ALABAMA PORT AUTHORITY
PORT OF MOBILE

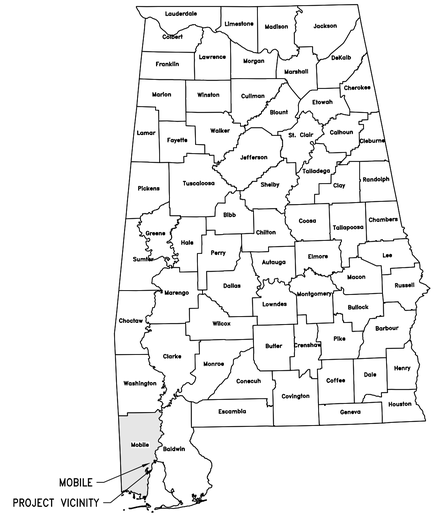
McDUFFIE WAREHOUSE
MOBILE, ALABAMA
(10861-TASK 2 - AUGUST 2022)

KAY IVEY, GOVERNOR
JOHN C. DRISCOLL, DIRECTOR AND C.E.O

ALABAMA STATE PORT AUTHORITY - BOARD OF DIRECTORS
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DR. PATRICIA SIMS
HORACE HORN
THE HON. MERCERIA LUDGOOD



LOCATION MAP
N.T.S.

DRAWING SCHEDULE:

4043-C0	–	COVER SHEET
4043-BCS	–	BUILDING CODE SUMMARY
4043-G1	–	GENERAL NOTES
4043-G2	–	GENERAL NOTES
4043-G3	–	GENERAL NOTES
4043-C1	–	EXISTING SITE PLAN
4043-C2	–	NEW SITE PLAN
4043-C2A	–	SECURITY PERIMETER PLAN
4043-C3	–	ENLARGED AREA PLAN
4043-C4	–	SITE DETAILS
4043-C4A	–	GATE DETAILS
4043-C4B	–	FENCE DETAILS
4043-C5	–	EROSION CONTROL PLAN
4043-F1	–	FOUNDATION PLAN
4043-F1A	–	FOUNDATION CONTROL JOINT PLAN
4043-F2	–	FOUNDATION DETAILS
4043-F2A	–	FOUNDATION DETAILS
4043-F3	–	FOUNDATION DETAILS
4043-F4	–	FOUNDATION DETAILS
4043-F5	–	FOUNDATION DETAILS
4043-F6	–	TRUCK WELL DETAIL
4043-F7	–	STAIR FOOTINGS – PLAN & DETAILS
4043-F8	–	STAIR FOOTINGS – PLAN & DETAILS
4043-A1	–	OVERALL FLOOR PLAN
4043-A2	–	OFFICE FLOOR PLANS
4043-A3	–	EXTERIOR BUILDING ELEVATIONS
4043-A4	–	EXTERIOR BUILDING ELEVATIONS
4043-A5	–	INTERIOR ELEVATIONS
4043-A6	–	DOOR AND WINDOW SCHEDULE
4043-A7	–	ROOM FINISH SCHEDULE
4043-LSP1	–	LIFE SAFETY PLAN – FIRST & SECOND FLOOR
4043-LSP2	–	LIFE SAFETY PLAN – WAREHOUSE
4043-S1	–	FRAMING PLAN
4043-S2	–	DETAILS AND SECTIONS
4043-S2A	–	DETAILS AND SECTIONS
4043-S3	–	DETAILS AND SECTIONS
4043-S3A	–	TUBE FRAME OPENING PROTECTOR DETAILS
4043-S4	–	DETAILS AND SECTIONS
4043-S5	–	WALL DETAILS AND SECTIONS
4043-S5A	–	WALL DETAILS AND SECTIONS
4043-S6	–	STAIR LAYOUT
4043-S7	–	STAIR DETAILS
4043-S8	–	STAIR LAYOUT
4043-S9	–	STAIR DETAILS
4043-S10	–	NOT USED
4043-S11	–	STAIR LAYOUT
4043-S12	–	STAIR DETAILS
4043-S13	–	STAIR DETAILS
4043-S14	–	ANTENNA POLE
4043-M1	–	WAREHOUSE VENTILATION PLAN
4043-M2	–	FIRST FLOOR OFFICE MECHANICAL PLAN
4043-M3	–	SECOND FLOOR OFFICE MECHANICAL PLAN
4043-M4	–	HVAC SCHEDULE AND DETAILS
4043-M5	–	HVAC SPECIFICATIONS
4043-E1	–	NEW ELECTRICAL SITE PLAN
4043-E2	–	FIRST FLOOR OFFICE LIGHTING FLOOR PLAN
4043-E3	–	SECOND FLOOR OFFICE LIGHTING FLOOR PLAN
4043-E4	–	STORAGE LIGHTING FLOOR PLAN
4043-E5	–	FIRST FLOOR OFFICE POWER FLOOR PLAN
4043-E6	–	SECOND FLOOR OFFICE POWER FLOOR PLAN
4043-E7	–	STORAGE AREA POWER FLOOR PLAN
4043-E8	–	GROUNDING PLAN
4043-E9	–	PANELBOARD SCHEDULE & AC RISER DIAGRAM
4043-E10	–	PANELBOARD SCHEDULE
4043-E11	–	STORAGE LIGHTING CONTROL PLAN
4043-E12	–	OFFICE LIGHTING CONTROL PLAN
4043-E13	–	SECURITY CAMERA AND KEY-PAD FLOOR PLAN
4043-E14	–	ELECTRICAL SPECIFICATIONS
4043-P1	–	PLUMBING PLAN
4043-P2	–	FIRST FLOOR OFFICE PLUMBING PLAN
4043-P3	–	SECOND FLOOR OFFICE PLUMBING PLAN
4043-P4	–	OFFICE PLUMBING ISOMETRIC
4043-P5	–	PLUMBING SCHEDULE AND DETAILS
4043-P6	–	PLUMBING SPECIFICATIONS
4043-U1	–	UTILITY PLAN

REFERENCE DRAWINGS:

*McDUFFIE COAL TERMINAL STORMWATER TRANSFER – SHEET 4
*McDUFFIE COAL TERMINAL STORMWATER TRANSFER – SHEET 11
LITTLE BUILDING INC. DWG: 200710

* FOR INFORMATION ONLY, ITS ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

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REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	08/10/22	JWM	GDEC

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LaGrange, GA 30241
Phone (706) 302-2831
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PROJECT: McDUFFIE WAREHOUSE
McDUFFIE TERMINAL – ASPA
MOBILE, AL

TITLE: COVER SHEET

SCALE	DRAWN BY	DATE	SHEET	REV.
AS NOTED	JWM	01/24/22	– OF – 22x34	A
JOB NO. 4043	CHECKED BY WBS	DATE 01/24/22	DRAWING NUMBER 4043-C0	

Z:\4000-4099\4043-ASPA McDuffie Warehouse\Design\4043-C0.dwg, 8/10/2022 9:36:27 AM, DWG To PDF.pc3, 1:1

COMMERCIAL PROJECT BUILDING CODE SUMMARY JANUARY, 2020

1. GENERAL INFORMATION
NAME OF PROJECT McDUFFIE WAREHOUSE
PROJECT ADDRESS 1901 EZRA TRICE BLVD, MOBILE, AL 36603
PROPOSED USE EQUIPMENT AND PARTS STORAGE
OWNER/AUTHORIZED AGENT ASPA
ADDRESS 250 NORTH WATER ST. MOBILE AL 36602
PHONE 251-433-7260 FAX _____ E-MAIL Marcus.Coleman@alports.com
CONTRACTOR TBD
ADDRESS _____
PHONE _____ FAX _____ E-MAIL _____
STATE LICENSE NO. _____

2. DESIGN PROFESSIONALS
ARCHITECTURAL DOUGLAS KEARLEY, SR. E-MAIL dbkearley@aol.com
STRUCTURAL BRUCE SMITH E-MAIL bsmith@cmg-a.com
ELECTRICAL JAMES MEIGS E-MAIL jmeigs@cmg-a.com
FIRE ALARM TBD E-MAIL _____
PLUMBING JOHN D. GLOVER E-MAIL jglover@cmg-a.com
MECHANICAL JOHN D. GLOVER E-MAIL jglover@cmg-a.com
SPRINKLER-STANDPIPE _____ E-MAIL _____
CIVIL BRUCE SMITH E-MAIL bsmith@cmg-a.com
DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE
NAME GARY D.E. COWLES SIGNATURE _____

2.1 SPECIAL INSPECTIONS
A STATEMENT OF SPECIAL INSPECTIONS IS REQUIRED PER IBC SECTION 1704.3 AND SECTION 1704.5 AS A CONDITION OF PERMIT ISSUANCE. THE SCHEDULE SHALL INCLUDE ALL MATERIALS AND WORK NEEDING SPECIAL INSPECTIONS, THE INSPECTIONS TO BE PERFORMED AND THE NAMES OF INDIVIDUALS, APPROVED AGENCIES AND FIRMS CONDUCTING SUCH INSPECTIONS.
IF NOT PROVIDED, EXPLAIN: _____

3. GENERAL CODE DATA
3.1 BUILDING AND FIRE CODES USED IN DESIGN (CHECK ALL THAT APPLY)
X 2018 INTERNATIONAL BUILDING CODE X 2017 NATIONAL ELECTRICAL CODE
X 2018 INTERNATIONAL MECHANICAL CODE X 2018 INTERNATIONAL PLUMBING CODE
X 2018 INTERNATIONAL FIRE CODE X 2015 INTERNATIONAL ENERGY CONSERVATION CODE (ASHRAE 90.1 2013)
___2018 INTERNATIONAL EXISTING BUILDING CODE ___ 2013 MOBILE COUNTY COASTAL CONSTRUCTION SUPPLEMENT

3.2 CONSTRUCTION DESCRIPTION
X NEW CONSTRUCTION ___ RENOVATION (EXISTING BLDG.) ___TENANT BUILD-OUT
___ALTERATION ___ ADDITION ___UNOCCUPIED BUILDING

SCOPE OF WORK
BUILDING: PRE-ENGINEERED METAL BUILDING, ONE STORY 30' EAVE HT. WITH GENERAL OFFICE AREA SEPARATED BY 2 HOUR FIRE WALL
MECHANICAL: NEW WAREHOUSE ROOF EXHAUST FANS/WALL INTAKE LOUVERS NEW OFFICE SPLIT SYSTEM HEAT PUMP/AIR HANDLERS
ELECTRICAL : NEW POWER AND LIGHTING FOR WAREHOUSE BUILDING AND SITE
PLUMBING: NEW PLUMBING LIFT STATION, PLUMBING WATER SUPPLY, FIXTURES, PLUMBING RISER AND FIXTURE DETAIL.

EXTERIOR WALL MATERIALS AND INSTALLATION DETAILS MUST COMPLY WITH SECTIONS 1404 & 1405.
PLEASE LIST THE SECTIONS THAT APPLY TO THE PROJECT: 1404.11

EXISTING BUILDINGS AND RENOVATIONS: N/A
THE BUILDING WILL REMAIN IN OPERATION DURING CONSTRUCTION: ____ YES; ____ NO
IF YES, ADD PROVISIONS FOR RIGID SAFETY BARRIERS AND DUST BARRIERS TO PROTECT THE PUBLIC DURING CONSTRUCTION IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF IBC CHAPTER 33.
IS THE WORK IN THIS BUILDING OR SPACE A CHANGE OF OCCUPANCY? ____YES; ____ NO
PROVIDE EVALUATION OF COMPLIANCE ALTERNATIVES IF REQUIRED.

CONSISTENCY OF DOCUMENTATION
VERIFY ALL SECTIONS AND DETAILS SHOWN ARE REFERENCED CORRECTLY TO THE CONSTRUCTION DOCUMENTS.
REQUIRE ALL MANUFACTURER'S RECOMMENDATIONS BE FOLLOWED AND AVAILABLE ON JOBSITE.
DELETE ANY NOTES, DETAILS, REFERENCES AND SPECIFICATIONS THAT ARE NOT APPLICABLE TO PROJECT.

4. BUILDING DATA
CONSTRUCTION TYPE __ IA __ IB __ IIA X IIB __ IIIA __ IIIB __ IV __ VA __ VB
MIXED CONSTRUCTION X NO __ YES CONSTRUCTION TYPES_____
SPRINKLERS X NO __ YES __ PARTIAL
SYSTEM TYPE __ 13 __ 13R __ 13D
STANDPIPES X NO __ YES __ WET __ DRY __ CLASS __ COMBINED
BUILDING HEIGHT 30 FEET 2 NUMBER OF STORIES __ HEIGHT INCREASE (504) _____
MEZZANINE: X NO __ YES
HIGH RISE X NO __ YES
ATRIUM X NO __ YES
BASEMENT X NO __ YES

5. BUILDING OCCUPANCY CLASSIFICATION
HIGH HAZARD: NO SUBSTANCES LISTED IN SECTION 307 ARE TO BE STORED IN THE BUILDING EXCEPT AS NOTED:
HAZARDOUS SUBSTANCES: N/A
WITH PROVISIONS MADE PER CODE SECTION: _____
MIXED OCCUPANCY X YES; _____ NO; SEPARATION REQUIRED: 2 HOURS.
PLEASE IDENTIFY ANY EXCEPTIONS WHICH YOU ARE USING: _____
INCIDENTAL USE AREAS (508.2) _____YES; X NO
NON-SEPARATED MIXED OCCUPANCY (508.3.): _____ YES; X NO
THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE MOST RESTRICTIVE HEIGHT AND AREA LIMITATIONS FOR THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING.
SEPARATED MIXED OCCUPANCY (508.4): X YES; _____NO
EACH PART OF THE BUILDING MUST BE INDIVIDUALLY CLASSIFIED AS TO USE AND BE SEPARATED FROM ADJACENT USES BY FIRE BARRIER WALLS AND /OR HORIZONTAL ASSEMBLIES PER TABLE 508.4. THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.
INCIDENT AL USE AREAS (TABLE 509) _____ YES; X NO

ALLOWABLE AREA AND HEIGHT (TABLE 503)

ALLOWABLE AREA	S-2		B	
ALLOWABLE AREA PER FLOOR:	UNLIMITED (507.3)	SQ. FT. / FLOOR	23,000	
ACTUAL AREA PER FLOOR:	60,000	SQ. FT. / 1ST FLOOR	7,820	
	N/A	SQ. FT. / 2ND FLOOR	7,820	

ATTACH AREA CALCULATIONS AND NOTE EXCEPTIONS PER SECTION 506 & FOR UNLIMITED AREAS IN SECTION 507.

ALLOWABLE HEIGHT	S-2		B
ALLOWABLE HEIGHT:	55	FEET	55
ACTUAL BUILDING HEIGHT:	39	FEET	30
ALLOWABLE NUMBER OF STORIES:	3	STORIES	3
ACTUAL NUMBER OF STORIES:	1	STORIES	2

BUILDING USE AND OCCUPANT LOAD
INCLUDE OCCUPANT LOAD CALCULATIONS FOR INSTITUTIONAL, ASSEMBLY, EDUCATIONAL, MULTISTORY PROJECTS, LARGE COMPLEX PROJECTS, AND MIXED OCCUPANCIES.
PLEASE NOTE THE USE, AREA AND OCCUPANT LOAD OF EACH AREA ON THE LIFE SAFETY PLAN.
BUILDING USE – STORAGE OCCUPANCY – S-2 ALLOWABLE OCCUPANCY – 104
BUILDING USE – OFFICE OCCUPANCY – B ALLOWABLE OCCUPANCY – 104
OCCUPANT LOAD SIGNAGE IN ASSEMBLY PER 1004.9; _____YES _____ NO N/A

FIRE PROTECTION REQUIREMENTS (TABLE 601)

BUILDING ELEMENT:		REQUIRED RATING	ASSEMBLY REFERENCE*
STRUCTURAL FRAME(COLUMNS, GIRDERS, TRUSSES):		0	
BEARING WALLS:	EXTERIOR:	0	
	INTERIOR:	0	
NON-BEARING WALLS:	EXTERIOR:	0	
	INTERIOR:	0	
FLOOR CONSTRUCTION (INCL. BEAMS AND JOISTS):		0	
ROOF CONSTRUCTION (INCL. BEAMS AND JOISTS):		0	

OTHER RATED ELEMENTS (REFERENCE THE NOTES BELOW)

ELEMENT		REQUIRED RATING	ASSEMBLY REFERENCE*
INTERIOR WALLS:	BEARING:	0	
	NON-BEARING:	0	
CEILING-FLOORS:		0	
BEAMS:		0	
COLUMNS:		0	
CEILING-ROOFS:		0	
SHAFTS-EXIT:		0	
SHAFTS-OTHER:		0	
CORRIDOR SEPARATION:		0	
OCCUPANCY SEPARATION:		2	UL V421
PARTY WALL OR FIRE WALL SEPARATION:		0	
SMOKE BARRIER SEPARATION:		0	
TENANT SEPARATIONS:		0	
OPENING PROTECTION FOR RATED DOORS:		1 1/2	

NOTES:
1. ALL FIRE RATED WALLS SHALL BE IDENTIFIED ON PLANS BY LINE TYPE, HATCHING, ETC.; SHOW LEGEND.
2. IDENTIFY CODE SECTION WHEN USING ANY SPECIAL EXCEPTIONS, ETC.
* REPRODUCE FULL UL OR OTHER APPROVED AGENCIES DETAILS AND SPECIFICATIONS FOR RATED ASSEMBLIES/PENETRATIONS ON DRAWINGS.(STATEMENT OF REQUIRED CONFORMITY INSUFFICIENT)

DRAFTSTOPPING
DRAFTSTOPPING IN FLOOR X YES ___ NO
DRAFTSTOPPING IN ATTIC X YES ___ NO
DISTANCE TO PROPERTY LINE FROM EXTERIOR WALL (TABLE 602)
(SITE PLAN AND LIFE SAFETY PLAN MUST ILLUSTRATE THIS INFORMATION)
FIRE SEPARATION DISTANCE: NORTH WALL: __ FT.; SOUTH WALL: __ FT.; EAST WALL: __ FT.; WEST WALL: __ FT.
FIRE RESISTANCE RATING: NORTH WALL: __ HRS.; SOUTH WALL: __ HRS.; EAST WALL: __ HRS.; WEST WALL: ___HRS.
LIFE SAFETY SYSTEMS IN CODE COMPLIANCE:
1008 EMERGENCY LIGHTING: X YES; _____NO; EXCEPTIONS: _____
1013 EXIT SIGNS: X YES; _____ NO; EXCEPTIONS: _____
907 FIRE ALARM: X YES; _____NO; EXCEPTIONS: _____
1010.1.9 DOOR OPERATIONS: X YES; _____ NO
1010.1.9.5 BOLT LOCKS: X YES; _____ NO
1010.1.10 PANIC HARDWARE: X YES; _____ NO; EXCEPTIONS: _____
SMOKE DETECTION SYSTEMS: _____ YES; X NO; EXCEPTIONS: S-2 NOT REQ'D

EXIT REQUIREMENTS

EXIT ACCESS (1016 - 1021)	S-2	B	S-2	B
NUMBER OF EXITS REQUIRED:	2	2	NUMBER OF EXITS FURNISHED:	4 4

MEANS OF EGRESS WIDTH
UNITS OF EXIT REQUIRED: 20.8 INCHES UNITS OF EXIT WIDTH PROVIDED: 132 INCHES
STAIR WIDTH UNITS REQUIRED: 31.2 INCHES STAIR WIDTH UNITS PROVIDED: 72 INCHES
DIAGONAL RULE:
DESIGN COMPLIES WITH SECTION 1017: ____YES__X__NO

TRAVEL DISTANCE (TABLE 1017.2)	S-2	B	S-2	B	S-2	B
ALLOWABLE TRAVEL DISTANCE:	300	200 FT.	ACTUAL TRAVEL DISTANCE (MAXIMUM):		244	96 FT.

SPACES WITH ONE MEANS OF EGRESS (TABLE 1006.2.1)
FOR BUILDINGS WITH ONE MEANS OF EGRESS, I HAVE CHECKED THE OCCUPANT LOAD AND THE COMMON PATH OF TRAVEL AGAINST THE REQUIREMENTS OF SECTION 1006: ___ YES X NO

LIFE SAFETY PLAN
PROVIDE A LIFE SAFETY PLAN FOR ALL COMMERCIAL PROJECTS. AT A MINIMUM, THE LIFE SAFETY PLAN SHOULD ILLUSTRATE THE OCCUPANT LOADS FOR ALL AREAS, EXIT LOCATIONS, EXIT ACCESS, EXIT CAPACITY, MAXIMUM TRAVEL DISTANCE, EXIT LIGHTS, EMERGENCY LIGHTS, FIRE EXTINGUISHERS, FIRE RATED ASSEMBLIES, ASSEMBLY AREA SEATING LAYOUT AND EXIT DISCHARGE. SECOND EMERGENCY ESCAPE REQUIRED FOR RESIDENTIAL & INSTITUTIONAL-1 OCCUPANCIES PROVIDED PER 1026.

ACCESSIBILITY CHAPTER 11
DESIGN CONFORMS TO ICC/ANSI A117.1-2009: X YES _____NO, EXCEPTION: _____
(RESTROOM PLANS AND ELEVATIONS SHALL BE PROVIDED AT A MINIMUM 3/16" =1'-0" SCALE)
AN ACCESSIBLE ROUTE IS PROVIDED THROUGHOUT THIS BUILDING PER 1104 EXCEPT AS NOTED:
_____
_____
IS AN ACCESSIBLE ENTRANCES PROVIDED PER 1005: X YES _____ NO, EXCEPTION: _____

STRUCTURAL DESIGN PARAMETERS
CLASSIFICATION OF BUILDING CATEGORY/USE GROUP II (I, II, III, IV)
ROOF LIVE LOAD: 20 PSF ATTIC LOAD: 0 PSF
MEZZANINE LOAD: 0 PSF FLOOR LOAD: 100 PSF
BUILDING EXPOSURE: C WIND SPEED 161 MPH (ASCE 7-10)
IMPORTANCE FACTOR: II
LOAD COMBINATIONS CONSIDERED AS PER 1605 X YES ___ NO
BUILDING WILL BE DESIGNED AS: X AN ENCLOSED BUILDING _____AN UNENCLOSED BUILDING
METHOD OF DEBRIS PROTECTION TO GLAZED OPENINGS PER 1609.2: X
ASSUMED SOIL BEARING 1200 POUNDS / SQ. FT.; SOILS REPORT X YES ___ NO.
PROVIDE A COMPONENTS AND CLADDING PRESSURE DIAGRAM ON THE CONSTRUCTION DOCUMENTS.

SPECIAL DETAILED REQUIREMENTS
THE DESIGN PROFESSIONAL SHALL COMPLY WITH ANY SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY. PLEASE INDICATE ALL CONDITIONS THAT APPLY:

402 COVERED MALL BUILDING	N/A
403 HIGH RISE BUILDINGS	N/A
404 ATRIUMS	N/A
405 UNDER GROUND BUILDINGS	N/A
406 MOTOR-VEHICLE RELATED OCCUPANCIES	N/A
407 GROUP I-2	N/A
408 GROUP I-3	N/A
409 MOTION PICTURE PROJECTION ROOMS	N/A
410 STAGES & PLATFORMS, ETC.	N/A
411 SPECIAL AMUSEMENT BUILDINGS	N/A
412 AIRCRAFT RELATED OCCUPANCIES	N/A
413 COMBUSTIBLE STORAGE	N/A
414 HAZARDOUS MATERIALS	N/A
415 HAZARDOUS OCCUPANCY GROUPS	N/A
416 APPLICATION OF FLAMMABLE FINISHES	N/A
417 DRYING ROOMS	N/A
418 ORGANIC COATINGS.	N/A
419 LIVE / WORK UNITS	N/A
420 GROUPS I-1, R-1, R-2, R-3	N/A
421 HYDROGEN CUTOFF ROOMS	N/A
422 AMBULATORY CARE FACILITIES	N/A
423 STORM SHELTERS	N/A
424 CHILDREN'S PLAY STRUCTURES	N/A

CONTRACTOR REQUIREMENTS
THE DESIGN PROFESSIONAL WILL NOTIFY THE CONTRACTOR OF HIS RESPONSIBILITY UNDER SECTION 1704.4.
THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE INSPECTION DEPARTMENT AND THE OWNER PRIOR TO COMMENCEMENT OF THE WORK STATING THAT THEY ARE AWARE OF THEIR RESPONSIBILITY CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS:
CONTRACTOR'S SIGNATURE AT TIME OF PERMITTING: _____

SAFETY GLAZING FOR HAZARDOUS LOCATIONS
THE REQUIRED LOCATIONS OF TEMPERED SAFETY GLASS SHALL BE IDENTIFIED ON THE CONSTRUCTION DOCUMENTS AS PER SECTION 2406 SAFETY GLAZING.
SAFETY GLASS LOCATIONS NOTED: X YES_____NO, EXCEPTION NO. _____

PRE-ENGINEERED BUILDINGS AND TRUSSES
COMPLETE STRUCTURAL PACKAGES MUST BE SUBMITTED PRIOR TO OBTAINING THE BUILDING PERMIT.
THE SUBMITTALS MUST BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF ALABAMA.

FIRE DEPARTMENT REQUIREMENTS
THE DESIGN PROFESSIONAL SHALL PROVIDE THE REQUIRED WATER SUPPLY FOR THE BUILDING. PLEASE INITIAL THE METHOD USED FOR DETERMINING THE REQUIRED WATER SUPPLY AS NOTED BELOW:
REQUIRED WATER SUPPLY 5250 GPM @ 20 PSI IFC METHOD USED
THE INSURANCE SERVICE OFFICE (ISO) METHOD; IOWA STATE UNIVERSITY (ISU) METHOD;
ILLINOIS INSTITUTE OF TECHNOLOGY (IIT) METHOD, OR THE INTERNATIONAL FIRE CODE (IFC).

PLUMBING FIXTURES
PROVIDE A TABLE ON THE CONSTRUCTION DOCUMENTS SHOWING THE NUMBER OF REQUIRED FIXTURES AND THE NUMBER OF FIXTURES PROVIDED PER TABLE 2902.1 - MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES. THE PLUMBING DRAWINGS MUST BE SUBMITTED AND APPROVED BY THE MOBILE COUNTY HEALTH DEPARTMENT WILL RELEASE THE PLUMBING PERMIT.
SEPARATE FACILITIES PROVIDED AS PER 2902.2: X YES_____NO, EXCEPTION NO. ___

ENERGY COMPLIANCE
THE CONTRACT DOCUMENTS MUST ILLUSTRATE COMPLIANCE WITH THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE. THE CONTRACTOR MAY SUBMIT A CERTIFICATE OF COMPLIANCE AS PER THE IECC SECTION R403.1.1.

MECHANICAL REQUIREMENTS
COMPLIANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE IS REQUIRED.
PROVIDE A COMPLETE MECHANICAL SCOPE-OF-WORK AND VENTILATION CALCULATIONS.

THE FOLLOWING ITEMS SHOULD BE IDENTIFIED AND LOCATED ON PLANS:
ALL NEW AND EXISTING SUPPLY AND RETURN AIR DUCTWORK.
ALL NEW AND EXISTING EQUIPMENT TOGETHER WITH EQUIPMENT SCHEDULES.
RATED PARTITION AND FLOOR/ CEILING ASSEMBLY LOCATIONS AND INFORMATION.
CLOTHES DRYER VENT ROUTING AND MAKE-UP AIR INFORMATION.
CONDENSATE DRAIN ROUTING, DRAINING TO STORM, DRYWELL OR LANDSCAPED AREA.
ALL FIRE AND SMOKE DAMPER AND DETECTOR LOCATIONS AND INSTALLATION INFORMATION.
BATHROOM EXHAUST FANS, DUCT ROUTING AND CFM INFORMATION.
IF PLUMBING OR MECHANICAL EQUIPMENT IS INSTALLED ABOVE CEILING OR IN ATTIC SPACES, A FIXED LADDER OR COMMERCIAL GRADE 300 LB. CAPACITY DISAPPEARING STAIRWAY SHALL BE REQUIRED
THE FOLLOWING DETAILS SHOULD BE PROVIDED:
TIE-DOWN DETAILS FOR ALL EQUIPMENT EXPOSED TO THE HIGH WIND LOADS.
KITCHEN EQUIPMENT LAYOUT AND EXHAUST HOOD ANCHOR DETAILS
UL INFORMATION FOR KITCHEN HOODS, GREASE EXHAUST AND PAINT SPRAY BOOTHS.
PAINT SPRAY BOOTH EXHAUST, MAKE UP AIR AND SEQUENCE OF OPERATIONS.
THE FOLLOWING MUST BE SIGNED AND SEALED BY AN ENGINEER:
MECHANICAL PLANS FOR BUILDINGS OF MORE THAN 2500 S.F.
ALL TYPE 1 (GREASE) EXHAUST HOOD DOCUMENTS

ELECTRICAL REQUIREMENTS
COMPLIANCE WITH THE 2017 NATIONAL ELECTRICAL CODE IS REQUIRED.
THE FOLLOWING ITEMS SHOULD BE IDENTIFIED AND LOCATED ON PLANS:
ELECTRICAL SERVICE, AND ALL ELECTRICAL PANELS,
ALL APPLIANCES AND EQUIPMENT.
ALL LUMINARIES AND OUTLETS (INCLUDING THOSE FOR HVAC).
ALL EQUIPMENT DISCONNECTING MEANS, TOGETHER WITH SIZES AND RATINGS.
ELECTRICAL EQUIPMENT SHOULD BE SPECIFIED WITH:
EQUIPMENT WORKING SPACE AND CLEARANCES SHOWN.
LABELLING BY A RECOGNIZED ELECTRICAL TESTING LABORATORY.
ELECTRICAL PANEL SCHEDULES SHOULD SHOW:
ALL LOADS, VOLTAGES, PHASES, AND BUS SIZES IN AMPERES.
PANELS SHOULD BE BALANCED AND SHOWN IN THE CIRCUIT DIRECTORY
CALCULATIONS FOR EACH PANEL FOR SERVICE, FEEDER AND BRANCH CIRCUITS.
ALL BRANCH CIRCUIT CONDUCTORS AND CONDUIT SIZES.

AMENDMENTS
PRIOR TO SUBMITTING THE CONSTRUCTION DOCUMENTS FOR REVIEW AND PERMITTING, THE DESIGN PROFESSIONAL SHOULD CONTACT THE MOBILE COUNTY INSPECTION DEPARTMENT TO OBTAIN A COPY OF THE MOST CURRENT AMENDMENTS ADOPTED BY THE MOBILE COUNTY COMMISSION.

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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
BUILDING CODE SUMMARY

SCALE	DRAWN BY	DATE	SHEET	REV.
N/A	JWM	12/22/21	— OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	DBK	12/22/21	4043-BCS	

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GENERAL NOTES

1. NO PROVISION OF ANY REFERENCED STANDARD SPECIFICATION, MANUAL OR CODE (WHETHER OR NOT SPECIFICALLY INCORPORATED BY REFERENCE IN THE CONTRACT DOCUMENTS) SHALL BE EFFECTIVE TO CHANGE THE DUTIES AND RESPONSIBILITIES OF OWNER, CONTRACTOR, ENGINEER, SUPPLIER, OR ANY OF THEIR CONSULTANTS, AGENTS, OR EMPLOYEES FROM THOSE SET FORTH IN THE CONTRACT DOCUMENTS. NOR SHALL IT BE EFFECTIVE TO ASSIGN TO THE STRUCTURAL ENGINEER OF RECORD OR ANY OF THE STRUCTURAL ENGINEER OF RECORD'S CONSULTANTS, AGENTS, OR EMPLOYEES ANY DUTY OR AUTHORITY TO SUPERVISE OR DIRECT THE FURNISHING OR PERFORMANCE OF THE WORK OR ANY DUTY OR AUTHORITY TO UNDERTAKE RESPONSIBILITIES CONTRARY TO THE PROVISIONS OF THE CONTRACT DOCUMENTS.

2. CONTRACT DOCUMENTS INCLUDE, BUT ARE NOT LIMITED TO, THE STRUCTURAL DOCUMENTS (DRAWINGS AND SPECIFICATIONS), BUT DO NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR MATERIAL PREPARED AND SUBMITTED BY THE CONTRACTOR.

3. REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION, OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION OR TENTATIVE SPECIFICATION ADOPTED AT THE DATE OF TAKING BIDS, UNLESS SPECIFICALLY STATED OTHERWISE.

4. CONTRACT DOCUMENTS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE CODE OF PRACTICE OR SPECIFICATIONS OF ACI, PCI, AISC, SJI OR OTHER STANDARDS. WHERE A CONFLICT OCCURS WITHIN THE CONTRACT DOCUMENTS, THE STRICTEST REQUIREMENT SHALL GOVERN.

5. MATERIAL, WORKMANSHIP, AND DESIGN SHALL CONFORM TO THE REFERENCED BUILDING CODE.

6. CONTRACTOR SHALL COORDINATE THE STRUCTURAL DOCUMENTS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR OMISSION. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS SEE THE ARCHITECTURAL DRAWINGS.

7. CONTRACTOR SHALL OBTAIN AND COORDINATE EDGE OF SLAB DIMENSIONS, OPENING LOCATIONS AND DIMENSIONS, DEPRESSED SLAB LOCATIONS AND EXTENTS, SLAB SLOPES, CURB LOCATIONS, AND CMU WALL LOCATIONS. STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR OMISSION.

8. CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY.

9. CONTRACTOR HAS SOLE RESPONSIBILITY FOR MEANS, METHODS, SAFETY, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

10. THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. TEMPORARY SUPPORTS REQUIRED FOR STABILITY DURING ALL INTERMEDIATE STAGES OF CONSTRUCTION SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTIBILITY ANALYSIS, AND ERECTION PROCEDURES, INCLUDING DESIGN AND ERECTION OF FALSEWORK, TEMPORARY BRACING, ETC.

11. CONTRACTOR HAS SOLE RESPONSIBILITY TO COMPLY WITH ALL OSHA REGULATIONS.

12. REPRODUCTION OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED. ELECTRONIC DRAWING FILES WILL NOT BE PROVIDED TO THE CONTRACTOR.

13. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN IN THE CONTRACT DOCUMENTS. REVIEW OF SHOP DRAWINGS SHALL BE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS REGARDING ARRANGEMENT AND SIZES OF MEMBERS AND THE CONTRACTOR'S INTERPRETATION OF THE DESIGN LOADS AND CONTRACT DOCUMENT DETAILS. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK ALL SUBMITTALS AND SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.

14. WHERE A SECTION OR DETAIL IS SHOWN OR DETAILED FOR ONE CONDITION, IT SHALL APPLY TO ALL SIMILAR AND LIKE CONDITIONS. DETAILS LABELED "TYPICAL" ON THE DRAWINGS APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR. THE CONTRACTOR SHALL CONSIDER ALL OF THE CONTRACT DOCUMENTS IN DETERMINING SIMILAR AND LIKE CONDITIONS.

15. SIGNATURE AND REGISTRATION SEAL OF THE STRUCTURAL ENGINEER THAT MAY BE AFFIXED TO THESE DRAWINGS RELATES ONLY TO THE STRUCTURAL DESIGN OF THE PROJECT.

CODE/DESIGN CRITERIA

1. STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2012 BUILDING CODE, WITH LATEST AMENDMENTS.

2. GRAVITY LOADS
   2.1 UNIFORM FLOOR LIVE LOADS (REDUCED AS ALLOWED BY THE BUILDING CODE):

FLOOR	100 PSF
STAIRS	100 PSF

WIND LOADS: SEE TABLE ON THIS SHEET

3. ESTIMATED DEFLECTIONS (IN INCHES) ARE AS FOLLOWS:

	LIVE LOAD	DEAD + LIVE LOAD
ROOF MEMBERS:	L/360 OR 1 IN.	L/240
FLOOR MEMBERS:	L/360	L/240

WHERE, L = SPAN LENGTH (IN INCHES) BETWEEN CENTERLINES OF SUPPORTS. FOR CANTILEVERS, L IS TWICE THE LENGTH OF THE CANTILEVER.)

4. SPECIAL INSPECTIONS:

4.1 THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTION: FOUNDATION ANCHORS & REINFORCING STEEL, STRUCTURAL STEEL, AND LIGHT GAUGE STEEL FRAMING.

REINFORCEMENT

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, PREFABRICATED, UNLESS NOTED OTHERWISE. NO FIELD BURNING ALLOWED.

2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND HAVE MINIMUM SIDE AND END LAPS OF 12". CHAIRS TO BE PLACED 2'-0" O.C.. INDIVIDUAL CHAIRS SHOULD BE ABLE TO SUPPORT 200 LB. LOAD WITHOUT CRUSHING. WIRE MUST RETURN TO PROPER PLACEMENT AFTER BEING STEPPED ON.

3. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.

4. PROVIDE DOWELS FROM FOUNDATIONS THE SAME SIZE AND NUMBER AS THE VERTICAL WALL OR COLUMN REINFORCING, UNLESS NOTED OTHERWISE.

5. PLACE REINFORCEMENT AS FOLLOWS, UNLESS NOTED OTHERWISE:

   5.1 CAST-IN-PLACE (NON POST-TENSIONED) CONCRETE REINFORCEMENT COVER

   PERMANENTLY EXPOSED TO EARTH:
   CAST AGAINST THE EARTH_____ 3" CLEAR

   EXPOSED TO EARTH OR WEATHER:
   FOR BARS LARGER THAN A NO. 5 BAR_____ 2" CLEAR
   NO. 5 BARS OR SMALLER_____ 1-1/2" CLEAR

   5.2 MASONRY REINFORCING STEEL SHALL BE PLACED IN THE CENTER OF CMU CELLS, UNLESS NOTED OTHERWISE.

6. REINFORCEMENT SHALL BE SPLICED ONLY AT LOCATIONS SHOWN OR NOTED IN THE STRUCTURAL DOCUMENTS, EXCEPT REINFORCEMENT MARKED "CONTINUOUS" CAN BE SPLICED AT LOCATIONS DETERMINED BY CONTRACTOR. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. REINFORCING STEEL SPLICES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE REINFORCEMENT:	CLASS B TENSION LAP
MASONRY REINFORCEMENT:	48 BAR DIAMETERS

7. ADHESIVE FOR REINFORCING DOWELS IN EXISTING CONCRETE SHALL BE EITHER THE HIT HY150 INJECTION ADHESIVE SUPPLIED BY HILTI FASTENING SYSTEMS, THE EPCON SYSTEM CERAMIC 6 EPOXY ADHESIVE SUPPLIED BY ITW RAMSET/RED HEAD, POWER-FAST EPOXY INJECTION GEL SUPPLIED BY POWERS FASTENING, OR APPROVED EQUAL. MINIMUM EMBEDMENT LENGTH SHALL BE 24 BAR DIAMETERS, UNLESS NOTED OTHERWISE.

8. REINFORCING STEEL SHALL BE FREE FROM GREASE, MUD, EXCESSIVE RUST OR OTHER COATINGS THAT WILL DESTROY OR REDUCE BOND STRENGTH. REINFORCING STEEL IN ALL FOOTINGS, WALLS, BOND BEAMS AND PILASTERS SHALL BE MADE WITH BENT BARS WITH A MINIMUM SPLICE LENGTH OF 48 BAR DIAMETERS. PROVIDE GALV. ANCHOR BOLTS SET IN CONCRETE FOR ANCHORING STEEL OR WOOD TO CONCRETE.

CAST-IN-PLACE CONCRETE

1. CONCRETE WORK SHALL CONFORM TO ACI 318 AND CRSI STANDARDS.

2. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM SPECIFIED 28-DAY COMPRESSIVE STRENGTH:

   ALL CONCRETE SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS SPECIFIED.

   CLASS "A" CONCRETE SHALL BE USED FOR ALL WORK INCLUDED IN THIS CONTRACT, AND CLASS "AC" SHALL BE USED FOR PUMPING.

3. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE ENCASED IN CONCRETE AND FOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS.

4. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED EXCEPT THOSE SHOWN ON THE STRUCTURAL DRAWINGS.

5. DEFECTIVE AREAS IN CONCRETE INCLUDING, BUT NOT LIMITED TO, HONEY-COMBING, SPALLS, AND CRACKS WITH WIDTHS EXCEEDING 0.01 INCH SHALL BE REPAIRED. EXTENT OF DEFECTIVE AREA TO BE DETERMINED BY THE STRUCTURAL ENGINEER.

PROVIDE (1) SET OF CYLINDERS, (4) FROM EACH 50 CUBIC YARDS.

CLASS	MAX. WATER PER BAG OF CEMENT	MIN. CEMENT PER CUBIC YARD	MIN. COMPRESSIVE STRENGTH IN 28 DAYS	SLUMP RANGE
A	5.5	6.5	4,000 PSI	2"-4"
AC	6.0	8.0	4,000 PSI	5"-7"

FOUNDATION

1. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE BEARING PRESSURE OF 1,200 PSF AND TIMBER PILE SUPPORTED COLUMN FOOTINGS. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT FROM THOSE ASSUMED FOR DESIGN.

2. GEOTECHINCAL/INSPECTION AGENCY SHALL CERTIFY THE BEARING MEDIUM.

3. DENSIFY BUILDING AREAS AND A MINIMUM OF 5'-0" OUTSIDE THE BUILDING PERIMETER USING A VIBRATORY ROLLER.

4. SOIL COMPACTION - 100% STANDARD PROCTOR DENSITY. ALL FILL SHALL BE COMPACTED IN 8" LOOSE LIFTS. COMPACTION TESTING SHALL BE PERFORMED ON EACH LIFT. ALL REPORTS SHALL BE SUBMITTED TO THE ENGINEER.

5. BACKFILL SHALL BE A SAND CLAY GRANULAR MATERIAL WITH LESS THAN 30% PASSING THE #200 SIEVE AND A LIQUID LIMIT OF LESS THAN 25.

6. ALL CONCRETE MUST CURE FOR A MINIMUM OF 7 DAYS BEFORE ANY LOAD IS PLACED ON CONCRETE. INSTALL CURING COMPOUND ON ALL EXPOSED CONCRETE SURFACES. CONCRETE SHALL BE CURED WITH MEMBRANE 30% SOLIDS COMPOUND, SPRAY APPLIED.

7. PROVIDE (1) SET OF CYLINDERS, (4) FROM EACH 50 CUBIC YARDS.

8. FOR SITE PREPARATION SEE SOUTHERN EARTH SCIENCES, GEOTECHNICAL REPORT PROJECT #: M21-454.

PRE-ENGINEERED METAL BUILDING NOTES:

1. SEE ALSO SPECIFICATIONS PROVIDED BY ARCHITECT. WHERE SPECIFICATIONS CONFLICT OR ARE DUPLICATED THE MORE RESTRICTIVE OF THE ARCHITECTURAL OR ENGINEERING SPECS WILL GOVERN.

2. BUILDING DIMENSIONS SHALL BE AS SHOWN ON THE DRAWINGS AND SHALL BE DESIGNED AS FOLLOWS AND IN ACCORDANCE WITH THE 2018 BUILDING CODE:

   A. DEAD LOAD OF STRUCTURE

   B. WIND LOAD - 159 MPH (3 SECOND GUST) (RISK CATEGORY II) (EXPOSURE D)

   C. ROOF LIVE LOAD - 20 PSF

   D. COLLATERAL LOAD = 8 PSF

   E. MAJOR STRUCTURAL COMPONENTS, INCLUDING RIGID FRAMES, BEAMS AND COLUMN WHICH SUPPORT A TRIBUTARY ROOF AREA GREATER THAN 600 SQUARE FEET SHALL BE DESIGNED ON THE BASIS OF A REDUCED LIVE LOAD IN ACCORDANCE WITH THE APPLICABLE CODE.

   F. BUILDING SHALL BE CERTIFIED BY BUILDING MANUFACTURER FOR 159 MPH WIND LOAD.

3. DEFLECTIONS SHALL BE LIMITED AS FOLLOWS:

PRIMARY FRAMING	L/360 FOR LIVE LOAD
WIND BEAM	H/240 FOR WIND LOAD
SECONDARY FRAMING	L/360 FOR ROOF DEAD LOAD +ROOF LIVE LOAD.

4. THE ROOF SHALL BE 24 GAUGE STANDING SEAM GALVALUME.

5. ALL ROOF PANEL FASTENERS SHALL BE "EXTENDED LIFE" WITH EITHER A ZINC/ALUMINUM/MANGANESE ALLOY CASTING OR A 302 STAINLESS STEEL CAP OVER THE CARBON STEEL HEAD AND STANDARD SEALING WASHER.

6. BUILDING TRIM SHALL BE IN ACCORDANCE WITH BUILDING MANUFACTURERS STANDARD. COLOR OF TRIM SHALL BE CHOSEN BY OWNER.

7. ALL STRUCTURAL STEEL SHALL RECEIVE A SHOP COAT OF BUILDING MANUFACTURER'S STANDARD SHOP PAINTING SYSTEM.

8. THE BUILDING SHALL BE INSULATED WITH BUILDING MANUFACTURER'S STANDARD VINYL BACKED INSULATION AS FOLLOWS:

ROOF:	R19 VINYL BACKED ROLL INSULATION
WALLS:	R10 VINYL BACKED ROLL INSULATION

8. ALL ANCHOR BOLT SIZES AND LOCATIONS SHALL BE AS PER BUILDING MANUFACTURER'S CERTIFIED DRAWINGS.

9. WIND BRACING IN ROOF AND WALLS SHALL BE PROVIDED USING ROD TYPE X-BRACING OR WIND FRAMES.

10. GUTTERS AND DOWNSPOUTS SHALL BE DESIGNED FOR THE ABOVE WIND LOAD AND FASTENED AS REQUIRED. GUTTERS AND DOWNSPOUTS SHALL BE DESIGNED FOR A MINIMUM 25 YEAR RAINFALL EVENT.

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A	ISSUED FOR BID	08/10/22	JWM	GDEC

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STRUCTURAL STEEL GENERAL NOTES

REFERENCE SPECIFICATIONS

1. STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS

2. STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" (1989) AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (1992).

3. HIGH STRENGTH BOLTING SHALL BE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS OR A490 BOLTS" (1994).

4. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARD D1.1, LATEST EDITION.

MATERIALS

8. STRUCTURAL STEEL "W", "WT" AND "S" SHAPES SHALL CONFORM TO ASTM A992, GRADE 50. ALL CHANNELS, ANGLES AND PLATES SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.

9. HIGH STRENGTH BOLTS, NUTS AND HARDENED WASHERS SHALL CONFORM TO ASTM A325, ASTM A563 DH, AND ASTM F436 RESPECTIVELY. MACHINE BOLTS AND NUTS SHALL CONFORM TO ASTM A307, AND PLAIN WASHERS SHALL CONFORM TO ANSI B18.22.1. BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED.

10. WELDING ELECTRODES USED FOR FIELD CONNECTIONS SHALL CONFORM TO AWS A5.1, CLASS E70XX UNLESS NOTED OTHERWISE ON THE DRAWINGS. WELDING ELECTRODES USED FOR SHOP CONNECTIONS SHALL CONFORM TO AWS A5.1 WITH A MINIMUM ELECTRODE TENSILE STRENGTH OF 70 KSI, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

FABRICATION AND ERECTION

1. NO TEMPORARY ERECTION BOLTS OTHER THAN HIGH STRENGTH BOLTS SHALL BE USED DURING ERECTION OF THE MEMBERS REQUIRING HIGH STRENGTH BOLTS.

2. WHEN CONNECTIONS REQUIRE FIELD PREPARATION OF BOLT HOLES, THE HOLES SHALL BE DRILLED OR PUNCHED, AND THE DIAMETER OF THE BOLT HOLES SHALL BE $\frac{1}{16}$ INCH GREATER THAN THE NOMINAL BOLT DIAMETER.

3. FIELD CORRECTING OF FABRICATED STEEL BY GAS CUTTING SHALL NOT BE PERMITTED ON MAJOR STRUCTURAL FRAMING MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

4. ALL ANGLE AND STRUCTURAL TEE BRACING SHALL HAVE $\frac{1}{16}$ INCH DRAW PER 10 FEET OF LENGTH. MAXIMUM DRAW SHALL BE $\frac{3}{16}$ INCH AND NO DEDUCTION SHALL BE MADE FOR LENGTHS LESS THAN 10 FEET.

5. FILLET WELD SIZES, IF NOT CALLED OUT ON THE DRAWINGS, SHALL BE $\frac{3}{16}$ INCH MINIMUM UNLESS TABLE J2.4 OF AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" REQUIRES A LARGER SIZE.

6. SLIP CRITICAL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE INSTALLED AND TIGHTENED THROUGH THE USE OF "TURN-OF-THE-NUT" TIGHTENING AS PROVIDED IN THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. ALL NON-SLIP CRITICAL BOLTS MAY BE TIGHTENED TO A "SNUG-TIGHT" CONDITION AS DEFINED BY AISC.

7. THE CONTRACTOR SHALL NOT CUT OR ALTER STRUCTURAL MEMBERS WITHOUT THE APPROVAL OF THE ENGINEER.

8. ERECTOR SHALL PROVIDE ALL TEMPORARY SHORING AND BRACING NEEDED FOR STABILITY UNTIL STRUCTURE IS COMPLETE.

9. PAINTED SURFACES THAT HAVE BEEN DAMAGED BY WELDING, CUTTING, BURNING, SHEARING OR OTHER DAMAGE INCURRED DURING TRANSIT OR ERECTION SHALL BE REPAIRED TO PROVIDE A FINISH IN ACCORDANCE WITH SPECIFICATIONS.

CONNECTIONS

1. BOLTED CONNECTIONS FOR SECONDARY STRUCTURAL MEMBERS (PURLINS, GIRTS, STAIR FRAMING, STAIR BRACING, TOE PLATE, HANDRAIL, LADDERS, ETC) SHALL BE BOLTED WITH HIGH STRENGTH BOLTS CONFORMING TO ASTM A325, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

2. WHEN CONNECTION DETAILS ARE NOT SHOWN ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC SPECIFICATIONS.

3. HIGH STRENGTH BOLT SIZES SHALL BE $\frac{3}{4}$ INCH DIAMETER (UNO) EXCEPT THAT TOE PLATES, HANDRAIL AND LADDERS SHALL BE BOLTED WITH $\frac{5}{8}$ INCH DIAMETER BOLTS.

4. FIELD CONNECTIONS SHALL BE MADE WITH GALVANIZED ASTM-A325 HIGH STRENGTH BOLTS, BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED FROM SHEAR PLANE. CONNECTIONS SHALL BE MADE WITH $\frac{3}{4}$" DIA. BOLTS UNLESS OTHERWISE NOTED.

5. ALL SHOP CONNECTIONS SHALL BE WELDED. BEAM CONNECTIONS SHALL USE TABLE III, CASE 1 WELD A, WITH TABLE II BOLTED CONNECTIONS. WELDING SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS AND AWS D1.1 STRUCTURAL WELDING CODE USING E70XX ELECTRODES.

6. MINIMUM NUMBER OF BOLTS IN CONNECTIONS NOT OTHERWISE DETAILED.
   DIAGONAL ANGLE BRACING – 3
   OTHER BRACING – TO DEVELOP 50% OF MEMBER STRENGTH
   BEAMS (WF & CHANNEL) – MAXIMUM NO. MEMBER WILL ACCOMMODATE.

7. ALL WELDED JOINTS SHALL BE WELDED CONTINUOUSLY. MINIMUM WELD SIZE SHALL BE $\frac{1}{4}$" FILLET.

8. ALL ANCHOR BOLTS SHALL BE GALVANIZED.

DETAILS

1. HOLES FOR $\frac{3}{4}$" BOLTS SHALL BE $\frac{13}{16}$" DIA. AND FOR $\frac{7}{8}$" BOLTS SHALL BE $\frac{15}{16}$" DIA. UNLESS NOTED OTHERWISE.

2. BRACING MEMBERS MEETING AT A POINT SHALL HAVE THEIR GRAVITY AXIS MEETING AT ONE POINT IF PRACTICABLE. IF NOT, PROVISIONS SHALL BE MADE FOR BENDING STRESSES DUE TO ECCENTRICITY.

3. CLIP ANGLES AND GUSSET PLATES SHALL BE $\frac{3}{8}$" THICK UNLESS NOTED OTHERWISE.

4. COLUMN BASES AND SPLICED ENDS SHALL BE MILLED OR SAW CUT TO PROVIDE FULL BEARING.

5. BRACING: ALL RECESSED DIMENSIONS (i.e. -6, -8 ETC.) ARE NOMINAL DIMENSIONS FOR MEMBER CLEARANCE ONLY. THE FABRICATOR AND DETAILER SHALL PROVIDE FOR CLEARANCE AT BOLTS, PLATES, AND ANY OTHER INTERFERENCES.

COATINGS

1. ALL STEEL SURFACES TO BE PAINTED SHALL BE BLAST CLEANED TO NEAR-WHITE CONDITION IN ACCORDANCE WITH SSPC-SP 10-82.

2. ALL STEEL SURFACES, EXCEPT MACHINED ITEMS, OR NOTED OTHERWISE, SHALL BE PAINTED. PAINTING SYSTEM AS FOLLOWS:

3. PRIME COAT – SHOP APPLIED. PRIME WITH ONE COAT OF INORGANIC ZINC WITH MIL. DFT. CARBO ZINC 11 AS MANUFACTURED BY CARBOLINE, OR AN APPROVED EQUAL.

4. INTERMEDIATE COAT – SHOP APPLIED. ONE COAT OF EPOXY PRIMER WITH 3 TO MIL. DFT. CARBOLINE 893

5. TOP COAT – SHOP APPLIED. TOP COAT IS ONE (1) COAT OF HIGH BUILD VINYL WITH 4 MIL. DFT. POLYCLAD 134HS AS MANUFACTURED BY CARBOLINE, OR AN APPROVED EQUAL.

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EARTHWORK SPECIFICATIONS

1. GENERAL REQUIREMENTS

1.1. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE SPECIFICATIONS STATED HEREIN.

2. SITE CLEARING

2.1. THE WORK INCLUDED UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL THE LABOR, TOOLS, EQUIPMENT, MATERIAL, SERVICES, AND SUPERVISION NECESSARY FOR THE REMOVAL, CLEARING, GRUBBING, AND DISPOSAL OF EXISTING UTILITY LINES, VEGETATION, FOUNDATIONS, PAVEMENT, MISCELLANEOUS STRUCTURES, DEBRIS, AND OTHER ITEMS WITHIN THE CONTRACT LIMITS SHOWN ON THE DRAWINGS AND SPECIFIED.

2.2. ANY CONCRETE, METAL, PAVEMENT, OR ANY OTHER ITEM, WHICH WILL NOT BECOME PART OF FINAL FACILITY, SHALL BE REMOVED.

2.3. THE REMOVAL AND DISPOSAL WORK REQUIRED UNDER THIS SECTION SHALL BE PERFORMED IN SUCH A MANNER SO AS NOT TO DAMAGE ANY EXISTING STRUCTURES THAT ARE TO REMAIN AND ANY DAMAGE THERETO CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.

2.4. REMOVED MATERIALS AS NOTED HEREIN OR AS MAY BE DESIGNATED BY THE ENGINEER SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE NEATLY STOCKPILED AS DIRECTED. MATERIAL SPECIFIED TO BE DISPOSED OF SHALL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE DISPOSED OF OFF OWNER'S PROPERTY. CARE SHALL BE TAKEN TO AVOID DROPPING ANY REMOVED MATERIALS IN THE WATER AND ANY SUCH MATERIALS ENTERING THE WATER SHALL BE IMMEDIATELY REMOVED.

2.5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL NECESSARY DETAILS OF THE EXISTING CONSTRUCTION AS RELATIVE TO ITS EFFECTS ON HIS WORK.

2.6. EROSION CONTROL – SEE DWG. 4043-C5.

2.6.1. DURING THIS SITE CONSTRUCTION PROCESS AND UNTIL ALL SITE DRAINAGE IMPROVEMENTS ARE OPERATIONAL; THE CONTRACTOR SHALL MAINTAIN AN EROSION CONTROL SYSTEM SATISFACTORY TO THE ENGINEER, OWNER, AND ADEM. EROSION CONTROL SHALL CONSIST OF SILT FENCES, 10' WIDE SEDIMENT DITCH, SEDIMENT TRAPS AROUND INLETS, HAY WATTLES (IF ADDITIONAL BMPS ARE REQUIRED) TO PREVENT THE TRANSPORTATION OF SEDIMENTS IN STORM WATER RUNOFF TO THE SURFACE WATERS.

2.6.2. THE CONTRACTOR SHALL PROVIDE, ESTABLISH, MAINTAIN, AND INSTALL EROSION CONTROL AS REQUIRED BY THE OWNER, MOBILE COUNTY AND ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.

2.6.3. ALL EROSION CONTROL SHALL BE MAINTAINED AND INSPECTED WEEKLY BY THE ENGINEER (QCP) DURING THE CONTRACT PERIOD, AND UNTIL CONTRACT ACCEPTANCE. ALL DAILY WALK THROUGHS FOR TRASH BY CONTRACTOR.

2.6.3.1. THE CONTRACTOR SHALL EXAMINE THE SITE AND SITE CONDITIONS DAILY AND REPAIR AS REQUIRED.

2.6.3.2. ONCE THE WORK HAS BEGUN ON A SECTION IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL ALL EROSION DURING CONSTRUCTION. THIS MAY INCLUDE, BUT IS NOT LIMITED TO, SEEDING, SODDING, FENCES, BERMS, DIKES, DRAINS, NETTING, SAND BAGS, ETC., AS SPECIFIED HEREIN.

2.6.4. ALL PRACTICES AND MATERIALS SHALL CONFORM TO THE ALABAMA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION, AND ALABAMA HANDBOOK FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS, LATEST EDITION.

2.6.5. ALL MATERIALS SHALL COMPLY WITH THE PLANS AND SPECIFICATIONS. CERTAIN MATERIALS CAN BE SUBSTITUTED IF AUTHORIZED BY THE ENGINEER.

2.6.5.1. NO HAY BALES WILL BE USED.

2.6.5.2. SILT FENCES, TYPE "A" SHALL CONSIST OF A WOVEN WIRE FABRIC MOUNTED ON POSTS WITH A POLYMERIC FILTER FABRIC ATTACHED TO THE FENCE FABRIC. FILTER FABRIC SHALL BE A POLYMERIC FABRIC FORMED FROM A PLASTIC YARN OF A LONG CHAIN SYNTHETIC POLYMER COMPOSED OF AT LEAST 85% BY WEIGHT OF PROPYLENE ETHYLENE, AMIDE, ESTER, OR VINYLEDENECHLORIDE AND SHALL CONTAIN STABILIZERS TO MAKE THE FILAMENTS RESISTANT TO DETERIORATION FROM ULTRAVIOLET AND HEAT EXPOSURE FOR AT LEAST SIX MONTHS. FOR INSTALLATION, PLACE BOTTOM 8" OF FABRIC IN A 6" DEEP (MIN) TRENCH LAPPING TOWARD THE UPSLOPE SIDE. THEN IT SHALL BE BACKFILLED WITH COMPACTED SOIL. ALL SILT FENCING IS TO REMAIN IN PLACE UNTIL LANDSCAPING HAS BEEN COMPLETED AND SITE IS FULLY STABILIZED.

2.6.6. PERFORMANCE REQUIREMENTS

2.6.6.1. SAND BAGS SHALL BE SECURELY FASTENED WHEN PLACED. THE BAGS SHALL HAVE A THICKNESS OF APPROXIMATELY 6". SILT FENCES SHALL BE CONSTRUCTED AT LOCATIONS AS REQUIRED. FIELD SPLICES CAN BE MADE BY OVERLAPPING THE FABRIC A MINIMUM OF 3 FT. AND SECURELY FASTENING THE FABRIC TO THE WIRE FENCE. CONTRACTOR SHALL MAINTAIN THE FENCE UNTIL THE CONTRACT HAS BEEN ACCEPTED. IF THE FABRIC SHOULD BECOME DAMAGED AN ADDITIONAL LAYER OF FABRIC CAN BE ATTACHED WITH AT LEAST A 3 FT. OVERLAP.

2.6.6.2. TEMPORARY DRAINAGE SUMPS OR SEDIMENT BASINS CAN BE CONSTRUCTED NEAR THE ENDS OF DRAINAGE STRUCTURES OR DITCHES TO CONTROL SILTING. SUMPS SHALL BE CLEANED PERIODICALLY BY THE REMOVAL OF THE SILT TO KEEP THE SUMP FUNCTIONAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE SITE AND ALL ADJACENT SURFACE WATERS FROM ANY AND ALL EROSION. IF EROSION DOES OCCUR, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND PROVIDE ALL ADDITIONALLY NEEDED TOPSOIL AT THE CONTRACTOR'S EXPENSE.

2.7. MULCHING & GRASSING IS REQUIRED WITHIN 10 DAYS PRIOR TO COMPLETION OF GRADING.

2.7.1. ALL DISTURBED AREAS, NOT SPECIFICALLY DESIGNATED TO RECEIVE A STONE SURFACE OR IMPERVIOUS AREA, SHALL BE COVERED WITH 4" OF TOPSOIL IN ACCORDANCE WITH SECTION 650 OF THE ALDOT STANDARD SPECIFICATIONS. THE AREAS SHALL THEN BE PREPARED AND FERTILIZED IN ACCORDANCE WITH SECTION 651 OF THE ALDOT STANDARD SPECIFICATIONS. FERTILIZER, COMMERCIAL 8_8_8, SHALL BE PLACED AT THE RATE OF 0.75 TON/ACRE. THE AREAS SHALL BE GRASSED AND MULCHED IN ACCORDANCE WITH SECTIONS 652, 656, 657, OR 658. THE SEED MIX AND MULCH SHALL BE OF A TYPE COMPATIBLE WITH THE TIME OF YEAR OR PLACEMENT AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT.

2.7.2. THE AREAS TO BE GRASSED SHALL INCLUDE, BUT ARE NOT LIMITED TO, ALL OF THE DISTURBED AREAS IN THE CONSTRUCTION ZONES.

2.7.3. CONTRACTOR WILL BE REQUIRED TO REMOVE ALL SILT FENCES PRIOR TO SITE STABILIZATION.

3. SITE INFORMATION

3.1. SOIL REPORT – EARTHWORK INCLUDING EXCAVATION/FILL SHALL BE IN ACCORDANCE WITH SESI, GEOTECHNICAL REPORT, PROJECT NO. M21-454.

4. EXCAVATION

4.1. GENERAL.

4.1.1. THE TERM "EXCAVATION" USED HEREINAFTER IS DEFINED AS "UNCLASSIFIED EXCAVATION". EXCAVATION OF EVERY DESCRIPTION, REGARDLESS OF MATERIAL ENCOUNTERED WITHIN THE LIMITS OF THE PROJECT, SHALL BE PERFORMED TO THE LINES AND GRADES INDICATED OR SPECIFIED. SUITABLE EXCAVATED MATERIAL SHALL BE STOCKPILED OR TRANSPORTED TO AND PLACED IN FILL AREAS WITHIN THE LIMITS OF THE WORK. (DURING CONSTRUCTION, EXCAVATION AND FILLING SHALL BE PERFORMED IN A MANNER AND SEQUENCE THAT WILL PROVIDE DRAINAGE AT ALL TIMES.)

4.2. STOCKPILING.

4.2.1. GENERALLY, IT WILL BE NECESSARY TO STOCKPILE EXCAVATED MATERIALS PRIOR TO FINAL PLACEMENT OR DISPOSAL. SUITABLE MATERIALS SHALL BE KEPT SEGREGATED FROM UNSATISFACTORY MATERIALS AND CONTAINED BY SILT FENCING. ONCE EXCAVATED, ALL MATERIALS ARE TO BE TRUCKED OFF-SITE AND SHALL ONLY BE ON SITE LONG ENOUGH TO BE LOADED INTO TRUCK. SINCE THE ENTIRE PROJECT BOUNDARY IS CONTAINED WITH SILT FENCING, NO ADDITIONAL BMPS WILL BE PLACED AROUND THE STOCKPILING. ONCE MATERIAL IS IMPORTED OR EXCAVATED, THE MATERIAL WILL BE GRADED THROUGHOUT THE SITE OR HAULED-OFF SITE AS SOON AS POSSIBLE SO NO ADDITIONAL BMPS ARE REQUIRED.

4.3. STRUCTURES.

4.3.1. EXCAVATION FOR STRUCTURES SHALL BE MADE ACCURATELY TO THE LINES, GRADES, AND ELEVATIONS SHOWN OR AS DIRECTED. TRENCHES AND FOUNDATION PITS SHALL BE OF SUFFICIENT SIZE TO PERMIT THE PLACEMENT AND REMOVAL OF FORMS FOR THE FULL LENGTH AND WIDTH OF STRUCTURE FOOTINGS AND FOUNDATIONS AS SHOWN. EXCAVATION TO THE FINAL GRADE LEVEL SHALL NOT BE MADE UNTIL JUST BEFORE THE CONCRETE IS TO BE PLACED.

4.4. TRENCHES.

4.4.1. GENERAL.

4.4.1.1. PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCE ENCOUNTERED SO THAT PIPE CAN BE LAID TO THE ALIGNMENT AND DEPTH SHOWN ON THE DRAWINGS. BRACE AND SHORE ALL TRENCHES, WHERE REQUIRED, IN ACCORDANCE WITH THE SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR. MAKE ALL EXCAVATIONS BY OPEN CUT UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS.

4.4.2. WIDTH OF TRENCHES.

4.4.2.1. EXCAVATE TRENCHES SUFFICIENTLY WIDE TO ALLOW PROPER INSTALLATION OF PIPE, FITTINGS, AND OTHER MATERIALS AND NOT LESS THAN 12" CLEAR OF PIPE ON EITHER SIDE AT ANY POINT. DO NOT WIDEN TRENCHES BY SCRAPING OR LOOSENING MATERIALS FROM THE SIDES. WHERE SUPPORTS, SHEETING, AND BRACING ARE REQUIRED, TRENCH MAY BE OF EXTRA WIDTH TO PERMIT THE PLACING OF THE TRENCH SUPPORTING MATERIAL.

4.4.3. TRENCH EXCAVATION IN EARTH.

4.4.3.1. EARTH EXCAVATION INCLUDES ALL EXCAVATION OF WHATEVER SUBSTANCE ENCOUNTERED. IN LOCATIONS WHERE PIPE IS TO BE BEDDED IN EARTH EXCAVATED TRENCHES, FINE GRADE THE BOTTOM OF SUCH TRENCHES TO ALLOW FIRM BEARING FOR THE BOTTOM OF THE PIPE ON UNDISTURBED EARTH. WHERE ANY PART OF THE TRENCH HAS BEEN EXCAVATED BELOW THE GRADE OF THE PIPE, FILL THE PART EXCAVATED BELOW SUCH GRADE WITH PIPE BEDDING MATERIAL AND COMPACT AT THE CONTRACTOR'S EXPENSE.

5. BACKFILL

5.1. GENERAL.

5.1.1. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, USE SUITABLE MATERIAL FOR BACKFILL, WHICH WAS REMOVED IN THE COURSE OF MAKING THE CONSTRUCTION EXCAVATIONS.

5.2. MATERIAL.

5.2.1. APPROVED SELECTED MATERIALS AVAILABLE FROM THE EXCAVATIONS MAY BE USED FOR BACKFILLING AROUND STRUCTURES. OBTAIN MATERIAL NEEDED IN ADDITION TO THAT OF CONSTRUCTION EXCAVATIONS FROM APPROVED SITES OR OTHER APPROVED DEPOSITS. FURNISH ALL BORROW MATERIAL NEEDED FOR THE WORK. PLACE AND COMPACT ALL MATERIAL, WHETHER FROM THE EXCAVATION OR BORROW, TO MAKE A DENSE, STABLE FILL. USE FILL MATERIAL WHICH CONTAINS NO VEGETATION, MASSES OF ROOTS, INDIVIDUAL ROOTS OVER 18" LONG OR MORE THAN ½" IN DIAMETER, STONES OVER 4" IN DIAMETER, OR POROUS MATTER.

5.2.2. THE CONTRACTOR SHALL REPORT ALL QUANTITIES OF BACKFILL MATERIAL TO BRING SUB GRADE TO FINAL LEVEL. BORROW MATERIAL WILL BE USED ONLY WHEN AUTHORIZED OR DIRECTED BY THE ENGINEER.

5.2.3. SELECTION OF BORROW MATERIAL. BORROW MATERIAL SHALL BE A GOOD CLEAN MATERIAL WITH NOT MORE THAN 20% (BY WEIGHT) PASSING THE NO. 200 SIEVE. BORROW MATERIAL SHALL BE OBTAINED FROM APPROVED OFF_SITE SOURCES BY THE CONTRACTOR. SERVICE RECORDS OF THE SOURCE AND ANALYSIS OF THE MATERIAL BY A REPUTABLE LABORATORY SHALL BE SUBMITTED TO THE ENGINEER.

5.3. PLACING BACKFILL.

5.3.1. DO NOT PLACE BACKFILL AGAINST OR ON STRUCTURES UNTIL THEY HAVE ATTAINED SUFFICIENT STRENGTH TO SUPPORT THE LOADS (INCLUDING CONSTRUCTION LOADS) TO WHICH THEY WILL BE SUBJECTED WITHOUT DISTORTION, CRACKING, OR OTHER DAMAGE.

5.3.2. USE THE BEST OF THE EXCAVATED MATERIALS IN BACKFILLING WITHIN 2 FT. OF THE STRUCTURE. AVOID UNEQUAL SOIL PRESSURES BY DEPOSITING THE MATERIAL EVENLY AROUND THE STRUCTURE.

5.3.3. PLACE FILL AND BACKFILL IN LAYERS NOT MORE THAN 6" THICK, EXCEPT AS SPECIFIED OTHERWISE HEREIN, AND COMPACT EACH LAYER EVENLY TO THE SPECIFIED DENSITY. DO NOT BACKFILL AGAINST CONCRETE WITHOUT ENGINEER'S APPROVAL.

5.4. TRENCH BACKFILL

5.4.1. GENERAL.

5.4.1.1. UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, USE SUITABLE MATERIAL FOR BACKFILL, WHICH WAS REMOVED IN THE COURSE OF MAKING THE CONSTRUCTION EXCAVATIONS. START BACKFILLING AS SOON AS PRACTICABLE AFTER THE PIPES HAVE BEEN LAID OR THE STRUCTURES HAVE BEEN BUILT AND ARE STRUCTURALLY ADEQUATE TO SUPPORT THE LOADS, INCLUDING CONSTRUCTION LOADS, TO WHICH THEY WILL BE SUBJECTED, AND PROCEED UNTIL ITS COMPLETION. WITH THE EXCEPTION MENTIONED BELOW IN THIS PARAGRAPH, DO NOT BACKFILL TRENCHES AT PIPE JOINTS UNTIL AFTER THAT SECTION OF THE PIPELINE HAS SUCCESSFULLY PASSED ANY SPECIFIED TEST REQUIRED. SHOULD THE CONTRACTOR WISH TO MINIMIZE THE MAINTENANCE OF LIGHTS AND BARRICADES AND THE OBSTRUCTION OF TRAFFIC, HE MAY, AT HIS OWN RISK, BACKFILL THE ENTIRE TRENCH AS SOON AS PRACTICABLE AFTER INSTALLATION OF PIPE, AND THE RELATED STRUCTURES HAVE ACQUIRED A SUITABLE DEGREE OF STRENGTH, HE SHALL, HOWEVER, BE RESPONSIBLE FOR REMOVING AND LATER REPLACING SUCH BACKFILL, AT HIS OWN EXPENSE, SHOULD HE BE ORDERED TO DO SO IN ORDER TO LOCATE AND REPAIR OR REPLACE LEAKING OR DEFECTIVE JOINTS OR PIPE.

5.4.2. MATERIALS.

5.4.2.1. THE NATURE OF THE MATERIALS WILL GOVERN BOTH THEIR ACCEPTABILITY FOR BACKFILL AND THE METHODS BEST SUITED FOR THEIR PLACEMENT AND COMPACTION IN THE BACKFILL. BOTH ARE SUBJECT TO THE APPROVAL OF THE ENGINEER. PLACE NO STONE OR ROCK FRAGMENT LARGER THAN 4" IN GREATEST DIMENSION IN THE BACKFILL. DROP NO LARGE MASSES OF BACKFILL MATERIAL INTO THE TRENCH IN SUCH A MANNER AS TO ENDANGER THE PIPELINE. USE A TIMBER GRILLAGE TO BREAK THE FALL OF MATERIAL DROPPED FROM A HEIGHT OF MORE THAN 5 FEET. EXCLUDE PIECES OF BITUMINOUS PAVEMENT FROM THE BACKFILL UNLESS THEIR USE IS EXPRESSLY PERMITTED.

5.4.3. ZONE AROUND PIPE.

5.4.3.1. PLACE BEDDING MATERIAL TO THE LEVEL SHOWN ON THE DRAWINGS AND WORK MATERIAL CAREFULLY AROUND THE PIPE TO ENSURE THAT ALL VOIDS ARE FILLED. FOR BACKFILL UP TO A LEVEL OF 2 FT. OVER THE TOPS OF THE PIPE, USE ONLY SELECTED MATERIALS CONTAINING NO ROCKS, CLODS, OR ORGANIC MATERIALS. PLACE THE BACKFILL AND COMPACT THOROUGHLY UNDER THE PIPE HAUNCHES AND UP TO THE MID_LINE OF THE PIPE IN LAYERS NOT EXCEEDING 6" IN DEPTH. PLACE EACH LAYER AND TAMP CAREFULLY AND UNIFORMLY SO AS TO ELIMINATE THE POSSIBILITY OF LATERAL DISPLACEMENT. PLACE AND COMPACT THE REMAINDER OF THE ZONE AROUND THE PIPE AND TO A HEIGHT OF 1 FT. ABOVE THE PIPE IN LAYERS NOT EXCEEDING 6" AND COMPACT TO A MAXIMUM DENSITY OF AT LEAST 95% AS DETERMINED BY ASTM D1557 MODIFIED.

5.4.4. TAMPING.

5.4.4.1. DEPOSIT AND SPREAD BACKFILL MATERIALS IN UNIFORM, PARALLEL LAYERS NOT EXCEEDING 12" THICK BEFORE COMPACTION. TAMP EACH LAYER BEFORE THE NEXT LAYER IS PLACED TO OBTAIN A THOROUGHLY COMPACTED MASS. FURNISH AND USE, IF NECESSARY, AN ADEQUATE NUMBER OF POWER-DRIVEN TAMPERS, EACH WEIGHING AT LEAST 20 POUNDS, FOR THIS PURPOSE. TAKE CARE THAT THE MATERIAL CLOSE TO THE BANK, AS WELL AS IN ALL OTHER PORTIONS OF THE TRENCH, IS THOROUGHLY COMPACTED. WHEN THE TRENCH WIDTH AND THE DEPTH TO WHICH BACKFILL HAS BEEN PLACED ARE SUFFICIENT TO MAKE IT FEASIBLE, AND IT CAN BE DONE EFFECTIVELY AND WITHOUT DAMAGE TO THE PIPE, BACKFILL MAY, ON APPROVAL, BE COMPACTED BY THE USE OF SUITABLE ROLLERS, TRACTORS, OR SIMILAR POWERED EQUIPMENT INSTEAD OF BY TAMPING. FOR COMPACTION BY TAMPING (OR ROLLING), THE RATE AT WHICH BACKFILL MATERIAL IS DEPOSITED IN THE TRENCH SHALL NOT EXCEED THAT PERMITTED BY THE FACILITIES FOR ITS SPREADING, LEVELING, AND COMPACTING AS FURNISHED BY THE CONTRACTOR. WET THE MATERIAL BY SPRINKLING, IF NECESSARY, TO ENSURE PROPER COMPACTION BY TAMPING (OR ROLLING). PERFORM NO COMPACTION BY TAMPING (OR ROLLING) WHEN THE MATERIAL IS TOO WET FROM RAIN OR APPLIED WATER TO BE COMPACTED PROPERLY.

5.4.5. TRENCH COMPACTION.

5.4.5.1. COMPACT BACKFILL IN PIPE TRENCHES TO THE MAXIMUM DENSITY AS SHOWN ON THE DRAWINGS OR AS LISTED IN THE SOILS REPORT AND THESE SPECIFICATIONS WITH A MOISTURE CONTENT WITHIN THE RANGE OF VALUES OF MAXIMUM DENSITY AS INDICATED.

6. PREPARATION OF SUBGRADE

6.1. GROUND SURFACE ON WHICH FILL IS TO BE PLACED SHALL BE STRIPPED OF LIVE, DEAD, OR DECAYED VEGETATION, RUBBISH, DEBRIS, BOULDERS, AND OTHER UNSATISFACTORY MATERIAL; PLOWED, DISKED, OR OTHERWISE BROKEN UP; PULVERIZED; AND MOISTENED OR AERATED AS REQUIRED JUST PRIOR TO PLACEMENT OF FILL MATERIALS TO ASSURE ADEQUATE BOND BETWEEN FILL MATERIAL AND THE PREPARED GROUND SURFACE. THE EXPOSED GROUND SURFACE OF AREA GRADED TO ELEVATIONS AS NOTED ABOVE SHALL BE SCREENED AND GRATED TO CLEAN NATIVE SOIL MATERIAL.

6.2. SAND FILL REQUIRED TO ATTAIN DESIGN ELEVATIONS AND PARTICLE SIZE MIX SHALL BE PROVIDED AND INSTALLED.

7. SUBBASE PREPARATION

7.1. CONSTRUCTION.

7.1.1. THE FINAL LIFT FOR SUB GRADE SHALL NOT BE MORE THAN 6" IN DEPTH. SUB GRADE SHALL BE SHAPED TO LINE, GRADE AND CROSS SECTION, AND COMPACTED AS SPECIFIED. THIS OPERATION SHALL INCLUDE PLOWING, DISKING, AND ANY MOISTENING OR AERATING REQUIRED TO OBTAIN PROPER COMPACTION. SOFT OR OTHERWISE UNSATISFACTORY MATERIAL SHALL BE REMOVED AND REPLACED WITH SATISFACTORY EXCAVATED MATERIAL OR OTHER APPROVED MATERIAL AS DIRECTED. AFTER ROLLING, THE SURFACE OF THE SUB BASES FOR BASE SHALL NOT SHOW DEVIATION GREATER THAN ¼" WHEN TESTED WITH A 10' STRAIGHTEDGE APPLIED BOTH PARALLEL AND AT RIGHT ANGLES TO THE CENTERLINE OF THE AREA. THE ELEVATION OF THE FINISHED SUB BASE SHALL NOT VARY MORE THAN 0.05 FT. FROM THE ESTABLISHED GRADE AND APPROVED CROSS SECTION.

7.2. COMPACTION.

7.2.1. COMPACTION SHALL BE ACCOMPLISHED BY SHEEPS FOOT ROLLERS, PNEUMATIC TIRED ROLLERS, STEEL WHEELED ROLLERS, VIBRATORY COMPACTORS, OR OTHER APPROVED EQUIPMENT.

8. FINISHING

8.1. THE SURFACE OF ALL EXCAVATIONS, FILLS, AND SUB GRADES SHALL BE FINISHED TO A REASONABLY SMOOTH AND COMPACT SURFACE SUBSTANTIALLY IN ACCORDANCE WITH THE LINES, GRADES, AND CROSS SECTIONS OR ELEVATIONS SHOWN. THE DEGREE OF FINISH FOR ALL GRADED AREAS SHALL BE WITHIN 0.1 FT. OF THE GRADES AND ELEVATIONS INDICATED.

9. SUBBASE AND FILL PROTECTION

9.1. DURING CONSTRUCTION, FILLS AND EXCAVATIONS SHALL BE KEPT SHAPED AND DRAINED. DITCHES AND DRAINS ALONG SUB GRADE SHALL BE MAINTAINED IN SUCH A MANNER AS TO DRAIN EFFECTIVELY AT ALL TIMES. THE FINISHED SUB GRADE SHALL NOT BE DISTURBED BY TRAFFIC OR OTHER OPERATION AND SHALL BE PROTECTED AND MAINTAINED BY THE CONTRACTOR IN A SATISFACTORY CONDITION UNTIL BASE COURSE IS PLACED. THE STORAGE OR STOCKPILING OF MATERIALS ON THE FINISHED SUB GRADE WILL NOT BE PERMITTED. NO BASE COURSE SHALL BE LAID UNTIL THE SUB GRADE HAS BEEN CHECKED AND APPROVED, AND IN NO CASE SHALL BASE BE PLACED ON A MUDDY, SPONGY, OR FROZEN SUB GRADE.

10. DISPOSAL OF UNSUITABLE OR EXCESS MATERIAL

10.1. GENERAL.

10.1.1. THE CONTRACTOR SHALL DISPOSE OF ALL UNSUITABLE OR EXCESS MATERIALS RESULTING FROM THE EXCAVATION THAT ARE NOT PERMITTED OR REQUIRED IN THE FILLS OR REQUIRED IN OTHER FEATURES OF THE WORK. MATERIALS SHALL BE DISPOSED OF OFF THE OWNER'S PROPERTY.

11. MEASUREMENT

11.1. THE UNIT OF MEASUREMENT FOR MATERIAL WILL BE THE CUBIC YARD FOR ALL "CHANGE ORDER" YARDAGE. "CHANGE ORDER" YARDAGE OF MATERIAL TO BE PAID FOR WILL BE THE NUMBER OF CUBIC YARDS OF MATERIAL BASED UPON TRUCK BED MEASUREMENT AND PAYMENT BY LOAD TICKETS.

11.2. THE UNIT OF MEASUREMENT FOR EXCESS MATERIAL WILL BE THE CUBIC YARD. YARDAGE WILL BE THE NUMBER OF CUBIC YARDS BASED UPON TRUCK BED MEASUREMENT.

12. SUBSIDIARY OBLIGATIONS

12.1. GENERAL.

12.1.1. THE FOLLOWING OPERATIONS AND CONSTRUCTION WILL NOT BE MEASURED FOR DIRECT PAYMENT, BUT WILL BE CONSIDERED SUBSIDIARY OBLIGATIONS OF THE CONTRACTOR, AND WILL BE COVERED UNDER THE CONTRACT PRICES FOR THE STRUCTURES INVOLVED OR UNDER THE UNIT PRICES PER YARD AS SPECIFIED BELOW.

12.2. EXCAVATION.

12.2.1. EXCAVATION FOR DRAINAGE STRUCTURES, FOUNDATIONS, AND OPERATIONS REQUIRED IN CONNECTION THEREWITH, INCLUDING BRACING OR SHEETING, DRAINAGE, AND PUMPING, WILL BE COVERED UNDER THE CONTRACT LUMP SUM PRICE FOR DRAINAGE STRUCTURES OR THE SUBJECT STRUCTURE.

12.3. BACKFILL.

12.3.1. BACKFILL FOR DRAINAGE STRUCTURES AND OTHER STRUCTURES BELOW GRADE, INCLUDING ATTENDANT OPERATIONS, WILL BE COVERED UNDER THE CONTRACT LUMP SUM PRICE FOR DRAINAGE STRUCTURES OR THE SUBJECT STRUCTURE.

12.4. FILL.

12.4.1. FILL CONSTRUCTION INCLUDING THE PREPARATION OF GROUND SURFACE FOR PLACEMENT OF FILL UP TO THE FINISHED SUB GRADE ELEVATION WILL BE COVERED UNDER THE CONTRACT LUMP SUM PRICE FOR EXCAVATION OR BORROW.

12.5. SUB GRADE PREPARATION.

12.5.1. SUB GRADE PREPARATION, INCLUDING DRESSING, SHAPING, WETTING, AERATING, AND COMPACTING OF THE SUB GRADE, WILL BE COVERED UNDER THE CONTRACT LUMP SUM PRICE FOR EXCAVATION OR BORROW.

12.6. WATER

12.6.1. WATER USED FOR SPRINKLING AND WETTING MATERIALS DURING CONSTRUCTION IN CONNECTION WITH COMPACTION OF FILLS, UNLESS OTHERWISE SPECIFIED, WILL BE COVERED UNDER THE CONTRACT LUMP SUM PRICE FOR EXCAVATION OR BORROW.

12.7. DISPOSAL

12.7.1. DISPOSAL OF UNSUITABLE MATERIAL SHALL BE MOVED AND STORED AS DIRECTED BY THE OWNER.

12.8. DEWATERING

12.8.1. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TYPE OF DEWATERING, IF REQUIRED.

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REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUED FOR BID	08/10/22	JWM	GDEC

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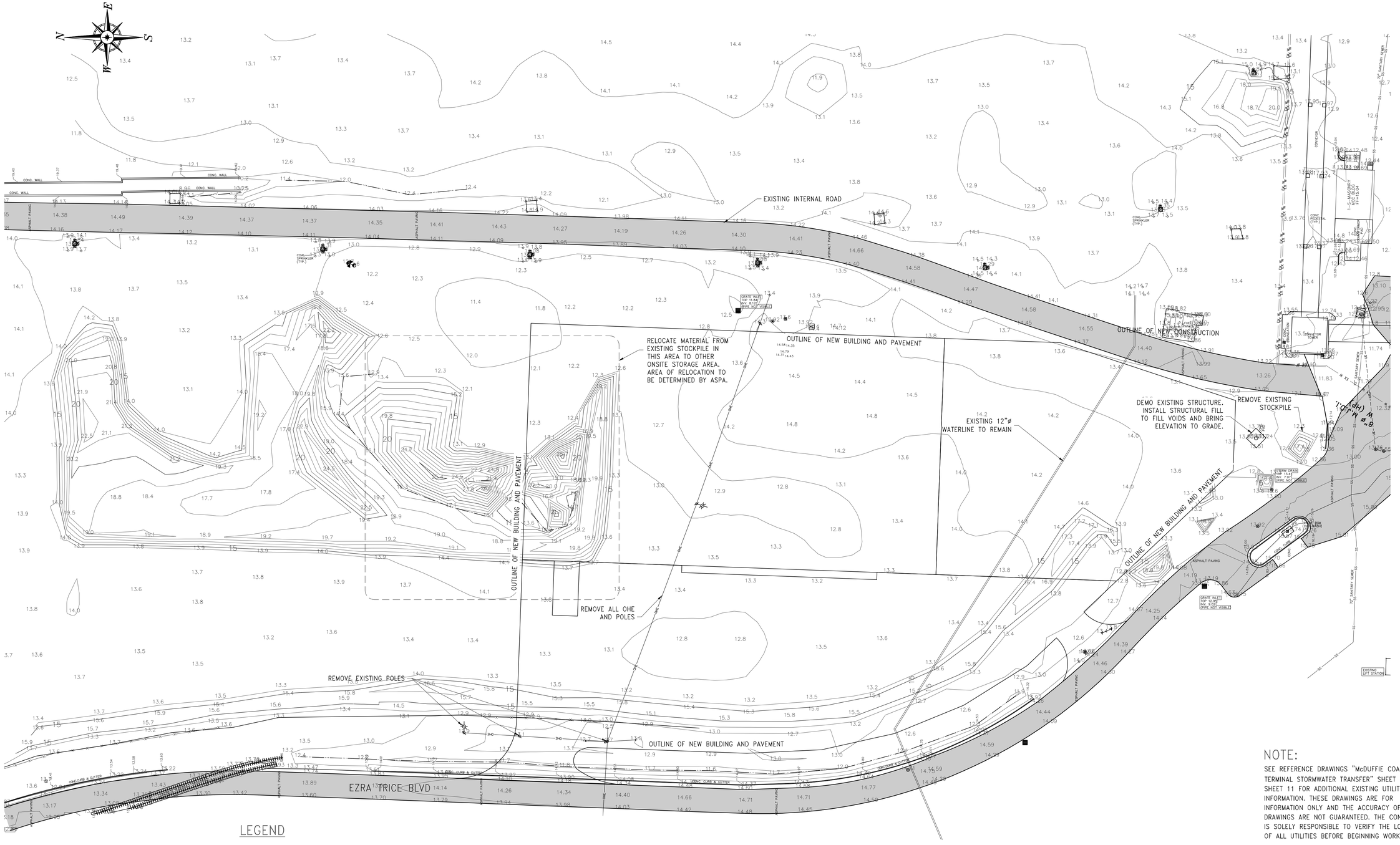
13 Thrash Rd.
LaGrange, GA 30241
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
GENERAL NOTES

SCALE	DRAWN BY	DATE	SHEET	REV.
N/A	JWM	12/22/21	— OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	WBS	12/22/21	4043-G3	

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LEGEND

EXISTING PAVED ROAD

EXISTING SITE PLAN

1"=40'

NOTE:

SEE REFERENCE DRAWINGS "McDUFFIE COAL TERMINAL STORMWATER TRANSFER" SHEET 4 AND SHEET 11 FOR ADDITIONAL EXISTING UTILITY INFORMATION. THESE DRAWINGS ARE FOR INFORMATION ONLY AND THE ACCURACY OF THESE DRAWINGS ARE NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

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REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	08/10/22	JWM	GDEC

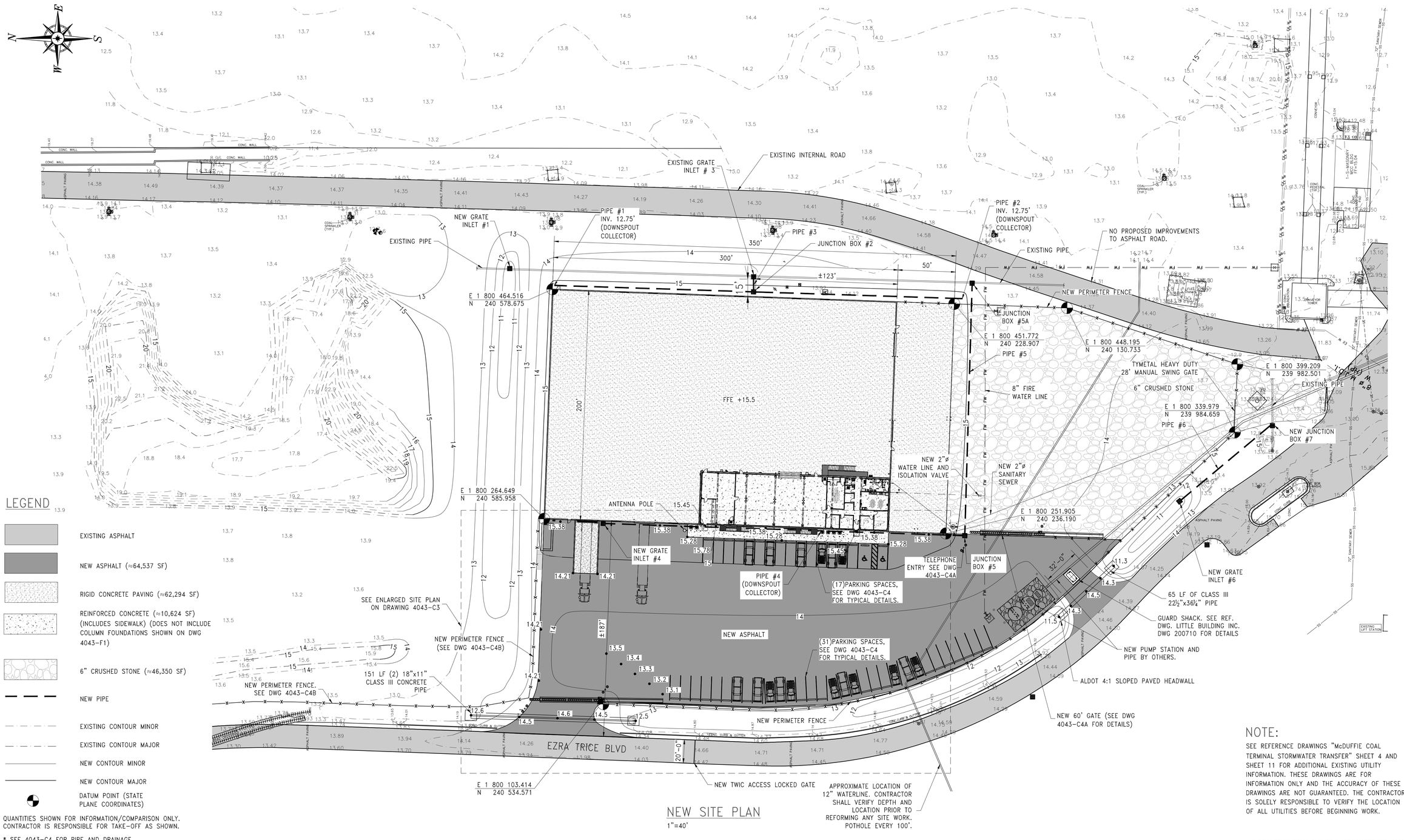
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
EXISTING SITE PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	12/01/21	— OF —	A
JOB NO. 4043	CHECKED BY WBS	DATE 12/01/21	DRAWING NUMBER 4043-C1	

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NEW SITE PLAN

1"=40'

LEGEND

- EXISTING ASPHALT
- NEW ASPHALT (≈64,537 SF)
- RIGID CONCRETE PAVING (≈62,294 SF)
- REINFORCED CONCRETE (≈10,624 SF) (INCLUDES SIDEWALK) (DOES NOT INCLUDE COLUMN FOUNDATIONS SHOWN ON DWG 4043-F1)
- 6" CRUSHED STONE (≈46,350 SF)
- NEW PIPE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- NEW CONTOUR MINOR
- NEW CONTOUR MAJOR
- DATUM POINT (STATE PLANE COORDINATES)

QUANTITIES SHOWN FOR INFORMATION/COMPARISON ONLY. CONTRACTOR IS RESPONSIBLE FOR TAKE-OFF AS SHOWN.

* SEE 4043-C4 FOR PIPE AND DRAINAGE STRUCTURE DETAILS.

NOTE:

SEE REFERENCE DRAWINGS "McDUFFIE COAL TERMINAL STORMWATER TRANSFER" SHEET 4 AND SHEET 11 FOR ADDITIONAL EXISTING UTILITY INFORMATION. THESE DRAWINGS ARE FOR INFORMATION ONLY AND THE ACCURACY OF THESE DRAWINGS ARE NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

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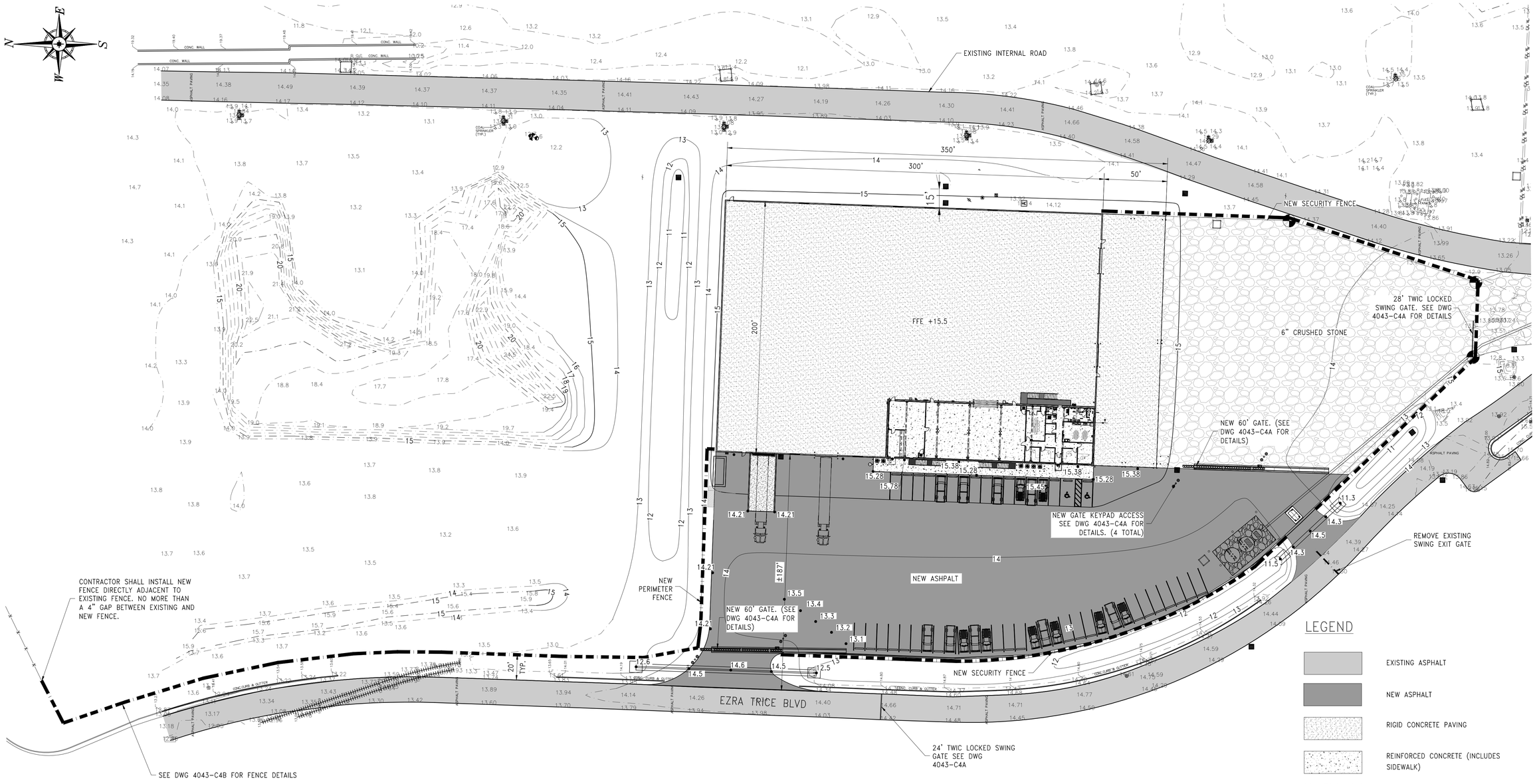
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL ASPA

TITLE
NEW SITE PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	12/01/21	_ OF _	A
JOB NO. 4043	CHECKED BY WBS	DATE 12/01/21	DRAWING NUMBER 4043-C2	

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SECURITY PERIMETER PLAN

1"=40'

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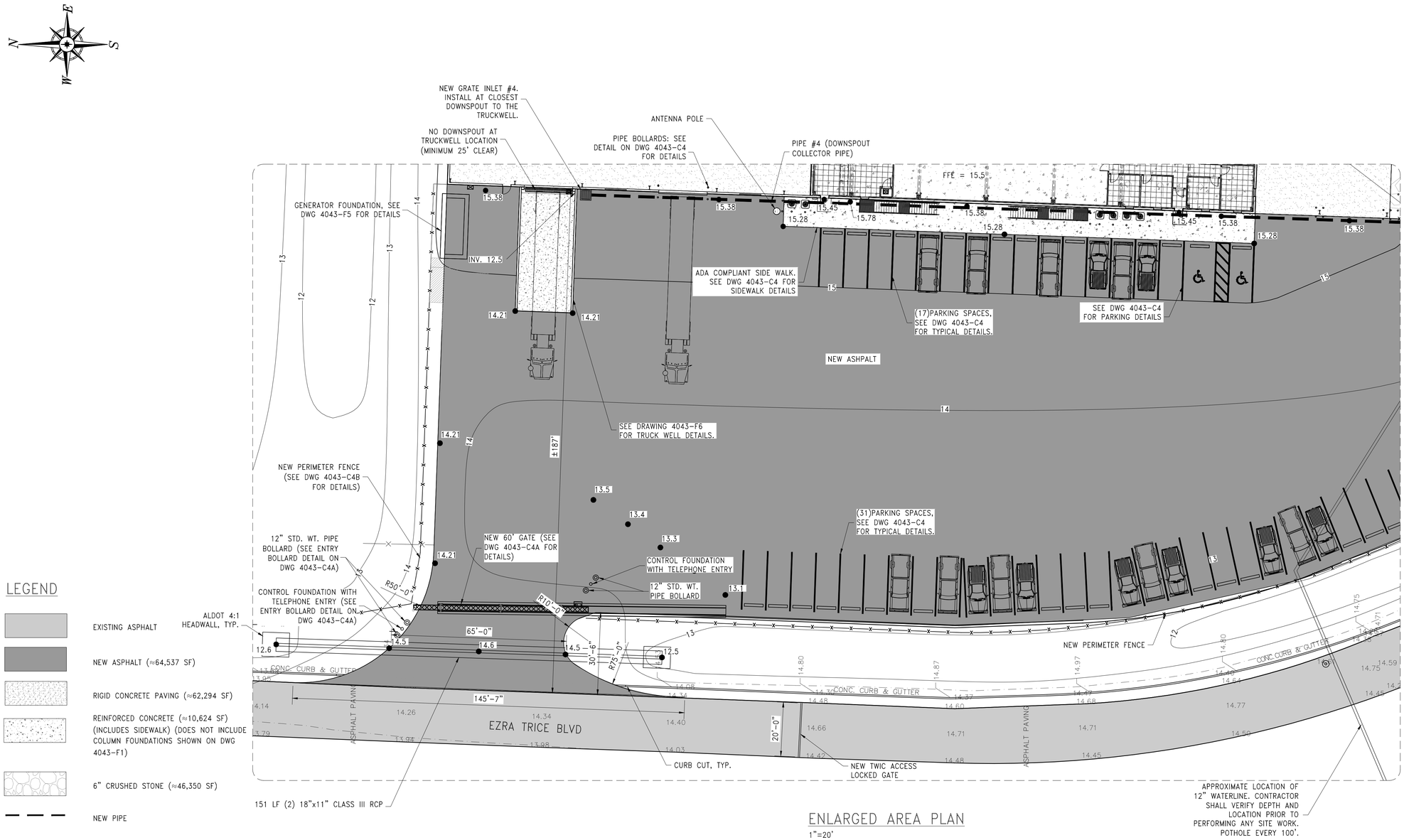
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
SECURITY PERIMETER PLAN

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ENLARGED AREA PLAN

1"=20'

LEGEND

- EXISTING ASPHALT
- NEW ASPHALT (≈64,537 SF)
- RIGID CONCRETE PAVING (≈62,294 SF)
- REINFORCED CONCRETE (≈10,624 SF) (INCLUDES SIDEWALK) (DOES NOT INCLUDE COLUMN FOUNDATIONS SHOWN ON DWG 4043-F1)
- 6" CRUSHED STONE (≈46,350 SF)
- NEW PIPE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- NEW CONTOUR MINOR
- NEW CONTOUR MAJOR
- DATUM POINT (STATE PLANE COORDINATES)

QUANTITIES SHOWN FOR INFORMATION/COMPARISON ONLY. CONTRACTOR IS RESPONSIBLE FOR TAKE-OFF AS SHOWN.

* SEE 4043-C4 FOR PIPE AND DRAINAGE STRUCTURE DETAILS.

NOTE:

SEE REFERENCE DRAWINGS "McDUFFIE COAL TERMINAL STORMWATER TRANSFER" SHEET 4 AND SHEET 11 FOR ADDITIONAL EXISTING UTILITY INFORMATION. THESE DRAWINGS ARE FOR INFORMATION ONLY AND THE ACCURACY OF THESE DRAWINGS ARE NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

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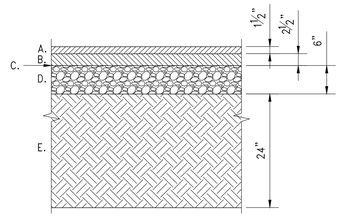
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL ASPA

TITLE
ENLARGED AREA PLAN

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HEAVY DUTY ASPHALT DETAIL

N.T.S.

GENERAL NOTES:

A. 424A-360: SUPERPAVE BITUMINOUS CONCRETE WEARING SURFACE LAYER, WIDENING, 1/2" MAX AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROXIMATELY 165 # / SY OR 1.5 INCHES)

B. 424B-651: SUPERPAVE BITUMINOUS CONCRETE UPPER BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX, ESAL RANGE C/D (APPROXIMATELY 275 # / SY OR 2.5 INCHES)

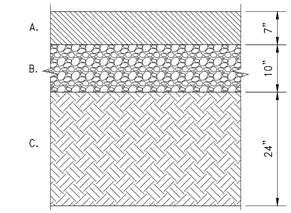
C. 401A-000: BITUMINOUS TREATMENT A

D. 301A-020: CRUSHED AGGREGATE BASE COURSE, TYPE B, PLANT MIXED, 6"

E. 24 INCHES IMPROVED SUBGRADE – IMPORTED SELECT STRUCTURAL FILL COMPACTED IN 12-INCH MAXIMUM LIFT THICKNESS TO 98% ASTM 698

NOTES:

1. 301A-020 SHOULD EXTEND SIX (6) INCHES BEYOND THE OVERLYING LOWER BINDER LAYER
2. 230A-000 SHOULD EXTEND TWO (2) FEET BEYOND THE OVERLYING CRUSHED AGGREGATE BASE LAYER
3. ALL MATERIALS SHOULD CONFORM AND BE PLACED AS OUTLINED THE CURRENT EDITION OF THE ALDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION MANUAL.



RIGID CONCRETE PAVING DETAIL

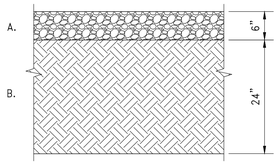
N.T.S.

GENERAL NOTES:

A. 7 INCHES UNREINFORCED PORTLAND CEMENT CONCRETE PAVING – MINIMUM 4,000 PSI COMPRESSIVE STRENGTH AND 650 PSF FLEXURAL STRENGTH.

B. 10 INCHES ALDOT 301A CRUSHED AGGREGATE BASE, TYPE B, PLANT MIXED.

C. 24 INCHES IMPROVED SUBGRADE – IMPORTED SELECT STRUCTURAL FILL COMPACTED IN 12-INCH MAXIMUM LIFT THICKNESS TO 98% ASTM 698



CRUSHED STONE DETAIL

N.T.S.

GENERAL NOTES:

A. 6 INCHES 301A-020: CRUSHED AGGREGATE BASE, TYPE B, PLANT MIXED

B. 24 INCHES IMPROVED SUBGRADE – IMPORTED SELECT STRUCTURAL FILL COMPACTED IN 12-INCH MAXIMUM LIFT THICKNESS TO 98% ASTM 698

DRAINAGE STRUCTURE TABLE

STRUCTURE I.D.	STATUS	TYPE	TOP TYPE	TOP ELEVATION	INV. DIRECTION	PIPING INV.	STATE PLANE COORDINATES
1	NEW	CONCRETE	EJ V5636	10.5'	NORTH SOUTH	– –	FIELD LOCATE
2	NEW	CONCRETE	EJ 1810	15'	NORTH SOUTH EAST	10.0' 10.0' 9.75'	E: 1800462.2162 N: 240403.6444
3	EXISTING	CONCRETE	–	11.84'	NORTH (EXISTING) SOUTH (EXISTING) WEST	7.92' 6.42' 8.25'	
4	NEW	NYLOPLAST 30"	GRATE INLET	15.5	SOUTH	12.5'	
5	NEW	CONCRETE	EJ 1810	15.3	NORTH EAST	10.02' 10.02'	E: 1800250.0525 N: 240219.7687
5A	NEW	CONCRETE	EJ V5636	≈ 14.0	NORTH SOUTH WEST	– – *	FIELD LOCATE
6	NEW	CONCRETE	EJ V5636	10.5	NORTH SOUTH	8.5' 8.5'	E: 1800462.2126 N: 240032.9106
7	NEW	CONCRETE	EJ 1810	≈ 13.5	NORTH WEST EAST	* – –	FIELD LOCATE

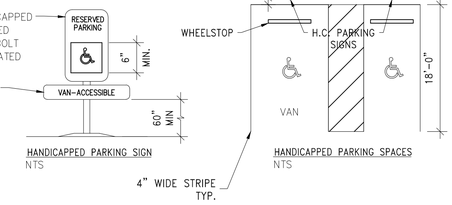
* CONTRACTOR SHALL POTHOLE JUNCTION BOX LOCATION TO VERIFY PIPE ELEVATION AND CONSULT WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR SHALL MATCH THE CROWN OF THE NEW PIPE TO THE CROWN OF THE EXISTING PIPE.

PIPE TABLE

PIPE I.D.	STRUCTURE ID FROM	TO	DIAMETER	TYPE	LENGTH	SLOPE
1	–	2	15"	HP STORM	±173'	± 1.6%
2	–	2	15"	HP STORM	±182'	± 1.5%
3	2	3	18"	HP STORM	±13'	± 11.5%
4	4	5	18"ø	HP STORM	±315'	± 0.8%
5	5	5A	18"ø	CLASS III RCP	±220'	*
6	6	7	18"x28½"	CLASS III RCP	±101'	*

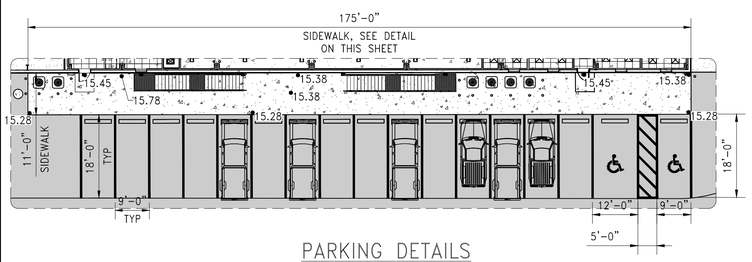
* CONTRACTOR SHALL POTHOLE JUNCTION BOX LOCATION TO VERIFY PIPE ELEVATION AND CONSULT WITH ENGINEER PRIOR TO INSTALLATION. CONTRACTOR SHALL MATCH THE CROWN OF THE NEW PIPE TO THE CROWN OF THE EXISTING PIPE.

1. PARKING SPACES & ACCESS AISLES SLOPE & CROSS SLOPE 1:48 MAX.
2. ACCESS AISLE 60" MIN.
3. ACCESSIBLE CAR PARKING SPACES 96" MIN. FROM CENTERLINE OF MARKING.
4. ACCESSIBLE VAN PARKING SPACES 132" MIN. FROM CENTERLINE OF MARKING EXCEPT WHERE 96" ACCESS AISLE IS PROVIDED & 96" VAN PARKING SPACE.
5. PROVIDE WHEEL STOP TO PREVENT VEHICLE OVERHANGS FROM REDUCING THE CLEAR WIDTH OF ACCESSIBLE ROUTES.



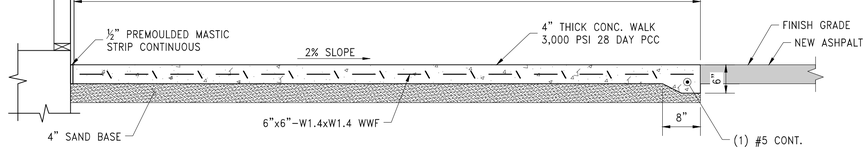
PARKING STALL DETAIL

N.T.S.



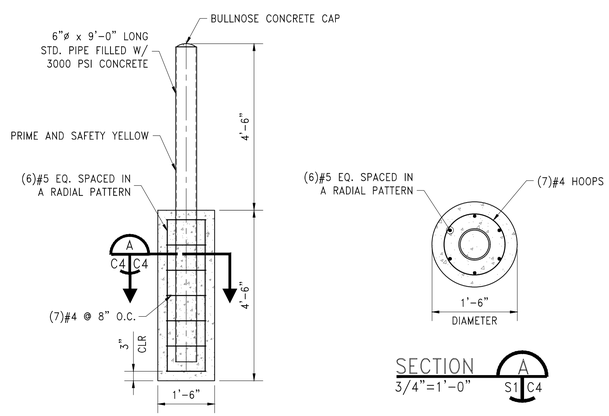
PARKING DETAILS

1"=20'-0"



SIDEWALK DETAIL

N.T.S.



EXTERIOR PIPE BOLLARD DETAIL

½"=1'-0" 85 REQUIRED

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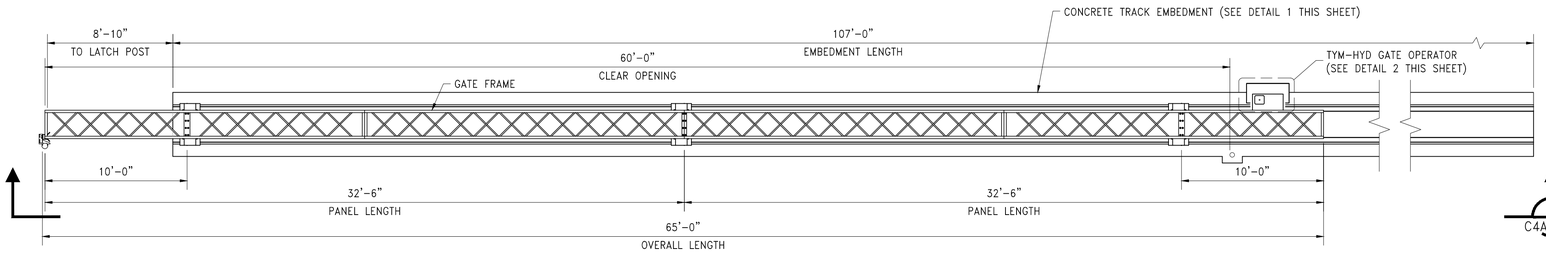
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
SITE DETAILS

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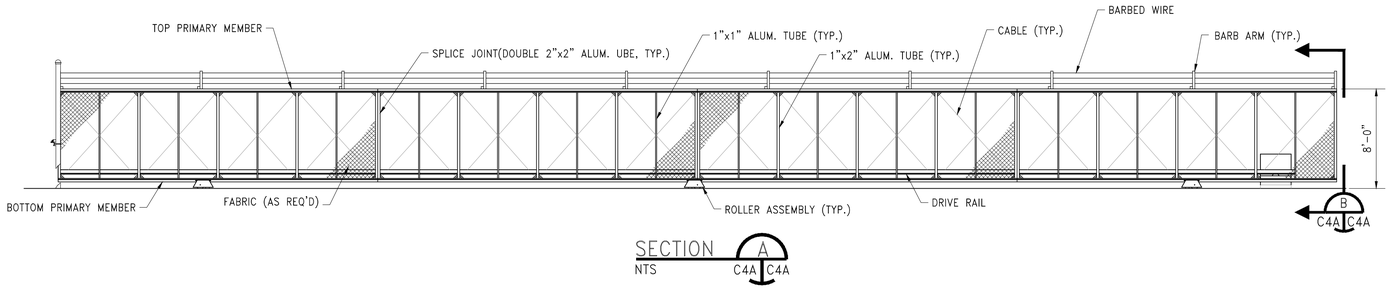
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60' GATE PLAN VIEW

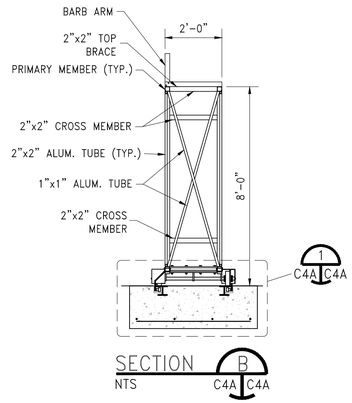
NTS

*TYMETAL CORP 60' BOX FRAME
ROLLER GATE OR APPROVED EQUAL



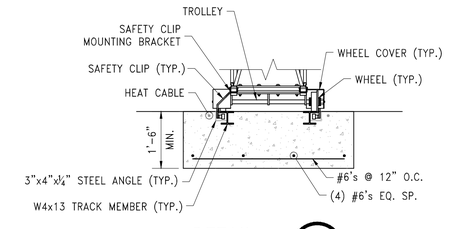
SECTION A

NTS C4A C4A



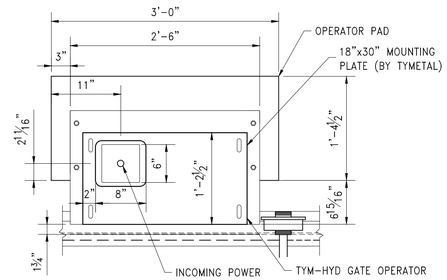
SECTION B

NTS C4A C4A



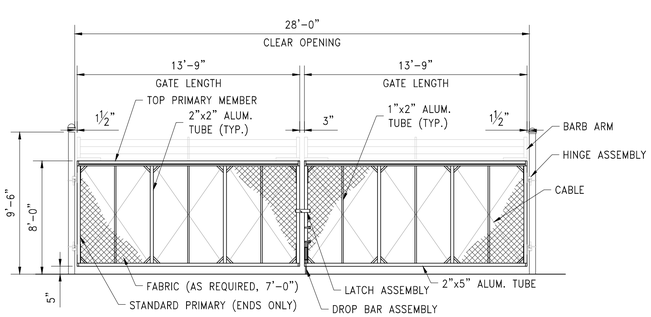
DETAIL 1

NTS C4A C4A



DETAIL 2

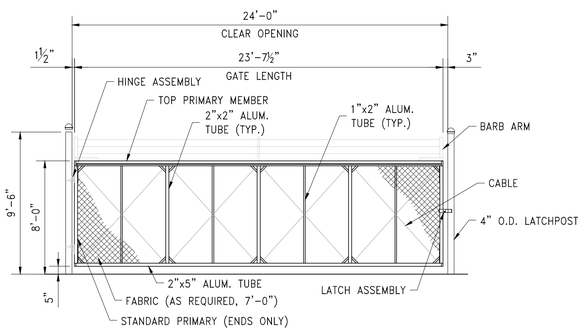
1"=1'-0" C4A C4A



28' GATE ELEVATION VIEW

NTS

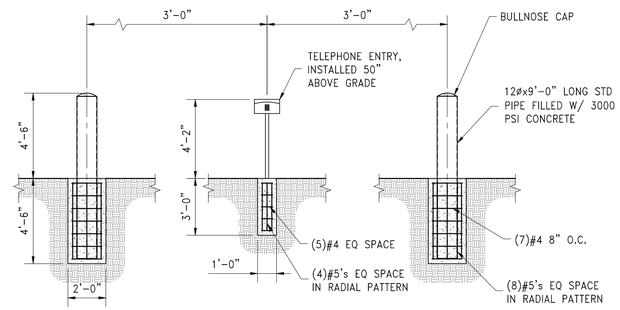
*TYMETAL CORP 28'-8'
GATE OR APPROVED EQUAL



24' GATE ELEVATION VIEW

NTS

*TYMETAL CORP 24'-8'
GATE OR APPROVED EQUAL



ENTRY BOLLARD DETAIL

½"=1'-0'

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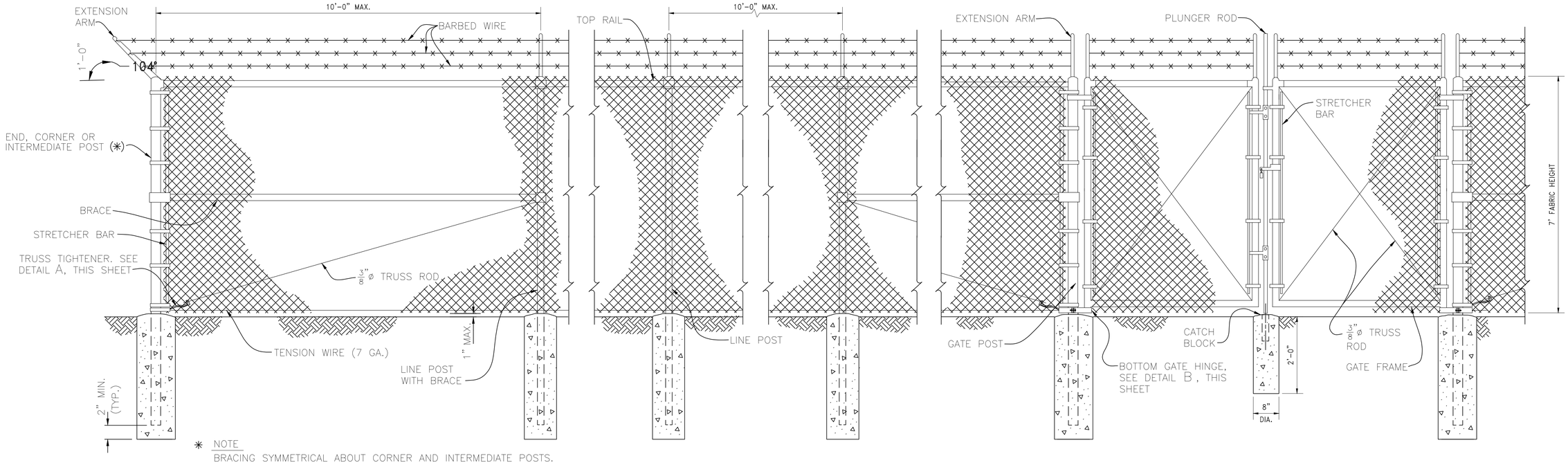
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GATE DETAILS

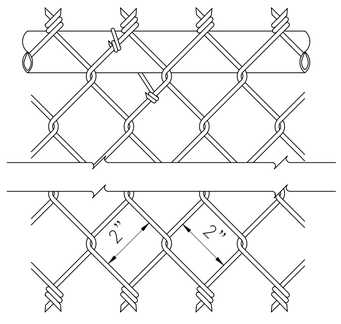
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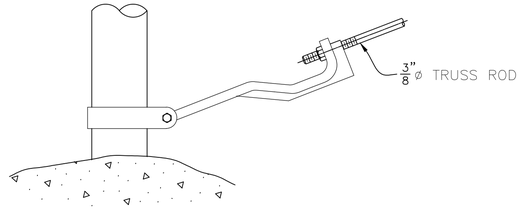


* NOTE
BRACING SYMMETRICAL ABOUT CORNER AND INTERMEDIATE POSTS.

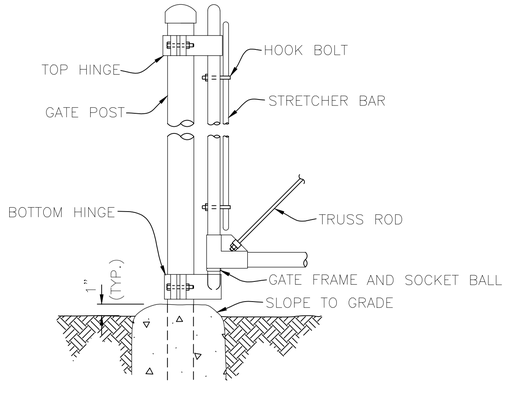
ELEVATION



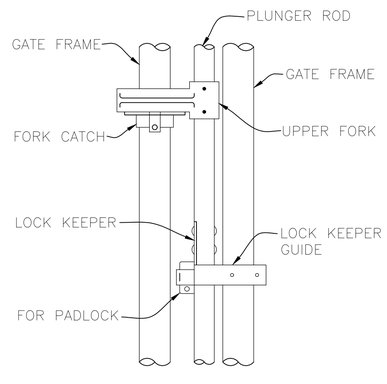
TYPICAL FABRIC TIE



TRUSS TIGHTENER DETAIL (A)



GATE HINGE DETAIL (B)



TYPICAL GATE LOCKING DEVICE

NOTES

1. FASTEN THE BOTTOM TENSION WIRE WITHIN THE BOTTOM 6" OF FABRIC.
2. ALL TENSION WIRE SHALL MATCH FENCE FABRIC.
3. TENSION WIRE SHALL BE SECURELY FASTENED TO THE CORNER POSTS, AND SHALL BE TAUT AND FREE OF SAG.
4. PLACE NEW END (CORNER) POSTS ADJACENT TO EXISTING FENCE. WIRE POST TO EXISTING FENCE.

TABLE I		
GATE LEAF WIDTHS	GATE POST FOOTING SIZE	GATE FRAME SIZE
TO 6'-0" WIDE	1'-0" DIA. x 3'-0" DEEP	1.900" O.D., 2.28 LBS/FT

TABLE II		
FABRIC HEIGHT	END, CORNER OR INTERMEDIATE POST FOOTING SIZE	LINE POSTS FOOTING SIZE
7'-0"	1'-0" DIA. x 3'-6" DEEP	10" DIA. x 3'-6" DEEP

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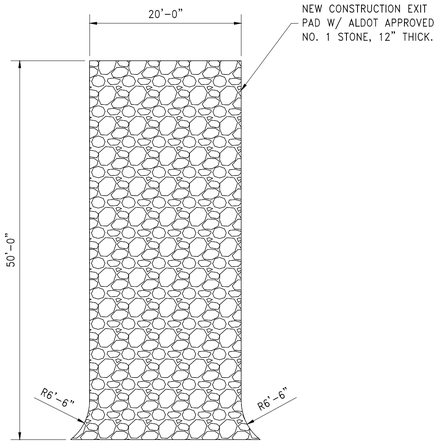
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TITLE
CHAIN LINK FENCE DETAILS

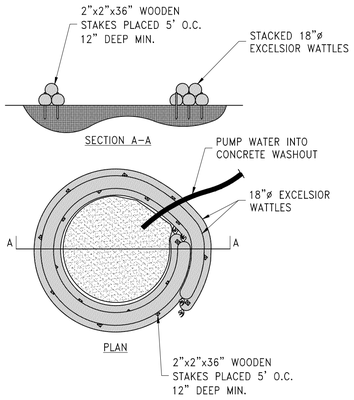
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CONSTRUCTION EXIT PAD DETAIL

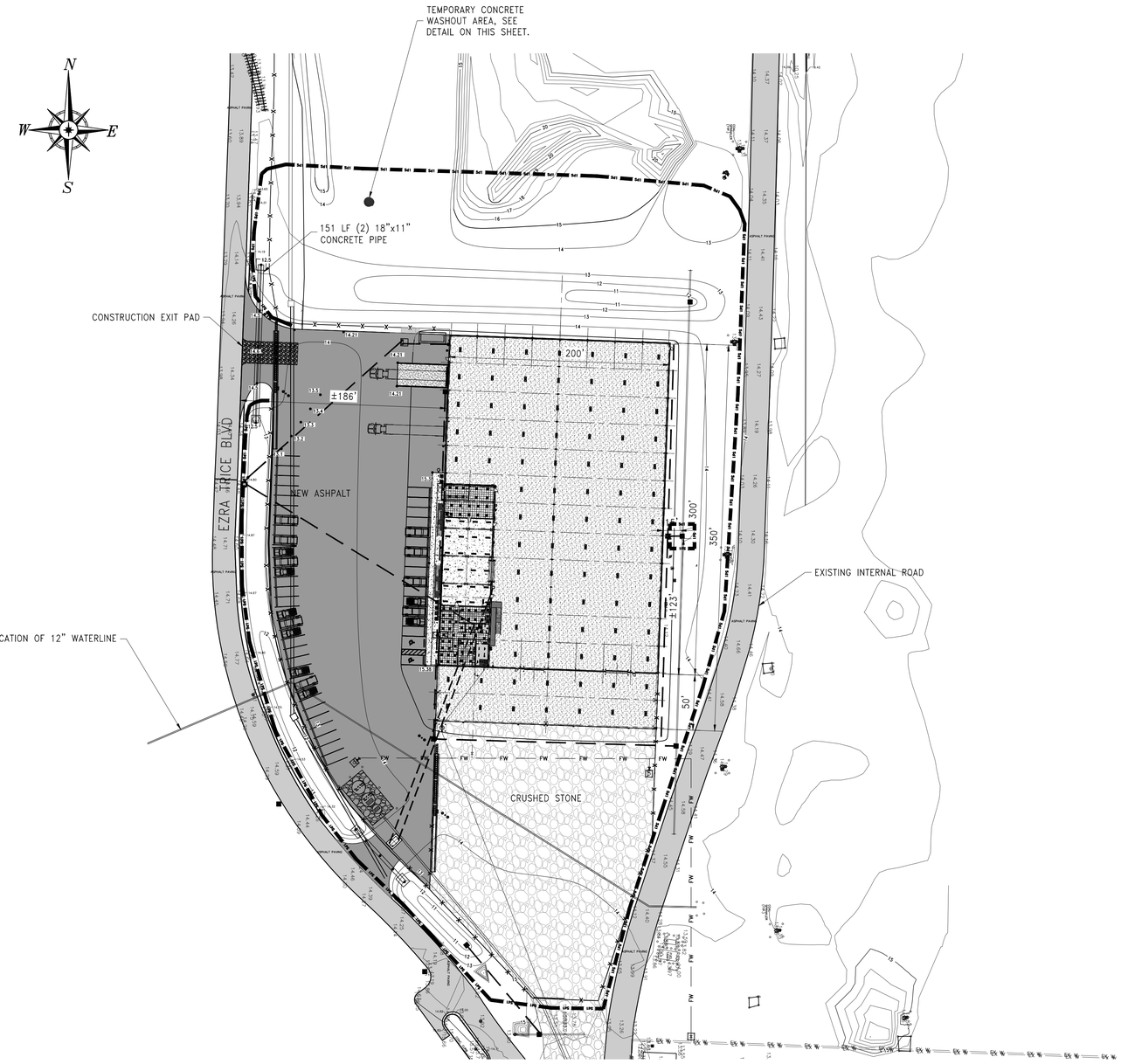
1" = 10'-0"



EXCELSIOR WATTLE CONCRETE WASHOUT

N.T.S.

NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
2. FILTER SOXX MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION

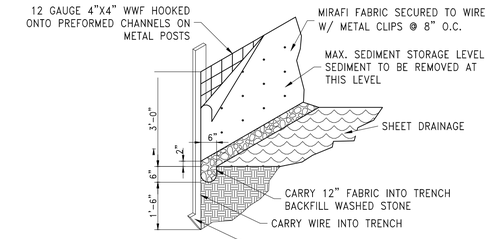


NEW SITE PLAN

1"=60'

EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR WILL PROTECT INLETS AND DRAINS FROM SEDIMENT DEPOSITS WITH STRAW BALES, SECURELY TIED AND ANCHORED TO THE GROUND OR OTHER METHODS AS SHOWN ON THE DRAWINGS. THE EXISTING SITE IS COMPLETELY DEVELOPED, GRADED AND OPERATIONAL.
2. THE EXISTING PERMANENT STORM WATER SYSTEM IS IN PLACE, AND WILL BE UTILIZED DURING CONSTRUCTION AND OPERATION OF THE NEW FACILITY.
3. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IN OPERATION PRIOR TO GRADING.
4. SEDIMENT DEPOSITION CAUSED BY SHEET FLOW ACROSS PROPERTY LINES SHALL BE PREVENTED BY PLACING AND ANCHORING OF TEMPORARY STRAW BALES/EROSION NETTING. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS QUICKLY AS POSSIBLE.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED DAILY AND REPAIRED IMMEDIATELY, IF DAMAGED.
6. TRENCHES, IF REQUIRED, SHALL BE BACKFILLED WITHIN 7 DAYS OF COMPLETION, TESTING AND ACCEPTANCE OF THE APPROPRIATE LINES.
7. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES TO CONTROL RUN OFF VELOCITIES AND REDUCE EROSION.
8. THE OWNER OF PROPERTY WILL BE REQUIRED TO MAINTAIN THE DRAINAGE APPURTENANCES IN WORKING ORDER FOR LIFE OF THE FACILITY.
9. ALL PRACTICES AND MATERIALS SHALL CONFORM TO THE ALABAMA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION, AND ALABAMA HANDBOOK FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS, LATEST EDITION.



SILT FENCE DETAIL

Sd1

N.T.S.

LEGEND

NEW ASPHALT

EXISTING ASPHALT

NEW CRUSHED STONE

SILT FENCE

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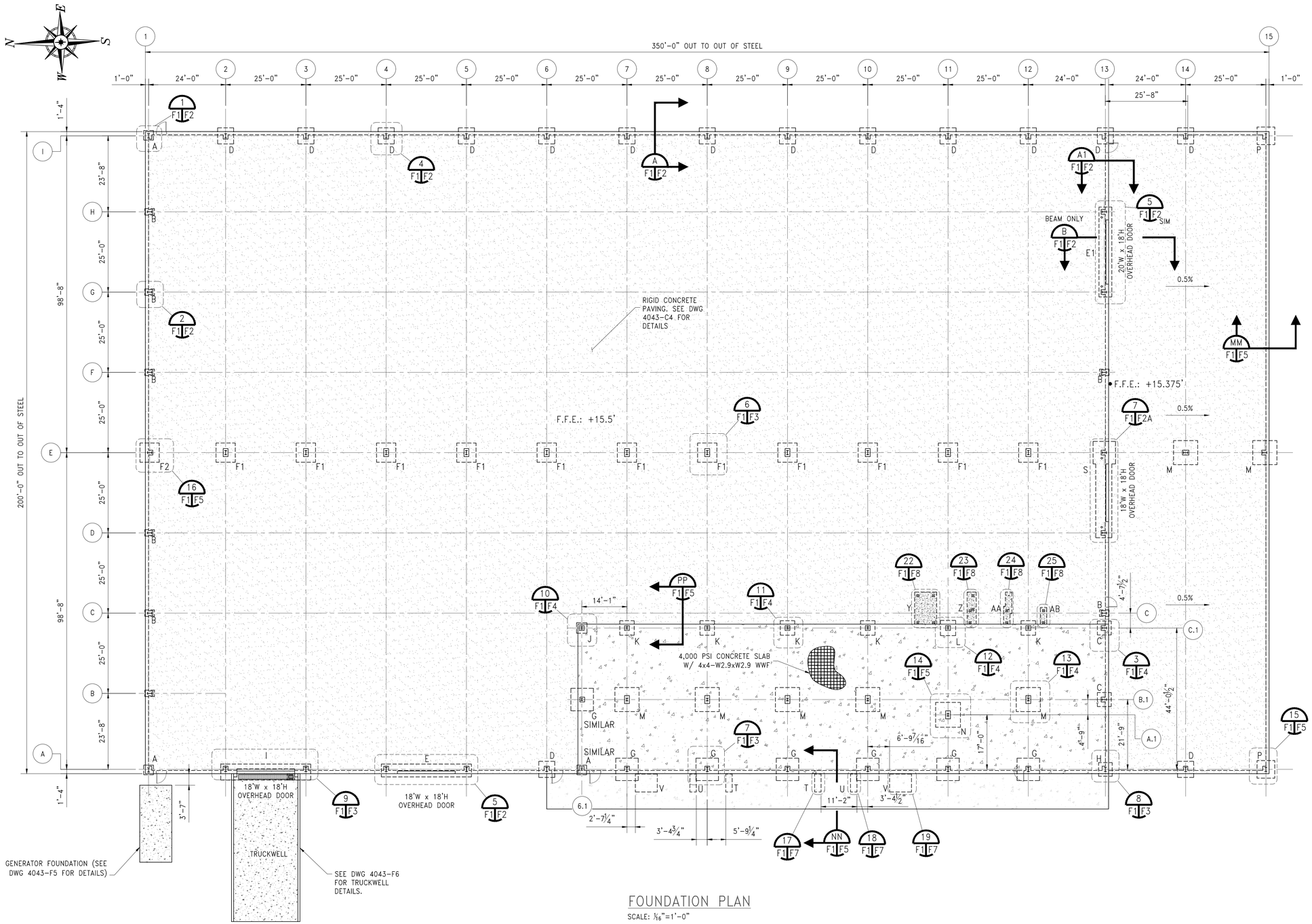
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13 Thrash Rd., LaGrange, GA 30241
11880 Cranston Dr. Ste 102, Arlington, TN 38002
Alabama (251) 433-1611
Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
EROSION CONTROL PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	12/08/21	— OF —	A
JOB NO. 4043	CHECKED BY WBS	DATE 12/08/21	DRAWING NUMBER 4043-C5	

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FOUNDATION PLAN

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

NOTE:

FINAL FOUNDATION DESIGN IS CONTINGENT ON PEMB DESIGN. PRIOR TO CONSTRUCTION, STRUCTURAL ENGINEER OF RECORD SHALL REVIEW PEMB DESIGN AND COLUMN REACTIONS TO VERIFY FINAL FOUNDATION DESIGN.

FOUNDATION SCHEDULE			
TYPE	DIMENSIONS	REBAR	QTY.
A	3'-0"x3'-0"x1'-0"	(4) #6'S E.W., EQ. SP.	3
B	3'-0"x2'-0"x1'-0"	(4) #6'S E.W., EQ. SP.	10
C	4'-4"x4'-4"x1'-0"	(5) #6'S E.W., EQ. SP.	2
D	5'-0"x5'-0"x1'-0"	(7) #6'S E.W., EQ. SP.	15
E	4'-0"x28'-0"x1'-0"	SEE DETAIL	1
E1	4'-0"x28'-0"x1'-0"	SEE DETAIL	1
F1	6'-0"x6'-0"x1'-0"	(9) #6'S E.W., EQ. SP.	11
F2	6'-0"x6'-0"x1'-0"	(9) #6'S E.W., EQ. SP.	1
G	7'-0"x7'-0"x1'-0"	(11) #6'S E.W., EQ. SP.	8
H	4'-3"x4'-3"x1'-0"	(5) #6'S E.W., EQ. SP.	1
I	5'-0"x28'-0"x1'-0"	SEE DETAIL	1
J	3'-3"x3'-3"x1'-0"	(4) #6'S E.W., EQ. SP.	1
K	4'-6"x4'-6"x1'-0"	(6) #6'S E.W., EQ. SP.	5
L	4'-9"x4'-9"x1'-0"	(6) #6'S E.W., EQ. SP.	1
M	7'-6"x7'-6"x1'-0"	(11) #6'S E.W., EQ. SP.	7
N	7'-9"x7'-9"x1'-0"	(12) #6'S E.W., EQ. SP.	1
P	5'-6"x5'-6"x1'-0"	(9) #6'S E.W., EQ. SP.	2
Q	8'-6"x5'-6"x1'-0"	#5'S @ 12" O.C. E.W.	3
R	2'-0"x5'-6"x1'-0"	#5'S @ 12" O.C. E.W.	3
S	4'-0"x28'-0"x1'-0"	SEE DETAIL	1
T	5'-8½"x2'-0"x1'-0"	#5'S @ 12" O.C. E.W.	1
U	5'-8½"x2'-0"x1'-0"	#5'S @ 12" O.C. E.W.	1
V	6'-10"x5'-8½"x1'-0"	#5'S @ 12" O.C. E.W.	1
Y	10'-0"x6'-10"x1'-0"	#5'S @ 12" O.C. E.W.	1
Z	10'-0"x2'-7"x1'-0"	#5'S @ 12" O.C. E.W.	1
AA	10'-0"x2'-7"x1'-0"	#5'S @ 12" O.C. E.W.	1
AB	10'-0"x2'-0"x1'-0"	#5'S @ 12" O.C. E.W.	1

*SEE PLAN FOR LOCATIONS AND ORIENTATION

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457 St. Michael St.
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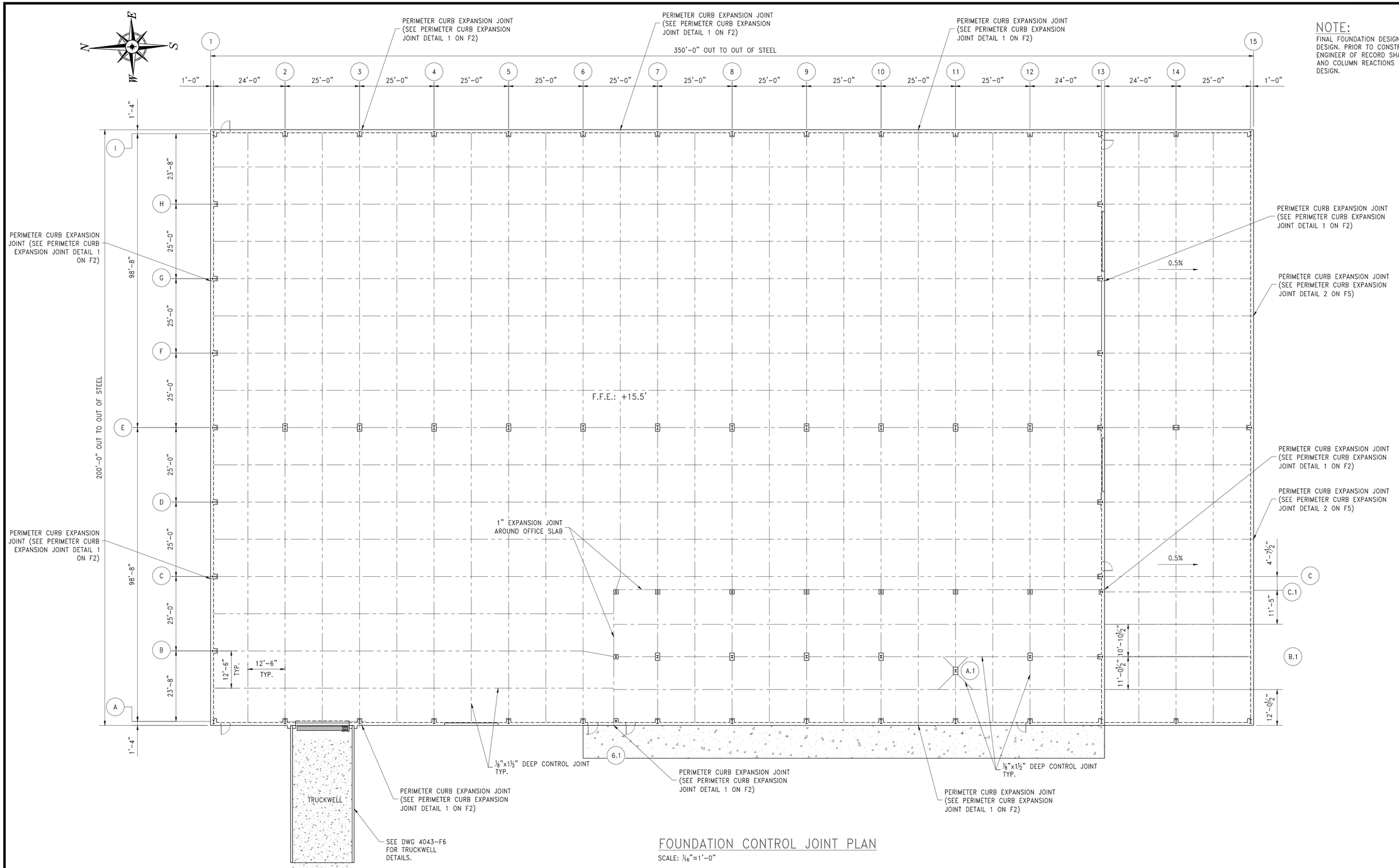
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
FOUNDATION PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	— OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE 10/01/21	DRAWING NUMBER 4043-F1	

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NOTE:
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FOUNDATION CONTROL JOINT PLAN

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

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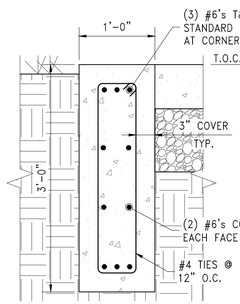
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TITLE
FOUNDATION CONTROL JOINT PLAN

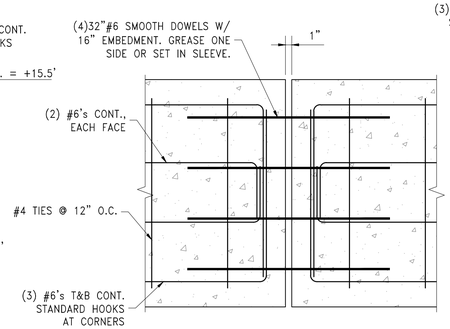
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NOTED	RCC	10/01/21	— OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE 10/01/21	DRAWING NUMBER 4043-F1A	

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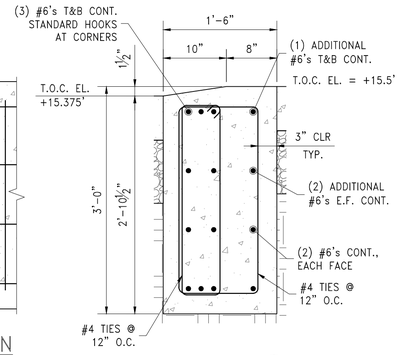


SECTION A
1"=1'-0" F1 F2

PERIMETER CURB DETAIL

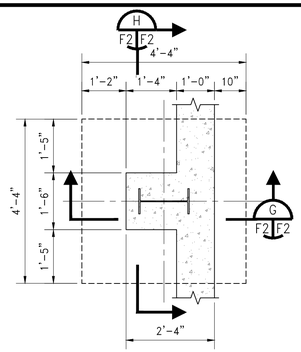


PERIMETER CURB EXPANSION JOINT DETAIL 1
1"=1'-0"

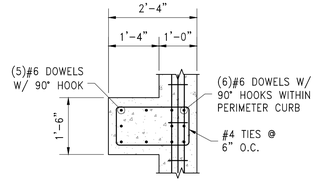


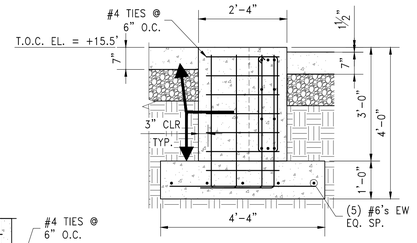
SECTION B
1"=1'-0" F1 F2

TRUCK CROSSING BEAM DETAIL

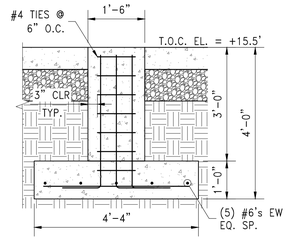


DETAIL 3
1/2"=1'-0" F1 F2
TYPE "C"

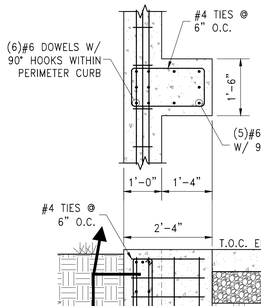




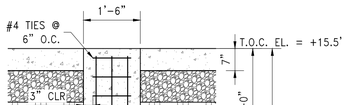
SECTION G
1/2"=1'-0" F2 F2



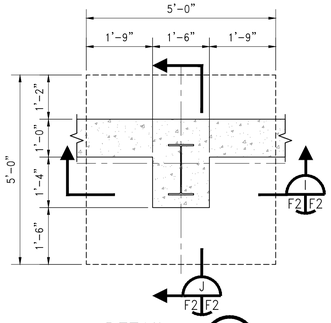
SECTION H
1/2"=1'-0" F2 F2



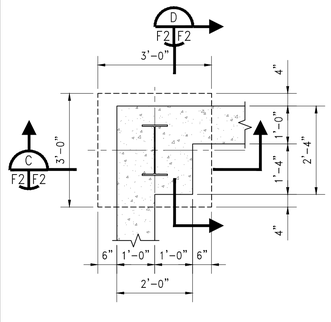
SECTION I
1/2"=1'-0" F2 F2



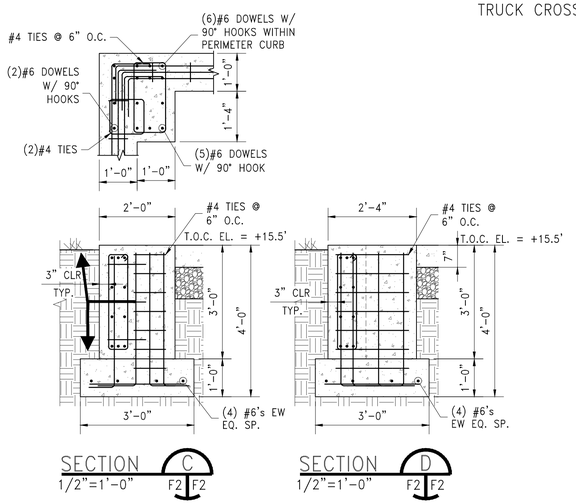
SECTION J
1/2"=1'-0" F2 F2



DETAIL 4
1/2"=1'-0" F1 F2
TYPE "D"

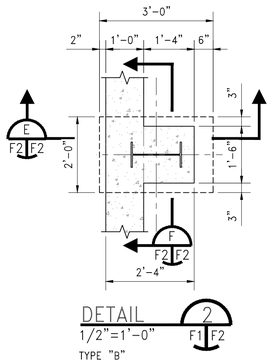


DETAIL 1
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TYPE "A"

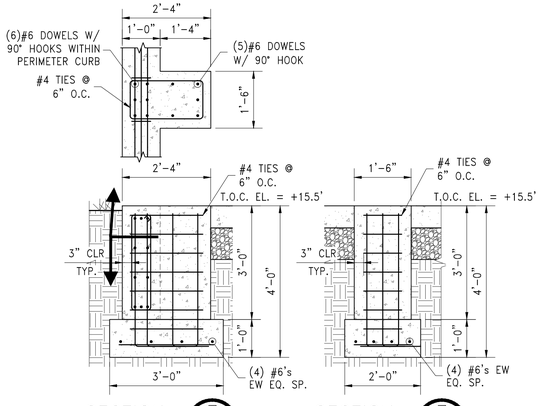


SECTION C
1/2"=1'-0" F2 F2

SECTION D
1/2"=1'-0" F2 F2

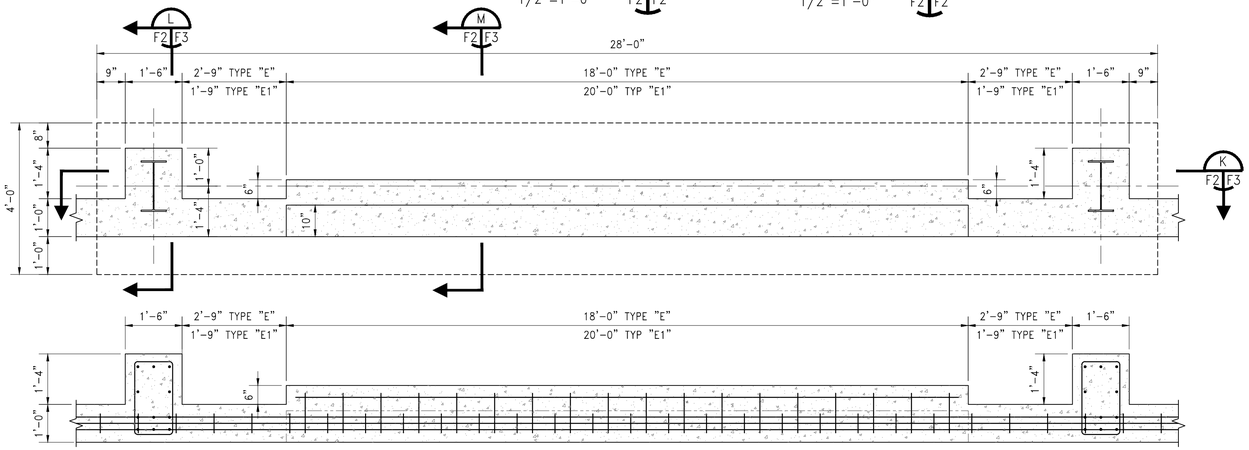


DETAIL 2
1/2"=1'-0" F1 F2
TYPE "B"



SECTION E
1/2"=1'-0" F2 F2

SECTION F
1/2"=1'-0" F2 F2



DETAIL 5
1/2"=1'-0" F1 F2
TYPE "E" / "E1"

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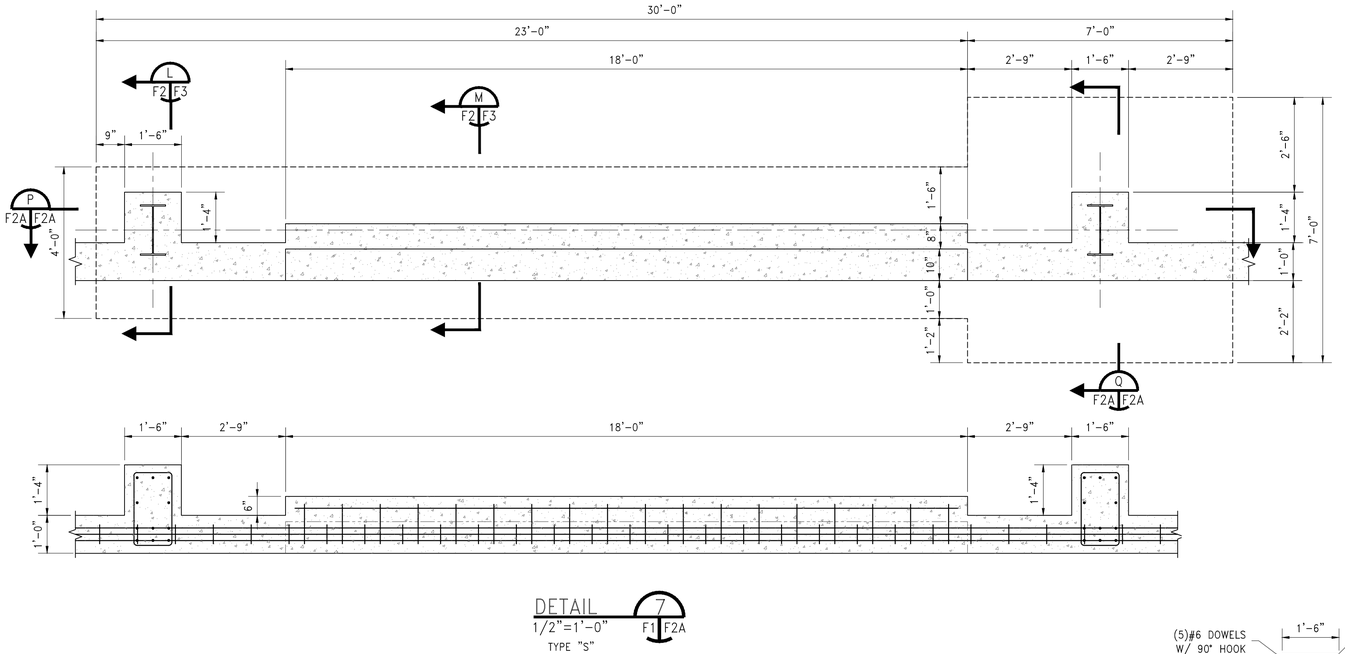
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ASPA

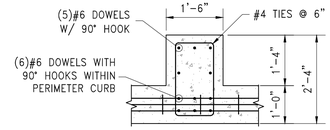
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FOUNDATION DETAILS

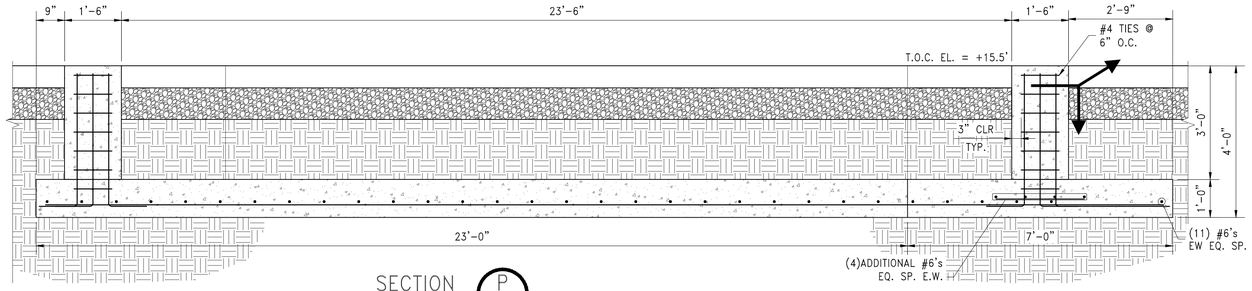
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NOTED	JWM	01/21/22	— OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE 01/21/22	DRAWING NUMBER 4043-F2	

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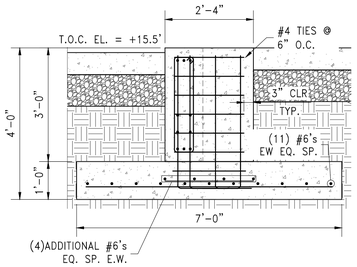


DETAIL 7
1/2"=1'-0"
F1 F2A
TYPE "S"





SECTION P
1/2"=1'-0"
F2A F2A



SECTION Q
1/2"=1'-0"
F2A F2A

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A	ISSUED FOR BID	08/10/22	JWM	GDEC

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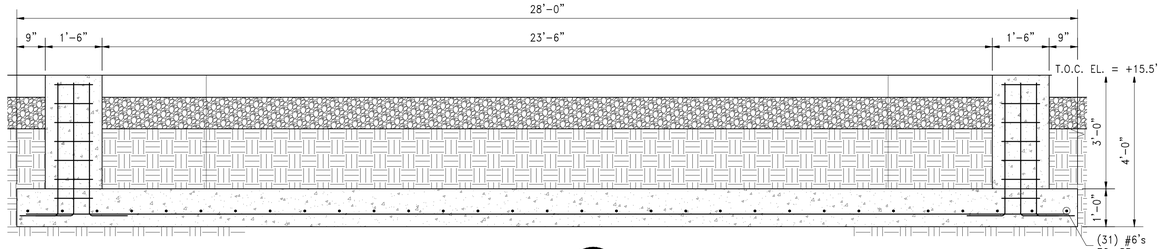
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LaGrange, GA 30241
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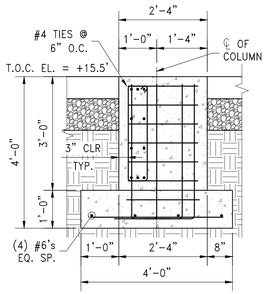
TITLE
FOUNDATION DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
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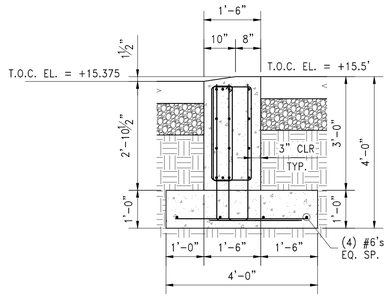
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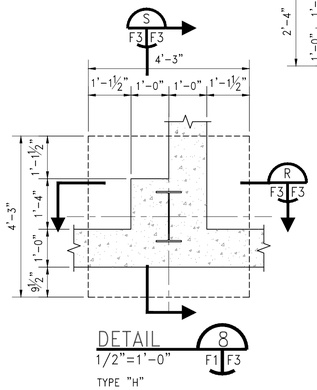
SECTION K
1/2"=1'-0"



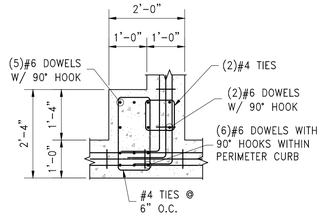
SECTION L
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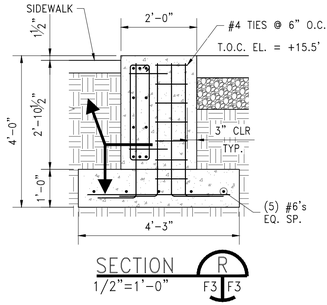


SECTION M
1/2"=1'-0"

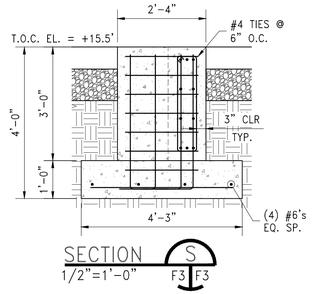


DETAIL 8
1/2"=1'-0"
TYPE "H"

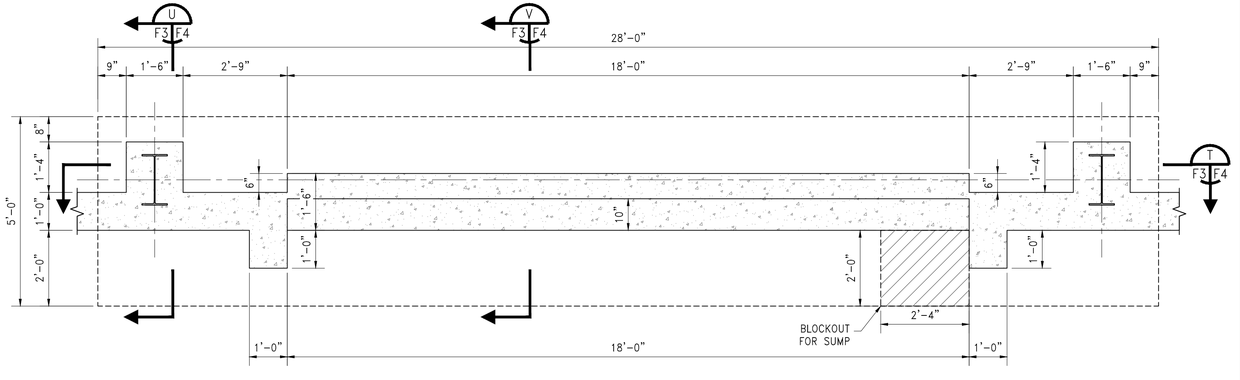




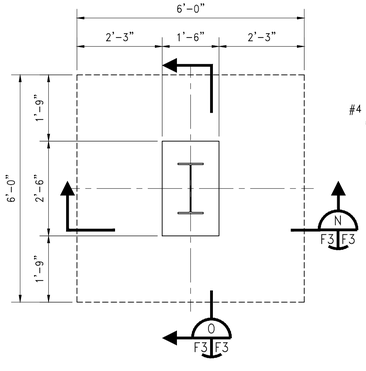
SECTION R
1/2"=1'-0"



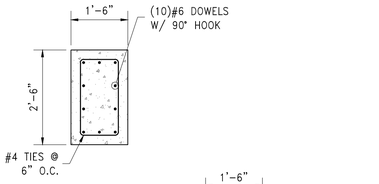
SECTION S
1/2"=1'-0"



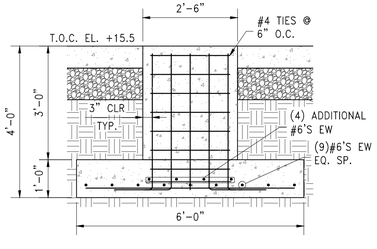
DETAIL 9
1/2"=1'-0"
TYPE "I"



DETAIL 6
1/2"=1'-0"
TYPE "F1"



SECTION N
1/2"=1'-0"



SECTION O
1/2"=1'-0"

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CONFIDENTIAL, VALUABLE, AND PROPRIETARY INFORMATION

REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUED FOR BID	08/10/22	JWM	GDEC

457 St. Michael St.
Mobile, AL 36602
Phone (251) 433-1611
Fax (251) 433-1411

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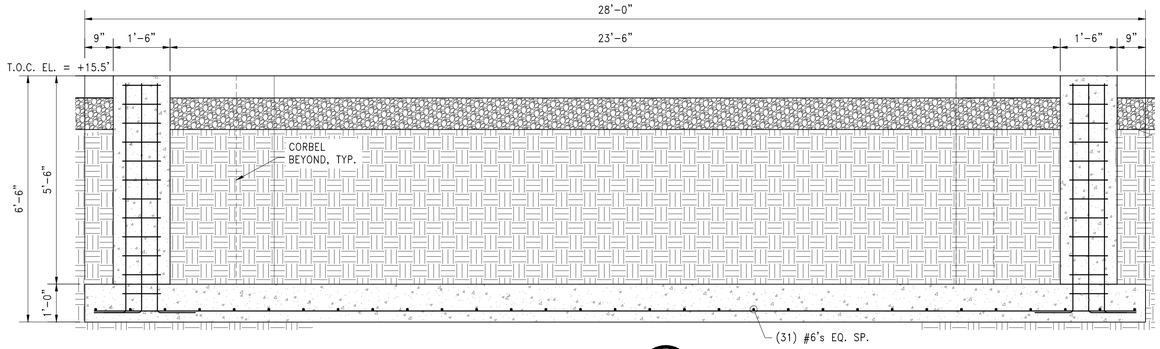
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE
WAREHOUSE
McDUFFIE TERMINAL
ASPA

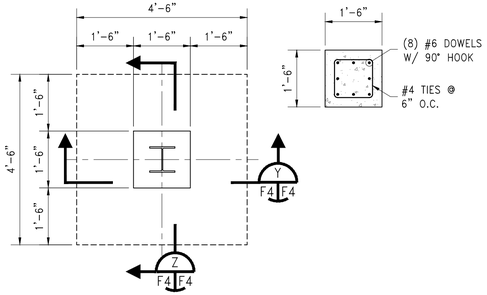
TITLE
FOUNDATION DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	01/21/22	— OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE 01/21/22	DRAWING NUMBER 4043-F3	

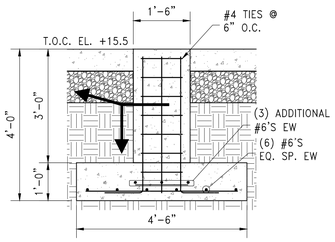
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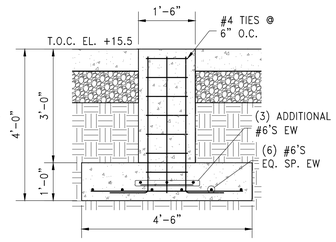
SECTION T
1/2"=1'-0" F3 F4



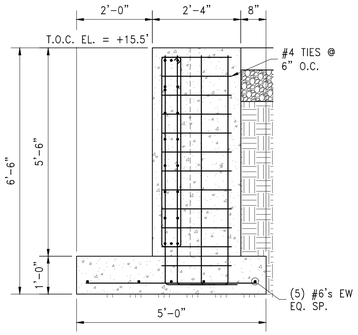
DETAIL 11
1/2"=1'-0" F1 F4
TYPE "K"



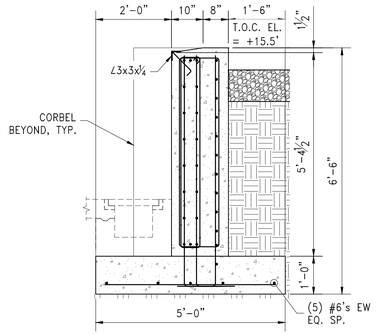
SECTION Y
1/2"=1'-0" F4 F4



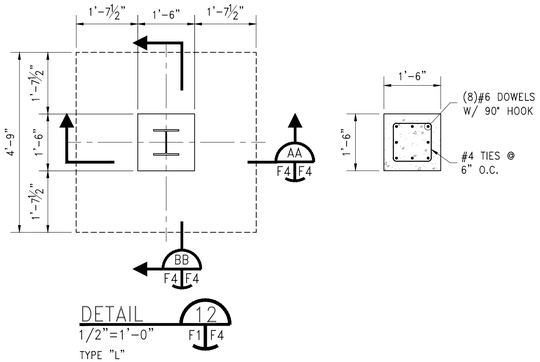
SECTION Z
1/2"=1'-0" F4 F4



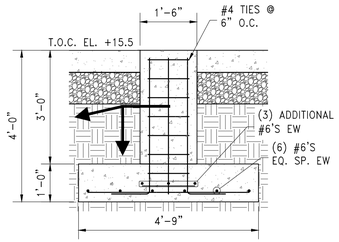
SECTION U
1/2"=1'-0" F3 F4



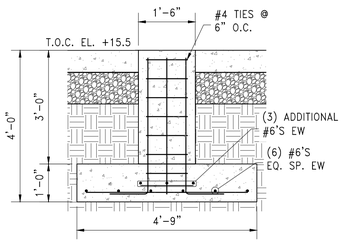
SECTION V
1/2"=1'-0" F3 F4



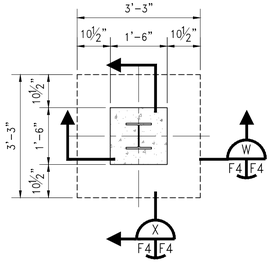
DETAIL 12
1/2"=1'-0" F1 F4
TYPE "L"



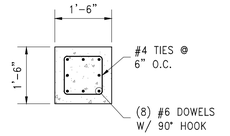
SECTION AA
1/2"=1'-0" F4 F4

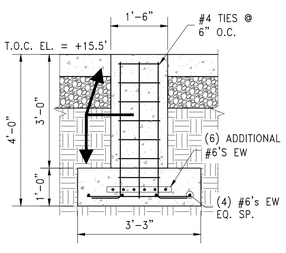


SECTION BB
1/2"=1'-0" F4 F4

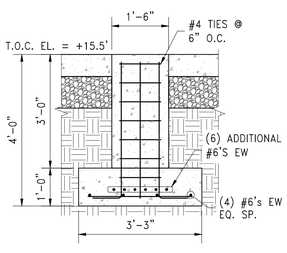


DETAIL 10
1/2"=1'-0" F1 F4
TYPE "J"

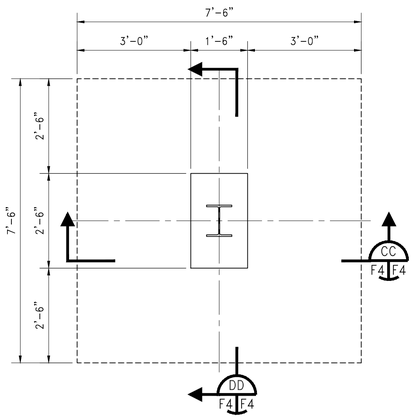




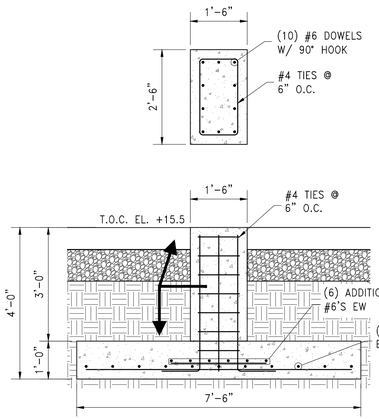
SECTION W
1/2"=1'-0" F4 F4



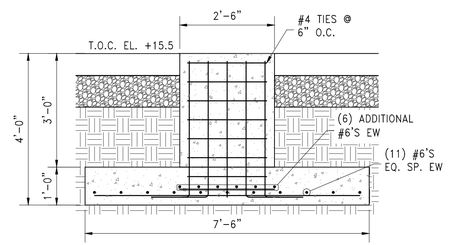
SECTION X
1/2"=1'-0" F4 F4



DETAIL 13
1/2"=1'-0" F1 F4
TYPE "M"



SECTION CC
1/2"=1'-0" F4 F4



SECTION DD
1/2"=1'-0" F4 F4

REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUED FOR BID	08/10/22	JWM	GDEC

457 St. Michael St.
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Fax (251) 433-1411

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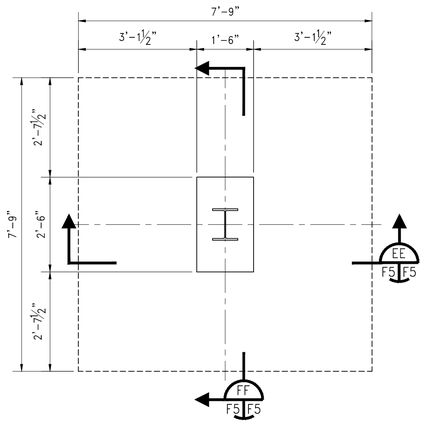
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
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ASPA

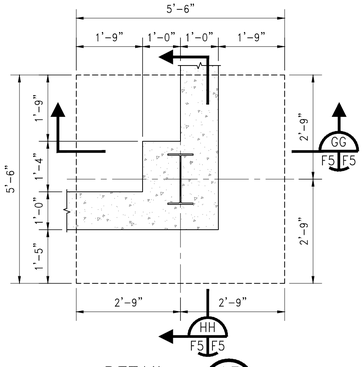
TITLE
FOUNDATION DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	01/21/22	— of —	A
JOB NO. 4043	CHECKED BY GDEC	DATE 01/21/22	DRAWING NUMBER 4043-F4	

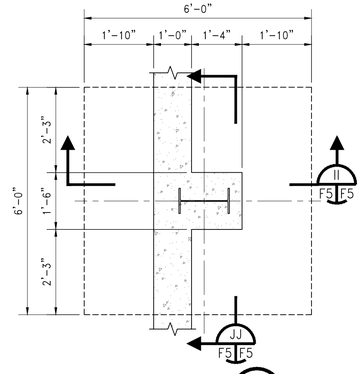
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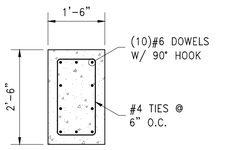
DETAIL 14
1/2"=1'-0" F1 F5
TYPE "N"

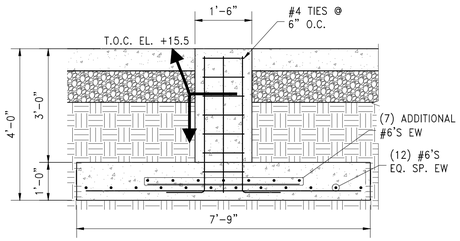


DETAIL 15
1/2"=1'-0" F1 F5
TYPE "P"

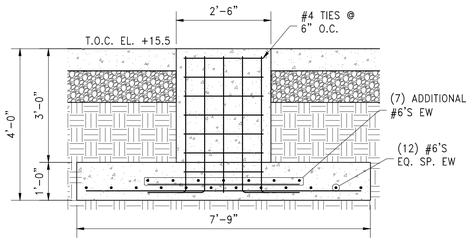


DETAIL 16
1/2"=1'-0" F1 F5
TYPE "F2"

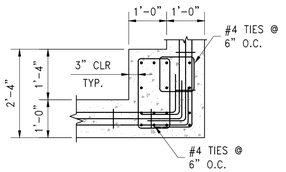


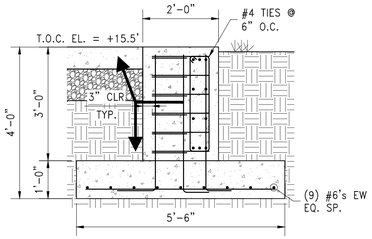


SECTION EE
1/2"=1'-0" F5 F5

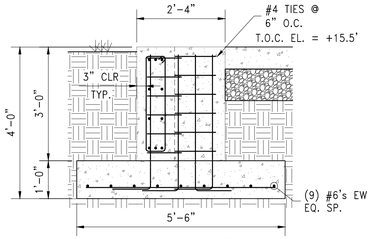


SECTION FF
1/2"=1'-0" F5 F5

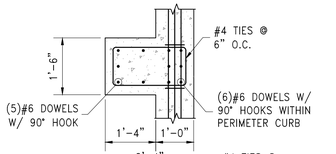


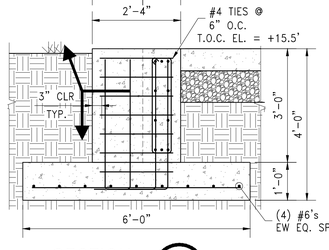


SECTION GG
1/2"=1'-0" F5 F5

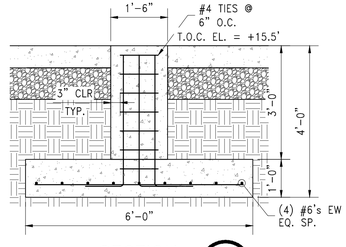


SECTION HH
1/2"=1'-0" F5 F5

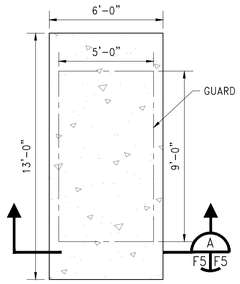




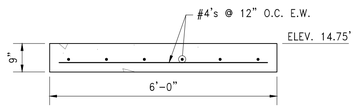
SECTION II
1/2"=1'-0" F5 F5



SECTION JJ
1/2"=1'-0" F5 F5

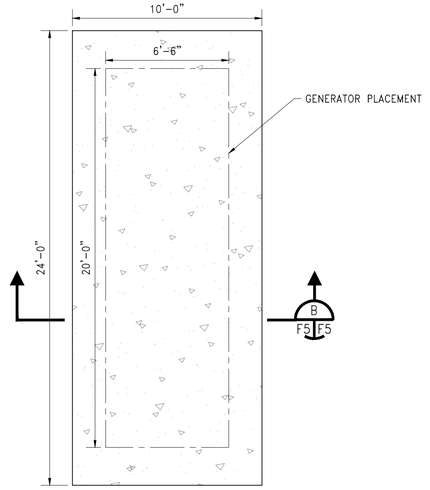


GUARD SHACK FOUNDATION
¼"=1'-0"

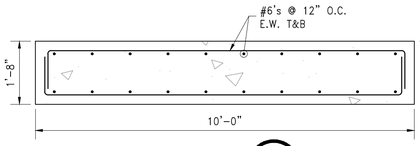


SECTION A
1/2"=1'-0" F5 F5

* ANCHOR PER MANUFACTURER'S RECOMMENDATIONS

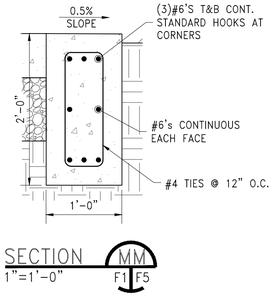


GENERATOR FOUNDATION
¼"=1'-0"

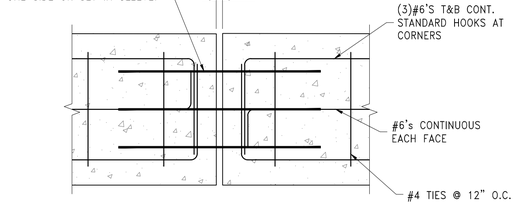


SECTION B
1/2"=1'-0" F5 F5

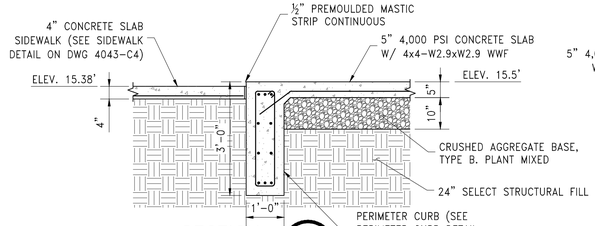
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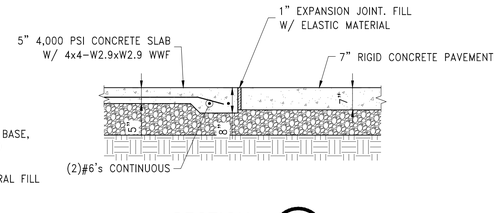
SECTION MM
1"=1'-0" F1 F5



PERIMETER CURB EXPANSION JOINT DETAIL 2
1"=1'-0"



SECTION NN
1/2"=1'-0" F1 F5



SECTION PP
1/2"=1'-0" F1 F5

REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUED FOR BID	08/10/22	JWM	GDEC

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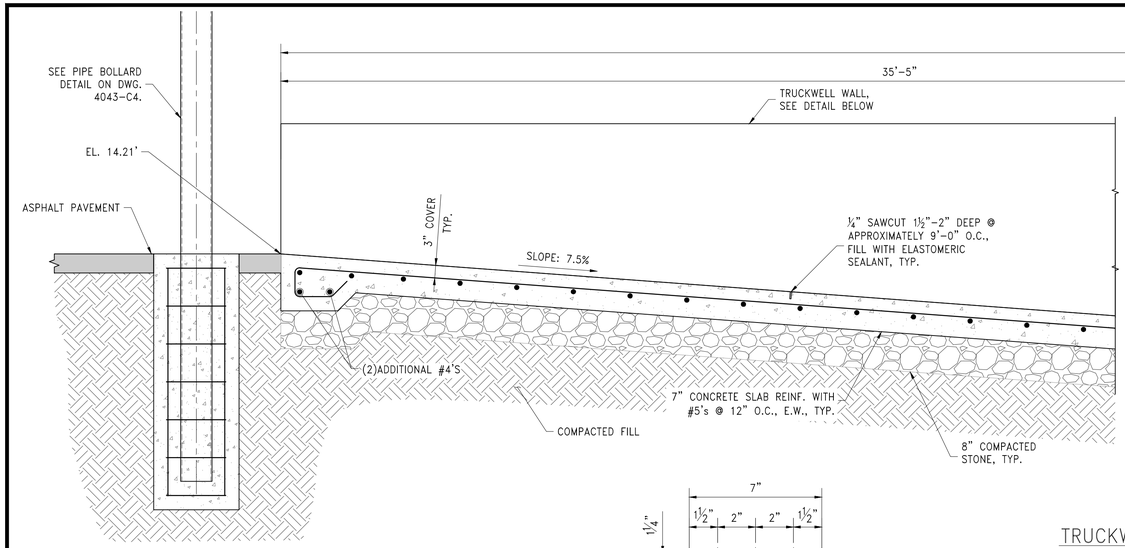
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

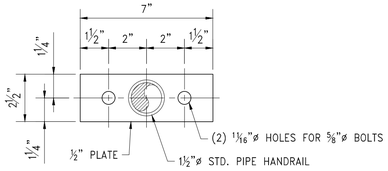
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
FOUNDATION DETAILS

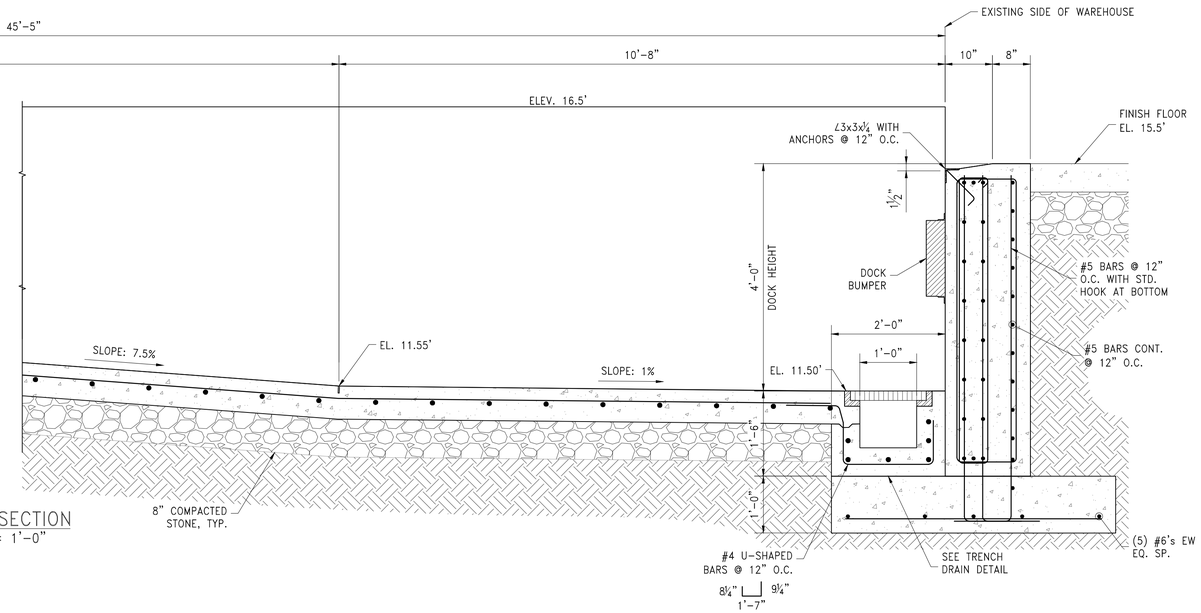
SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	01/21/22	— OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE 01/21/22	DRAWING NUMBER 4043-F5	

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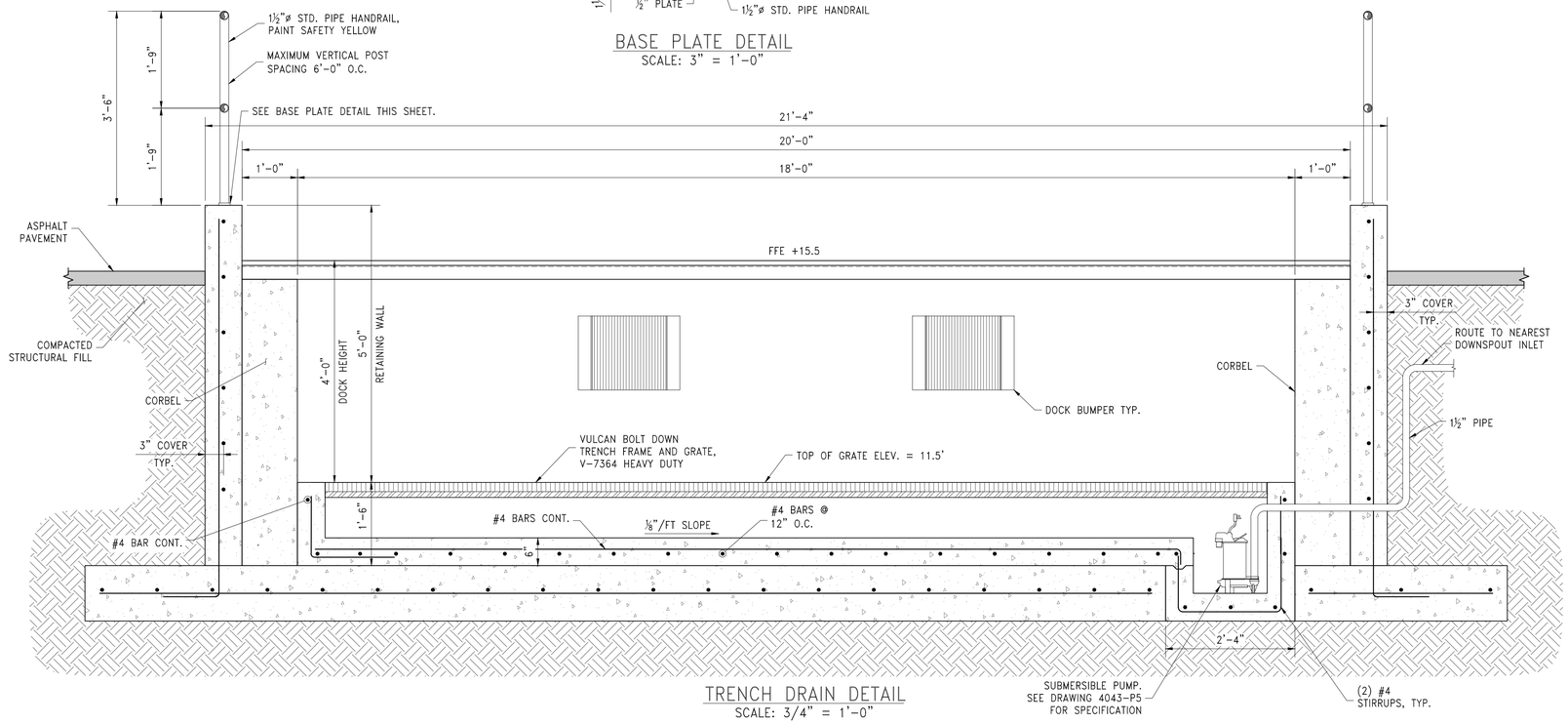




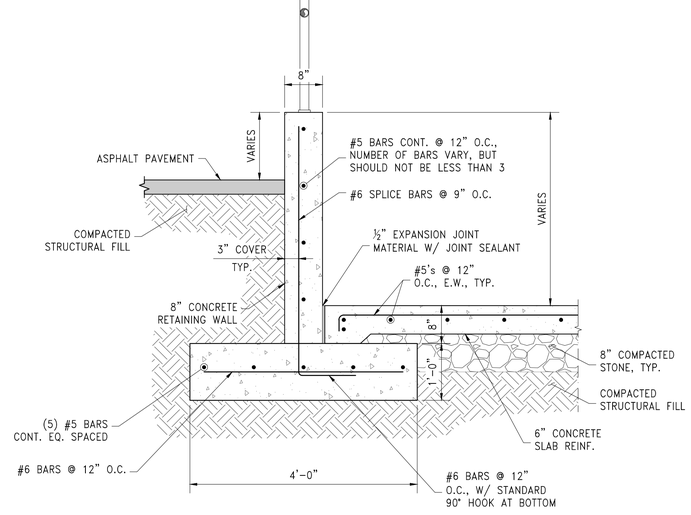
BASE PLATE DETAIL
SCALE: 3" = 1'-0"



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



TRENCH DRAIN DETAIL
SCALE: 3/4" = 1'-0"



TRUCK WELL WALL DETAIL
SCALE: 3/4" = 1'-0"

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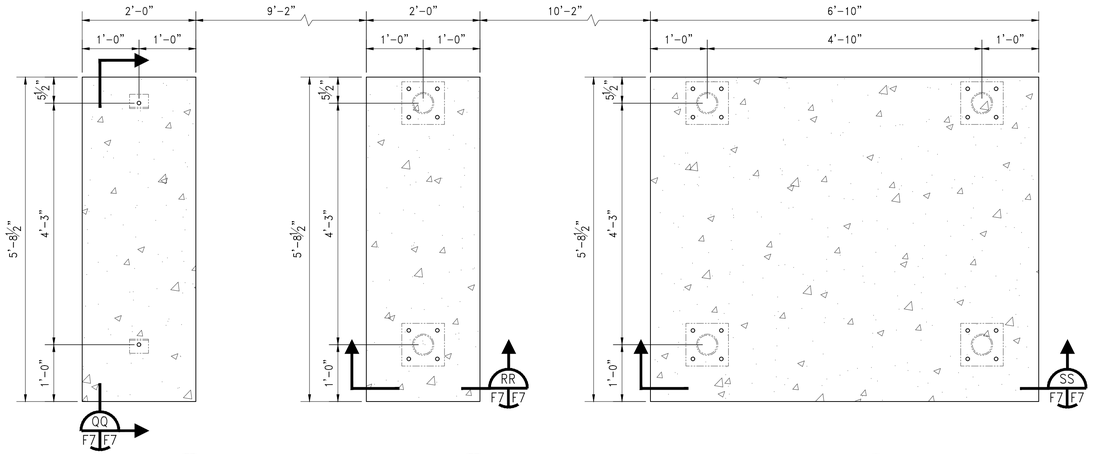
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
TRUCK WELL DETAIL

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	01/11/22	___ OF ___	A
JOB NO. 4043	CHECKED BY GDEC	DATE 01/11/22	DRAWING NUMBER 4043-F6	

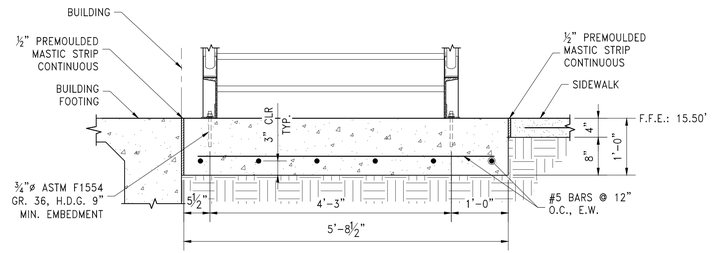
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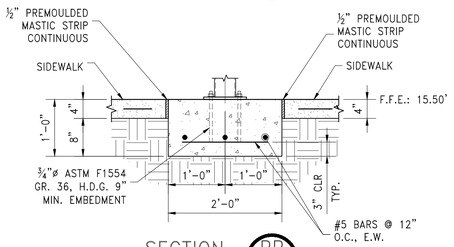
DETAIL 17 — 3/4"=1'-0" — F1 F7

DETAIL 18 — 3/4"=1'-0" — F1 F7

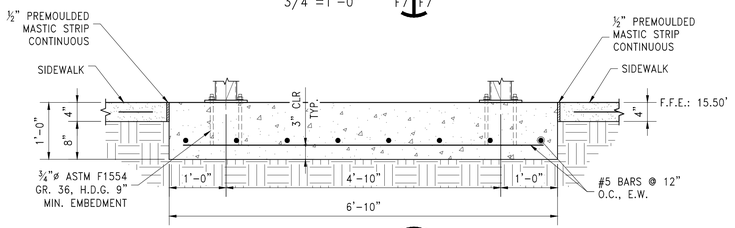
DETAIL 19 — 3/4"=1'-0" — F1 F7



SECTION QQ — 3/4"=1'-0" — F7 F7



SECTION RR — 3/4"=1'-0" — F7 F7



SECTION SS — 3/4"=1'-0" — F7 F7

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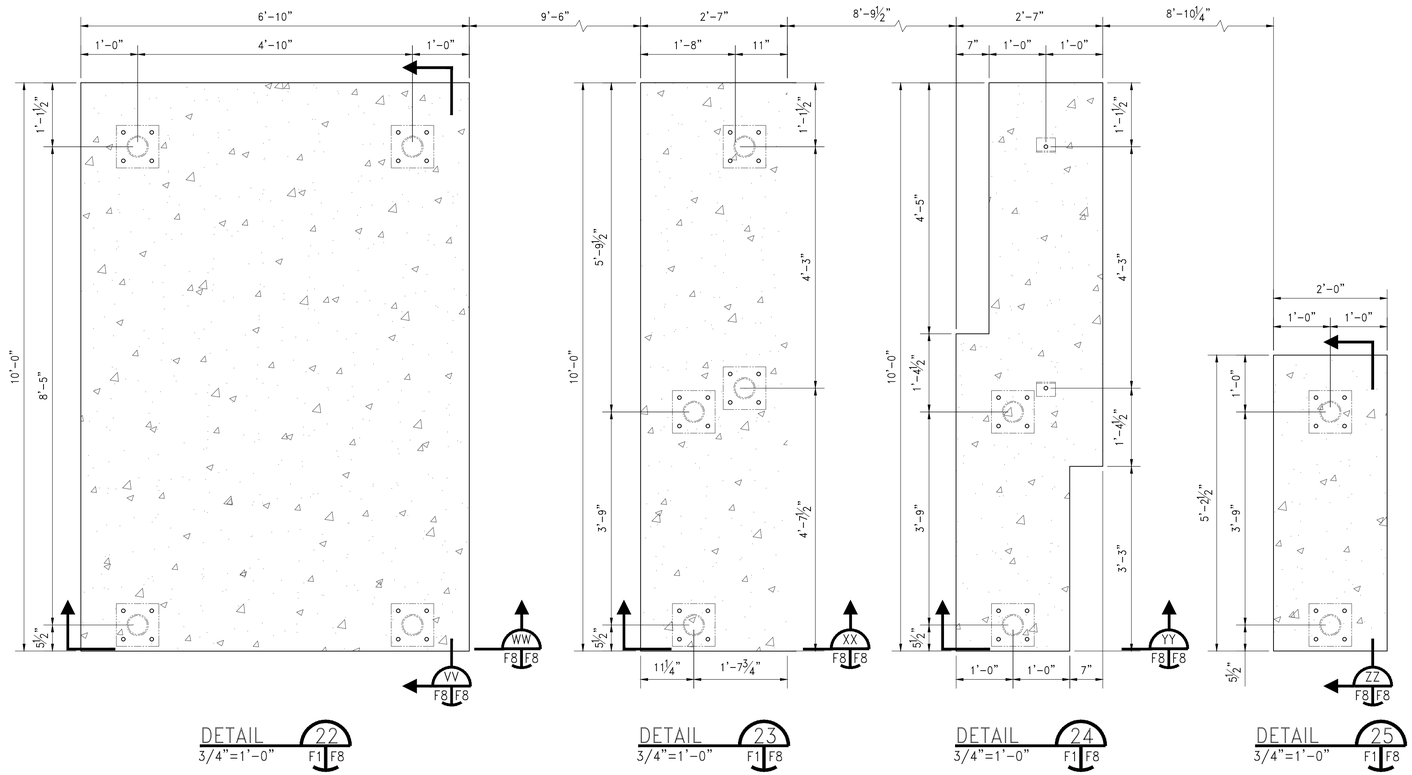
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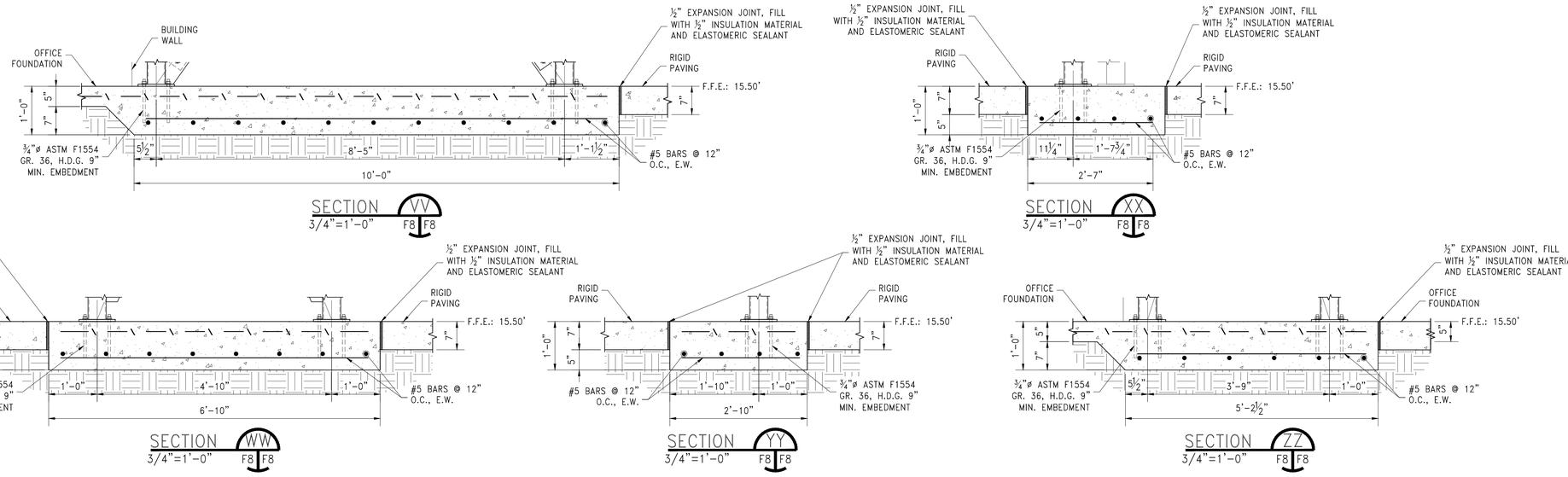
PROJECT
McDUFFIE WAREHOUSE
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TITLE
STAIR FOOTINGS – PLAN & DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	VTH	05/25/22	_ OF _	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	GDEC	05/25/22	4043–F7	

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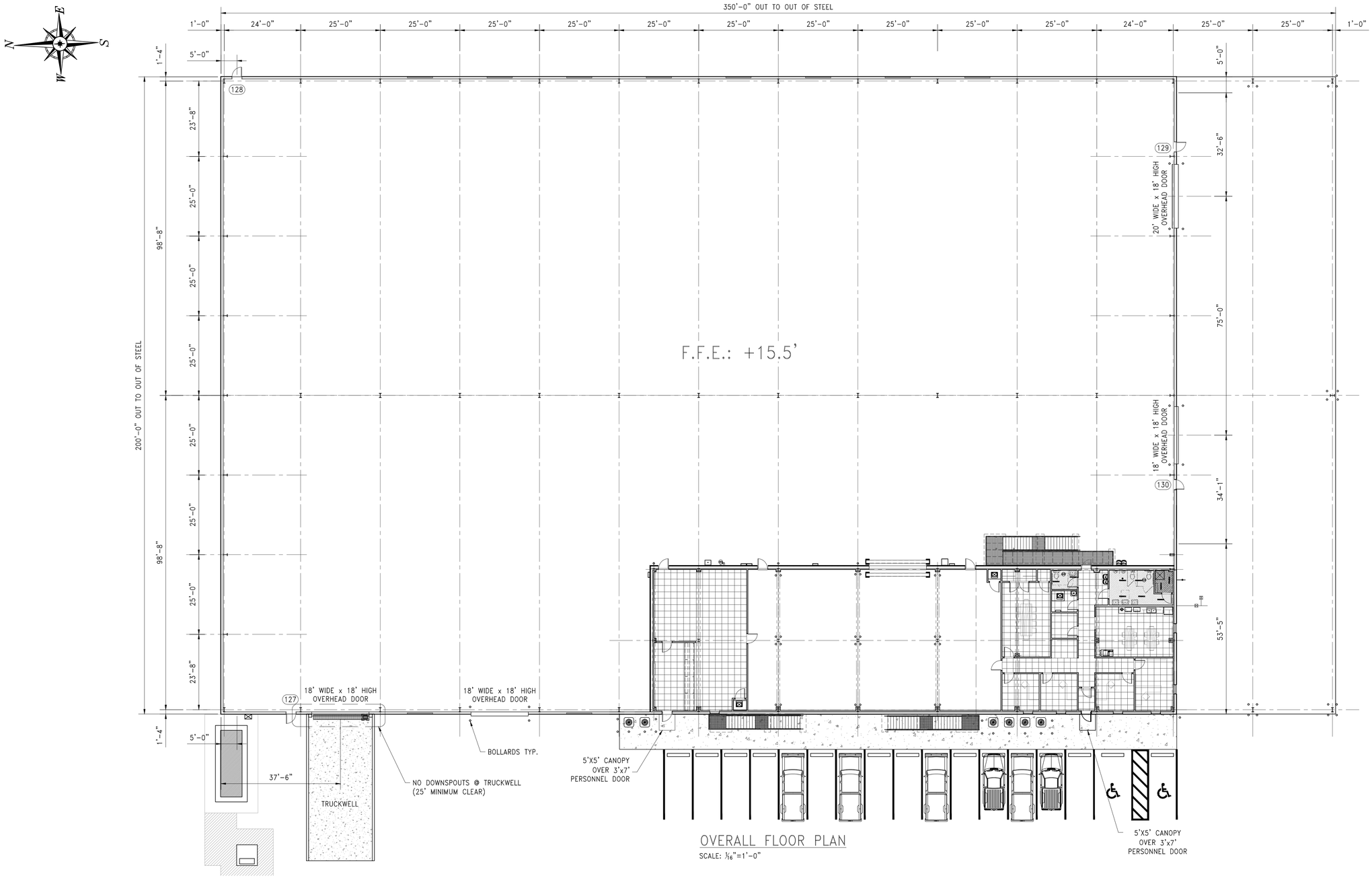
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PROJECT
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TITLE
STAIR FOOTINGS – PLAN & DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	VTH	05/25/22	— OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	GDEC	05/25/22	4043–F8	

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OVERALL FLOOR PLAN

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

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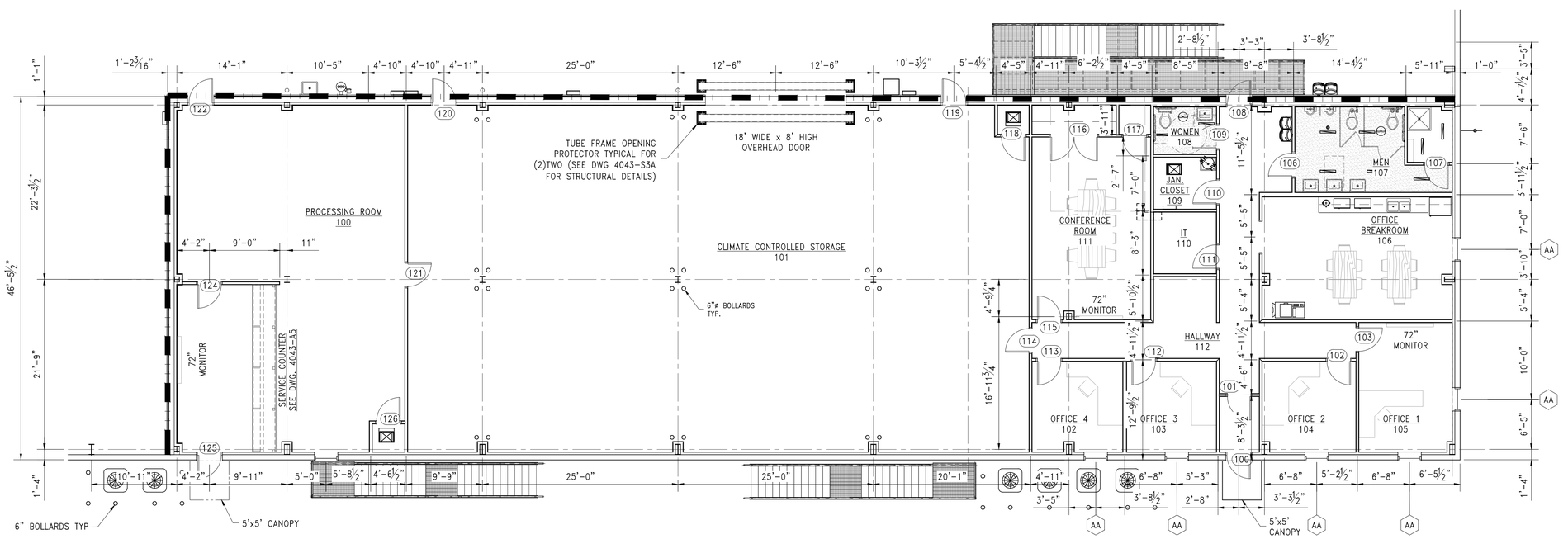
McDUFFIE WAREHOUSE

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TITLE: OVERALL FLOOR PLAN

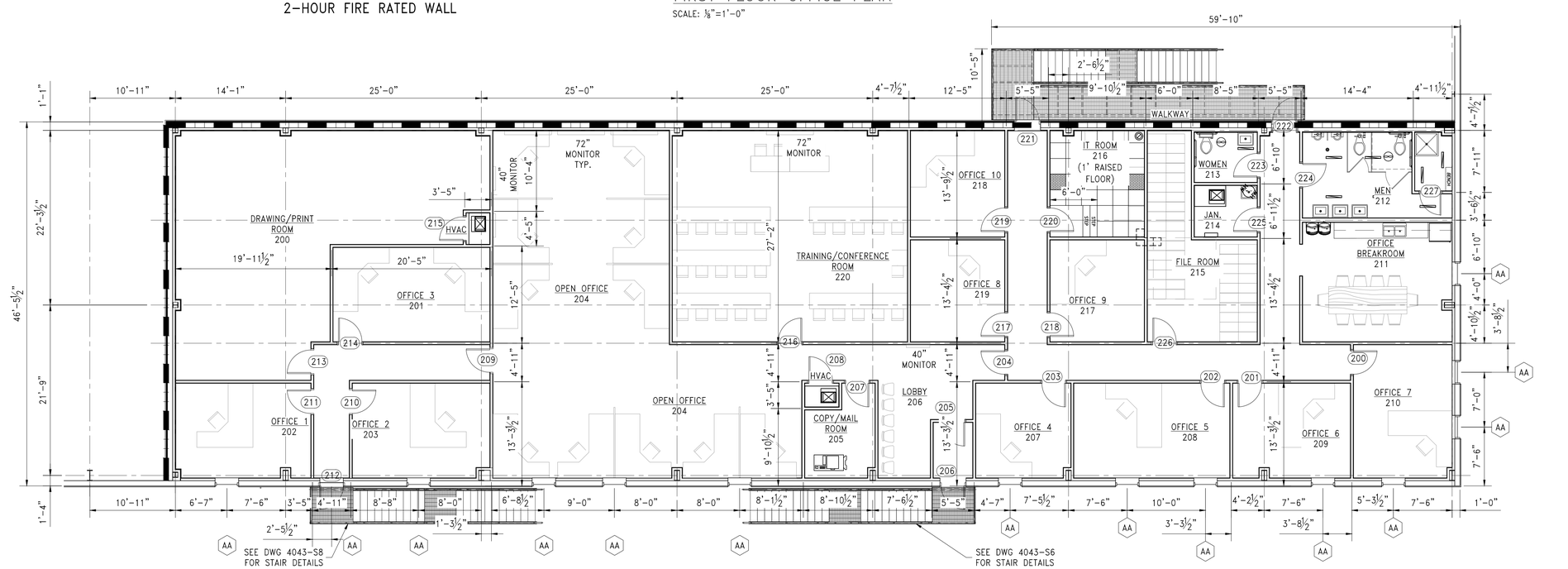
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NOTED	RCC	10/01/21	— OF —	A
JOB NO. 4043	CHECKED BY DBK	DATE 10/01/21	DRAWING NUMBER 4043-A1	

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FIRST FLOOR OFFICE PLAN

SCALE: ⅛"=1'-0"



SECOND FLOOR OFFICE PLAN

SCALE: ⅛"=1'-0"

NOTE:
SEE DWG 4043-A6 FOR WINDOW AND DOOR SCHEDULE AND 4043-A7 FOR ROOM FINISH SCHEDULE.

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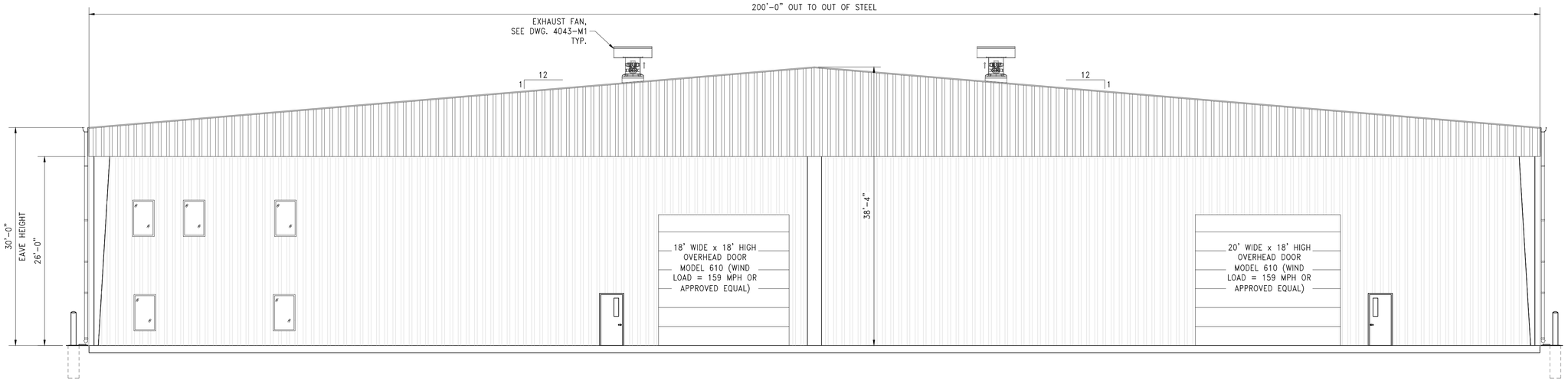
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TITLE
OFFICE FLOOR PLANS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	— OF —	A
JOB NO. 4043	CHECKED BY DBK	DATE 10/01/21	DRAWING NUMBER 4043-A2	

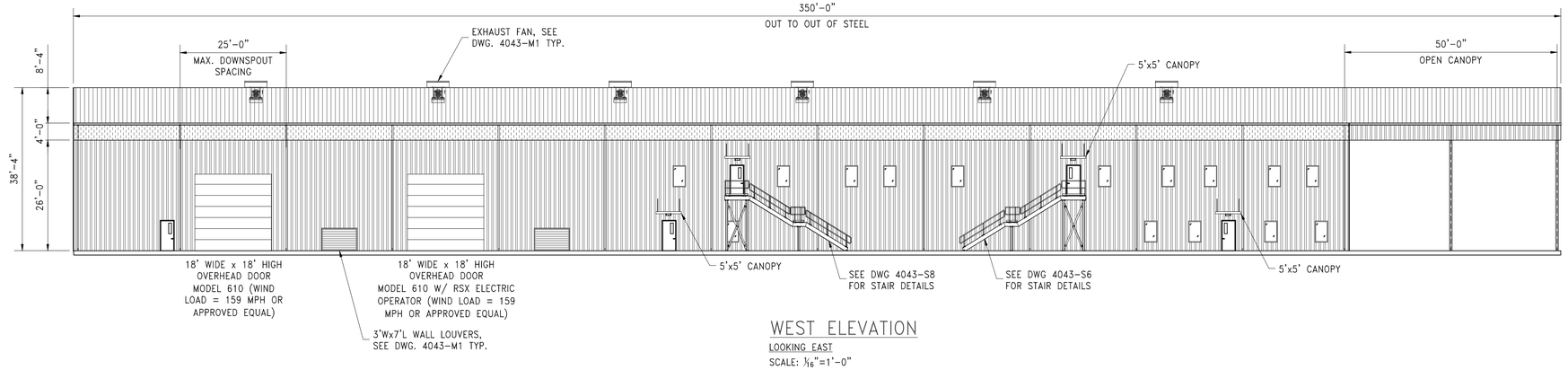
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SOUTH ELEVATION

LOOKING NORTH

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



WEST ELEVATION

LOOKING EAST

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

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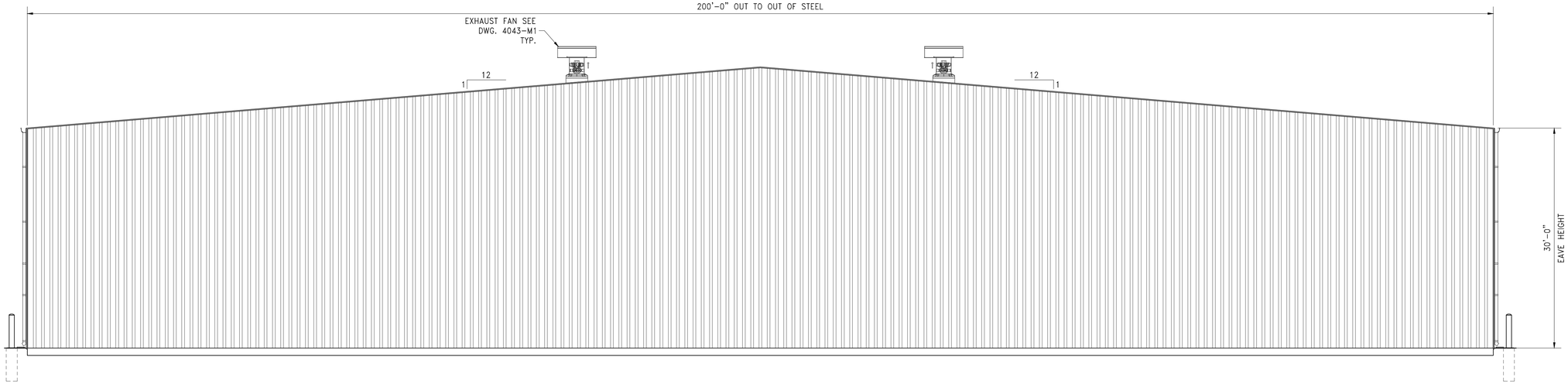
McDUFFIE TERMINAL
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TITLE

EXTERIOR BUILDING ELEVATIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	— OF —	A
JOB NO. 4043	CHECKED BY DBK	DATE 10/01/21	DRAWING NUMBER 4043-A3	

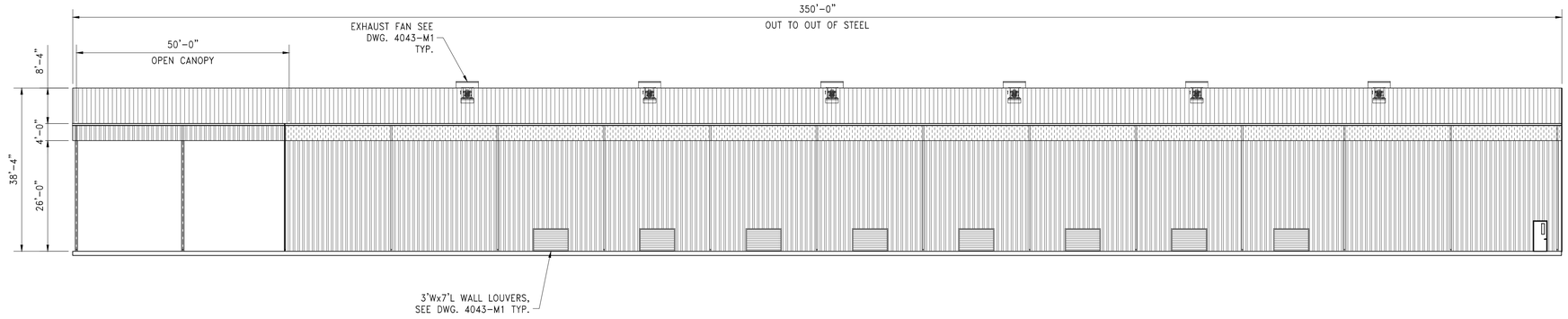
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NORTH ELEVATION

LOOKING SOUTH

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



EAST ELEVATION

LOOKING WEST

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

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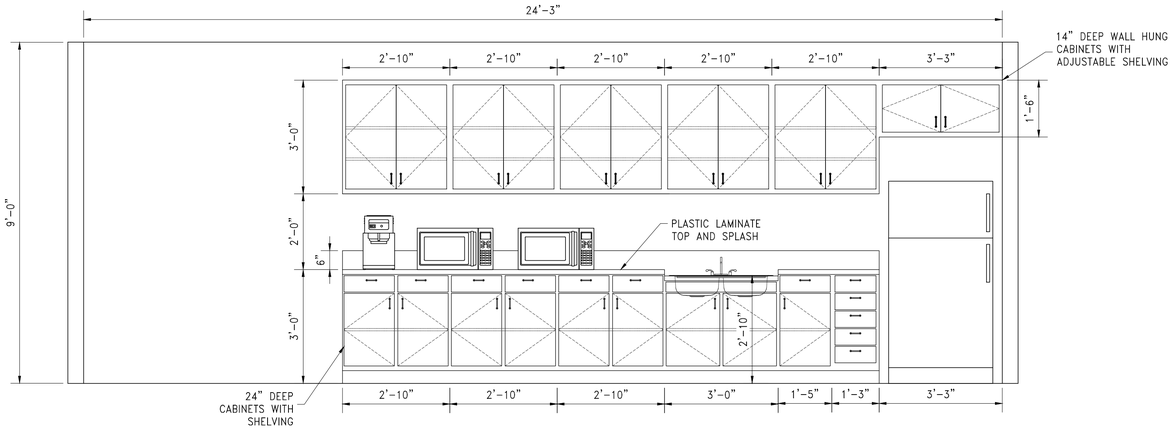
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TITLE

EXTERIOR BUILDING ELEVATIONS

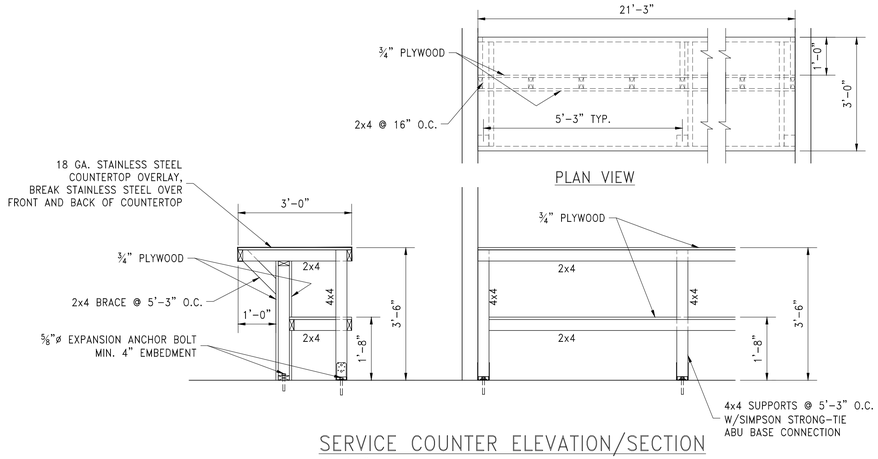
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NOTED	RCC	10/01/21	— OF —	A
JOB NO. 4043	CHECKED BY DBK	DATE 10/01/21	DRAWING NUMBER 4043-A4	

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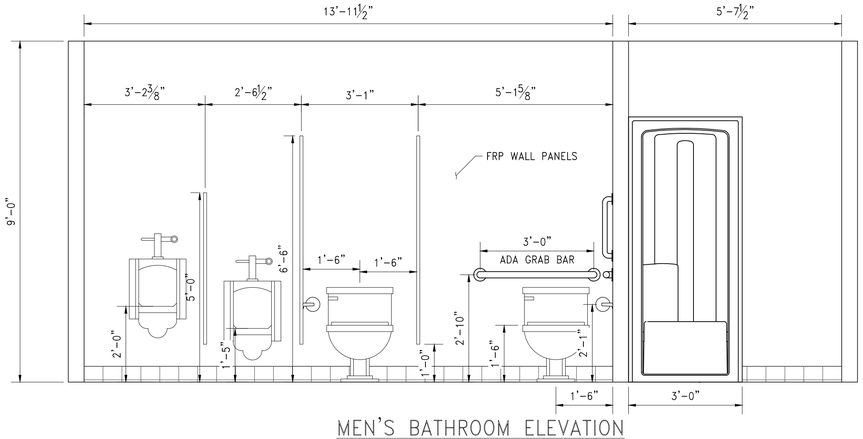
KITCHEN ELEVATION

½"=1'-0"



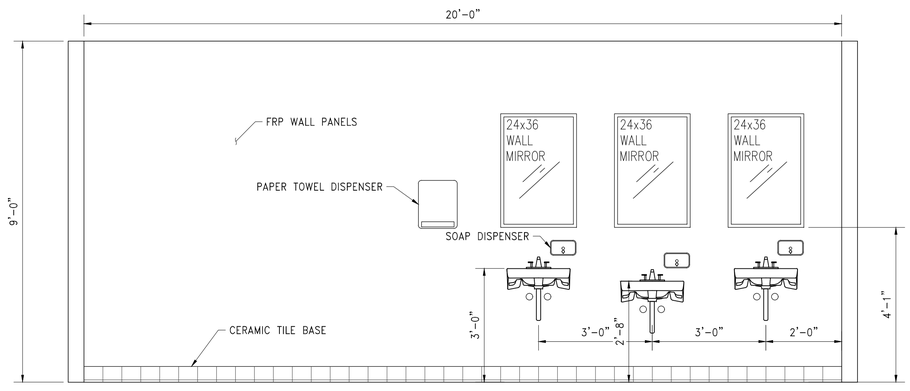
SERVICE COUNTER ELEVATION/SECTION

½"=1'-0"



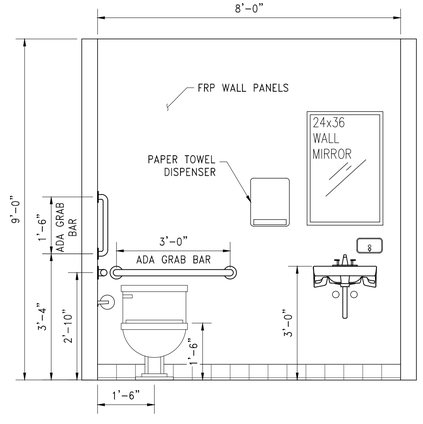
MEN'S BATHROOM ELEVATION

½"=1'-0"



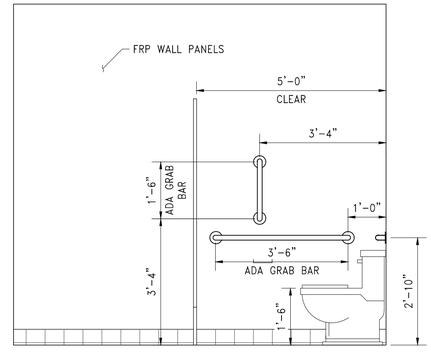
MEN'S BATHROOM ELEVATION

½"=1'-0"



WOMEN'S BATHROOM ELEVATION

½"=1'-0"



TYPICAL ADA COMPLIANT TOILET SIDE ELEVATION

½"=1'-0"

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INTERIOR ELEVATIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
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JOB NO. 4043	CHECKED BY DBK	DATE 12/31/21	DRAWING NUMBER 4043-A5	

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DOOR SCHEDULE – FIRST FLOOR

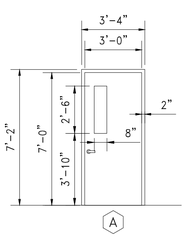
DOOR #	RATING	DOOR SIZE	DOOR MATERIAL	FRAME MATERIAL	HARDWARE	REMARKS
100	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	CT GLASS–SEE DOOR TYPE "A"
101	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	
102	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
103	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
104					DELETED	
105					DELETED	
106	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	
107	NONE	3'-0" x 5'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	SEE DOOR TYPE "C"
108	2 HR	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	FR GLASS–SEE DOOR TYPE "E"
109	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	
110	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
111	NONE	3'-0" x 7'-0"	SCWD	METAL	ENTRY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
112	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
113	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
114	NONE	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	CT GLASS–SEE DOOR TYPE "A"
115	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
116	NONE	6-0" x 7'-0"	SCWD	METAL	1½ PAIR S.S. BUTT HINGES	DOUBLE DOOR, SEE DOOR TYPE "B"
117	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
118	NONE	3'-0" x 7'-0"	SCWD	METAL	LOUVERED DOOR, 1½ PAIR S.S. BUTT HINGES	LOUVERED DOOR SEE DOOR TYPE "D"
119	2 HR	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	FR GLASS–SEE DOOR TYPE "E"
120	2 HR	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	FR GLASS–SEE DOOR TYPE "E"
121	NONE	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	CT GLASS–SEE DOOR TYPE "A"
122	2 HR	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	FR GLASS–SEE DOOR TYPE "E"
124	NONE	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	CT GLASS–SEE DOOR TYPE "A"
125	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	CT GLASS–SEE DOOR TYPE "A"
126	NONE	3'-0" x 7'-0"	SCWD	METAL	LOUVERED DOOR, 1½ PAIR S.S. BUTT HINGES	LOUVERED DOOR SEE DOOR TYPE "D"
127	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	
128	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	
129	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	
130	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	

DOOR SCHEDULE SECOND FLOOR

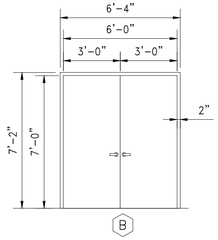
DOOR #	RATING	DOOR SIZE	DOOR MATERIAL	FRAME MATERIAL	HARDWARE	REMARKS
200	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
201	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
202	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
203	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
204	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
205	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	
206	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	CT GLASS–SEE DOOR TYPE "A"
207	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
208	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
209	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
210	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
211	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
212	NONE	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	CT GLASS–SEE DOOR TYPE "A"
213	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
214	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
215	NONE	3'-0" x 7'-0"	SCWD	METAL	LOUVERED DOOR, 1½ PAIR S.S. BUTT HINGES	LOUVERED DOOR SEE DOOR TYPE "D"
216	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
217	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
218	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
219	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
220	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
221	2 HR	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	FR GLASS–SEE DOOR TYPE "E"
222	2 HR	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	FR GLASS–SEE DOOR TYPE "E"
223	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	
224	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	
225	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
226	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	
227	NONE	3'-0" x 5'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	SEE DOOR TYPE "C"

DOOR SCHEDULE NOTES:

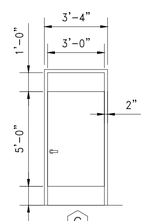
GENERAL: PROVIDE WALL BUMPERS FOR ALL DOORS.
1. DOOR FIRE RATING – RATING SHALL BE 30 MIN, UNLESS NOTED OTHERWISE.
2. SCWD = SOLID CORE WOOD DOOR
   2A. WOOD DOORS TO HAVE HOLLOW METAL FRAME
   2B. WOOD DOORS TO BE ROTARY NATURAL BIRCH, FACTORY PRE–FINISHED, STANDARD COLOR STAINED.
3. NL = NIGHTLATCH
4. SS = STAINLESS STEEL
5. ALL DOORS NOT TYPE A OR B TO BE FLUSH, UNLESS NOTED OTHERWISE.
6. IR = IMPACT RESISTANT
   CT = CLEAR TEMPERED
   FR = FIRE RESISTANT



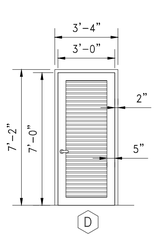
HOLLOW METAL DOOR WITH POLYSTYRENE CORE AND IR TOP WINDOW (6"W x 30"H)



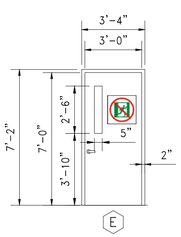
DOUBLE 3'–0"x7'–0" SOLID CORE WOOD DOORS.



3'–0"x5'–0" DRESSING ROOM DOOR IN 3'–0"x7'–0" DOOR OPENING.



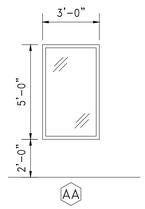
3'–0"x7'–0" LOUVERED DOOR



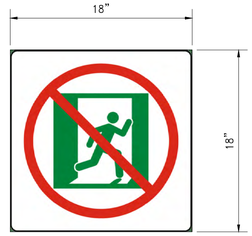
FIRE RATED STEEL DOOR WITH GLASS WINDOW AND FIRE RATED DOOR SIGNAGE (ONLY ON INTERIOR SIDE, SEE DETAILS THIS SHEET)

WINDOW SCHEDULE NOTES:

1. CLEAR TEMPERED
2. IMPACT RESISTANT: 159 WIND REQUIREMENT MIN.
3. VINYL FRAME FIXED
4. U–FACTOR: 1.250
5. SHGC: 0.82



STOREFRONT KAWNEER IR 501 CLEAR INSULATED – LOW–E #2 – HURRICANE RESISTANT GLAZING



FIRE RATED DOOR SIGNAGE

1. NFPA 170 "NOT AN EMERGENCY EXIT SYMBOL"
2. 18"X18"
3. REFLECTIVE SIGN

NOTE:

–ALL EXTERIOR GLASS TO BE CLEAR TEMPERED, IMPACT RESISTANT, MEETING WIND REQUIREMENT OF 159 MPH.

–ALL EXTERIOR DOORS SHALL BE AIR TIGHT AND WEATHER TIGHT. (DOORS SHALL PERMIT LESS THAN 0.01 CU.FT./MIN. OF OUTSIDE AIR)

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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
DOOR AND WINDOW SCHEDULE

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	03/14/22	— OF —	A
JOB NO. 4043	CHECKED BY DBK	DATE 03/14/22	DRAWING NUMBER 4043–A6	

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FIRST FLOOR ROOM FINISH SCHEDULE

ROOM		FLOOR	BASE	WALL				CEILING		REMARKS
				N	S	E	W	MAT'L	HEIGHT	
100	PROCESSING ROOM	CON	VB	7	7	6	2	LI	9'	.
101	CLIMATE CONTROLLED STORAGE	CON	VB	7	7	6	2	LI	9'	.
102	OFFICE 4	CON	VB	1	1	1	2	LI	9'	.
103	OFFICE 3	CON	VB	1	1	1	2	LI	9'	.
104	OFFICE 2	CON	VB	1	1	1	2	LI	9'	.
105	OFFICE 1	CON	VB	1	2	1	2	LI	9'	.
106	OFFICE BREAKROOM	CON	VB	1	2	3	1	LI	9'	.
107	MEN	CON	CB	4	8	9	5	S-GYP	9'	TOILET PARTITIONS
108	WOMEN	CON	CB	4	4	9	5	S-GYP	9'	TOILET PARTITIONS
109	JANITOR CLOSET	CON	VB	1	1	3	1	LI	9'	.
110	I.T.	CON	VB	1	1	1	1	LI	9'	.
111	CONFERENCE ROOM	CON	VB	1	1	6	1	LI	9'	.
112	HALLWAY	CON	VB	1	1	1	1	LI	9'	.

NOTES:

1. TOILET PARTITIONS TO BE FLOOR MOUNTED AND OVERHEAD BRACED, POWDER COATED STEEL.

ROOM FINISH SCHEDULE
KEY NOTES

WALLS:

1. 3⅝" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH 3½" BATT INSULATION
2. 3⅝" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH SPRAY FOAM INSULATION
3. 6" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH 6" BATT INSULATION
4. 3⅝" METAL STUD WALL FRAMING WITH ⅝" MOISTURE RESISTANT PAINTED GYPSUM WITH 3½" BATT INSULATION AND ¼" FRP FULL HEIGHT.
5. 6" METAL STUD WALL FRAMING WITH ⅝" MOISTURE RESISTANT PAINTED GYPSUM WITH 6" BATT INSULATION AND ¼" FRP FULL HEIGHT.
6. 2 HOUR FIRE WALL DETAIL WITH SPRAY FOAM INSULATION, SEE DETAIL "J" ON DWG. 4043-S5, WITH (2) ⅝" TYPE X GYP.
7. 3⅝" METAL STUD WALL FRAMING WITH ⅝" PAINTED IMPACT RESISTANT GYPSUM WITH BATT INSULATION.
8. 3⅝" METAL STUD WALL FRAMING WITH ⅝" MOISTURE RESISTANT GYP. WITH SPRAY FOAM INSULATION AND ¼" FRP FULL HEIGHT.
9. 2 HOUR FIRE WALL DETAIL WITH SPRAY FOAM INSULATION, SEE DETAIL "J" ON DWG 4043-S5, WITH (2) ⅝" TYPE X GYPSUM AND ¼" FRP FULL HEIGHT.

FLOORING:

CON	SEALED EXPOSED CONCRETE (COLOR TO BE DETERMINED BY OWNER)
EPY	EPOXY COATED FLOORING
CT	CERAMIC TILE
CAR	COMMERCIAL CARPET
VCT	VINYL COMPOSITION TILE
HSF	HOLLOW STEEL FLOOR PANELS OVER CONCRETE FLOOR (PRO ACCESS FLOORS, INCLUDE 2 PERFORATED AIR FLOW PANELS, 1250 PANELS, OR APPROVED EQUAL) FINISH TO BE DETERMINED BY OWNERS.

CEILING:

E	EXPOSED CEILING
LI	ARMSTRONG-TILE #1.728. FINE FISSURED 2'x2'x⅝" MINERAL BOARD – WITH WITH SQUARE EDGE DETAIL WITH 6¼" BATT INSULATION.
S-GYP	⅝" GYPSUM, SUSPENDED WITH CERTAINTEED SYSTEM OR APPROVED EQUAL.

BASE:

PVC	1x4 PAINTED PVC BASE
CB	6" HIGH CEREMIC BASE
VB	VINYL BASE

SECOND FLOOR ROOM FINISH SCHEDULE

ROOM		FLOOR	BASE	WALL				CEILING		REMARKS
				N	S	E	W	MAT'L	HEIGHT	
200	DRAWING/PRINT ROOM	CON	VB	2	1	2	1	LI	10'	.
201	OFFICE 3	CON	VB	1	1	1	1	LI	10'	.
202	OFFICE 1	CON	VB	2	1	1	2	LI	10'	.
203	OFFICE 3	CON	VB	1	1	1	2	LI	10'	.
204	OPEN OFFICE	CON	VB	1	1	2	2	LI	10'	.
205	COPY/MAIL ROOM	CON	VB	1	1	1	2	LI	10'	.
206	LOBBY	CON	VB	1	1	1	2	LI	10'	.
207	OFFICE 4	CON	VB	1	1	1	2	LI	10'	.
208	OFFICE 5	CON	VB	1	1	1	2	LI	10'	.
209	JANITOR CLOSET	CON	VB	1	1	1	2	LI	10'	.
210	I.T.	HSF	VB	1	2	1	2	LI	10'	1' RAISED FLOOR W/ HOLLOW METAL FLOOR PANELS
211	OFFICE BREAKROOM	CON	VB	1	2	3	1	LI	10'	.
212	MEN	CON	CB	4	8	9	5	S-GYP	10'	TOILET PARTITIONS
213	WOMEN	CON	CB	4	4	9	5	S-GYP	10'	TOILET PARTITIONS
214	JANITOR	CON	VB	1	1	1	1	LI	10'	.
215	FILE ROOM	CON	VB	1	1	2	1	LI	10'	.
216	IT ROOM	HSF	VB	1	1	2	1	LI	10'	.
217	OFFICE 9	CON	VB	1	1	1	1	LI	10'	.
218	OFFICE 10	CON	VB	1	1	2	1	LI	10'	.
219	OFFICE 8	CON	VB	1	1	1	1	LI	10'	.
220	TRAINING/CONFERENCE ROOM	CON	VB	1	2	1	1	LI	10'	.

NOTES:

1. TOILET PARTITIONS TO BE FLOOR MOUNTED AND OVERHEAD BRACED, POWDER COATED STEEL.

ROOM FINISH SCHEDULE
KEY NOTES

WALLS:

1. 3⅝" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH 3½" BATT INSULATION
2. 3⅝" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH SPRAY FOAM INSULATION
3. 6" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH 6" BATT INSULATION
4. 3⅝" METAL STUD WALL FRAMING WITH ⅝" MOISTURE RESISTANT PAINTED GYPSUM WITH 3½" BATT INSULATION AND ¼" FRP FULL HEIGHT
5. 6" METAL STUD WALL FRAMING WITH ⅝" MOISTURE RESISTANT PAINTED GYPSUM WITH 6" BATT INSULATION AND ¼" FRP FULL HEIGHT.
6. 2 HOUR FIRE WALL DETAIL WITH SPRAY FOAM INSULATION, SEE DETAIL J ON DWG. 4043-S5, (2) ⅝" TYPE X GYPSUM
7. 3⅝" METAL STUD WALL FRAMING WITH ⅝" PAINTED IMPACT RESISTANT GYPSUM WITH BATT INSULATION.
8. 3⅝" METAL STUD WALL FRAMING WITH ⅝" MOISTURE RESISTANT GYP. WITH SPRAY FOAM INSULATION AND ¼" FRP FULL HEIGHT.
9. 2 HOUR FIRE WALL DETAIL WITH SPRAY FOAM INSULATION, SEE DETAIL "J" ON DWG 4043-S5, WITH (2) ⅝" TYPE X GYPSUM AND ¼" FRP FULL HEIGHT.

FLOORING:

CON	SEALED EXPOSED CONCRETE (COLOR TO BE DETERMINED BY OWNER)
EPY	EPOXY COATED FLOORING
CT	CERAMIC TILE
CAR	COMMERCIAL CARPET
VCT	VINYL COMPOSITION TILE
HSF	HOLLOW STEEL FLOOR PANELS OVER CONCRETE FLOOR (PRO ACCESS FLOORS, INCLUDE 2 PERFORATED AIR FLOW PANELS, 1250 PANELS, OR APPROVED EQUAL) FINISH TO BE DETERMINED BY OWNERS.

CEILING:

E	EXPOSED CEILING
LI	ARMSTRONG-TILE #1.728. FINE FISSURED 2'x2'x⅝" MINERAL BOARD – WITH WITH SQUARE EDGE DETAIL WITH 6¼" BATT INSULATION.
S-GYP	⅝" GYPSUM, SUSPENDED WITH CERTAINTEED SYSTEM OR APPROVED EQUAL.

BASE:

PVC	1x4 PAINTED PVC BASE
CB	6" HIGH CEREMIC BASE
VB	VINYL BASE

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A	ISSUE FOR BID	08/10/22	JWM	DBK

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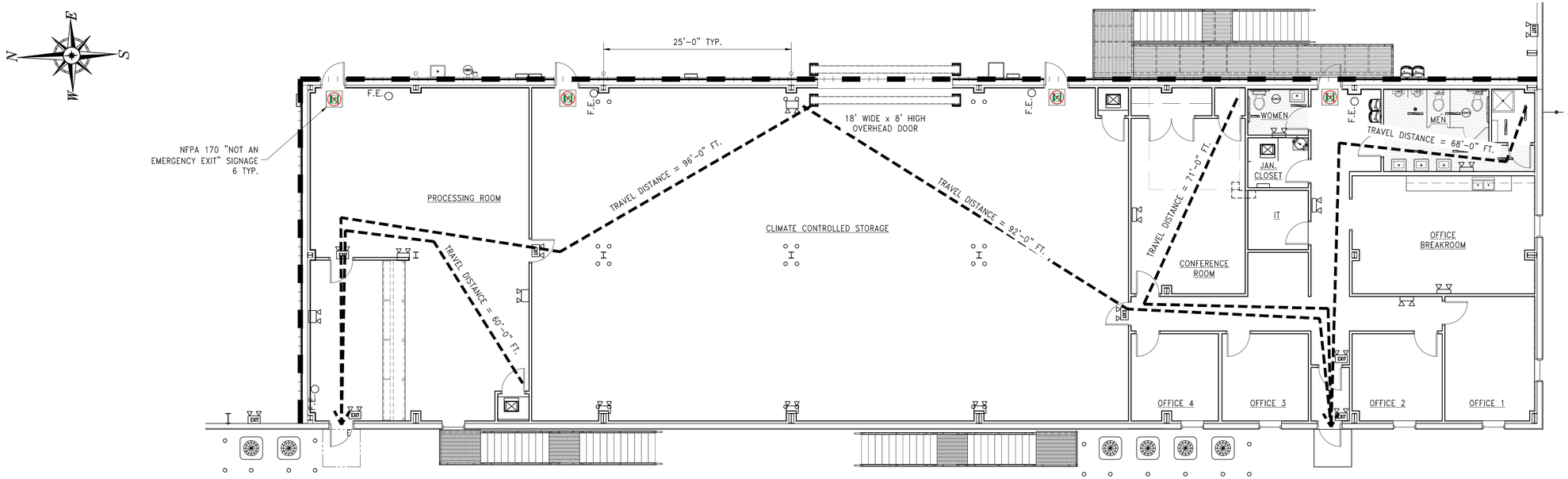
13 Thrash Rd.
LaGrange, GA 30241
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Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

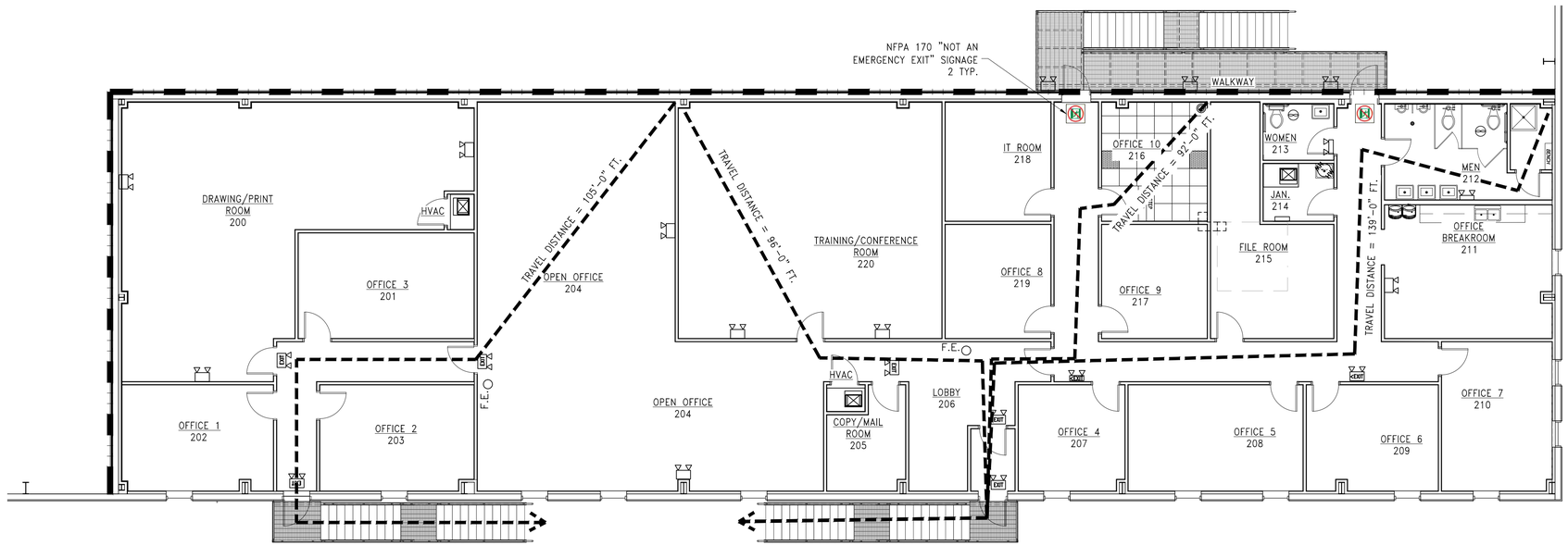
TITLE
ROOM FINISH SCHEDULE

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	VTH	04/27/22	— OF —	A
JOB NO. 4043	CHECKED BY DBK	DATE	DRAWING NUMBER 4043-A7	

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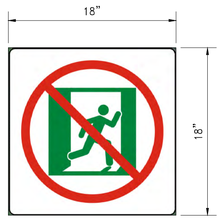
LIFE SAFETY PLAN – FIRST FLOOR
1/8"=1'-0"



LIFE SAFETY PLAN – SECOND FLOOR
1/8"=1'-0"

MAXIMUM ALLOWABLE TRAVEL DISTANCE 200'-0"

2-HOUR FIRE RATED WALL



FIRE RATED DOOR SIGNAGE
1. NFPA 170 "NOT AN EMERGENCY EXIT SYMBOL"
2. 18"X18"
3. REFLECTIVE SIGN

F.E.	WALL MOUNTED FIRE EXTINGUISHER (USE TYPE 2-A:20-B:C IN ALL AREAS) MAX. SPACING 75', MIN. 5
E	EMERGENCY LIGHTS WITH BATTERY BACKUP. SEE DWG. 4043-E2 FOR LIGHTING SPECIFICATIONS
EXIT	ILLUMINATED EXIT SIGN HARD WIRED TO ELECTRICAL SYSTEM WITH BATTERY BACKUP.
	EMERGENCY LIGHTING FIXTURE UNIT HARD WIRED TO ELECTRICAL SYSTEM WITH BATTERY BACKUP

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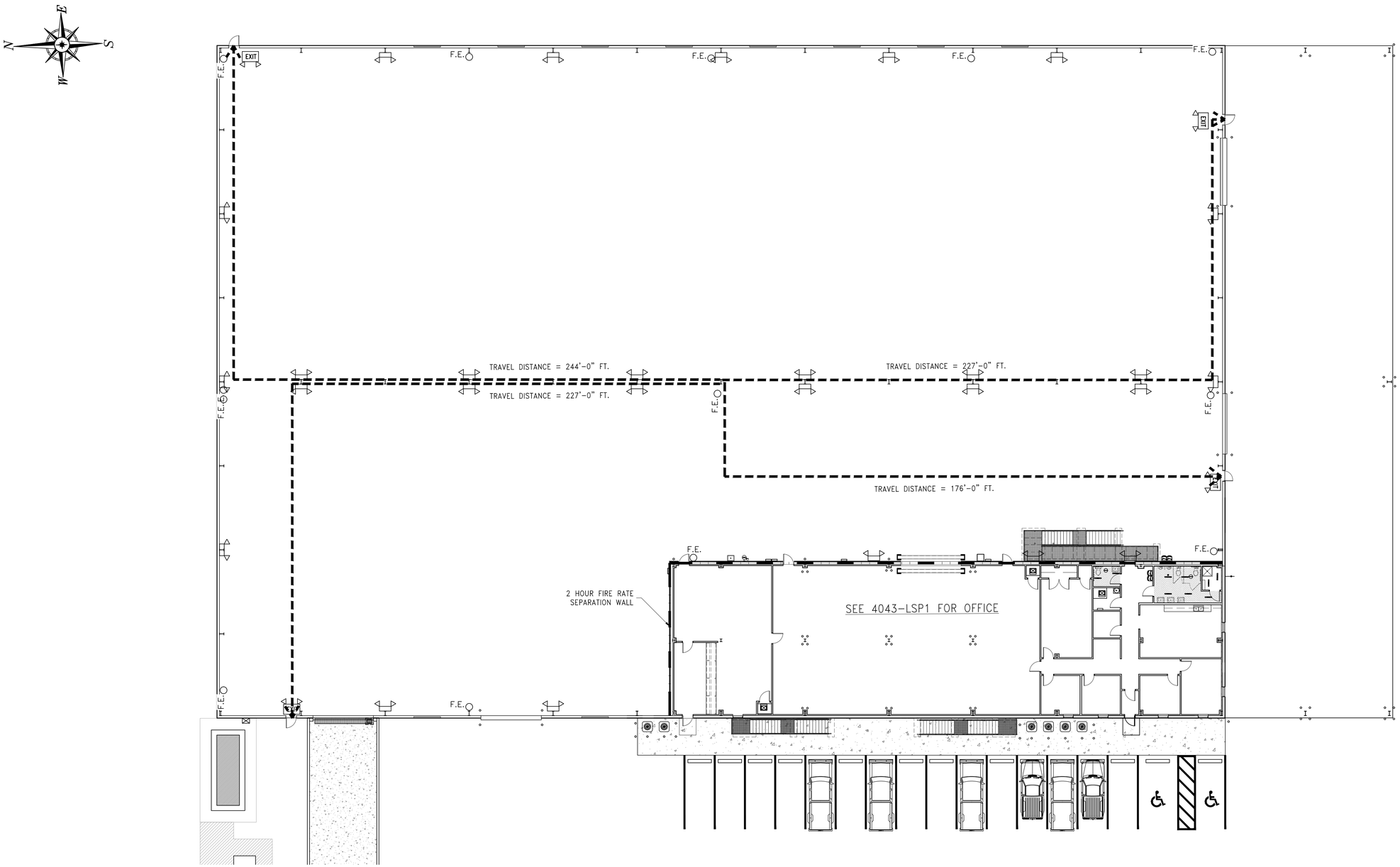
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
LIFE SAFETY PLAN – OFFICES

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	— OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	DBK	10/01/21	4043-LSP1	

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LIFE SAFETY PLAN – WAREHOUSE
1/16"=1'-0"

F.E.	WALL MOUNTED FIRE EXTINGUISHER (USE TYPE 2-A:20-B:C IN ALL AREAS) MAX. SPACING 75', 12 REQ'D
E	EMERGENCY LIGHTS WITH BATTERY BACKUP. SEE DWG. 4043-E2 FOR LIGHTING SPECIFICATIONS
EXIT	ILLUMINATED EXIT W/EMERGENCY LIGHTING SIGN HARD WIRED TO ELECTRICAL SYSTEM WITH BATTERY BACKUP.

MAXIMUM ALLOWABLE TRAVEL DISTANCE 300'-0"

2-HOUR FIRE RATED WALL

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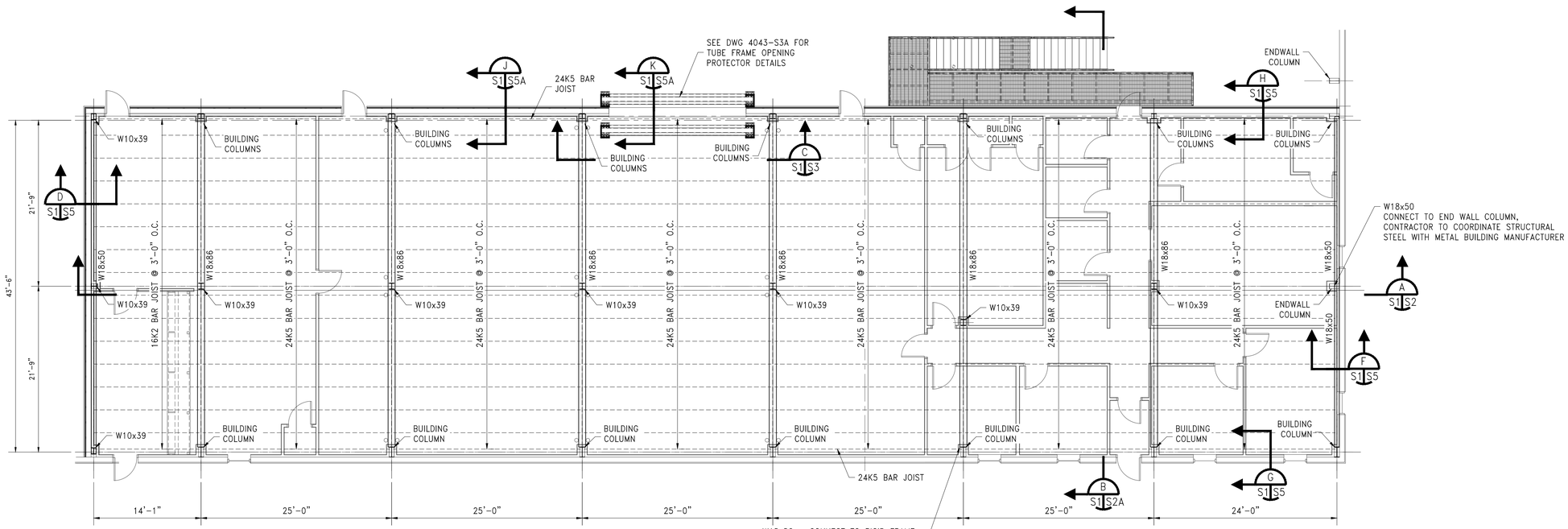
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Phone (706) 302-2831
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
LIFE SAFETY PLAN – WAREHOUSE

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	_ OF _	A
JOB NO. 4043	CHECKED BY DBK	DATE 10/01/21	DRAWING NUMBER 4043-LSP2	

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

W18x86 – CONNECT TO RIGID FRAME COLUMN, CONTRACTOR TO COORDINATE STRUCTURAL STEEL WITH METAL BUILDING MANUFACTURER, TYP.

* MEMBER SIZES AND CONNECTION DETAILS FOR OFFICE FRAMING ARE SHOWN FOR REFERENCE ONLY. ALL STEEL COLUMNS, BEAMS, AND CONNECTION DETAILS SHALL BE SIZED AND DESIGNED BY THE METAL BUILDING MANUFACTURERS.

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A	ISSUE FOR BID	08/10/22	JWM	GDEC

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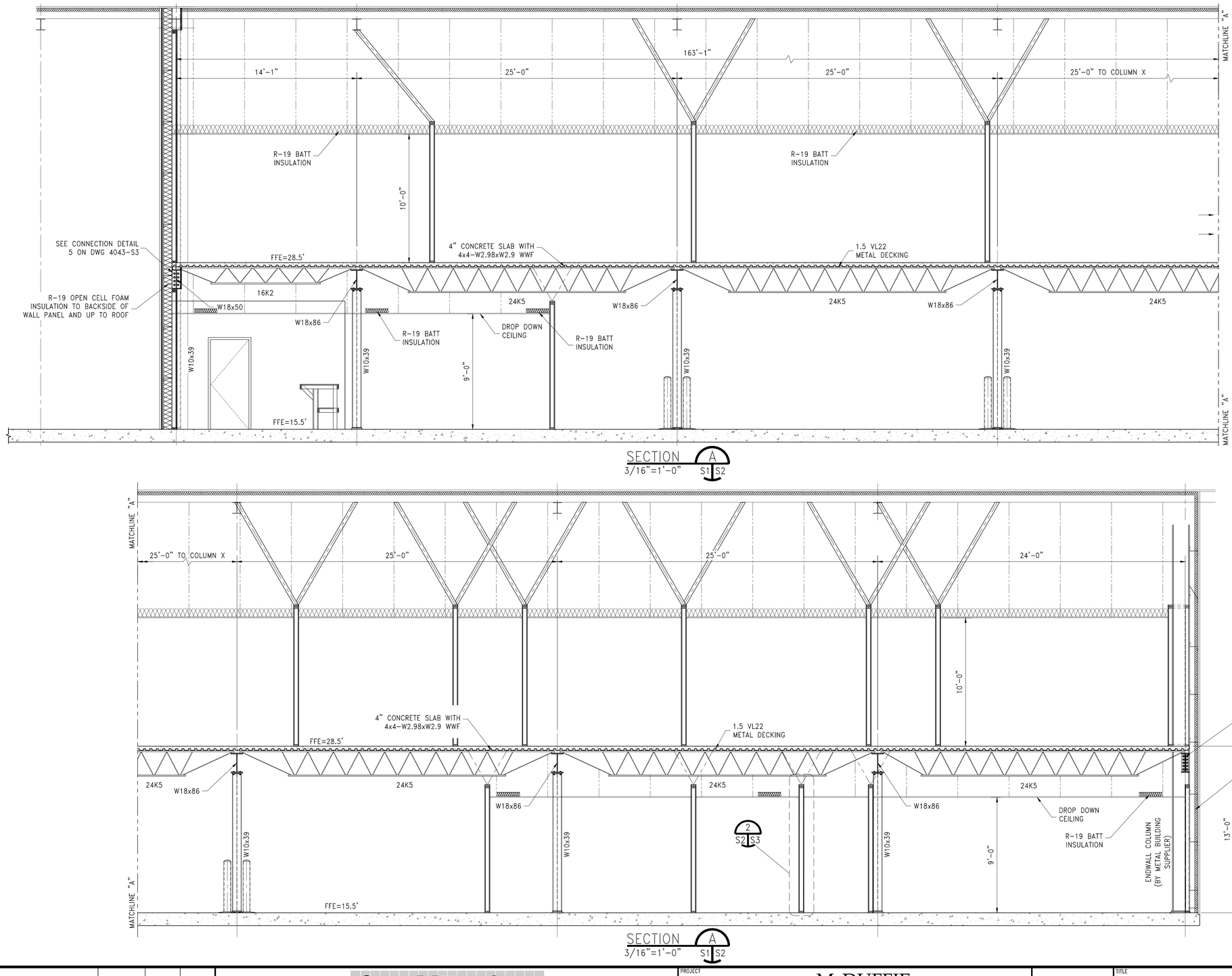
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
FRAMING PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	VTH	12/01/21	_____ OF _____ 22x34	A
JOB NO. 4043-21	CHECKED BY WBS	DATE	DRAWING NUMBER 4043-S1	

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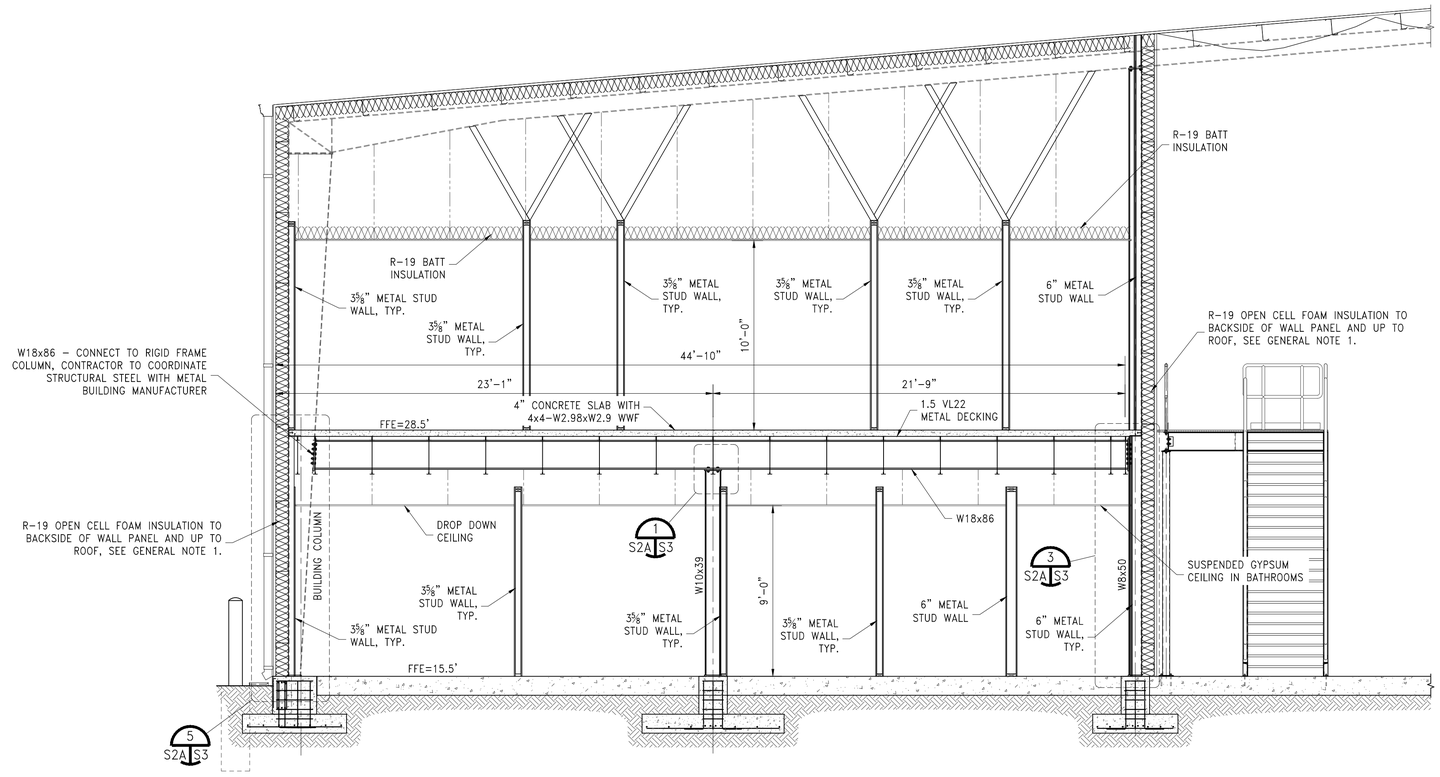
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
DETAILS AND SECTIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	VTH	12/01/21	— OF —	A
JOB NO. 4043-21	CHECKED BY WBS	DATE	DRAWING NUMBER 4043-S2	

22x34

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SECTION B
3/16"=1'-0" S1 S2A

NOTES:

1. CONTRACTOR SHALL INSTALL INSULATION FOR THE ENTIRE OFFICE BUILDING ENVELOPE, CREATING A CONTINUOUS AIR BARRIER. THE CONTINUOUS AIR BARRIER SHALL EXTEND OVER ALL SURFACES OF THE OFFICE BUILDING ENVELOPE (WALL, DOORS, WINDOWS, OPENINGS, ETC.) AND SHALL CREATE AN OFFICE BUILDING WITH AIR LEAKAGE RATE NOT EXCEEDING 0.4 CFM/SQ. FT. UNDER A PRESSURE DIFFERENTIAL OF 75 PASCAL (1.57 PSF) WHEN TESTED IN ACCORDANCE WITH ASTM STANDARD TEST METHOD FOR DETERMINING AIR LEAKAGE RATE BY FAN PRESSURIZATION (ASTM E 779).

2. AIR LEAKAGE TEST SHALL BE CONDUCTED WHEN ALL COMPONENTS OF THE AIR BARRIER HAVE BEEN INSTALLED AND BEFORE INSTALLATION OF FINISHES THAT ARE NOT PART OF THE AIR BARRIER ASSEMBLY. IN THE EVENT THE OFFICE BUILDING AIR LEAKAGE RATE DOES NOT MEET THE SPECIFIED REQUIREMENT, THE CONTRACTOR SHALL REPAIR THE AIR BARRIER AND RETEST UNTIL IT CONFORMS TO THE LEAKAGE RATES SPECIFIED.

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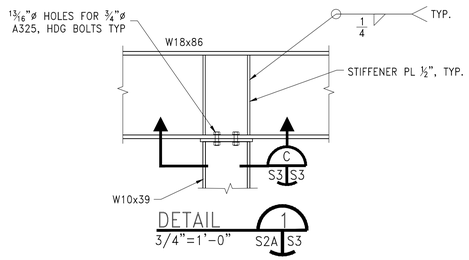
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Fax (706) 302-1411

PROJECT
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ASPA

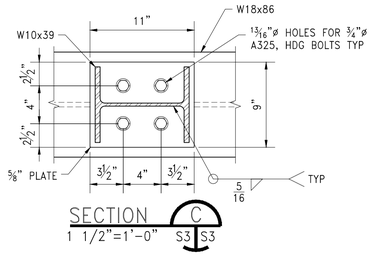
TITLE
DETAILS AND SECTIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	VTH	12/01/21	22x34 — OF —	A
JOB NO. 4043-21	CHECKED BY WBS	DATE	DRAWING NUMBER 4043-S2A	

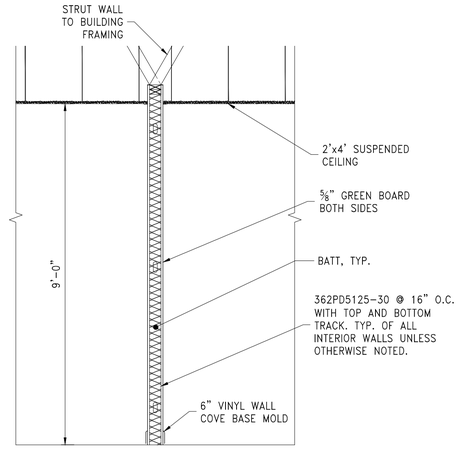
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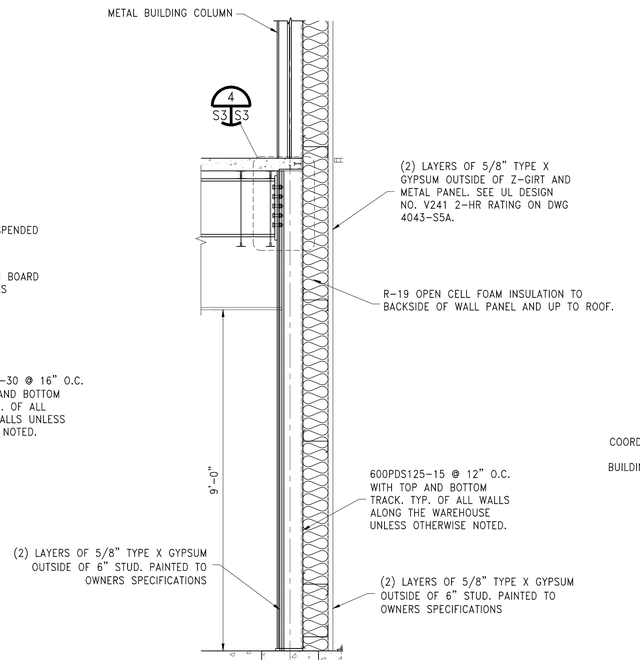
DETAIL 1
3/4"=1'-0" S2A S3



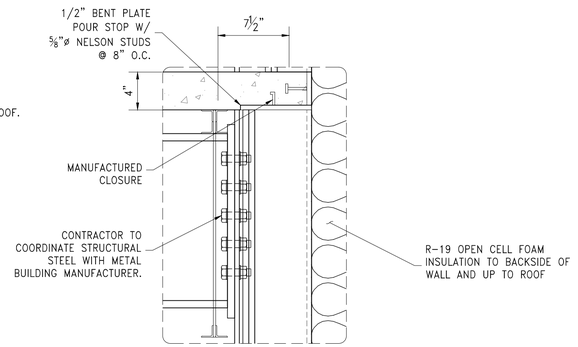
SECTION C
1 1/2"=1'-0" S3 S3



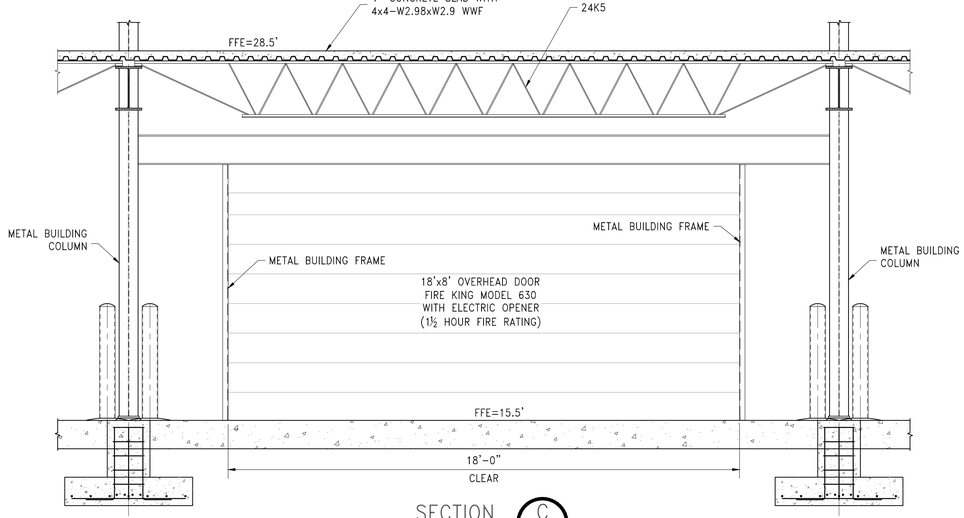
DETAIL 2
1/2"=1'-0" S2 S3



DETAIL 3
1/2"=1'-0" S2A S3



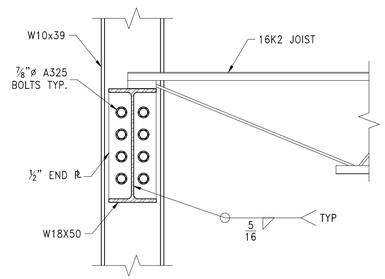
DETAIL 4
1 1/2"=1'-0" S3 S3



SECTION C
3/8"=1'-0" S1 S3

DOOR SECTION

*OPENING PROTECTOR NOT SHOWN FOR CLARITY



DETAIL 5
1"=1'-0" S2 S3

* CONCRETE DECK AND WALL SECTIONS NOT SHOWN FOR CLARITY

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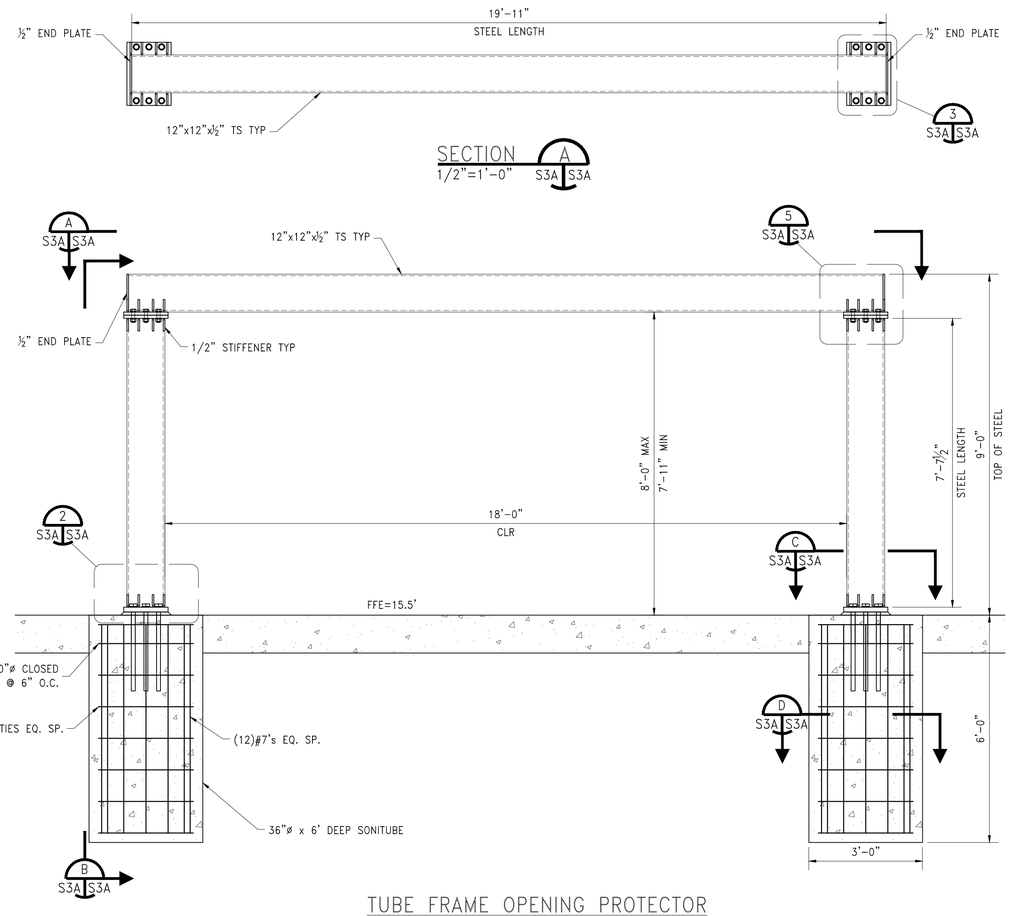
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

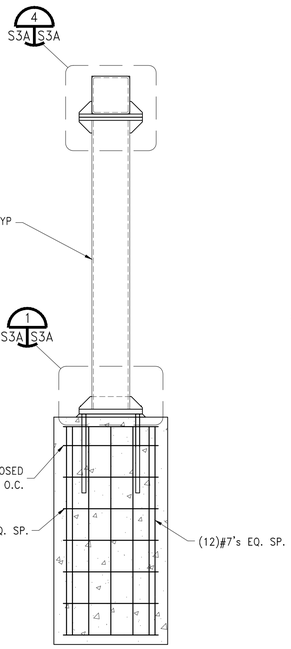
TITLE
DETAILS AND SECTIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	01/20/22	— OF — (22x34)	A
JOB NO. 4043-21	CHECKED BY WBS	DATE	DRAWING NUMBER 4043-S3	

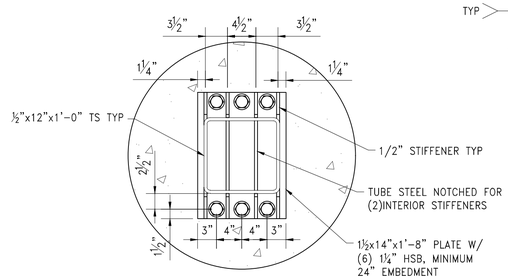
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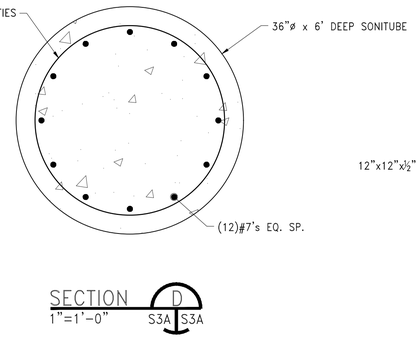
TUBE FRAME OPENING PROTECTOR
½"=1'-0"



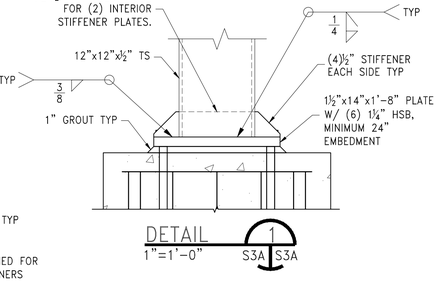
SECTION B
1/2"=1'-0"



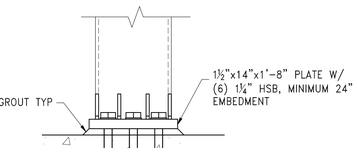
SECTION C
1"=1'-0"



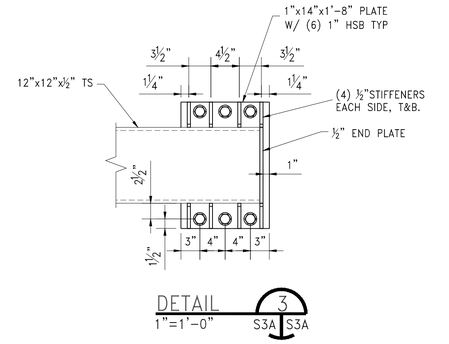
SECTION D
1"=1'-0"



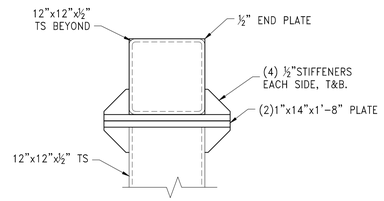
DETAIL 1
1"=1'-0"



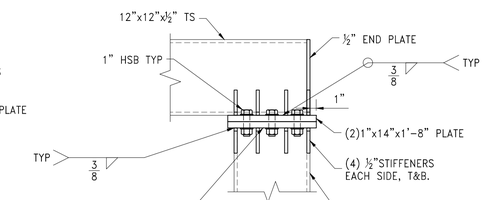
DETAIL 2
1"=1'-0"



DETAIL 3
1"=1'-0"



DETAIL 4
1"=1'-0"



DETAIL 5
1"=1'-0"

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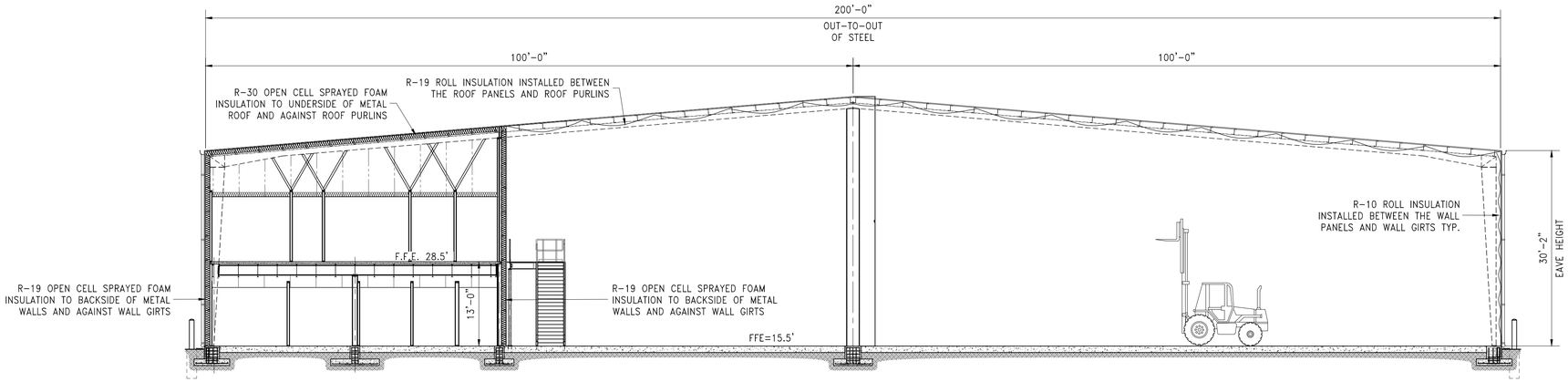
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PROJECT
McDUFFIE
WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
TUBE FRAME OPENING PROTECTOR DETAILS

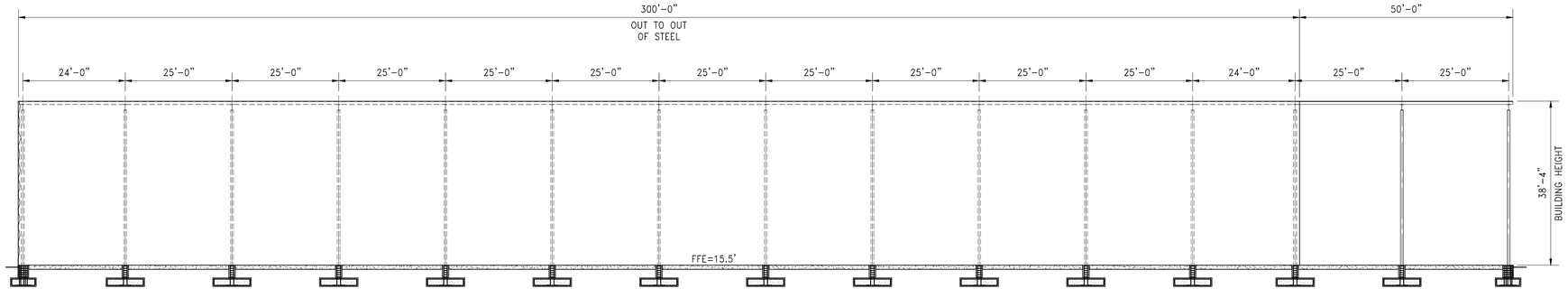
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JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043-21	WBS		4043-S3A	

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NORTH ELEVATION

$\frac{3}{32}$"=1'-0"



EAST ELEVATION

$\frac{1}{16}$"=1'-0"

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PROJECT

McDUFFIE WAREHOUSE

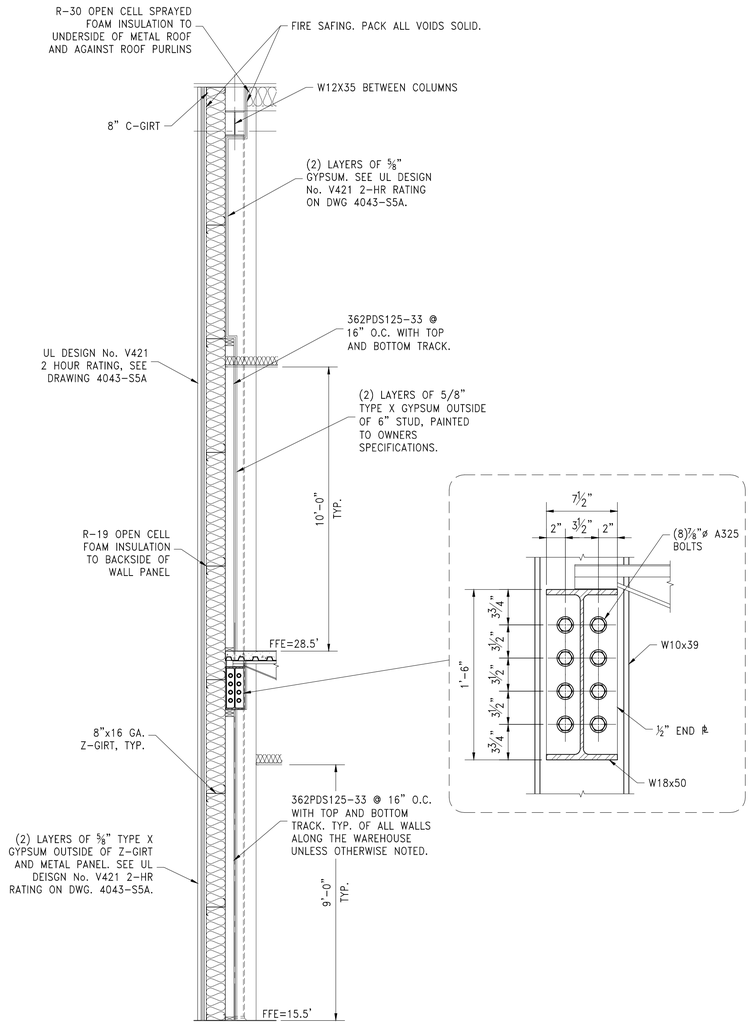
McDUFFIE TERMINAL
ASPA

TITLE

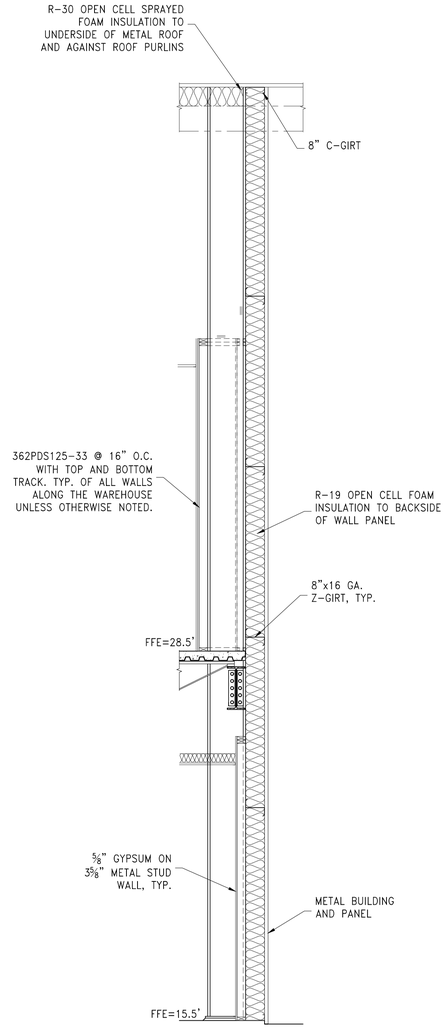
DETAILS AND SECTIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	VTH	12/01/21	22x34 — of —	A
JOB NO. 4043-21	CHECKED BY WBS	DATE	DRAWING NUMBER 4043-S4	

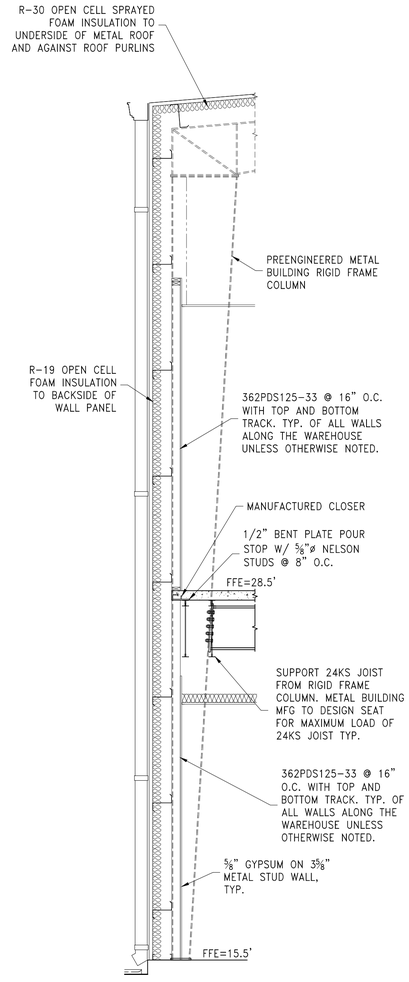
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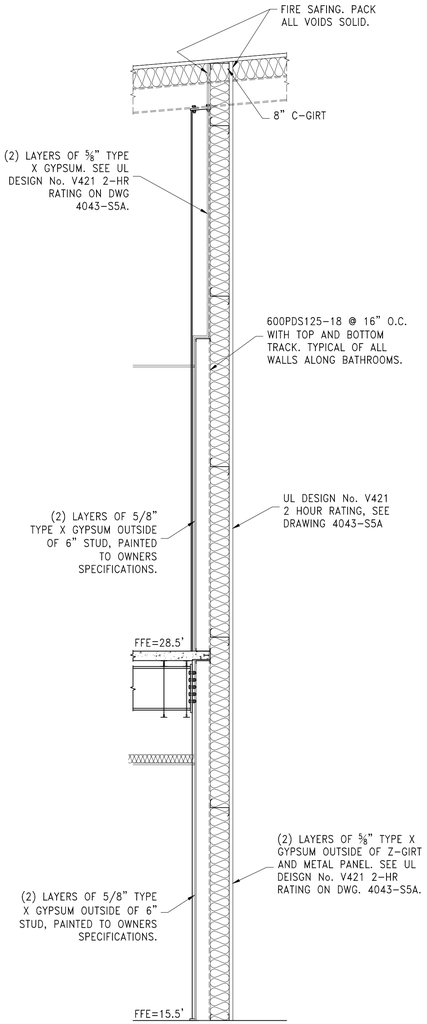
SECTION D
3/8"=1'-0" S1 S5



SECTION F
3/8"=1'-0" S1 S5



SECTION G
3/8"=1'-0" S1 S5



SECTION H
3/8"=1'-0" S1 S5

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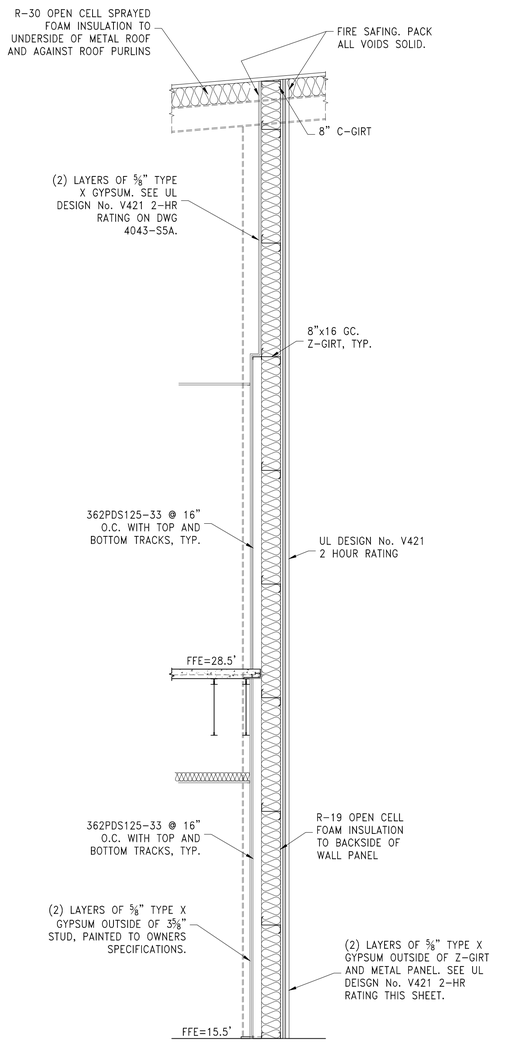
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Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

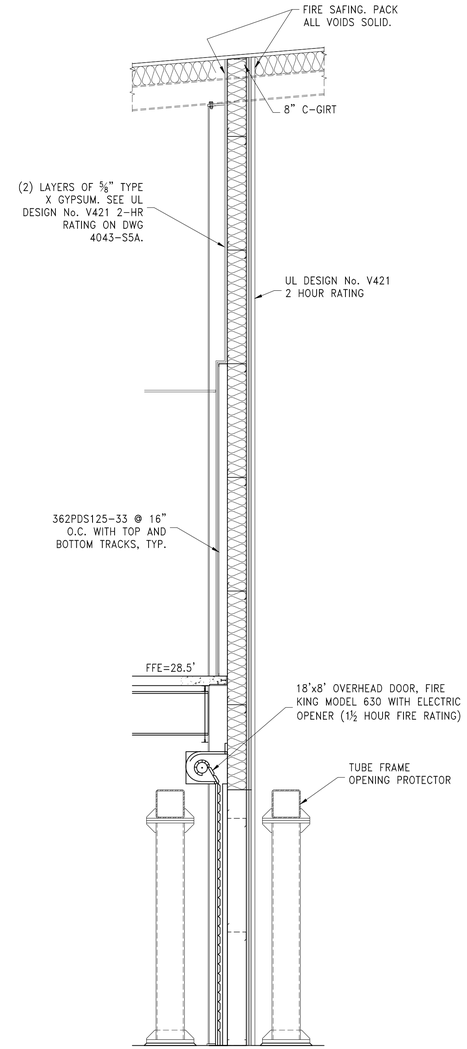
TITLE
WALL DETAILS AND SECTIONS

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NOTED	VTH	05/19/22	— — OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE	DRAWING NUMBER 4043-S5	

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SECTION J
3/8"=1'-0"
S1 S5A



SECTION K
3/8"=1'-0"
S1 S5A

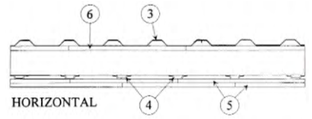
FIRE RESISTANCE RATINGS FOR EXTERIOR WALLS UL TESTED AND CLASSIFIED FOR 1–AND 2–HOURS

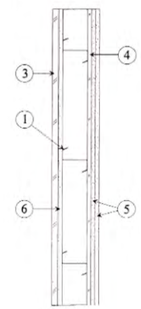
MBMA HAS DEVELOPED FIRE RESISTANCE RATINGS BASED ON FIRE TESTS OF COLUMNS, ROOFS AND EXTERIOR WALLS CONDUCTED AT UNDERWRITERS LABORATORIES, INC. (UL). THE EXTERIOR WALL RATINGS IN MBMA FIRE RESISTANCE BULLETIN NO. 2 (FORMERLY INSURANCE BULLETIN #16), WHICH ARE BASED ON UL DESIGN NOS. U489 AND U425, WERE ADAPTED FOR USE IN MBMA BUILDINGS WHERE FIRE RESISTANCE RATINGS WERE NEEDED.

IT BECAME APPARENT THAT A SPECIAL GYPSUM WALLBOARD FIRE PROTECTION FRAMING DESIGN WAS NEEDED TO TAKE ADVANTAGE OF THE EXISTING COMPONENTS USED IN METAL BUILDINGS. ALTHOUGH THE PREVIOUS UL EXTERIOR WALL LISTINGS FOR METAL BUILDING SYSTEMS ARE STILL TECHNICALLY ACCEPTABLE, THIS NEW ASSEMBLY REDUCES THE EXTRA COST OF LABOR AND MATERIALS REQUIRED TO BUILD THOSE ASSEMBLIES.

THE MBMA FIRE TESTS OF EXTERIOR WALLS IN 1997 RESULTED IN A NEW UL DESIGN, NO. V421, WHICH PROVIDES 1 AND 2–HOUR FIRE RESISTANCE RATINGS FOR EXTERIOR WALLS IN METAL BUILDINGS. THE RATINGS ARE FOR UNSYMMETRICAL WALLS THAT REQUIRE RATINGS FROM BOTH SIDES. THE THICKNESS AND NUMBER OF THE LAYERS OF TYPE X GYPSUM WALLBOARD ARE SPECIFIED FOR EACH RATING.

FOR EXTERIOR WALLS THAT ARE MORE THAN 5 FEET FROM A PROPERTY LINE, SOME BUILDING CODES ONLY REQUIRE A FIRE RESISTANCE RATING FROM THE INSIDE. THIS PERMITS ALL THE GYPSUM WALLBOARD TO BE LOCATED ON THE INTERIOR FACE OF THE WALL, AND IS SHOWN IN THE TABLE FOLLOWING ITEM 6.





DESIGN NO. V421 NON–LOADING BEARING WALL RATING – 1 AND 2 HR

1. GIRTS – "Z" OR "C" SHAPED GIRTS, 0.056 TO 0.120 IN. THICK STEEL, 6 TO 12 IN. DEEP, WITH 2 TO 4 IN. WIDE FLANGES. GIRTS PLACED HORIZONTALLY (WITH FLANGES UP OR DOWN) AND SPACED MAXIMUM 48 IN. O.C. GIRTS ARE SECURED TO COLUMNS WITH GIRT CLIPS, ITEM 2, OR BOLTED TO THE COLUMN THROUGH THE GIRT FLANGE.
2. GIRT CLIPS – (OPTIONAL, NOT SHOWN) – STEEL CLIPS SECURED TO COLUMN BY WELDS OR BOLTS.
3. STEEL WALL PANELS – MINIMUM NO. 26 MSG, MINIMUM 16 IN. WIDE COATED STEEL PANELS. PANEL JOINTS OFFSET 6 IN. FROM GYPSUM SHEATHING JOINTS IF ONE LAYER OF EXTERIOR WALLBOARD IS USED, PANELS ARE FASTENED TO THE HORIZONTAL GIRTS WITH 1 ½ IN. LONG (MIN.) NO. 12–14 SELF–DRILLING SCREWS 12 IN. O.C. IF TWO LAYERS OF EXTERIOR WALLBOARD ARE USED, PANELS ARE FASTENED TO THE HORIZONTAL GIRTS WITH 2 IN. LONG (MIN.) NO. 12–14 SELF–DRILLING SCREWS 12 IN. O.C. VERTICAL RAISED RIB PROFILES OF ADJACENT PANELS ARE OVER LAPPED APPROXIMATELY 3 IN. AND ATTACHED TO EACH OTHER WITH 7/8 IN. LONG (MIN.) ¼ – 14 SELF DRILLING SCREWS (STITCH SCREWS) 24 IN. O.C. (MAX.) ALONG THE LAP.

3A. STEEL SIDING OR BRICK – (OPTIONAL, NOT SHOWN) – FOR FIRE RESISTANCE RATINGS FROM INSIDE WALL ONLY, STEEL SIDING OR BRICK VENEER MEETING THE REQUIREMENTS OF LOCAL CODE AGENCIES MAY BE INSTALLED OVER ADDITIONAL FURRING CHANNELS (NOT ITEM 4, ON EXTERIOR OF WALL IN PLACE OF STEEL WALL PANELS. BRICK VENEER ATTACHED TO FUR RING CHANNELS WITH CORRUGATED METAL WALL TIES ATTACHED TO EACH FURRING CHANNEL WITH STEEL SCREWS, NOT MORE THAN EACH SIXTH COURSE OF WHEN A MINIMUM 3 ¾ IN. THICK BRICK VENEER FACING IS USED, THE FIRE RESISTANCE RATING APPLIES FROM EITHER SIDE OF THE WALL.

4. FURRING CHANNELS – HAT SHAPED, MINIMUM 25 MSG GALVANIZED STEEL, APPROXIMATELY 2 5/8 IN. WIDE, 7/8 IN. DEEP, SPACED 24 IN. O.C. PERPEN DICULAR TO GIRTS. CHANNELS ARE SECURED TO EACH GIRT WITH 3/8 IN. (MIN.) LONG SELF–DRILLING PAN HEAD SHEET STEEL TYPE SCREWS. TWO SCREWS ARE USED AT EACH FASTENING LOCATION, ONE THROUGH EACH LEG OF THE FURRING CHANNEL.
5. WALLBOARD, GYPSUM* – SEE TABLE UNDER ITEM 6 FOR NUMBER OF LAYERS ON INTERIOR FACE OF WALL. ANY 5/8 IN. THICK GYPSUM WALLBOARD BEARING THE UL CLASSIFICATION MARK FOR FIRE RESISTANCE. APPLIED HORIZONTALLY OR VERTICALLY. FIRST LAYER ATTACHED TO FURRING CHANNELS, ITEM 4, USING 1 IN. LONG TYPE S BUGLE HEAD DRYWALL SCREWS SPACED 24 IN. O.C. VERTICALLY AND HORIZONTALLY. SECOND LAYER ATTACHED TO FURRING CHANNELS USING 1⅝ LONG TYPE S BUGLE HEAD DRYWALL SCREWS SPACED 12 IN. O.C. VERTICALLY AND 24 IN. O.C. HORIZONTALLY. THIRD LAYER, WHEN USED, ATTACHED TO FURRING CHANNELS USING TYPE S BUGLE HEAD DRYWALL SCREWS SPACED 12 IN. O.C. VERTICALLY AND 24 IN. O.C. HORIZONTALLY, 1 7/8 IN. LONG FOR IN. WALLBOARD AND 2 ¼ IN. LONG FOR 5/8 IN. WALLBOARD. THE HORIZONTAL OR VERTICAL JOINTS OF THE WALLBOARD ARE OFFSET 24 IN. WHEN 2 SUCCES SIVE LAYERS ARE APPLIED IN THE SAME ORIENTATION. SEE WALLBOARD, GYPSUM (CKNX) CATEGORY FOR NAMES OF MANUFACTURERS.

6. WALLBOARD, GYPSUM* – SEE FOLLOWING TABLE FOR NUMBER OF LAYERS ON EXTERIOR FACE OF WALL. ANY EXTERIOR GRADE 5/8 IN. THICK GYPSUM WALL BOARD OR GYPSUM SHEATHING BEARING THE UL CLASSIFICATION MARK FOR FIRE RESISTANCE. APPLIED HORIZONTALLY OR VERTICALLY. FIRST LAYER ATTACHED TO GIRTS, ITEM 1, USING 1 ¼ IN. LONG (MIN.) SELF–DRILLING BUGLEHEAD SHEET STEEL TYPE DRYWALL SCREWS SPACED 8 IN. O.C. HORIZONTALLY. SECOND LAYER, WHEN USED, ATTACHED TO GIRTS USING 1 5/8 IN. LONG (MIN.) SELF–DRILLING BUGLE HEAD SHEET STEEL TYPE DRYWALL SCREWS SPACED 8 O.C. HORIZONTALLY. THE HORIZONTAL OR VERTICAL JOINTS OF THE WALLBOARD ARE OFFSET 24 IN. IF 2 SUC CESSIVE LAYERS ARE APPLIED IN THE SAME ORIENTATION.

SEE WALLBOARD, GYPSUM (CKNX) CATEGORY FOR NAMES OF MANUFACTURERS.

*BEARING THE UL CLASSIFICATION MARK

FIRE RESISTANCE FROM BOTH SIDES OF WALL

Rating	Layers 5/8 in. Gypsum Wallboard (Item 5) on Interior Face	Layers 5/8 in. Gypsum Wallboard (Item 6) on Exterior Face
1	1	1
2	2	2
2	3	1

7. COLUMN PROTECTION – (NOT SHOWN) – 9. HORIZONTAL WALL GIRTS, ITEM 1, ARE ATTACHED TO VERTICAL STRUCTURAL STEEL COLUMNS. SEE COLUMN DESIGN NO. X524 FOR PROTECTION OF COLUMNS.
8. BATTS AND BLANKETS* (OPTIONAL, NOT SHOWN) – GLASS FIBER BATTS PLACED IN THE CAVITIES OF EXTERIOR WALLS. SEE BATTS AND BLANKETS (BZJZ) CATEGORY FOR NAMES OF MANUFACTURERS.

Rating	Layers 1/2 in. Gypsum Wallboard (Item 5) on Interior Face	Layers 5/8 in. Gypsum Wallboard (Item 6) on Exterior Face
1	3	0
Rating	Layers 5/8 in. Gypsum Wallboard (Item 5) on Interior Face	Layers 5/8 in. Gypsum Wallboard (Item 6) on Exterior Face
2	4	0

9. JOINT TAPE AND COMPOUND – (OPTIONAL, NOT – VINYL OR CASEIN, DRY OR PREMIXED JOINT COMPOUND APPLIED IN TWO COATS TO JOINTS AND SCREW HEADS OF FACE LAYER OF GYPSUM WALL PAPER OR GLASS FIBER TAPE EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.

*BEARING THE UL CLASSIFICATION MARK

* MEMBER SIZES AND CONNECTION DETAILS FOR OFFICE FRAMING ARE SHOWN FOR REFERENCE ONLY. ALL STEEL COLUMNS, BEAMS, AND CONNECTION DETAILS SHALL BE SIZED AND DESIGNED BY THE METAL BUILDING MANUFACTURERS.

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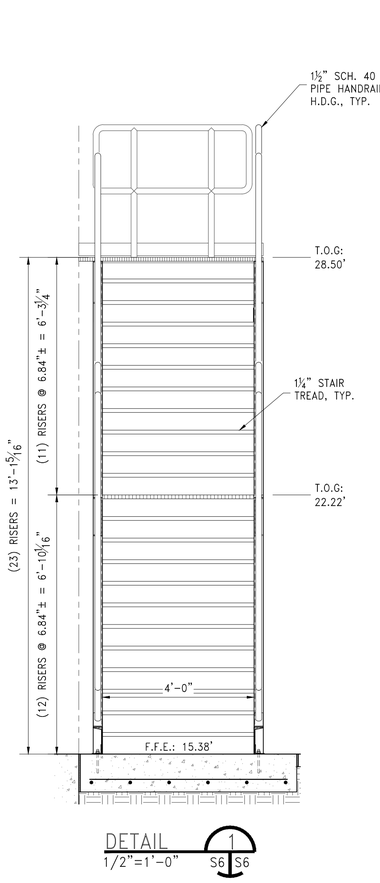
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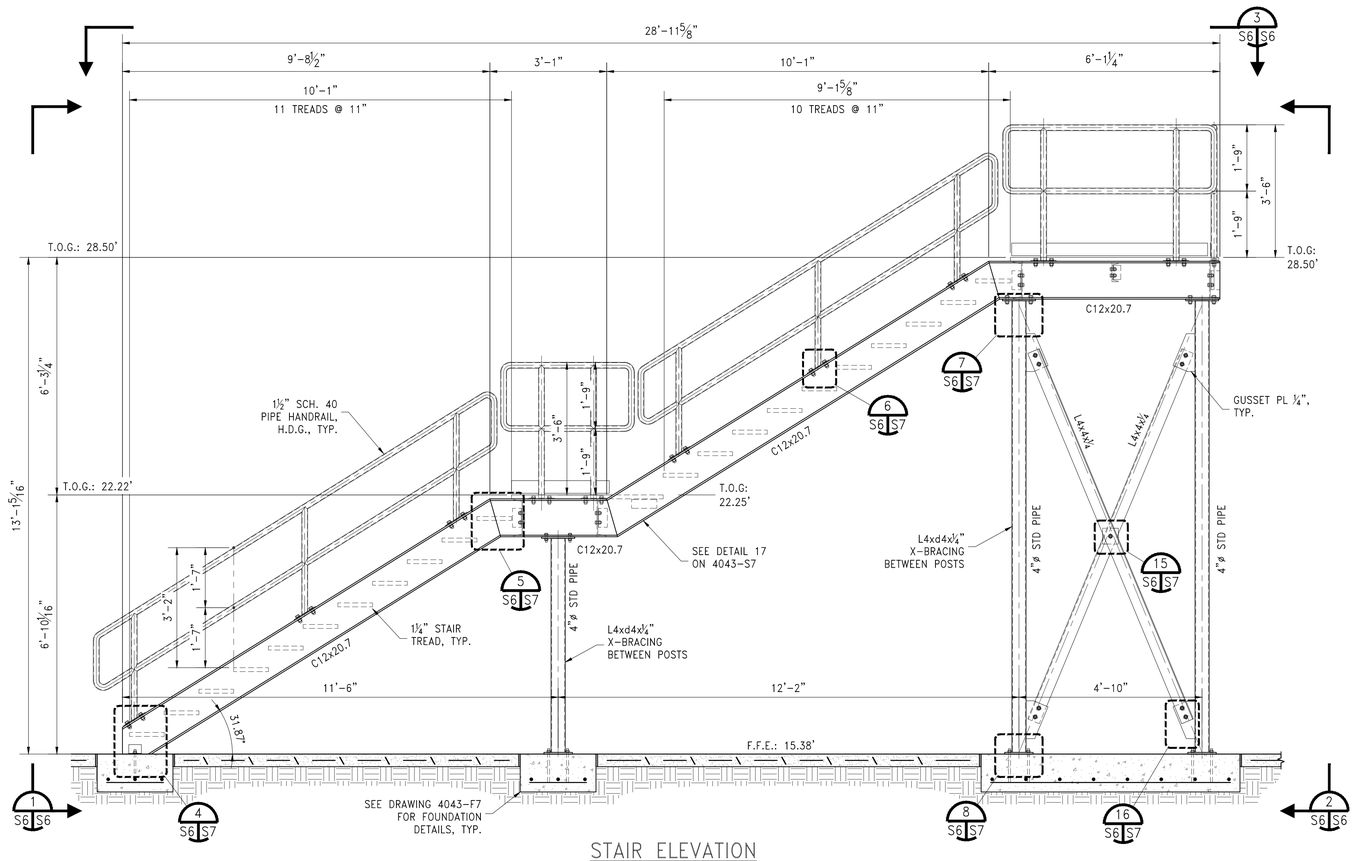
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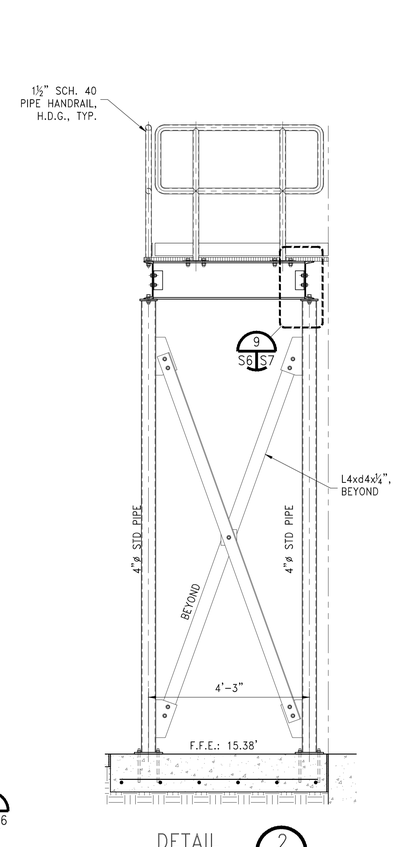
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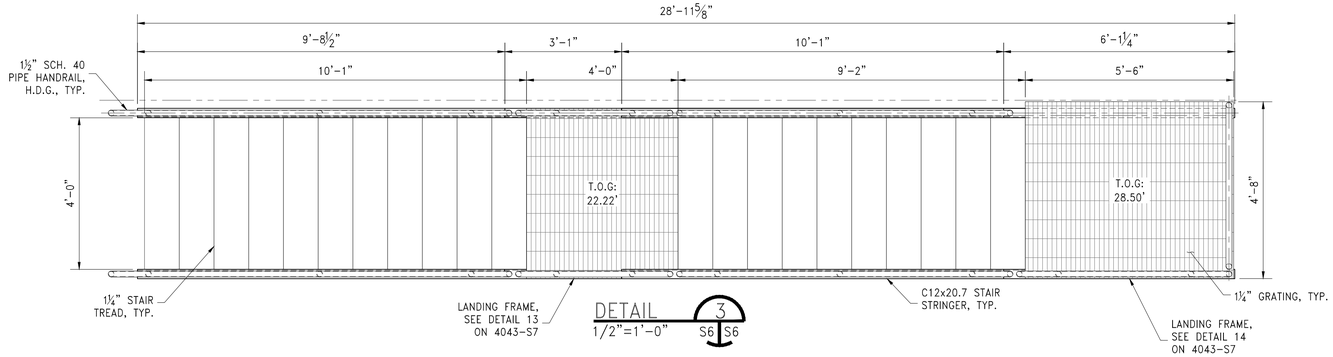
DETAIL 1
1/2"=1'-0"
S6 | S6



STAIR ELEVATION
½"=1'-0"



DETAIL 2
1/2"=1'-0"
S6 | S6



DETAIL 3
1/2"=1'-0"
S6 | S6

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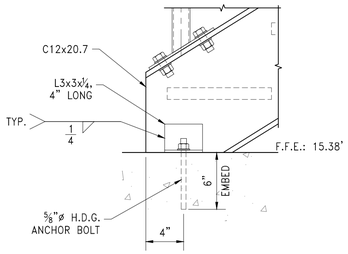
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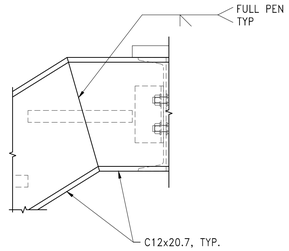
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STAIR LAYOUT

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NOTED	VTH	05/05/22	— of — (22x34)	A
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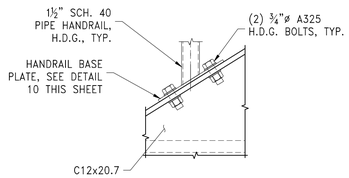
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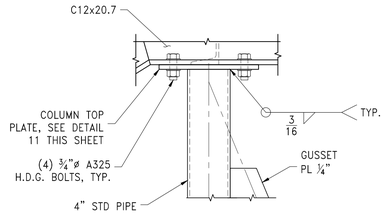
DETAIL 4
1 1/2"=1'-0" S6 S7



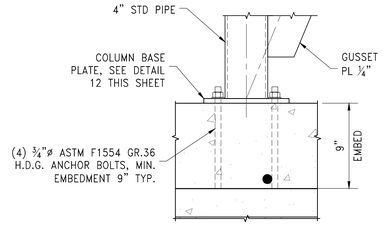
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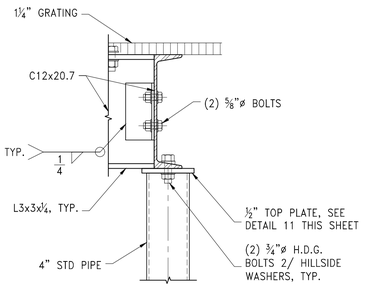
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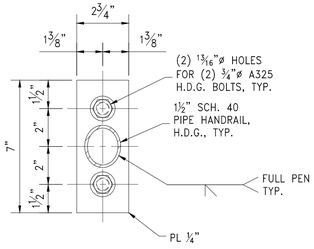
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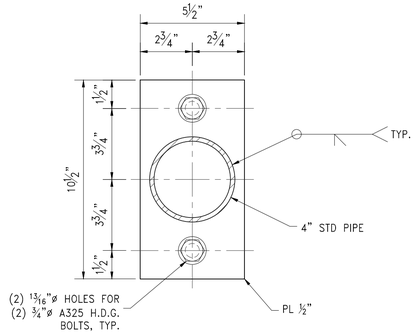
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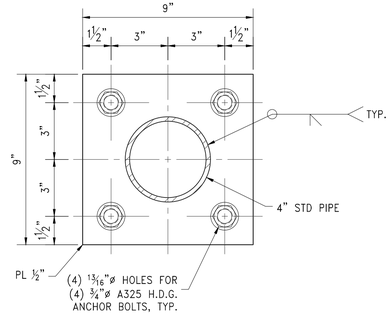
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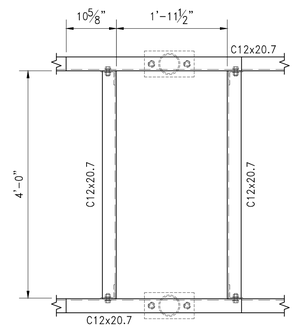
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3"=1'-0" S7 S7



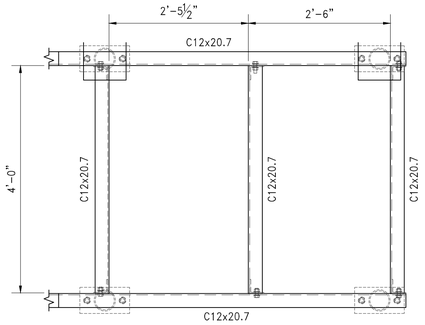
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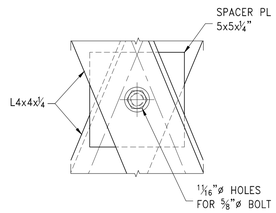
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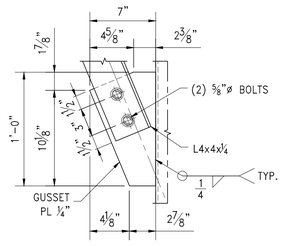
DETAIL 13
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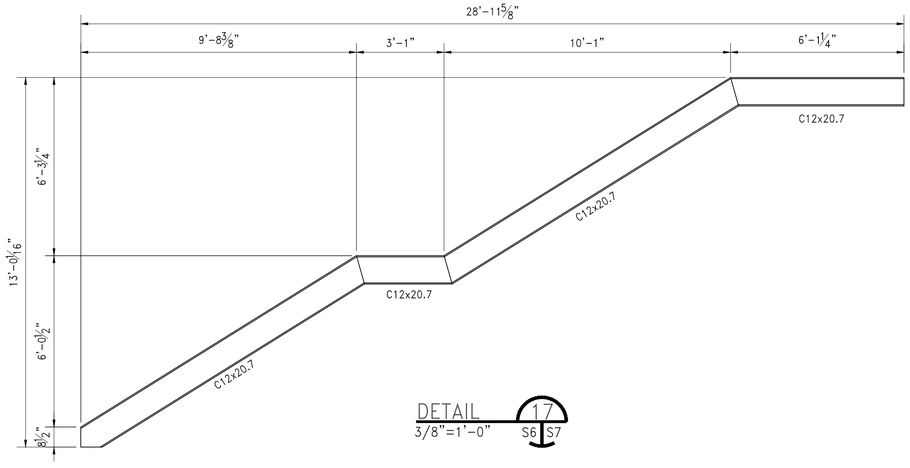
DETAIL 14
3/4"=1'-0" S6 S7



DETAIL 15
3"=1'-0" S6 S7



DETAIL 16
1 1/2"=1'-0" S6 S7



DETAIL 17
3/8"=1'-0" S6 S7

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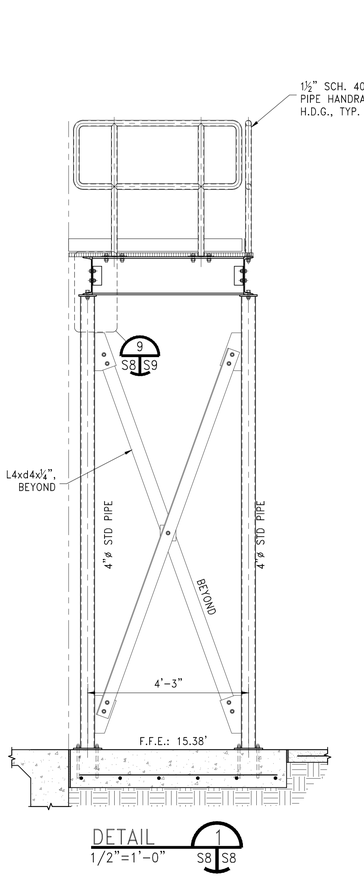
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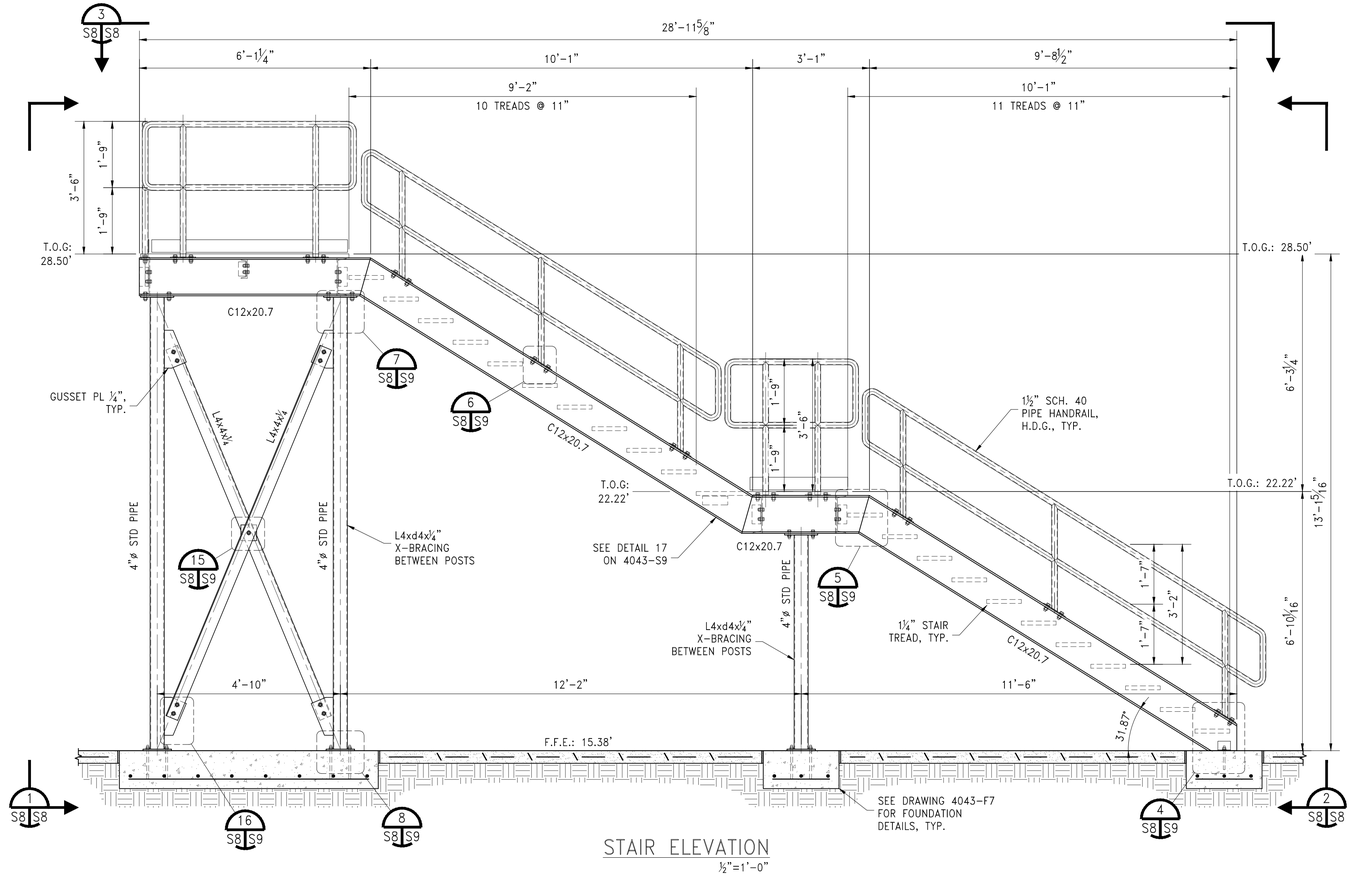
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STAIR DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
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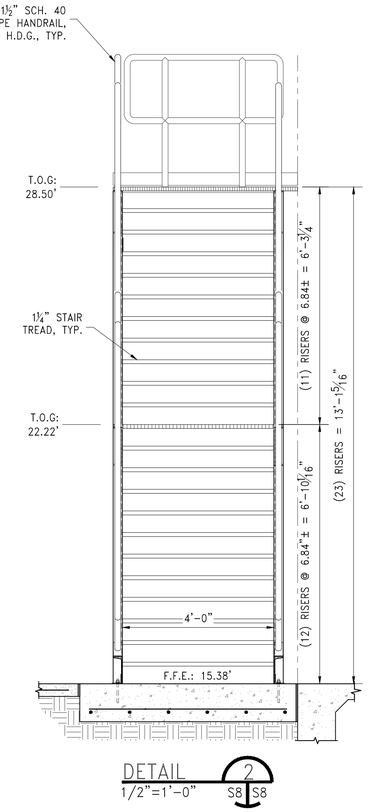
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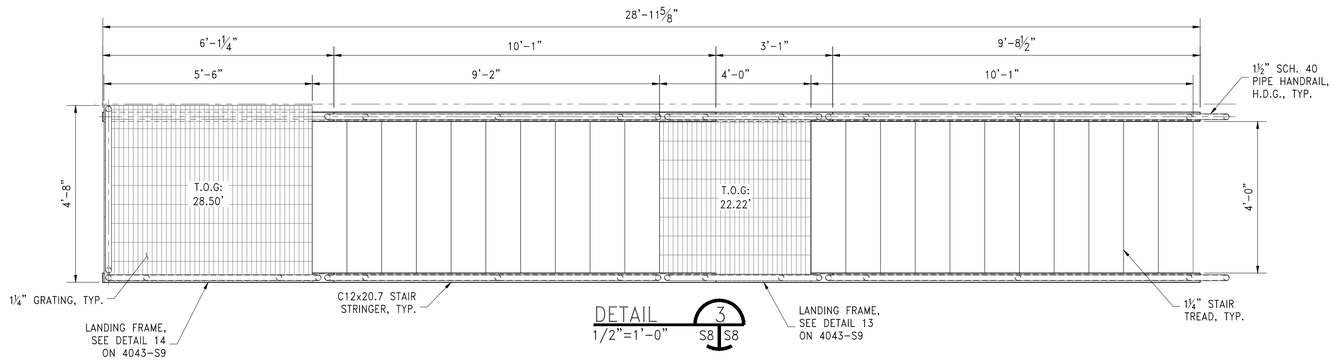
DETAIL 1 — 1/2"=1'-0" — S8 | S8



STAIR ELEVATION — ½"=1'-0"



DETAIL 2 — 1/2"=1'-0" — S8 | S8



DETAIL 3 — 1/2"=1'-0" — S8 | S8

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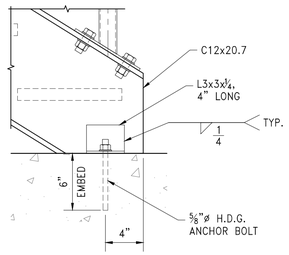
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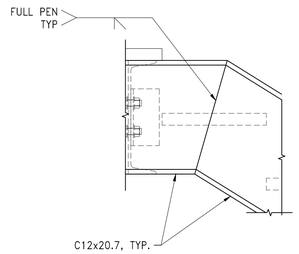
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STAIR LAYOUT

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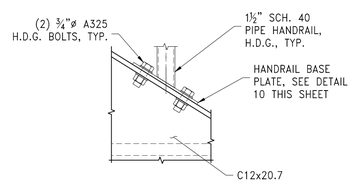
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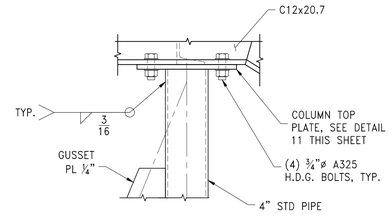
DETAIL 4 — 1 1/2"=1'-0" — S8 | S9



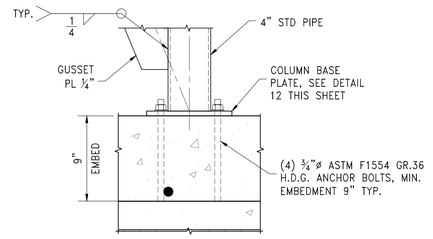
DETAIL 5 — 1 1/2"=1'-0" — S8 | S9



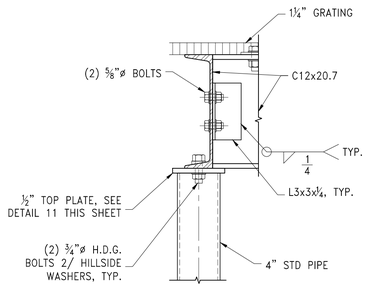
DETAIL 6 — 1 1/2"=1'-0" — S8 | S9



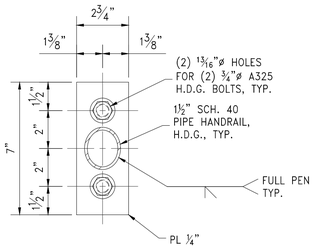
DETAIL 7 — 1 1/2"=1'-0" — S8 | S9



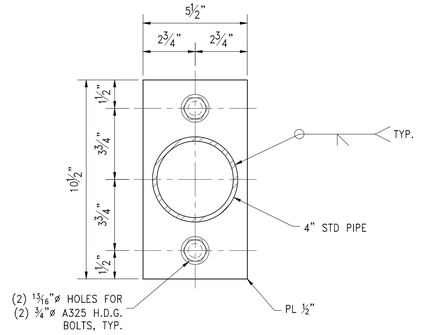
DETAIL 8 — 1 1/2"=1'-0" — S8 | S9



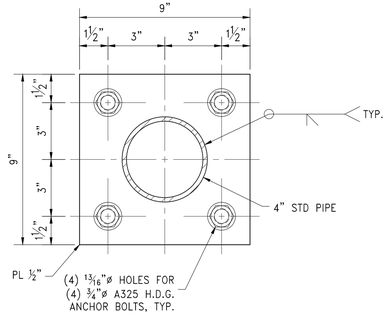
DETAIL 9 — 1 1/2"=1'-0" — S8 | S9



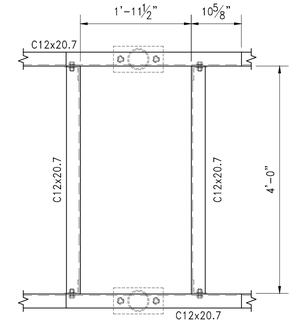
DETAIL 10 — 3"=1'-0" — S9 | S9



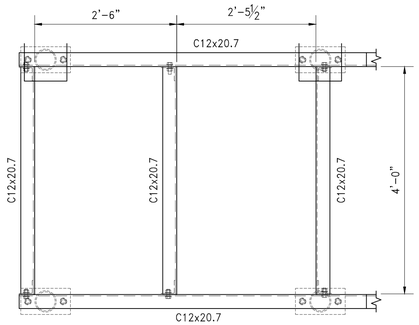
DETAIL 11 — 3"=1'-0" — S9 | S9



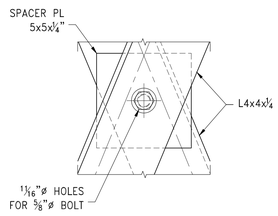
DETAIL 12 — 3"=1'-0" — S9 | S9



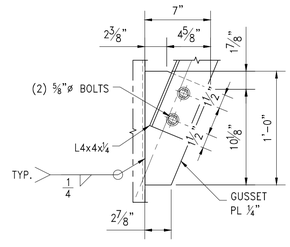
DETAIL 13 — 3/4"=1'-0" — S8 | S9



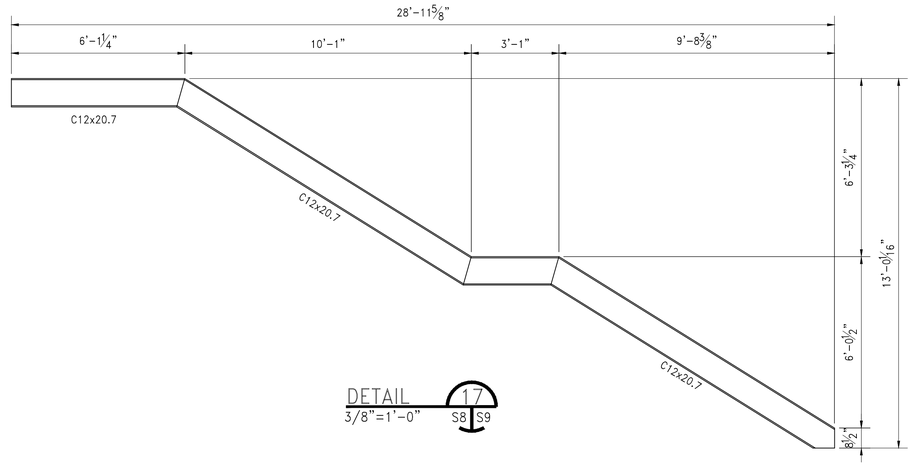
DETAIL 14 — 3/4"=1'-0" — S8 | S9



DETAIL 15 — 3"=1'-0" — S8 | S9



DETAIL 16 — 1 1/2"=1'-0" — S8 | S9



DETAIL 17 — 3/8"=1'-0" — S8 | S9

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Fax (251) 433-1411

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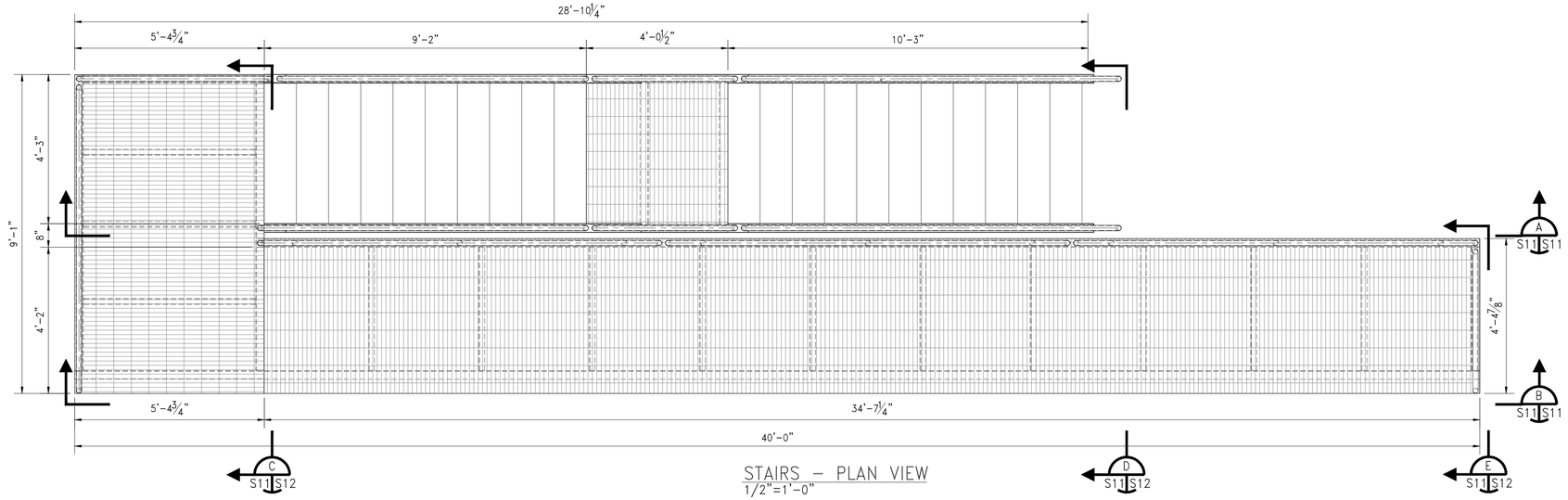
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LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

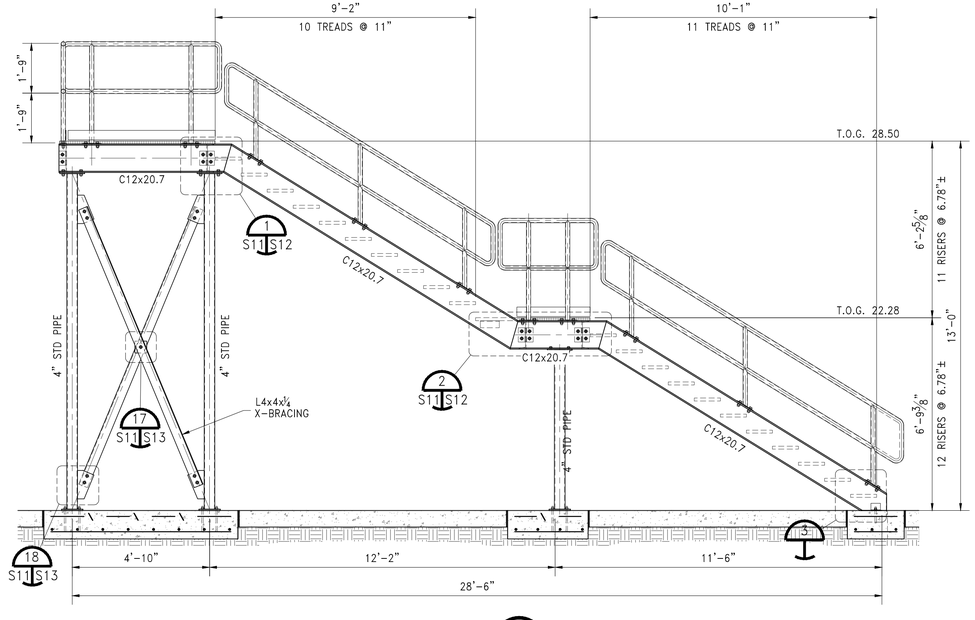
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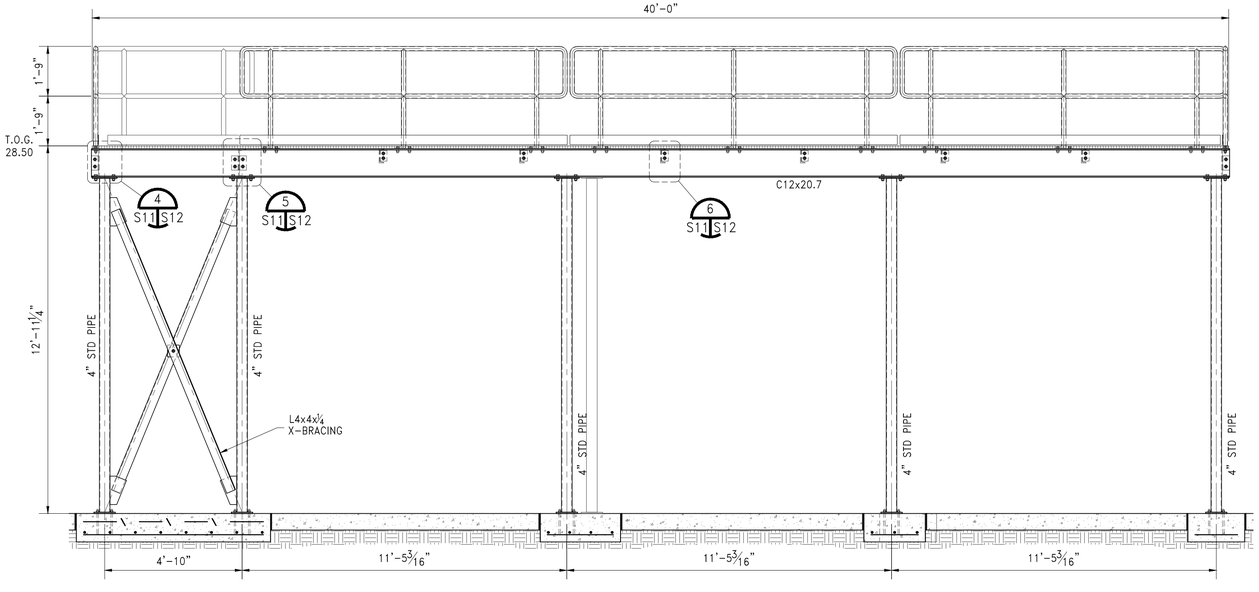
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STAIRS – PLAN VIEW
1/2"=1'-0"



SECTION A
3/8"=1'-0" S11 S11



SECTION B
3/8"=1'-0" S11 S11

* ALL STAIR STRUCTURAL STEEL AND COMPONENTS SHALL BE HOT-DIPPED GALVANIZED

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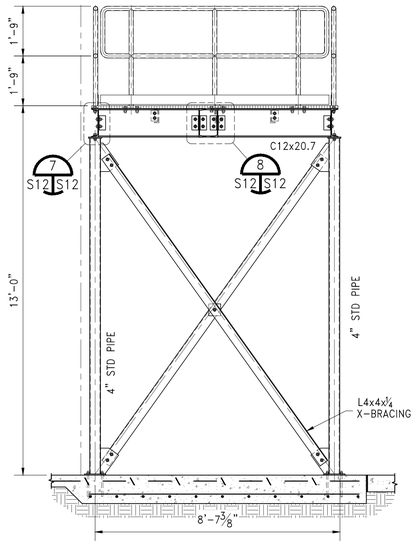
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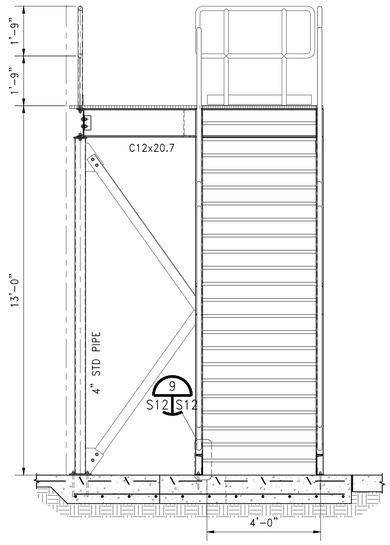
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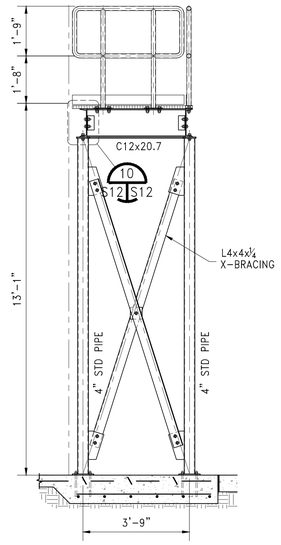
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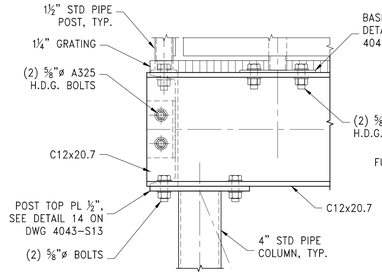
SECTION C
3/8""=1'-0" S11 S12



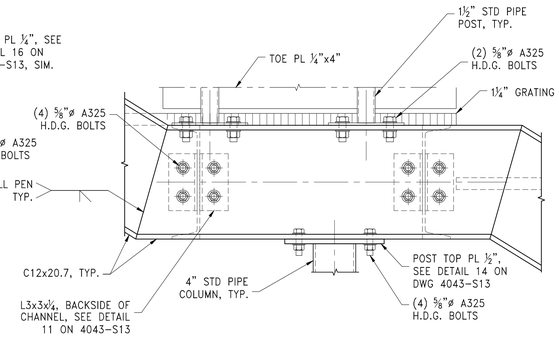
SECTION D
3/8""=1'-0" S11 S12



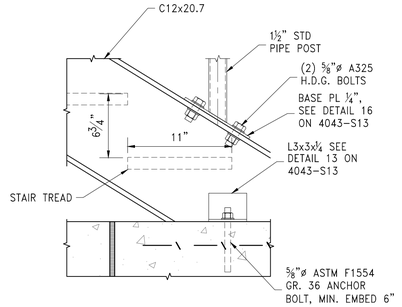
SECTION E
3/8""=1'-0" S11 S12



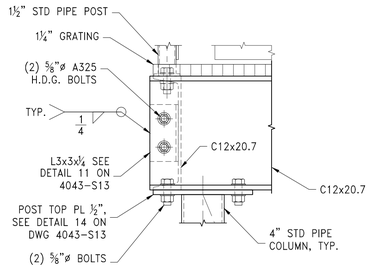
DETAIL 1
1 1/2"=1'-0" S11 S12



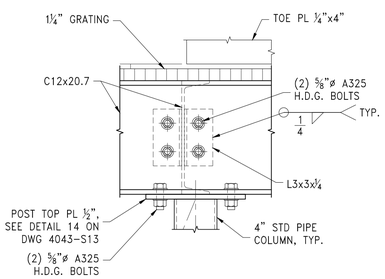
DETAIL 2
1 1/2"=1'-0" S11 S12



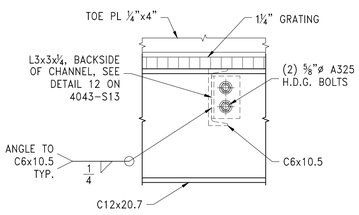
DETAIL 3
1 1/2"=1'-0" S11 S12



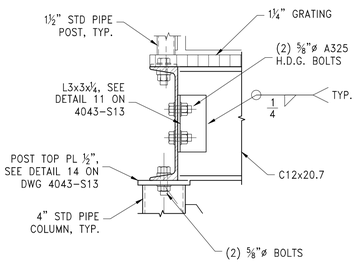
DETAIL 4
1 1/2"=1'-0" S11 S12



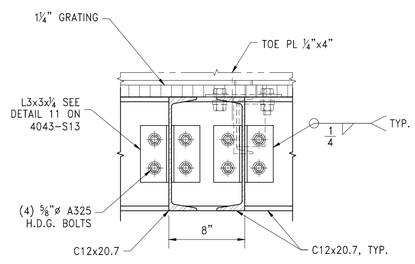
DETAIL 5
1 1/2"=1'-0" S11 S12



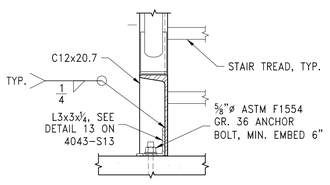
DETAIL 6
1 1/2"=1'-0" S12 S12



DETAIL 7
1 1/2"=1'-0" S12 S12



DETAIL 8
1 1/2"=1'-0" S12 S12



DETAIL 9
1 1/2"=1'-0" S12 S12

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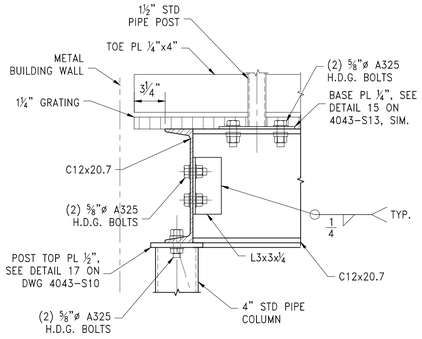
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Phone (706) 302-2831
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ASPA

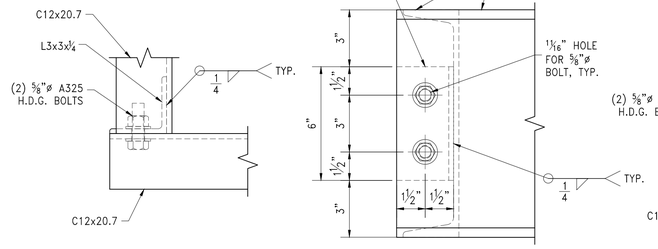
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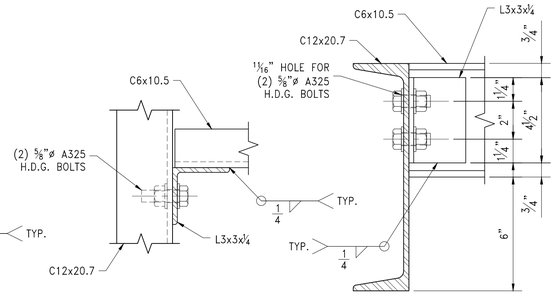
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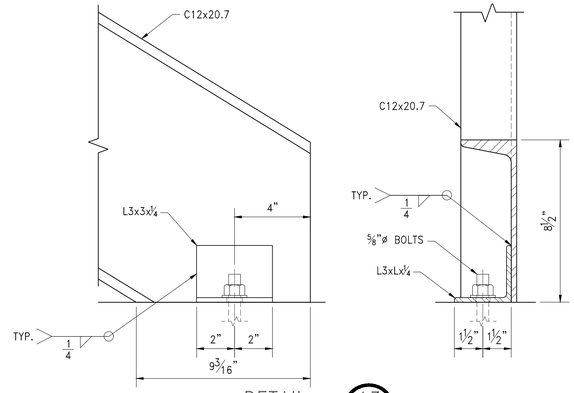
DETAIL 10
1 1/2"=1'-0" S12 S13



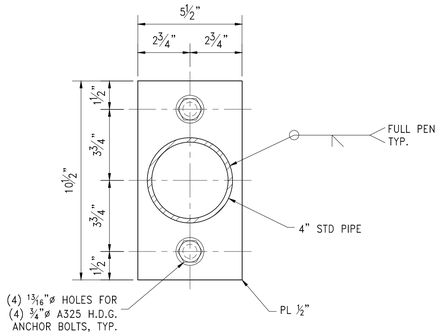
DETAIL 11
1 1/2"=1'-0" S12 S13



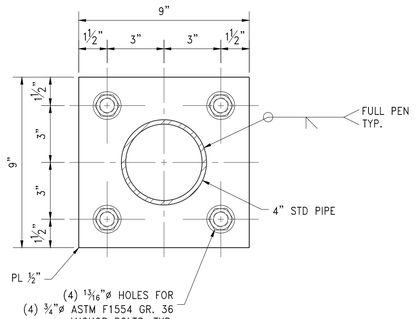
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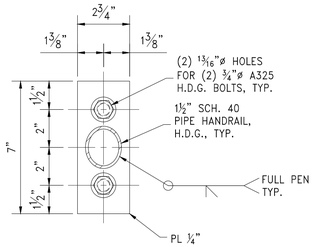
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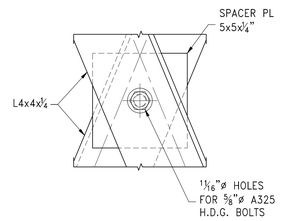
DETAIL 14
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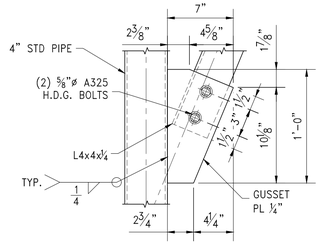
DETAIL 15
1 1/2"=1'-0" S12 S13



DETAIL 16
1 1/2"=1'-0" S12 S13



DETAIL 17
3"=1'-0" S12 S13



DETAIL 18
1 1/2"=1'-0" S12 S13

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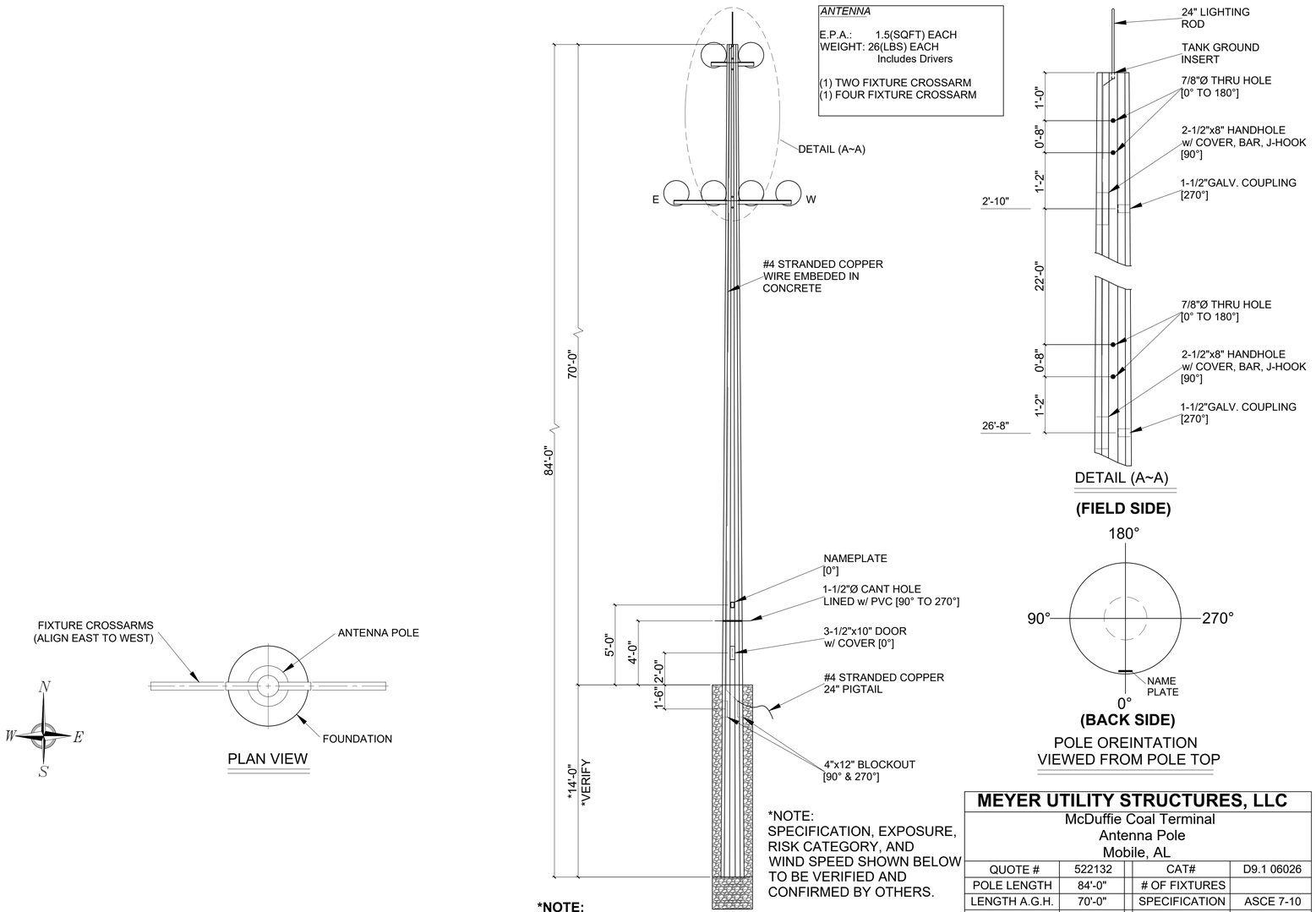
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STAIR DETAILS

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NOTED	VTH	05/05/22	— OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE	DRAWING NUMBER 4043-S13	

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*NOTE:
SPECIFICATION, EXPOSURE, RISK CATEGORY, AND WIND SPEED SHOWN BELOW TO BE VERIFIED AND CONFIRMED BY OTHERS.

***NOTE:**
THE REFERENCED EMBEDMENT DEPTH IS ESTIMATED. EMBEDMENT DEPTH IS DEPENDENT ON LOCAL CONDITIONS, INCLUDING BUT NOT LIMITED TO SOILS AND BACKFILL MATERIAL. VERIFICATION OF EMBEDMENT DEPTH IS THE RESPONSIBILITY OF THE CUSTOMER, GEOTECHNICAL ENGINEERING EVALUATION IS RECOMMENDED.

MEYER UTILITY STRUCTURES, LLC			
McDuffie Coal Terminal Antenna Pole Mobile, AL			
QUOTE #	522132	CAT#	D9.1 06026
POLE LENGTH	84'-0"	# OF FIXTURES	
LENGTH A.G.H.	70'-0"	SPECIFICATION	ASCE 7-10
BURIAL DEPTH	Verify	EXPOSURE	C
TIP WIDTH	9.1	RISK CATEGORY	II
BUTT WIDTH	24.2	DESIGN WIND	154 mph
POLE WEIGHT	12,295 lbs.	POLE SHAPE	Dodecagonal
POLE TAPER	0.18 in./ft.	QUANTITY	1
DRAWN BY	T.O.	DATE	5/13/2022

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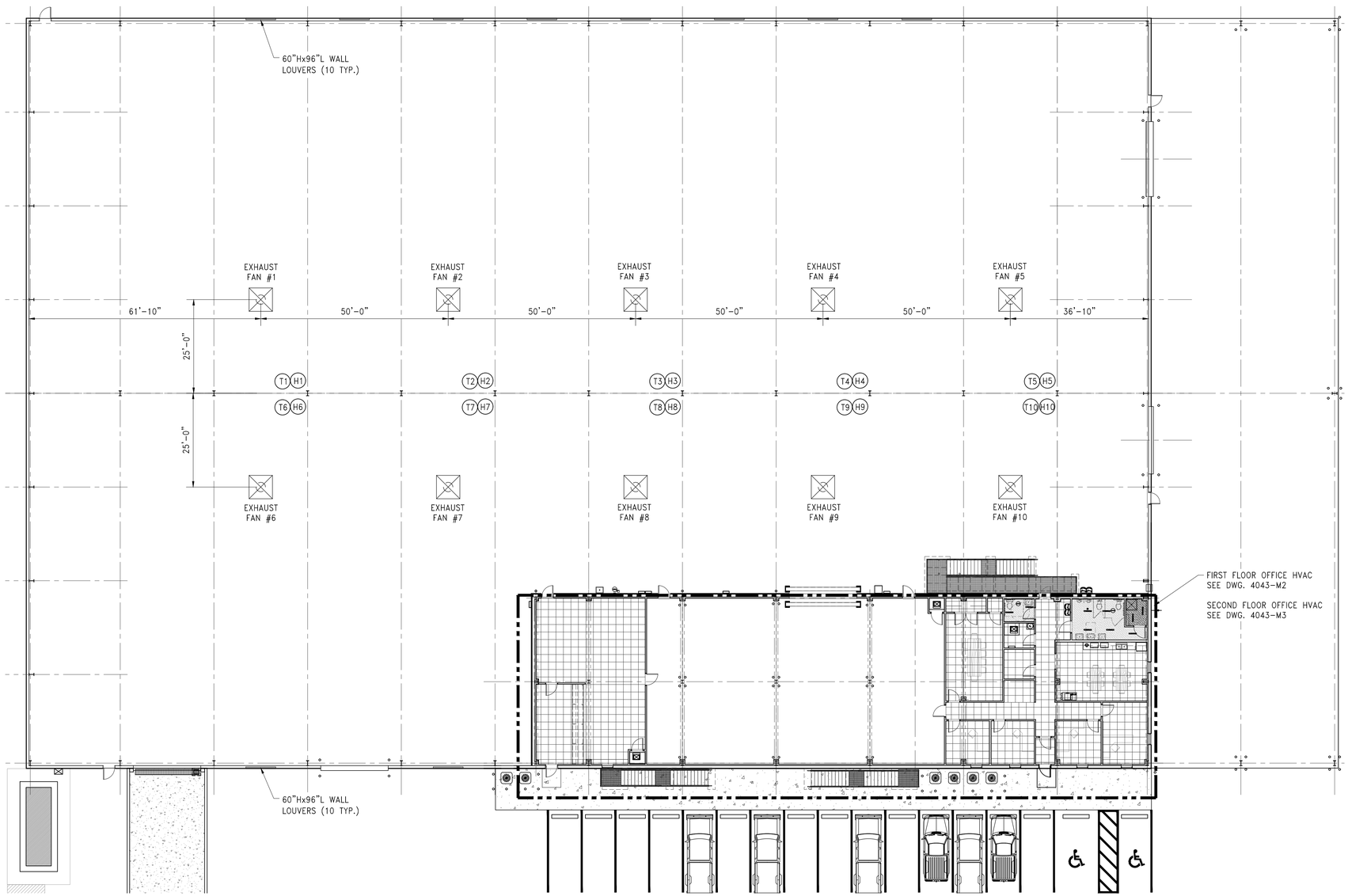
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ASPA

TITLE
ANTENNA POLE

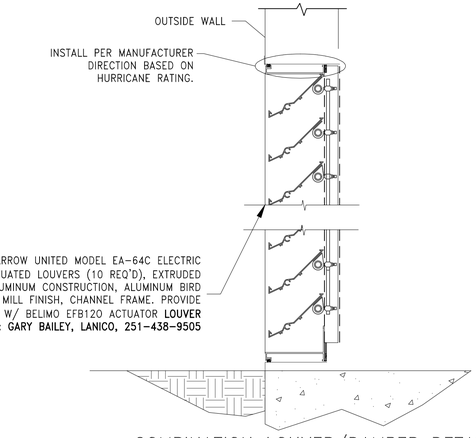
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AS NOTED	VTH	06/02/22	— OF —	A
JOB NO. 4043	CHECKED BY GDEC	DATE	DRAWING NUMBER 4043-S14	

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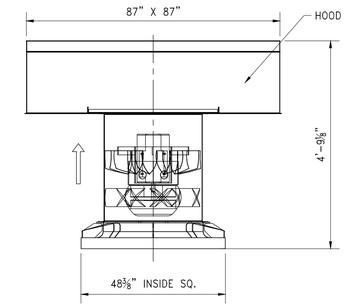
WAREHOUSE VENTILATION PLAN

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



COMBINATION LOUVER/DAMPER DETAIL

NTS



EXHAUST FAN DETAIL

NTS

EXHAUST FAN DATA (10 REQ'D)

TWIN CITY FAN COMPANY – THD-36E4 TYPE, CLASS 1 HOODED POWER ROOF VENTILATOR, 1 HP, 480V, 3ø, 11,850 CFM @ .125 SP, 860 RPM, WITH H.O.A. (HAND-OFF-AUTO), AUTO MODE TO BE CONNECTED TO THERMOSTAT AND HUMIDISTAT. **ASSEMBLY WEIGHT IS APPROXIMATELY 648#**

FAN CONTACT: GARY BAILEY, LANICO, 251-438-9505

FAN TO INCLUDE THE FOLLOWING OPTIONS:

01 ACCESS DOOR WHEEL AREA
02 SCREEN-IN HOOD
03 CURB CAP
04 DISCONNECT SWITCH UNFUSED NEMA 3R MOUNTED AND WIRED
05 EXTERNALLY MOUNTED CONDUIT BOX
06 SHAFT MOUNTING PER AE22-88
07 EXTENDED LUBE LINES TO FAN HOUSING EXTERIOR
08 BLADE ADJUSTING TOOL
09 HOOD STD. (NO FILTERS)
10 GROUP 1E TCF BLUE (XTRA COAT) ENTIRE FAN LESS WHEEL

LEGEND

(T) THERMOSTAT

(H) HUMIDISTAT

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A	ISSUE FOR BID	08/10/22	JWM	JDG

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Fax (251) 433-1411

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PROJECT

McDUFFIE WAREHOUSE

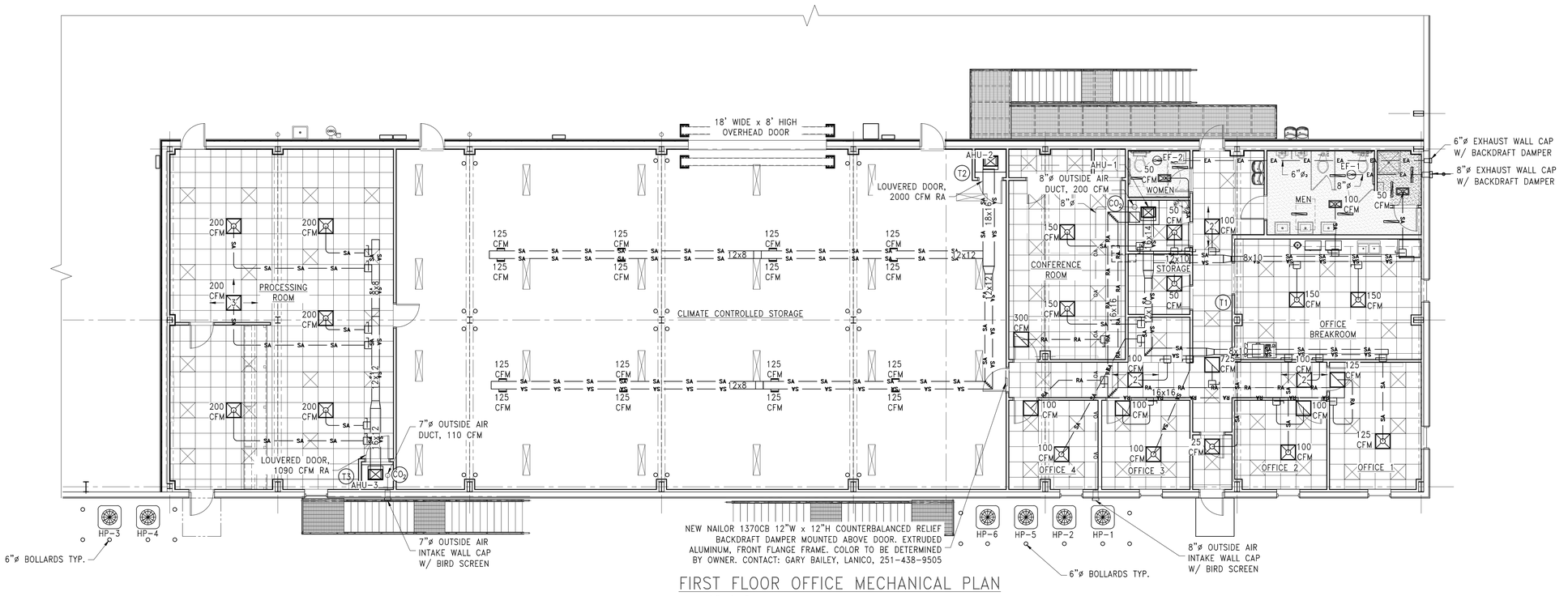
McDUFFIE TERMINAL
ASPA

TITLE

WAREHOUSE VENTILATION PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MAD	12/01/21	— OF — (22x34)	A
JOB NO. 4043-21	CHECKED BY JDG	DATE 12/31/21	DRAWING NUMBER 4043-M1	

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FIRST FLOOR OFFICE MECHANICAL PLAN

SCALE: ⅛"=1'-0"

NOTES: (SEE DWG. 4043-M4 FOR ADDITIONAL SPECIFICATIONS)

1. ALL MECHANICAL WORK SHALL BE IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODES, 2018.
2. AIR FLOW (SUPPLY & RETURN) ARE 1000 FPM & 800 FPM. PROCESSING ROOM & OFFICE AREA FLOW RATE BASED ON 6 AIR CHANGES PER HOUR. CLIMATE CONTROLLED STORAGE FLOW RATE BASED ON 4 AIR CHANGES PER HOUR.
3. MAIN DUCTWORK SHALL BE GALVANIZED SHEET METAL PER SMACNA STANDARDS. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. ALL DUCTWORK SHALL BE ROUTED ABOVE SUSPENDED CEILING.
4. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER SMACNA STANDARDS. DUCTWORK SHALL INCLUDE BALANCING DAMPER AT EACH SUPPLY/RETURN AND TURNING VANES AS SHOWN AND @ ALL 90° TURNS BOTH VERTICAL AND HORIZONTAL.
5. OUTSIDE AIR INTAKE TO BE ADJUSTED AS REQUIRED BY DWG. 4043-M4. OUTSIDE AIR MOTORIZED DAMPERS SHALL BE CONTROLLED VIA RETURN AIR DUCT MOUNTED CO2 SENSOR TRANE MODEL X13790423010, VACO2DUCT010, SEN01092. OUTSIDE AIR INTAKE SHALL NOT BE LOCATED WITHIN TEN FEET OF EXHAUST FAN DISCHARGE OR PLUMBING VENT.
6. EXHAUST FANS SHALL BE VENTED TO THE OUTSIDE OF BUILDING. CONNECT FAN TO LIGHT SWITCH. SEE DWG 4043-M4 FOR EXHAUST FAN SCHEDULE.
7. SEE DWG. 4043-M4 FOR SYSTEM SCHEDULES. APPROVED MANUFACTURER'S ARE TRANE AND CARRIER. SUBMIT A VALUE ENGINEERED ANALYSIS FOR OTHERS MANUFACTURERS WITH BID FOR CONSIDERATION.
8. ALL CONTROL WIRING AND INTERFACES WITH ANCILLARY EQUIPMENT BY CONTRACTOR. HVAC SHALL BE CONTROLLED USING A SEVEN DAY PROGRAMMABLE THERMOSTAT CONTROLLER WITH LOCKABLE CLEAR BOX COVER.
9. CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C.
10. CONTRACTOR SHALL ROUTE CONDENSATE AND DRAIN LINES TO NEAREST LANDSCAPED AREA, HUB DRAIN OR MOP SINK, SEE DWG. 4043-P2 FOR HUB DRAIN/MOP SINK LOCATIONS.

LEGEND

- SA / WxH / SA — SUPPLY AIR DUCT
- RA / WxH / RA — RETURN AIR DUCT
- EA / WxH / EA — EXHAUST AIR DUCT
- OA / WxH / OA — OUTSIDE AIR DUCT
- BALANCE DAMPER/BRANCH CONNECTION
- REQ'D CFM, GRID — SUPPLY AIR REGISTER 4-WAY (UNLESS NOTED OTHERWISE BY ARROWS) 2-INDICATES 2 WAY 3-INDICATES 3 WAY
- REQ'D CFM, GRID — RETURN AIR REGISTER
- REQ'D CFM — ALUMINUM SIDEWALL SUPPLY REGISTER W/OPPOSED BLADE DAMPERS
- EXHAUST FAN (EF)
- (T) THERMOSTAT
- REQ'D CFM, GYP — SUPPLY AIR REGISTER 4-WAY (UNLESS NOTED OTHERWISE BY ARROWS) 2-INDICATES 2 WAY 3-INDICATES 3 WAY

BRANCH DUCT SCHEDULE

CFM	AIR DEVICE SIZE	DUCT CONNECTION SIZE	REMARKS
25	6" X 6"	6"ø	SUPPLY
50	6" X 6"	6"ø	SUPPLY
75	6" X 6"	6"ø	SUPPLY
100	6" X 9"	6"ø	SUPPLY
125	6" X 9"	7"ø	SUPPLY
150	6" X 9"	7"ø	SUPPLY
166	6" X 9"	7"ø	SUPPLY
175	9" X 9"	8"ø	SUPPLY
200	9" X 9"	8"ø	SUPPLY
225	9" X 9"	8"ø	SUPPLY
250	9" X 12"	10"ø or 8"x10"	SUPPLY
0-125	8" X 8"	10"ø	RETURN
126-450	12" X 12"	10"ø	RETURN
451-800	16" X 16"	12" X 12"	RETURN
801-1100	18" X 18"	14" X 14"	RETURN
1101-1500	20" X 20"	16" X 16"	RETURN
1501-2000	22" X 22"	18" X 18"	RETURN

* - DUCT SIZE AS SHOWN IN SCHEDULE UNLESS NOTED ON PLAN.

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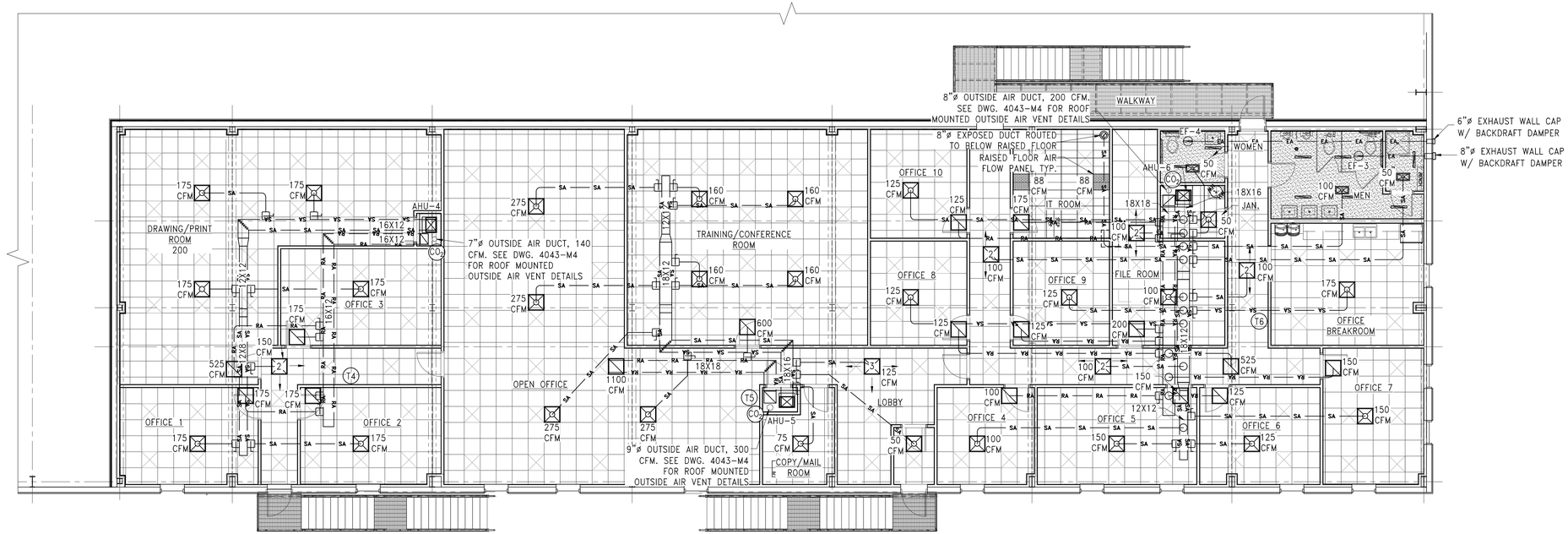
PROJECT: McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE: FIRST FLOOR OFFICE MECHANICAL PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MAD	12/01/21	— OF —	A
JOB NO. 4043-21	CHECKED BY JDG	DATE 12/31/21	DRAWING NUMBER 4043-M2	

22x34

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SECOND FLOOR OFFICE MECHANICAL PLAN

SCALE: ⅛"=1'-0"

NOTES: (SEE DWG. 4043-M4 FOR ADDITIONAL SPECIFICATIONS)

1. ALL MECHANICAL WORK SHALL BE IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODES, 2018.
2. AIR FLOW (SUPPLY & RETURN) ARE 1000 FPM & 800 FPM. FLOW RATE BASED ON 5 AIR CHANGES PER HOUR.
3. MAIN DUCTWORK SHALL BE GALVANIZED SHEET METAL PER SMACNA STANDARDS. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. ALL DUCTWORK SHALL BE ROUTED ABOVE SUSPENDED CEILING.
4. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER SMACNA STANDARDS. DUCTWORK SHALL INCLUDE BALANCING DAMPER AT EACH SUPPLY/RETURN AND TURNING VANES AS SHOWN AND @ ALL 90° TURNS BOTH VERTICAL AND HORIZONTAL.
5. OUTSIDE AIR INTAKE TO BE ADJUSTED AS REQUIRED BY DWG. 4043-M4. OUTSIDE AIR MOTORIZED DAMPERS SHALL BE CONTROLLED VIA RETURN AIR DUCT MOUNTED CO2 SENSOR TRANE MODEL X13790423010, VACO2DUCT010, SEN01092. OUTSIDE AIR INTAKE SHALL NOT BE LOCATED WITHIN TEN FEET OF EXHAUST FAN DISCHARGE OR PLUMBING VENT.
6. EXHAUST FANS SHALL BE VENTED TO THE OUTSIDE OF BUILDING. CONNECT FAN TO LIGHT SWITCH. SEE DWG 4043-M4 FOR EXHAUST FAN SCHEDULE.
7. SEE DWG. 4043-M4 FOR SYSTEM SCHEDULES. APPROVED MANUFACTURER'S ARE TRANE AND CARRIER. SUBMIT A VALUE ENGINEERED ANALYSIS FOR OTHERS MANUFACTURERS WITH BID FOR CONSIDERATION.
8. ALL CONTROL WIRING AND INTERFACES WITH ANCILLARY EQUIPMENT BY CONTRACTOR. HVAC SHALL BE CONTROLLED USING A SEVEN DAY PROGRAMMABLE THERMOSTAT CONTROLLER WITH LOCKABLE CLEAR BOX COVER.
9. CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C.
10. CONTRACTOR SHALL ROUTE CONDENSATE AND DRAIN LINES TO NEAREST LANDSCAPED AREA, HUB DRAIN OR MOP SINK, SEE DWG. 4043-P3 FOR HUB DRAIN/MOP SINK LOCATIONS.

LEGEND

- SA / WxH / SA — SUPPLY AIR DUCT
- RA / WxH / RA — RETURN AIR DUCT
- EA / WxH / EA — EXHAUST AIR DUCT
- OA / WxH / OA — OUTSIDE AIR DUCT
- BALANCE DAMPER/BRANCH CONNECTION
- REQ'D CFM / (2) / GRID — SUPPLY AIR REGISTER 4-WAY (UNLESS NOTED OTHERWISE BY ARROWS) 2-INDICATES 2 WAY 3-INDICATES 3 WAY
- REQ'D CFM / GRID — RETURN AIR REGISTER
- EXHAUST FAN (EF)
- (T) — THERMOSTAT
- REQ'D CFM / (2) / GYP — SUPPLY AIR REGISTER 4-WAY (UNLESS NOTED OTHERWISE BY ARROWS) 2-INDICATES 2 WAY 3-INDICATES 3 WAY

BRANCH DUCT SCHEDULE

CFM	AIR DEVICE SIZE	DUCT CONNECTION SIZE	REMARKS
25	6" X 6"	6"ø	SUPPLY
50	6" X 6"	6"ø	SUPPLY
75	6" X 6"	6"ø	SUPPLY
100	6" X 9"	6"ø	SUPPLY
125	6" X 9"	7"ø	SUPPLY
150	6" X 9"	7"ø	SUPPLY
160	6" X 9"	7"ø	SUPPLY
175	9" X 9"	8"ø	SUPPLY
200	9" X 9"	8"ø	SUPPLY
225	9" X 9"	8"ø	SUPPLY
250	9" X 12"	10"ø OR 8"x10"	SUPPLY
275	9" X 12"	10"ø OR 8"x10"	SUPPLY
300	9" X 12"	10"ø OR 8"x10"	SUPPLY
0-125	8" X 8"	10"ø	RETURN
126-450	12" X 12"	10"ø	RETURN
451-800	16" X 16"	12" X 12" OR 14"ø	RETURN
801-1100	18" X 18"	14" X 14"	RETURN
1101-1500	20" X 20"	16" X 16"	RETURN
1501-2000	22" X 22"	18" X 18"	RETURN

* - DUCT SIZE AS SHOWN IN SCHEDULE UNLESS NOTED ON PLAN.

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11880 Cranston Dr. Ste 102, Arlington, TN 38002
Alabama (251) 433-1611
Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
SECOND FLOOR OFFICE MECHANICAL PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MAD	12/01/21	22x34 _ OF _	A
JOB NO. 4043-21	CHECKED BY JDG	DATE 12/31/21	DRAWING NUMBER 4043-M3	

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NEW SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE

MARK AHU #/ HP #	AHU DATA				COOLING CAPACITY @ ARI STANDARD CONDITIONS					HEATING CAPACITY @ ARI STANDARD CONDITIONS			MIN. SEER	HP MCA/CB	AHU MCA/CB	HEAT KW	ELECTRICAL DATA AHU/HP			REMARKS
	TOTAL CFM	OA CFM	ESP	MOTOR HP	EDB °F	EWB °F	AMBIENT °F	TOTAL BTU/HR	SENSIBLE BTU/HR	TOTAL BTU/HR	EDB °F	EWB °F					VOLTS	Hz	PHASE	
1	1650	200	0.3"	3/4	80	67	95	48,000	40,800	48,000	47	43	16.0	26/40	17.3/30	3.60	AHU 208 HP 208	60 60	1 1	TRANE 4TWR6048H1000A WITH TEM6A0C48H41SB W/BAYHTR1505BRK
2	2000	0	0.3"	3/4	80	67	95	60,000	51,000	60,000	47	43	16.0	32/50	17.3/30	3.60	AHU 208 HP 208	60 60	1 1	TRANE 4TWR6060H1000A WITH TEM6A0C60H51SB W/BAYHTR1505BRK, **SEE NOTE 5**
3	1200	110	0.3"	1/3	80	67	95	36,000	30,600	36,000	47	43	16.0	18/30	17.3/30	3.60	AHU 208 HP 208	60 60	1 1	TRANE 4TWR6036H1000A WITH TEM6A0C36H31SB W/BAYHTR1505BRK
4	1200	140	0.3"	1/3	80	67	95	36,000	30,600	36,000	47	43	16.0	18/30	17.3/30	3.60	AHU 208 HP 208	60 60	1 1	TRANE 4TWR6036H1000A WITH TEM6A0C36H31SB W/BAYHTR1505BRK
5	2000	300	0.3"	3/4	80	67	95	60,000	51,000	60,000	47	43	16.0	32/50	17.3/30	3.60	AHU 208 HP 208	60 60	1 1	TRANE 4TWR6060H1000A WITH TEM6A0C60H51SB W/BAYHTR1505BRK, **SEE NOTE 5**
6	2000	200	0.3"	3/4	80	67	95	60,000	51,000	60,000	47	43	16.0	32/50	17.3/30	3.60	AHU 208 HP 208	60 60	1 1	TRANE 4TWR6060H1000A WITH TEM6A0C60H51SB W/BAYHTR1505BRK, **SEE NOTE 5**

NOTES:
1. **MCA SHOWN ARE ESTIMATED VALUES. CONTRACTOR SHALL VERIFY MINIMUM CIRCUIT REQUIREMENT WITH ACTUAL EQUIPMENT PURCHASED PRIOR TO INSTALLATION.**
2. PROVIDE GFI SERVICE OUTLET NEAR OUTSIDE UNIT. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
3. PROVIDE EACH AHU WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH LOCKABLE CLEAR HOUSING.
4. OUTSIDE AIR DAMPER CONTROLLED VIA RETURN AIR DUCT MOUNTED CO2 SENSOR TRANE MODEL X13790423010, VACO2DUCT010, SEN01092
5. PROVIDE W/ RAWAL DEVICE, INC. APR CONTROL DEVICE.

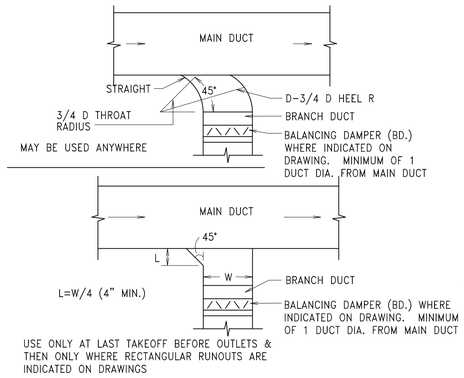
IMC-2012 MINIMUM VENTILATION RATE CALCULATION (TABLE 403.3)

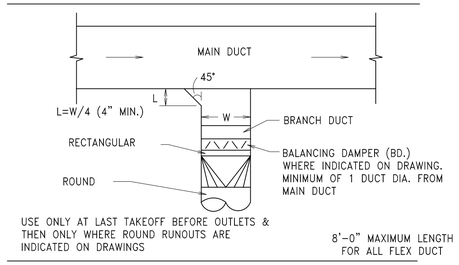
VENTILATION ZONE	Rp PEOPLE OUTDOOR AIR RATE	Pz ZONE POPULATION	VENTILATION RATE BASED ON PEOPLE	Ra AREA OUTDOOR AIR RATE	Az ZONE FLOOR AREA	VENTILATION RATE BASED ON AREA	Vbz* TOTAL ZONE VENTILATION RATE	OUTSIDE AIR PROVIDED
AHU-1	5	10	50	0.06	2500	150	200	200
AHU-3	5	5	25	0.06	1330	80	105	110
AHU-4	5	6	30	0.06	1770	106	136	140
AHU-5	5	30	150	0.06	2500	150	300	300
AHU-6	5	8	40	0.06	2500	150	190	200

EXHAUST FAN SCHEDULE

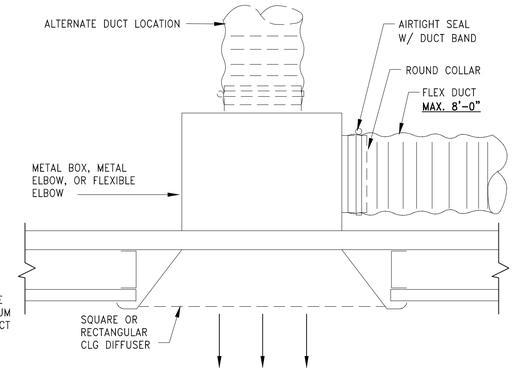
MARK	CFM	V/A	REMARKS
EF-1	330	120/1.4	TWIN CITY T400
EF-2	70	120/1.1	TWIN CITY T100
EF-3	330	120/1.4	TWIN CITY T400
EF-4	70	120/1.1	TWIN CITY T100

NOTES:
1. EXHAUST FANS SHALL BE TWIN CITY OR ENGINEER APPROVED EQUAL
2. EXHAUST FANS SHALL BE EQUIP WITH UNIT MOUNTED SPEED CONTROLLER

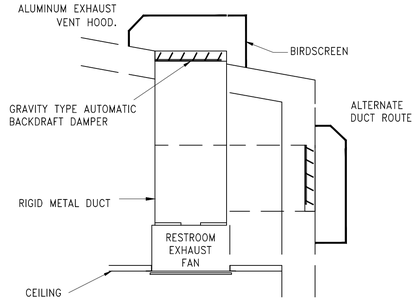




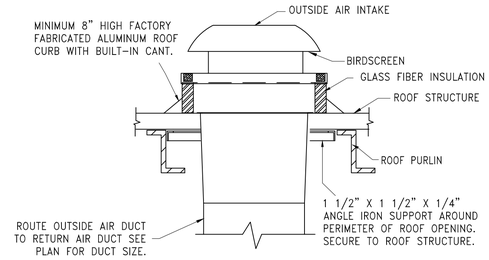
TYPICAL BRANCH CONNECTION
N.T.S.



FLEXIBLE DUCT TO CEILING DIFFUSER
N.T.S.

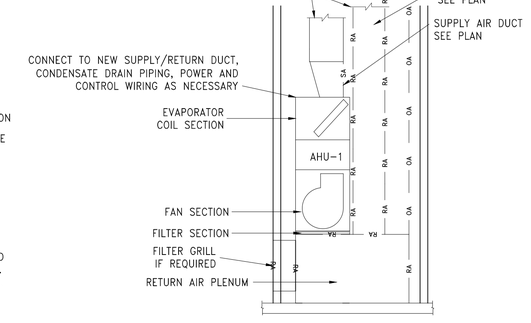


RESTROOM EXHAUST FAN DETAIL
NTS

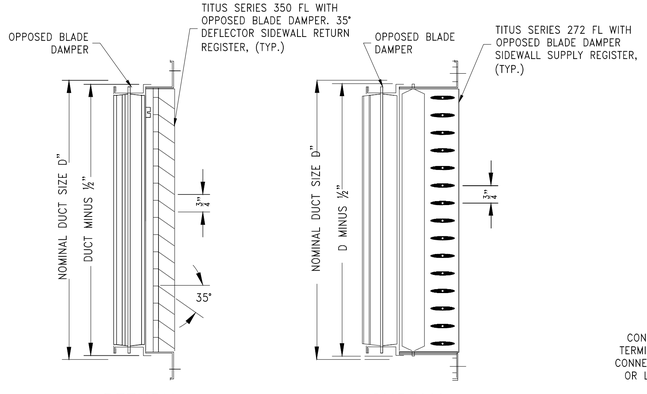


ROOF MOUNTED OUTSIDE AIR VENT DETAIL
NTS SIDE WALL LOUVER IS AN ACCEPTABLE ALTERNATE

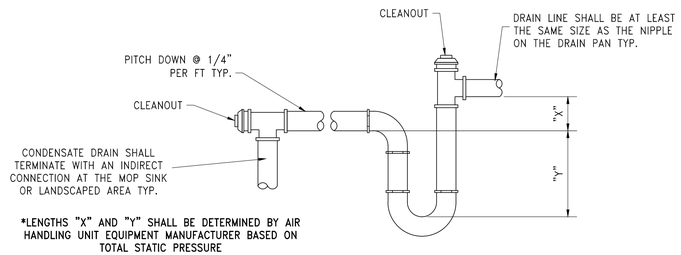
TRANSITION AND ROUTE DUCT AS GENERALLY INDICATED ON THE PLANS. OFFSET AS NECESSARY TO AVOID CONFLICTS WITH JOIST AND STRUCTURE.



TYPICAL AHU DETAIL
N.T.S.



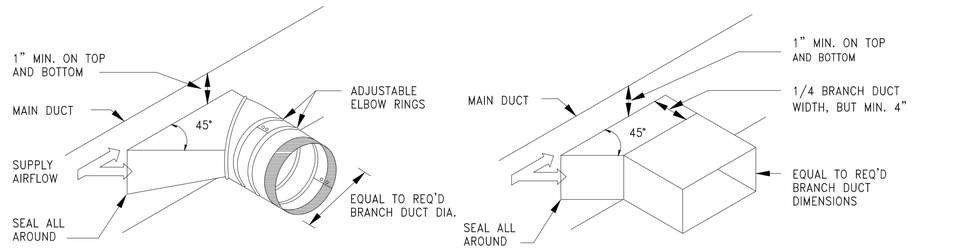
SIDEWALL REGISTER DETAIL
NTS



***LENGTHS "X" AND "Y" SHALL BE DETERMINED BY AIR HANDLING UNIT EQUIPMENT MANUFACTURER BASED ON TOTAL STATIC PRESSURE**

***SEE DWG. M3 FOR CONDENSATE PIPING INSULATION SPECIFICATIONS**

CONDENSATE TRAP DETAIL
NOT TO SCALE



TYPICAL BRANCH TAKE-OFF FITTING
N.T.S.

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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
HVAC SCHEDULE & DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MAD	12/01/21	22x34 _ OF _	A
JOB NO. 4043-21	CHECKED BY JDG	DATE 12/31/21	DRAWING NUMBER 4043-M4	

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PART 1 GENERAL

1.1 SCOPE OF WORK

A. THE WORK CONSISTS OF FURNISHING ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY FOR A COMPLETELY FUNCTIONAL SYSTEM. IN GENERAL, THE WORK SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO THE FOLLOWING MAJOR SUBDIVISIONS.

DUCTWORK, GRILLES, AND DIFFUSERS
SPLIT SYSTEM HEAT PUMP(S)
EXHAUST FANS
LOUVERS

1.2 CODES, FEES, PERMITS

A. THE CONTRACTOR SHALL COMPLY WITH ALL COUNTY, DISTRICT, MUNICIPAL, OR LOCAL BUILDING CODE, INTERPRETATIONS, BUILDING PERMITS AND ASSESSMENTS OF FEES FOR BUILDING PERMITS, AND ORDINANCES.

B. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, INSPECTIONS, AND CERTIFICATES OF INSPECTION. CERTIFICATES OF INSPECTION SHALL BE DELIVERED TO THE ENGINEER UPON COMPLETION OF THE JOB.

C. THE CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS OF ALL COUNTY, DISTRICT, MUNICIPAL, OR LOCAL BUILDING CODES, INTERPRETATIONS, BUILDINGS PERMITS TO INCLUDE BUT NOT BE LIMITED TO:

ASHRAE, 1994 "EQUIPMENT" – CHAPTER 1, DUCT CONSTRUCTION
SMACNA STANDARDS FOR DUCT CONSTRUCTION
INTERNATIONAL BUILDING CODE – 2018
INTERNATIONAL MECHANICAL CODE – 2018
INTERNATIONAL PLUMBING CODE – 2018
NFPA-90A (1999) – INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS
LOCAL MUNICIPAL CODES

1.3 RESPONSIBILITY OF BIDDER

A. EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT HIMSELF WITH CONDITIONS RELATING TO THE CONSTRUCTION REQUIREMENTS SO THAT HE MAY FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS CONTINGENT UPON THE EXECUTION OF THE WORK UNDER THIS CONTRACT. THE FAILURE OR OMISSION OF ANY BIDDER TO RECEIVE OR EXAMINE ANY FORM, INSTRUMENT, ADDENDUM OR OTHER DOCUMENT SHALL IN NO WAY RELIEVE ANY BIDDER FROM HIS OBLIGATIONS WITH RESPECT TO HIS BID OR THE CONTRACT. THE SUBMISSION OF A BID SHALL BE TAKEN AS PRIMA FACIA EVIDENCE OF COMPLIANCE WITH THIS PARAGRAPH AND THAT HE HAS INCLUDED IN HIS PROPOSAL EVERY ITEM OF COST NECESSARY FOR A COMPLETE INSTALLATION OF AIR CONDITIONING, HEATING AND VENTILATION OPERATIONS STRICTLY AS PLANNED, SPECIFIED, AND INTENDED.

1.4 SUB-DIVISIONS OF WORK

A. EACH SUB-DIVISION OF WORK INCLUDES FURNISHING AND INSTALLING ALL MATERIALS TO MAKE THAT PART OF WORK COMPLETE, AND SHALL COMPRISE ALL AUXILIARIES, SETTING OF EQUIPMENT, SLEEVES THROUGH BUILDING CONSTRUCTION WHERE REQUIRED AND ETC., ALL IN COMPLETE COORDINATION WITH GENERAL CONTRACTOR AND IN COOPERATION WITH OTHER TRADES. IT IS CONTEMPLATED THAT ALL SUB-DIVISIONS OF WORK WHEN COMPLETED WILL FORM HEATING, AIR CONDITIONING, AND VENTILATION SYSTEM FOR THIS PROJECT.

1.5 DRAWINGS

A. THE DRAWINGS FOR THE HEATING, VENTILATING AND AIR CONDITIONING FOR THIS JOB ARE DIAGRAMMATIC. THE CONTRACTOR SHALL MAKE HIS OWN MEASUREMENTS AT THE SITE AND IN THE BUILDINGS DURING CONSTRUCTION AND INSTALL THE SYSTEMS AS THE WORK PROGRESSES IN SUCH A MANNER THAT THE EQUIPMENT, PIPING, CONDUIT, PANELS, AND DUCTWORK WILL FIT INTO THE FINISHED SPACE PROVIDED MAINTAINING HEADROOM; AND BE NEATLY INSTALLED. ALL EQUIPMENT AND ITS INTERCONNECTING PIPING, DUCTWORK, CONDUIT, ETC., SHALL BE PROVIDED.

B. DUE TO DIFFERENCES BETWEEN VARIOUS MANUFACTURERS, IT IS NOT PRACTICABLE TO SHOW EXACT DIMENSIONS OF UNITS, NOR TO SHOW OR SPECIFY ALL MINOR DETAILS OF EQUIPMENT. CONTRACTOR SHALL PROVIDE ALL VALVES, FITTINGS AND ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION, WHETHER OR NOT SPECIFICALLY MENTIONED OR SHOWN.

C. EQUIPMENT SHALL NOT BE ACCEPTABLE IF OPERATED IN EXCESS OF THE RECOMMENDED AND PUBLISHED RATINGS OF THE MANUFACTURER.

D. CONTRACTOR SHALL SUBMIT ALL HVAC EQUIPMENT FOR ENGINEER APPROVAL PRIOR TO PURCHASING EQUIPMENT.

1.6 FOUNDATIONS

A. THE CONTRACTOR SHALL FURNISH ALL SPECIAL FOUNDATIONS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING WHICH HE INSTALLS AND WHICH ARE SEPARATE AND DISTINCT FROM BUILDING CONSTRUCTION AS SHOWN BY ARCHITECTURAL DRAWINGS.

1.7 SAFETY PROVISIONS

A. CONTRACTOR SHALL BE REQUIRED AT ALL TIMES TO PERFORM HIS WORK IN STRICT ACCORDANCE WITH THE WILLIAMS-STEIGER OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970.

B. EQUIPMENT WITH ANY PROJECTING OR ROTATING PARTS SHALL BE TOTALLY ENCLOSED OR PROPERLY GUARDED.

1.8 NOISE AND VIBRATION

A. THIS CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ELIMINATION OF ALL NOISES OR VIBRATIONS TRANSMITTED TO OCCUPIED AREAS FROM EQUIPMENT WHICH HE MAY INSTALL. THIS APPLIES PARTICULARLY TO AIRBORNE NOISES IN DUCTWORK, VIBRATION AND NOISES IN PIPING, AND VIBRATION FROM MECHANICAL EQUIPMENT TRANSMITTED THROUGH BASES TO BUILDING STRUCTURE.

B. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL FLEXIBLE CONNECTORS FOR DUCTWORK CONNECTED TO MOTOR DRIVEN EQUIPMENT.

C. CONTRACTOR SHALL CLOSELY COORDINATE WORK FOR LOCATION OF MECHANICAL EQUIPMENT AND ROOF OPENINGS.

1.9 MOTORS AND STARTERS

A. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE FURNISHING IN PLACE OF ALL ELECTRIC MOTORS REQUIRED FOR THE OPERATION OF ALL HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT. ELECTRICAL CONTRACTOR TO PROVIDE ALL POWER WIRING AND CONDUIT REQUIRED FOR THE OPERATION OF ELECTRICAL MOTORS AS SPECIFIED. ELECTRIC MOTORS SHALL BE SELECTED IN SIZES AS REQUIRED TO PROPERLY OPERATE THE EQUIPMENT FURNISHED BUT IN NO CASE SMALLER THAN THOSE INDICATED ON EQUIPMENT SCHEDULES. VERIFY ALL ELECTRICAL CHARACTERISTICS FROM ELECTRICAL DRAWINGS BEFORE RELEASING MOTORS FOR SHIPMENT. ELECTRIC MOTORS SHALL HAVE A SERVICE FACTOR OF 1.15 AND POWER FACTOR IN ACCORDANCE WITH ASHRAE 90-75.

B. THIS CONTRACTOR SHALL FURNISH ALL MAGNETIC MOTOR STARTERS REQUIRED TO OPERATE HEATING, VENTILATING, AND AIR CONDITIONING EQUIPMENT AND TURN OVER TO THE ELECTRICAL CONTRACTOR FOR INSTALLATION. ALL MOTOR STARTERS SHALL BE PROVIDED WITH:

1. 1 THERMAL OVERLOAD PER PHASE LEG.

2. A 110 VOLT COIL AND A HAND-OFF-AUTOMATIC SWITCH, IF MOTORS ARE SUBJECT TO ELECTRICAL INTERLOCK UNLESS OTHERWISE SPECIFIED.

C. IF EQUIPMENT IS PROVIDED WITH R.L.A. IN EXCESS OF DESIGN CONDITIONS THE MECHANICAL CONTRACTOR SHALL STAND THE EXPENSE OF ASSOCIATED ELECTRICAL CHANGES.

D. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO PROVIDE THERMAL OVERLOADS OF THE PROPER SIZE AS REQUIRED BY THE ACTUAL MOTOR NAMEPLATE AMPS. MOTOR STARTERS SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND THE LOCAL UTILITY SERVICE COMPANY.

1.10 PAINTING

A. ALL EQUIPMENT FURNISHED WITHOUT FACTORY PAINT OR GALVANIZED FINISH SHALL BE THOROUGHLY CLEANED AND GIVEN A PRIME COAT, THEN A FINISH COAT OF PAINT IN A COLOR AS SELECTED BY ARCHITECT/ENGINEER. ANY EQUIPMENT FINISH THAT IS DAMAGED OR CHIPPED, SHALL BE SPOT PAINTED TO MATCH EXISTING SURFACE. ANY MISCELLANEOUS METALS USED BY THIS CONTRACTOR THAT ARE NOT GALVANIZED SHALL BE GIVEN TWO COATS OF PAINT IN COLOR SPECIFIED BY ARCHITECT. ANY RUSTY OR CORRODED FINISHES SHALL BE THOROUGHLY CLEANED AND PAINTED TWO COATS OF PAINT-ONE PRIME AND ONE FINISH COAT.

1.11 TESTS AND GUARANTEES

A. AFTER COMPLETION OF HIS WORK, AND WHEN THE BUILDING IS READY FOR OCCUPANCY, THIS CONTRACTOR SHALL OPERATE THE AIR CONDITIONING OR HEATING SYSTEM FOR A PERIOD OF TWO DAYS. DURING THE TESTS, THE CONTRACTOR SHALL ADJUST CONTROLS, OUTLETS, ETC.

B. THE CONTRACTOR SHALL REPEAT OPERATIONAL SEQUENCE DURING HEATING AND/OR COOLING SEASON, WHICHEVER HAD NOT BEEN SUBJECT TO PRIOR TEST PERIOD.

1.12 SHOP DRAWINGS

A. MATERIALS AND EQUIPMENT SCHEDULES SHALL BE SUBMITTED AS SOON AS PRACTICABLE BUT NOT LATER THAN THIRTY (30) DAYS AFTER THE DATE OF AWARD OF CONTRACT, AND BEFORE COMMENCEMENT OF INSTALLATION OF ANY MATERIAL OR EQUIPMENT. A COMPLETE SCHEDULE OF THE MATERIAL AND EQUIPMENT PROPOSED FOR INSTALLATION SHALL BE SUBMITTED FOR APPROVAL. THE SCHEDULE SHALL INCLUDE CATALOGS, CUTS, DIAGRAMS, DRAWINGS, SPECIFICATIONS AND SUCH OTHER DESCRIPTIVE DATA AS MAY BE REQUIRED BY THE ENGINEER. ALL MATERIALS REQUIRED TO BE SUBMITTED FOR APPROVAL UNDER THIS SECTION SHALL BE SUBMITTED AT ONE TIME. PARTIAL SUBMITTALS WILL NOT BE CONSIDERED. THEY WILL BE RETURNED AS "NOT APPROVED".

B. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL ON THE FOLLOWING ITEMS OF EQUIPMENT: SUBJECT DRAWINGS SHALL INCLUDE ALL DATA PERTINENT TO THE PERFORMANCE AND INSTALLATION OF ALL EQUIPMENT.

AIR DISTRIBUTION DEVICES – GRILLES, DIFFUSERS, DAMPERS
LOUVERS
TEMPERATURE CONTROLS
INSULATION MATERIALS
SPLIT SYSTEM HEAT PUMP(S)
EXHAUST FANS

1.13 QUALITY OF MATERIALS AND EQUIPMENT

A. IT IS NOT THE INTENT OF THESE SPECIFICATIONS TO LIMIT MATERIAL AND/OR EQUIPMENT SELECTIONS TO ONE MANUFACTURER; HOWEVER, THE ENGINEER RESERVES THE RIGHT TO BE THE FINAL AND SOLE JUDGE WITH REGARD TO EQUALS.

B. APPROVALS OF EQUIPMENT IS BASED ON CAPACITIES, EQUALITY OF WORKMANSHIP AND COMPONENTS, OR GENERAL AND SPECIAL CONSTRUCTION FEATURES. APPROVAL OF EQUIPMENT DOES NOT RELIEVE THE CONTRACTOR OF COORDINATION RESPONSIBILITY WITH OTHER TRADES. EQUIPMENT SHALL FIT WITHIN THE PHYSICAL SPACE OF EQUIPMENT SHOWN AND HAVE SAME GENERAL CONNECTION AS THAT SHOWN ON DRAWINGS. PROPER CLEARANCES SHALL BE MAINTAINED FOR SERVICING AND MAINTAINING EQUIPMENT.

C. WHERE EQUIPMENT SUBMITTED VARIES FROM THE GENERAL ARRANGEMENT OF THAT SPECIFIED, CONTRACTOR SHALL SUBMIT DETAILED SHEET METAL AND EQUIPMENT BROCHURES. SHOP DRAWINGS SHALL INDICATE ANY AND ALL SHEET METAL, ELECTRICAL, PIPING AND STRUCTURAL CHANGES REQUIRED TO FACILITATE CHANGE. ANY AND ALL ADDITIONAL COSTS INCURRED BY CHANGES WILL BE BORNE BY THIS CONTRACTOR.

PART 2 PRODUCTS

2.1 REFRIGERANT PIPING

A. PIPING SHALL BE TYPE "K" HARD DRAWN COPPER, ASTM SPEC. B280, AND SHALL BE MILL CLEANED, DRIED, AND CAPPED.

B. FITTINGS SHALL BE EXTRA HEAVY WROUGHT COPPER IN ACCORDANCE WITH ANSI B9.1 WITH JOINTS SOLDERED USING A HIGH CONTENT SILVER ALLOY SOLDER.

C. INSTALLATION SHALL BE IN ACCORDANCE WITH UNIT MANUFACTURER'S REQUIREMENTS WITH ALL PIPING SECURED TO WALLS AND CEILINGS WITH APPROVED GALVANIZED HANGERS AND CLAMPS. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH ANSI STANDARD B31.5 FOR REFRIGERANT PIPING.

D. INSULATE REFRIGERANT SUCTION LINE WITH 3/4" WALL FOAMED PLASTIC INSULATION SLIPPED OVER TUBING AND ALL JOINTS THOROUGHLY SEALED. PAINT INSULATION WITH TWO COATS OF ACRYLIC PROTECTIVE PAINT WHERE INSULATION IS EXPOSED TO WEATHER. PROTECT INSULATION WITH METAL SADDLES AND SHIELDS AT ALL HANGER POINTS.

E. ALL REFRIGERANT PIPING ROUTED BELOW GRADE SHALL BE ROUTED IN 6" PVC CONDUIT WITH ENDS SEALED TO BE RODENT PROOF.

F. SUSPEND PIPING AS REQUIRED WITH APPROVED PIPE HANGERS AT 8'-0" ON CENTER.

G. IF FIELD PIPING IS USED, PIPING DIAGRAMS SHALL BE SUBMITTED BY UNIT MANUFACTURER SHOWING PIPE SIZES, TRAPS, SERVICE VALVES, ETC., REQUIRED FOR PROPER OPERATION OF EQUIPMENT. PRE-CHARGED TUBING MAY BE USED AT CONTRACTOR'S OPTION.

H. TEST REFRIGERANT SYSTEM AT 300 PSI BEFORE CHARGING SYSTEM WHERE UNITS ARE TO BE FIELD CHARGED. SYSTEM IS TO BE THOROUGHLY PURGED AND EVACUATED BEFORE CHARGING WITH REFRIGERANT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. IF FACTORY PRE-CHARGED TUBING IS USED, UNIT SHALL BE CHECKED AND MONITORED FOR PROPER CHARGE AND EFFICIENT OPERATION.

2.2 EXHAUST FAN

A. ALL EXHAUST FANS SHALL BEAR THE AMCA SEAL OF APPROVAL AND SHALL BE CURRENTLY LISTED IN THE CURRENT AMCA DIRECTORY.

B. EXHAUST FAN FOR TOILET ROOMS SHALL BE CEILING MOUNTED TYPE FANS WITH 1/2" THICK ACOUSTICAL LINED STEEL HOUSING, DIRECT DRIVE CENTRIFUGAL FAN, BACK DRAFT DAMPER AND INTEGRAL ALUMINUM CEILING GRILLE. FAN CONTROL SHALL BE BY SEPARATE WALL MOUNTED SWITCH. FANS SHALL BE EQUAL TO BROAN LOSONE SELECT.

2.3 CONTROL OPERATIONS

A. GENERAL SPACE TEMPERATURE SHALL BE CONTROLLED BY WALL MOUNTED THERMOSTATS LOCATED WITHIN THE SPACES AS INDICATED ON DRAWINGS. THERMOSTAT SUBBASE SHALL INCLUDE A SYSTEM SELECTOR SWITCH (OFF-HEAT-AUTO-COOL) AND FAN SWITCH (AUTO-ON) AND BE PROVIDED BY THE AIR CONDITIONING EQUIPMENT MANUFACTURER. THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE AND HAVE BATTERY BACK-UP WITH NIGHT LOW AND HIGH LIMIT SETTINGS.

B. WIRING: ALL CONTROL WIRING EXTERNAL TO THE AIR CONDITIONING EQUIPMENT SHALL BE INSTALLED BY THE CONTROL SUB-CONTRACTOR UNDER THE DIRECT SUPERVISION OF THE HVAC SUBCONTRACTOR.

NOTE: ALL WIRING REQUIRED FOR EQUIPMENT OPERATIONS SHALL BE BY THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL ALSO PROVIDE ALL CONDUIT AS REQUIRED FOR CONTROL WIRING.

C. TEST ALL UNITS FOR TWO (2) 8-HOUR DAYS UNDER THE SUPERVISION OF MANUFACTURER'S REPRESENTATIVE, WHO SHALL MAKE ALL NECESSARY ADJUSTMENTS AND INSTRUCT DESIGNATED OPERATING PERSONNEL IN OPERATION AND MAINTENANCE OF EQUIPMENT AND CONTROLS.

2.4 CONTROLS

A. CONTRACTOR SHALL FURNISH AND INSTALL ALL RELAYS, TRANSFORMERS, CONTACTS, ETC., AS REQUIRED TO CONTROL AUTOMATICALLY THE HEATING AND AIR CONDITIONING EQUIPMENT. SUBMIT CONTROL DRAWINGS FOR APPROVAL. CONTROL DRAWINGS SHALL BE COMPLETE AND SHALL INDICATE COMPLETE CONTROL SEQUENCE OF OPERATION.

B. ALL CONTROL WIRING SHALL BE INSTALLED IN CONDUIT AND SHALL BE SIZED AS RECOMMENDED BY UNIT MANUFACTURER. ALL WIRING SHALL BE COLOR CODED TO MATCH SYSTEM WIRING DIAGRAMS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE ELECTRICAL SECTION OF THIS SPECIFICATION.

2.5 DUCTWORK

A. THE SIZES, RUNS, AND CONNECTIONS OF DUCTS SHALL BE AS INDICATED. ADHERE TO DRAWINGS AS CLOSELY AS POSSIBLE. THE RIGHT IS RESERVED, HOWEVER, IF REQUIRED TO MEET STRUCTURAL OR OTHER INTERFERENCES, TO VARY RUN AND SHAPE OF DUCTS AND OFFSETS DURING PROGRESS OF WORK, AT NO EXTRA COST TO THE OWNER. DUCTWORK SPECIFIED HEREIN SHALL HAVE RECTANGULAR CROSS SECTION, UNLESS OTHERWISE INDICATED.

B. MATERIALS – METHODS OF CONSTRUCTION: DETAILS OF CONSTRUCTION AND MATERIALS NOT SPECIFIED HEREIN SHALL BE IN ACCORDANCE WITH SMACNA LOW VELOCITY AND ASHRAE "GUIDE" RECOMMENDATIONS. FABRICATE DUCTWORK IN WORKMANLIKE MANNER WITH AIRTIGHT JOINTS PRESENTING SMOOTH SURFACE ON INSIDE, NEATLY FINISHED ON OUTSIDE. SEAL ALL DUCT JOINTS AIRTIGHT BEFORE INSULATION IS APPLIED. CONSTRUCT DUCTWORK AIR EXTRACTORS, SPIN-IN TAPS WITH AIR SCOOPS, TURNING VANES, SPLITTER DAMPERS, ETC., TO EASE AIR FLOW AND BALANCING OF AIR. UNLESS OTHERWISE INDICATED, WHERE SQUARE ELBOWS HAVE TO BE USED, PROVIDE FIXED DEFLECTORS. CONSTRUCT, BRACE AND SUPPORT DUCTS IN MANNER THAT THEY WILL NOT SAG OR VIBRATE TO ANY PERCEPTIBLE EXTENT WHEN FANS ARE OPERATING AT MAXIMUM SPEED AND CAPACITY. DUCTWORK SHALL BE GALVANIZED SHEET STEEL UNLESS OTHERWISE SPECIFIED. DISTANCE BETWEEN JOINTS OF ANY SIZE DUCT SHALL NOT EXCEED 8'.

D. FLEXIBLE DUCTWORK SHALL NOT EXCEED 8' IN LENGTH, BE EQUAL TO THERMAFLEX TYPE M-KE-R6 OR J.P. LAMBORN MHP-R6 WITH 1"-1 LB. DENSITY INSULATION WITH METALIZED FILM VAPOR BARRIER, AND CONFORM TO UL-181 AS A CLASS I DUCT.

E. SHEET METAL GAUGES FOR RECTANGULAR DUCT CONSTRUCTION SHALL BE:

STEEL U.S. STD.GAUGE	MAXIMUM SIZE INCHES	TYPE OF TRANSVERSE JOINT CONN.	BRACING
26	UP TO 12	S-DRIVE, POCKET OR BAR CLIPS, ON 7'-10" CENTERS	NONE
24	13 TO 24	S-DRIVE, POCKET OR BAR CLIPS, ON 7'-10" CENTERS	NONE
24	25 TO 30	S-DRIVE, POCKET OR BAR CLIPS ON 7'-10" CENTERS	1X1X⅛" ANGLE 4' FROM JOINT

F. DUCT SUPPORT: SUPPORT HORIZONTAL DUCTS WITH HANGERS SPACED NOT MORE THAN 8' APART, PLACE HANGERS AT CHANGES IN DIRECTIONS. USE STRAP HANGERS FOR DUCTS UP TO 30" WIDE, ANGLE HANGERS FOR DUCTS OVER 30" WIDE. MAKE STRAP HANGERS 1" BY 16-GAUGE MINIMUM, EXTENDED DOWN BOTH SIDES OF DUCT AND TURN UNDER BOTTOM 2" MINIMUM, FASTEN SIDES AND BOTTOM WITH SHEET METAL SCREWS.

G. PROVIDE FLEXIBLE DUCT CONNECTIONS BETWEEN DUCTS AND A/C UNIT. CONNECTORS SHALL BE CONSTRUCTED OF 29 OUNCE NEOPRENE-COATED FIBERGLASS APPROXIMATELY 6" WIDE, BORDERED BY CRIMPING TO SHEET METAL AND FASTENED TO DUCTS WITH SCREWS NOT MORE THAN 2" ON CENTERS.

2.6 DAMPERS

A. PROVIDE SPLITTER AND DEFLECTING VANES FOR CONTROL OF AIR VOLUME AND DIRECTION, AND FOR BALANCING SYSTEM WHERE INDICATED, SPECIFIED, DIRECTED OR REQUIRED.

B. DAMPERS OF SAME MATERIALS AS DUCT, AT LEAST ONE GAUGE HEAVIER THAN DUCT, REINFORCED WHERE DIRECTED, SHALL HAVE AN ACCESSIBLE LOCATION INDICATING QUADRANT, LOCKING DEVICE FOR ADJUSTING AND LOCKING DAMPERS IN POSITION.

C. STIFFEN DUCT AT DAMPER LOCATION, INSTALL DAMPER IN MANNER TO PREVENT RATTLING.

2.7 GRILLES AND DIFFUSERS

A. SUPPLY AND RETURN AIR GRILLES AND DIFFUSERS SHALL BE SIZED NOT TO EXCEED A N.C. LEVEL OF (35). GRID CEILING DIFFUSER SHALL BE EQUAL TO TITUS SERIES TDC-AA TYPE WITH 24"X24" LAY-IN PANEL SUPPLY DIFFUSER WITH BALANCING DAMPER OF SIZE, DISCHARGE FLOW PATTERN AND CAPACITY AS INDICATED ON DRAWINGS. GYP. OR RIGID CEILING DIFFUSERS INSTALLED IN RIGID CEILINGS SHALL BE EQUAL TO TITUS SERIES TDC-AA TYPE SUPPLY DIFFUSER BORDER TYPE 1 WITH BALANCING DAMPER OF SIZE AND CAPACITY AS INDICATED ON DRAWINGS. (UNLESS SHOWN ON DRAWINGS.)

B. CEILING RETURN AIR GRILLES SHALL BE EQUAL TO TITUS SERIES 50F. GRILLES SHALL BE OF ALUMINUM CONSTRUCTION WITH 1/2"x1/2"x1/2" ALUMINUM GRID. GRILLE SHALL BE 90% FREE AREA (MINIMUM). PROVIDE WITH OPPOSED BLADE DAMPER. WALL RETURN GRILLES SHALL BE EQUAL TO TITUS 350FL (FILTER GRILL TO BE 350FLF1). SIZE AND CAPACITY SHALL BE AS INDICATED ON DRAWINGS. (UNLESS SHOWN ON DRAWINGS.)

C. SIDEWALL REGISTERS SHALL BE EQUAL TO TITUS SERIES 272RS WITH OPPOSED BLADE DAMPER. (UNLESS SHOWN ON DRAWINGS.)

D. INSTALL AND FASTEN CEILING DIFFUSER AND RETURN AIR GRILLES AS PER MANUFACTURER'S DETAILED DRAWINGS, USE GASKETS TO MAKE AIRTIGHT JOINTS WITH ADJOINING CONSTRUCTION, JOIN NEATLY WITH ADJOINING FINISHED SURFACE.

2.8 INSULATION

A. EXTERIOR DUCT INSULATION SHALL BE APPLIED OUTSIDE OF ALL HEATING AND AIR CONDITIONING DUCTWORK IN ACCORDANCE WITH SMACNA STANDARDS. INSULATION SHALL BE CONSTRUCTED OF GLASS FIBER AND SHALL BE 1 POUND DENSITY, 2" THICK AND COMPLY WITH NFPA BULLETINS 90A AND 90B (MINIMUM R VALUE = 6). INSULATION SHALL BE WRAPPED AND SHALL BE SECURED WITH DUCT BANDS. ALL JOINTS IN INSULATION SHALL BE BUTTED TOGETHER AND BRUSHED WITH ADHESIVE.

2.9 NATURAL GAS PIPING **(N.I.C.)**

A. ALL PIPING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL ASTM 120. FITTINGS SHALL BE 150 POUNDS BLACK MALLEABLE SCREW PATTERN FOR ALL SIZES 2" AND SMALLER.

B. PIPING BELOW GRADE SHALL BE SCHEDULE 40 BLACK STEEL WITH BLACK WELDED FITTINGS SHALL BE PROTECTED BY MILL WRAPPING, REPUBLIC EXTRU-COAT OR APPROVED EQUAL. FITTINGS AND FIELD JOINTS SHALL BE FIELD WRAPPED AFTER TESTING WITH EXTRU-TAPE OR EQUAL TO 6" ABOVE FINISHED GRADE.

C. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH NFPA RECOMMENDATIONS AND SOUTHERN STANDARD GAS CODE COMPLETE WITH ALL NECESSARY APPURTENANCES.

D. GAS COCKS SHALL BE INSTALLED BEFORE EACH PIECE OF EQUIPMENT IS CONNECTED TO THE SYSTEM.

E. HORIZONTAL PIPING SHALL GRADE WITH A SLOPE OF 1" IN 40'-0" TO DROP LEGS AT ALL LOW POINTS AS REQUIRED. DRIPS SHALL BE PROVIDED AT ALL LOW POINTS AND AT BOTTOM OF RISERS. DRIPS SHALL BE SAME SIZE AS THE PIPING WHERE INSTALLED AND SHALL BE MINIMUM OF 8" LONG.

F. USE GROUND JOINTS IN ALL SCREW PIPING JOINTS AND 150 POUND FLANGES IN ALL WELDED JOINT PIPING WHERE REQUIRED.

PART 3 EXECUTION

3.1 TESTING AND BALANCING

A. THE HEATING AND VENTILATING SUBCONTRACTOR SHALL SUBMIT TO THE OWNER/ENGINEER A RECORD OF THE CAPACITIES OF EACH GRILLE, REGISTER, AND EQUIPMENT OPENING AS DETERMINED BY THE TEST AFTER FINAL ADJUSTMENTS HAVE BEEN MADE WITH A NOTATION FOR THE FINAL SETTING AND AVERAGE VELOCITY THROUGH EACH OUTLET AS DETERMINED BY READINGS OF A VELOMETER TAKEN AT SEVERAL POINTS AT THE FACE OF THE REGISTER OR OPENING. AIR DELIVERY THROUGH SUPPLY OUTLETS SHALL BE CONSIDERED EQUAL TO THAT QUANTITY AS PUBLISHED IN THE MANUFACTURER'S TABLES. RETURN AIR THROUGH RETURN AIR GRILLES SHALL BE CONSIDERED AS EQUAL TO THE PRODUCT OF THE VELOMETER VELOCITY AND EFFECTIVE AREA OF THE REGISTER. TEST AND BALANCE BOTH HVAC SYSTEMS WITH DUCTWORK PRIOR TO INSTALLATION OF FINISHED CEILING. ONCE CEILINGS HAVE BEEN INSTALLED THE BALANCING DEVICES AND DUCTWORK SHALL NOT BE ACCESSIBLE FOR THIS PROCEDURE.

B. THERMOSTATS FOR THE AIR CONDITIONING EQUIPMENT SHALL BE PROVIDED AS PART OF THAT EQUIPMENT, AND CONNECTED UP BY THE ELECTRICAL SUBCONTRACTOR, AND IS TESTED BY THE HVAC SUBCONTRACTOR.

3.2 CLEANING VENTILATING SYSTEMS

A. ALL DUCTS SHALL BE THOROUGHLY CLEANED AND BLOWN OUT TO PREVENT ANY DEBRIS FROM DAMAGING FAN WHEELS OR DISCHARGING THROUGH DIFFUSERS WHEN SYSTEMS ARE PLACED IN OPERATIONS. ALL TEMPORARY CONNECTIONS REQUIRED FOR BLOWING OUT THE SYSTEM, CHEESECLOTH FOR ALL DUCT OPENINGS, AND ANY OTHER EQUIPMENT OR LABOR FOR CLEANING SHALL BE PROVIDED BY THE HEATING AND VENTILATING SUBCONTRACTOR. ALL FILTERS SHALL BE RENEWED AFTER VENTILATING SYSTEMS HAVE BEEN CLEANED. THE COST OF RENEWAL SHALL BE BORNE BY THE GENERAL CONTRACTOR.

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CONFIDENTIAL, VALUABLE, AND PROPRIETARY INFORMATION

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A	ISSUE FOR BID	08/10/22	JWM	JDG

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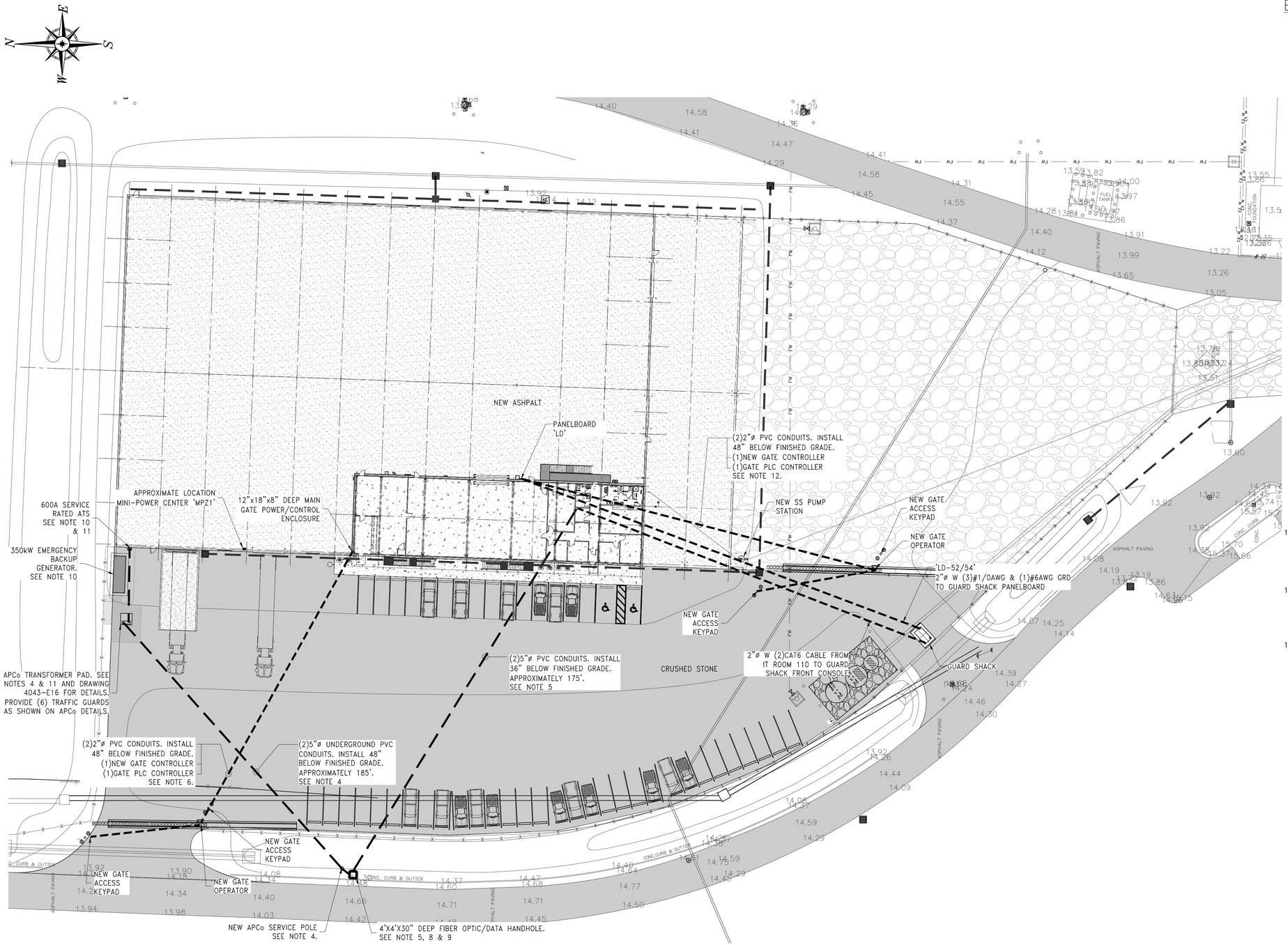
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
HVAC SPECIFICATIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MAD	12/01/21	— OF — (22x34)	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043-21	JDG	12/31/21	4043-M5	

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NEW ELECTRICAL SITE PLAN

1"=30'

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" – STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)

2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.

3. CONTRACTOR SHALL (PRIOR TO BID)
   (a) VISIT THE JOB/CONSTRUCTION SITE AND FIELD VERIFY ALL EXISTING CONDITIONS
   (b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED TO THE CONTRACTOR AFTER THE BID HAS BEEN ACCEPTED.

4. CONTRACTOR SHALL VERIFY WITH ASPA APCo REPRESENTATIVE FINAL LOCATION OF SERVICE POLE PRIOR TO CONDUIT INSTALLATION. CONTRACTOR SHALL FURNISH AND INSTALL (2)5"ø POWER UNDERGROUND CONDUITS FROM THE NEW APCO SERVICE POLE TO THE NEW APCo TRANFORMER PAD. CONDUITS SHALL STUB-UP AT SERVICE POLE A MINIMUM OF 24" ABOVE FINISHED GRADE AND A MINIMUM OF 2" ABOVE FINISHED GRADE AT TRANSFORMER PAD. SEE NOTE 5 FOR FIBER OPTIC CABLE REQUIREMENTS.

5. CONTRACTOR SHALL FURNISH AND INSTALL NEW FIBER OPTIC HANDHOLD, 4'x4'x4' WITH REMOVAL COVER LABELED COMMUNICATION, IN THE LOCATION SHOWN OR AS DIRECTED BY ASPA PERSONNEL. CONTRACTOR SHALL ROUTE (1)4"ø UNDERGROUND CONDUIT FROM THE APCO SERVICE POLE TO THE NEW FIBER OPTIC HANDHOLD AND (2)4"ø FROM THE NEW FIBER OPTIC HANDHOLD TO WAREHOUSE OFFICE IT ROOM 216. SEE DRAWING 4043-E15 FOR FIBER OPTIC SITE PLAN.

6. CONTRACTOR SHALL FURNISH AND INSTALL (2)2"ø ELECTRICAL PVC CONDUITS TO THE NEW GATE ACCESS CONTROL/POWER CABINET.
   A) (1)2"ø CONDUIT SHALL BE ROUTED TO A POWER/CONTROL ENCLOSURE LOCATED NEAR MPZ1.
   B) (1)2"ø CONDUIT SHALL BE TO THE GATE PLC ENCLOSURE
   CONTRACTOR SHALL VERIFY FINAL LOCATION OF POWER/CONTROL ENCLOSURE AND GATE PLC ENCLOSURE WITH OWNER PRIOR TO INSTALLATION.

7. SEE DRAWING 4043-C1 FOR DEMOLITION AND REMOVAL OF EXISTING ELECTRICAL SERVICES.

8. CONTRACTOR SHALL FURNISH AND INSTALL (1)48 STRAIN MULTI-MODE AND (1)48 STRAIN SINGLE MODE FIBER OPTIC CABLES FROM THE EXISTING GUARD SHACK TO THE NEW WAREHOUSE IT OFFICE 216. CONTRACTOR SHALL VERIFY THE MANUFACTURER TYPE FIBER OPTIC CABLE REQUIRED FROM ASPA IT PERSONNEL. FIBER OPTIC CABLE SHALL BE INSTALLED ON THE APCO SERVICE POLE OVER THE ASPA RAIL TRACKS, ALL CABLE CLEARANCES SHALL MEET THE REQUIREMENTS OF N.E.C.. CONTRACTOR SHALL NOTIFY APCO JOINT USE REPRESENTATIVE (ERIC BRASHER, 205-257-4056, ERMBRASH@SOUTHERNCO.COM) AND ASPA REPRESENTATIVE TO ARRANGE THE INSTALLATION OF THE FIBER OPTIC CABLES TO THE APCO SERVICE POLE.

9. CONTRACTOR SHALL FURNISH AND INSTALL NEW FIBER OPTIC CABLES, (1)128 STRAIN MULTI-MODE AND (1)128 STRAIN SINGLE MODE FROM THE EXISTING NORTH 32 ELECTRICAL BUILDING TO THE MAINTENANCE BUILDING MAIN IT ROOM AND FROM THE MAINTENANCE BUILDING MAIN IT ROOM AND FROM THE MAINTENANCE MAIN IT ROOM THE THE EXISTING GUARD SHACK IT COMMUNICATION EQUIPMENT. CONTRACTOR SHALL VERIFY WITH ASPA PERSONNEL THE ROUTING TO BE USED FROM THE NORTH 32 BUILDING TO THE MAINTENANCE MAIN IT ROOM AND FROM THE MAINTENANCE MAIN IT ROOM TO THE EXISTING GUARD SHACK. THE NEW FIBER OPTIC CABLES SHALL BE INSTALLED AS DIRECTED BY ASPA PERSONNEL. SEE DRAWING 4043-E15 FOR NEW FIBER OPTIC SITE PLAN.

10. CONTRACTOR SHALL FURNISH AND INSTALL CATERPILLAR MODEL C13GC, 350kW, 480/277V, 3 PHASE, 4 WIRE STANDBY GENERATOR. GENERATOR SHALL HAVE A FUEL TANK BASE (72 HOURS OPERATION AT 100% LOAD) APPROX 1,795 USABLE GALLONS. (1)600A EATON OPEN TRANSITION AUTOMATIC SERVICE RATED TRANSFER SWITCH. CONTACT SEAN O'NEILL AT THOMPSON POWER SYSTEMS FOR DETAILS (251-621-6021), REFERENCE – QUOTATION No. SPO-220629-3.

11. CONTRACTOR SHALL FURNISH AND INSTALL (2)4"ø UNDERGROUND CONDUITS FROM APCo TRANSFORMER PAD TO THE LOCATION OF THE NEW 600A SERVICE RATED AUTOMATIC TRANSFORMER SWITCH (ATS) AND (1)2"ø FROM THE APCo TRANSFORMER PAD TO THE APCo METER LOCATION. CONTRACTOR SHALL VERIFY FINAL APCo METER AND ATS LOCATION WITH APCo AND ASPA PERSONNEL.

12. CONTRACTOR SHALL FURNISH AND INSTALL (2)2"ø ELECTRICAL PVC CONDUITS TO THE NEW GATE ACCESS CONTROL/POWER CABINET.
   A) (1)2"ø CONDUIT SHALL BE ROUTED TO A PANELBOARD 'LD'.
   B) (1)2"ø CONDUIT SHALL BE TO THE GATE PLC ENCLOSURE
   CONTRACTOR SHALL VERIFY FINAL LOCATION OF POWER/CONTROL ENCLOSURE AND GATE PLC ENCLOSURE WITH OWNER PRIOR TO INSTALLATION.

NOTE:

SEE REFERENCE DRAWINGS "McDUFFIE COAL TERMINAL STORMWATER TRANSFER" SHEET 4 AND SHEET 11 FOR ADDITIONAL EXISTING UTILITY INFORMATION. THESE DRAWINGS ARE FOR INFORMATION ONLY AND THE ACCURACY OF THESE DRAWINGS ARE NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

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A	ISSUE FOR BID	08/10/22	JWM	JJM

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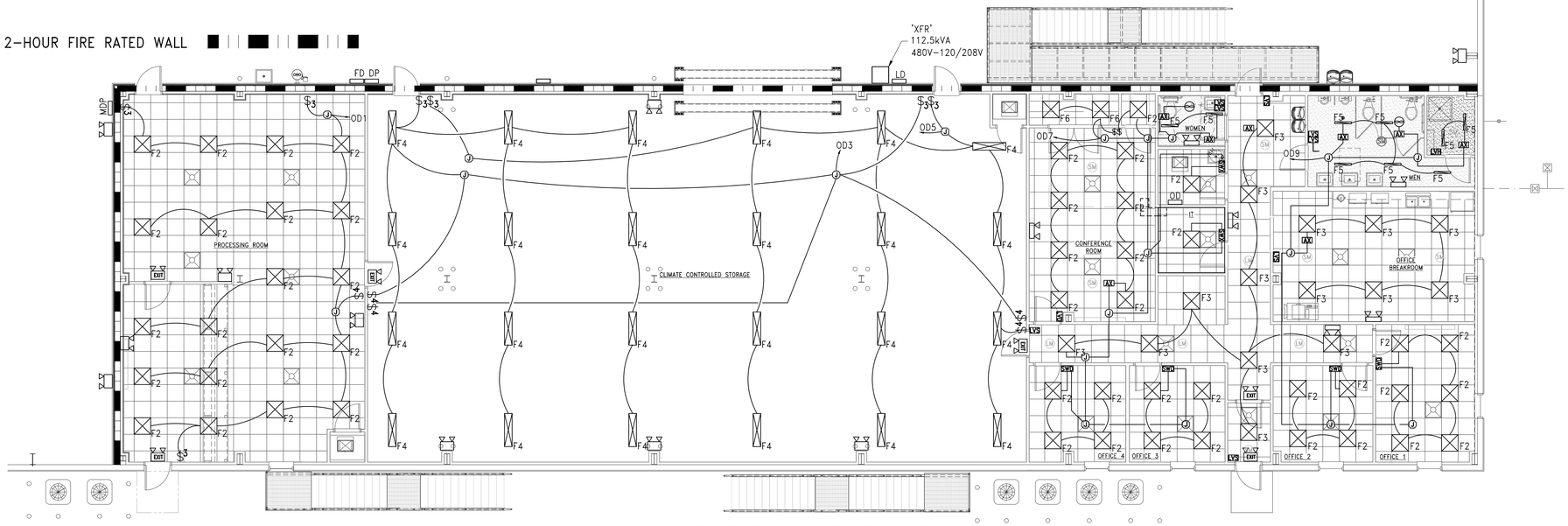
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
NEW ELECTRICAL SITE PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	1 OF —	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E1	

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2-HOUR FIRE RATED WALL



FIRST FLOOR OFFICE LIGHTING POWER PLAN

SCALE: ⅛"=1'-0"

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
F2	METALUX #22PD-40-PB1-L840-U, 2x2 LED RECESSED, BEVEL SHIELDING, 0-10V DIMMIMG, 33W (4,000 LUMENS) OR ENGINEER APPROVED EQUAL.
F3	METALUX #22PD-30-PB1-L840-U, 2x2 LED RECESSED, BEVEL SHIELDING, 0-10V DIMMING 25W (3,000 LUMENS) OR ENGINEER APPROVED EQUAL.
F4	METALUX #4ILED-LD5-14-W-CL-UNV-L840-CD2-U-AYC-CHAIN/SET/U, 0-10V DIMMING, CHAIN KIT, 98W (13,962 LUMENS) OR ENGINEER APPROVED EQUAL.
F5	METALUX #2SNLED-LD5-30HL-LW-UNV-L840-CD1-U ENGINEER, LED SURFACE FIXTURE, FULL FROST LENS-WIDE SPREAD, 4000K, 28W (2,975 LUMENS) OR APPROVED EQUAL.
F6	METALUX #22PD-50-PB1-L840-U, 2x2 LED RECESSED, BEVEL SHIELDING, 0-10V DIMMING 42W (5,000 LUMENS) OR ENGINEER APPROVED EQUAL.
(J)	JUNCTION BOX WITH COVER
EXIT	EXIT LED FIXTURE EXITRONIX #VLED-U-WH-EL90-G2. BATTERY BACKUP EXIT LIGHT WITH EMERGENCY LED LAMPS, MOUNT 12" BELOW CEILING OR ENGINEER APPROVED EQUAL.
	EXITRONIX #LED-52-WH-G2, LED BATTERY BACK-UP, 2 WATT LAMPS, SELF-TEST/SELD-DIAGNOSTUCS, MOUNT 9' A.F.F. OR ENGINEER APPROVED EQUAL
$3	THREE WAY 120/277V, 20A, ROCKER SWITCH - FLUSH WALL MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE. COLOR WILL BE OWNER APPROVED.
$4	FOUR WAY 120/277V, 20A, ROCKER SWITCH - FLUSH WALL MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE. COLOR WILL BE OWNER APPROVED.
$	SINGLE POLE 120/277V, 20A ROCKER SWITCH - FLUSH WALL MOUNTED 48" A.F.F. UNLESS NOTED OTHERWISE. COLOR WILL BE OWNER APPROVED.
SM	SENSORWORX #SWX-221-1, CEILING MOUNT OCCUPANCY SENSOR, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), SMALL MOTION 360°.
LM	SENSORWORX #SWX-222-1, CEILING MOUNT OCCUPANCY SENSOR, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), LARGE MOTION 360°.
LVS	SENSORWORX #SWX-801-WH, DECORATOR LOW VOLTAGE WALL SWITCH, MOMENTARY OPERATION, WHITE.
LVH	SENSORWORX #SWX-801-WH-HE, DECORATOR LOW VOLTAGE WALL SWITCH, MOMENTARY OPERATION, WHITE, HIGH HUMIDITY ENVIROMENT.
LVD	SENSORWORX #SWX-803-WH, DECORATOR LOW VOLTAGE DIMMER (0-10V) WALL SWITCH, MOMENTARY OPERATION, WHITE.
AX	SENSORWORX #SWX-900-AX, POWER PACK CONTROLLER, LINE VOLTAGE, 120/277V, SINGLE RELAY +150mA SUPPLY
SWX	SENSORWORX #SWX-121-WH, OCCUPANCY SENSOR, LINE VOLTAGE, WALL SWITCH, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), 1-POLE:AUTO ON (OCCUPANCY), WHITE
SWD	SENSORWORX #SWX-121-D-WH, 0-10V DIMMING OCCUPANCY SENSOR, LINE VOLTAGE, WALL SWITCH, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), 1-POLE:AUTO ON (OCCUPANCY), WHITE
	NEMA-1/3R DISTRIBUTION PANEL, SEE SCHEDULE
(M) EF	BATHROOM EXHAUST FAN TO BE SWITCHED FROM WALL MOUNTED SWITCH.

ELECTRICAL GENERAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" - STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)

2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.

3. CONTRACTOR SHALL (PRIOR TO BID)
   (a) VISIT THE JOB/CONSTRUCTION SITE AND FIELD VERIFY ALL EXISTING CONDITIONS
   (b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED TO THE CONTRACTOR AFTER THE BID HAS BEEN ACCEPTED.

4. ALL LIGHT FIXTURES SHOWN/LISTED IN LIGHTING FIXTURE SCHEDULE SHALL BE 10-DAY PRE-APPROVED BY THE ENGINEER PRIOR TO BID.

5. ALL ELECTRICAL SWITCHES SHALL BE INSTALLED AS PER N.E.C. ARTICLE 404 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.

6. ALL RECEPTACLES AND COVERS SHALL BE INSTALLED AS PER N.E.C. ARTICLE 406 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.

7. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-MATALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUIT, 'SEALTIGHT' TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A REQUIRED CODE SIZED GROUND WIRE SHALL HAVE A REQUIRED CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.

8. RECEPTACLES INSTALLED WITHIN 6'-0" OF SINKS OR WATER SHALL BE CONNECTED TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER OR TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE.

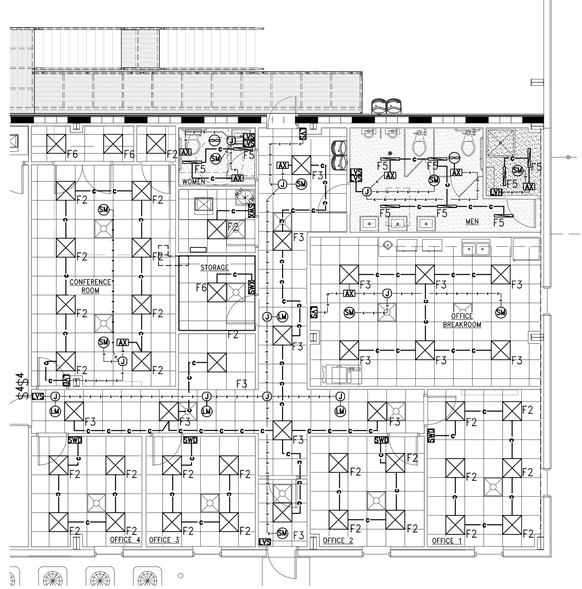
9. CONTRACTOR SHALL FURNISH AND INSTALL WEATHER PROOF G.F.C.I. RECEPTACLE AT AN ACCESSIBLE LOCATION NEAR ALL HVAC EQUIPMENT IN ACCORDANCE WITH N.E.C. ARTICLE 210.63 AND AS REQUIRED BY CODE. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THESE RECEPTACLES IN THE FIELD REGARDLESS OF THE PLAN LAYOUT.

10. CONTRACTOR SHALL, PRIOR TO BID AND ROUGH-IN, FIELD VERIFY ALL HVAC ELECTRICAL REQUIREMENTS AGAINST THE PLAN REQUIREMENTS. FAILURE TO VERIFY AND NOTIFY ENGINEER/ARCHITECT PRIOR TO ROUGH-IN SHALL INDICATE THAT THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THE DESIGN AND INSTALLATION REQUIREMENTS.

11. CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C. CONTRACTOR SHALL INSTALL GFI DUPLEX SERVICE RECEPTACLES NEAR CONDENSER UNIT. PROVIDE MOTOR STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS FOR AIR HANDLERS, IF NOT PROVIDED BY MECHANICAL CONTRACTOR.

12. CONTRACTOR SHALL FURNISH AND INSTALL NON-FUSED DISCONNECT SWITCHES AT EACH WATER HEATER. DISCONNECT SWITCH SHALL BE RATED AS REQUIRED BY THE EQUIPMENT SERVED.

13. SEE REFERENCE DRAWING 4043-E12 FOR OFFICE LIGHTING CONTROL SCHEMATICS.



FIRST FLOOR OFFICE LIGHTING CONTROL PLAN

SCALE: ⅛"=1'-0"

CONTROL CONDUCTOR SYMBOLS:

CLASS 1 LOW VOLTAGE SENSOR CONTROL

CLASS 1 LOW VOLTAGE LIGHT CONTROL

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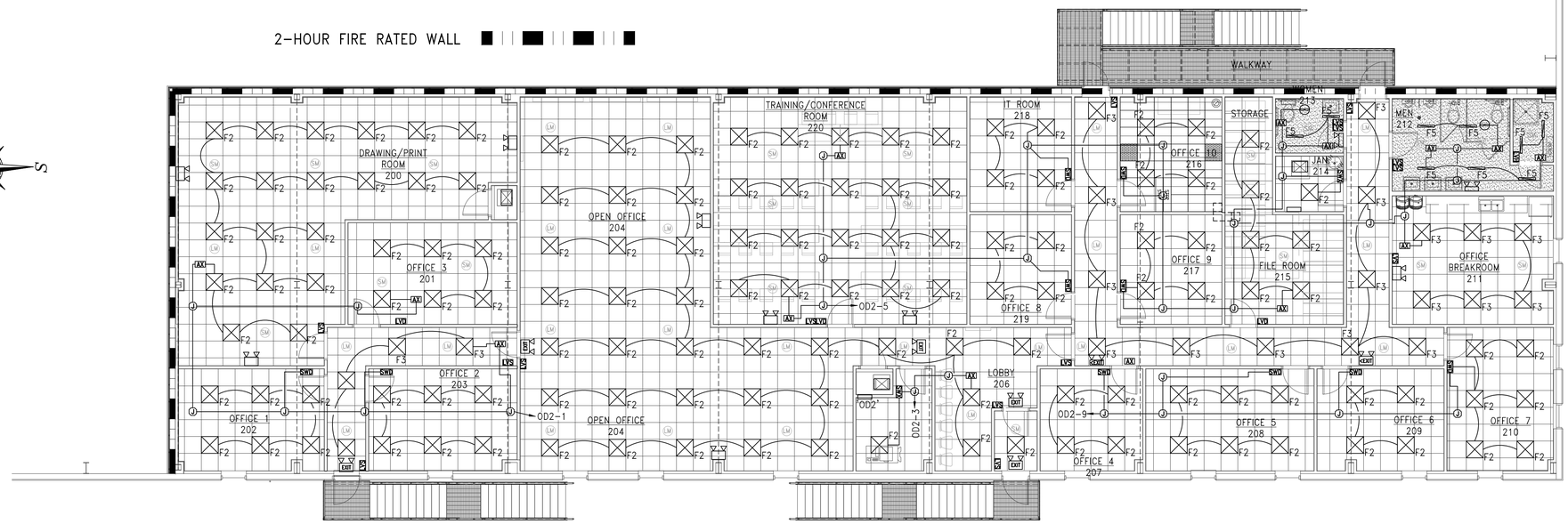
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
FIRST FLOOR OFFICE LIGHTING FLOOR PLANS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	10/01/21	2 OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	JJM	10/01/21	4043-E2	

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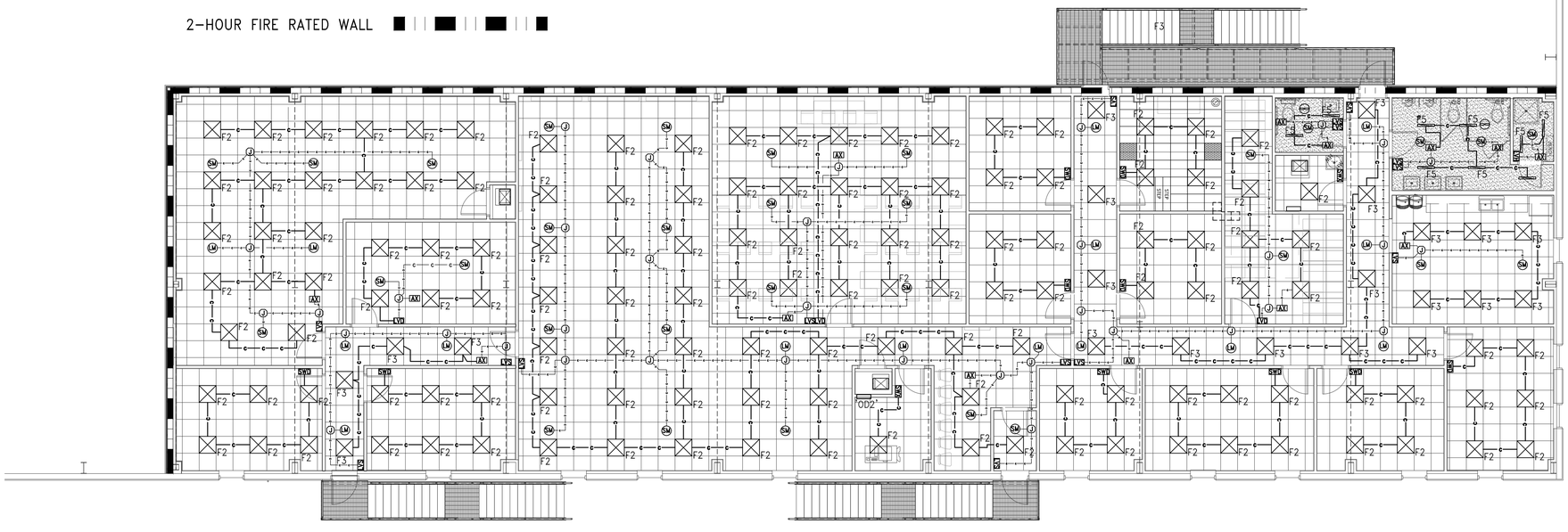
2-HOUR FIRE RATED WALL



SECOND FLOOR OFFICE LIGHTING POWER PLAN

SCALE: ⅛"=1'-0"

2-HOUR FIRE RATED WALL



SECOND FLOOR OFFICE LIGHTING CONTROL PLAN

SCALE: ⅛"=1'-0"

CONTROL CONDUCTOR SYMBOLS:

CLASS 1 LOW VOLTAGE SENSOR CONTROL

CLASS 1 LOW VOLTAGE LIGHT CONTROL

ELECTRICAL GENERAL NOTES:

1. SEE DRAWING 4043-E2 FOR ELECTRICAL NOTES AND SYMBOL LEGEND.
2. SEE DRAWING 4043-E12 FOR LIGHTING CONTROL SCHMATICS.

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PROJECT

McDUFFIE WAREHOUSE

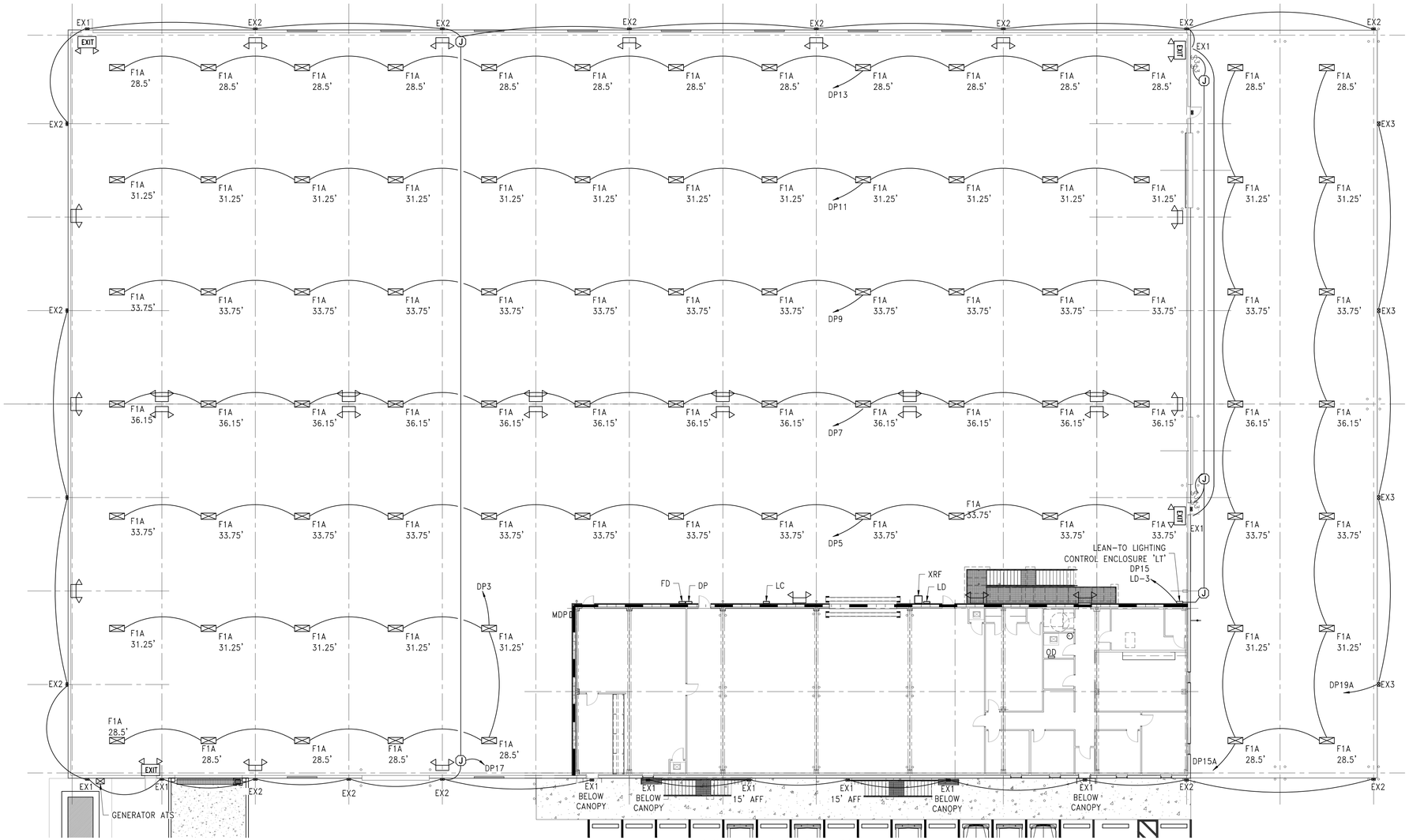
McDUFFIE TERMINAL
ASPA

TITLE

SECOND FLOOR OFFICE LIGHTING FLOOR PLANS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	10/01/21	3 OF —	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E3	

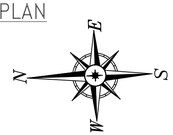
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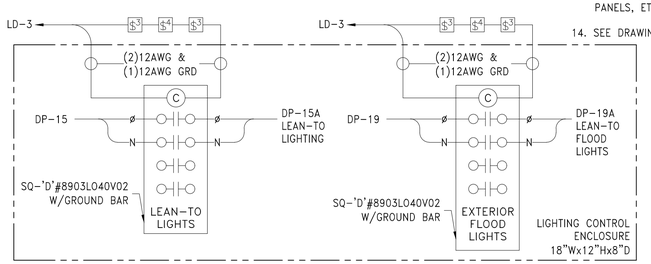


2-HOUR FIRE RATED WALL

OVERALL FLOOR PLAN

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





LEAN-TO LIGHTING CONTROL ENCLOSURE 'LT'

N.T.S.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
F1A	METALUX #HBLED-LD5-48SE-W-UNV-L840-ED4-MP-U-HBAYC-CHAIN/SET/U-MPC6(277V), STANDARD EFFICANCY 20"x48" LED HIGH BAY FIXTURE, 6FT MODULAR POWER CORD & PLUG, 299W (51,058 LUMENS) OR ENGINEER APPROVED EQUAL.
F1B	METALUX #HBLED-LD5-24SE-W-UNV-L840-ED2-MP-U-HBAYC-CHAIN/SET/U-MPC6(277V), STANDARD EFFICANCY 20"x48" LED HIGH BAY FIXTURE, 6FT MODULAR POWER CORD & PLUG, 154W (24,953 LUMENS) OR ENGINEER APPROVED EQUAL.
EX1	LUMARK #XTOR8BRL-PC2-CBP, WALL MOUNT BATTERY BACKUP EGRESS/AREA LIGHT, LED 81W (8635 LUMENS) OR ENGINEER APPROVED EQUAL. 20 A.F.F. UNLESS NOTED
EX2	LUMARK #XTOR12BRL-PC2, WALL MOUNT AREA LIGHT, LED 102W (13,458 LUMENS) OR ENGINEER APPROVED EQUAL. 20 A.F.F.
EX3	STREETWORKS #UFLD-L-CA4-390-740-U-66-T-BZ, LED LARGE WIDE BEAM FLOODLIGHT (277V), TRUNNION MOUNT, 390W (56,841 LUMENS) OR ENGINEER APPROVED EQUAL.
EX4	LUMARK #XTOR12BRL, WALL MOUNT AREA LIGHT, LED 102W (13,458 LUMENS) OR ENGINEER APPROVED EQUAL. 20 A.F.F.
EXIT	EXIT LED FIXTURE EXITRONIX #VLED-U-WH-EL90-G2. BATTERY BACKUP EXIT LIGHT WITH EMERGENCY LED LAMPS, ABOVE DOOR OR ENGINEER APPROVED EQUAL.
	EXITRONIX #SCL-8-REN3M-2-B-G2-NI, 8W, 2 RENEGADE MAX 3.6W LED LAMP, SELF-TEST/SELF-DIAGONSTICS WITH NUMBER INDICATOR, MOUNT AT 10' A.F.F. OR ENGINEER APPROVED EQUAL
J	JUNCTION BOX WITH COVER

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" – STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)
2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.
3. CONTRACTOR SHALL (PRIOR TO BID)
   (a) VISIT THE JOB/CONSTRUCTION SITE AND FIELD VERIFY ALL EXISTING CONDITIONS
   (b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED TO THE CONTRACTOR AFTER THE BID HAS BEEN ACCEPTED.
4. **ALL LIGHT FIXTURES SHOWN/LISTED IN LIGHTING FIXTURE SCHEDULE SHALL BE 10-DAY PRE-APPROVED BY THE ENGINEER PRIOR TO BID.**
5. ALL ELECTRICAL SWITCHES SHALL BE INSTALLED AS PER N.E.C. ARTICLE 404 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.
6. ALL RECEPTACLES AND COVERS SHALL BE INSTALLED AS PER N.E.C. ARTICLE 406 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.
7. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-MATALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUIT, 'SEALTIGHT' TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A REQUIRED CODE SIZED GROUND WIRE SHALL HAVE A REQUIRED CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.
8. RECEPTACLES INSTALLED WITHIN 6'-0" OF SINKS OR WATER SHALL BE CONNECTED TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER OR TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE.
9. CONTRACTOR SHALL FURNISH AND INSTALL WEATHER PROOF G.F.C.I. RECEPTACLE AT AN ACCESSIBLE LOCATION NEAR ALL HVAC EQUIPMENT IN ACCORDANCE WITH N.E.C. ARTICLE 210.63 AND AS REQUIRED BY CODE. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THESE RECEPTACLES IN THE FIELD REGARDLESS OF THE PLAN LAYOUT.
10. CONTRACTOR SHALL, PRIOR TO BID AND ROUGH-IN, FIELD VERIFY ALL HVAC ELECTRICAL REQUIREMENTS AGAINST THE PLAN REQUIREMENTS. FAILURE TO VERIFY AND NOTIFY ENGINEER/ARCHITECT PRIOR TO ROUGH-IN SHALL INDICATE THAT THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THE DESIGN AND INSTALLATION REQUIREMENTS.
11. CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C. CONTRACTOR SHALL INSTALL GFI DUPLEX SERVICE RECEPTACLES NEAR CONDENSER UNIT. PROVIDE MOTOR STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS FOR AIR HANDLERS, IF NOT PROVIDED BY MECHANICAL CONTRACTOR.
12. CONTRACTOR SHALL FURNISH AND INSTALL NON-FUSED DISCONNECT SWITCHES AT EACH WATER HEATER. DISCONNECT SWITCH SHALL BE RATED AS REQUIRED BY THE EQUIPMENT SERVED.
13. CONTRACTOR SHALL FURNISH AND INSTALL FIRE DETECTION SYSTEM TO CONNECT TO THE EXISTING FIRE DETECTION SYSTEM AS REQUIRED BY THE NATIONAL FIRE PROTECTION ASSOCIATION. FIRE DETECTION SYSTEM EXPANSION SHALL HAVE ALARM BELLS/HORNS IN HALLWAYS AND AS REQUIRED BY LOCAL FIRE MARSHALL OR A.H.J.. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY DRAWINGS TO OBTAIN PERMITS FOR FIRE SYSTEM INSTALLATION. AN ELECTRONIC AUTOCAD FILE OF THE FLOOR PLAN WILL BE PROVIDED TO THE CONTRACTOR FOR LOCATING ALL FIRE DETECTION SYSTEM ALARM BELLS, PULL STATIONS, CONTROL PANELS, ETC.
14. SEE DRAWING 4043-E8 FOR WAREHOUSE AREA LIGHTING CONTROL.

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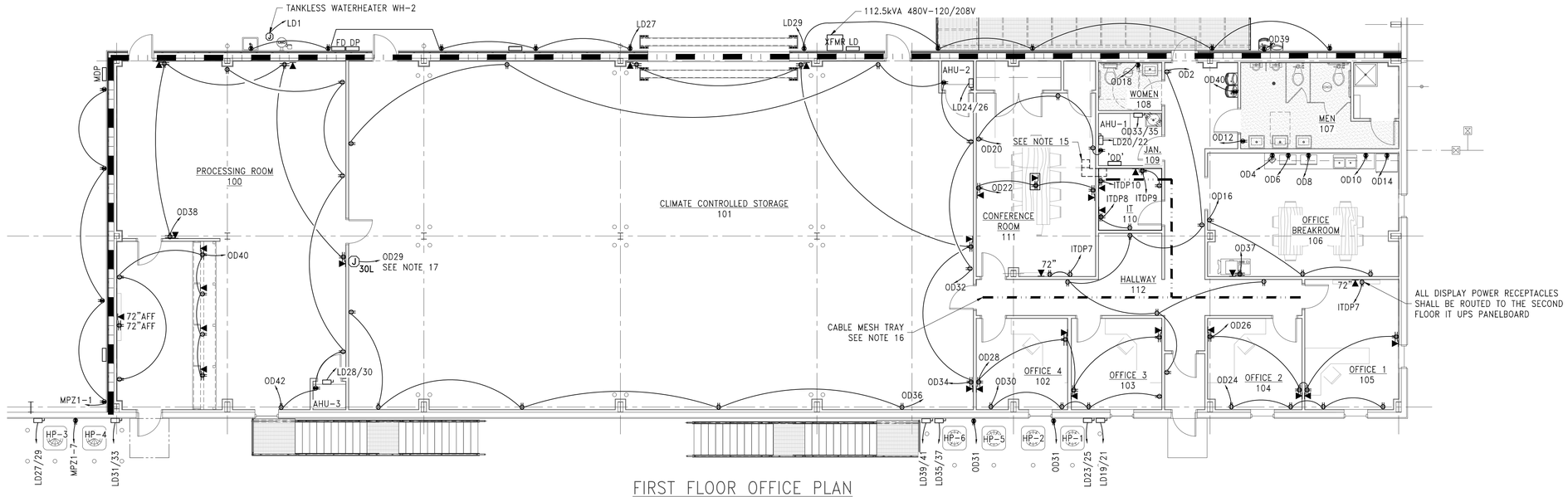
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
STORAGE LIGHTING FLOOR PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	4 OF –	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E4	

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2-HOUR FIRE RATED WALL



FIRST FLOOR OFFICE PLAN

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

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" – STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)

2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.

6. ALL RECEPTACLES AND COVERS SHALL BE INSTALLED AS PER N.E.C. ARTICLE 406 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.

7. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUIT, 'SEALTIGHT' TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A REQUIRED CODE SIZED GROUND WIRE SHALL HAVE A REQUIRED CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.

8. RECEPTACLES INSTALLED WITHIN 6'-0" OF SINKS OR WATER SHALL BE CONNECTED TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER OR TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE.

9. CONTRACTOR SHALL FURNISH AND INSTALL WEATHER PROOF G.F.C.I. RECEPTACLE AT AN ACCESSIBLE LOCATION NEAR ALL HVAC EQUIPMENT IN ACCORDANCE WITH N.E.C. ARTICLE 210.63 AND AS REQUIRED BY CODE. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THESE RECEPTACLES IN THE FIELD REGARDLESS OF THE PLAN LAYOUT.

10. CONTRACTOR SHALL, PRIOR TO BID AND ROUGH-IN, FIELD VERIFY ALL HVAC ELECTRICAL REQUIREMENTS AGAINST THE PLAN REQUIREMENTS. FAILURE TO VERIFY AND NOTIFY ENGINEER/ARCHITECT PRIOR TO ROUGH-IN SHALL INDICATE THAT THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THE DESIGN AND INSTALLATION REQUIREMENTS.

11. CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C. CONTRACTOR SHALL INSTALL GFI DUPLEX SERVICE RECEPTACLES NEAR CONDENSER UNIT. PROVIDE MOTOR STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS FOR AIR HANDLERS, IF NOT PROVIDED BY MECHANICAL CONTRACTOR.

12. CONTRACTOR SHALL FURNISH AND INSTALL NON-FUSED DISCONNECT SWITCHES AT EACH WATER HEATER. DISCONNECT SWITCH SHALL BE RATED AS REQUIRED BY THE EQUIPMENT SERVED.

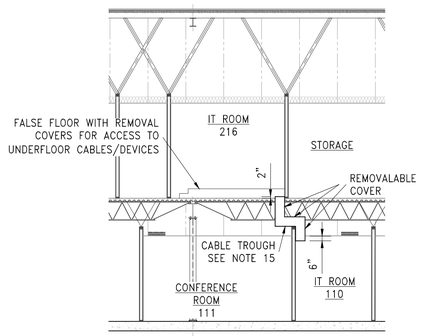
13. CONTRACTOR SHALL FURNISH AND INSTALL (2)4"ø CONDUIT FROM 1ST FLOOR IT ROOM TO 2ND FLOOR IT ROOM. THE CONDUITS SHALL HAVE SWEEPING BENDS AND PULLS BOXES, IF REQUIRED. THE CONDUITS SHALL BE ARRANGED TO ALLOW FOR THE INSTALLATION OF INNER DUCT IF REQUIRED FOR EASY OF FIBER OPTIC INSTALLATION. CONTRACTOR SHALL FURNISH THE OWNER AND ENGINEER A DIAGRAM SHOWING THE MATERIAL TO BE USED AND A DIAGRAM INDICATING THE ROUTING.

14. CONTRACTOR SHALL FURNISH AND INSTALL FIRE DETECTION SYSTEM AS REQUIRED BY THE NATIONAL FIRE PROTECTION ASSOCIATION. SYSTEM SHALL BE A NEW FULLY FUNCTIONING ADDRESSABLE FIRE ALARM SYSTEM WITH VOICE EVACUATION NOTIFICATION AS WELL AS VISUAL AND HORN NOTIFICATION. FIRE DETECTION SYSTEM SHALL HAVE ALARM BELLS/HORNS IN HALLWAYS AND AS REQUIRED BY LOCAL FIRE MARSHALL OR A.H.J.. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY DRAWINGS TO OBTAIN PERMITS FOR FIRE SYSTEM INSTALLATION. AN ELECTRONIC AUTOCAD FILE OF THE FLOOR PLAN WILL BE PROVIDED TO THE CONTRACTOR FOR LOCATING ALL FIRE DETECTION SYSTEM ALARM BELLS, PULL STATIONS, CONTROL PANELS, ETC. BIDDERS ARE TO PROVIDE TAMPER SWITCHES AT THE BACKFLOW VALVES NEAR THE STREET AS WELL AS RELAYS FOR THE SPRINKLER SYSTEM FLOW SWITCH (FLOW SWITCH BY SPRINKLER SUBCONTRACTOR), THE KITCHEN HOOD SUPPRESSION SYSTEM, AND ALL HVAC DUCT DETECTORS IN ADDITION TO OTHER REQUIREMENTS OF THE REFERENCED CODES. ALL FIRE ALARM CONTRACTORS MUST SUBMIT THROUGH A BIDDING ELECTRICAL CONTRACTOR WHO SHALL INCLUDE ALL BOXES, CONDUIT, WIRE, ETC. TO COMPLETE THE FIRE ALARM PACKAGE. THE ALARM CONTRACTOR IS REQUIRED TO SUBMIT TO THE ARCHITECT AND THE LOCAL CITY FIRE INSPECTOR SHOP DRAWINGS OF THE CODE COMPLIANT SYSTEM STAMPED BY A QUALIFIED FIRE ALARM ENGINEER/DESIGNER ACCEPTABLE TO THE LOCAL FIRE INSPECTOR.

15. CONTRACTOR SHALL FURNISH AND INSTALL CABLE TRANSFER TROUGH ENCLOSURE BETWEEN SECOND FLOOR IT ROOM 216 AND FIRST FLOOR IT ROOM 110. THE DATA TRANSFER TROUGH ENCLOSURE SHALL BE A MINIMUM OF 24" WIDE x 12" DEEP AND HAVE A REMOVAL COVER FOR CABLE INSTALLATION. THE CABLE TRANSFER TROUGH ENCLOSURE SHALL STUB-UP 2" ABOVE THE BASE FLOOR LEVEL INTO THE FALSE FLOOR IN SECOND FLOOR IT ROOM 216 AND STUB-DOWN A MINIMUM OF 6" BELOW THE FINISHED CEILING LEVEL IN FIRST FLOOR IT ROOM 110. CONTRACTOR SHALL SUBMIT DETAILS FOR THE INSTALLATION PRIOR TO INSTALLATION. SEE DRAWING 4043-E6, DETAIL 'A', FOR DETAILS. CONTRACTOR SHALL ROUTE (1) 48 STRAIN MULTI-MODE AND (1)48 STAIN SINGLE MODE FROM IT ROOM 110 TO IT ROOM 216 AND LEAVE 50 FOOT COILED FOR CONNECTIONS. SEE DRAWING 4043-E6 FOR DETAILS.

16. CONTRACTOR SHALL FURNISH AND INSTALL CABLE MESH TRAY SYSTEM IN OFFICE AREA FOR DATA CABLE ROUTING AND SUPPORT TO IT ROOM. CABLE MESH TRAY SHALL BE CABLOFIL, BY LEGRAND, #CF150-30 OR APPROVED EQUAL. CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED SUPPORTS, GROUND STRAPS, FITTINGS AND CABLE MESH TRAY. CABLE MESH TRAY SHALL BE INSTALLED OVER THE CEILING AND LOCATED FOR EASY ACCESS. LOCATE CABLE MESH TRAY AS DIRECTED BY IT PERSONNEL.

17. CONTRACTOR SHALL FURNISH AND INSTALL (1)#2 AWG GROUND CONDUCTOR FROM THE RADIO EQUIPMENT, LOCATED IN ROOM 101, TO THE RADIO TOWER AND TERMINATE AS DIRECTED BY OWNER PERSONNEL AND MANUFACTURER RECOMMENDATIONS.



DETAIL 'A'

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

ELECTRICAL SCHEDULE

SYMBOL	DESCRIPTION
	DATA JACK DUPLEX J-BOX WITH CONDUIT TO OVERHEAD CEILING WITH (2)CAT6 DATA CABLES ROUTED TO IT ROOM. TERMINATIONS BY OTHERS.
	110 VOLT GROUNDING TYPE, DUPLEX RECEPTACLE. FLUSH WALL MTD. 18" A.F.F. UNLESS NOTED OTHERWISE.
WT	GROUND FAULT DUPLEX RECEPTACLE. FLUSH WALL MTD. 42" A.F.F. UNLESS NOTED OTHERWISE. WT IS FOR WEATHER TIGHT ENCLOSURE WHERE APPLICABLE
	(2)DUPLEX RECEPTACLE WITH COVER. VERIFY COLOR WITH OWNER
	(2)DUPLEX RECEPTACLE AND (2)DUPLEX DATA CONNECTION IN FLUSH MOUNTED FLOOR BOX. CONNECT RECEPTACLES TO GROUND FAULT CIRCUIT BREAKER AND ROUTE (2)CAT 6 TO IT ROOM 110
	NON-FUSED DISCONNECT SWITCH, NEMA-3R, SIZED AS REQUIRED
	NEMA-12 OR NEMA-1 DISTRIBUTION PANEL, SEE SCHEDULE
	JUNCTION BOX WITH COVER
30L	RECEPTACLE, HUBBELL #HBL2620, 30A, 250V, 2-POLE, 3-WIRE GRD, L6-30R, SCREW TERMINALS. PROVIDE OWNER WITH MATING PLUG #HBL2621. CONNECT FOR 120V, 30A, 1ø POWER FOR RADIO. VERIFY WITH OWNER.

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REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	08/10/22	JWM	JJM

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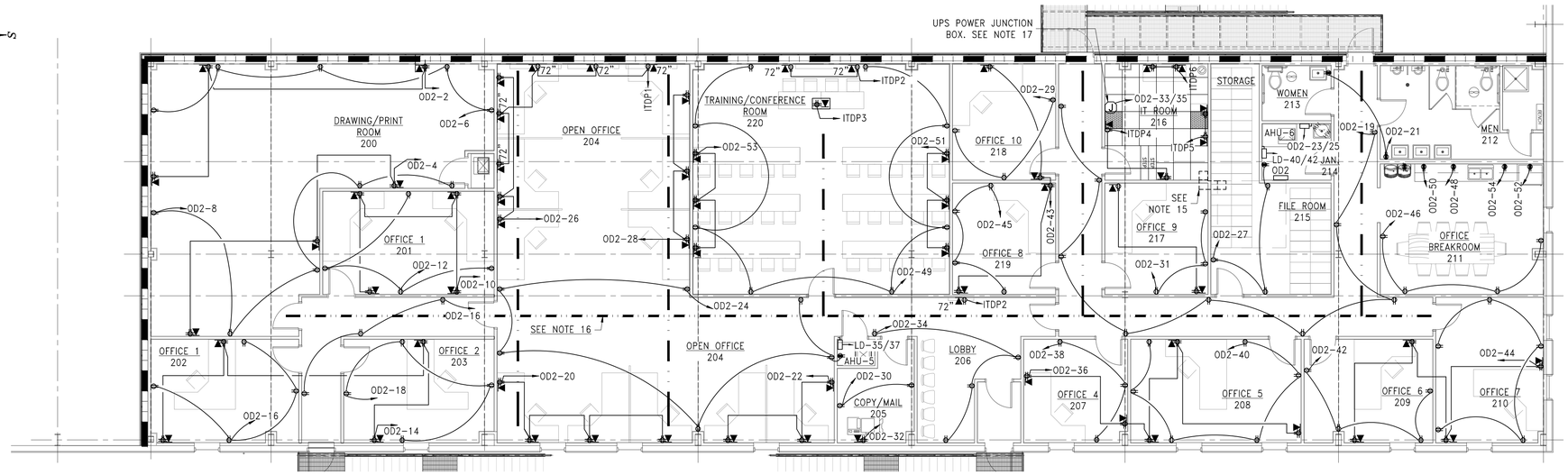
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (706) 302-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
FIRST FLOOR OFFICE POWER FLOOR PLANS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	10/01/21	5 OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	JJM	10/01/21	4043-E5	

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2-HOUR FIRE RATED WALL

SECOND FLOOR OFFICE PLAN

SCALE: ⅛"=1'-0"

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" - STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)

2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.

6. ALL RECEPTACLES AND COVERS SHALL BE INSTALLED AS PER N.E.C. ARTICLE 406 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.

7. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUIT, 'SEALTIGHT' TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A REQUIRED CODE SIZED GROUND WIRE SHALL HAVE A REQUIRED CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.

8. RECEPTACLES INSTALLED WITHIN 6'-0" OF SINKS OR WATER SHALL BE CONNECTED TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER OR TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE.

9. CONTRACTOR SHALL FURNISH AND INSTALL WEATHER PROOF G.F.C.I. RECEPTACLE AT AN ACCESSIBLE LOCATION NEAR ALL HVAC EQUIPMENT IN ACCORDANCE WITH N.E.C. ARTICLE 210.63 AND AS REQUIRED BY CODE. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THESE RECEPTACLES IN THE FIELD REGARDLESS OF THE PLAN LAYOUT.

10. CONTRACTOR SHALL, PRIOR TO BID AND ROUGH-IN, FIELD VERIFY ALL HVAC ELECTRICAL REQUIREMENTS AGAINST THE PLAN REQUIREMENTS. FAILURE TO VERIFY AND NOTIFY ENGINEER/ARCHITECT PRIOR TO ROUGH-IN SHALL INDICATE THAT THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THE DESIGN AND INSTALLATION REQUIREMENTS.

11. CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C. CONTRACTOR SHALL INSTALL GFI DUPLEX SERVICE RECEPTACLES NEAR CONDENSER UNIT. PROVIDE MOTOR STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS FOR AIR HANDLERS, IF NOT PROVIDED BY MECHANICAL CONTRACTOR.

12. CONTRACTOR SHALL FURNISH AND INSTALL NON-FUSED DISCONNECT SWITCHES AT EACH WATER HEATER. DISCONNECT SWITCH SHALL BE RATED AS REQUIRED BY THE EQUIPMENT SERVED.

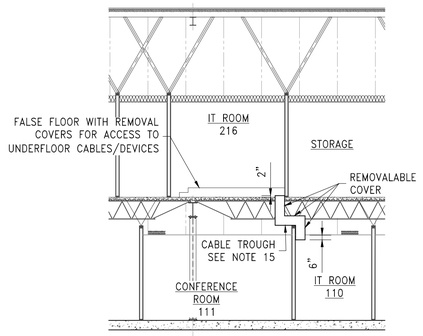
13. CONTRACTOR SHALL FURNISH AND INSTALL (2)4"ø CONDUIT FROM 1ST FLOOR IT ROOM TO 2ND FLOOR IT ROOM. THE CONDUITS SHALL HAVE SWEEPING BENDS AND PULLS BOXES, IF REQUIRED. THE CONDUITS SHALL BE ARRANGED TO ALLOW FOR THE INSTALLATION OF INNER DUCT IF REQUIRED FOR EASY OF FIBER OPTIC INSTALLATION. CONTRACTOR SHALL FURNISH THE OWNER AND ENGINEER A DIAGRAM SHOWING THE MATERIAL TO BE USED AND A DIAGRAM INDICATING THE ROUTING.

14. CONTRACTOR SHALL FURNISH AND INSTALL FIRE DETECTION SYSTEM AS REQUIRED BY THE NATIONAL FIRE PROTECTION ASSOCIATION. SYSTEM SHALL BE A NEW FULLY FUNCTIONING ADDRESSABLE FIRE ALARM SYSTEM WITH VOICE EVACUATION NOTIFICATION AS WELL AS VISUAL AND HORN NOTIFICATION. FIRE DETECTION SYSTEM SHALL HAVE ALARM BELLS/HORNS IN HALLWAYS AND AS REQUIRED BY LOCAL FIRE MARSHALL OR A.H.J.. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY DRAWINGS TO OBTAIN PERMITS FOR FIRE SYSTEM INSTALLATION. AN ELECTRONIC AUTOCAD FILE OF THE FLOOR PLAN WILL BE PROVIDED TO THE CONTRACTOR FOR LOCATING ALL FIRE DETECTION SYSTEM ALARM BELLS, PULL STATIONS, CONTROL PANELS, ETC. BIDDERS ARE TO PROVIDE TAMPER SWITCHES AT THE BACKFLOW VALVES NEAR THE STREET AS WELL AS RELAYS FOR THE SPRINKLER SYSTEM FLOW SWITCH (FLOW SWITCH BY SPRINKLER SUBCONTRACTOR), THE KITCHEN HOOD SUPPRESSION SYSTEM, AND ALL HVAC DUCT DETECTORS IN ADDITION TO OTHER REQUIREMENTS OF THE REFERENCED CODES. ALL FIRE ALARM CONTRACTORS MUST SUBMIT THROUGH A BIDDING ELECTRICAL CONTRACTOR WHO SHALL INCLUDE ALL BOXES, CONDUIT, WIRE, ETC. TO COMPLETE THE FIRE ALARM PACKAGE. THE ALARM CONTRACTOR IS REQUIRED TO SUBMIT TO THE ARCHITECT AND THE LOCAL CITY FIRE INSPECTOR SHOP DRAWINGS OF THE CODE COMPLIANT SYSTEM STAMPED BY A QUALIFIED FIRE ALARM ENGINEER/DESIGNER ACCEPTABLE TO THE LOCAL FIRE INSPECTOR.

15. CONTRACTOR SHALL FURNISH AND INSTALL CABLE TRANSFER TROUGH ENCLOSURE BETWEEN SECOND FLOOR IT ROOM 216 AND FIRST FLOOR IT ROOM 110. THE DATA TRANSFER TROUGH ENCLOSURE SHALL BE A MINIMUM OF 24" WIDE x 12" DEEP AND HAVE A REMOVAL COVER FOR CABLE INSTALLATION. THE CABLE TRANSFER TROUGH ENCLOSURE SHALL STUB-UP 2" ABOVE THE BASE FLOOR LEVEL INTO THE FALSE FLOOR IN SECOND FLOOR IT ROOM 216 AND STUB-DOWN A MINIMUM OF 6" BELOW THE FINISHED CEILING LEVEL IN FIRST FLOOR IT ROOM 110. CONTRACTOR SHALL SUBMIT DETAILS FOR THE INSTALLATION PRIOR TO INSTALLATION. SEE DRAWING 4043-E6, DETAIL 'A', FOR DETAILS. CONTRACTOR SHALL ROUTE (1) 48 STRAIN MULTI-MODE AND (1)48 STAIN SINGLE MODE FROM IT ROOM 110 TO IT ROOM 216 AND LEAVE 35 FOOT COILED FOR CONNECTIONS.

16. CONTRACTOR SHALL FURNISH AND INSTALL CABLE MESH TRAY SYSTEM IN OFFICE AREA FOR DATA CABLE ROUTING AND SUPPORT TO IT ROOM. CABLE MESH TRAY SHALL BE CABLOFIL, BY LEGRAND, #CF150-30 OR APPROVED EQUAL. CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED SUPPORTS, GROUND STRAPS, FITTINGS AND CABLE MESH TRAY. CABLE MESH TRAY SHALL BE INSTALLED OVER THE CEILING AND LOCATED FOR EASY ACCESS. LOCATE CABLE MESH TRAY AS DIRECTED BY IT PERSONNEL.

17. CONTRACTOR SHALL VERIFY WITH THE OWNER IT PERSONNEL THE REQUIREMENTS FOR THE IT UPS SYSTEM. CONTRACTOR SHALL PROVIDE 6"x6"x6" JUNCTION ENCLOSURE IN LOCATION OF IT UPS SYSTEM WITH A COVER AND/OR RECEPTACLE. CONTRACTOR SHALL FURNISH 3/4"øC CONDUIT WITH (3)#8AWG & (1)#10AWG GROUND FROM PANELBOARD OD2-33/35. IT UPS MAY BE HARDWIRED OR PROVIDED WITH RECEPTACLE, VERIFY. CONTRACTOR SHALL PROVIDE 1ø 240V 24 POLE PANELBOARD, 'ITDP' SEE DRAWING 4043-E10, FOR ELECTRICAL EQUIPMENT TO BE CONNECTED TO THE UPS SYSTEM.



DETAIL 'A'

SCALE: ⅛"=1'-0"

ELECTRICAL SCHEDULE

SYMBOL	DESCRIPTION
	DATA JACK DUPLEX J-BOX WITH CONDUIT TO OVERHEAD CEILING WITH (2)CAT6 DATA CABLES ROUTED TO IT ROOM 216. TERMINATIONS BY OTHERS.
	110 VOLT GROUNDING TYPE, DUPLEX RECEPTACLE. FLUSH WALL MTD. 18" A.F.F. UNLESS NOTED OTHERWISE.
WT	GROUND FAULT DUPLEX RECEPTACLE. FLUSH WALL MTD. 42" A.F.F. UNLESS NOTED OTHERWISE. WT IS FOR WEATHER TIGHT ENCLOSURE WHERE APPLICABLE
	(2)DUPLEX RECEPTACLE IN FLOOR PEDESTAL CONNECT TO GROUND FAULT CIRCUIT BREAKER.
	(2)DUPLEX RECEPTACLE AND (2)DUPLEX DATA CONNECTION IN FLUSH MOUNTED FLOOR BOX. CONNECT RECEPTACLES TO GROUND FAULT CIRCUIT BREAKER AND ROUTE (2)CAT 6 TO IT ROOM 216
	NON-FUSED DISCONNECT SWITCH, NEMA-3R, SIZED AS REQUIRED
	NEMA-12 OR NEMA-1 DISTRIBUTION PANEL, SEE SCHEDULE
J	JUNCTION BOX WITH COVER
J 30L	RECEPTACLE, HUBBELL #HBL2620, 30A, 250V, 2-POLE, 3-WIRE GRD, L6-30R, SCREW TERMINALS. PROVIDE OWNER WITH MATING PLUG #HBL2621. CONNECT FOR 120V, 30A, 1ø POWER FOR RADIO. VERIFY WITH OWNER.

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REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	08/10/22	JWM	JJM

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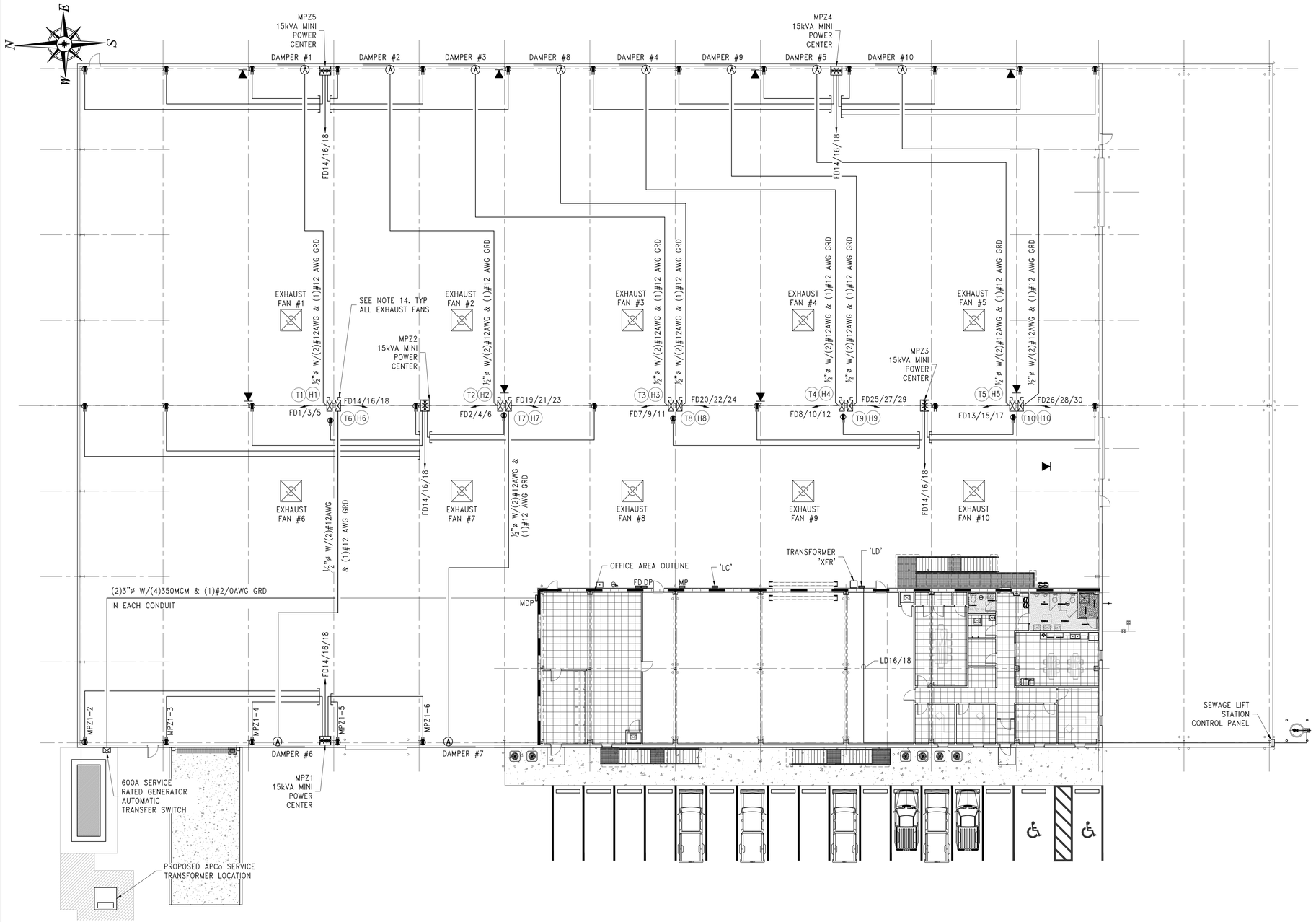
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
OFFICE SECOND FLOOR POWER PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	JWM	10/01/21	6 OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	JJM	10/01/21	4043-E6	

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2-HOUR FIRE RATED WALL

OVERALL FLOOR PLAN

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

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	MINI-POWER CENTER, SEE DWG 4043-E7
(A)	DAMPER ACTUATOR
	NON-FUSED DISCONNECT SWITCH, NEMA-3R, SIZED AS REQUIRED
	NEMA-1 DISTRIBUTION PANEL, SEE SCHEDULE
	COMBINATION MOTOR STARTER, NON-FUSED DISCONNECT SWITCH, HAND/OFF/ON SELECTOR SWITCH, AUXILARY CONTACTS, NEMA-3R ENCLOSURE, SIZED AS REQUIRED
WT	GROUND FAULT DUPLEX RECEPTACLE. FLUSH WALL MTD. 42" A.F.F. UNLESS NOTED OTHERWISE. WT IS FOR WEATHER TIGHT ENCLOSURE WHERE APPLICABLE
	DATA JACK DUPLEX J-BOX WITH CONDUIT TO OVERHEAD CEILING WITH (2)CAT6 DATA CABLES ROUTED TO IT ROOM 216. TERMINATIONS BY OTHERS.

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" - STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)

2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.

3. CONTRACTOR SHALL (PRIOR TO BID)
   (a) VISIT THE JOB/CONSTRUCTION SITE AND FIELD VERIFY ALL EXISTING CONDITIONS
   (b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED TO THE CONTRACTOR AFTER THE BID HAS BEEN ACCEPTED.

4. **ALL LIGHT FIXTURES SHOWN/LISTED IN LIGHTING FIXTURE SCHEDULE SHALL BE 10-DAY PRE-APPROVED BY THE ENGINEER PRIOR TO BID.**

5. ALL ELECTRICAL SWITCHES SHALL BE INSTALLED AS PER N.E.C. ARTICLE 404 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.

6. ALL RECEPTACLES AND COVERS SHALL BE INSTALLED AS PER N.E.C. ARTICLE 406 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.

7. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUIT, 'SEALTIGHT' TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A REQUIRED CODE SIZED GROUND WIRE SHALL HAVE A REQUIRED CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.

8. RECEPTACLES INSTALLED WITHIN 6'-0" OF SINKS OR WATER SHALL BE CONNECTED TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER OR TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE.

9. CONTRACTOR SHALL FURNISH AND INSTALL WEATHER PROOF G.F.C.I. RECEPTACLE AT AN ACCESSIBLE LOCATION NEAR ALL HVAC EQUIPMENT IN ACCORDANCE WITH N.E.C. ARTICLE 210.63 AND AS REQUIRED BY CODE. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THESE RECEPTACLES IN THE FIELD REGARDLESS OF THE PLAN LAYOUT.

10. CONTRACTOR SHALL, PRIOR TO BID AND ROUGH-IN, FIELD VERIFY ALL HVAC ELECTRICAL REQUIREMENTS AGAINST THE PLAN REQUIREMENTS. FAILURE TO VERIFY AND NOTIFY ENGINEER/ARCHITECT PRIOR TO ROUGH-IN SHALL INDICATE THAT THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THE DESIGN AND INSTALLATION REQUIREMENTS.

11. CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C. CONTRACTOR SHALL INSTALL GFI DUPLEX SERVICE RECEPTACLES NEAR CONDENSER UNIT. PROVIDE MOTOR STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS FOR AIR HANDLERS, IF NOT PROVIDED BY MECHANICAL CONTRACTOR.

12. CONTRACTOR SHALL FURNISH AND INSTALL NON-FUSED DISCONNECT SWITCHES AT EACH WATER HEATER. DISCONNECT SWITCH SHALL BE RATED AS REQUIRED BY THE EQUIPMENT SERVED.

13. CONTRACTOR SHALL FURNISH AND INSTALL FIRE DETECTION SYSTEM AS REQUIRED BY THE NATIONAL FIRE PROTECTION ASSOCIATION. SYSTEM SHALL BE A NEW FULLY FUNCTIONING ADDRESSABLE FIRE ALARM SYSTEM WITH VOICE EVACUATION NOTIFICATION AS WELL AS VISUAL AND HORN NOTIFICATION. FIRE DETECTION SYSTEM SHALL HAVE ALARM BELLS/HORNS IN HALLWAYS AND AS REQUIRED BY LOCAL FIRE MARSHALL OR A.H.J.. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY DRAWINGS TO OBTAIN PERMITS FOR FIRE SYSTEM INSTALLATION. AN ELECTRONIC AUTOCAD FILE OF THE FLOOR PLAN WILL BE PROVIDED TO THE CONTRACTOR FOR LOCATING ALL FIRE DETECTION SYSTEM ALARM BELLS, PULL STATIONS, CONTROL PANELS, ETC. BIDDERS ARE TO PROVIDE TAMPER SWITCHES AT THE BACKFLOW VALVES NEAR THE STREET AS WELL AS RELAYS FOR THE SPRINKLER SYSTEM FLOW SWITCH (FLOW SWITCH BY SPRINKLER SUBCONTRACTOR), THE KITCHEN HOOD SUPPRESSION SYSTEM, AND ALL HVAC DUCT DETECTORS IN ADDITION TO OTHER REQUIREMENTS OF THE REFERENCED CODES. ALL FIRE ALARM CONTRACTORS MUST SUBMIT THROUGH A BIDDING ELECTRICAL CONTRACTOR WHO SHALL INCLUDE ALL BOXES, CONDUIT, WIRE, ETC. TO COMPLETE THE FIRE ALARM PACKAGE. THE ALARM CONTRACTOR IS REQUIRED TO SUBMIT TO THE ARCHITECT AND THE LOCAL CITY FIRE INSPECTOR SHOP DRAWINGS OF THE CODE COMPLIANT SYSTEM STAMPED BY A QUALIFIED FIRE ALARM ENGINEER/DESIGNER ACCEPTABLE TO THE LOCAL FIRE INSPECTOR.

14. CONTRACTOR SHALL FURNISH AND INSTALL (1)½"ø C W/(2)#12AWG & (1)#12AWG GRD FROM THE FAN COMBINATION MOTOR-STARTER AUXILIARY CONTACTS TO THE DAMPER ACTUATOR CONNECTION. FAN MOTOR STARTER SHALL BE FURNISHED WITH 480V-120V, 500 VA CONTROL TRANSFORMER, HAND/OFF/AUTO SELECTOR SWITCH AND N.O. AUXILIARY CONTACTS. THERMOSTAT AND HUMIDISTAT SHALL BE CONNECTED TO AUTO-START EXHAUST FAN. THE EXHAUST FAN SHALL START WHEN EITHER/OR THERMOSTAT/HUMIDISTAT ARE ACTIVATED. SEE MECHANICAL DRAWING 4043-M1 FOR EXHAUST FAN AND DAMPER REQUIREMENTS.

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REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	08/10/22	JWM	JJM

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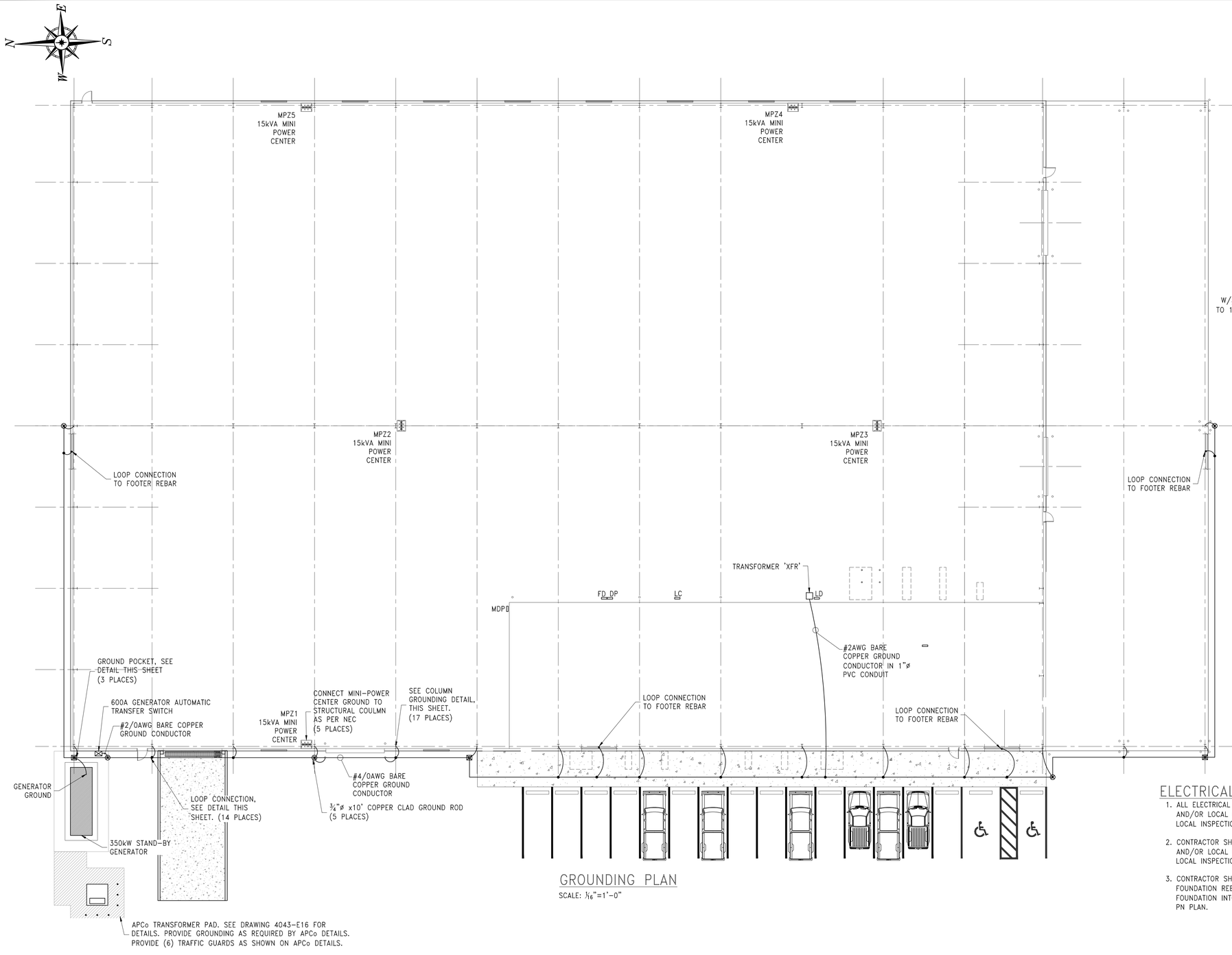
13 Thrash Rd.
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
STORAGE AREA POWER FLOOR PLAN

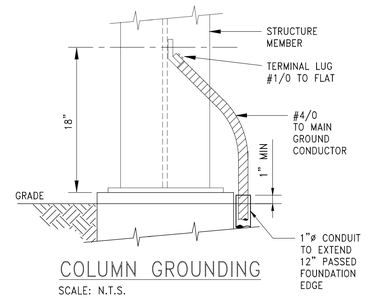
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NOTED	RCC	10/01/21	7 OF —	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	JJM	10/01/21	4043-E7	

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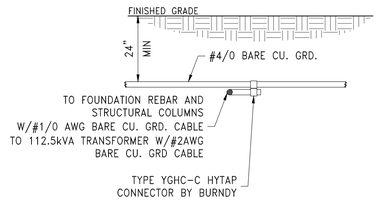
GROUNDING PLAN

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



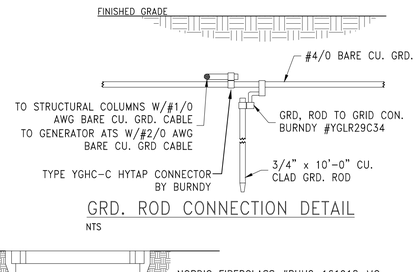
COLUMN GROUNDING

SCALE: N.T.S.



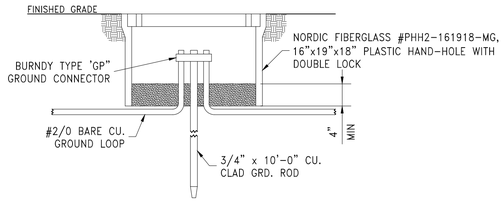
LOOP CONNECTION DETAIL

NTS



GRD. ROD CONNECTION DETAIL

NTS



GROUND POCKET DETAIL

NTS

NOTES:

1. TOP OF WELL TO BE FLUSH WITH FIN. GRADE. TOP OF GRD. ROD TO BE AT EAST 12" BELOW FIN. GRADE.
2. REBAR CONNECTION, USE BURNDY TYPE YSHG DOUBLE H-TAP.

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" – STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)
2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.
3. CONTRACTOR SHALL FURNISH AND ISTALL 1"ø ELECTRICAL PVC CONDUIT IN FOUNDATION FOR STRUCTURAL COLUMN, FOUNDATION REBAR, MDS AND 112.5kVA TRANSFORMER. 1"ø ELECTRICAL PVC CONDUIT SHALL EXTEND 12" PASSED FOUNDATION INTO THE EARTH AND 1" (MIN) ABOVE FINISHED FOUNDATION ELEVATION AT EACH ELECTRICAL DEVICE SHOWN PN PLAN.

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PROJECT

McDUFFIE WAREHOUSE

McDUFFIE TERMINAL
ASPA

TITLE

GROUNDING PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	8 OF –	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E8	

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PANELBOARD SCHEDULE (277/480V 3ø, 4W)

MARK: MAIN PANEL "MDP"

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (kVA) A	PHASE (kVA) B	PHASE (kVA) C	PHASE (kVA) A	PHASE (kVA) B	PHASE (kVA) C	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	LOAD DESCRIPTION	CKT #
1	EXHAUST FAN PANELBOARD "FD"	3	100	2	6	1½"	5.85			36.309								WAREHOUSE PANELBOARD "DP"	2
3								5.85			35.347		350 MCM	3	3	3	300		4
5									5.85			35.008							6
7	225kVA 480V–120/208V OFFICE TRANSFORMER	3	400	(2) 4/0	(2)3	(2)2½"	75.00			20.50								MOTOR TEST BENCH PANELBOARD "MP"	8
9								75.00			20.50		3/0	6	2	3	200		10
11									75.00			20.50							12
13	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	14
15	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	16
17	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	18
19	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	20
21	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	22
23	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	24
							80.85	80.85	80.85	56.809	55.847	55.508							

TOTAL (kVA) øA 137.659 øB 136.697 øC 136.358 HIGH PHASE (AMPS) 497.0
TOTAL CONNECTED LOAD (kVA) 410.714 TOTAL LOAD (AMPS) 494.1

PANELBOARD SCHEDULE (277/480V 3ø, 4W)

MARK: DISTRIBUTION PANEL "DP"

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	LOAD DESCRIPTION	CKT #
1	SPARE	1	20	–	–	–	–			–			–	–	–	–	–	SPACE	2
3	NORTH 2 ROW LTG	1	20	10	12	¾"		2,990			–		–	–	–	–	–	SPACE	4
5	NORTH 3 ROW LTG	1	20	10	12	¾"			3,588			–	–	–	–	–	–	SPACE	6
7	NORTH 4 ROW LTG	1	20	10	12	¾"	3,588			–			–	–	–	–	–	SPACE	8
9	NORTH 5 ROW LTG	1	20	10	12	¾"		3,588			–		–	–	–	–	–	SPACE	10
11	NORTH 6 ROW LTG	1	20	10	12	¾"			3,588			–	–	–	–	–	–	SPACE	12
13	NORTH 7 ROW LTG	1	20	10	12	¾"	3,588			5,000								MPZ1	14
15	LEAN–TO LTG	1	20	10	12	¾"		4,186			5,000		6	8	1	3	40	15kVA MINI–POWER CENTER 480V–120/208V	16
17	EXTERIOR LTG	1	20	10	12	¾"			2,832			5,000							18
19	EXTERIOR FLOODLIGHTS	1	20	10	12	¾"	1,560			5,000								MPZ2	20
21	SPACE	–	–	–	–	–		–			5,000		6	8	1	3	40	15kVA MINI–POWER CENTER 480V–120/208V	22
23	SPACE	–	–	–	–	–			–			5,000							24
25	SPACE	–	–	–	–	–	–			5,000								MPZ3	26
27	SPACE	–	–	–	–	–		–			5,000		6	8	1	3	40	15kVA MINI–POWER CENTER 480V–120/208V	28
29	SPACE	–	–	–	–	–			–			5,000							30
31	SPACE	–	–	–	–	–	–			5,000								MPZ4	32
33	SPACE	–	–	–	–	–		–			5,000		6	8	1	3	40	15kVA MINI–POWER CENTER 480V–120/208V	34
35	SPACE	–	–	–	–	–			–			5,000							36
37	SPACE	–	–	–	–	–	–			5,000								MPZ5	38
39	SPACE	–	–	–	–	–		–			5,000		6	8	1	3	40	15kVA MINI–POWER CENTER 480V–120/208V	40
41	SPACE	–	–	–	–	–			–			5,000							42
							11,309	10,347	10,008	25,000	25,000	25,000							

TOTAL (kVA) øA 36.309 øB 35.347 øC 35.008 HIGH PHASE (AMPS) 131.1
TOTAL CONNECTED LOAD (kVA) 106.664 TOTAL LOAD (AMPS) 128.3

PANELBOARD SCHEDULE (277/480V 3ø, 4W)

MARK: DISTRIBUTION PANEL "MP"

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	LOAD DESCRIPTION	CKT #
1	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	2
3	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	4
5	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	6
7	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	8
9	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	10
11	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	12
13	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	14
15	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	16
17	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	18
19	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	20
21	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	22
23	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	24
25	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	26
27	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	28
29	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	30
31	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	32
33	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	34
35	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	36
37	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	38
39	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	40
41	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	42
							–	–	–	–	–	–							

TOTAL (kVA) øA – øB – øC – HIGH PHASE (AMPS) –
TOTAL CONNECTED LOAD (kVA) – TOTAL LOAD (AMPS) –

NOTES:
CONTRACTOR SHALL VERIFY WITH THE OWNER THE REQUIRED CIRCUIT BREAKERS TO BE FURNISHED WITH PANELBOARD PRIOR TO PURCHASE AND INSTALLATION.

PANELBOARD SCHEDULE (277/480V 3ø, 4W)

MARK: FAN PANEL "FD"

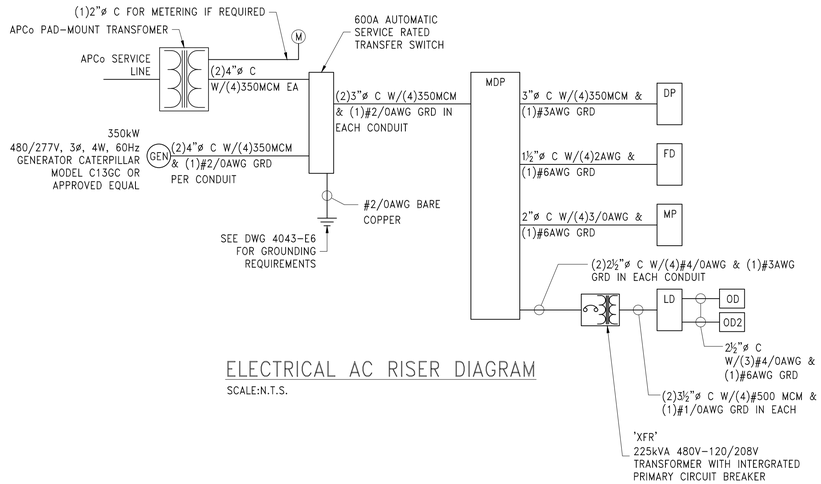
CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	LOAD DESCRIPTION	CKT #
1	EXHAUST FAN No.1	3	20	10	12	½"	585			585								EXHAUST FAN No.2	2
3								585			585		10	12	½"	3	20		4
5									585			585							6
7	EXHAUST FAN No.3	3	20	10	12	½"	585			585								EXHAUST FAN No.4	8
9								585			585		10	12	½"	3	20		10
11									585			585							12
13	EXHAUST FAN No.5	3	20	10	12	½"	585			585								EXHAUST FAN No.6	14
15								585			585		10	12	½"	3	20		16
17									585			585							18
19	EXHAUST FAN No.7	3	20	10	12	½"	585			585								EXHAUST FAN No.8	20
21								585			585		10	12	½"	3	20		22
23									585			585							24
25	EXHAUST FAN No.9	3	20	10	12	½"	585			585								EXHAUST FAN No.10	26
27								585			585		10	12	½"	3	20		28
29									585			585							30
31	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	32
33	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	34
35	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	36
37	SPACE	–	–	–	–	–	–			–			–	–	–	–	–	SPACE	38
39	SPACE	–	–	–	–	–		–			–		–	–	–	–	–	SPACE	40
41	SPACE	–	–	–	–	–			–			–	–	–	–	–	–	SPACE	42
							2,925	2,925	2,925	2,925	2,925	2,925							

TOTAL (kVA) øA 5.85 øB 5.85 øC 5.85 HIGH PHASE (AMPS) 21.1
TOTAL CONNECTED LOAD (kVA) 17.55 TOTAL LOAD (AMPS) 21.1

PANELBOARD COORDINATION SCHEDULE

MARK	TYPE	MOUNTING	VOLTAGE	ø	WIRE	MAIN	SERVICE RATED	kAIC RATING	BUS RATING	NEUTRAL RATING	C/B TYPE	FEEDER CONDUCTORS	FEEDER GROUND	FEEDER CONDUIT
MDP	NEMA–12	SURFACE	480/277	3	4	MLO	NO	35	600	600	BOLT–ON	(4)#4/0	(1)#2/0	(3)3"
DP	NEMA–12	SURFACE	480/277	3	4	MLO	NO	35	400	400	BOLT–ON	(4)350MCM	(1)#3	(1)3"
MP	NEMA–12	SURFACE	480/277	3	4	MLO	NO	35	225	225	BOLT–ON	(4)3/0AWG	(1)#6	(1)2"
FD	NEMA–12	SURFACE	480/277	3	4	MLO	NO	14	100	100	BOLT–ON	(4)#2	(1)#6	(1)1½"
LD	NEMA–12	SURFACE	120/208	3	4	800MB	NO	35	800	800	BOLT–ON	(2)500 PER ø/N	(2)#1/0	(2)3½"
OD	NEMA–12	SURFACE	120/208	3	4	MLO	NO	18	225	225	BOLT–ON	(4)#4/0	(1)#6	(1)2½"
OD2	NEMA–12	SURFACE	120/208	3	4	MLO	NO	18	225	225	BOLT–ON	(4)#4/0	(1)#6	(1)2½"
ITDP	NEMA–1	FLUSH	120/208	1	3	100MB	NO	10	100	100	BOLT–ON	(3)#2	(1)#6	(1)1½"

NOTES: ALL BUSSING COPPER, INCLUDING NEUTRAL AND GROUND.
ALL LUGS 100 AMPS AND GREATER SHALL BE COPPER.
ALL LUGS ON CIRCUIT BREAKERS GREATER THAN 400 AMPS SHALL BE COPPER.



ELECTRICAL AC RISER DIAGRAM
SCALE:N.T.S.

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TITLE
PANELBOARD SCHEDULE & AC RISER DIAGRAM

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	9 OF –	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	JJM	10/01/21	4043–E9	

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PANELBOARD SCHEDULE (120/208V 3ø, 4W)

MARK: 208V DISTRIBUTION "LD"

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #	LOAD DESCRIPTION	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #
1	WATERHEATER WH-2	1	35	8	10	¾	3,500			2							10,810			2
3	LEAN-TO LIGHTING CONTROL	1	15	10	12	½		500		4								11,836		4
5	SPACE	–	–	–	–	–			–	6									11,796	6
7	SPACE	–	–	–	–	–	–			8							18,160			8
9	SPACE	–	–	–	–	–		–		10								16,480		10
11	SPACE	–	–	–	–	–			–	12									14,800	12
13	SPACE	–	–	–	–	–	–			14		–	–	–	1	20	–			14
15	SPACE	–	–	–	–	–		–		16								780		16
17	SPACE	–	–	–	–	–			–	18		10	12	¾"	2	20			780	18
19	HP-1	2	40	8	10	¾"	2,705			20	SEWAGE LIFT STATION						1,800			20
21								2,705		22								1,800		22
23	HP-2	2	50	6	10	¾"			3,330	24									1,800	24
25							3,330			26	AHU-1	10	12	¾"	2	30	1,800			26
27	HP-3	2	30	8	10	¾"		1,875		28								1,800		28
29									1,875	30									1,800	30
31	HP-4	2	30	8	10	¾"	1,875			32							1,800			32
33								1,875		34								1,800		34
35	HP-5	2	50	6	10	¾"			3,330	36									1,800	36
37							3,330			38	AHU-2	10	12	¾"	2	30	1,800			38
39	HP-6	2	50	6	10	¾"		3,330		40								1,800		40
41									3,330	42									1,800	42
43	SPACE	–	–	–	–	–	–			44		–	–	–	1	20	–			44
45	SPACE	–	–	–	–	–		–		46								–		46
47	SPACE	–	–	–	–	–			–	48		–	–	–	1	20	–			48
49	SPACE	–	–	–	–	–	–			50		–	–	–	1	20	–			50
51	GATE ACCESS POWER	2	20	8	10	¾		915		52								5,000		52
53									915	54	GUARD SHACK	1/0	6	2"	2	60			5,000	54
							14,740	11,200	12,780								36,170	41,296	39,576	

TOTAL (kVA) øA 56.046 øB 52.496 øC 52.356
TOTAL CONNECTED LOAD (kVA) 160.898
DEMAND LOAD (kVA) 123.933
HIGH PHASE (AMPS) 467.1
TOTAL LOAD (AMPS) 446.6
DEMAND LOAD (AMPS) 344.1

PANELBOARD SCHEDULE (120/208V 3ø, 4W)

MARK: 1ST FLOOR PANEL "OD"

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #	LOAD DESCRIPTION	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #
1	PROCESSING RM LTG	1	20	10	12	½	660			2							1,260			2
3	CLIMATE CONTROL LTG	1	20	10	12	½		1,176		4								1,000		4
5	CLIMATE CONTROL LTG	1	20	10	12	½			1,176	6									1,100	6
7	OFFICE LTG	1	20	10	12	½	1,100			8							1,100			8
9	OFFICE LTG	1	20	10	12	½		860		10								360		10
11	SPACE	–	–	–	–	–			–	12									180	12
13	SPACE	–	–	–	–	–	–			14							900			14
15	SPACE	–	–	–	–	–		–		16								540		16
17	SPACE	–	–	–	–	–			–	18									180	18
19	SPACE	–	–	–	–	–	–			20							720			20
21	SPACE	–	–	–	–	–		–		22								1,080		22
23	SPACE	–	–	–	–	–			–	24									720	24
25	SPARE	1	20	–	–	–	–			26							1,440			26
27	SPARE	1	20	–	–	–		–		28								1,440		28
29	RADIO RECEPT	1	30	8	10	¾			2,880	30									720	30
31	HP RECEPT	1	20	10	12	½	360			32							1,080			32
33	WATER HEATER WH-1	2	30	10	12	½		2,000		34								1,440		34
35									2,000	36									900	36
37	COPY MACHINE	1	20	10	12	½	750			38							1,440			38
39	WATERCOOLER RECEPT	1	20	10	12	½		500		40								1,440		40
41	WATERCOOLER RECEPT	1	20	10	12	½			500	42									1,080	42
							2,870	4,536	6,556								7,940	7,300	4,880	

TOTAL (kVA) øA 10.81 øB 11.836 øC 11.796
TOTAL CONNECTED LOAD (kVA) 34.442
DEMAND LOAD (kVA) 30.322
HIGH PHASE (AMPS) 98.6
TOTAL LOAD (AMPS) 95.6
DEMND LOAD (AMPS) 84.2

MINI-POWER CENTER PANELBOARD SCHEDULE

MARK: (SEE BELOW)

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #	LOAD DESCRIPTION	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #
1	RECEPT GFI	1	20	10	12	½	180			2							180			2
3	RECEPT GFI	1	20	10	12	½		180		4								180		4
5	RECEPT GFI	1	20	10	12	½			180	6									180	6
7	SPARE	1	20	–	–	–	–			8							–			8
9	SPARE	1	20	–	–	–		–		10								–		10
11	SPACE	1	20	–	–	–			–	12									–	12
13	SPACE	1	20	–	–	–	–			14							–			14
15	SPACE	1	20	–	–	–		–		16								–		16
17	SPACE	1	20	–	–	–			–	18									–	18
							180	180	180								180	180	180	

TOTAL (kVA) øA .36 øB .36 øC .36
TOTAL CONNECTED LOAD (kVA) 1.08
HIGH PHASE (AMPS) 3.0
TOTAL LOAD (AMPS) 3.0

MARK	TYPE	MOUNTING	XFMR kVA	PRIMARY VOLTAGE	ø	WIRE	PRI MAIN	SECONDARY VOLTAGE	ø	WIRE	SEC MAIN	C/B TYPE	FEEDER CONDUCTORS	FEEDER GROUND	FEEDER CONDUIT	FEEDER FROM
MPZ3	NEMA-3R	SURFACE	15	480	3	3	40 MB	120/208	3	4	50 MB	BOLT-ON	(3)#8AWG	(1)#10AWG	¾	DP
MPZ4	NEMA-3R	SURFACE	15	480	3	3	40 MB	120/208	3	4	50 MB	BOLT-ON	(3)#8AWG	(1)#10AWG	¾	DP
MPZ5	NEMA-3R	SURFACE	15	480	3	3	40 MB	120/208	3	4	50 MB	BOLT-ON	(3)#8AWG	(1)#10AWG	¾	DP

MINI-POWER CENTER PANELBOARD SCHEDULE

MARK: MPZ1

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #	LOAD DESCRIPTION	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #
1	OFICE EXTERIOR RECEPT GFI	1	20	10	12	½	720			2							180			2
3	RECEPT GFI	1	20	10	12	½		180		4								180		4
5	RECEPT GFI	1	20	10	12	½			180	6									180	6
7	HP RECEPT	1	20	10	12	½	180			8							–			8
9	SPARE	1	20	–	–	–		–		10								–		10
11	SPACE	1	20	–	–	–			–	12									–	12
13	SPACE	1	20	–	–	–	–			14							–			14
15	GATE ACCESS POWER	2	20	8	10	¾		915		16								–		16
17									915	18									–	18
							900	1,095	1,095								180	180	180	

TOTAL (kVA) øA 720 øB 1.275 øC 1.275
TOTAL CONNECTED LOAD (kVA) 3.45
HIGH PHASE (AMPS) 10.6
TOTAL LOAD (AMPS) 9.6

MARK	TYPE	MOUNTING	XFMR kVA	PRIMARY VOLTAGE	ø	WIRE	PRI MAIN	SECONDARY VOLTAGE	ø	WIRE	SEC MAIN	C/B TYPE	FEEDER CONDUCTORS	FEEDER GROUND	FEEDER CONDUIT	FEEDER FROM
MPZ1	NEMA-3R	SURFACE	15	480	3	3	40 MB	120/208	3	4	50 MB	BOLT-ON	(3)#8AWG	(1)#10AWG	¾	DP

MINI-POWER CENTER PANELBOARD SCHEDULE

MARK: MPZ2

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #	LOAD DESCRIPTION	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #
1	RECEPT GFI	1	20	10	12	½	180			2							180			2
3	RECEPT GFI	1	20	10	12	½		180		4								180		4
5	RECEPT GFI	1	20	10	12	½			180	6									180	6
7	RECEPT GFI	1	20	10	12	½	180			8							–			8
9	SPARE	1	20	–	–	–		–		10								–		10
11	SPACE	1	20	–	–	–			–	12									–	12
13	SPACE	1	20	–	–	–	–			14							–			14
15	SPACE	1	20	–	–	–		–		16								–		16
17	SPACE	1	20	–	–	–			–	18									–	18
							360	180	180								180	180	180	

TOTAL (kVA) øA .54 øB .36 øC .36
TOTAL CONNECTED LOAD (kVA) 1.26
HIGH PHASE (AMPS) 4.5
TOTAL LOAD (AMPS) 3.5

MARK	TYPE	MOUNTING	XFMR kVA	PRIMARY VOLTAGE	ø	WIRE	PRI MAIN	SECONDARY VOLTAGE	ø	WIRE	SEC MAIN	C/B TYPE	FEEDER CONDUCTORS	FEEDER GROUND	FEEDER CONDUIT	FEEDER FROM
MPZ2	NEMA-3R	SURFACE	15	480	3	3	40 MB	120/208	3	4	50 MB	BOLT-ON	(3)#8AWG	(1)#10AWG	¾	DP

PANELBOARD SCHEDULE (120/208V 3ø, 4W)

MARK: 2ND FLOOR PANEL "OD2"

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #	LOAD DESCRIPTION	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	BREAKER P	BREAKER TRIP	PHASE (VA) A	PHASE (VA) B	PHASE (VA) C	CKT #
1	RM 200 – 203 LTG	1	20	10	12	½	1,350			2							1,080			2
3	RM 204 – 206 LTG	1	20	10	12	½		1,090		4								1,080		4
5	RM 214 – 220 LTG	1	20	10	12	½			1,420	6									900	6
7	SPARE	1	20	–	–	–	–			8							900			8
9	RM 207 – 213 LTG	1	20	10	12	½		1,340		10								1,440		10
11	SPARE	1	20	–	–	–			–	12									900	12
13	SPACE	–	–	–	–	–	–			14							1,440			14
15	SPACE	–	–	–	–	–		–		16								720		16
17	SPACE	–	–	–	–	–			–	18									720	18
19	CORRIDOR RECEPT	1	20	10	12	½	1,620			20							1,440			20
21	RM 212/213	1	20	10	12	½		360		22								1,080		22
23	WATER HEATER WH-1	2	30	10	12	½			2,000	24									1,080	24
25							2,000			26							1,080			26
27	RM 214/215 RECEPT	1	20	10	12	½		720		28								1,080		28
29	RM 218 RECEPT	1	20	10	12	½			240	30									360	30
31	RM 217 RECEPT	1	20	10	12	½	540			32							750			32
33	RM 216 UPS POWER RUN NEUTRAL WITH CKT **	2	30	8	10	¾		2,500		34								720		34
35									2,500	36									1,800	36
37	SPARE	1	20	–	–	–	–			38							540			38
39	SPARE	1	20	–	–	–		–		40								1,080		40
41	SPARE	1	20	–	–	–			–	42									720	42
43	RM 218/219 DATA RECEPT	1	20	10	12	½	1,440			44							1,440			44
45	RM 219 RECEPT	1	20	10	12	½		720		46								720		46
47	SPARE	1	20	–	–	–			–	48									180	48
49	RM 220 RECEPT	1	20	10	12	½	1,440			50							1,100			50
51	RM 220 DATA RECEPT	1	20	10	12	½		1,080		52								750		52
53	RM 220 DATA RECEPT	1	20	10	12	½			1,080	54									900	54
							8,390	7,810	7,240								9,770	8,670	7,560	

TOTAL (kVA) øA 18.16 øB 16.48 øC 14.80
TOTAL CONNECTED LOAD (kVA) 49.44
DEMAND LOAD (kVA) 38.195
HIGH PHASE (AMPS) 151.3
TOTAL LOAD (AMPS) 137.2
DEMAND LOAD (AMPS) 106.0

** – CONTRTACTOR SHALL VERIFY UPS REQUIREMENTS WITH ASPA IT PERSONNEL PRIOR TO BID AND INSTALLATION

PANELBOARD SCHEDULE (120/208V 1ø, 3W)

MARK: 'ITDP' **

CKT #	LOAD DESCRIPTION	BREAKER P	BREAKER TRIP	FEEDER/CONDUIT FEED	FEEDER/CONDUIT GRD	FEEDER/CONDUIT SIZE	PHASE (VA) A	PHASE (VA) B
1	RM 204 TV RECEPT	1	20	10	12	½	750	
2	RM 206/220 TV RECEPT	1	20	10	12	½		450
3	RM 220 DESK RECEPT	1	20	10	12	½	360	
4	IT RM 216 RECEPT	1	20	10	12	½		720
5	IT RM 216 RECEPT	1	20	10	12	½	720	
6	IT RM 216 RECEPT	1	20	10	12	½		720
7	RM 105/111 TV RECEPT	1	20	10	12	½	360	
8	IT RM 110 RECEPT	1	20	10	12	½		540
9	IT RM 110 RECEPT	1	20	10	12	½	720	
10	IT RM 110 RECEPT	1	20	10	12	½		360
11	SPARE	1	20	–	–	–	–	
12	SPARE	1	20	–	–	–		–
13	SPARE	1	20	–	–	–	–	
14	SPARE	1	20	–	–	–		–
15	SPARE	1	20	–	–	–	–	
16	SPARE	1	20	–	–	–		–
17	SPARE	1	20	–	–	–	–	
18	SPARE	1	20	–	–	–		–
19	SPACE	1	–	–	–	–	–	
20	SPACE	1	–	–	–	–		–
21	SPACE	1	–	–	–	–	–	
22	SPACE	1	–	–	–	–		–
23	SPACE	1	–	–	–	–	–	
24	SPACE	1	–	–	–	–		–
							2,910	2,790

TOTAL (kVA) øA 2.91 øB 2.79 HIGH PHASE (AMPS) 24.3
TOTAL CONNECTED LOAD (kVA) 5.70 TOTAL LOAD (AMPS) 27.4

** – PANELBOARD 'ITDP' WILL BE FEED FROM THE OWNER SUPPLIED UPS AND CONTRTACTOR SHALL VERIFY UPS REQUIREMENTS WITH ASPA IT PERSONNEL PRIOR TO BID AND INSTALLATION

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CONFIDENTIAL, VALUABLE, AND PROPRIETARY INFORMATION

REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	08/10/22	JWM	JJM

457 St. Michael St.
Mobile, AL 36602
Phone (251) 433-1611
Fax (251) 433-1411

Cowles, Murphy, Glover & ASSOCIATES
A Full Service Engineering Firm
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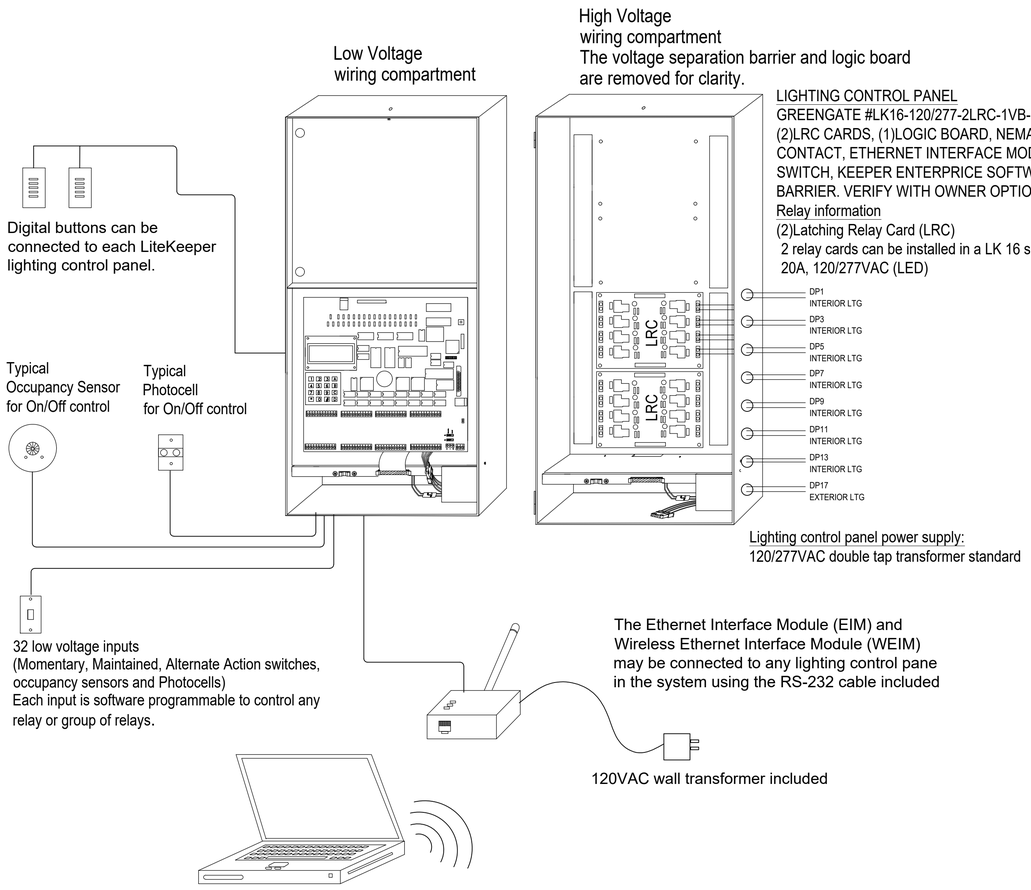
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
PANELBOARD SCHEDULES

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	10 OF –	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043	JJM	10/01/21	4043-E10	

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STORAGE LIGHTING CONTROL PLAN

SCALE: N.T.S.

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" – STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)

2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.

3. CONTRACTOR SHALL (PRIOR TO BID)
   (a) VISIT THE JOB/CONSTRUCTION SITE AND FIELD VERIFY ALL EXISTING CONDITIONS
   (b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED TO THE CONTRACTOR AFTER THE BID HAS BEEN ACCEPTED.

4. ALL LIGHT FIXTURES SHOWN/LISTED IN LIGHTING FIXTURE SCHEDULE SHALL BE 10-DAY PRE-APPROVED BY THE ENGINEER PRIOR TO BID.

5. ALL ELECTRICAL SWITCHES SHALL BE INSTALLED AS PER N.E.C. ARTICLE 404 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.

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REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	08/10/22	JWM	JJM

457 St. Michael St.
Mobile, AL 36602
Phone (251) 433-1611
Fax (251) 433-1411

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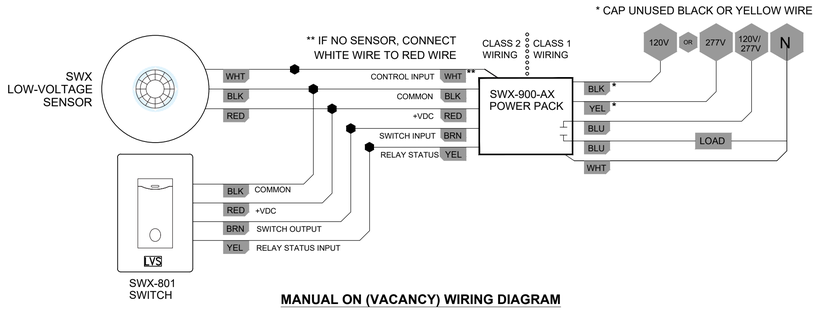
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

PROJECT
McDUFFIE
WAREHOUSE
McDUFFIE TERMINAL
ASPA

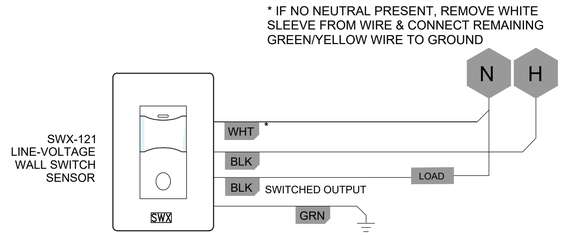
TITLE
STORAGE LIGHTING CONTROL PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	11 OF –	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E11	

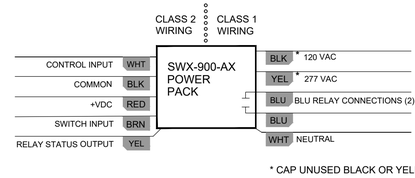
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MANUAL ON (VACANCY) WIRING DIAGRAM

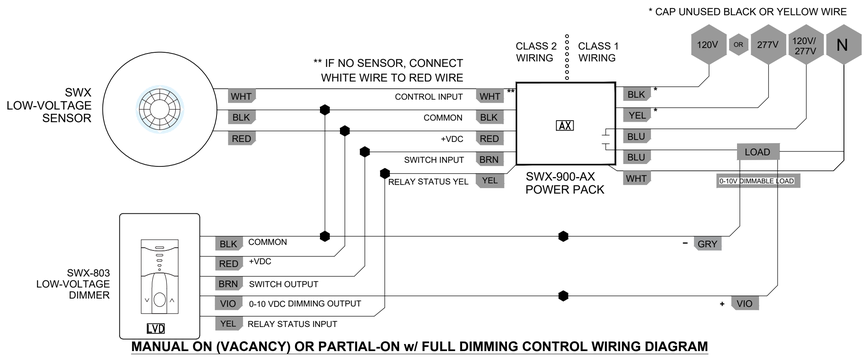


SWX WALL LINE-VOLTAGE SWITCH SENSOR STANDARD WIRING DIAGRAM

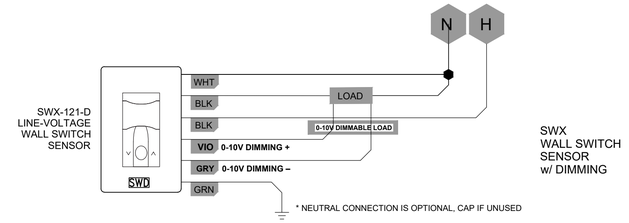


* CAP UNUSED BLACK OR YELLOW WIRE

SWX - 900 - AX POWER PACK STANDARD WIRING DIAGRAM

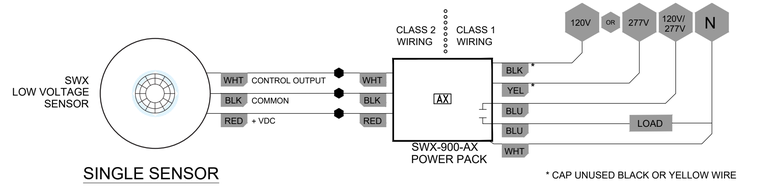


MANUAL ON (VACANCY) OR PARTIAL-ON w/ FULL DIMMING CONTROL WIRING DIAGRAM



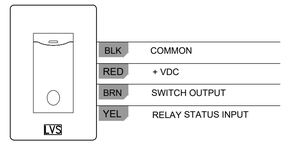
SWX WALL SWITCH SENSOR w/ DIMMING

SWX WALL LINE-VOLTAGE SWITCH SENSOR W/DIMMING STANDARD WIRING DIAGRAM



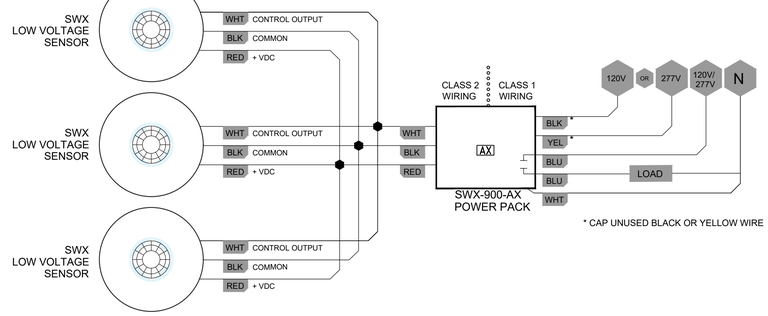
SINGLE SENSOR

* CAP UNUSED BLACK OR YELLOW WIRE



SWX-801 SWITCH

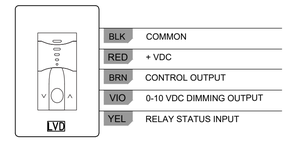
STANDARD WIRING DIAGRAM



* CAP UNUSED BLACK OR YELLOW WIRE

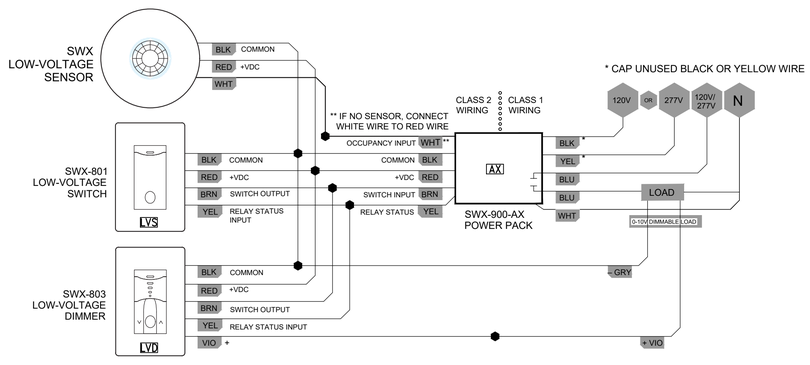
MULTIPLE SENSOR

SWX-900-AX COMMON WIRING CONFIGURATIONS

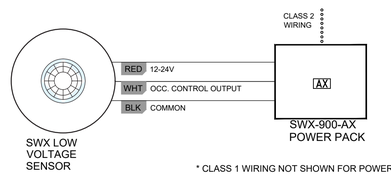


SWX-803 DIMMER SWITCH

STANDARD WIRING DIAGRAM



3-WAY, MANUAL ON (VACANCY) OR PARTIAL-ON w/ FULL DIMMING CONTROL WIRING DIAGRAM



* CLASS 1 WIRING NOT SHOWN FOR POWER PACK

STANDARD WIRING DIAGRAM

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
SM	SENSORWORX #SWX-221-1, CEILING MOUNT OCCUPANCY SENSOR, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), SMALL MOTION 360°.
LM	SENSORWORX #SWX-222-1, CEILING MOUNT OCCUPANCY SENSOR, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), LARGE MOTION 360°.
LVS	SENSORWORX #SWX-801-WH, DECORATOR LOW VOLTAGE WALL SWITCH, MOMENTARY OPERATION, WHITE.
LVD	SENSORWORX #SWX-803-WH, DECORATOR LOW VOLTAGE DIMMER (0-10V) WALL SWITCH, MOMENTARY OPERATION, WHITE.
AX	SENSORWORX #SWX-900-AX, POWER PACK CONTROLLER, LINE VOLTAGE, 120/277V, SINGLE RELAY +150mA SUPPLY
SWX	SENSORWORX #SWX-121-WH, OCCUPANCY SENSOR, LINE VOLTAGE, WALL SWITCH, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), 1-POLE:AUTO ON (OCCUPANCY), WHITE
SWD	SENSORWORX #SWX-121-D-WH, 0-10V DIMMING OCCUPANCY SENSOR, LINE VOLTAGE, WALL SWITCH, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), 1-POLE:AUTO ON (OCCUPANCY), WHITE

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A	ISSUE FOR BID	08/10/22	JWM	JJM

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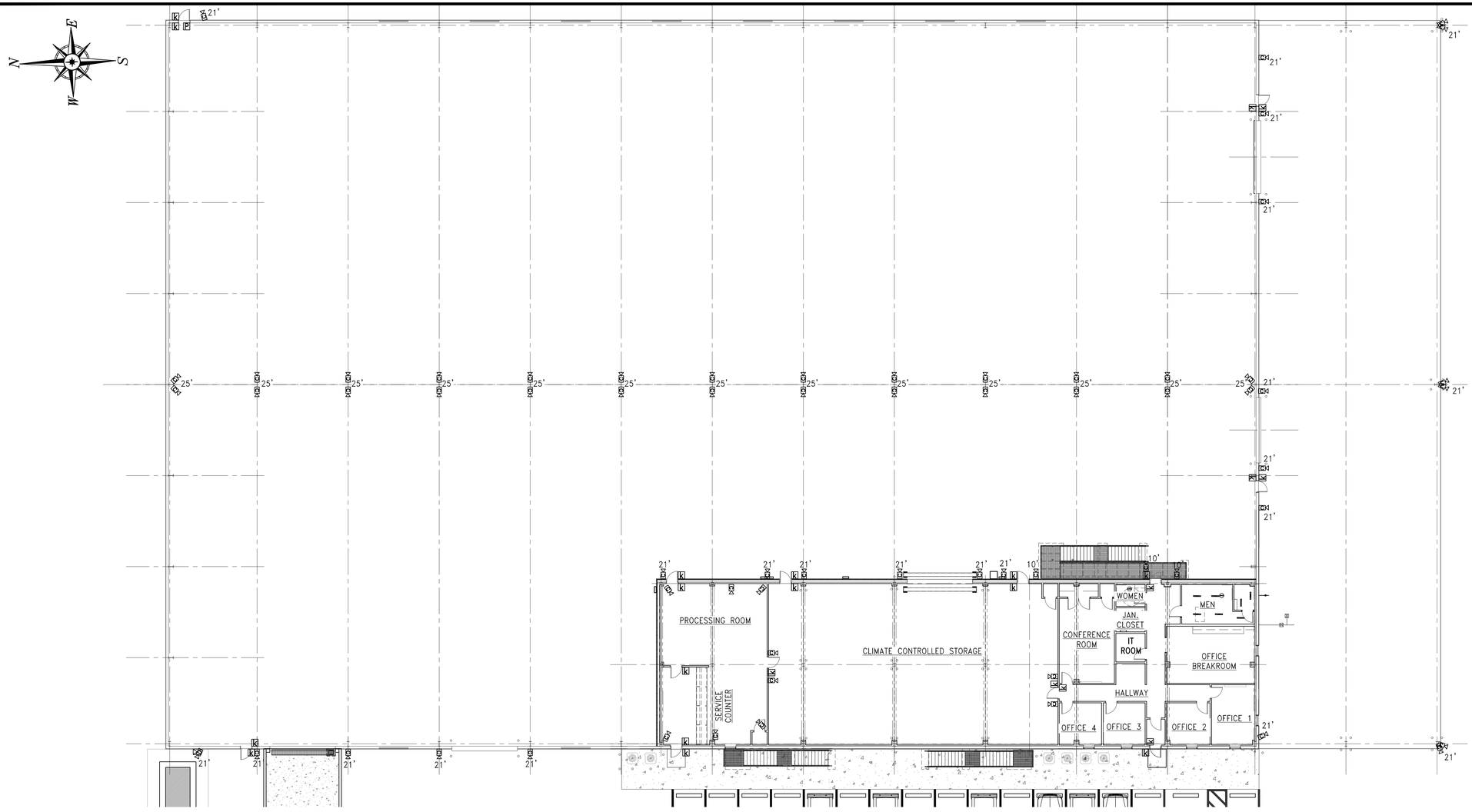
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
OFFICE LIGHTING CONTROL PLAN

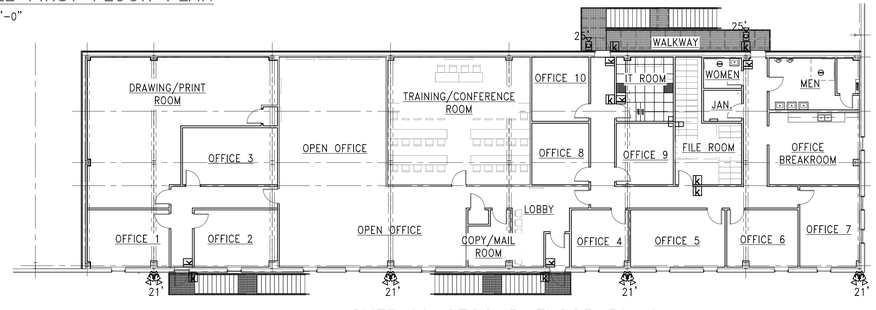
SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	12 OF _____	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E12	

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OVERALL FIRST FLOOR PLAN

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



OVERALL SECOND FLOOR PLAN

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

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" – STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)
2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.
3. CONTRACTOR SHALL VERIFY THE FINAL LOCATION FOR ALL CAMERAS PRIOR TO JUNCTION BOX AND CONDUIT INSTALLATION. ALL CONDUITS SHALL HAVE CAT6 CABLE ROUTED TO IT ROOM.
4. CONTRACTOR SHALL VERIFY THE FINAL LOCATION FOR ALL SECURITY ACCESS KEY-PADS PRIOR TO JUNCTION BOX AND CONDUIT INSTALLATION. ALL CONDUITS SHALL HAVE CAT6 CABLE ROUTED TO IT ROOM.
5. CONTRACTOR SHALL ROUTE 1/2"ø RGS CONDUIT TO OVERHEAD JUNCTION ABOVE DEVICE. CONTRACTOR SHALL ROUTE 1"ø RGS CONDUIT FROM DEVICE OVERHEAD JUNCTION BOX TO NEXT DEVICE OVERHEAD JUNCTION BOX AND FROM LAST DEVICE OVERHEAD JUNCTION BOX TO IT SERVER ROOM. ROUTE CAT6 FROM DEVICES TO IT ROOM AS LISTED IN LEGEND. CAMERA AND KEY-PAD CONDUIT RUNS SHALL BE SEPARATE.
6. ALL CAT6 CABLES SHALL BE INSTALLED BY CONTRACTOR AND TERMINATED BY OTHERS. CONTRACTOR SHALL LEAVE 5' SLACK AT EACH DEVICE AND 50' SLACK CABLE IN IT ROOM. CAT6 CABLE SHALL BE COILED UP AND STORED FOR TERMINATION BY OTHERS.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
K	SECURITY KEY PAD LOCATION. INSALL JUNCTION AND ROUTE 1/2"ø RGS CONDUIT TO OVERHEAD JUNCTION BOX. ROUTE 1"ø RGS FROM JUNCTION BOX TO IT ROOM WITH CAT6 TO IT ROOM.
CCTV	SECURITY CAMERA LOCATION. INSALL JUNCTION AND ROUTE 1/2"ø RGS CONDUIT OVERHEAD JUNCTION BOX. ROUTE 1"ø RGS CONDUIT TO IT ROOM. CAT6 CABLES ROUTED TO IT ROOM
P	DOOR PANIC HARDWARE LOCATION. INSTALL 1/2"ø RGS CONDUIT TO OVERHEAD JUNCTION BOX. ROUTE 1"ø RGS FROM JUNCTION BOX TO IT ROOM. ALARM WITH NOTIFICATION TO POLICE DEPARTMENT. CAT6 CABLE TO IT ROOM

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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
SECURITY CAMERA AND KEY-PAD FLOOR PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	RCC	10/01/21	13 OF –	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E13	

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ELECTRICAL SPECIFICATIONS:

PART 1 – GENERAL SCOPE

FURNISHING OF ALL LABOR, MATERIAL, EQUIPMENT, SUPPLIES, AND SERVICES NECESSARY TO CONSTRUCT AND INSTALL THE COMPLETE ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING ITEMS:

- LIGHTING INSTALLATION/TERMINATION
- INTERIOR/EXTERIOR CIRCUIT DISTRIBUTION
- MAIN SERVICE DISCONNECT SWITCH
- PANELBOARD INSTALLATION/TERMINATION
- EQUIPMENT INSTALLATION/TERMINATION
- RECEPTACLE INSTALLATION/TERMINATION
- CONDUIT INSTALLATION
- CONDUCTOR INSTALLATION/TERMINATION

JOB CONDITIONS

EXISTING CONDITIONS: ALL UTILITIES, EXISTING SYSTEMS, AND CONDITIONS SHOWN ON THE PLANS AS EXISTING ARE APPROXIMATE, AND THE CONTRACTOR SHALL VERIFY BEFORE ANY WORK IS STARTED.

CODES, PERMITS AND INSPECTIONS

THE INSTALLATION SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND ORDINANCES APPLICABLE TO ELECTRICAL INSTALLATION AND WITH THE REGULATIONS OF THE LATEST ACCEPTED PUBLISHED EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C. 2017) WHERE SUCH REGULATIONS DO NOT CONFLICT WITH THOSE LAWS AND ORDINANCES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES, AND AFTER COMPLETION OF THE WORK, SHALL FURNISH THE ARCHITECT A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE APPLICABLE LOCAL INSPECTION AUTHORITIES. ANY CHARGES BY A UTILITY FOR PROVIDING SERVICE AS SHOWN SHALL BE INCLUDED IN THE BID AND PAID BY THE CONTRACTOR.

STANDARDS OF MATERIALS AND WORKMANSHIP

ALL MATERIALS SHALL BE NEW AND SHALL BE LISTED AND APPROVED BY THE UNDERWRITERS' LABORATORIES, INC., IN EVERY CASE WHERE A STANDARD HAS BEEN ESTABLISHED FOR A PARTICULAR TYPE OF MATERIAL IN QUESTION. ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT APPEARANCE.

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT A LIST OF ITEMS PROPOSED FOR USE. HE SHALL ALSO SUBMIT CATALOG DATA AND SHOP DRAWINGS ON PROPOSED SYSTEMS AND THEIR COMPONENTS, PANELBOARDS, SAFETY SWITCHES, LIGHTING FIXTURES, AND WIRING DEVICES. WHERE SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS, THE CONTRACTOR SHALL DEFRAY ALL ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING COSTS TO ALL ALLIED TRADES INVOLVED.

TYPE OF PERMANENT ELECTRICAL SERVICE

NEW ELECTRICAL SERVICE SHALL BE 277/480 VOLTS,3 PHASE, 4 WIRE SERVED FROM AN UNDERGROUND APCo ELECTRIC UTILITY SERVICE. CONTRACTOR SHALL VERIFY ALL DETAILS OF ELECTRICAL SERVICE WITH THE APCo UTILITY PRIOR TO BID. CONTRACTOR SHALL BE RESPONSIBILITY FOR THE INSTALLATION OF THE PRIMARY (VERIFY) AND SECONDARY CONDUIT AS REQUIRED BY APCo UTILITY. INTERFACE WITH OTHER CONTRACTS IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COOPERATE WITH ALL OTHER CRAFTS WORKING ON THIS PROJECT. ALL CUTTING, TRENCHING, BACKFILL, AND STRUCTURAL REMOVALS TO PERMIT ENTRY OF THE ELECTRICAL SYSTEM COMPONENTS SHALL BE DONE BY THIS CONTRACTOR. ALL PATCHING AND FINISHING SHALL BE DONE BY THE GENERAL CONTRACTOR.

EQUIPMENT FURNISHED UNDER OTHER SECTIONS

THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE ELECTRICAL ROUGHING-IN AND CONNECTION TO ALL EQUIPMENT FURNISHED UNDER OTHER SECTIONS AS INDICATED ON DRAWINGS. THE CONTRACTOR SHALL VERIFY AND INSTALL PROPER SIZE SERVICE AS REQUIRED FOR ALL ACTUAL EQUIPMENT PURCHASED. ALL SUCH EQUIPMENT SHALL BE SET IN PLACE AS WORK OF OTHER SECTIONS.

FIRE ALARM SYSTEM

CONTRACTOR SHALL FURNISH AND INSTALL FIRE DETECTION SYSTEM AS REQUIRED BY THE NATIONAL FIRE PROTECTION ASSOCIATION. SYSTEM SHALL BE A NEW FULLY FUNCTIONING ADDRESSABLE FIRE ALARM SYSTEM WITH VOICE EVACUATION NOTIFICATION AS WELL AS VISUAL AND HORN NOTIFICATION. FIRE DETECTION SYSTEM SHALL HAVE ALARM BELLS/HORNS IN HALLWAYS AND AS REQUIRED BY LOCAL FIRE MARSHALL OR A.H.J.. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY DRAWINGS TO OBTAIN PERMITS FOR FIRE SYSTEM INSTALLATION. AN ELECTRONIC AUTOCAD FILE OF THE FLOOR PLAN WILL BE PROVIDED TO THE CONTRACTOR FOR LOCATING ALL FIRE DETECTION SYSTEM ALARM BELLS, PULL STATIONS, CONTROL PANELS, ETC. BIDDERS ARE TO PROVIDE TAMPER SWITCHES AT THE BACKFLOW VALVES NEAR THE STREET AS WELL AS RELAYS FOR THE SPRINKLER SYSTEM FLOW SWITCH (FLOW SWITCH BY SPRINKLER SUBCONTRACTOR), THE KITCHEN HOOD SUPPRESSION SYSTEM, AND ALL HVAC DUCT DETECTORS IN ADDITION TO OTHER REQUIREMENTS OF THE REFERENCED CODES. ALL FIRE ALARM CONTRACTORS MUST SUBMIT THROUGH A BIDDING ELECTRICAL CONTRACTOR WHO SHALL INCLUDE ALL BOXES, CONDUIT, WIRE, ETC. TO COMPLETE THE FIRE ALARM PACKAGE. THE ALARM CONTRACTOR IS REQUIRED TO SUBMIT TO THE ARCHITECT AND THE LOCAL CITY FIRE INSPECTOR SHOP DRAWINGS OF THE CODE COMPLIANT SYSTEM STAMPED BY A QUALIFIED FIRE ALARM ENGINEER/DESIGNER ACCEPTABLE TO THE LOCAL FIRE INSPECTOR.

GROUNDING

PROVIDE GROUNDING AND BONDING SYSTEMS IN STRICT ACCORDANCE WITH THE LATEST ACCEPTED PUBLISHED EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C. 2017), EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SPECIFIED HEREIN. INTER-CONNECTION OF NEUTRAL AND GROUND IS NOT PERMITTED EXCEPT AT SERVICE ENTRANCE EQUIPMENT. INSTALL GROUNDING CONDUCTORS TO PERMIT SHORTEST AND MOST DIRECT PATH TO GROUND. CONCEALED JOINTS SHALL BE MADE BY CADWELD METHOD. WHERE GROUNDING CONDUCTORS ARE IN RACEWAY, BOND CONDUCTOR AND RACEWAY AT BOTH ENDS. GROUNDING AND BONDING FITTINGS USED SHALL BE UL LISTED AND BE COMPATIBLE WITH METALS USED IN SYSTEM. SHEET METAL TYPE STRAP ARE NOT ACCEPTABLE.

A GREEN INSULATED GROUND CONDUCTOR SHALL BE RUN IN ALL BRACH CIRCUIT AND FEEDER CONDUIT WITH PHASE AND/OR NEUTRAL CONDUCTORS. GROUND CONDUCTOR SHALL BE SIZED PER NEC OR AS NOTED ON DRAWINGS. MINIMUM SIZE #12 AWG. CONDUIT BOX TO DEVICE STRAP OR YOKE SCREW CONNECTION IS NOT SUFFICIENT. PROVIDE AN INSULATED GROUNDING JUMPER FOR RECEPTACLE CIRCUITS.

GUARANTEE AND SERVICE

UPON COMPLETION OF ALL TESTS AND ACCEPTANCE, THE CONTRACTOR SHALL FURNISH THE OWNER OF A WRITTEN GUARANTEE COVERING THE ELECTRICAL WORK DONE FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. GUARANTEE INCLUDES EQUIPMENT CAPACITY AND PERFORMANCE RATINGS SPECIFIED WITHOUT EXCESSIVE NOISE LEVELS. UPON NOTICE FROM THE ARCHITECT OR THE OWNER, THE CONTRACTOR SHALL, DURING THE GUARANTEE PERIOD, RECTIFY AND REPLACE ANY DEFECTIVE MATERIAL OR WORKMANSHIP AND REPAIR ANY DAMAGE CAUSED THEREBY WITHOUT ADDITIONAL COST.

PART 2 – PRODUCTS

GENERAL

ALL EQUIPMENT AND MATERIALS SHALL HAVE RATINGS ESTABLISHED BY THE RECOGNIZED INDEPENDENT AGENCY OR LABORATORY. THE CONTRACTOR SHALL APPLY THE ITEMS USED ON THE PROJECT WITHIN THE RATINGS AND SUBJECT TO ANY STIPULATIONS OR EXCEPTIONS ESTABLISHED BY THE INDEPENDENT AGENCY OR LABORATORY. USE OF EQUIPMENT OR MATERIALS IN APPLICATIONS BEYOND THAT CERTIFIED BY THE AGENCY OR BEYOND THAT RECOMMENDED BY THE MANUFACTURER SHALL BE CAUSE FOR REMOVAL AND REPLACEMENT OF SUCH MISAPPLIED ITEMS.

RACEWAY AND FITTINGS

CONDUIT SYSTEMS: ACCEPTABLE TYPES OF CONDUIT:

HOT DIPPED GALVANIZED RIGID STEEL (GRS)	(1/2" MIN. TRADE SIZE)
ELECTRICAL METALLIC TUBING (EMT)	(1/2" MIN. TRADE SIZE)
POLYVINYL CHLORIDE – SCHEDULE 40 (PVC 40)	(1/2" MIN. TRADE SIZE)
FLEXIBLE METALLIC CONDUIT (FLEX)	(1/2" MIN. TRADE SIZE)
LIQUID TIGHT FLEXIBLE METALLIC CONDUIT (LQFLEX)	(1/2" MIN. TRADE SIZE)
MC METAL CLAD CABLE (MC)	(#12AWG MIN TRADE SIZE)

EMT OR GRS SHALL BE THE MAIN HOME RUN RACEWAY FOR ELECTRICAL CIRCUITS FROM PANELBOARDS TO ELECTRICAL DEVICES AND/OR JUNCTION BOX. MC CABLE CAN BE USED AS A SECONDARY INTERIOR CIRCUIT RACEWAY FROM THE MAIN HOME RUN JUNCTION BOX TO RECEPTACLES AND/OR LIGHT FIXTURE. CONDUITS INSTALLED IN EARTH FILL, IN CONCRETE, OR IN SOLID MASONRY STRUCTURES SHALL BE PVC 40. WHERE PVC 40 IS USED, THE 90° ELBOWS RISING ABOVE GRADE OR EXTENDING THROUGH THE CONCRETE ENVELOPE SHALL BE GRS. CONDUITS INSTALLED IN MOIST AND/OR DAMP LOCATIONS SHALL BE PVC 40. CONDUITS SUBJECT TO MECHANICAL INJURY SHALL BE GRS. CONDUITS RUN CONCEALED IN THE HOLLOW SPACE OF NON-MASONRY WALL OR ABOVE SUSPENDED CEILINGS SHALL BE EMT. IN ALL CASES, CONDUITS/MC SHALL BE RUN AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING LINES AND EXPOSED STRUCTURE. IN ALL CASES, CONDUIT/MC RUNS SHALL BE GROUPED TOGETHER WHERE POSSIBLE AND SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, NOT FOR ANY SUSPENDED CEILING SUPPORT SYSTEM.

CONDUCTORS: ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT/MC. CONDUCTORS FOR BUILDING WIRING SHALL HAVE THHN/THWN, 600 VOLT INSULATION AND SHALL BE SOFT-DRAWN COPPER OF STANDARD AMERICAN WIRE GAUGE (AWG) SIZE. MINIMUM SIZE SHALL BE NO. 12. ALL WIRE NO. 8 AND LARGER SHALL BE STRANDED. ALL BRANCH CIRCUITS NO. 10 AND SMALLER SHALL BE WIRED WITH COLOR-CODED WIRE WITH THE SAME COLOR USED FOR A SYSTEM THROUGHOUT THE BUILDING. POWER FEEDERS AND BRANCH CIRCUITS LARGER THAN NO. 10 SHALL EITHER BE FULLY COLOR CODED OR SHALL HAVE BLACK INSULATION AND BE SIMILARLY COLOR CODED WITH TAPE OR PAINT IN ALL JUNCTION BOXES AND PANELS. TAPE OR PAINT SHALL COMPLETELY COVER THE FULL VISIBLE LENGTH OF CONDUCTOR INSULATION WITHIN THE BOX OR PANEL.
COLOR CODING OF ALL CONDUCTORS SHALL BE AS FOLLOWS:

GROUNDING:	BARE, GREEN OR GREEN W/YELLOW STRIP
120/208V 3ø CONDUCTORS:	øA-BLACK, øB-RED, øC-BLUE
277/480V 3ø CONDUCTORS:	øA-BROWN, øB-ORANGE, øC-YELLOW
120/208V NEUTRAL:	WHITE
277/480V NEUTRAL:	GRAY

PART 3 – EXECUTION

PAINTING

CONTRACTOR SHALL TOUCH-UP OR REFINISH ALL ITEMS OF ELECTRICAL EQUIPMENT FURNISHED WITH A FACTORY FINISH COAT OF PAINT AND WHICH MAY HAVE BEEN DAMAGED REGARDLESS OF CAUSE.

TESTING AND BALANCING

BALANCE ALL SINGLE PHASE LOADS CONNECTED TO ALL PANELBOARDS TO ENSURE AN APPROXIMATE EQUAL DIVISION ON THESE LOADS ON MAIN POWER SUPPLY SERVING BUILDING. ALL TESTS SHALL BE MADE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE IEEE AND THE NEC. THE INSTALLATION SHALL BE TESTED FOR PERFORMANCE, GROUNDS AND INSULATION RESISTANCE. "MEGGER" TYPE INSTRUMENTS SHALL BE USED. CONTRACTOR SHALL PERFORM CIRCUIT CONTINUITY AND OPERATIONAL TESTS ON ALL EQUIPMENT FURNISHED OR CONNECTED BY CONTRACTOR. THE TESTS SHALL BE MADE PRIOR TO FINAL INSPECTION. THE CONTRACTOR SHALL PROVIDE ALL TESTING EQUIPMENT AND ALL COSTS SHALL BE BORNE BY HIM. WRITTEN REPORTS SHALL BE MADE OF ALL TESTS. THESE REPORTS SHALL BE TURNED OVER TO THE ARCHITECT AT TIME OF FINAL INSPECTION. ALL FAULTS SHALL BE CORRECTED IMMEDIATELY.

CLEANING UP

THE CONTRACTOR SHALL REMOVE ALL OIL, GREASE, OR OTHER STAINS RESULTING FROM HIS WORK PERFORMED IN THE BUILDING OR THE EXTERIOR THEREOF.

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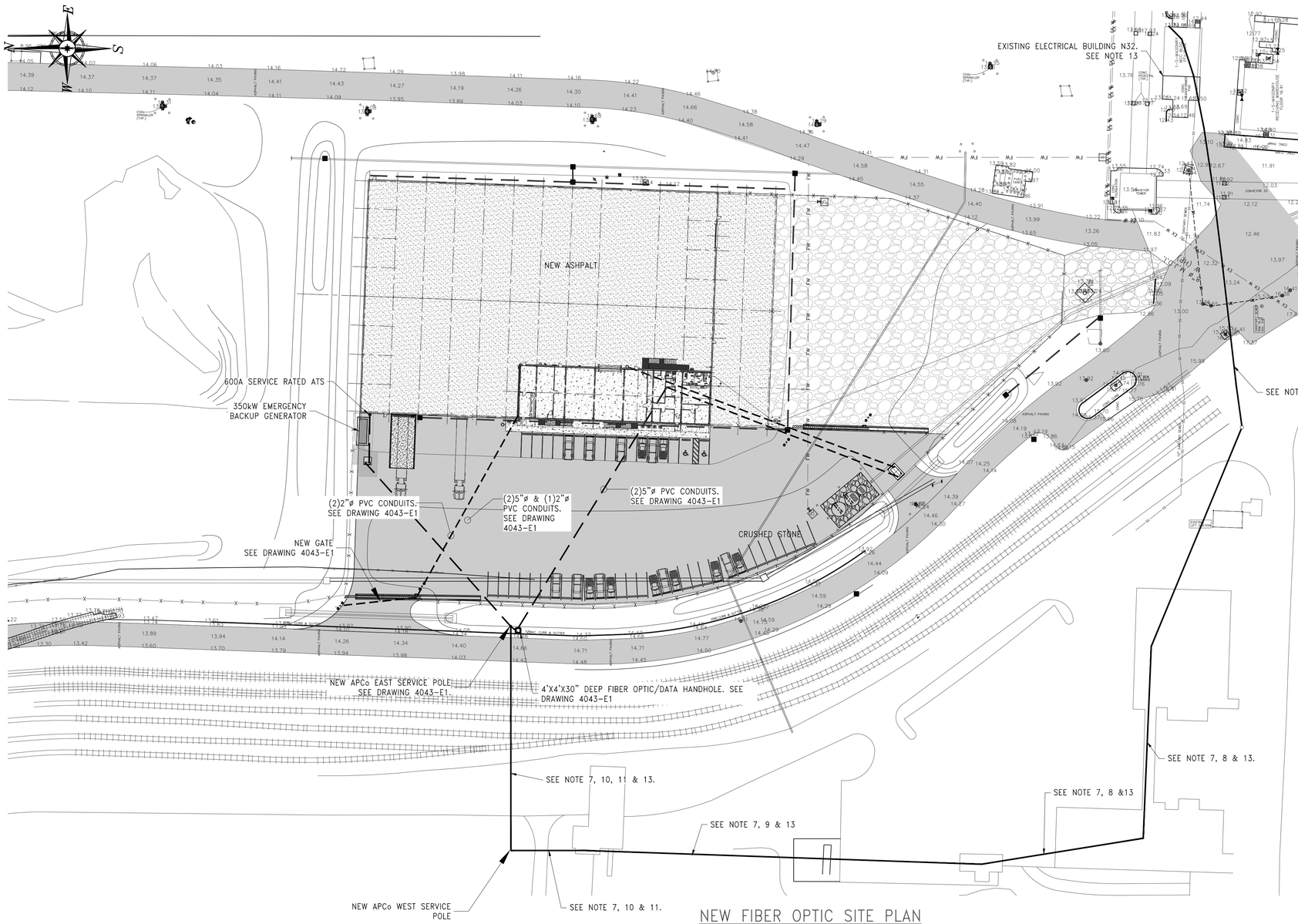
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
ELECTRICAL SPECIFICATIONS

SCALE: NOTED	DRAWN BY: RCC	DATE: 10/01/21	SHEET: 14 OF –
JOB NO.: 4043	CHECKED BY: JJM	DATE: 10/01/21	DRAWING NUMBER: 4043-E14

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NEW FIBER OPTIC SITE PLAN

1"=50'

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" – STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)

2. CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.

3. CONTRACTOR SHALL (PRIOR TO BID)
   (a) VISIT THE JOB/CONSTRUCTION SITE AND FIELD VERIFY ALL EXISTING CONDITIONS
   (b) TAKE ALL CONSIDERATIONS INTO ACCOUNT AT THE TIME OF BID. NO CONSIDERATIONS WILL BE GRANTED TO THE CONTRACTOR AFTER THE BID HAS BEEN ACCEPTED.

5. CONTRACTOR SHALL VERIFY THE EXISTING FIBER OPTIC ROUTING FROM THE EXISTING NORTH 32 ELECTRICAL BUILDING TO THE MAINTENANCE BUILDING AND GUARD SHACK PRIOR TO BID AND INSTALLATION.

6. CONTRACTOR SHALL REPLACE THE EXISTING FIBER OPTIC CABLES FROM THE NORTH 32 (N32) ELECTRICAL BUILDING TO THE MAINTENANCE BUILDING, FOREMAN OFFICE AND EXISTING GUARD SHACK. CONTRACTOR SHALL FURNISH AND INSTALL (1)128 STRAIN MULTI-MODE FIBER OPTIC AND (1)128 STRAIN SINGLE-MODE FIBER OPTIC FROM N32 TO THE MAINTENANCE SHOP MAIN IT ROOM AND FROM THE MAINTANENCE SHOP MAIN IT ROOM TO THE GUARD SHOP FIBER OPTIC EQUIPMENT.

7. CONTRACTOR SHALL LOCATED THE EXISTING COMMUNICATION DUCTBANK ROUTED UNDER THE RAILROAD TRACKS FROM THE NORTH 32 (N32) ELECTRICAL BUILDING TO THE MAINTENANCE BUILDING. INSTALL (1)128 STRAIN MULTI-MODE FIBER OPTIC CABLE AND (1)128 STRAIN SINGLE-MODE FIBER OPTIC CABLE. CONTRACTOR SHALL VERIFY THE LOCATION IN THE MAINTANENCE SHOP FOR THE FIBER OPTIC CABLES TO BE ROUTED TO.

8. CONTRACTOR SHALL LOCATED THE EXISTING COMMUNICATION DUCTBANK ROUTED FROM THE MAINTENANCE BUILDING MAIN IT ROOM TO THE MAIN IT ROOM IN THE FOREMAN OFFICE BUILDING MAIN IT ROOM. INSTALL (1)128 STRAIN MULTI-MODE FIBER OPTIC CABLE AND (1)128 STRAIN SINGLE-MODE FIBER OPTIC CABLE. CONTRACTOR SHALL VERIFY THE LOCATION IN THE FOREMAN OFFICE BUILDING FOR THE NEW FIBER OPTIC CABLES TO BE ROUTED TO.

9. CONTRACTOR SHALL LOCATED THE EXISTING COMMUNICATION DUCTBANK ROUTED FROM THE FOREMAN OFFICE BUILDING MAIN IT ROOM TO THE MAIN IT ROOM IN THE EXISTING GUARD SHACK. INSTALL (1)128 STRAIN MULTI-MODE FIBER OPTIC CABLE AND (1)128 STRAIN SINGLE-MODE FIBER OPTIC CABLE. CONTRACTOR SHALL VERIFY THE LOCATION IN THE EXISTING GUARD SHACK FOR THE NEW FIBER OPTIC CABLES TO BE ROUTED TO.

10. CONTRACTOR SHALL FURNISH AND INSTALL (2)4"ø UNDERGROUND PVC CONDUITS FROM THE EXISTING GUARD SHACK TO THE APCo WEST ELECTRICAL SERVICE POLE. CONTRACTOR SHALL STUB-UP CONDUITS A MINIMUM OF 24" AT THE POLE. SEE DRAWING 4043-E1 NOTES FOR INTERFACE WITH APCO SERVICE POLE.

11. CONTRACTOR SHALL FURNISH AND INSTALL (1)48 STRAIN MULTI-MODE FIBER OPTIC CABLE AND (1)48 STRAIN SINGLE MODE FIBER OPTIC CABLE FROM THE EXISTING GUARD SHACK TO THE NEW WAREHOUSE IT ROOM 216 ON THE SECOND FLOOR. NEW FIBER OPTIC CABLE SHALL BE SUSPENDED OVER THE EXISTING ASPS RAIL TRACK USING THE NEW APCO SERVICE UTILITY POLES. SEE DRAWING 4043-E1 FOR DETAIL

12. CONTRACTOR SHALL REFERENCE DRAWING 4043-E1 FOR THE ELECTRICAL UTILITIES AND FIBER OPTIC CABLE INSTALLATION FOR THE WAREHOUSE SITE.

13. FIBER OPTIC CABLE ROUTING SHOWN IS DIAGRAMMIC AND CONTRACTOR SHALL VERIFY ACTUAL ABOVE/BELOW GROUND FIBER OPTIC CABLE ROUTING BID AND INSTALLATION. CONTRACTOR SHALL VERIFY FIBER OPTIC MAIN IT ROOMS IN THE MAINTENANCE BUILDING, FORE BUILDING AND GUARD SHACK WITH ASPA PERSONNEL PRIOR TO BID AND INSTALLATION.

NOTE:

SEE REFERENCE DRAWINGS "McDUFFIE COAL TERMINAL STORMWATER TRANSFER" SHEET 4 AND SHEET 11 FOR ADDITIONAL EXISTING UTILITY INFORMATION. THESE DRAWINGS ARE FOR INFORMATION ONLY AND THE ACCURACY OF THESE DRAWINGS ARE NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

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A	ISSUE FOR BID	08/10/22	JWM	JJM

457 St. Michael St.
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
NEW FIBER OPTIC SITE PLAN

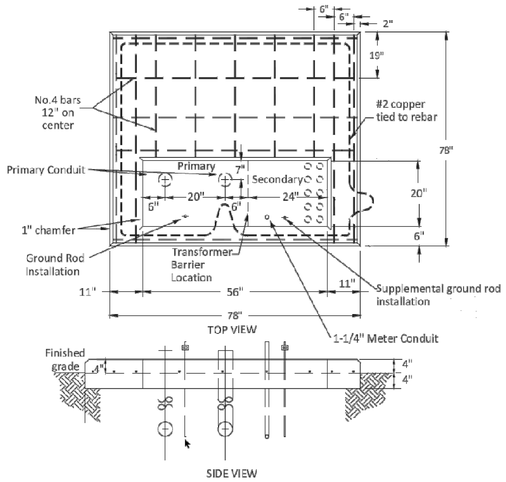
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NOTED	RCC	10/01/21	15 OF –	A
JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E15	

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POURED IN PLACE CONCRETE

3 - PHASE TRANSFORMER PAD

150KVA - 300KVA



NOTES:

1. Reinforce with No. 4 bars with a 12" x 12" grid, 4 in. below top of pad except as shown above.
2. Concrete shall have a minimum ultimate 28 day compressive strength of not less than 3,000 pounds, pad shall be cured not less than 72 hours before transformer is installed.
3. Mounting surface shall be level, smooth and uniform with minimal irregularities.
4. This pad will also accommodate a 500 KVA transformer
5. All concrete shall be vibrated in forms to increase strength and prevent any voids or honeycomb in the finished pad.
6. Maintain 2 in. of clear concrete between rebar and all outer surfaces.

TRANFORMER PAD NOTE:
CONTRACTOR SHALL VERIFY TRANSFORMER PAD REQUIREMENTS WITH APCo PRIOR TO BID AND INSTALATION.

Material/Installation Requirements

APCO to Furnish, Customer to Install
- 2 - 5/8"x 10'CU Clad Ground Rods
- #2 Stranded CU Ground Bus Conductor (150')
- Meter Socket (200A Feed Through, 320A Feed Through, 600A Trans Socket, or 13 Terminal CT Socket)

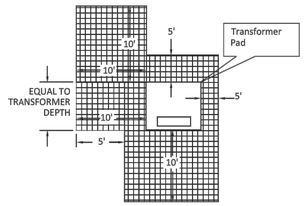
APCO to Furnish and Install
- Underground primary conductors.
- Meter, Meter Cable, and C.T.'s.
- Primary cable riser.
- Pad Mounted 3Ø Transformer

Customer to Furnish and Install
- Open and Close trenches per APCO specifications.
- Customer owned service conduit and conductors.
- Concrete pads for 3Ø transformers.
- Meter conduit and pull wire per APCO specifications.
- Conduit for building riser.
- 5" schedule 40 PVC conduit, bends and couplings (2 runs).

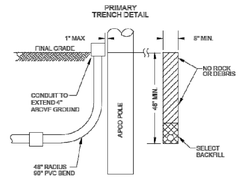
Please give APCO engineering 48 hour notice before you pick up APCO furnished material to ensure it is in stock and available
Material can be picked up at the address below:
45 Schillinger Rd S - Mobile, AL 36608
If a 600A trans socket is required, it will have to be picked up at the address below:
650 Michigan Ave - Mobile, AL 36605

GENERAL REQUIREMENTS

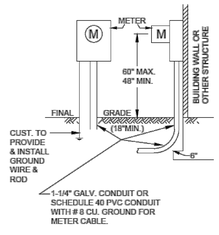
1. Customer's service entrance cable and conduits should be installed in the open window of the concrete pad. Conduits should be installed starting at the extreme right hand side of the window. Conduits should not be installed near the left hand dimension of the conduit window unless absolutely necessary.
2. Grounding is to be provided by enhanced grounding consisting of 100 ft. of #2 copper 7 strand conductor installed in the bottom of the trench or 32 ft. stacked sections of ground rod installed in both the primary and secondary sides of the concrete pad window. The ground rod locations are not dimensioned to allow maximum flexibility in locating the ground rods, but the separation between ground rods should be as great as possible.
3. The transformer pad should NOT be located near: fire escapes, doors, windows, ventilation ducts, within 4 ft. of fire hydrants, or under building overhangs. If possible the pad should be installed on ground that slopes away from the building. There should be no above ground obstructions such as air conditioners, walls shrubbery, trash bins, etc. in front of the transformer location. The transformer location must be accessible by large truck or crane.
4. There must be clear area around the transformer pad as detailed in the drawing below. The 10' X 10' area at the rear of the pad is necessary for the proper operation of the bayonet fuse of the transformer. The 10 ft. area in the front is necessary for



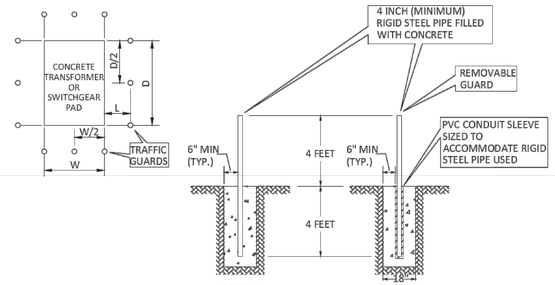
5. Trench for primary conduit to be a minimum of 48" deep with 12" minimum clearance from other utilities. See the below detail.



6. Metering conduit shall be 1-1/4" rigid galvanized conduit or schedule 40 PVC and must be installed within the bounds of the secondary compartment. The location of a 13-Terminal Meter Socket shall be within 20' of a 120/208V 3Ø Transformer and within 50' of a 277/480V 3Ø Transformer. If the meter socket will not be placed on the building, it shall be installed on a 6" by 6" pressure treated lumber post. Exact location of APCO meter socket is to be determined by APCO engineering or service supervisor. See the below detail on Meter Socket installation.



7. The customer is required to install 2 runs of 5" schedule 40 conduit from the primary riser pole to the transformer pad. Leave a pull cord in both the primary and metering conduit.
8. If a feed through meter socket is to be used on a 277/480V service, the customer is responsible for providing and installing a disconnect on the line side of the meter socket. This allows for APCO personnel to safely remove the meter.
9. Pad forming and conduit trench must be inspected by APCO engineering before concrete is poured.
10. Leave 6' of service entrance conductors for connection by APCO to transformer terminals.
11. Owner will be required to furnish necessary rights-of-way for all APCO facilities including ingress and egress.
12. Protective barriers for the transformer shall be 4" minimum rigid galvanized pipe, 8' long, filled with concrete, extending 4' below and 4' above final grade located adjacent to pad as shown on the next page.



NOTES:
1. THIS DRAWING SHOWS A TYPICAL GUARD LAY-OUT FOR PAD-MOUNTED EQUIPMENT EXPOSED TO TRAFFIC ON ALL SIDES. INSTALL GUARDS ONLY ON THOSE SIDES EXPOSED TO VEHICULAR TRAFFIC. INSTALL CENTER POLE ONLY ON SIDES WHERE SPACING BETWEEN CORNER POLES DOES NOT PROVIDE ADEQUATE PROTECTION.

NOTE: IF INSTALLING A CENTER POLE ON THE DOOR SIDE OF THE PAD, THE W/2 DIMENSION AND THE L DIMENSION MAY NEED ADJUSTING TO AVOID INTERFERENCE WITH DOOR OPENING.

2. MAXIMUM TRAFFIC GUARD SPACING: W = PAD WIDTH + 6 INCHES*
   D = PAD DEPTH
   L = 36 INCHES (MINIMUM)
   * ADD 6 IN. TO FRONT OF PAD (DOOR SIDE ONLY).

3. TRAFFIC GUARDS SHOULD BE LOCATED SO THERE WILL BE NO CONFLICT WITH THE INSTALLATION OR REMOVAL OF ELBOWS, FUSES, DOORS, ETC.

4. THE MAXIMUM HEIGHT OF TRAFFIC GUARDS ABOVE GRADE SHOULD BE FOUR (4) FT. IF THE TOP OF THE PAD-MOUNTED EQUIPMENT IS LESS THAN FOUR (4) FT. ABOVE GRADE, THE HEIGHT MAY BE REDUCED TO THE PAD-MOUNTED EQUIPMENT HEIGHT.

5. EITHER ARRANGEMENT, DETAIL A OR DETAIL B, IS AN ACCEPTABLE METHOD FOR TRAFFIC GUARD INSTALLATION.

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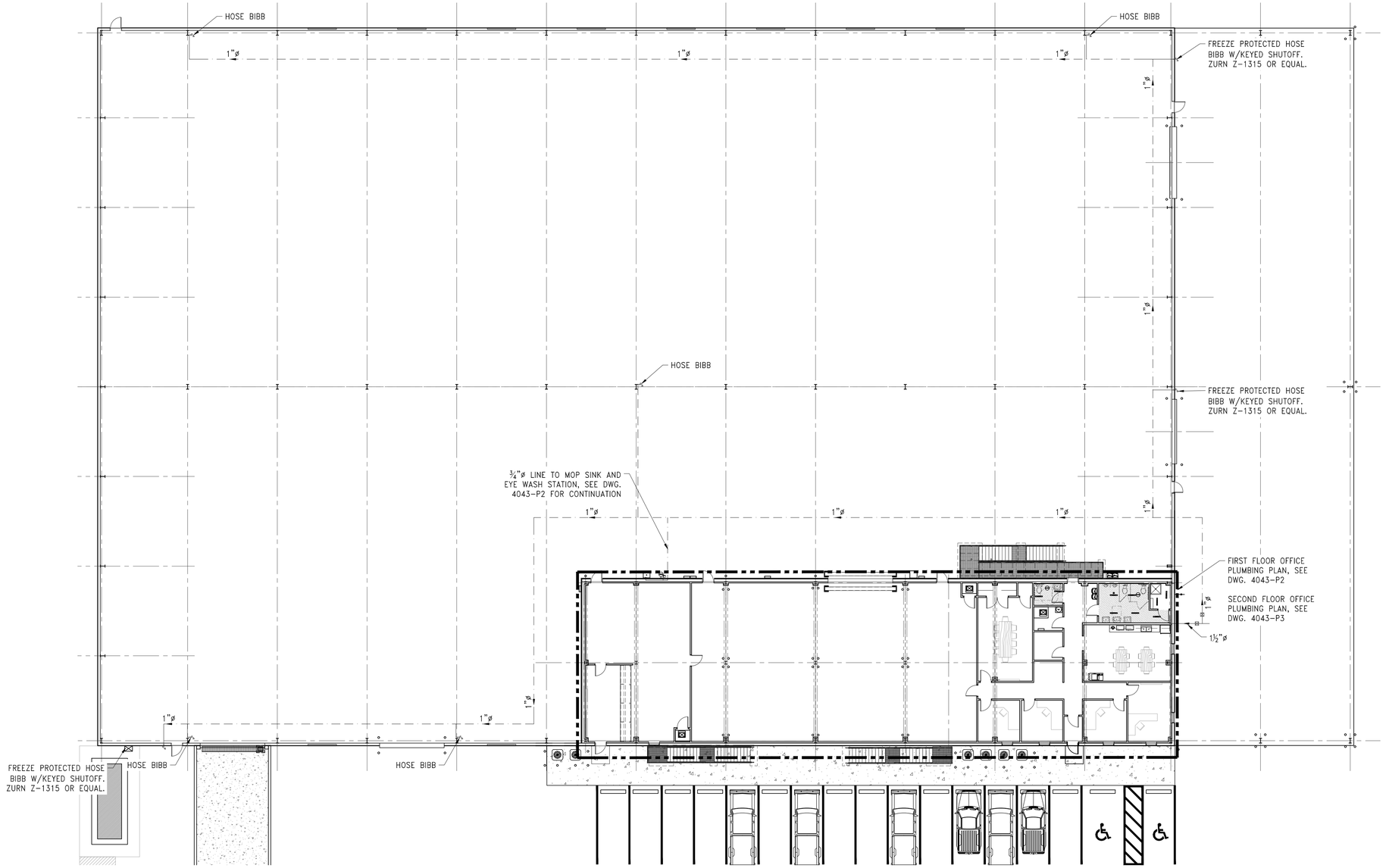
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
APCo TRANSFORMER PAD SPEC'S

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JOB NO. 4043	CHECKED BY JJM	DATE 10/01/21	DRAWING NUMBER 4043-E16	

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PLUMBING PLAN

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

COLD WATER - - - - - - - -

HOSE BIBB HOSE BIBB

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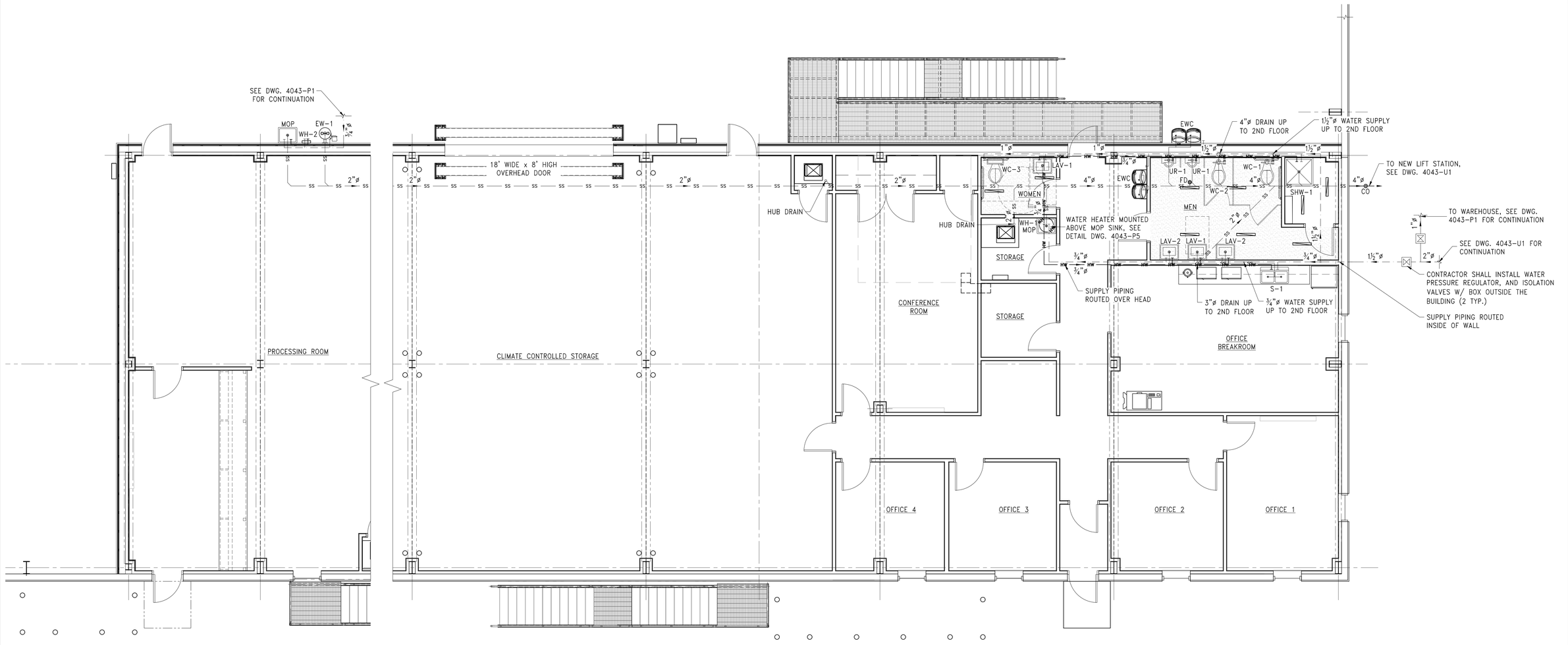
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PROJECT
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McDUFFIE TERMINAL
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TITLE
PLUMBING PLAN

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JOB NO. 4043-21	CHECKED BY JDG	DATE 12/31/21	DRAWING NUMBER 4043-P1	

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GENERAL NOTES:

1. ALL PLUMBING TO BE DONE IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE 2018.
2. WASTE PIPING TO BE 4" PVC DWV SCH.40. ALL DRAIN LINES SHALL HAVE A MINIMUM SLOPE OF ⅛" PER FT.
3. ALL COPPER EMBEDDED SHALL BE SLEEVED AND WRAPPED TO PREVENT CORROSION. NO SEAMS/JOINTS ARE PERMITTED BELOW THE SLAB.
4. CONTRACTOR WILL BE RESPONSIBLE FOR CONNECTING ALL WATER SUPPLY LINES TO NEW UTILITIES. ALL NEW UTILITIES SHALL BE WITHIN SIX FOOT OF THE BUILDING. SEE DWG. 4043-U1 FOR UTILITY LOCATIONS.
4. CONTRACTOR WILL BE RESPONSIBLE FOR CONNECTING ALL SEWER DRAIN LINES TO NEW GRINDER STATION. SEE DWG. 4043-U1 FOR NEW GRINDER STATION LOCATION. CONTRACTOR SHALL FIELD VERIFY GRAVITY FLOW TO THE NEW GRINDER PUMP PRIOR TO CONNECTION.
5. SUPPLY PIPING MAY BE ROUTED OVERHEAD. INSULATED ALL PIPING ROUTED OVER HEAD TO PREVENT FREEZING.

FIRST FLOOR OFFICE PLUMBING PLAN

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

NEW SANITARY SEWER	SS
NEW COLD WATER (CW)	
NEW HOT WATER (HW)	HW
CLEAN OUT	CO
FLOOR DRAIN	FD
HOSE BIBB	HB

FIELD VERIFY GRAVITY FLOW TO THE NEW GRINDER PUMP PRIOR TO BEGINNING WORK

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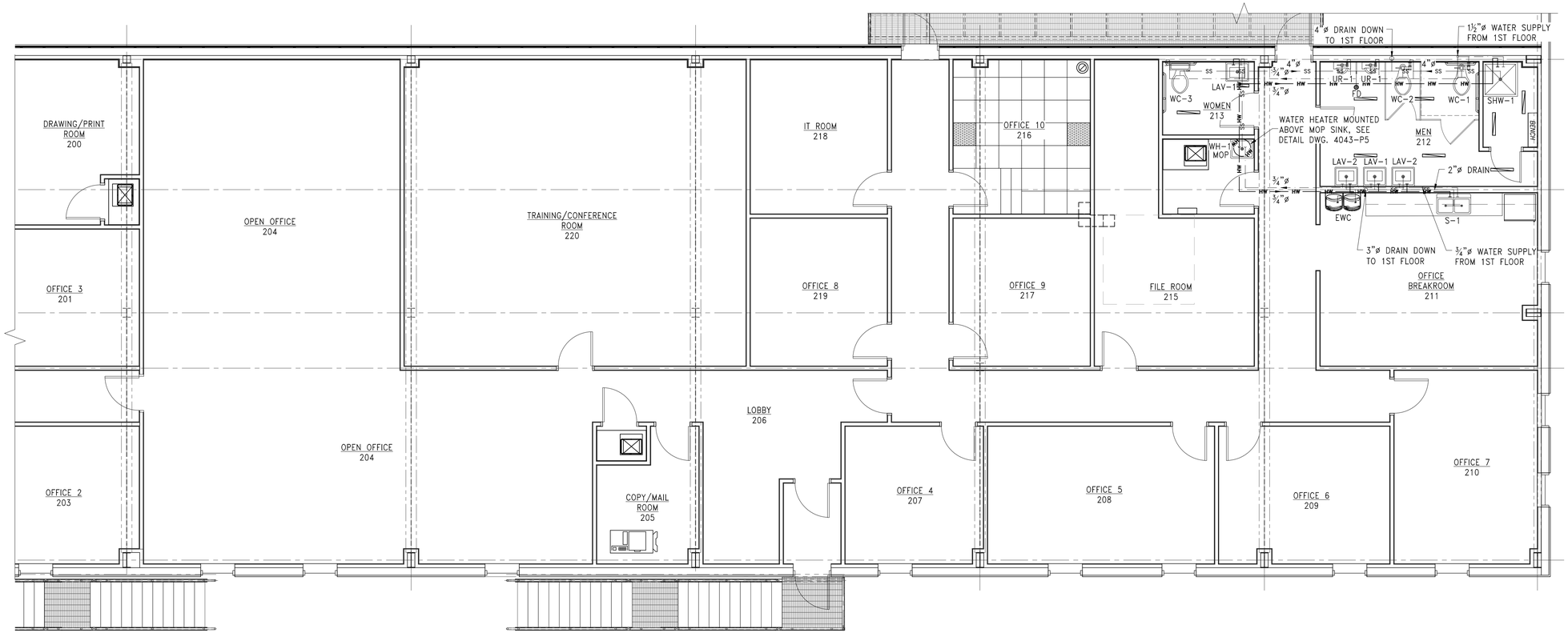
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PROJECT
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TITLE
FIRST FLOOR OFFICE PLUMBING PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
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JOB NO. 4043-21	CHECKED BY JDG	DATE 12/31/21	DRAWING NUMBER 4043-P2	

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GENERAL NOTES:

1. ALL PLUMBING TO BE DONE IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE 2018.
2. WASTE PIPING TO BE 4" PVC DWV SCH.40. ALL DRAIN LINES SHALL HAVE A MINIMUM SLOPE OF ⅛" PER FT.
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4. CONTRACTOR WILL BE RESPONSIBLE FOR CONNECTING ALL SEWER DRAIN LINES TO NEW GRINDER STATION. SEE DWG. 4043-U1 FOR NEW GRINDER STATION LOCATION. CONTRACTOR SHALL FIELD VERIFY GRAVITY FLOW TO THE NEW GRINDER PUMP PRIOR TO CONNECTION.
5. SUPPLY PIPING MAY BE ROUTED OVERHEAD. INSULATED ALL PIPING ROUTED OVER HEAD TO PREVENT FREEZING.

SECOND FLOOR OFFICE PLUMBING PLAN

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

NEW SANITARY SEWER —— SS —— SS ——
NEW COLD WATER (CW) — — — — — —
NEW HOT WATER (HW) —— HW —— HW ——
CLEAN OUT CO
FLOOR DRAIN FD

FIELD VERIFY GRAVITY FLOW TO THE NEW GRINDER PUMP PRIOR TO BEGINNING WORK

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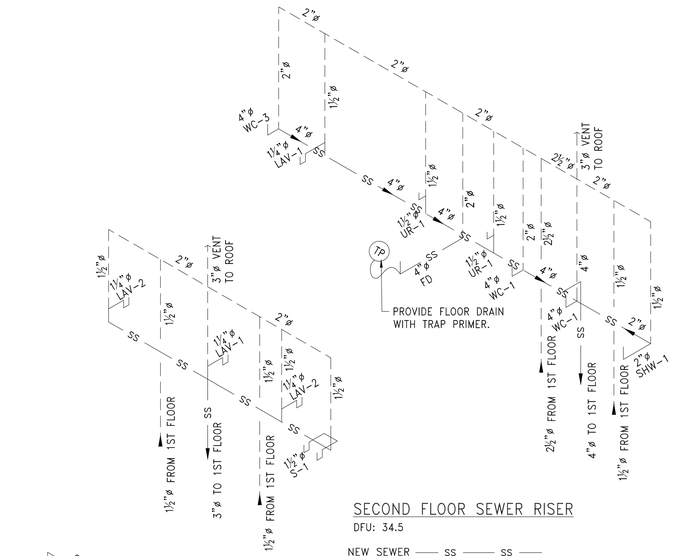
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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
SECOND FLOOR OFFICE PLUMBING PLAN

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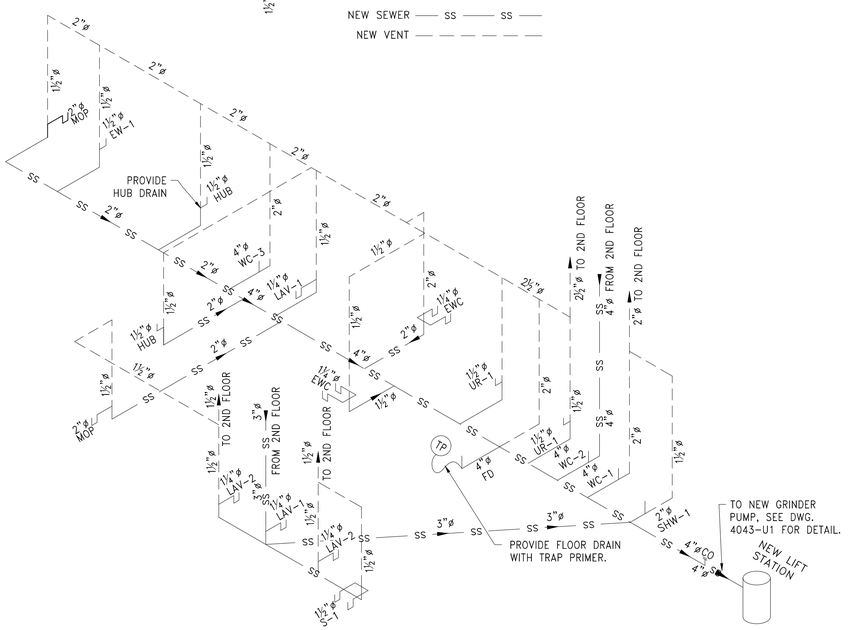


SECOND FLOOR SEWER RISER

DFU: 34.5

NEW SEWER —— SS —— SS ——

NEW VENT — — — — —

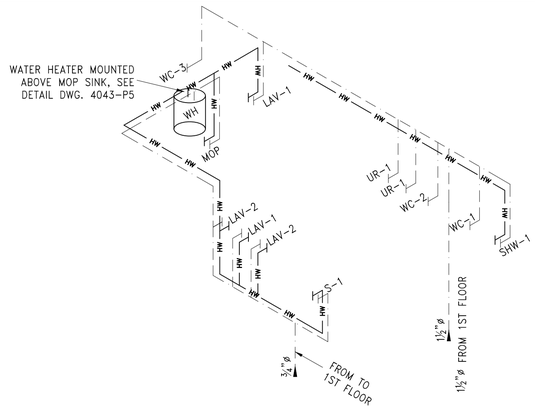


FIRST FLOOR SEWER RISER

DFU: 42.0

NEW SEWER —— SS —— SS ——

NEW VENT — — — — —

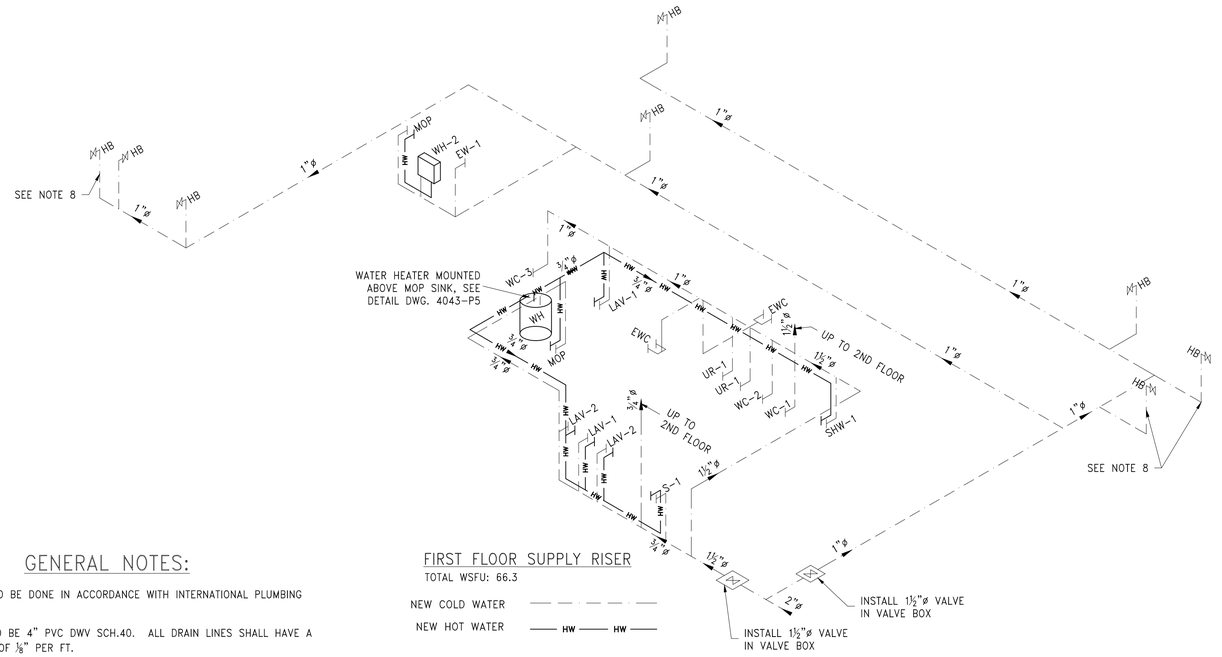


SECOND FLOOR SUPPLY RISER

TOTAL WSFU: 54.0

NEW COLD WATER — — — — —

NEW HOT WATER —— HW —— HW ——



FIRST FLOOR SUPPLY RISER

TOTAL WSFU: 66.3

NEW COLD WATER — — — — —

NEW HOT WATER —— HW —— HW ——

GENERAL NOTES:

1. ALL PLUMBING TO BE DONE IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE 2018.
2. WASTE PIPING TO BE 4" PVC DWV SCH.40. ALL DRAIN LINES SHALL HAVE A MINIMUM SLOPE OF ⅛" PER FT.
3. ALL COPPER EMBEDDED SHALL BE SLEEVED AND WRAPPED TO PREVENT CORROSION. NO SEAMS/JOINTS ARE PERMITTED BELOW THE SLAB.
4. CONTRACTOR WILL BE RESPONSIBLE FOR CONNECTING ALL WATER SUPPLY AND SEWER DRAIN LINES TO EXISTING UTILITIES.
5. CONTRACTOR SHALL FIELD VERIFY GRAVITY FLOW TO THE NEW GRINDER PUMP PRIOR TO CONNECTION.
6. SIZES SHOWN ON RISER ARE FOR MAIN LINE AND BRANCH LINES.
7. SUPPLY PIPING MAY BE ROUTED OVERHEAD. INSULATED ALL PIPING ROUTED OVER HEAD TO PREVENT FREEZING.
8. ALL HOSE BIBBS LOCATED ON THE EXTERIOR OF BUILDING SHALL BE FREEZE PROTECTED W/ KEYED SHUTOFF. ZURN Z-1315 OR EQUAL. SEE DWG. 4043-P1 FOR LOCATIONS.

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PROJECT
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TITLE
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PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	CONNECTIONS			REMARKS
		WASTE	CW	HW	
WC-1	WATER CLOSET (HANDICAPPED)	4"	1"	---	FLOOR MOUNTED, RIM HEIGHT 17", BOTTOM OUTLET, ELONGATED FRONT, 1.6 GPF FLUSHOMETER TYPE WITH OPEN FRONT SEAT, VERIFY RH/LH FLUSH, MOUNT PER ADA SPECIFICATIONS. AMERICAN STANDARD MADERA SERIES OR EQUAL.
WC-2	WATER CLOSET	4"	1"	---	FLOOR MOUNTED, RIM HEIGHT 15", BOTTOM OUTLET, ELONGATED FRONT, 1.6 GPF FLUSHOMETER TYPE WITH OPEN FRONT SEAT, VERIFY RH/LH FLUSH. AMERICAN STANDARD MADERA SERIES OR EQUAL.
WC-3	WATER CLOSET	4"	¾"	---	FLOOR MOUNTED, RIM HEIGHT 17", BOTTOM OUTLET, ELONGATED FRONT, 1.6 GPF PRESSURE-ASSISTED TOILET WITH OPEN FRONT SEAT, AND FLEXIBLE SUPPLY WITH STOP, VERIFY RH/LH FLUSH, MOUNT PER ADA SPECIFICATIONS. AMERICAN STANDARD CADET SERIES OR EQUAL.
LAV-1	LAVATORY (HANDICAPPED)	1¼"	½"	½"	VITREOUS CHINA WALL MOUNTED LAVATORY (24"x20") WITH SINGLE LEVER FAUCET W/WATTS MMV TEMPER VALVE. PROVIDE OFFSET GRID DRAIN, 1¼", 17 GA. P-TRAP, FLEXIBLE SUPPLIES AND STOPS. INSTALL PER ADA SPECIFICATIONS W/ZURN Z8946-1 GUARDS.
LAV-2	LAVATORY	1¼"	½"	½"	VITREOUS CHINA WALL MOUNTED LAVATORY (24"x20") WITH SINGLE LEVER FAUCET W/WATTS MMV TEMPER VALVE. PROVIDE OFFSET GRID DRAIN, 1¼", 17 GA. P-TRAP, FLEXIBLE SUPPLIES AND STOPS. INSTALL PER ADA SPECIFICATIONS W/ZURN Z8946-1 GUARDS.
UR-1	URINAL	2"	¾"	---	VITREOUS CHINA WALL MOUNTED URINAL, 1.0 GPF, RIM FLUSH WITH 2 WALL HANGERS, AMERICAN STANDARD W/SLOAN ROYAL FLUSH VALVE
EWC	ELECTRIC WATER COOLER	1¼"	½"	---	WALL MOUNTED DUAL HEIGHT WATER COOLER, 7.0 GPH @ 70 DEG., 115V, 60 Hz, 1ø, MOUNT FOR HANDICAPPED ACCESS, PROVIDE 1¼", 17 GA. P-TRAP. ELKAY MODEL EMABFTL8C OR EQUAL.
EW-1	EYE WASH	1¼"	½"	---	WALL MOUNTED EYE/FACE WASH UNIT. STAINLESS STEEL EYEWASH BOWL, TWIN ABS PLASTIC EYE/WASH SPRAYHEADS W/ PROTECTIVE SPRAYHEAD COVERS, BRADLEY MODEL S19-220T OR EQUAL.
MOP	MOP SINK	2"	½"	½"	REGENCY ONE COMPARTMENT FLOOR MOP SINK (20"x16"x6") WITH STRAINER, WALL MOUNTED FAUCET W/HOSE THREADED ON END OF FAUCET, TYPE 304 16 GA. STAINLESS STEEL
S-1	SINK	2"	½"	½"	TOP MOUNTED DOUBLE BOWL STAINLESS STEEL 33"x22"x7" DOUBLE LEVER FAUCET W/ WATTS MMV TEMPER VALVE. FLEXIBLE SUPPLIES AND STOPS. ELKAY CELEBRITY MODEL CR3322 OR EQUAL.
SHW-1	SHOWER	2"	½"	½"	DELTA SHOWER: BASE MODEL: B710912, ENCLOSURE MODEL: B912912. WALL MOUNTED CHROME PLATED SHOWER UNIT MODEL 132900 WITH THERMOSTATIC/PRESSURE BALANCING MIXING VALVE.

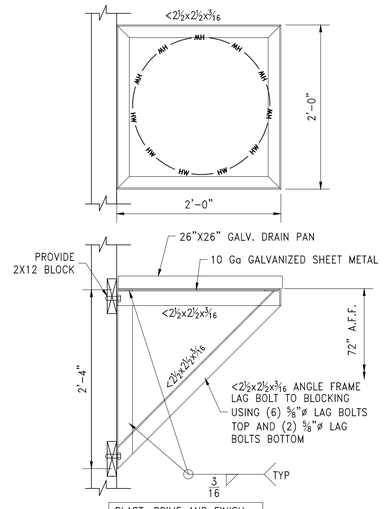
NOTES:
1. ALL PLUMBING FIXTURES SHALL BE WHITE, UNLESS INDICATED OTHERWISE.
2. INSTALL ZURN INSUL GUARD Z-8946-3 TRAP AND SUPPLY PROTECTORS ON ALL ADA MOUNTED LAVATORIES OR ENGINEER APPROVED EQUAL.
3. INSTALL WATTS MMV TEMPER VALVE CONFORMING TO ASSE 1070 ON ALL LAVATORIES AND SINKS. SET TO 109F MAX..

WATER HEATER SCHEDULE

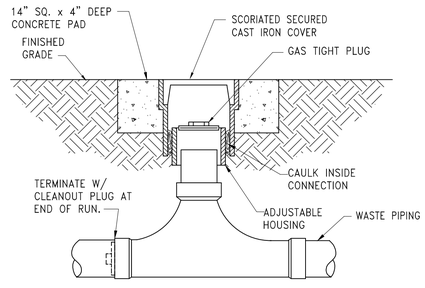
MARK WH #	CAPACITY (GALLONS)	ELECTRICAL DATA				REMARKS
		VOLTS	Hz	PHASE	KW	
WH-1	30	208	60	1	4	GLASS-LINED, FOAM INSULATED, ENERGY MISER 10 YR. TYPE, W/ T&P RELIEF VALVE, HEAT TRAP AND AUXILIARY DRAIN PAN. A.O. SMITH DURA-POWER DEL-30, SHALL MEET ASHRAE 90.1
WH-2	TANKLESS	120	60	1	3.5	GLASS-LINED, FOAM INSULATED, RHEEM RTEX-04, SHALL MEET ASHRAE 90.1

TRUCK WELL SUBMERSIBLE PUMP SCHEDULE

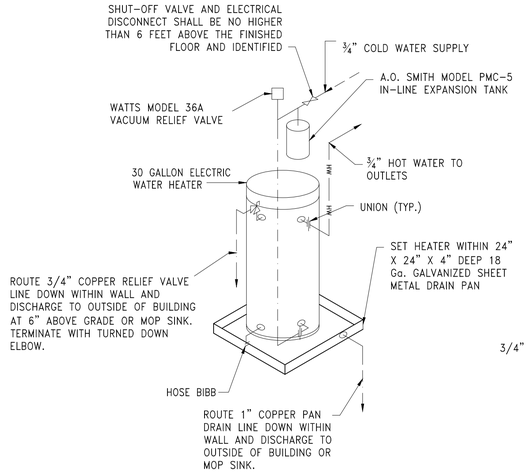
PUMP HP	PUMP QTY	CAPACITY (GPM) / TDH HEAD	ELECTRICAL DATA/PUMP			REMARKS
			VOLTS	Hz	PHASE	
1/2	1	50/15	120	60	1	LIBERTY PUMP MODEL 280 SERIES SUBMERSIBLE PUMP WITH INTEGRAL FLOAT



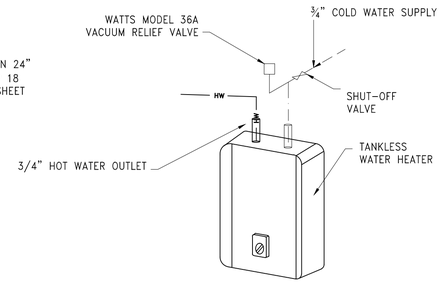
WATER HEATER SUPPORT
NTS



TWO-WAY CLEANOUT ON GRADE
NTS



WATER HEATER (WH) DETAIL
NTS



ELECTRIC TANKLESS WATER HEATER DETAIL
NTS

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PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
PLUMBING SCHEDULE AND DETAILS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MAD	12/01/21	— OF — (22x34)	A
JOB NO. 4043-21	CHECKED BY JDG	DATE 12/31/21	DRAWING NUMBER 4043-P5	

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PLUMBING SPECIFICATIONS

PART 1 GENERAL PLUMBING PROVISIONS

1.1 SCOPE OF WORK

A. THE WORK TO BE PERFORMED UNDER THIS SECTION OF THE SPECIFICATION SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, CONSTRUCTION, FACILITIES, AND INCIDENTALS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL PLUMBING WORK AS SHOWN AND INDICATED ON THE CONTRACT DRAWINGS, AND/OR SPECIFIED HEREIN WITH THE INTENT THAT THE INSTALLATION SHALL BE COMPLETE IN EVERY RESPECT AND READY FOR USE.

1.2 GUARANTEE

A. ALL MATERIALS AND EQUIPMENT PROVIDED AND/OR INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR AND MATERIALS TO CORRECT THE TROUBLE WITHOUT ANY COST TO THE OWNER.

1.3 CODES AND REGULATIONS

A. ALL WORK PERFORMED UNDER THIS SECTION SHALL CONFORM WITH ALL LOCAL GOVERNING REGULATIONS, AND IN CASE OF CONFLICTING REQUIREMENTS, THE MOST STRINGENT SHALL APPLY. MINIMUM REQUIREMENTS SHALL BE THE INTERNATIONAL PLUMBING CODE AS PUBLISHED BY THE INTERNATIONAL CODE COUNCIL (ICC). ALL ELECTRICALLY OPERATED EQUIPMENT SPECIFIED IN THIS SECTION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE 2017.

B. SHOULD IT BE FOUND THAT ANY PART OF THE WORK SHOWN OR SPECIFIED IS NOT IN ACCORDANCE WITH LOCAL REGULATIONS, THE ARCHITECT SHALL BE SO ADVISED AT THE TIME OF BIDDING AND ALL WORK INSTALLED AS REQUIRED TO MEET THE LOCAL CODES.

C. THE CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS OF ALL COUNTY, DISTRICT, MUNICIPAL, OR LOCAL BUILDING CODES, INTERPRETATIONS, BUILDINGS PERMITS TO INCLUDE BUT NOT BE LIMITED TO:

1. INTERNATIONAL BUILDING CODE – 2018
2. INTERNATIONAL MECHANICAL CODE – 2018
3. INTERNATIONAL PLUMBING CODE – 2018
4. INTERNATIONAL ENERGY CONSERVATION CODE – 2018
5. LOCAL MUNICIPAL CODES

1.4 FEES AND PERMITS

A. THE PLUMBING SUBCONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES FOR INSPECTION, AND OTHER CHARGES THAT MAY BE NECESSARY FOR FULLY COMPLETING THE WORK. THE PLUMBING SUBCONTRACTOR SHALL MAKE ALL NECESSARY TESTS REQUIRED BY CITY, COUNTY, OR STATE AUTHORITIES, LEGAL REGULATIONS, AND/OR THE ENGINEER, AND RETURN TO THE ENGINEER ANY CERTIFICATES OF APPROVAL ISSUED IN THIS DISTRICT FOR PLUMBING WORK, ETC. SIGNED BY THE INSPECTOR IN CHARGE OF EACH PARTICULAR PART OF THE WORK.

1.5 RESPONSIBILITY OF BIDDER

A. EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT HIMSELF WITH CONDITIONS RELATING TO THE CONSTRUCTION REQUIREMENTS SO THAT HE MAY FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS CONTINGENT UPON THE EXECUTION OF THE WORK UNDER THIS CONTRACT. THIS INCLUDES THE VERIFICATION OF GRAVITY FLOW FROM THE NEW PLUMBING SYSTEM TO THE NEW GRINDER SYSTEM PRIOR TO STARTING CONSTRUCTION. THE FAILURE OR OMISSION OF ANY BIDDER TO RECEIVE OR EXAMINE ANY FORM, INSTRUMENT, ADDENDUM OR OTHER DOCUMENT SHALL IN NO WAY RELIEVE ANY BIDDER FROM HIS OBLIGATIONS WITH RESPECT TO HIS BID OR THE CONTRACT. THE SUBMISSION OF A BID SHALL BE TAKEN AS PRIMA FACIA EVIDENCE OF COMPLIANCE WITH THIS PARAGRAPH AND THAT HE HAS INCLUDED IN HIS PROPOSAL EVERY ITEM OF COST NECESSARY FOR A COMPLETE INSTALLATION OF THE PLUMBING SYSTEM OPERATIONS STRICTLY AS PLANNED, SPECIFIED, AND INTENDED.

1.6 PIPING

A. PROVIDE PIPE SLEEVES THROUGH MASONRY CONSTRUCTION, AND INSTALL ESCUTCHEON PLATES AROUND EXPOSED PIPING IN ALL ROOMS.

B. SOIL, WASTE AND VENT LINES SHALL BE SCHEDULE 40 PVC-DWV IN ACCORDANCE WITH COMMERCIAL STANDARDS CS272-65 OR ASTM STANDARDS D2665-68. SOIL, WASTE, AND VENT LINES PENETRATING A FIRE RATED WALL OR FLOOR SHALL BE SERVICE WEIGHT CAST IRON AT THE POINT OF PENETRATION ONLY.

C. ALL PLASTIC PIPE SHALL BEAR THE NSF SEAL OF APPROVAL, AND SUCH OTHER MARKINGS AS REQUIRED BY THE AFOREMENTIONED STANDARDS.

D. ABOVE SLAB COLD WATER AND HOT WATER PIPING SHALL BE TYPE "L" HARD COPPER WITH SWEATED JOINTS, USING WROUGHT FITTINGS AND NON-CORROSIVE FLUX. BELOW SLAB COLD WATER PIPING SHALL BE TYPE "K" SOFT COPPER TUBING.

E. OPENINGS AND PENETRATIONS IN THE BUILDING ENVELOPE SHALL BE SEALED WITH CAULKING MATERIALS OR CLOSED WITH GASKETING SYSTEMS COMPATIBLE WITH THE CONSTRUCTION MATERIALS AND LOCATION TO ALLOW EXPANSION/ CONTRACTION TO INSURE THE BUILDING ENVELOPE IS SEALED IN ACCORDANCE WITH IECC 502.4.3.

1.7 PIPE SUPPORT

A. HANGERS: SUPPORT ALL SUSPENDED PIPING WITH CLEVIS TYPE HANGERS EQUAL TO GRINNELL #260, 4'-0" O.C. ARCHITECT SHALL APPROVE ALL METHODS OF ATTACHMENT OF HANGERS TO CONSTRUCTION. HANGERS IN CONTACT WITH COPPER PIPING SHALL BE COPPER, OR COPPER PLATED.

B. VERTICAL SUPPORT: STEEL BAR BASE CLAMPED TO PIPE OR GRIP STRUT CHANNEL WITH OFFSET CLAMPS. SUPPORT MEMBERS TO BE OF SAME MATERIAL AS SUPPORTED MATERIAL WHERE POSSIBLE.

1.8 PIPING PLACEMENT

A. PLACE IN MOST DIRECT MANNER PERMITTED BY CONSTRUCTION, FREE OF UNNECESSARY OFFSETS. CHANGES IN DIRECTION BY MEANS OF STANDARD FITTINGS.

B. GRADE 2" WASTE LINES 1/4" PER FOOT AND 3" AND 4" WASTE LINES 1/8" PER FOOT FOR POSITIVE FLOW. SECURE ALL PIPING TO STRUCTURE.

C. SOIL PIPE: SUPPORT TO FIRM EARTH BELOW FLOOR SLABS.

1. CHANGES IN DIRECTION OF DRAINAGE PIPE SHALL BE MADE BY MEANS OF SUITABLE BENDS AND BRANCHES OF Y'S AND LONG SWEEPS. SHORT RADIUS QUARTER BENDS ARE PROHIBITED.

2. CONNECTIONS TO VERTICAL SOIL PIPE TO ALL CONNECTIONS IN HORIZONTAL SOIL PIPE TO BE MADE BY "Y" FITTINGS.

D. VENT PIPES:

1. MAIN SOIL PIPE STACKS TO BE EXTENDED UP THROUGH THE BUILDING FULL SIZE WITH INCREASER THROUGH ROOF PER CODE.

2. CONNECT BRANCH VENTS INTO MAIN STACKS WITH CONNECTIONS NOT LESS THAN 4 FEET ABOVE THE HIGHEST FIXTURE.

3. ALL VENT STACKS SHALL BE CONNECTED AT THE BOTTOM TO MAIN DRAINAGE SYSTEM AND ALL HORIZONTAL RUNS SHALL BE GRADED SO AS TO DISCHARGE ALL WATER OR CONDENSATION.

E. WATER PIPING: PLACE SUPPLY PIPES AS SHOWN OR AS DIRECTED IN NEAT ARRANGEMENT AND PARALLEL OR AT RIGHT ANGLES TO WALLS, JOISTS, ETC.

1. PLACE AIR CHAMBER EXTENSIONS 12" LONG ON TOP OF ALL RISERS AND ONE PIPE SIZE LARGER THAN THE RISER.

2. PLACE SHOCK ABSORBERS AT EACH FIXTURE GROUP AS RECOMMENDED BY MANUFACTURER. SHOCK ABSORBERS SHALL BE PDI CERTIFIED.

3. PLACE VALVES ON ALL WATER PIPE RISERS AND BRANCH LINES AT POINT WHERE RISERS AND BRANCH LINES CONNECT TO MAIN WATER LINES.

PART 2 PRODUCTS

2.1 WATER PIPING

A. ALL WATER PIPING, UNLESS OTHERWISE SHOWN OR SPECIFIED SHALL BE COPPER PIPE TYPE L OR K AS SPECIFIED HAVING A WALL THICKNESS OF NOT LESS THAN .035 INCHES. IT SHALL BE CLEAN, ROUND, STRAIGHT, AND TRUE TO SIZE, FREE FROM FLAWS AND OTHER DEFECTS.

B. ALL FITTINGS ON COPPER PIPE SHALL BE COPPER. THE PIPE AND FITTINGS SHALL BE THOROUGHLY CLEANED BEFORE INSERTING INTO THE JOINT AND THEN SOLDERED WITH LEAD FREE SOLDER.

2.2 GAS PIPING (NOT IN CONTRACT)

A. ALL PIPING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL ASTM 120. FITTINGS SHALL BE 150 POUND BLACK MALLEABLE SCREW PATTERN FOR ALL SIZES 2" AND SMALLER.

B. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH NFPA RECOMMENDATIONS AND THE INTERNATIONAL FUEL GAS CODE COMPLETE WITH ALL NECESSARY APPURTENANCES.

C. HORIZONTAL PIPING SHALL GRADE WITH A SLOPE OF 1" ON 40 FEET-0" TO DRIP LEGS AT ALL LOW POINTS AS REQUIRED. DRIPS SHALL BE PROVIDED AT ALL LOW POINTS AND AT BOTTOM OF RISERS. DRIPS SHALL BE SAME SIZE AS THE PIPING WHERE INSTALLED AND SHALL BE A MINIMUM OF 12" LONG.

D. USE GROUND JOINT UNIONS IN ALL SCREW PIPING JOINTS.

2.3 UNIONS

A. UNIONS SHALL BE PROVIDED ON INLET AND OUTLET OF ALL APPARATUS AND EQUIPMENT. WHERE VALVES ARE ADJACENT TO EQUIPMENT, UNIONS SHALL BE ON DOWNSTREAM SIDE OF VALVES.

B. UNIONS IN COPPER PIPE SHALL BE CAST BRONZE, WOG PATTERN, GROUND JOINT, 150 PSI TYPE.

C. UNIONS IN STEEL PIPE SHALL BE MALLEABLE IRON, WOG FEMALE PATTERN BRASS SEAT, GROUND JOINT, 150 PSI TYPE.

D. UNIONS CONNECTING DISSIMILAR METALS SHALL BE DIELECTRIC TYPE.

2.4 VALVES AND COCKS

A. VALVES AND COCKS SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS, AND/OR WHERE FOUND TO BE NECESSARY FOR PROPER OPERATION OF THE SYSTEM. ALL BRANCHES FROM RISERS, ALL BRANCHES FROM MAINS, AND ALL FIXTURES OR EQUIPMENT NOT HAVING STOPS SHALL BE PROVIDED WITH VALVES WHETHER SHOWN OR NOT.

B. ANGLE OR STRAIGHTWAY CHROMIUM PLATED STOPS ON THE SUPPLIES TO ALL FIXTURES ACCESSIBLE FROM THE SAME ROOM IN WHICH THE FIXTURES ARE LOCATED.

C. ALL VALVES SHALL BE THE PRODUCT OF ONE MANUFACTURER AS CATALOGED BY MILWAUKEE, STOCKHAM, CRANE, OR NIBCO.

D. FOR WATER PIPING, VALVES SHALL BE EQUAL TO 125 PSI SWP/200 PSI WOG NIBCO AS FOLLOWS:
1. GATE VALVES 1/2" TO 3" = S-111.
2. BALL VALVES 1/2" TO 2" = S-585.
3. CHECK VALVES 1/2" TO 3" = S-413W.

2.5 WALL HYDRANTS

A. WALL HYDRANTS SHALL BE BOX TYPE, 1/2", FREEZE PROOF, KEYED WITH NICKEL BRONZE FACE PLATE AND VACUUM BREAKER. MOUNT FLUSH WITH WALL. WALL HYDRANT SHALL BE EQUAL TO ZURN Z-1321.

2.6 THERMAL INSULATION WORK

A. ALL INSULATION WORK SHALL BE PERFORMED BY EXPERIENCED INSULATION APPLICATION MECHANICS THOROUGHLY FAMILIAR WITH AND EXPERIENCED IN THE APPLICATION OF INSULATION MATERIALS. ALL INSULATION MATERIALS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDED METHODS. INSTALLATION AND FINISH OF INSULATION MATERIALS SHALL MEET WITH COMPLETE DATA FOR APPROVAL OF MATERIALS AND APPLICATION METHODS AS PROPOSED FOR USE. ALL PIPING SHALL BE PRESSURE TESTED AND ALL SURFACES SHALL BE THOROUGHLY CLEANED BEFORE COVERING IN APPLIED. INSULATION MATERIALS, INCLUDING SEALER, ADHESIVE, FINISHED, ETC., SHALL MEET NFPA STANDARDS WITH REGARD TO FLAME SPREAD AND SUPPORT OF COMBUSTION.

B. COLD WATER PIPING SHALL BE COVERED WITH 1" THICK HEAVY DENSITY FIBERGLASS SECTIONAL PIPE INSULATION EQUAL TO OWENS CORNING FIBERGLASS 25 ASJ/SSL, EXCLUDING PIPING BELOW GRADE OR CHROMIUM PLATED FIXTURE CONNECTIONS.

C. HOT WATER PIPING SHALL BE COVERED WITH HEAVY DENSITY FIBERGLASS SECTIONAL PIPE INSULATION EQUAL TO OWENS CORNING FIBERGLASS 25 ASJ/SSL AS FOLLOWS:
1. PIPE SIZES 1" TO <1-1/2"= 1" THICK.
2. PIPE SIZES 1-1/2" TO <4" = 1-1/2" THICK.

D. FITTINGS FOR THE ABOVE SHALL BE INSULATED WITH PREMOLDED FITTING INSULATION OF THE SAME MATERIAL AND THICKNESS AS THE ADJACENT INSULATION AND SHALL BE COVERED WITH A PREMOLDED PLASTIC (PVC) VAPOR BARRIER AND SEALED WITH VAPOR BARRIER LAGGING ADHESIVE. COVERING ADJACENT TO UNIONS AND OTHER POINTS OF TERMINATION SHALL BE FINISHED WITH THE PLASTIC MATERIAL NEATLY BEVELED.

E. IT SHALL BE THE RESPONSIBILITY OF THE INSULATION SUBCONTRACTOR TO COORDINATE HANGER LOCATIONS AND PREVENT CRUSHING OR BREAKING FINISHES.

F. CONTRACTOR SHALL INSULATE WATER SUPPLY ASSEMBLIES AND P-TRAP ASSEMBLY WITH ARMAFLEX 3/8" FOAM INSULATION KIT ON HANDICAPPED LAVATORIES.

2.7 FLOOR, WALL, AND CEILING PLATES

A. NICKEL PLATED FLOOR, WALL, AND CEILING PLATES SHALL BE PROVIDED ON ALL PIPES PASSING THROUGH FLOOR, CEILING, OR PARTITION. NICKEL OR CHROMIUM PLATED ESCUTCHEONS SHALL BE PROVIDED ON ALL FIXTURE SUPPLIES.

2.8 PLUMBING FIXTURES AND EQUIPMENT

A. PROVIDE ROUGHING-IN FOR AND CONNECT TO SUPPLY LINES, WASTE AND VENT LINES, ALL EQUIPMENT, FIXTURES, DRAINS, ETC., SPECIFIED HEREIN OR IN OTHER SECTIONS OF THE SPECIFICATIONS WHICH REQUIRE SUCH CONNECTIONS.

B. PROVIDE STOPS IN HOT AND COLD WATER CONNECTIONS TO EACH FIXTURE, EQUIPMENT ITEMS, ETC. WHERE NOT OTHERWISE SPECIFIED, STOPS SHALL BE SAME AS SPECIFIED HEREIN BEFORE FOR BALL VALVES. PROVIDE DEEP ESCUTCHEON ON ALL SINKS AND LAVATORIES WHERE WASTE PIPE GOES INTO WALL. ANCHOR ALL SUPPLIES FROM WALL SECURELY WITHIN WALL CONSTRUCTION.

C. PROVIDE STOPS FOR ALL FIXTURES. TRAPS FOR ALL FIXTURES SHALL BE 17-GAUGE CHROMIUM PLATED BRASS.

D. PLUMBING FIXTURES SHALL BE EQUAL TO AMERICAN STANDARD, CRANE OR KOHLER. NO OTHERS WILL BE ACCEPTED.

2.9 CLEANOUTS

A. PROVIDE IN CAST IRON SANITARY PIPING AT ALL CHANGES IN DIRECTION AT ENDS OF BRANCHES, AT INTERVALS NOT EXCEEDING 40' ON STRAIGHT RUNS, AND ELSEWHERE AS SHOWN. CLEANOUTS SHALL BE FULL OPENING TYPE COMPLETELY ACCESSIBLE. SIZE SAME AS LINES IN WHICH THEY OCCUR, BUT NOT LARGER THAN 4". TEES AND EXTENSIONS SHALL BE OF SAME WEIGHT AS PIPE. PLUGS SHALL BE COUNTERSUNK TYPE. CATALOG NUMBERS FROM JOSAM OR APPROVED EQUAL.

B. OUTSIDE CLEANOUTS TO GRADE SHALL BE BROUGHT UP FLUSH WITH FINISHED GRADE AND INSTALLED IN 14" X 14" X 4" CONCRETE PAD, CLEANOUT PLUG SHALL BE COUNTERSUNK.

C. IN TILE FLOORS: 56030-2, ADJUSTABLE, CAST IRON BODY WITH CADMIUM PLUG AND SATIN FINISHED SQUARE SCORIATED NIKALOY TOP; WHERE SOFT TILE OCCURS, PROVIDE 56030-12-2 RECESSED SQUARE NIKALOY COVER.

D. IN CONCRETE FLOORS: 58190, ADJUSTABLE HEAD, CAST IRON HEAD AND FERRULE WITH CADMIUM PLUG, ROUND LOOSE SET SCORIATED TRACTOR COVER.

E. IN OUTSIDE LINE: 58190 CAST IRON HEAD AND FERRULE WITH CADMIUM PLUG. TERMINATE AT GRADE OR PAVEMENT IN 14" X 14" X 4" CONCRETE PAD WITH TOOLED EDGES.

PART 3 EXECUTION

3.1 COMPLETION OF WORK

A. THIS CONTRACTOR SHALL ARRANGE FOR THE INSTALLATION OF ALL EQUIPMENT IN ORDER THAT IT PROGRESSES ALONG WITH THE GENERAL CONSTRUCTION OF THE BUILDING, AND IN NO CASE SHALL BE HOLD UP OTHER PHASES OF THE WORK DUE TO THE FACT HIS EQUIPMENT IS NOT PROPERLY INSTALLED.

3.2 TESTING

A. GENERAL: PERFORM ALL TESTS IN THE PRESENCE OF THE ARCHITECT OR HIS REPRESENTATIVE. TEST SHALL CONFORM TO LOCAL CODE REQUIREMENTS. FILE COPIES OF ALL TEST REPORTS IN DUPLICATE TO PHYSICAL PLANT.

B. SOIL, WASTE, AND VENT SYSTEMS: PLUG ALL OPENINGS, FILL ENTIRE SYSTEM WITH WATER TO POINT OF OVERFLOW AND HOLD FOR AT LEAST ONE HOUR BEFORE INSPECTION. SYSTEM MUST REMAIN FULL DURING THE TEST WITHOUT LEAKAGE. EACH VERTICAL STACK WITH ITS BRANCHES MAY BE TESTED SEPARATELY, BUT ANY PORTION TESTED MUST HAVE A 10' HEAD. PROVIDE TEST TEES AND PLUGS FOR ALL TESTS AS REQUIRED.

C. WATER SUPPLY SYSTEM: TEST AND SECURE ACCEPTANCE OF ENTIRE SYSTEM BEFORE THE PIPING OR HOT WATER HEATERS ARE OTHERWISE CONCEALED. TEST AS FOLLOWS: DISCONNECT AND CAP ALL OUTLETS TO PLUMBING FIXTURES AND ALL OTHER EQUIPMENT NOT DESIGNED FOR THE FULL TEST PRESSURE. FILL THE SYSTEM WITH WATER; APPLY 150 PSI HYDROSTATIC PRESSURE AND HOLD UNTIL INSPECTION IS COMPLETED. ALL PIPING THROUGHOUT SHALL BE TIGHT UNDER TEST. WATER PIPING SHALL REMAIN UNDER NORMAL WATER PRESSURE DURING CONSTRUCTION WHERE FREEZING CONDITIONS DO NOT EXIST.

3.3 DISAFFECTION

A. DISINFECT ALL DOMESTIC WATER PIPING IN ACCORDANCE WITH LOCAL HEALTH DEPARTMENT GUIDELINES.

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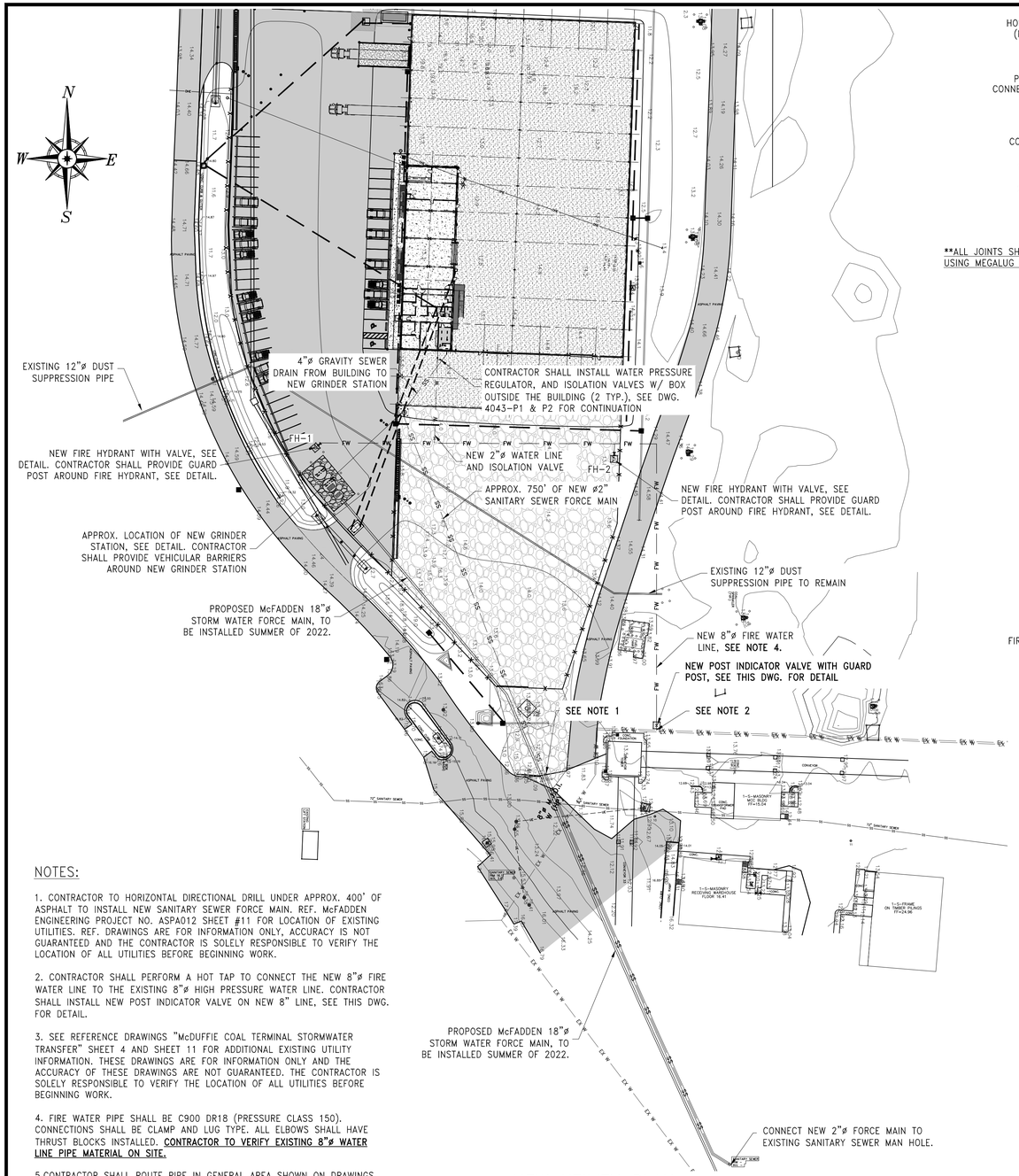
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
PLUMBING SPECIFICATIONS

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MAD	12/01/21	– OF –	A
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4043-21	JDG	12/31/21	4043-P6	

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NEW UTILITY PLAN

1"=60'

NEW FIRE PROTECTION WATER —— FW —— FW —— FW ——
NEW SANITARY SEWER —— SS —— SS —— SS ——
NEW WATER —— W —— W —— W ——
EXISTING WATER LINE —— EX W —— EX W —— EX W ——

NOTES:

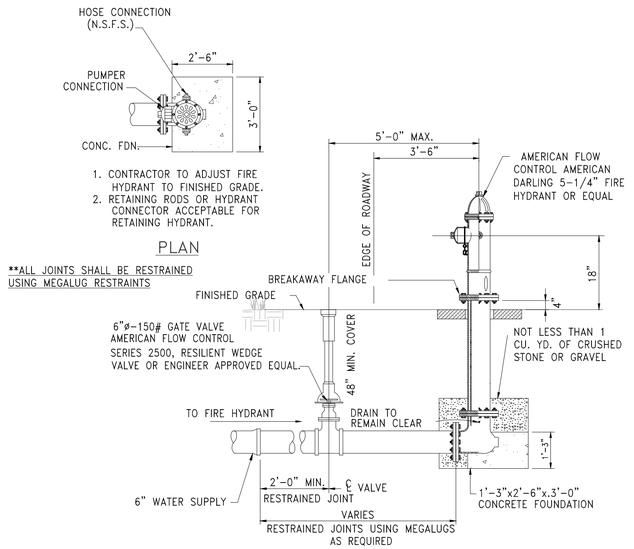
1. CONTRACTOR TO HORIZONTAL DIRECTIONAL DRILL UNDER APPROX. 400' OF ASPHALT TO INSTALL NEW SANITARY SEWER FORCE MAIN. REF. McFADDEN ENGINEERING PROJECT NO. ASPA012 SHEET #11 FOR LOCATION OF EXISTING UTILITIES. REF. DRAWINGS ARE FOR INFORMATION ONLY, ACCURACY IS NOT GUARANTEED AND THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

2. CONTRACTOR SHALL PERFORM A HOT TAP TO CONNECT THE NEW 8"ø FIRE WATER LINE TO THE EXISTING 8"ø HIGH PRESSURE WATER LINE. CONTRACTOR SHALL INSTALL NEW POST INDICATOR VALVE ON NEW 8" LINE, SEE THIS DWG. FOR DETAIL.

3. SEE REFERENCE DRAWINGS "McDUFFIE COAL TERMINAL STORMWATER TRANSFER" SHEET 4 AND SHEET 11 FOR ADDITIONAL EXISTING UTILITY INFORMATION. THESE DRAWINGS ARE FOR INFORMATION ONLY AND THE ACCURACY OF THESE DRAWINGS ARE NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING WORK.

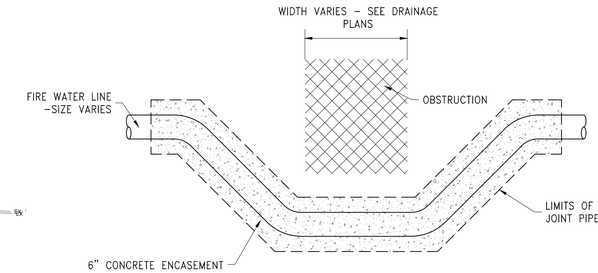
4. FIRE WATER PIPE SHALL BE C900 DR18 (PRESSURE CLASS 150). CONNECTIONS SHALL BE CLAMP AND LUG TYPE. ALL ELBOWS SHALL HAVE THRUST BLOCKS INSTALLED. **CONTRACTOR TO VERIFY EXISTING 8"ø WATER LINE PIPE MATERIAL ON SITE.**

5.CONTRACTOR SHALL ROUTE PIPE IN GENERAL AREA SHOWN ON DRAWINGS. SOME MODIFICATION TO ROUTING MAY BE REQUIRED BASED ON UNKNOWN OBSTACLES AND OBSTRUCTIONS



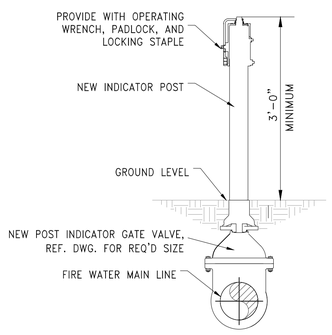
TYPICAL FIRE HYDRANT INSTALLATION

N.T.S.



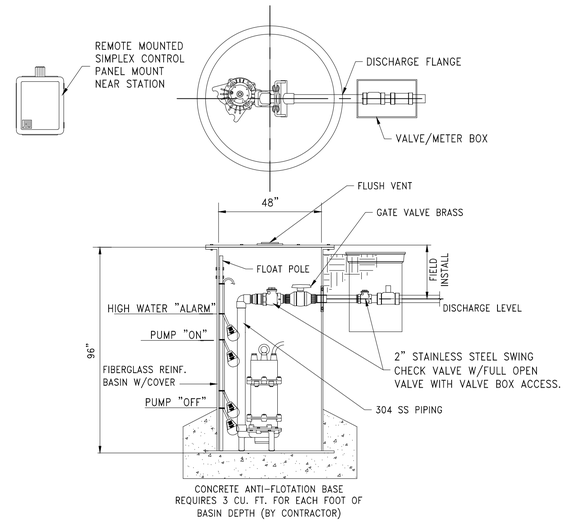
TYPICAL PRESSURE MAIN PIPE DIP

N.T.S.



TYP. POST INDICATOR VALVE DETAIL

N.T.S.

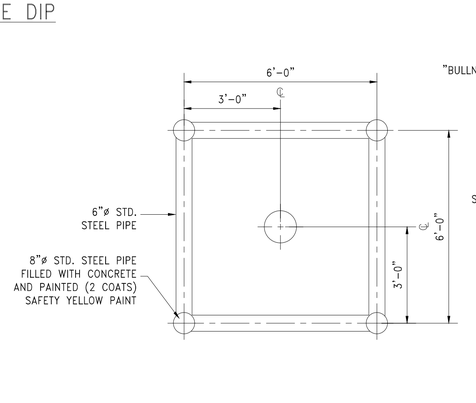


SIMPLEX GRINDER STATION DETAIL

NTS

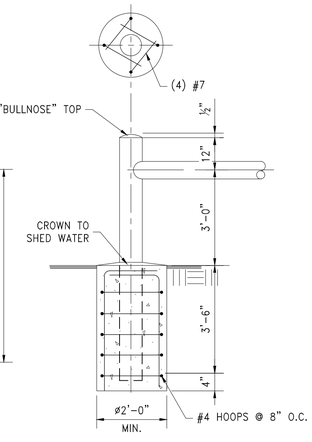
GRINDER STATION SCHEDULE

PUMP HP	PUMP QTY	CAPACITY (GPM) / TDH HEAD	ELECTRICAL DATA/PUMP VOLTS	Hz	PHASE	REMARKS
5	1	65/95	208	60	1	KEEN PUMP MODEL KHG5-5.75" GRINDER PUMP STATION WITH ALUMINUM HATCH COVER, NEMA 4X FRP ENCLOSURE, & MOTOR STARTER. CONTACT MATT PERRY W/ J.H. WRIGHT (251) 300-6356



GUARD POST DETAIL

N.T.S.



UTILITY SITE NOTE:

SITE CONTRACTOR SHALL CONTACT ALABAMA 1 CALL AND HAVE ALL EXISTING UTILITIES LOCATED PRIOR TO EXCAVATION. ALL UTILITIES TO SERVE BUILDING SHALL BE COORDINATED WITH OWNER AND RESPECTIVE UTILITY COMPANY PRIOR TO COMMENCEMENT OF SITE WORK.

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CONFIDENTIAL, VALUABLE, AND PROPRIETARY INFORMATION

REV.	DESCRIPTION	DATE	BY	CHK'D
A	ISSUE FOR BID	07/31/22	JWM	JDG

457 St. Michael St.
Mobile, AL 36602
Phone (251) 433-1611
Fax (251) 433-1411

Cowles, Murphy, Glover & ASSOCIATES
A Full Service Engineering Firm
PERFORMANCE • RELIABILITY • EXPERIENCE

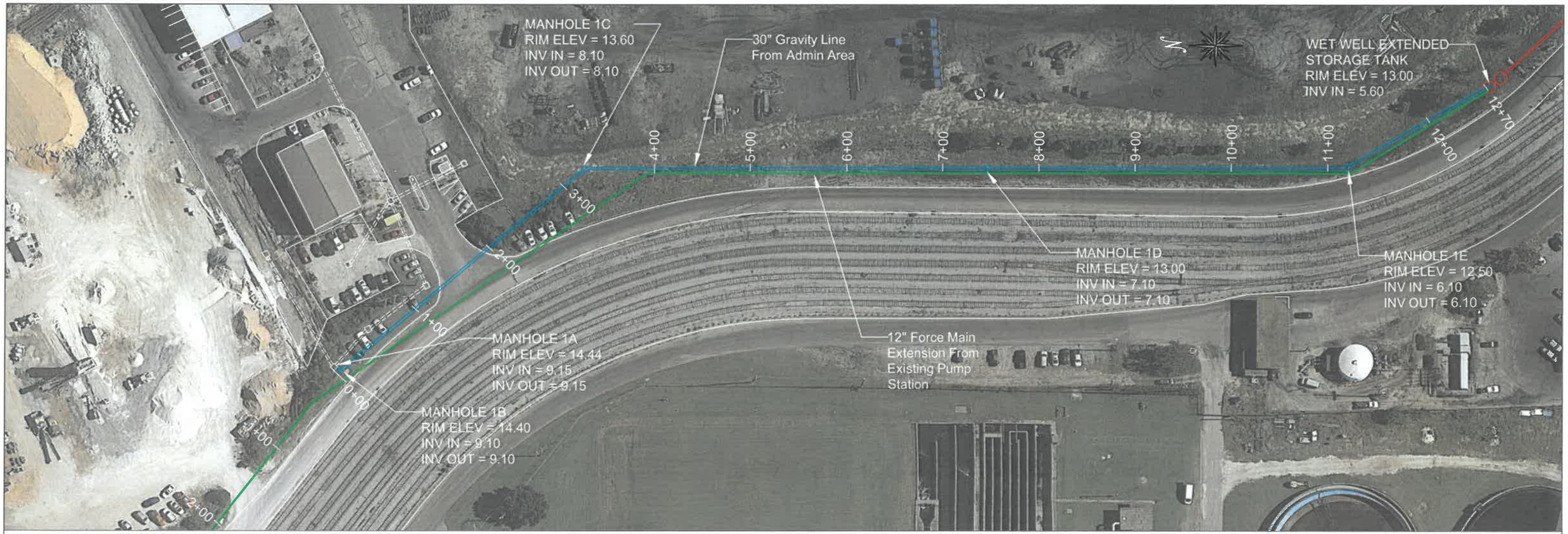
13 Thrash Rd.
LaGrange, GA 30241
Phone (706) 302-2831
Fax (251) 433-1411

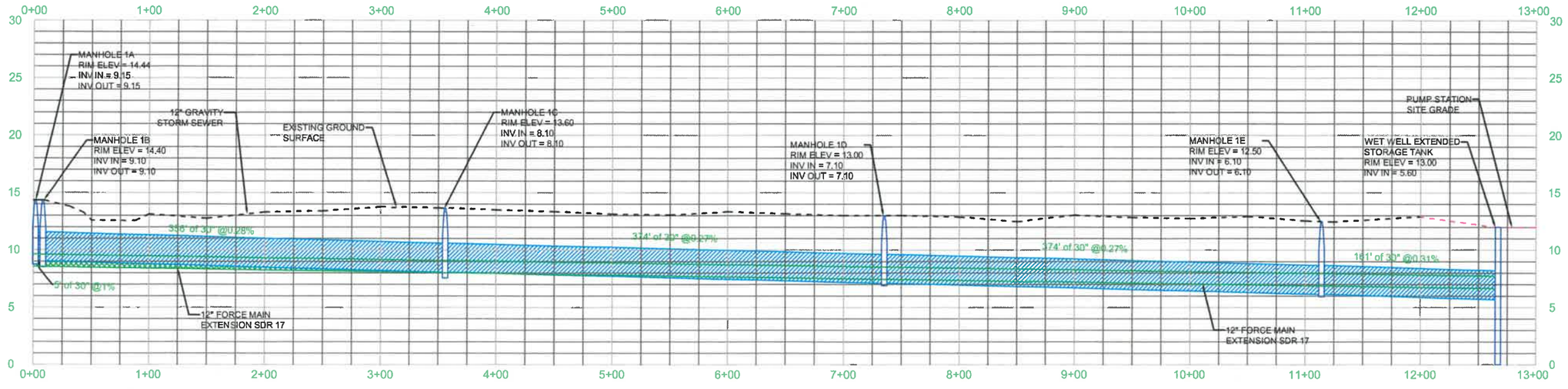
PROJECT
McDUFFIE WAREHOUSE
McDUFFIE TERMINAL
ASPA

TITLE
UTILITY PLAN

SCALE	DRAWN BY	DATE	SHEET	REV.
NOTED	MD	12/21/21	— OF —	A
JOB NO. 4043-21	CHECKED BY JDG	DATE 2/2/22	DRAWING NUMBER 4043-U1	

Z:\4000-4099\4043-ASPA McDuffie Warehouse\Design\4043-U1.dwg, 8/9/2022 5:04:07 PM, DWG To PDF.pc3, 1:1





REVISION:	DESCRIPTION:	DATE:

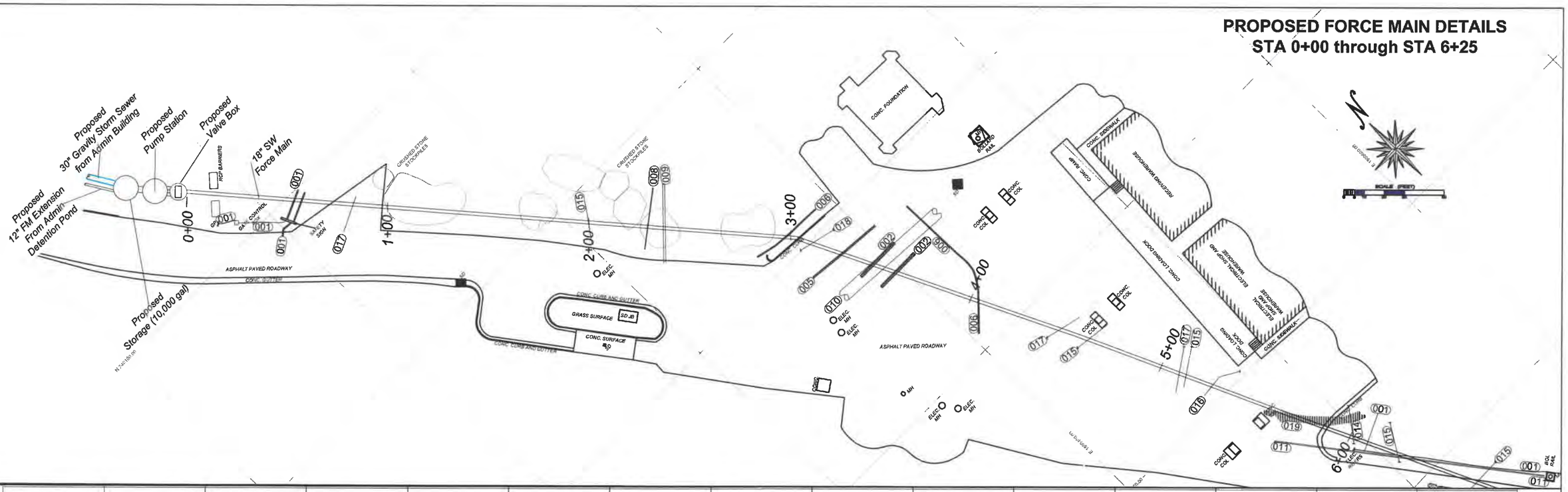
McFadden Engineering, Inc.
2860 Dauphin Street, Suite D
Mobile, Alabama 36606
www.mcfaddenengineering.com
Phone: (251) 470-6870
Fax: (251) 470-6872

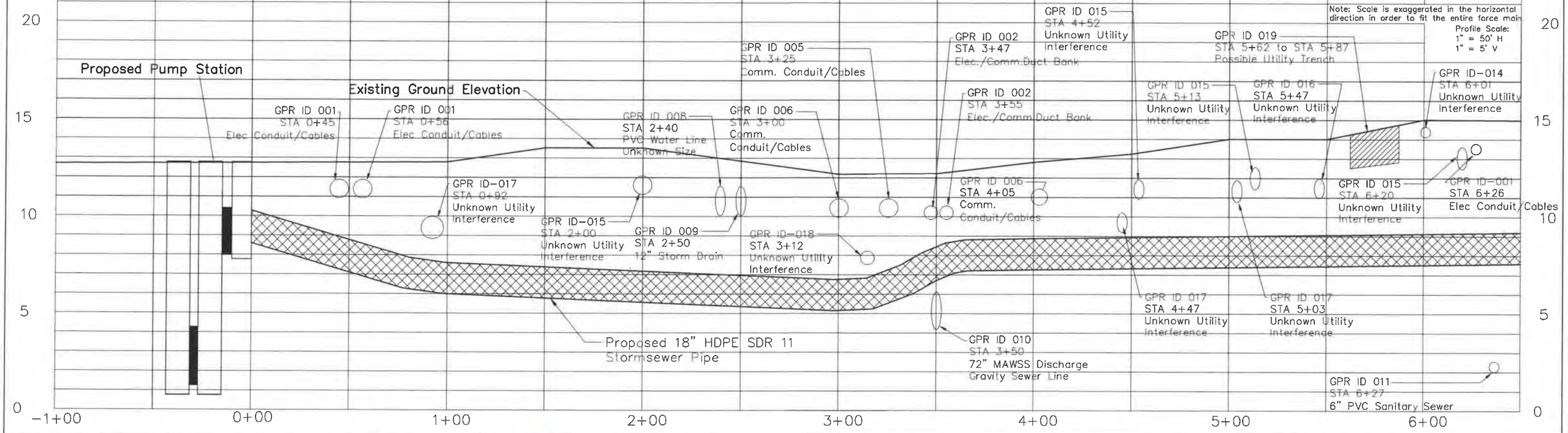
SEAL:

PRELIMINARY

PROJECT NAME: McDuffie Coal Terminal Stormwater Transfer Mobile, Alabama				PROJECT No. ASPA012	REVISION:
CADD NAME: M:\MEI Projects\ASPA\ASPA012\Project Design Drawings\Gravity Line Details				SCALE: 1" = 100'	TITLE: Gravity Line Plan & Profile
DESIGNED BY: EHB	DRAWN BY: EHB	CHECKED BY: JBN	APPROVED BY: JBN	DATE CREATED: 6/3/21	SHEET #: 4

PROPOSED FORCE MAIN DETAILS
STA 0+00 through STA 6+25





REVISION:	DESCRIPTION:	DATE:

McFadden Engineering, Inc.
2860 Dauphin Street, Suite D
Mobile, Alabama 36606
www.mcfaddenengineering.com
Phone: (251) 470-6870
Fax: (251) 470-6872

SEAL:

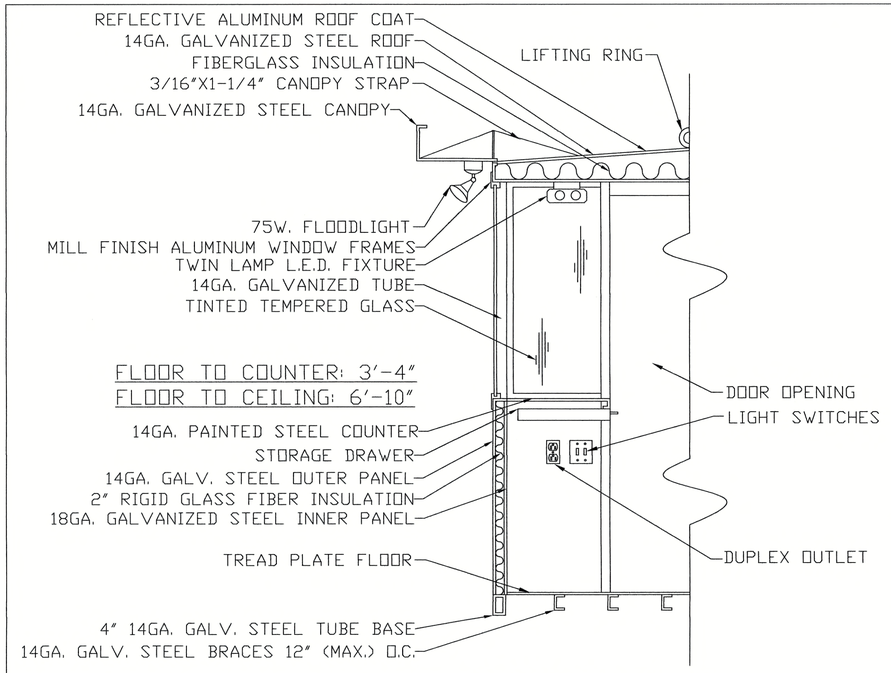
PRELIMINARY

PROJECT NAME: McDuffie Coal Terminal Stormwater Transfer Mobile, Alabama			PROJECT No.: ASPA012
CADD NAME: M:\MEI Projects\ASPA\ASPA012\Project Design Drawings\Force Main Details (1-7)			SCALE: 1" = 50'
DESIGNED BY: JBN	DRAWN BY: EHB	CHECKED BY: JBN	APPROVED BY: JBN
DATE CREATED: 6/10/21			SHEET #: 11

REVISION:

TITLE: Force Main Plan & Profile

200710

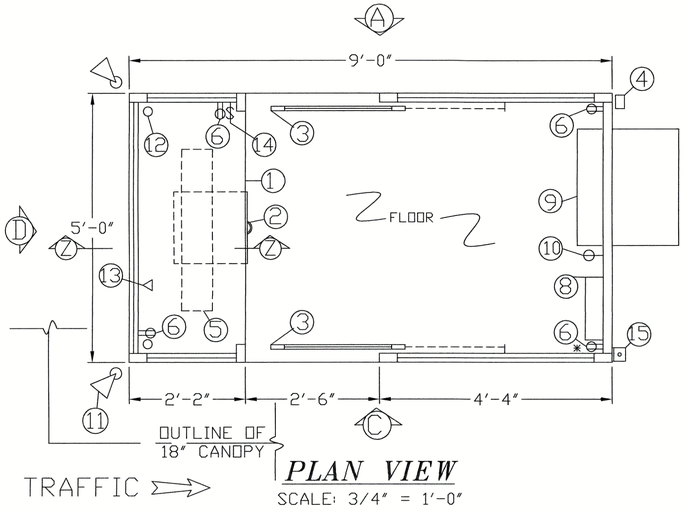


SECTION Z-Z

NO SCALE

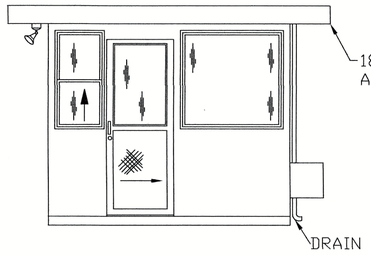
NOTES: LITTLE BUILDINGS ARE OF WELDED, GALVANIZED STEEL FULLY FACTORY ASSEMBLED AND SHIPPED IN ONE PIECE. UNIT MUST BE ANCHORED BY CUSTOMER TO PAD OR FOUNDATION TO PREVENT TIPPING LEADING TO SERIOUS INJURY OR DEATH.

A. GLAZING TO BE OF TINTED TEMPERED GLASS IN MILL FINISH ALUMINUM FRAMES. OPENING WINDOWS HAVE BUG SCREENS.
B. BOOTH TO BE PAINTED WITH RUST INHIBITIVE PRIMER AND FINISH PAINTED WITH OVEN DRIED PAINT IN OWNER'S CHOICE OF ONE COLOR.
C. ELECTRIC: FITTINGS, FIXTURES, AND DEVICES SHALL BEAR U.L. LABELS. ALL WIRING SHALL BE #12 (MIN.) TYPE THHN ENCLOSED IN 1/2" (MIN.) E.M.T. CONDUIT. ALL CIRCUITS SHALL HAVE GREEN GROUND CONDUCTOR. ALL WIRING BY LITTLE BUILDINGS SHALL TERMINATE AT BREAKER BOX.
D. CANOPY OVERHANG: 18" ON ALL SIDES.
E. LIFTING RING: 4-1/2" O.D., 2-1/2" I.D., FORGED STEEL. LIFT FROM OVERHEAD WITH STRAIGHT PULL, PROVIDED IN ROOF. BUILDING WEIGHT: APPROX. 2,800 POUNDS.
F. NO UNLOADING OR ON SITE WORK BY LITTLE BUILDINGS.

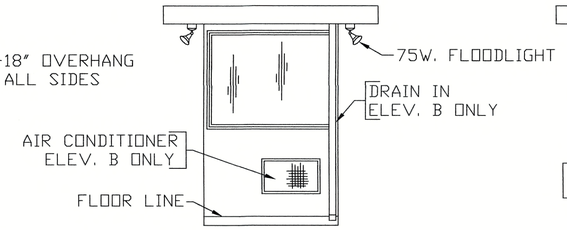


PLAN VIEW

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

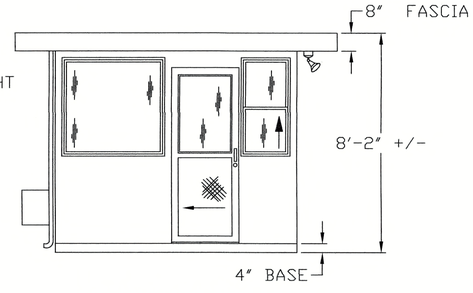


ELEVATION C



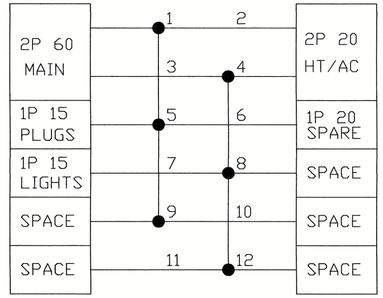
ELEVATIONS B&D

SCALE: 3/8" = 1'-0"



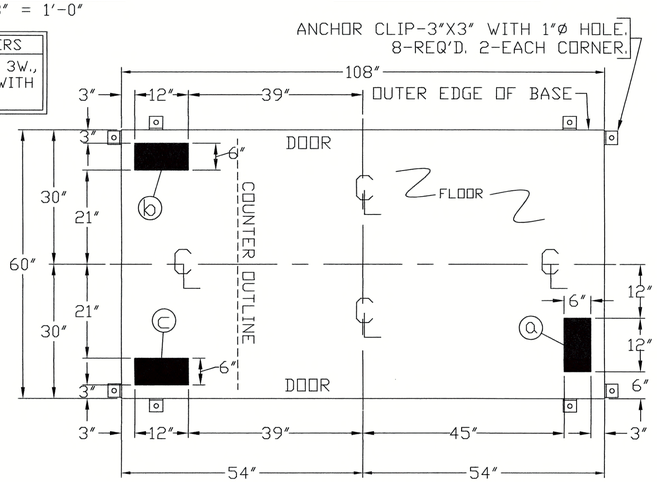
ELEVATION A

SITE WORK BY OTHERS
PROVIDE 120/240VAC, 3W., 1Ø, 60 AMP SERVICE WITH GROUND PER NEC 250.



CB BOX DETAIL

SQUARE D Q012L125



SERVICE ENTRANCE DETAIL

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

1. COUNTER: 24" DEEP PAINTED STEEL, 40" ABOVE FLOOR.
2. DRAWER: STORAGE BENEATH COUNTER.
3. DOOR: 30" WIDE SLIDING ALUMINUM WITH GLAZING, WEATHER-STRIPPING, MAXIMUM SECURITY HOOK BOLT LOCK, INSULATED KICK PANEL, REMOVABLE KEY CYLINDER, ALUMINUM THRESHOLD, HEAVY DUTY BALL BEARING HANGERS, AND TRACK. 2-REQ'D.
4. DRAIN: ROOF. 1-REQ'D.
5. LIGHT: L.E.D. LAMP WITH LENS, 1-REQ'D.
6. OUTLET: 120V/15AMP DUPLEX, 4-REQ'D.
7. NOT USED.
8. CIRCUIT BREAKER BOX: SQUARE D#Q012L125, 120/240V., 3 WIRE, SINGLE PHASE WITH 2-POLE 60 AMP BREAKER FOR MAIN. ONE SPARE 1P20 INCLUDED FOR CUSTOMER USE.
9. AIR CONDITIONER/HEATER: COMBINATION 11,600BTU COOL/11,600 BTU HEAT. G.E. #AJES12DC.
10. OUTLET: 240V/20AMP SINGLE RECEPTACLE FOR COMBO A/C-HEAT.
11. FLOODLIGHT: 2-AXIS ADJUSTABLE, WITH 75W. PER LAMP. 2-REQ'D.
12. HOLE: 2" DIAMETER IN COUNTER TOP FOR ELECTRIC CORD DROPS, 2-REQ'D.
13. PHONE JACK: 4 WIRE MODULAR WITH RACEWAY TO JUNCTION BOX NEAR SERVICE ENTRANCE IN FLOOR.
14. SWITCH: FOR LIGHT. 2-REQ'D.
15. ANCHOR CLIP: 3" X 3" WITH 1" ANCHOR BOLT HOLE, 8-REQ'D. ANCHOR BOOTH AFTER FINAL LOCATION. FAILURE TO ANCHOR THIS UNIT MAY RESULT IN TIPPING IN HIGH WINDS, LEADING TO SERIOUS INJURY OR DEATH.

FLOOR HOLE SCHEDULE

a.) 6"X12" SLOT IN FLOOR WITH REMOVABLE COVER WITH CAPTIVE SCREWS. FOR ELECTRIC SERVICE ENTRANCE TO CB BOX ABOVE.
b.) 6"X12" SLOT IN FLOOR WITH REMOVABLE COVER WITH CAPTIVE SCREWS. FOR CUSTOMER USE.
c.) 6"X12" SLOT IN FLOOR WITH REMOVABLE COVER WITH CAPTIVE SCREWS. TELEPHONE JUNCTION IN WALL IMMEDIATELY ABOVE. FOR CUSTOMER USE.

SITE WORK BY OTHERS
USE 3/4" X 4" STAINLESS STEEL RAWL CONCRETE ANCHOR BOLTS OR EQUAL TO SECURE BUILDING THRU ANCHOR CLIPS TO CONCRETE SLAB BY OTHERS. LITTLE BUILDING MUST BE ANCHORED AFTER FINAL LOCATION TO PREVENT TIPPING, LEADING TO SERIOUS INJURY OR DEATH.

APPROVED
ALABAMA STATE PORT AUTHORITY
ENGINEERING DEPARTMENT
By: _____ Date 5/20/20

APPROVED FOR FABRICATION BY:
ASPA ENGINEERING
PRINT LAST NAME: BOULTON

ARCHITECT / ENGINEER NOTES
◦PAINT COLOR: FLINT GRAY #SW4019
◦NO PERMITS BY LITTLE BUILDINGS, INC.
◦BUILDING WEIGHT: APPROX. 2,800 POUNDS.
◦BOOTH MUST BE ANCHORED – SEE NOTE ABOVE WHILE OF THE HIGHEST QUALITY, OUR PRODUCTS ARE NOT APPROVED OR LICENSED BY LOCAL OR STATE AUTHORITIES
◦CUSTOMER TO PROVIDE PAD OR FOUNDATION & PROPER ANCHOR. LITTLE BUILDING TO BE INSTALLED LEVEL TO ASSURE DOORS, WINDOWS, AND ROOF DRAINS WORK PROPERLY.
◦UNIT NOT HANDICAP ACCESSIBLE

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LITTLE BUILDINGS, INC.
161 SHAFER DR., ROMEO, MI 48065
SALES: 810.752.7100 FAX: 810.752.7108
email: sales@littlebuildingsinc.com Web: www.littlebuildingsinc.com

DWG NO. 200710	MODEL NO. 59SPEC

CUSTOM BOOTH BUILT EXCLUSIVELY FOR:
ALABAMA STATE PORT AUTHORITY

P.O. #	RE:
SHIP TO: ALABAMA	CHKD BY: JBS
SCALE: AS NOTED	SIZE/TYPE: 5' X 9'
DR. BY: AEP / AG	DATE: 5/18/2020
QUANTITY: 1	REV'D:

LITTLE BUILDINGS, INC.®
161 SHAFER DR. * ROMEO, MICH * PHONE: 586/752-7100 * FAX: 586/752-7108 * EMAIL: sales@littlebuildingsinc.com

200710