BID PACKAGE A - BUS BARN BID PACKAGE B - PEDESTRIAN BRIDGE REPAIRS

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TS TITLE SHEET

BID PACKAGE A A-AG1.0 BUILDING CODE PLAN

A-C1.1 SITE IMPROVEMENT PLANS

A-C1.2 SITE IMPROVEMENT DETAILS

ARCHITECTURAL A-A1.1 FLOOR PLAN

A-A2.1 ROOF PLAN A-A3.1 DOOR SCHEDULE, DOOR, WINDOW AND FRAME ELEVATIONS, DETAILS

A-A4.1 EXTERIOR ELEVATIONS A-A5.1 BUILDING SECTIONS

A-A6.1 LARGE SCALE DETAILS

A-A7.1 ENLARGED FLOOR PLAN, INTERIOR ELEVATIONS, STANDARD MOUNTING HEIGHTS, DETAILS

STRUCTURAL

A-S0.1 GENERAL NOTES AND SPECIAL INSPECTIONS

A-S0.2 TYPICAL FOUNDATION DETAILS

A-S1.0 FOUNDATION PLAN & DETAILS

MECHANICAL

A-M1.1 FOUNDATION & FLOOR PLANS - PLUMBING A-M2.1 RISER DIAGRAMS, DETAILS & SCHEDULES - PLUMBING

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A-ME0.1 SITE PLAN - MECHANICAL & ELECTRICAL

ELECTRICAL

A-E1.1 FLOOR PLAN - LIGHTING

A-E2.1 FLOOR PLAN - POWER & SYSTEMS

A-E3.1 ELECTRICAL DETAILS A-E4.1 ELECTRICAL SCHEDULES

BID PACKAGE B

B-A1.1 KEY PLAN, FLOOR PLANS, ELEVATIONS, PHOTOS & DETAILS

B-S1.1 STRUCTURAL GENERAL NOTES AND DETAILS

		OCCUPANCY LOAD SCHEDULE			
NUMBER	NAME	FUNCTION OF SPACE	AREA	OCCUPANT LOAD FACTOR	OCCUPANT LOAD
101	STORAGE		660 SF	200	4
102	MECHANICAL		151 SF	300	1
103	TOILET	RESTROOM	67 SF	0	
104	WASH BAY	PARKING GARAGE	1145 SF	200	6
105	BUS BAYS	PARKING GARAGE	2875 SF	200	15
106	BUS BAYS	PARKING GARAGE	4653 SF	200	24
		·	9552 SF		50

CODE PLAN LEGEND

TRAVEL DISTANCE 1' - 0" EXIST ACCESS TRAVEL DISTANCE PER IBC2012 1016.1

100 NAME 150 SF --- BUSINESS F=20 --- 60 OCCP. EXIT REQ'D = 2/ PROV. =2

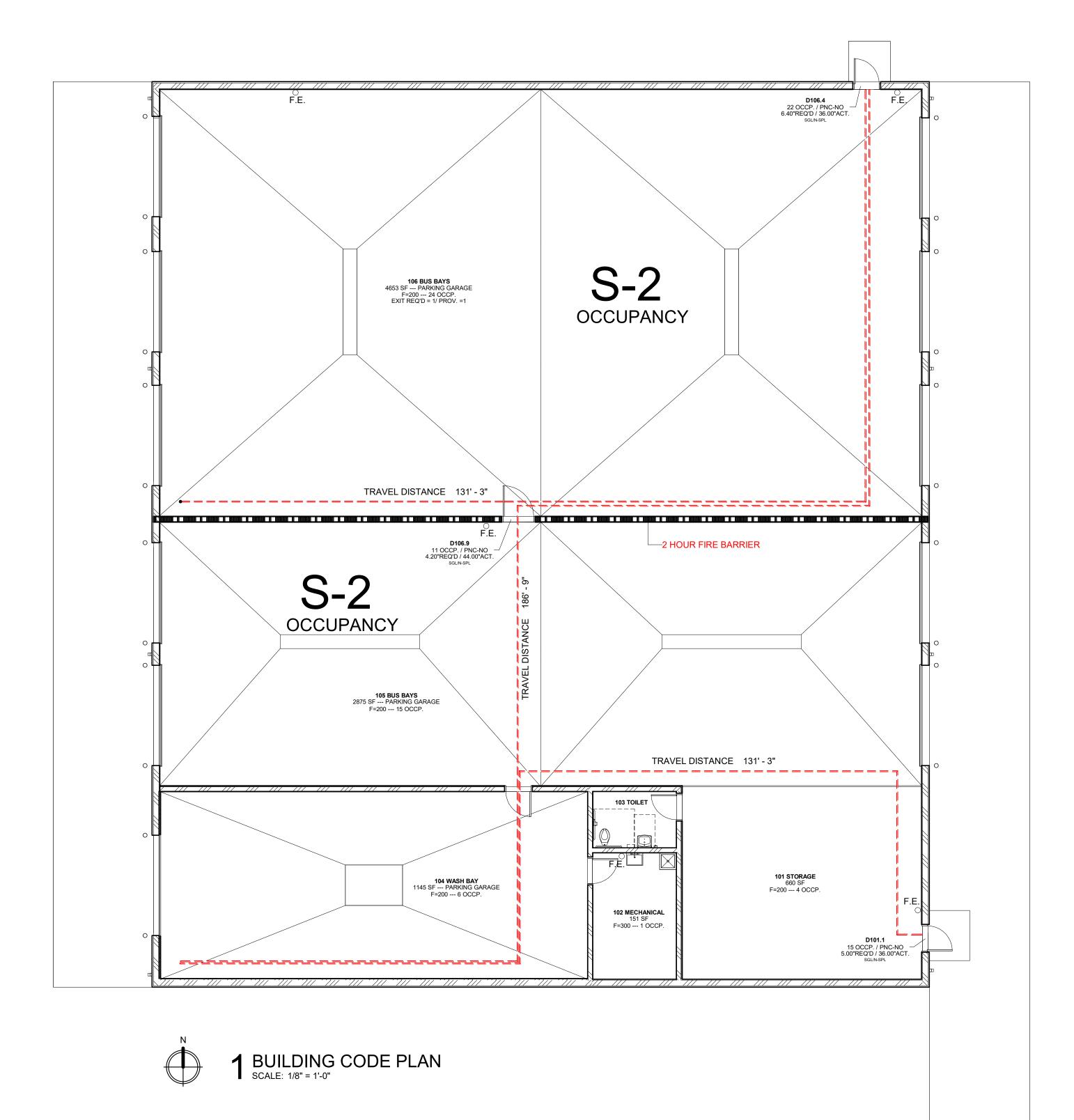
ROOM TAG ROOM NUMBER ROOM NAME AREA (SF) --- FUNCTION OF SPACE PER TABLE 1004.1.2
OCCUPANT LOAD FACTOR --- OCCUPANT LOAD EXITS REQUIRED --- EXIST PROVIDED

D100 -90M

DOOR TAG DOOR NUMBER - FIRE RATING (IF APPLICABLE) OCCUPANT LOAD SERVED / PANIC HARDWARÉ REQUIRED WIDTH / ACTUAL WIDTH SINGLE OR DOUBLE DOOR / SPRINKLER OR NON-SPRINKLER

FIRE SEPARATION LEGEND

2 HOUR FIRE BARRIER (90M DOORS, W-120 FIRE-RESISTANCE-RATED ASSEMBLIES)



CODE INFORMATION

LIGHT MAINTENANCE.

APPLICABLE CODES: 2015 - INTERNATIONAL BUILDING CODE 2018 - STATE PLUMBING CODE

2012 - INTERNATIONAL ENERGY CODE 2017 - STATE ELECTRICAL CODE 2015 - INTERNATIONAL FIRE CODE 2010 - ADAAG

BUILDING HEIGHTS AND AREAS (CHAPTER 5) BASIC ALLOWABLE 13,500 GROSS SQ.FT.

> PROPOSED BUILDING 9,701 GROSS SQ.FT.

TYPE S-2 OCCUPANCY = 9506 SF TYPES OF CONSTRUCTION (CHAPTER 6)
TYPE V-B CONSTRUCTION

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601) PRIMARY STRUCTURAL FRAME -----BEARING WALLS EXTERIOR ---INTERIOR --------- 0 HOUR NONBEARING WALLS AND PARTITIONS - EXTERIOR -----

FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE (TABLE 602)

10FT ≤ X < 30FT 0 HOUR

FIRE PROTECTION SYSTEMS (CHAPTER 9)

FIRE ALARM CONTROL PANEL PROVIDED SMOKE DETECTION REQUIRED-PROVIDED NOT REQUIRED-NOT PROVIDED HEAT DETECTION FIRE EXTINGUISHERS PROVIDED: PER NFPA 10

MEANS OF EGRESS (CHAPTER 10)

TOTAL OCCUPANTS 50 1005.1 EGRESS WIDTH

MEANS OF EGRESS CAPACITY FACTOR = 0.2 INCH (1005.3.2)

1008 MEANS OF EGRESS ILLUMINATION TO BE ILLUMINATED ALL TIMES (1008.2) 1009.1 ACCESSIBLE MEANS OF EGRESS 1 MOE = 1 REQUIRED

1010.1.1 WIDTH OF DOOR

MINIMUM CLEAR WIDTH OF 32 INCHES

SWING IN THE DIRECTION OF EGRESS TRAVEL (50 OR MORE OCCUPANT LOAD) 1013.1 EXIT SIGNS

NO MORE THAN 100 FEET VIEWING DISTANCE NOT REQUIRED IN ROOMS OR AREAS THAT REQUIRE ONLY ONE EXIT OR EXIT ACCESS

EXIT SIGNS SHOULD BE INTERNALLY OR EXTERNALLY ILLUMINATED

1017.2 EXIT ACCESS TRAVEL DISTANCE (TABLE 1017.2) 300 FEET WITHOUT SPRINKLER

WITH AN OCCUPANT LOAD OF LESS THAN 50 36 INCHES 1022 EXITS

AS SHOWN ON THE PLAN 1028.1 EXIT DISCHARGE

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (CHAPTER 15) 1505.1 FIRE CLASSIFICATION (TABLE 1505.1)

PROJECT DESCRIPTION:
THIS BUILDING IS A PRE-ENGINEERED METAL BUILDING FOR THE STORAGE OF DISTRICT BUSES AND

2018 - STATE MECHANICAL CODE

OCCUPANCY TYPE (CHAPTER 3) TYPE S-2 OCCUPANCY

2 STORIES

----- 0 HOUR NONBEARING WALLS AND PARTITIONS - INTERIOR ----- 0 HOUR FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS - 0 HOUR ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS --- 0 HOUR

X < 5FT

5FT ≤ X < 10FT 1 HOUR X ≥ 30FT 0 HOUR

1004 DESIGN OCCUPANT LOADS

MORE THAN 2 MOE = NOT LESS THAN TWO REQUIRED

1010.1.2.1 DOOR SWING

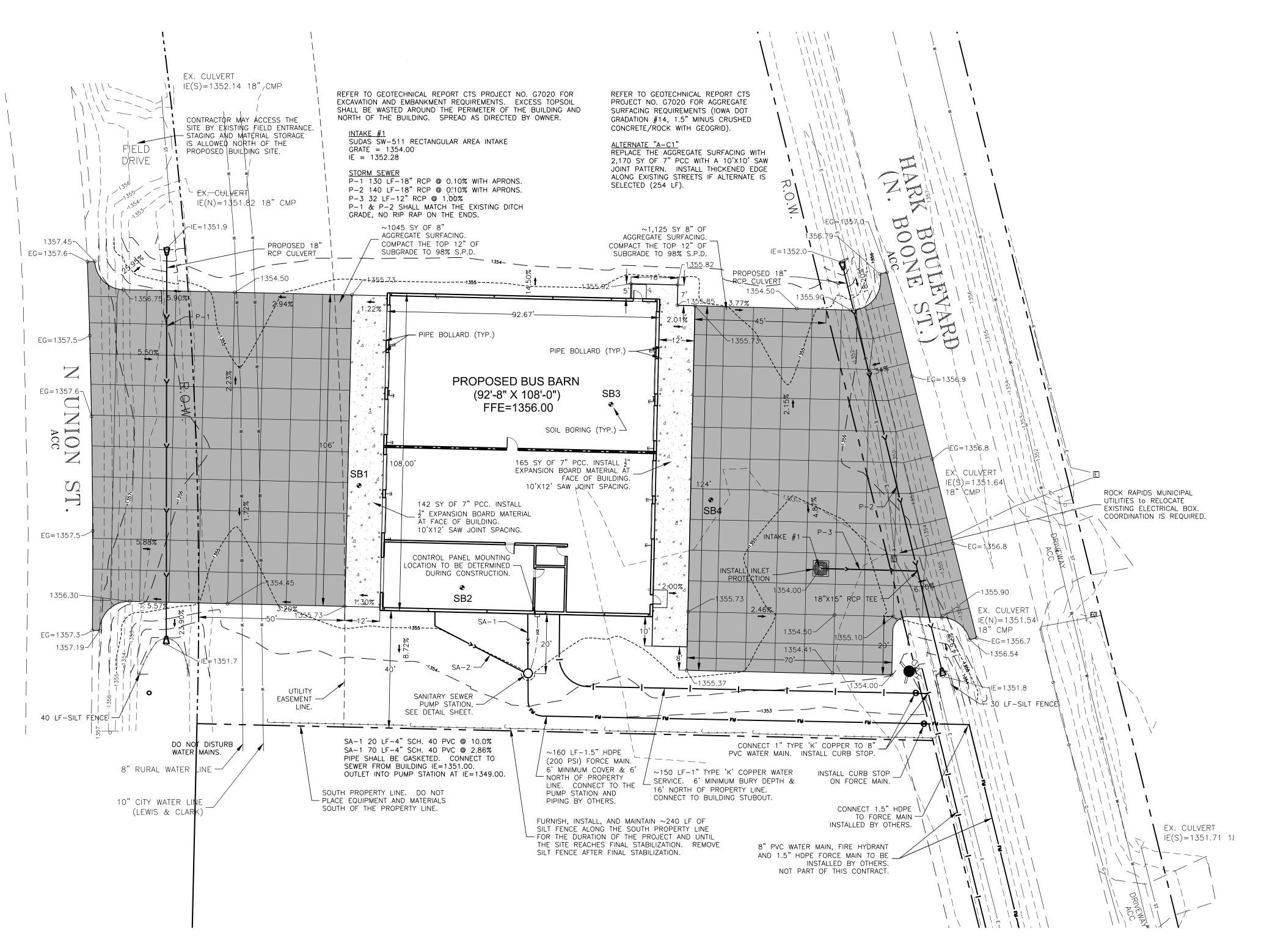
1013.5, 1013.6 EXIT SIGN ILLUMINATION

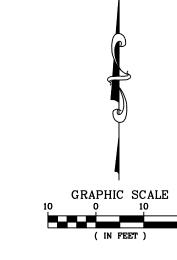
1020.2 MINIMUM CORRIDOR WIDTH (TABLE 1020.2)

EXITS SHALL DISCHARGE DIRECTLY TO THE EXTERIOR OF THE BUILDING

MINIMUM ROOF COVERING CLASSIFICATION C

SITE IMPROVEMENTS





PLAN NOTATION:

CSP = CORRUGATED STEEL PIPE

RCP = REINFORCED CONCRETE PIPE CP = CONCRETE PIPE PE = POLYETHYLENE PVC = POLYVINYL CHLORIDE RE = RIM ELEVATION IE = INVERT ELEVATION INT = STORM SEWER INTAKE DMH = DRAINAGE MANHOLE SMH = SANITARY SEWER MANHOLE GT = GUTTER ELEVATION ER = END OF RADIUS LOCATION BVCS = BEGIN VERTICAL CURVE STATION EVCS = END VERTICAL CURVE STATION SA = SANITARY SEWER LINE OHE = OVERHEAD ELECTRICAL LINE UGE = UNDERGROUND ELECTRICAL LINE T = TELEPHONE LINEHMA = HOT MIX ASPHALT VCP = VITRIFIED CLAY PIPE FFE = FINISHED FLOOR ELEVATION GT = GUTTER ELEVATIONFG = FINISHED PAVING GRADE TYP = TYPICALT/DC = TOP OF DROP CURB TC = TOP OF CURB

	Ll	EGEND
EXISTING	PROPOSED	DESCRIPTION
		LOT LINE
		EASEMENT LINE
		CENTER LINE
T — T—		TELEPHONE BOX, CABLE TV LINE
—SA—S——		SANITARY SEWER, MANHOLE
— FM——	— FM——	SANITARY SEWER FORCE MAIN
—ST-®-ST-□		STORM SEWER, MANHOLE, INTAKE
		SUBDRAIN
_ = =		CURB & GUTTER
		PCC PAVEMENT
$\mathbb{W} \xrightarrow{W} \mathbb{W}$	- ፠ × 8 · l · · ·	WATER MAIN, HYDRANT, VALVE
—uge−E ¢	UNDERGR	ROUND ELECTRIC LINE, BOX, LIGHT POLE
\emptyset \longrightarrow		POWER POLE, GUY WIRE
—— ОНЕ		OVERHEAD ELECTRIC LINE
—GAS— <mark>S∨</mark>		GAS LINE, VALVE
TEL		TELEPHONE LINE
* 0 &		EVERGREEN, BUSH, TREE
Ê		SIGN POST, MAILBOX
_FO— —		FIBER OPTIC LINE
1455	1455 	CONTOURS
		PAVEMENT REMOVALS
		INLET PROTECTION
	¹ 000000000000000000000000000000000000	WADDLE OR DITCH CHECK
	(SILT FENCE
	\Rightarrow	DRAINAGE FLOW DIRECTION ARROW

CONSTRUCTION NOTES

1. ALL SITE WORK CONSTRUCTION AND MATERIALS SHALL CONFORM TO IOWA S.U.D.A.S, THE PROJECT SPECIFICATIONS AND THE IOWA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION. IOWA S.U.D.A.S. SPECIFICATIONS ARE AVAILABLE AT THIS WEBSITE: http://www.iowasudas.org/specs.cfm

- 2. THE CONTRACTOR SHALL COMPLY WITH THE STORM WATER DISCHARGE PERMIT AND PREVENT EROSION OCCURRING AND SEDIMENT FROM LEAVING THE SITE. CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCE AND OTHER EROSION CONTROL MEASURES AS NEEDED. THE CONTRACTOR SHALL MONITOR ALL EROSION CONTROL DEVICES AND MAINTAIN WEEKLY REPORTS AND REPORTS WITHIN 24 HOURS OF THE 0.5" OR GREATER STORM EVENT. THE CONTRACTOR SHALL REFER TO AND ABIDE BY THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS AVAILABLE FROM THE ENGINEER. THE CONTRACTOR SHALL SIGN THE 'CONTRACTOR'S STATEMENT' ATTACHED TO THE STORM WATER POLLUTION PREVENTION PLAN AND MAINTAIN A COPY OF THE SWPPP AND RECORDS ONSITE. INSTALL SILT FENCE AROUND THE PERIMETER OF DISTURB AREAS AND
- 3. CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, SAFETY FENCE, ETC. TO PROTECT THE WORK FROM AUTOMOBILE AND PEDESTRIAN TRAFFIC. MAINTAIN EXISTING FIELD ENTRANCE AND INSTALL A ROCK CONSTRUCTION ENTRANCE IN ORDER TO PREVENT MUD TRACKING OFF SITE.
- 4. CONTRACTOR SHALL STRIP, SALVAGE, AND STOCKPILE EXISTING TOPSOIL IN AREAS TO BE DISTURBED. STOCKPILE LOCATION TO BE DETERMINED DURING CONSTRUCTION. CONTRACTOR SHALL PERFORM SITE GRADING TO INSURE POSITIVE DRAINAGE AWAY FROM THE BUILDING SITE. PLACE A MINIMUM OF 6" OF TOPSOIL FREE OF DEBRIS ON ALL DISTURBED AREAS TO BE SEEDED. CONTRACTOR SHALL PROVIDE TOPSOIL FREE OF DEBRIS IF NOT ENOUGH TOPSOIL IS GENERATED ON SITE.
- 5. CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT CTS PROJECT NO. G7020 PREPARED BY CERTIFIED TESTING SERVICES. THE 'SITE PREPARATION' SECTION SPECIFIES THE FILL REQUIREMENTS. REMOVE TOPSOIL AS REQUIRED BY THE REPORT. THE APPROXIMATE IN-PLACE FILL VOLUME BETWEEN THE FINISHED GROUND SURFACE AND THE EXISTING SURFACE ARE AS FOLLOWS:

BUILDING FOOTPRINT EAST APPROACH/PARKING 990 C.Y. WEST APPROACH/PARKING 940 C.Y.

SIDES OF SLOPES TOTAL IN-PLACE FILL VOLUME

THE BUILDING FOOTPRINT VOLUME IS FROM THE EXISTING GROUND TO THE BOTTOM OF THE FLOOR SLAB. THE CONTRACTOR WILL NEED TO STRIP TOPSOIL (WASTE ON SITE) AS PER THE GEOTECHNICAL REPORT. THE STRIPPING OF TOPSOIL WILL ADD TO THE FILL VOLUME. THE THICKNESS OF THE PAVEMENT AND AGGREGATE SURFACING IN THE APPROACH/PARKING AREAS WILL NEED TO BE SUBTRACTED FROM THE FILL VOLUME.

- 6. THE OVER EXCAVATION AND FILL BENEATH OR WITHIN THE BUILDING SHALL BE REPLACED WITH ON SITE SUITABLE FILL MATERIAL OR IMPORTED SUITABLE MATERIAL FROM OFF SITE AS PER THE GEOTECHNICAL REPORT. COORDINATE REVIEW OF UNSUITABLE SOIL EXCAVATION AND PLACEMENT OF FILL WITH CERTIFIED TESTING SERVICES, INC.
- 7. ANY EXCESS UNSUITABLE MATERIAL SHALL BE WASTED AROUND THE PERIMETER OF THE BUS BARN.
- 8. EXTEND SANITARY SEWER SERVICE TO WITHIN 5' OF PROPOSED BUILDING USING 4" SCH. 40 GASKETED PVC INSTALL CLEAN-OUT WHERE CHANGE IN ALIGNMENT. SEE MECHANICAL PLANS FOR CONTINUATION AND CLEAN OUTS.
- 9. ALL STORM SEWER CONNECTIONS SHALL BE WATER TIGHT. CONNECT TO EXISTING PVC STORM SEWER WITH A FERNCO STRONG BACK RC SERIES COUPLING. CONNECTIONS THAT A FERNCO IS NOT ADEQUATE SHALL BE INSTALLED USING A PCC COLLAR INCLUDING RCP STORM SEWER. STORM SEWER PIPE AND CONNECTION SHALL CONFORM TO CLASS 2000D RCP PIPE. ALL CONCRETE COLLAR INSTALLATIONS ON SITE SHALL UTILIZE IDOT CLASS C-4 OR C-4WR.
- 10. FURNISH, INSTALL, MAINTAIN AND REMOVE INLET PROTECTION ONCE SURFACE INTAKES ARE INSTALLED.
- 11. FURNISH, INSTALL, MAINTAIN AND REMOVE (AFTER FINAL STABILIZATION) 250-300 OF SILT FENCE ALONG THE SOUTH SIDE OF THE CONSTRUCTION SITE. ADDITIONAL SILT FENCE WILL BE NEEDED AROUND STOCK PILES AS NEEDED.
- 12. TRENCHING, BACKFILLING & COMPACTING: CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR MAY NEED TO ADJUST GRADES DURING CONSTRUCTION TO AVOID ELEVATION CONFLICTS, INCIDENTAL. BACKFILL SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY AS
- 13. RAPID STABILIZATION: GRADE, SEED, FERTILIZE, AND MULCH THE ALL DISTURBED AREAS WITHIN 7 DAYS OF COMPLETING THE GRADING. REMOVE ALL AGGREGATE AND FOREIGN MATTER, PROVIDED TOPSOIL EXCAVATED FROM THE SITE. INSTALL SEEDING FERTILIZING AND MULCHING ACCORDING TO S.U.D.A.S. STANDARD SPECIFICATIONS SECTION 9010, TYPE 4 (URBAN TEMPORARY EROSION CONTROL MIXTURE). SEED THE APPROPRIATE MIXTURE ACCORDING TO SEEDING DATES. TEMPORARY SEEDING WILL BE REPLACED WITH PERMANENT SEEDING AT THE END OF THE PROJECT. FINÍSH GRADE ALL DISTURBED AREAS FOR SEED, FERTILIZE, AND MULCH BY OWNER. REMOVE ALL AGGREGATE AND FOREIGN MATTER, PROVIDED TOPSOIL EXCAVATED FROM THE SITE.

WATER SERVICE TO BUS BARN:

MINNEAPOLIS PATTERN.

1. SERVICE PIPE: SHALL BE 1" (INSIDE DIAMETER) TYPE K COPPER. 2. CURB STOP: FORD B44-444M-NL FOR 1" INSIDE DIAMETER PIPE,

3. CURB BOX: MINNEAPOLIS PATTERN BASE, SIZE 1.25".

4. SERVICE SADDLE: FORD FS313-905-CC4 5. CORPORATION STOP: FORD F1000-4-NL

'OR EQUAL' FITTINGS ARE ACCEPTABLE.

VERIFY CONNECTION LOCATIONS WITH MECHANICAL DRAWINGS. CONNECT TO EXISTING 8" PVC WATER MAIN TO BE INSTALLED BY OTHERS.

SANITARY SEWER SERVICE:

SERVICE PIPE: SHALL BE 1.5" (INSIDE DIAMETER) 200 PSI POLYETHYLENE (NO SPLICES) WITH STIFFENERS AT CORPORATION AND CURB STOP CONNECTS.

2. CURB STOP: FORD - B61-666M FOR 1.5" INSIDE DIAMETER PIPE, MINNEAPOLIS PATTERN.

3. CURB BOX: MINNEAPOLIS PATTERN BASE, SIZE 1.25".

- 4. STAINLESS STEEL STIFFENERS: FORD FOR 1.5" POLYETHYLENE PIPE.
- <u>5. CHECK VALVE:</u> INLINE SINGLE CHECK, AY McDONALD STYLE 701 FOR 1.5" SERVICE LINE. INSTALL IN PUMP STATION BASIN.

'OR EQUAL' FITTINGS ARE ACCEPTABLE.

EROSION CONTROL NOTES:

THE CONTRACTOR SHALL PROVIDE INLET PROTECTION AT ALL TIMES UNTIL FINAL STABILIZATION IS ACHIEVED. THE CONTRACTOR WILL NEED TO CHANGE THE TYPE OF INLET PROTECTION TO FIT THE WORK BEING PERFORMED. THE DETAILS SHOWN ARE TO BE USED AND DETERMINED BY THE PLACE OF CONSTRUCTION. OTHER TYPES OF INLET PROTECTION MAY BE ALLOWED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY AND AFTER ALL WEATHER EVENTS, NON-COMPLYING EQUIPMENT SHALL BE FIXED WITHIN THE WORKING DAY.

THE CONTRACTOR SHALL TAKE STEPS TO CONTROL SOIL EROSION AND FUGITIVE DUST DURING CONSTRUCTION. IF NECESSARY, CHECK DAMS, SEDIMENT TRAPS OR ADDITIONAL SILT FENCE (NOT INDICATED ON THE PLANS) SHALL BE USED TO RETAIN SILT AND PREVENT SILT FROM ENTERING THE SEWER SYSTEM. THIS WORK SHALL BE PAID FOR AS PER PAY ITEMS IN THE PROPOSAL. THE CONTRACTOR SHALL CONSTRUCT EROSION CONTROL PRIOR TO ANY GRADING ON THE PROJECT IN ORDER TO PREVENT SILT TRANSPORT AND SOIL TRACKING INTO PUBLIC RIGHT-OF-WAY. CONTRACTOR SHALL MAINTAIN AND WATER HAUL ROADS TO CONTROL FUGITIVE DUST.

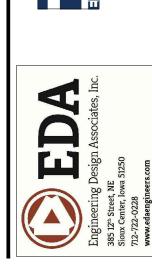
SILT FENCE SHOULD BE INSPECTED WEEKLY AND AFTER RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM BEHIND FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO 1/3 THE HEIGHT OF THE FENCE ABOVE GRADE. INSPECT THE BASE OF THE FENCE TO ENSURE THAT NO GAPS HAVE DEVELOPED AND RE-TRENCH AS NECESSARY. INSPECT FENCE POSTS TO ENSURE THAT THEY ARE PROPERLY SUPPORTING THE FENCE. STRAIGHTEN, RESET AND ADD ADDITIONAL POSTS IF NECESSARY. IF FILTER FABRIC IS RIPPED, DAMAGED OR DETERIORATED, REPLACE IT IN ACCORDANCE WITH THE ORIGINAL SPECIFICATIONS & DETAILS.

THE CONTRACTOR SHALL MAKE PROVISIONS TO MAINTAIN DRAINAGE ON/ALONG ALL STREETS ADJACENT TO THE PROJECT THROUGHOUT THE CONSTRUCTION PERIOD.

CONTRACTOR SHALL HAVE A PERSON ON CALL TO RESPOND TO FLOODING THAT MAY OCCUR DURING NON-WORKING HOURS. CONTRACTOR SHALL HAVE PUMPING EQUIPMENT ON SITE IN CASE OF A LARGE STORM EVENT. CONTRACTOR SHALL PUMP STORM WATER OFF SITE IF NEEDED AT NO ADDITIONAL COST TO THE PROJECT. CONTRACTOR SHALL NOT PUMP WATER CONTAINING SEDIMENT OFF SITE. MAKE PROVISIONS FOR FILTERING WATER TO BE PUMPED.







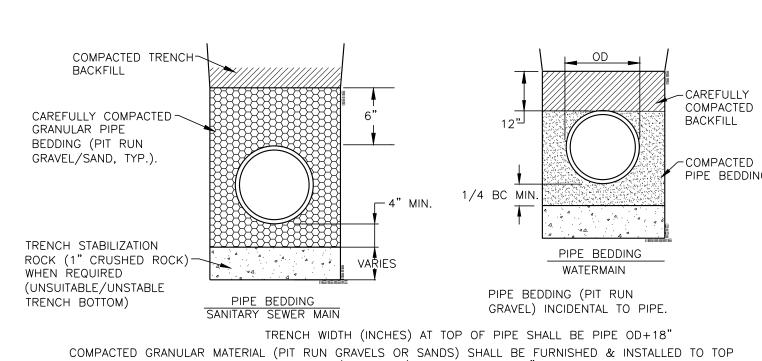
DATE ISSUED 10/17/2023 REV. NO. DATE

PROJECT NUMBER 2022018.07

SHEET

PCC PAVEMENT SHALL BE IOWA D.O.T. C-4 OR C-4W WITH CLASS 3 AGGREGATE. FLY-ASH MAY BE USED AS PER IOWA D.O.T. SPECIFICATIONS. MINIMUM 28 DAY STRENGTH OF 4000 PSI. BROOM OR BURLAP FINISH. CURING COMPOUND SHALL HAVE A WHITE PIGMENT. REFER TO SECTION 2301 OF THE IOWA D.O.T. STANDARD SPECIFICATIONS FOR PLACEMENT SPECIFICATIONS. IF APPROACH/DRIVEWAY PAVEMENT ALTERNATE IS SELECTED, PAVE A THICKENED EDGE ALONG THE EXISTING ASPHALT PAVEMENT FOR THE FULL LENGTH OF EACH APPROACH. INSTALL #4 BARS ON 3' CENTERS EACH WAY TO FOR A GRID. SAW AND SEAL JOINTS AS AS THE PATTERN IS SHOWN ON THE PLAN OR AGREED TO DURING CONSTRUCTION. COMPACT GRANULAR BASE TO 100% S.P.D, MEET REQUIREMENTS OF GRAD. NO. 10 OF SECTION 4109 OF THE IDOT STANDARD SPECIFICATIONS. GRANULAR BASE IS FOR FINE GRADING AND IS NOT REQUIRED IF THE CONTRACTOR HAS MEANS TO UNIFORMLY TRIM THE SUBGRADE. COMPACT TOP 12" OF SUBGRADE TO 98% S.P.D, USE EXISTING EXCAVATED MATERIAL TO REPLACE SOFT SUBGRADE AREAS. APPROPRIATE REMEDIAL ACTION SHALL BE PERFORMED BY THE CONTRACTOR TO PRODUCE PAVEMENTS SMOOTHNESS NOT TO EXCEED A 1/4 INCH BUMP IN 10'

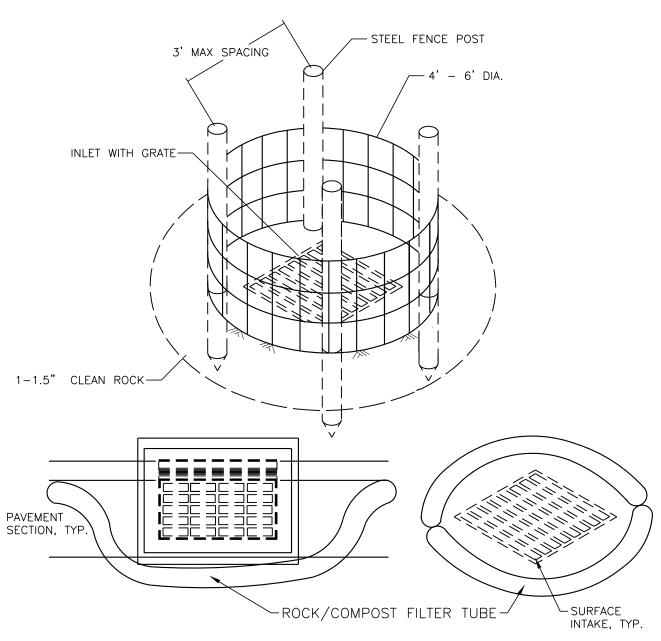




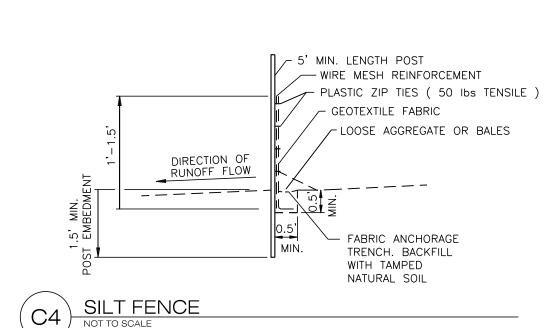
OF PIPE. TRENCH STABILIZATION MATERIAL (IF NEEDED) SHALL ONLY BE 1" CRUSHED ROCK AND USED IF THE TRENCH BOTTOM IS UNSTABLE. TRENCH BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY AS

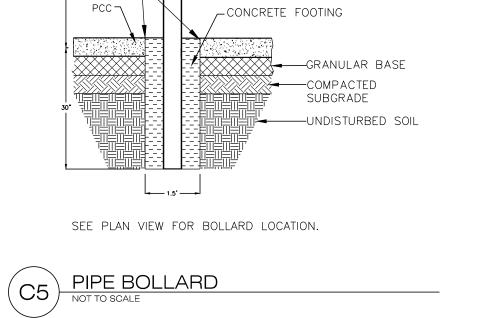
DETERMINED BY ASTM D698. A MINIMUM OF 98% OF STANDARD PROCTOR DENSITY SHALL BE ACHIEVED FOR THE TOP FOOT WHERE THE TRENCH IS BENEATH A STREET, HIGHWAY, PARKING LOT, DRIVEWAY, SIDEWALK OR OTHER TRAVELED SURFACE. MOISTURE CONTENT SHALL BE -2 TO +2% OF OPTIMUM. TRENCH BACKFILL SHALL BE PLACED IN 6-8" LIFTS.

PIPE BEDDING CONDITIONS (C2)



SILT FENCE SEWN INTO A SOCK AND FILLED WITH 1.5" CLEAN ROCK OR COMPOST. CLEAN SURFACING AND INSTALL 6"-8" FILTER TUBE ACROSS GUTTERS DOWN GRADE OF EXCAVATION. CLEAN AND MAINTAIN UNTIL PAVING IN THE DRAINAGE AREA IS COMPLETE AND PERMANENT VEGETATIVE COVER IS ESTABLISHED. COST OF MOVING AND MAINTAINING THE FILTER TUBE SHALL BE INCIDENTAL TO THE INLET PROTECTION BID ITEM. THE FILTER TUBE SHALL BE REMOVED WITHIN A WEEK AFTER PERMANENT STABILIZATION IS COMPLETED.





ROUND OFF TOP OF

PURCHASING PAINT.

6" O.D. CONC. FILLED SCH. 40 STEEL

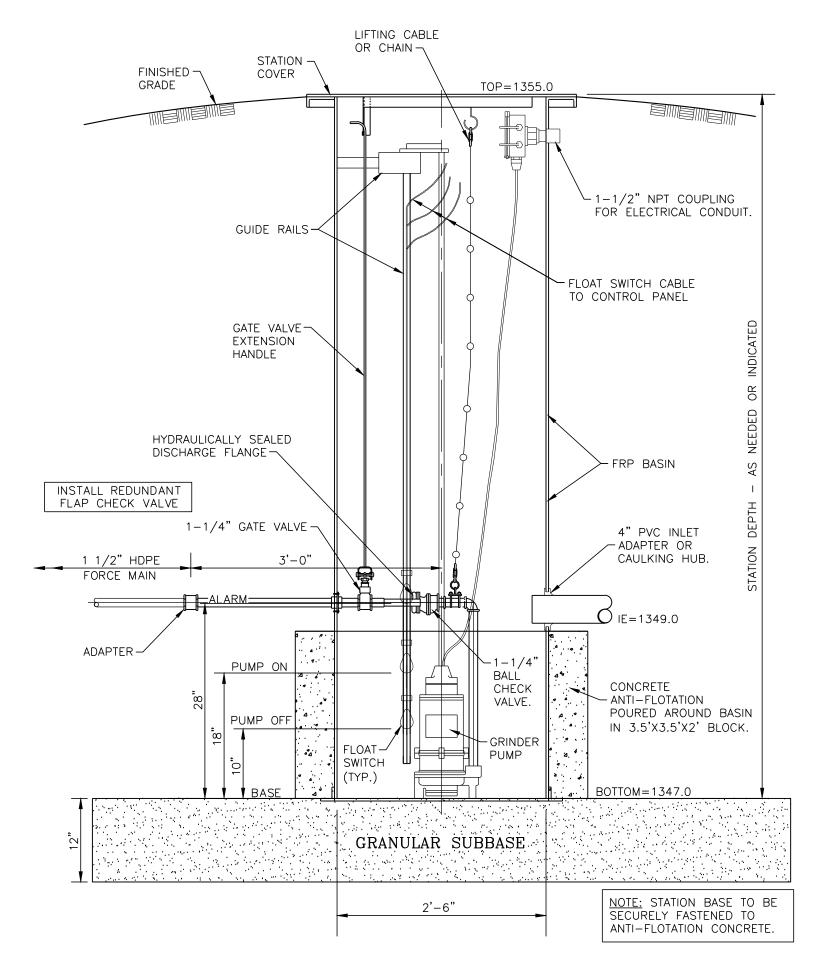
COAT UNDER 2 COATS "SAFETY YELLOW".

VERIFY COLOR WITH ARCHITECT PRIOR TO

~PIPE BOLLARD. 1 COAT OF STEEL PRIME

CONCRETE FILL

PUMP CONTROL PANEL. MOUNT ON SIDE OF BUS BARN BUILDING. NOTE: CONDUCTORS SHALL BE MARKED WITH VINYL TAPE AT ALL CONNECTIONS. NEUTRAL SHALL BE WHITE. INSTALL 1-1/2" GALVANIZED BUSHINGS ON ALL CONDUITS. GROUND RIGIÓ CONDUIT. NEUTRAL IN DISCONNECT. SEAL FITTING FINISHED GRADE RIGID CONDUIT -_1-1/2" BUSHING TO FLOATS. = = = = -120/240V 1ø SERVICE FROM SOURCE. NOTE: PUMP POWER AND CONTROL CONDUITS SHALL BE RIGID GALVANIZED STEEL ABOVE GROUND. RIGID CONDUIT UNDERGROUND CONDUIT TO PUMP STATION MAY BE NOTE: CONTRACTOR TO FURNISH & INSTALL ELECTRICAL SERVICE BETWEEN RIGID PVC. CONDUITS CONNECTING TO THE PUMP STATION SHALL BE SEALED ACCORDING TO NEC §" X 8'−0"— THE DESIGNATED POWER SOURCE (BUS HAZARDOUS AREA GUIDELINES BEFORE ENTERING BARN) AND THE SIMPLEX PANELS. PUMP CONTROL PANEL. GROUND ROD WIRING MAY TRENCHED SEPARATELY. CONTROL PANEL



SIMPLEX LIFT STATION WITH CONTROL PANEL

FURNISH AND INSTALL A COMPLETE SIMPLEX GRINDER PUMP PACKAGE LIFT STATION THAT SHALL INCLUDE ONE (1) SUBMERSIBLE GRINDER PUMP, A FIBERGLASS WET WELL BASIN, ACCESS CONVER, VALVES, ALL RELATED PIPING,

GRINDER PUMP: BARNES ZOGP2072PCO-EQD RAZOR GRINDER PUMP, 2 HP, 208-240 Volt, 60 Hz, 1 Ph (SINGLE PHASE), 3450 RPM. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS. The pump shall be able to operate at all of the following design points:

11 gpm @ 45 ft. TDH 25 gpm @ 38 ft. TDH

Power cable shall be heavy duty type SOW/SOW—A cord, 3 conductor with ground. Control cable shall be heavy duty type SO cord, 4 conductor with ground. Control cable connects to heat sensors and seal failure detector. All leads shall be potted into cap with epoxy.

Motor shall be protected by two mechanical seals mounted in tandem with a seal chamber between the seals. Seal chamber shall be oil filled to lubricate seal face and to transmit heat from shaft to outer shell. Seal face shall be carbon and ceramic and lapped to a flatness of one light band.

Two heavy duty ball bearings shall support the stainless steel pump shaft. Ball bearings shall be designed for a

The shredding ring and grinder impeller shall be cast of 440 C stainless steel and hardened to 58 to 60 Rockwell C. The cutters shall automatically alternate direction to enhance blade life and free hang-ups.

The wet well basins shall be fiberglass construction in accordance with ASTM D883-69. Basin sizes are noted on the Drawings. The wall thicknesses shall be sufficient to withstand a water—saturated sand load of 120 pounds per cubic foot with a safety factor of two at all depths. Basins shall have antiflotation flanges and bolt down covers. Two 1-1/2" electrical conduit hubs shall also be provided. Covers shall be gas tight and constructed of fiberglass, aluminum or stainless steel capable of supporting 150 lb. per square foot. Steel covers are not acceptable.

Furnish and install a complete grinder pump system consisting of submersible grinder pump and lift—out rail systems, valves, controls, access cover(s) and all other appurtenances to make a complete system.

pump guide plate, and cast iron elbow. All exposed nuts, bolts, and fasteners shall be 300 series stainless steel. Discharge elbow shall have an integral 1-1/4" ball check valve. Discharge elbow shall attach to the pump with an 1-1/4" S.S. nipple. A plastic ball valve shall also be provided rated at 200 psi water pressure. A stainless steel extension handle shall be furnished for each shut off valve. An external flap check valve shall also be provided.

A sealing plate shall be threaded to the pump. A simple downward sliding motion of the pump and guide plate on the guide rails shall cause the unit to be automatically connected and sealed to the base. The open face of the sealing plate shall have dove—tailed groove machined into the face to hold a sealing "o" ring. The "o" ring shall provide a leakproof seal at all operating pressures.

Two rail pipes shall be used to guide the pump from the surface to the discharge base connection. The guide rails shall be 3/4" schedule 40 stainless steel pipe. The weight of the pump shall bear solely on the discharge

An adequate length of ½" diameter polypropylene rope with knots in 12" increments or stainless steel chain shall be supplied for removing pump. The rope/chain shall be of sufficient length to provide ease of pump removal. A suitable attachment point for the free end of this rope/chain shall be provided near the top of the basin.

LEVEL CONTROL Provide 3 float level controls consisting of sealed steel encased mercury switches molded within solid polyurethane complete with two conductor cords. An individual switch is required for each control function. Float levels shall be easily adjustable without entering the basin. All hardware and fasteners shall be 300 series stainless steel.

CONTROL PANEL

STORM WATER POLLUTION PREVENTION PLAN-SUMMARY

Furnish services of a competent manufacturer's representative (minimum 1 day) to check equipment, place it into operation and instruct Owner in proper operation and maintenance. Run equipment, check for and correct any leaks and excessive vibrations. Test and adjust control system and auxiliary equipment under actual

All contractors/subcontractors shall conduct their operations in a manner that minimizes erosion and prevents

The goal of the Storm Water Pollution Prevention Plan (SWPPP) is to improve the quality of surface waters by

Pollutant Discharge Elimination System (NPDES) Permit for storm water discharges as enforced by the lowa

in this SWPPP. The complete SWPPP is located in the Appendix of the Specifications.

sediments from leaving the street right-of-way or construction easements. The prime contractor shall be responsible

This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined

reducing the amount of pollutants potentially contained in the storm water runoff being discharged. This SWPPP covers

facility operations, identifies potential sources of storm water pollution at the facility, lists best management practices

(BMPs) or pollution control measures to reduce the discharge of pollutants in storm water runoff and provides a plan

the operations and maintenance at the Owner's facility and has been developed as required under lowa's National

Department of Natural Resources (IDNR). The SWPPP will meet the requirements of the IDNR. This SWPPP describes

The storm water pollution prevention team is responsible for developing, implementing, maintaining and revising this SWPPP. The members of the team shall consist of a combination of City, Engineer and Contractor staff which are

familiar with the management and operations of the NWICC facilities. The storm water pollution prevention team will

continually evaluate the planned BMPs and will implement additional BMP options to react to unforeseen or unusual

The Storm Water Pollution Prevention Plan (SWPPP) is for the construction of the Central Lyon schools Bus Barn

Refer to the project plans for locations of typical slopes, ditch grades, and major structural and non-structural

controls. A copy of this plan will be on file at the project engineer's office. Runoff from this work will flow into

This area has been agricultural/farm land. Crops have a difficult time growing on the site due to soil being sand

a result of a storm event. However, this SWPPP provides conveyance for other (non-project related) operations.

Rural Agricultural Activities: Runoff from agricultural land use can potentially contain chemicals including herbicides,

These other operations have storm water runoff, the regulation of which is beyond the control of this SWPPP.

Commercial and Industrial Activities: Runoff from commercial and industrial land use may contain constituents

associated with the specific operation. Such operations are subject to potential leaks and spills which could be

commingled with run—off from the facility. Pollutants associated with commercial and industrial activities are not

Potential pollutants which may result from construction on the project and may be present in storm water runoff

Potentially this runoff can contain various pollutants related to site—specific land uses. Examples are:

Site sources of pollution generated as a result of this work relate to silts and sediment which may be transported as

curve number before construction is 72, after construction the NRCS runoff curve number will be 89.

This SWPPP covers approximately 1.60 acres with an estimated 1.2 acres being disturbed. The estimated NRCS runoff

for compliance and implementation of the Storm Water Pollution Prevention Plan (SWPPP) for their entire contract.

WASTEWATER PUMP STATION:

CONTROLS AND ALL OTHER APPURTENANCES TO MAKE A COMPLETE SYSTEM.

32 gpm @ 30 ft. TDH

MOTOR/PUMP

Heat sensor units shall attach directly to the motor winding and shall automatically reset when motor has cooled. Tandem heavy duty shaft seals in an oil filled chamber shall prevent moisture from entering the motor housing. A seal leak probe connected to a red warning light shall be activated when excessive moisture has entered through the bottom seal.

The motor chamber shall also be oil filled for heat transfer and lubrication of bearings and seals. All iron castings shall be pre-treated with phosphate and chromic rinse and to be painted before machining and all machined surfaces exposed to the sewage water to be re-painted. All fasteners to be 302 stainless steel. B-10 life of 50,000 hours. A bronze support bushing shall take the high radial load from the grinder impeller. The impeller shall be bronze and be completely recessed out of the volute passage.

Each lift out system shall consist of a cast iron discharge base, cast iron pump carrier and sealing plate, steel

base and not on the guide rails. The guide rails shall be firmly attached to the access hatch frame.

Simplex starter control panel shall have a NEMA 4X enclosure for outside mounting. Each panel shall include line circuit breaker, motor contactor, control fuses, terminal blocks for level controls, red seal failure light, elapsed time meter, condensation protection, external red alarm light, high level audible alarm and silence button. Enclosure shall have a full inner door and a tamper proof fully gasketed exterior door with padlockable door latch.

TEST AND ADJUST

for periodic review of this SWPPP.

conditions as they may occur.

Improvements, Rock Rapids, Iowa.

3.0 SITE DESCRIPTION

3'-3.5' below the surface.

are listed as follows: Erosion/sediment

Petroleum products

Fertilizers

Concrete wash out water

General waste materials

4.0 POTENTIAL SOURCES OF POLLUTION:

pesticides, fungicides and fertilizers.

readily available since they are typically proprietary.

2.0 STORM WATER POLLUTION PREVENTION TEAM

the following stream: storm sewer system to the Rock River.

DETAIL FIGURES REFERENCED MAY BE FOUND IN THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS MANUAL. FIGURE NO. 2000-EARTHWORK DETAILS OF EMBANKMENTS AND REBUILDING EMBANKMENTS DESIGNATION OF ROADWAY EARTHWORK ITEMS 3000-TRENCH AND TRENCHLESS CONSTRUCTION TRENCH BEDDING AND BACKFILL ZONES 3010.101 (SW-101) RIGID GRAVITY PIPE TRENCH BEDDING 3010.102 (SW-102) FLEXIBLE GRAVITY PIPE TRENCH BEDDING 3010.103 (SW-103) PRESSURE PIPE TRENCH BEDDING 3010.104 (SW-104) 4000-SEWERS AND DRAINS 4010.201 (SW-201) SANITARY SEWER SERVICE STUB SANITARY SEWER CLEANOUT 4010.203 (SW-203) RELOCATE SANITARY SEWER SERVICE 4010.901 IN CONFLICT WITH NEW SEWER 5000-WATER MAINS AND APPURTENANCES THRUST BLOCKS 5010.101 (WM-101) TRACER SYSTEM 5010.102 (WM-102) MIN. CLEARANCE BETWEEN SERVICE AND STRUCTURE 5010.901 6000-STRUCTURES FOR SANITARY AND STORM SEWERS SANITARY SEWER MANHOLE FIGURES: CASTINGS FOR SANITARY SEWER MANHOLES 6010.601 (SW-601) 7000-STREETS AND RELATED WORK 7010.101 (PV-101) PCC CURB DETAILS 7010.102 (PV-102) PCC PAVEMENT JOINTING 7010.901 TYPICAL JOINTING LAYOUT 7010.904 CONCRETE DRIVEWAY, TYPE A 7030.101 CONCRETE DRIVEWAY, TYPE B 7030.102 DRIVEWAY GRADING RIGHT-OF-WAY GRADING 7030.104 9000-SITE WORK AND LANDSCAPING SILT FENCE 9040.119 STABILIZED CONSTRUCTION ENTRANCE 9040.120

SUDAS STANDARD DETAILS

(3010-3.05) PIPE BEDDING AND BACKFILL

CONTRACTOR SHALL BACKFILL ALL PIPE IN ACCORDANCE WITH FIGURE 3010.101, 3010.102, 3010.103, AND 3010.104 UNLESS OTHERWISE SPECIFIED. AT A MINIMUM, THE FOLLOWING REQUIREMENTS SHALL BE MET: (A) PVC SANITARY SEWER MAIN: BEDDING CLASS F-2.

(B) WATER MAIN PRESSURE PIPE: SHALL BE BACKFILLED WITH SUITABLE IN PLACE MATERIALS UNLESS INSTALLED BENEATH THE WATER TABLE OR UNLESS SUITABLE IN PLACE MATERIAL IS NOT AVAILABLE. WHEN SUITABLE MATERIAL IS NOT AVAILABLE, OR, WHEN INSTALLED BENEATH THE WATER TABLE, WATER MAIN SHALL BE BACKFILLED TO THE TOP OF THE PIPE WITH CLASS I BEDDING MATERIAL (CLASS P-3).

(C) SANITARY SEWER FORCE MAIN: SHALL BE BACKFILLED WITH SUITABLE IN PLACE MATERIALS UNLESS INSTALLED BENEATH THE WATER TABLE OR UNLESS SUITABLE IN PLACE MATERIAL IS NOT AVAILABLE. WHEN SUITABLE MATERIAL IS NOT AVAILABLE, OR, WHEN INSTALLED BENEATH THE WATER TABLE, WATER MAIN SHALL BE BACKFILLED TO THE TOP OF THE PIPE WITH CLASS I BEDDING MATERIAL (CLASS P-3).

(1) BENEATH AND WITHIN 2'OF PROPOSED PAVING: CLASS R-2 PIPE EMBEDMENT. (2) OUTSIDE 2' OF PROPOSED PAVING: SHALL BE BACKFILLED WITH SUITABLE IN PLACE MATERIALS UNLESS INSTALLED BENEATH THE WATER TABLE WHICH SHALL REQUIRE CLASS R-2 PIPE EMBEDMENT.

(E) PVC STORM SEWER: TYPE F-3 EMBEDMENT.

(F) HDPE STORM SEWER: TYPE F-3 EMBEDMENT.

COMPACTION OF ALL BACKFILL MATERIALS SHALL MEET THE REQUIREMENTS OF SECTION 2010, PART 3.04 AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS/SPECIAL PROVISIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH COMPACTION TESTING.

SAND ENCOUNTERED AND REMOVED DURING THE EXCAVATION FOR FOUNDATIONS MAY BE USED FOR PIPE

5.0 NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and pipe culverts. The velocity of the discharge from these features may be controlled by the use of patio blocks, Class A stone or erosion stone. Allowable non-storm water discharges include: uncontaminated ground water discharge, uncontaminated flows from foundation or footing drains, discharge from springs, and pavement wash waters where spills or leaks or hazardous materials are not present. Discharges from fire fighting activities, fire hydrant flushing, potable water sources and lawn watering are allowed.

be disturbed prior to beginning grading, excavation or clearing and grubbing operations. Vegetation in areas not needed for construction shall be preserved. As areas reach their final grade, additional silt fences, silt basins and earth dikes shall be installed as specified in the plans and/or as required by the project engineer. This will include using silt fence as ditch checks and to protect intakes. Temporary stabilizing seeding shall be completed as the disturbed areas are constructed. If construction activity it not planned to occur in a disturbed area for at least 21 days, the area shall be stabilized by temporary seeding or mulching within 14 days. Other stabilizing methods shall be used outside the seeding time period. Areas of the project which are to be paved will be temporarily stabilized by placement of a granular base. All permanent surfaces shall be replaced with PCC pavement.

This work shall be done in accordance with S.U.D.A.S. and/or lowa Dept. of Transportation Standard be paid for according to Article 1109.03 paragraph B.

As the work progresses, additional erosion control items may be required as determined by the engineer after field investigation. These may include appropriate measures installed by contractor, as directed by the engineer. The contractor will complete the construction with the establishment of permanent perennial

7.0 OTHER CONTROLS

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations

exposure to storm water runoff. They shall be properly stored and the contents of any partially used bags of fertilizers will be transferred to a sealable plastic bin to avoid spills.

designated locations. At designated location(s) a temporary pit or containment system will be constructed/installed. The pit shall be designated for Ready-Mix truck wash out only. Contractor shall remove and dispose of all hazardous or unwanted materials contained at such locations at the end of the

by vehicular tracking. Street surfaces adjacent to construction activities shall be swept/cleaned as needed to remove excess mud, dirt, and rock tracted from the project.

The contractor is required to maintain all temporary erosion control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. Cleaning of silt control devices shall begin when the features have lost 50% of their capacity.

Inspections shall be made jointly by the contractor and the contracting authority every seven calendar days and after each rain event that is one half inch or greater. The contractor shall immediately begin corrective action on all deficiencies found. The findings of this inspection shall be recorded in the project diary. This SWPPP may be revised based on the findings of the inspection. The contractor shall implement all revisions. All corrective actions shall be completed within 3 calendar days of the inspection. During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

At locations where runoff can move offsite, silt fence shall be placed along the perimeter of the areas to

Specifications (Section 2602). If the work involved is not applicable to any contract items, the work shall

vegetation of all disturbed areas.

Fertilizers used will be applied only as specified. Once applied, fertilizer will be worked into the soil to limit

Concrete trucks will only be allowed to wash out or discharge surplus concrete or drum wash water at

Traffic through disturbed areas of construction will be limited. This will minimize the migration of sediments

DATE

DATE ISSUED 10/17/2023

2022018.07

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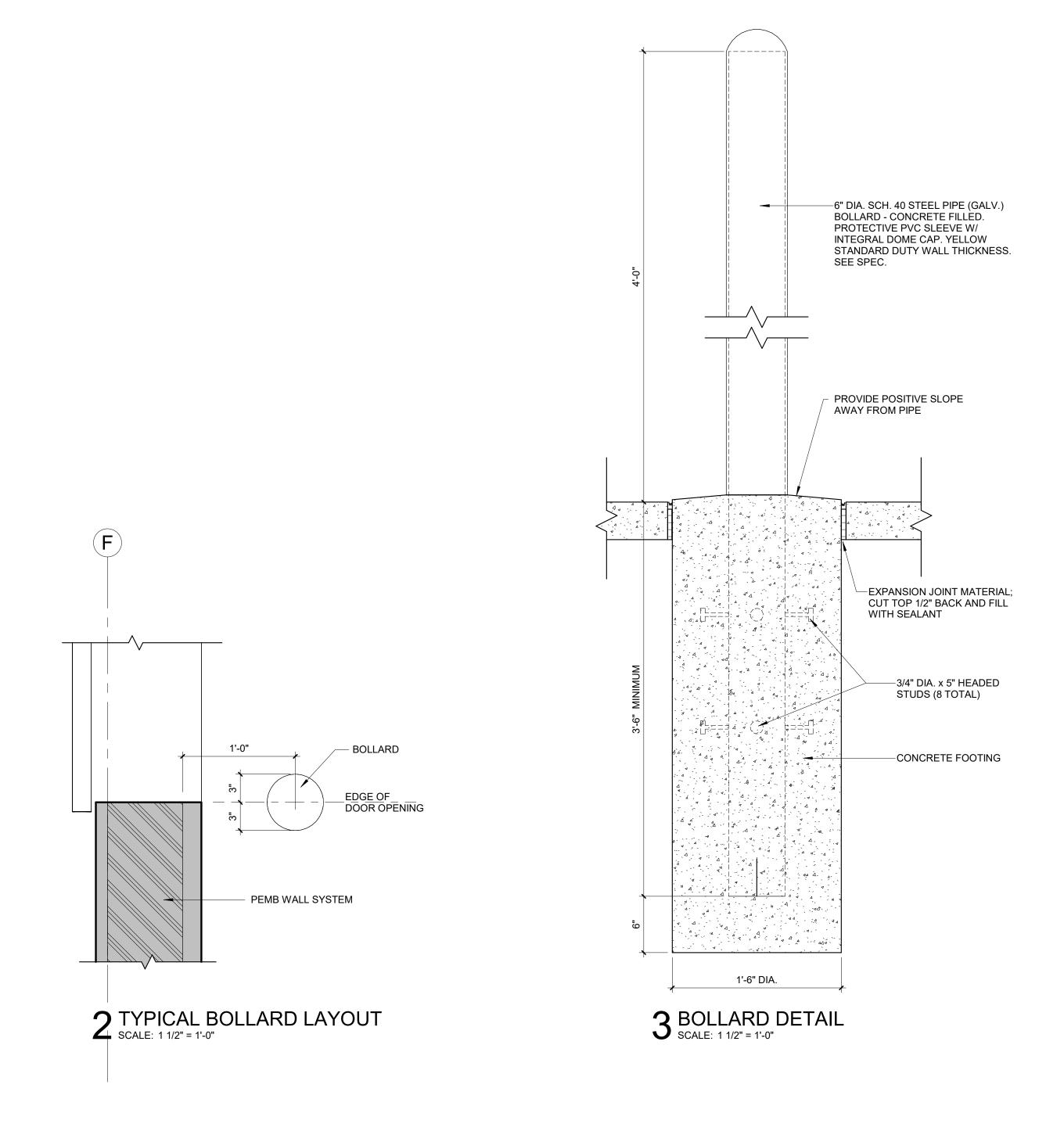
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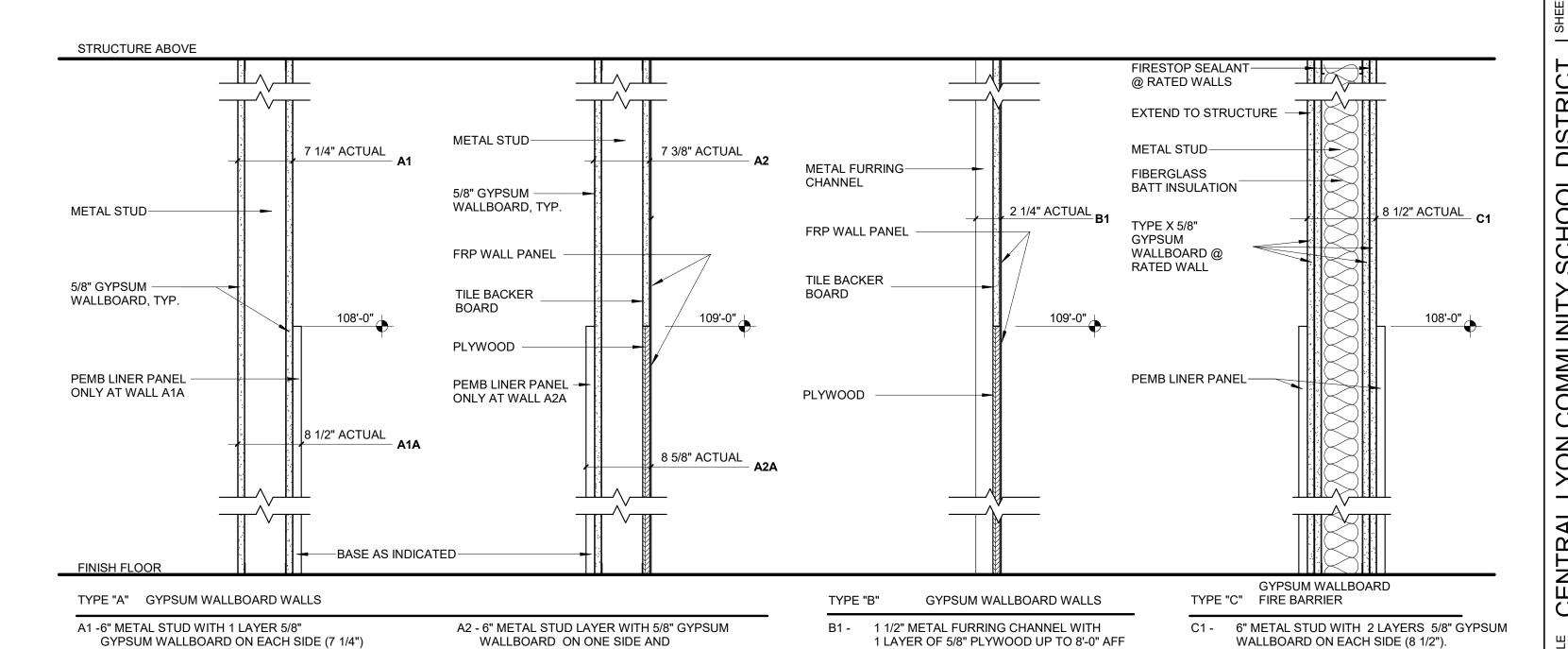
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ARCHITECTURAL GENERAL NOTES

REGULATIONS.

- 1. THESE CONSTRUCTION DRAWING SHEETS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT MANUAL. 2. WHEN DRAWINGS AND PROJECT MANUAL CONFLICT, BIDDER SHALL REQUEST WRITTEN CLARIFICATION FROM THE ARCHITECT PRIOR TO BIDDING. IF CLARIFICATION IS NOT OBTAINED PRIOR TO BIDDING, THE FOLLOWING SHALL BE USED TO DETERMINE SCOPE OF BID: MATERIAL SIZE AND QUANTITY SHALL BE DETERMINED BY DRAWINGS, QUALITY IS DETERMINED BY PROJECT MANUAL. FINAL DETERMINATION SHALL BE BY THE ARCHITECT OR ENGINEER PRIOR TO CONSTRUCTION OR FABRICATION.
- B. INCONSISTENCIES OR CONFLICTS ARE TO BE REPORTED IMMEDIATELY TO THE ARCHITECT. 4. STRUCTURAL DRAWINGS GOVERN FOR SIZES, SPACING, AND CONNECTIONS OF ALL STRUCTURAL MATERIALS AND MEMBERS. IN THE CASE OF DISCREPANCIES, CONSULT WITH THE ARCHITECT/ENGINEER BEFORE COMMENCEMENT OF WORK.
- 5. INSTALL VAPOR BARRIERS DIRECTLY BELOW ALL CONCRETE INTERIOR SLAB-ON-GRADE.
- 6. REFER TO STRUCTURAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF FLOOR OPENINGS. COORDINATE ADDITIONAL OPENINGS REQUIRED WITH STRUCTURAL ENGINEER. '. THE CONTRACTOR SHALL ARRANGE FOR THE PREMISES TO BE MAINTAINED IN AN ORDERLY MANNER THROUGHOUT THE COURSE OF THE JOB. MAINTAIN CLEANLINESS THROUGHOUT. PROVIDE AND MAINTAIN TEMPORARY BARRICADES, CLOSURE WALLS, ETC. AS REQUIRED TO PROTECT THE PUBLIC DURING THE PERIOD OF CONSTRUCTION.
- DAMAGE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR. 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL LEFTOVER MATERIALS, DEBRIS, TOOLS, AND EQUIPMENT INVOLVED AT THE CONCLUSION OF THE INSTALLATION. THE CONTRACTOR SHALL LEAVE ALL AREAS CLEAN. ALL FIXTURES AND REUSABLE MATERIALS TO BE REMOVED ARE TO BE STORED OR DISPOSED OF AS PER OWNERS INSTRUCTIONS. 9. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT WORKERS FROM INJURY OR EXPOSURE TO DANGEROUS MATERIALS DURING THE WORK BY THE CONTRACTOR, AS PER OSHA
- 10. DO NOT SCALE DRAWINGS. NOTIFY ARCHITECT / ENGINEER IF ADDITIONAL DIMENSIONS ARE REQUIRED OR DISCREPANCIES DISCOVERED. 11. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SHOP DRAWING APPROVAL AND CONSTRUCTION. SEE PROJECT MANUAL WHERE FIELD VERIFICATION CANNOT BE OBTAINED PRIOR TO SHOP DRAWING APPROVAL.
- 12. DIMENSIONS ARE NOMINAL. DIMENSIONS FOR MASONRY WALLS ARE GIVEN FROM FACE TO FACE OF WALL. DIMENSIONS FOR STUD WALL IS TO FACE OF FINISH WALL OR TO CENTER OF WALL, NOT CENTER OF STUD.
- 13. ABBREVIATIONS AND MATERIAL REPRESENTATIONS ON ARCHITECTURAL DRAWINGS ARE SHOWN ON 'ABBREVIATIONS' AND 'MATERIAL LEGEND'.
 14. SEE TYPICAL MOUNTING HEIGHTS FOR EQUIPMENT AND FIXTURES ON SHEET A-A7.1.
- 15. FOR ADDITIONAL PLAN INFORMATION REFER TO PARTIAL ENLARGED PLANS OR DETAILS AS NOTED ON THE DRAWINGS. 16. REFER TO CIVIL DRAWINGS FOR ALL STEEL PIPE BOLLARDS REQUIRED.





AND 1 LAYER 5/8" TILE BACKER BOARD FROM

8'-0" UP TO CEILING AND FRP FINISH FROM

(B WALL INSTALLED ON INSIDE FACE OF

FLOOR TO CEILING

PEMB WALL SYSTEM)

1 LAYER OF 5/8" PLYWOOD UP TO 8'-0" AFF

8'-0" UP TO CEILING AND FRP FINISH FROM

1 LAYER OF 5/8" PLYWOOD UP TO 8'-0" AFF

AND 1 LAYER 5/8" TILE BACKER BOARD FROM 8'-0" UP TO CEILING AND FRP FINISH FROM

NOTES FOR ALL TYPE "A" WALLS
* USE MOISTURE RESISTANT GYPSUM WALLBOARD

* SEAL AROUND ALL OPENINGS WITH ACOUSTICAL

AT TOILETS AND OTHER WET AREAS.

SEALANT, ELECTRICAL BOXES & ETC.

A2A - 6" METAL STUD LAYER WITH 5/8" GYPSUM

FLOOR TO CEILING

FLOOR TO CEILING

SCALE: 1 1/2" = 1'-0" NOTE: REFER TO UL FIRE-RESISTANCE DESIGN FOR ADDITIONAL INFORMATION @ FIRE RATED WALLS

AND 1 LAYER 5/8" TILE BACKER BOARD FROM

WALLBOARD WITH 1 1/4" LINER PANEL ON ONE SIDE AND

A1A - 6" METAL STUD WITH 1 LAYER 5/8"

AT TOILETS AND OTHER WET AREAS.

SEALANT, ELECTRICAL BOXES & ETC.

WALL TYPES

PANEL ON ONE SIDE (8 1/2")

GYPSUM WALLBOARD ON EACH SIDE AND 1 1/4" LINER

NOTES FOR ALL TYPE "A" WALLS
* USE MOISTURE RESISTANT GYPSUM WALLBOARD

* SEAL AROUND ALL OPENINGS WITH ACOUSTICAL

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PROJECT NUMBER

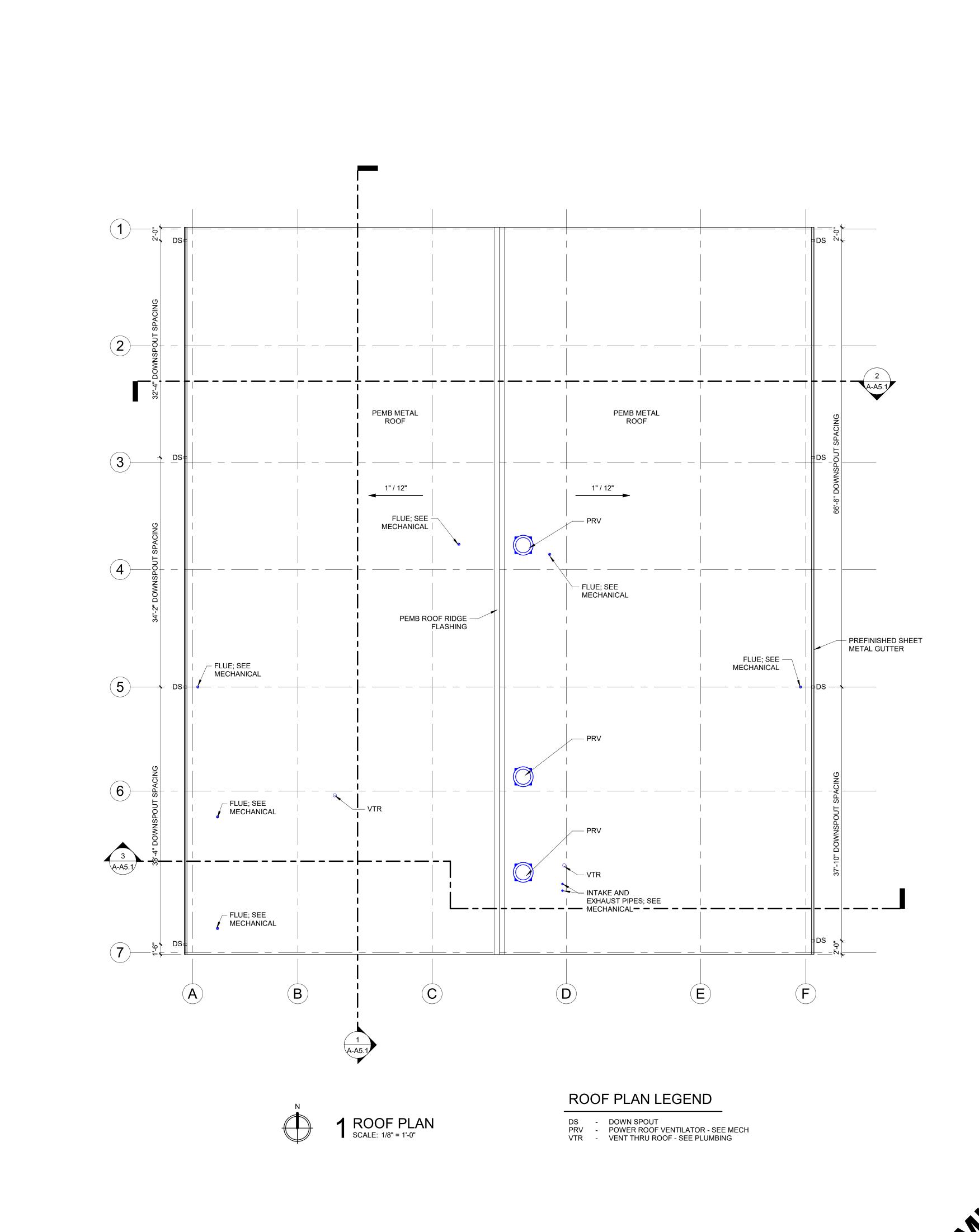
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(UL-U411, U419 @ FIRE RATED WALL, 2HR)

NOTE FOR ALL TYPE "C" WALLS:

* SEAL AROUND ALL PENETRATIONS WITH FIRE SEALANT, ELECTRICAL BOXES & ETC TO

MAINTAIN FIRE RATING.

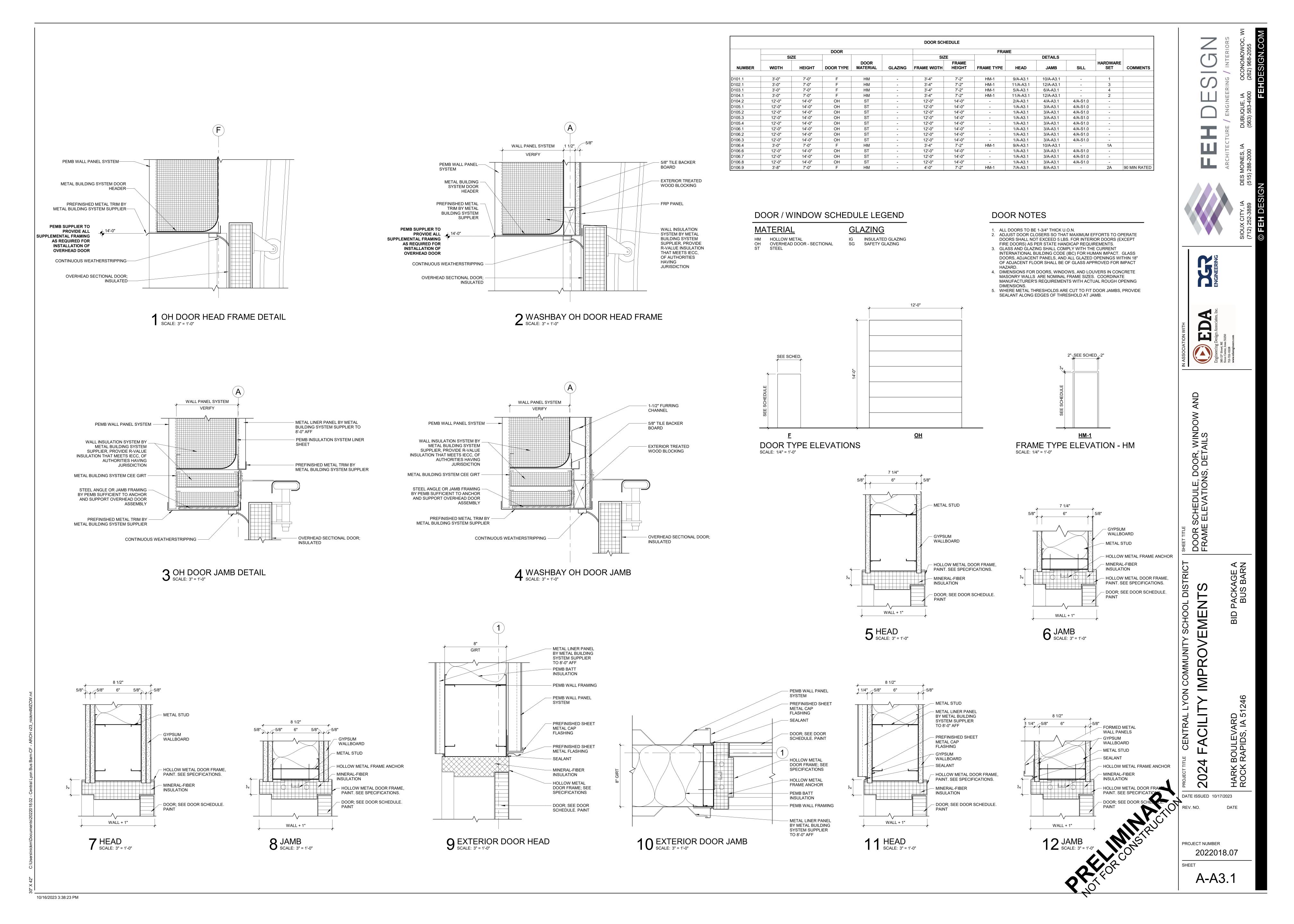


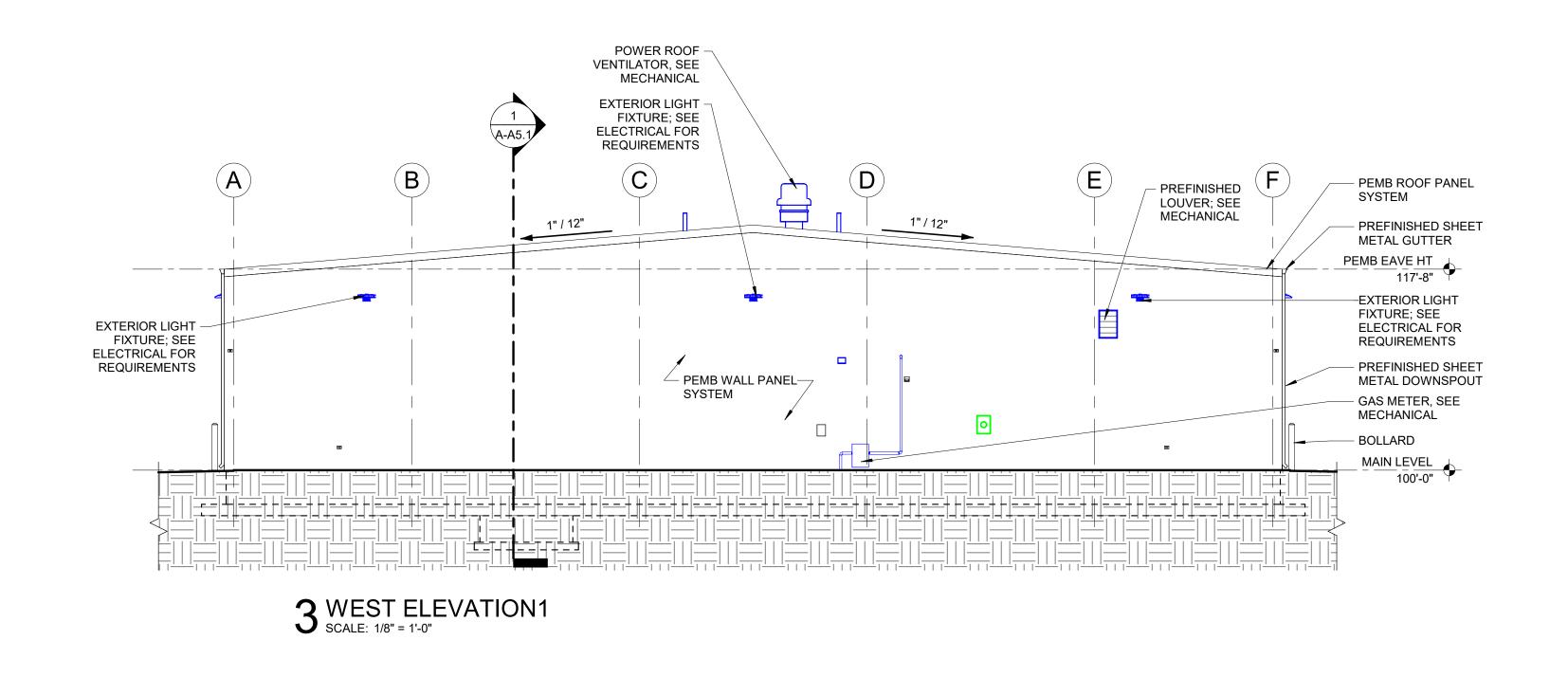
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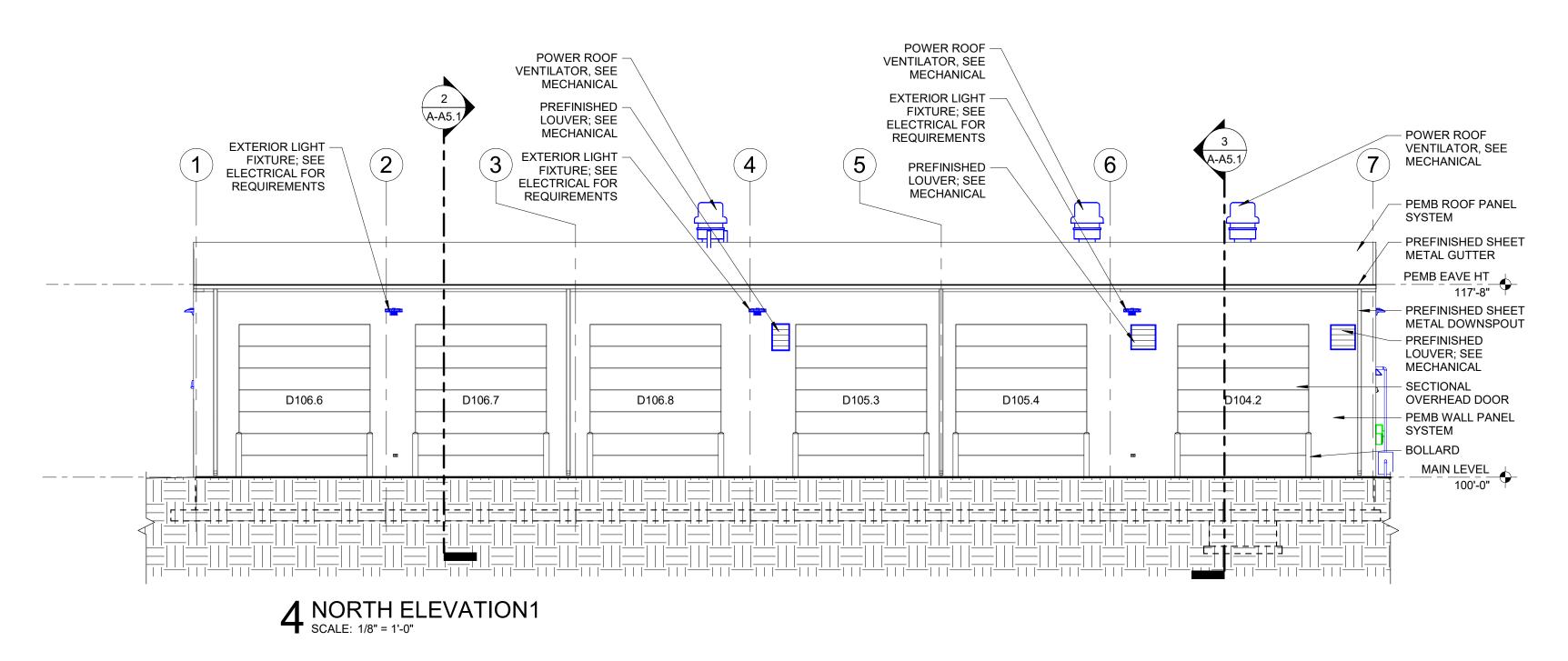
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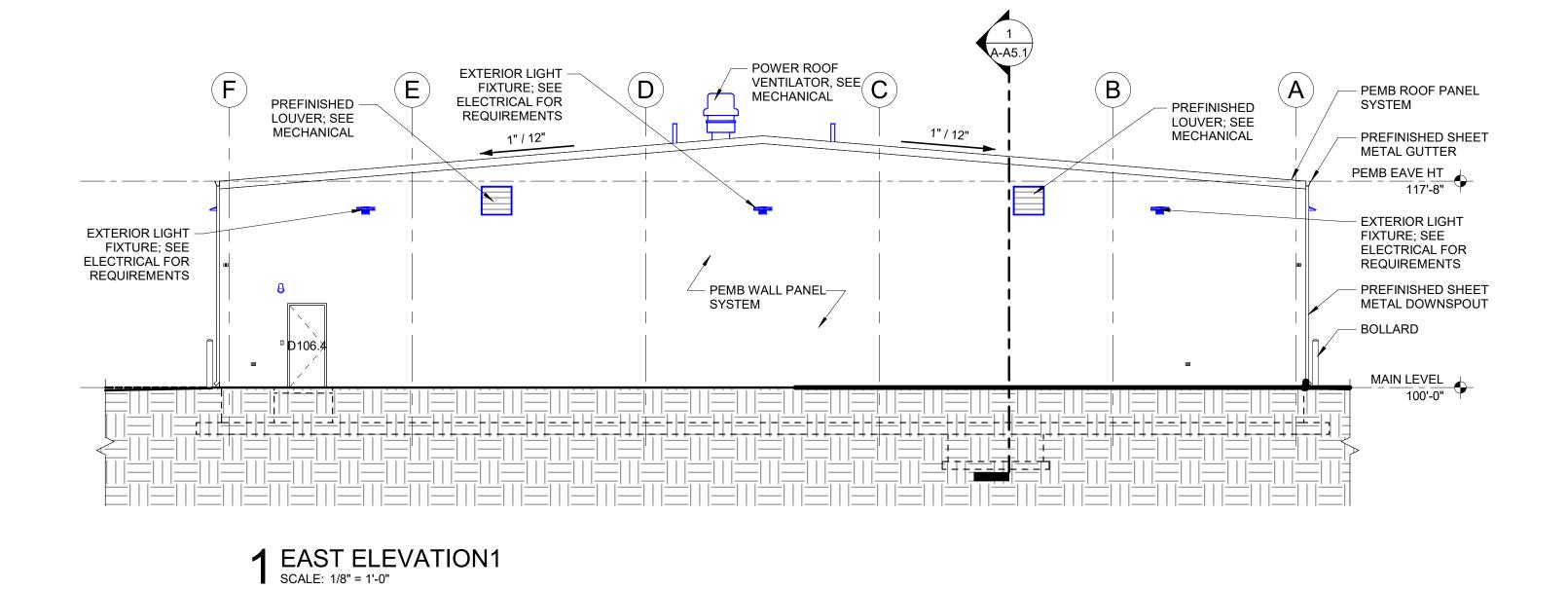
N COMMUNITY SCHOOL DISTRICT
IMPROVEMENTS

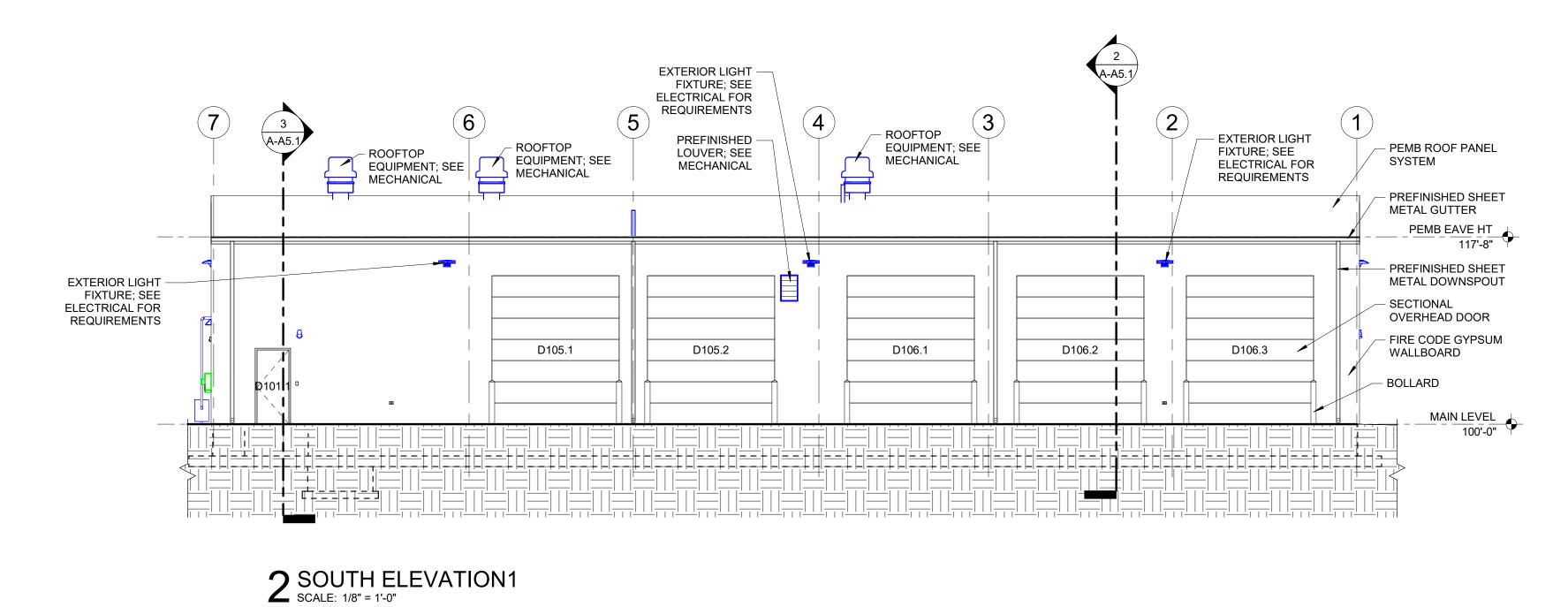
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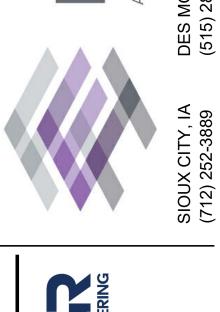




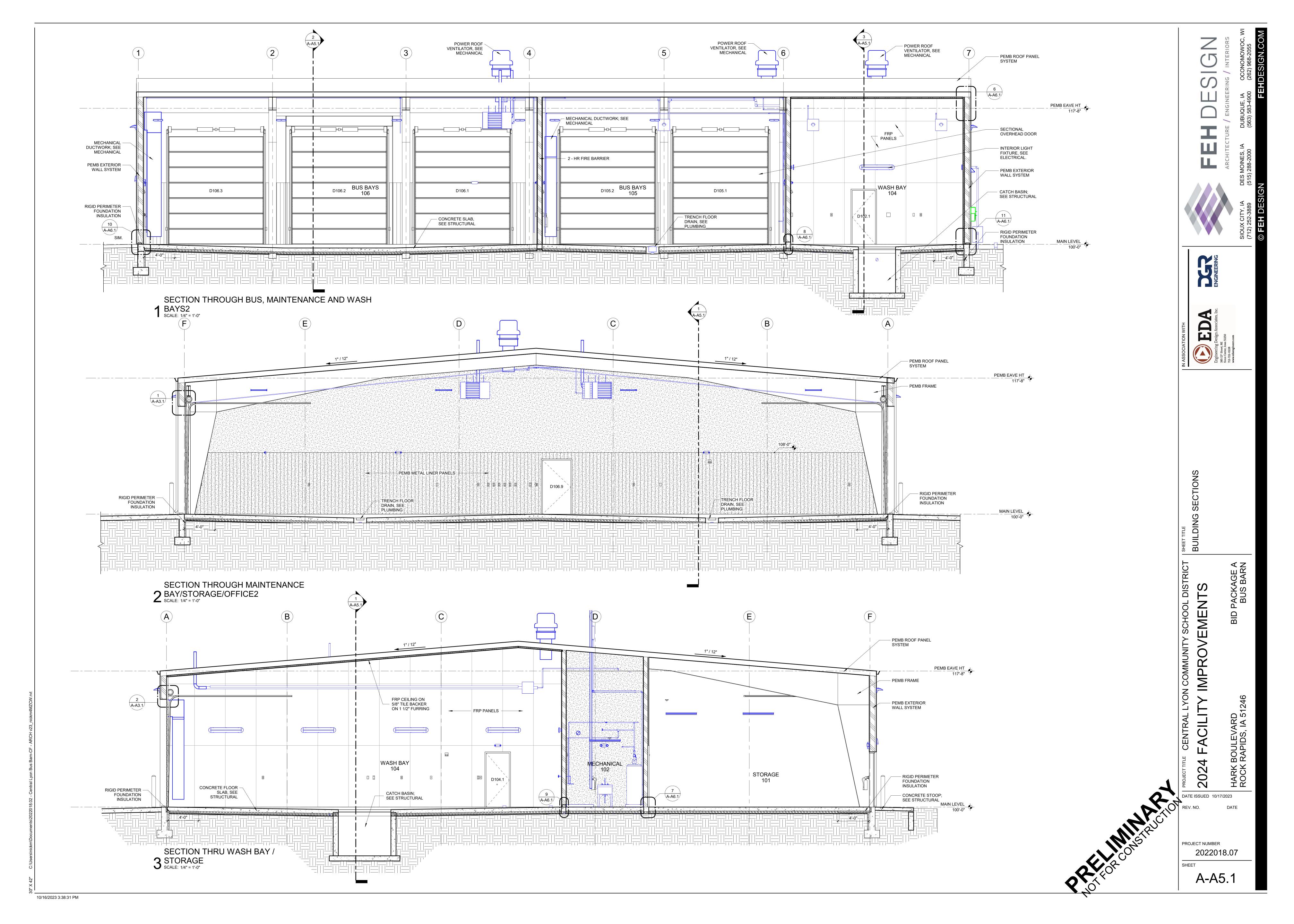
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IMPROVEMENTS





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— GRAB BAR

- TOILET TISSUE DISPENSER, OWNER FURNISHED/OWNER

INSTALLED

- VINYL BASE

4 TOILET 103 - WEST SCALE: 1/4" = 1'-0"

REFERENCE ADA 2010 STANDARDS FOR ACCESSIBLE DESIGN FOR FURTHER

ROOMS. SEE ELEVATIONS ELSEWHERE FOR SPECIFIC ROOM ELEVATIONS.

CONSULT ARCHITECT IF DISCREPANCIES ARE DISCOVERED BETWEEN THESE DIMENSIONS AND DETAIL DIMENSIONS.

REFER TO PROJECT MANUAL FOR ACCESSORY MODEL NUMBERS.

REFER TO SECTION 22 & 26 OF THE PROJECT MANUAL FOR FURTHER

ALL DIMENSIONS ARE FROM FINISHED SURFACE.

NOT ALL ITEMS SHOWN MAY BE APPLICABLE.

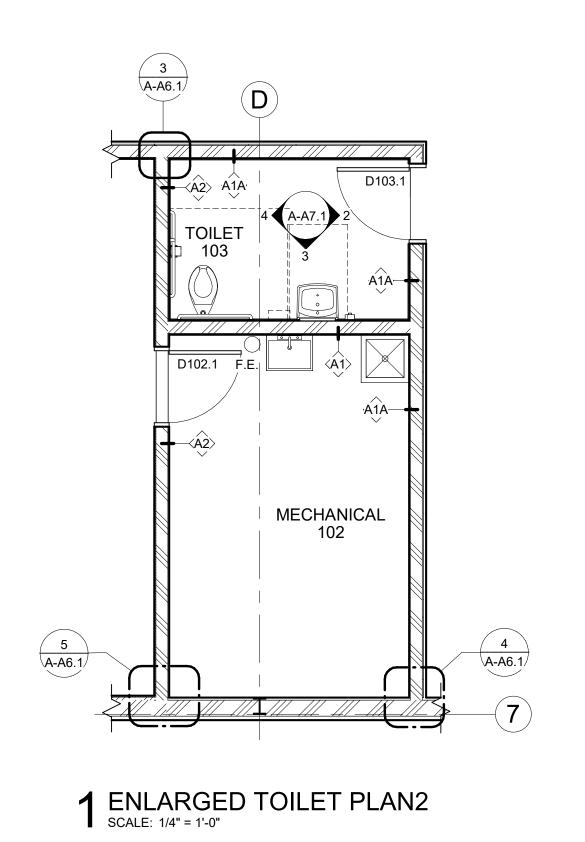
ELEVATIONS SHOWN ARE FOR MOUNTING LOCATIONS ONLY AND <u>NOT</u> FOR SPECIFIC

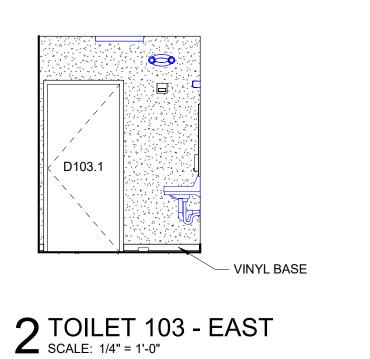
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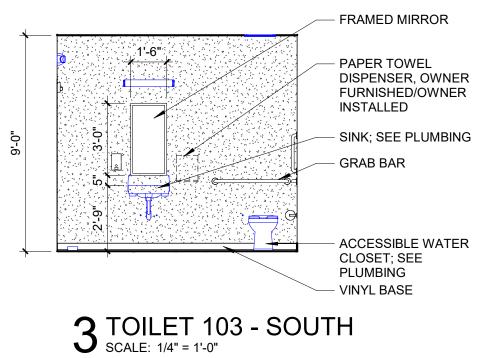
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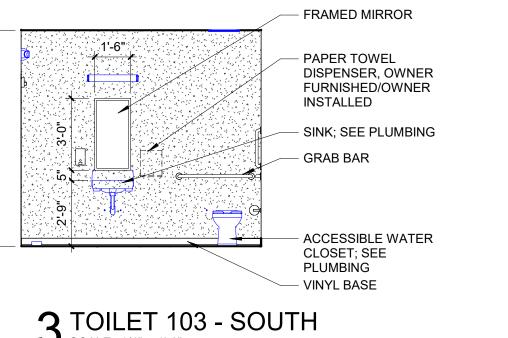
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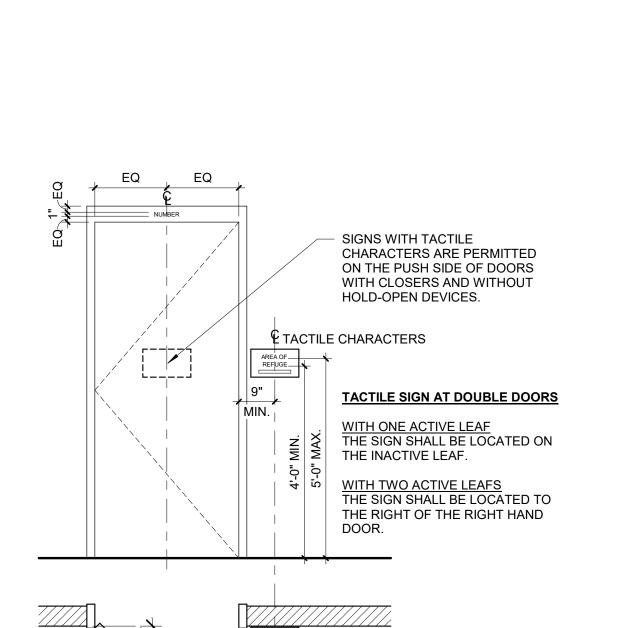
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NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH	SOUTH	EAST	WEST	CEILING FINISH	COMMENTS
					-				
101	STORAGE	SC	VB	-	MLP	MLP	GB-PNT/MLP	EXP	MLP TO 8'-0"
102	MECHANICAL	SC	VB	GB-PNT	MLP	GB-PNT	GB-PNT	EXP	MLP TO 8'-0"
103	TOILET	SC	VB	GB-PNT	GB-PNT	GB-PNT	GB-PNT	GB-PNT	CEILING @ 9'-0"AFF
104	WASH BAY	SC	-	FRP	FRP	FRP	FRP	FRP	
105	BUS BAYS	SC	-	MLP/GB-PNT	MLP/GB-PNT	MLP	MLP	EXP	MLP TO 8'-0"
106	BUS BAYS	SC	_	MLP	MLP/GB-PNT	MLP	MLP	EXP	MLP TO 8'-0

ROOM FINISH SCHEDULE LEGEND

FL	<u>OORS</u>	WAL	<u>L</u>	CEILI	NG
SC	SEALED CONCRETE	EPNT PNT MLP GB-PNT	EPOXY PAINT PAINT METAL LINER PANEL GYPSUM BOARD, PAINT	EXP FRP GB-PNT	EXPOSED STRUCTURE, NO PAINT FIBERGLASS REINFORCED PANEL GYPSUM BOARD, PAINT

ROOM FINISH NOTES

APPLICATION OF THE SEALER.

- 1. ELECTRICAL PANELS AND ACCESS DOOR PANELS SHALL BE PRIMED AND PAINTED TO MATCH ADJACENT WALLS (VERIFY WITH OWNER).
- 2. ALL FLOORS SHALL RECEIVE SEALER PER THE PROJECT MANUAL. CONCRETE FLOORS ARE TO BE CLEANED OF ALL FOREIGN MATERIAL PRIOR TO THE
- 3. PROVIDE EXPANSION JOINTS AT ALL SLAB EDGES AGAINST EXTERIOR WALLS. REFER TO STRUCTURAL.
- 4. SLOPE INTERIOR FLOOR SLAB TO DRAIN AT 1/8" PER FOOT WHERE SLOPED SLABS ARE INDICATED, U.N.O. 5. FLOOR SLAB TO BE SLOPED DOWN AROUND DRAINS WHERE FLOOR SLAB IS
- NOT INDICATED TO BE SLOPED. REFER TO MECHANICAL DRAWINGS FOR ALL 6. FLOOR DRAINS AND TRENCH DRAINS INDICATED FOR LOCATION AND
- CONFIGURATION ONLY, REFER TO MECHANICAL DRAWINGS FOR PRODUCT AND
- PIPING INFORMATION. 7. SEE STRUCTURAL FOR CONCRETE SLAB FLOOR JOINT PATTERN. 8. NOTE FOR WALLS NOT RECEIVING FINISHES: COORDINATE OPENINGS SO AS NOT TO LEAVE SPACES I.E. THAT WOULD OTHERWISE BE CAULKED AND

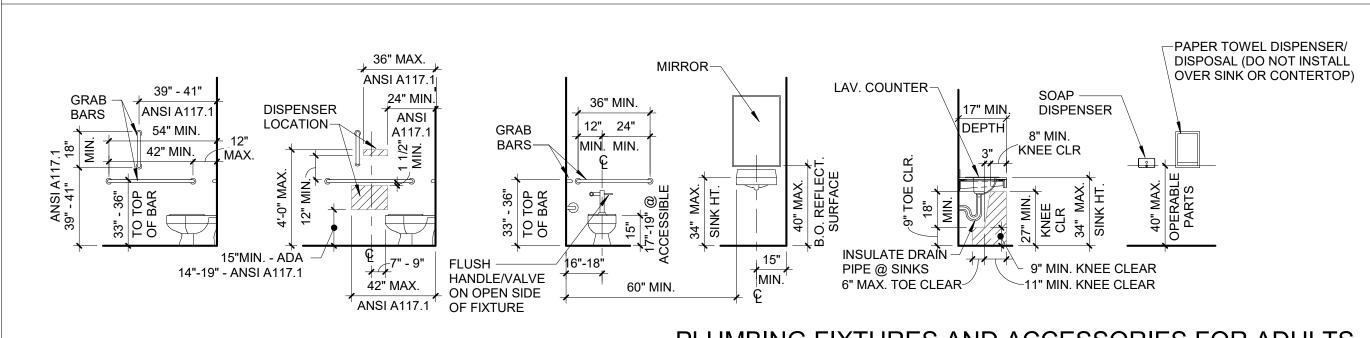
ACCESSIBLE & STANDARD MOUNTING HEIGHTS - 2010 ADA STANDARD FOR ACCESSIBLE DESIGN AND ANSI A117.1

— CLEAR FLOOR SPACE OF 18" MIN. X 18" MIN., CENTERED ON THE TACTILE CHARACTERS, PROVIDED BEYOND

THE ARC OF THE DOOR SWING

BETWEEN THE CLOSED POSITION

AND 45 DEGREE OPEN POSITION.



5 SIGNAGE TYPES SCALE: 1/2" = 1'-0"

TO BASIC OPERATION 48" MAX. (SIDE & FORWARD REACH). F.E.B. F.E. F.E.C. FIRE EXTINGUISHER

HEIGHT TO HIGHEST OPERABLE

PARTS WHICH ARE ESSENTIAL

SIGNAGE

(TACTILE CHARACTERS)

PLUMBING FIXTURES AND ACCESSORIES FOR ADULTS

- CODES AND STANDARDS: 2018 IBC/ASCE 7-16 OCCUPANCY/RISK CATEGORY II
- 2. DESIGN DEAD LOADS: ROOF DEAD LOAD TO BE DETERMINED BY PRE-ENGINEERED METAL
- BUILDING SUPPLIER DESIGN LIVE LOADS:

MINIMUM LIVE LOAD: 20 PSF GROUND SNOW LOAD: Pg = 40 PSF SNOW EXPOSURE FACTOR: Ce = 1.0 SNOW THERMAL FACTOR: Ct = 1.1

SNOW LOAD IMPORTANCE FACTOR: 1.0 PLUS ALLOWANCE FOR DRIFTED AND UNBALANCED SNOW

MECHANICAL ROOMS: 150 PSF OR POSTED M.E.P. LOADS SIDEWALKS AND VEHICULAR DRIVEWAYS SUBJECT TO TRUCKING: 125PSF

WIND LOAD: BASIC WIND SPEED: 112 M.P.H. WIND EXPOSURE: C WIND DIRECTIONAL FACTOR: 0.85 TOPOGRAPHIC FACTOR: 1.0 WIND ANALYSIS FOR LOW RISE BUILDING BASED ON ASCE 7-16/2018 IBC. SUPPLIER OF COMPONENTS OF STRUCTURE RESPONSIBLE FOR CALCULATING WIND LOADS BASED ON THE VALUES LISTED ABOVE. UPLIFT PRESSURE TO BE CONSIDERED ON ALL ROOF COMPONENTS.

SEISMIC LOAD: SPECTRAL ACCELERATIONS: Ss = 0.078 SPECTRAL ACCELERATIONS: S1 = 0.036 SITE COEFFICIENTS: Fa = 1.6

> Fv = 2.4DESIGN SPECTRAL RESPONSE ACCELERATION: Sds = 0.083 DESIGN SPECTRAL RESPONSE ACCELERATION: Sd1 = 0.058 RISK/OCCUPANCY CATEGORY: II IMPORTANCE FACTOR: I = 1.0 SITE CLASS: D SEISMIC DESIGN CATEGORY: A

MISCELLANEOUS

STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.

2. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL

- OF THE ARCHITECT. 3. NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE
- WRITTEN APPROVAL OF THE ARCHITECT.
- 4. OPENINGS 1'-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SUCH OPENINGS.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- 6. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR
- 7. UNLESS OTHERWISE NOTED, FIRE PROOFING METHODS AND MATERIALS FOR STRUCTURAL MEMBERS ARE NOT SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATING REQUIREMENTS, FIRE PROOFING METHODS
- 8. DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.
- 9. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS
- 10. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECT'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA. ETC., UNLESS HE HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- 11. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT BEFORE THE EFFECTED WORK PROCEEDS.
- 12. CHECK ALL DIMENSIONS AGAINST REQUIREMENTS OF OTHER CONTRACT DOCUMENTS. FIELD VERIFY DIMENSIONS RELATING TO EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS AND FABRICATION.
- 13. NO MODIFICATION, ALTERATION OR REPAIR SHALL BE MADE WITHOUT PRIOR REVIEW BY STRUCTURAL ENGINEER. SUBMIT DETAILS AND CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN STATE WHERE PROJECT IS LOCATED AND EMPLOYED BY CONTRACTORS.

FOUNDATIONS

- 1. THE FOUNDATION HAS BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE ON THE GEOTECHNICAL EXPLORATION REPORT BY: CERTIFIED TESTING SERVICES, CTS PROJECT NO. G7020 (DATED MAY 23, 2023)
- A. DO NOT BACKFILL PIT WALLS UNTIL ADEQUATE TEMPORARY BRACING IS INSTALLED. B. BACKFILL UNDER FOUNDATION WITH CONCRETE OR AS APPROVED BY SOILS ENGINEER.
- 3. SOIL MODULUS OF SUBGRADE REACTION (Ks) = 72 KIPS PER CUBIC FOOT. SPREAD FOOTINGS:
- 1. FOOTINGS SHALL BEAR ON SOIL CAPABLE OF SUSTAINING A NET BEARING PRESSURE UNDER FULL SERVICE LIVE AND DEAD LOAD AS FOLLOWS: 2,000 PSF FOR FOUNDATIONS BEARING ON SUITABLE NATIVE SOILS OR ENGINEERED FILL
- 2. TOP OF FOOTING (TOF) ELEVATIONS ARE SHOWN ON THE PLANS.
- 3. FOOTING MAY BE EARTH FORMED.
- 4. ALL BEARING MATERIAL SHALL BE INSPECTED BY A QUALIFIED TECHNICIAN PRIOR TO CONCRETE PLACEMENT. A QUALIFIED TECHNICIAN SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED. OVEREXCAVATION MAY BE REQUIRED.
- 5. BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR A MINIMUM OF 4'-0" BELOW FINAL GRADE.
- 6. SLIDING RESISTANCE (VALUES INCLUDE A 1.50 SAFETY FACTOR)

INTERIOR SLAB JOINT PLACEMENT

INTERIOR CONSTRUCTION JOINTS A. PROVIDE CONSTRUCTION JOINTS: 1.) AT ALL COLD JOINTS IN SLABS 2.) AS REQUIRED BY THE DRAWINGS

A. COEFFICIENT OF FRICTION = 0.3

- INTERIOR CONTROL JOINTS: A. EXPOSED SLABS (THOSE WHICH RECEIVE NO FINISHED FLOOR SURFACE MATERIAL) SHALL BE POURED IN LONG STRIPS WITH SAWED OR TOOLED CONTROL JOINTS. STRIP WIDTHS SHALL NOT EXCEED. AT CONTRACTOR'S OPTION, CONCRETE MAY BE PLACED IN A CHECKER BOARD PATTERN, ALLOWING 72 HOURS BETWEEN ADJACENT POURS, DISTANCE BETWEEN CONTROL JOINTS SHALL NOT EXCEED TABULATED VALUES. SHALL BE LOCATED TO CONFORM TO BAY SPACING WHENEVER POSSIBLE (AT COLUMN
- CENTERLINES, HALF BAYS, ETC.), AND BE LOCATED AS REQUIRED BY THE DRAWINGS. B. ALL CONTROL JOINTS ARE TO BE FILLED WITH THE SEALANT INDICATED IN THE SPECIFICATIONS. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION. C. COVERED SLABS (THOSE WHICH RECEIVE FINISHED FLOOR SURFACE MATERIALS SHALL BE MONOLITHICALLY POURED IN AREAS AS LARGE AS CONTRACTOR DESIRES. JOINTS SHALL CONFORM TO CONSTRUCTION JOINT DESIGN.
- 3. INTERIOR ISOLATION JOINTS: A. PROVIDE ISOLATION JOINTS:
 - AT ALL COLUMNS 2. AT ALL JUNCTIONS OF SLABS AND VERTICAL SURFACES 3. AS REQUIRED BY DRAWINGS

CONCRETE

- 1. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH AND DENSITY, IN ACCORDANCE WITH THE SPECIFICATION.
- 2. REINFORCING SHALL CONFORM TO A.S.T.M. A615, GR. 60, INCLUDING TIES AND STIRRUPS.
- 3. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED, IN ACCORDANCE WITH A.C.I. DETAILING MANUAL.
- 4. ALL REINFORCING SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER. IN ACCORDANCE WITH C.R.S.I. "REINFORCING BAR DETAILING".
- 5. MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE: A. UNFORMED SURFACE IN CONTACT WITH THE GROUND: 3 IN. B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER: 1 1/2 IN. FOR #5 BAR OR
 - SMALLER 2 IN FOR #6 BAR OR LARGER C. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER: WALLS, SLABS: 3/4 IN. BEAMS, GIRDERS AND COLUMNS (TO TIES OR STIRRUPS): 1 1/2 IN.
- 6. ALL CONSTRUCTION JOINTS SHOWN ON DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE, UNLESS THEIR ELIMINATION IS APPROVED BY THE ENGINEER. ADDITIONAL CONSTRUCTION JOINTS, REQUIRED TO FACILITATE CONSTRUCTION, SHALL BE LOCATED AT POINTS OF MINIMUM SHEAR AND SHALL BE DETAILED ON SHOP DRAWINGS. REINFORCEMENT SHALL PASS CONTINUOUSLY THROUGH THE JOINT.
- 7. ALL ABUTTING CONCRETE MEMBERS SHALL BE DOWELED TOGETHER. UNLESS POURED MONOLITHICALLY. DOWELS SHALL BE EQUAL IN SIZE AND SPACING TO THE REINFORCING IN
- 8. UNLESS OTHERWISE SHOWN IN THE ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFERS AT ALL EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE.
- 9. SEE ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIP SLOTS, REGLETS, MASONRY ANCHORS. PRECAST BEARING LEDGES, BRICK LEDGE ELEVATIONS AND FOR MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC.
- 10. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES. WHERE FINISH IS NOT
- SPECIFIED, CONFORM TO REQUIREMENTS OF A.C.I. 301. 11. MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS SHALL BE REFERRED TO FOR DRAINS,

SLEEVES, OUTLET BOXES, CONDUIT, ANCHORS, ETC.

12. LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B", CASE 2 SPLICES. SPLICES f'c = 4000PSI, fy = 60,000PSI

TENSION LAP SPLICE FOR TOP BARS, * GRADE 60			TENSION LAP SPLICE FOR OTHER BARS GRADE 60				
LAP SPLICE LENGTH (INCHES)			LAP S	SPLICE LENG	TH (INCHES)		
	f'c = 4,000 P.S.I.		BAR SIZE		f'c = 4,000 P.S.I.		
	37		#3		28		
	49		#4		37		
	61		#5		47		
	73		#6		56		
	106		#7		81		
	121		#8		93		
	* GRADE	* GRADE 60 P SPLICE LENGTH (INCHES) f'c = 4,000 P.S.I. 37 49 61 73 106	* GRADE 60 P SPLICE LENGTH (INCHES) f'c = 4,000 P.S.I. 37 49 61 73 106	* GRADE 60 PSPLICE LENGTH (INCHES) fc = 4,000 P.S.I. 37	* GRADE 60 SPLICE LENGTH (INCHES) f'c = 4,000 P.S.I. 37 49 61 73 106 GRADE LAP SPLICE LENG BAR SIZE #4 #4 #5 #6 #7		

"TOP BARS" ARE DEFINED AS ANY BAR WITH MORE THAN 12" OF CONCRETE CAST <u>BELOW</u> THE BAR.

THE ADJACENT MEMBER.

COMPRESSION	ON LAP SCHD.	<u>NC</u>	OTES:	
LAP LENGTH (INCHES)		1.	TABLES ARE BASED ON ACI 318-05 SEC. 12.2.2.	
f'c = 3,000 P.S.I. OR GREATER		2.	ALL SPLICES TO BE CLASS "B" TENSION SPLICE UNLESS OTHERWISE NOTED.	
fc = 3,000 P.S.	·			
BAR SIZE	30 db	3.	SPLICE PLAIN WELDED WIRE FABRIC BY LAPPIN	
#3	12		ONE FULL MESH SPACE PLUS 2 INCHES.	
#4	15	4.	FOR LIGHT WEIGHT CONCRETE, MULTIPLY	
#5	19		LENGTHS IN TABLE BY 1.3	
#6	23	5.	FOR EPOXY COATED REINFORCEMENT, MULTIF LENGTHS IN TABLE BY 1.5.	
#7	26			
#8	30	6.	COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS	

LENGTHS IN TABLE BY 1.5. COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS

13. REFER TO MECHANICAL DRAWINGS FOR HOUSEKEEPING PADS AND INERTIA BASES AT

- MECHANICAL EQUIPMENT. 14. BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES, ETC., BELOW GRADE SHALL BE COVERED WITH A MINIMUM OF 3" CONCRETE.
- 15. WHERE REINFORCING IS NOT INDICATED OR DEFINED, INCLUDE FOR BID PURPOSES ONLY. A. WALLS: #5 EACH WAY EACH FACE. SPACING IN INCHES = 140/(WALL THICKNESS
- IN INCHES BUT NOT OVER 18"O.C. B. COLUMNS: 1-#9 VERTICAL PER 50 SQUARE INCHES OF CROSS SECTIONAL AREA
- C. SLABS: #5 EACH WAY TOP AND BOTTOM. SPACING IN INCHES = 100/(SLAB THICKNESS IN INCHES) BUT NOT OVER 18"O.C.
- ON SHOP DRAWINGS, INDICATE ABOVE REINFORCING AS "PER GENERAL NOTES". SUCH REINFORCING MAY BE REVISED OR RELOCATED BY STRUCTURAL ENGINEER DURING SHOP
- 16. PROVIDE CONCRETE EQUIPMENT PADS, INERTIA BASES AND CURBS AS NOTED ELSEWHERE IN CONTRACT DOCUMENTS. UNLESS NOTED, DOWEL PADS WITH #4 x 0'-6" PROJECTING 3" FROM CONCRETE BELOW AT 18"O.C. EACH WAY. REINFORCE PADS WITH #4@18 EACH WAY TOP AND
- 17. PROVIDE STANDARD HOOKS ON BARS TERMINATING AT A CONCRETE FACE UNLESS NOTED (E.G.: EDGES OF OPENINGS, SLAB EDGES, EXPANSION JOINTS, ENDS OF BEAMS, AND AT: TOP, BOTTOM AND ENDS OF WALLS, ETC...).
- 18. PROVIDE 2-#5 (MIN.) @ EACH SIDE OF OPENING. EXTEND 2'-0 BEYOND OPENINGS.

DEFERRED SUBMITTALS

AND #3 TIES AT 9"O.C.

- 1. PER IBC SECTION 106.3.4.2 THE FOLLOWING ITEMS ARE DEFERRED SUBMITTALS ITEMS: PRE-ENGINEERED METAL BUILDING (PEMB)
- 2. DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL IS RECEIVED.

COLD-FORMED STEEL

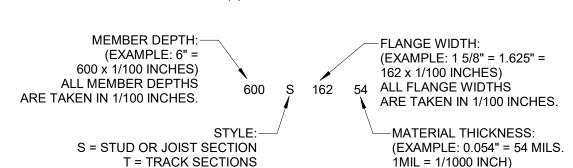
B. PROPERTIES:

- 1. ALL SIZING BASED ON STEEL STUD MANUFACTURERS ASSOCIATION (ICBO ER-4943P) PRODUCT TECHNICAL INFORMATION.
- 2. MATERIALS SHALL CONFORM TO THE FOLLOWING:
 - A. GALVANIZED MATERIAL: 1. ALL GALVANIZED STUDS AND JOISTS 12, 14 AND 16 GAUGE SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE MINIMUM REQUIREMENTS OF ASTM A653 SS,
 - GRADE 50, CLASS 1 OR 3 WITH A MINIMUM YIELD OF 50,000 PSI. 2. ALL GALVANIZED 18 AND 20 GAUGE STUDS AND JOISTS; ALL GALVANIZED TRACK, BRIDGING, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF ASTM A653 SS, GRADE 33 WITH
 - A MINIMUM YIELD OF 33,000 PSI. 3. ALL GALVANIZED STUDS, JOISTS, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A525.
 - 1. THE PHYSICAL AND STRUCTURAL PROPERTIES LISTED BY THE STEEL STUD MANUFACTURER ASSOCIATION AND AISI DESIGN MANUAL SHALL BE CONSIDERED THE MINIMUM PERMITTED FOR ALL FRAMING MEMBERS. SPECIFICALLY. THE FOLLOWING MINIMUM PROPERTIES, CALCULATED IN ACCORDANCE WITH THE LATEST AISI SPECIFICATION SHALL BE PROVIDED: IX (IN.4), SX (IN.3), AREA (IN.2), RX (IN.), FY (KSI),
- RESISTING MOMENT (IN.-LB.). C. SUBSTITUTIONS: 1. ANY SUBSTITUTIONS MUST BE APPROVED IN WRITING PRIOR TO DELIVERY, BY THE ARCHITECT AND/OR ENGINEER OF RECORD.
- 3. INSTALLATION OF STUDS SHALL BE AS PER ASTM C1007-00 "INSTALLATION OF LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS AND ACCESSORIES", ASTM C955-00a "SPECIFICATION FOR LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS, RUNNERS (TRACK), AND BRACING OR BRIDGING FOR SCREW APPLICATION OF GYPSUM BOARD AND METAL PLASTER BASES", AND ASTM C754-00 "SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE SCREW ATTACHED
- 4. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE
- HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED. 5. ALL TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON
- STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT-WELDED OR SPLICED TOGETHER. 6. ALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED ACCORDING TO DIETRICH INDUST. RECOMMENDATION.
- 7. TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED.
- 8. STUD ENDS MUST BE SQUARELY SEATED AGAINST THE TRACK WEB. BOTH STUD FLANGES MUST BE ATTACHED TO TRACK MEMBERS AT TOP AND BOTTOM.
- 9. STUD BRIDGING SHALL BE PROVIDED BY 1-1/2" COLD ROLLED U-CHANNEL. THE U-CHANNEL MUST BE ATTACHED TO EACH STUD BY WELDING OR ATTACHING WITH CLIP ANGLES AND SCREWS. HORIZONTAL STRAPPING AND SOLID BRIDGING WITH TRACK MEMBERS CAN ALSO BE USED FOR BRIDGING. BRIDGING SHALL BE SPACED AT 4'-0"O.C. MAX.

THE FOLLOWING MINIMUM COLD FORMED STEEL ATTACHMENTS SHALL BE PROVIDED U.N.O.: TRACK TO STUD #10 TEK SCREW EACH FLANGE, EACH STUD

TRACK TO STRUCTURAL STEEL TRACK TO CONCRETE TRACK TO METAL DECK TRACK TO MASONRY STUD TO STRUCTURAL STEEL

.145" DIA. POWER DRIVEN FASTENER @ 2'-8" O.C. .145" DIA. POWER DRIVEN FASTENER @ 16" O.C. #10 TEK SCREW @ 1'-4" O.C. .145" DIA. POWER DRIVEN FASTENER @ 2'-8" O.C. L2x 2x - 14 GA. CLIP ANGLE CONNECTION W/ #10 TEK SCREWS INTO METAL STUD AND .145" DIA. POWER DRIVEN FASTENERS INTO STRUCTURAL STEEL OR 1/4" TEK SCREWS INTO STRUCTURAL STEEL.



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SPECIAL INSPECTIONS

- 1. THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTIONS PER IBC 2015. OWNER TO FURNISH INSPECTION UNLESS INSTRUCTED OTHERWISE BY THE CONSTRUCTION CONTRACT.
 - A. SPECIAL INSPECTION IN NOT A SUBSTITUTE FOR INSPECTION BY A CITY/COUNTY INSPECTOR SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE CITY/COUNTY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
 - B. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE CITY/COUNTY TO PERFORM THE TYPES OF INSPECTION SPECIFIED.
 - C. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANYWORK THAT REQUIRES SPECIAL INSPECTION. A WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO
 - D. SUBMIT WRITTEN REPORTS WITHIN TWO DAYS OF TESTING TO ENGINEER OF RECORD.

TABLE 1705.6 REQUIRED VERIFICATION AND INSPECTION OF SOILS

TIEQUITED VEITH 10/THOIT/HA		SOILS
VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	x	
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		x

TABLE 1705.3 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT		Х	ACI 318: Ch. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706;		Х	AWS D1.4	
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16";ANDC. INSPECT ALL OTHER WELDS	×	X	ACI 318: 26.5.4	
3. INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE MEMBERS. A A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST	х		ACI 318: 17.8.2.4	
SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.		X	ACI 318: 17.8.2	
5. VERIFYING USE OF REQUIRED DESIGN MIX.		Х	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	Х		ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICAITON TECHNIQUES	X		ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		Х	ACI 318: 26.4.7-26.4.9	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSED FORCES; AND b. GROUTING OF BONDED PRESTRESSING TENDONS.	X		ACI 318: 26.9.2.1 ACI 318: 26.9.2.3	
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.		Х	ACI 318: Ch. 26.8	
11. VERIFY IN-SITU CONCRETE STRENTH, PRIOR TO STRESSING OF TENONS IN POSTTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		Х	ACI 318: 26.10.2	
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		Х	ACI 318: 26.10.1(b)	

A. TESTING OF POST-INSTALLED ANCHORS MUST ALSO COMPLY WITH THE ANCHOR MANUFACTURER'S RECOMMENDED TESTING AND VERIFICATION AS WELL AS THE TESTING AND VERIFICATION INDICATED IN THAT PRODUCT'S ICC-ES REPORT

TABLE N5.4-1 INSPECTION TASKS PRIOR TO WELDING

INSPECTON TASKS PRIOR TO WELDING	QC	QA
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	Р	Р
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	Р	Р
MATERIAL IDENTIFICATIONS (TYPE/GRADE)	0	0
WELDER IDENTIFICATION SYSTEM 1	0	0
FIT-UP GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOTFACES, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	0	0
CONFIGURATION AND FINISH OF ACCESS HOLES	0	0
FIT-UP OF FILLET WELDS DIMENSIONS (ALIGNMENT, GAPS AT ROOT) CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION)	0	0
CHECK WELDING EQUIPMENT	0	
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	Р	0

WELDER WHO HAS WELDED A JOINTOF A MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE

P: PERFORM - THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT OR MEMBER O: OBSERVE - THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

TABLE N5.4-2 INSPECTION TASKS DURING WELDING

INSPECTON TASKS DURING WELDING	QC	QA
USE OF QUALIFIED WELDERS	0	0
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	0	0
NO WELDING OVER CRACKED TACK WELDS	0	0
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	0	0
WPS FOLLOWED SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED SELECTED WELDING MATERIALS SHIELDING GAS TYPE/FLOW RATE PREHEAT APPLIED INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) PROPER POSITION (F. V. H. OH)	O	O
WELDING TECHNIQUES INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS EACH PASS MEETS QUALITY REQUIREMENTS	0	0

P: PERFORM - THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT OR MEMBER O: OBSERVE - THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

TABLE N5.4-3 INSPECTION TASKS AFTER WELDING

INSPECTON TASKS AFTER WELDING	QC	QA
WELDS CLEANED	Р	Р
SIZE LENGTH AND LOCATION OF WELDS	Р	Р
WELDS MEET VISUAL ACCEPTANCE CRITERIA CRACK PROHIBITION WELD/BASE-METAL FUSION CRATER CROSS SECTION WELD PROFILES WELD SIZE UNDERCUT POROSITY	0	0
ARC STRIKES	0	0
K-AREA ¹	0	0
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	0	0
REPAIR ACTIVITIES	0	0
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	0	0
	NERS HAS I	

(75 mm) OF THE WELD. P: PERFORM - THESE TASKS SHALL BE PERFORMED FOR EACH WELDED JOINT OR MEMBER O: OBSERVE - THE INSPECTOR SHALL OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

MP

2 DATE ISSUED 10/17/2023

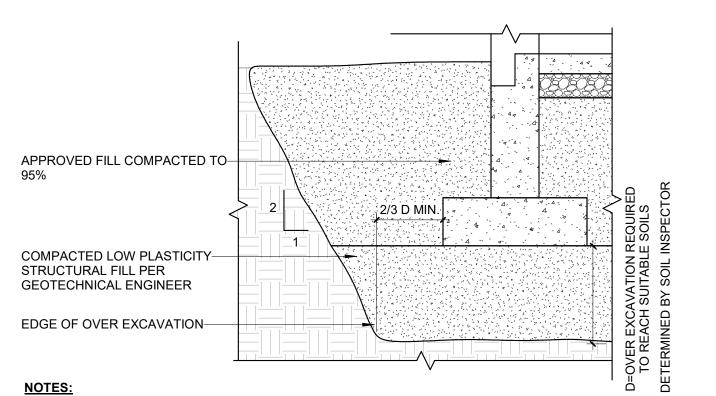
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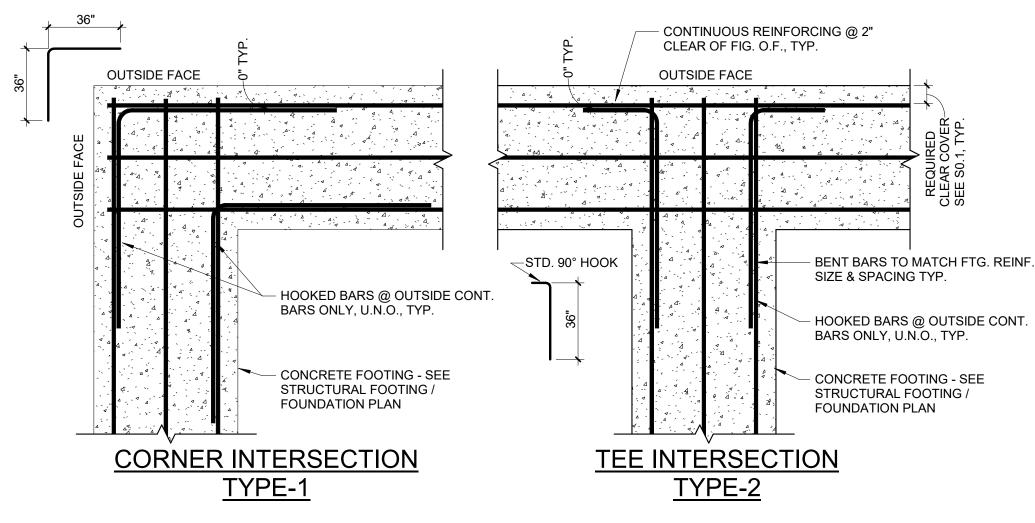
DATE ISSUED 10/17/2023 REV. NO.

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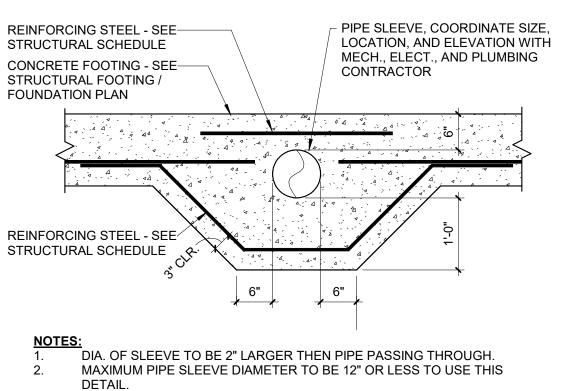


- NOTES:

 1. OVER EXCAVATIONS ARE REQUIRED AT ALL AREAS WHERE EXISTING FILL MATERIALS OR UNSUITABLE MATERIALS DETERMINED BY THE
- SOILS INSPECTOR ARE PRESENT. 2. FOOTINGS COULD ALSO BARE DIRECTLY ON THE SUITABLE NATIVE SOIL OR ON LEAN CONCRETE BACKFILL IN THE EXCAVATION INSTEAD OF ON PROPERLY COMPACTED STRUCTURAL FILL PLACE IN THE EXCAVATION.
 - 1 TYPICAL OVEREXCAVATION DETAIL SCALE: 1/2" = 1'-0"

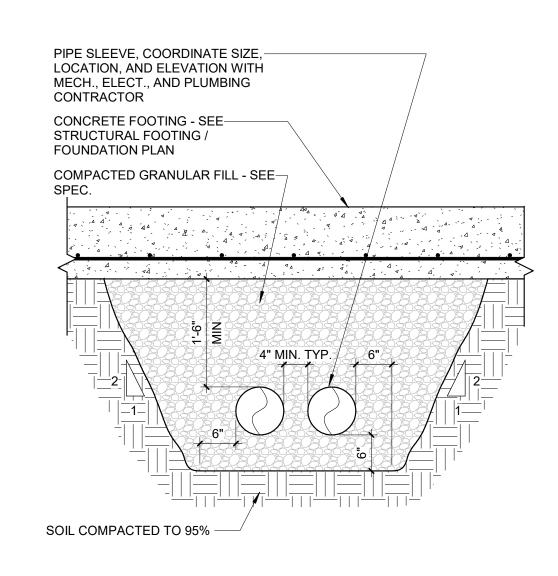


2 TYPICAL FOOTING INTERSECTION REINFORCEMENT SCALE: 3/4" = 1'-0"

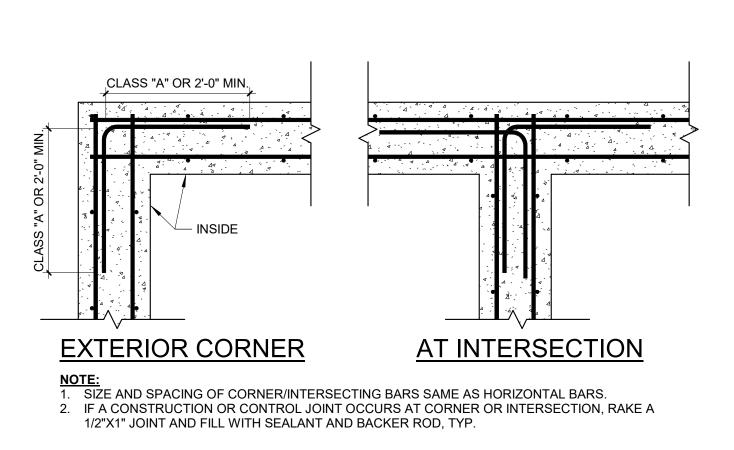


WHERE PIPE SLEEVE OPENING IS GREATER THAN 12" THE CONTRACTOR IS TO STEP THE FOOTING PER "TYPICAL STEP FOOTING DETAIL" SO PIPE SLEEVE PASSES THROUGH FOUNDATION WALL. CONTRACTOR TO REINFORCE OPENING IN THE WALL PER "TYP. DETAIL AT OPENING IN

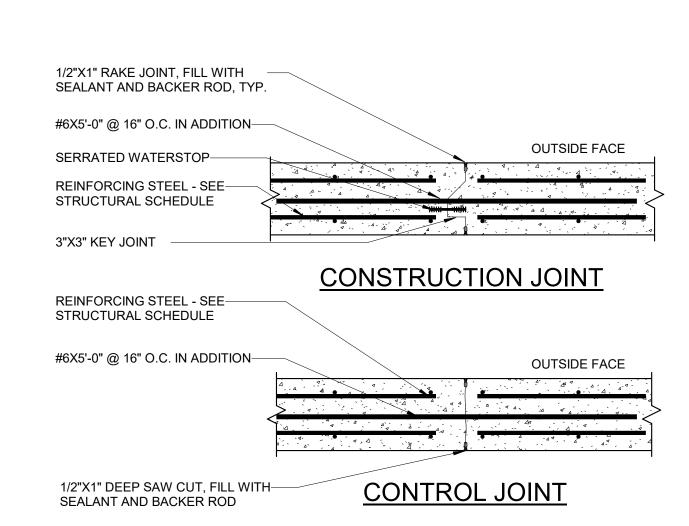
TYPICAL PIPE SLEEVE THROUGH CONTINUOUS 3 FOOTING SCALE: 3/4" = 1'-0"



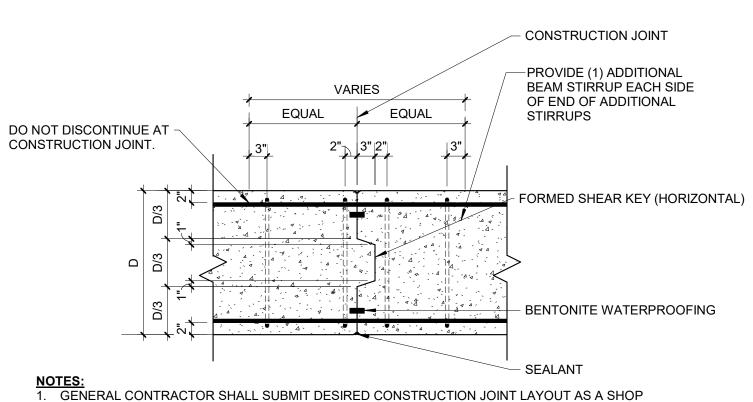
4 TYPICAL PIPE SLEEVE UNDER CONTINUOUS FOOTING SCALE: 3/4" = 1'-0"



5 TYPICAL CORNER BAR DETAIL SCALE: 3/4" = 1'-0"

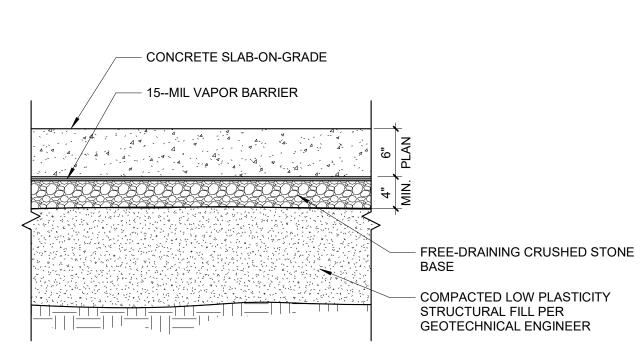


TYPICAL DETAIL OF VERTICAL CONSTRUCTION AND 6 CONTROL JOINT IN CONCRETE WALLS SCALE: 3/4" = 1'-0"

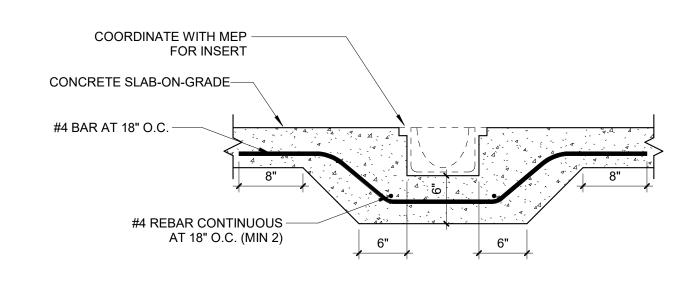


- DRAWING FOR APPROVAL A MINIMUM OF TWO WEEKS PRIOR TO POUR. 2. CONSTRUCTION JOINT LOCATIONS SHALL BE COORDINATED WITH REINFORCING STEEL SUPPLIER AND ERECTOR. 3. ACCEPTABLE JOINT LOCATIONS ARE AS FOLLOWS: a. FOR BEAMS NOT SUPPORTING INTERSECTING BEAMS: PLACE JOINT WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN.
- b. FOR BEAMS SUPPORTING INTERSECTING BEAMS, CHECK WITH STRUCTURAL 4. FOR JOINT LOCATIONS OTHER THAN WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN, CONTRACTOR SHALL COORDINATE REQUIRED ADDITIONAL REINFORCEMENT WITH THE ENGINEER ON THE SHOP DRAWINGS.

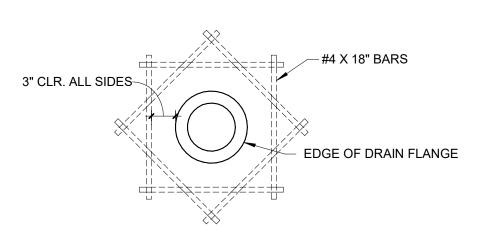
7 TYPICAL GRADE BEAM CONSTRUCTION JOINT DETAIL SCALE: 3/4" = 1'-0"



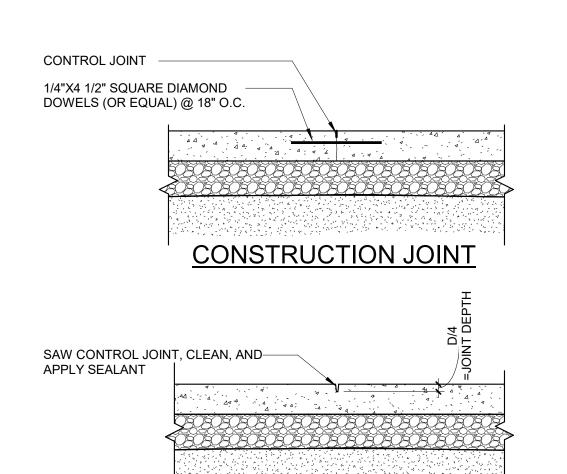
8 TYPICAL SLAB-ON-GRADE DETAIL SCALE: 1" = 1'-0"



10 TYPICAL TRENCH DRAIN/RECESS SLAB DETAIL
SCALE: 1" = 1'-0"



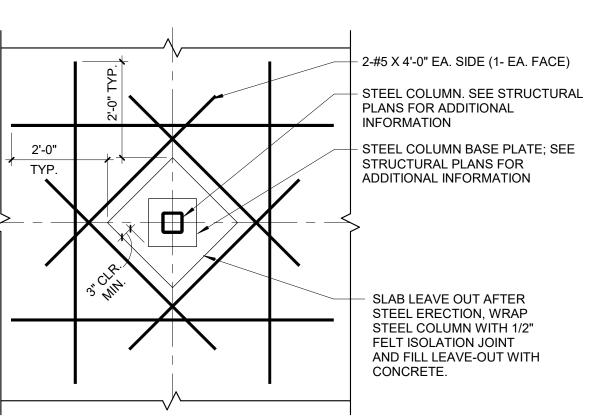
1 1 TYPICAL REINFORING AT FLOOR DRAIN
SCALE: 1" = 1'-0"



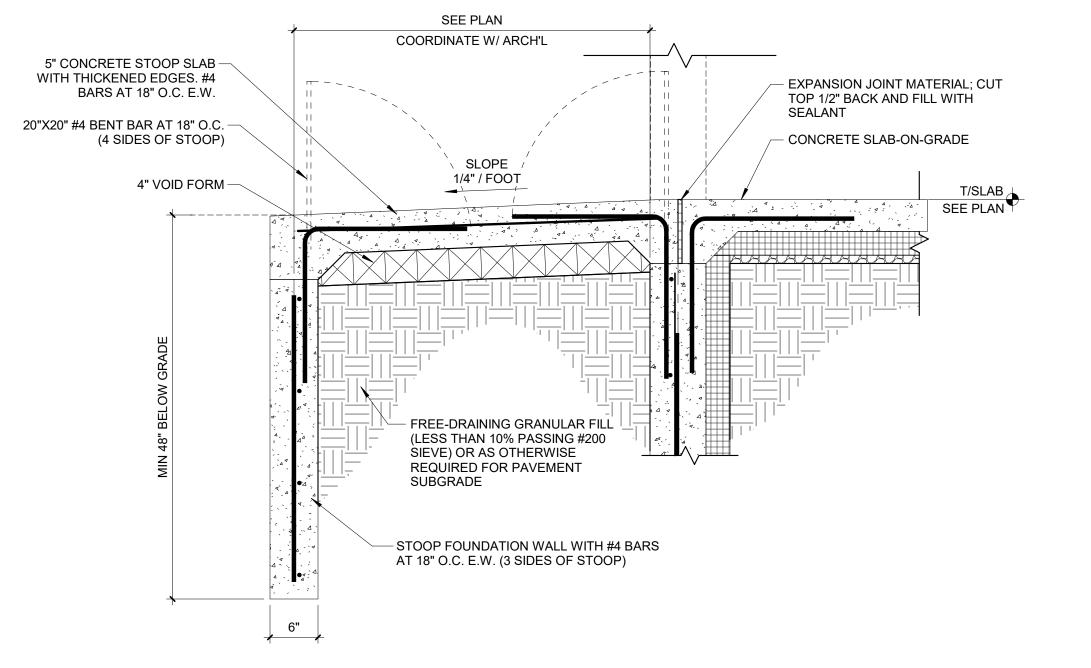
CONTROL JOINT

- NOTES:
 1. CONSTRUCTION AND/OR CONTROL JOINTS ARE INTERCHANGEABLE AT THE CONTRACTORS OPTION. SEE PLANS FOR JOINT LOCATIONS. SAW CUTTING OF JOINTS SHALL BE DONE AS THE CONCRETE SETS SUFFICIENTLY TO PERMIT CUTTING WITHOUT CHIP, SPALLING OR TEARING,
- BUT NOT MORE THAN 24 HR. AFTER PLACING. 3. ACI RECOMMENDATION: PLACE SLABS IN LONG RECTANGULAR STRIPS IN ALTERNATE PANELS. WIDTH OF STRIPS TO BE APPROX. 10'-0"

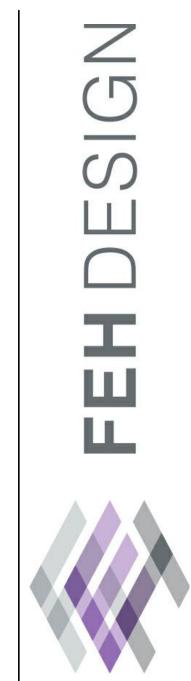
TYPICAL SLAB-ON-GRADE CONTROL AND **9** CONSTRUCTION JOINTS DETAIL SCALE: 3/4" = 1'-0"



12 TYPICAL ISOLATION JOINT DETAIL
SCALE: 1/2" = 1'-0"



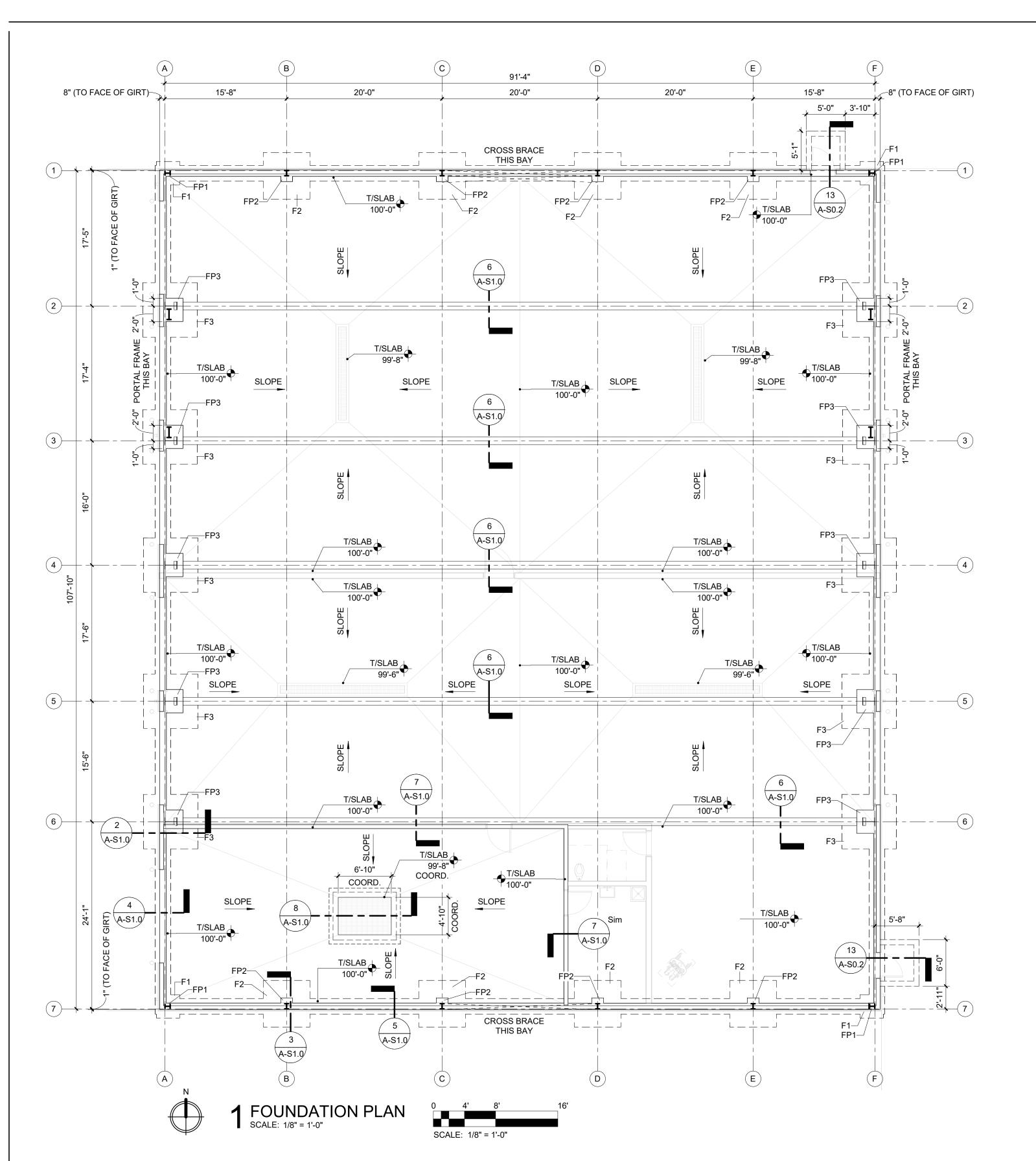
13 NEW STOOP DETAIL
SCALE: 1" = 1'-0"

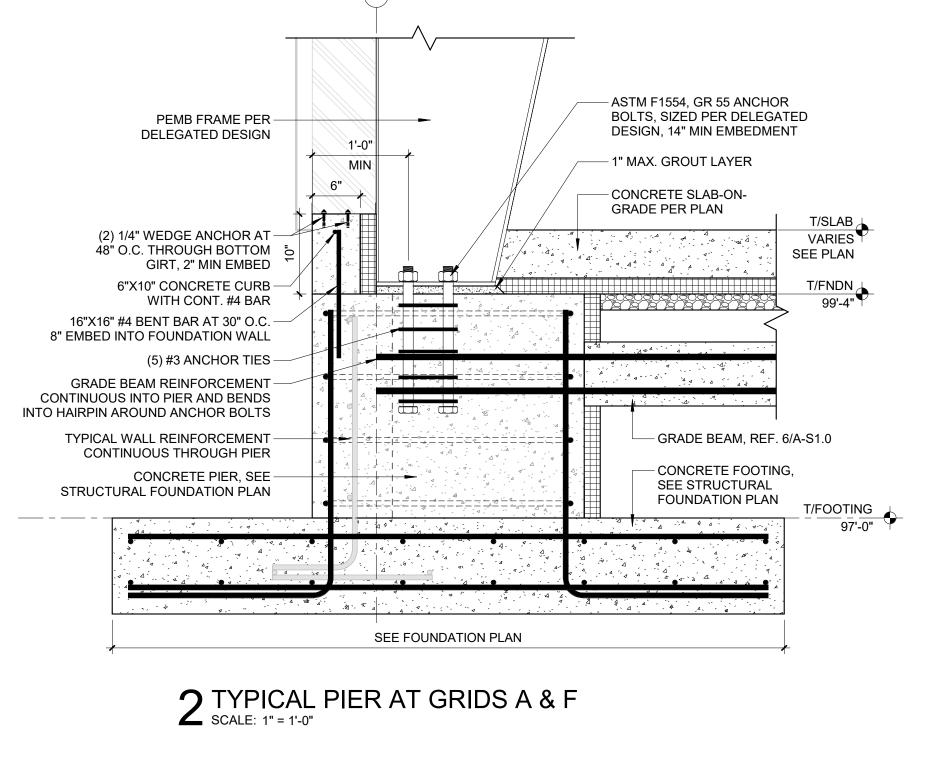


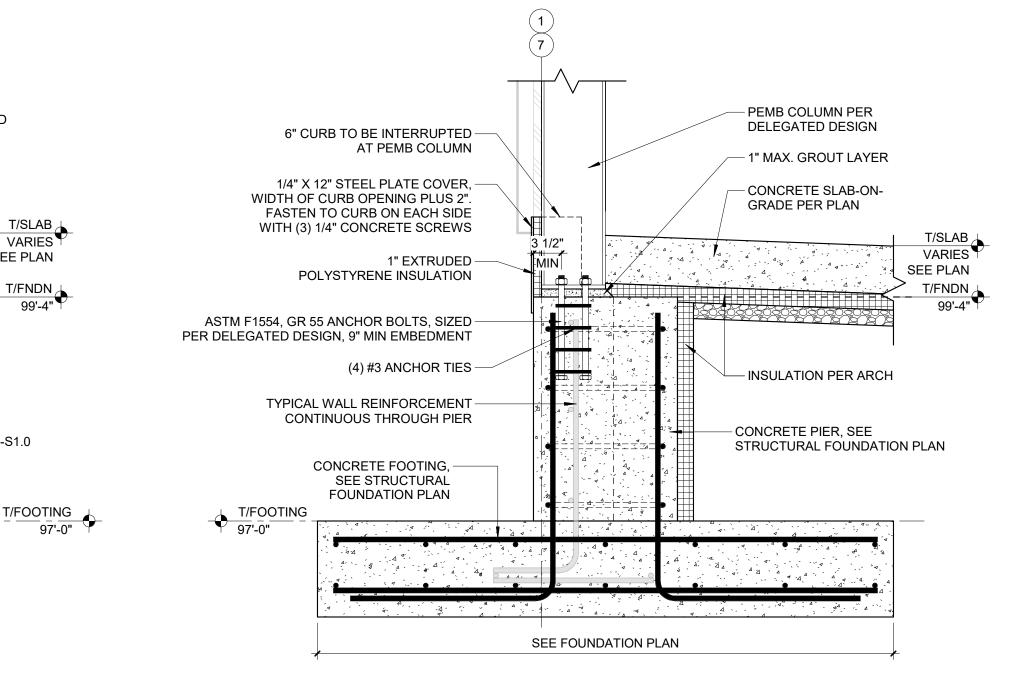


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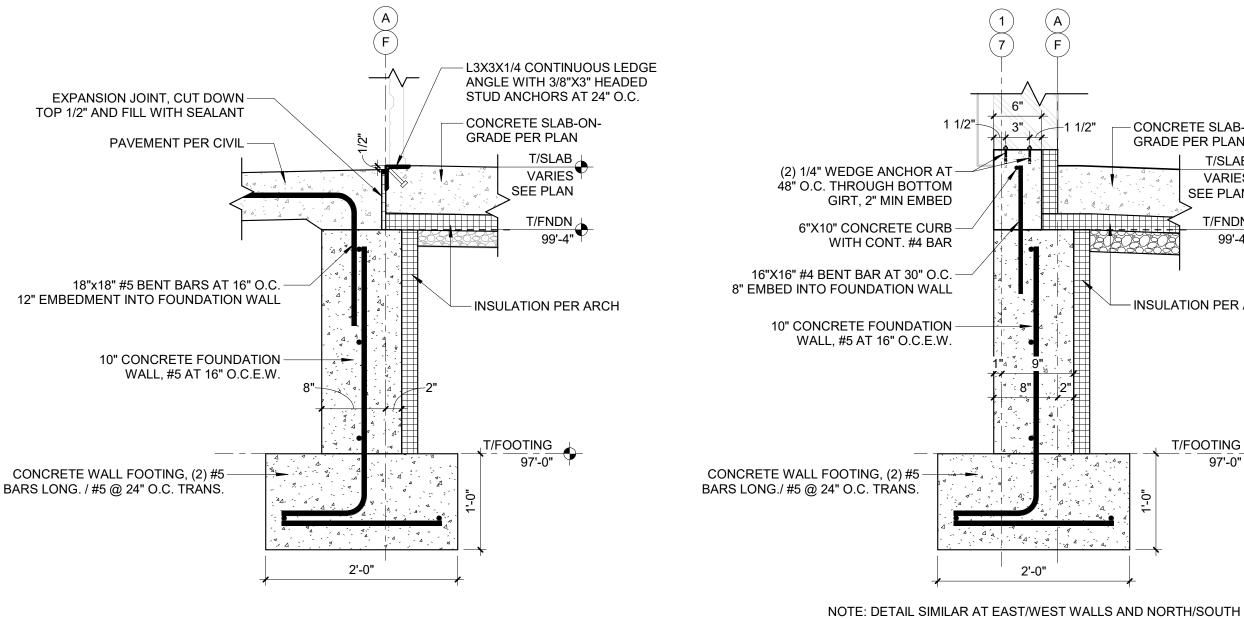
PROJECT NUMBER 2022018.07

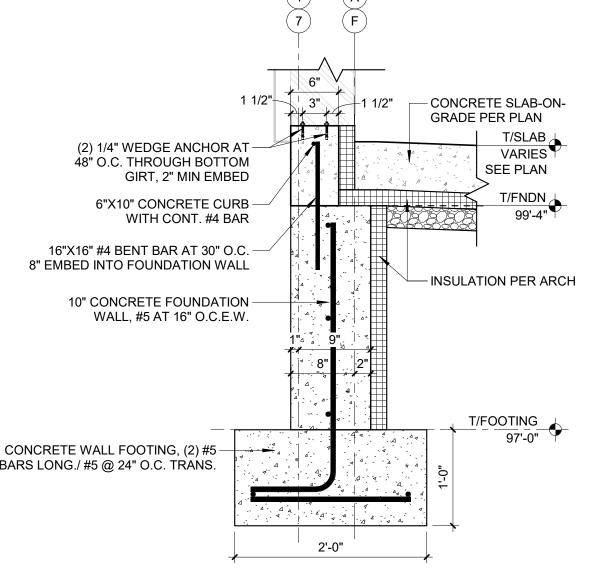


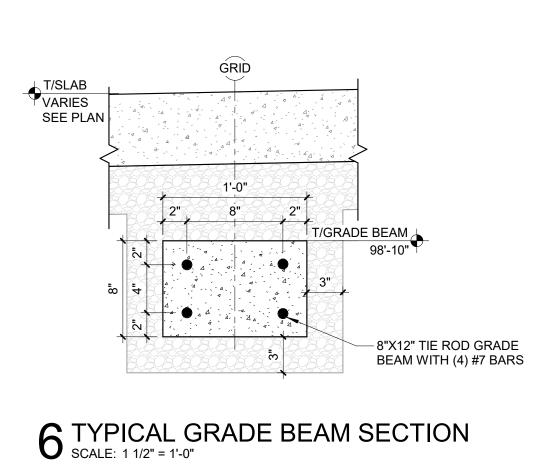




3 TYPICAL PIER AT GRIDS 1 & 7

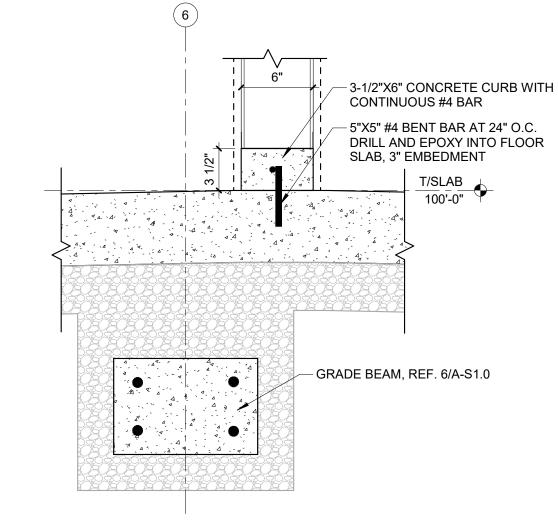


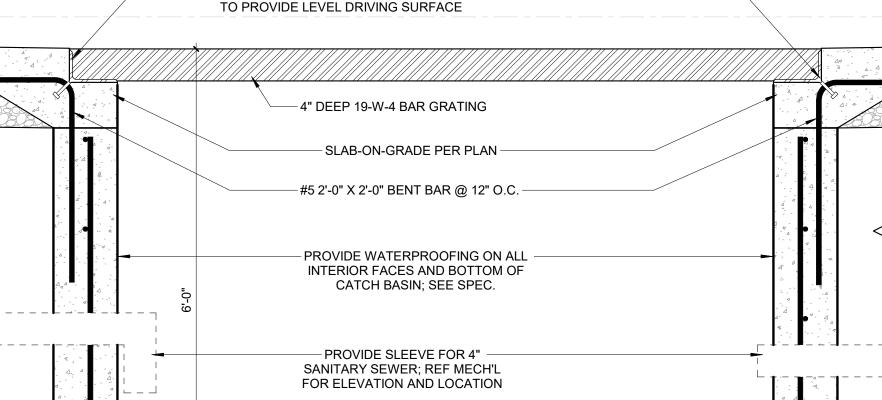




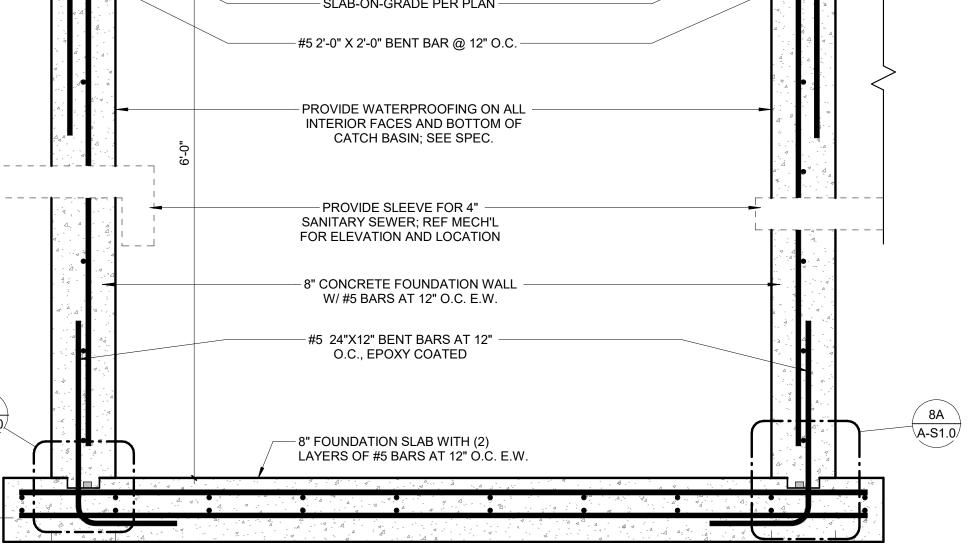
4 TYPICAL FOUNDATION WALL AT OVERHEAD DOOR SCALE: 1" = 1'-0"

WALLS. GRID LINES SHOWN FOR EACH LOCATION FOR REFERENCE. 5 TYPICAL FOUNDATION WALL SCALE: 1" = 1'-0"





PERIMETER BEARING FRAME, CONT. L6X4X3/8 WITH 1/2"-DIA. X 3" HCAS @ 12" O.C.; MITER AT CORNERS, COORD. BEARING ELEVATION WITH GRATING DEPTH



SEE PLAN

8 WASHBAY SAND CATCH BASIN SCALE: 1" = 1'-0"

7 CONCRETE CURB AT INTERIOR WASH BAY WALLS

SELF-EXPANDING BUTYL STRIP WATERSTOP. -INSTALL PRIOR TO CONCRETE POUR. CONT. KEYWAY, MUST BE DRY PRIOR TO — INSTALLATION OF WATERSTOP.

8A WATERSTOP DETAIL SCALE: 3" = 1'-0"

FOUNDATION PLAN NOTES:

- . FOR GENERAL NOTES, SPECIAL INSPECTIONS, AND TYPICAL DETAILS SEE SHEETS A-S0.1 AND A-S0.2. SEE SHEET A-S0.2 FOR TYPICAL SLAB ON GRADE AND TYPICAL FOUNDATION DETAILS. SEE THIS SHEET FOR PIER AND FOOTING SCHEDULES.
- 4. COORDINATE OPENINGS IN WALLS AND SLABS WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS. SEE SHEET S0.2 FOR TYPICAL OPENING DETAILS. NO FIELD CUTTING OF OPENINGS ALLOWED. REFER TO THE ARCHITECTURAL DRAWINGS AND/OR COORDINATE WITH THE ARCHITECT

REGARDING ADDITIONAL DIMENSIONS AND ELEVATIONS.

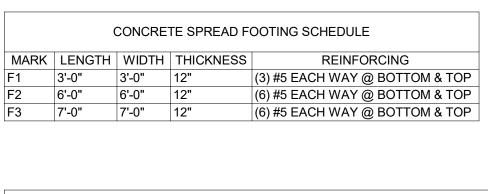
- 1. TOP OF SLAB ELEVATION AS NOTED. ARCHITECTURAL ELEVATION 100'-0" CORRESPONDS TO CIVIL ELEVATION 1356.0'. SEE CIVIL DRAWINGS. SLAB-ON-GRADE TO BE 6" THICK WITH 5 LB/CY MACROFIBER REINFORCEMENT OVER 15 MIL VAPOR BARRIER OVER 4" MINIMUM OF FREE-DRAINING CRUSHED ROCK OR CLEAN 1" DIAMETER ROCK
- DEVIOD OF FINES. REF. 8/A-S0.2. 3. PLACE SLAB OVER SUITABLE EXISTING SOILS, OR IF SOILS BELOW SLAB LOCATION ARE DEEMED TO BE EXPANSIVE IN NATURE OR OTHERWISE UNACCEPTABLE BY THE GEOTECHNICAL INSPECTOR, REMOVE AND REPLACE TOP 24" WITH ENGINEERED COMPACTED FILL PER
- GEOTECHNICAL ENGINEER. 4. CONTRACTOR TO COORDINATE SLOPING OF SLABS TO FLOOR DRAINS WITH ARCH. AND 5. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, DEPRESSED SLABS, STEPPED
- SLABS, STOOPS AND NON-BEARING PARTITION WALLS. 6. TYPICAL CONSTRUCTION/CONTROL JOINTS AT 10'-0" O.C., MAX., TYP. SEE CONSTRUCTION/CONTROL JOINT PLACEMENT PLAN ON SHEET SXX FOR JOINT LOCATIONS.

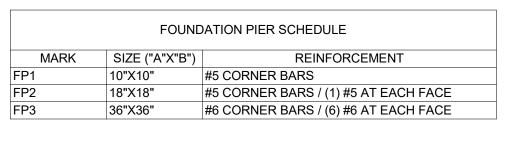
FOOTINGS/FOUNDATION WALLS:

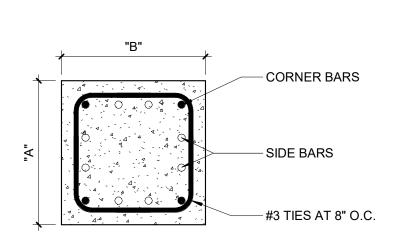
- 1. ALL FOOTINGS TO BE CENTERED UNDER WALLS AND/OR PIERS, U.N.O. 2. FOOTING REINFORCEMENT CENTERED BELOW CONC. PIER WHERE FOOTING PLAN DIMENSION(S)
- EXCEED SCHEDULED VALUE, TYP. 3. ALL NEW CONTINOUS WALL FOOTINGS TO BE 24" WIDE X 12" DEEP WITH (2) CONT. #5
- LONGITUDINAL BARS AND #5 TRANSVERSE BARS AT 24" O.C. 4. TOP OF EXTERIOR FOOTING ELEVATION AS NOTED ON PLAN, MIN. 3'-0" BELOW EXTERIOR GRADE. 5. TOP OF TYPICAL NEW FOUNDATION WALLS AND PIERS TO BE 99'-4" U.N.O. 6. COORDINATE TOP OF FOOTING ELEVATIONS WITH CROSSING MECHANICAL PLUMBING LINE INVERTS AND ELECTRICAL LINE LOCATIONS. WHENEVER POSSIBLE, STEP FOOTINGS DOWN ON

EITHER SIDE OF LINE AND SLEEVE THROUGH FOUNDATION WALLS. COORDINATE BLOCKOUTS IN

FOUNDATION WALL AS NEEDED. SEE DETAIL 3/A-S0.2 WHEN PIPE FALLS WITHIN FOOTING AND DETAIL 4/A-S0.2 WHEN PIPE FALLS BELOW FOOTING. 7. CONCRETE FOUNDATION WALLS TO BE REINFORCED WITH #5 AT 16" O.C.E.W., PROVIDE CORNER BARS PER TYPICAL DETAILS AT CORNERS AND INTERSECTIONS.







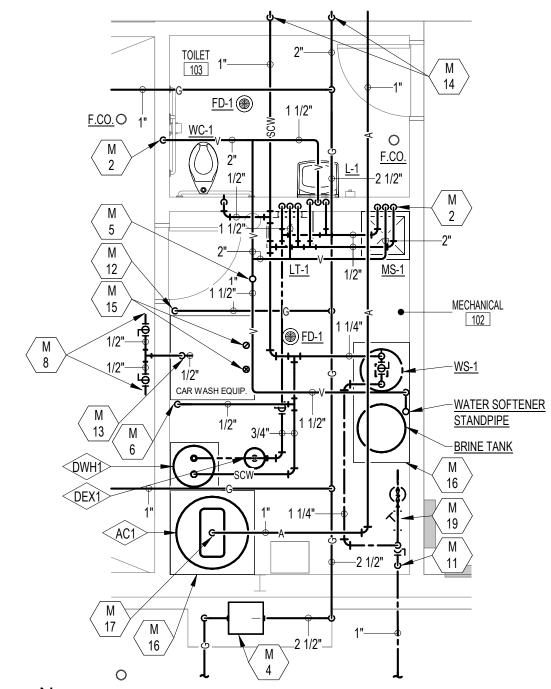
---- EXISTING PIPE

—— – – HOT WATER (HW)

CONTRACTOR ABBREVIATION LEGEND

G.C. GENERAL CONTRACTOR

M.C. MECHANICAL CONTRACTOR (DIVISIONS 22 & 23) T.A.B. TESTING & BALANCING CONTRACTOR T.C.C. TEMPERATURE CONTROL CONTRACTOR E.C. ELECTRICAL CONTRACTOR



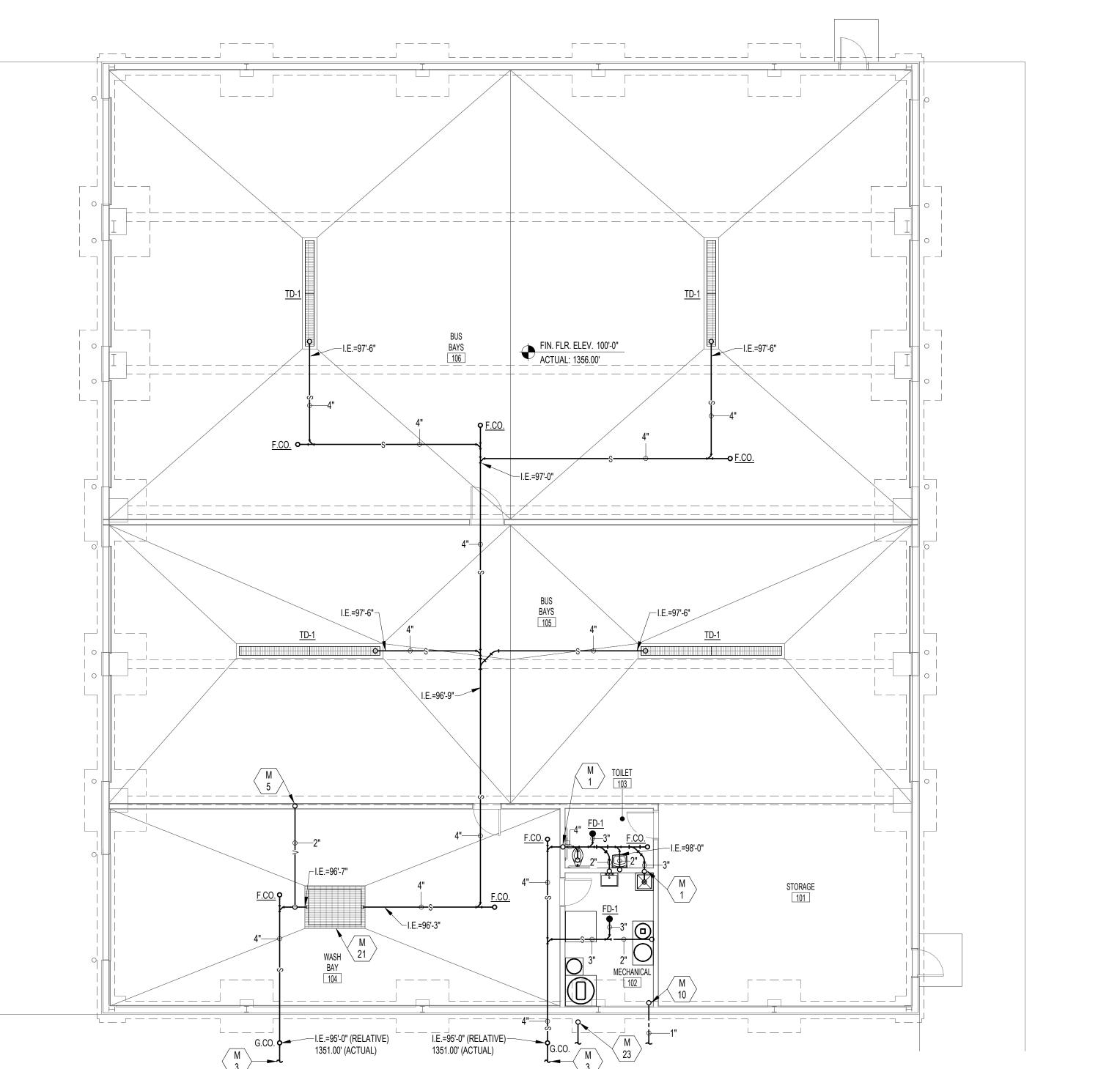
ENLARGED MECH. ROOM 102 SCALE: 1/4" = 1'-0"

(M) KEYNOTES

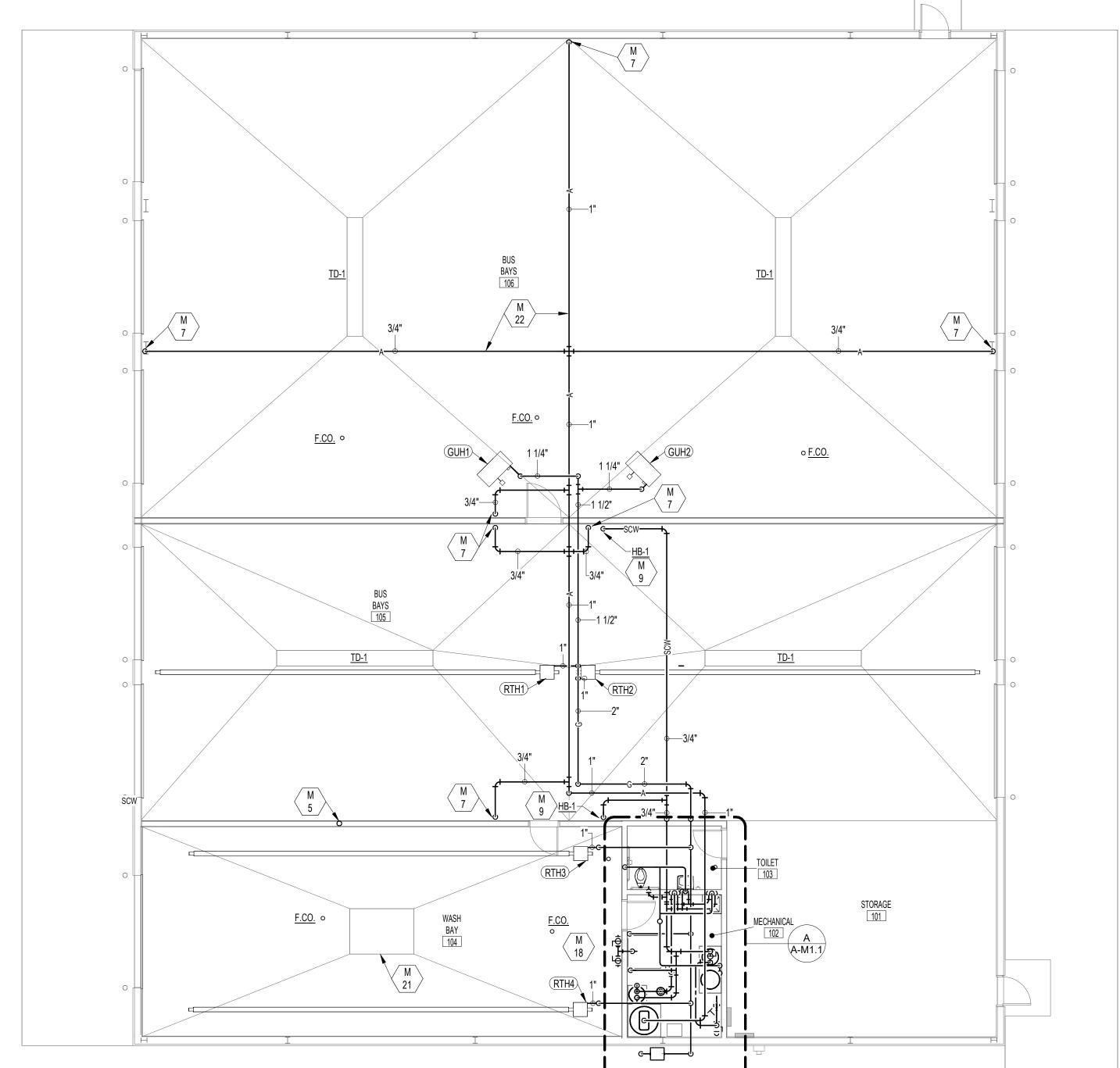
- 1. 2" VENT UP THROUGH FLOOR. SEE ENLARGED FLOOR PLAN ON THIS SHEET FOR CONTINUATION. 2. 2" VENT DOWN THROUGH FLOOR. SEE FOUNDATION PLAN ON THIS SHEET FOR CONTINUATION. 3. 4" SANITARY SEWER SERVICE TO THIS POINT BY M.C. CONNECTION TO CITY SEWER BY SITE UTILITY
- CONTRACTOR. 4. GAS SERVICE, METER AND REGULATOR BY GAS UTILITY. METER RATED FOR 749 CFH CURRENT, 1,250 CFH FUTURE AND 7.0" W.C. DELIVERED GAS PRESSURE.
- 2" VENT UP TO 4" VTR. 6. 1" GAS DROP TO CAR WASH EQUIPMENT HOT WATER HEATER. INSTALL SHUT-OFF VALVE PIPE DROP
- AT 48" A.F.F. INSTALL DIRT LEG ON GAS CONNECTION TO EQUIPMENT. VERIFY HEIGHT AND TERMINATION LOCATION WITH CAR WASH EQUIPMENT VENDOR. 7. 3/4" AIR PIPE DROP TO 48" A.F.F. SEE AIR CONNECTION DETAIL ON SHEET A-M2.1 8. INSTALL (2) 1/2" SCW PIPES WITH SHUT-OFF BALL VALVES FOR CONNECTION BY CAR WASH
- EQUIPMENT VENDOR. COVER PIPE INSULATION IN WASH BAY 107 WITH 20 MIL PVC JACKET. VERIFY HEIGHT AND TERMINATION LOCATION WITH CAR WASH EQUIPMENT VENDOR. 9. 3/4" CW PIPE DOWN TO 48" A.F.F. INSTALL HB-1 AT BOTTOM OF DROP AND SECURE PIPE/HB-1 TO
- 10. 1" DOMESTIC WATER SERVICE UP THROUGH FLOOR. SEE CONTINUATION ON ENLARGED MECH/ELEC ROOM 102 PLAN ON THIS SHEET. 11. 1" DOMESTIC WATER SERVICE DOWN THROUGH FLOOR. SEE CONTINUATION ON FOUNDATION PLAN -
- PLUMBING ON THIS SHEET. 12. 1/2" SCW PIPE TO CAR WASH EQUIPMENT. TERMINATE PIPE AT 4'-0" A.F.F. WITH A BALL VALVE. VERIFY HEIGHT AND TERMINATION LOCATION WITH CAR WASH EQUIPMENT VENDOR. 13. 1/2" SCW PIPE TO CAR WASH EQUIPMENT. TERMINATE PIPE AT 4'-0" A.F.F. WITH A BALL VALVE.

VERIFY HEIGHT OR TERMINATION WITH CAR WASH EQUIPMENT VENDOR.

- 14. RISE PIPING TO BOTTOM OF ROOF TRUSSES. 15. 3" INTAKE AND EXHAUST PIPES FROM INSTANTANEOUS WATER HEATER FOR CAR WASH EQUIPMENT UP THROUGH ROOF. SEE DETAIL ON SHEET A-M2.1 AND CONTINUATION ON ROOF PLAN - HVAC ON SHEET A-M3.1. VERIFY EXACT SIZE AND LOCATION WITH CAR WASH EQUIPMENT VENDOR.
- 16. 4" CONCRETE PADS BY G.C. (TYPICAL). 17. 1" AIR PIPE TO AIR COMPRESSOR. INSTALL BALL VALVE IN DROP. CONNECT TO AIR COMPRESSOR
- WITH 12" LONG FLEXIBLE EPDM, NITRILE OR PVC AIR HOSE. 18. COVER PIPING IN WASH BAY 107 WITH 20 MIL PVC JACKET.
- 19. SEE DOMESTIC WATER SERVICE DETAIL ON SHEET A-M2.1. 20. INSTALL PIPING IN BUS BAYS AS THE BOTTOM OF THE ROOF TRUSSES AT APPROXIMATELY 16-9"
 - 21. SAND CATCH BASIN. SEE DETAIL ON SHEET A-M2.1. 22. INSTALL AIR PIPING AS HIGH AS POSSIBLE IN THE SPACE. 23. GAS SERVICE UP. SEE ENLARGED FLOOR PLAN ON THIS SHEET FOR CONTINUATION.







MAIN FLOOR PLAN - PLUMBING SCALE: 1/8" = 1'-0"

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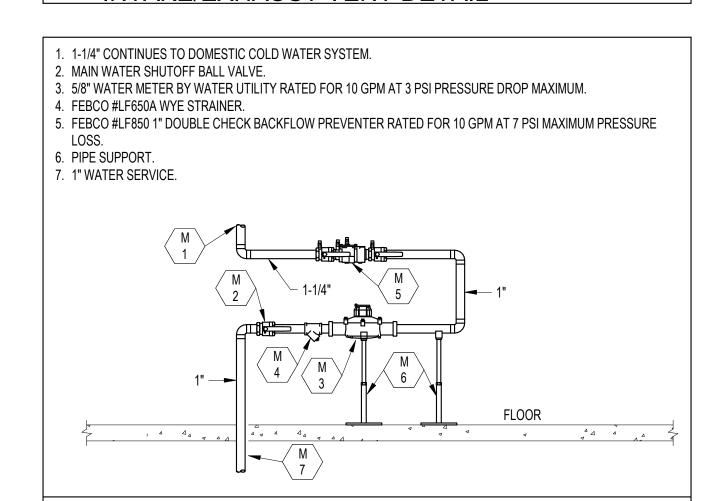
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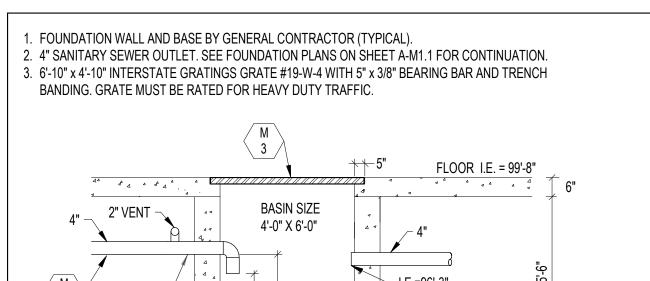
PROJECT NUMBER 2022018.07

A-M1.1

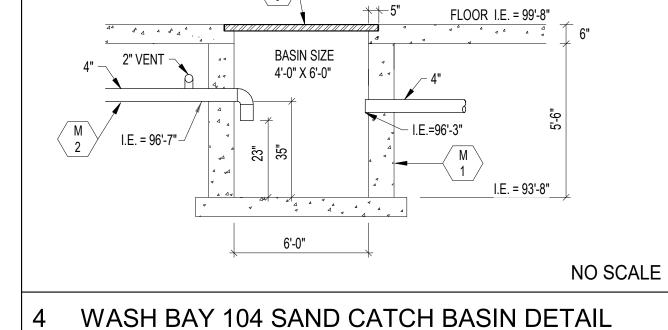
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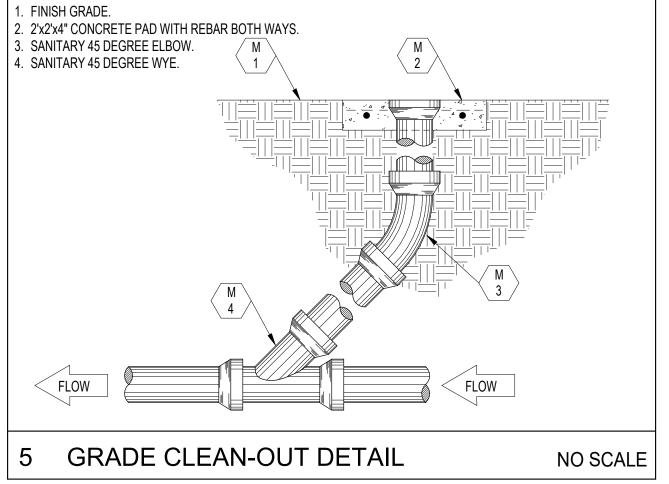
NO SCALE

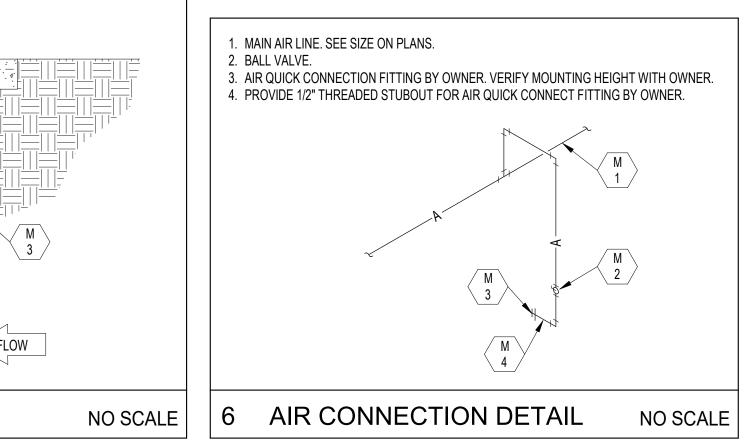




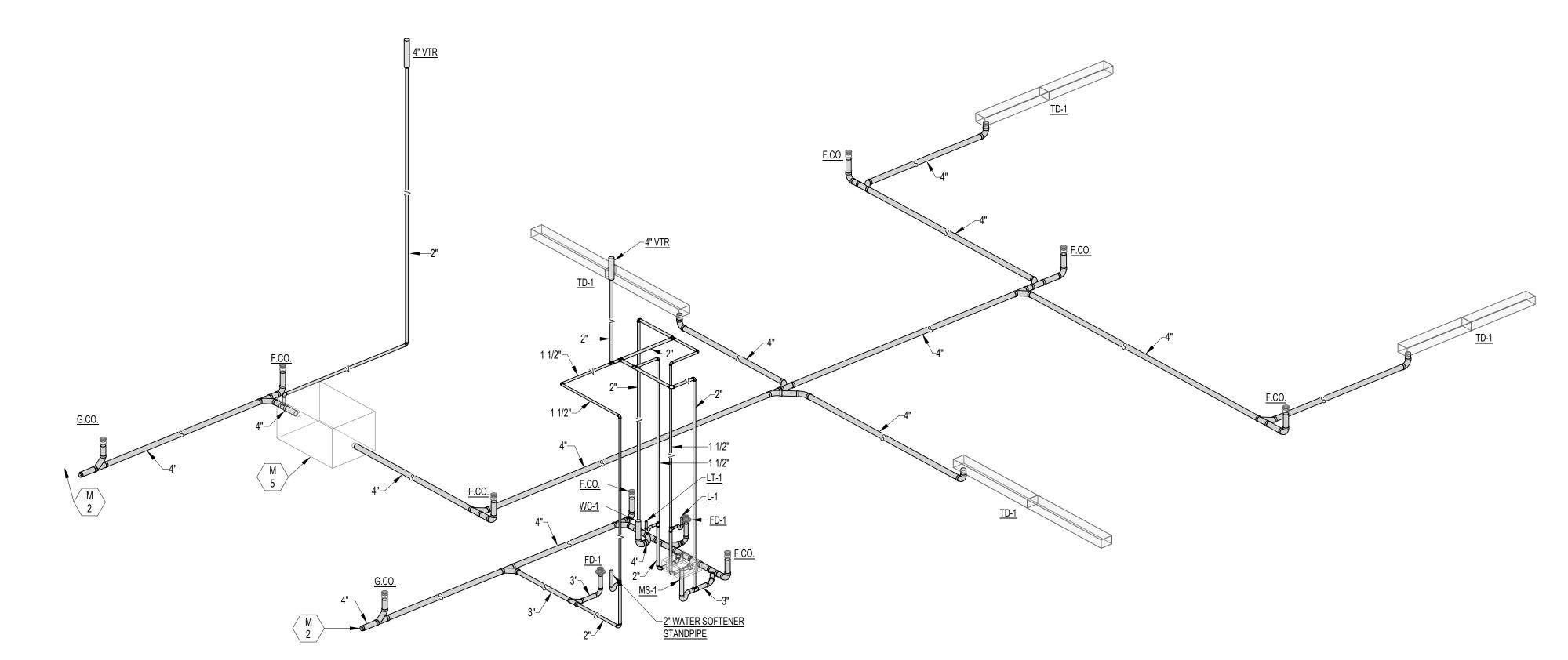
DOMESTIC WATER SERVICE DETAIL NO SCALE







DOMESTIC WATER RISER DIAGRAM NO SCALE



WASTE & VENT RISER DIAGRAM NO SCALE

 4" CONCRETE PAD BY G.C. (TYPICAL).
 4" SANITARY SEWER. SEE CONTINUATION ON SITE PLAN - MECHANICAL & ELECTRICAL ON SHEET A-ME0.1 AND CIVIL DRAWINGS. 3. 1" DOMESTIC WATER SERVICE. SEE CONTINUATION ON SITE PLAN -MECHANICAL & ELECTRICAL ON SHEET A-ME0.1 AND CIVIL DRAWINGS.

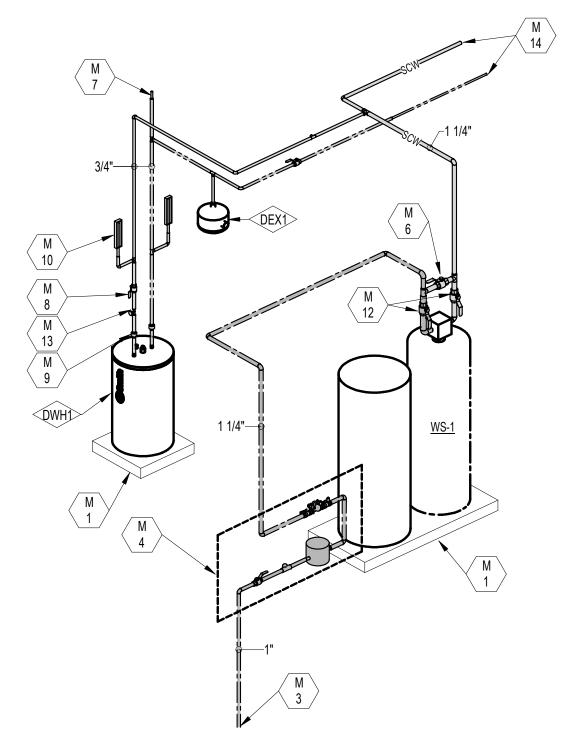
4. SEE DOMESTIC WATER SERVICE DETAIL ON THIS SHEET. 5. SAND INTERCEPTOR PIT. SEE DETAIL ON THIS SHEET.

6. WATER SOFTENER BYPASS VALVE (N.C.). 7. VACUUM BREAKER, SEE SPECIFICATIONS.

8. BALL VALVE (TYPICAL). 9. DIELECTRIC UNION (TYPICAL) 10. THERMOMETER (TYPICAL).

11. 1/2" SCW PIPE TO CAR WASH EQUIPMENT. TERMINATE PIPE AT 4'-0" A.F.F. WITH A BALL VALVE. VERIFY HEIGHT AND TERMINATION LOCATION WITH CAR WASH EQUIPMENT VENDOR.
12. WATER SOFTENER ISOLATION VALVES (N.O.).

13. CHECK VALVE.
14. SOFT COLD WATER AND HOT WATER TO BUILDING.



DOMESTIC WATER HEATER RISER DIAGRAM NO SCALE

EXPANS SYMBOL	SION I AI	NK SCH	TANK	ACCEPTANCE	FILL	SERVES	REMARKS
STIVIBOL	IVIINER	MODEL	VOLUME	GALLONS	PRESSURE	SERVES	INLIVIAINIO
DEX1	AMTROL	ST-5	2 gal.	0.9	50 psig	DOMESTIC HW	

DOMEST	IC ELE	CTRIC W	ATER HEA	TER SCHE	DULE							
SYMBOL	MNFR	MODEL	DOMESTIC W	ATER DATA		ELECT	TRICAL D	ATA		UEF	SERVES	REMARKS
\Diamond			STORAGE (gal.)	RECOVERY (gph)	WATER TEMP.	KW	VOLTS	PHASE	MFS			
DWH1	RHEEM	ME30238C	30	17	120°F	4.5	230	1	25	0.92	BUILDING	1
1.	PROVIDE	NON-SIMUL	TANEOUS ELE	MENT OPERA	ΓΙΟΝ.							

AIR CO	MPRES	SOR SCI	HEDULE										
SYMBOL	MNFR	MODEL	TANK	CAPACIT	Υ	MOTOR	STAGES	VOLTS	PHASE	FLA	MOP	SERVES	REMARKS
$ \diamond $			SIZE (Gal.)	ACFM	PSIG	PEAK HP							
AC1	C-AIRE	A050V060	60	15	175	5	2	230	1	20.3	30	BUILDING	1, 2
1.	PROVIDE	WITH FP FU	LL PACKAGE	INCLUDI	NG AFTE	RCOOLER.	AUTOMAT	IC TANK	DRAIN. A	ND INS	TALLAT	ION KIT.	

stalled	by the Mechanical Contractor.	installed by the Mechanical Conti Installation includes rough-in, cor to the top of the rim unless other	nnection, co	ther items ntinuous v	to be fur vaste and	nished a I p-traps	nd (verify		
MARK	FUNCTION	MNFR. & MODEL	MTG. HT.	WASTE	VENT	HW	SCW	CW	REMARKS
WC-1	GRAVITY TANK TYPE ADA WATER CLOSET	KOHLER "HIGHLINE" K-3979 CLASS FIVE (1.6 GPF) BEMIS #3155SSCT SEAT	17"	4"	2"		1/2"		1
L-1	WALL HUNG ADA LAVATORY WITH MANUAL FAUCET	KOHLER "GREENWICH" K-2032 DELTA 22C151 FAUCET	34"	1-1/2"	1-1/2"	1/2"	1/2"		2, 3, 4, 5, 6
FD-1	FLOOR DRAIN	ZURN #ZN-415 WITH TYPE 'B' STRAINER		3"	2"				
F.CO.	FLOOR CLEAN-OUT	ZURN #ZN-1400		VARIES					
W.CO.	WALL CLEAN-OUT WITH ROUND ACCESS COVER	ZURN #Z-1440 WITH #Z-1469 ACCESS COVER							
G.CO.	GRADE CLEAN-OUT	ZURN #Z-1400		VARIES					
MS-1	MOP SINK	MUSTEE #63M, 63.600A FAUCET 65.700 HOSE AND BRACKET (2) 63.401 GUARDS		3"	1-1/2"	1/2"	1/2"		
HB-1	HOSE BIBB (CW)	WOODFORD #26P-3/4	SEE PLANS				3/4"		
LT-1	LAÙNDRY TUB	MUSTEE #18F WITH CHICAGO FAUCET #891-369-L5VB		1-1/2"	1-1/2"	1/2"	1/2"		
TD-1	TRENCH DRAIN SYSTEM	ZURN #Z882 TRENCH DRAIN		4"					7, 8

2. QUINCY, INGERSOLL RAND, AND INDUSTRIAL AIR BRANDS SHALL BE CONSIDERED EQUAL.

 PROVIDE WITH ZURN #Z-1231 WALL CARRIER. P-TRAP DRAIN AND EXPOSED SUPPLY PIPES SHALL BE INSULATED WITH TRUEBRO, HANDI LAV-GUARD2 MODEL 102E-Z INSULATION KIT, WHITE COORDINATE ROUGH-IN HEIGHTS FOR ADA CLEARANCES. PROVIDE METAL GRID STRAINER. PROVIDE LAWLER MIXING VALVE #570. SET TEMPERATURE TO 105°. 	1. TAIN TRIP LEVER, PLOSH VALVE HANDLE OR SENSOR SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS ON ALL ADA WATER CLOSETS.
4. COORDINATE ROUGH-IN HEIGHTS FOR ADA CLEARANCES. 5. PROVIDE METAL GRID STRAINER.	2. PROVIDE WITH ZURN #Z-1231 WALL CARRIER.
5. PROVIDE METAL GRID STRAINER.	3. P-TRAP DRAIN AND EXPOSED SUPPLY PIPES SHALL BE INSULATED WITH TRUEBRO, HANDI LAV-GUARD2 MODEL 102E-Z INSULATION KIT, WHITE COLOR.
···	4. COORDINATE ROUGH-IN HEIGHTS FOR ADA CLEARANCES.
6. PROVIDE LAWLER MIXING VALVE #570. SET TEMPERATURE TO 105°.	5. PROVIDE METAL GRID STRAINER.
	6. PROVIDE LAWLER MIXING VALVE #570. SET TEMPERATURE TO 105°.

7. VERIFY NUMBER OF SECTIONS NEEDED AT EACH BAY. MECHANICAL CONTRACTOR TO CUT TO REQUIRED LENGTH. 8. PROVIDE TRENCH DRAIN WITH DUCTILE IRON SLOTTED GRATE WITH A CLASS C RATING AND 4" BOTTOM OUTLET.

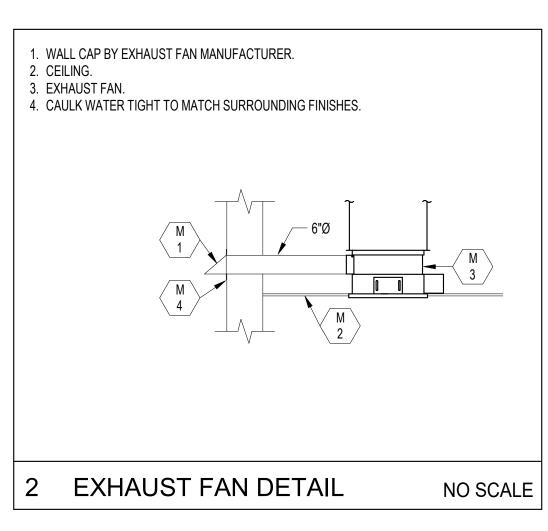
MARK	MNFR	MODEL	TYPE	DESIGN	I FLOW	CONTINU	JOUS FLOW	PEAK	FLOW	RESIN	SOFTENING CAPACI	ITY	BRINE	SOFTENER	CONNECTION	REMARKS
				GPM	PSI DROP	GPM	PSI DROP	GPM	PSI DROP	CU. FT.	SALT USAGE (Kgr)	MIN. CAP. (Kgr)	TANK SIZE	TANK SIZE	SIZES	
WS-1	CULLIGAN	HE 1.0	DUPLEX	10	9.2	10.6	11	12.8	15	3.0	88	60	24" x 42"	14" x 65"	1"	1, 2, 3
1.	UNIT MUST	MEASURE	MINIMUM	FLOW D	OWN TO 1.0	GPM.										

KEYNOTES

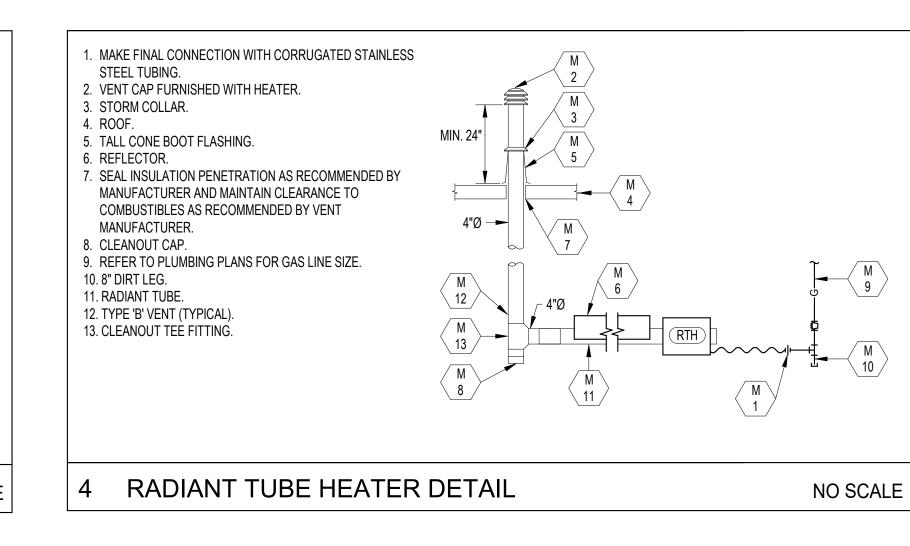
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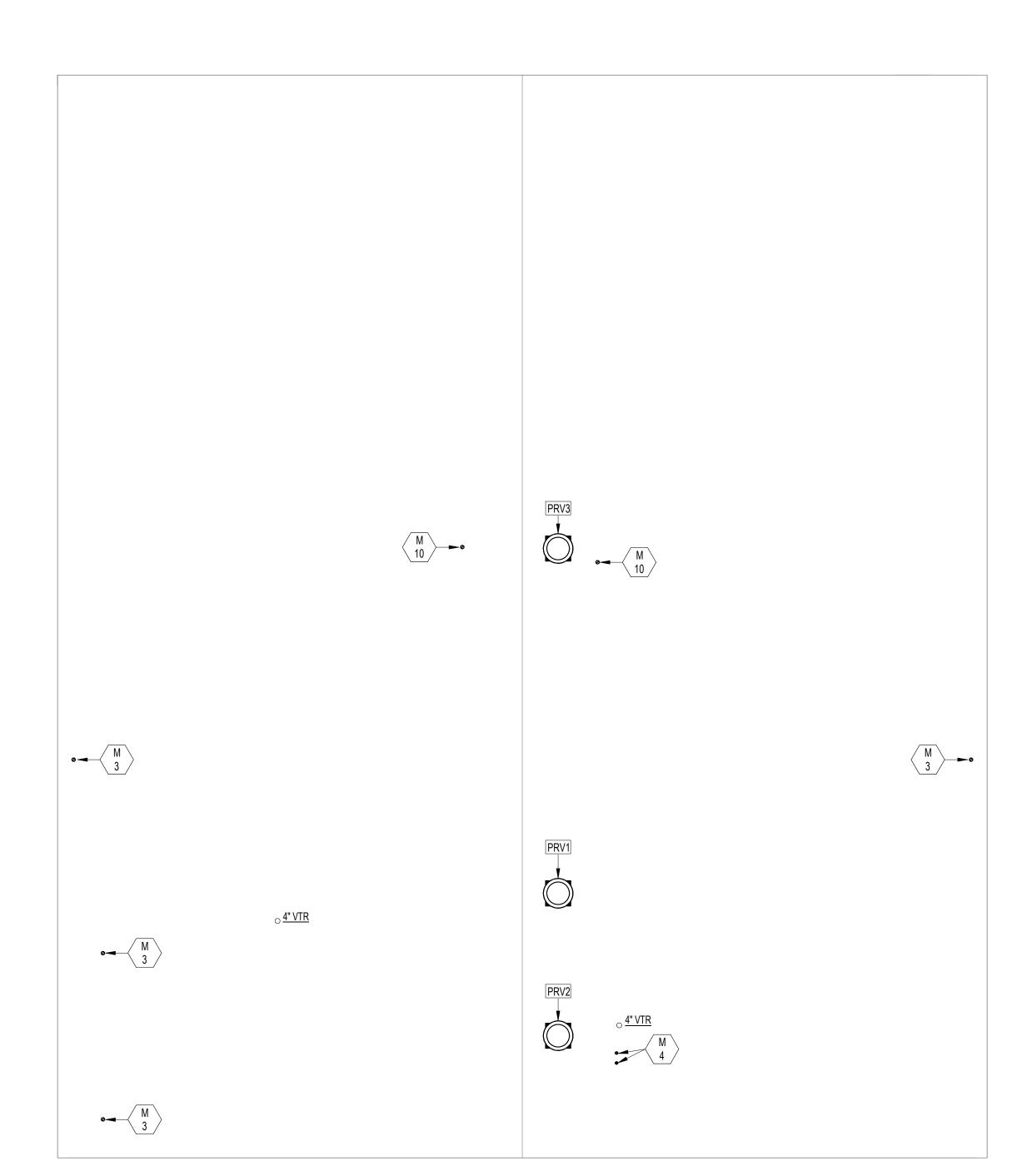
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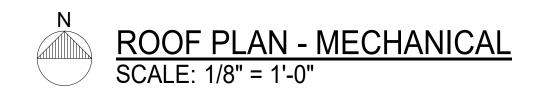


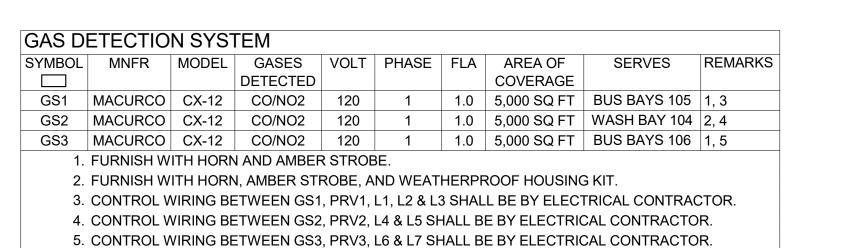
	L			
 8" DIRT LEG (TYPICAL). GALVANIZED STEEL EXHAUST B-VENT. SEAL AIRTIGHT WITH HIGH TEMPERATURE SEALANT. SLOPE VENT 1/4" PER FOOT TOWARDS DRIP LEG. THIMBLE BY MECHANICAL CONTRACTOR. SEAL INSULATION PENETRATION AS RECOMMENDED BY THE METAL BUILDING MANUFACTURER. VENT TERMINAL FURNISHED BY UNIT MANUFACTURER. MAKE FINAL CONNECTION WITH CORRUGATED STAINLESS STEEL TUBING, ROOF FLASHING. TEE WITH DRIP LEG AND CLEANOUT CAP. 	24" MIN. M 2 4"Ø 12" MIN. M 5	WALL WALL M 7 SEE PLAN FOR SIZE M 1	2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	MAKE FINAL C STEEL TUBING VENT CAP FUI STORM COLL/ ROOF. TALL CONE BO REFLECTOR. SEAL INSULAT MANUFACTUF COMBUSTIBLE MANUFACTUF CLEANOUT CA REFER TO PLI 8" DIRT LEG. RADIANT TUB TYPE 'B' VENT CLEANOUT TI
3 GAS UNIT HEAT	ER DETAIL	NO SCALE	4	RAD



NO SCALE







POWE	R ROOF VE	NTILATOF	RSCH	EDULE	<u> </u>				
SYMBOL	MNFR	MODEL	CFM	ESP	MOTOR		SONE*	SERVES	REMARK
				("w.c.)	VOLTS	HP			
PRV1	GREENHECK	G-180-VG	2,665	0.30	120	3/4	8.1	BUS BAYS 105	1, 2
PRV2	GREENHECK	G-180-VG	2,300	0.30	120	3/4	7.5	WASH BAY 104	1, 2
PRV3	GREENHECK	G-200-VG	3,490	0.30	120	1.0	10.2	BUS BAYS 106	1, 2
*	MAXIMUM INLE	T SONES PER	R AMCA	STANDA	RD 301 AT	5 FT.			
1.	FURNISH WITH	12" HIGH RO	OF CURI	B, MOTO	RIZED DAI	MPER A	ND DISC	ONNECT.	
0	FUDAUCULVA/ITU	1400\/ A OTUA			TUDAL FAI		00550	NILOGO OF DOME	-D

1. FURNISH WITH 12" HIGH ROOF CURB, MOTORIZED DAMPER AND DISCONNECT.
2. FURNISH WITH 120V ACTUATOR, SPRING RETURN, FAILING CLOSED ON LOSS OF POWER.

SYMBOL	MNFR	MODEL	CFM	ESP	MOTOR	DATA		SONE*	SERVES	REMARK
				("w.c.)	VOLTS	PHASE	HP			
EF1	GREENHECK	SP-A90	60	0.25	120	1	16.9W	0.6	TOILET 103	1

(M) KEYNOTES

- 1. WALL CAP FURNISHED WITH EXHAUST FAN. INSTALL CENTER AT APPROXIMATELY 9'-6" A.F.F. 2. 4"Ø RADIANT TUBE HEATER FLUE UP THROUGH ROOF. SEE DETAIL ON THIS SHEET AND
- CONTINUATION ON ROOF PLAN MECHANICAL ON THIS SHEET (TYPICAL). 3. 4"Ø RADIANT TUBE HEATER FLUE. SEE DETAIL ON THIS SHEET AND CONTINUATION ON FLOOR
- PLAN HVAC ON THIS SHEET. 4. 3" INTAKE AND EXHAUST PIPES DOWN THROUGH ROOF TO INSTANTANEOUS WATER HEATER FOR CAR WASH EQUIPMENT. SEE DETAIL ON SHEET A-M2.1 AND CONTINUATION ON ENLARGED FLOOR PLAN - PLUMBING ON SHEET A-M1.1. VERIFY LOCATION OF PIPES WITH CAR WASH VENDOR.
- 5. ALL RADIANT TUBE HEATER AND UNIT HEATER THERMOSTAT CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR. CONDUIT FOR WIRING SHALL BE BY ELECTRICAL CONTRACTOR. 6. INSTALL TOP OF LOUVER OPENING AT SAME ELEVATION AS TOP OF OVERHEAD DOOR OPENING, APPROXIMATELY 14'-0" A.F.F. (TYPICAL).
- 7. 30"x22" DUCT DROP TO 18" A.F.F.
- 8. 18"x18" DUCT DROP TO 18" A.F.F. 9. 26"x18" DUCT DROP TO 18" A.F.F.
- 10. 4"Ø FLUE UP THROUGH ROOF. 11. INSTALL BOTTOM OF UNIT HEATER AT 15'-0" A.F.F.

COMBI	NATION LO	JVER/DA	MPE	R SCH	EDULE			
SYMBOL	MNFR	MODEL	CFM	SIZE	FREE AREA	APD	SERVES	REMARK
				(w x h)	(sq. ft.)	("w.c.)		
L1	GREENHECK	EACA-601	890	18"x28"	1.25	0.06	BUS BAYS 105	1, 2
L2	GREENHECK	EACA-601	890	18"x28"	1.25	0.06	BUS BAYS 105	1, 2
L3	GREENHECK	EACA-601	890	18"x28"	1.25	0.06	STORAGE 101	1, 2
L4	GREENHECK	EACA-601	1,150	26"x26"	1.49	0.07	WASH BAY 104	1, 2
L5	GREENHECK	EACA-601	1,150	26"x26"	1.49	0.07	WASH BAY 104	1, 2
L6	GREENHECK	EACA-601	1,745	30"x28"	2.24	0.07	BUS BAYS 106	1, 2
L7	GREENHECK	EACA-601	1,745	30"x28"	2.24	0.07	BUS BAYS 106	1, 2
1.	FURNISH WITH	BIRD SCRE	EN.					

1. I ORNIGIT WITH BIRD SCILLIN.	
2. FURNISH WITH 120V ACTUATOR, SPRING RETURN, FAILING CLOSED ON LOSS OF PO)WEF

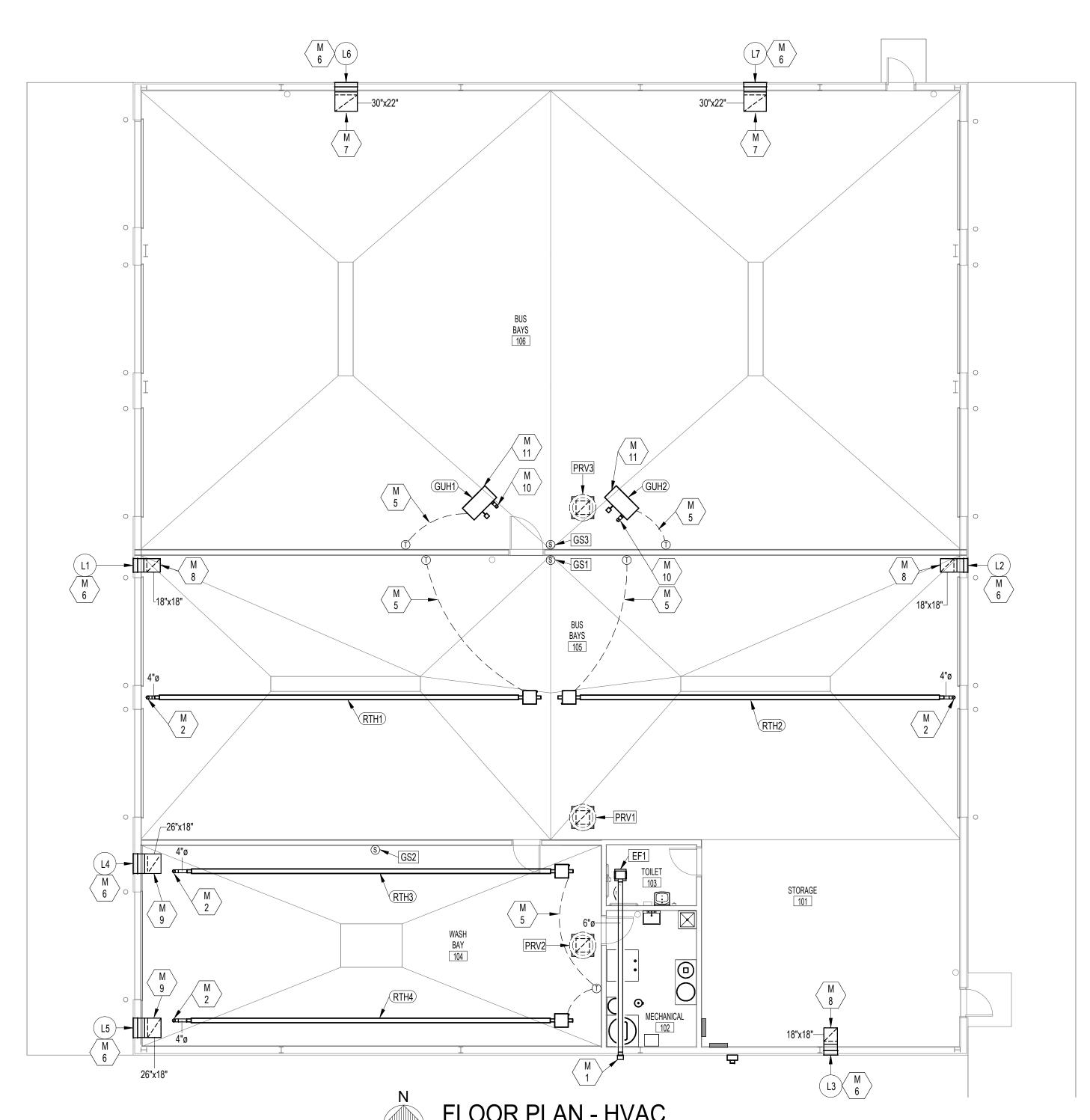
	MNFR	MODEL	TOTAL	MOTOR	VOLTS	PHASE	HEATING							SERVES	REMARKS
			CFM	HP			FUEL	PRESSURE ("w.c.)	INPUT (MBH)	OUTPUT (MBH)	EAT (°F)	LAT (°F)	AFUE		
GUH1 N	MODINE	PTP-175	2,725	1/6	120	1	NAT. GAS	6.0-7.0	175	143.5	40	88	82%	BUS BAYS 106	1, 2, 3
GUH2 N	MODINE	PTP-175	2,725	1/6	120	1	NAT. GAS	6.0-7.0	175	143.5	40	88	82%	BUS BAYS 106	1, 2, 3

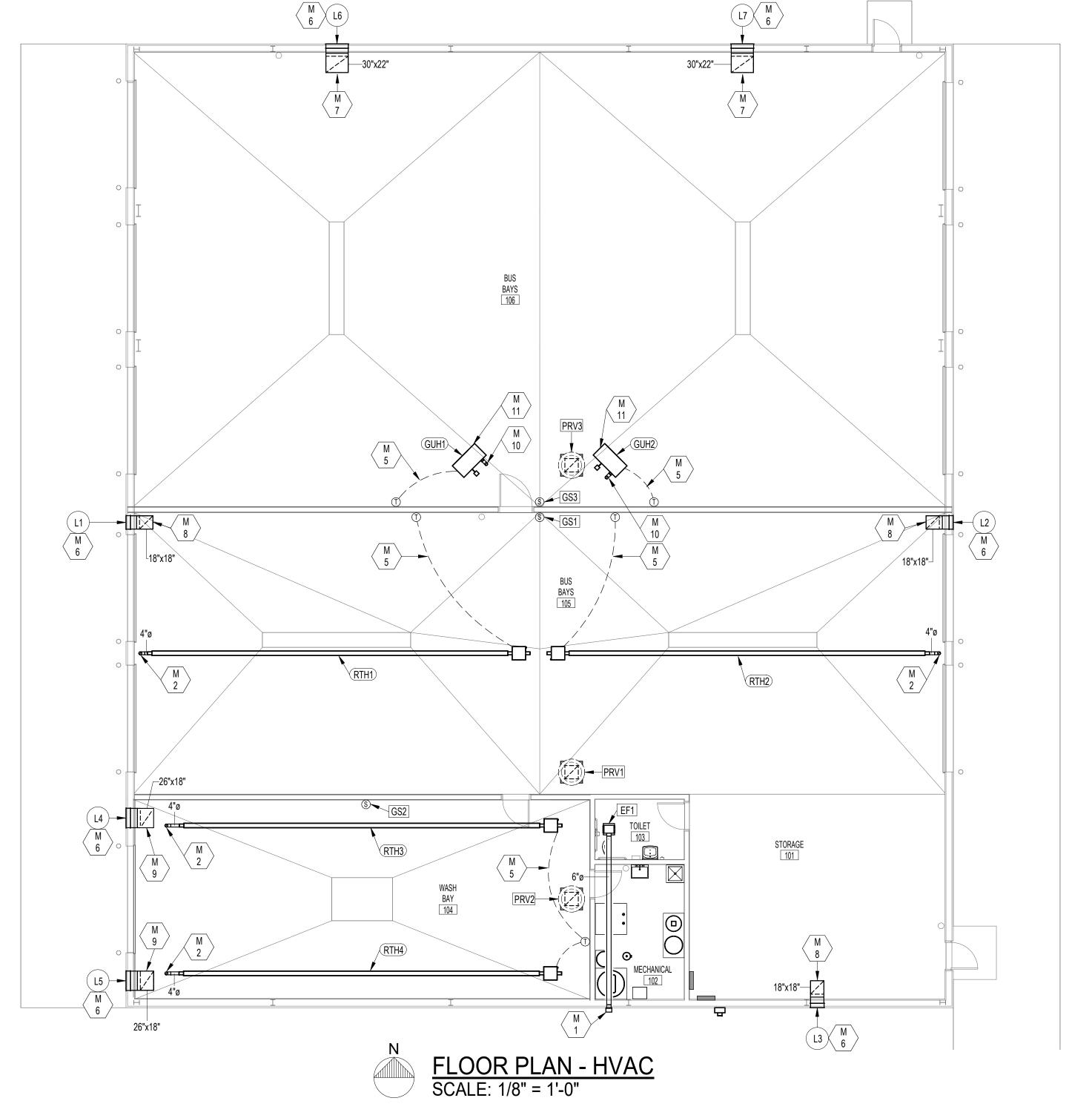
3. FURNISH EACH UNIT WITH 16 GAUGE 304 S.S. STEEL TUBES, ALUMINUM REFLECTORS, 2-STAGE BURNER, AND S.S. CONTROL BOX.

5. FURNISH UNIT WITH "S" CLIPS AND CHAINS FOR CEILING SUSPENSION AS RECOMMENDED BY UNIT MANUFACTURER. VERIFY CHAIN LENGTH PRIOR TO ORDERING.

4. FURNISH UNIT WITH 4" ROOFTOP VENTING KIT WITH CAP, AND 24 VOLT, 2-STAGE, NEMA 4X WEATHERPROOF THERMOSTAT.

SYMBOL	T TUBE HEATER MNFR	MODEL	- FUEL	FUEL	INPUT	INPUT	TUBE	VOLTAGE	PH	FLA	MOUNTING	MOUNTING	CLEARANCE	TO COMBUSTIBLE	ES		SERVES	REMARKS
		_		PRESS. ("w.c.)	MBH-HIGH						HEIGHT*			SIDE (BEHIND)		BELOW		
RTH1-2	DETROIT RADIANT	HL3-40-150	NAT. GAS	5.0 - 14.0	150	100	40'	120	1	4.8	15'-6"	0°	9"	9"	6"	60/30"	BUS BAYS 105	1, 2, 5
RTH3-4	DETROIT RADIANT	HL2-SS-40-125	NAT. GAS	5.0 - 14.0	125	82	40'	120	1	4.8	15'-6"	45°	9"	9"	6"	60/30"	WASH BAY 104	3, 4, 5
	* ESTIMATE TO CENTERLINE OF TUBE, VERIFY ON SITE AND MOUNT TUBES AS HIGH AS POSSIBLE. CLEARANCES ARE FROM EDGE OF REFLECTOR (SIDE), BOTTOM OF TUBE (BELOW) AND TOP OF REFLECTOR (TOP). SHORTER "BELOW" CLEARANCE IS 20' FROM BURNER.																	
1.	FURNISH EACH UNIT	WITH ALUMINIZI	ED COATED	STEEL TUBES, A	ALUMINUM F	REFLECTOR	S, 2-STAGE	E BURNER,	AND (CONTR	ROL BOX.							
2	1. FURNISH EACH UNIT WITH ALUMINIZED COATED STEEL TUBES, ALUMINUM REFLECTORS, 2-STAGE BURNER, AND CONTROL BOX. 2. FURNISH UNIT WITH 4" ROOFTOP VENTING KIT WITH CAP, AND 24 VOLT, 2-STAGE THERMOSTAT.																	





FLOOR PLAN, ROOF PLAN, DETAILS SCHEDULES - MECHANICAL

N COMMUNITY SCHOOL DISTRICT
IMPROVEMENTS

2024 FACILIT DATE ISSUED 10/17/2023

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A-M3.1

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MECHANICAL KEYNOTES SHEET A-ME0.1 1. 4" SANITARY SEWER TO 5'-0" OUTSIDE BUILDING. SEE INVERT ELEVATIONS ON

2. GAS SERVICE, METER AND REGULATOR BY GAS UTILITY.

3. 1" DOMESTIC WATER SERVICE TO 5'-0" OUTSIDE BUILDING. 4. 4" SANITARY SEWER INTO BUILDING. SEE CONTINUATION ON FOUNDATION PLAN -PLUMBING ON SHEET A-M1.1.

ELECTRICAL GENERAL NOTES SHEET A-ME0.1

A ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF ALL UNDERGROUND UTILITIES FOR ENTIRE TRENCHING PATH OF UNDERGROUND CONDUIT RUNS. B ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING AND COMPACTING FOR

ENTIRE LENGTH OF TRENCH REQUIRED. C ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE CITY OF ROCK RAPIDS MUNICIPAL UTILITIES AS REQUIRED FOR WORK INDICATED ON SITE PLAN. NOTE THAT THE CITY OF ROCK RAPIDS MUNICIPAL UTILITIES

IS REFERRED TO AS THE "UTILITY" ON DRAWINGS. D ALL UNDERGROUND CONDUIT SHALL BE 42" BELOW GRADE IN GREEN SPACE AREAS AND 36" BELOW GRADE IN PARKING LOT OR SIDEWALK AREAS UNLESS NOTED OTHERWISE.

1 EXISTING UTILITY CONNECTION CABINET, TO BE RELOCATED BY THE UTILITY. COORDINATE SEQUENCING OF THE WORK WITH THE UTILITY. VERIFY NEW CONNECTION CABINET LOCATION ON THE SITE WITH THE OTHER SITE UTILITIES SHOWN.

2 METER SOCKET IS FURNISHED BY THE ELECTRICAL CONTRACTOR. METER AND ALL METER CONTROLS WIRING ARE BY THE UTILITY. METER SHALL BE MOUNTED TO THE BUILDING BY THE ELECTRICAL

CONTRACTOR. SEE FLOOR PLANS FOR ADDITIONAL INFORMATION ON THE METER. 3 APPROXIMATE LOCATION OF THE EXISTING COMMUNICATIONS PEDESTAL, TO REMAIN. ROUTE NEW CONDUIT TO THE PEDESTAL BASE. COORDINATE CONDUIT TERMINATION AT THE PEDESTAL BASE WITH THE COMMUNICATIONS UTILITY.

4 ELECTRICAL CONTRACTOR SHALL PROVIDE SECONDARY LATERAL FROM THE UTILITY TRANSFORMER TO THE NEW BUS BARN BUILDING SERVICE ENTRANCE. SEE DETAIL 1/A-E3.1 FOR ADDITIONAL INFORMATION ON

5 NEW IN GRADE BOX FOR THE COMMUNICATIONS CABLING. PROVIDE QUAZITE BOX MODEL #PG2436DA30 IN THE GREEN SPACE. HAND HOLE IS 24" BY 36" WITH SOLID BOTTOM. PROVIDE (4) 1" DRAIN HOLES IN THE IN GRADE BOX BOTTOM AND PROVIDE ALL DRAINAGE UNDER THE BOX AS RECOMMENDED BY THE MANUFACTURER. PROVIDE MATCHING COVER FOR THE IN GRADE BOX. COVER SHALL READ "COMMUNICATIONS". PROVIDE SHOP DRAWINGS.

THE SECONDARY WIRING.

6 PROVIDE (1) 3-1/2" CONDUIT FROM THE IN GRADE BOX TO THE UTILITY PEDESTAL. CONDUIT IS FOR THE COMMUNICATIONS UTILITY. VERIFY TERMINATION LOCATION AT THE EXISTING PEDESTAL WITH THE COMMUNICATIONS UTILITY.

7 NEW PAD MOUNTED UTILITY TRANSFORMER LOCATION FOR SERVING THE BUS BARN BUILDING. UTILITY SHALL PROVIDE FIBERGLASS VAULT AT THE TRANSFORMER AND ALL PRIMARY WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE SECONDARY LATERAL WIRING AND LUGS FOR CONNECTIONS AT THE TRANSFORMER. COORDINATE CONSTRUCTION SCHEDULING WITH THE UTILITY.

8 EXISTING PRIMARY WIRING SHOWN FOR REFERENCE. ALL WORK ON THE ELECTRICAL PRIMARY WIRING SYSTEM IS BY THE UTILITY.

9 PROVIDE (1) 3-1/2 CONDUIT FROM THE IN GRADE BOX TO THE EXISTING UTILITY PEDESTAL. WHERE NEW CONDUITS ARE RUN UNDER THE EXISTING ROADWAY. THE ELECTRICAL CONTRACTOR SHALL BORE THE CONDUIT UNDER THE ROAD.



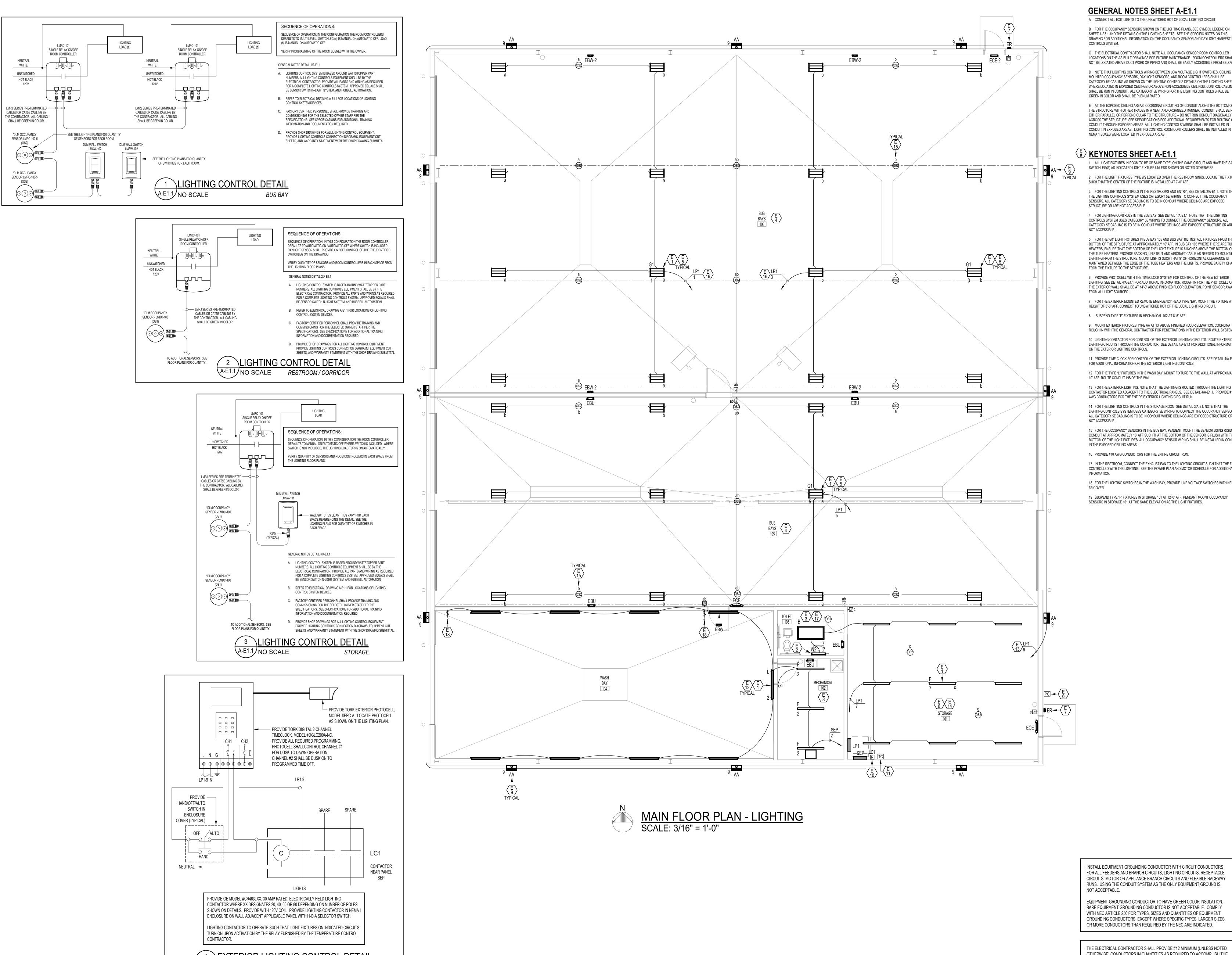


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A-ME0.1

SITE PLAN - MECHANICAL & ELECTRICAL SCALE: 1" = 20'-0"



B FOR THE OCCUPANCY SENSORS SHOWN ON THE LIGHTING PLANS, SEE SYMBOL LEGEND ON SHEET A-E3.1 AND THE DETAILS ON THE LIGHTING SHEETS. SEE THE SPECIFIC NOTES ON THIS DRAWING FOR ADDITIONAL INFORMATION ON THE OCCUPANCY SENSOR AND DAYLIGHT HARVESTING

C THE ELECTRICAL CONTRACTOR SHALL NOTE ALL OCCUPANCY SENSOR ROOM CONTROLLER LOCATIONS ON THE AS-BUILT DRAWINGS FOR FUTURE MAINTENANCE. ROOM CONTROLLERS SHALL NOT BE LOCATED ABOVE DUCT WORK OR PIPING AND SHALL BE EASILY ACCESSIBLE FROM BELOW. D NOTE THAT LIGHTING CONTROLS WIRING BETWEEN LOW VOLTAGE LIGHT SWITCHES, CEILING MOUNTED OCCUPANCY SENSORS, DAYLIGHT SENSORS, AND ROOM CONTROLLERS SHALL BE CATEGORY 5E CABLING AS SHOWN ON THE LIGHTING CONTROLS DETAILS ON THE LIGHTING SHEETS. WHERE LOCATED IN EXPOSED CEILINGS OR ABOVE NON-ACCESSIBLE CEILINGS, CONTROL CABLING

E AT THE EXPOSED CEILING AREAS, COORDINATE ROUTING OF CONDUIT ALONG THE BOTTOM OF THE STRUCTURE WITH OTHER TRADES IN A NEAT AND ORGANIZED MANNER. CONDUIT SHALL BE RUN EITHER PARALLEL OR PERPENDICULAR TO THE STRUCTURE - DO NOT RUN CONDUIT DIAGONALLY ACROSS THE STRUCTURE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR ROUTING OF CONDUIT THROUGH EXPOSED AREAS. ALL LIGHTING CONTROLS WIRING SHALL BE INSTALLED IN CONDUIT IN EXPOSED AREAS. LIGHTING CONTROL ROOM CONTROLLERS SHALL BE INSTALLED IN NEMA 1 BOXES WERE LOCATED IN EXPOSED AREAS.

KEYNOTES SHEET A-E1.1

1 ALL LIGHT FIXTURES IN ROOM TO BE OF SAME TYPE, ON THE SAME CIRCUIT AND HAVE THE SAME SWITCHLEG(S) AS INDICATED LIGHT FIXTURE UNLESS SHOWN OR NOTED OTHERWISE.

2 FOR THE LIGHT FIXTURES TYPE W2 LOCATED OVER THE RESTROOM SINKS, LOCATE THE FIXTURES SUCH THAT THE CENTER OF THE FIXTURE IS INSTALLED AT 7'-0" AFF. 3 FOR THE LIGHTING CONTROLS IN THE RESTROOMS AND ENTRY, SEE DETAIL 2/A-E1.1. NOTE THAT THE LIGHTING CONTROLS SYSTEM USES CATEGORY 5E WIRING TO CONNECT THE OCCUPANCY

4 FOR LIGHTING CONTROLS IN THE BUS BAY, SEE DETAIL 1/A-E1.1, NOTE THAT THE LIGHTING CONTROLS SYSTEM USES CATEGORY 5E WIRING TO CONNECT THE OCCUPANCY SENSORS. ALL CATEGORY 5E CABLING IS TO BE IN CONDUIT WHERE CEILINGS ARE EXPOSED STRUCTURE OR ARE

5 FOR THE "G1" LIGHT FIXTURES IN BUS BAY 105 AND BUS BAY 106, INSTALL FIXTURES FROM THE BOTTOM OF THE STRUCTURE AT APPROXIMATELY 16' AFF. IN BUS BAY 105 WHERE THERE ARE TUBE HEATERS, ENSURE THAT THE BOTTOM OF THE LIGHT FIXTURE IS 6 INCHES ABOVE THE BOTTOM OF THE TUBE HEATERS. PROVIDE BACKING, UNISTRUT AND AIRCRAFT CABLE AS NEEDED TO MOUNT/HANG LIGHTING FROM THE STRUCTURE. MOUNT LIGHTS SUCH THAT 9" OF HORIZONTAL CLEARANCE IS MAINTAINED BETWEEN THE EDGE OF THE TUBE HEATERS AND THE LIGHTS. PROVIDE SAFETY CHAIN FROM THE FIXTURE TO THE STRUCTURE.

6 PROVIDE PHOTOCELL WITH THE TIMECLOCK SYSTEM FOR CONTROL OF THE NEW EXTERIOR LIGHTING. SEE DETAIL 4/A-E1.1 FOR ADDITIONAL INFORMATION. ROUGH IN FOR THE PHOTOCELL ON THE EXTERIOR WALL SHALL BE AT 14'-0" ABOVE FINISHED FLOOR ELEVATION. POINT SENSOR AWAY FROM ALL LIGHT SOURCES.

7 FOR THE EXTERIOR MOUNTED REMOTE EMERGENCY HEAD TYPE "ER", MOUNT THE FIXTURE AT A HEIGHT OF 8'-6" AFF. CONNECT TO UNSWITCHED HOT OF THE LOCAL LIGHTING CIRCUIT. 8 SUSPEND TYPE "F" FIXTURES IN MECHANICAL 102 AT 8'-6" AFF.

9 MOUNT EXTERIOR FIXTURES TYPE AA AT 13' ABOVE FINISHED FLOOR ELEVATION. COORDINATE ROUGH IN WITH THE GENERAL CONTRACTOR FOR PENETRATIONS IN THE EXTERIOR WALL SYSTEM. 10 LIGHTING CONTACTOR FOR CONTROL OF THE EXTERIOR LIGHTING CIRCUITS. ROUTE EXTERIOR LIGHTING CIRCUITS THROUGH THE CONTACTOR. SEE DETAIL 4/A-E1.1 FOR ADDITIONAL INFORMATION

11 PROVIDE TIME CLOCK FOR CONTROL OF THE EXTERIOR LIGHTING CIRCUITS. SEE DETAIL 4/A-E1.1 FOR ADDITIONAL INFORMATION ON THE EXTERIOR LIGHTING CONTROLS. 12 FOR THE TYPE "L" FIXTURES IN THE WASH BAY, MOUNT FIXTURE TO THE WALL AT APPROXIMATELY

13 FOR THE EXTERIOR LIGHTING, NOTE THAT THE LIGHTING IS ROUTED THROUGH THE LIGHTING CONTACTOR LOCATED ADJACENT TO THE ELECTRICAL PANELS. SEE DETAIL 4/A-E1.1. PROVIDE #10 AWG CONDUCTORS FOR THE ENTIRE EXTERIOR LIGHTING CIRCUIT RUN.

ALL CATEGORY 5E CABLING IS TO BE IN CONDUIT WHERE CEILINGS ARE EXPOSED STRUCTURE OR ARE 15 FOR THE OCCUPANCY SENSORS IN THE BUS BAY, PENDENT MOUNT THE SENSOR USING RIGID CONDUIT AT APPROXIMATELY 16' AFF SUCH THAT THE BOTTOM OF THE SENSOR IS FLUSH WITH THE BOTTOM OF THE LIGHT FIXTURES. ALL OCCUPANCY SENSOR WIRING SHALL BE INSTALLED IN CONDUIT

16 PROVIDE #10 AWG CONDUCTORS FOR THE ENTIRE CIRCUIT RUN.

17 IN THE RESTROOM, CONNECT THE EXHAUST FAN TO THE LIGHTING CIRCUIT SUCH THAT THE FAN IS CONTROLLED WITH THE LIGHTING. SEE THE POWER PLAN AND MOTOR SCHEDULE FOR ADDITIONAL

18 FOR THE LIGHTING SWITCHES IN THE WASH BAY, PROVIDE LINE VOLTAGE SWITCHES WITH NEMA

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A-E1.1

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4 EXTERIOR LIGHTING CONTROL DETAIL

INSTALL EQUIPMENT GROUNDING CONDUCTOR WITH CIRCUIT CONDUCTORS FOR ALL FEEDERS AND BRANCH CIRCUITS, LIGHTING CIRCUITS, RECEPTACLE CIRCUITS, MOTOR OR APPLIANCE BRANCH CIRCUITS AND FLEXIBLE RACEWAY RUNS. USING THE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUND IS

EQUIPMENT GROUNDING CONDUCTOR TO HAVE GREEN COLOR INSULATION. BARE EQUIPMENT GROUNDING CONDUCTOR IS NOT ACCEPTABLE. COMPLY WITH NEC ARTICLE 250 FOR TYPES, SIZES AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS, EXCEPT WHERE SPECIFIC TYPES, LARGER SIZES, OR MORE CONDUCTORS THAN REQUIRED BY THE NEC ARE INDICATED.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE #12 MINIMUM (UNLESS NOTED OTHERWISE) CONDUCTORS IN QUANTITIES AS REQUIRED TO ACCOMPLISH THE GENERAL POWER, LIGHTING AND SWITCHING CIRCUITING AS SHOWN ON THIS SHEET. FOLLOW THE NEC FOR DERATING AND CONDUIT FILL AS IT APPLIES TO MULTIPLE CIRCUITS. CONDUIT SIZE SHALL BE 1/2" SIZE MINIMUM.

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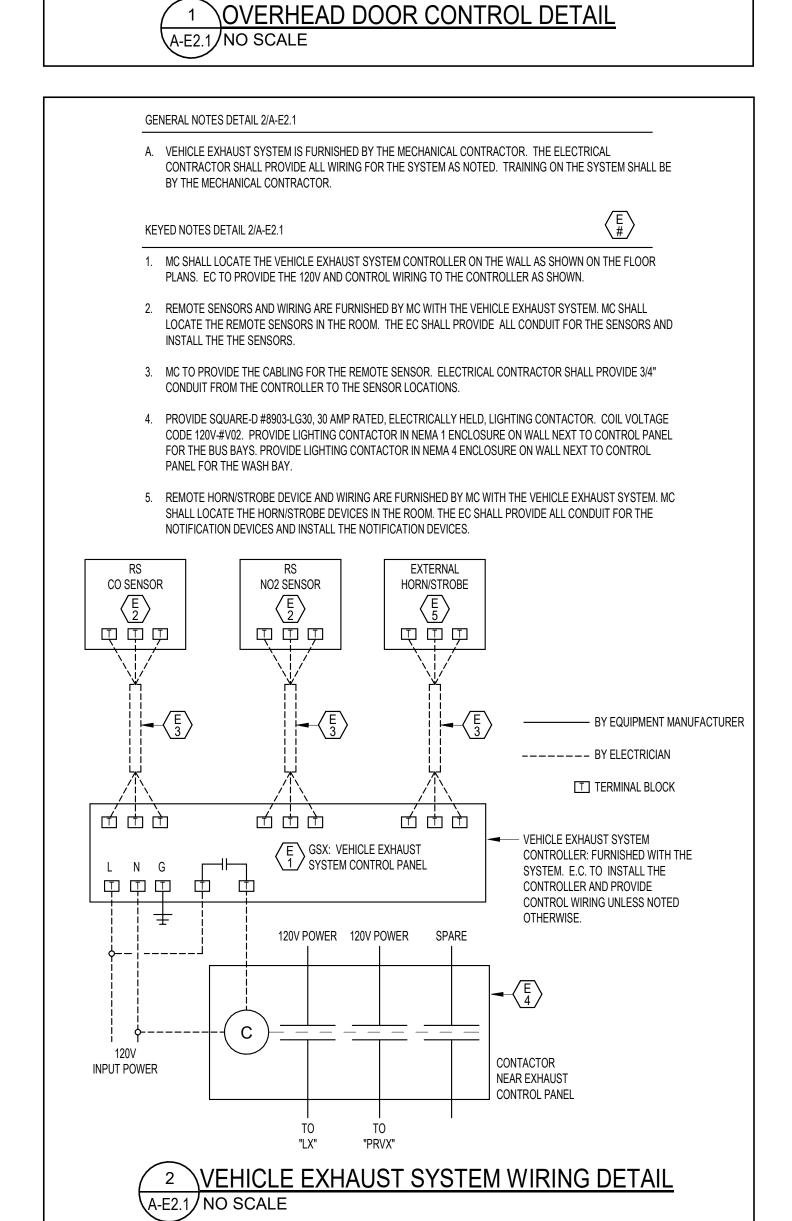
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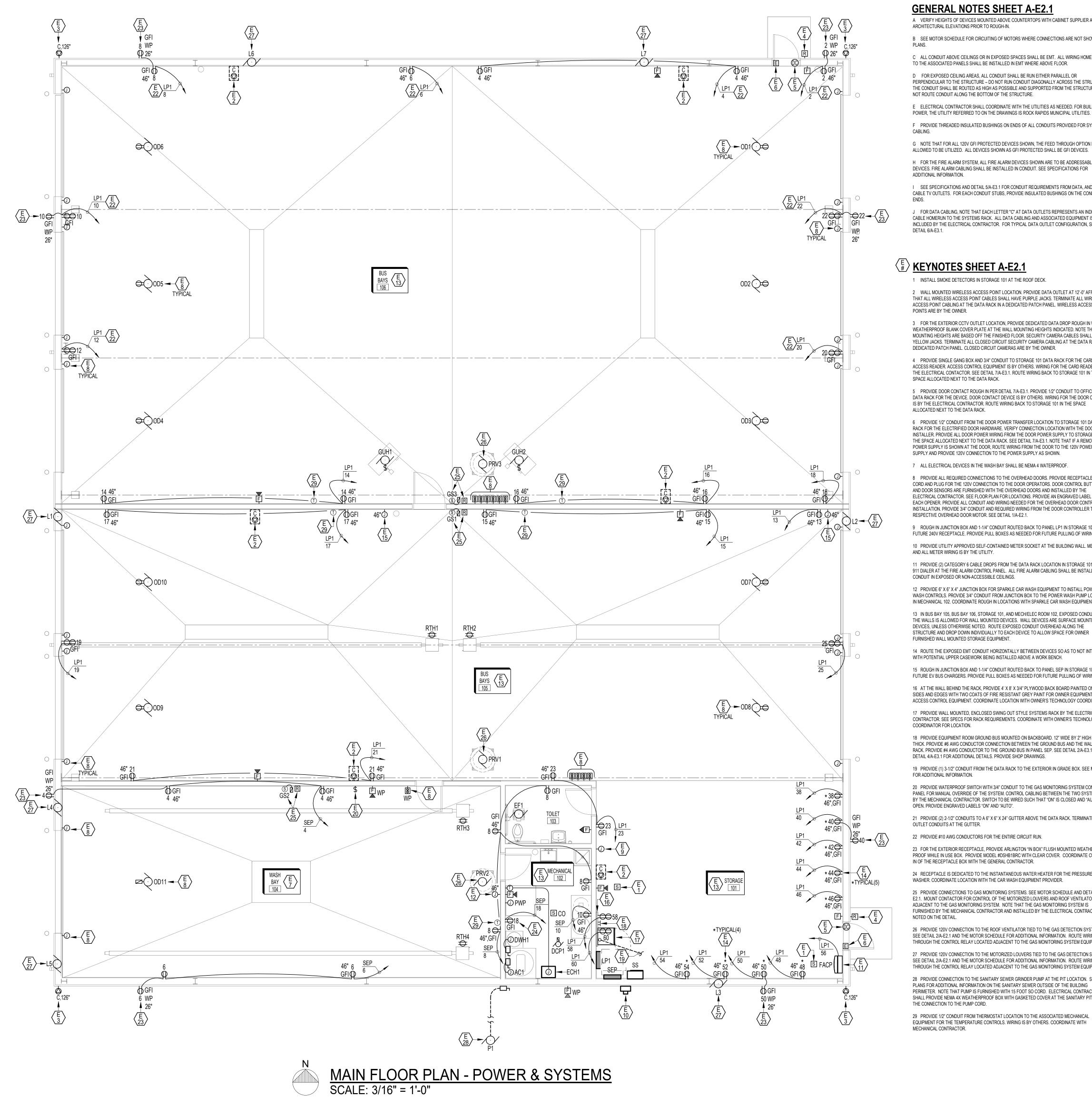
5. PROVIDE JUNCTION BOX AT 24" AFF FOR CONNECTIONS TO BEAM SENSOR ASSOCIATED WITH OVERHEAD DOOR

8. PROVIDE CONDUIT AND WIRING BETWEEN PRESSURE SENSOR JUNCTION BOX AND DOOR CONTROLLER.

PROVIDE JUNCTION BOX CENTERED ON DOOR FOR CONNECTIONS TO CURLY CORD ASSOCIATED WITH DOOR EDGE

6. PROVIDE CONDUIT AND WIRING BETWEEN BEAM SENSOR AND DOOR CONTROLLER.





GENERAL NOTES SHEET A-E2.1

A VERIFY HEIGHTS OF DEVICES MOUNTED ABOVE COUNTERTOPS WITH CABINET SUPPLIER AND ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.

B SEE MOTOR SCHEDULE FOR CIRCUITING OF MOTORS WHERE CONNECTIONS ARE NOT SHOWN ON C ALL CONDUIT ABOVE CEILINGS OR IN EXPOSED SPACES SHALL BE EMT. ALL WIRING HOMERUNS

TO THE ASSOCIATED PANELS SHALL BE INSTALLED IN EMT WHERE ABOVE FLOOR. D FOR EXPOSED CEILING AREAS, ALL CONDUIT SHALL BE RUN EITHER PARALLEL OR PERPENDICULAR TO THE STRUCTURE - DO NOT RUN CONDUIT DIAGONALLY ACROSS THE STRUCTURE. THE CONDUIT SHALL BE ROUTED AS HIGH AS POSSIBLE AND SUPPORTED FROM THE STRUCTURE. DO

NOT ROUTE CONDUIT ALONG THE BOTTOM OF THE STRUCTURE. E ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UTILITIES AS NEEDED. FOR BUILDING POWER, THE UTILITY REFERRED TO ON THE DRAWINGS IS ROCK RAPIDS MUNICIPAL UTILITIES. F PROVIDE THREADED INSULATED BUSHINGS ON ENDS OF ALL CONDUITS PROVIDED FOR SYSTEMS

G NOTE THAT FOR ALL 120V GFI PROTECTED DEVICES SHOWN, THE FEED THROUGH OPTION IS NOT ALLOWED TO BE UTILIZED. ALL DEVICES SHOWN AS GFI PROTECTED SHALL BE GFI DEVICES. H FOR THE FIRE ALARM SYSTEM, ALL FIRE ALARM DEVICES SHOWN ARE TO BE ADDRESSABLE

I SEE SPECIFICATIONS AND DETAIL 5/A-E3.1 FOR CONDUIT REQUIREMENTS FROM DATA, AND/OR CABLE TV OUTLETS. FOR EACH CONDUIT STUBS, PROVIDE INSULATED BUSHINGS ON THE CONDUIT

J FOR DATA CABLING, NOTE THAT EACH LETTER "C" AT DATA OUTLETS REPRESENTS AN INDIVIDUAL CABLE HOMERUN TO THE SYSTEMS RACK. ALL DATA CABLING AND ASSOCIATED EQUIPMENT IS TO BE INCLUDED BY THE ELECTRICAL CONTRACTOR. FOR TYPICAL DATA OUTLET CONFIGURATION, SEE

EXAMPLE SHEET A-E2.

1 INSTALL SMOKE DETECTORS IN STORAGE 101 AT THE ROOF DECK. 2 WALL MOUNTED WIRELESS ACCESS POINT LOCATION. PROVIDE DATA OUTLET AT 12'-0" AFF. NOTE THAT ALL WIRELESS ACCESS POINT CABLES SHALL HAVE PURPLE JACKS. TERMINATE ALL WIRELESS ACCESS POINT CABLING AT THE DATA RACK IN A DEDICATED PATCH PANEL. WIRELESS ACCESS POINTS ARE BY THE OWNER.

3 FOR THE EXTERIOR CCTV OUTLET LOCATION, PROVIDE DEDICATED DATA DROP ROUGH IN WITH WEATHERPROOF BLANK COVER PLATE AT THE WALL MOUNTING HEIGHTS INDICATED. NOTE THAT THE MOUNTING HEIGHTS ARE BASED OFF THE FINISHED FLOOR. SECURITY CAMERA CABLES SHALL HAVE YELLOW JACKS. TERMINATE ALL CLOSED CIRCUIT SECURITY CAMERA CABLING AT THE DATA RACK IN A DEDICATED PATCH PANEL. CLOSED CIRCUIT CAMERAS ARE BY THE OWNER.

4 PROVIDE SINGLE GANG BOX AND 3/4" CONDUIT TO STORAGE 101 DATA RACK FOR THE CARD ACCESS READER. ACCESS CONTROL EQUIPMENT IS BY OTHERS. WIRING FOR THE CARD READER IS BY THE ELECTRICAL CONTACTOR. SEE DETAIL 7/A-E3.1. ROUTE WIRING BACK TO STORAGE 101 IN THE SPACE ALLOCATED NEXT TO THE DATA RACK.

5 PROVIDE DOOR CONTACT ROUGH IN PER DETAIL 7/A-E3.1. PROVIDE 1/2" CONDUIT TO OFFICE 104 DATA RACK FOR THE DEVICE. DOOR CONTACT DEVICE IS BY OTHERS. WIRING FOR THE DOOR CONTACT IS BY THE ELECTRICAL CONTRACTOR. ROUTE WIRING BACK TO STORAGE 101 IN THE SPACE ALLOCATED NEXT TO THE DATA RACK. 6 PROVIDE 1/2" CONDUIT FROM THE DOOR POWER TRANSFER LOCATION TO STORAGE 101 DATA

RACK FOR THE ELECTRIFIED DOOR HARDWARE. VERIFY CONNECTION LOCATION WITH THE DOOR INSTALLER. PROVIDE ALL DOOR POWER WIRING FROM THE DOOR POWER SUPPLY TO STORAGE 101 IN THE SPACE ALLOCATED NEXT TO THE DATA RACK. SEE DETAIL 7/A-E3.1. NOTE THAT IF A REMOTE POWER SUPPLY IS SHOWN AT THE DOOR, ROUTE WIRING FROM THE DOOR TO THE 120V POWER SUPPLY AND PROVIDE 120V CONNECTION TO THE POWER SUPPLY AS SHOWN. 7 ALL ELECTRICAL DEVICES IN THE WASH BAY SHALL BE NEMA 4 WATERPROOF.

8 PROVIDE ALL REQUIRED CONNECTIONS TO THE OVERHEAD DOORS. PROVIDE RECEPTACLE AND CORD AND PLUG FOR THE 120V CONNECTION TO THE DOOR OPERATORS. DOOR CONTROL BUTTONS AND DOOR SENSORS ARE FURNISHED WITH THE OVERHEAD DOORS AND INSTALLED BY THE ELECTRICAL CONTRACTOR. SEE FLOOR PLAN FOR LOCATIONS. PROVIDE AN ENGRAVED LABEL FOR EACH OPENER. PROVIDE ALL CONDUIT AND WIRING NEEDED FOR THE OVERHEAD DOOR CONTROLS INSTALLATION. PROVIDE 3/4" CONDUIT AND REQUIRED WIRING FROM THE DOOR CONTROLLER TO THE RESPECTIVE OVERHEAD DOOR MOTOR. SEE DETAIL 1/A-E2.1.

FUTURE 240V RECEPTACLE. PROVIDE PULL BOXES AS NEEDED FOR FUTURE PULLING OF WIRING. 10 PROVIDE UTILITY APPROVED SELF-CONTAINED METER SOCKET AT THE BUILDING WALL. METER AND ALL METER WIRING IS BY THE UTILITY.

11 PROVIDE (2) CATEGORY 6 CABLE DROPS FROM THE DATA RACK LOCATION IN STORAGE 101 TO THE 911 DIALER AT THE FIRE ALARM CONTROL PANEL. ALL FIRE ALARM CABLING SHALL BE INSTALLED IN CONDUIT IN EXPOSED OR NON-ACCESSIBLE CEILINGS. 12 PROVIDE 6" X 6" X 4" JUNCTION BOX FOR SPARKLE CAR WASH EQUIPMENT TO INSTALL POWER

WASH CONTROLS. PROVIDE 3/4" CONDUIT FROM JUNCTION BOX TO THE POWER WASH PUMP LOCATED IN MECHANICAL 102. COORDINATE ROUGH IN LOCATIONS WITH SPARKLE CAR WASH EQUIPMENT. 13 IN BUS BAY 105, BUS BAY 106, STORAGE 101, AND MECH/ELEC ROOM 102, EXPOSED CONDUIT ON THE WALLS IS ALLOWED FOR WALL MOUNTED DEVICES. WALL DEVICES ARE SURFACE MOUNTED DEVICES, UNLESS OTHERWISE NOTED. ROUTE EXPOSED CONDUIT OVERHEAD ALONG THE STRUCTURE AND DROP DOWN INDIVIDUALLY TO EACH DEVICE TO ALLOW SPACE FOR OWNER URNISHED WALL MOUNTED STORAGE EQUIPMENT.

14 ROUTE THE EXPOSED EMT CONDUIT HORIZONTALLY BETWEEN DEVICES SO AS TO NOT INTERFERE WITH POTENTIAL UPPER CASEWORK BEING INSTALLED ABOVE A WORK BENCH.

15 ROUGH IN JUNCTION BOX AND 1-1/4" CONDUIT ROUTED BACK TO PANEL SEP IN STORAGE 101 FOR FUTURE EV BUS CHARGERS. PROVIDE PULL BOXES AS NEEDED FOR FUTURE PULLING OF WIRING. 16 AT THE WALL BEHIND THE RACK, PROVIDE 4' X 8' X 3/4" PLYWOOD BACK BOARD PAINTED ON ALL SIDES AND EDGES WITH TWO COATS OF FIRE RESISTANT GREY PAINT FOR OWNER EQUIPMENT AND ACCESS CONTROL EQUIPMENT. COORDINATE LOCATION WITH OWNER'S TECHNOLOGY COORDINATOR.

17 PROVIDE WALL MOUNTED, ENCLOSED SWING OUT STYLE SYSTEMS RACK BY THE ELECTRICAL CONTRACTOR. SEE SPECS FOR RACK REQUIREMENTS. COORDINATE WITH OWNER'S TECHNOLOGY COORDINATOR FOR LOCATION.

18 PROVIDE EQUIPMENT ROOM GROUND BUS MOUNTED ON BACKBOARD. 12" WIDE BY 2" HIGH BY 1/4" THICK. PROVIDE #6 AWG CONDUCTOR CONNECTION BETWEEN THE GROUND BUS AND THE WALL DATA RACK. PROVIDE #4 AWG CONDUCTOR TO THE GROUND BUS IN PANEL SEP. SEE DETAIL 2/A-E3.1 AND DETAIL 4/A-E3.1 FOR ADDITIONAL DETAILS. PROVIDE SHOP DRAWINGS.

19 PROVIDE (1) 3-1/2" CONDUIT FROM THE DATA RACK TO THE EXTERIOR IN GRADE BOX. SEE ME0.1 FOR ADDITIONAL INFORMATION. 20 PROVIDE WATERPROOF SWITCH WITH 3/4" CONDUIT TO THE GAS MONITORING SYSTEM CONTROL PANEL FOR MANUAL OVERRIDE OF THE SYSTEM. CONTROL CABLING BETWEEN THE TWO SYSTEMS IS

BY THE MECHANICAL CONTRACTOR. SWITCH TO BE WIRED SUCH THAT "ON" IS CLOSED AND "AUTO" IS OPEN. PROVIDE ENGRAVED LABELS "ON" AND "AUTO". 21 PROVIDE (2) 2-1/2" CONDUITS TO A 6" X 6" X 24" GUTTER ABOVE THE DATA RACK. TERMINATE DATA OUTLET CONDUITS AT THE GUTTER.

22 PROVIDE #10 AWG CONDUCTORS FOR THE ENTIRE CIRCUIT RUN. 23 FOR THE EXTERIOR RECEPTACLE, PROVIDE ARLINGTON "IN BOX" FLUSH MOUNTED WEATHER

PROOF WHILE IN USE BOX. PROVIDE MODEL #DSHB1BRC WITH CLEAR COVER. COORDINATE CUTTING IN OF THE RECEPTACLE BOX WITH THE GENERAL CONTRACTOR.

24 RECEPTACLE IS DEDICATED TO THE INSTANTANEOUS WATER HEATER FOR THE PRESSURE WASHER. COORDINATE LOCATION WITH THE CAR WASH EQUIPMENT PROVIDER.

25 PROVIDE CONNECTIONS TO GAS MONITORING SYSTEMS. SEE MOTOR SCHEDULE AND DETAIL 2/A-E2.1. MOUNT CONTACTOR FOR CONTROL OF THE MOTORIZED LOUVERS AND ROOF VENTILATORS ADJACENT TO THE GAS MONITORING SYSTEM. NOTE THAT THE GAS MONITORING SYSTEM IS FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS

6 PROVIDE 120V CONNECTION TO THE ROOF VENTILATOR TIED TO THE GAS DETECTION SYSTEM. SEE DETAIL 2/A-E2.1 AND THE MOTOR SCHEDULE FOR ADDITIONAL INFORMATION. ROUTE WIRING HROUGH THE CONTROL RELAY LOCATED ADJACENT TO THE GAS MONITORING SYSTEM EQUIPMENT. PROVIDE 120V CONNECTION TO THE MOTORIZED LOUVERS TIED TO THE GAS DETECTION SYSTEM.

SEE DETAIL 2/A-E2.1 AND THE MOTOR SCHEDULE FOR ADDITIONAL INFORMATION. ROUTE WIRING

HROUGH THE CONTROL RELAY LOCATED ADJACENT TO THE GAS MONITORING SYSTEM EQUIPMENT.

28 PROVIDE CONNECTION TO THE SANITARY SEWER GRINDER PUMP AT THE PIT LOCATION. SEE CIVIL PLANS FOR ADDITIONAL INFORMATION ON THE SANITARY SEWER OUTSIDE OF THE BUILDING PERIMETER. NOTE THAT PUMP IS FURNISHED WITH 15 FOOT SO CORD. ELECTRICAL CONTRACTOR SHALL PROVIDE NEMA 4X WEATHERPROOF BOX WITH GASKETED COVER AT THE SANITARY PIT FOR THE CONNECTION TO THE PUMP CORD.

29 PROVIDE 1/2" CONDUIT FROM THERMOSTAT LOCATION TO THE ASSOCIATED MECHANICAL EQUIPMENT FOR THE TEMPERATURE CONTROLS. WIRING IS BY OTHERS. COORDINATE WITH MECHANICAL CONTRACTOR.

INSTALL EQUIPMENT GROUNDING CONDUCTOR WITH CIRCUIT CONDUCTORS FOR ALL FEEDERS AND BRANCH CIRCUITS, LIGHTING CIRCUITS, RECEPTACLE CIRCUITS, MOTOR OR APPLIANCE BRANCH CIRCUITS AND FLEXIBLE RACEWAY RUNS. USING THE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUND IS

EQUIPMENT GROUNDING CONDUCTOR TO HAVE GREEN COLOR INSULATION. BARE EQUIPMENT GROUNDING CONDUCTOR IS NOT ACCEPTABLE. COMPLY WITH NEC ARTICLE 250 FOR TYPES, SIZES AND QUANTITIES OF EQUIPMENT GROUNDING CONDUCTORS, EXCEPT WHERE SPECIFIC TYPES, LARGER SIZES, OR MORE CONDUCTORS THAN REQUIRED BY THE NEC ARE INDICATED.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE #12 MINIMUM (UNLESS NOTED OTHERWISE) CONDUCTORS IN QUANTITIES AS REQUIRED TO ACCOMPLISH THE GENERAL POWER, LIGHTING AND SWITCHING CIRCUITING AS SHOWN ON THIS SHEET. FOLLOW THE NEC FOR DERATING AND CONDUIT FILL AS IT APPLIES TO MULTIPLE CIRCUITS. CONDUIT SIZE SHALL BE 1/2" SIZE MINIMUM.

NOT ACCEPTABLE.

PROJECT NUMBER 2022018.07

SHEET

A-E2.1

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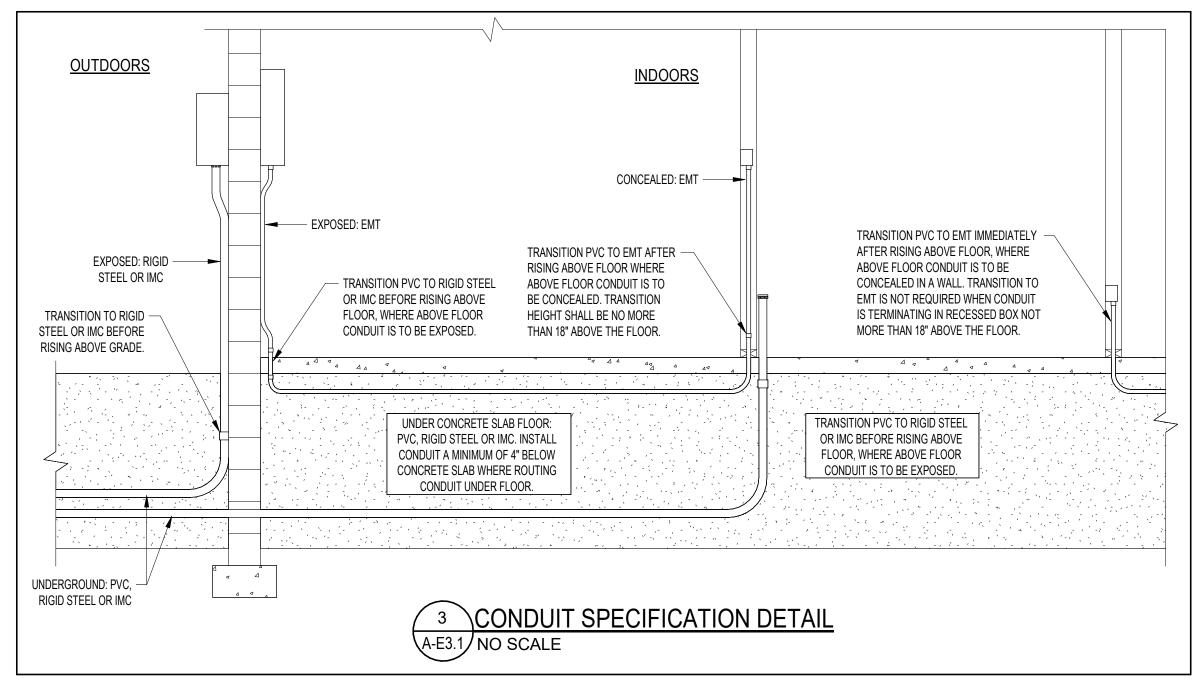
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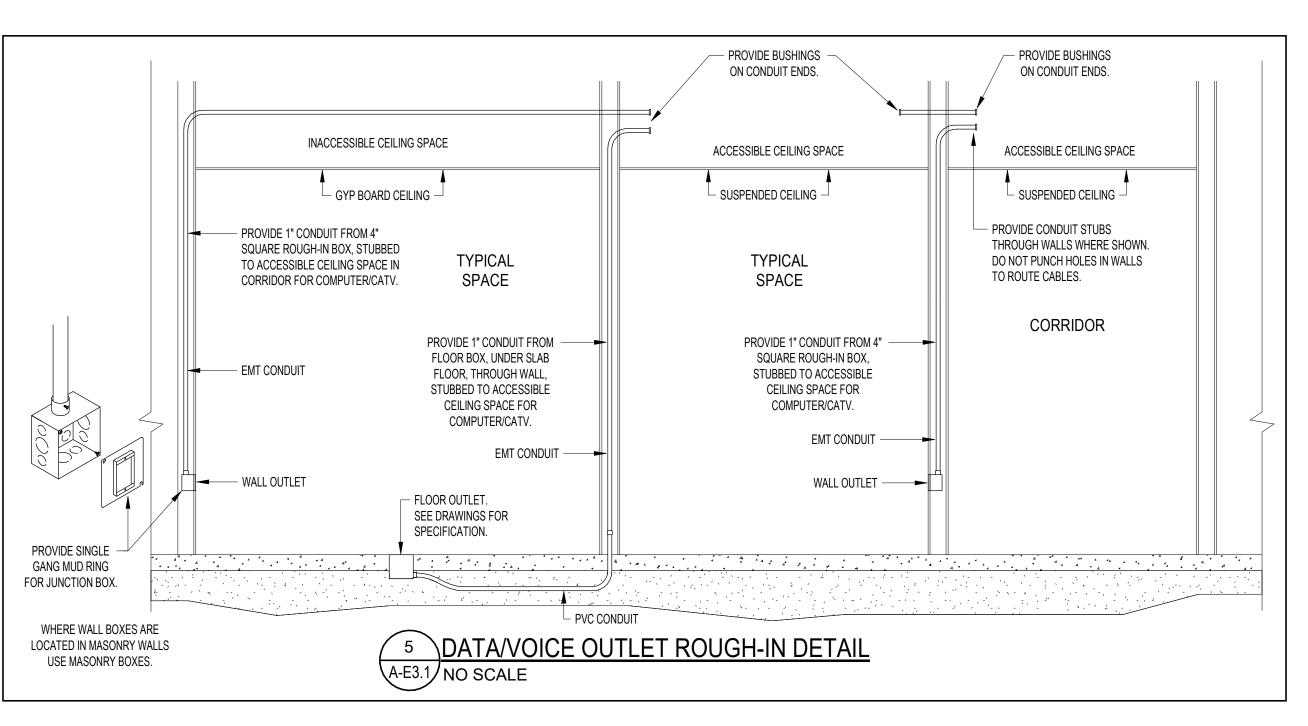
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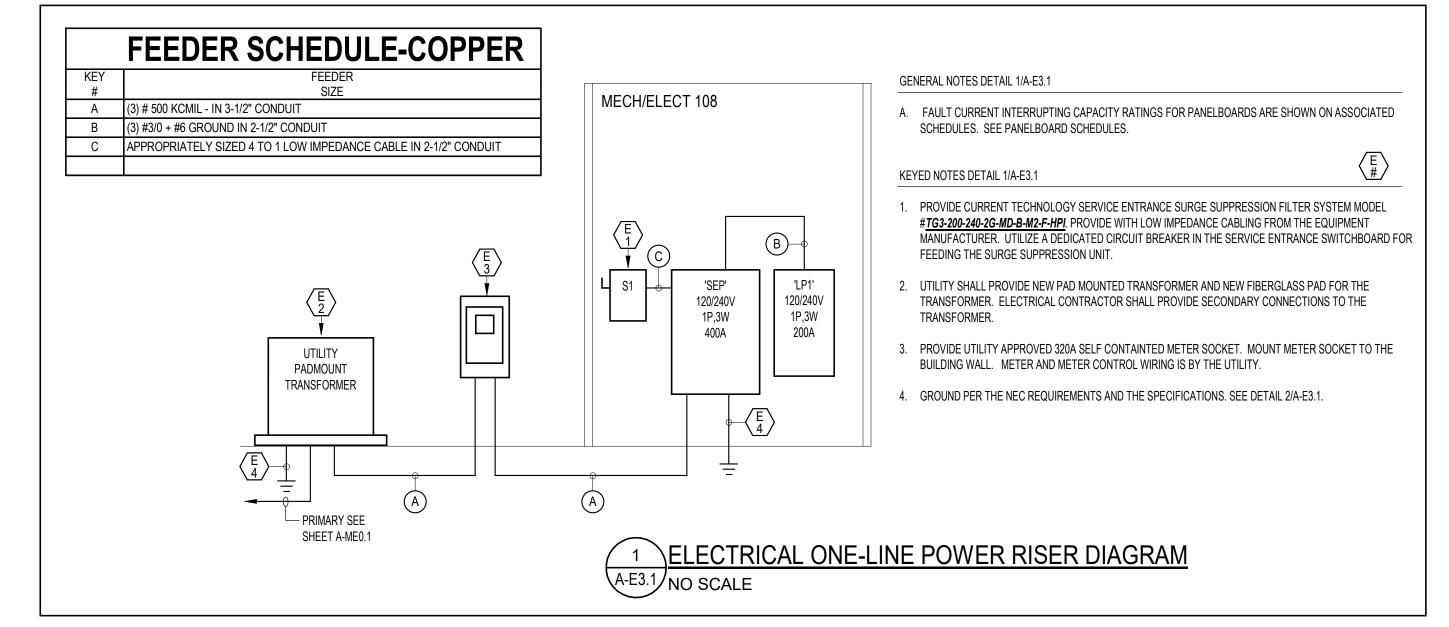
DATE ISSUED 10/17/2023

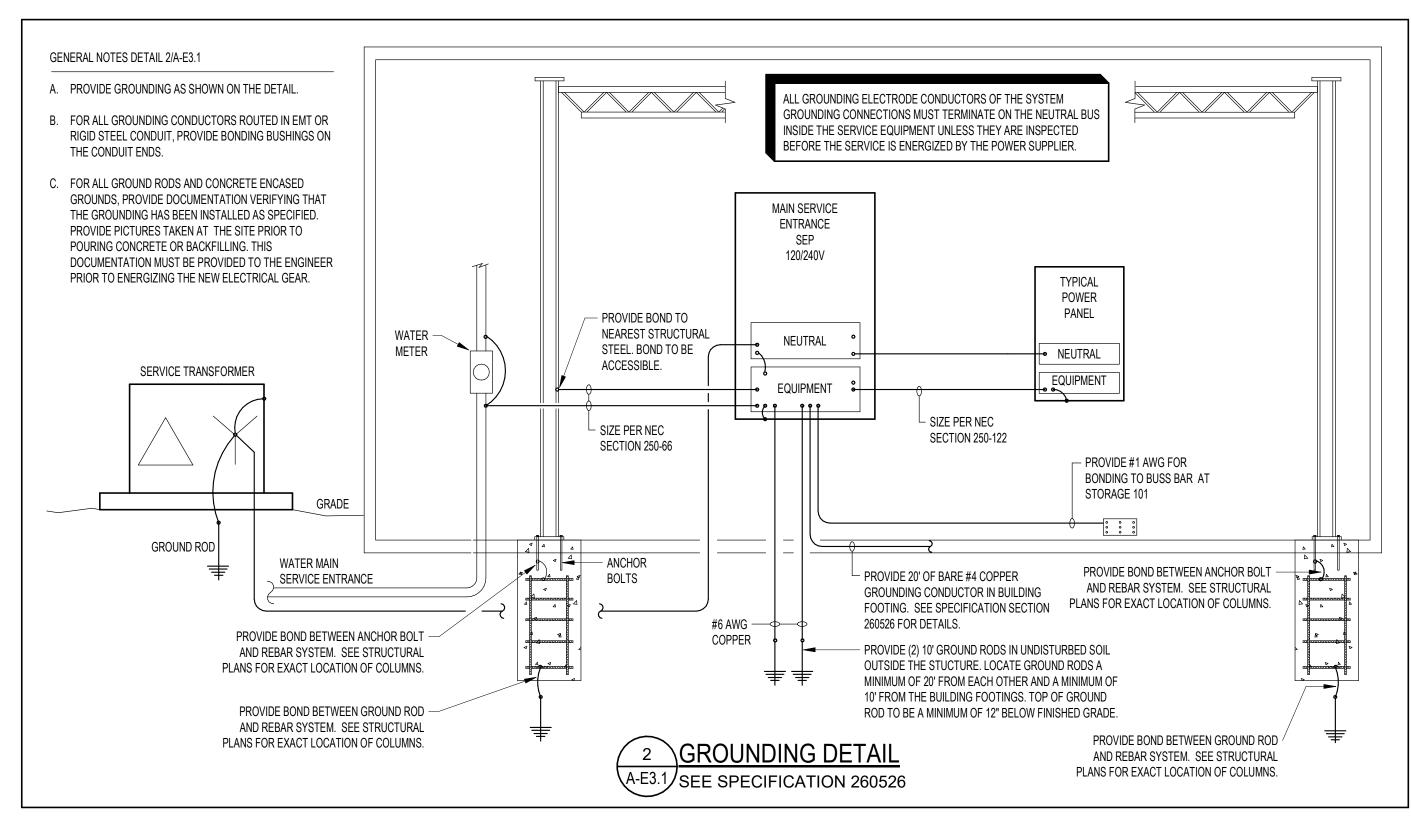
NOTED OTHERWISE

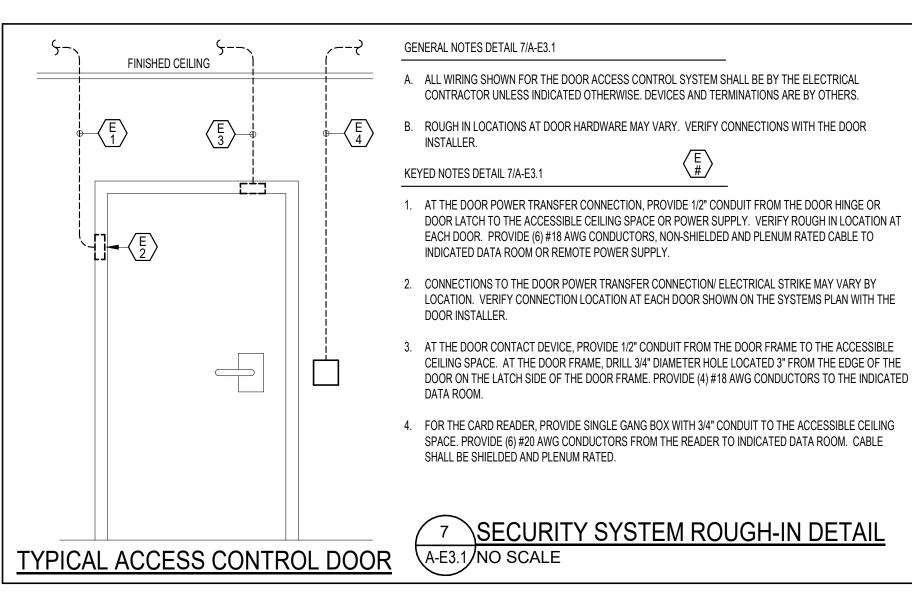
TEMPERATURE CONTROL CONTRACTOR REFERS TO THE DIVISION 23 CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE

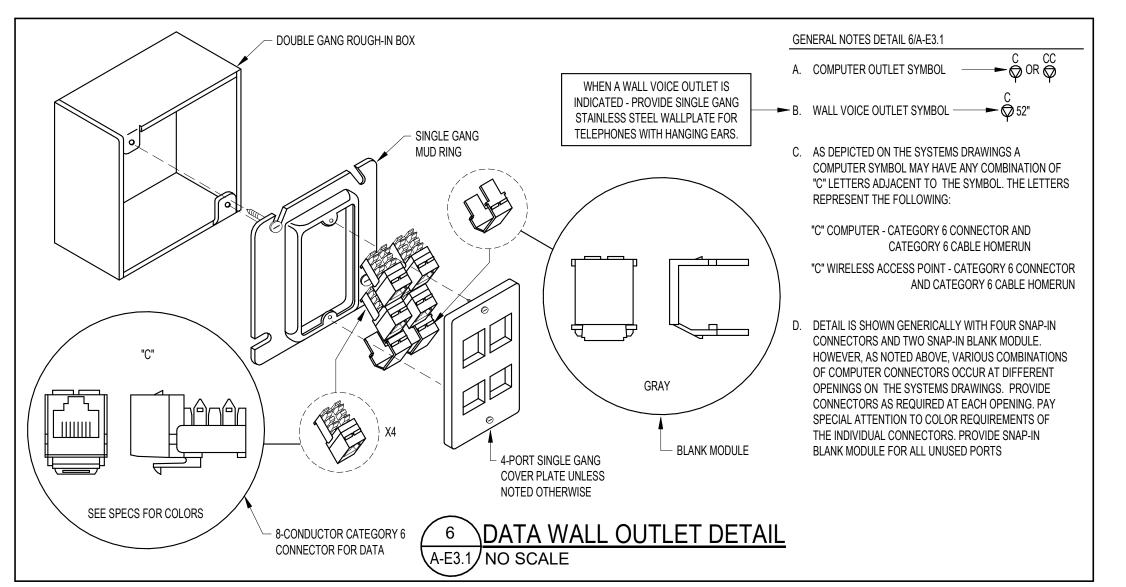


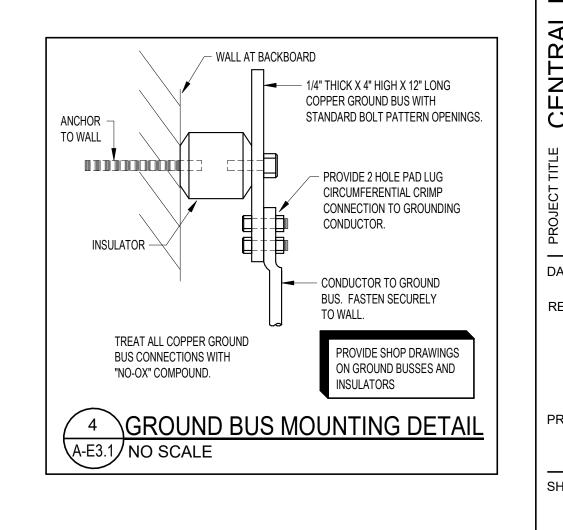




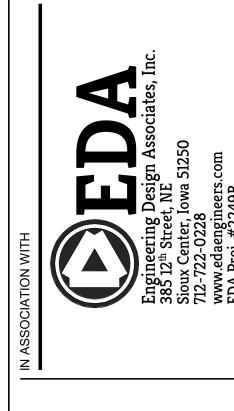












SHEET TITLE

ELECTRICAL DETAILS

SID PACKAGE A

APROVEMENTS

HARK BOULDEVARD
ROCK RAPIDS, IA 51246

DATE ISSUED 10/17/2023

REV. NO. DATE

JECT NUMBER 2022018.07

A-E3.1

10/16/2023 12:19:18 PM

	PANEL: LP1	LOCATION: STORAGE 101			VOLTS	S:	240	Y/	120		PH: 1-Phase	W: 3-Wire
	BUSS SIZE (AMPS) 200	PANEL LUGS: MLO			AIC RATING	3 :	10.000				MOUNT: SURFACE	FED FROM: SEP
	PROVIDE POCKET SLIDE-IN TYPED CIRCUIT DIRECTORY	<u> </u>				-	.,	3. PROVI	DE BOLT ON CIRC	UIT BREAKERS		
	2. PROVIDE COPPER PHASE AND GROUND BUSSES							4. PROVI	DE EQUIPMENT G	ROUND BUS		
		LOAD	CKT	Р	CIR	Р	CIR	Р	CKT	LOAD		
ROOM	CIRCUIT DESCRIPTION	VA	BKR		#	Н	#		BKR	KVA	CIRCUIT DESCRIPTION	ROOM
106	LIGHTING - NW BUS BAY	840	20	1	1	А	2	1	20	360	BUS BAY RECEPTS - NORTHEAST	106
106	LIGHTING - NE BUS BAY	840	20	1	3	В	4	1	20	360	BUS BAY RECEPTS - NORTH WALL	106
105	LIGHTING - SOUTH BUS BAY	1260	20	1	5	A	6	1	20	180	BUS BAY RECEPTS - NORTH WALL	106
101/103	LIGHTING - STORAGE AND RR	419	20	1	7	В	8	1	20	360	BUS BAY RECEPTS - NORTHWEST	106
EXT	LIGHTING - EXTERIOR	660	20	1	9	Α	10	1	20	540	BUS BAY RECEPTS - WEST WALL	106
-	SPARE		20	1	11	В	12	1	20	360	BUS BAY RECEPTS - WEST WALL	106
105	BUS BAY RECEPTS - NORTHEAST	180	20	1	13	Α	14	1	20	360	BUS BAY RECEPTS - SOUTH WALL	106
105	BUS BAY RECEPTS - NORTH WALL	360	20	1	15	В	16	1	20	360	BUS BAY RECEPTS - SOUTH WALL	106
105	BUS BAY RECEPTS - NORTH WALL	360	20	1	17	Α	18	1	20	180	BUS BAY RECEPTS - SOUTHEAST	106
105	BUS BAY RECEPTS - WEST WALL	360	20	1	19	В	20	1	20	360	BUS BAY RECEPTS - EAST WALL	106
105	BUS BAY RECEPTS - SOUTH WALL	360	20	1	21	Α	22	1	20	540	BUS BAY RECEPTS - EAST WALL	106
105	BUS BAY RECEPTS - SOUTH WALL	360	20	1	23	В	24	1	20	1656	OVERHEAD DOOR - OD1 - EAST NORTH	106
105	BUS BAY RECEPTS - EAST WALL	360	20	1	25	A	26	1	20	1656	OVERHEAD DOOR - OD2 - EAST MID	106
105	OVERHEAD DOOR - OD7 - EAST NORTH	1656	20	1	27	В	28	1	20	1656	OVERHEAD DOOR - OD3 - EAST SOUTH	106
105	OVERHEAD DOOR - OD8 - EAST SOUTH	1656	20	1	29	A	30	1	20	1656	OVERHEAD DOOR - OD4 - WEST SOUTH	106
105	OVERHEAD DOOR - OD9 - WEST NORTH	1656	20	1	31	В	32	1	20	1656	OVERHEAD DOOR - OD5 - WEST MID	106
105	OVERHEAD DOOR - OD10 - WEST SOUTH	1656	20	1	33	A	34	1	20	1656	OVERHEAD DOOR - OD6 - WEST NORTH	106
105	RADIANT TUBE HEATERS - RTH1 & RTH2	264	20	1	35	В	36	1	20		SPARE	-
105	POWER ROOF VENTILATOR - PRV1	1656	20	1	37	A	38	1	20	180	RECEPTS - EAST WORK BENCH	101
106	POWER ROOF VENTILATOR - PRV3	1656	20	1	39	В	40	1	20	360	RECEPTS - EAST WORK BENCH	101
105/106	GAS DETECTION SYSTEM - GS1 & GS3	240	20	1	41	Α	42	1	20	180	RECEPTS - EAST WORK BENCH	101
101/105	MOTORIZED LOUVER - L1, L2, L3	8	20	1	43	В	44	1	20	180	RECEPTS - EAST WORK BENCH	101
106	MOTORIZED LOUVER - L6, L7	5	20	1	45	Α	46	1	20	180	RECEPTS - EAST WORK BENCH	101
106	GAS UNIT HEATER - GUH1	600	20	1	47	В	48	1	20	180	RECEPTS - SOUTH WORK BENCH	101
106	GAS UNIT HEATER - GUH2	600	20	1	49	Α	50	1	20	360	RECEPTS - SOUTH WORK BENCH	101
-	SPARE		20	1	51	В	52	1	20	180	RECEPTS - SOUTH WORK BENCH	101
-	SPARE		20	1	53	A	54	1	20	180	RECEPTS - SOUTH WORK BENCH	101
-	SPARE		20	1	55	В	56	1	20	1000	FIRE ALARM CONTROL PANEL	101
-	SPARE		50	2	57	A	58	1	20	360	RECEPTS - IT EQUIPMENT	101
-				-	59	В	60	1	20	360	RECEPTS - IT EQUIPMENT	101

MUMDED	LOCATION	MOTOR	LID	LVOLT	Прц	TYPE	STARTE	LOCATION	DISCONNECT	AMD	DV	LOCATION	CONTROLS	DV	PANEL NAME	NO
NUMBER	LOCATION	DESCRIPTION	HP	VOLT	PH	TYPE	BY	LOCATION	TYPE	AMP	BY	LOCATION	TYPE	BY	CIRCUIT NUMBER(S)	_
	5005	B014/EB					DIVISION			RATING	DIVISION		75110	DIVISION	WIRE / CONDUIT	
	ROOF	POWER											TEMP		LP1	
PRV1	ABOVE	ROOF	3/4	120	1	INTEG	23	IN UNIT	INTEG	-	23	ON UNIT	CONTROL	23	37	
	105	VENTILATOR											SYSTEM		2 #12 + #12 G - 1/2"C	
	ROOF	POWER											TEMP		SEP	
PRV2	ABOVE	ROOF	3/4	120	1 4	INTEG	23	IN UNIT	INTEG	_	23	ON UNIT	CONTROL	23	26	-
1 111/2			3/4	120	'	INTLO	20	IIN OINIT	INTLO	_	25	ON ONL		20		_
	104	VENTILATOR											SYSTEM		2 #12 + #12 G - 1/2"C	\perp
	ROOF	POWER											TEMP		LP1	
PRV3	ABOVE	ROOF	1/4	120	1	INTEG	23	IN UNIT	INTEG	-	23	ON UNIT	CONTROL	23	39	
	106	VENTILATOR											SYSTEM		2 #12 + #12 G - 1/2"C	
	BUS	RADIANT							CORD	LOCKING		ON CEILING	TEMP		LP1	
RTH1	BAY	TUBE	1.1	120	1 4	INTEG	23	IN UNIT	AND	NEMA	26	NEAR	CONTROL	23	35	_
MIIII				120	'	INILG	23	IIN UNIT			20			23		_
	105	HEATER	FLA						PLUG	L5-20R		UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	_
	BUS	RADIANT							CORD	LOCKING		ON CEILING	TEMP		LP1	
RTH2	BAY	TUBE	1.1	120	1	INTEG	23	IN UNIT	AND	NEMA	26	NEAR	CONTROL	23	35	
	105	HEATER	FLA						PLUG	L5-20R		UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	
	WASH	RADIANT							CORD	LOCKING		ON CEILING	TEMP		SEP	+
RTH3	BAY	TUBE	1 1	120	,	INITEC	00	IN UNIT		NEMA	26	NEAR	CONTROL	1 22	28	-
KINS			1.1	120	!	INTEG	23	IN UNIT	AND		26		l	23		_
	104	HEATER	FLA						PLUG	L5-20R		UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	
	WASH	RADIANT							CORD	LOCKING		ON CEILING	TEMP		SEP	
RTH4	BAY	TUBE	1.1	120	1	INTEG	23	IN UNIT	AND	NEMA	26	NEAR	CONTROL	23	28	
	104	HEATER	FLA						PLUG	L5-20R		UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	\dashv
		DOMESTIC		 	 			ON WALL	1 200	20 2011		ON WALL	TEMP		SEP	+
DODA	MEOU		05147	400	,	MAG	00	1	1440	00	00			00		\dashv
DCP1	MECH	RECIRC.	25W	120	1 1	MMS	26	NEAR	MMS	20	26	NEAR	CONTROL	23	12	_
	102	PUMP	<u></u>					UNIT				UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	\perp
	TOILET	EXHAUST											CONTROL		LOCAL	
EF1	103	FAN	FRAC	120	1 1	INTEG	23	IN UNIT	INTEG	_	23	IN UNIT	WITH	26	LIGHTING CIRCUIT	7
	100	1744	11010	1 120	l '	"""	20	""	"""		20		LIGHTING		2 #12 + #12 G - 1/2"C	-
	DUO	040		1					TVDE			ONLWALL				+
	BUS	GAS							TYPE			ON WALL	SEE		LP1	
GS1	BAY	DETECTION	1.0 FLA	120	1	INTEG	23	IN UNIT	l l	20	26	NEAR	DETAIL	23	41	
	105	SYSTEM							MMS			UNIT	2A-E2.1		2 #12 + #12 G - 1/2"C	
	WASH	GAS							TYPE			ON WALL	SEE		SEP	
GS2	BAY	DETECTION	1.0 FLA	120	l 1	INTEG	23	IN UNIT	l ı	20	26	NEAR	DETAIL	23	22	_
002	104	SYSTEM	1.01 L/1	120	'	"1120	20	III OIIII	MMS	20		UNIT	2A-E2.1	20	2 #12 + #12 G - 1/2"C	-
																_
	BUS	GAS							TYPE			ON WALL	SEE		LP1	
GS3	BAY	DETECTION	1.0 FLA	120	1	INTEG	23	IN UNIT	l	20	26	NEAR	DETAIL	23	41	
	106	SYSTEM							MMS			UNIT	2A-E2.1		2 #12 + #12 G - 1/2"C	
	BUS	GAS FIRED							MOTOR				TEMP		LP1	
GUH1	BAY	UNIT	5 A	120	l 1	INTEG	23	IN UNIT	RATED	20	26	NEAR	CONTROL	23	47	_
00111	106	HEATER	071	1 120	'	"""	20	"''	SWITCH	20	20	UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	
												UNII				
	BUS	GAS FIRED							MOTOR				TEMP		LP1	
GUH2	BAY	UNIT	5 A	120	1	INTEG	23	IN UNIT	RATED	20	26	NEAR	CONTROL	23	49	
	106	HEATER							SWITCH			UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	
	BUS	MOTORIZED											SEE		LP1	
L1	BAY	LOUVER	2.5W	120	1 1	INTEG	23	IN UNIT	NA	NA	NA	NA	DETAIL	23	43	_
		LOOVER	2.011	1 120	l '	"""	20	""	""	10.	""	107			2 #12 + #12 G - 1/2"C	\dashv
	105	MOTORIZES	1	-	-								2A-E2.1			+
	BUS	MOTORIZED						l					SEE		LP1	_
L2	BAY	LOUVER	2.5W	120	1	INTEG	23	IN UNIT	NA	NA	NA	NA	DETAIL	23	43	
	105												2A-E2.1		2 #12 + #12 G - 1/2"C	
		MOTORIZED	Ī	1									SEE		LP1	\top
L3	STOR	LOUVER	2.5W	120	1	INTEG	23	IN UNIT	NA	NA	l NA	NA	DETAIL	23	43	\dashv
LU		LOUVLIN	2.5	'20	Ι '	"\'LG	20	IIV OIVII	11/7	14/7	11/7	IN/A		20		\dashv
	101	MOTO:	1										2A-E2.1		2 #12 + #12 G - 1/2"C	\perp
	WASH	MOTORIZED											SEE		SEP	_
L4	BAY	LOUVER	2.5W	120	1	INTEG	23	IN UNIT	NA	NA	NA	NA	DETAIL	23	20	
	104												2A-E2.1		2 #12 + #12 G - 1/2"C	7
	WASH	MOTORIZED	1	1									SEE		SEP	十
L5	BAY	LOUVER	2.5W	120	1	INTEG	23	IN UNIT	NA	NA	NA	NA	DETAIL	23	20	\dashv
	104	LOOVEIX	2.011	'2"	Ι΄.	",,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	20	"1 01111	14/1	14/1	14/1	14/1	2A-E2.1	-	2 #12 + #12 G - 1/2"C	\dashv
			1	1												\bot
	BUS	MOTORIZED											SEE		LP1	
L6	BAY	LOUVER	2.5W	120	1	INTEG	23	IN UNIT	NA	NA	NA	NA	DETAIL	23	45	
	106												2A-E2.1		2 #12 + #12 G - 1/2"C	
	BUS	MOTORIZED	1	1									SEE		LP1	+
L7	BAY	LOUVER	2.5W	120	4	INTEG	23	IN UNIT	NA	NA	l _{NA}	NA	DETAIL	23	45	\dashv
L/	1	LOUVEK	Z.3VV	120	l '	INTEG	23	I IIN UNI I	I INA	INA	INA	INA		ا کی		4
	106		1										2A-E2.1		2 #12 + #12 G - 1/2"C	\perp
	OUTSIDE	SANITARY	1						NON			ON WALL			SEP	
P1	MECH	GRINDER	2HP	208	1	INTEG	26	IN UNIT	FUSED	30A	26	NEAR	-	.	32,34	7
			I	1		I - 1		I ' '			I .	UNIT	ĺ	1	2 #10 + #10 G - 3/4"C	\dashv
• •	102	PUMP	I	1	1				NEMA 3R			I IIVI I			/ # + # - 1/4 .	

MOTOR - EQUIPMENT - STARTER SCHEDULE

EQUIPME	NT						DISCONNECT				CORD & PLUG (C8	(P)		PANEL NAME	
EQUIP	LOCATION	DESCRIPTION	HP/KW	VOLT	PHASE	CONNECTION	TYPE	AMP	BY	LOCATION	RECEPTACLE	LOCATION	CORD & PLUG	CIRCUIT NO.	NOTE(S
NUMBER						TYPE		RATING	DIVISION		TYPE		TYPE	WIRE SIZE	
							NON			ON WALL				SEP	
AC1	MECH	AIR	20 A	240	1	DIRECT	FUSED	30 A	26	NEAR	-		- [23,25	
	102	COMPRESSOR					NEMA 1			UNIT				2 #10 + #10 G - 1/2"C	
DWH1		ELECTRIC					NON			ON WALL				SEP	
	MECH	WATER	4.5kW	240	1	DIRECT	FUSED	30 A	26	NEAR	-	-	- [14,16	
	102	HEATER					NEMA 1			UNIT				2 #10 + #10 G - 3/4"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD1	BAY	DOOR	3/4	120	1	AND	-	-	-	UNISTRUT	L5-20R	UNIT	DIV 26	24	1
	106	OPENER				PLUG				NEAR UNIT				2 #10 + #10 G - 1/2"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD2	BAY	DOOR	3/4	120	1	AND	-	-	-	UNISTRUT	L5-20R	UNIT	DIV 26	26	1
	106	OPENER				PLUG				NEAR UNIT				2 #10 + #10 G - 1/2"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD3	BAY	DOOR	3/4	120	1	AND	-	-	-	UNISTRUT	L5-20R	UNIT	DIV 26	28	1
	106	OPENER				PLUG				NEAR UNIT				2 #10 + #10 G - 1/2"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD4	BAY	DOOR	3/4	120	1	AND	-	-	-	UNISTRUT	L5-20R	UNIT	DIV 26	30	1
	106	OPENER				PLUG				NEAR UNIT				2 #10 + #10 G - 1/2"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD5	BAY	DOOR	3/4	120	1	AND	-	-	-	UNISTRUT	L5-20R	UNIT	DIV 26	32	1
	106	OPENER				PLUG				NEAR UNIT			l	2 #10 + #10 G - 1/2"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD6	BAY	DOOR	3/4	120	1	AND		-	-	UNISTRUT	L5-20R	UNIT	DIV 26	34	1
	106	OPENER				PLUG				NEAR UNIT				2 #10 + #10 G - 1/2"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD7	BAY	DOOR	3/4	120	1	AND	-	-	-	UNISTRUT	L5-20R	UNIT	DIV 26	27	1
	105	OPENER				PLUG				NEAR UNIT				2 #10 + #10 G - 1/2"C	
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD8	BAY	DOOR	3/4	120	1	AND	-	-	-	UNISTRUT	L5-20R	UNIT	DIV 26	29	1
	105	OPENER				PLUG				NEAR UNIT				2 #10 + #10 G - 1/2"C	1
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD9	BAY	DOOR	3/4	120	1	AND	_	_	-	UNISTRUT	L5-20R	UNIT	DIV 26	31	1
•	105	OPENER				PLUG				NEAR UNIT			·	2 #10 + #10 G - 1/2"C	1
	BUS	OVERHEAD				CORD				MOUNT ON	NEMA	NEAR	BY	LP1	
OD10	BAY	DOOR	3/4	120	1	AND	_	_	-	UNISTRUT	L5-20R	UNIT	DIV 26	33	1
-	105	OPENER				PLUG				NFAR LINIT		-	•	2 #10 + #10 G - 1/2"C	⊢ `

TYPE 1 20 A 26

INTEGRAL

MOUNT ON

UNISTRUT NEAR UNIT

ON PUMP

2 #10 + #10 G - 1/2"C

27,29

2 #10 + #10 G - 1/2"C

DOOR, DOOR HARDWARE AND CONTROL DEVICES TO BE FURNISHED BY DOOR SUPPLIER. EC TO PROVIDE ALL POWER AND CONTROL CONNECTIONS FOR OVERHEAD DOOR.

PWP MECH

WASHER 5 HP 240

1 EC TO WIRE PRV1, L1, L2 AND L3 THROUGH GS1 TO TURN ON PRV1 AND OPEN L1, L2 AND L3 WHEN THE GS1 FAN RELAY CLOSES. SEE DETAIL 2/A-E2.1.

COORDINATE WITH MC FOR EXACT PLACEMENT OF RECEPTACLE FOR EQUIPMENT. PROVIDE LOCKING CORD, PLUG AND RECEPTACLE.

9 PUMP IS FURNISHED WITH 15 FOOT SO CORD. PROVIDE JUNCTION BOX AT THE SANITARY PIT FOR CONNECTION TO THE PUMP CORD.

6 EC TO WIRE PRV2, L4, L5, AND GS2 TO TURN ON PRV2 AND OPEN L4 AND L5 WHEN GS2 FAN RELAY CLOSES. SEE DETAIL 2/A-E2.1.

7 EC TO WIRE PRV3, L6, L7, AND GS3 TO TURN ON PRV3 AND OPEN L6 AND L7 WHEN GS3 FAN RELAY CLOSES. SEE DETAIL 2/A-E2.1.

EQUIPMENT IS IN WASH BAY AND WILL REQUIRE WEATHERPROOF, NEMA 4, CONDUIT AND BOXES.

'8 EC TO PROVIDE 120V CONNECTION FROM THE PRV TO THE ASSOCIATED MOTORIZED DAMPER.

DISCONNECT AND THERMAL OVERLOADS ARE PROVIDED WITH UNIT BY MECHANICAL CONTRACTOR.

FAN SHALL COME ON AND GO OFF WITH LIGHTS IN THE ROOM WHICH ARE CONTROLLED BY OCCUPANCY SENSORS.

2 EQUIPMENT IS TO BE FURNISHED AND INSTALLED BY THE CAR WASH EQUIPMENT CONTRACTOR. EC TO MAKE ELECTRICAL CONNECTIONS ONCE INSTALLED. 3 PROVIDE WATERPROOF, NEMA 4, CONDUITS, BOXES AND WIRING IN WASHBAY 104.

DIRECT

DIRECT

	DISCONNECT			I	CONTROLS	1	PANEL NAME	NOTE(S)	TYPE	SHT FIXTURE SC	MODEL	I VOLT	I I AMP	BALLAST	DESCRIPTION			
ION	TYPE	AMP	BY I	LOCATION	TYPE	ВУ	CIRCUIT NUMBER(S)	NOTE(5)		LITHONIA	CPX-2X4-5000LM-80CRI-40K-SWL-MIN10-MVOLT	MULTI	LED ARRAY	LED DRIVER	2X4 LED LIGHT FIXTURE WITH SURFACE MOUNTING KIT.			
1011	1111 =	RATING	DIVISION	LOOMION		DIVISION	WIRE / CONDUIT			BEGHELLLUCE	WITH 2X4SMKSH	VOLT	40 WATTS 4000 K	CAPABLE OF 0-10V DIMMING TO 10%	HOUSING IS A WHITE ALUMINUM FRAME. DIFFUSER IS SATIN WHITE ACRYLIC. PROVIDE THE FIXTURE WITH A 0-10V DIMMING DRIVER TO			
				01111117	TEMP		LP1	,		EELP			5000 LUMEN	SEE NOTE #1	10% LIGHT OUTPUT AS NOTED. DRIVER AND FIXTURE HEIGHT			
IIT	INTEG	-	23	ON UNIT	CONTROL	23	37	1,8		COLUMBIA			80 CRI		SHALL NOT EXCEED 2.5 INCHES. DELIVERED LUMENS SHALL			
					SYSTEM		2 #12 + #12 G - 1/2"C SEP			TRULY GREEN SOLUTIONS					BE 5000 LUMENS. FIXTURE SHALL HAVE A MINIMUM LUMEN			
т Т	INTEG	_	23	ON UNIT	CONTROL	23	26	6.8	ECE	WILLIAMS LITHONIA	LHQM-LED-R-SD	120/277	LED LAMPS	I NIA	PER WATT PERFORMANCE OF 105 LPW. COMBINATION EXIT/EMERGENCY LIGHTING UNIT WITH			
"'	IIVILO		20	ON ONL	SYSTEM	20	2 #12 + #12 G - 1/2"C	0,0	505	MCPHILBEN	LNQW-LED-K-SD	120/2//	LED LAIMPS	INA INA	SELF DIAGNOSTICS. FIXTURE HAS UNIVERSAL MOUNTING			
-					TEMP		LP1			SURE-LITES					AND CAN BE SINGLE OR DOUBLE FACE. VERIFY SINGLE OR			
IT	INTEG	-	23	ON UNIT	CONTROL	23	39	7,8		DUAL-LITE					DOUBLE FACE WITH THE FLOOR PLANS.			
					SYSTEM		2 #12 + #12 G - 1/2"C			EXITRONIX								
	CORD	LOCKING		ON CEILING	TEMP		LP1		FCF-2	LIGHTALARMS LITHONIA	WLTE-W-1-R-EL-SD	120/277	LED LAMPS	NA NA	COLD TEMPERATURE RATED EXIT LIGHTING UNIT WITH			
IT	AND	NEMA	26	NEAR	CONTROL	23	35	5		MCPHILBEN	WEIE WINCE OF	120/2/1	LLD L/ IIVII O		SELF DIAGNOSTICS. FIXTURE HAS UNIVERSAL MOUNTING.			
	PLUG	L5-20R		UNIT	SYSTEM		2 #12 + #12 G - 1/2"C			SURE-LITES					FIXTURE RATED AT 0°F.			
, Т	CORD AND	LOCKING NEMA	26	ON CEILING NEAR	TEMP CONTROL	23	LP1 35	_		DUAL-LITE								
''	PLUG	L5-20R	20	UNIT	SYSTEM	23	2 #12 + #12 G - 1/2"C))		EXITRONIX LIGHTALARMS								
	CORD	LOCKING		ON CEILING	TFMP		SEP		ER	LITHONIA	AFF-OEL-DWHGXD-UVOLT-LTP-SDRT-WT-CW	120V	LED ARRAY	LED DRIVER	WALL MOUNTED EMERGENCY LIGHT WITH INTEGRAL			
ıt	AND	NEMA	26	NEAR	CONTROL	23	28	2,5		DUAL-LITE			12 WATTS	SEE NOTE #1	LITHIUM ION BATTERY. PROVIDE WITH EXTERIOR RATING			
	PLUG	L5-20R		UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	·		SURE-LITES					FOR TEMPERTURES DOWN TO 0 DEGREES F.			
	CORD	LOCKING		ON CEILING	TEMP		SEP			DUAL-LITE MCPHILBEN					FIXTURE SHALL BE WHITE IN COLOR. LISTED			
IT	AND	NEMA	26	NEAR	CONTROL	23	28	2,5		LIGHTALARMS		\dashv			FOR WET LOCATIONS.			
	PLUG	L5-20R		UNIT	SYSTEM		2 #12 + #12 G - 1/2"C		EBU	LITHONIA	ELM4L-UVOLT-LTP-SDRT	120/277	LED LAMPS	NA	EMERGENCY LIGHTING FIXTURE WITH THERMOPLASTIC			
ALL	14140	00	00	ON WALL	TEMP		SEP			MCPHILBEN			INCLUDED		HOUSING. FIXTURE HAS LITHIUM ION PHOSPHATE BATTERIES			
к	MMS	20	26	NEAR UNIT	CONTROL SYSTEM	23	12 2 #12 + #12 G - 1/2"C			SURE-LITES DUAL-LITE		_	640 LUMENS		WITH SELF DIAGNOSTICS. COLOR SHALL BE WHITE.			
'				UNIT	CONTROL		LOCAL			EXITRONIX		_			DELIVERED LUMENS SHALL BE A MINIMUM OF 640 LUMENS.			
шΤ	INTEG	_	23	IN UNIT	WITH	26	LIGHTING CIRCUIT	3.4		LIGHTALARMS								
"	11120		20	III OIIII	LIGHTING	20	2 #12 + #12 G - 1/2"C	,,,	EBW	EELP	RM-6V22-NI-LMR02-SD	120V	LED MR16 LAMP	NA	WATERPROOF THERMO PLASTIC LED EMERGENCY LIGHT.			
	TYPE			ON WALL	SEE		LP1			EMEDOW ITE					UNIVERSAL MOUNT. WHITE PLASTIC HOUSING.			
IIT	1	20	26	NEAR	DETAIL	23	41	1 1		EMERGILITE DUAL-LITE					SELFDIAGNOSTICS. IP66 RATED.			
	MMS			UNIT	2A-E2.1		2 #12 + #12 G - 1/2"C			MULE		_						
	TYPE			ON WALL	SEE		SEP			LITHONIA								
IIT		20	26	NEAR	DETAIL	23	22	6	EBW-	EELP	RM-6V22-NI-LMR02-SD-HTR	120V	LED MR16 LAMP	NA	COLD TEMPERATURE THERMO PLASTIC LED EMERGENCY			
	MMS			UNIT	2A-E2.1		2 #12 + #12 G - 1/2"C			EMEDOUITE					LIGHT. UNIVERSAL MOUNT. WHITE PLASTIC HOUSING.			
ит	TYPE	20	26	ON WALL NEAR	SEE DETAIL	23	LP1 41	7		EMERGILITE DUAL-LITE					SELFDIAGNOSTICS. FIXTURE RATED AT 0°F.			
"'	MMS	20	20	UNIT	2A-E2.1	23	2 #12 + #12 G - 1/2"C	'		MULE								
	MOTOR			OIIII	TEMP		LP1			LITHONIA								
IIT	RATED	20	26	NEAR	CONTROL	23	47		F	LITHONIA	ZL1D-L48-5000LM-FST-MVOLT-40K-80CRI-WH		LED ARRAY	LED DRIVER	PENDANT MOUNTED STRIP LIGHT WITH STEEL HOUSING. HOUSING			
	SWITCH			UNIT	SYSTEM		2 #12 + #12 G - 1/2"C	1		WILLIAMS		VOLT	41 WATTS 4000K	CAPABLE OF 0-10V DIMMING TO 10%	SHALL HAVE WHITE FINISH. PROVIDE WITH FROSTED DROP DIFFUSED LENS. PROVIDE WITH AIRCRAFT CABLE MOUNTING			
	MOTOR				TEMP		LP1			COLUMBIA			5000 LUMENS 80 CRI	SEE NOTE #1	WITH 10 FOOT OF AIRCRAFT CABLE. DELIVERED LUMENS SHALL BE A MINIMUM OF 5000 LUMENS. SHALL			
IIT	RATED	20	26	NEAR	CONTROL	23	49			METALUX								
	SWITCH			UNIT	SYSTEM		2 #12 + #12 G - 1/2"C			DAYBRITE		10/01	40.000 1 114510	INTEGRAL	HAVE A MINIMUM LUMEN PER WATT PERFORMANCE OF 105 LPW.			
	NA	NA NA	NA	NA	SEE DETAIL	23	LP1 43	,	G1	LITHONIA	IBG-18000LM-SEF-AFL-WD-MVOLT-GZ10 40K-80CRI-DWH-IBAC120 M100		18,000 LUMENS COLOR=4000K	INTEGRAL LED DRIVER	LED HIGH BAY WITH FROSTED ACRYLIC LENS. WIDE OPTICAL			
"	NA	I NA	INA	NA	2A-E2.1	23	43 2 #12 + #12 G - 1/2"C	'		METALUX	40K-00CRI-DWH-IBAC120 WITOU	120/2//	105 WATTS	LED DRIVER	DISTRIBUTION. MOUNT SUSPENDED USING AIRCRAFT CABLE W/ GRIPPLE HANGING HARDWARE. PROVIDE 10 FOOT SUSPENSION			
					SEE		LP1			WILLIAMS		-	80 CRI		CABLE LENGTHS. FIXTURE LUMEN PER WATT PERFORMANCE SHALL			
IIT	NA	NA	NA	NA	DETAIL	23	43	1 1		COLUMBIA	+		33.07.00		NOT BE LESS THAN 135 LUMENS PER WATT.			
	• •		'	.	2A-E2.1		2 #12 + #12 G - 1/2"C			DAYBRITE					FIXTURE SHALL PROVIDE A MINIMUM OF DELIVERED 18,000 LUMENS			
					SEE		LP1			ILP (HHB)					AT THE COLOR TEMPERATURE AND CRI RATING SHOWN.			
IIT	NA	NA	NA	NA	DETAIL	23	43	1	L	LITHONIÁ	FEM-L48-10000LM-LPAFL-WD-MVOLT		LED ARRAY	INTEGRAL	SURFACE-MOUNTED LED GASKETED AND ENCLOSED FIXTURE			
					2A-E2.1		2 #12 + #12 G - 1/2"C			WILLIAMS	GZ10-40K-80CRI	VOLT	65 WATTS 4000 K	LED DRIVER CAPABLE OF 0-10V	SHALL HAVE WHITE FINISH. PROVIDE WITH FROSTED LENS. DELIVERED LUMENS SHALL BE A MINIMUM OF 10000 LUMENS. SHALL			
	ALA	A.I.A	A.I.A.	A I A	SEE		SEP			COLUMBIA		\dashv	10000 K 10000 LUMENS	DIMMING TO 10%	HAVE A MINIMUM LUMEN PER WATT PERFORMANCE OF 140 LPW.			
111	NA	NA	NA	NA	DETAIL 2A-E2.1	23	20	6		METALUX			80 CRI		FIXTURE HAS FIBERGLASS HOUSING WITH IMPACT RESISTANT FROSTED			
					SEE		2 #12 + #12 G - 1/2"C SEP	 		DAYBRITE					ACRYLIC LENS.			
ит	NA	NA NA	NA	NA	DETAIL	23	20	6	W2	LITHONIA	BLWP2-8L-ADP-SLD-LP840	MULTI	LED ARRAY	LED DRIVER	2 FOOT LONG WALL MOUNTED LED FIXTURE WITH CURVED			
	141	13/1	""	1911	2A-E2.1		2 #12 + #12 G - 1/2"C			METALUX		VOLT	10 WATTS 4000 K	CAPABLE OF 0-10V DIMMING TO 10%	ACRYLIC LENS. FIXTURE HAS FORMED METAL HOUSING, WHITE IN COLOR. DRIVER IS INTEGRALLY MOUNTED IN THE FIXTURE.			
					SEE		LP1			WILLIAMS			800 LUMEN	SEE NOTE #1	FIXTURE SHALL HAVE A DELIVERED LUMEN OUTPUT OF AT LEAST			
IIT	NA	NA	NA	NA	DETAIL	23	45	7		COLUMBIA			80 CRI		400 LUMENS PER FOOT WITH A MINIMUM LUMEN PER WATT			
					2A-E2.1		2 #12 + #12 G - 1/2"C			DAYBRITE	DOVING LED 000 500 101/ TETH 1		LIED ARRAY		PERFORMANCE OF 90 LPW.			
					SEE		LP1		AA	LITHONIA	DSXW2 LED-30C-530-40K-TFTM-MVOLT-DWHXD	MULTI VOLT	LED ARRAY 55 WATTS	LED DRIVER	WALL MOUNTED EXTERIOR FIXTURE WITH FORWARD THROW MEDIUM OPTICAL DISTRIBUTION. FIXTURE SHALL BE WHITE IN			
IIT	NA	NA	NA	NA	DETAIL	23	45	7		MCGRAW EDISON		- VOLI	4000K		COLOR AND IS A FULL CUT OFF FIXTURE. FIXTURE IS			
	NON			ONIMALI	2A-E2.1		2 #12 + #12 G - 1/2"C			GARDCO	<u> </u>	\dashv	6000 LUMENS		UL LISTED FOR WET LOCATIONS. FIXTURE SHALL DELIVER A			
	NON FUSED	 		ON WALL NEAR			SEP 32,34	,		KIM LIGHTING			80 CRI		MINIMUM OF 6,000 LUMENS.			
пт '		1 30A	26		-	-	-	-								80 CRI		MINIMUM OF 0,000 LUMENS.

A ALL LIGHT FIXTURES WITH BALLASTS OR DRIVERS SHALL BE PROVIDED WITH DISCONNECTS TO COMPLY WITH THE 2020 NEC. PROVIDE SHOP DRAWINGS ON THE DISCONNECTS. B EQUAL LIGHT FIXTURES WILL BE CONSIDERED BY THE PRIOR APPROVALS PROCESS ONLY. LIGHT FIXTURES NOT LISTED IN THE FIXTURE SCHEDULE OR APPROVIDE BY THE PRIOR APPROVALS PROCESS WILL NOT BE ACCEPTED.

LIGHT FIXTURE SCHEDULE NOTES: 1 PROVIDE CUT SHEETS ON THE LED DRIVER USED IN THE SHOP DRAWING SUBMITTAL. ALL DRIVERS SHALL BE OPTICALLY ISOLATED TO PREVENT FEED BACK INTO THE 0-10V DIMMING CIRCUIT. 2 PROVIDE CONCRETE BASE FOR THE FIXTURES AS SHOWN ON THE ELECTRICAL SITE PLAN DRAWING.

C PROVIDE CUT SHEETS WITH THE SHOP DRAWING SUBMITTAL FOR ALL BALLASTS AND LED DRIVERS USED ON THE PROJECT.

PROVIDE AND FIELD INSTALL THERMOSTAT. PROVIDE WITH INTEGRAL DISCONNECT SWITCH. PROVIDE SHOP DRAWINGS.

2 PROVIDE WITH CEILING MOUNTING BRACKET AND MOUNT AS INDICATED ON THE FLOOR PLANS.

3 FOR THE LIGHTING CONTROLS, PROVIDE ON SITE COMMISSIONING OF THE SYSTEM AND PROVIDE TRAINING WITH THE OWNERS REPRESENTATIVE.

ELECTRIC HEAT EQUIPMENT SCHEDULE LECTRIC HEATER CIRCUIT NUMBER WIRE / CONDUIT NO. LOCATION MODEL NO. DESCRIPTION BERKO MODEL TSTAT MECH EFF1500 MOUNTED 1.5 kW 120 WITH SURFACE MOUNTING FRAME HEATER

DATE ISSUED 10/17/2023

02

PROJECT NUMBER 2022018.07

A-E4.1







20'-8 1/2"

GUARDRAIL/HANDRAIL ASSEMBLY

─ 1 1/2" O.D. STEEL PIPE HANDRAIL

4" CLR

MAX

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

TYPICAL AT BOTH SIDES OF RAMP

- PROVIDE NEW

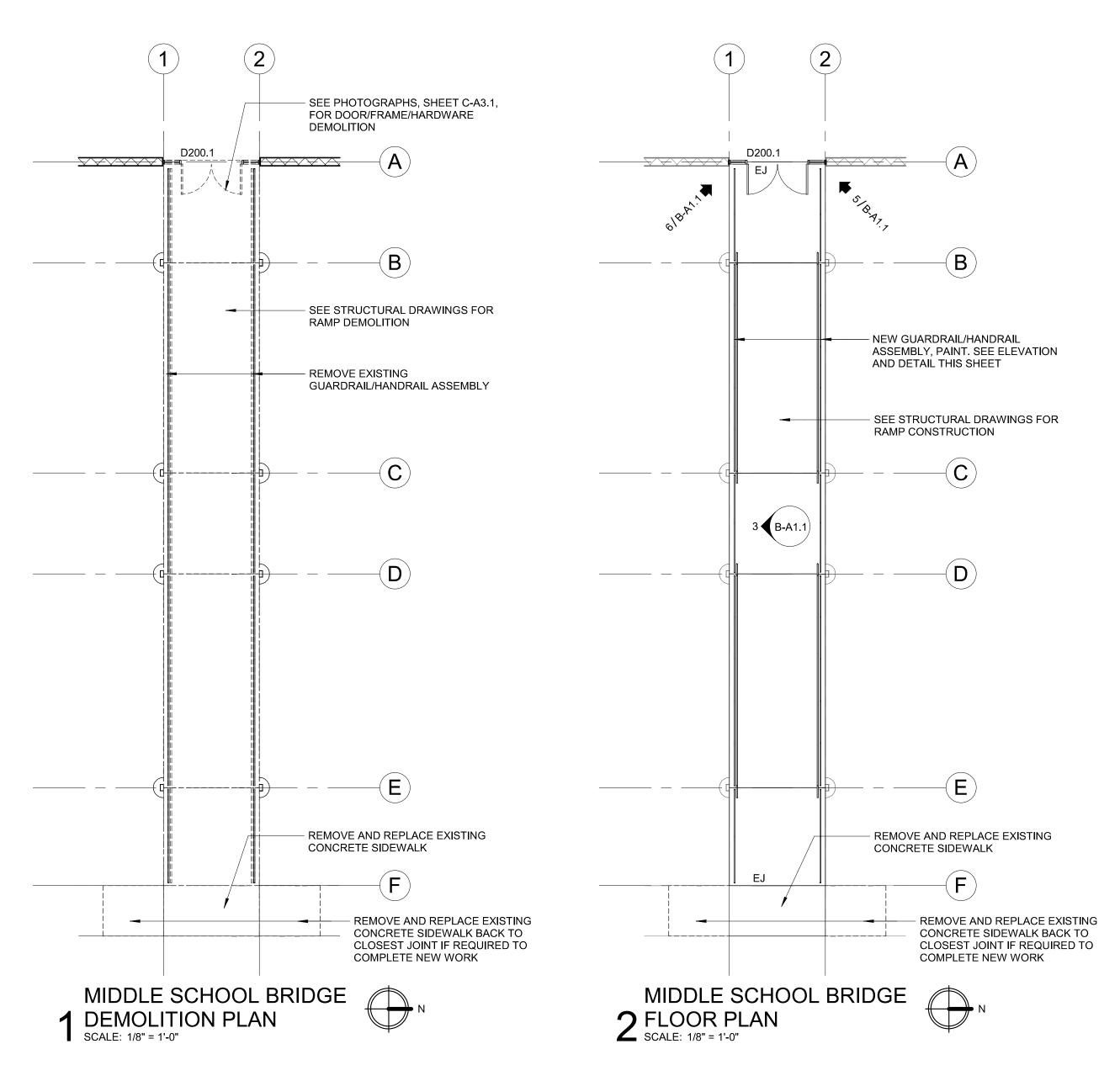
AS DETAILED

9'-1 3/4"

4" CLR

MAX

EXISTING SIDEWALK



4" CLR MAX.

EQ

Ψ || 4" CLR

MAX

20'-4 1/2"

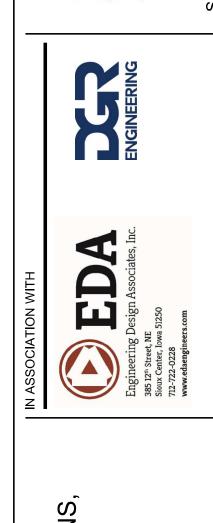
EQ

4" CLR

MAX

— 1 1/2" O.D. STEEL

PIPE HANDRAIL



B-A1.1

2024

DATE ISSUED 10/17/2023

11/21/2022 10:04:59 AM

8. PRECAST MANUFACTURER SHALL CAST IN STRUCTURAL INSERTS, BOLTS, PLATES, ANGLES, DOWELS, KEYWAYS, AS DETAILED IN THE CONTRACT DRAWINGS.

ERECTION OF PRECAST MEMBERS SHALL INCLUDE THE FURNISHING AND PLACING OF MILD STEEL REINFORCING, WET CAST OR DRY PACKED CONCRETE AT CLOSURES OF CONNECTIONS OUTSIDE OF

10. IN ORDER TO ACCOMMODATE VARYING MANUFACTURING AND ERECTION PROCEDURES, SHOP BE CONSIDERED. SUCH DEVIATIONS WILL BE PERMITTED ONLY AFTER THE ARCHITECT'S APPROVAL OF THE MANUFACTURER'S PROPOSED DEVIATION SUPPORTED BY COMPLETE DESIGN CALCULATIONS

11. PRECAST SOLID CORE FLOOR PLANK SHALL BE DESIGNED TO SUPPORT THE LOADS SHOWN ON THE DRAWINGS, PLUS ADDITIONAL CONCENTRATIONS, SUCH AS PARTITIONS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR OPENINGS REQUIRED THROUGH THE PLANK. PRECASTER SHALL LAY OUT HIS PLANK, CONSIDERING SUCH OPENINGS, AND SHALL FURNISH ANY HEADERS OR SUPPORTS AS REQUIRED. LOCATIONS OF FIELD CUT OPENINGS SHALL BE COORDINATED WITH THE PLANK LAYOUT. PRECASTER SHALL GROUT ALL JOINTS BETWEEN PLANK. PLANK SHALL NOT EXCEED THE FOLLOWING

AND SHALL PROVIDE NECESSARY HARDWARE REQUIRED TO BE CAST INTO THE SLAB. COORDINATE THESE REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND CLADDING DETAILS.

 STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.

WRITTEN APPROVAL OF THE ARCHITECT.

4. OPENINGS 1'-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL

IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.

IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR

MEMBERS ARE NOT SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATING REQUIREMENTS, FIRE PROOFING METHODS

8. DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.

CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN

CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY ETC., UNLESS HE HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC

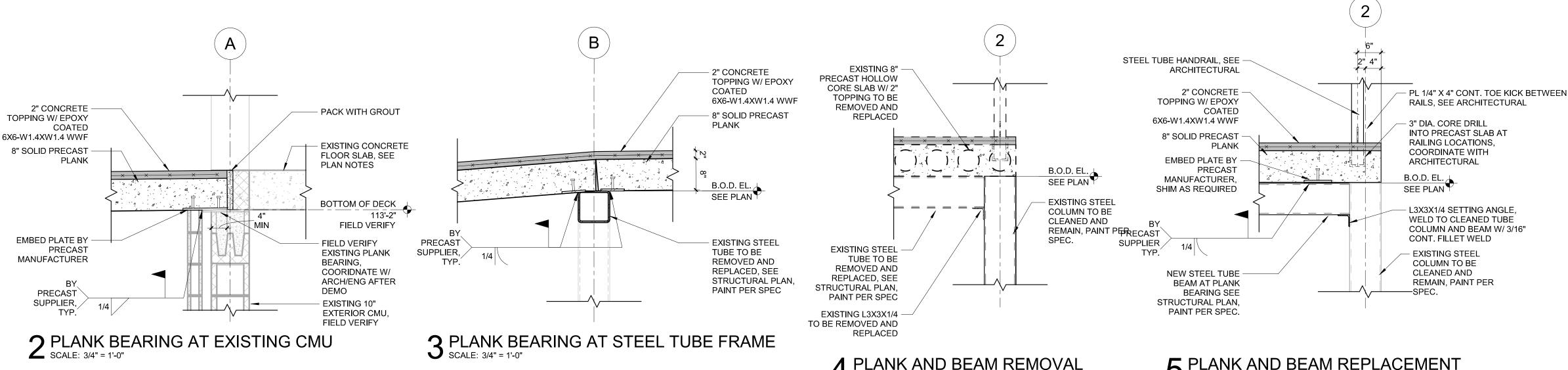
CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT BEFORE THE EFFECTED

MANUFACTURER TO MANUFACTURER, VERIFY DIMENSIONS AND WEIGHTS SHOWN ON DRAWINGS WITH SELECTED MANUFACTURER PRIOR TO ORDERING MATERIALS. NOTIFY STRUCTURAL ENGINEER OF DISCREPANCIES. DO NOT PLACE EQUIPMENT WHEN SHIPPING OR OPERATING WEIGHT EXCEEDS WEIGHT.

14. DO NOT PLACE EQUIPMENT WHEN SHIPPING OR OPERATING WEIGHTS EXCEEDS WEIGHTS INDICATED ON STRUCTURAL DRAWINGS.

ENGINEER REGISTERED IN STATE WHERE PROJECT IS LOCATED AND EMPLOYED BY

16. EPOXY / ADHESIVE ANCHORS SHALL BE INSTALLED WITHIN THE TEMPERATURE REQUIREMENTS



CONCRETE

'REINFORCING BAR DETAILING".

▲ PLANK AND BEAM REMOVAL

F PLANK AND BEAM REPLACEMENT

EXPANSION JOINT MATERIAL; CUT TOP 1/2" BACK AND FILL WITH SEALANT 2" CONCRETE TOPPING W/ EPOXY REMOVE AND REPLACE CONCRETE SIDEWALK IN AREA 6X6-W1.4XW1.4 WWF INDICATED ON PLAN, NEW CONCRETE TO BE 6" THICK OVER 6" MIN. RECOMPACTED GRANULAR 8" SOLID PRECAST FILL, REINFORCE W/ #4 EPOXY PLANK COATED BARS @ 18" O.C.E.W. FIELD VERIFY PRECAST` SUPPLIER / L5X3X3/8 CONT. GALVANIZED SUPPORT ANGLE, BOLT BACK TO STEM WALL W/ 1/2" SCREW ANCHOR @ 12" O.C. #5 VERTICAL REINFORCING BAR @ TRENCH FOOTING SEE STRUCTURAL FOOTING / #5 REINFORCING BAR -FOUNDATION PLAN 1'-0"

6 PLANK BEARING AT SIDEWALK STOOP SCALE: 3/4" = 1'-0"

CODES AND STANDARDS:

GENERAL NOTES

DESIGN CRITERIA:

2015 IBC/ASCE 7-16 OCCUPANCY/RISK CATEGORY I

DESIGN DEAD LOADS: 8" PRECAST WITH TOPPING: 125 PSF

DESIGN LIVE LOADS: MINIMUM LIVE LOAD: 100 PSF GROUND SNOW LOAD: Pg = 40 PSF SNOW EXPOSURE FACTOR: Ce = 1.0 SNOW THERMAL FACTOR: Ct = 1.2 SNOW LOAD IMPORTANCE FACTOR: 1.0

> BASIC WIND SPEED: 112 M.P.H. WIND EXPOSURE: C WIND DIRECTIONAL FACTOR: 0.85 TOPOGRAPHIC FACTOR: 1.0 WIND ANALYSIS FOR LOW RISE BUILDING BASED ON ASCE 7-16/IBC2015. SUPPLIER OF COMPONENTS OF STRUCTURE RESPONSIBLE FOR CALCULATING WIND LOADS BASED ON THE VALUES LISTED ABOVE. UPLIFT PRESSURE TO BE CONSIDERED ON ALL ROOF COMPONENTS.

SPECTRAL ACCELERATIONS: Ss = 0.077 SPECTRAL ACCELERATIONS: S1 = 0.036 SITE COEFFICIENTS: Fa = 1.6 DESIGN SPECTRAL RESPONSE ACCELERATION: Sds = 0.083 DESIGN SPECTRAL RESPONSE ACCELERATION: Sd1 = 0.058 RISK/OCCUPANCY CATEGORY: II

IMPORTANCE FACTOR: I = 1.0 SITE CLASS: D SEISMIC DESIGN CATEGORY: A

POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS.

POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.

CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO USING

ANCHORS INSTALLED IN CONCRETE BASE MATERIAL SHALL HAVE CURRENT ICC APPROVAL FOR

BOTH CRACKED AND UNCRACKED CONCRETE IN ACCORDANCE WITH ACI 355.2, ICC ES AC193

3. THREADED ANCHOR RODS ADHESIVE ANCHORS SHALL BE ASTM A36 OR ASTM F1554 GRADE 36.

CONDITIONS ARE SUBJECT TO SUSTAINED DEAD LOADS RESULTING FROM ADHESIVE CREEP.

AVOID CONFLICTS WITH EXISTING REBAR WHEN DRILLING HOLES. HOLES SHALL BE DRILLED

ADHESIVE ANCHORS SHALL BE INSTALLED WITHIN THE TEMPERATURE REQUIREMENTS

7. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE LISTED BELOW, SHALL BE

THE FOLLOWING ANCHOR PRODUCTS ARE PRE-APPROVED FOR ADHESIVE ANCHORS.

THE FOLLOWING ANCHOR PRODUCTS ARE PRE-APPROVED FOR EXPANSION ANCHORS.

SIMPSON STRONG-BOLT

THE FOLLOWING ANCHOR PRODUCTS ARE PRE-APPROVED FOR SCREW ANCHORS

HILTI KWIK BOLT TZ

SIMPSON TITEN-HD

HILTI KWIK HUS-EZ

REGISTERED PROFESSIONAL ENGINEERING IN THE STATE OF IOWA SHOWING THAT THE

ENGINEER IF TEMPERATURES ARE NOT WITHIN THE PROPER RANGE.

HILTI HIT RE-500-V3

HILTI HIT HY-200

HILTI HIT HY-270

SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE.

EXISTING REWORK NOTES:

DIMENSIONS OR ELEVATIONS NOT INDICATED.

EXPANSION, SCREW, WEDGE OR OTHER MECHANICAL TYPE ANCHORS SHALL BE USED IN THIS

AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PER

THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM END/EDGE

PROVIDED BY THE ADHESIVE MANUFACTURER. THE GENERAL CONTRACTOR SHALL NOTIFY THE

SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A

SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE

DESIGN PROCEDURE REQUIRED BY THE IBC BUILDING CODE. PRODUCT ICC-ES CODE REPORTS

ADHESIVE ANCHOR PRODUCT ICC ES REPORT

EXPANSION ANCHOR PRODUCT ICC ES REPORT

EXPANSION ANCHOR PRODUCT ICC ES REPORT

ESR-3187

FSR-1771

ESR-1971

ESR-3056

ESR-4143/4144

ADHESIVE USED SHALL BE A STRUCTURAL GRADE, TWO-PART EPOXY THAT MEETS THE

REQUIREMENTS OF ASTM C-881 TYPES I AND IV, GRADE 3, CLASSES A,B OR C.

ADHESIVE ANCHORS SHALL NOT BE USED IN OVERHEAD APPLICATIONS. OVERHEAD

POST-INSTALLED ANCHORS

TYPE OF APPLICATION.

CONCRETE

CONCRETE

CONCRETE

CONCRETE

CONCRETE

MASONRY

1 BRIDGE REPAIR/REPLACEMENT PLAN

BEARING EL.

FIELD VERIFY

- 1. FOR GENERAL NOTES, SPECIAL INSPECTIONS, AND MATERIAL STRENGTHS SEE THIS SHEET AND SPECIFICATIONS COORDINATE OPENINGS IN WALLS AND SLABS WITH OTHER TRADES.
- 3. NO FIELD CUTTING OF OPENINGS ALLOWED. 4. REFER TO THE ARCHITECTURAL DRAWINGS AND/OR COORDINATE WITH THE ARCHITECT REGARDING ADDITIONAL DIMENSIONS AND ELEVATIONS.

- SERVICE REACTIONS FOR STEEL BEAM CONNECTION DESIGN ARE INDICATED AS (xxK) ON PLAN WHERE NOT NOTED, STEEL SUPPLIER TO PROVIDE CONNECTIONS PER STRUCTURAL GENERAL
- 2. ADDITIONAL TENSION/COMPRESSION (AXIAL) CONNECTION DESIGN LOADS INDICATED [xxK] ON
- T/BEAM ELEVATION AT DECK BEARING ELEVATION OR AT JOIST BEARING ELEVATION (IF SUPPORTING JOISTS) UNLESS NOTED OTHERWISE.

B.O.D. EL. 113'-0 3/4"

B.O.D. EL.

B.O.D. EL.

B.O.D. EL. 109'-4 3/4"

EXISTING SIDEWALK

MAIN FLOOR FRAMING PLAN NOTES:

FIELD VERIFY

FIELD VERIFY

FIELD VERIFY

FIELD VERIFY

PRECAST PLANK:

- PRECAST TOP OF SLAB ELEVATION PER PLAN INDICATES ELEVATION OF THE 2" TOPPING SLAB FOR SLABS THAT HAVE A TOPPING LAYER. FOR SLABS THAT DO NOT HAVE A TOPPING LAYER, TOP OF SLAB ELEVATION PER PLAN INDICATED ELEVATION OF THE PRECAST MEMBER. BEARING
- ELEVATION VARIES DEPENDING ON MEMBER DEPTH. INDICATES SPAN DIRECTION OF PRECAST PLANK. PRECAST SUPPLIER TO DESIGN FOR THE LIVE LOADS INDICATED PER GENERAL NOTES. ADD 10 PSF MISCELLANEOUS SUPERIMPOSED DEAD LOAD IN ADDITION TO CONCRETE TOPPING AT
- 4. REFER TO THE ARCHITECTURAL DRAWINGS AND/OR COORDINATE WITH THE ARCHITECT REGARDING ADDITIONAL DIMENSIONS. 5. PROVIDED PLANK-TO-PLANK SHEAR CONNECTIONS SUFFICIENT TO TRANSFER DIAPHRAGM
- SHEAR BETWEEN PLANKS, MIN. 500 PLF. 6. INSTALLED PLANK CAMBER SHALL NOT EXCEED 1 1/2" WHERE 2" TOPPING IS SPECIFIED

STRUCTURAL STEEL

1. STEEL SHALL CONFORM TO THE FOLLOWING GRADES ALL WF (U.N.O.): A992 GRADE 50 (FY=50) ALL ANGLE, BASE PLATES, CONN. PLATES (U.N.O.): A36 (FY=36) STRUCTURAL PIPE: A53 (FY=35) A500 GRADE B (FY=46) STRUCTURAL TUBE:

2. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE A.I.S.C. CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THESE NOTES AND THE

- 3. CONNECTIONS MAY BE BOLTED OR WELDED. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF CONNECTIONS NOT DESIGNED ON THE DRAWINGS. GENERALLY, CONNECTIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE SCHEMATIC AND ARE ONLY INTENDED TO SHOW THE RELATIONSHIP OF MEMBERS CONNECTED. ANY CONNECTION THAT IS NOT SHOWN OR IS NOT COMPLETELY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN DESIGNED BY AN ENGINEER, REGISTERED IN THE STATE OF IOWA, RETAINED BY THE FABRICATOR. COMPLETELY DETAILED MEANS THE FOLLOWING INFORMATION IS SHOWN ON
- A. ALL PLATE DIMENSIONS AND GRADES. B. ALL WELD SIZES, LENGTHS, PITCHES, AND RETURNS
- ALL HOLE SIZES AND SPACINGS. D. NUMBER AND TYPES OF BOLTS: WHERE BOLTS ARE SHOWN BUT NO NUMBER IS GIVEN. THE CONNECTION HAS NOT BEEN COMPLETELY DETAILED. E. WHERE PARTIAL INFORMATION IS GIVEN, IT SHALL BE THE MINIMUM
- REQUIREMENT FOR THE CONNECTION.

DESIGN CALCULATIONS FOR TYPICAL BEAM CONNECTIONS AND ALL PRIMARY BRACING AND HANGER CONNECTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

4. CONNECTION DESIGN FORCES: A. BEAMS, GREATER OF:

T = TORSION IN FOOT KIPS

- 55% OF TOTAL ALLOWABLE UNIFORM LOAD CAPACITY FROM A.I.S.C 14TH EDITION TABLES FOR ALLOWABLE LOADS ON BEAMS, Wc/L REACTIONS SHOWN ON DRAWINGS.
- B. MOMENT CONNECTIONS INDICATED ON THE DRAWINGS THUS: DESIGN FOR MOMENT SHOWN OR, IF NOT SHOWN, DEVELOP MOMENT CAPACITY OF MEMBER WITH fb = 0.66 FY. . MAINTAIN TENSION CAPACITY OF COLUMNS, DIAGONALS AND MEMBERS

SUBJECT TO TENSION AT BOLT HOLES, NOTCHES, OR COPES. D. CONNECTION FORCE NOTATION: P[] = AXIAL FORCE IN KIPS: [+] TENSION, [-] COMPRESSION V OR () = SHEAR IN KIPS M = MOMENT IN FOOT KIPS

STRUCTURAL STEEL CONT

5. THE MINIMUM PLATE THICKNESS SHALL BE 3/8 6. BOLTED CONNECTIONS:

EXISTING BUILDING

- REPAIR CMU ON

BOTH SIDES OF

- COLUMNS TO BE

CLEANED AND

TO REMAIN

REMAIN. 24" DIA

FOUNDATION PIERS

- 8" SOLID PRECAST

PLANKS W/ 2" N.W.

CONTRACTOR

EXISTING STEEL

REMOVED AND

-REPLACED, SEE -

PAINT PER SPEC

STRUCTURAL PLAN,

- --- - --- - --- - --- - --- - ---

EXISTING SIDEWALK

REMOVE AND REPLACE EXISTING

CONCRETE SIDEWALK BACK TO

CLOSEST JOINT IF REQUIRED TO

COMPLETE NEW WORK

SET NEW RAMP

AND REPLACE

OF BRIDGE

FLUSH TO EXISTING

SIDEWALK, REMOVE

PAVING FOR WIDTH

-CONCRETE TOPPING.-PLANK WIDTH TBD BY

-BEARING - ---- - ----

FIELD VERIFY

- A. MINIMUM BOLT DIAMETER = 3/4" B. SLIP CRITICAL CONNECTIONS OF A325SC OR A490SC BOLTS SHALL BE USED FOR ALL BOLTED CONNECTIONS OF BRACING MEMBERS, MOMENT CONNECTIONS, CANTILEVERS, AND AS SHOWN ON THE DRAWINGS. OVERSIZED AND LONG-SLOTTED
- C. ALL OTHER BOLTED CONNECTIONS SHALL BE BEARING TYPE USING A325N OR A490N BOLTS. OVERSIZED HOLES AND LONG-SLOTTED HOLES ARE NOT ALLOWED UNLESS SHOWN ON THE DRAWINGS.

HOLES ARE ALLOWED FOR FRICTION CONNECTIONS

- A307 BOLTS MAY BE USED WHERE INDICATED ON THE DRAWINGS PROTRUDING BOLT HEADS, SHAFTS OR NUTS SHALL NOT EXTEND INTO NOR PROHIBIT THE APPLICATION OF ARCHITECTURAL FINISHES AND THEY SHALL NOT EXTEND INTO NOR
- PROHIBIT THE PLACEMENT OF STEEL DECKING TO THE CORRECT LINE AND ELEVATION. F. THE FABRICATOR IS RESPONSIBLE FOR VERIFYING THE TENSION CAPACITY OF AXIALLY LOADED MEMBERS AFTER A SECTION IS REDUCED FOR BOLT HEADS. MEMBER SIZE MAY
- BE INCREASED OR CONNECTION PLATES ADDED AS REQUIRED. G. SHOP DRAWINGS SHALL INDICATE THE TYPE OF BOLT USED IN EACH CONNECTION AND THE ALLOWABLE VALUES USED FOR THE VARIOUS BOLT TYPES.
- 7. WELDED CONNECTIONS A. WELDS ARE CONTINUOUS UNLESS NOTED.
- B. ALL FILLET WELDS: A.I.S.C. MINIMUM BUT NOT LESS THAN 1/8" UNLESS NOTED C. ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE

(A.W.S. D1.1) PUBLISHED BY THE AMERICAN WELDING SOCIETY. ELECTRODES FOR

- WELDING SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 4.1.1 OF (A.W.S. D1.1). D. ALL GROOVE WELDS SHALL BE COMPLETE PENETRATION UNLESS NOTED OTHERWISE 8. SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT
- WRITTEN APPROVAL OF THE ARCHITECT. 9. NO CHANGE IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS SHALL BE MADE OF HOLES
- SLOTS, CUTS, ETC., AND ARE NOT PERMITTED THROUGH ANY MEMBER UNLESS THEY ARE DETAILED ON THE APPROVED SHOP DRAWINGS. 10. NO FINAL BOLTING OR WELDING SHALL BE MADE UNTIL AS MUCH OF THE STRUCTURE HAS BEEN
- PROPERLY ALIGNED AND WILL THEREBY BE STIFFENED. 11. UNLESS NOTED OTHERWISE, BEAMS SHALL BEAR 8" MINIMUM ON CONCRETE OR MASONRY. ANCHOR BEAMS TO MASONRY WITH A GOVERNMENT-TYPE ANCHOR.
- 12. FABRICATE ALL BEAMS WITH THE MILL CAMBER UP. 13. EXPANSION BOLTS:
 - A. UNLESS NOTED OTHERWISE, EXPANSION BOLTS SHALL HAVE THE FOLLOWING MINIMUM SERVICE LOAD CAPACITIES WHEN DRILLED INTO CONCRETE WITH A MINIMUM DESIGN STRENGTH OF 4000 P.S.I. SERVICE LOAD CAPACITIES SHALL PROVIDE FOR A MINIMUM FACTOR OF SAFETY = 4. DIAMETER SHEAR TENSION
 - 1/2" 2450 LBS 2400 LBS 3/4" 5120 LBS 4800 LBS SEE SPECIFICATIONS

AND SUPPLEMENT NO. 1.

14. SHEAR STUDS: CONFORM TO A.W.S. D1.1, SHOP WELD EXCEPT WHERE APPLIED THROUGH METAL

15. TESTING OF EXPANSION BOLTS AND EPOXY ANCHORS. A. EXPANSION BOLTS: THE CONTRACTOR SHALL TEST 25% OF ALL EXPANSION BOLTS

ACCORDING TO THE MANUFACTURER'S REQUIRED TORQUES B. EPOXY ANCHORS: THE CONTRACTOR SHALL TEST 25% OF ALL EPOXY ANCHORS WITH PULL TEST EQUAL TO 150% TIMES THE ALLOWABLE BOLT TENSILE CAPACITIES. C. NOTE: THE EPOXY ANCHORS ARE TO BE STORED IN A COOL LOCATION ACCORDING TO

THE MANUFACTURES SPECIFICATIONS. 16. MATERIALS AND JOINTS FOR MOMENT CONNECTIONS AND CONNECTIONS FOR VERTICALLY BRACED ELEMENTS SHALL CONFORM TO THE FOLLOWING:

C. BOLTED AND WELDED JOINTS TO CONFORM TO SEISMIC PROVISION SECTIONS 7,

A. MATERIALS SHALL CONFORM TO SEISMIC PROVISIONS, SECTION 6 AND SUPPLEMENT B. STEEL PLATES AND SHAPES SHALL HAVE A MINIMUM CHARPY V-NOTCH

TOUGHNESS CONFORMING TO SEISMIC PROVISIONS SECTION 6.3, AND SUPPLEMENT

- WHERE THEY AFFECT NEW CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF ANY DEVIATIONS FROM ANTICIPATED CONDITIONS ARE DISCOVERED. 2. COORDINATION W/ COMPLETE SET OF CONTRACT DOCUMENTS: THE CONTRACT DOCUMENTS ARE ONE COMPLETE, COMPREHENSIVE AND INCLUSIVE DOCUMENT CONSISTING OF THE AGGREGATE COLLECTION OF DRAWINGS AND SPECIFICATIONS FOR ALL OF THE DISCIPLINES'
- ELECTRICAL, ETC.). NO SINGLE DISCIPLINE DIVISION IS AUTONOMOUS NOR DOES IT STAND-ALONE FROM ANY OR ALL OTHER DISCIPLINE DIVISIONS. 3. VERIFY ALL DIMENSIONS, ELEVATIONS, DEPRESSIONS, INSERTS, EMBEDDED ITEMS, EQUIPMENT PADS AND SUPPORTS, OPENINGS, DETAILS, AND CONDITIONS BY CROSS-REFERENCING TO ARCHITECTURAL AND ALL OTHER DISCIPLINE SECTION DRAWINGS, PARTICULARLY CIVIL,

DIVISIONS (E.G. SITE, CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING,

THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, SUCH AS DIMENSIONS.

ELEVATIONS, CONFIGURATION, AND DETAILS OF EXISTING STRUCTURES AND CONDITIONS

- MECHANICAL, AND ELECTRICAL SECTIONS. 4. SEE ARCHITECTURAL AND ALL OTHER DISCIPLINE SECTION DRAWINGS FOR DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- 5. STRUCTURAL DRAWINGS DO NOT SHOW ALL REQUIRED OPENINGS THROUGH STRUCTURAL
- DISCIPLINE SECTION DRAWINGS. NOTES REGARDING USE OF DRAWINGS: DRAWING SCALES ARE NOTED FOR REFERENCE ONLY. NOT ALL ITEMS ARE DRAWN TO SCALE, AND DRAWINGS SHOULD NOT BE SCALED TO OBTAIN

6. VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECTURAL AND ALL OTHER

- CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH AND DENSITY, IN ACCORDANCE WITH THE SPECIFICATION:
- 2. REINFORCING SHALL CONFORM TO A.S.T.M. A615, GR. 60, INCLUDING TIES AND STIRRUPS. 3. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A185.
- 4. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED, IN ACCORDANCE WITH A.C.I. DETAILING MANUAL. 5. ALL REINFORCING SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH C.R.S.I.
- 6. MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE: UNFORMED SURFACE IN CONTACT WITH THE GROUND: 3 IN. B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER: 1 1/2 IN. FOR #5 BAR OR

SMALLER 2 IN FOR #6 BAR OR LARGER

SPLICES. SPLICES f'c = 4000PSI, fy = 60,000PSI

FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER: 1. WALLS, SLABS: 3/4 IN. 2. BEAMS, GIRDERS AND COLUMNS (TO TIES OR STIRRUPS): 1 1/2 IN. ALL CONSTRUCTION JOINTS SHOWN ON DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE, UNLESS THEIR ELIMINATION IS APPROVED BY THE ENGINEER. ADDITIONAL

CONSTRUCTION JOINTS, REQUIRED TO FACILITATE CONSTRUCTION, SHALL BE LOCATED AT

- SHALL PASS CONTINUOUSLY THROUGH THE JOINT. 8. ALL ABUTTING CONCRETE MEMBERS SHALL BE DOWELED TOGETHER, UNLESS POURED MONOLITHICALLY. DOWELS SHALL BE EQUAL IN SIZE AND SPACING TO THE REINFORCING IN
- 9. UNLESS OTHERWISE SHOWN IN THE ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFERS AT ALL EDGES THAT ARE EXPOSED TO VIEW IN THE FINISHED STRUCTURE.
- 10. SEE ARCHITECTURAL DRAWINGS FOR DOOR AND WINDOW OPENINGS, DRIP SLOTS, REGLETS, MASONRY ANCHORS, PRECAST BEARING LEDGES, BRICK LEDGE ELEVATIONS AND FOR MISCELLANEOUS EMBEDDED PLATES, BOLTS, ANCHORS, ANGLES, ETC.
- 11. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES. WHERE FINISH IS NOT SPECIFIED, CONFORM TO REQUIREMENTS OF A.C.I. 301.
- 12. MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS SHALL BE REFERRED TO FOR DRAINS. SLEEVES, OUTLET BOXES, CONDUIT, ANCHORS, ETC. 13. LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B", CASE 2

						_
TENSION	LAP SPLICE F GRADE		THE	R BA	RS,	
CLAS	S A, B, LAP SF (INCHE		LEN	GTH		NOTES:
		f	c = 4,	000 F	P.S.I.	1. TABLES ARE BASED ON ACI 318-05 SEC. 12.2.2.
	CLASS	,	4	В		2. ALL SPLICES TO BE CLASS "B" TENSION
BAR SIZE	CASE	1	2	1	2	SPLICE UNLESS OTHERWISE NOTED.
#3		15	22	19	28	3. SPLICE PLAIN WELDED WIRE FABRIC BY
#4		19	29	25	37	LAPPING ONE FULL MESH SPACE PLUS 2 INCHES.
#5		24	36	31	47	INVOITES.
#6		29	43	37	56	4. FOR LIGHT WEIGHT CONCRETE, MULTIPL LENGTHS IN TABLE BY 1.3
#7		42	63	54	81	5 FOR EDOVY COATER REINEORGEMENT
#8		48	72	62	93	5. FOR EPOXY COATED REINFORCEMENT, MULTIPLY LENGTHS IN TABLE BY 1.5.
#9		54	54 81 70 105		105	6. COMPRESSION DOWEL EMBEDMENT: 22
#10		61	91	79	118	BAR DIAMETERS

- #11 67 | 101 | 87 | 131 |
- 14. BASE PLATES, ANCHOR BOLTS, SUPPORT ANGLES, ETC., BELOW GRADE SHALL BE COVERED WITH A MINIMUM OF 3" CONCRETE. 15. WHERE REINFORCING IS NOT INDICATED OR DEFINED, INCLUDE FOR BID PURPOSES ONLY. A. SLABS: #5 EACH WAY TOP AND BOTTOM. SPACING IN INCHES = 100/(SLAB THICKNESS
- ON SHOP DRAWINGS, INDICATE ABOVE REINFORCING AS "PER GENERAL NOTES". SUCH REINFORCING MAY BE REVISED OR RELOCATED BY STRUCTURAL ENGINEER DURING SHOP
- AND ENDS OF WALLS, ETC...). 17. PROVIDE 2-#5 (MIN.) @ EACH SIDE OF OPENING. EXTEND 2'-0 BEYOND OPENINGS
- 18. SEE MISC. NOTE #16 FOR EPOXY / ADHESIVE ANCHORS. 19. GROUT ALL BEAM POCKETS SOLID WITH NON-SHRINK GROUT AFTER BEAM INSTALLATION AND DEAD LOAD FULLY APPLIED, U.N.O.

DEFERRED SUBMITTALS

IN INCHES) BUT NOT OVER 18"O.C.

- 1. PER IBC SECTION 106.3.4.2 THE FOLLOWING ITEMS ARE DEFERRED SUBMITTALS ITEMS: PRECAST CONCRETE PLANK
- 2. DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ONCE REVIEWED. CONTRACTOR SHALL FORWARD TO THE BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION FOR APPROVAL. FABRICATION AND/OR INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL IS RECEIVED.

PRECAST CONCRETE PLANK

- 1. PRECAST CONCRETE PLANK CONSTRUCTION SHALL CONSIST OF THE DESIGN, MANUFACTURE, TRANSPORTATION AND ERECTION OF SOLID CORE FLOOR PLANKS.
- 2. DESIGN OF PRECAST MEMBERS SHALL BE IN ACCORDANCE WITH A.C.I. 318.
- 3. PRECAST CONCRETE MEMBERS SHALL HAVE A MINIMUM FIRE RESISTANCE CLASSIFICATIONS IF REQUIRED ON THE ARCHITECTURAL DRAWING.
- WITH THE DESIGN LOADS, SPANS, HANDLING STRESSES, ETC. DESIGN LOADS ARE SHOWN ON THE 5. PRECAST CONTRACTOR SHALL FURNISH COMPLETE DESIGN CALCULATIONS, INCLUDING DETAILS OF CONNECTIONS, BEARINGS, FITTINGS AND ANTICIPATED CAMBERS. CALCULATIONS ARE TO BE

4. PRECAST MEMBERS MAY BE CONVENTIONALLY REINFORCED AND/OR PRESTRESSED, CONSISTENT

- STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF IOWA. 6. PRECAST CONTRACTOR SHALL FURNISH AND PLACE ANY TEMPORARY SHORING, BRACING ETC.
- 7. PRECAST CONTRACTOR SHALL FURNISH ALL PLATES, INSERTS, ANGLES, RODS, ETC., REQUIRED TO CONNECT PRECAST TO PRECAST OR CAST-IN-PLACE MEMBERS OR TO STRUCTURAL STEEL DETAILEL PLACING PLANS SHALL BE FURNISHED FOR ALL ITEMS TO BE EMBEDDED IN CAST-IN-PLACE CONCRETE
- POINTS OF MINIMUM SHEAR AND SHALL BE DETAILED ON SHOP DRAWINGS. REINFORCEMENT
 - PRACTICES, ETC., DEVIATIONS FROM THE DETAILS AND MEMBER SIZES SHOWN IN THE CONTRACT WILL
 - AND/OR DETAIL DRAWINGS.
 - UNIT WEIGHT (GROUTED WEIGHTS EXCLUSIVE OF TOPPING): AS CALLED OUT IN THE DESIGN CRITERIA
 - 12. PRECAST CONTRACTOR MUST MAKE PROVISIONS FOR ANCHORAGE REQUIREMENTS OF ALL CLADDING

MISCELLANEOUS

- 2. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL
- 3. NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE
- DRAWINGS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SUCH OPENINGS. 5. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD
- 6. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR
- 7. UNLESS OTHERWISE NOTED, FIRE PROOFING METHODS AND MATERIALS FOR STRUCTURAL
- 9. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS
- 10. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE 16. PROVIDE STANDARD HOOKS ON BARS TERMINATING AT A CONCRETE FACE UNLESS NOTED (E.G.: FOR SUCH DEVIATION BY THE ARCHITECT'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, EDGES OF OPENINGS, SLAB EDGES, EXPANSION JOINTS, ENDS OF BEAMS, AND AT: TOP, BOTTOM
 - 11. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS, OR AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE
 - 12. CHECK ALL DIMENSIONS AGAINST REQUIREMENTS OF OTHER CONTRACT DOCUMENTS. FIELD VERIFY DIMENSIONS RELATING TO EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS AND
 - 13. WHERE DIMENSIONS OR WEIGHTS OF EQUIPMENT OR SYSTEMS ARE VARIABLE FROM

 - 15. NO MODIFICATION, ALTERATION OR REPAIR SHALL BE MADE WITHOUT PRIOR REVIEW BY STRUCTURAL ENGINEER. SUBMIT DETAILS AND CALCULATIONS PREPARED BY A PROFESSIONAL
 - PROVIDED BY THE EPOXY / ADHESIVE MANUFACTURER. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT / ENGINEER IF TEMPERATURES ARE NOT WITHIN THE PROPER RANGE.

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