A201	ELEVATIONS DOOR AND FINISH SCHEDULE	E701	ELECTRICAL SCHEDULES
A301	BUILDING SECTIONS		
A302	WALL SECTIONS		
A401	DETAILS		

OWNER'S AFFIDAVIT

THE UNDERSIGNED_____ __ DO HEREBY CERTIFY THAT I (WE) AM (ARE) THE EQUITABLE OWNER(S) OF THE LAND SHOWN WITHIN THE TRACT BOUNDARY OF THIS PLAN, DO HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS THE LOTS, LANDS, STREETS, AND OTHER IMPROVEMENTS TO THE BEST OF MY (OUR) KNOWLEDGE AS SURVEYED, PLATTED AND DESIGNED FOR ME (US), DO HEREBY CERTIFY THAT ANY LOT SHOWN ON THIS PLAN TRANSFERRED OR DEVELOPED BY US SHALL HAVE THE WIDTH AND LOT SIZE THE SAME AS THOSE SHOWN ON THIS PLAN, AND DO HEREBY CERTIFY THAT WITHIN _____ DAYS AFTER CONDITIONS PREREQUISITE TO THE CITY OF UNIONTOWN APPROVAL BECOMING OPERATIVE HAVE BEEN SATISFIED, AN APPROVED DUPLICATE COPY OF THIS PLAN WILL BE RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS, FAYETTE COUNTY, PENNSYLVANIA, AND DO HEREBY CERTIFY THAT WITHIN TEN DAYS AFTER THE RECORDING OF THIS PLAN WE SHALL NOTIFY THE SECRETARY OF THE CITY OF UNIONTOWN, IN WRITING, THAT THE PLAN WAS DULY RECORDED.

SIGNATURE(S)_____
_____

ADDRESS _____
_____
_____

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND OFFICIAL SEAL.

SIGNATURE_____
NOTARY PUBLIC

ADDRESS_____
_____
_____

MY COMMISSION EXPIRES_____

APPROVAL BY THE CITY OF UNIONTOWN, PENNSYLVANIA

THIS LAND DEVELOPMENT PLAN WAS GIVEN APPROVAL BY THE CITY OF UNIONTOWN,

AS FOLLOWS: APPROVED BY CITY OFFICIAL AT A MEETING HELD THIS _____

DAY OF _____, 20_____.

_____ _____
SECRETARY CITY OFFICIAL

RECORDER OF DEEDS:

RECORDED IN THE OFFICE OF DEEDS OF FAYETTE COUNTY, PENNSYLVANIA

ON _____, 20_____. IN MAP BOOK VOLUME _____, PAGE _____

_____
FAYETTE COUNTY RECORDER OF DEEDS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
ROBERT CLAYTON VANVERTH
No. 062921

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
PH: 724 - 323 - 8020

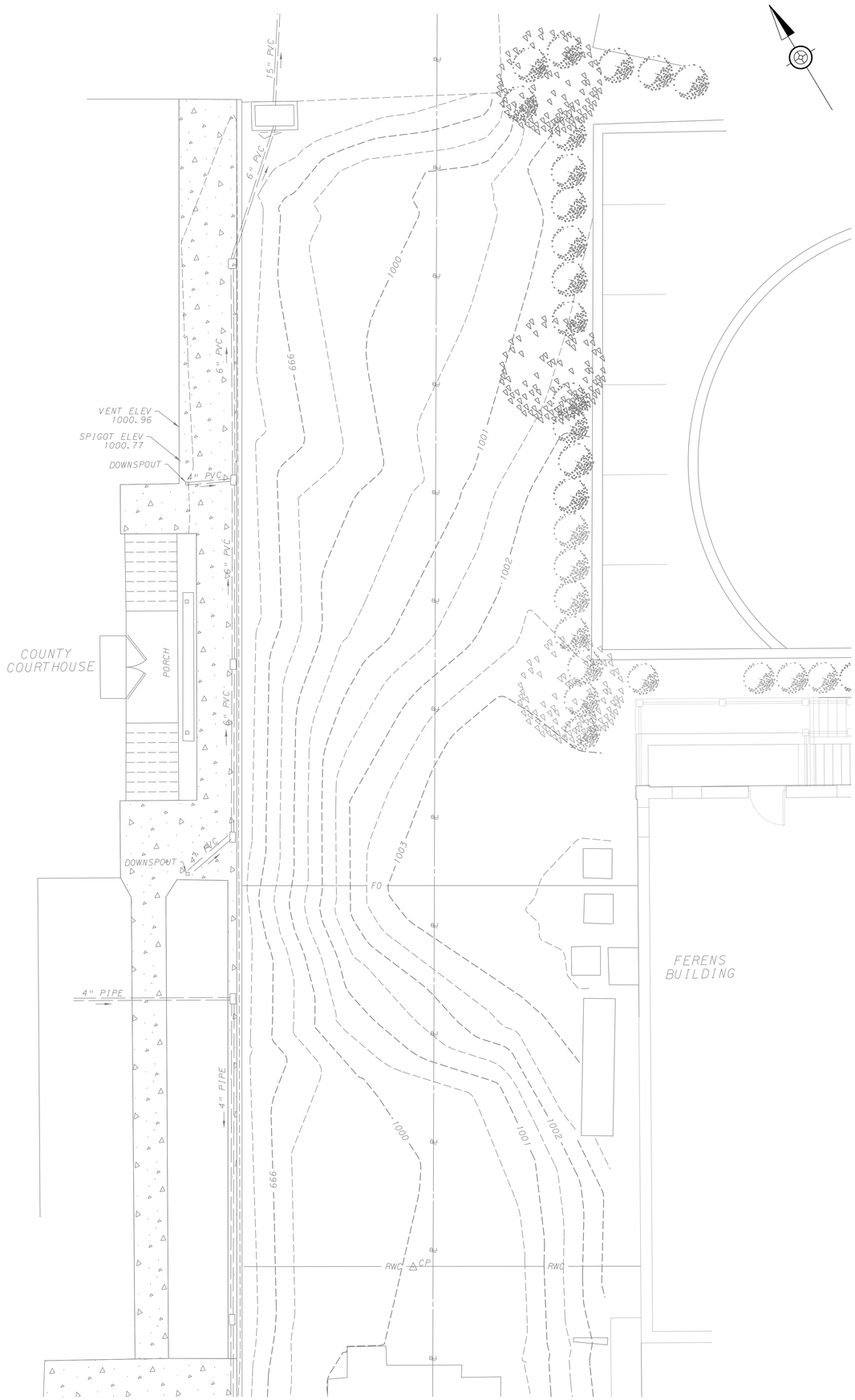
GIBSON THOMAS ENGINEERING CO., INC.

NOT FOR CONSTRUCTION

FAYETTE COUNTY COURTHOUSE BLDG.
FEREN'S BUILDING
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN
FAYETTE COUNTY PENNSYLVANIA
NEW WALKWAY CONNECTION STRUCTURE

JAN 31, 2022
BID SET
REVISIONS
15537
COVER SHEET

G001



EXISTING CONDITION PLAN NOTES:

1. SURVEY DATUMS
   A. VERTICAL DATUM IS NAVD88.
   B. HORIZONTAL DATUM IS PA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) NAD83.

2. CONTRACTOR TO VERIFY LOCATION OF UTILITIES PRIOR TO PERFORMING ANY WORK. LOCATIONS ARE ASSUMED FROM EVIDENCE GATHERED ABOVE THE SURFACE. NOTIFY THE ENGINEER AND THE OWNER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.

3. SITE ADDRESS: 61 & 97 EAST MAIN STREET
   UNIONTOWN, PA 15401

LEGEND

- CP — EXISTING CONTROL POINT
- EXISTING INLET
- EXISTING PIPE
- PROPERTY LINE
- RWC — RAINWATER CONDUCTOR
- FO — FIBER OPTIC LINE
- 1240 — EXISTING CONTOUR
- EXISTING CONCRETE

SCALE
0 5 10 FEET

NOT FOR CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
ROBERT CLINTON UNVERTH
No. 062921

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
PH: 724 - 323 - 8020

GIBSON THOMAS ENGINEERING CO., INC.

FAYETTE COUNTY COURTHOUSE BLDG.

NEW WALKWAY CONNECTION STRUCTURE

FEREN'S BUILDING

61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JAN 31, 2022

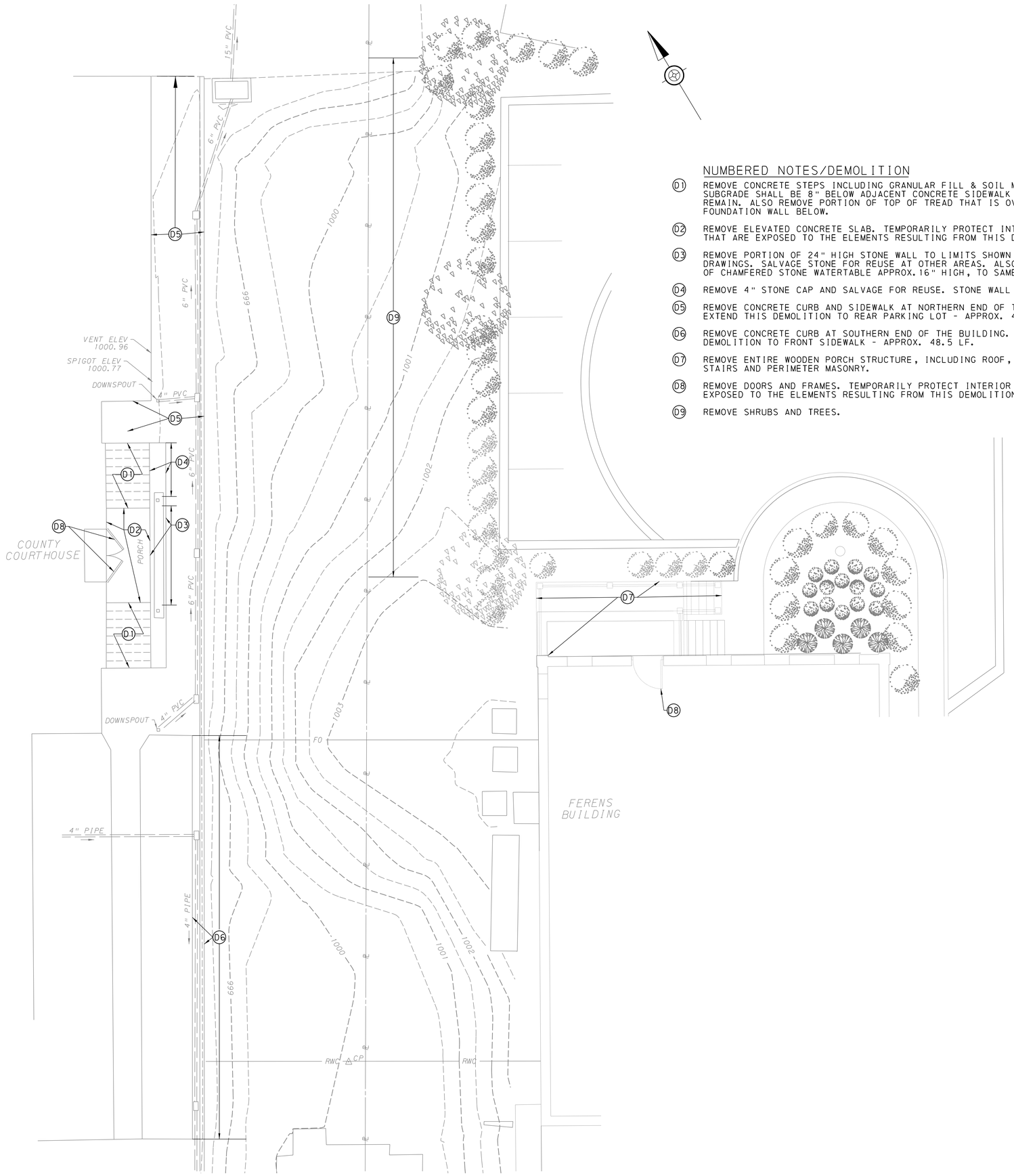
BID SET

REVISIONS

15537

GENERAL EXISTING CONDITIONS PLAN

C101



NUMBERED NOTES/DEMOLITION

(D1) REMOVE CONCRETE STEPS INCLUDING GRANULAR FILL & SOIL MATERIAL. FINAL SUBGRADE SHALL BE 8" BELOW ADJACENT CONCRETE SIDEWALK SCHEDULED TO REMAIN. ALSO REMOVE PORTION OF TOP OF TREAD THAT IS OVER THE FOUNDATION WALL BELOW.

(D2) REMOVE ELEVATED CONCRETE SLAB. TEMPORARILY PROTECT INTERIOR SPACES THAT ARE EXPOSED TO THE ELEMENTS RESULTING FROM THIS DEMOLITION.

(D3) REMOVE PORTION OF 24" HIGH STONE WALL TO LIMITS SHOWN IN ARCHITECTURAL DRAWINGS. SALVAGE STONE FOR REUSE AT OTHER AREAS. ALSO REMOVE PORTION OF CHAMFERED STONE WATERTABLE APPROX.16" HIGH, TO SAME LIMITS.

(D4) REMOVE 4" STONE CAP AND SALVAGE FOR REUSE. STONE WALL BELOW TO REMAIN.

(D5) REMOVE CONCRETE CURB AND SIDEWALK AT NORTHERN END OF THE BUILDING. EXTEND THIS DEMOLITION TO REAR PARKING LOT - APPROX. 45 LF.

(D6) REMOVE CONCRETE CURB AT SOUTHERN END OF THE BUILDING. EXTEND THIS DEMOLITION TO FRONT SIDEWALK - APPROX. 48.5 LF.

(D7) REMOVE ENTIRE WOODEN PORCH STRUCTURE, INCLUDING ROOF, FLOOR, RAILINGS, STAIRS AND PERIMETER MASONRY.

(D8) REMOVE DOORS AND FRAMES. TEMPORARILY PROTECT INTERIOR SPACES THAT ARE EXPOSED TO THE ELEMENTS RESULTING FROM THIS DEMOLITION.

(D9) REMOVE SHRUBS AND TREES.

DEMOLITION PLAN GENERAL NOTES:

1. NOTED EXISTING ABOVE AND BELOW GROUND STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED. THIS INCLUDES FOUNDATION SLABS, WALLS AND FOOTINGS. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE BACKFILLED WITH SATISFACTORY MATERIALS AND COMPACTED.
2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD.
3. ALL DEMOLITION WASTE AND CONSTRUCTION DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED AND SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO THE APPROPRIATE UTILITY COMPANY STANDARDS AND AT THE CONTRACTOR'S EXPENSE.
4. ALL UTILITY DISCONNECTION, REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY/AGENCY.
5. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED.
6. EROSION AND SEDIMENTATION CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED AND SHALL FUNCTION PROPERLY PRIOR TO INITIATION OF DEMOLITION ACTIVITIES.
7. ASBESTOS OR HAZARDOUS MATERIALS, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIALS CONTRACTOR. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IF HAZARDOUS MATERIALS ARE ENCOUNTERED. ASBESTOS MATERIALS TO BE DISPOSED OF PROPERLY BY OTHERS.
8. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
9. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED. CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, STRUCTURES, AND FEATURES TO REMAIN. ANY ITEMS TO REMAIN THAT HAVE BEEN DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
11. CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION REGULATIONS AND AS REQUIRED BY LOCAL AGENCIES WHEN WORKING IN AND/OR ALONG STREETS, ROADS, HIGHWAYS, ETC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL AND COORDINATE WITH LOCAL AND/OR STATE AGENCIES REGARDING THE NEED, EXTENT AND LIMITATIONS ASSOCIATED WITH INSTALLING AND MAINTAINING TRAFFIC CONTROL MEASURES.
12. PROVIDE NEAT, STRAIGHT, FULL DEPTH, SAW CUTS OF EXISTING PAVEMENT WHERE INDICATED ALONG LIMITS OF PAVEMENT DEMOLITION.
13. ALL UTILITY AND STRUCTURE REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED AND PROPERLY DOCUMENTED BY A CERTIFIED PROFESSIONAL, WHEN APPLICABLE, WITH THE APPROPRIATE UTILITY COMPANY, MUNICIPALITY AND/OR AGENCY. DEMOLITION OF REGULATED ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO: WELLS, ASBESTOS, UNDER GROUND STORAGE TANKS, SEPTIC TANKS AND ELECTRIC TRANSFORMERS. DEMOLITION CONTRACTOR SHALL REFER TO ANY ENVIRONMENTAL STUDIES FOR DEMOLITION RECOMMENDATIONS AND GUIDANCE. AVAILABLE ENVIRONMENTAL STUDIES MAY INCLUDE, BUT ARE NOT LIMITED TO: PHASE I ESA, PHASE II, WETLAND AND STREAM DELINEATION AND ASBESTOS SURVEY. ALL APPLICABLE ENVIRONMENTAL STUDIES SHALL BE MADE AVAILABLE UPON REQUEST.
14. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
15. ALL PAVEMENT, BASE COURSES, SIDEWALKS, CURBS, BUILDINGS, FOUNDATIONS. ETC., WITHIN THE AREA TO BE DEMOLISHED SHALL BE REMOVED TO FULL DEPTH. EXISTING BASE COURSE MATERIALS MAY BE WORKED INTO THE NEW PAVEMENT OR BUILDING SUBGRADE PROVIDED THAT THE GRADATION, CONSISTENCY, COMPACTION, SUBGRADE CONDITION, ETC., ARE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS OF TYPICAL STATE/LOCAL STANDARDS. BASE COURSE MATERIALS SHALL NOT BE WORKED INTO THE SUBGRADE AREAS TO RECEIVE LANDSCAPING.
16. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITY.
17. SEE DRAWING A01 FOR ADDITIONAL SITE DEMOLITION ITEMS AND NOTES.

LEGEND

- △CP — EXISTING CONTROL POINT
- ▭ — EXISTING INLET
- EXISTING PIPE
- ℄ — PROPERTY LINE
- RWC — RAINWATER CONDUCTOR
- F0 — FIBER OPTIC LINE
- 1240 — EXISTING CONTOUR
- EXISTING CONCRETE

SCALE

0 5 10 FEET

NOT FOR CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ROBERT CARLTON CANVERITH NO. 062921

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
PH: 724 - 323 - 8020
GIBSON THOMAS ENGINEERING CO. INC.

FAYETTE COUNTY COURTHOUSE BLDG.

NEW WALKWAY CONNECTION STRUCTURE

FEREN'S BUILDING
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JAN 31, 2022

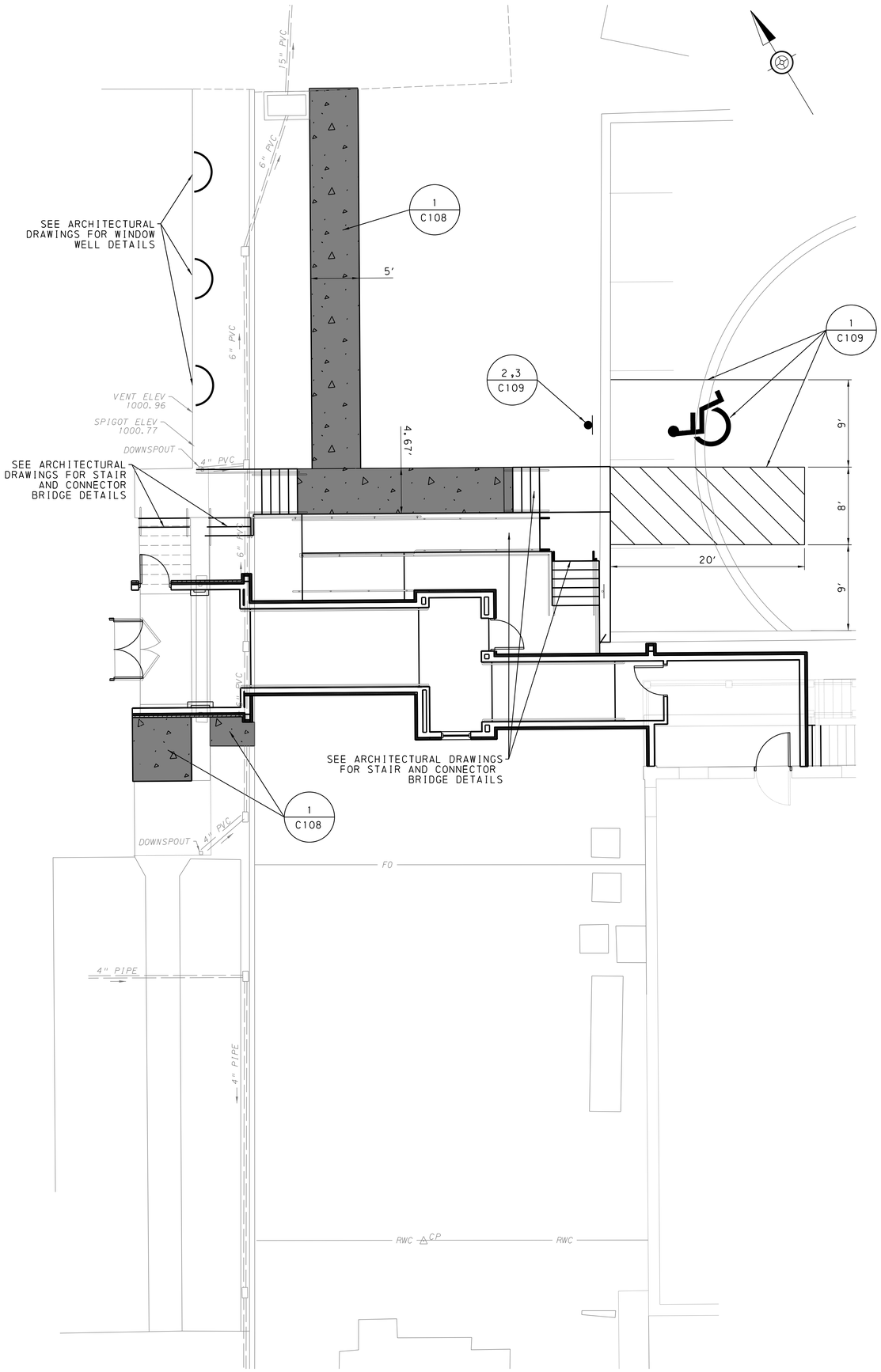
BID SET

REVISIONS

15537

SITE DEMOLITION PLAN

C102



SITE PLAN GENERAL NOTES

1. INTENT OF THIS PLAN IS TO CONSTRUCT A CONNECTOR BRIDGE BETWEEN THE FAYETTE COUNTY COURTHOUSE AND THE NEIGHBORING FEREN'S BUILDING WITH ASSOCIATED SITE IMPROVEMENTS.
2. THE CONTRACTOR MUST PERFORM A ONE CALL (1-800-242-1776) AT LEAST THREE (3) WORKING DAYS PRIOR TO PERFORMING ANY CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH ACT 287 - 1974, OR AS AMENDED WITH ACT 287.
3. ADA ACCESSIBLE ROUTES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE.

LEGEND

- 1 / C108 — DETAIL NUMBER / DRAWING NUMBER
- CONCRETE SIDEWALK
- *CP* — *EXISTING CONTROL POINT*
- *EXISTING INLET*
- *EXISTING PIPE*
- *PROPERTY LINE*
- *RWC* — *RAINWATER CONDUCTOR*
- *FO* — *FIBER OPTIC LINE*
- *1240* — *EXISTING CONTOUR*
- *EXISTING CONCRETE*

SCALE

0 5 10 FEET

NOT FOR CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER No. 062921 ROBERT CLINTON CONVERTY

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
PH: 724 - 323 - 8020

GIBSON THOMAS ENGINEERING CO., INC.

NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FEREN'S BUILDING
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JAN 31, 2022

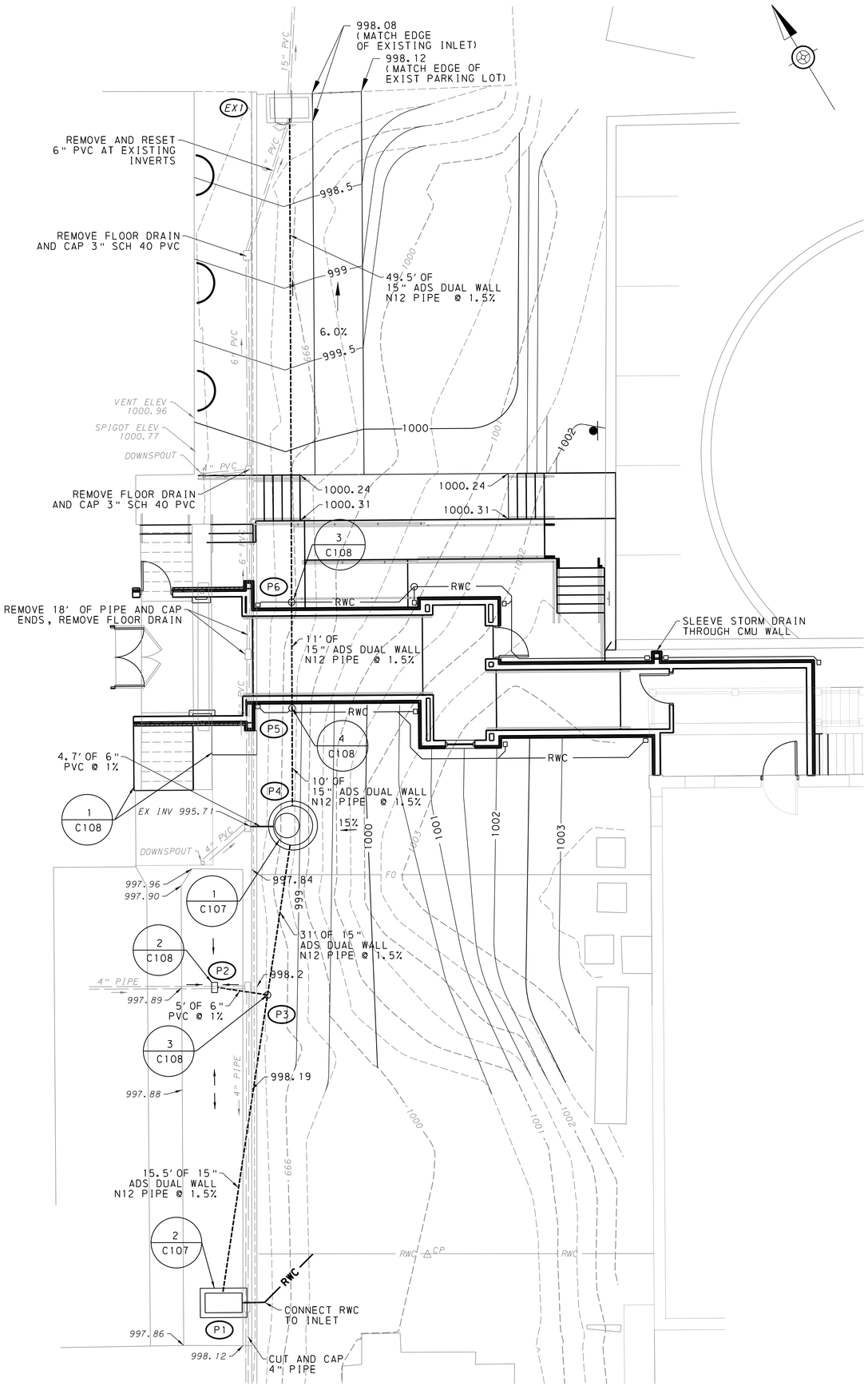
BID SET

REVISIONS

15537

SITE PLAN

C103



GRADING PLAN GENERAL NOTES:

1. THE CONTRACTOR MUST PERFORM A ONE CALL (1-800-242-1776) AT LEAST THREE (3) WORKING DAYS PRIOR TO PERFORMING ANY CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH ACT 287 - 1974, OR AS AMENDED WITH ACT 287.
2. THE EXACT LOCATION AND DEPTH OF ALL UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. COORDINATE PAVING LAYOUT WITH THE SITE PLANS. CONTRACTOR IS TO ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO CONSTRUCT A SMOOTH FIT AND CONTINUOUS GRADE.
4. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATIONS ARE TO RECEIVE FOUR INCHES (4") OF TOPSOIL AND SEEDED/MULCHED PER THE E&S PLANS.
5. CONTRACTOR MUST FIELD VERIFY ALL EXISTING GRADES AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
6. CONTRACTOR TO MAINTAIN 2% MAX CROSS-SLOPE ACROSS ALL WALKWAYS. CONTRACTOR TO CONSULT CIVIL ENGINEER PRIOR TO POURING IN ANY WALKWAY CROSS-SLOPE THAT EXCEEDS 2%.
7. EXISTING AND PROPOSED CONTOURS ARE DISPLAYED AT 1/2 FOOT INCREMENTS.

LEGEND

- PROPERTY LINE
- 1121 EXISTING MAJOR CONTOUR
- 1121 EXISTING MINOR CONTOUR
- 1121 PROPOSED MAJOR CONTOUR
- 1121 PROPOSED MINOR CONTOUR
- 1120 SPOT ELEVATION
- TC 1120 TOP OF CURB ELEVATION
- BC 1120 BOTTOM OF CURB ELEVATION
- 1.5% PROPOSED SLOPE
- 1 / C108 DETAIL NUMBER / DRAWING NUMBER
- *CP EXISTING CONTROL POINT
- *EXISTING INLET
- *EXISTING PIPE
- *PROPERTY LINE
- *RWC RAINWATER CONDUCTOR
- *FO FIBER OPTIC LINE
- *1240 EXISTING CONTOUR
- *EXISTING CONCRETE

P1 PENNDOT TYPE M CONCRETE TOP UNIT AND GRATE AND STANDARD BOX
TG = 997.80
INV RWC = 995.80
INV 15" = 992.00

P2 NEENAH FOUNDRY R-4937 DRAIN, OR APPROVED EQUAL
TG = 997.80
INV = 995.67

P3 CLEAN OUT 8" NYLOPLAST DROP IN GRATE OR APPROVED EQUAL
TG = 998.62
INV 15" = 991.77

P4 PENNDOT TYPE 4 MANHOLE
TG = 998.80
INV IN 6" = 995.66
INV IN 15" = 991.30
INV OUT 15" = 991.10

P5 CLEAN OUT 8" NYLOPLAST DROP IN GRATE OR APPROVED EQUAL
TG = 998.86
INV 15" = 990.94

P6 CLEAN OUT 8" NYLOPLAST DROP IN GRATE OR APPROVED EQUAL
TG = 1004.30
INV 15" = 990.77

EX1 *INLET*
TG=998.08
INV IN 6" = 994.83
INV IN 15" = 990.00
INV OUT 15" = 989.81

SCALE
0 5 10 FEET

NOT FOR CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ROBERT CHARLES KONVERTH NO. 062921

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
PH: 724 - 323 - 8020

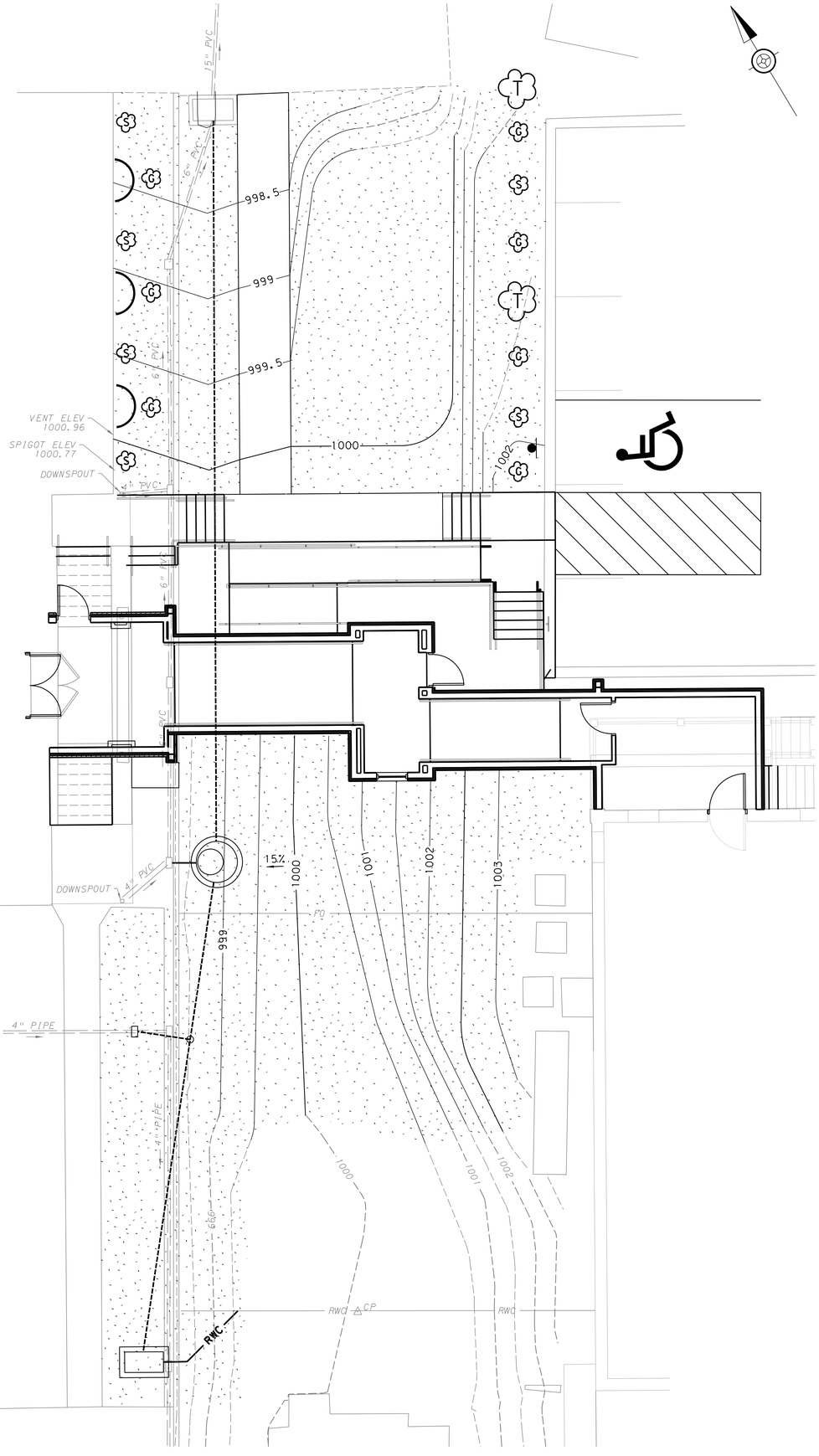
GIBSON THOMAS ENGINEERING CO., INC.

FAYETTE COUNTY COURTHOUSE BLDG.

NEW WALKWAY CONNECTION STRUCTURE
FERENʼS BUILDING
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN
FAYETTE COUNTY PENNSYLVANIA

JAN 31, 2022
BID SET
REVISIONS
15537
GRADING PLAN

C104



LANDSCAPING PLAN GENERAL NOTES

1. SEE ESC103 FOR SEED TYPE AND LOCATION ALONG WITH FERTILIZER AND LIMING APPLICATION RATES.

LEGEND

- GRASS PLANTINGS
- SHRUB PLANTINGS
- TREE PLANTINGS
- 1121 — PROPOSED MAJOR CONTOUR
- SEEDING & MULCHING AREA

PLANT SCHEDULE

QUANTITY	KEY	COMMON NAME	SCIENTIFIC NAME	SIZE AND ROOT
7	G	BIG BLUE LIRIOPE	LIRIOPE MUSCARI	1' HT B.R.
6	S	GOLDFLAME SPIREA	SPIRAEA JAPONICA	1'-2' HT B.R.
2	T	APPLE SERVICEBERRY	AMELANCHIER	5' HT B. & B.

SCALE

0 5 10 FEET

NOT FOR CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ROBERT ANDREW VANVERTH CIVIL ENGINEER No. 062921

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
PH: 724 - 323 - 8020

GIBSON THOMAS ENGINEERING CO., INC.

NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FEREN'S BUILDING

61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JAN 31, 2022

BID SET

REVISIONS

15537

LANDSCAPE PLAN

C105

GENERAL

1. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL GOVERNING AUTHORITIES.

2. ALL CONTRACTORS ARE RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS AS SPECIFIED IN THESE NOTES. ALL PARTIES MUST CAREFULLY STUDY ALL NOTES FOR ITEMS WHICH MAY PERTAIN TO THEIR TRADES. FAILURE TO READ THESE NOTES DOES NOT PERMIT THE CONTRACTOR(S) TO DEVIATE FROM THEIR REQUIREMENTS. ANY QUESTIONS WILL BE ANSWERED BY THE SER. SUBMIT QUESTIONS IN RFI FORMAT.

3. ALL STRUCTURAL WORK SHALL BE COMPLETED AND COORDINATED WITH THE ELECTRICAL DRAWINGS AND SPECIFICATIONS.

4. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FEDERAL, STATE AND LOCAL MUNICIPAL LAWS, BYLAWS, ORDINANCES AND REGULATIONS IN ANY MANNER AFFECTING THE CONDUCT OF THIS WORK AS WELL AS ALL ORDERS OR DECREES WHICH HAVE BEEN PROMULGATED OR ENACTED BY ANY LEGAL BODIES OR TRIBUNALS HAVING AUTHORITY OR JURISDICTION OVER THE WORK, MATERIALS, EMPLOYEES OR CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PERSONNEL SAFETY ON THE JOBSITE. GUIDELINES FOR CONSTRUCTION SAFETY SHALL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE CONSTRUCTION INDUSTRY OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION (PART 1926 STANDARDS), AND ANY LOCAL ORDINANCES OR CODES THAT MAY BE APPLICABLE.

5. ALL EXISTING CONDITIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING ANY WORK. IF FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE DESIGN PROFESSIONAL IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH PROPOSED MODIFICATION FOR REVIEW BY THE DESIGN PROFESSIONAL.

6. ALL CODES AND STANDARDS REFERENCED IN THESE NOTES, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, AND ALL FEDERAL, STATE AND LOCAL REGULATIONS APPLY TO THE DESIGN, CONSTRUCTION, DEMOLITION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST ADOPTED EDITIONS OF THE CODES AND STANDARDS.

7. ALL CONTRACTORS AND SUBCONTRACTORS ON THIS PROJECT SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, SELECTION OF MEANS AND METHODS, COORDINATION WITH OTHER TRADES, SAFETY AND SECURITY ON THE JOB SITE.

8. LOCATE ALL UNDERGROUND STRUCTURES AND UTILITIES, SUCH AS WATER MAINS, SEWERS, TELEPHONE AND ELECTRIC CONDUITS, ETC., AND ABOVE GROUND UTILITIES, WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION OPERATIONS. DIG TEST HOLES TO DETERMINE THE POSITION OF THE UNDERGROUND STRUCTURES AND UTILITIES, OR ARRANGE WITH THE OWNERS OF SUCH UNDERGROUND STRUCTURES AND UTILITIES TO ASSIGN A REPRESENTATIVE TO MARK THE LOCATIONS. THE CONTRACTOR SHALL PAY THE COST OF DIGGING TEST HOLES AND LIKEWISE SHALL PAY THE COST OF THE SERVICE OF THE REPRESENTATIVES OF THE OWNERS OF SUCH UTILITIES FOR LOCATING THE SAID UTILITIES. THE COST OF DETERMINING THE LOCATIONS SHALL BE INCLUDED IN THE LUMP SUM BID PRICES. THE LOCATION OF EXISTING STRUCTURES AND UTILITIES, IF SHOWN ON THE PLANS, IS SIMPLY FOR THE GUIDANCE OF THE CONTRACTOR. THEY HAVE NOT BEEN FIELD LOCATED. SINCE INFORMATION IS AS FURNISHED BY THE RESPECTIVE UTILITIES, OR TAKEN FROM NON-AS-BUILT PLANS, THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR THE ACCURACY OF PLANS IN THIS RESPECT. DESIGNERS AND CONTRACTORS UTILIZING THESE DRAWINGS AND THE INFORMATION CONTAINED THEREON ARE CAUTIONED TO COMPLY WITH THE REQUIREMENTS OF LOCAL AND STATE REGULATIONS FOR UNDERGROUND UTILITY LINE PROTECTION.

GEOTECHNICAL

1. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER TO VERIFY THAT THE MATERIAL ON WHICH FOUNDATIONS BEAR HAS AT LEAST THE CAPACITY PROVIDED ON DRAWING S000, 3.0 FOUNDATIONS, NOTE 3.1.

CONCRETE

1. CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST ADOPTED EDITIONS OF ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY (ACI 318)" AND ACI "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301)". A COPY OF ACI 318 SHALL BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.

2. REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF CRSI "MANUAL OF STANDARD PRACTICE", CRSI "PLACING REINFORCING BARS" AND ACI "DETAILING MANUAL (SP-66)".

3. CONCRETE SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING PROPERTIES:

4. CONCRETE EXPOSED TO FREEZE/THAW CONDITIONS AND/OR WEATHER (INCLUDING EXTERIOR FOOTINGS) SHALL HAVE 4½~6% AIR-ENTRAINMENT IN ACCORDANCE WITH ACI.

5. ALL CONCRETE SHALL CONTAIN AN APPROVED WATER-REDUCING ADMIXTURE.

6. SLUMP TESTS SHALL BE MADE PRIOR TO THE ADDITION OF PLASTICIZERS. CONCRETE FOR THE PREPARATION OF TEST CYLINDERS SHALL BE TAKEN FROM THE HOSE END FOR CONCRETE PLACED BY PUMPING METHODS. SLUMP (AT POINT OF CONCRETE PLACEMENT) SHALL BE 4" (± 1"). IF NEEDED FOR WORKABILITY, ADD A HIGH RANGE WATER REDUCING ADMIXTURE (HRWR) TO THE CONCRETE. WHEN USING WATER REDUCING ADMIXTURES, THE SLUMP LIMITS SHALL BE:

   A. PRIOR TO ADDITION OF ADMIXTURE: LESS THAN 3"
   B. AFTER ADDITION OF ADMIXTURE: 8" MAXIMUM

7. WATER SHALL NOT BE ADDED TO THE CONCRETE AT THE JOBSITE, UNLESS APPROVED IN WRITING BY THE SER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE REQUIREMENTS OF THE CONCRETE SUPPLIER AND PUMPER TO ENSURE PUMPABLE AND WORKABLE MIX WITHOUT THE ADDITION OF WATER AT THE JOBSITE. THE USE OF PLASTICIZERS, RETARDANTS AND OTHER ADDITIVES SHALL BE AT THE OPTION OF THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE SER. FOLLOW THE RECOMMENDATIONS OF THE MANUFACTURER FOR PROPER USE OF RETARDANTS AND OTHER ADDITIVES. USE OF CALCIUM CHLORIDE OR OTHER CHLORIDE BEARING SALTS IS NOT PERMITTED.

8. THE CONCRETE SUPPLIER SHALL SUBMIT MIX DESIGNS FOR REVIEW AND APPROVAL PRIOR TO PLACING ANY CONCRETE. COMPRESSIVE STRENGTH MUST BE SUBSTANTIATED BY A SUITABLE EXPERIENCE RECORD OR BY THE METHOD OF LABORATORY TRIAL BATCHES. THE PERTINENT CRITERIA OF CHAPTER 5 OF ACI 318 (LATEST EDITION) SHALL APPLY TO THE PROPORTIONING OF MIX DESIGNS AND TO THE ACCEPTANCE OF CONCRETE PRODUCED FOR THE JOB. IF DURING CONSTRUCTION ANY CLASS CONCRETE FAILS TO MEET THE ACCEPTANCE CRITERIA, THE CONTRACTOR SHALL TAKE SUCH STEPS AS ARE DEEMED NECESSARY BY THE SER TO IMPROVE SUBSEQUENT TEST RESULTS AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL ALSO BEAR THE COST OF SPECIAL INVESTIGATION, TESTING OR REMEDIAL WORK NECESSARY BECAUSE OF EVIDENCE OF LOW STRENGTH OR NON-CONFORMING CONCRETE OR WORKMANSHIP.

9. REINFORCING STEEL SHALL BE MANUFACTURED FROM HIGH-STRENGTH BILLET STEEL, DEFORMED TYPE, CONFORMING TO ASTM A615, GRADE 60.

10. PLACING OF CONCRETE SHALL NOT COMMENCE UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE OWNER'S INSPECTION AGENCY.

11. INSERTS AND SLEEVES SHALL BE CAST IN PLACE WHENEVER FEASIBLE. DRILLED OR POWER DRIVEN FASTENERS SHALL BE PERMITTED ONLY WHEN PROVEN TO THE SATISFACTION OF THE SER THAT THE FASTENERS WILL NOT SPALL THE CONCRETE AND HAVE THE SAME CAPACITY AS CAST-IN-PLACE INSERTS.

12. GENERAL CONTRACTOR SHALL GROUT UNDER ALL LEVELING AND BEARING PLATES WITH AN APPROVED NON-SHRINK, NON-METALLIC GROUT CONFORMING TO ASTM C1107, AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI. PRE-GROUTING OF BASE PLATES IS NOT PERMITTED.

13. TOPS OF FOUNDATIONS SHALL BE HAND TROWEL FINISHED AND SMOOTH. REFER TO DRAWINGS FOR BASE PLATE ACCOMMODATIONS.

14. WHEN CONCRETING IS TO BE DONE IN HOT WEATHER CONDITIONS THAT COULD ADVERSELY AFFECT THE PROPERTIES AND SERVICEABILITY OF CONCRETE, PREPARATIONS AND PROCEDURES OUTLINED IN ACI 305R (LATEST EDITION) SHOULD BE FOLLOWED, UNLESS OTHERWISE NOTED IN CONSTRUCTION SPECIFICATIONS.

15. WHEN CONCRETING IS TO BE DONE IN COLD WEATHER CONDITIONS (<40 DEGREES F) THAT COULD ADVERSELY AFFECT THE PROPERTIES AND SERVICEABILITY OF CONCRETE, PREPARATIONS AND PROCEDURES OUTLINED IN ACI 306R (LATEST EDITION) SHOULD BE FOLLOWED, UNLESS OTHERWISE NOTED IN CONSTRUCTION SPECIFICATIONS.

16. ANCHOR RODS ARE PROVIDED BY THE LIGHT POLE MANUFACTURER.

17. ALL CONCRETE, INCLUDING FOUNDATION WORK, SHALL BE VIBRATED. PROPER USE OF VIBRATORS IS A MUST. VIBRATORS SHALL NOT BE USED TO TRANSPORT CONCRETE.

18. ALL EMBEDMENTS, INCLUDING ANCHOR RODS, SHALL BE IN PLACE PRIOR TO POURING CONCRETE.

19. CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 304, LATEST EDITION. CONCRETE SHALL NOT BE SUBJECT TO DROPS IN EXCESS OF 5 FEET.

COMMONWEALTH OF PENNSYLVANIA
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FAYETTE COUNTY COURTHOUSE BLDG.

FERENʼS BUILDING

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UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

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BID SET

REVISIONS

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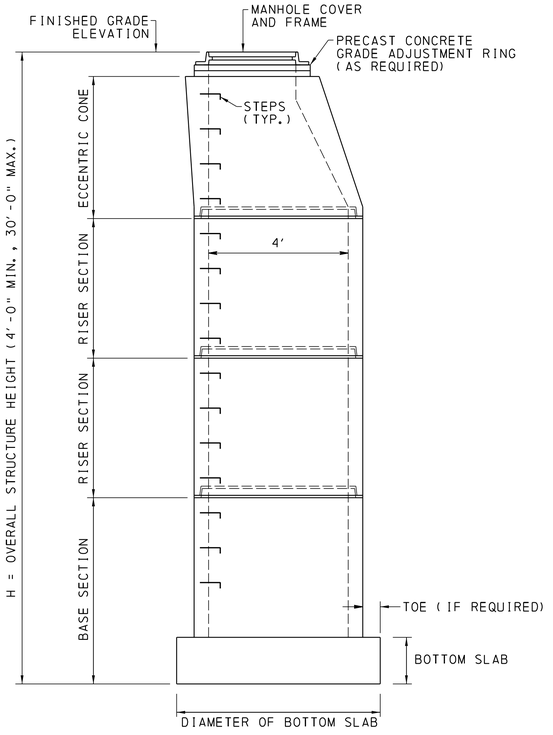
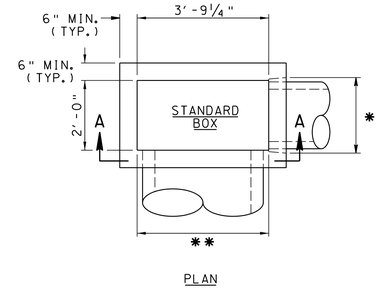


1 PENNDOT TYPE 4 MANHOLE

NOT TO SCALE

NOTES:

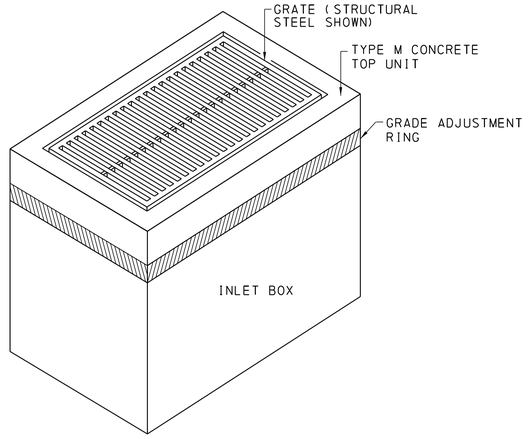
1. CONSTRUCT IN ACCORDANCE WITH THE REQUIREMENTS OF COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PADOT) PUBLICATION 408, SECTION 605 (CAST-IN-PLACE UNITS) OR SECTION 714 (PRE-CAST CEMENT CONCRETE UNITS), AND PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION RC-39M.



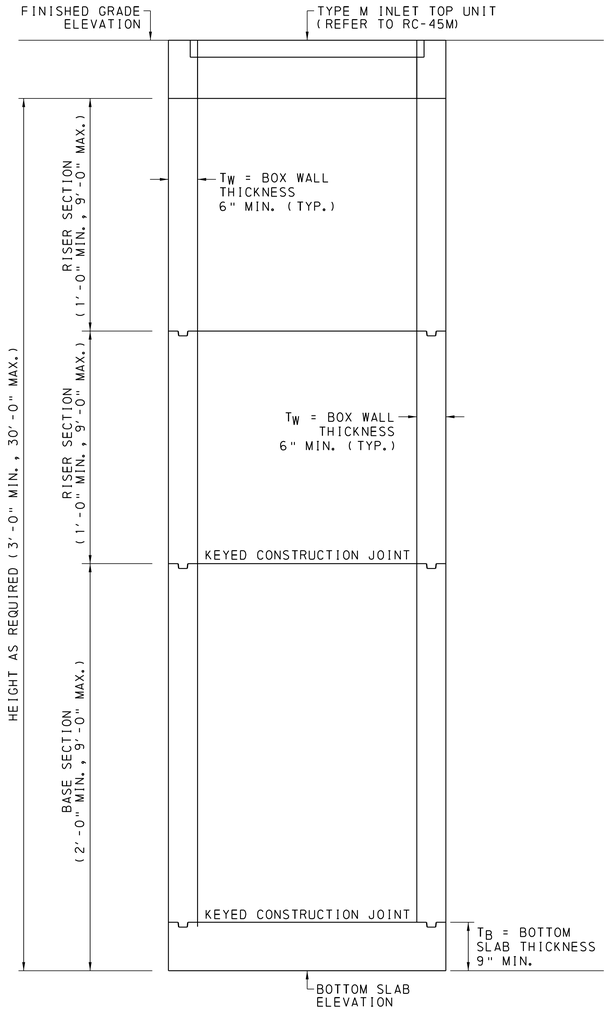
PLAN

* PIPE OPENING (OUTSIDE DIAMETER)
INSIDE FACE = 25"ø MAX.
OUTSIDE FACE = 26"ø MAX.

** PIPE OPENING (OUTSIDE DIAMETER)
INSIDE FACE = 46¼"ø MAX.
OUTSIDE FACE = 47¼"ø MAX.



CONCRETE TOP UNIT - TYPE M



SECTION A-A

2 PENNDOT TYPE M CONCRETE TOP UNIT AND GRATE, STANDARD INLET BOX

NOT TO SCALE

NOTES:

1. CONSTRUCT IN ACCORDANCE WITH THE REQUIREMENTS OF COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PADOT) PUBLICATION 408, SECTION 605 (CAST-IN-PLACE UNITS) OR SECTION 714 (PRE-CAST CEMENT CONCRETE UNITS), AND PUBLICATION 72M STANDARDS FOR ROADWAY CONSTRUCTION RC-45M AND RC-46M.

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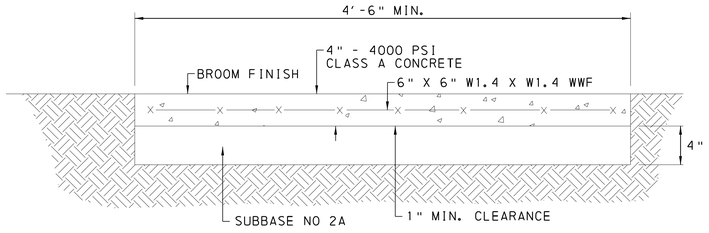
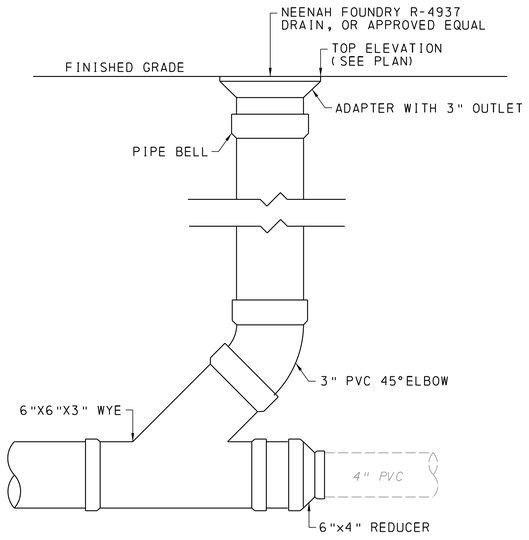


1 SIDEWALK SECTION

NOT TO SCALE

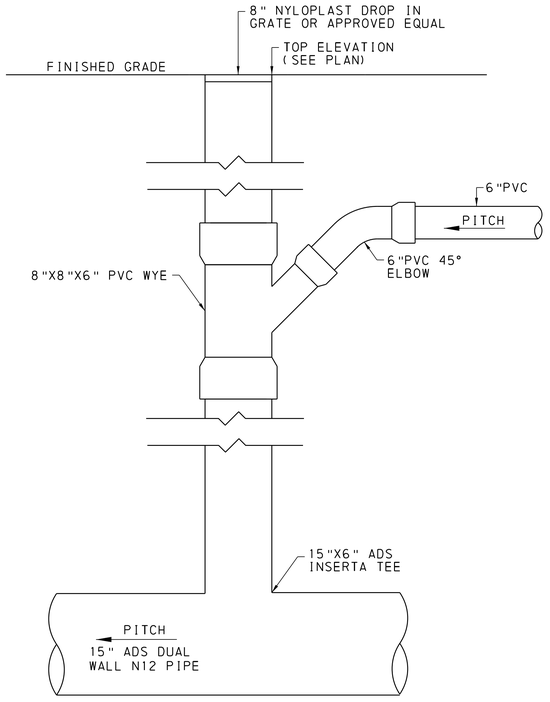
NOTES:

1. CONSTRUCT SIDEWALK IN ACCORDANCE WITH PA DOT SPECIFICATIONS.
2. PROVIDE TRANSVERSE DUMMY JOINTS AT 5' INTERVALS.
3. PROVIDE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AT 20' SPACING.
4. CURING AND PROTECTING COVERS SHALL BE PROVIDED IN ACCORDANCE WITH PUB 408 SECTION 711.



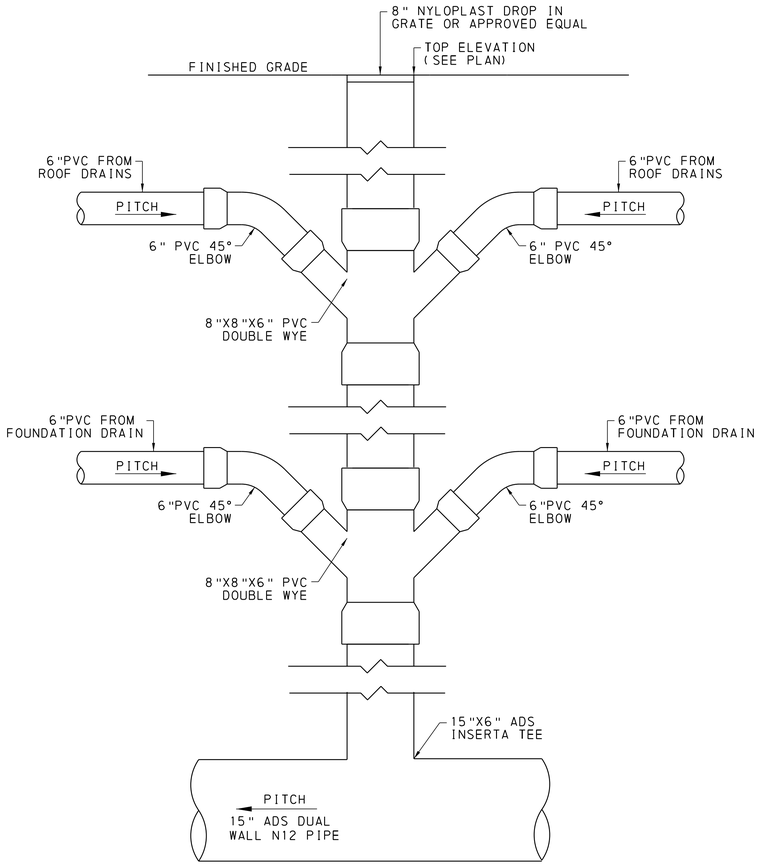
2 P2 DRAIN DETAIL

NOT TO SCALE



3 P3 CLEANOUT DETAIL

NOT TO SCALE



4 P5/P6 CLEANOUT DETAIL

NOT TO SCALE

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FAYETTE COUNTY PENNSYLVANIA

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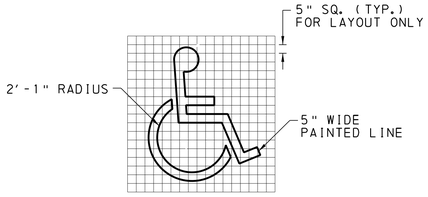
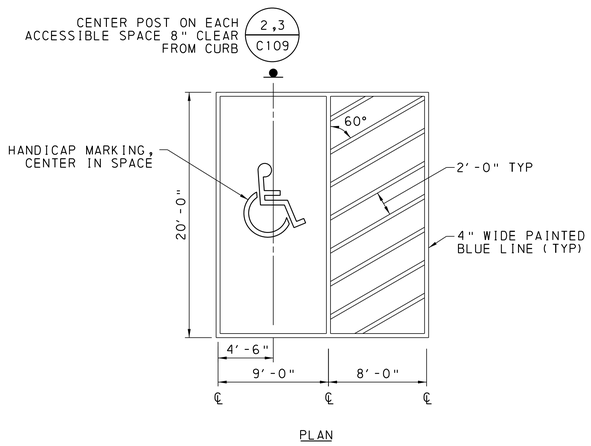
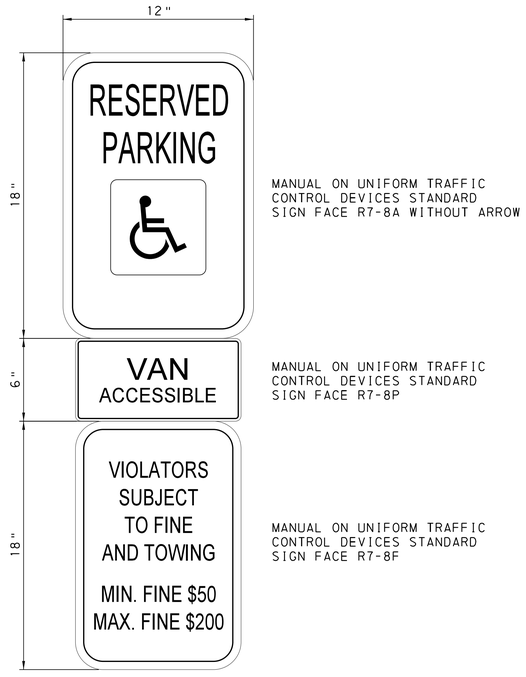


HANDICAP MARKING

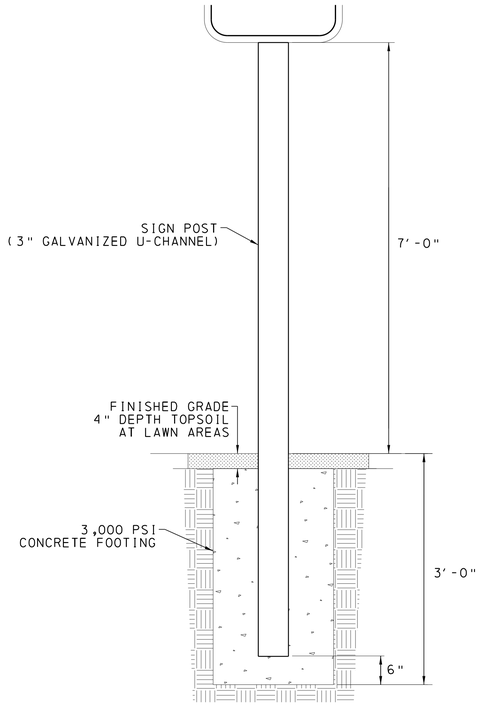


PLAN

1 ACCESSIBLE PARKING
NOT TO SCALE



2 ADA PARKING SIGN FACE
NOT TO SCALE



3 SIGN POST FOOTING IN LAWN / LANDSCAPE
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TABLE A
BRACING REQUIREMENTS

BRACING TYPE	TREE SIZE DECIDUOUS	MINIMUM POST LENGTH	STAKE BRACE TYPE	REQUIRED POST SIZES
2	2½" TO 3½" CALIPER	11'-0"	CHANNEL BAR	3 LB POST H2-2
			WOOD	3" X 3" FULL DIM
2	OVER 3½" CALIPER	12'-6"	CHANNEL BAR	3 LB POST H2-3
			WOOD	3" X 3" FULL DIM

‡ ROUND WOOD STAKES MAY BE SUBSTITUTED AS FOLLOWS:
3" x 3" = 3" DIAMETER ROUND STAKE

TABLE B
110 g, 16-8-16 ROOT CONTACT FERTILIZER PACKET SCHEDULE

TREE SIZE DECIDUOUS	NUMBER OF PACKETS
2" TO 2 1/2" CALIPER	3
3 1/2" TO 4" CALIPER	5
SHRUBS	NUMBER OF PACKETS
3' - 0" TO 5' - 0" HEIGHT	3

TABLE C
10 g, 20-10-5 FERTILIZER PACKET SCHEDULE

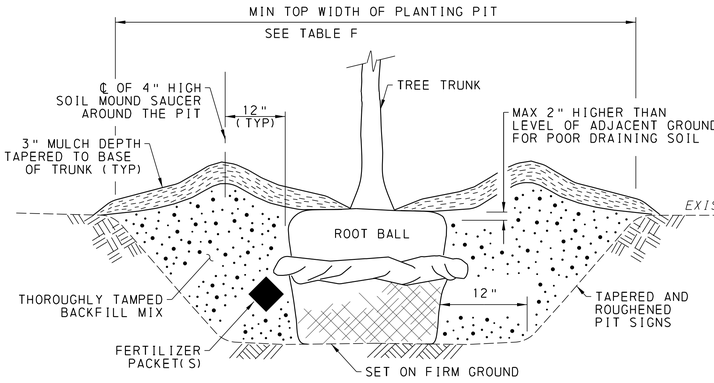
ALL DECIDUOUS SEEDLINGS	1 TABLET
ALL GROUNDCOVER MATERIAL	1 TABLET

TABLE D
COLLAR STRAP BRACING SCHEDULE

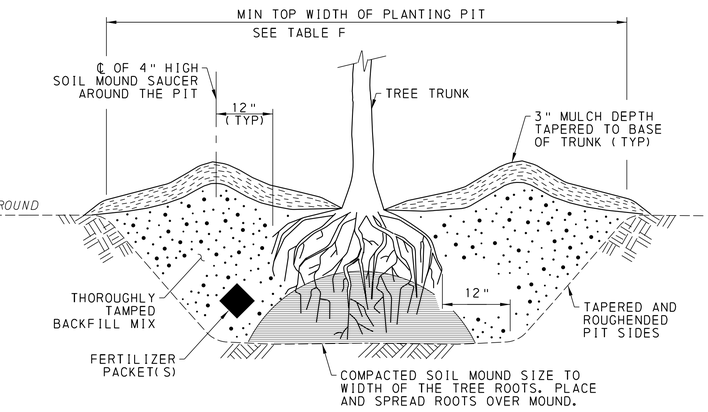
BRACING - RUBBER COLLAR STRAP SCHEDULE	
TREE SIZE	STRAP SIZE
TREES UNDER 2" CALIPER	MIN 1½" WIDE X 14" LENGTH
TREES 2" CALIPER OR LARGER	MIN 3" WIDE X 19" LENGTH

TABLE F
TREE PLANTING PIT SIZE CRITERIA

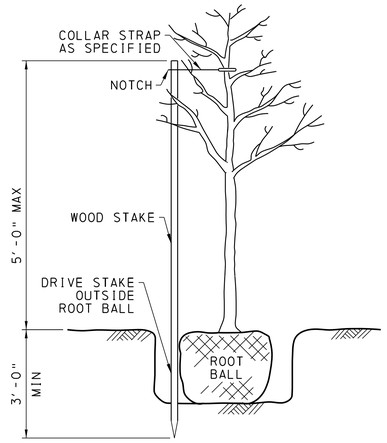
DECIDUOUS TREES		
BALLED AND BURLAPPED, AND WIRE ROOT PROTECTION DEVICES		
CALIPER	HEIGHT	MIN TOP DIAMETER OF PLANTING PIT
2 1/2"	--	6'
4"	--	8'
BARE ROOT		
--	4' TO 8'	5'



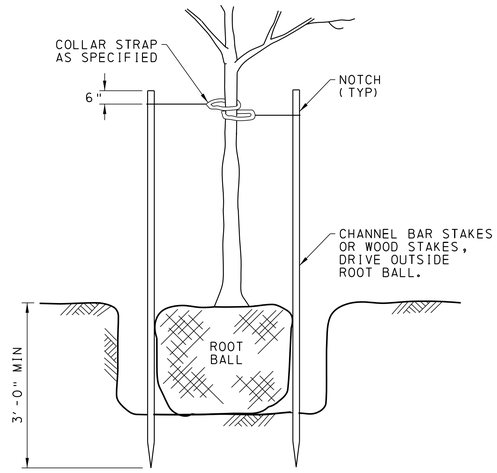
BALLED AND BURLAPPED OR CONTAINER



BARE ROOT

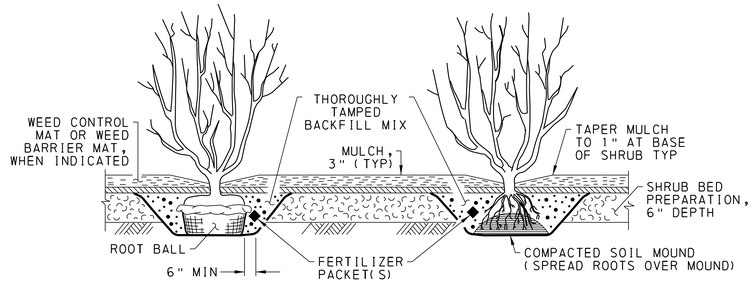


TYPE 3 BRACING
NOT TO SCALE



TYPE 2 BRACING DETAIL
NOT TO SCALE

2 DECIDUOUS TREE PLANTING
NOT TO SCALE



BALLED AND BURLAPPED OR CONTAINER

BARE ROOT

1 SHRUB PLANTING AND SHRUB BED PREPARATION
NOT TO SCALE

PLANTING INSTRUCTIONS

PLANTING OF TREES SHOULD OCCUR BETWEEN APRIL 1 TO MAY 15 OR OCTOBER 15 TO NOVEMBER 30.

INSPECT TREES AT PLANTING SITE PRIOR TO PLANTING. TREES DELIVERED TO THE SITE WITH BALLS BROKEN, LOOSE OR MANUFACTURED WILL BE REJECTED. TREES DAMAGED DURING PLANTING OPERATIONS WILL ALSO BE REJECTED AND REQUIRE REPLACEMENT.

TEMPORARILY STORE TREES IN AREA CLOSE TO PLANTING SITE THAT IS SHADED FOR HOTTEST PART OF DAY. PLACE ROOT BALLS CLOSE TOGETHER AND COVER ROOT SYSTEMS WITH WET BURLAP, WET MULCH, WOOD CHIPS, STRAW OR OTHER APPROVED MATERIALS TO KEEP ROOTS MOIST.

PREPARE PLANTING PITS BY HAND AT LOCATIONS INDICATED OR AT LOCATIONS AS DIRECTED BY THE ENGINEER AFTER COORDINATION WITH THE PROPERTY OWNER.

DIG PITS WITH TAPERED SIDES AND FLAT BOTTOM SO PIT IS WIDER AT TOP THAN AT ROOT MASS DEPTH AND LARGE ENOUGH TO ACCOMMODATE ROOTS WITHOUT CROWDING. ALLOW FOR PLACEMENT OF AT LEAST 12 INCHES OF BACKFILL MIX AROUND ALL SIDES AT BOTTOM OF ROOT MASS.

SCARIFY, LOOSEN, OR ROUGHEN THE TAPERED PIT SIDES FOR GLAZED OR HARDENED SOIL SURFACES IMMEDIATELY BEFORE PLANTING.

HANDLE BALLED AND BURLAPPED PLANTS BY THE BALL OR OTHER ROOT PROTECTIVE DEVICE, NOT BY STEM OR BRANCHES.

PLANT TREES WITHIN ONE WEEK OF DIGGING PIT.

PLACE TREE PLUMB AND AT REQUIRED DEPTH WITHIN PLANTING PIT AS SHOWN ON DETAILS.

FERTILIZE AS INDICATED.

BACKFILL WITH A UNIFORM MIXTURE OF ONE PART PEAT OR COMPOST MATERIAL AS SPECIFIED IN PUBLICATION 408 SECTION 808.2, AND THREE PARTS SOIL BY VOLUME THAT WAS REMOVED FROM THE PLANTING PIT.

BACKFILL BOTTOM HALF OF PIT AND MIX APPROPRIATE AMOUNT OF WATER ABSORBENT POLYMER GRANULES AS INDICATED IN PUBLICATION 408 SECTION 808.3. CULTIVATE AND TAMP BACKFILL MIX AROUND BALL TO FILL VOIDS AND ELIMINATE AIR POCKETS.

WHEN BACKFILL IS TWO-THIRDS COMPLETE CUT OR UNTIE ROOT BALL LACING AND LAY BACK OR CUT AWAY BURLAP WRAP FROM TOP ONE-THIRD OF ROOT BALL.

REMOVE TAPE, WIRE OR TWINE THAT MAY BE AROUND TRUNK.

WATER BACKFILL MATERIAL THOROUGHLY AROUND ROOTS AND COMPLETE BACK FILLING.

THOROUGHLY WATER AGAIN AFTER INITIAL WATERING HAS BEEN ABSORBED.

FIRM BACKFILL MATERIAL AROUND TOP OF PLANTING PIT AND TREE TRUNK.

FILL SURFACE IRREGULARITIES AND LEVEL SOIL.

STAKE TREES WITH RUBBER COLLAR STRAP IMMEDIATELY AFTER COMPLETION OF BACK-FILLING AS INDICATED.

WRAP STRAPS AROUND TREE TRUNK AND FASTEN TO ENDS OF STAKE WITH APPROVED NATURAL FIBER TWINE OR ROPE.

MAINTAIN PLANTINGS IN A LIVING, HEALTHY CONDITION UNTIL THE ENTIRE PROJECT HAS BEEN ACCEPTED.

WATER AS DIRECTED.

REMOVE AND DISPOSE OF SUBSOIL, ROCK, DEBRIS AND OTHER UNDESIRABLE EXCAVATION MATERIALS.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT [illegible] VANVERTH
ENGINEER No. 062921
PENNSYLVANIA

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
PH: 724 - 323 - 8020

GIBSON THOMAS ENGINEERING CO., INC.

NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.
FEREN'S BUILDING

61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JAN 31, 2022

BID SET

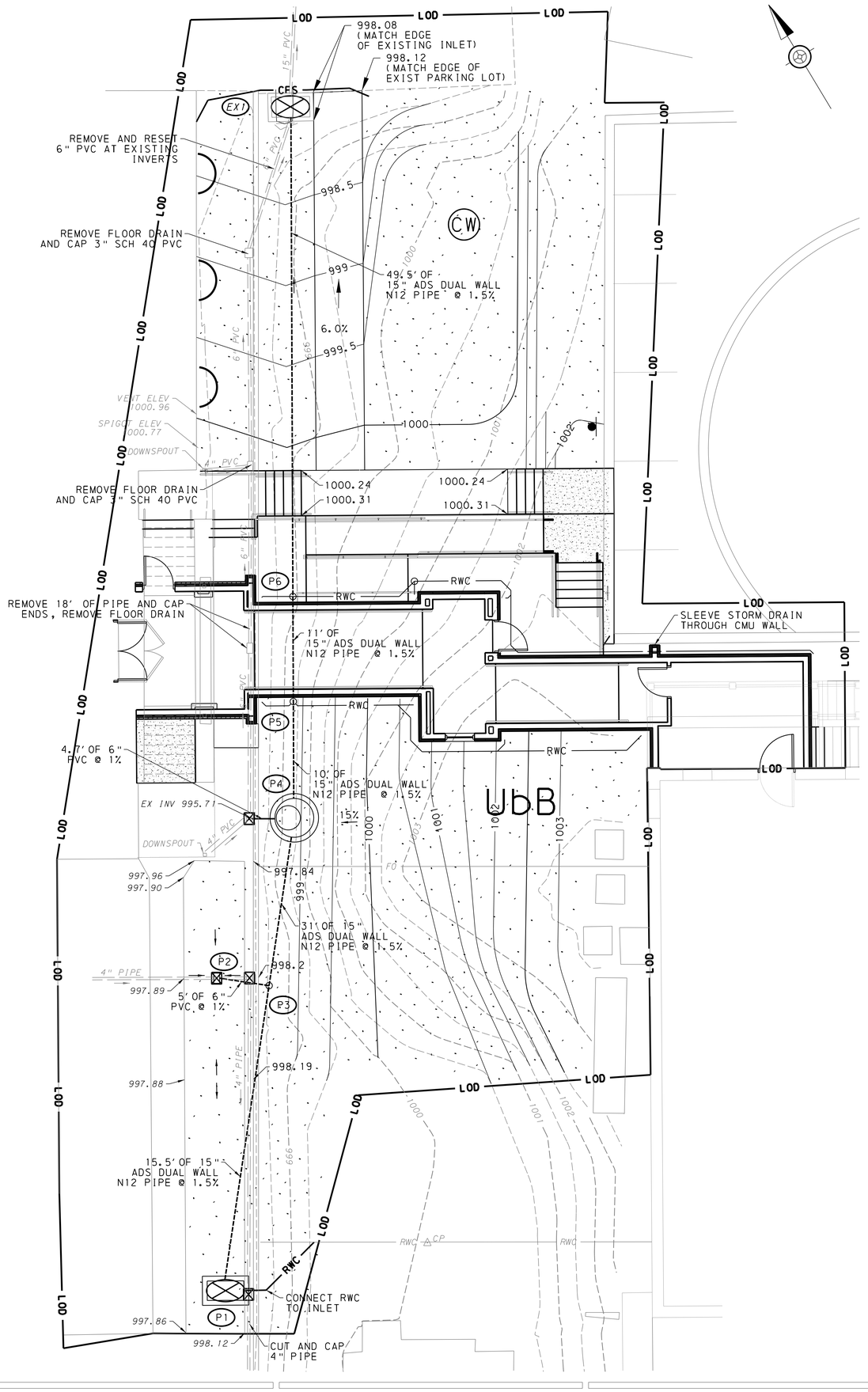
REVISIONS

15537

LANDSCAPE DETAILS

C110

NOT FOR CONSTRUCTION



LEGEND

- 12" CFS PROTECTION
- INLET PROTECTION
- CW CONCRETE WASHOUT
- —1240— EXISTING CONTOUR
- —1240— PROPOSED CONTOUR
- — 18" — PROPOSED PIPE
- — LOD — LIMIT OF DISTURBANCE/ PERMIT BOUNDARY
- — CFS — 24" COMPOST FILTER SOCK
- UbB SOIL TYPE
- TEMPORARY ROLLED EROSION CONTROL PRODUCTS

(P1) PENNDOT TYPE M CONCRETE TOP UNIT
AND GRATE AND STANDARD BOX
TG = 997.80
INV RWC = 995.80
INV 15" = 992.00

(P2) NEENAH FOUNDRY R-4937
DRAIN, OR APPROVED EQUAL
TG = 997.80
INV = 995.67

(P3) CLEAN OUT
8" NYLOPLAST
DROP IN GRATE
OR APPROVED EQUAL
TG = 998.62
INV 15" = 991.77

(P4) PENNDOT TYPE 4 MANHOLE
TG = 998.80
INV IN 6" = 995.66
INV IN 15" = 991.30
INV OUT 15" = 991.10

(P5) CLEAN OUT
8" NYLOPLAST
DROP IN GRATE
OR APPROVED EQUAL
TG = 998.86
INV 15" = 990.94

(P6) CLEAN OUT
8" NYLOPLAST
DROP IN GRATE
OR APPROVED EQUAL
TG = 1004.30
INV 15" = 990.77

(EX1) *INLET*
TG=998.08
INV IN 6" = 994.83
INV IN 15" = 990.00
INV OUT 15" = 989.81

SCALE
0 5 10 FEET

NOT FOR CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
ROBERT CLAYTON VANVERTH
No. 062921

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FERENS BUILDING

NEW WALKWAY CONNECTION STRUCTURE

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EROSION AND SEDIMENTATION CONTROL PLAN

ESC101

GENERAL NOTES

IN ACCORDANCE WITH THE CURRENT POLICIES AND PRACTICES IN THE COMMONWEALTH OF PENNSYLVANIA TO CONTROL EROSION, IT IS REQUIRED THAT THE CONTRACTOR FOR THIS PROJECT CONFORM WITH THE FOLLOWING GUIDELINES AS THEY ARE APPLICABLE AND IN ACCORDANCE WITH THE INSTRUCTIONS OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE INSPECTOR IN CHARGE.

ALL EARTH DISTURBANCES SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.

AT LEAST 7 BUSINESS DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER AND/OR OPERATOR SHALL INVITE ALL EARTHMOVING CONTRACTORS, A TOWNSHIP REPRESENTATIVE, AND THE E&S PLAN PREPARER.

AT LEAST 3 BUSINESS DAYS PRIOR TO STARTING ANY EARTH DISTURBING ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.

LIMIT EARTH DISTURBANCE TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. DO NOT COMMENCE GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS DOCUMENT.

CLEARLY MARK AND/OR FENCE THE LIMIT OF DISTURBANCE BEFORE ANY EARTH DISTURBANCE OPERATIONS BEGIN. CONSTRUCTION VEHICLES ARE NOT PERMITTED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE DRAWINGS.

TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED WITHIN THE LIMIT OF DISTURBANCE SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED TO PREVENT ANY POTENTIAL EROSION. PLACE STOCKPILES NO GREATER THAN 35 FEET IN HEIGHT WITH SLOPES NO STEEPER THAN 2H:1V.

IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BMPS TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY PLAN PREPARER, THE LOCAL COUNTY CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF PADEP.

THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING AND PREPARING A SEPARATE EROSION AND SEDIMENT POLLUTION CONTROL PLAN AND AN NPDES PERMIT, IF REQUIRED, FOR ANY AREAS TO BE DISTURBED, WHICH ARE NOT SHOWN ON THE PLANS INCLUDING BUT NOT LIMITED TO WASTE SITES, BORROW SITES, JOB TRAILER SITES, MATERIAL STORAGE AREAS AND EQUIPMENT STORAGE SITES. THESE PLANS MUST BE SUBMITTED TO AND APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT BEFORE ANY DISTURBANCE WITHIN THESE AREAS BEGIN. THE CONTRACTOR SHOULD ALLOW TIME IN THEIR CONSTRUCTION PLANNING FOR THE REVIEW PROCESS BY THE LOCAL COUNTY CONSERVATION DISTRICT AND/OR PADEP.

ENSURE THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY FROM THE PROJECT SITE.

AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.

ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE.

PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.

ENSURE THAT E&S BMPS REMAIN FUNCTIONAL UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT OR PADEP.

AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATION SEASON.

FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO $10,000 PER DAY IN CIVIL PENALTIES, UP TO $10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO $25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

ALL CONTRACTORS ASSOCIATED WITH EARTHMOVING OPERATIONS MUST COMPLETE THE CO-PERMITTEE PROCESS PRIOR TO ANY CONSTRUCTION ACTIVITIES.

OTHER REGULATIONS

THIS PROJECT WILL COMPLY WITH THE PENNSYLVANIA CODE TITLE 25 - ENVIRONMENTAL PROTECTION: PART I - DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C - PROTECTION OF NATURAL RESOURCES, ARTICLE II - WATER RESOURCES, CHAPTER 102 - EROSION AND SEDIMENT CONTROL OR THE MORE RESTRICTIVE OF THE FEDERAL, STATE, OR LOCAL POLLUTION CONTROL REGULATIONS.

WASTE MATERIAL RECYCLING

ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH PADEP'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET. SEQ. NO BUILDING MATERIALS, WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE SITE. PROJECT WASTES MAY INCLUDE BUT ARE NOT LIMITED TO BITUMINOUS AND WASTE RESULTING FROM THE DEMOLITION OF THE EXISTING BUILDINGS.

ENVIRONMENTAL DUE DILIGENCE

APPLICANTS AND/OR OPERATORS MUST USE ENVIRONMENTAL DUE DILIGENCE TO ENSURE THAT THE FILL MATERIAL ASSOCIATED WITH THIS PROJECT QUALIFIES AS CLEAN FILL. DEFINITIONS OF CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE ARE PROVIDED BELOW. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL", DOCUMENT NUMBER 258-2182-773. A COPY OF THIS POLICY IS AVAILABLE ONLINE AT WWW.DEPWEB.STATE.PA.US. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK, OR CONCRETE FROM CONSTRUCTION OR DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM 'USED ASPHALT' DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.) ENVIRONMENT DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDED, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL."

THERMAL IMPACTS

THE PROPOSED PROJECT IS THE DEMOLITION OF THE EXISTING SIDEWALKS WITH NEW CONSTRUCTION OF A CONNECTOR BRIDGE BUILDING. THERMAL IMPACTS WILL BE IMPROVED SINCE THE PROJECT REDUCES THE IMPERVIOUS SURFACES WITHIN THE PROPERTY. ADDITIONAL IMPROVEMENTS TO THE THERMAL IMPACTS WILL BE THROUGH THE USE OF THE BMPS BEING UTILIZED FOR STORMWATER MANAGEMENT ON THE PROJECT. THE ROOF TOP DOWNSPOUTS ARE CONNECTED TO THE STORMWATER MANAGEMENT SYSTEM. DURING CONSTRUCTION THERMAL IMPACTS WILL BE REDUCED SINCE THE IMPERVIOUS SURFACES THAT COVER THE SITE WILL BE REDUCED.

SITE SOILS

THE FOLLOWING SOILS ARE LOCATED WITHIN THE PROJECT AREA:

SYMBOL	SOIL NAME	SLOPE
UbB	URBAN LAND	0%-8%

URBAN SOILS HAVE THE FOLLOWING LIMITATIONS: DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE AND FROST ACTION

THE PRIMARY LIMITATIONS AS RELATED TO THIS PROJECT ARE THE CUTBACKS AND CAVING, CORROSIVITY, DROUGHTY, ERODIBILITY, SEASONABLE HIGH WATER TABLE, HYDRIC, LANDSLIDE PRONE, SLOW PERCOLATION, PIPING, POOR SOURCE OF TOPSOIL, FROST ACTION, SHRINK-SWELL, POTENTIAL SINKHOLE AND WETNESS. THESE LIMITATIONS RESPECTIVELY WILL BE MITIGATED BY: LAYING BACK SLOPES OF PIPE TRENCHES DURING INSTALLATION OR PROVIDING SHORE TRENCH/BOXES, PROPER INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT POLLUTION CONTROL BMPS, BORROWING OF SOIL FOR EMBANKMENT MATERIAL FROM OTHER LOCATIONS, AND IMPORTING OF TOPSOIL TO THE PROJECT SITE.

SOILS WITH HIGH RATINGS FOR CORROSIVITY TO STEEL AND HIGH RATINGS FOR CORROSIVITY TO CONCRETE WILL BE MITIGATED BY THE FOLLOWING:
1. ALL PIPES WILL BE BACKFILLED WITH STONE.
2. PIPES THAT ARE COMBINATION STORM/SEWER WILL BE MODIFIED TO UTILIZE FOREIGN BORROW.
3. INLETS, MANHOLES AND ENDWALLLS WILL BE BACKFILLED WITH STONE.

AREA TABULATION

AREA WITHIN LIMITS OF DISTURBANCE 0.16 AC

CALL BEFORE YOU DIG
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL 1-800-242-1776
PA ONE CALL SYSTEMS, INC.
THE CITY OF UNIONTOWN SERIAL NO. 20210352327

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ROBERT CHARLES HANVERTH No. 062921

GIBSON - THOMAS ENGINEERING CO.
2200 UNIVERSITY DRIVE, SUITE 1 LEMONT FURNACE, PA 15456
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NEW WALKWAY CONNECTION STRUCTURE

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JAN 31, 2022

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EROSION AND SEDIMENTATION CONTROL NOTES

ESC102

NOT FOR CONSTRUCTION

VEGETATIVE SURFACE STABILIZATION

ALL DISTURBED AREAS THAT WILL NOT BE STABILIZED WITH IMPERVIOUS SURFACES WILL BE STABILIZED WITH VEGETATION. AREAS THAT WILL BE SUBJECT TO EARTHMOVING WITHIN 12 MONTHS MAY BE STABILIZED WITH TEMPORARY SEED MIXTURES. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREAS SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. AN AREA WILL NOT BE CONSIDERED STABILIZED UNTIL A MINIMUM UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED. CRITICAL AREAS INCLUDING ERODIBLE SOILS AND AREAS WITHIN 50 FEET OF A SURFACE WATER SHOULD BE BLANKETED. TEMPORARY EROSION CONTROL BMPS THAT WERE INSTALLED FOR THE EARTHMOVING PHASE OF THE PROJECT MUST REMAIN IN PLACE AND BE MAINTAINED IN WORKING ORDER UNTIL PERMANENT STABILIZATION IS ACHIEVED.

TOPSOIL WILL BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A DEPTH OF 4 INCHES MINIMUM. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

WHERE SEED AND MULCH IS APPLIED BY HYDROSEEDING METHODS, THE SEED AND MULCH SHOULD BE APPLIED IN SEPARATE APPLICATIONS WITH THE SEED BEING APPLIED FIRST AND THE MULCH SPRAYED ON TOP OF THE SEED.

IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SPECIFICATIONS, LATEST EDITION, SECTION 804 - SEEDING AND SOIL SUPPLEMENTS AND SECTION 805 - MULCHING, ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY THAT WILL NOT BE STABILIZED WITH PAVEMENT OR ROCK LINING WILL BE SEEDED AND MULCHED BASED ON THE GUIDELINES LISTED IN TABLE SCHEDULE OF SEEDING AND SOIL SUPPLEMENTS.

STRAW MULCH WILL BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. MULCH ON SLOPES OF 8% OR STEEPER WILL BE HELD IN PLACE WITH NETTING.

SCHEDULE OF SEEDING AND SOIL SUPPLEMENTS

SEED (% BY WEIGHT)	MINIMUM %		SEEDING RATE (LBS PER 1000 SY)	MULCH MATERIAL AND RATE	APPLICATION DATES	APPLICATION AREA
	PURITY	GERMI-NATION				
FORMULA B 20% PERENNIAL RYEGRASS 30% CREEPING RED FESCUE 50% KENTUCKY BLUEGRASS	 97 97 97	 90 85 80	42.0 TOTAL	STRAW MULCH 1240 LBS PER 1000 SY	MAR 15-JUN 01 AUG 01-OCT 15	YARD AREAS
FORMULA E 100% ANNUAL RYEGRASS	100	90	10.0 TOTAL	STRAW MULCH 1240 LBS PER 1000 SY	MAR 15-OCT 15	TEMPORARY STABILIZATION

MULCH APPLICATION RATES

MULCH TYPE	APPLICATION RATE (MIN)			NOTES
	PER ACRE	PER 1000 SQ FT	PER 1000 SQ YD	
STRAW	3 TONS	140 LB	1240 LB	EITHER WHEAT OR OAT STRAW, FREE OF WEEDS, NOT CHOPPED OR FINELY BROKEN
HAY	3 TONS	140 LB	1240 LB	TIMOTHY, MIXED CLOVER AND TIMOTHY OR OTHER NATIVE FORAGE GRASSES
WOOD CHIPS	4-6 TONS	185-275 LB	1650-2500 LB	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES
HYDROMULCH	1 TON	47 LB	415 LB	SEE LIMITATIONS ABOVE

SOIL AMENDMENT APPLICATION RATE EQUIVALENTS

SOIL AMMENDMENT	PERMANENT SEEDING APPLICATION RATES			NOTES
	PER ACRE	PER 1000 SQ FT	PER 1000 SQ YD	
AGRICULTURAL LIME	6 TONS	240 LB	2480 LB	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS
10-10-20 FERTILIZER	1000 LB	25 LB	210 LB	OR AS PER SOIL TEST; MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS
	TEMPORARY SEEDING APPLICATION RATES			
AGRICULTURAL LIME	1 TON	40 LB	410 LB	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILES
10-10-20 FERTILIZER	500 LB	12.5 LB	100 LB	TYPICALLY NOT REQUIRED FOR TOPSOIL STOCKPILES

MAINTENANCE PROGRAM FOR CONTROL FACILITIES

UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION BMPS MUST BE MAINTAINED PROPERLY. INSPECT ALL E&S BMPS AFTER EACH RUNOFF EVENT OR SNOW MELT AND ON A WEEKLY BASIS. PERFORM ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK IMMEDIATELY, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING. SHOULD ANY MEASURES CONTAINED WITHIN THIS PLAN PROVE TO BE INCAPABLE OF ADEQUATELY REMOVING SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE OR OF STABILIZING THE SURFACES INVOLVED, ADDITIONAL MEASURES MUST BE IMPLEMENTED BY THE CONTRACTOR TO ELIMINATE SUCH PROBLEMS. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS TO THOSE INSTALLED WILL BE REQUIRED.

ALL SITE INSPECTIONS SHALL BE LOGGED ONTO DEP FORM 3800-FM-BCW0271D DATED 12-2019 AND KEPT ON SITE AT ALL TIMES. THE FOLLOWING ITEMS SHALL BE DOCUMENTED IN THE LOG WHEN BMPS ARE FOUND TO FAIL TO ALLEVIATE EROSION AND/OR SEDIMENT POLLUTION:

1. THE INSPECTION DATE, PERSON CONDUCTING THE INSPECTION, ANY DEFICIENCIES FOUND AND THE DATE THE DEFICIENCIES WERE CORRECTED.
2. THE LOCATION AND SEVERITY OF THE BMPS FAILURE AND ANY POLLUTION EVENTS.
3. ALL STEPS TAKEN TO REDUCE, ELIMINATE AND PREVENT THE RECURRENCE OF THE NON-COMPLIANCE.
4. THE TIME FRAME TO CORRECT THE NON-COMPLIANCE, INCLUDING THE EXACT DATES WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE.

ONCE SEDIMENT REACHES THE MAXIMUM ALLOWABLE DEPTH FOR A PARTICULAR SEDIMENT STRUCTURE OR DEVICE, THE CONTRACTOR WILL REMOVE ALL ACCUMULATED SEDIMENT. SEDIMENT REMOVED FROM BMPS SHOULD BE EITHER USED AS EMBANKMENT OR AS APPROVED BY THE ENGINEER OR PROPERLY DISPOSED OF IN ACCORDANCE WITH SPECIFICATION PUBLICATION 408, LATEST EDITION. SEDIMENT SHALL NOT BE DUMPED IN AREAS WHERE EROSION WILL CAUSE AN UNSIGHTLY SCAR OR WHERE THE SEDIMENT CAN REACH A STREAM. ALL SEDIMENT WILL BE REMOVED FROM A TEMPORARY SEDIMENTATION OR EROSION CONTROL DEVICE PRIOR TO REMOVAL OF THAT DEVICE. UPON REMOVING THE SEDIMENT FROM THE DEVICE AND PLACING IT IN AN APPROVED LOCATION, THE MATERIAL SHALL BE SPREAD TO A UNIFORM DEPTH, SEEDED AND STABILIZED.

RETURN SEDIMENT THAT IS TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSE OF IN THE MANNER DESCRIBED IN THIS PLAN. DO NOT WASH, SHOVEL, OR SWEEP THE SEDIMENT INTO ANY ROADSIDE DITCH, STORM SEWER OR SURFACE WATER.

ANY PERMANENT SEEDED AREAS THAT BECOME ERODED SHALL HAVE THE TOPSOIL REPLACED AND THE GRASS RESOWN WITH NEW MULCH APPLIED. IF CULTIVATION OF A NEW LEGUME OR GRASS CROP IS NOT PRACTICAL IN THE ERODED AREA, THE CONTRACTOR SHALL INSTALL SOD IN LIEU OF NEW SEED.

IF THE VEGETATIVE COVER ESTABLISHED IS ALLOWED TO DETERIORATE AND BECOME INEFFECTIVE, A FERTILIZATION AND RE-SEEDING PROGRAM SHALL BE ESTABLISHED AND CARRIED OUT AS THE CONSTRUCTION PROCEEDS. AREAS WHERE FAILURES HAVE BEEN EXPERIENCED IN THE ESTABLISHMENT OF BOTH PERMANENT AND TEMPORARY VEGETATIVE PROTECTION SHALL BE PROMPTLY TREATED. THE REESTABLISHMENT OF PERMANENT VEGETATIVE COVER SHALL BE INITIATED AS SOON AS POSSIBLE.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PERIODIC INSPECTION AND MAINTENANCE OF ALL DRAINAGE AND EROSION CONTROL MEASURES. THE SPECIFIC CRITERIA FOR INSPECTION AND MAINTENANCE FOR EACH OF THE EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE AS FOLLOWS:

INLET FILTER BAG

INSPECT INLET FILTER BAG WEEKLY AND AFTER EACH RUNOFF EVENT. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER INSPECTION. REMOVE ACCUMULATED SEDIMENT/DEBRIS WHEN THE INLET FILTER REACHES ONE-HALF MAXIMUM CAPACITY OR WHEN THE FLOW CAPACITY OF THE INLET HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. REPLACE FILTER BAG IF RIPPED, TORN OR CLOGGED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. BAGS THAT WILL BE REUSED SHOULD BE RINSED AT A LOCATION WHERE THE RINSE WATER WILL ENTER A SEDIMENT TRAP OR SEDIMENT BASIN. REMOVE AND PROPERLY DISPOSE OF INLET FILTER BAG WHEN NO LONGER NEEDED.

COMPOST FILTER SOCK

COMPOST FILTER SOCK SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. RESULTS OF SUCH INSPECTIONS MUST BE REVIEWED WITH THE REPRESENTATIVE. DAMAGED SOCKS SHALL BE IMMEDIATELY REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED AFTER 24 HOURS OF INSPECTION. REPLACE BIODEGRADABLE FILTER SOCK AFTER 6 MONTHS AND PHOTODEGRADABLE FILTER SOCK AFTER 12 MONTHS. UPON STABILIZATION OF THE TRIBUTARY AREA, THE FILTER SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH IS TYPICALLY CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT. REMOVE DEPOSITS WHEN SEDIMENT ACCUMULATION IS ONE-HALF OF THE HEIGHT OF THE EXPOSED COMPOST FILTER SOCK.

COMPOST FILTER SOCK CONCRETE WASHOUT

INSPECT CONCRETE WASHOUTS DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. ACCUMULATED MATERIALS SHOULD BE REMOVED WHEN THEY REACH 50% CAPACITY. PLASTIC LINERS SHOULD BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.

ROLLED EROSION CONTROL PRODUCTS (RECP)

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

SEQUENCE OF BMP INSTALLATION AND EARTHMOVING ACTIVITIES

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT OR BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP, EXCEPT WHERE NOTED.

1. MARK THE LIMITS OF DISTURBANCE WITH FLAGGING AND STAKES IN THE FIELD.
2. INSTALL COMPOST FILTER SOCKS AT THE LOCATIONS SHOWN ON PLAN, AND IN ACCORDANCE WITH THE DETAIL.
3. INSTALL INLET FILTER BAGS IN THE EXISTING INLETS AND INSTALL CONCRETE WASHOUT.
4. PROTECT EXISTING UTILITIES BY MARKING LOCATIONS WHERE NECESSARY.
5. INSTALL THE DRAINAGE SYSTEM WORKING DOWNSTREAM TO UPSTREAM. INSTALL THE INLET FILTER BAGS AS THE INLETS ARE PLACES.
6. CONSTRUCT THE BUILDING. SEE ARCHITECTURAL PLANS BUILDING FOR SCOPE OF WORK.
7. PERFORM PAVING OPERATIONS. PLACE CURBING, SIDEWALK, PAVEMENT MARKINGS, SIGNAGE, AND ANY REMAINING PARKING LOT ITEMS.
8. IMMEDIATELY PLACE TOPSOIL, SEEDING, LANDSCAPING, AND MULCHING WHEN THE GRADING OPERATIONS ARE COMPLETE. REMOVE THE TEMPORARY MEASURES WHEN THE DISTURBED AREAS HAVE REACHED A UNIFORM 70% COVERAGE OF EROSION-RESISTANT PERENNIAL VEGETATION. ALL DISTURBED AREAS MUST BE PROVIDED WITH IMMEDIATE INTERIM STABILIZATION IF THE AREA REMAINS DORMANT FOR FOUR OR MORE DAYS. NO MORE THAN 15,000 SQUARE FEET OF DISTURBED AREA MAY REACH FINAL GRADE BEFORE INITIATING SEEDING AND MULCHING OPERATIONS. RESEED ALL DISTURBED OR DISTRESSED AREAS IF VEGETATION HAS NOT BEEN ESTABLISHED AFTER 30 DAYS.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT CLINTON VANVERTH
ENGINEER
No. 062921
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GIBSON THOMAS ENGINEERING CO., INC.

NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FERENʼS BUILDING

61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

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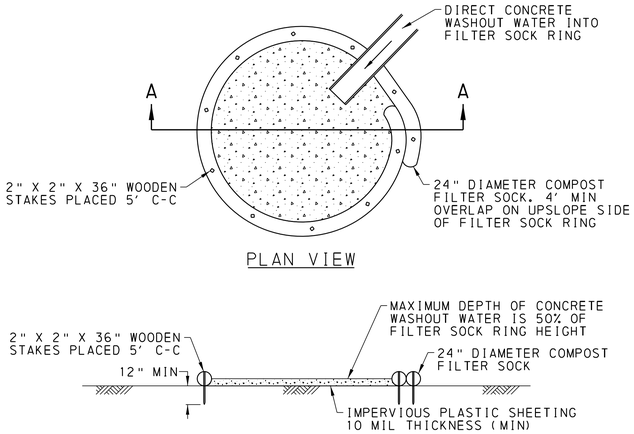
EROSION AND SEDIMENTATION MAINTENANCE NOTES

ESC103

NOT FOR CONSTRUCTION

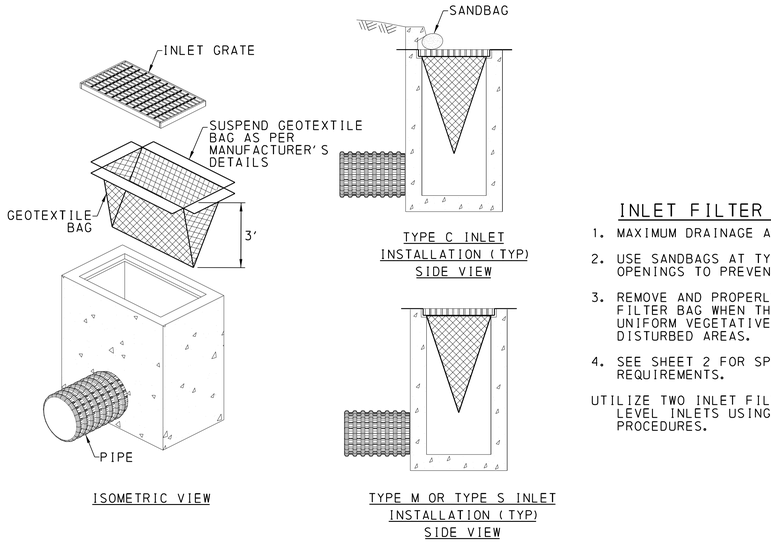


1 CONCRETE WASHOUT

NOT TO SCALE

CONCRETE WASHOUT NOTES:

1. DO NOT INSTALL WITHIN 50 FEET OF SURFACE WATERS OR STORM DRAINS.
2. LOCATE ON SLOPES NOT EXCEEDING A 2% GRADE.
3. PLACE A SUITABLE IMPERVIOUS GEOMEMBRANE AT THE LOCATION OF THE CONCRETE WASHOUT PRIOR TO INSTALLING THE COMPOST FILTER SOCKS.
4. PROVIDE PROPER SIGNAGE FOR DRIVERS SO THEY ARE AWARE OF THE PRESENCE OF WASHOUT FACILITIES.
5. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
6. SEE SHEET EXC103 FOR SPECIFIC MAINTENANCE REQUIREMENTS.



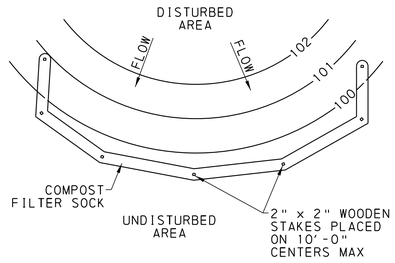
INLET FILTER BAG

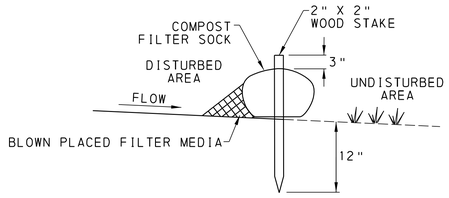
NOT TO SCALE

INLET FILTER BAG NOTES:

1. MAXIMUM DRAINAGE AREA IS 1/2 ACRE.
2. USE SANDBAGS AT TYPE C INLET CURB OPENINGS TO PREVENT BYPASS FLOW.
3. REMOVE AND PROPERLY DISPOSE OF INLET FILTER BAG WHEN THE SITE HAS A 70% UNIFORM VEGETATIVE COVER OVER ALL THE DISTURBED AREAS.
4. SEE SHEET 2 FOR SPECIFIC MAINTENANCE REQUIREMENTS.

UTILIZE TWO INLET FILTER BAGS FOR TYPE D-H LEVEL INLETS USING THE SAME INSTALLATION PROCEDURES.





1 COMPOST FILTER SOCK

NOT TO SCALE

SLOPE TO SLOPE RELATIONSHIP FOR COMPOST FILTER SOCK	
SLOPE PERCENT	MAX SLOPE LENGTH (FT) ABOVE SOCK 12" SOCK HEIGHT
2% OR LESS	520
5	245
10	150
15	100
20	70
25	55
30	45
35	40
40	35
45	30
50	25

SLOPE TO SLOPE RELATIONSHIP FOR COMPOST FILTER SOCK	
SLOPE PERCENT	MAX SLOPE LENGTH (FT) ABOVE SOCK 24" SOCK HEIGHT
2% OR LESS	1000
5	500
10	320
15	250
20	200
25	150
30	100
35	90
40	80
45	65
50	50

COMPOST FILTER SOCK NOTES:

1. SOCK FABRIC AND COMPOST SHALL MEET THE STANDARDS SHOWN ON THE TABLES.
2. PLACE COMPOST FILTER SOCK ON LEVEL GRADE. EXTEND BOTH ENDS OF THE COMPOST FILTER SOCK AT LEAST 8' UPSLOPE AT 45 DEGREES TO THE MAIN ALIGNMENT.
3. PLACEMENT OF COMPOST FILTER SOCK SHOULD BE BEYOND THE LIMIT OF EXCAVATION WHICH COULD INCLUDE GEOTECHNICAL TREATMENTS SHOWN ON PLAN AND/OR CROSS SECTIONS.
4. MAXIMUM SLOPE LENGTH ABOVE ANY COMPOST FILTER SOCK SHALL NOT EXCEED THAT SHOWN IN THE SLOPE-TO-SLOPE RELATIONSHIPS FOR COMPOST FILTER SOCK TABLE.
5. REPLACE BIODEGRADABLE FILTER SOCK AFTER 6 MONTHS; PHOTODEGRADABLE FILTER SOCK AFTER 12 MONTHS.
6. TRAFFIC IS NOT PERMITTED TO CROSS FILTER SOCKS.
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
8. COMPOST IS TO BE UTILIZED TO FILL THE FILTER SOCKS. WOOD CHIPS ARE NOT PERMITTED.
9. WHEN THE SITE IS STABILIZED, SPLIT THE FILTER SOCK CASING AND SPREAD THE COMPOST. REMOVE THE STAKES AND CASING FROM THE PROJECT.
10. SEE SHEET ESC103 FOR SPECIFIC MAINTENANCE REQUIREMENTS.

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ROBERT ALLEN VANVERTH No. 062921
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GIBSON THOMAS ENGINEERING CO., INC.

FAYETTE COUNTY COURTHOUSE BLDG.

NEW WALKWAY CONNECTION STRUCTURE
FEREN'S BUILDING
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN
FAYETTE COUNTY PENNSYLVANIA

JAN 31, 2022

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EROSION AND SEDIMENTATION CONTROL DETAILS

NOT FOR CONSTRUCTION

ESC104

FAYETTE COUNTY COURTHOUSE BLDG.

FERENʼS BUILDING

61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

NEW WALKWAY CONNECTION STRUCTURE

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PCSM PLAN
PREDEVELOPMENT

PCSM 101

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GIBSON THOMAS ENGINEERING CO., INC.

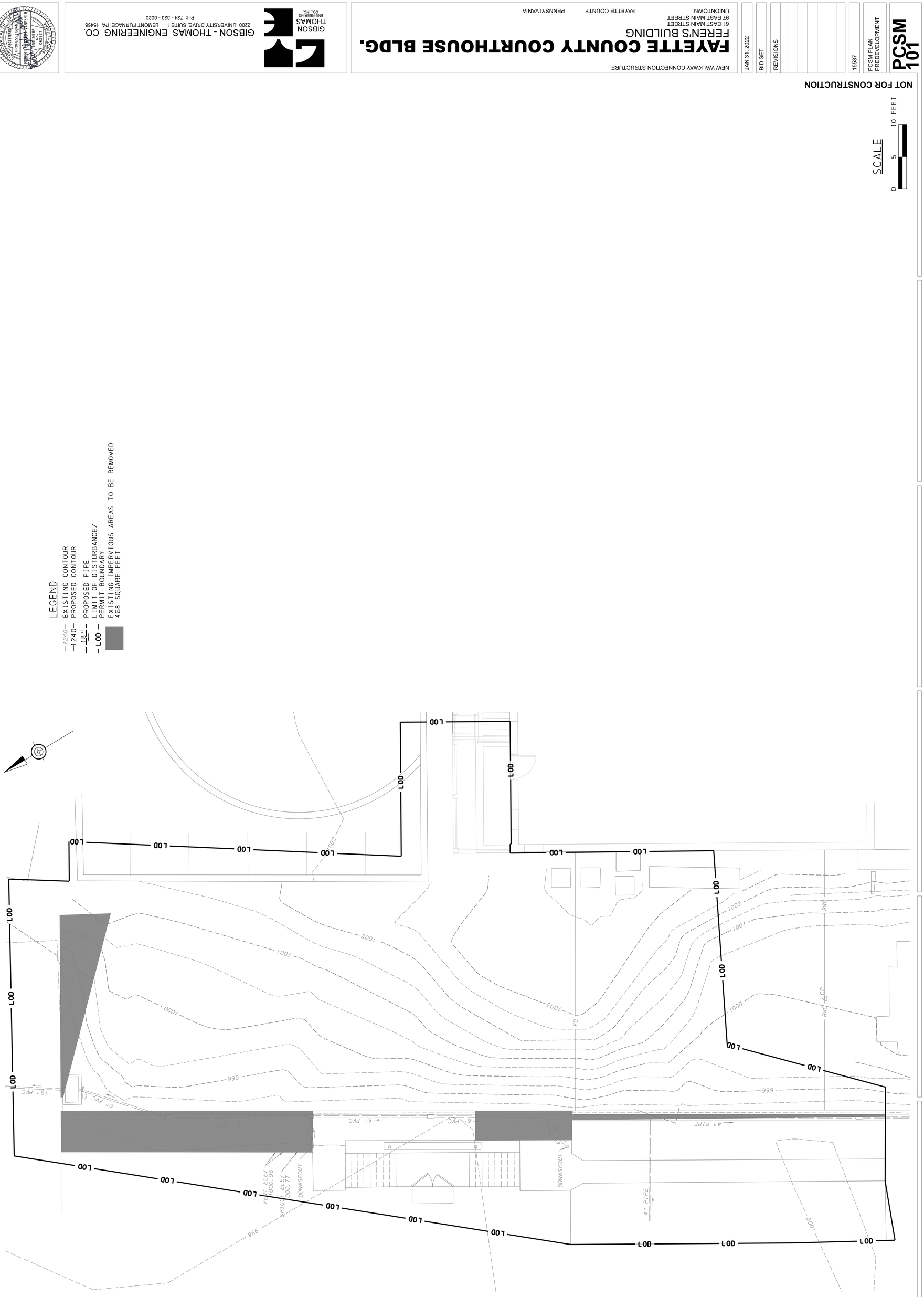
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
ROBERT L. THOMAS, JR.
PE No. 042923

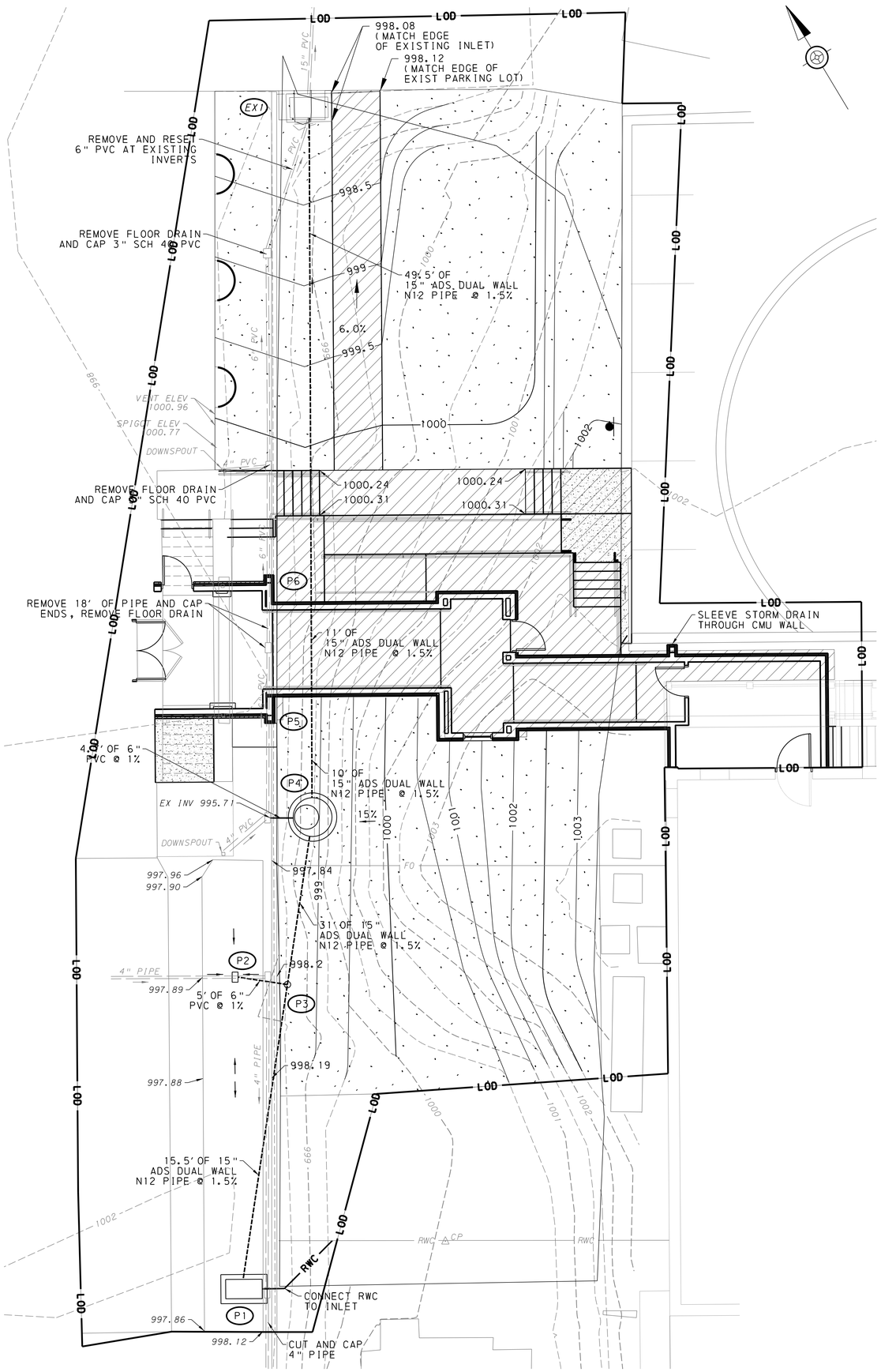
NOT FOR CONSTRUCTION

SCALE
0 5 10 FEET

LEGEND

- 1240 — EXISTING CONTOUR
- 1240 — PROPOSED CONTOUR
- 18" — PROPOSED PIPE
- LOD — LIMIT OF DISTURBANCE/ PERMIT BOUNDARY
- EXISTING IMPERVIOUS AREAS TO BE REMOVED 468 SQUARE FEET





LEGEND

- —1240— EXISTING CONTOUR
- —1240— PROPOSED CONTOUR
- —18"— PROPOSED PIPE
- — LOD — LIMIT OF DISTURBANCE/ PERMIT BOUNDARY
- NEW IMPERVIOUS AREAS BEING ADDED 1200 SQUARE FEET
- AMENDED SOIL AREAS

OWNERSHIP, OPERATION AND MAINTENANCE

FAYETTE COUNTY WILL OWN AND BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT ESTABLISHED BY THIS PROJECT. FAYETTE COUNTY MAINTENANCE FORCES WILL INSPECT THE BMP AND DEFICIENCIES WILL BE INVESTIGATED AND REPAIRS WILL BE MADE AS NECESSARY.

FAYETTE COUNTY
61 EAST MAIN STREET
UNIONTOWN, PA 15401
PHONE (724) 430-1200 X1602

AMENDED SOIL PLACEMENT NOTES:

1. PLACE AMENDED SOIL TO A 4" DEPTH AND CONFIGURATION SHOWN. DO NOT SUBJECT AMENDED SOIL TO EXCESSIVE COMPACTION DURING PLACEMENT AND FINE GRADING.
2. IMMEDIATELY AFTER PLACEMENT, APPLY SEEDING AND MULCHING.
3. IMMEDIATELY REPAIR ANY AREAS SUBJECTED TO ACCELERATED EROSION OR SIMILAR DAMAGE AND APPLY SEEDING AND MULCHING TO ANY EXPOSED SOILS.
4. SOIL CONSISTING OF SANDS, SILTS, CLAYS AND LOAMS MIMICKING THE COMPOSITION OF NATURAL HYDRIC SOILS MEETING THE FOLLOWING COMPOSITIONAL REQUIREMENTS:

(A) SAND NOT LESS AND 40% AND NOT MORE THAN 55% OF THE TOTAL MIXTURE.

(B) SILT NOT LESS AND 25% AND MORE THAN 40% OF THE TOTAL MIXTURE.

(C) CLAY NOT LESS THAN 15% OR MORE THAN 25% OF THE TOTAL MIXTURE.

(P1) PENNDOT TYPE M CONCRETE TOP UNIT AND GRATE AND STANDARD BOX
TG = 997.80
INV RWC = 995.80
INV 15" = 992.00

(P2) NEENAH FOUNDRY R-4937 DRAIN, OR APPROVED EQUAL
TG = 997.80
INV = 995.67

(P3) CLEAN OUT
8" NYLOPLAST
DROP IN GRATE
OR APPROVED EQUAL
TG = 998.62
INV 15" = 991.77

(P4) PENNDOT TYPE 4 MANHOLE
TG = 998.80
INV IN 6" = 995.66
INV IN 15" = 991.30
INV OUT 15" = 991.10

(P5) CLEAN OUT
8" NYLOPLAST
DROP IN GRATE
OR APPROVED EQUAL
TG = 998.86
INV 15" = 990.94

(P6) CLEAN OUT
8" NYLOPLAST
DROP IN GRATE
OR APPROVED EQUAL
TG = 1004.30
INV 15" = 990.77

(EX1) *INLET*
TG=998.08
INV IN 6" = 994.83
INV IN 15" = 990.00
INV OUT 15" = 989.81

SCALE
0 5 10 FEET

NOT FOR CONSTRUCTION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ROBERT [illegible] MANVERTH
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No. 062921
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GIBSON THOMAS ENGINEERING CO. INC.

FAYETTE COUNTY COURTHOUSE BLDG.

FEREN'S BUILDING

NEW WALKWAY CONNECTION STRUCTURE
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN
FAYETTE COUNTY
PENNSYLVANIA

JAN 31, 2022

BID SET

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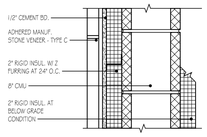
PCSM PLAN
POSTDEVELOPMENT

PCSM 102



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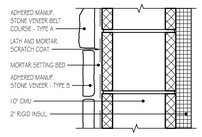

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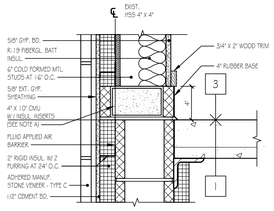
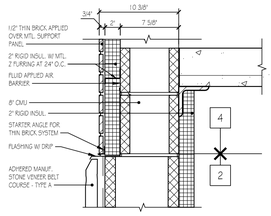


NOTE A
PROVIDE 10" CMU AT CONCRETE WALK AND RAMP CONDITIONS. OTHERWISE, MAINTAIN 8" CMU

3



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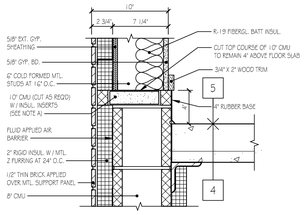
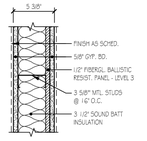


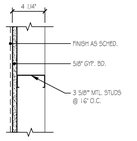
NOTE A
PROVIDE 10" CMU AT CONCRETE WALK AND RAMP CONDITIONS. OTHERWISE, MAINTAIN 8" CMU

5



SOUND ATTENUATION - EXTEND FRAMING, INSUL., ONE SIDE GYP. BD. AND FIBERGL. PANEL TO DECK ABOVE AND SEAL. LEVEL 1 FINISH ON GYP. BD. ABOVE CEILING.

6



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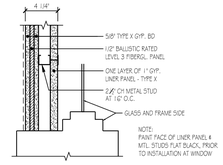
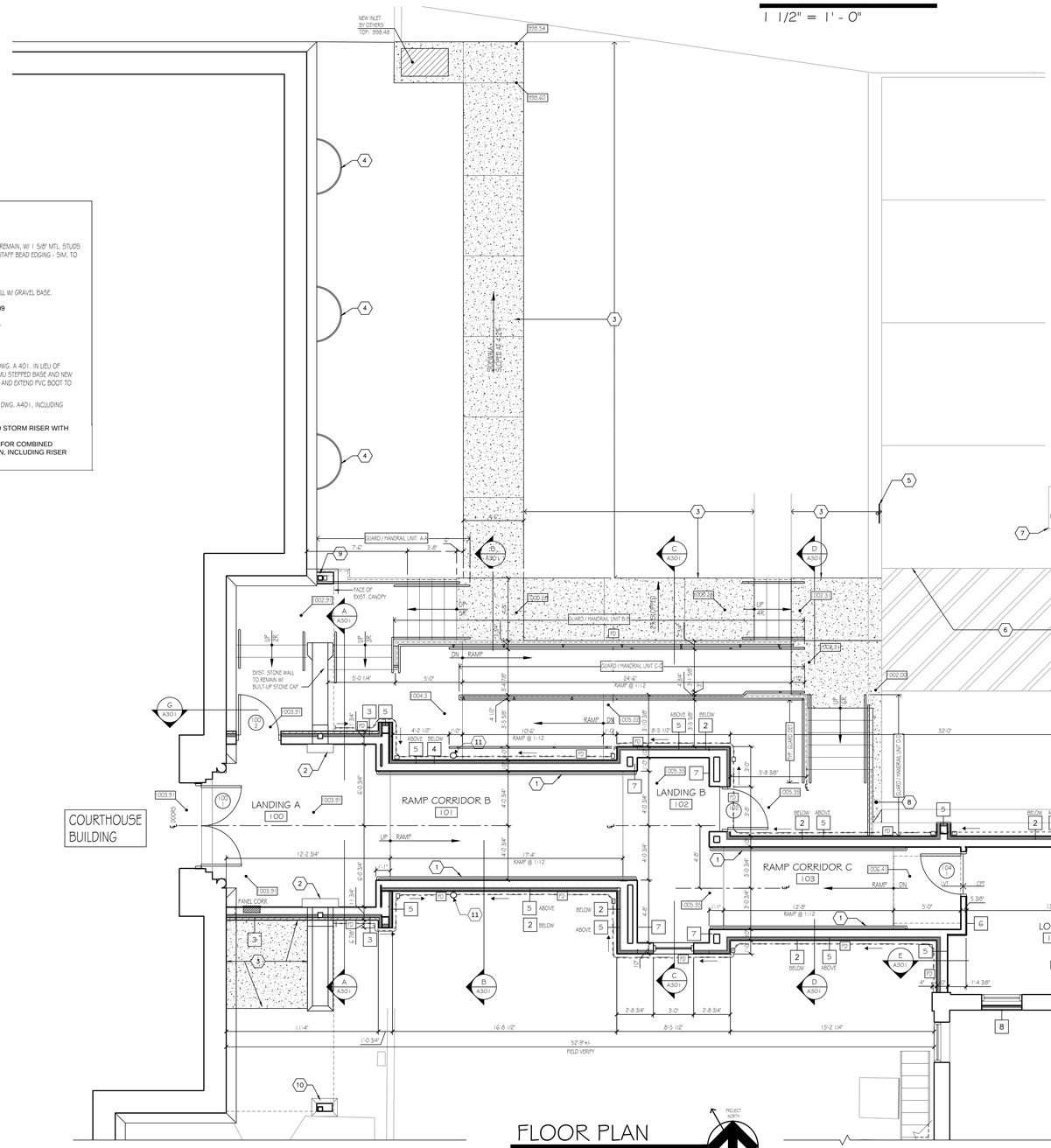


2 HR FIRE RATED
UL DESIGN NO. U411SB

8

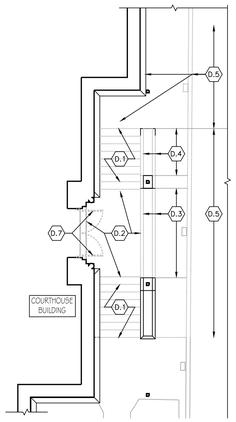
WALL TYPES

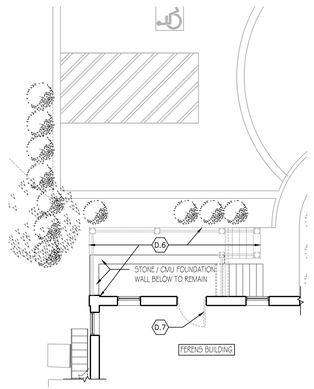
1 1/2" = 1' - 0"



FLOOR PLAN

1/4" = 1' - 0"





DEMOLITION PLANS

1/8" = 1' - 0"

NUMBERED NOTES / DEMOLITION

D.1 REMOVE CONCRETE STEPS INCLUDING GRANULAR FILL & SOIL MATERIAL. FINAL SUBGRADE SHALL BE 8" BELOW ADJACENT CONCRETE SIDEWALK SCHEDULED TO REMAIN. ALSO REMOVE PORTION OF TOP OF TREAD THAT IS OVER THE FOUNDATION WALL BELOW.

D.2 REMOVE ELEVATED CONCRETE SLAB. TEMPORARILY PROTECT INTERIOR SPACES THAT ARE EXPOSED TO THE ELEMENTS RESULTING FROM THESE DEMOLITION OPERATIONS.

D.3 REMOVE PORTION OF 24" HIGH STONE WALL TO LIMITS SHOWN. SALVAGE STONE FOR REUSE AT OTHER AREAS. ALSO REMOVE PORTION OF CHAMFERED, STONE WATER TABLE APPROX. 16" HIGH, TO SAME LIMITS SHOWN.

D.4 REMOVE 4" STONE CAP AND SALVAGE FOR REUSE. STONE WALL BELOW TO REMAIN.

D.5 REMOVE CONCRETE CURB AND SIDEWALK AT NORTHERN END OF THE BUILDING. EXTEND THIS DEMOLITION TO REAR PARKING LOT - APPROXIMATELY 45 LINEAR. FT.

D.6 REMOVE REMOVE ENTIRE WOODEN PORCH STRUCTURE, INCLUDING ROOF, FLOOR, RAILINGS, STAIRS AND PERIMETER MASONRY WALLS.

D.7 REMOVE DOORS AND FRAMES

BASEMENT PLAN DEMOLITION - NUMBERED NOTES

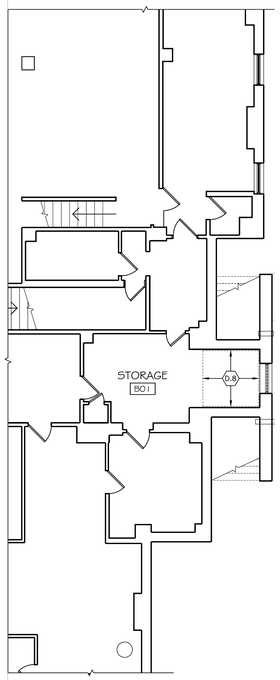
D.7 CEILING / LANDING STRUCTURE TO BE REMOVED. PROTECT ALL INTERIOR SURFACES DURING DEMOLITION OPERATIONS.

GENERAL DEMOLITION NOTES

1. PROTECT EXISTING COURTHOUSE METAL ROOF CANOPY AND STRUCTURE FROM DEMOLITION DEBRIS AND OPERATIONS
2. PROTECT ALL ADJACENT BUILDING SURFACES AND WINDOWS FROM DEMOLITION DEBRIS AND OPERATIONS
3. SEE DRAWING C102, FOR ADDITIONAL SITE DEMOLITION ITEMS, AND NOTES.

NUMBERED NOTES

1. WOOD HANDRAIL - SEE DET. 6/A401
2. FURR OUT EXISTING / EXPOSED STONE WALL TO REMAIN, W/ 1 5/8" MTL. STUDS @ 5/8" GYP. BD. PROVIDE 3/4" POPLAR CAP W / STAFF BEAD EDGING - SIM. TO ALLEGHENY MILLWORK # F3845 - PAINT CAP
3. NEW CONCRETE SIDEWALK - SEE DETAIL 1/C108
4. CORRUGATED, GALVANIZED, METAL WINDOW WELL W/ GRAVEL BASE.
5. ACCESSIBLE PARKING SIGN - SEE DETAIL 2/C109
6. NEW LINE STRIPING FOR PARKING ACCESS AISLE.
7. NEW PAINTED SYMBOL OF ACCESSIBILITY.
8. NEW CONCRETE INFILL.
9. PROVIDE COLUMN ENCLOSURE PER DETAIL ON DWG. A 401. IN LIEU OF LIMESTONE CLAD BASE, PROVIDE SPLIT FACE CMU STEPPED BASE AND NEW CONCRETE CAP. SHORTEN ALUM - DOWNSPOUT AND EXTEND PVC BOOT TO TRANSITION ABOVE NEW CONCRETE LINE.
10. PROVIDE COLUMN ENCLOSURE PER DETAILS ON DWG. A401, INCLUDING LIMESTONE BASE AND CONCRETE WALK INFILL.
11. **FOUNDATION DRAIN CONNECTION TO STORM RISER WITH CLEANOUT.**
SEE CIVIL DRAWINGS C104 AND C108 FOR COMBINED RAINWATER CONDUTOR CONNECTION, INCLUDING RISER DETAILS, INTO MAIN 15" STORM PIPE.



PARTIAL BASEMENT PLAN

1/8" = 1' - 0"

REGISTERED ARCHITECT COMMONWEALTH OF PENNSYLVANIA ROBERT SCHONDER POLLOCK 1997

RSSC ARCHITECTURE
ROSS | SCHONDER | STERZINGER | CUPCHECK | PC
5500 Brooktree Road, Suite 300, Wexford, Pennsylvania 15090
T 724.933.9100 F 724.933.9150 www.rsscarch.com

NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FERENS BUILDING
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

DEMOLITION PLAN, FLOOR PLAN AND WALL TYPES

A101

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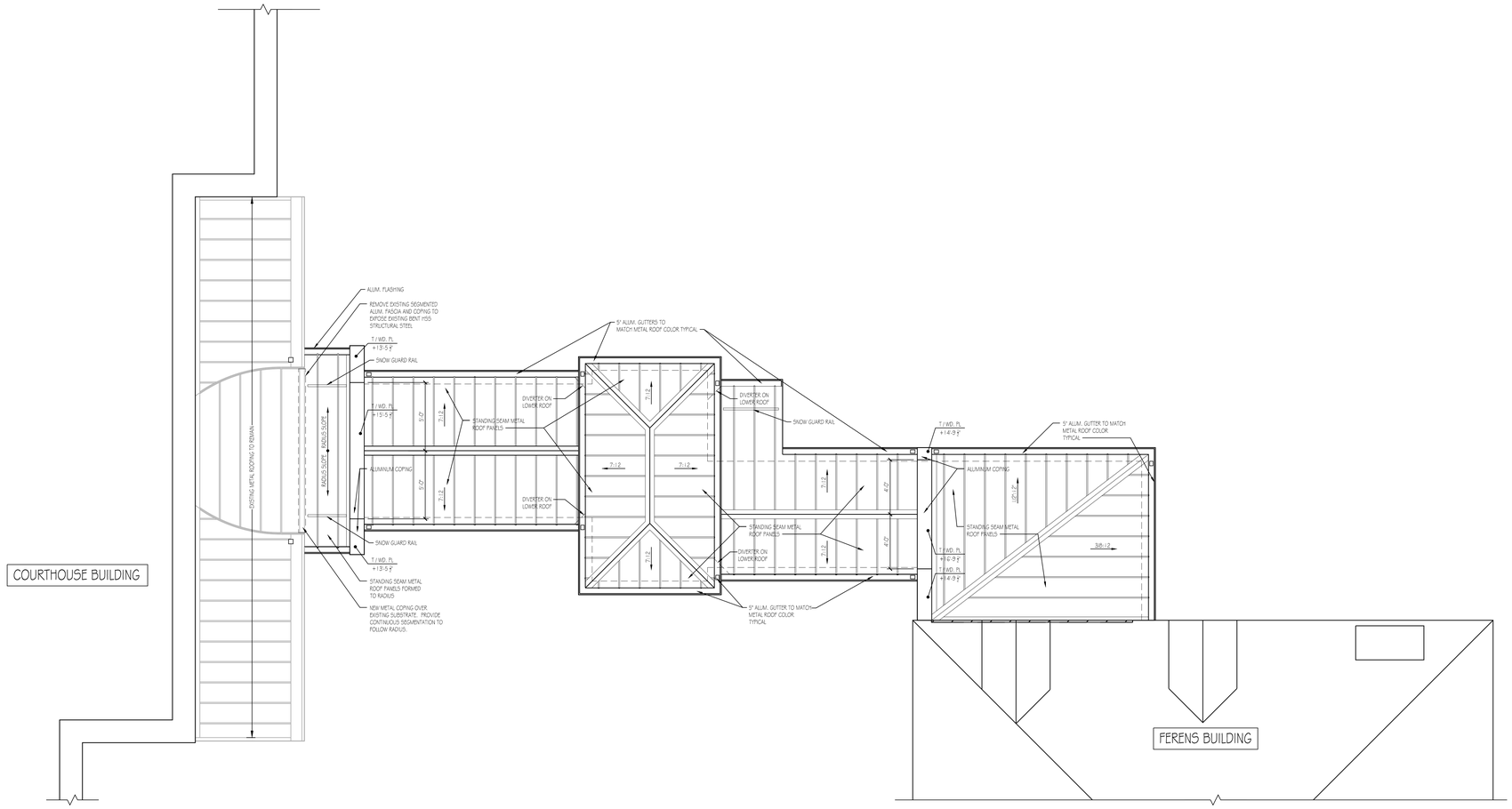
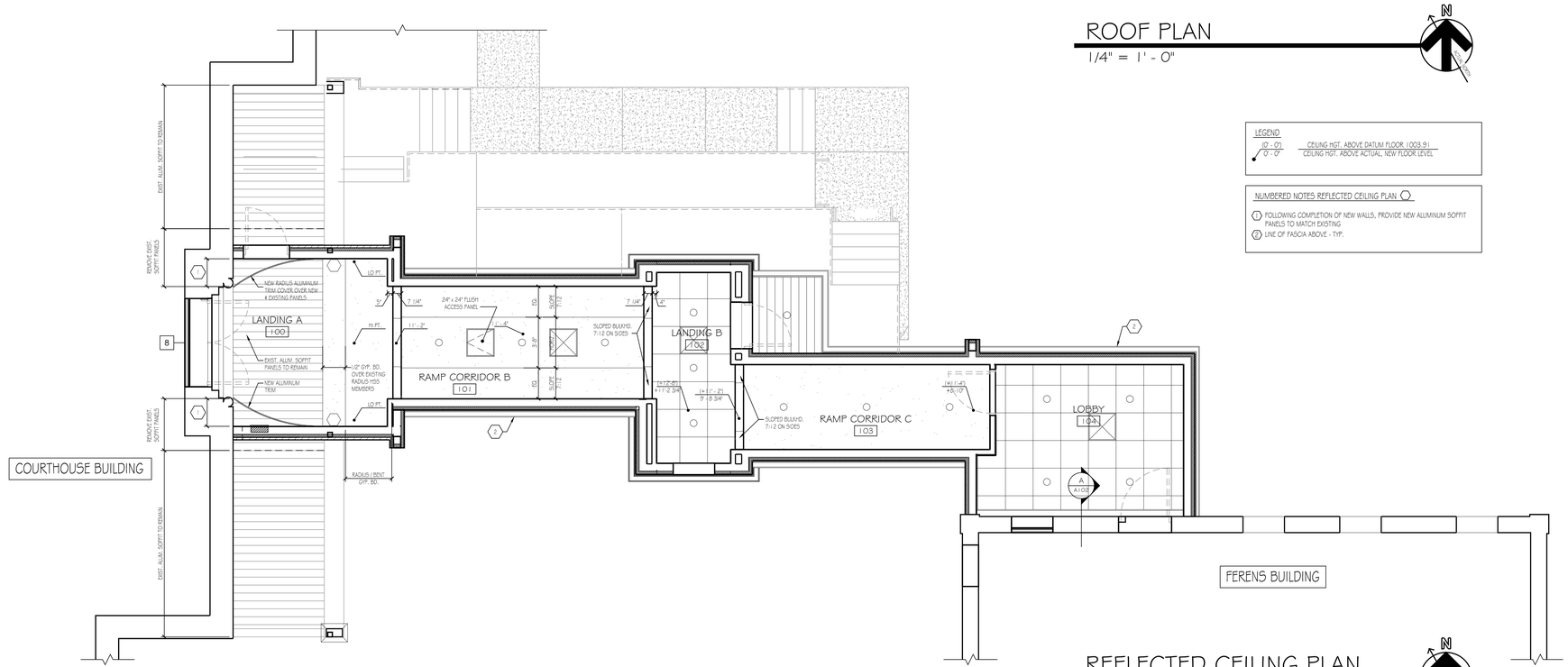


ROOF PLAN

1/4" = 1' - 0"



REFLECTED CEILING PLAN

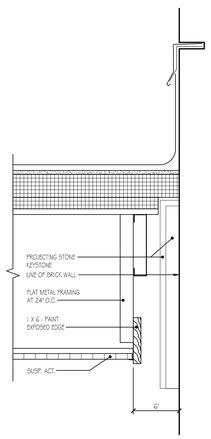
1/4" = 1' - 0"

LEGEND

(0' - 0") / 0' - 0" — CEILING HGT. ABOVE DATUM FLOOR 1003.91 / CEILING HGT. ABOVE ACTUAL, NEW FLOOR LEVEL

NUMBERED NOTES REFLECTED CEILING PLAN

1. FOLLOWING COMPLETION OF NEW WALLS, PROVIDE NEW ALUMINUM SOFFIT PANELS TO MATCH EXISTING
2. LINE OF FASCIA ABOVE - TYP.



A DETAIL

1 1/2" = 1' - 0"

RSSC ARCHITECTURE

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NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FERENS BUILDING

61 EAST MAIN STREET

97 EAST MAIN STREET

UNIONTOWN FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

ROOF PLAN AND CEILING PLAN

A102

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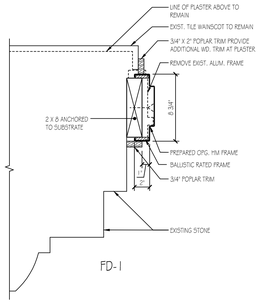
DOOR AND FRAME SCHEDULE

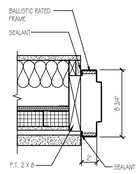
LOCATION		DOORS							FRAME				FIRE RATING LABEL	H.W. SET NO.	SIGNAGE	REMARKS
ROOM	NO.	LOCATION	TYPE	SIZE	THK.	MATERIAL	GLAZING	FINISH	TYPE	DETAIL	MATERIAL	FINISH				
100	1	LANDING A	A	PR 3'-0" x 7'-0"	1 3/4"	H.M.	--	PAINT	H.M.- 1	FD - 1	H.M.	PAINT	90 MIN.	4	DET. A	FIRE RATED EXIT DEVICES / CONTINUOUS HINGES / CLOSER / LEVEL 3 BULLET RESISTANT / ACCESS CONTROL
100	2	LANDING A	B	3'-0" x 7'-0"	1 3/4"	H.M.	--	PAINT	H.M.- 2	FD - 2	H.M.	PAINT	--	1	DET. A	GALV. DOOR & FRAME / POLYST. CORE / EXIT DEVICE / CLOSER / LEVEL 3 BULLET RESISTANT / ACCESS CONTROL
102	1	LANDING B	B	3'-0" x 7'-0"	1 3/4"	H.M.	--	PAINT	H.M.- 2	FD - 3	H.M.	PAINT	--	1	DET. A	GALV. DOOR & FRAME / POLYST. CORE / EXIT DEVICE / CLOSER / LEVEL 3 BULLET RESISTANT / ACCESS CONTROL
104	1	LOBBY	B	3'-0" x 7'-0"	1 3/4"	WOOD	--	FIELD STAIN & FINISH	H.M.- 1	FD - 4	H.M.	PAINT	--	2		LEVEL 3 BULLET RESISTANT / ACCESS CONTROL
104	2	LOBBY	B	3'-0" x 7'-0"	1 3/4"	WOOD	--	FIELD STAIN & FINISH	H.M.- 3	FD. - 5	H.M.	PAINT	90 MIN.	3		LEVEL 3 BULLET RESISTANT / ACCESS CONTROL

ROOM FINISH SCHEDULE

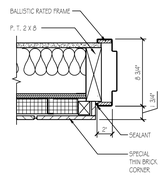
ROOM NO	ROOM NAME	FLOOR		BASE		WALLS								CEILING		REMARKS
						NORTH		EAST		SOUTH		WEST				
		MAT.	COL.	MAT.	COL.	MAT.	COL.	MAT.	COL.	MAT.	COL.	MAT.	COL.	MAT.	HEIGHT	
100	LANDING A	LVT	--	4" RUB AND PTD. WOOD TRIM	AA	PAINT	--	--	--	PAINT	--	ETR	--	ETR NEW ALUM. PANEL	VARIES	PAINT GYP. BD. BULKHEAD / PAINT WD. SHELVES.
101	RAMP CORRIDOR B	LVT	--	4" RUB AND PTD. WOOD TRIM	--	PAINT	--	--	--	PAINT	--	--	--	GYP. BD. PAINT	VARIES	STAIN & FINISH WD. HANDRAILS / PAINT BRACKETS.
102	LANDING B	LVT	--	4" RUB AND PTD. WOOD TRIM	--	PAINT	--	PAINT	--	PAINT	--	PAINT	--	ACT A	11' - 2 3/4"	STAIN & FINISH WD. WINDOW, CASING, & STOOL.
103	RAMP CORRIDOR C	LVT	--	4" RUB AND PTD. WOOD TRIM	--	PAINT	--	PAINT	--	PAINT	--	--	--	GYP. BD. - PAINT	VARIES	STAIN & FINNISH WD. HANDRAILS / PAINT BRACKETS
104	LOBBY	CPT	--	4" RUB	--	PAINT	--	PAINT	--	PAINT	--	PAINT	--	ACT A	9' - 8"	PAINT WD. TRIM - DET. A / A 102



FD-1



FD-2



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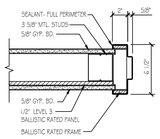

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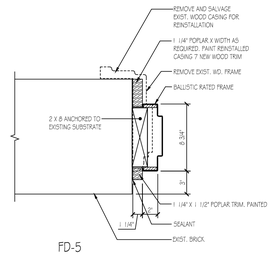
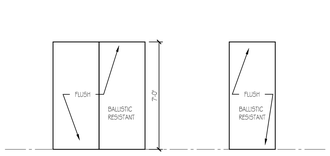
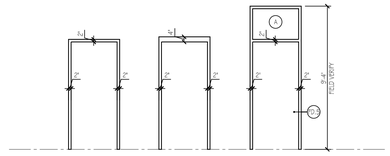


FD-5

FRAME DETAILS

1 1/2" = 1'-0"





GLAZING SCHEDULE

(A) 3/8" CERAMIC FIRE RATED/FORCED ENTRY GLASS. MATCH FIRE RATING OF DOOR

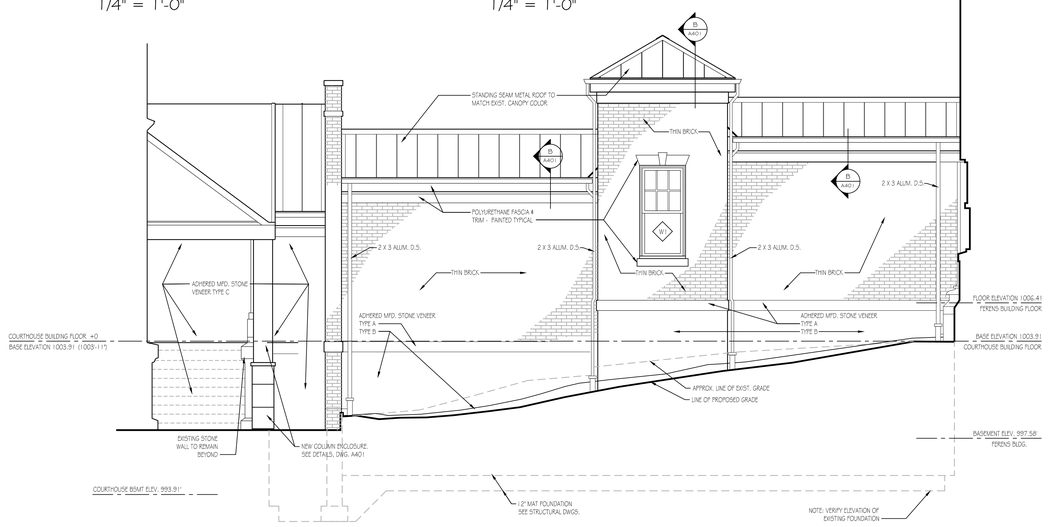
(B) 1" INSULATED UNIT:
EXTERIOR PANEL- 1/4" TEMPERED CLEAR GLASS (LOW-E ON SURFACE # 2)
3/8" ARGON GAS FILLED SPACE
7/16" SCHOOL GUARD SG4 GLASS

DOOR ELEVATIONS

1/4" = 1'-0"

FRAME ELEVATIONS

1/4" = 1'-0"



GENERAL NOTES:

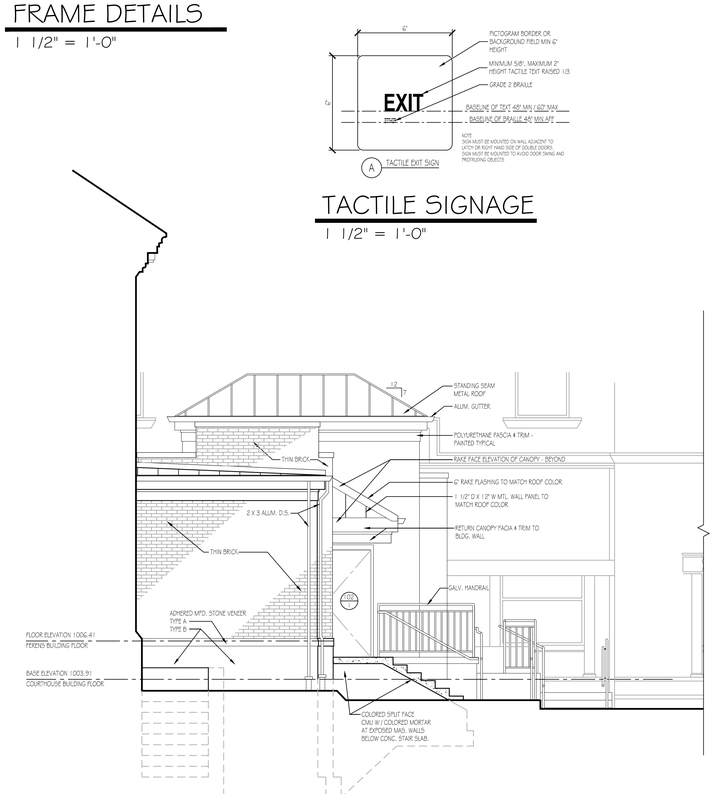
1. FOR MANUFACTURED STONE VENEER, TYPES A & B, PROVIDE 'OVERGROUTING' TECHNIQUE FOR GROUT JOINTS BETWEEN STONE UNITS.

SOUTH ELEVATION

1/4" = 1'-0"

BASIS OF DESIGN - THINK BRICK SYSTEM

THIN BRICK: GLEN GERY, BELDEN OR APPROVED SUBSTITUTION
2 1/4" INCHES HIGH BY 7 5/8" INCHES LONG BY 1/2" INCH DEEP.
MASONRY SUPPORT PANEL: GLEN-GERY THIN TECH ELITE PANEL SERIES, 48" x 48" SIZE WITH 3/8" SUPPORT TIE LENGTHAND 1/4" AIR FLOW DRAINAGE CHANNELS.
ANCHOR TO MASONRY SUBTRATE OR METAL FRAMING WITH SELF TAPPING, #10, PAN HEAD, CORROSION RESISTAN FASTENERS PER MANUFACTURER'S INSTRUCTIONS.
PROVIDE BRICK SEE SPEC SECTION 04431 3.1 G ADHERED STONE MASONRY VENEER ADHESIVE AND MORTAR AS RECOMMENDED BY GLEN-GERY.

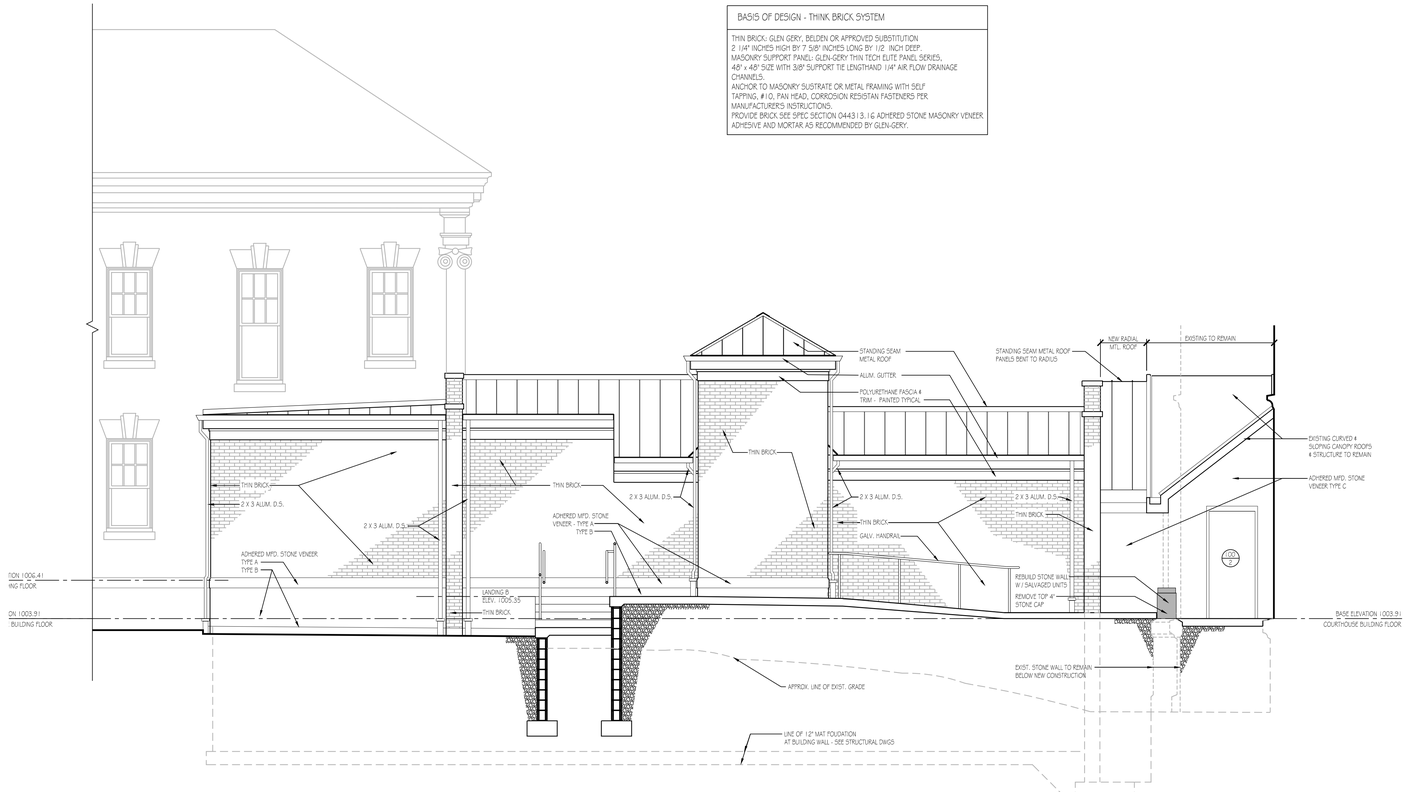


TACTILE SIGNAGE

1 1/2" = 1'-0"

EAST ELEVATION

1/4" = 1'-0"



NORTH ELEVATION

1/4" = 1'-0"

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FERENS BUILDING
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97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

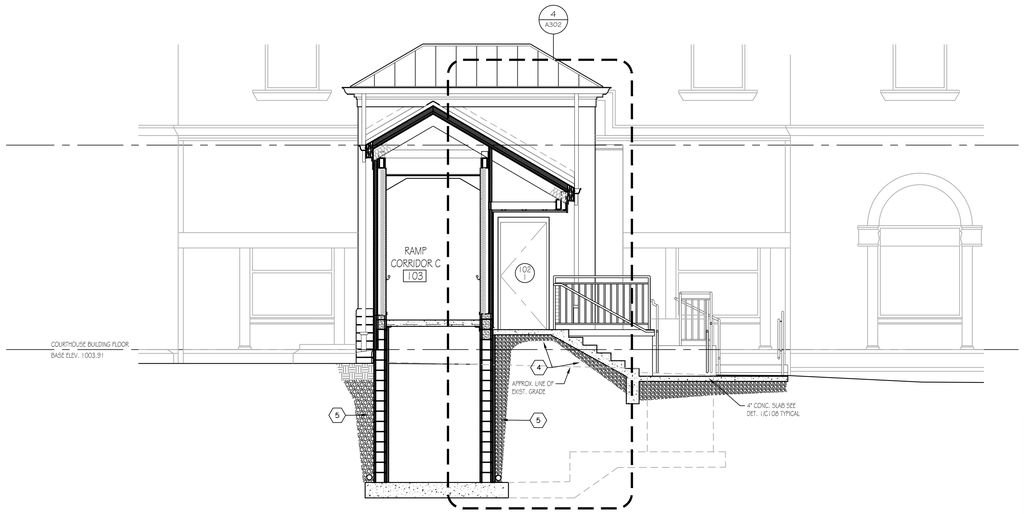
REVISIONS

2801.02

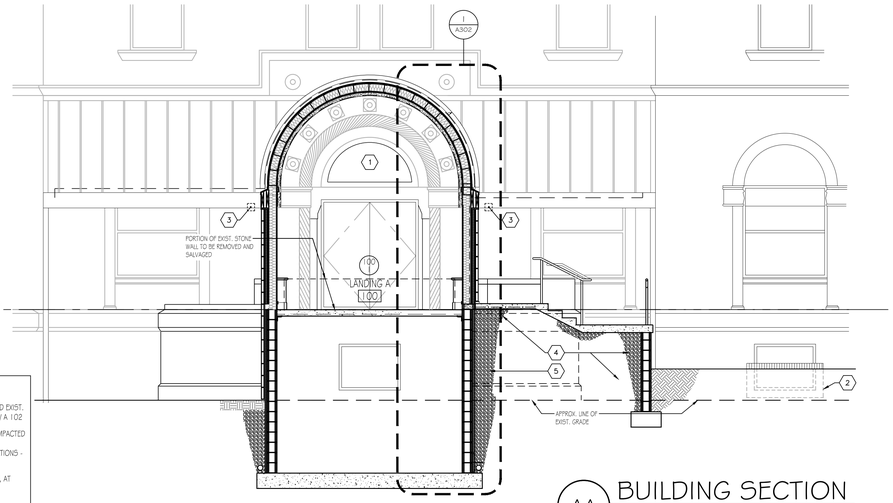
ELEVATIONS
DOOR & FINISH SCHEDULES

NOT FOR CONSTRUCTION

A201



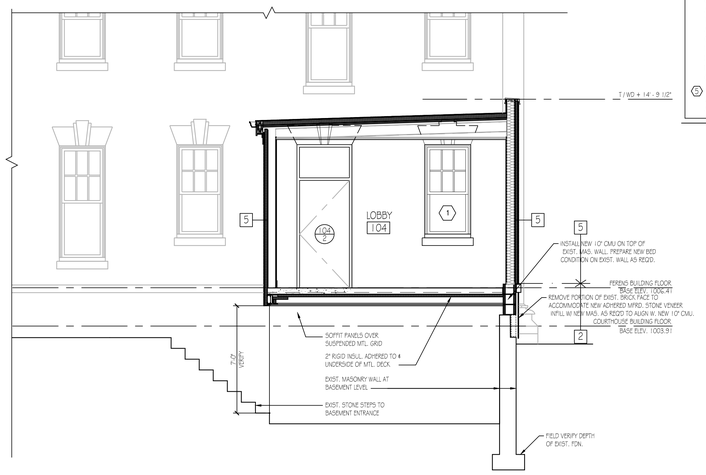
DD BUILDING SECTION
1/4" = 1'-0"



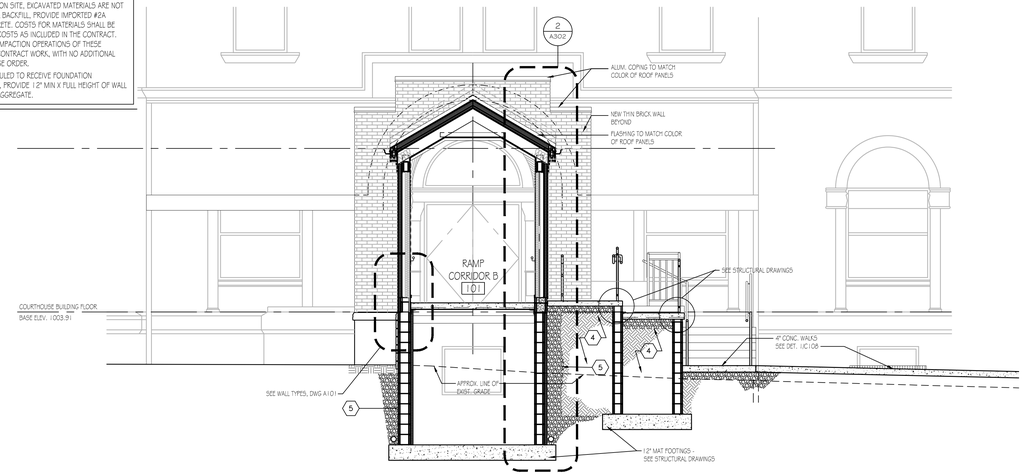
AA BUILDING SECTION
1/4" = 1'-0"

NUMBERED NOTES - BUILDING SECTIONS

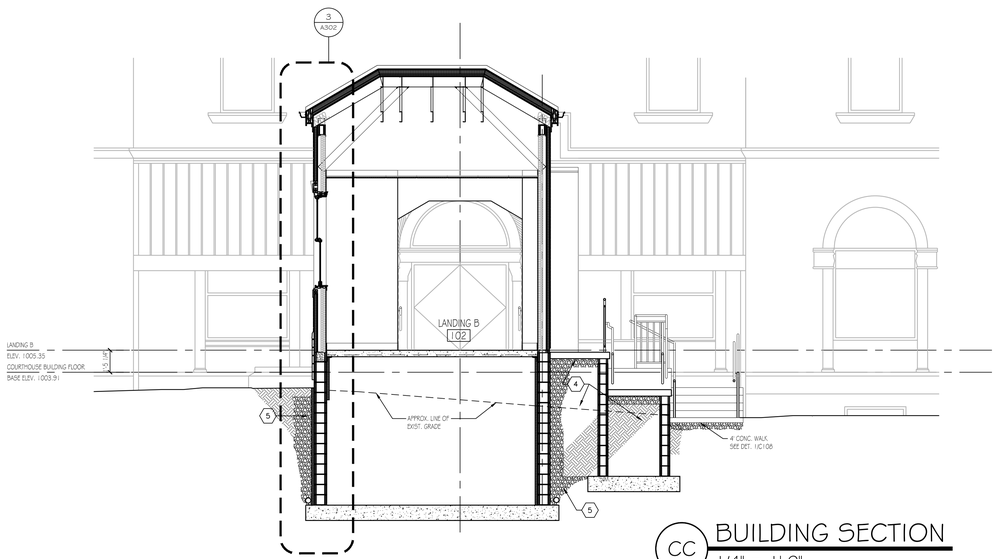
1. 2 HR. FIRE RATED ASSEMBLY, CONSTRUCTED BEHIND EXIST. GLASS ON INTERIOR SIDE OF BUILDING. SEE DET. B / A 102
2. GALV. / CORRUGATED WINDOW WELL SET ON 8" COMPACTED GRAVEL BASE.
   INSTALL PRIOR TO FINAL EARTHWORK FILLING OPERATIONS - TYPICAL OF THREE
3. PATCH STONE WITH PORTIONS OF SALVAGED UNITS, AT AREA OF REMOVED LIGHT FIXTURE
4. USED ACCEPTABLE ON-SITE SOIL MATERIALS FOR COMPACTED BACKFILL UNDER RAMPS, STAIRS, 4 WALKS, CONCRETE SLABS AND STAIRS SHALL BE SUPPORTS ON THE COMPACTED BACKFILL MATERIAL WITH A MIN. OF 5" OF COMPACTED #2A GRANULAR FILL.
   ALL ABOVE REFERENCED WORK SHALL BE IN CONTRACT. IN THE EVENT THAT ON SITE, EXCAVATED MATERIALS ARE NOT ACCEPTABLE FOR BACKFILL, PROVIDE IMPORTED #2A CRUSHED CONCRETE. COSTS FOR MATERIALS SHALL BE BASED ON UNIT COSTS AS INCLUDED IN THE CONTRACT. PLACEMENT & COMPACTION OPERATIONS OF THESE MATERIALS ARE CONTRACT WORK, WITH NO ADDITIONAL COST PER CHANGE ORDER.
5. AT WALLS SCHEDULED TO RECEIVE FOUNDATION WATERPROOFING, PROVIDE 12" MIN X FULL HEIGHT OF WALL AREA WITH #2A AGGREGATE.



EE BUILDING SECTION
1/4" = 1'-0"



BB BUILDING SECTION
1/4" = 1'-0"



CC BUILDING SECTION
1/4" = 1'-0"

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UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

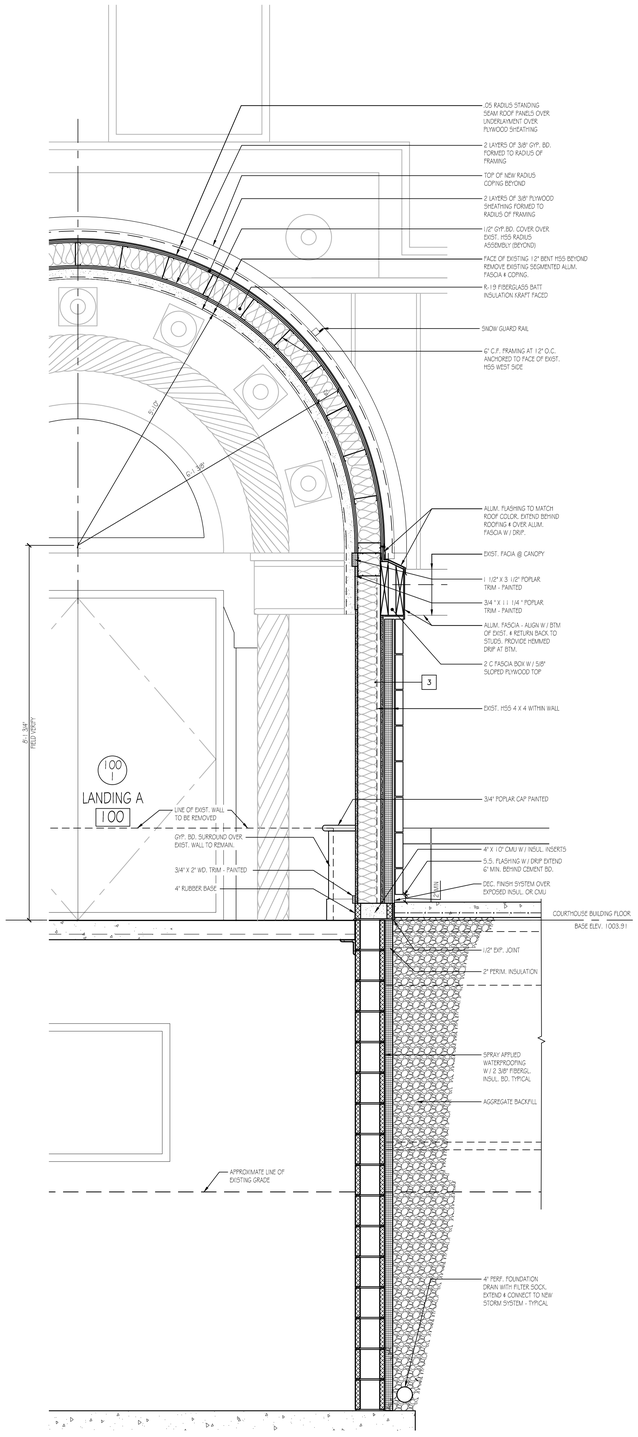
BID SET

REVISIONS

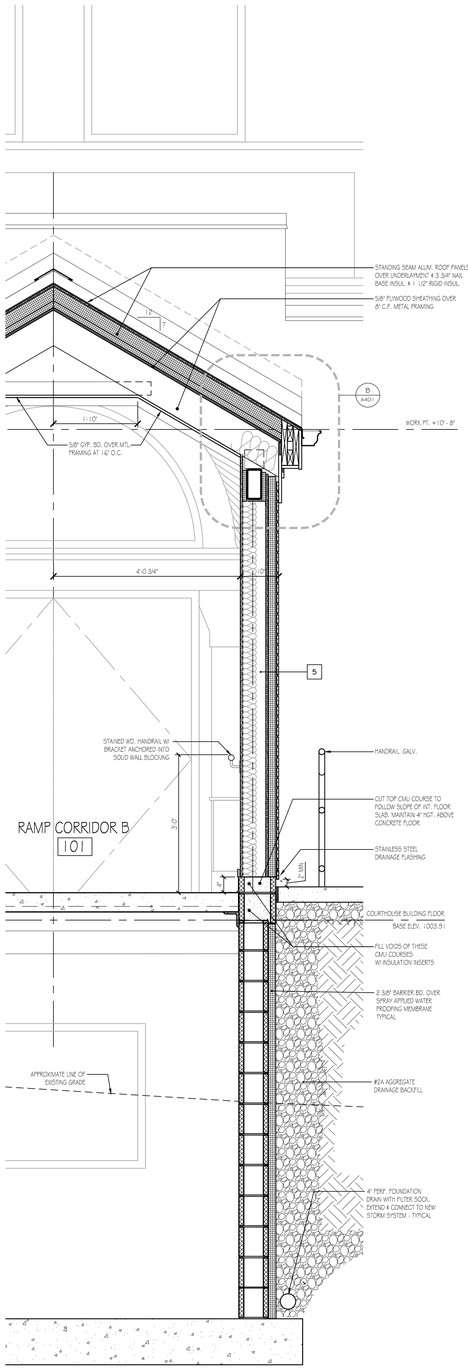
2801.02

BUILDING SECTIONS

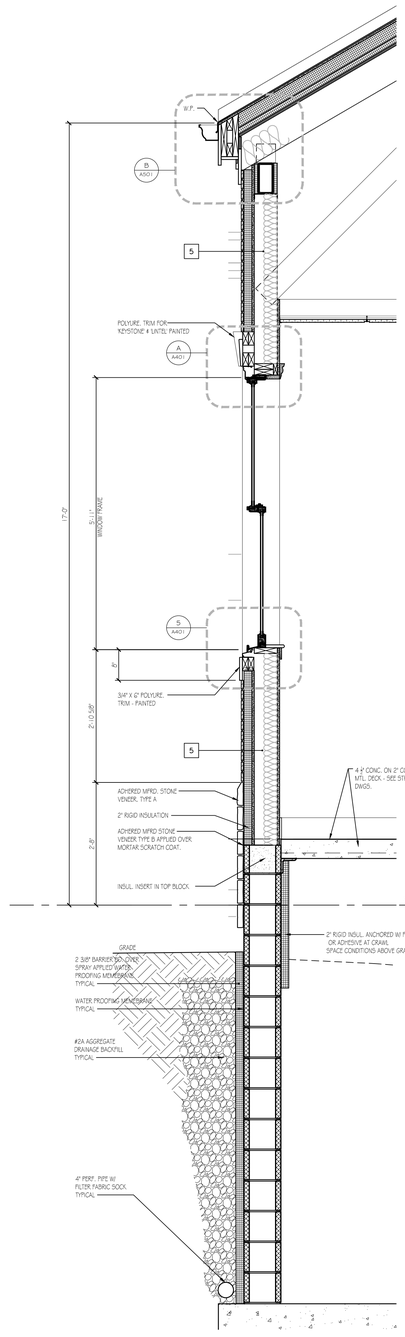
A301



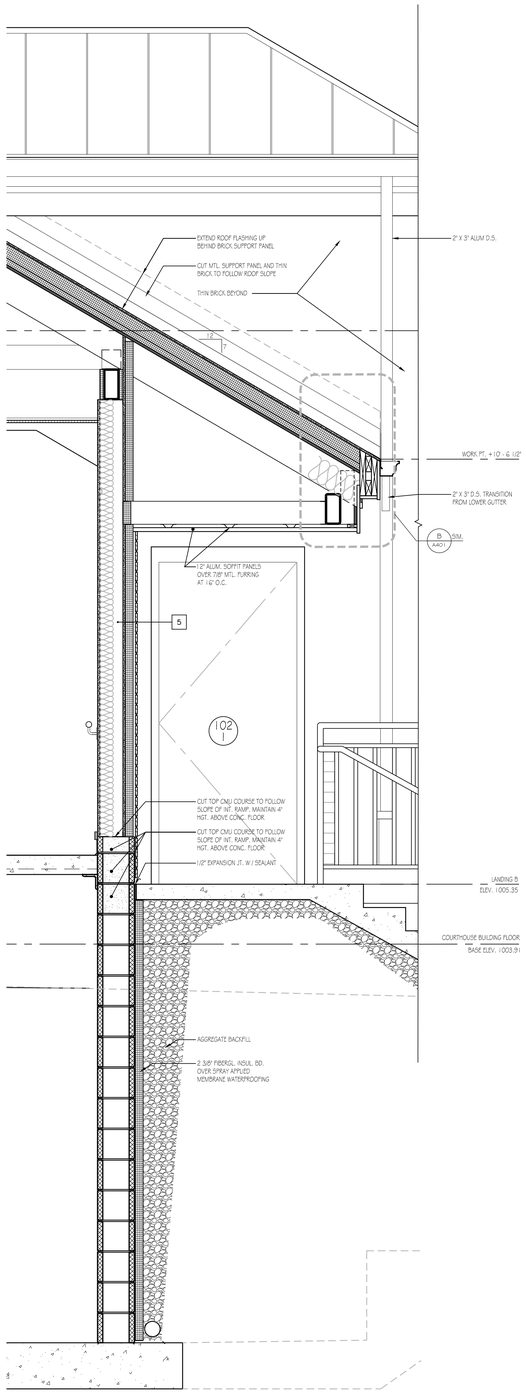
1 WALL SECTION
3/4" = 1'-0"



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



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



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

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WALL SECTIONS

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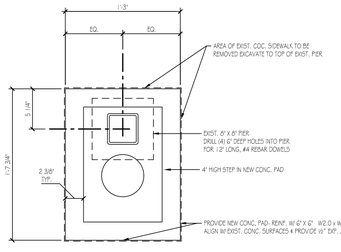
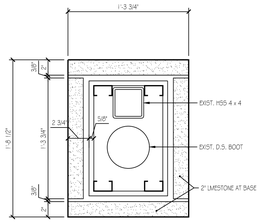


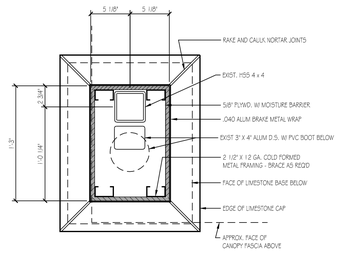
1 COLUMN WRAP DETAIL GRADE LEVEL PLAN

1 1/2" = 1'-0"



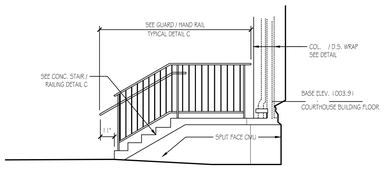
2 COLUMN WRAP DETAIL BASE PLAN

1 1/2" = 1'-0"



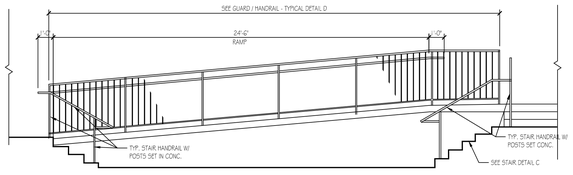
3 COLUMN WRAP DETAIL UPPER PLAN

1 1/2" = 1'-0"



GUARD / HANDRAIL ELEVATION

1/4" = 1'-0" UNIT A-A



GUARD / HANDRAIL ELEVATION

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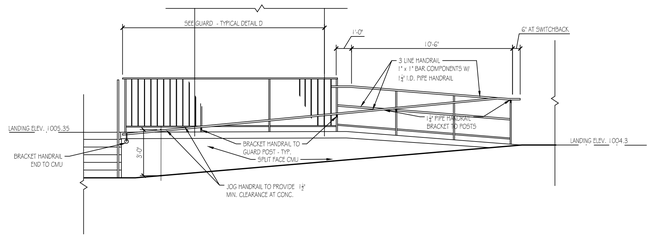
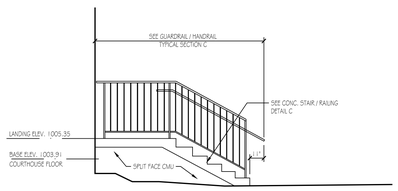


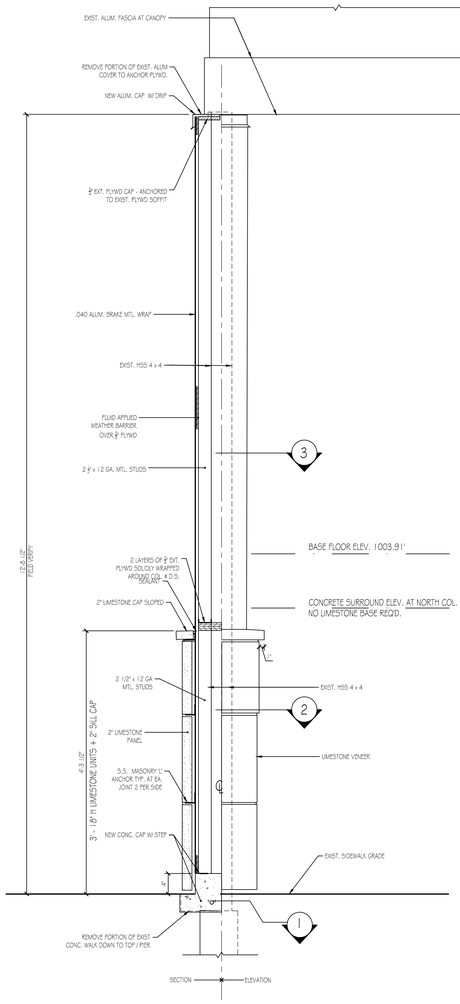
GUARD / HANDRAIL ELEVATION

1/4" = 1'-0" UNIT C-C



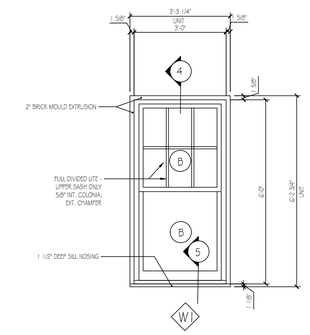
GUARD / HANDRAIL ELEVATION

1/4" = 1'-0" UNIT D-D



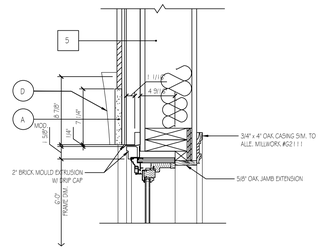
A COLUMN WRAP ELEVATION

1" = 1'-0"



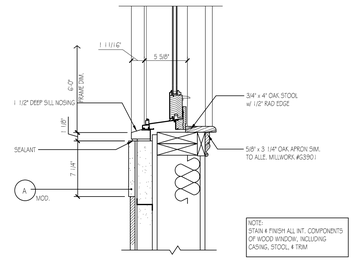
E ELEVATION

1/2" = 1'-0"



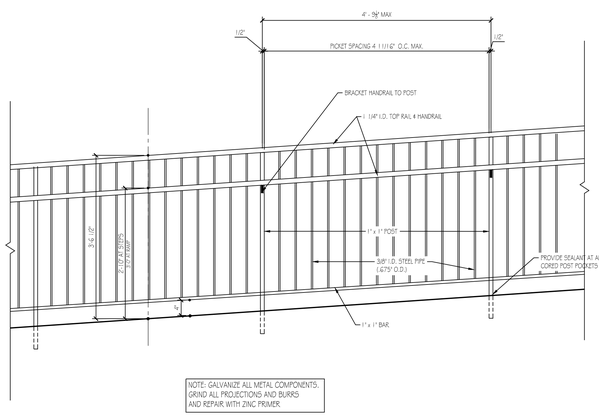
4 HEAD DETAIL

1 1/2" = 1'-0"



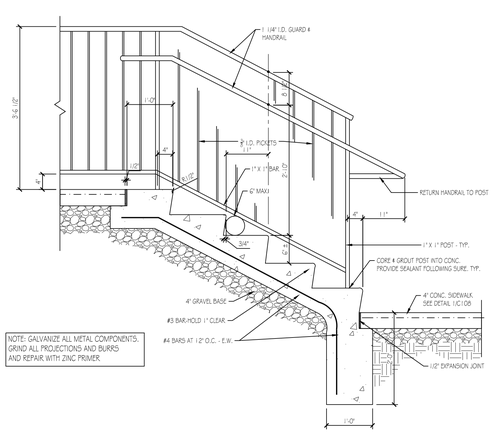
5 SILL DETAIL

1 1/2" = 1'-0"



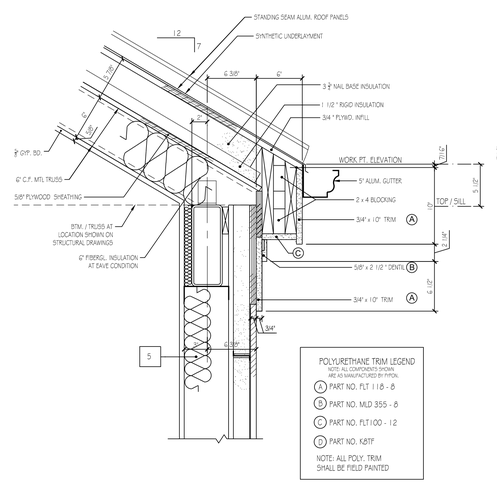
D GUARD / HANDRAIL DETAIL ELEVATION

3/4" = 1'-0"



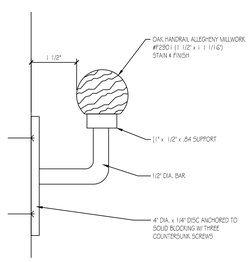
C STAIR AND RAILING DETAIL SECTION

3/4" = 1'-0"



B EAVE DETAIL

1 1/2" = 1'-0"



6 WOOD HANDRAIL DETAIL

6" = 1'-0"

RSSC ARCHITECTURE
ROSS | SCHONDER | STERZINGER | CUPCHECK | PC
5500 Brooktree Road, Suite 300, Wexford, Pennsylvania 15090
T 724.933.9100 F 724.933.9150 www.rsscarch.com

NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE

FERENS BUILDING
61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

DETAILS

A401

NOT FOR CONSTRUCTION

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GENERAL NOTES

1.0 GENERAL

1.1 Shop drawings
- a. Shop drawings for materials shall be submitted to the Architect for review prior to the start of fabrication or commencement of work.
- b. No portion of the Structural Contract Drawings may be reproduced for submittal as shop drawings unless authorized by KSS in writing. Violation of this provision will result in the rejection of the shop drawings and will be returned not reviewed by the structural engineer.
- c. Shop drawings shall bear the General Contractor's stamp of approval, which shall constitute certification that he has verified all field measurements, construction criteria, materials and similar data and has checked each drawing for completeness, coordination, and compliance with the contract documents. Shop drawings not reviewed by the General Contractor prior to submittal will be rejected.
- d. Changes to shop drawings that are re-submitted must be clouded or otherwise clearly indicate the changes that have been made to a previously issued and reviewed drawing.
- e. The contractor shall provide written notice of deviations of any type from the requirements of the Construction Documents. The notice must be received prior to shop drawing submittal. The contractor remains liable for any deviation unless reviewed by the structural engineer and acknowledged in writing, prior to receipt of the shop drawings.
- f. The contractor shall provide a schedule for submittal and shop drawing submissions as well as required return dates to the architect/structural engineer at least 30 days before submittals are received.
- g. Shop drawings will be returned not later than 10 working days after receipt by the structural engineer.
- h. Shop drawings shall be submitted electronically for structural review in the form of pdf files. Shop drawings will be returned to the contractor with Structural Engineer's comments, also in the form of pdf files. This requirement applies to shop drawings for structural review only and it supersedes any other requirements indicated on any other drawings or in any section of the specifications.

1.2 The structural drawings shall govern the work for structural features, unless otherwise noted. Discrepancies between the architectural and structural drawings shall be reported to the architect and engineer for review and clarification before proceeding with related work.

1.3 In case of conflict between the General Notes, Specifications, and Drawings regarding structural issues, the Contractor shall submit an RFI for clarification.

1.4 Work not indicated on a part of the drawings, but reasonably implied to be similar to that shown at corresponding places, shall be repeated.

1.5 The contractor is responsible for means and methods of construction and construction procedures, fabrication processes, coordination of work with other trades and job site safety.

1.6 Existing building information shown is as indicated on from field observation. Information shown may not necessarily reflect actual conditions. The Contractor shall field verify existing building information shown (dimensions, elevations, etc.) and notify the Architect of any discrepancies prior to fabrication of any structural component.

1.7 The structure has been designed for its final/in use condition. Temporary bracing, sheeting, shoring, etc., required to ensure the structural integrity/stability of the structure, adjacent existing structures, sidewalks, utilities, etc., during construction is the Contractor's responsibility and shall be designed by a Registered Professional Engineer employed by the Contractor.

1.8 The Contractor shall refer to Architectural, Mechanical, Plumbing, and Electrical Drawings for size and locations of openings, sleeves, concrete housekeeping pads, inserts and depressions.

1.9 The contractor shall coordinate dimensions for rooftop dunnage steel, roof opening frames, and roof curb supports with the mechanical drawings and the appropriate equipment manufactures.

1.10 Information contained on the hard copy of this drawing retained by Keystone Structural Solutions controls over variances or changes that might be introduced due to plotting by others via electronic document transfer.

1.11 The distribution and/or use of the electronic files of the structural drawings is strictly prohibited unless written authorization is provided by Keystone Structural Solutions.

1.12 The structural construction documents are instruments of professional services and shall remain the property of KSS. The documents are not intended or represented to be suitable for reuse by the Client or others on extensions of this project or on any other project.

2.0 DESIGN CRITERIA

2.1 Design Codes:
- a. IBC 2015
- b. ANSI/ASCE-7 2010
- c. PA Uniform Construction Code (UCC)

2.2 Live Loads:

a. Roof live load	20 psf
b. Typical Floor	100 psf

2.3 Snow Load:

a. Ground snow load (Pg)	30 psf
b. Flat-roof snow load (Pf)	25 psf
c. Exposure factor (Ce)	1.0
d. Thermal Factor (Ct)	1.0
e. Snow Importance factor (Is)	1.0
f. Additional drift load at conditions per ASCE-7	

2.4 Wind Load:

a. Basic wind speed (3 sec. gust) Risk Category II	
Wind	115 mph
b. Wind Exposure category	B
c. Internal pressure coefficient	+/- 0.18
d. Components & Cladding per ASCE-7	25 psf min.

2.5 Seismic Load:

a. Seismic Occupancy Category	II
b. Seismic importance factor (Ie)	1.00
c. Spectral response accel. – short (Ss)	0.126
d. Spectral response accel. – 1 sec.(S1)	0.056
e. Site Class (S)	D
f. Spectral response coeff. – short (Sds)	0.134
g. Spectral response coeff. – 1 sec. (Sd1)	0.090
h. Seismic Design Category	B
i. Basic seismic force resisting system:	
• Steel system not specifically detailed for seismic resistance	
• Ordinary reinforced masonry shear walls	
• Light framed walls with wood structural panels	
j. Seismic-response coefficient (Cs)	0.048
k. Response modification factor (R)	3.0
l. Seismic Base Shear	XXXX
m. Analysis procedure:	Equivalent Lateral Force

3.0 FOUNDATIONS

3.1 No subsurface investigation report has been provided for this project.. Spread footings have been designed for an assumed allowable bearing capacity of 1500 psf. Concrete slabs on grade have been designed to bear on properly compacted subgrade soils. Provide 6" (min.) granular subbase beneath slabs on grade, AASHTO #57 grading.

3.2 Elevations shown on the drawings at which foundations bear are approximate. Step-in footing locations and elevations shown on the drawings shall be field verified and adjusted as required so foundations bear on material of at least the capacity noted above. Bottom of exterior footings shall be a minimum of 3'-6" below finished grade. If conditions prove to be unacceptable at elevations shown, over-excavate to acceptable subgrade material as determined by a Geotechnical Engineer. Fill over-excavation with lean concrete (f'c = 2000 psi) or properly compacted engineered fill.

3.3 The contractor shall retain the services of a professional geotechnical engineer to verify that the material on which foundations bear has at least the above noted capacity.

3.4 Divide floor slabs on grade into segments by means of contraction and construction joints as indicated on the drawings. Position of joints other than those shown on the drawings shall be submitted to the architect for approval.

3.5 Provide vertical slots for dovetail masonry anchors @ 16" o.c. where masonry abuts or faces concrete walls or piers.

3.6 No backfilling against walls shall be done until the slabs at the top and bottom have been placed or proper temporary shoring has been installed to brace the wall. Walls and grade beams having backfill against both sides shall have the backfill placed on both sides with a maximum differential height of 8 inches.

3.7 Construction joint keys shall be 2x4 (nominal & tapered) u. n. o.

3.8 Coordinate foundation drain locations with architectural, mechanical and/or civil drawings.

3.9 Coordinate site retaining wall drain locations with architectural, mechanical and/or civil drawings or place 4" weep holes at 10 ft. o.c."

4.0 REINFORCED CONCRETE

4.1 Reinforced concrete work shall be in accordance with the "Building Code Requirements for Reinforced Concrete" (ACI 318) and the Specifications for Structural Concrete (ACI 301) of the American Concrete Institute (editions as required by governing code).

4.2 Cast-in-place concrete shall have a minimum 28 day compressive Strength (f'c) of 4000 psi.

4.3 Air entrainment: 6% (+/-1.5%) in piers, grade beams, footings and other concrete exposed to freeze/thaw.

4.4 Concrete shall be normal weight concrete (144 pcf) with cement conforming to ASTM C150, Type I. Aggregate shall conform to ASTM C33.

4.5 Prior to concrete placement, the contractor shall submit to the architect for review, a concrete mix design for each type of concrete, prepared in accordance with the specifications.

4.6 Reinforcement:

a. Deformed bars:	ASTM A615, Grade 60.
b. Welded Wire Reinforcement:	ASTM A1064
c. Deformed Bar Anchors:	Nelson Type D2L, ASTM A496.

4.7 Reinforcement shall be detailed, fabricated, and placed in accordance with the A.C.I. "Detailing Manual No. SP-66", latest edition.

4.8 Reinforcement shall be securely held in place while placing concrete. If required, additional bars, stirrups, or chairs shall be provided by the contractor to furnish support for bars.

4.9 Reinforcing bars shall have the following minimum concrete cover:

a. Cast against earth:	3"
b. Exposed to earth or weather	
• (No. 5 or smaller):	1-1/2"
• (No. 6 or larger):	2"
c. Concrete not exposed to weather	
• Slabs, Walls, Joists:	3/4"
• Beams and Columns:	1-1/2"

4.10 Reinforcing bar splices shall be Class 'B' tension lap per ACI 318 u.n.o. Lap welded wire fabric two full mesh lengths at splices and wire tie together.

4.11 Fiber reinforcing of the type and dosage as specified on plan shall be uniformly dispersed throughout concrete slabs.

4.12 Leveling grout shall be non-shrink, non-metallic, factory pre-mixed grout in accordance with ASTM C1107, with f'c of not less than 5000 psi.

4.13 Contractor shall verify dimensions and locations of slots, pipe sleeves, etc., as required for mechanical trades before concrete is placed.

4.14 The beams and girders supporting elevated floors are designed to have a deflection of not more than one inch under the wet weight of concrete and self-weight of structure. The contractor is responsible to provide a level concrete surface in accordance with the specifications. Additional concrete or temporary shoring may be needed and shall be provided by the contractor.

4.15 Construction joints in slabs on metal deck shall be located as indicated on the drawings.

5.0 POST INSTALLED ANCHORS

5.1 Post installed anchors shall be used only where specified on structural drawings.

5.2 The installation of post installed anchors for missing or misplaced cast in place anchors shall be approved by the engineer of record (EOR).

5.3 Anchors shall be installed in strict accordance with manufacturer's printed installation instructions in conjunction with edge distance, spacing and embedment depths as indicated on the drawings.

5.4 The contractor shall arrange for a manufacturer's field representative to provide installation training for all products to be used, prior to the commencement of work. Only trained installers shall perform post installed anchor installation. A record of training shall be kept on site and be made available to the EOR/IOR as requested.

5.5 Adhesive anchors installed in horizontal to vertically overhead orientation to support sustained tension loads shall be done by a certified adhesive anchor installer (AAI) as certified through ACI/CRSI (ACI 318-11 D.9.2). Proof of current certification shall be submitted to the engineer for approval prior to commencement of installation.

5.6 Concrete adhesive anchors must be installed in concrete aged a minimum of 21 days (ACI 318-11 D.2.2).

6.0 MASONRY

6.1 Masonry work shall be in conformance with the latest edition of the "Building Code Requirements for Masonry Structures" (TMS 402) and the "Specifications for Masonry Structures" (TMS 602) of The Masonry Society.

6.2 Mortar for structural masonry shall conform to ASTM C270 and ASTM C780. Materials include: Portland cement - ASTM C150, Type I. Lime - ASTM C207. Type S mortar shall be used for structural masonry, except **Type M mortar shall be used for** masonry retaining walls **and basement** walls. Type N mortar shall be used for veneers.

6.3 Grout shall conform to ASTM C476 and ASTM C-1019, and have a minimum compressive strength of 2150 psi. u.n.o. Slump shall be 8 to 10 inches. Maximum aggregate size shall be 3/8".

6.4 Concrete masonry units: Hollow block shall conform to ASTM C90 , Type I. Solid blocks shall conform to ASTM C145. Block to have a minimum net area compressive strength of the units of 2,000 psi, and a minimum net area compressive strength of masonry (prism strength) of 2,000 psi (f'm), unless noted otherwise.

6.5 Deformed bar reinforcement shall conform to ASTM A615, grade 60. Provide lap splices with a min. of 48 bar diameters. Provide bar spacers as required to properly locate reinforcing within CMU cells.

6.6 Horizontal joint reinforcing for vertically reinforced walls shall be galvanized, standard class, Ladder type DUR-O-WAL (or equal), conforming to ASTM A82 and ASTM A951, spaced at 16" o.c. u.n.o. Side rods shall be No. 9 with No. 9 cross rods u.n.o. Ladder type or truss type may be used for walls without vertical reinforcing. Provide one-piece prefabricated units at 8" o.c. at all wall corners and intersections. Provide additional joint reinforcing in the first two courses above and below masonry openings . Extend at least 2'-0" beyond each side of the opening. Provide lap as recommended by the manufacturer with a minimum of 6". Discontinue reinforcing at control joints.

6.7 Provide full bed and head joints.

6.8 Grout cells of CMU solid for CMU lintels, bond beams, cells with vertical reinforcement and at least two courses, 24" wide below beam bearing plates, u.n.o.

6.9 Vertical control joints in CMU walls shall be provided where indicated on the Structural Drawings or as approved by the Structural Engineer. Joints should be located at a maximum spacing of 25 feet on center, and in accordance with the latest NCMA standards. If joint locations are not provided on structural drawings, the masonry contractor shall submit a joint location plan for review and approval by the engineer of record.

6.10 Masonry walls shall be securely braced until floor and/or roof systems have been installed and are capable of stabilizing the walls.

7.0 STRUCTURAL STEEL

7.1 Structural steel work shall be in accordance with the AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings" (ASD – 14th Edition) and the "Code of Standard Practice for Steel Buildings and Bridges".

7.2 Structural steel shall conform to the following:
- a. Wide flange shapes and WT's: ASTM A992 with a minimum yield strength of 50,000 psi.
- b. Channels, angles, plates and miscellaneous connection material: ASTM A36 with a minimum yield strength of 36,000 psi, u.n.o.
- c. Pipes: ASTM A53, Types E or S, with minimum yield strength of 35,000 psi.
- d. Steel Tubing: ASTM A500, Grade B, with a minimum yield strength of 46,000 psi for square and rectangular and 42,000 psi for round.

7.3 Anchor bolts shall be ASTM F1554, Grade 36, u.n.o. Nuts shall be ASTM A 563 Heavy Hex carbon steel. Washers shall be ASTM F 436.

7.4 Steel beams shall be equally spaced in bays unless otherwise noted.

7.5 Steel exposed to the exterior shall be hot dipped galvanized according to ASTM A-123. When galvanized steel is field welded provide appropriate ventilation measures. Welded surfaces shall be ground smooth and coated with galvanizing repair paint. Galvanizing repair paint shall be a high zinc dust content paint complying with Military Specifications MIL-P-21035 (Ships) or SSPC-Paint-20.

7.6 Do not paint steel where encased with concrete, to receive spray-on fireproofing, at field weld areas, at the top flange of composite beams or at S.C. bolt areas.

7.7 Structural Steel Fabricator shall provide for vertical and horizontal field adjustment of support assemblies.

7.8 The Structural Steel Fabricator, and/or General Contractor, shall verify existing dimensions and conditions at the site. Any discrepancy found shall be reported to the Architect prior to preparation of shop drawings. Shop drawings shall include field measurements and conditions.

7.9 Cuts, holes, coping, etc. required for other trades shall be shown on the shop drawings and made in the shop. Cuts or burning of holes in the field will not be permitted.

7.10 Structural steel frames shall be securely braced until floor slabs, roof decks and shear walls have been installed and are capable of stabilizing the frames.

8.0 STRUCTURAL STEEL CONNECTIONS

8.1 All steel details and connections shall be in accordance with the requirements of "Specification for Structural Steel Building" and "Code of Standard Practice for Steel Buildings and Bridges" (ASD – 14th Edition).

8.2 All connections, unless indicated as being fully designed on structural drawings shall be designed and detailed by a licensed professional engineer working for or retained by the fabricator licensed in the state where the project is located. The design and detail shall comply with all applicable codes and specification sections.

8.3 Unless otherwise noted as being fully designed, details indicated on drawings indicate general criteria for design and detailing of connections. Details indicated on drawings are not intended to convey complete connector sizes, plate sizes, weld sizes, number of bolts, or any other specific information that is obtained through designing of an individual connection for a given set of loads.

8.4 Submit connections not indicated as being fully designed on the drawings to KSS for review prior to the preparation of shop drawings.

8.5 Alternate connections to those shown on drawings will only be considered acceptable if contractor formally submits alternates prior to the preparation of shop drawings and KSS approves the submittal.

8.6 For connection design and detailing, set connection work point at intersection of member centerlines, u.n.o.

8.7 Design all connections for forces indicated on the drawings and/or notes. Connection design forces indicated on the drawings represent the total combined un-factored load (ASD) forces, uno

8.8 Design of members is based on assumption of 3/4-inch diameter ASTM A325 bolts. Use no more than two bolt diameters, one grade per diameter, skip one size between diameters. Connections shall be Type N for framed connections and Type SC Class A for bracing and hangers uno.

8.9 Do not use oversized holes for any connections unless specifically indicated on the drawings or approved in writing by KSS.

8.10 Unless alternate connections are approved by the structural engineer, bolted connections shall be double angle connections in accordance with AISC. Alternatively, single plate connections in accordance with AISC can be used for beam to beam connections only. The minimum depth of the connection must be more than 67% of the beam depth except that beams framing to columns shall have full depth connections using minimum 5/16" double angle connections; minimum 5/16" single connection plates may be used at wind moment connections at HSS columns and skewed connections, u.n.o. Non-composite beam connections shall be designed for loads indicated on the drawings, or a minimum of one half the uniform load capacity of the beam as indicated in the AISC Manual, Maximum Total Uniform Load Tables. The steel fabricator is responsible for the connection design utilizing the above criteria. Fabricator's responsibilities include using a Registered Professional Engineer to design the structural-steel connections.

8.11 Welding shall be in accordance with the "Structural Welding Code ANSI/AWS D1.1", American Welding Society, latest edition. Use E70XX electrodes.

8.12 Field welded surfaces shall be cleaned, ground smooth, and coated with appropriate primer/paint as specified.

9.0 METAL DECK

9.1 Metal deck shall be designed, detailed and installed in accordance with the "Design Manual for Floor Decks and Roof Decks" of the Steel Deck Institute, latest edition.

9.2 Composite floor deck shall be in conformance with the. "Specifications for Composite Steel Floor Deck" of the Steel Deck Institute, latest edition. Sheet steel for galvanized deck shall conform to ASTM A653 G60, Structural Quality with a minimum yield strength of 33 ksi.

9.3 Composite steel floor deck shall be fastened to the supporting steel at the ends of the units and at all intermediate supports with Hilti powder actuated fasteners (PAFs). Hilti X-ENP19 PAFs shall be spaced at 12" o.c. in a 36/4 pattern where no shear studs are used. Fasten side laps and perimeter edges of panels between supports using Hilti S-SLC-01 screws at intervals not exceeding the lesser of 1/2 of the span or 36 inches.

9.4 Verify actual base material thickness on-site prior to purchasing or installing powder actuated fasteners. Consult manufacturer for correct fastener for corresponding base material thickness.

9.5 Deck installer may substitute alternate means of welding in lieu of mechanical fastening if connection and diaphragm capacity is maintained.

9.6 Deck units shall be placed in three (3) spans continuous, if possible. A minimum two (2) span condition must be maintained at all locations. Ends of adjacent deck units shall meet, either lapped or butted as appropriate, over supports.

9.7 Metal deck supplier shall provide light gage metal concrete pour stops, deck closure pieces and shall reinforce or support deck at openings and column areas as required, in accordance with the Steel Deck Institute.

10.0 COLD FORMED STEEL

10.1 Cold formed steel structural members shall be designed in accordance with the American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members", edition as required by governing code.

10.2 Cold formed steel members and details shown on the architectural or structural drawings are diagrammatic. They are intended for bid purposes only. The light gage manufacturer is responsible for final design and detailing of structural stud and/or joist framing members and their connections to each other and the main building structure. Design calculations and shop drawings indicating jambs, posts, headers, bracing and pieces necessary for construction shall be submitted to the architect for review and shall bear the engineering seal of the professional engineer responsible for their preparation.

10.3 Exterior stud walls shall be designed per the applicable codes noted in Design Criteria. The maximum permissible horizontal deflection shall be L/360 (L/600 for brick veneer).

10.4 Maximum stud spacing shall be 16" u.n.o.

10.5 Framing components shall be cut squarely for attachment to perpendicular members or as required for an angular fit against abutting members.

10.6 Field cutting of framing members must be done by sawing or shearing. Torch cutting of cold-formed members is prohibited.

10.7 Fastening of components shall be with self-drilling screws or welding. Fasteners shall be compatible with the structural members. Wire tying of components is not permitted. Welds shall be touched-up with zinc-rich paint.

10.8 Cold formed steel framing members shall be securely attached to the structure where indicated on the drawings, or reviewed shop drawings. The attachment to the building structure shall be provided by the light gage framing manufacturer/installer.

10.9 Provide vertical slide tracks or slide clips where required to allow for vertical movement of building structural members. Maximum expected structure deflection is L/360 at floors and L/240 at roofs.

10.10 See architectural drawings for additional information, such as sheathing types, finishes, opening locations etc.

11.0 PREFABRICATED COLD FORMED STEEL TRUSSES

11.1 Cold formed steel structural members shall be designed in accordance with the American Iron and Steel Institute (AISI) "Specification for the Design of Cold-Formed Steel Structural Members", latest edition.

11.2 Prefabricated cold formed steel trusses shall be designed and engineered by the manufacturer. Design calculations and shop drawings for construction shall be submitted to the architect for review and shall bear the engineering seal of the professional engineer responsible for their preparation.

11.3 Prefabricated cold formed steel trusses shall be designed to support the loads indicated by the design criteria, at the depth and spacing indicated on the drawings. Self weight of the trusses are not included in these loads. Lateral and uplift loads shall be applied in accordance with the design criteria.

11.4 The stability of the trusses during erection is the sole responsibility of the truss installer. Design of temporary and permanent bracing is the responsibility of truss fabricator/truss installer. The truss fabricator should indicate on the roof truss layout all temporary and permanent bracing as required by the truss design and by standard practice.

11.5 Use manufacturer's standard load bearing members. With each type of metal framing required, provide manufacturer's standard steel chords, blocking, clip angles, shoes, reinforcements, purlins, fasteners and accessories for applications indicated as needed to provide a complete metal framing system.

11.6 Install cold formed steel I trusses in accordance with the manufacturer's instructions. Provide web stiffeners at reaction points, and truss bridging and bracing as required by the truss design.

11.7 Truss manufacturer shall arrange truss web members as required by design. Web arrangements shown on the structural drawings are for illustrative purposes only.

11.8 Truss framing plans indicate the required basic truss layouts. Alterations to the plans which require design revisions to the contract documents are not permitted.

11.9 If the truss manufacturer changes the truss layout, the new layout must be coordinated with all other structural drawings prior to submission of shop drawings. Shop drawings must be approved prior to start of fabrication.

11.10 Touch-up shop-applied protective coatings when damaged in field. Use appropriate coating. Use compatible primer for prime coated surfaces.

11.11 No field alteration of prefabricated trusses is permitted unless done in accordance with truss manufacturer's approved modification detail.

11.12 Refer to mechanical drawings for locations and weights of any mechanical units to be supported by the roof trusses.

12.0 SPECIAL INSPECTIONS AND TESTING

12.1 INSPECTION AGENCY:
- a. Inspection agency or individual shall be retained by the owner or contractor to conduct the inspections and testing outlined below and as defined in Chapter 17 of the International Building Code
- b. Special Inspectors shall keep records of all inspections and tests and submit records to the Architect.

SOIL

• Bearing capacity	Periodic
• Excavation depth to proper mat.'l	Periodic
• Classification and testing of compacted mat.'l	Periodic
• Proper use of mat.'l	Continuous
• Site preparation	Periodic

CONCRETE

• Verifying use of req.'d mix designs	Periodic
• Anchor bolt placement	Continuous
• Post-installed anchors	Continuous
• Reinforcing steel and placement	Periodic
• Formwork	Periodic
• Concrete Sampling	Continuous
• Curing Techniques	Periodic

MASONRY

• Material certificates of compliance	Periodic
• Verification of f'm every 5,000 S.F.	Periodic
• Mortar proportions	Periodic
• Placement of CMU and joints	Periodic
• Reinforcement placement	Continuous
• Grout placement	Continuous
• Anchor bolt type,size & placement	Continuous

STRUCTURAL STEEL

• Material Certificates of Compliance	Periodic
• Identification markings	Periodic
• Welding – Fillet welds < 5/16"	Periodic
• Welding – Fillet welds > 5/16"	Continuous
• Welding – Full / Partial Penetration	Continuous
• Inspection of steel frame connections	Periodic

METAL DECKING

• Welding	Periodic
• Verification of deck type, gage, finish	Periodic
• Sidelap fastening	Periodic

ABBREVIATIONS

A	
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ASTM	American Society of Testing & Materials
AB	Anchor bolt
ADD'L	Additional
ADJ	Adjustable
AESS	Architecturally Exposed Structural Steel
AFF	After Final Fitup, Above Finished Floor
AISI	American Iron & Steel Institute
ALUM	Aluminum
ALT	Alternate
ANC	Anchor
ANG	Angle
APA	American Plywood Association
ARCH	Architect/Architectural
ASD	Allowable Stress Design
B	
BLDG	Building
BPL	Base Plate
BLKG	Blocking
BM	Beam
BOT	Bottom
BRG	Bearing
BT	Bent
BTW	Between
C	
CANT	Cantilever
CA	Caisson
CAP	Caisson Cap
C/C	Center to Center
CFS	Cold-Formed Steel
CIP	Cast-In-Place
CJ	Contraction Joint
CLR	Clear / Clearance
CMU	Concrete Masonry Unit(s)
COL	Column
CONC	Concrete
CONN	Connection
CP	Concrete Pier
CONTR	Contractor
CONT	Continuous
COORD	Coordinate
CSK/S	Countersunk Screw
D	
d(penny)	Nails(penny-weight)
D	Depth
DBA	Deformed Bar Anchor
DBL	Double
DEMO	Demolish
DET	Detail
DIA / Ø	Diameter
DIAG	Diagonal
DIM	Dimension
DWL(S)	Dowel(s)
DWG	Drawing
E	
EA	Each
EF	Each Face
EW	Each Way
EL	Elevation
ELEC	Electrical
ENG	Engineer
EOD	Edge of Deck
EOR	Engineer of Record
EOS	Edge of Slab
EQ	Equal
EX	Existing
EXP	Expansion
EJ	Expansion Joint
F	
FIN	Finish
FLG	Flange
FLR	Floor
FND	Foundation
FOM	Face of Masonry
FF	Finished Floor
FS	Far Side, Footing Step
FT(')	Foot
FTG	Footing
FRT	Fire Retardant Treated
FR	Fully Restrained
G	
GA	Guage,gage
GALV	Galvanize
GB	Grade Beam
GC	General Contractor
GR	Grade
GT	Girder Truss
GYP	Gypsum
H	
HD	Hold Down
HC	Hollow Core
HNGR	Hanger
HT	Height
HP	High Point
HORZ	Horizontal
HSS	Hollow Structural Steel
I	
IBC	International Building Code
ID	Inside Diameter
IF	Inside Face
IN(")	Inch
INCL	Inclusive, Including
INFO	Information
IOR	Inspector of Record
J	
JNT	Joint
JST	Joist
K	
KB	Knee Brace
K	KIP (1000 pounds)
KLF	Kips Per Linear Foot
KSS	Keystone Structural Solutions
L	
L	Angle
L	Long or Length
LAT	Lateral
LF	Linear Foot
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LONG	Longitudinal
LG	Long
LP	Low Point
LRFD	Load & Resistance Factor Design
LSH	Longside Horizontal
LSV	Longside Vertical
LVL	Laminated Veneer Lumber
LW	Long Way
LWC	Lightweight Concrete
M	
MSRY	Masonry
MAX	Maximum
MC	Moment Connection
MCJ	Masonry Control Joint
MECH	Mechanical
MEMB	Membrane, Member
MEP	Mechanical, Electrical and Plumbing
MFG	Manufacturer
MIN	Minimum
MISC	Miscellaneous
MO	Masonry opening
MP	Masonry Pier
MTL	Metal
MW	Masonry Wall
N	
NIC	Not in Contract
NS	Near Side
NTS	Not to Scale
NWC	Normal Weight Concrete
O	
OC	On Center
OD	Outside Diameter
OF	Outside Face
OPNG	Opening
OH	Opposite Hand
OPP	Opposite
OSB	Oriented Strand Board
OSH	Oversized Hole
P	
PAF	Powder Actuated Fastener
PC	Precast Concrete
PCF	Pounds per Cubic Foot
PCP	Precast Concrete Plank
PEMB	Pre-engineered Metal Building
PEN	Penetration
PL	Plate
PLCS	Places
PLYWD	Plywood
PrefFab	Prefabricated(d)
PMJ	Premolded Joint Filler
PROJ	Project; Projected, Projection
PSL	Parallel Strand Lumber
PCY	Pounds Per Cubic Yard
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PT	Pressure Treated, Pre/Post Tensioned
R	
R	Radius
R/C	Reinforced Concrete
REF	Refer(ence)
REINF	Reinforcing
REQ'D	Required
RFI	Request for Information
RTN	Return
REV	Revise; Revision
RO	Rough Opening
RTU	Rooftop Unit
S	
SCHED	Schedule
SECT	Section
SHT	Sheet
SIM	Similar
SC	Slip Critical
SJ	Steel Joist
SGLT	Struct. Glue Lam. Timber
SL	Slope
SOG	Slab-on-Grade
SOD	Slab-on-Deck
SPA	Space(s)
SPEC	Specification
SQ	Square
SSH	Short Slotted Hole
SS	Stainless Steel
STD	Standard
STIF	Stiffener
STIR	Stirrup
STL	Steel
STRUCT	Structural
SYM	Symmetrical
T	
T or T/	Top
T&B	Top & Bottom
TD	Trench Drain
TEMP	Temporary
TEMP	Temperature
T&G	Tongue & Groove
TJ	Tie Joist
T/SL	Top of Slab
T/STL	Top of Steel
T/W	Top of Wall
THK	Thick
THRU	Through
TRANS	Transverse
TYP	Typical
TBD	To Be Determined
U	
UNO	Unless Noted Otherwise
V	
VERT	Vertical
VIF	Verify In Field
W	
W	Width, Wide Flange
WF	Wall Footing
W/	With
W/O	Without
WD	Wood
WP	Work Point, Wood Post
WPL	Wall Plate
WT	Weight
WWF	Welded Wire Fabric
Y	
YD	Yard

SYMBOLS LEGEND

- CONCRETE WALL
- MASONRY WALL
- WOOD STUD WALL
- SHEAR WALL
- SHEAR WALL HOLD DOWNS
- METAL STUD WALL
- BEAM WITH BEARING WALL ABOVE
- BRACE FRAME LOCATION
- WIND MOMENT CONNECTION
- MOMENT CONNECTION
- DECK OR SLAB SPAN DIRECTION
- PLANK MARK & SPAN DIRECTION (P#)
- STEP IN SLAB
- EXISTING STRUCTURE
- ELEVATION WORK POINT
- BUILDING OR WALL SECTION (X / X-X)
- DETAIL OR ENLARGED PLAN (X / X-X)
- REVISION MARK (△)
- SLOPE (1 / 1)
- MECH OPENING (MO)
- MW# REINFORCED MASONRY WALL, SEE SCHEDULE
- MP# REINFORCED MASONRY PIER, SEE SCHEDULE
- BP# BEARING PLATE, SEE SCHEDULE
- (SL) SLOPING STEEL
- SL SLOPE TO LOW POINT
- [#] NUMBER OF HEADED STUDS
- (X) COLUMN GRID CENTER LINE
- (X) STEEL LINE

DRAWING LIST

S000	GENERAL NOTES, ABBREVIATIONS & SYMBOLS LEGEND
S100	FOUNDATION PLAN
S101	FIRST FLOOR FRAMING PLAN
S102	ROOF FRAMING PLAN
S200	FOUNDATION TYPICAL DETAILS
S201	FOUNDATION SECTIONS
S300	FRAMING TYPICAL DETAILS
S301	FRAMING SECTIONS

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY L. MOSCOLLIC ENGINEER PE-081361-E

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NEW WALKWAY CONNECTION STRUCTURE

PRELIMINARY NOT FOR CONSTRUCTION

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

GENERAL NOTES, ABBREVIATIONS & SYMBOLS LEGEND

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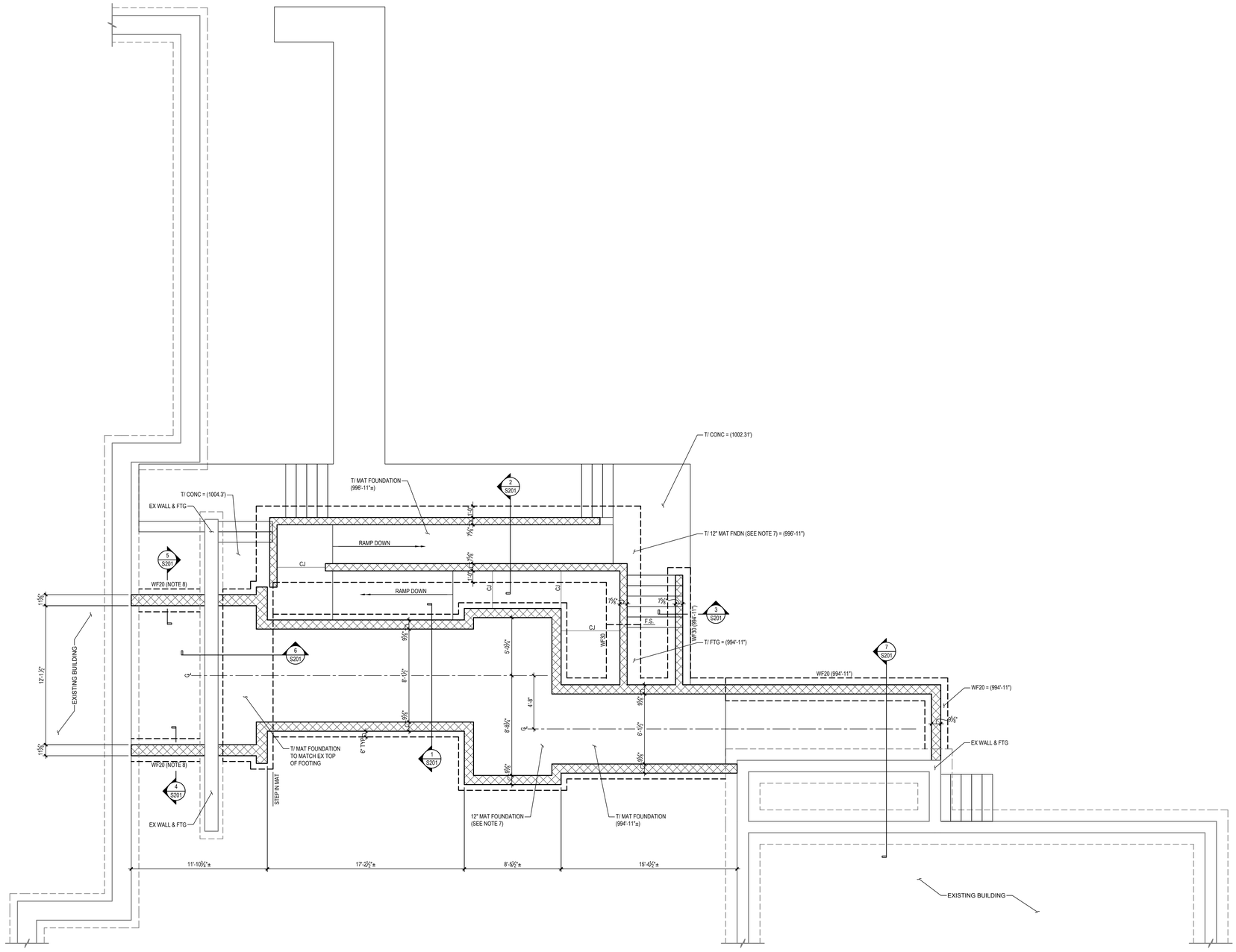
FOOTING SCHEDULE			
MARK	DIMENSIONS (L x W x D)	REINFORCING (EA WAY, BOT UNO)	REMARKS
WF20	CONT x 2'-0" x 1'-0"	#5 @ 48" TRANS, (3) #5 CONT	
WF30	CONT x 3'-0" x 1'-0"	#5 @ 24" TRANS, (3) #5 CONT	

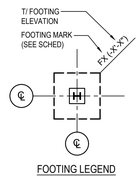


FOUNDATION PLAN

SCALE 1/4" = 1'-0"

NOTES:

1. TOP OF SLAB ELEVATION = VARIES. SEE PLAN.
2. FLOOR SLAB IS A 4" CONCRETE SLAB ON GRADE REINFORCED WITH PROPEX FIBERMESH 300 AT A DOSAGE RATE OF 2.0 LBS PER CUBIC YARD UNO. PLACE SLAB ON VAPOR RETARDER OVER 6" WELL GRADED/COMPACTED GRANULAR BASE, (SEE GENERAL NOTES).
3. TOP OF FOOTING ELEVATION VARIES. SEE PLAN.
4. WALL FOOTINGS TO BE CENTERED ON FOUNDATION WALLS UNO.
5. SEE ARCHITECTURAL DRAWINGS FOR FLOOR FINISHES, RECESSES, DEPRESSIONS, AND SLOPES.
6. REFER TO ARCHITECTURAL DRAWINGS FOR INTERIOR WALLS NOT SHOWN, FOR INTERIOR AND EXTERIOR WALL OPENINGS, RECESSED SLABS AREAS AND ADDITIONAL INFORMATION NOT SHOWN.
7. MAT FOUNDATION TO BE 12" THICK REINFORCED CONCRETE WITH #5 @ 12" OC, EACH FACE, EACH WAY.
8. TOP OF FOOTING TO MATCH EXISTING FOOTING ELEVATIONS.



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FOUNDATION PLAN

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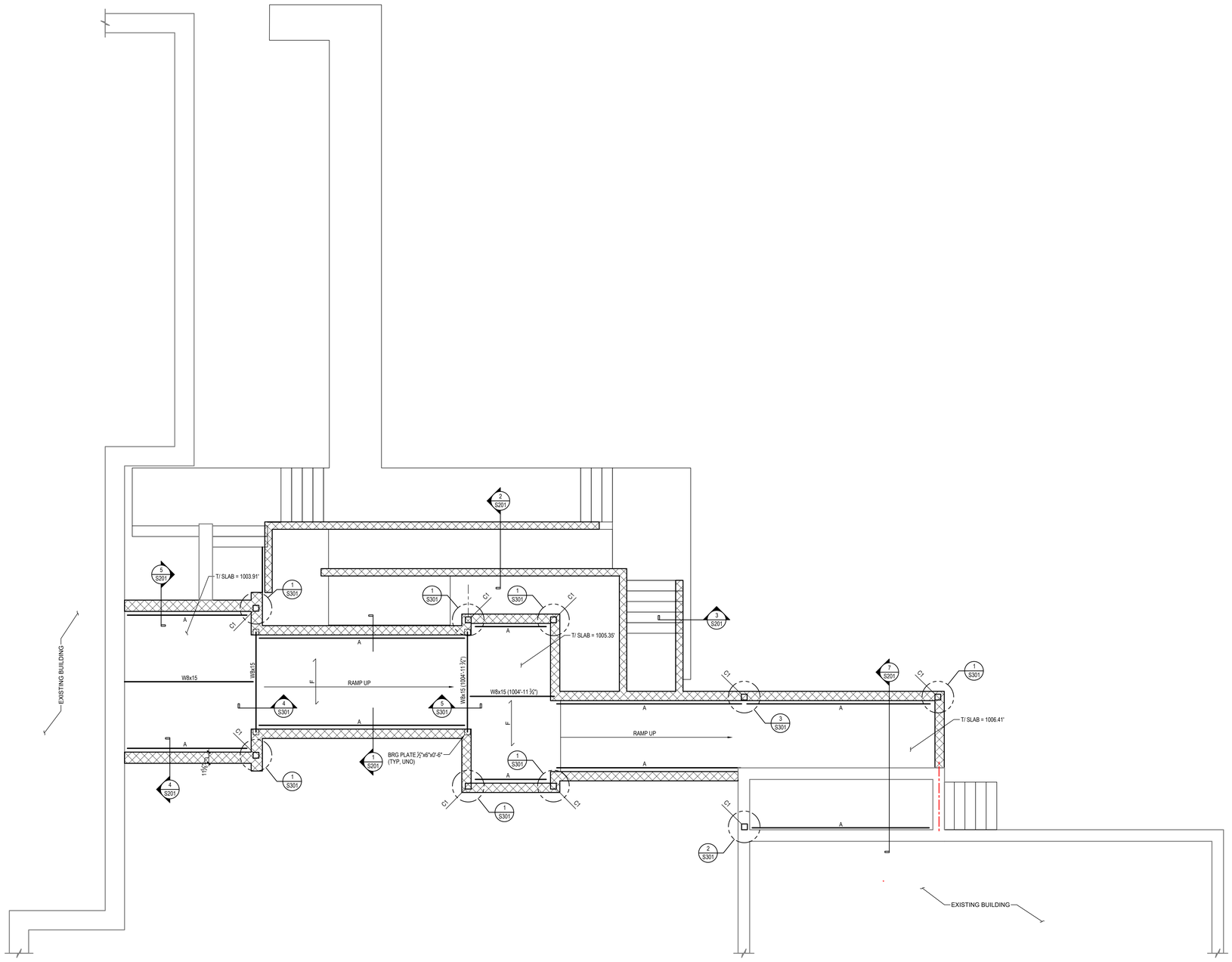

FIRST FLOOR FRAMING PLAN

SCALE 1/4" = 1'-0"

NOTES:

1. TOP OF SLAB ELEVATION VARIES. SEE PLAN
2. TOP OF STEEL ELEVATION = (-4 1/2") FROM THE REFERENCED TOP OF SLAB ELEVATIONS.
3. "F" DESIGNATES SPAN DIRECTION OF 2"-20 GAGE GALVANIZED COMPOSITE METAL DECK + 2 1/2" NWC (NORMAL WEIGHT CONCRETE) SLAB REINFORCED WITH 6x6 - W2.1 x W2.1 WWF; (4 1/2" TOTAL THICKNESS).
4. "C1" DESIGNATES HSS 5x5x½ POST WITH BASE PLATE ¾" THICK. SEE DETAILS 1-3/S301 FOR ADDITIONAL INFORMATION.
5. "C2" DESIGNATES HSS 6x6x½ WITH BASE PLATE ¾" THICK.
6. "A" DESIGNATED ALONG WALL INDICATES ANGLE SUPPORT F OR SLAB/DECK AT WALL. SEE TYPICAL DETAIL.
7. PROVIDE ANGLES FOR DECK SUPPORT AROUND COLUMNS, TYPICAL.
8. SEE ARCHITECTURAL DRAWINGS FOR FLOOR FINISHES, DEPRESSIONS AND SLOPE OF SLABS.
9. REFER TO FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
10. UNLESS NOTED ON THE PLAN, COORDINATE EDGE OF SLAB (EOS) DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
11. SEE MISCELLANEOUS LOOSE LINTEL SCHEDULE FOR LINTELS NOT SHOWN.

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JANUARY 31, 2022

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FIRST FLOOR FRAMING PLAN

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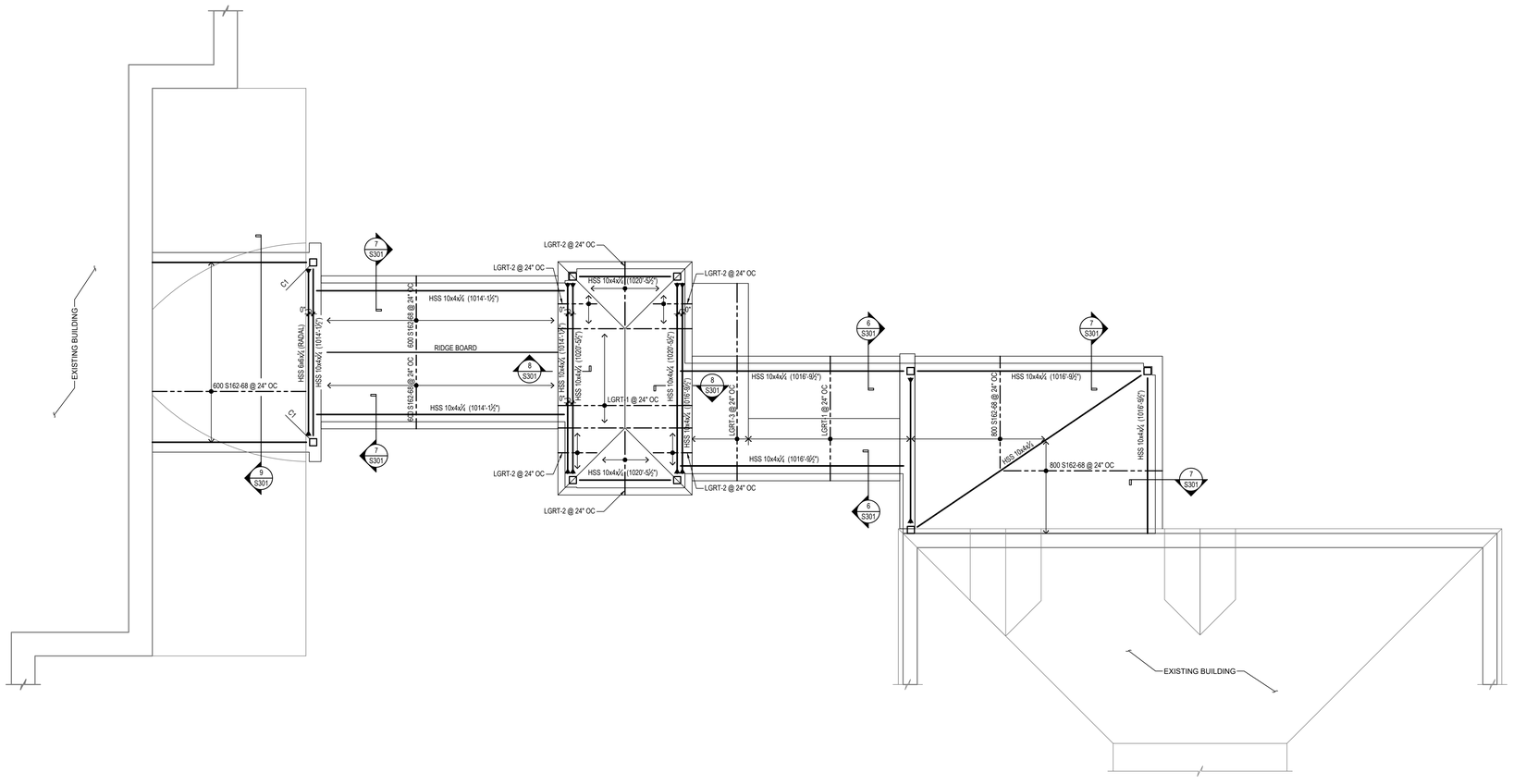


ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

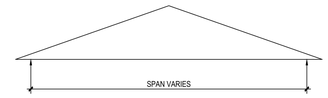
NOTES:

1. TOP OF STEEL BEAM/JOIST BEARING ELEVATION VARIES, SEE PLAN.
2. "LGRT-X" DESIGNATES LIGHT GAGE ROOF TRUSSES. SEE SCHEDULE FOR LOADING INFORMATION.
3. ROOF SHEATHING TO BE 5/8" OSB OR PLYWOOD WITH #10 SCREWS AT 12" FIELD SPACING AND 6" EDGE SPACING.
4. "A" DESIGNATED ALONG WALL INDICATES ANGLE SUPPORT FOR DECK AT WALL. SEE TYPICAL DETAIL.
5. ROOF TRUSS MANUFACTURER TO COORDINATE ALL ROOF OPENINGS AND PROVIDE ADEQUATE SUPPORT FOR ROOF SHEATHING AT PERIMETER OF OPENINGS.
6. SEE MISCELLANEOUS LOOSE LINTEL SCHEDULE FOR LINTELS NOT SHOWN.
7. REFER TO FOUNDATION PLAN AND ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

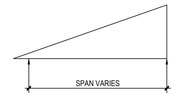
NOT TO SCALE

NOTES:

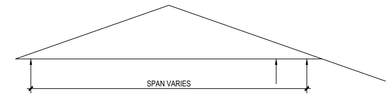
1. DESIGN ROOF TRUSSES FOR THE FOLLOWING LOADS:
   - SNOW LOAD = 25PSF
   - BOTTOM CHORD DL = 10 PSF
   - TOP CHORD DL = 10 PSF
   - TOTAL LOAD = 45 PSF
2. TOTAL DEFLECTION LIMITED TO L/240



LGRT-1



LGRT-2



LGRT-3

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ROOF FRAMING PLAN

S102

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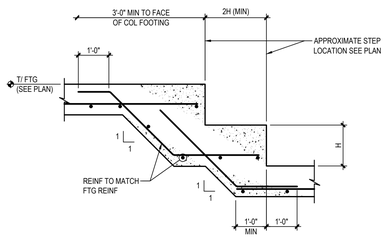
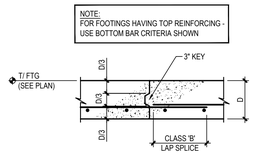


STEP IN WALL FOOTING DETAIL

NOT TO SCALE

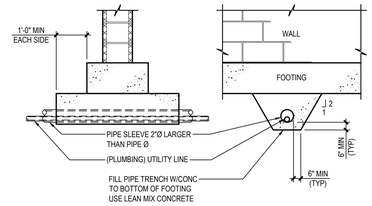
A S200



WALL FOOTING CONSTRUCTION JOINT DETAIL

NOT TO SCALE

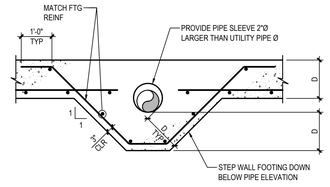
B S200



UTILITY PIPE UNDER WALL FOOTING DETAIL

NOT TO SCALE

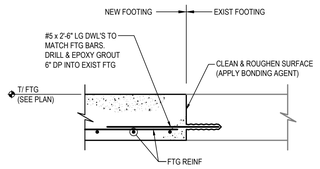
C S200



UTILITY PIPE THRU WALL FOOTING DETAIL

NOT TO SCALE

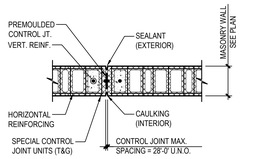
D S200



NEW TO EXIST FOOTING CONNECTION DETAIL

NOT TO SCALE

E S200

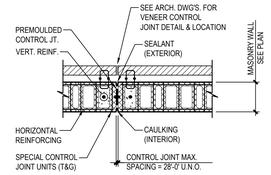


NOTES:
1. CONTROL JOINTS TO OCCUR FULL HEIGHT OF WALL
2. JOINT REINF. TO BE DISCONTINUOUS, BOND BEAM REINF. TO BE CONTINUOUS THRU JOINTS

CONTROL JOINT IN MASONRY WALL

NOT TO SCALE

F S200

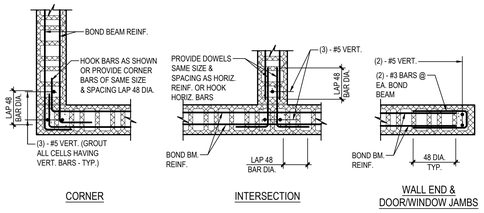


NOTES:
1. CONTROL JOINTS TO OCCUR FULL HEIGHT OF WALL
2. JOINT REINF. TO BE DISCONTINUOUS, BOND BEAM REINF. TO BE CONTINOUS THRU JOINTS

CONTROL JOINT IN CMU WALL W/ BRICK

NOT TO SCALE

G S200



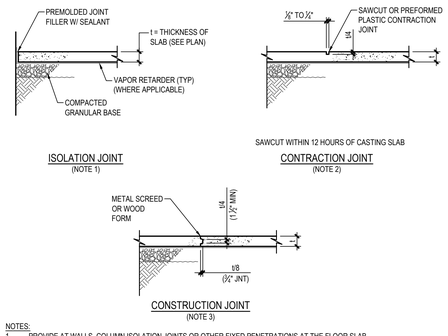
NOTES:
1. CORNERS AND INTERSECTIONS UNLESS OTHERWISE NOTED OR SPECIFIED, AT POINTS WHERE CONCRETE MASONRY WALLS MEET OR INTERSECT, LAY 50% OF UNITS IN MASONRY BOND WITH ALTERNATE UNITS HAVING A BEARING ON NOT LESS THAN 4 INCHES ON THE UNIT BELOW

2. DOWELS UNLESS OTHERWISE NOTED OR SPECIFIED, PROVIDE DOWELS FROM CONCRETE FOOTING OR WALL BELOW WITH SAME SIZE AND SPACING AS VERTICAL BARS AT LEVEL BELOW. LAP 48 BAR DIAMETERS MINIMUM U.N.O.

MASONRY WALL DETAILS

NOT TO SCALE

H S200

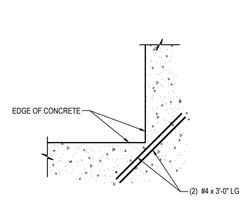


NOTES:
1. PROVIDE AT WALLS, COLUMN ISOLATION JOINTS OR OTHER FIXED PENETRATIONS AT THE FLOOR SLAB.
2. SEE PLAN FOR JOINT LAYOUT. IF NOT SHOWN, PROVIDE AT 12'-0" MAX OC AND SUBMIT PLAN LAYOUT FOR APPROVAL.
3. SUBSTITUTE CONSTRUCTION JOINTS FOR CONTRACTION JOINT AT END OF POUR LOCATIONS.

SLAB ON GRADE JOINT DETAILS FIBER REINFORCED

NOT TO SCALE

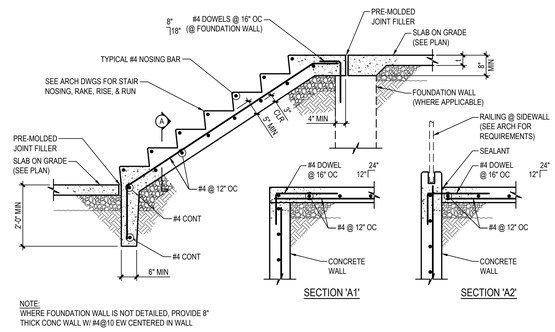
J S200



PLAN RE-ENTRANT CORNERS AT SLAB DETAIL

NOT TO SCALE

K S200



NOTE:
WHERE FOUNDATION WALL IS NOT DETAILED, PROVIDE 8" THICK CONC WALL W/ #4@10 EW CENTERED IN WALL

EXTERIOR STAIR ON GRADE DETAIL

NOT TO SCALE

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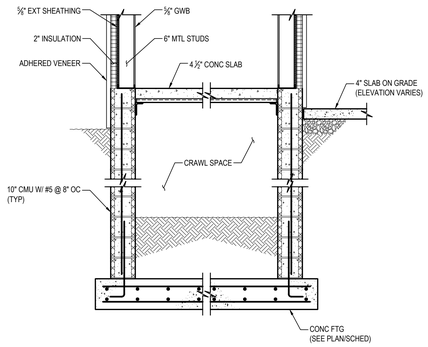
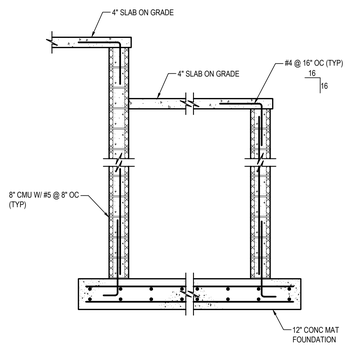


SECTION
SCALE: 1/2"=1'-0"
1 S201



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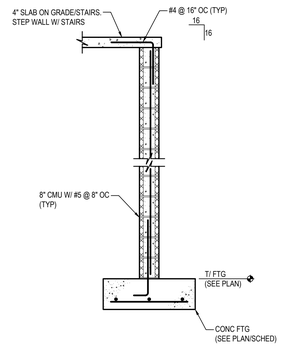
2 S201



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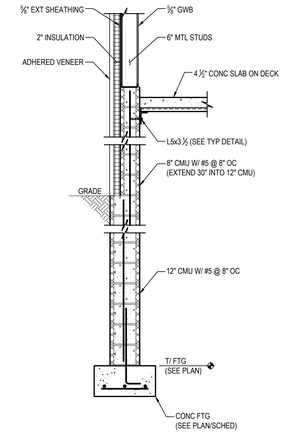
3 S201



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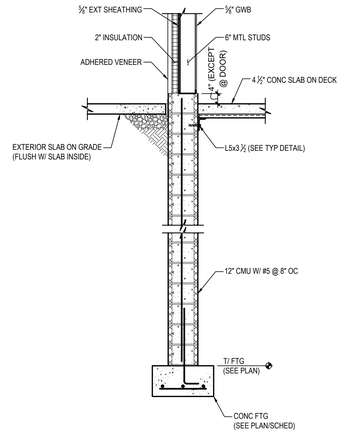

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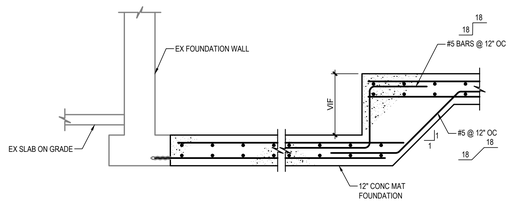
5 S201



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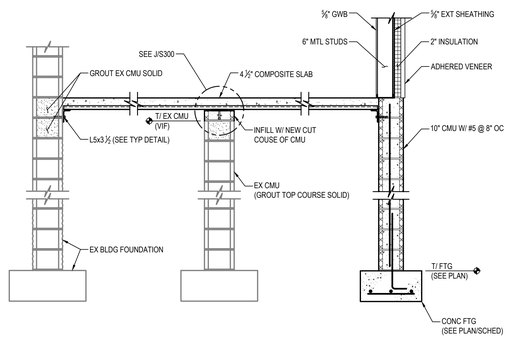
6 S201



SECTION
SCALE: 1/2"=1'-0"
7 S201

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
PROFESSIONAL
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PS-041814-E

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PRELIMINARY NOT FOR CONSTRUCTION

NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FERENS BUILDING

61 EAST MAIN STREET
97 EAST MAIN STREET
UNIONTOWN

FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

FOUNDATION SECTIONS

S201

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Consulting Engineers
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Project No. 21188

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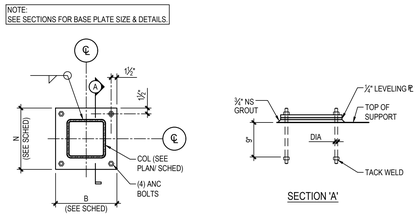
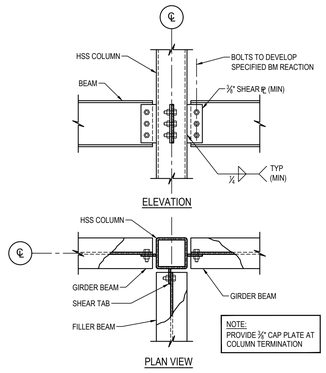


COLUMN BASE PLATE & SETTING DETAIL

NOT TO SCALE

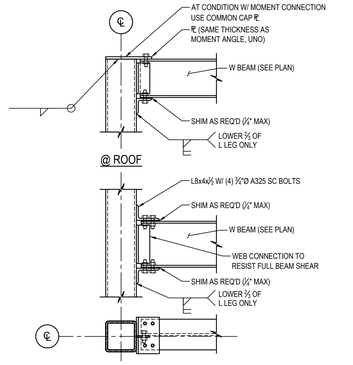
A S300



BEAM TO HSS COLUMN SHEAR TAB CONNECTION DETAIL

NOT TO SCALE

B S300

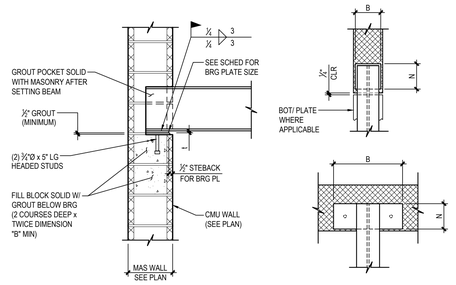


NOTES:
1. SEE PLAN FOR SEMI-RIGID MOMENT CONNECTION LOCATIONS SHOWN THUS ▶
2. PROVIDE CONNECTION AS INDICATED ON PLAN.
3. MOMENT ANGLE CAN BE WELDED TO BEAM TOP FLANGE (2 SIDES & TOE) WELD TO EQUAL BOLT CAPACITY.

WIND MOMENT CONNECTION AT HSS COLUMN

NOT TO SCALE

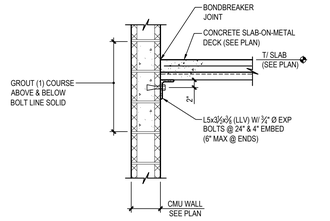
C S300



BEAM BEARING ON MASONRY WALL

NOT TO SCALE

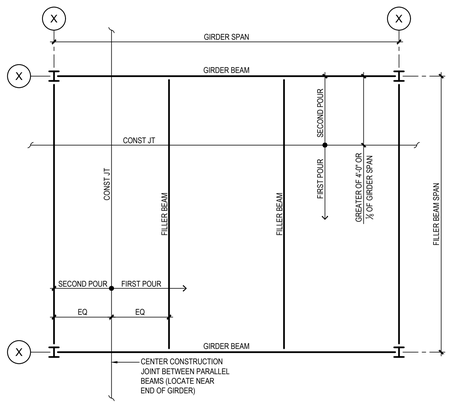
D S300



SLAB BEARING AT MASONRY WALL

NOT TO SCALE (NOTED "A" ON PLAN)

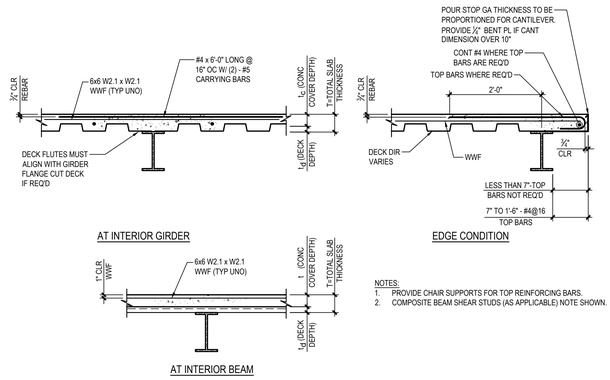
E S300



CONSTRUCTION JOINT LOCATIONS FOR SLAB-ON-COMPOSITE BM FRAMING

NOT TO SCALE

F S300

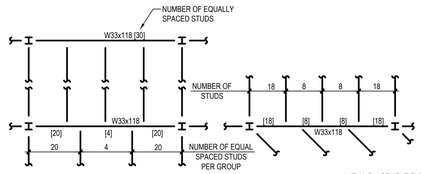


NOTES:
1. PROVIDE CHAIR SUPPORTS FOR TOP REINFORCING BARS.
2. COMPOSITE BEAM SHEAR STUDS (AS APPLICABLE) NOTE SHOWN.

SLAB-ON-METAL DECK DETAILS

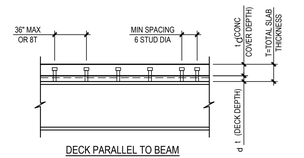
NOT TO SCALE

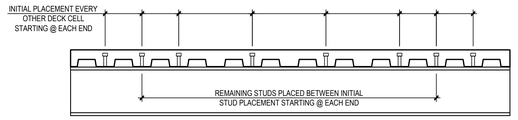
G S300



SHEAR STUD NOMENCLATURE

NOT TO SCALE



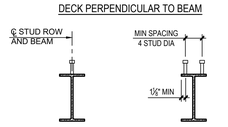


COMPOSITE BEAM NOTES:
1. SHEAR STUD CONNECTORS SHALL BE ¾" DIAMETER X (TOTAL SLAB THICKNESS - 1") LONG (IN PLACE HEIGHT) AND SECURELY WELDED TO THE BEAMS. THE NUMBER OF STUDS IS INDICATED [XX] AFTER BEAM SIZE ON PLAN. NUMBER OF STUDS INDICATED [XX] [XX] [XX] SHALL BE PLACED IN CORRESPONDING GROUPS BETWEEN INTERSECTING MEMBERS AND SUPPORTING MEMBERS (NO STUDS ON CANTILEVERS). SEE DIAGRAMS INCLUDED WITH THESE NOTES FOR STUD PLACEMENT. BEAMS HAVING THE SAME DESIGN DESIGNATION SHALL HAVE THE SAME NUMBER OF STUDS.
2. WHERE DECK IS PERPENDICULAR TO COMPOSITE BEAM (I.E. FILLER BEAM), PLACE A SINGLE STUD IN EVERY OTHER DECK CELL STARTING AT BEAM ENDS AND WORKING TOWARD THE CENTER OF THE BEAM. ANY REMAINING STUDS SHALL BE PLACED IN EMPTY CELLS STARTING AGAIN AT BEAM ENDS AND WORKING TOWARD THE CENTER.
3. WHERE DECK IS PARALLEL TO COMPOSITE BEAM (I.E. GIRDER), STUDS SHALL BE EQUALLY SPACED OVER THE LENGTH OF THE BEAM. STUDS IN GROUPS BETWEEN INTERSECTING MEMBERS SHALL BE EQUALLY SPACED.
4. MINIMUM CENTER TO CENTER SPACING OF STUDS SHALL BE 6 DIAMETERS (4½") ALONG LONGITUDINAL AXIS OF COMPOSITE BEAM AND 4 DIAMETERS (3") TRANSVERSE TO THE LONGITUDINAL AXIS OF COMPOSITE BEAM. PLACE SINGLE ROW STUDS ON BEAM CENTER LINE. FOR STAGGERED ARRANGEMENT OF STUDS MAINTAIN ½" MINIMUM DISTANCE FROM EDGE OF BEAM FLANGE. STUD SPACING SHALL NOT EXCEED 36" OR 8 TIMES THE SLAB THICKNESS, T.
5. SHOP DRAWING OF STUD PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

COMPOSITE BEAM DETAILS

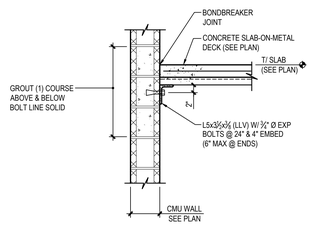
NOT TO SCALE

H S300



SHEAR STUD PLACEMENT

NOT TO SCALE



SLAB BEARING AT MASONRY WALL

NOT TO SCALE (NOTED "A" ON PLAN)

J S300

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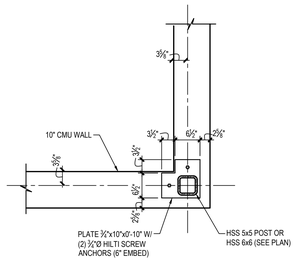
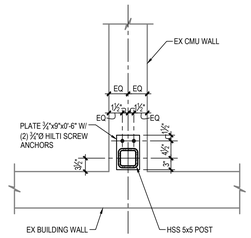
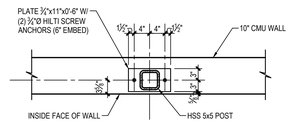


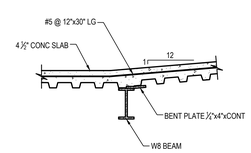
SECTION
SCALE 3/4" = 1'-0"
1 S301



SECTION
SCALE 3/4" = 1'-0"
2 S301



SECTION
SCALE 3/4" = 1'-0"
3 S301



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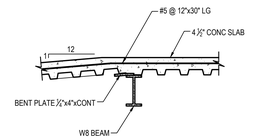

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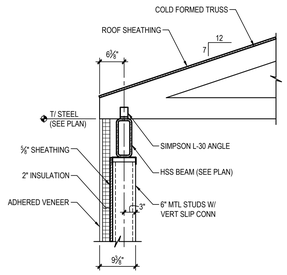

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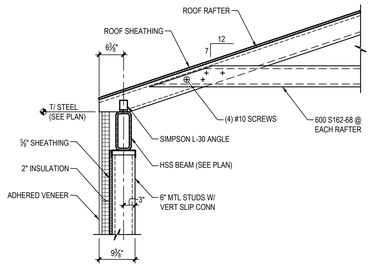

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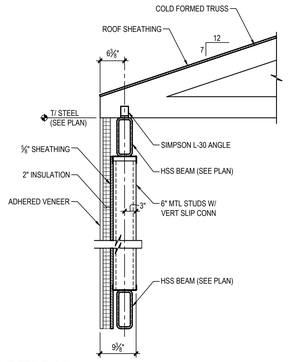

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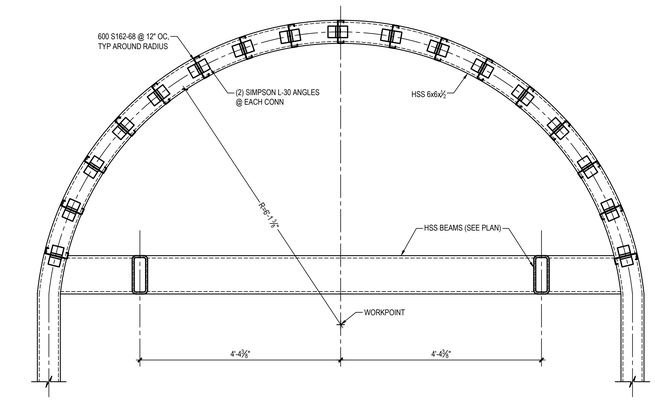

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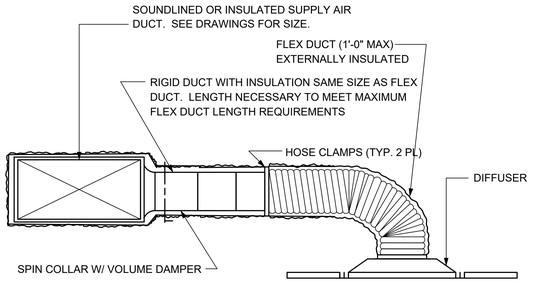
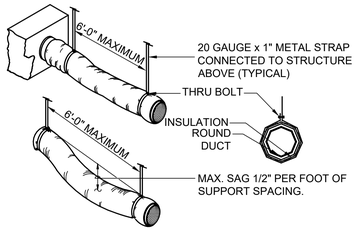
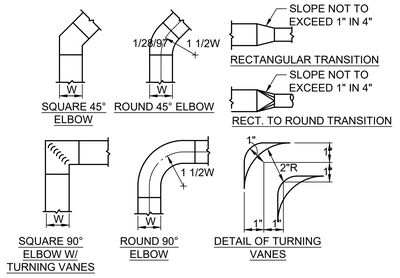


1 M001 SUPPLY AIR DIFFUSER CONNECTION DETAIL
NOT TO SCALE



3 M001 FLEXIBLE DUCT RUN-OUT SUPPORT DETAIL
NOT TO SCALE

NOTES:
1. FLEXIBLE DUCT SHOULD EXTEND STRAIGHT FOR SEVERAL INCHES FROM RECTANGULAR DUCT CONNECTION BEFORE BENDING.
2. FLEXIBLE DUCT SHOULD NOT EXCEED 6'-0" IN LENGTH. USE RIGID ROUND DUCTWORK WHEN RUNOUTS EXCEED 6'-0".



2 M001 LOW VELOCITY DUCT DIAGRAMS
NOT TO SCALE

NOTE:
PROVIDE RADIUS ELBOWS, 18" AND LARGER WITH TURNING BLADES AT 1/3 AND 1/2 THE WIDTH OF THE DUCT FROM THE INSIDE RADIUS. TURNING BLADES SHALL BE PROVIDED WITH HEMMED ENDS. (SEE SECTION 15840 OF MECHANICAL SPECIFICATIONS FOR ADDITIONAL DUCT CONSTRUCTION INFORMATION AND RESTRICTIONS.)

ELECTRIC UNIT HEATER SCHEDULE

TAG	LOCATION	TYPE	MBTUH	KW	ELEC. VOLT/PH	AMPS	BASIS OF DESIGN	MODEL
EUH 1-1	ENTRANCE 110	WALL	6.1	1.8	120/1	15	QMARK	AWH3180F

REMARKS:
1. PROVIDE DISCONNECT.
2. PROVIDE INTEGRAL THERMOSTAT.

SPLIT SYSTEM AIR-COOLED A/C UNIT SCHEDULE

	INDOOR UNIT								OUTDOOR UNIT				
	COOLING						HEATING						
TAG	NOMINAL TONS	TOTAL CAPACITY MBH	SENS. CAPACITY MBH	O/A CFM	CFM (DRY COIL)	E.S.P. IN. W.G.	TOTAL CAPACITY MBH	MITSUBISHI MODEL	TAG	EER	MCA/MOCP	ELECTRICAL VOLTS/PH.	MITSUBISHI MODEL
AC-1	1.5	18	14.4	40	600	.4	14	PEAD-A18AA7	CU-1	12.5	14/15	208/1	SUZ-KA18NAR1

NOTES:
1. CAPACITY BASED ON 80 DEG. F. DB/67 DEG. F. WB EAT ON EVAPORATOR
2. UNIT SHALL BE EQUIPPED WITH A WIND BAFFLE FOR OPERATION DOWN TO 0 DEG.S F.
3. PROVIDE THE FOLLOWING ACCESSORIES: PROVIDE CONDENSER ROOF MOUNTING PAD.
4. PROVIDE DISCONNECT AT EACH OUTDOOR AND INDOOR UNITS.
5. PROVIDE INTEGRAL UNIT CONTROLS AND A "HARD WIRED" WALL MOUNTED THERMOSTAT/CONTROLLER MODEL PAR-31MAA.

MECHANICAL DUCTWORK & GENERAL SYMBOLS LEGEND

SYMBOL	ABRV.	DESCRIPTION
	XTR	EXISTING EQUIPMENT OR DUCTWORK TO REMAIN
	RX	EXISTING EQUIPMENT OR DUCTWORK TO BE REMOVED
		NEW EQUIPMENT OR DUCTWORK
		LINED DUCTWORK
		SUPPLY DUCT UP
		SUPPLY DUCT DOWN
		RETURN / EXHAUST DUCT UP
		RETURN / EXHAUST DUCT DOWN
		ROUND DUCT ELBOW UP
		ROUND DUCT ELBOW DOWN
		ELBOW WITH TURNING VANES
R		DUCT OFFSET UP
D		DUCT OFFSET DOWN
		SQUARE / RECTANGULAR DUCT TRANSITION
		SQUARE/RECTANGULAR TO ROUND DUCT TRANSITION
	CD	CEILING DIFFUSER. - ROUND NECK - # THROW DIRECTIONS
	SD	SUPPLY DIFFUSER - RECTANGULAR - MULTI-DIRECT.
	SG/EG	SIDEWALL SUPPLY or RETURN GRILLE - (R = REGISTER)
	LD	LINEAR DIFFUSER. SEE SCHEDULE FOR INFORMATION.
	RG/EG	RETURN or EXHAUST GRILLE - (R = REGISTER)
		FLEXIBLE DUCT
	FLEX	FLEXIBLE DUCT CONNECTION (TO EQUIPMENT)
		SPIN TAP WITH VOLUME CONTROL DAMPER
AD	AD	DUCT ACCESS DOOR
	VD	VOLUME CONTROL DAMPER
BDD	BDD	BACKDRAFT DAMPER
M	MD	MOTORIZED DAMPER
	FD	VERTICAL FIRE DAMPER (WALL)
	HFD	HORIZONTAL FIRE DAMPER (FLOOR)
	SD	VERTICAL SMOKE DAMPER (WALL)
	HSD	HORIZONTAL SMOKE DAMPER (FLOOR)
	FD/SD	COMBINATION VERTICAL FIRE & SMOKE DAMPER
	HFD/SD	COMBINATION HORIZONTAL FIRE & SMOKE DAMPER
	RD	CEILING RADIATION FIRE DAMPER
DD	DD	DUCT SMOKE DETECTOR
T		THERMOSTAT
H		HUMIDISTAT
SP		STATIC PRESSURE SENSOR
CQ		CARBON DIOXIDE SENSOR
CO		CARBON MONOXIDE SENSOR
TAG #		EQUIPMENT UNIT DESIGNATION
TAG CFM		DIFFUSER, REGISTER & GRILLE UNIT DESIGNATION W/ CFM
U		UNDER CUT DOOR
L		LOUVERED DOOR
		CONNECTION POINT, NEW TO EXISTING
		DISCONNECTION POINT
1		DRAWING KEYNOTE
1		DEMOLITION DRAWING KEYNOTE
1		REVISION NUMBER
	RA or EA	RETURN OR EXHAUST AIR
	SA or OA	SUPPLY OR OUTSDIE AIR

MECHANICAL PIPING SYMBOLS LEGEND

SYMBOL	ABRV.	DESCRIPTION
HWS	HWS	HEATING WATER SUPPLY PIPING
HWR	HWR	HEATING WATER RETURN PIPING
CWS	CWS	CONDENSER WATER SUPPLY PIPING
CWR	CWR	CONDENSER WATER RETURN PIPING
CHWS	CHWS	CHILLED WATER SUPPLY PIPING
CHWR	CHWR	CHILLED WATER RETURN PIPING
G	G	NATURAL GAS PIPING
D	D	CONDENSATE DRAIN PIPING
R	R	REFRIGERANT PIPING
LPS	LPS	LOW PRESSURE STEAM SUPPLY PIPING (0-15 PSIG)
MPS	MPS	MEDIUM PRESSURE STEAM SUPPLY PIPING (16-60 PSIG)
HPS	HPS	HIGH PRESSURE STEAM SUPPLY PIPING (61 TO 200 PSIG)
LPR	LPR	LOW PRESSURE STEAM CONDENSATE RETURN
MPR	MPR	MEDIUM PRESSURE STEAM CONDENSATE RETURN
HPR	HPR	HIGH PRESSURE STEAM CONDENSATE RETURN
PC	PC	PUMPED STEAM CONDENSATE
V	V	VENT PIPING
CW	CW	CITY (DOMESTIC) WATER
FOS	FOS	FUEL OIL SUPPLY PIPING
FOR	FOR	FUEL OIL RETURN PIPING
		ELBOW TURNED UP
		ELBOW TURNED DOWN
		BOTTOM PIPE CONNECTION
		TOP PIPE CONNECTION
		PIPING CAP
		UNION
		FLANGED CONNECTION
		CONCENTRIC PIPE REDUCER
		ECCENTRIC PIPE REDUCER
		FLOW ARROW
	BV	BALL VALVE
	BFV	BUTTERFLY VALVE
	PV	PLUG VALVE
	GV	GATE VALVE
	GBV	GLOBE VALVE
	CV	CHECK VALVE
		2-WAY CONTROL VALVE
		3-WAY CONTROL VALVE
		CIRCUIT SETTER (BALANCING VALVE)
		STRAINER (W/ BALL VALVE AND CAP)
		BACKFLOW PREVENTER
		PRESSURE REGULATING VALVE
		PRESSURE RELIEF VALVE
		TRIPLE DUTY VALVE WITH MEASURING CONNECTIONS
		PRESSURE GAGE W/ SHUT-OFF
		FLEXIBLE CONNECTOR
		AUTOMATIC AIR VENT
		HOSE BIB
		PIPE ANCHOR
		PIPE GUIDE
T		STEAM TRAP

MECHANICAL ABBREVIATIONS

ABRV.	DESCRIPTION
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
MBH	1000 - BRITISH THERMAL UNITS
KW	1000-WATT (1 KW = 3,412 BTUH)
SENS.	SENSIBLE
LAT.	LATENT
E.A.T.	ENTERING AIR TEMPERATURE
L.A.T.	LEAVING AIR TEMPERATURE
E.W.T.	ENTERING WATER TEMPERATURE
L.W.T.	LEAVING WATER TEMPERATURE
DB/WB	DRY BULB / WET BULB
IN. W.G.	INCHES WATER GAUGE (AIR)
FT. W.G.	FEET WATER GAUGE (HYDRONIC)
E.S.P.	EXTERNAL STATIC PRESSURE
T.S.P.	TOTAL STATIC PRESSURE
TG	TRANSFER GRILLE
TR	TOP REGISTER
(E)	EXISTING
R / R	REMOVE EXISTING ITEM & RELOCATE TO NEW LOCATION
UNO	UNLESS NOTED OTHERWISE
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
Ø OR PH	PHASE
Ø	DIAMETER
AFF	ABOVE FINISHED FLOOR
ELEV.	ELEVATION FROM DATUM

NOTES:
1. NOT ALL SYMBOLS AND ABBREVIATIONS ARE IN USE FOR THIS PROJECT.

GENERAL MECHANICAL NOTES (ALL DRAWINGS):

1. MECHANICAL CONTRACTOR SHALL PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND REQUIRED BY CODE.
2. THE CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC ONLY, AND ARE INTENDED TO CONVEY THE SCOPE AND GENERAL ARRANGEMENT OF WORK.
3. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR BY FIELD INSPECTION PRIOR TO BIDDING. ANY INTERFERENCES TO INSTALLATION SHALL BE NOTED AND THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE THE COST TO AVOID OR RELOCATE ALL ITEMS, INCLUDING ITEMS OF OTHER TRADES, THAT INTERFERE. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. ALL OFFSETS, RISES, TRANSITIONS AND DROPS IN DUCTS AND PIPING AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
4. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS OR PIPE ADAPTERS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
5. PROVIDE ACCESS IN WALLS & CEILINGS TO ACCESS ALL EQUIPMENT, VALVES, CONTROL DEVICES, VOLUME DAMPERS, AND FIRE/SMOKE DAMPERS.
6. FOLLOW MANUFACTURE'S RECOMMENDATIONS FOR INSTALLATION OF EQUIPMENT. ALSO REFER TO TYPICAL DETAILS FOR INSTALLATION OF EQUIPMENT.
7. ALL MATERIALS FURNISHED, AND ALL WORK PERFORMED BY THE MECHANICAL CONTRACTOR SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE LATEST APPLICABLE EDITIONS OF NFPA, IEEE, OSHA, SMACNA, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL BUILDING CODE, AND ANY STATE, COUNTY, AND LOCAL CODES.
8. ALL EQUIPMENT, DUCTWORK, ETC., SHALL BE SUPPORTED SUFFICIENTLY AND ANY ADDITIONAL SUPPORT SHALL BE PROVIDED AS REQUIRED TO PROVIDE VIBRATION FREE AND SAFE INSTALLATION. ALL MISCELLANEOUS STEEL REQUIRED AND/OR AS SHOWN IN DETAILS FOR DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. SUPPORT ALL DUCTWORK, PIPING AND EQUIPMENT MOUNTED ABOVE THE CEILING DIRECTLY FROM THE STRUCTURE. ALL ATTACHMENTS TO BEAMS, TRUSSES, OR JOIST SHALL BE MADE AT PANEL POINTS WITH BEAM CLAMPS MEETING MSS STANDARDS.
9. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH NEC AND ELECTRICAL SPECIFICATIONS FOR THIS PROJECT.

DUCTWORK GENERAL NOTES (ALL DRAWINGS):

1. ALL DUCTWORK INDICATED IS SCHEMATIC AND SHOW ONLY RELATIVE POSITIONS. PROVIDE OFFSETS, RISES, TRANSITIONS AND ELBOWS AS NEEDED TO INSTALL PROPERLY.
2. PROVIDE ACCESS DOORS IN DUCTWORK FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL HVAC DEVICES, FANS, DAMPERS, (FIRE, SMOKE, BALANCING) COILS, AND TERMINAL EQUIPMENT.
3. LOCATIONS OF TERMINAL DEVICES, AIR OUTLETS AND INLETS ARE APPROXIMATE. LOCATE PER THE ARCHITECTURAL DRAWINGS AND TO AVOID OTHER TRADE'S WORK. COORDINATE LOCATIONS WITH OTHER TRADES. CONSULT ARCHITECT/ENGINEER FOR CLARIFICATION IF CONFLICTS OCCUR.
4. DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE FACE-TO-FACE DIMENSIONS AND DO NOT INCLUDE DUCT LINER WHERE SPECIFIED. INCREASE DIMENSIONS OF LINED DUCTWORK TO PROVIDE FREE INSIDE AREA EQUAL DIMENSIONS SHOWN. REFER TO THE SPECIFICATIONS FOR LOCATION OF LINED DUCTWORK.
5. FINAL CONNECTIONS FROM HIGH VELOCITY MAIN DUCTS TO AIR TERMINAL UNITS SHALL BE MADE WITH FLEXIBLE DUCTWORK NOT EXCEEDING 3 FEET IN LENGTH. CONNECTIONS BETWEEN LOW VELOCITY DUCTWORK AND/OR TERMINAL UNITS TO AIR INLETS AND OUTLETS SHALL BE MADE WITH FLEXIBLE DUCTWORK NOT EXCEEDING 6 FEET IN LENGTH. LONGER DUCT RUN OUTS SHALL BE CONSTRUCTED OF HARD DUCT OF THE SAME MATERIAL SPECIFIED FOR THE SYSTEM SERVED AND INSULATED AS SPECIFIED FOR THAT SYSTEM. FLEXIBLE DUCTWORK SHALL BE OF THE PRESSURE CLASS AND FACTORY INSULATED AS SPECIFIED FOR THE SYSTEM WHERE INSTALLED.
6. FLEXIBLE DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WITHOUT ANY SAGS, SHARP TURNS OR KINKS. AT THE MINIMUM, THE FLEXIBLE DUCTWORK SHALL BE FASTENED TO THE HARD DUCT BY A NYLON STRAP SECURED BY SHEETMETAL SCREWS TO PREVENT SLIPPING OFF FROM COLLAR.
7. PROVIDE VOLUME DAMPERS AT EACH AIR OUTLET, AIR INLET AND TERMINAL DEVICE AND AT EACH BRANCH TAKE-OFF CONNECTION FROM THE MAIN.

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JANUARY 31, 2022

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REVISIONS

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MECHANICAL DATA SHEET

NOT FOR CONSTRUCTION

M001

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MECHANICAL SPECIFICATIONS

MECHANICAL GENERAL CONDITIONS (230010)

A. GENERAL

1. CONFORM TO ALL GENERAL AND SPECIAL CONDITIONS OF CONTRACT AS SPECIFIED BY ARCHITECT AND/OR OWNER.

2. PRODUCTS AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES, GOVERNMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, ETC. OF ALL AUTHORITIES HAVING JURISDICTION. WORK SHALL COMPLY WITH THE FOLLOWING CODES, STANDARDS AND ORGANIZATIONS: INTERNATIONAL MECHANICAL CODE (IMC), INTERNATIONAL PLUMBING CODE (IPC), INTERNATIONAL ENERGY CODE, NATIONAL ELECTRIC CODE, NFPA, UNDERWRITERS LABORATORY (UL), IRI, FM, SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" GUIDELINES, DETAILS, & MODEL SPECIFICATION, ASHRAE. WHERE CONFLICTS EXIST BETWEEN CODES, STANDARDS OR THIS SPECIFICATION THE HIGHER REQUIREMENT SHALL APPLY. DEVIATIONS FROM THE CONTRACT DOCUMENTS REQUIRED BY THE ABOVE AUTHORITIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS. CONFIRM ALL UTILITY COMPANY REQUIREMENTS AND CONNECTION POINTS IN FIELD, PRIOR TO STARTING WORK.

3. ALL SPECIFICATIONS AND DRAWINGS, I.E., ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ARE COMPLIMENTARY AND MUST BE USED IN COMBINATION TO OBTAIN COMPLETE CONSTRUCTION INFORMATION. ANY INFORMATION CONFLICTS WITHIN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION. DRAWINGS ARE DIAGRAMMATIC. CONFIRM ALL DIMENSIONS BY FIELD MEASUREMENT. THE EXACT LOCATIONS FOR APPARATUS, FIXTURES, EQUIPMENT AND PIPING WHICH IS NOT COVERED BY DRAWINGS, SHALL BE OBTAINED FROM THE ARCHITECT OR HIS REPRESENTATIVE IN THE FIELD, AND THE WORK SHALL BE LAID OUT ACCORDINGLY.

4. VISIT SITE, CHECK FACILITIES AND CONDITIONS MAKE ALL NECESSARY OBSERVATIONS, MEASUREMENTS, NOTE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED, AND TAKE ALL ITEMS INTO CONSIDERATION IN BID.

5. EACH CONTRACTOR SHALL PROVIDE FOR HIS OWN CLEAN-UP, REMOVAL AND LEGAL DISPOSAL OF ALL RUBBISH DAILY. CONTRACTOR SHALL PROTECT THEIR WORK AND EXISTING OR ADJACENT PROPERTY AGAINST WEATHER, TO MAINTAIN THEIR WORK, MATERIALS, APPARATUS AND FIXTURES FREE FROM INJURY OR DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED, SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTOR'S EXPENSE.

6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES OF CONSTRUCTION AND THE SAFETY OF WORKMEN.

7. NO PIPING, DUCTWORK, CONTROLS, ETC., SHALL BE INSTALLED OR ROUTED ABOVE ELECTRICAL PANELS AND EQUIPMENT OR THROUGH ELEVATOR ROOMS.

8. THE CONTRACTOR SHALL COORDINATE AND OBTAIN A WRITTEN LISTING OF ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT FROM ELECTRICAL CONTRACTOR PRIOR TO ORDERING OF EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.

9. DURING THE BUILDING CONSTRUCTION SOME EXISTING INSTALLATION MAY BE EXPOSED THAT WILL HAVE TO BE CHANGED, ALTERED, REROUTED AND/OR ABANDONED. ANY SUCH WORK WHICH COMES UNDER THE JURISDICTION OF THIS CONTRACTOR SHALL BE DONE BY THIS CONTRACTOR WITHOUT EXTRA COST TO THE OWNER, AS THOUGH FULLY DETAILED ON PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.

10. WORK RELATED TO THE EXISTING BUILDING SHALL BE COORDINATED TO MINIMIZE INTERFERENCE OR INTERRUPTION OF NORMAL BUILDING USE BY OWNER. REFER TO ARCHITECTURAL PLANS FOR PHASING REQUIREMENTS.

11. IN CASES OF DOUBT AS TO THE WORK INTENDED, OR IN THE EVENT OF NEED FOR EXPLANATION THEREOF, THE CONTRACTOR SHALL REQUEST SUPPLEMENTARY INSTRUCTIONS FROM THE ENGINEER. NO CHANGES ARE TO BE MADE TO THE WORK OF THIS CONTRACT WITHOUT PRIOR KNOWLEDGE AND APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL HOLD THE OWNER AND ITS CONSULTANTS HARMLESS AGAINST ALL CLAIMS AND JUDGMENTS ARISING OUT OF THE CONTRACTORS PERFORMANCE OF THE WORK OF THIS CONTRACT. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK, WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT, WITHOUT WRITTEN AUTHORIZATION FROM THE APPROPRIATE AUTHORITY. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.

12. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO INSTALL THE HEATING, VENTILATION AND AIR CONDITIONING SYSTEM SO AS TO INSURE QUIET OPERATION. NO VIBRATION OR SOUND SHALL BE TRANSMITTED TO THE BUILDING, STRUCTURE OR OCCUPIED AREAS. THE DECISION OF THE ENGINEER AS TO THE QUIETNESS OF THE SYSTEM AND EQUIPMENT SHALL BE FINAL. IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO CORRECT OR REPLACE ANY NOISY SYSTEM OR EQUIPMENT AS REQUIRED.

13. OBTAIN PERMITS AND PAY ALL FEES. ARRANGE FOR ALL REQUIRED INSPECTIONS AND APPROVALS.

B. DEMOLITION

1. DISCONNECT, DISASSEMBLE, CAP, PLUG AND REMOVE ALL MEP ELEMENTS (PIPING, DUCTS, ELECTRICAL DEVICES, WIRING, CONDUIT, EQUIPMENT, HANGERS, SUPPORTS, ETC) INDICATED ON THE DRAWINGS OR NOT OTHERWISE REQUIRED FOR COMPLETED PRODUCT. NO MEP ELEMENTS ARE TO BE ABANDONED IN PLACE UNLESS SPECIFICALLY NOTED. NOT ALL ITEMS TO BE REMOVED ARE INDICATED ON DRAWING.

2. ALL OPENINGS ON PIPING AND DUCTS THAT REMAIN SHALL BE CAPPED AND PROPERLY SECURED. WIRING SHALL BE DISCONNECTED AT CIRCUIT BREAKERS AND REMOVED AND BREAKERS MARKED "SPARE." REMOVE AND RECLAIM ANY REFRIGERANT IN EXISTING SYSTEMS PRIOR TO DEMOLITION OF ANY EQUIPMENT ACCORDING TO FEDERAL REQUIREMENT.

3. ANY EQUIPMENT DESIGNATED BY OWNER TO BE SALVAGED SHALL BE PROTECTED AND DELIVERED TO AN OWNER DESIGNATED AREA ON SITE.

4. ALL ASBESTOS REMOVAL (IF REQUIRED) WILL BE HANDLED BY THE OWNER AND IS NOT A PART OF THIS WORK. IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB; NOTIFY ARCHITECT AND OWNER IMMEDIATELY.

C. BASIS OF DESIGN AND SUBSTITUTIONS

1. WHEREVER THE WORDS "APPROVED BY", "APPROVED EQUAL", "AS DIRECTED" OR SIMILAR PHRASES ARE USED IN THE FOLLOWING SPECIFICATIONS, THEY SHALL BE UNDERSTOOD TO REFER TO THE OWNER AS THE APPROVING AGENCY. THE NAME OR MAKE OF ANY EQUIPMENT OR MATERIALS NAMED IN THE SPECIFICATION (WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED) SHALL BE KNOWN AS THE "STANDARD".

2. THESE SPECIFICATIONS ESTABLISH QUALITY STANDARDS OF MATERIALS AND EQUIPMENT TO BE PROVIDED. SPECIFIC ITEMS ARE IDENTIFIED BY MANUFACTURER, TRADE NAME OR CATALOG DESIGNATION. THE CONTRACTOR SHALL SUBMIT THE BASE BID PRICE BASED UPON STANDARD SPECIFIED EQUIPMENT DESCRIBED HEREIN AND AS DETAILED ON DRAWINGS AND ASSOCIATED CONTRACT DOCUMENTS. THE CONTRACTOR MAY SUBMIT INFORMATION ON MATERIALS AND MANUFACTURERS (OTHER THAN THOSE LISTED) FOR REVIEW BY THE OWNER, ARCHITECT, AND ENGINEER NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. IN ADDITION, SAMPLES OF THE PROPOSED EQUIPMENT MAY BE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. MANUFACTURERS OF PRODUCTS ACCEPTED BY THE OWNER, ARCHITECT, AND ENGINEER WILL BE LISTED IN AN ADDENDUM TO THE SPECIFICATIONS AS AN ACCEPTABLE SUBSTITUTION. EQUIPMENT ACCEPTED AS DETAILED BELOW SHALL BE SHOWN AS A SEPARATE ADD OR DEDUCT PRICE TO BE FACTORED INTO THE BASE PRICE BY THE ARCHITECT AND OWNER IF ACCEPTED.

3. SHOULD THE CONTRACTOR PROPOSE TO FURNISH MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED OR APPROVED BY ADDENDUM, SUBMIT A WRITTEN REQUEST FOR SUBSTITUTION TO THE OWNER, ARCHITECT AND ENGINEER AT BID OPENING. THE REQUEST SHALL BE AN ALTERNATE TO THE ORIGINAL BID, BE ACCOMPANIED WITH COMPLETE DESCRIPTIVE (MANUFACTURER, BRAND NAME, CATALOG NUMBER, ETC.) AND TECHNICAL DATA FOR ALL ITEMS. FAILURE BY THIS CONTRACTOR TO SUBMIT THE REQUISITE DOCUMENTATION DETAILED ABOVE SHALL BE UNDERSTOOD BY THE OWNER, ARCHITECT, AND ENGINEER TO INDICATE THAT SUBSTITUTE EQUIPMENT WILL NOT BE PRESENTED BY THE CONTRACTOR FOR CONSIDERATION. SUCH SUBSTITUTIONS WILL NOT BE CONSIDERED AFTER THE BID OPENING DATE AND DELAY OF THE PROJECT WILL NOT BE PERMITTED FOR FURTHER INSPECTION AND EVALUATION AFTER THIS DATE.

4. WHERE SUCH SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS INDICATED ON THE DRAWINGS, INCLUDE ALL ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING COST OF ALL ALLIED TRADES INVOLVED.

5. ACCEPTANCE OR REJECTION OF THE PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO APPROVAL OF THE OWNER, ARCHITECT, AND ENGINEER. IF REQUESTED, THE CONTRACTOR SHALL SUBMIT (AT THEIR COST) INSPECTION SAMPLES OF BOTH THE SPECIFIED AND PROPOSED SUBSTITUTE ITEMS.

6. IN ALL CASES WHERE SUBSTITUTIONS ARE PERMITTED, THE CONTRACTOR SHALL BEAR ANY EXTRA COST OF EVALUATING THE QUALITY OF THE MATERIAL AND EQUIPMENT TO BE PROVIDED.

7. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, FREE OF DEFECTS AND U.L. LABELED.

D. CUTTING, PATCHING AND DRILLING

1. ALL CUTTING AND PATCHING OF THE BUILDING CONSTRUCTION REQUIRED FOR THIS WORK SHALL BE BY THIS CONTRACTOR UNLESS SHOWN ON ARCHITECTURAL DRAWINGS AND CONFIRMED AS TO SIZE AND LOCATION PRIOR TO NEW CONSTRUCTION. CUTTING SHALL BE IN A NEAT AND WORKMANLIKE MANNER. NEATLY SAW CUT ALL RECTANGULAR OPENINGS, SET SLEEVE THROUGH OPENING, AND FINISH PATCH OR PROVIDE TRIM FLANGE AROUND OPENING. CORE DRILL AND SLEEVE ALL ROUND OPENINGS. DO NOT CUT ANY STRUCTURAL COMPONENTS WITHOUT ARCHITECT'S APPROVAL.

2. PATCH AND FINISH TO MATCH ADJACENT AREAS THAT HAVE BEEN CUT, DAMAGED OR MODIFIED AS A RESULT OF THE INSTALLATION OF THE MECHANICAL OR ELECTRICAL EQUIPMENT. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER.

3. ALL CONTRACTORS SHALL CONFIRM WITH OWNER, PRIOR TO BID, TIMES AVAILABLE FOR NOISE PRODUCING WORK SUCH AS CUTTING AND CORE DRILLING OF FLOORS, WALLS, ETC., AS WELL AS TIMES FOR WORK WHICH REQUIRE ACCESS INTO ADJOINING TENANT SPACES. INCLUDE ANY PREMIUM TIME IN BID.

4. EXACT LOCATION OF ROOFTOP EQUIPMENT SHALL BE APPROVED BY OWNER'S STRUCTURAL ENGINEER.

5. INFORMATION REGARDING REQUIRED PIPE OPENINGS IN WALLS, FLOORS, CHASES, ETC., AND CONCRETE EQUIPMENT PADS OR FOUNDATIONS SHALL BE GIVEN TO THE GENERAL CONTRACTOR BY THIS CONTRACTOR PRIOR TO THE CONSTRUCTION PERIOD. IF THIS CONTRACTOR FAILS TO COMPLY WITH THIS REQUEST, OR IF INCORRECT INFORMATION IS GIVEN, THE NECESSARY CUTTING AND PATCHING WILL BE PERFORMED BY THE GENERAL CONTRACTOR, AT THIS CONTRACTOR'S EXPENSE.

E. WARRANTY

1. FULLY WARRANT ALL MATERIALS, EQUIPMENT AND WORKMANSHIP FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE.EXTEND ALL MANUFACTURER'S WARRANTIES TO OWNER, INCLUDING ALL EXTENDED WARRANTIES ON HVAC EQUIPMENT.

2. REPAIR OR REPLACE WITHOUT CHARGE TO THE OWNER ALL ITEMS FOUND DEFECTIVE DURING THE WARRANTY PERIOD. IN THE CASE OF REPLACEMENT OR REPAIR DUE TO FAILURE WITHIN THE WARRANTY PERIOD, THE WARRANTY ON THAT PORTION OF THE WORK SHALL BE EXTENDED FOR A MINIMUM PERIOD OF ONE (1) YEAR FROM THE DATE OF SUCH REPLACEMENT OR REPAIR.

F. SHOP DRAWING SUBMITTALS

1. SUBMIT SHOP DRAWINGS FOR MECHANICAL EQUIPMENT, FIRE PROTECTION SYSTEMS, DUCTWORK, AND PLUMBING FIXTURES AND EQUIPMENT WITH ADEQUATE DETAILS AND SCALES TO CLEARLY SHOW CONSTRUCTION. INDICATE THE OPERATING CHARACTERISTICS FOR EACH REQUIRED ITEM. CLEARLY IDENTIFY EACH ITEM ON THE SUBMITTAL AS TO MARK, LOCATION AND USE, USING SAME IDENTIFICATION AS PROVIDED ON DESIGN DRAWINGS.

2. DUCTWORK AND FIRE PROTECTION DRAWINGS SHALL BE FULLY DIMENSIONED BASED ON FIELD VERIFIED BUILDING CLEARANCES AND ARCHITECTURAL CEILING LAYOUTS, AND INDICATE STRUCTURAL, LIGHTING, DUCTWORK AND PIPING AT ALL CRITICAL LOCATIONS.

3. CONTRACTOR SHALL REVIEW AND INDICATE HIS APPROVAL OF EACH SHOP DRAWING PRIOR TO SUBMITTAL FOR REVIEW. DO NOT START WORK OR FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.

4. SUBMITTALS WILL BE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND NOT FOR DIMENSIONS OR QUANTITIES. THE SUBMITTAL REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PURCHASE OF ANY ITEM IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS OR ITS COMPLETE AND PROPER INSTALLATION.

5. WHERE SUBMITTALS VARY FROM THE CONTRACT REQUIREMENTS, THE CONTRACTOR SHALL CLEARLY INDICATE ON SUBMITTAL OR ACCOMPANYING DOCUMENTS THE NATURE AND REASON FOR VARIATIONS.

6. REFER TO VARIOUS SECTIONS FOR LISTING OF SHOP DRAWINGS REQUIRED ON THIS PROJECT.

7. EACH MANUFACTURER OR HIS REPRESENTATIVE MUST CHECK THE APPLICATION OF HIS EQUIPMENT AND CERTIFY AT TIME OF SHOP DRAWING SUBMITTAL THAT EQUIPMENT HAS BEEN PROPERLY APPLIED AND CAN BE INSTALLED, SERVICED AND MAINTAINED WHERE INDICATED ON DRAWINGS. ADVISE ENGINEER IN WRITING WITH SUBMITTAL DRAWINGS OF ANY POTENTIAL PROBLEMS. THE MANUFACTURER SHALL BE RESPONSIBLE FOR ANY CHANGES THAT MIGHT BE NECESSARY BECAUSE OF PHYSICAL CHARACTERISTICS OF EQUIPMENT THAT HAVE NOT BEEN CALLED TO THE ENGINEER'S ATTENTION AT THE TIME OF SUBMITTAL.

G. RECORD DRAWINGS

1. EACH CONTRACTOR OR SUBCONTRACTOR SHALL KEEP ONE (1) COMPLETE SET OF THE CONTRACT WORKING DRAWINGS ON THE JOB SITE ON WHICH HE SHALL REGULARLY RECORD ANY DEVIATIONS OR CHANGES FROM SUCH CONTRACT DRAWINGS MADE DURING CONSTRUCTION.

2. THESE DRAWINGS SHALL RECORD THE LOCATION OF ALL CONCEALED EQUIPMENT, PIPING, ELECTRIC SERVICE, SEWERS, WASTES, VENTS, DUCTS, CONDUIT AND OTHER PIPING, BY MEASURED DIMENSIONS TO EACH SUCH ITEM FROM READILY IDENTIFIABLE AND ACCESSIBLE WALLS OR CORNERS OF THE BUILDING. PLANS ALSO SHALL SHOW INVERT ELEVATION OF SEWERS AND TOP ELEVATION OF ALL OTHER BELOW-GRADE LINES.

3. RECORD DRAWINGS SHALL BE KEPT CLEAN AND UNDAMAGED AND SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN RECORDING DEVIATIONS FROM WORKING DRAWINGS AND EXACT LOCATIONS OF CONCEALED WORK.

4. AFTER THE PROJECT IS COMPLETED, THESE SETS OF DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT IN GOOD CONDITION, AS A PERMANENT RECORD OF THE INSTALLATION AS ACTUALLY CONSTRUCTED.

H. FIRESTOPPING

1. ALL SERVICES THAT PASS THRU FIRE OR SMOKE RATED PARTITIONS, WALLS, FLOORS, SHALL BE FIRESTOPPED. FIRE STOPPING RATING SHALL MATCH PARTITION RATING. ALL FIRE STOPPING SYSTEM SHALL MEET THE REQUIREMENTS OF ASTM E 814,UL 1479, AND BE FACTORY MUTUAL APPROVED.

2. ALL FIRESTOPPING AND/OR SMOKE STOPPING MATERIAL AND INSTALLATION SHALL BE AS MANUFACTURED BY HILTI OR APPROVED EQUAL.

I. ACCESS DOORS & PANELS

1. ACCESS DOORS SHALL BE PROVIDED IN WALLS AND CEILINGS WHERE REQUIRED TO PERMIT PROPER ACCESS TO VALVES AND ANY OTHER SUCH DEVICES WHICH REQUIRE MAINTENANCE OR SERVICE. DOORS PLACED IN WALLS, PARTITIONS OR OTHER FIRE-RATED CONSTRUCTION SHALL HAVE A LABEL SIGNIFYING THAT THE DOOR HAS THE SAME FIRE RATING AS THE FIRE-RATED CONSTRUCTION.

2. THIS CONTRACTOR SHALL FURNISH ACCESS PANELS TO THE GENERAL CONTRACTOR FOR INSTALLATION.

3. ACCESS PANELS SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WITH 16 GAUGE STEEL FRAMES. DOORS SHALL FINISH FLUSH WITH THE SURROUNDING SURFACE. FRAMES SHALL HAVE 3 INCH WIDE EXPANDED METAL FOR PLASTERED SURFACES AND PLAIN FLANGED TYPE FRAME FOR TILE, MASONRY OR GYPSUM BOARD SURFACES. DOORS AND FRAMES SHALL BE FURNISHED PRIME COATED. DOORS INSTALLED IN CERAMIC TILE OR OTHER NON-PAINTED SURFACES SHALL BE STAINLESS STEEL. HINGES SHALL BE CONCEALED SPRING TYPE, TO ALLOW DOORS TO BE OPENED 175 DEGREES. LOCKS SHALL BE FLUSH SCREWDRIVER TYPE WITH STEEL CAMS. ACCESS PANELS SHALL BE 16 INCHES BY 16 INCHES OR LARGER AS MAY BE REQUIRED FOR PROPER ACCESS TO THE DEVICE BEING SERVED.

4. ACCESS PANELS ARE NOT REQUIRED IN COMPLETELY ACCESSIBLE LIFT OUT TILE CEILINGS. CONTRACTOR SHALL REVIEW THE ROOM FINISH SCHEDULE ON THE ARCHITECTURAL DRAWINGS IN ORDER TO VERIFY THE NEED FOR ACCESS PANEL

J. PAINTING

1. IN FINISHED SPACES, PAINTING OF ALL MECHANICAL EQUIPMENT, APPARATUS, AND PIPING SHALL BE DONE BY THE PAINTING TRADE UNDER THE GENERAL CONTRACTOR SPECIFICATION, EXCEPT WHERE SPECIFIED TO BE DONE BY THE MECHANICAL CONTRACTOR.

K. TEMPORARY HEAT

1. THE COSTS OF TEMPORARY HEAT, INCLUDING UTILITY COSTS, SHALL BE AT THE EXPENSE OF THE HEATING TRADE (MECHANICAL CONTRACTOR). THE HEATING TRADE SHALL PROVIDE THE MEANS OF TEMPORARY HEAT. EXISTING HEATING EQUIPMENT AND SYSTEMS MAY NOT BE USED DURING CONSTRUCTION AS THE SYSTEMS SERVE OTHER OCCUPIED SPACES WITHIN THE BUILDING.

2. THE PERMANENT MECHANICAL SYSTEM SHALL NOT BE USED UNDER ANY EXCEPTIONS TO PROVIDE TEMPORARY HEATING, VENTILATING, EXHAUST OR AIR CONDITIONING UNTIL THE BUILDING IS CLEAN, WITHOUT ANY DUST OR DEBRIS THAT CAN ENTER THE MECHANICAL SYSTEM AND IS READY FOR OCCUPANCY. COVERING THE RETURN/EXHAUST AIR INLETS WITH FILTER MEDIA IS NOT AN ACCEPTABLE ALTERNATIVE TO HAVING AN ENCLOSED, DUST-FREE ENVIRONMENT FOR THE SYSTEMS TO OPERATE IN. IN NO EVENT SHALL THE MECHANICAL CONTRACTOR'S ONE YEAR WARRANTY BE SHORTENED BY THE USE OF PERMANENT EQUIPMENT FOR TEMPORARY HEAT.

REFRIGERANT PIPING (232300)

1. INSTALL REFRIGERANT PIPING BETWEEN CONDENSING UNIT AND DX COIL. PIPING SHALL BE REFRIGERANT GRADE TYPE "L" OR ACR COPPER WITH BRAZED JOINTS. PIPE PER MANUFACTURER'S PIPING DIAGRAMS AND RECOMMENDATIONS.

2. ISOLATE PIPING FROM STRUCTURE WITH ONE (1) INCH INSULATION BETWEEN ALL PIPING AND SUPPORT POINTS.

3. AFTER COMPLETION, PRESSURE TEST PIPING, PURGE AND EVACUATE SYSTEM TWICE AND CHARGE SYSTEM WITH REFRIGERANT AND OIL.

4. INSTALL PIPING IN AS SHORT AND DIRECT ARRANGEMENT AS POSSIBLE TO MINIMIZE PRESSURE DROP. PROVIDE OIL TRAP AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

5. INSTALL UNIONS TO ALLOW REMOVAL OF SOLENOID VALVES, PRESSURE REDUCING VALVES, EXPANSION VALVES, AND AT CONNECTIONS TO COMPRESSORS AND EVAPORATORS.

6. FILL THE PIPE AND FITTINGS DURING BRAZING, WITH NITROGEN TO PREVENT FORMATION OF SCALE.

PIPE WALL SEALS (230517)

1. WALL PIPE SEALS WITH RUBBER LINKS SHALL BE THUNDERLINE LINK SEAL, OR APPROVED EQUAL. WALL PIPE SEALS WITH INORGANIC MATERIAL LINKS THE PENETRATIONS OF FIRE RATED WALLS SHALL BE THUNDERLINE PYRO-PAC, OR APPROVED EQUAL.

2. SEALS SHALL BE MODULAR MECHANICAL TYPE CONSISTING OF INTERLOCKING SYNTHETIC RUBBER OR INORGANIC MATERIAL LINKS SHAPED TO CONTINUOUSLY FILL THE ANNULAR SPACE BETWEEN THE PIPE AND WALL OPENING. LINKS SHALL BE LOOSELY ASSEMBLED WITH BOLTS TO FORM A CONTINUOUS BELT AROUND THE PIPE. A PRESSURE PLATE SHALL BE PROVIDED UNDER THE BOLT HEAD AND NUT OF EACH LINK. SEALS SHALL BE CONSTRUCTED TO PROVIDE ELECTRICAL INSULATION BETWEEN THE PIPE AND SLEEVE, THUS REDUCING CHANCES OF CATHODIC REACTION BETWEEN THESE TWO MEMBERS.

3. AFTER THE SEAL ASSEMBLY IS POSITIONED IN THE SLEEVE, THE TIGHTENING OF THE BOLTS SHALL CAUSE THE SEALING ELEMENTS TO EXPAND AND PROVIDE AN ABSOLUTELY WATER-TIGHT SEAL BETWEEN THE PIPE AND SLEEVE.

4. SLEEVES SHALL BE MANUFACTURED FROM HEAVY-WALL, WELDED OR SEAMLESS STEEL PIPE. A FULL CIRCLE CONTINUOUSLY WELDED WATER STOP PLATE SHALL BE PROVIDED TO ASSURE POSITIVE WATER SEALING OF THE SLEEVE. SLEEVE SHALL BE PROTECTED BY A COATING OF ENRICHED RED PRIMER.

DUCTWORK (233113)

1. FABRICATE AND ERECT ALL DUCTWORK TO ASHRAE AND SMACNA STANDARDS FROM G90 GALVANIZED STEEL. COMPLY WITH NFPA BULLETIN 90A REQUIREMENTS.

2. SUPPLY DUCTWORK UPSTREAM OF TERMINAL UNITS AND WITHIN 15' OF ANY AHU FAN OUTLET SHALL HAVE A SMACNA 3" STATIC PRESSURE RATING WITH SEAL CLASS A SEAMS AND JOINTS.

3. GENERAL SUPPLY AND RETURN DUCTWORK HAVE A SMACNA 2" STATIC PRESSURE RATING WITH SEAL CLASS B SEAMS AND JOINTS.

4. OUTDOOR AIR INTAKE DUCTWORK SHALL HAVE A SMACNA 2" STATIC PRESSURE RATING WITH SEAL CLASS A SEAMS AND JOINTS.

5. ALL FLEXIBLE DUCTWORK SHALL BEAR THE UL 181 LABEL (CLASS 1 AIR DUCT) AND SHALL BE FACTORY INSULATED (1-1/2 ", 0.6 LB., FIBERGLASS) ATCO UPC #076 I OR EQUAL. FLEXIBLE DUCTWORK SHALL COMPLY W/ NFPA 90A AND NFPA 90B. ALL FLEXIBLE DUCTWORK CONNECTED TO DIFFUSERS SHALL NOT BE LESS THAN THE NECK SIZE OF THE DIFFUSER. MINIMUM FLEXIBLE DUCT BEND RADIUS OF CURVATURE SHALL BE 3 DUCT DIAMETERS, MAXIMUM LENGTH SHALL BE 8-0", NO MORE THAN THE EQUIVALENT OF TWO (2) 90 DEGREE BENDS WILL BE ACCEPTABLE. FLEXIBLE DUCTS SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE AND CONNECTED WITH PLASTIC DRAW BANDS TIGHTENED WITH MANUFACTURER'S TOOL. FLEXIBLE DUCTS ARE NOT PERMITTED IN ROOMS WITHOUT CEILINGS.

6. INCLUDE ALL ACOUSTIC, DOUBLE RADIUS AIRFOIL SHAPED PERFORATED ALUMINUM TURNING VANES, MANUAL DAMPERS, FLEXIBLE CONNECTORS, GRILLES AND DIFFUSERS, ACOUSTIC LINING, AND OTHER SHEET METAL ACCESSORIES FOR THE PROJECT. VOLUME DAMPERS TO BE OF OPPOSED BLADE TYPE CONSTRUCTED IN ACCORDANCE WITH "SMACNA" STANDARDS.

7. ALL BRANCH CONNECTION FITTINGS IN RECTANGULAR DUCTWORK SHALL BE 45 DEGREE TRANSITION TYPE, CONICAL FITTINGS OR SPIN-IN FITTINGS. BUTT FITTINGS ARE NOT ACCEPTABLE.

8. PROVIDE CURBS FOR ALL ROOF OPENINGS FOR DUCTS, FLUES, PIPING AND EQUIPMENT. CURBS SHALL BE FURNISHED AS ACCESSORIES TO THE EQUIPMENT OR 8" HIGH PATE OR EQUAL EQUIPMENT SUPPORTS SPANNING STRUCTURE AND FLASHED INTO ROOFING, ALL CUTTING, FLASHING, AND PATCHING OF ROOF SHALL BE BY OWNER'S ROOFING CONTRACTOR AND PAID FOR BY MECHANICAL CONTRACTOR.

DUCTWORK EXTERNAL INSULATION & PIPE INSULATION (230713, 230719)

1. INSULATE DUCTWORK AS DESCRIBED IN DUCTWORK INSULATION SCHEDULE. FIBERGLASS DUCT WRAP SHALL BE FULLY SECURED TO DUCT. LAP AND TAPE SEAMS AND SECURE TIGHTLY TO THE DUCTS WITH WIRE OR STICK PINS.

2. DO NOT INSULATE:
   - 2.1. MAKE-UP AIR DUCTWORK OPERATING AT SURROUNDING AMBIENT CONDITIONS.
   - 2.2. RETURN AND EXHAUST AIR DUCTWORK LOCATED WITHIN THE BUILDING ENVELOPE, (DOES NOT INCLUDE BUILDING SHAFTS.)
   - 2.3. TRANSFER AIR DUCTWORK (ACOUSTICALLY LINE DUCT, CLEAR INSIDE DIMENSIONS SHOWN ON PLANS)
   - 2.4. EXPOSED SUPPLY DUCTWORK LOCATED IN CONDITIONED SPACE. (DOES NOT INCLUDE RETURN AIR PLENUM)
   - 2.5. PHENOLIC DUCTWORK

3. INSULATE REFRIGERANT PIPING LINES AS DESCRIBED IN PIPING INSULATION SCHEDULE WITH ELASTOMERIC FOAM INSULATION WITH SELF-SEALING SEAM. ARMACELL - AP ARMAFLEX SS INSULATION. PAINT CLOSED CELL INSULATION OUTDOORS WITH TWO COATS OF UV RESISTANT PAINT PER MANUFACTURER'S RECOMMENDATIONS. USE PRE-MOLDED COVERS OVER FITTINGS, VALVES, ELBOWS AND CONTROL DEVICES SEALED VAPOR TIGHT.

4. ALL INSULATION TO BE APPLIED IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL INSULATION SHALL COMPLY WITH 25/50 FLAME AND SMOKE HAZARD RATINGS PER ASTM E-84, NFPA 255 AND UL 723.

5. PROVIDE REMOVABLE INSULATION SECTIONS TO COVER PARTS OF EQUIPMENT WHICH MUST BE OPENED PERIODICALLY FOR MAINTENANCE; INCLUDE METAL VESSEL COVERS, FASTENERS, FLANGES, CHILLED WATER PUMPS, FRAMES AND ACCESSORIES.

6. REPLACE DAMAGED INSULATION WHICH CANNOT BE REPAIRED SATISFACTORILY, INCLUDING UNITS WITH VAPOR BARRIER DAMAGE AND MOISTURE SATURATED UNITS.

15. CONDENSATE DRAIN PIPING IN RETURN AIR RATED PLENUMS SHALL BE TYPE L COPPER WITH 1/2" FIBERGLASS INSULATION (MIN. R-VALUE = 3). SCHEDULE 40 PVC WITHOUT INSULATION MAY BE USED IN ALL OTHER LOCATIONS.

EQUIPMENT (235000)

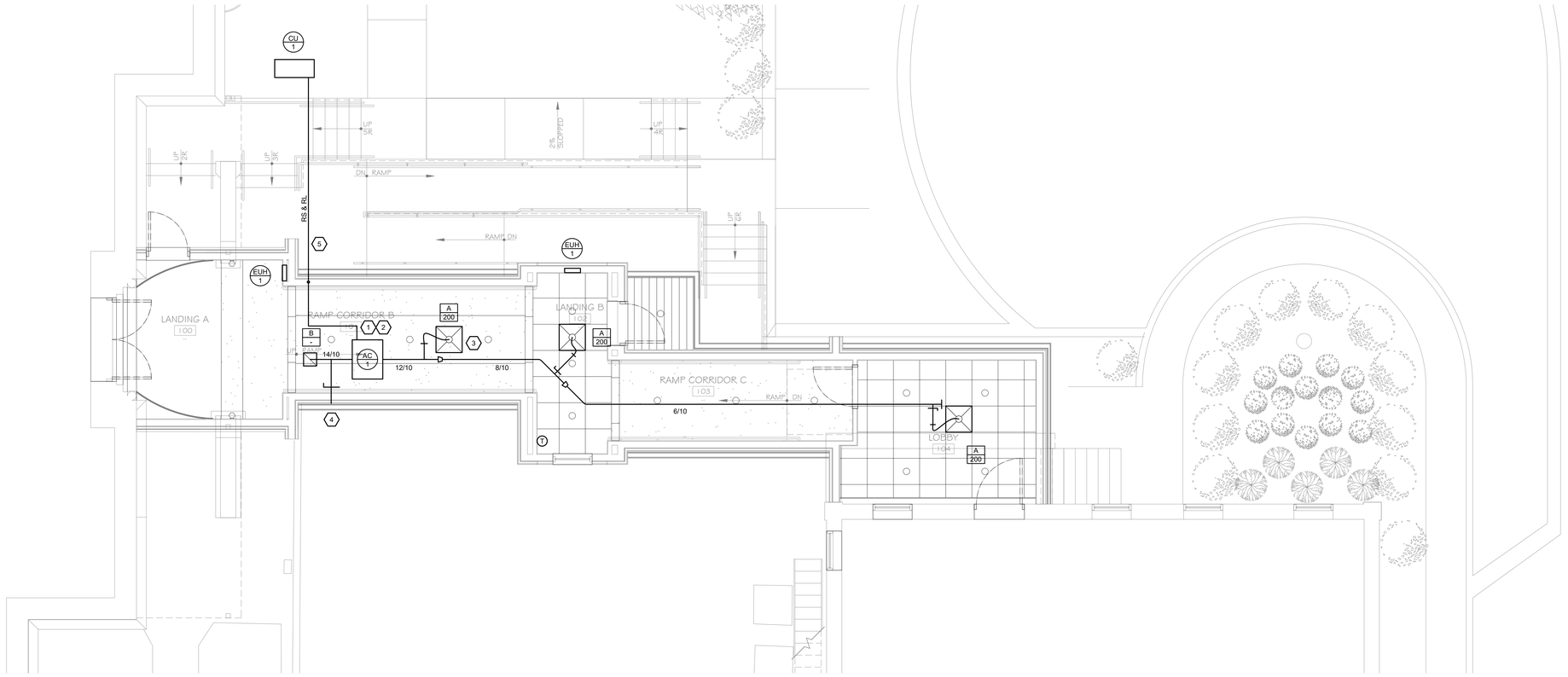
1. MAKE ALL FINAL EQUIPMENT CONNECTIONS AND PROVIDE THE NECESSARY ADAPTORS, FITTINGS, VALVES, DEVICES, ETC. FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE COMPLETE WITH BASES, ISOLATORS, SUPPORTS AND OTHER REQUIRED ACCESSORIES.

2. EQUIPMENT SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURER'S DATA AND INSTALLATION INSTRUCTIONS, INCLUDING CLEARANCES; LUBRICATE AND ADJUST AS REQUIRED. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO CHECK AND CONFORM TO THESE REQUIREMENTS PRIOR TO STARTING WORK. FURNISH AND INSTALL CLEAN SET OF FILTERS PRIOR TO BALANCING.

3. THE CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS OF ALL MECHANICAL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. COORDINATE REQUIREMENT FOR PROVISION OF MOTOR STARTERS, DISCONNECTS, CONTACTORS, CONTROL WIRING, ETC. AS REQUIRED FOR PROPER FUNCTIONING SYSTEM WITH ELECTRICAL CONTRACTOR. NO ADDITIONAL PAYMENT WILL BE MADE FOR LACK OF CONTRACTOR COORDINATION OF ELECTRICAL CHARACTERISTICS.

4. ALL EQUIPMENT SHALL BE MOUNTED ON VIBRATION ISOLATORS TO PREVENT THE TRANSMISSION OF VIBRATION AND MECHANICALLY TRANSMITTED SOUND TO THE BUILDING STRUCTURE.

5. ISOLATION EQUIPMENT SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER, AND SHALL BE DESIG



1 M201 FIRST FLOOR MECHANCAL PLAN

1/4" = 1'-0"

MECHANICAL GENERAL NOTES:

1. SIZE REFRIGERANT LINES BASED ON MANUFACTURER INSTALLATION INSTRUCTIONS.

MECHANICAL KEY NOTES: (#)

1. RUN 3/4" CONDENSATE DRAIN TO NEAREST SAFEWASTE.
2. PROVIDE ACCESS PANEL FOR AC-1.
3. PROVIDE OPPOSED BLADE DAMPERS FOR BALANCING FOR DIFFUSER LOCATED IN INACCESSIBLE CEILING.
4. PROVIDE BACKDRAFT DAMPER AND WALL CAP FOR OUTSIDE AIR CONNECTION.
5. ROUTE REFRIGERANT PIPING UNDERGROUND. PROVIDE CONDUIT FOR ROUTING.

N

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NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FERENS BLDG.
61 EAST MAIN STREET
97 EAST MAIN STREET
UNION TOWN

FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

FIRST FLOOR MECHANICAL PLAN

NOT FOR CONSTRUCTION

M201

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GENERAL ELECTRICAL NOTES:

GENERAL: UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON THE ELECTRICAL DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.

DEMOLITION: SEE "ELECTRICAL GENERAL DEMOLITION NOTES FOR ADDITIONAL DEMOLITION REQUIREMENTS.

COORDINATION: COORDINATE AND COOPERATE WITH ALL TRADES ON THE PROJECT.

RECORD DRAWINGS: SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. THESE MARKED DRAWINGS SHALL REFLECT ANY AND ALL CHANGES AND REVISIONS TO THE ORIGINAL DESIGN WHICH EXISTS IN THE COMPLETED WORK. DELIVER THE MARKED DRAWINGS TO THE ARCHITECT OR ENGINEER AT PROJECT CLOSE-OUT.

TESTS: TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. PERFORM INSULATION RESISTANCE TESTS ON ALL WIRING #8 OR LARGER TO ENSURE THAT ALL PORTIONS ARE FREE FROM SHORT-CIRCUITS AND GROUNDS.

INSPECTIONS: ARRANGE ALL NECESSARY INSPECTIONS. DELIVER ALL REQUIRED INSPECTION CERTIFICATES TO THE OWNER.

GROUNDING: PROVIDE GROUNDING IN ACCORDANCE WITH THE NEC FOR THE ELECTRICAL SYSTEM, INCLUDING EQUIPMENT FRAMES CONDUITS, SWITCHES, CONTROLLERS, WIRE-WAYS, NEUTRAL CONDUCTORS AND OTHER EQUIPMENT. PROVIDE A GROUNDING CONDUCTOR IN ALL CIRCUITS.

LABELS: PROVIDE LABELS FOR ALL PANELBOARDS, CABINETS, SAFETY SWITCHES, MOTOR-DISCONNECT SWITCHES, AND MOTOR CONTROLLERS. LABELS SHALL BE MACHINE ENGRAVED, LAMINATED PLASTIC.

J-BOX LABELING: LABEL ALL JUNCTION BOXES WITH PERMANENT MARKER IDENTIFYING CIRCUIT NUMBER AND PANELBOARD OF CIRCUITS WITHIN.

PANEL DIRECTORY: PROVIDE TYPEWRITTEN PANELBOARD DIRECTORY CARD IN EACH PANELBOARD, INCLUDING EXISTING PANELBOARDS MODIFIED FOR THIS PROJECT, WITH CIRCUIT LOAD INFORMATION AND ROOM NUMBER CLEARLY IDENTIFIED. USE ACTUAL ROOM NUMBERS IN THE BUILDING, NOT THE ROOM NUMBERS SHOWN ON THE CONTRACT DRAWINGS, AS THEY ARE OFTEN DIFFERENT.

MOTOR COORDINATION: MOTORS, MOTOR STARTERS, CONTROLLERS, INTEGRAL DISCONNECT SWITCHES, AND CONTACTORS SHALL BE PROVIDED WITH THEIR RESPECTIVE PIECES OF EQUIPMENT BY THE EQUIPMENT SUPPLIER. COMMUNICATE WITH THE TRADES PROVIDING THE EQUIPMENT, VERIFYING ALL REQUIREMENTS. PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED THEREIN AND INSTALL MOTOR STARTERS.

MOTOR DISCONNECTS: ALL MOTORS SHALL HAVE DISCONNECTING MEANS.

MOTOR FUSE PROTECTION: WHERE FUSE PROTECTION IS SPECIFICALLY REQUIRED BY THE EQUIPMENT MANUFACTURER, PROVIDE FUSIBLE SWITCHES IN LIEU OF NON-FUSIBLE SWITCHES OR FUSIBLE ENCLOSED CIRCUIT BREAKERS OR OTHER DEVICES INDICATED.

CONNECTION DETAILS: SECURE APPROVED SHOP DRAWINGS SHOWING WIRING DIAGRAMS, ROUGH-IN AND HOOK UP DETAILS FOR EQUIPMENT WHICH MUST BE CONNECTED ELECTRICALLY.

EQUIPMENT DETAILS: MECHANICAL EQUIPMENT WILL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS ARE APPROXIMATE. COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE THE EXACT LOCATION OF EACH PIECE OF EQUIPMENT AND DETERMINE THE EXACT ROUGH-IN AND CONNECTION REQUIREMENTS.

STARTER MOUNTING: WHERE AN INDIVIDUALLY MOUNTED SAFETY SWITCH, STARTER OR CIRCUIT BREAKER IS SHOWN ADJACENT TO ITS RESPECTIVE LOAD AND NOT MOUNTED ON A WALL, PROVIDE ALL SUPPORTS, BRACKETS, ANCHORING, ETC. NECESSARY TO PROPERLY SUPPORT THE DEVICE.

LIGHTING ARRANGEMENT: ARRANGE LIGHTING FIXTURES IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.

LIGHTING COORDINATION: COORDINATE LIGHTING FIXTURES WITH GRILLES, DIFFUSERS, SPRINKLER HEADS, ACCESS PANELS, ETC.

MATERIAL COORDINATION: VERIFY CEILING AND WALL CONSTRUCTION AND MATERIAL PRIOR TO ORDERING LIGHT FIXTURES OR OTHER DEVICES TO ENSURE PROPER FIXTURES OR DEVICES ARE FURNISHED TO MATCH CONSTRUCTION.

MOUNTING HEIGHTS: MOUNTING HEIGHTS INDICATED ARE FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE WIRING DEVICE UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS OF LIGHTING FIXTURES AND FIRE ALARM DEVICES ARE TO THE BOTTOM OF THE FIXTURE OR DEVICE UNLESS OTHERWISE NOTED.

DEVICE LOCATIONS: COORDINATE LOCATIONS OF SWITCHES, RECEPTACLES, AND TELE/DATA OUTLETS WITH OTHER WALL MOUNTED DEVICES SUCH AS THERMOSTATS AND CONTROL STATIONS. DO NOT MOUNT WIRING DEVICES BACK TO BACK.

EWC RECEPTACLES: RECEPTACLES FOR ELECTRIC WATER COOLERS (EWC) SHALL BE INSTALLED OUT OF VIEW AND BEHIND THE EWC ENCLOSURE. VERIFY THE MOUNTING HEIGHT WITH THE EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.

DEVICE COORDINATION: THOROUGHLY REVIEW AND COORDINATE ALL CASEWORK, DOOR SWINGS, AND CABINET DRAWINGS AND ARCHITECTURAL ELEVATIONS WITH DEVICE LOCATIONS PRIOR TO ROUGH-IN OF OUTLET BOXES.

BARRIERS: WHERE A MULTIPLE GANG BOX HAS CIRCUITS OF DIFFERENT VOLTAGES OR SYSTEMS WHICH ARE REQUIRED TO BE SEPARATED, PROVIDE THE CODE-REQUIRED SEPARATION, USING A FULL HEIGHT AND DEPTH BARRIER PLATE.

FIRE PROOFING: FOR ANY WALL OR FLOOR PENETRATIONS THROUGH FIRE RATED STRUCTURES, PROVIDE FIRE-PROOFING TO SEAL ALL THE PENETRATIONS AFTER THE CONDUIT HAS BEEN INSTALLED. FIRE PROOFING FOR PENETRATIONS SHALL BE UL APPROVED PER THE THE PENETRATION MADE IN ORDER TO MAINTAIN FIRE RATED INTEGRITY OF THE STRUCTURE.

CLEAN UP: ON PROJECT CLOSE-OUT, CLEAN ALL ELECTRICAL DEVICES, LIGHTING FIXTURES, LAMPS AND LENSES, AND REMOVE ALL PAINT SPATTERS FROM DEVICES, FIXTURES, AND PLATES. REPLACE ALL INOPERATIVE LAMPS.

OWNER FURNISHED EQUIPMENT: CONTRACTOR SHALL OBTAIN CUT SHEETS, INSTALLATION DATA, AND ROUGH-IN REQUIREMENTS FOR OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT AND COORDINATE ROUGH-IN AND POWER REQUIREMENTS WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY ASSOCIATED WORK.

CONDUIT ROUTING: ALL CONDUIT RUN OVERHEAD SHALL BE RUN AT THE BOTTOM OF THE FLOOR, ROOF STRUCTURE, OR LOWEST CHORD OF JOIST SPACE (AS APPLICABLE) ABOVE IN ORDER TO AVOID CONFLICTS WITH OTHER TRADES.

WIRING DEVICES: ALL RECEPTACLES AND SWITCHES SHALL BE LABELED WITH CLEAR PLASTIC LAMINATED LABEL WITH BLACK TEXT, NOTING PANELBOARD DESIGNATION AND CIRCUIT NUMBER FROM WHICH IT IS FED.

EQUIPMENT DEMONSTRATION: PROVIDE A DEMONSTRATION OF THE OPERATION OF ALL ELECTRICAL COMPONENTS.

CEILING AND MECHANICAL ROOM PLENUM: ALL WIRING THAT WILL NOT BE RUN IN METAL CONDUIT SHALL BE PLENUM RATED.

ELECTRICAL GENERAL DEMOLITION NOTES:

GENERAL: DEMOLITION DRAWINGS ARE BASED ON EXISTING PLANS AND FIELD INVESTIGATION PRIOR TO DEMOLITION. VISIT THE EXISTING BUILDING PRIOR TO BID IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND IN ORDER TO AVOID CONFLICTS.

DASHED ITEMS: ALL ITEMS SHOWN DASHED ON DEMOLITION PLANS ARE EXISTING AND SHALL BE REMOVED COMPLETE INCLUDING BOXES, CONDUIT, WIRE, FASTENERS, AND ASSOCIATED APPURTENANCES UON.

SOLID ITEMS: ALL ITEMS SHOWN SOLID ON DEMOLITION PLANS ARE EXISTING TO REMAIN.

CIRCUITING TO REMAIN: WHERE AFFECTED BY NEW WORK, EXISTING CIRCUITING TO REMAIN SHALL BE REROUTED OR RECONNECTED AS REQUIRED, IN ORDER TO MAINTAIN CONTINUITY OF CIRCUIT.

REUSE OF EXISTING CIRCUITRY: EXISTING CIRCUITS SHALL BE REUSED WHERE CONVENIENT TO SERVE THE NEW LAYOUT. PROVIDE CIRCUIT MODIFICATIONS INDICATED OR REQUIRED TO MAINTAIN CONTINUITY OF EXISTING CIRCUITS THAT REMAIN.

EXISTING CONDUIT: ALL EXISTING CONDUITS AND WIRING THAT WILL NOT BE REUSED SHALL BE REMOVED. EXISTING CONDUIT TO REMAIN CONCEALED IN WALLS SHALL BE ABANDONED. EXISTING CONDUIT TO REMAIN BELOW FLOOR SLAB SHALL BE CUT OFF ONE INCH BELOW ROUGH FLOOR AND GROUTED FLUSH. ALL EXISTING WIRING IN CONDUITS TO BE ABANDONED SHALL BE DISCONNECTED FROM POWER SOURCE AND REMOVED.

REPAIR DAMAGE: EXERCISE CARE IN REMOVAL OF DEMOLITION ITEMS. REPAIR, AT NO ADDITIONAL COST TO OWNER, ANY DAMAGE CAUSED TO EXISTING CONSTRUCTION AND/OR EQUIPMENT TO REMAIN.

ASSOCIATED APPURTENANCES: REMOVE ALL ELECTRICAL APPURTENANCES (DISCONNECTS, STARTERS, WIRING, CONDUIT, ETC.) ASSOCIATED WITH EQUIPMENT TO BE REMOVED BY OTHERS.

KNOCKOUT PLUGS AND COVERS: ALL CONDUIT REMOVED SHALL BE REMOVED IN ITS ENTIRETY, INCLUDING FITTINGS, MOUNTING DEVICES, MOUNTING HARDWARE, ETC. PROVIDE CONDUIT PLUGS AND BLANKS FOR ALL OPENINGS CREATED BY THE REMOVAL OF CONDUIT. PROVIDE BLANK COVER PLATES FOR ALL OPENED OUTLET BOXES CREATED BY THE REMOVAL OF THE EQUIPMENT AND/OR DEVICES.

DEMOLISHED MATERIALS: ALL MATERIALS REMOVED UNDER DEMOLITION, NOT TO BE RELOCATED OR DESIGNATED TO BE TURNED OVER TO THE OWNER, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED COMPLETELY FROM THE SITE.

SCHEDULE OUTAGES: ALL WORK AND ALL POWER OUTAGES SHALL BE SCHEDULED AT TIMES CONVENIENT TO THE OWNER.

NOTIFICATION: NOTIFY THE OWNER PRIOR TO TURNING OFF ANY CIRCUITS.

EXISTING CIRCUITS: IF DURING THE COURSE OF CONSTRUCTION, IT IS DETERMINED BY THE CONTRACTOR THAT AN EXISTING CIRCUIT BECOMES SPARE, THE CONTRACTOR SHALL UPDATE THE PANELBOARD DIRECTORY TO INDICATE SUCH, EVEN IF IT IS NOT EXPLICITLY MARKED ON THE ELECTRICAL PLANS.

GENERAL SPECIAL SYSTEM NOTES:

TELEPHONE AND DATA SYSTEMS

THE TELEPHONE AND DATA SYSTEMS WILL BE FURNISHED AND INSTALLED THROUGH THE OWNER'S VENDOR (THE VENDOR) UNDER A SEPARATE CONTRACT. ALL CABLING AND WIRING (EXCEPT FOR POWER WIRING), J-HOOKS, JACKS, COVER PLATE COMPATIBLE WITH THE EQUIPMENT, DEVICES, RACKS, AND COMPONENT EQUIPMENT WILL BE PROVIDED BY THE VENDOR, UNLESS INDICATED OTHERWISE. THE VENDOR WILL PROVIDE INSTALLATION DURING CONSTRUCTION. THE ELECTRICAL CONTRACTOR (THE CONTRACTOR) SHALL COORDINATE ALL ROUGH-IN, BOX SIZES AND CONFIGURATIONS, CONDUIT SIZES AND ROUTING WITH THE VENDOR PRIOR TO INSTALLATION OF THE RACEWAY SYSTEM.

THE CONTRACTOR SHALL PROVIDE ALL CONDUIT WITH PULL WIRE, AND 4"X4"X2 1/4"BOX WITH SINGLE GANG PLASTER RING UNLESS OTHERWISE NOTED. ELECTRICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELECTRICAL REQUIREMENTS WITH THE VENDOR PRIOR TO ROUGH-IN.

STUB ALL CONDUITS WITH PULL WIRE FOR COMMUNICATIONS DEVICES TO ABOVE AN ACCESSIBLE CORRIDOR CEILING AND TERMINATE WITH INSULATED NYLON BUSHING. THE VENDOR WILL PROVIDE J-HOOKS ABOVE THE CEILING FROM THE STUB OUT TO EQUIPMENT LOCATION AS REQUIRED FOR HIS CABLING AND TERMINATE WITH INSULATED NYLON BUSHING. WHERE A WALL SEPARATES THE CONDUIT STUB OUT FROM THE EQUIPMENT LOCATION, PROVIDE A 1" MINIMUM SLEEVE THROUGH THE WALL, ABOVE AN ACCESSIBLE CEILING, TO ACCOMMODATE THE CABLING. ALL CONDUITS AND SLEEVES PENETRATING RATED FIRE OR SMOKE WALLS SHALL BE PROVIDED WITH APPROVED FIRE RETARDANT TO PROVIDE A UL RATED WALL PENETRATION ASSEMBLY. MAINTAIN VENDOR RECOMMENDED SEPARATION BETWEEN WIRING OF DIFFERENT SYSTEMS AND FROM INTERFERENCE PRODUCING ELECTRICAL DEVICES SUCH AS FLUORESCENT LIGHTS, BALLAST, TRANSFORMERS, RELAYS, MOTOR CONTROLS, ETC.

PROVIDE POWER CIRCUITS FOR TELECOMMUNICATIONS EQUIPMENT AS INDICATED.

THE CONTRACTOR SHALL PROVIDE ALL BACKBOXES, CONDUIT, GROUNDING AND SHALL INSTALL ALL SPECIAL BOXES WITH PLASTER RING FURNISHED BY THE VENDOR FOR THE TELECOMMUNICATIONS SYSTEMS IN ACCORDANCE WITH THE APPLICABLE CODES.

THE CONTRACTOR SHALL INSTALL ALL COMMUNICATIONS SLEEVES AND CONDUIT IN ACCORDANCE WITH DRAWINGS, ELECTRICAL SPECIFICATIONS, VENDOR WIRING DIAGRAMS, AND ALL APPLICABLE CODES.

THE GENERAL CONTRACTOR SHALL PROVIDE IN-WALL REINFORCEMENT AS NECESSARY FOR ALL COMMUNICATIONS CABINETS, SHELVES, BRACKETS, FURNITURE MOUNTS, ETC. AND SHALL MOUNT CABINETS, SHELVES, BRACKETS, AND FURNITURE MOUNTS IN ACCORDANCE WITH DRAWINGS, VENDOR SUBMITTALS, AND ALL APPLICABLE CODES.

COORDINATE FINAL LOCATIONS AND ELEVATIONS OF ALL TELECOMMUNICATIONS DEVICES AND OUTLETS WITH ARCHITECTURAL PLANS, CASEWORK AND ELEVATIONS, AND VENDOR REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE A COMPLETION SCHEDULE BROKEN DOWN BY PROJECT PHASES, FOR TURNOVER OF COMPLETED COMMUNICATIONS ROUGH-IN FOR VENDOR FINISH WORK. THE CONTRACTOR SHALL COORDINATE TURNOVER WITH VENDORS, AND SHALL TURNOVER AREAS FOR VENDOR FINISH WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXTRA VENDOR COST RESULTING FROM INCORRECT COMMUNICATIONS ROUGH-IN.

LIGHTING

⊘	DOWNLIGHT FIXTURE.
◐	DOWNLIGHT FIXTURE WITH EMERGENCY BATTERY.
⏚	WALL MOUNTED LIGHTING FIXTURE.
⏚	WALL MOUNTED LIGHTING FIXTURE WITH EMERGENCY BATTERY.
	EMERGENCY BATTERY LIGHTING UNIT, CONNECT AHEAD OF LOCAL SWITCH.
	EXIT LIGHTING FIXTURE WITH DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS, CONNECT AHEAD OF LOCAL SWITCH. SHADED AREA DENOTES LIGHTED FACE.
$a	SINGLE POLE SWITCH, 20A, 120/277V, 44"AFF UON. SUBSCRIPT "a" INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED.
$a LVa	LOW VOLTAGE SWITCH WITH ON/OFF CONTROL OF ONE ZONE. 44" AFF. UON. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES OR ZONE TO BE CONTROLLED. PROVIDE NLIGHT MODEL #NPODMA OR APPROVED EQUAL.
OS#a	CEILING MOUNTED DUAL TECHNOLOGY LOW VOLTAGE OCCUPANCY SENSOR. SUBSCRIPT "a", WHERE USED, INDICATES ASSOCIATED FIXTURES TO BE CONTROLLED. OS1: NLIGHT MODEL NCM-PDT-9 OR APPROVED EQUAL. OS2: NLIGHT MODEL NCM-PDT-10 OR APPROVED EQUAL

LIGHTING FIXTURE KEY

DL1a NL	1. LETTER "DL1" DENOTES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE. ASSOCIATED LETTER "a", WHERE USED, INDICATES LIGHTING FIXTURE CONTROL DEVICE DESIGNATION. 2. SUBSCRIPT "NL" , WHERE USED, INDICATES NIGHT LIGHT CONNECTED AHEAD OF LIGHTING CONTROLS.

POWER

	DUPLEX RECEPTACLE, 20A, 120V, 18"AFF, UON.
	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, 18"AFF, UON.
WP	DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTING TYPE, 20A, 120V, WITH COOPER MODEL WIU-1D (OR EQUAL) "WHILE-IN-USE" WEATHERPROOF COVER, 18"AFG UON.
J	JUNCTION BOX - ABOVE CEILINGS OR FLUSH IN WALLS.
	DISCONNECT SWITCH - SIZE AS INDICATED ON PLANS 30/2/20/3R — NEMA RATING (IF OTHER THAN 1) FUSE SIZE (AMPS), N.F. INDICATES NON-FUSED No. OF POLES SIZE (AMPS)
	ELECTRICAL PANELBOARD
	ELECTRICAL CIRCUIT RUN IN CONDUIT AND CIRCUIT HOMERUN TO PANELBOARD (PANEL AND CIRCUIT DESIGNATION AS INDICATED). AS A MINIMUM CONDITION, EACH SINGLE PHASE CIRCUIT SHALL HAVE 1 #12 PHASE CONDUCTOR, 1 #12 NEUTRAL CONDUCTOR, AND 1 #12 GROUNDING CONDUCTOR IN 3/4" CONDUIT. PROVIDE ADDITIONAL PHASE CONDUCTORS AS REQUIRED FOR "MULTIPLE PHASED" ELECTRICAL LOADS. PROVIDE ADDITIONAL "SWITCH LEG" CONDUCTORS TO PROVIDE THE LIGHT FIXTURE CONTROL INDICATED. MULTIPLE SINGLE PHASE CONDUCTORS SHALL BE GROUPED TOGETHER IN A COMMON CONDUIT IN ACCORDANCE WITH THE NEC AND AT THE CONTRACTORS DISCRETION. NEUTRAL AND GROUNDING CONDUCTORS SHALL BE SHARED AS ALLOWED BY THE NEC. CONDUIT LARGER THAN 3/4" AND CONDUCTORS LARGER THAN #12 SHALL BE AS INDICATED.

ACCESS CONTROL

CR	SINGLE GANG J-BOX FOR SECURITY SYSTEM CARD READER WITH 3/4" CONDUIT WITH PULL STRING AND TERMINATED WITH PLASTIC BUSHING UP TO ABOVE ACCESSIBLE CEILING.

GENERAL

1	KEYNOTE.

LINEWEIGHTS

———	NEW
———	EXISTING
- - - - -	REMOVE EXISTING

ELECTRICAL ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CURRENT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO/VISUAL
BFG	BELOW FINISHED GRADE
C	CONDUIT
CATV	CABLE ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFL	COMPACT FLUORESCENT
CKT	CIRCUIT
EBU	EMERGENCT BATTERY UNIT
EC	EMPTY CONDUIT
EC	ELECTRICAL CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
ERU	ENERGY RECOVERY UNIT
EQUIP	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING
FLA	FULL LOAD AMPS
FPC	FIRE PROTECTION CONTRACTOR
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HP	HORSE POWER/HEAT PUMP
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILO-VOLT AMPERE
KW	KILO-WATT
LC	LIGHTING CONTACTOR
LTG	LIGHTING
MAU	MAKE UP AIR UNIT
MCA	MINIMUM CIRUIT AMPS
MC	MECHANICAL CONTRACTOR
MC	METAL CLAD
MCB	MAIN CIRCUIT BREAKER
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
P	POLE
PC	PLUMBING CONTRACTOR
PCP	PUMP CONTROL PANEL
PF	POWER FACTOR
PNL	PANEL
PNLBD	PANELBOARD
Ø	PHASE
PRI	PRIMARY
REC	RECEPTACLE
RTU	ROOF TOP UNIT
SE	SERVICE ENTRANCE
SEC	SECONDARY
TBB	TELEPHONE BACKBOARD
TR	TAMPER RESISTANT
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VAC	VOLTS ALTERNATING CURRENT
VAV	VARIABLE AIR VOLUME
VDC	VOLTS DIRECT CURRENT
VFD	VARIABLE REQUENCY DRIVE
W	WATTS/WIRE
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

RSSC ARCHITECTURE
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FAYETTE COUNTY COURTHOUSE BLDG.

NEW WALKWAY CONNECTION STRUCTURE
FERENS BLDG.
61 EAST MAIN STREET
97 EAST MAIN STREET
UNION TOWN
FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

ELECTRICAL DATA SHEET

NOT FOR CONSTRUCTION

E001

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ELECTRICAL SPECIFICATIONS

CODES

1. CODES AND STANDARDS - THE LATEST EFFECTIVE PUBLICATIONS OF ALL APPLICABLE STANDARDS, CODES, ETC., AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION, STATE AND LOCAL GOVERNMENTS, AS THEY APPLY, FORM PART OF THESE SPECIFICATIONS AS IF WERE WRITTEN FULLY HEREIN AND CONSTITUTE MINIMUM REQUIREMENTS. THE FOLLOWING WILL BE REFERRED TO THROUGHOUT IN ABBREVIATED FORMS.
   - A. NATIONAL ELECTRICAL CODE, (NFPA 70) (NEC).
   - B. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
   - C. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
   - D. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
   - E. APPLICABLE STATE AND LOCAL CODES.
   - F. APPLICABLE STANDARDS OF UNDERWRITER'S LABORATORIES, INC. (UL).
   - G. APPLICABLE STANDARDS OF NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
   - H. THE INTERNATIONAL BUILDING CODE (IBC).
   - I. THE INTERNATIONAL FIRE CODE (IFC)
   - J. THE AMERICANS WITH DISABILITIES ACT (ADA).
   - K. INTERNATIONAL ELECTRICAL TESTING ASSOCIATION (NETA).
   - L. THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC).
   - M. ASHRAE 90.1

GENERAL INFORMATION

1. MANUFACTURING STANDARDS - MATERIAL SHALL BE NEW AND APPROVED AND LABELED BY UL WHEREVER STANDARDS HAVE BEEN ESTABLISHED BY THAT AGENCY. DEFECTIVE EQUIPMENT OR EQUIPMENT DAMAGED IN THE COURSE OF INSTALLATION OR TEST SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING THE APPROVAL OF THE OWNER. ALL ITEMS OF THE SAME TYPE AND RATING SHALL BE IDENTICAL.
2. TRADE NAMES - UNLESS SPECIFICALLY IDENTIFIED OTHERWISE, MANUFACTURERS' NAMES AND CATALOG NUMBERS INDICATED HEREIN AND ON THE DRAWINGS ARE NOT INTENDED TO BE PROPRIETARY DESIGNATIONS. THEY ARE TO INDICATE GENERAL TYPE AND QUALITY OF MATERIALS AND EQUIPMENT REQUIRED. EQUIPMENT AND MATERIAL BY OTHER MANUFACTURERS WHICH IN THE OPINION OF THE ENGINEER ARE OF EQUAL QUALITY AND WHICH WILL PRODUCE THE SAME RESULTS WILL BE CONSIDERED ACCEPTABLE.
3. MOTORS - MOTORS SHALL BE PROVIDED WITH DISCONNECTING MEANS.
4. POWER WIRING - UP TO AND INCLUDING MOTOR CONNECTIONS FOR ALL EQUIPMENT PROVIDED UNDER OTHER DIVISIONS OF THIS SPECIFICATION SHALL BE INCLUDED IN THIS DIVISION. WHERE MANUAL MOTOR CONTROL SWITCHES FOR SINGLE PHASE MOTORS ARE INDICATED, THEY SHALL BE PROVIDED AND WIRED COMPLETE UNDER THIS DIVISION. MOTOR CONTROLLERS AND MOTOR STARTERS FURNISHED UNDER OTHER DIVISIONS SHALL BE SET IN PLACE AND CONNECTED TO SOURCE AND LOAD UNDER THIS DIVISION. IN GENERAL, MOTORS WILL BE PROVIDED WITH THE EQUIPMENT THEY DRIVE AND ARE NOT PART OF THIS WORK UNDER THIS DIVISION, EXCEPT THAT THEY SHALL BE CONNECTED HEREUNDER.
5. OBTAIN APPROVED SHOP DRAWINGS - SHOWING WIRING DIAGRAMS, CONNECTION DIAGRAMS, ROUGH-IN AND HOOKUP DETAILS, FROM ALL CONTRACTORS FOR ALL EQUIPMENT AND COMPLY THEREWITH.
6. CONTROL, INTERLOCK AND INTERNAL EQUIPMENT - WIRING REGARDLESS OF VOLTAGE SHALL BE PROVIDED BY OTHERS UNLESS SPECIFICALLY SHOWN HERE.
7. TEMPORARY ELECTRICAL SERVICE - TEMPORARY ELECTRICAL SERVICE AT 120/240V, 1-PHASE AND OR 120/208V, 3-PHASE WITH GROUND FAULT INTERRUPTER WITH SOLIDLY GROUNDED NEUTRAL SHALL BE PROVIDED. AMPERAGE AND VOLTAGE SHALL BE COORDINATED WITH SITE AND PROJECT SPECIFIC REQUIREMENTS. PROVIDE ALL NECESSARY TEMPORARY LIGHTING AND RECEPTACLES. GENERAL CONTRACTOR WILL PAY ALL CHARGES, WHICH MAY BE MADE BY THE POWER COMPANY FOR TEMPORARY SERVICE.
8. GROUNDING - THE ENTIRE ELECTRICAL SYSTEM, INCLUDING EQUIPMENT FRAMES, CONDUIT, SWITCHES, CONTROLLERS, WIREWAYS, AND ALL OTHER SUCH EQUIPMENT SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH THE NEC. GROUNDING OF EACH TRANSFORMER SECONDARY SHALL BE PROVIDED AND EACH SHALL BE CONSIDERED AS A SEPARATE SERVICE GROUND. PROVIDE A SEPARATE GROUND CONDUCTOR IN ALL BRANCH CIRCUIT CONDUITS SIZED IN ACCORDANCE WITH THE NEC.
9. SCHEDULE OF WORK - THE SCHEDULE OF THE ELECTRICAL WORK SHALL BE ARRANGED TO SUIT THE PROGRESS OF WORK BY THE OTHER TRADES AND SHALL IN NO WAY RETARD PROGRESS OF CONSTRUCTION OF THE PROJECT.
10. WORK UNDER THIS DIVISION - SHALL PROCEED IN ADVANCE OF THE WORK OF OTHERS WHENEVER POSSIBLE, ELIMINATING ALL CUTTING AND PATCHING. WHEN SUCH PROCEDURE IS IMPOSSIBLE, CUTTING AND PATCHING SHALL BE DONE IN AN APPROVED MANNER. CUTTING SHALL NOT ENDANGER STRUCTURAL INTEGRITY IN ANY WAY. PATCHING SHALL EXACTLY MATCH CONTIGUOUS WORK. ACTUAL WORK OF CUTTING AND PATCHING OF EXISTING SURFACES SHALL BE PERFORMED BY THE SUBCONTRACTOR WHO ORIGINALLY PREPARED THESE SURFACES, E.G., CUTTING AND PATCHING OF MASONRY WALL WILL BE PERFORMED BY THE MASONRY SUBCONTRACTOR. COSTS OF SUCH CUTTING AND PATCHING SHALL BE BORNE BY THE ELECTRICAL SUBCONTRACTOR. CUTTING SHALL BE CAREFULLY DONE AND DAMAGE TO BUILDING, PIPING, WORK OR EQUIPMENT AS A RESULT OF CUTTING SHALL BE REPAIRED BY SKILLED MECHANICS OF TRADE INVOLVED.
11. STORAGE AND MATERIALS - SPACE WILL BE ASSIGNED TO THE CONTRACTOR BY THE OWNER FOR THE STORAGE OF MATERIAL. THIS CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION AND SAFEKEEPING OF MATERIALS, TOOLS, AND EQUIPMENT. ALL MATERIALS AND EQUIPMENT SHALL BE KEPT IN ITS ASSIGNED PLACE UNTIL THE TIME OF ITS INSTALLATION. EXCESS MATERIALS, DIRT AND REFUSE SHALL BE PROMPTLY REMOVED FROM THE WORK SITE.
12. LABELING OF EQUIPMENT - ALL PANELBOARDS, CABINETS, SAFETY SWITCHES, MOTOR DISCONNECT SWITCHES, AND MOTOR CONTROLLERS SHALL BE IDENTIFIED BY MACHINE ENGRAVED LAMINATED PLASTIC DESIGNATION PLATES PERMANENTLY ATTACHED THERETO WITH SELF-TAPPING SCREWS OR RIVETS. ALL COMPONENT PARTS OF EACH ITEM OF EQUIPMENT OR DEVICE SHALL BEAR THE MANUFACTURER'S NAMEPLATE, GIVING NAME OF MANUFACTURER, DESCRIPTION, SIZE TYPE, SERIAL AND MODEL NUMBER AND ELECTRICAL CHARACTERISTICS IN ORDER TO FACILITATE MAINTENANCE OR REPLACEMENT. PROVIDE UPDATED PANEL DIRECTORIES FOR ALL NEW AND MODIFIED EXISTING PANELS TO INDICATE CORRECT CIRCUITING DESIGNATIONS.
13. COORDINATION - COOPERATE AND COORDINATE EFFORTS WITH ALL CONTRACTORS ON THE PROJECT. THIS IS ESPECIALLY IMPORTANT IN DETERMINING EXACT LOCATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHTING FIXTURES. ARRANGE LIGHTING FIXTURES IN ACCORDANCE WITH THE ARCHITECTURAL REFLECTED CEILING PLANS UNLESS OTHERWISE INDICATED. COORDINATE LIGHTING FIXTURE LOCATIONS WITH GRILLES, DIFFUSERS, ACCESS PANELS, ETC. VERIFY CEILING AND WALL CONSTRUCTION AND MATERIAL PRIOR TO ORDERING LIGHTING FIXTURES OR OTHER DEVICES TO ENSURE PROPER FIXTURE OR DEVICE IS FURNISHED TO MATCH CONSTRUCTION. THIS VERIFICATION MUST BE EXECUTED REGARDLESS OF INFORMATION PLACED ON THE DRAWINGS. ANY COST INCURRED WHICH IN THE OPINION OF THE OWNER, COULD HAVE BEEN AVOIDED BY THIS STEP SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
14. GUARANTEE OF WORK - CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK INSTALLED IS FREE FROM ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS, AND THAT THE APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED, AND THAT IF, DURING THE PERIOD OF ONE YEAR OR AS OTHERWISE SPECIFIED, FROM DATE OF CERTIFICATE OF COMPLETION AND ACCEPTANCE OF THE WORK ANY SUCH DEFECTS IN WORKMANSHIP, MATERIAL OR PERFORMANCE APPEAR, HE WILL, WITHOUT COST TO THE OWNER, REMEDY SUCH DEFECTS WITHIN A REASONABLE TIME TO BE SPECIFIED IN NOTICE. IN DEFAULT THEREOF, THE OWNER MAY HAVE SUCH WORK DONE AND CHARGE COST TO CONTRACTOR. EQUIPMENT GUARANTEES FROM DATE OF "START-UP" WILL NOT BE RECOGNIZED.
15. ALL ELECTRICAL WORK SHALL BE INSTALLED TO MAINTAIN ALL CLEARANCES AS DEFINED IN ARTICLE NEC 110.26 AND ITS SUBSEQUENT SUBSECTIONS. NO DUCT, CONDUIT, PIPE, ETC. NOT DIRECTLY ASSOCIATED WITH THAT PIECE OF ELECTRICAL EQUIPMENT SHALL BE LOCATED IN THE CLEARANCE SPACE AS DEFINED BY THE NEC. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF OTHER TRADES TO MAINTAIN THESE CLEARANCES.

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1. SUBMITTALS
   - A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.

PART 2 - PRODUCTS

1. COPPER BUILDING WIRE
   - A. DESCRIPTION: FLEXIBLE, INSULATED AND UNINSULATED, DRAWN COPPER CURRENT-CARRYING CONDUCTOR WITH AN OVERALL INSULATION LAYER OR JACKET, OR BOTH, RATED 600 V OR LESS.
   - B. CONDUCTOR INSULATION:
     - a. TYPE THHN AND TYPE THWN-2: COMPLY WITH UL 83.
     - b. TYPE XHHW-2: COMPLY WITH UL 44.
2. METAL-CLAD CABLE, TYPE MC
   - A. DESCRIPTION: A FACTORY ASSEMBLY OF ONE OR MORE CURRENT-CARRYING INSULATED CONDUCTORS IN AN OVERALL METALLIC SHEATH.
   - B. STANDARDS:
     - a. LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND USE.
     - b. COMPLY WITH UL 1569.
   - C. GROUND CONDUCTOR SHALL BE INSULATED. CONDUCTOR INSULATION TYPE THHN/THWN-2 SHALL COMPLY WITH UL 83. CONDUCTOR INSULATION TYPE XHHW-2 SHALL COMPLY WITH UL 44.
   - D. ARMOR SHALL BE STEEL OR ALUMINUM, INTERLOCKED. JACKET SHALL BE PVC APPLIED OVER ARMOR.
3. CONNECTORS AND SPLICES
   - A. DESCRIPTION: FACTORY-FABRICATED CONNECTORS, SPLICES, AND LUGS OF SIZE, AMPACITY RATING, MATERIAL, TYPE, AND CLASS FOR APPLICATION AND SERVICE INDICATED; LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND USE.
   - B. JACKETED COMPRESSION CONNECTORS: FOR STEEL AND ALUMINUM JACKETED CABLES, ZINC DIE-CAST WITH SET SCREWS, DESIGNED TO CONNECT CONDUCTORS SPECIFIED IN THIS SECTION.
   - C. LUGS: ONE PIECE, SEAMLESS, DESIGNED TO TERMINATE CONDUCTORS SPECIFIED IN THIS SECTION. MATERIAL SHALL BE COPPER. TYPE SHALL BE ONE OR TWO HOLE WITH STANDARD OR LONG BARRELS. TERMINATIONS SHALL BE COMPRESSION.

PART 3 - EXECUTION

1. CONDUCTOR MATERIAL APPLICATIONS
   - A. FEEDERS: COPPER. CONDUCTORS SHALL BE SOLID OR STRANDED FOR NO. 10 AWG AND SMALLER; STRANDED FOR NO. 8 AWG AND LARGER.
   - B. BRANCH CIRCUITS: COPPER. SOLID OR STRANDED FOR NO. 10 AWG AND SMALLER; STRANDED FOR NO. 8 AWG AND LARGER. WIRE SMALLER THAN NO. 12 AWG SHALL NOT BE USED FOR LIGHTING AND POWER CIRCUITS.
   - C. POWER-LIMITED FIRE ALARM AND CONTROL: SOLID FOR NO. 12 AWG AND SMALLER.
2. CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS
   - A. SERVICE ENTRANCE: TYPE THHN-THWN OR XHHW-2, SINGLE CONDUCTORS IN RACEWAY.
   - B. FEEDERS AND BRANCH CIRCUITING: TYPE THHN-THWN, SINGLE CONDUCTORS IN RACEWAY.
   - C. METAL-CLAD CABLE, TYPE MC, SHALL BE PERMISSIBLE WHERE INSTALLED AS BRANCH CIRCUITING CONCEALED IN ACCESSIBLE CEILINGS, WALLS, AND PARTITIONS, OR WHERE INSTALLED BELOW RAISED FLOORING.
3. INSTALLATION OF CONDUCTORS AND CABLES
   - A. CONCEAL CABLES IN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED.
   - B. USE MANUFACTURER'S APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY; COMPOUND USED MUST NOT DETERIORATE CONDUCTOR OR INSULATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
   - C. INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OF EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS WHERE POSSIBLE.
   - D. METAL CLAD CABLING SHALL BE SECURED EVERY SIX FEET AND WITHIN 12 INCHES OF EVERY BOX OR TERMINATION AS REQUIRED BY CODE. INSTALLATION OF METAL CLAD CABLING SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER AND FOLLOW OR BE PERPENDICULAR TO BUILDING LINES.
   - E. EACH DESIGNED CIRCUIT HOMERUN SHALL HAVE ITS OWN INDIVIDUAL GROUND CONDUCTOR. CONDUIT SHALL NOT BE USED A GROUND CONDUCTOR.
4. CONNECTIONS
   - A. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A-486B.
   - B. MAKE SPLICES, TERMINATIONS, AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS.
   - C. WIRING AT OUTLETS: INSTALL CONDUCTOR AT EACH OUTLET, WITH AT LEAST 6 INCHES OF SLACK.
   - D. PUSH-ON WIRE CONNECTORS, OTHER THAN FOR LUMINAIRE DISCONNECTS, ARE NOT PERMITTED.
   - E. ALL EXTERIOR WIRING CONNECTIONS, AND THOSE MADE AT OR BELOW GRADE SHALL BE WATERPROOF WITH UL LISTED WATERPROOF CONNECTORS.
   - F. COPPER CONDUCTORS #10 AWG AND SMALLER SHALL BE TERMINATED AND SPLICED WITH WIRE NUT CONNECTORS. THE NYLON SELF INSULATED TYPE SHALL BE USED TO ISOLATE THE TERMINATION FROM OTHER METAL PARTS AND EQUIPMENT.
   - G. COPPER CONDUCTORS #8 AWG AND LARGER SHALL BE TERMINATED, SPLICED, AND TAPPED WITH COLOR_KEYED COMPRESSION CONNECTORS. THE MANUFACTURERS RECOMMENDED TOOLS AND DIES SHALL BE USED.
   - H. COPPER CABLE LUG CONNECTIONS #8 AND LARGER TO COPPER BUS BAR MAINS AND BRANCHES SHALL USE COPPER SOLDERLESS CONNECTORS HAVING EITHER 2_BOLT CAST COPPER CLAMPS OR COMPRESSION CONNECTORS, WITH MANUFACTURER'S RECOMMENDED HEXAGONAL DIES AND HYDRAULIC COMPRESSION TOOLS.
   - I. PLENUM RATED CABLE OR WIRING IN METAL CONDUIT SHALL BE UTILIZED IN ALL PLENUM RATED SPACES.
   - J. WHERE AC CABLE IS PERMITTED FOR INSTALL AND INSTALLED IN ACCESSIBLE ATTICS, THE INSTALLATION SHALL FOLLOW ALL GUIDELINES OF NEC 320.23.

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1. SUBMITTALS
   - A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

PART 2 - PRODUCTS

1. SYSTEM DESCRIPTION
   - A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
   - B. COMPLY WITH UL 467 FOR GROUNDING AND BONDING MATERIALS AND EQUIPMENT.
2. CONDUCTORS
   - A. INSULATED CONDUCTORS: COPPER OR TINNED-COPPER WIRE OR CABLE INSULATED FOR 600 V UNLESS OTHERWISE REQUIRED BY APPLICABLE CODE OR AUTHORITIES HAVING JURISDICTION.
   - B. GROUNDING BUS: PREDRILLED RECTANGULAR BARS OF ANNEALED COPPER, 1/4 BY 4 INCHES IN CROSS SECTION, WITH 9/32-INCH HOLES SPACED 1-1/8 INCHES APART. STAND-OFF INSULATORS FOR MOUNTING SHALL COMPLY WITH UL 891 FOR USE IN SWITCHBOARDS, 600 V AND SHALL BE LEXAN OR PVC, IMPULSE TESTED AT 5000 V. MINIMUM SIZE SHALL BE 24" IN LENGTH.
3. CONNECTORS
   - A. LISTED AND LABELED BY AN NRTL ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION FOR APPLICATIONS IN WHICH USED AND FOR SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS CONNECTED.
4. GROUNDING ELECTRODES
   - A. GROUND RODS: COPPER-CLAD STEEL; 3/4 INCH BY 10 FEET.
   - B. GROUND PLATES: 1/4 INCH THICK, HOT-DIP GALVANIZED.

PART 3 - EXECUTION

1. APPLICATIONS
   - A. CONDUCTORS: INSTALL SOLID CONDUCTOR FOR NO. 8 AWG AND SMALLER, AND STRANDED CONDUCTORS FOR NO. 6 AWG AND LARGER UNLESS OTHERWISE INDICATED.
   - B. UNDERGROUND GROUNDING CONDUCTORS: INSTALL BARE COPPER CONDUCTOR, NO. 3/0 AWG MINIMUM. BURY AT LEAST 24 INCHES BELOW GRADE.
   - C. ISOLATED GROUNDING CONDUCTORS: GREEN-COLORED INSULATION WITH CONTINUOUS YELLOW STRIPE. ON FEEDERS WITH ISOLATED GROUND, IDENTIFY GROUNDING CONDUCTOR WHERE VISIBLE TO NORMAL INSPECTION, WITH ALTERNATING BANDS OF GREEN AND YELLOW TAPE, WITH AT LEAST THREE BANDS OF GREEN AND TWO BANDS OF YELLOW.
   - D. GROUNDING BUS: INSTALL IN ELECTRICAL EQUIPMENT ROOMS, IN ROOMS HOUSING SERVICE EQUIPMENT, IN ALL IDF AND MDF ROOMS, AND ELSEWHERE AS INDICATED.
     - a. INSTALL BUS HORIZONTALLY, ON INSULATED SPACERS 2 INCHES MINIMUM FROM WALL, 6 INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.
     - b. WHERE INDICATED ON BOTH SIDES OF DOORWAYS, ROUTE BUS UP TO TOP OF DOOR FRAME, ACROSS TOP OF DOORWAY, AND DOWN; CONNECT TO HORIZONTAL BUS.
   - E. CONDUCTOR TERMINATIONS AND CONNECTIONS:
     - a. PIPE AND EQUIPMENT GROUNDING CONDUCTOR TERMINATIONS: BOLTED CONNECTORS.
     - b. UNDERGROUND CONNECTIONS: WELDED CONNECTORS EXCEPT AT TEST WELLS AND AS OTHERWISE INDICATED.
     - c. CONNECTIONS TO GROUND RODS AT TEST WELLS: BOLTED CONNECTORS.
     - d. CONNECTIONS TO STRUCTURAL STEEL: WELDED CONNECTORS.
2. GROUNDING AT THE SERVICE
   - A. EQUIPMENT GROUNDING CONDUCTORS AND GROUNDING ELECTRODE CONDUCTORS SHALL BE CONNECTED TO THE GROUND BUS. INSTALL A MAIN BONDING JUMPER BETWEEN THE NEUTRAL AND GROUND BUSES.
3. EQUIPMENT GROUNDING
   - A. INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH ALL FEEDERS AND BRANCH CIRCUITS.
   - B. INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH THE FOLLOWING ITEMS, IN ADDITION TO THOSE REQUIRED BY NFPA 70:
     - a. FEEDERS AND BRANCH CIRCUITS.
     - b. LIGHTING CIRCUITS.
     - c. RECEPTACLE CIRCUITS.
     - d. SINGLE-PHASE MOTOR AND APPLIANCE BRANCH CIRCUITS.
     - e. THREE-PHASE MOTOR AND APPLIANCE BRANCH CIRCUITS.
     - f. FLEXIBLE RACEWAY RUNS.
     - g. METAL-CLAD CABLE RUNS.
     - h. COMPUTER AND RACK-MOUNTED ELECTRONIC EQUIPMENT CIRCUITS: INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTOR IN BRANCH-CIRCUIT RUNS FROM EQUIPMENT-AREA POWER PANELS AND POWER-DISTRIBUTION UNITS.
   - C. WHERE UNGROUNDED CONDUCTORS ARE INCREASED IN SIZE FROM THE MINIMUM SIZE THAT HAS SUFFICIENT AMPACITY FOR THE INTENDED INSTALLATION, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCREASED PER NEC 250.122(B).
4. INSTALLATION
   - A. GROUNDING CONDUCTORS: ROUTE ALONG SHORTEST AND STRAIGHTEST PATHS POSSIBLE UNLESS OTHERWISE INDICATED OR REQUIRED BY CODE. AVOID OBSTRUCTING ACCESS OR PLACING CONDUCTORS WHERE THEY MAY BE SUBJECTED TO STRAIN, IMPACT, OR DAMAGE.
   - B. GROUND RODS: DRIVE RODS UNTIL TOPS ARE 6 INCHES BELOW FINISHED FLOOR OR FINAL GRADE UNLESS OTHERWISE INDICATED.
     - a. INTERCONNECT GROUND RODS WITH GROUNDING ELECTRODE CONDUCTOR BELOW GRADE AND AS OTHERWISE INDICATED. MAKE CONNECTIONS WITHOUT EXPOSING STEEL OR DAMAGING COATING IF ANY.
     - b. USE EXOTHERMIC WELDS FOR ALL BELOW-GRADE CONNECTIONS.
     - c. FOR GROUNDING ELECTRODE SYSTEM, INSTALL AT LEAST THREE RODS SPACED AT LEAST ONE-ROD LENGTH FROM EACH OTHER AND LOCATED AT LEAST THE SAME DISTANCE FROM OTHER GROUNDING ELECTRODES, AND CONNECT TO THE SERVICE GROUNDING ELECTRODE CONDUCTOR. SYSTEM SHALL MEET REQUIREMENTS OF NEC 250.52 AND 250.53.
   - C. TEST WELLS: GROUND ROD DRIVEN THROUGH DRILLED HOLE IN BOTTOM OF HANDHOLE. HANDHOLES SHALL BE AT LEAST 12 INCHES DEEP, WITH COVER.
     - a. INSTALL AT LEAST ONE TEST WELL FOR EACH SERVICE UNLESS OTHERWISE INDICATED. INSTALL AT THE GROUND ROD ELECTRICALLY CLOSEST TO SERVICE ENTRANCE. SET TOP OF TEST WELL FLUSH WITH FINISHED GRADE OR FLOOR.
   - D. BONDING STRAPS AND JUMPERS: INSTALL IN LOCATIONS ACCESSIBLE FOR INSPECTION AND MAINTENANCE EXCEPT WHERE ROUTED THROUGH SHORT LENGTHS OF CONDUIT.
     - a. BONDING TO STRUCTURE: BOND STRAPS DIRECTLY TO BASIC STRUCTURE, TAKING CARE NOT TO PENETRATE ANY ADJACENT PARTS.
     - b. BONDING TO EQUIPMENT MOUNTED ON VIBRATION ISOLATION HANGERS AND SUPPORTS: INSTALL BONDING SO VIBRATION IS NOT TRANSMITTED TO RIGIDLY MOUNTED EQUIPMENT.
     - c. USE EXOTHERMIC-WELDED CONNECTORS FOR OUTDOOR LOCATIONS; IF A DISCONNECT-TYPE CONNECTION IS REQUIRED, USE A BOLTED CLAMP.
   - E. GROUNDING AND BONDING FOR PIPING:
     - a. METAL WATER SERVICE PIPE: INSTALL INSULATED COPPER GROUNDING CONDUCTORS, IN PVC CONDUIT OR METAL CONDUIT WHERE GROUND WIRE IS TIED TO CONDUIT, FROM BUILDING'S MAIN SERVICE EQUIPMENT, OR GROUNDING BUS, TO MAIN METAL WATER SERVICE ENTRANCES TO BUILDING. CONNECT GROUNDING CONDUCTORS TO MAIN METAL WATER SERVICE PIPES; USE A BOLTED CLAMP CONNECTOR OR BOLT A LUG-TYPE CONNECTOR TO A PIPE FLANGE BY USING ONE OF THE LUG BOLTS OF THE FLANGE. WHERE A DIELECTRIC MAIN WATER FITTING IS INSTALLED, CONNECT GROUNDING CONDUCTOR ON STREET SIDE OF FITTING. BOND METAL GROUNDING CONDUCTOR CONDUIT OR SLEEVE TO CONDUCTOR AT EACH END.
     - b. WATER METER PIPING: USE BRAIDED-TYPE BONDING JUMPERS TO ELECTRICALLY BYPASS WATER METERS. CONNECT TO PIPE WITH A BOLTED CONNECTOR.
     - c. BOND EACH ABOVEGROUND PORTION OF GAS PIPING SYSTEM DOWNSTREAM FROM EQUIPMENT SHUTOFF VALVE.
   - F. BONDING INTERIOR METAL DUCTS: BOND METAL AIR DUCTS TO EQUIPMENT GROUNDING CONDUCTORS OF ASSOCIATED FANS, BLOWERS, ELECTRIC HEATERS, AND AIR CLEANERS. INSTALL TINNED BONDING JUMPER TO BOND ACROSS FLEXIBLE DUCT CONNECTIONS TO ACHIEVE CONTINUITY.
   - G. GROUNDING FOR STEEL BUILDING STRUCTURE: INSTALL A DRIVEN GROUND ROD AT BASE OF EACH CORNER COLUMN AND AT INTERMEDIATE EXTERIOR COLUMNS AT DISTANCES NOT MORE THAN 60 FEET APART.
   - H. CONNECTIONS: MAKE CONNECTIONS SO POSSIBILITY OF GALVANIC ACTION OR ELECTROLYSIS IS MINIMIZED. SELECT CONNECTORS, CONNECTION HARDWARE, CONDUCTORS, AND CONNECTION METHODS SO METALS IN DIRECT CONTACT ARE GALVANICALLY COMPATIBLE.
     - a. USE ELECTROPLATED OR HOT-TIN-COATED MATERIALS TO ENSURE HIGH CONDUCTIVITY AND TO MAKE CONTACT POINTS CLOSER IN ORDER OF GALVANIC SERIES.
     - b. MAKE CONNECTIONS WITH CLEAN, BARE METAL AT POINTS OF CONTACT.
     - c. MAKE ALUMINUM-TO-STEEL CONNECTIONS WITH STAINLESS-STEEL SEPARATORS AND MECHANICAL CLAMPS.
     - d. MAKE ALUMINUM-TO-GALVANIZED-STEEL CONNECTIONS WITH TIN-PLATED COPPER JUMPERS AND MECHANICAL CLAMPS.
     - e. COAT AND SEAL CONNECTIONS HAVING DISSIMILAR METALS WITH INERT MATERIAL TO PREVENT FUTURE PENETRATION OF MOISTURE TO CONTACT SURFACES.

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1. ACTION SUBMITTALS
   - A. PRODUCT DATA: FOR SURFACE RACEWAYS, WIREWAYS AND FITTINGS, FLOOR BOXES, HINGED-COVER ENCLOSURES, AND CABINETS.

PART 2 - PRODUCTS

1. METAL CONDUITS AND FITTINGS
   - A. METAL CONDUIT:
     - a. LISTING AND LABELING: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
     - b. GRC: COMPLY WITH ANSI C80.1.
     - c. IMC: COMPLY WITH ANSI C80.6.
     - d. PVC-COATED STEEL CONDUIT: PVC-COATED RIGID STEEL CONDUIT IMC. COMPLY WITH NEMA RN 1.
     - e. EMT: COMPLY WITH ANSI C80.3.
     - f. FMC: COMPLY WITH UL 1; ZINC-COATED STEEL OR ALUMINUM.
     - g. LFMC: FLEXIBLE STEEL CONDUIT WITH PVC JACKET AND COMPLY WITH UL 360.
   - B. METAL FITTINGS:
     - a. COMPLY WITH NEMA FB 1 AND UL 514B.
     - b. LISTING AND LABELING: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
     - c. FITTINGS, GENERAL: LISTED AND LABELED FOR TYPE OF CONDUIT, LOCATION, AND USE.
     - d. CONDUIT FITTINGS FOR HAZARDOUS (CLASSIFIED) LOCATIONS: COMPLY WITH UL 1203 AND NFPA 70.
     - e. FITTINGS FOR EMT: MATERIAL: STEEL OR DIE CAST. TYPE: COMPRESSION.
     - f. EXPANSION FITTINGS: PVC OR STEEL TO MATCH CONDUIT TYPE, COMPLYING WITH UL 651, RATED FOR ENVIRONMENTAL CONDITIONS WHERE INSTALLED, AND INCLUDING FLEXIBLE EXTERNAL BONDING JUMPER.
     - g. COATING FOR FITTINGS FOR PVC-COATED CONDUIT: MINIMUM THICKNESS OF 0.040 INCH, WITH OVERLAPPING SLEEVES PROTECTING THREADED JOINTS.
   - C. JOINT COMPOUND FOR IMC, GRC, OR ARC: APPROVED, AS DEFINED IN NFPA 70, BY AUTHORITIES HAVING JURISDICTION FOR USE IN CONDUIT ASSEMBLIES, AND COMPOUNDED FOR USE TO LUBRICATE AND PROTECT THREADED CONDUIT JOINTS FROM CORROSION AND TO ENHANCE THEIR CONDUCTIVITY.
2. NONMETALLIC CONDUITS AND FITTINGS
   - A. NONMETALLIC CONDUIT:
     - a. LISTING AND LABELING: NONMETALLIC CONDUIT SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
     - b. FIBERGLASS: COMPLY WITH NEMA TC 14. COMPLY WITH UL 2515 FOR ABOVEGROUND RACEWAYS. COMPLY WITH UL 2420 FOR BELOWGROUND RACEWAYS.
     - c. ENT: COMPLY WITH NEMA TC 13.
     - d. RNC: TYPE EPC-80-PVC, COMPLYING WITH NEMA TC 2 AND UL 651 UNLESS OTHERWISE INDICATED.
     - e. LFNC: COMPLY WITH UL 1660.
   - B. NONMETALLIC FITTINGS:
     - a. FITTINGS, GENERAL: LISTED AND LABELED FOR TYPE OF CONDUIT, LOCATION, AND USE.
     - b. FITTINGS FOR ENT AND RNC: COMPLY WITH NEMA TC 3; MATCH TO CONDUIT OR TUBING TYPE AND MATERIAL. FITTINGS FOR LFNC: COMPLY WITH UL 514B.
3. METAL WIREWAYS AND AUXILIARY GUTTERS
   - A. DESCRIPTION: SHEET METAL, COMPLYING WITH UL 870 AND NEMA 250, TYPE 1, TYPE 3R, TYPE 4 UNLESS OTHERWISE INDICATED, AND SIZED ACCORDING TO NFPA 70.
     - a. METAL WIREWAYS INSTALLED OUTDOORS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
   - B. FITTINGS AND ACCESSORIES: INCLUDE COVERS, COUPLINGS, OFFSETS, ELBOWS, EXPANSION JOINTS, ADAPTERS, HOLD-DOWN STRAPS, END CAPS, AND OTHER FITTINGS TO MATCH AND MATE WITH WIREWAYS AS REQUIRED FOR COMPLETE SYSTEM

a. RATED FOR ENVIRONMENTAL CONDITIONS AT INSTALLED LOCATION.
- INDOOR DRY AND CLEAN LOCATIONS: NEMA 250, TYPE 1.
- OUTDOOR LOCATIONS: NEMA 250, TYPE 3R.
- KITCHEN WASH-DOWN AREAS: NEMA 250, TYPE 4X, STAINLESS STEEL.
- OTHER WET OR DAMP INDOOR LOCATIONS: NEMA 250, TYPE 4.
- INDOOR LOCATIONS SUBJECT TO DUST, FALLING DIRT, AND DRIPPING NONCORROSIVE LIQUIDS: NEMA 250, TYPE 5 OR TYPE 12.

b. HEIGHT: 84 INCHES MAXIMUM.

c. FRONT: SECURED TO BOX WITH CONCEALED TRIM CLAMPS. FOR SURFACE-MOUNTED FRONTS, MATCH BOX DIMENSIONS; FOR FLUSH-MOUNTED FRONTS, OVERLAP BOX. TRIMS SHALL COVER ALL LIVE PARTS AND SHALL HAVE NO EXPOSED HARDWARE.

d. HINGED FRONT COVER: ENTIRE FRONT TRIM HINGED TO BOX AND WITH STANDARD DOOR WITHIN HINGED TRIM COVER. TRIMS SHALL COVER ALL LIVE PARTS AND SHALL HAVE NO EXPOSED HARDWARE.

e. SKIRT FOR SURFACE-MOUNTED PANELBOARDS: SAME GAGE AND FINISH AS PANELBOARD FRONT WITH FLANGES FOR ATTACHMENT TO PANELBOARD, WALL, AND CEILING OR FLOOR.

B. INCOMING MAINS SHALL BE CONVERTIBLE BETWEEN TOP AND BOTTOM. MAIN LUG INTERIORS UP TO 400 AMPERES SHALL BE FIELD CONVERTIBLE TO MAIN BREAKER.

C. PHASE, NEUTRAL, AND GROUND BUSES:

a. MATERIAL: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY. PLATING SHALL RUN ENTIRE LENGTH OF BUS. BUS SHALL BE FULLY RATED THE ENTIRE LENGTH.

b. INTERIORS SHALL BE FACTORY ASSEMBLED INTO A UNIT. REPLACING SWITCHING AND PROTECTIVE DEVICES SHALL NOT DISTURB ADJACENT UNITS OR REQUIRE REMOVING THE MAIN BUS CONNECTORS.

c. EQUIPMENT GROUND BUS: ADEQUATE FOR FEEDER AND BRANCH-CIRCUIT EQUIPMENT GROUNDING CONDUCTORS; BONDED TO BOX.

D. CONDUCTOR CONNECTORS: SUITABLE FOR USE WITH CONDUCTOR MATERIAL AND SIZES.

a. MATERIAL: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY.

b. TERMINATIONS SHALL ALLOW USE OF 75 DEG C RATED CONDUCTORS WITHOUT DERATING.

c. SIZE: LUGS SUITABLE FOR INDICATED CONDUCTOR SIZES, WITH ADDITIONAL GUTTER SPACE, IF REQUIRED, FOR LARGER CONDUCTORS.

d. MAIN AND NEUTRAL LUGS: MECHANICAL TYPE, WITH A LUG ON THE NEUTRAL BAR FOR EACH POLE IN THE PANELBOARD.

e. GROUND LUGS AND BUS-CONFIGURED TERMINATORS: MECHANICAL TYPE, WITH A LUG ON THE BAR FOR EACH POLE IN THE PANELBOARD.

f. FEED-THROUGH LUGS: MECHANICAL TYPE, SUITABLE FOR USE WITH CONDUCTOR MATERIAL. LOCATE AT OPPOSITE END OF BUS FROM INCOMING LUGS OR MAIN DEVICE.

g. SUBFEED (DOUBLE) LUGS: MECHANICAL TYPE SUITABLE FOR USE WITH CONDUCTOR MATERIAL. LOCATE AT SAME END OF BUS AS INCOMING LUGS OR MAIN DEVICE.

h. GUTTER-TAP LUGS: MECHANICAL TYPE SUITABLE FOR USE WITH CONDUCTOR MATERIAL AND WITH MATCHING INSULATING COVERS. LOCATE AT SAME END OF BUS AS INCOMING LUGS OR MAIN DEVICE.

E. FUTURE DEVICES: PANELBOARDS SHALL HAVE MOUNTING BRACKETS, BUS CONNECTIONS, FILLER PLATES, AND NECESSARY APPURTENANCES REQUIRED FOR FUTURE INSTALLATION OF DEVICES.

F. PANELBOARD SHORT-CIRCUIT CURRENT RATING: FULLY RATED TO INTERRUPT SYMMETRICAL SHORT-CIRCUIT CURRENT AVAILABLE AT TERMINALS. ASSEMBLY LISTED BY AN NRTL FOR 100 PERCENT INTERRUPTING CAPACITY.

G. SURGE SUPPRESSION: FACTORY INSTALLED AS AN INTEGRAL PART OF INDICATED PANELBOARDS, COMPLYING WITH UL 1449 SPD TYPE 1 AT SERVICE AND TYPE 2 FOR ADDITIONAL ELECTRICAL INSTALLATIONS. ALL INSTALLATIONS SHALL COMPLY WITH NEC 285 REQUIREMENTS.

a. PEAK SURGE CURRENT RATING: THE MINIMUM SINGLE-PULSE SURGE CURRENT WITHSTAND RATING PER PHASE SHALL NOT BE LESS THAN 100 KA. THE PEAK SURGE CURRENT RATING SHALL BE THE ARITHMETIC SUM OF THE RATINGS OF THE INDIVIDUAL MOVS IN A GIVEN MODE.

b. PROTECTION MODES AND UL 1449 VPR FOR GROUNDED WYE CIRCUITS WITH 480Y/277 V OR 208Y/120 V, THREE-PHASE, FOUR-WIRE CIRCUITS SHALL NOT EXCEED THE FOLLOWING:
- LINE TO NEUTRAL: 1200 V FOR 480Y/277 V, 700 V FOR 208Y/120 V.
- LINE TO GROUND: 1200 V FOR 480Y/277 V, 700 V FOR 208Y/120 V.
- NEUTRAL TO GROUND: 1200 V FOR 480Y/277 V, 700 V FOR 208Y/120 V.
- LINE TO LINE: 2000 V FOR 480Y/277 V, 1200 V FOR 208Y/120 V.

c. PROTECTION MODES AND UL 1449 VPR FOR 240/120-V, SINGLE-PHASE, THREE-WIRE CIRCUITS SHALL NOT EXCEED THE FOLLOWING:
- LINE TO NEUTRAL: 700 V.
- LINE TO GROUND: 700 V.
- NEUTRAL TO GROUND: 700 V.
- LINE TO LINE: 1200 V.

d. SCCR: EQUAL TO THE SCCR OF THE PANELBOARD IN WHICH INSTALLED

2. DISTRIBUTION PANELBOARDS. POWER PANELBOARDS, AS SPECIFIED IN THIS ARTICLE, FALL UNDER REQUIREMENTS OF "DISTRIBUTION PANELBOARDS" IN NEMA PB 1.

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING: EATON, SQUARE D, OR GE.

B. PANELBOARDS: NEMA PB 1, DISTRIBUTION TYPE.

C. DOORS: SECURED WITH VAULT-TYPE LATCH WITH TUMBLER LOCK; KEYED ALIKE.

D. MAINS: CIRCUIT BREAKER OR LUGS ONLY. REFER TO SINGLE LINE DRAWING.

E. BRANCH OVERCURRENT PROTECTIVE DEVICES: BOLT-ON CIRCUIT BREAKERS.

3. LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS PANELBOARDS, AS SPECIFIED IN THIS ARTICLE, COMPLY WITH REQUIREMENTS OF "LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS" IN NEMA PB 1.

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING: EATON, SQUARE D, OR GE.

B. PANELBOARDS: NEMA PB 1, LIGHTING AND APPLIANCE BRANCH-CIRCUIT TYPE.

C. MAINS: CIRCUIT BREAKER OR LUGS ONLY. REFER TO SINGLE LINE DRAWING.

D. BRANCH OVERCURRENT PROTECTIVE DEVICES: BOLT-ON CIRCUIT BREAKERS, REPLACEABLE WITHOUT DISTURBING ADJACENT UNITS.

E. DOORS: DOOR-IN-DOOR CONSTRUCTION WITH CONCEALED HINGES; SECURED WITH MULTIPOINT LATCH WITH TUMBLER LOCK; KEYED ALIKE. OUTER DOOR SHALL PERMIT FULL ACCESS TO THE PANEL INTERIOR. INNER DOOR SHALL PERMIT ACCESS TO BREAKER OPERATING HANDLES AND LABELING, BUT CURRENT CARRYING TERMINALS AND BUS SHALL REMAIN CONCEALED.

F. PANELS KNOWN AS LOADCENTERS ARE NOT ACCEPTABLE.

4. IDENTIFICATION

A. PANELBOARD LABEL: MANUFACTURER'S NAME AND TRADEMARK, VOLTAGE, AMPERAGE, NUMBER OF PHASES, AND NUMBER OF POLES SHALL BE LOCATED ON THE INTERIOR OF THE PANELBOARD DOOR.

B. BREAKER LABELS: FACEPLATE SHALL LIST CURRENT RATING, UL AND IEC CERTIFICATION STANDARDS, AND AIC RATING.

C. CIRCUIT DIRECTORY: DIRECTORY CARD INSIDE PANELBOARD DOOR, MOUNTED IN METAL FRAME WITH TRANSPARENT PROTECTIVE COVER.

a. CIRCUIT DIRECTORY SHALL IDENTIFY SPECIFIC PURPOSE WITH DETAIL SUFFICIENT TO DISTINGUISH IT FROM ALL OTHER CIRCUITS.

PART 3 - EXECUTION

1. INSTALLATION

A. COORDINATE LAYOUT AND INSTALLATION OF PANELBOARDS AND COMPONENTS WITH OTHER CONSTRUCTION THAT PENETRATES WALLS OR IS SUPPORTED BY THEM, INCLUDING ELECTRICAL AND OTHER TYPES OF EQUIPMENT, RACEWAYS, PIPING, ENCUMBRANCES TO WORKSPACE CLEARANCE REQUIREMENTS, AND ADJACENT SURFACES. MAINTAIN REQUIRED WORKSPACE CLEARANCES AND REQUIRED CLEARANCES FOR EQUIPMENT ACCESS DOORS AND PANELS.

B. COMPLY WITH NECA 1. INSTALL PANELBOARDS AND ACCESSORIES ACCORDING TO NECA 407 AND NEMA PB 1.1.

C. MOUNT TOP OF TRIM 90 INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.

D. MAINTAIN ALL CLEARANCES ABOVE, BELOW, AND IN FRONT OF PANEL AS REQUIRED BY NEC 110.

WIRING DEVICES

PART 1 - GENERAL

1. SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT.

PART 2 - PRODUCTS

1. GENERAL WIRING-DEVICE REQUIREMENTS

A. WIRING DEVICES, COMPONENTS, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

B. DEVICES THAT ARE MANUFACTURED FOR USE WITH MODULAR PLUG-IN CONNECTORS MAY BE SUBSTITUTED UNDER THE FOLLOWING CONDITIONS:

a. CONNECTORS SHALL COMPLY WITH UL 2459 AND SHALL BE MADE WITH STRANDING BUILDING WIRE.

b. DEVICES SHALL COMPLY WITH THE REQUIREMENTS IN THIS SECTION.

c. DEVICES FOR OWNER-FURNISHED EQUIPMENT: RECEPTACLES: MATCH PLUG CONFIGURATIONS. CORD AND PLUG SETS: MATCH EQUIPMENT REQUIREMENTS.

d. SOURCE LIMITATIONS: OBTAIN EACH TYPE OF WIRING DEVICE AND ASSOCIATED WALL PLATE FROM SINGLE SOURCE FROM SINGLE MANUFACTURER. ACCEPTABLE MANUFACTURERS ARE EATON, HUBBELL, PASS & SEYMOUR, AND LEVITON, UNLESS OTHERWISE NOTED.

2. STRAIGHT-BLADE RECEPTACLES

A. DUPLEX CONVENIENCE RECEPTACLES: 125 V, 20 A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, AND FS W-C-596.

B. ISOLATED-GROUND, DUPLEX CONVENIENCE RECEPTACLES: 125 V, 20 A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, AND FS W-C-596.

a. DESCRIPTION: STRAIGHT BLADE; EQUIPMENT GROUNDING CONTACTS SHALL BE CONNECTED ONLY TO THE GREEN GROUNDING SCREW TERMINAL OF THE DEVICE AND WITH INHERENT ELECTRICAL ISOLATION FROM MOUNTING STRAP. ISOLATION SHALL BE INTEGRAL TO RECEPTACLE CONSTRUCTION AND NOT DEPENDENT ON REMOVABLE PARTS.

3. USB CHARGER DEVICES

A. TAMPER-RESISTANT, USB CHARGER RECEPTACLES: 12 V DC, 2.0 A, USB DUAL TYPE A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, UL 1310, AND FS W-C-596.

a. DESCRIPTION: SINGLE-PIECE, RIVETLESS, NICKEL-PLATED, ALL-BRASS GROUNDING SYSTEM. NICKEL-PLATED, BRASS MOUNTING STRAP.

4. GFCI RECEPTACLES

A. DUPLEX RECEPTACLE, 125 V, 20 A, STRAIGHT BLADE, NON-FEED-THROUGH TYPE. COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, UL 943 CLASS A, AND FS W-C-596.

B. INCLUDE INDICATOR LIGHT THAT SHOWS WHEN THE GFCI HAS MALFUNCTIONED AND NO LONGER PROVIDES PROPER GFCI PROTECTION.

5. TWIST-LOCKING RECEPTACLES

A. TWIST-LOCK, SINGLE CONVENIENCE RECEPTACLES: 125 V, 20 A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION L5-20R, AND UL 498.

6. SPECIALTY AND CONTROLLED RECEPTACLES

A. REFER TO DRAWING FOR NEMA CONFIGURATION OF ALL SPECIALTY RECEPTACLES.

B. CONTROLLED RECEPTACLES SHALL BE SPLIT CONTROLLED (UNLESS OTHERWISE NOTED ON DRAWINGS.) ALL MARKINGS FOR CONTROL SHALL MEET NEC 406.3 AND BE UL498B LISTED. RATING SHALL BE 20A UNLESS OTHERWISE NOTED ON DRAWINGS.

7. PENDANT CORD-CONNECTOR DEVICES

A. DESCRIPTION:

a. MATCHING, LOCKING-TYPE PLUG AND RECEPTACLE BODY CONNECTOR.

b. NEMA WD 6 CONFIGURATIONS L5-20P AND L5-20R, HEAVY-DUTY GRADE, AND FS W-C-596.

c. BODY: NYLON, WITH SCREW-OPEN, CABLE-GRIPPING JAWS AND PROVISION FOR ATTACHING EXTERNAL CABLE GRIP.

d. EXTERNAL CABLE GRIP: WOVEN WIRE-MESH TYPE MADE OF HIGH-STRENGTH, GALVANIZED-STEEL WIRE STRAND, MATCHED TO CABLE DIAMETER, AND WITH ATTACHMENT PROVISION DESIGNED FOR CORRESPONDING CONNECTOR.

8. CORD AND PLUG SETS

A. DESCRIPTION:

a. MATCH VOLTAGE AND CURRENT RATINGS AND NUMBER OF CONDUCTORS TO REQUIREMENTS OF EQUIPMENT BEING CONNECTED.

b. CORD: RUBBER-INSULATED, STRANDED-COPPER CONDUCTORS, WITH TYPE SOW-A JACKET; WITH GREEN-INSULATED GROUNDING CONDUCTOR AND AMPACITY OF AT LEAST 130 PERCENT OF THE EQUIPMENT RATING.

c. PLUG: NYLON BODY AND INTEGRAL CABLE-CLAMPING JAWS. MATCH CORD AND RECEPTACLE TYPE FOR CONNECTION.

9. TOGGLE SWITCHES

A. COMPLY WITH NEMA WD 1, UL 20, AND FS W-S-896.

B. SWITCHES, 120/277 V, 20 A:

C. PILOT-LIGHT SWITCHES: 120/277 V, 20 A.

a. DESCRIPTION: SINGLE POLE, WITH LED-LIGHTED HANDLE, ILLUMINATED WHEN SWITCH IS OFF.

b. KEY-OPERATED SWITCHES: 120/277 V, 20 A.

c. `DESCRIPTION: SINGLE POLE, WITH FACTORY-SUPPLIED KEY IN LIEU OF SWITCH HANDLE.

10. WALL SWITCH SENSOR LIGHT SWITCH, DUAL TECHNOLOGY

A. DESCRIPTION: SWITCHBOX-MOUNTED, COMBINATION LIGHTING-CONTROL SENSOR AND CONVENTIONAL SWITCH LIGHTING-CONTROL UNIT USING DUAL TECHNOLOGY. ADJUSTABLE TIME DELAY OF 20 MINUTES. ABLE TO BE LOCKED TO AUTOMATIC-ON OR MANUAL-ON MODE. COMPLY WITH NEMA WD 1, UL 20, AND FS W-S-896.

11. WALL-BOX DIMMERS

A. DESCRIPTION: MODULAR, FULL-WAVE, SOLID-STATE DIMMER SWITCH WITH INTEGRAL, QUIET ON-OFF SWITCHES, WITH AUDIBLE FREQUENCY AND EMI/RFI SUPPRESSION FILTERS.

B. CONTROL: CONTINUOUSLY ADJUSTABLE SLIDER WITH SINGLE-POLE OR THREE-WAY SWITCHING.

C. STANDARDS: COMPLY WITH UL 1472.

D. INCANDESCENT LAMP DIMMERS: 120 V; CONTROL SHALL FOLLOW SQUARE-LAW DIMMING CURVE. ON-OFF SWITCH POSITIONS SHALL BYPASS DIMMER MODULE.

E. LED LAMP DIMMER SWITCHES: MODULAR; COMPATIBLE WITH LED LAMPS; TRIM POTENTIOMETER TO ADJUST LOW-END DIMMING; CAPABLE OF CONSISTENT DIMMING WITH LOW END NOT GREATER THAN 20 PERCENT OF FULL BRIGHTNESS.

12. WALL PLATES

A. SINGLE AND COMBINATION TYPES SHALL MATCH CORRESPONDING WIRING DEVICES.

B. PLATE-SECURING SCREWS: METAL WITH HEAD COLOR TO MATCH PLATE FINISH.

C. MATERIAL FOR FINISHED SPACES: SMOOTH, HIGH-IMPACT THERMOPLASTIC.

D. MATERIAL FOR UNFINISHED SPACES: SMOOTH, HIGH-IMPACT THERMOPLASTIC.

E. MATERIAL FOR DAMP LOCATIONS: THERMOPLASTIC WITH SPRING-LOADED LIFT COVER, AND LISTED AND LABELED FOR USE IN WET AND DAMP LOCATIONS.

F. WET-LOCATION, WEATHERPROOF COVER PLATES: NEMA 250, COMPLYING WITH TYPE 3R, WEATHER-RESISTANT THERMOPLASTIC WITH LOCKABLE COVER.

13. FLOOR SERVICE FITTINGS

A. TYPE: MODULAR, DUAL-SERVICE UNITS SUITABLE FOR WIRING METHOD USED. TYPE AS INDICATED ON DRAWINGS.

B. COMPARTMENTS: BARRIER SEPARATES POWER FROM VOICE AND DATA COMMUNICATION CABLING.

C. SERVICE PLATE: AS INDICATED BY ARCHITECT WITH SATIN FINISH.

D. POWER RECEPTACLE: NEMA WD 6 CONFIGURATION 5-20R, GRAY FINISH, UNLESS OTHERWISE INDICATED.

E. DATA COMMUNICATION OUTLET: AS DIRECTED BY THE OWNER.

14. POKE-THROUGH ASSEMBLIES

A. DESCRIPTION:

a. FACTORY-FABRICATED AND -WIRED ASSEMBLY OF BELOW-FLOOR JUNCTION BOX WITH MULTICHANNELED, THROUGH-FLOOR RACEWAY/FIRESTOP UNIT AND DETACHABLE MATCHING FLOOR SERVICE-OUTLET ASSEMBLY.

b. COMPLY WITH UL 514 SCRUB WATER EXCLUSION REQUIREMENTS.

c. SERVICE-OUTLET ASSEMBLY: TYPE AS INDICATED ON DRAWINGS.

d. SIZE: SELECTED TO FIT NOMINAL CORED HOLES IN FLOOR AND MATCHED TO FLOOR THICKNESS.

e. FIRE RATING: UNIT IS LISTED AND LABELED FOR FIRE RATING OF FLOOR-CEILING ASSEMBLY.

f. CLOSURE PLUG: ARRANGED TO CLOSE UNUSED CORED OPENINGS AND REESTABLISH FIRE RATING OF FLOOR.

15. FINISHES

A. DEVICE COLOR:

a. WIRING DEVICES CONNECTED TO NORMAL POWER SYSTEM: AS SELECTED BY ARCHITECT UNLESS OTHERWISE INDICATED OR REQUIRED BY NFPA 70 OR DEVICE LISTING.

b. WIRING DEVICES CONNECTED TO EMERGENCY POWER SYSTEM: RED

c. ISOLATED-GROUND RECEPTACLES: AS SPECIFIED ABOVE, WITH ORANGE TRIANGLE ON FACE.

B. WALL PLATE COLOR: FOR PLASTIC COVERS, MATCH DEVICE COLOR.

PART 3 - EXECUTION

1. INSTALLATION

A. COMPLY WITH NECA 1, INCLUDING MOUNTING HEIGHTS LISTED IN THAT STANDARD, UNLESS OTHERWISE INDICATED.

B. COORDINATION WITH OTHER TRADES:

a. PROTECT INSTALLED DEVICES AND THEIR BOXES. DO NOT PLACE WALL FINISH MATERIALS OVER DEVICE BOXES AND DO NOT CUT HOLES FOR BOXES WITH ROUTERS THAT ARE GUIDED BY RIDING AGAINST OUTSIDE OF BOXES.

b. KEEP OUTLET BOXES FREE OF PLASTER, DRYWALL JOINT COMPOUND, MORTAR, CEMENT, CONCRETE, DUST, PAINT, AND OTHER MATERIAL THAT MAY CONTAMINATE THE RACEWAY SYSTEM, CONDUCTORS, AND CABLES.

c. INSTALL DEVICE BOXES IN BRICK OR BLOCK WALLS SO THAT THE COVER PLATE DOES NOT CROSS A JOINT UNLESS THE JOINT IS TROWELED FLUSH WITH THE FACE OF THE WALL.

d. INSTALL WIRING DEVICES AFTER ALL WALL PREPARATION, INCLUDING PAINTING, IS COMPLETE.

C. CONDUCTORS:

a. DO NOT STRIP INSULATION FROM CONDUCTORS UNTIL RIGHT BEFORE THEY ARE SPLICED OR TERMINATED ON DEVICES.

b. STRIP INSULATION EVENLY AROUND THE CONDUCTOR USING TOOLS DESIGNED FOR THE PURPOSE. AVOID SCORING OR NICKING OF SOLID WIRE OR CUTTING STRANDS FROM STRANDED WIRE.

c. THE LENGTH OF FREE CONDUCTORS AT OUTLETS FOR DEVICES SHALL MEET PROVISIONS OF NFPA 70, ARTICLE 300, WITHOUT PIGTAILS.

D. EXISTING CONDUCTORS:

a. CUT BACK AND PIGTAIL, OR REPLACE ALL DAMAGED CONDUCTORS.

b. STRAIGHTEN CONDUCTORS THAT REMAIN AND REMOVE CORROSION AND FOREIGN MATTER.

c. PIGTAILING EXISTING CONDUCTORS IS PERMITTED, PROVIDED THE OUTLET BOX IS LARGE ENOUGH.

E. DEVICE INSTALLATION:

a. REPLACE DEVICES THAT HAVE BEEN IN TEMPORARY USE DURING CONSTRUCTION AND THAT WERE INSTALLED BEFORE BUILDING FINISHING OPERATIONS WERE COMPLETE.

b. KEEP EACH WIRING DEVICE IN ITS PACKAGE OR OTHERWISE PROTECTED UNTIL IT IS TIME TO CONNECT CONDUCTORS.

c. DO NOT REMOVE SURFACE PROTECTION, SUCH AS PLASTIC FILM AND SMUDGE COVERS, UNTIL THE LAST POSSIBLE MOMENT.

d. CONNECT DEVICES TO BRANCH CIRCUITS USING PIGTAILS THAT ARE NOT LESS THAN 6 INCHES (152 MM) IN LENGTH.

e. WHEN THERE IS A CHOICE, USE SIDE WIRING WITH BINDING-HEAD SCREW TERMINALS. WRAP SOLID CONDUCTOR TIGHTLY CLOCKWISE, TWO-THIRDS TO THREE-FOURTHS OF THE WAY AROUND TERMINAL SCREW.

f. USE A TORQUE SCREWDRIVER WHEN A TORQUE IS RECOMMENDED OR REQUIRED BY MANUFACTURER.

g. WHEN CONDUCTORS LARGER THAN NO. 12 AWG ARE INSTALLED ON 15- OR 20-A CIRCUITS, SPLICE NO. 12 AWG PIGTAILS FOR DEVICE CONNECTIONS.

h. TIGHTEN UNUSED TERMINAL SCREWS ON THE DEVICE.

i. WHEN MOUNTING INTO METAL BOXES, REMOVE THE FIBER OR PLASTIC WASHERS USED TO HOLD DEVICE-MOUNTING SCREWS IN YOKES, ALLOWING METAL-TO-METAL CONTACT.

F. RECEPTACLE ORIENTATION:

a. INSTALL GROUND PIN OF VERTICALLY MOUNTED RECEPTACLES UP, AND ON HORIZONTALLY MOUNTED RECEPTACLES TO THE RIGHT.

G. ALL RECEPTACLES AND LIGHT SWITCHES IN PLENUM SPACES OR ROOMS SHALL BE IN A METAL ENCLOSURE PER NEC 300.22 (C)(3).

H. DEVICE PLATES: DO NOT USE OVERSIZED OR EXTRA-DEEP PLATES. REPAIR WALL FINISHES AND REMOUNT OUTLET BOXES WHEN STANDARD DEVICE PLATES DO NOT FIT FLUSH OR DO NOT COVER ROUGH WALL OPENING.

I. ARRANGEMENT OF DEVICES: UNLESS OTHERWISE INDICATED, MOUNT FLUSH, WITH LONG DIMENSION VERTICAL AND WITH GROUNDING TERMINAL OF RECEPTACLES ON TOP. GROUP ADJACENT SWITCHES UNDER SINGLE, MULTIGANG WALL PLATES.

J. ADJUST LOCATIONS OF FLOOR SERVICE OUTLETS AND SERVICE POLES TO SUIT ARRANGEMENT OF PARTITIONS AND FURNISHINGS.

2. IDENTIFICATION

A. IDENTIFY EACH RECEPTACLE WITH PANELBOARD IDENTIFICATION AND CIRCUIT NUMBER. USE HOT, STAMPED, OR ENGRAVED MACHINE PRINTING WITH BLACK-FILLED LETTERING ON FACE OF PLATE, AND DURABLE WIRE MARKERS OR TAGS INSIDE OUTLET BOXES.

FUSES

PART 1 - GENERAL

1. SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT. INCLUDE CONSTRUCTION DETAILS, MATERIAL DESCRIPTIONS, DIMENSIONS OF INDIVIDUAL COMPONENTS AND PROFILES, AND FINISHES FOR SPARE-FUSE CABINETS.

2. MAINTENANCE MATERIAL SUBMITTALS

A. FURNISH EXTRA MATERIALS THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.

a. FUSES: EQUAL TO 10 PERCENT OF QUANTITY INSTALLED FOR EACH SIZE AND TYPE, BUT NO FEWER THAN THREE OF EACH SIZE AND TYPE.

PART 2 - PRODUCTS

1. MANUFACTURERS

A. SOURCE LIMITATIONS: OBTAIN FUSES, FOR USE WITHIN A SPECIFIC PRODUCT OR CIRCUIT, FROM SINGLE SOURCE FROM SINGLE MANUFACTURER.

2. CARTRIDGE FUSES

A. CHARACTERISTICS: NEMA FU 1, CURRENT-LIMITING, NONRENEWABLE CARTRIDGE FUSES WITH VOLTAGE RATINGS CONSISTENT WITH CIRCUIT VOLTAGES.

B. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

C. COMPLY WITH NEMA FU 1 FOR CARTRIDGE FUSES.

D. COORDINATE FUSE RATINGS WITH UTILIZATION EQUIPMENT NAMEPLATE LIMITATIONS OF MAXIMUM FUSE SIZE AND WITH SYSTEM SHORT-CIRCUIT CURRENT LEVELS.

3. SPARE-FUSE CABINET

A. CHARACTERISTICS: WALL-MOUNTED STEEL UNIT WITH FULL-LENGTH, RECESSED PIANO-HINGED DOOR AND KEY-CODED CAM LOCK AND PULL.

a. SIZE: ADEQUATE FOR STORAGE OF SPARE FUSES SPECIFIED WITH 15 PERCENT SPARE CAPACITY MINIMUM.

b. FINISH: GRAY, BAKED ENAMEL.

c. IDENTIFICATION: "SPARE FUSES" IN 1-1/2-INCH- (38-MM-) HIGH LETTERS ON EXTERIOR OF DOOR.

d. FUSE PULLERS: FOR EACH SIZE OF FUSE, WHERE APPLICABLE AND AVAILABLE, FROM FUSE MANUFACTURER.

PART 3 - EXECUTION

1. FUSE APPLICATIONS

A. CARTRIDGE FUSES:

a. SERVICE ENTRANCE: CLASS L, FAST ACTING

b. FEEDERS: CLASS RK1, FAST ACTING

c. MOTOR BRANCH CIRCUITS: CLASS RK1, TIME DELAY.

d. LARGE MOTOR BRANCH (601-4000 A): CLASS L, TIME DELAY.

e. OTHER BRANCH CIRCUITS: CLASS RK1, TIME DELAY

f. ELEVATOR POWER MODULES: CLASS J

2. INSTALLATION

A. INSTALL FUSES IN FUSIBLE DEVICES. ARRANGE FUSES SO RATING INFORMATION IS READABLE WITHOUT REMOVING FUSE.

B. INSTALL SPARE-FUSE CABINET(S) IN LOCATION SHOWN ON THE DRAWINGS OR AS INDICATED IN THE FIELD BY OWNER.

ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1. SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE OF ENCLOSED SWITCH, CIRCUIT BREAKER, ACCESSORY, AND COMPONENT INDICATED. INCLUDE NAMEPLATE RATINGS, DIMENSIONED ELEVATIONS, SECTIONS, WEIGHTS, AND MANUFACTURERS' TECHNICAL DATA ON FEATURES, PERFORMANCE, ELECTRICAL CHARACTERISTICS, RATINGS, ACCESSORIES, AND FINISHES.

2. MAINTENANCE MATERIAL SUBMITTALS

A. FURNISH EXTRA MATERIALS THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS.

a. FUSES: EQUAL TO 10 PERCENT OF QUANTITY INSTALLED FOR EACH SIZE AND TYPE, BUT NO FEWER THAN THREE OF EACH SIZE AND TYPE.

PART 2 - PRODUCTS

1. GENERAL REQUIREMENTS

A. SOURCE LIMITATIONS: OBTAIN ENCLOSED SWITCHES AND CIRCUIT BREAKERS, OVERCURRENT PROTECTIVE DEVICES, COMPONENTS, AND ACCESSORIES, WITHIN SAME PRODUCT CATEGORY, FROM SINGLE MANUFACTURER.

B. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.

C. ACCEPTABLE MANUFACTURERS ARE EATON, SIEMENS, SQUARE D, AND GE.

2. FUSIBLE SWITCHES

A. FUSIBLE SWITCH, 800 A AND SMALLER: NEMA KS 1, TYPE HD, WITH CLIPS OR BOLT PADS TO ACCOMMODATE SPECIFIED FUSES, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT TWO PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.

B. ACCESSORIES:

a. EQUIPMENT GROUND KIT: INTERNALLY MOUNTED AND LABELED FOR COPPER AND ALUMINUM GROUND CONDUCTORS.

b. NEUTRAL KIT: INTERNALLY MOUNTED; INSULATED, CAPABLE OF BEING GROUNDED, AND BONDED; AND LABELED FOR COPPER AND ALUMINUM NEUTRAL CONDUCTORS.

c. AUXILIARY CONTACT KIT: AUXILIARY SET OF CONTACTS ARRANGED TO OPEN BEFORE SWITCH BLADES OPEN. PROVIDE WHEN USED AS REMOTE DISCONNECT FOR VARIABLE FREQUENCY MOTOR CONTROLLER CIRCUITS.

d. SERVICE-RATED SWITCHES: LABELED FOR USE AS SERVICE EQUIPMENT.

3. NONFUSIBLE SWITCHES

A. NONFUSIBLE SWITCH, 800 A AND SMALLER: NEMA KS 1, TYPE HD, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT TWO PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.

B. ACCESSORIES:

a. EQUIPMENT GROUND KIT: INTERNALLY MOUNTED AND LABELED FOR COPPER AND ALUMINUM GROUND CONDUCTORS.

b. NEUTRAL KIT: INTERNALLY MOUNTED; INSULATED, CAPABLE OF BEING GROUNDED, AND BONDED; AND LABELED FOR COPPER AND ALUMINUM NEUTRAL CONDUCTORS.

c. AUXILIARY CONTACT KIT: AUXILIARY SET OF CONTACTS ARRANGED TO OPEN BEFORE SWITCH BLADES OPEN. PROVIDE WHEN USED AS REMOTE DISCONNECT FOR VARIABLE FREQUENCY MOTOR CONTROLLER CIRCUITS.

d. SERVICE-RATED SWITCHES: LABELED FOR USE AS SERVICE EQUIPMENT.

4. MOLDED-CASE CIRCUIT BREAKERS

A. MOLDED-CASE CIRCUIT BREAKER: NEMA AB 1, WITH INTERRUPTING CAPACITY TO MEET AVAILABLE FAULT CURRENTS.

a. THERMAL-MAGNETIC CIRCUIT BREAKERS: INVERSE TIME-CURRENT ELEMENT FOR LOW-LEVEL OVERLOADS AND INSTANTANEOUS MAGNETIC TRIP ELEMENT FOR SHORT CIRCUITS. ADJUSTABLE MAGNETIC TRIP SETTING FOR CIRCUIT-BREAKER FRAME SIZES 250 A AND LARGER.

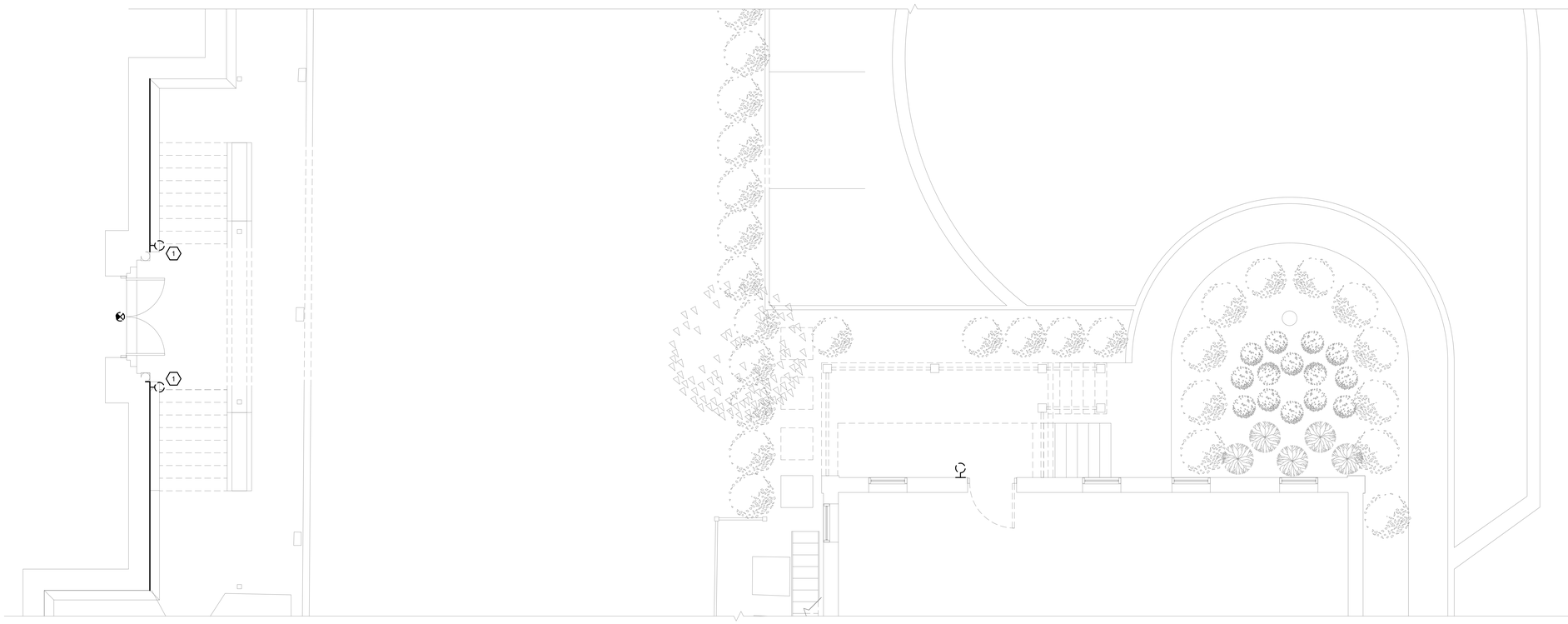
b. ADJUSTABLE INSTANTANEOUS-TRIP CIRCUIT BREAKERS: MAGNETIC TRIP ELEMENT WITH FRONT-MOUNTED, FIELD-ADJUSTABLE TRIP SETTING.

c. ELECTRONIC TRIP-UNIT CIRCUIT BREAKERS: RMS SENSING; FIELD-REPLACEABLE RATING PLUG; WITH THE FOLLOWING FIELD-ADJUSTABLE SETTINGS:
- INSTANTANEOUS TRIP.
- LONG- AND SHORT-TIME PICKUP LEVELS.
- LONG- AND SHORT-TIME TIME ADJUSTMENTS.
- GROUND-FAULT PICKUP LEVEL, TIME DELAY, AND I2T RESPONSE.

B. MOLDED-CASE CIRCUIT-BREAKER FEATURES AND ACCESSORIES:

a. STANDARD FRAME SIZES, TRIP RATINGS, AND NUMBER OF POLES.

b. LUGS: MECHANICAL STYLE SUITABLE FOR NUMBER, SIZE, TRIP RATINGS, AND C



1 / E101 FIRST FLOOR ELECTRICAL DEMOLITION PLAN

1/4" = 1'-0"

ELECTRICAL DEMOLITION GENERAL NOTES:

1. ELECTRICAL DISTRIBUTION EQUIPMENT IS EXISTING TO REMAIN, UNLESS OTHERWISE NOTED.
2. FIXTURES AND DEVICES NOTED WITH "EX" ARE EXISTING TO REMAIN. MAINTAIN EXISTING CIRCUITRY UNLESS OTHERWISE NOTED ON NEW WORK PLANS.
3. ALL HOLES IN WALLS, COLUMN ENCLOSURES, CEILINGS AND FLOORS FROM CONDUIT PENETRATIONS, JUNCTION BOXES, OR WIRING DEVICES SHALL BE PATCHED AND PAINTED PER THE ARCHITECT. RATED PARTITIONS SHALL BE FIREPROOFED TO MAINTAIN THE EXISTING FIRE RATING.
4. FIXTURES AND DEVICES ON WALLS THAT ARE SCHEDULED FOR DEMOLITION, WHETHER REPRESENTED ON THIS PLAN OR NOT, SHALL BE DISCONNECTED AND REMOVED. INTERCEPT AND EXTEND CIRCUITS AS REQUIRED TO MAINTAIN CONTINUITY OF POWER TO EXISTING DEVICES.
5. FIXTURES AND DEVICES ON WALLS THAT ARE SCHEDULED AS EXISTING TO REMAIN MAY NOT BE REPRESENTED ON THIS PLAN. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY AND CONSULT WITH ARCHITECT AND OWNER TO DETERMINE IF DEVICES NEED TO BE REMOVED.
6. LIGHTING FIXTURES SCHEDULED FOR DEMOLITION SHALL BE DISCONNECTED AND SALVAGED FOR EVALUATION BY OWNER. OWNER SHALL HAVE FIRST RIGHT TO ALL FIXTURES BEING DEMOLISHED. ELECTRICAL CONTRACTOR SHALL DISCARD ALL FIXTURES NOT SALVAGED BY OWNER.

ELECTRICAL DEMOLITION KEY NOTES: (#)

1. DISCONNECT, REMOVE, AND SALVAGE LIGHT FIXTURE FOR REINSTALLATION TO NEW LOCATION. REFER TO NEW WORK PLAN FOR MORE INFORMATION.

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NEW WALKWAY CONNECTION STRUCTURE

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JANUARY 31, 2022

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2801.02

FIRST FLOOR ELECTRICAL DEMOLITION PLAN

NOT FOR CONSTRUCTION

E101

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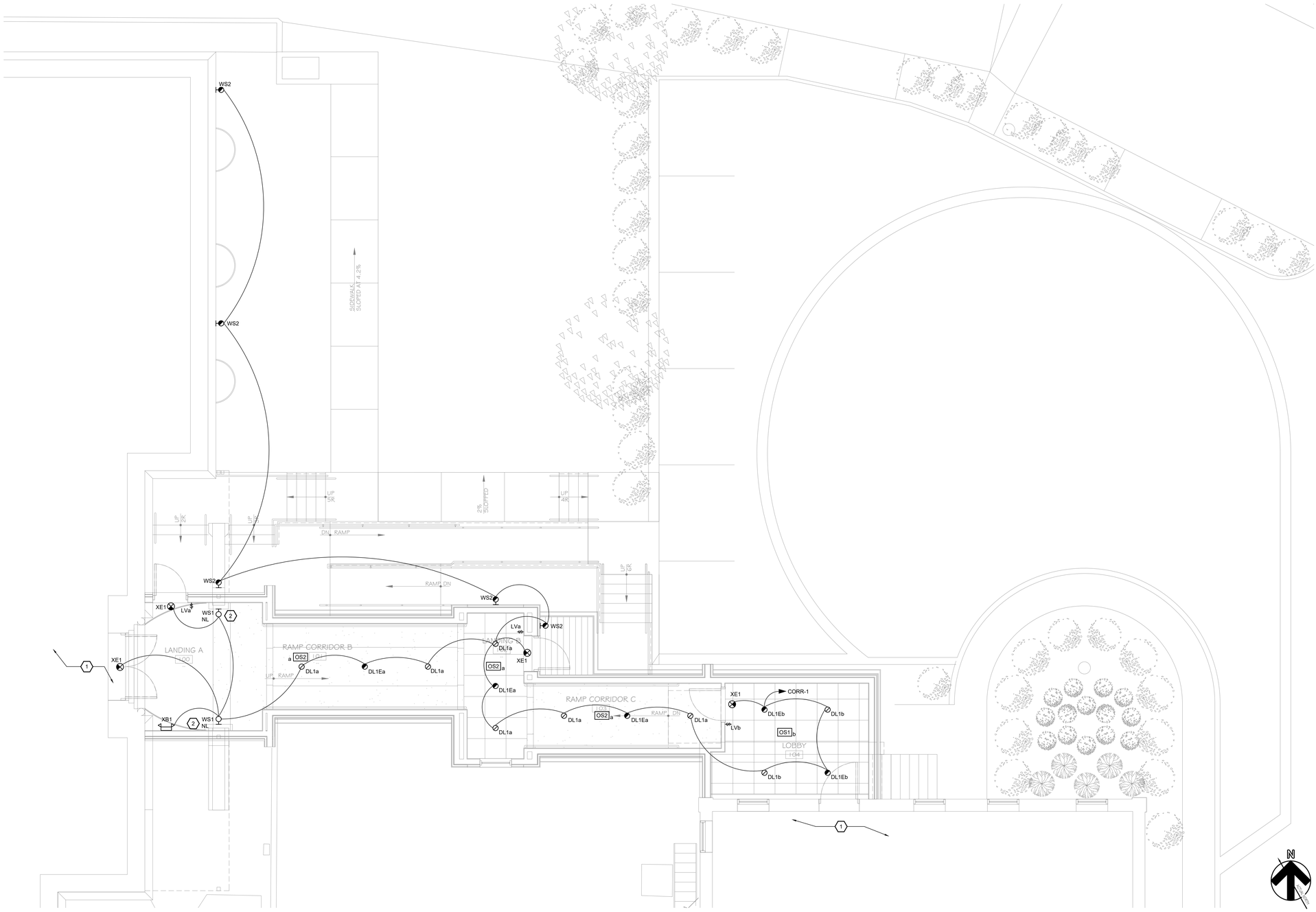

1 E201 FIRST FLOOR LIGHTING PLAN

1/4" = 1'-0"

LIGHTING GENERAL NOTES:

1. FIRE STOP ALL FIRE RATED FLOORS, CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL DRAWINGS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE. EXPOSED CONDUIT SHALL BE PAINTED PER THE ARCHITECTURAL DRAWINGS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND EXACT LIGHTING FIXTURE LOCATIONS AND DIMENSIONAL INFORMATION.
5. EXIT SIGNS AND BATTERY PACKS SHALL BE CIRCUITED TO AN UNSWITCHED HOT LEG OF THE CIRCUIT NOTED AHEAD OF LOCAL CONTROLS.
6. OCCUPANCY / VACANCY SENSORS HAVE BEEN LOCATED PER THE RECOMMENDED SPACING OF THE BASIS OF DESIGN PRODUCTS. THE EXACT LOCATIONS AND QUANTITY OF SENSORS SHALL BE VERIFIED BY THE MANUFACTURER FOR PRODUCTS SUBMITTED AS EQUALS.
7. CONTROL ZONE RELAY POWER PACKS ARE NOT SHOWN ON THESE DRAWINGS. PROVIDE COMPATIBLE POWER PACKS TO MEET DESIGN INTENT SHOWN ON DRAWINGS.

LIGHTING KEY NOTES: (#)

1. THIS AREA IS OUT OF SCOPE. ALL FIXTURES AND DEVICES ARE EXISTING TO REMAIN.
2. INSTALL FIXTURE SALVAGED DURING DEMOLITION. FIXTURE SHALL BE CLEANED AND RELAMPED UNDER THIS SCOPE. CONNECT FIXTURE TO CIRCUIT AND CONTROLS SHOWN ON PLAN.

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JANUARY 31, 2022

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2801.02

FIRST FLOOR LIGHTING PLAN

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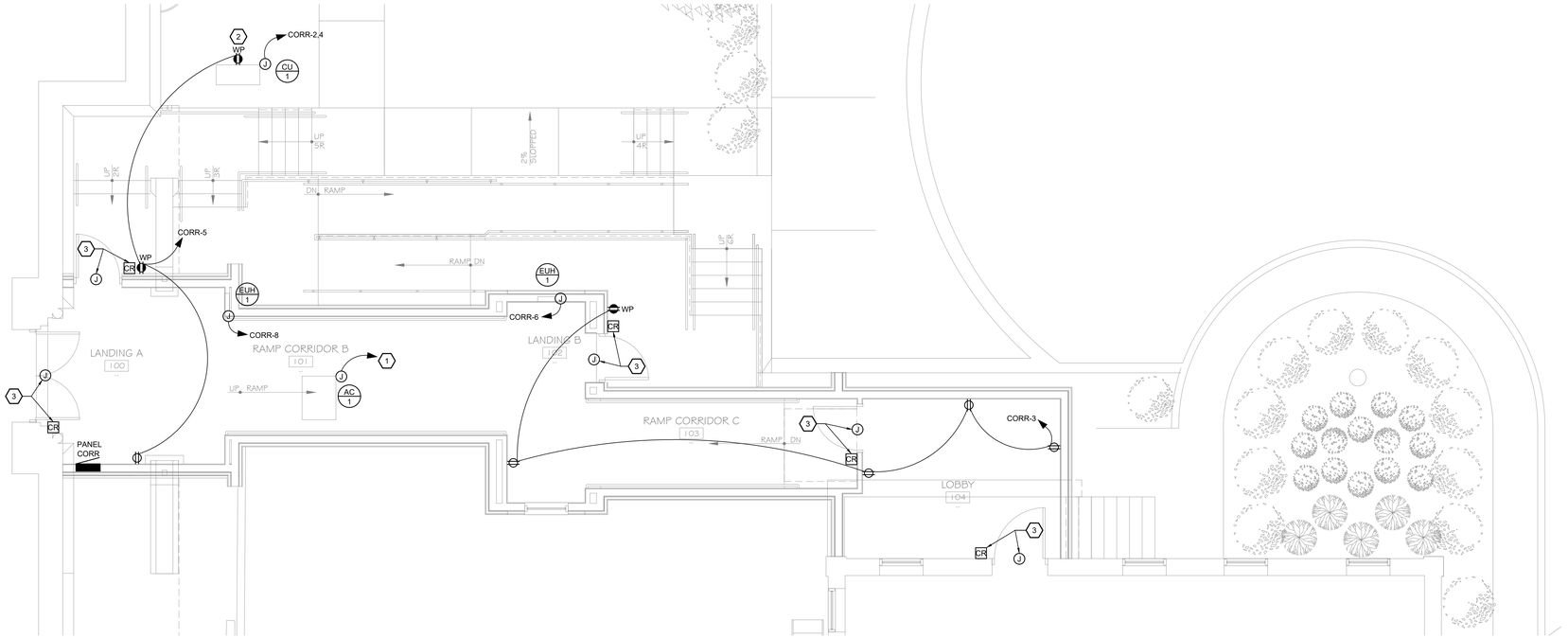
POWER GENERAL NOTES:

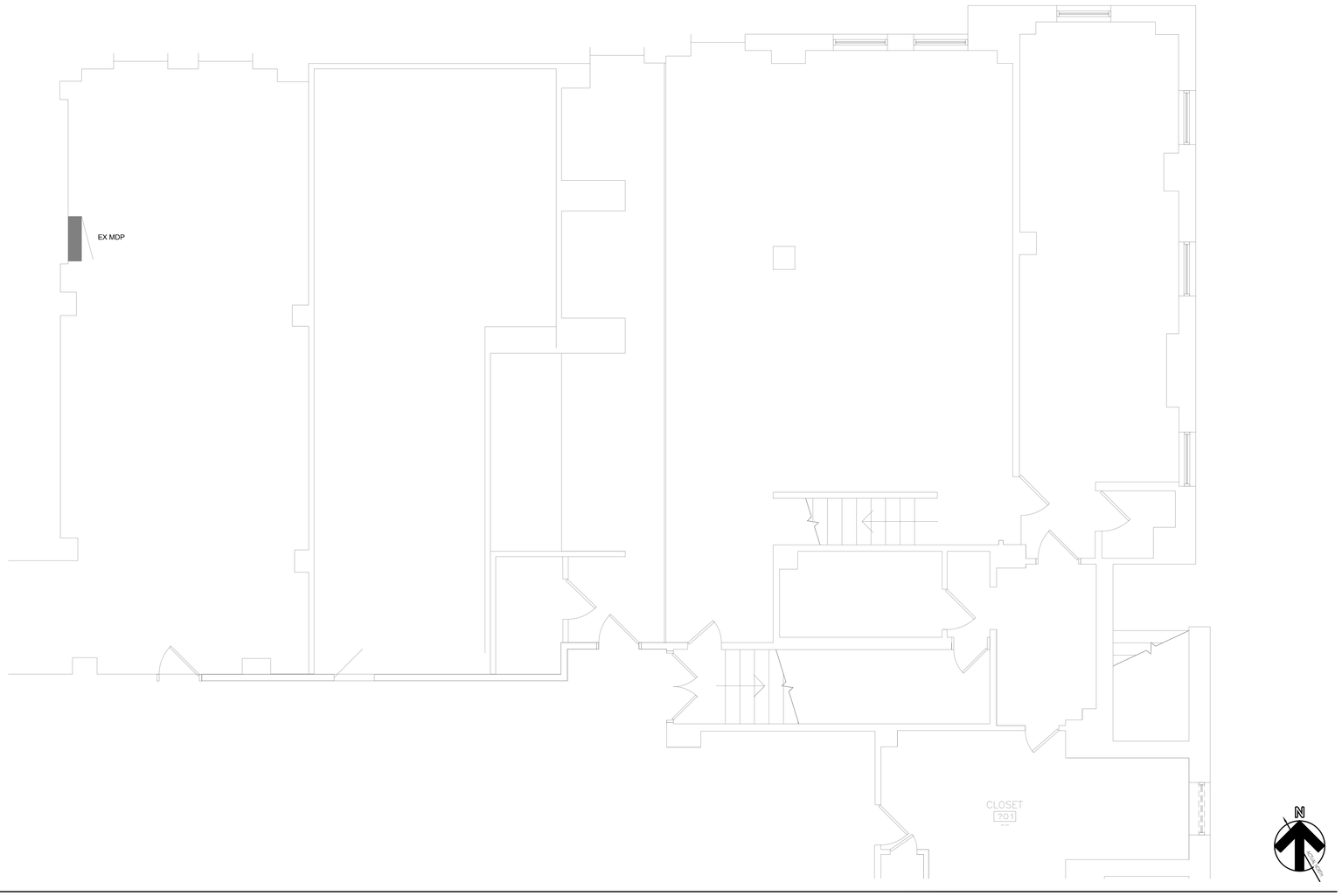
1. FIRE STOP ALL FIRE RATED FLOORS, CEILINGS, AND WALLS AS REQUIRED BY CODE. PENETRATIONS INTO OR THROUGH FIRE RESISTANCE RATED WALLS SHALL COMPLY WITH IBC CHAPTER 7.
2. PROVIDE EXPANSION FITTINGS AS REQUIRED AT ALL EXPANSION JOINTS. COORDINATE WITH ARCHITECTURAL DRAWINGS.
3. WHERE EXPOSED, BRANCH CIRCUITS SHALL BE RUN IN EMT CONDUIT ROUTED PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE. WHERE CONCEALED WITHIN WALLS OR ABOVE CEILING, MC CABLE IS PERMISSIBLE. EXPOSED CONDUIT SHALL BE PAINTED PER THE ARCHITECTURAL DRAWINGS.
4. COORDINATE EXACT LOCATIONS OF MECHANICAL EQUIPMENT WITH DIVISION 23. UNLESS NOTED OTHERWISE, MECHANICAL EQUIPMENT DISCONNECTS AND VARIABLE FREQUENCY DRIVES SHALL BE FURNISHED BY DIVISION 23, INSTALLED AND WIRED BY EC. THESE DISCONNECTS HAVE NOT BEEN SHOWN ON THIS PLAN.
5. EC SHALL NOT HAVE MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A CONDUIT WITHOUT DERATING AMPACITIES PER THE NEC.
6. WHERE DEVICES ARE INCLUDED AND DIMENSIONED ON THE ARCHITECTURAL DRAWINGS, THOSE LOCATIONS SHALL GOVERN. WHERE DEVICES ARE OMITTED FROM THE ARCHITECTURAL DRAWINGS, INSTALL IN ACCORDANCE WITH THIS PLAN AND THE DEFAULT LOCATIONS IN THE ELECTRICAL SPECIFICATIONS. ALL DEVICES SHALL BE INSTALLED PER ADA. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO VERIFY EXACT DEVICE LOCATIONS. WHERE DEVICES ARE INSTALLED IN THE FIELD AND DIFFER FROM DESIGN DOCUMENT DIMENSIONS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT DEVICE LOCATIONS TO MATCH CONSTRUCTION DOCUMENTS, AT NO COST TO THE OWNER.

POWER KEY NOTES: (#)

1. INDOOR UNIT SHALL BE POWERED FROM ASSOCIATED OUTDOOR UNIT. PROVIDE INTERCONNECTING WIRING PER EQUIPMENT SPECIFICATIONS.
2. RECEPTACLE SHALL BE MOUNTED TO EQUIPMENT. WHERE THIS IS NOT POSSIBLE, PROVIDE UNISTRUT SUPPORT.
3. CONFIRM DOOR HARDWARE REQUIRED WITH OWNER'S SECURITY CONSULTANT. PROVIDE JUNCTION BOX ABOVE DOOR FOR WIRING FROM ACCESS CONTROL PANEL. PROVIDE ALL BACK BOXES AND CONDUITS REQUIRED TO COVER CARD READERS, ELECTRIC STRIKES, REQUEST TO EXIT, MAGNETIC LOCKS, ETC. AS REQUIRED BY DOOR HARDWARE. WHERE REQUIRED, PROVIDE A 120V CIRCUIT TO THE JUNCTION BOX ABOVE THE DOOR. THE CIRCUIT SHALL BE TAKEN FROM 208/120V PANEL SERVING THIS SPACE, AND MULTIPLE DOORS MAY BE CIRCUITED TOGETHER.



1 / E301 FIRST FLOOR POWER PLAN
1/4" = 1'-0"



2 / E301 BASEMENT POWER PLAN
1/4" = 1'-0"

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FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

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BASEMENT & FIRST FLOOR POWER PLANS

NOT FOR CONSTRUCTION

E301

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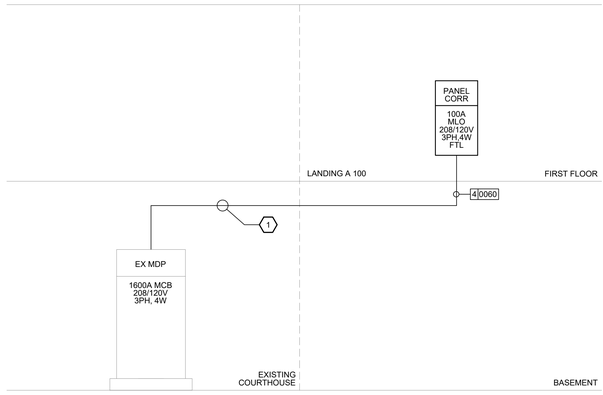


POWER RISER GENERAL NOTES:

1. THE RISER DIAGRAM IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO SHOW SYSTEM CONNECTIVITY AND FEEDER SIZES. REFER TO POWER PLANS FOR EQUIPMENT LAYOUTS AND LOCATIONS. ELECTRICAL CONTRACTOR SHALL VERIFY THAT THE SUBMITTED EQUIPMENT DIMENSIONS FIT WITHIN THE CORRESPONDING ELECTRICAL SPACE(S). ALL EQUIPMENT CLEARANCES AND MOUNTING HEIGHTS REQUIRED BY THE NEC SHALL BE MAINTAINED.
2. THE FULL EXTENT OF THE EXISTING ELECTRICAL DISTRIBUTION SYSTEM MAY NOT BE REPRESENTED ON THIS RISER DIAGRAM. ONLY PORTIONS THAT SHALL BE MODIFIED OR PROVIDED NEW UNDER THIS SCOPE HAVE BEEN INCLUDED.
3. PROVIDE PULL BOXES WHERE REQUIRED PER NEC FOR CONDUIT BENDS.
4. THE BASIS OF DESIGN MATERIAL FOR ALL EQUIPMENT BUSES IS COPPER.

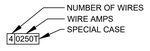
POWER RISER KEY NOTES: (#)

1. ROUTE FEEDER FROM EXISTING MDP TO PANEL CORR VIA THE EXISTING UTILITY TUNNEL LOCATED IN THE BASEMENT. UTILITY TUNNEL STARTS NEAR THE LOCATION OF THE MDP AND CONTINUES TO THE DOOR BETWEEN THE COURTHOUSE AND THE CONNECTOR. COORDINATE EXACT ROUTING IN FIELD WITH BUILDING MAINTENANCE DEPARTMENT AND OWNER.

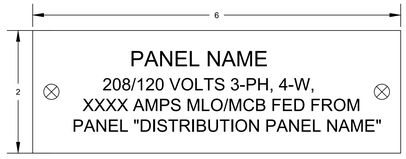
COPPER FEEDER SCHEDULE:

FEEDER TAG	FEEDER AMPS	FEEDER
40060	60	4#4, 1#10 GND - 1 1/4"C

FEEDER TAG KEY:



1 / E501 PARTIAL POWER RISER DIAGRAM
NOT TO SCALE



NOTES:

1. PANEL NAME SHALL HAVE A MINIMUM LETTER HEIGHT OF 3/8". ALL OTHER TEXT SHALL HAVE A MINIMUM LETTER HEIGHT OF 1/4".

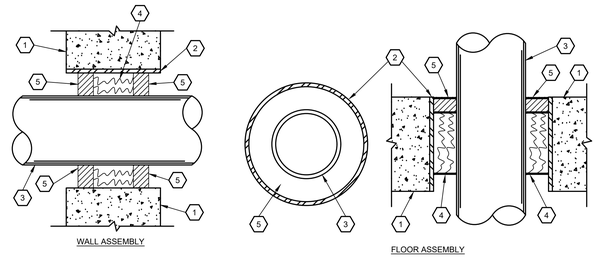
2. NAMEPLATE SHALL BE MACHINE ENGRAVED, LAMINATED PLASTIC, WITH WHITE LETTERING. BACKGROUND COLOR SHALL BE BLACK.

3. NAMEPLATE SHALL BE ATTACHED WITH RIVETS OR SELF TAPPING SCREWS.

4. DIMENSIONS INDICATED ARE MINIMUM DIMENSIONS. PROVIDE LARGER NAMEPLATE IF REQUIRED TO FIT ALL SPECIFIED INFORMATION ON NAMEPLATE.

5. "X" INDICATES FIELD TO BE FILLED IN PER PANEL SCHEDULE.

2 / E501 ELECTRICAL EQUIPMENT NAMEPLATE DETAIL
NOT TO SCALE



KEYED NOTES: (#)

1. FLOOR OR WALL ASSEMBLY MINIMUM 5" THICK NORMAL WEIGHT CONCRETE FLOOR OR WALL OR MINIMUM 7-5/8" THICK MASONRY WALL HAVING A MINIMUM 2 HOUR FIRE RESISTIVE RATING WITH A NOMINAL 6" DIAMETER OPENING.

2. STEEL PIPE SLEEVE (OPTIONAL) NOMINAL 6" DIAMETER SCHEDULE 40 OR HEAVIER STEEL PIPE SLEEVE. (2 TRADE SIZES LARGER THAN CONDUIT).

3. STEEL OR EMT CONDUIT NOMINAL 4" DIAMETER CENTERED THROUGH THE OPENING.

4. FORMING MATERIAL MINERAL WOOL, MINIMUM DENSITY OF 4.4 PCF FIRMLY PACKED WITHIN THE OPENING TO A NOMINAL THICKNESS OF 3" FOR FLOORS. FOR WALLS, THE MINERAL WOOL SHALL BE CENTERED IN THE OPENING.

5. FILL, VOID OR CAVITY MATERIAL* - FILL MATERIAL THAT IS TROWELED INTO THE OPENING TO A MINIMUM THICKNESS OF 1/2" IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS. IN WALLS, THE FILL MATERIAL SHALL BE INSTALLED ON BOTH SURFACES OF THE OPENING.

* BEARING THE "UL" CLASSIFICATION MARKING

2 / E501 FIRE STOP DETAIL
NOT TO SCALE

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NEW WALKWAY CONNECTION STRUCTURE

FAYETTE COUNTY COURTHOUSE BLDG.

FERENS BLDG.
61 EAST MAIN STREET
97 EAST MAIN STREET
UNION TOWN

FAYETTE COUNTY PENNSYLVANIA

JANUARY 31, 2022

BID SET

REVISIONS

2801.02

ELECTRICAL
DETAILS & RISERS

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E501

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LIGHTING FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	MANUFACTURER	MODEL	LAMP(S) LAMP #	LAMP(S) LAMP TYPE	DRIVER/ BALLAST	INPUT WATTS	VOLTS	MOUNTING	NOTES
DL1	6" ROUND DOWNLIGHT	LITHONIA	LDN6-30/15-LO6-AR-LD-MVOLT-GZ10-xx	--	LED 3000K 1500LM	0-10V, DIMTO 10%	17.5	120	RECESSED	
DL1E	6" ROUND DOWNLIGHT, WITH INTEGRAL EMERGENCY BATTERY, SELF-DIAGNOSTICS	LITHONIA	LDN6-30/15-LO6-AR-LD-MVOLT-GZ10-ELSD-xx	--	LED 3000K 1500LM	0-10V, DIMTO 10%	17.5	120	RECESSED	
WS1	RELOCATED DECORATIVE WALL SCONCE	--	EXISTING	1	INC	--	60	120	SURFACE, WALL	PROVIDE NEW LAMPS THAT MATCH THE SPECIFICATIONS OF THE EXISTING LAMPS. ARCHITECT SHALL SPECIFY MOUNTING HEIGHT. FIXTURES MUST BE AT LEAST 80" AFF.
WS2	ARCHITECTURAL EXTERIOR WALL SCONCE WITH PHOTOCELL AND MOTION SENSOR	LITHONIA	WDGE2 LED-P3-30K-80CRI-T2M-MVOLT-xx-E10WH-PIR1FC3V-xx	--	LED 3000K 3000LM	0-10V	32	120	SURFACE, WALL	ARCHITECT SHALL SPECIFY MOUNTING HEIGHT. FIXTURES MUST BE AT LEAST 80" AFF PER ADA REQUIREMENTS.
XB1	EMERGENCY LIGHTING BATTERY UNIT	LITHONIA	ELM4L	--	LED	--	3	120	SURFACE, WALL	
XE1	SINGLE FACE EDGE-LIT EXIT SIGN, EMERGENCY BATTERY WITH SELF-DIAGNOSTICS	LITHONIA	EDG-1-RMR-EL-SD	--	LED	--	3	120	UNIVERSAL	PROVIDE CHEVRONS AS SHOWN ON PLANS.

NOTES:
1. ARCHITECT SHALL SPECIFY / VERIFY ALL FINISH SELECTIONS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MOUNTING ACCESSORIES.
4. LIGHTING FIXTURE SUBSTITUTIONS THAT ARE CONSIDERED EQUAL TO THE SPECIFIED PRODUCTS MAY BE SUBMITTED AND WILL BE REVIEWED BY ARCHITECT AND ELECTRICAL ENGINEER. ACCEPTANCE WILL BE EVALUATED BASED ON AESTHETICS, PERFORMANCE, AND QUALITY. DO NOT PROVIDE VALUE ENGINEERING OPTIONS UNLESS SPECIFICALLY DIRECTED BY THE OWNER, ARCHITECT, OR ENGINEER.
5. THE STANDARD DRIVER OPTION FOR MOST FIXTURES IS 0-10V DIM. THE CONTRACTOR IS ONLY REQUIRED TO PROVIDE 0-10V WIRING WHERE DIMMING CONTROLS ARE SHOWN ON THE LIGHTING PLAN.

Branch Panel: CORR

Location: LANDING A 100
Supply From: EX MDP
Mounting: RECESSED
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: MATCH EX PANEL MDP KAIC
Mains Type: MLO
Mains Rating: 100
MCB Rating: -

CKT	Circuit Description	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Circuit Description	CKT
1	LIGHTING	2#12, 1#12G - 3/4"C	20	1	803	1456		2	15	3#12, 1#12G - 3/4"C	CU-1, AC-1	2
3	REC CONNECTOR CORR	2#12, 1#12G - 3/4"C	20	1		900	1456					4
5	REC CONNECTOR CORR	2#12, 1#12G - 3/4"C	20	1			540	1	20	2#12, 1#12G - 3/4"C	EUH-1	6
7	SPARE		20	1	1800		1800	1	20	2#12, 1#12G - 3/4"C	EUH-1	8
9	SPARE		20	1				1	20		SPARE	10
11	SPARE		20	1				1	20		SPARE	12
13	PROVISION							1	20		SPARE	14
15	PROVISION										PROVISION	16
17	PROVISION										PROVISION	18
19	PROVISION										PROVISION	20
21	PROVISION										PROVISION	22
23	PROVISION										PROVISION	24
	Total Load:				4059	2356	2340					
	Amps:				24.3							

NOTES:

Existing Distribution Panel: MDP

Location: BASEMENT
Supply From: EX UTILITY SERVICE
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120V
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING KAIC
Mains Type: MCB
Mains Rating: 1600
MCB Rating: 1600

CKT	Circuit Description	Wire Size	Trip	Pole	LOAD (VA) A	LOAD (VA) B	LOAD (VA) C	Pole	Trip	Wire Size	Circuit Description	CKT
1					4059							2
3	**PANEL CORR (NOTE 2)**	**REFER TO RISER**	**60**	**3**		2356		3			EX SPARE	4
5							2340					6
7												8
9	EX SPARE			3				3			EX SPARE	10
11												12
13												14
15	EX LOAD	EXISTING	40	3				3	150	EXISTING	EX 4TH FLOOR TO EAST PANEL	16
17												18
19												20
21	EX LOAD	EXISTING	40	3				3	60	EXISTING	EX BASEMENT TOILET EXHAUST FAN	22
23												24
25												26
27	EX DORM EXHAUST FANS	EXISTING	60	3				3	60	EXISTING	EX LOAD	28
29												30
31												32
33	EX ELEVATOR	EXISTING	100	3				3	60	EXISTING	EX EMERGENCY GENERATOR WOOD SHOP	34
35												36
37												38
39	EX LOAD	EXISTING	100	3				3	150	EXISTING	EX BASEMENT MAINT. ROOM PANEL	40
41												42
43												44
45	EX BASEMENT MENS TOILET PANEL	EXISTING	150	3				3	150	EXISTING	EX PROTHONOTARY PANEL	46
47												48
49												50
51	EX 1ST FLOOR WEST PANEL	EXISTING	200	3				3	175	EXISTING	EX EAST COURT RM 3 PANEL	52
53												54
55												56
57	EX NO. 2 COURT RM AND LIBRARY PANELS	EXISTING	225	3				3	225	EXISTING	EX 3RD AND 4TH FLOOR EAST PANEL	58
59												60
61												62
63	EX 4TH FL AIR CONDITIONER	EXISTING	225	3				3	225	EXISTING	EX 4TH FL WEST PANEL	64
65												66
	Total Load:				4059	2356	2340					
	Panel Amps:				24.3							

NOTES:
1. UNLESS OTHERWISE NOTED, ALL BRANCH CIRCUIT BREAKERS ARE EXISITNG TO REMAIN.
2. (WHERE NOTED) PROVIDE NEW BREAKER SIZED AS SHOWN. MATCH THE MANUFACTURER, MODEL, AND AIC RATING OF EXISTING BREAKERS.

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