

ADDENDUM NO.1

SULLIVAN MIDDLE SCHOOL ATHLETIC RESTROOM/CONCESSION BUILDING

ROCK HILL SCHOOLS
BID PACKAGE 1:
BID # 19-2024 SITE PREPARATION & UTILITY CONNECTIONS

BID PACKAGE 2:
BID # 19-2025 PRE-MANUFACTURED MODULAR PRECAST BUILDING

ROCK HILL SCHOOLS, YORK DISTRICT THREE
ROCK HILL, SOUTH CAROLINA

MOSELEYARCHITECTS

ARCHITECTURAL

COLUMBIA, SOUTH CAROLINA

February 25, 2020	VOLUME 1 OF 1	APN # 593120
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1 **GENERAL:**

2 Planholders are requested to attach this Addendum to the inside front cover of each Project Manual.
3 Inform all concerned that the Bidding Documents are modified by this Addendum.
4 The following modifications and clarifications are hereby made a part of the Bidding Documents and
5 supersede or otherwise modify the provisions of the published *Project Manual* and *Drawings*, dated
6 February 7, 2020.
7 Refer to the Drawings and Specification Sections, if any, attached to this Addendum, which are
8 hereby made a part of this Addendum.
9

10 **MODIFICATIONS TO THE DRAWINGS**

11 DRAWING C4.0

12 DELETE C4.0 and ADD C4.0 attached to the end of this addendum
13
14

15 DRAWING P2.0.1

16 DELETE P2.0.1 and ADD P2.0.1 attached to the end of this addendum
17

18 DRAWING E2.1

19 DELETE E2.1 and ADD E2.1 attached to the end of this addendum
20
21

22 **QUESTION CLARIFICATION**

23 QUESTIONS:

24 General Questions
25
26
27

28 **REFER TO SPECIFICATIONS ATTACHED TO THE END OF THIS ADDENDUM**

29 **REFER TO DRAWINGS ATTACHED TO THE END OF THIS ADDENDUM**

30
31
32 **END OF ADDENDUM NO. 1**

1. THIS DRAWING IS THE PROPERTY OF CAMPCO ENGINEERING, INC. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS NOT TO BE USED ON ANY OTHER PROJECT AND IS TO BE RETURNED ON REQUEST.

2. MATERIALS, DIMENSIONS, AND ALL OTHER CONDITIONS WHICH ARE NOT OTHERWISE DEFINED ON THIS DRAWING SHALL BE CONSIDERED AS HAVING THE SAME MEANING AS SIMILARLY INDICATED CONDITIONS WHICH ARE MORE FULLY DEFINED ELSEWHERE ON THIS PROJECT OR OTHER DRAWINGS ON THIS PROJECT.



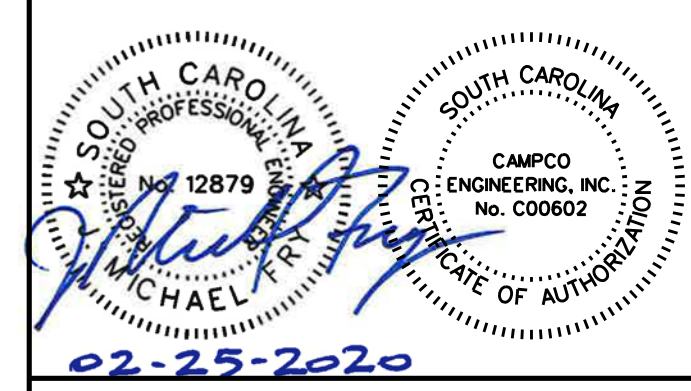
Campo Engineering, Inc.
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156 OAKLAND AVENUE, ROCK HILL, SC 29730
(803) 327-7121 WWW.CAMPCOENGINEERING.COM

**SULLIVAN MIDDLE SCHOOL
ATHLETIC CONCESSIONS
AND RESTROOM BUILDING**
ROCK HILL, SOUTH CAROLINA

REVISIONS		
NO.	DATE	DESCRIPTION
1	02-25-2020	ADD 01

UTILITY PLAN



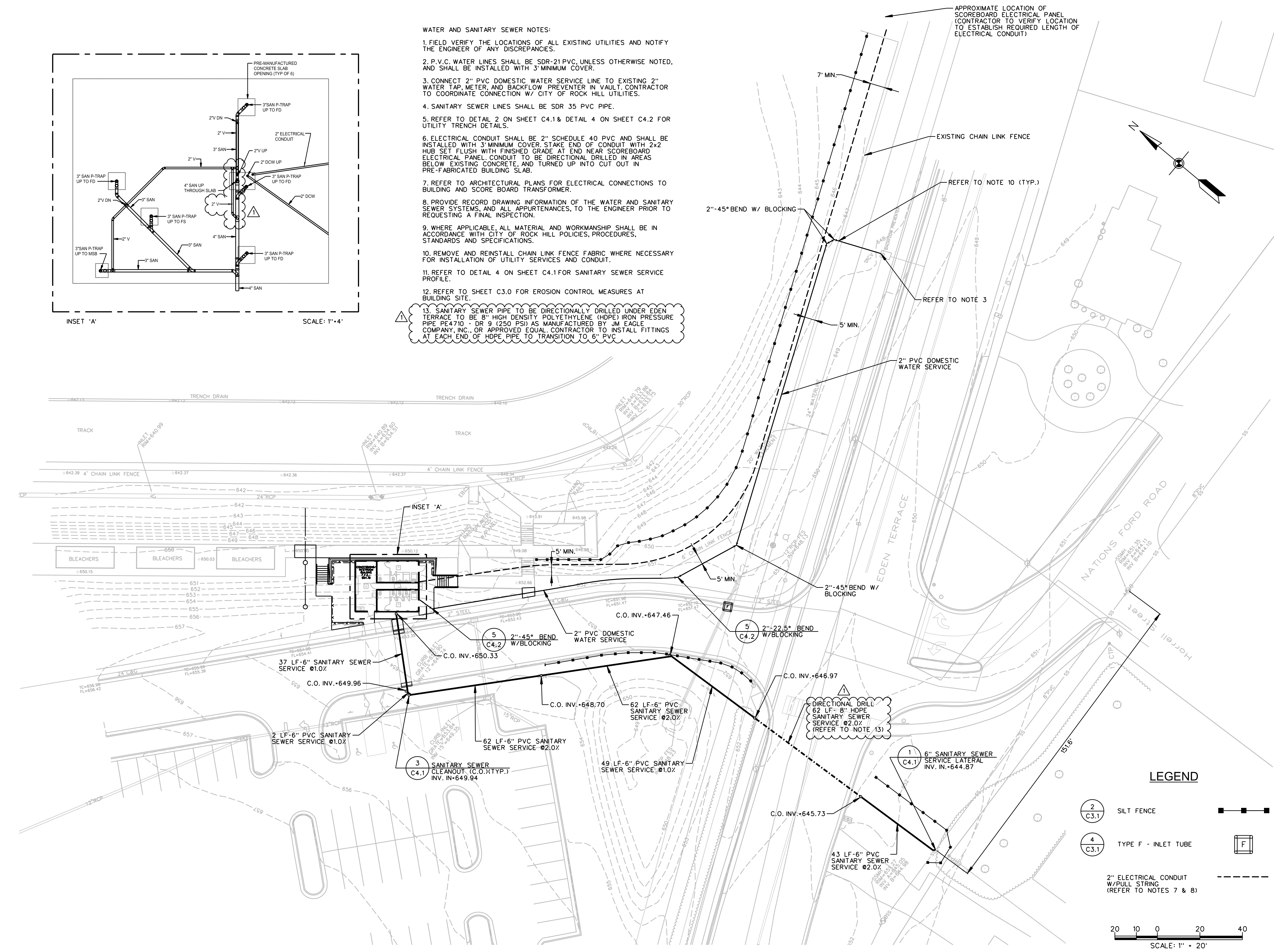
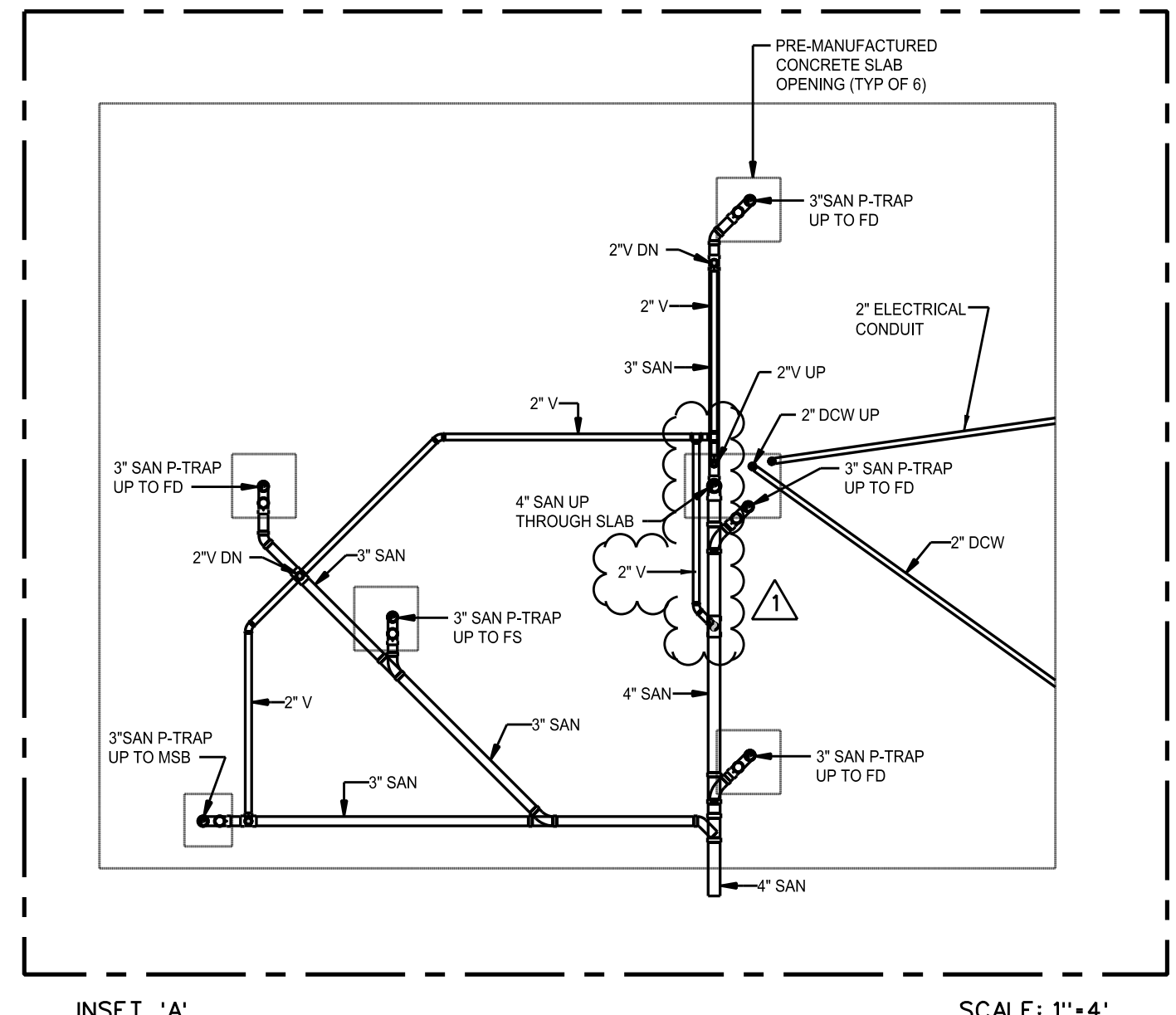
CE: 9697-FH ISSUED: 02-07-2020
SCALE: 1"=20' CAD FILE: 9697-FHUTC4.0

C4.0

WATER AND SANITARY SEWER NOTES:

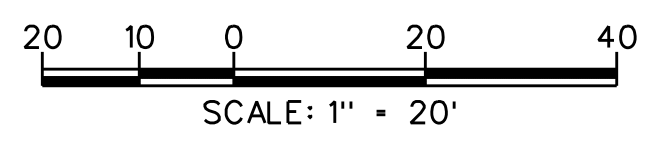
- FIELD VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- P.V.C. WATER LINES SHALL BE SDR-21 PVC, UNLESS OTHERWISE NOTED, AND SHALL BE INSTALLED WITH 3" MINIMUM COVER.
- CONNECT 2" PVC DOMESTIC WATER SERVICE LINE TO EXISTING 2" WATER TAP, METER, AND BACKFLOW PREVENTER IN VAULT. CONTRACTOR TO COORDINATE CONNECTION W/ CITY OF ROCK HILL UTILITIES.
- SANITARY SEWER LINES SHALL BE SDR 35 PVC PIPE.
- REFER TO DETAIL 2 ON SHEET C4.1 & DETAIL 4 ON SHEET C4.2 FOR UTILITY TRENCH DETAILS.
- ELECTRICAL CONDUIT SHALL BE 2" SCHEDULE 40 PVC AND SHALL BE INSTALLED WITH 3" MINIMUM COVER. STAKE END OF CONDUIT WITH 2x2 HUB SET FLUSH WITH FINISHED GRADE AT END NEAR SCOREBOARD ELECTRICAL PANEL. CONDUIT TO BE DIRECTIONAL DRILLED IN AREAS BELOW EXISTING CONCRETE, AND TURNED UP INTO CUT OUT IN PRE-FABRICATED BUILDING SLAB.
- REFER TO ARCHITECTURAL PLANS FOR ELECTRICAL CONNECTIONS TO BUILDING AND SCORE BOARD TRANSFORMER.
- PROVIDE RECORD DRAWING INFORMATION OF THE WATER AND SANITARY SEWER SYSTEMS, AND ALL APPURTENANCES, TO THE ENGINEER PRIOR TO REQUESTING A FINAL INSPECTION.
- WHERE APPLICABLE, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CITY OF ROCK HILL POLICIES, PROCEDURES, STANDARDS AND SPECIFICATIONS.
- REMOVE AND REINSTALL CHAIN LINK FENCE FABRIC WHERE NECESSARY FOR INSTALLATION OF UTILITY SERVICES AND CONDUIT.
- REFER TO DETAIL 4 ON SHEET C4.1 FOR SANITARY SEWER SERVICE PROFILE.
- REFER TO SHEET C3.0 FOR EROSION CONTROL MEASURES AT BUILDING SITE.

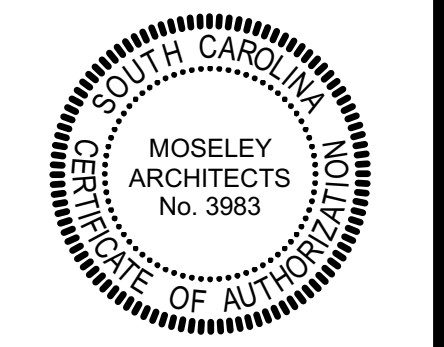
13. SANITARY SEWER PIPE TO BE DIRECTIONALLY DRILLED UNDER EDEN TERRACE TO BE 8" HIGH DENSITY POLYETHYLENE (HDPE) IRON PRESSURE PIPE PE4710 - DR 9 (250 PSI) AS MANUFACTURED BY JM EAGLE COMPANY, INC., OR APPROVED EQUAL. CONTRACTOR TO INSTALL FITTINGS AT EACH END OF HDPE PIPE TO TRANSITION TO 6" PVC



LEGEND

- SILT FENCE
- TYPE F - INLET TUBE
- 2" ELECTRICAL CONDUIT W/PULL STRING (REFER TO NOTES 7 & 8)





PROJECT NO:	593120
DATE:	January 7, 2020
REVISIONS	
DATE	DESCRIPTION
2/25/20	ADD 01

TAG	FIXTURE	HEIGHT A.F.F.	PIPE SIZE					NOTES
			COLD WATER	TEPID WATER	HOT WATER	VENT	SOIL WASTE	
DF-1	BH-LEVEL DRINKING FOUNTAIN (ACCESSIBLE)	BUBBLER AT 34" & 39"	1/2"	N/A	N/A	2"	2"	1
HB-1	HOSE BIBB	18" ABOVE FINISHED FLOOR	1/2"	N/A	N/A	N/A	N/A	
WH-1	WALL HYDRANT (FREEZE RESISTANT BOX)	12" ABOVE FINISHED FLOOR	3/4"	N/A	N/A	N/A	N/A	
LA-1	LAVATORY - (ACCESSIBLE)	RIM AT 34" ABOVE FINISHED FLOOR	1/2"	N/A	N/A	2"	2"	1
SK-1	KITCHEN UTILITY SINK (SINGLE COMPARTMENT)	FLOOR STAND	1/2"	N/A	1/2"	2"	3"	3
MBC-1	MOP SERVICE BASIN CABINET	FLOOR MOUNTED	1/2"	N/A	1/2"	2"	3"	3
SK-2	SINK - UTILITY	FLOOR MOUNTED	1/2"	N/A	1/2"	1-1/2"	2"	1
UR-1	URINAL	RIM AT 24"	3/4"	N/A	N/A	2"	2"	2
WC-1	FLOOR MOUNTED WATER CLOSET - (ACCESSIBLE)	TOP OF SEAT 17"-19"	1"	N/A	N/A	2"	4"	1, 2
WC-2	FLOOR MOUNTED WATER CLOSET	TOP OF SEAT 15"	1"	N/A	N/A	2"	4"	2

NOTES:
 1. THIS ACCESSIBLE FIXTURE, ACCESSORIES, AND INSTALLATION SHALL COMPLY TO ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES STANDARDS.
 2. LOCATE FLUSH ACTUATORS ON WIDE SIDE OF STALLS OR APPROACH AREAS.
 3. PROVIDE ASSE 1016 CERTIFIED MIXING VALVE SET TO 110 DEG. F.

TAG	BASIS OF DESIGN		CAPACITY (GALLONS)	RECOVERY RATE (GPH)	TEMPERATURE RISE (°F)	THERMAL EFFICIENCY	ELECTRICAL DATA			TEMPERATURE SETTING (°F)	NOTES	
	MANUFACTURER	MODEL					INPUT RATE	VOLTAGE	PHASE			HERTZ
EWH-1	A.O. SMITH	DEL-30	30	24	100	97%	6 KW	208	1	60	140	1

NOTES:
 1. KW INPUT RATE FOR ELECTRIC WATER HEATERS BASED ON FULL LOAD SIMULTANEOUS OPERATION.

TAG	BASIS OF DESIGN		STRAINER/GRATE	NOTES
	MANUFACTURER	MODEL		
FD-1	JOSAM	30000-6S-PD-2-VP-X	6" x 6"	1, 2
FS-1	JOSAM	49344A-3-33-35-X	10" x 10"	HALF GRATE

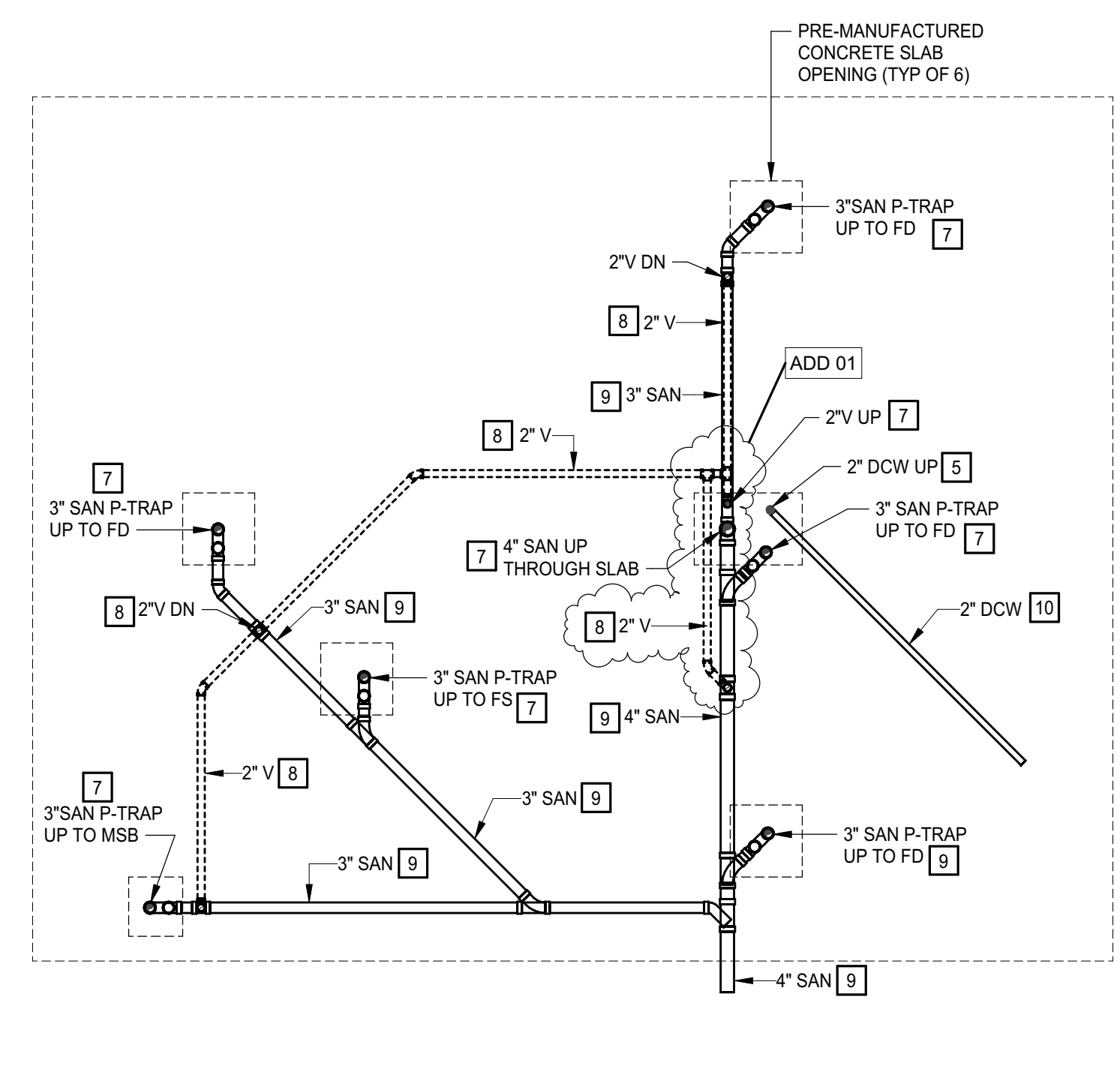
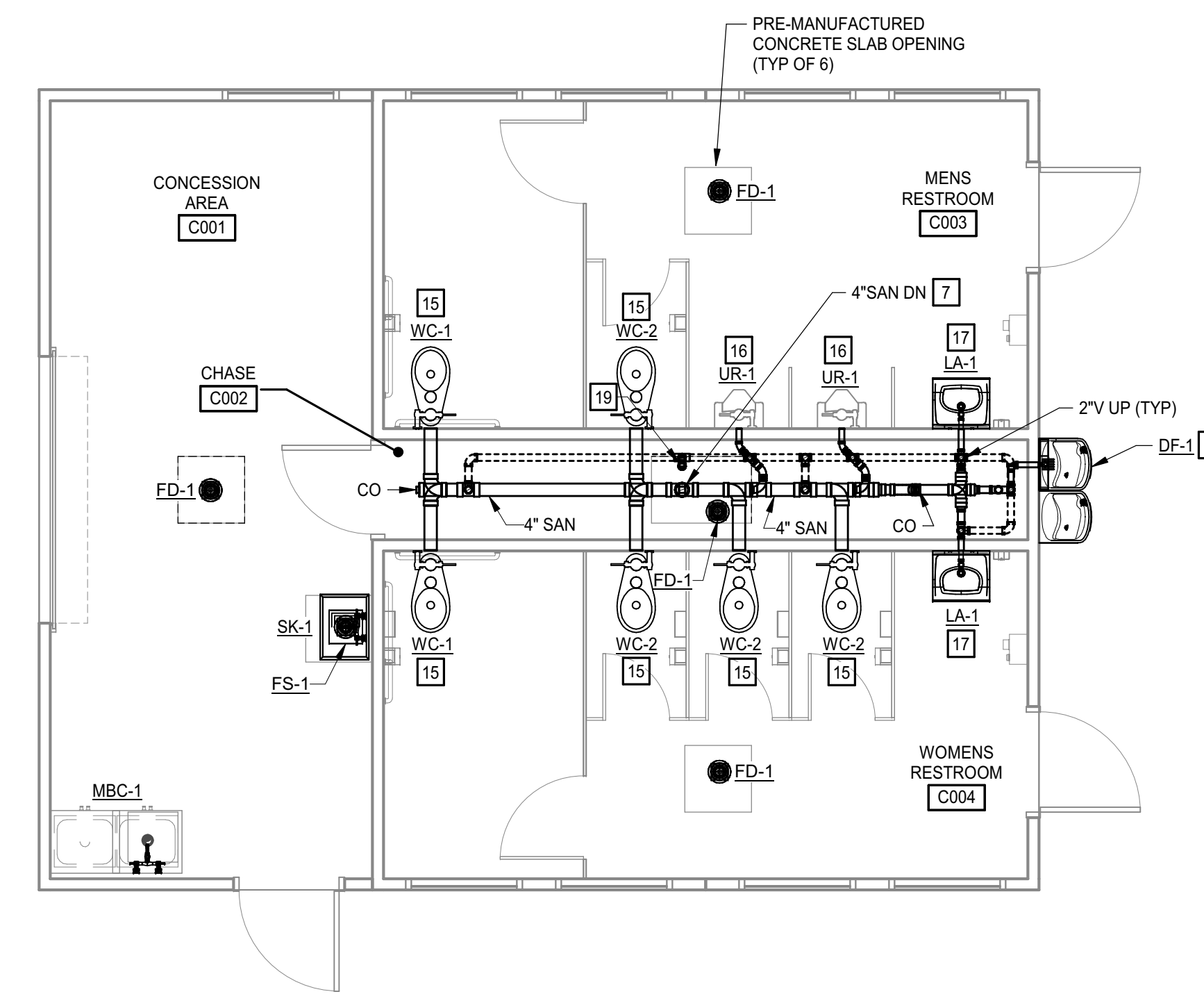
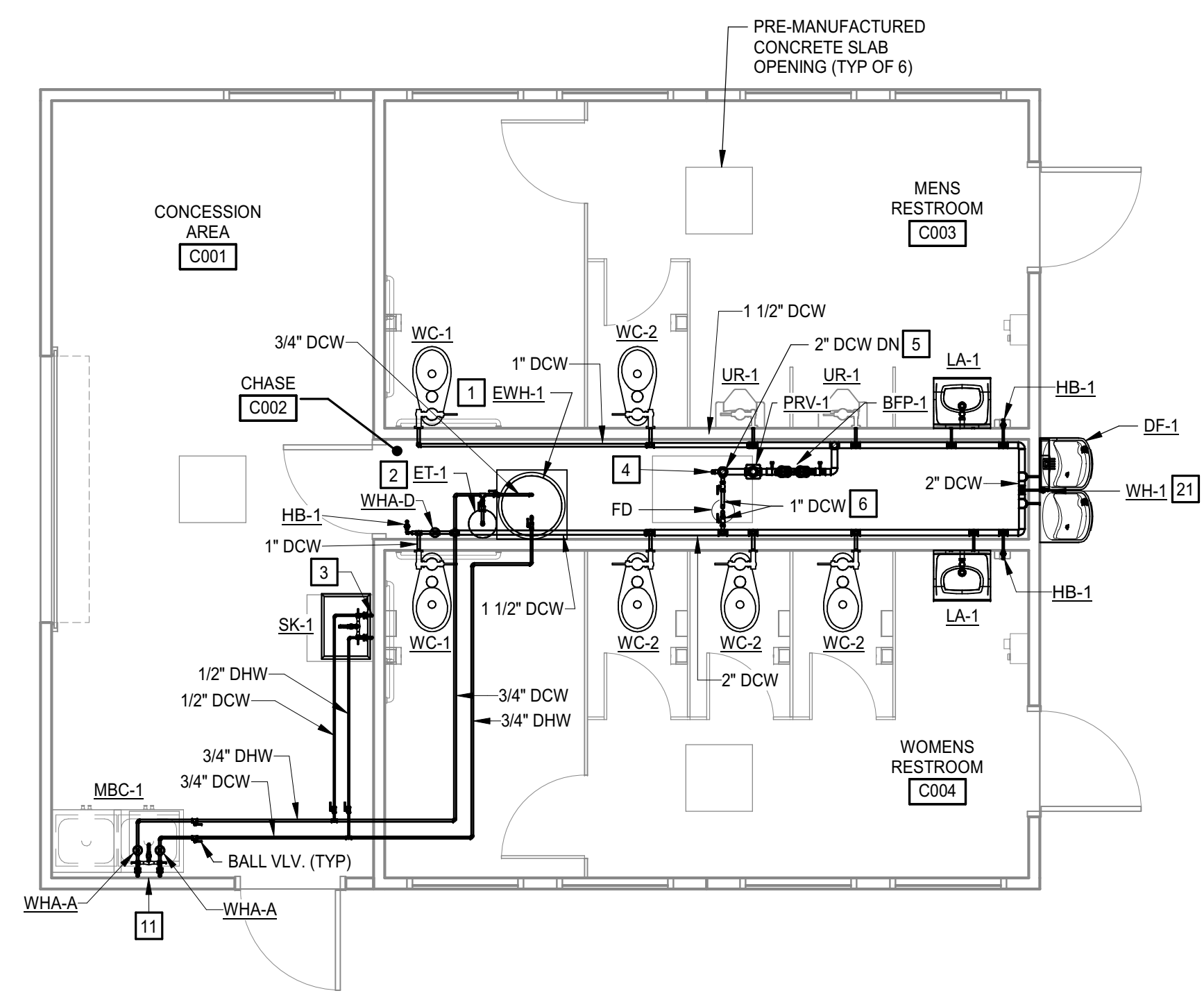
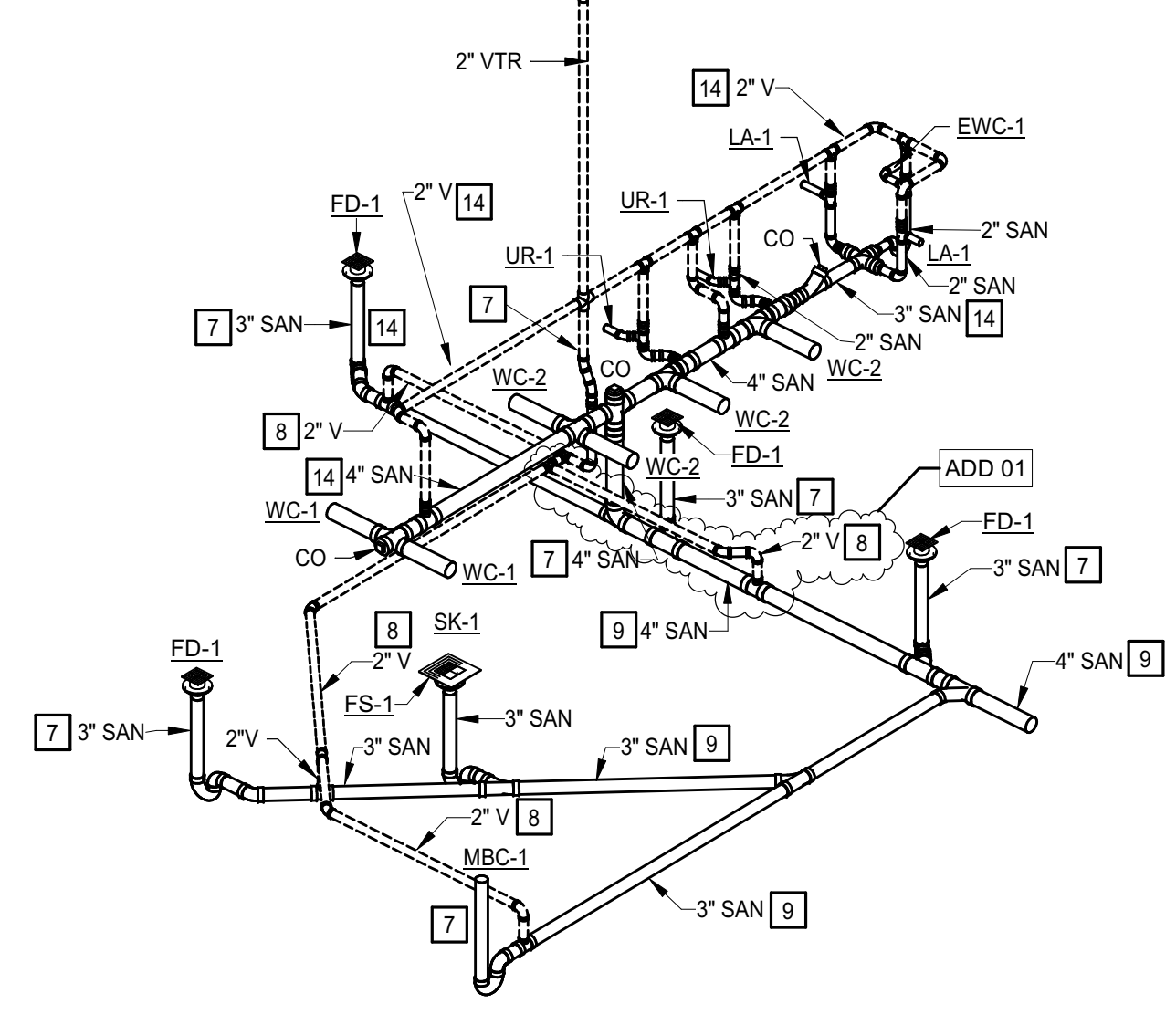
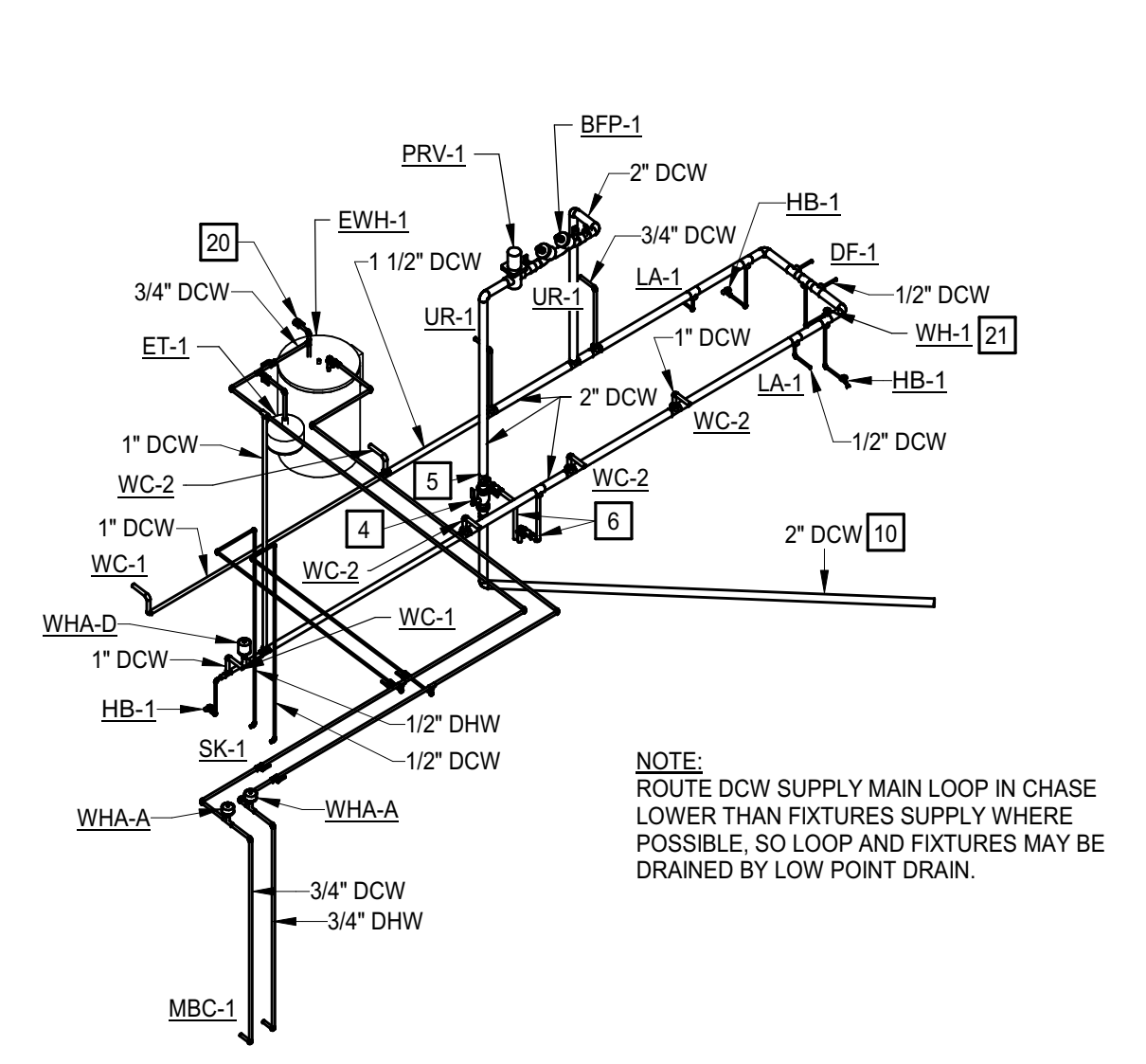
NOTES:
 1. PROVIDE ALL FLOOR DRAINS CONNECTED TO THE SANITARY SEWER SYSTEM WITH DEEP SEAL TRAPS AND TRAP GUARD INSERTS UNLESS OTHERWISE NOTED.
 2. SANITARY DRAINS TO HAVE ADJUSTABLE HEIGHT TOP.

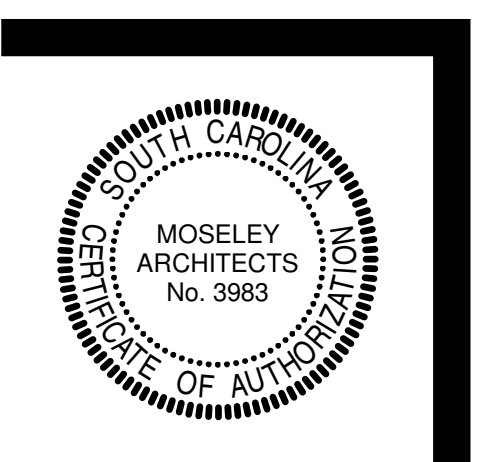
TAG	BASIS OF DESIGN		LOCATION	SYSTEM TYPE	TANK TYPE	OPERATING DATA			ASME CODE CONSTRUCTION (YES/NO)	CONNECTION SIZE INLET (IN)	NOTES
	MANUFACTURER	MODEL				TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	AIR PRE-CHARGE PRESSURE (PSIG)			
ET-1	AMTROL	ST-SC-DD	PLUMBING CHASE	DHW	EXPANSION	2.00	0.90	40 - 50	YES	3/4"	1

NOTES:
 1. PROVIDE HOLDRITE QUICK STRAP WALL MOUNTING BRACKET OR EQUAL TO ATTACH EXPANSION TANK TO WALL.

TAG	BASIS OF DESIGN		LOCATION	SYSTEM	SIZE	DESIGN FLOW RATE (GPM)	PRESSURE DROP (PSI)	NOTES
	MANUFACTURER	MODEL						
BFP-1	WATTS	LF007	PLUMBING CHASE	DCW	2"	65.00	10.00	
PRV-1	WATTS	LF25AUB-Z3	PLUMBING CHASE	DCW	2"	65.00	10.00	

- KEYNOTES**
 APPLIES TO THIS DRAWING REPRESENTED BY [n]
- ELECTRIC WATER HEATER LOCATED AS HIGH AS POSSIBLE ON GALVANIZED STEEL SUPPORT PLATFORM AND DRAIN PAN. ROUTE FULL SIZE DRAIN TO FLOOR DRAIN IN CHASE. PROVIDE HOLDRITE QUICKSTRAP EQUIPMENT PLATFORM OR EQUAL.
 - EXPANSION TANK MOUNTED HIGH AS POSSIBLE ON WALL BRACKET. PROVIDE HOLDRITE QUICKSTRAP MOUNTING BRACKET OR EQUAL.
 - 1/2" DCW & DHW DOWN FACE OF WALL TO SINK. AFFIX PIPING TO WALL WITH STAND-OFF SUPPORTS AND PROVIDE INSULATION AND PVC JACKET PER SPECIFICATION.
 - PROVIDE DCW MAIN SHUT-OFF VALVE PER SPECIFICATION 6' ABOVE FINISHED FLOOR.
 - 2" DCW MAIN STUBBED UP THROUGH PREMANUFACTURED FLOOR OPENING. REFER TO CIVIL DRAWINGS FOR PIPING.
 - LOW POINT DRAIN - 1" DCW WINTERIZING PIPING SYSTEM DRAIN WITH BALL VALVE. TURN DOWN OVER FLOOR DRAIN.
 - SANITARY OR VENT STUBBED UP THROUGH PREMANUFACTURED FLOOR OPENING. REFER TO CIVIL DRAWINGS FOR PIPING.
 - VENT PIPING UNDER SLAB. REFER TO CIVIL DRAWINGS FOR ALL UNDERSLAB PIPING.
 - SANITARY PIPING UNDER SLAB. REFER TO CIVIL DRAWINGS FOR ALL UNDERSLAB PIPING.
 - DOMESTIC PIPING UNDER SLAB. REFER TO CIVIL DRAWINGS FOR ALL UNDERSLAB PIPING.
 - 3/4" DCW & DHW DOWN FACE OF WALL TO MOP SINK CABINET FAUCET AT 3/4" AFF. AFFIX PIPING TO WALL WITH STAND-OFF SUPPORTS AND PROVIDE INSULATION AND PVC JACKET PER SPECIFICATION.
 - CONNECT SANITARY TO UNDER SLAB PIPING STUB-UP.
 - CONNECT DOMESTIC WATER TO UNDER SLAB STUB-UP.
 - SANITARY OR VENT PIPING ABOVE SLAB.
 - WALL MOUNTED WATER CLOSET BOLTED DIRECTLY THROUGH CONCRETE WALL WITH PIPE OPENINGS IN WALL.
 - WALL MOUNTED URINAL BOLTED DIRECTLY THROUGH CONCRETE WALL WITH PIPE OPENINGS IN WALL.
 - WALL MOUNTED LAVATORY SINK BOLTED DIRECTLY THROUGH CONCRETE WALL WITH PIPE OPENINGS IN WALL.
 - WALL MOUNTED HI-LO DRINKING FOUNTAIN.
 - 2" VENT DOWN THROUGH SLAB AND 2" VENT THROUGH ROOF.
 - 3/4" DCW MANUAL HIGH POINT VENT VALVE TO DRAIN DOMESTIC SYSTEM.
 - DHW HYDRANT LOCATED 12" AFF AND BELOW DRINKING FOUNTAINS.





Sullivan Middle School Athletic Concessions and Restroom Building

ROCK HILL SCHOOLS, DISTRICT THREE
Rock Hill, South Carolina

DATE	REVISIONS
2/25/20	ADD 1

PROJECT NO: 593120
DATE: FEBRUARY 7, 2020

GENERAL PROVISIONS

A. THE WORK TO BE PERFORMED UNDER THIS DIVISION CONSISTS OF FURNISHING AND INSTALLING ALL ELECTRICAL WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREINAFTER IT IS INTENDED THAT ALL WORK TO BE PERFORMED UNDER THIS DIVISION BE IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS GOVERNING STANDARDS OF DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIAL, INCLUDING BUT NOT LIMITED TO THE NEC AND THE NESC.

B. COMPLETE SHOP DRAWINGS AND ENGINEERING DATA ON ALL EQUIPMENT AND MATERIALS TO BE USED IN THE WORK OF THIS DIVISION SHALL BE SUBMITTED FOR THE ARCHITECT/ENGINEER'S APPROVAL IN ACCORDANCE WITH THE CONTRACT DRAWINGS WITHIN 10 DAYS OF NOTICE TO PROCEED.

C. ALL ELECTRICAL APPARATUS FURNISHED UNDER THIS DIVISION SHALL BE APPROVED BY UL AND SHALL BE SO LABELED OR LISTED WHERE SUCH IS APPLICABLE. WHERE CUSTOM BUILT EQUIPMENT IS SPECIFIED AND THE UL LABEL OR LISTING IS NOT APPLICABLE TO THE COMPLETED PRODUCT, ALL COMPONENTS USED IN THE CONSTRUCTION OF SUCH EQUIPMENT SHALL BE LABELED OR LISTED BY UL WHERE APPLICABLE.

D. AT THE COMPLETION OF THE ELECTRICAL INSTALLATION AND AT SUCH TIME AS THE ARCHITECT OR OWNER MAY DIRECT, THE CONTRACTOR FOR THE DIVISION SHALL CONDUCT AN OPERATING TEST FOR APPROVAL. ALL EQUIPMENT SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS AS INTENDED, PROVING SYSTEM INTEGRITY.

E. WHEN THE WORK ON THE PROJECT HAS BEEN COMPLETED AND IS READY FOR FINAL INSPECTION, SUCH AN INSPECTION WILL BE MADE. AT THIS TIME, THE CONTRACTOR SHALL DEMONSTRATE THAT THE REQUIREMENTS OF THIS DIVISION HAVE BEEN MET.

F. VARY LOCATION, SIZE, AND ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT BEING FURNISHED BEFORE ROUTING IN OF ANY CONDUIT FOR EQUIPMENT. REFER TO ALL CONTRACT DOCUMENTS PRIOR TO INSTALLATION OF FEEDER RUNS TO AVOID CONFLICTS WITH OTHER CONTRACTORS.

RACEWAYS AND FITTINGS

A. ALL WIRING SHALL BE INSTALLED IN GALVANIZED RIGID STEEL CONDUIT.

B. RACEWAYS SHALL BE INSTALLED AS A COMPLETE SYSTEM AND SHALL BE CONTINUOUS FROM OUTLET TO OUTLET UNLESS NOTED OTHERWISE. RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO ALL BOXES AND FITTINGS. RACEWAYS AND BOXES SHALL BE SUPPORTED FROM STRUCTURAL STEEL AND NOT SUPPORTED FROM THE CEILING GRID OR ROOF DECKING PER NEC.

C. THE MINIMUM SIZE CONDUIT USED SHALL BE 3/4" INCH. LARGER SIZES SHALL BE USED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

D. CONDUIT SHALL BE RUN EXPOSED TIGHT TO THE STRUCTURE.

E. A NYLON PULL CORD SHALL BE INSTALLED IN ALL CONDUITS IN WHICH CONDUCTORS ARE NOT INSTALLED. A 10 INCH LENGTH OF THE FISH CORD SHALL BE TIED OFF AT EACH END.

F. GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS. NO EXCEPTIONS!

WIRES AND CABLES

A. BRANCH CIRCUIT WIRING FOR POWER AND LIGHTING SHALL GENERALLY BE TYPE THW OR THWN.

B. ALL CONDUCTORS NO. 10 AWG AND SMALLER SHALL BE SOLID COPPER. ALL CONDUCTORS NO. 8 AWG AND LARGER SHALL BE STRANDED COPPER. ALL CONDUCTORS SHALL BE INSULATED FOR 600 VOLTS.

C. TYPE MC CABLE MAY BE USED FOR BRANCH CIRCUITS SERVING SERVICES WITHIN INTERIOR PARTITIONS AND EXTERIOR WALLS. INSTALLATION SHALL CONFORM WITH THE NEC. CONVERT TO CONDUIT AND WIRE FOR HOMERUNS.

D. ALL WIRE AND CONDUIT SIZED SHALL BE BASED UPON THE USE OF TYPE THW INSULATION.

E. ALL CABLING NOT IN CONDUIT SHALL BE PLENUM RATED.

F. BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM. THE ENTIRE LENGTH OF CIRCUITS SHALL HAVE THE SAME CONDUCTOR SIZE AS INDICATED FOR THE HOME RUN UNLESS NOTED OTHERWISE.

GENERAL NOTES

A. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

B. FOLLOW MOUNTING HEIGHTS INDICATED IN THE ELECTRICAL LEGEND UNLESS OTHERWISE INDICATED. MEASURE ALL MOUNTING HEIGHTS FROM THE DEVICE CENTER LINE UNLESS OTHERWISE INDICATED.

C. FIELD VERIFY EXACT FEEDER LOCATIONS FOR MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.

D. EQUIPMENT CONNECTIONS ARE INDICATED IN THEIR APPROXIMATE LOCATIONS. VERIFY EXACT LOCATIONS OF ALL CONNECTIONS WITH OTHER TRADES SUPPLYING EQUIPMENT TO AVOID CONFLICTS AT INSTALLATION.

E. LOCATED ALL SWITCHES FOR LOCAL CONTROL OF LIGHTING ON STRIKE SIDE OF SINGLE DOORS UNLESS OTHERWISE INDICATED.

F. PROVIDE SPECIFIC BREAKER ARRANGEMENT FOR THE PANEL BOARDS WHEREVER PHYSICALLY POSSIBLE. PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. PROVIDE TYPE WRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT.

G. PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. HAND WRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. HAND WRITTEN SCHEDULES ARE NOT ACCEPTABLE.

H. ALL CONDUIT RUNS INDICATED ARE DIAGRAMMATIC. COORDINATE ROUTING IN ALL SPACES WITH OTHER TRADES.

I. ALL PANELBOARDS INDICATED ARE HOUSED IN A SINGLE WIDTH ENCLOSURE. UNO. THE CONTRACTOR SHALL FIELD VERIFY RUM LAYOUT AND ADJUST ACCORDINGLY, AT NO COST TO THE OWNER, IF PROVIDING ANY PANELBOARD ENCLOSURES.

J. WHERE POWER AND COMMUNICATION OUTLETS ARE INDICATED IN CLOSE PROXIMITY ON THE DRAWINGS, FIELD COORDINATE THE LOCATIONS TO PLACE THE OUTLETS ADJACENT TO EACH OTHER.

K. ALL EXTERIOR RECEPTACLES SHALL BE LABELED "WR" - WEATHER RESISTANT.

L. WHEN GROUPING MULTIPLE LINES TO NEUTRAL BRANCH CIRCUITS IN A CONDUIT, PROVIDE DEDICATED COLOR CODED NEUTRAL CONDUCTORS FOR EACH CIRCUIT. DO NOT USE BREAKER TIES AND SHARED NEUTRALS EVEN THOUGH PERMITTED BY NEC.

M. PROVIDE A 2" WIDE YELLOW LINE PAINTED ON THE FLOOR INDICATING THE ELECTRICAL WORKING SPACE. IN FRONT OF ALL ELECTRICAL PANELS IN ELECTRICAL ROOMS. REFER TO PLANS FOR ELECTRICAL WORKING SPACE DETAILS. STENCIL "NO STORAGE" IN 2" HIGH, YELLOW LETTERS CENTERED IN THE OUTLINED AREA.

PANELBOARDS

A. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, SIEMENS, SQUARE D OR APPROVED EQUAL. LOAD CENTERS SHALL NOT BE ACCEPTED UNLESS SPECIFICALLY SPECIFIED ON THE DRAWINGS.

B. PROVIDE PANELBOARDS WITH COPPER BUS, RATINGS AS SCHEDULED ON DRAWINGS. SEPARATE NEUTRAL AND GROUNDING BARS WITH LUGS SHALL BE PROVIDED ON ALL 120/208-VOLT AND 277/480-VOLT PANELBOARDS. SPACE WHERE SHOWN IN PANEL SCHEDULES DESIGNATES SPACE FOR FUTURE PROTECTIVE DEVICES AND SHALL INCLUDE BUS AND SUPPORT COMPONENTS.

C. CABINETS OR BACK BOXES SHALL BE FABRICATED FROM GALVANIZED OR EQUIVALENT RUST RESISTANT SHEET STEEL OF THICKNESS TO MEET CODE REQUIREMENTS. CABINET DEPTHS SHALL BE THE MANUFACTURER'S STANDARD EXCEPT WHERE SPECIFIC REQUIREMENTS INDICATE OTHERWISE.

D. PANELBOARD FRONTS SHALL BE OF COLD ROLLED STEEL IN ACCORDANCE WITH GAUGES REQUIRED BY CODE. DOORS SHALL BE FASTENED TO TRIM BY FLUSH CONCEALED HINGES. DOORS SHALL BE EQUIPPED WITH A FLUSH TYPE COMBINATION CATCH AND KEVED LOCK. TWO MILLED TYPE KEYS SHALL BE PROVIDED WITH EACH PANEL AND ALL LOCKS SHALL BE KEVED ALIKE. DOORS SHALL BE EQUIPPED WITH A NEAT DIRECTORY FRAME SECURED TO THE INSIDE OF THE DOOR. TRIM AND DOORS SHALL BE PROPERLY CLEANED AND FINISHED WITH ONE RUST-INHIBITING PRIMUM COAT AND A FINISH COAT OF LIGHT GRAY ENAMEL, ANSI Z55.1-1967 NO. 61.

E. ALL PANELBOARD COMPONENTS SHALL BE OF THE SAME MANUFACTURER.

WIRING DEVICES

A. WIRING DEVICES SHALL BE COMPLETE WITH ALL MOUNTING DEVICES AND OTHER APPURTENANCES WHERE REQUIRED. ALL WIRING DEVICES SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER EXCEPT AS SPECIFICALLY STATED OTHERWISE.

B. ALL LIGHT SWITCHES SHALL BE TOGGLE TYPE, RATED 20 AMPS, 120/277 VOLT AC, SPECIFICATION GRADE, INSTALLED 48 INCHES ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED. SWITCHES SHALL BE SINGLE POLE, 3-WAY OR 4-WAY AS INDICATED.

C. ALL DIMMING SWITCHES SHALL BE SLIDE TYPE, RATED 20 AMPS, 120 VOLT AC, SPECIFICATION GRADE, INSTALLED 48 INCHES ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED.

D. ALL RECEPTACLES SHALL BE DUPLEX OUTLETS, 125 VOLT AC, 20 AMP, TWO POLE, THREE WIRE GROUNDING TYPE, SPECIFICATION GRADE, INSTALLED 18 INCHES ABOVE FINISHED FLOOR. SPECIAL AND HEAVY-DUTY TYPE RECEPTACLES SHALL BE PROVIDED AS SUITABLE FOR THE INTENDED USE.

E. PRESSED GALVANIZED STEEL OUTLET BOXES SHALL BE USED FOR INDOOR AND DRY LOCATIONS.

F. COORDINATE COVER PLATE COLOR WITH DEVICE COLOR AND ARCHITECTURAL FINISH SCHEDULE.

SUPPORTING DEVICES

A. ALL CONDUITS SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH THE NEC.

B. LAYOUT EQUIPMENT TO MAINTAIN HEADROOM, NEAT MECHANICAL APPEARANCE, AND TO SUPPORT EQUIPMENT LOADS REQUIRED.

GROUNDING

A. A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE PROVIDED. GROUNDING SHALL BE PROVIDED AND TESTED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND AS INDICATED ON THE DRAWINGS.

B. PROVIDE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL RACEWAYS.

LIGHTING FIXTURES

A. LIGHTING SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDED IES STANDARDS.

B. ALL FIXTURES SHALL BE FURNISHED COMPLETE WITH SOCKETS, INTERNAL WIRING, LEADS, TRIM, HANGERS, SUPPORTS, FRAMES, DRIVERS, AND ALL ACCESSORIES AND MISCELLANEOUS HARDWARE REQUIRED FOR PROPER INSTALLATION ETC., AS APPLICABLE.

C. ALL FIXTURES SHALL BE SUPPORTED BY MEANS OF ADEQUATE HANGERS WITH ATTACHMENTS TO BUILDING CONSTRUCTION INDEPENDENT OF ANY CEILING SYSTEM. EXACT LOCATIONS OF ALL CEILING MOUNTED LIGHTING FIXTURES SHALL BE DETERMINED FROM ARCHITECTURAL REFLECTED CEILING PLANS.

D. VERIFY EXACT CEILING TYPE PRIOR TO ORDERING OR THE INSTALLATION OF ANY CEILING LIGHTING FIXTURE.

E. THE LIGHTING FIXTURE LAYOUTS OF SPACES INDICATED IN THE CONTRACT DOCUMENTS ARE BASED UPON PHOTOMETRIC DATA, QUALITY, CONSTRUCTION AND APPEARANCE OF FIXTURES LISTED IN THE LIGHTING FIXTURE SCHEDULE. SUBSTITUTIONS OF LISTED FIXTURES ARE ALLOWED PROVIDED THAT A FOOTCANDLE CALCULATIONS FOR EACH ROOM OR AREA THAT FIXTURE SUBSTITUTION IS REQUESTED IS PROVIDED WITH THE SUBMITTAL. PACKAGE ARCHITECT/ENGINEER HAS FINAL AESTHETIC AND TECHNICAL APPROVAL ON ALL SUBSTITUTED FIXTURES.

TRANSFORMERS

A. ACCEPTABLE MANUFACTURERS: ACME, CUTLER-HAMMER, GENERAL ELECTRIC, SQUARE D, OR APPROVED EQUAL.

B. OPERATING VOLTAGES: PROVIDE TRANSFORMERS THAT HAVE PRIMARY AND SECONDARY VOLTAGES INDICATED ON THE DRAWINGS. FREQUENCY: 60 HERTZ, UNLESS NOTED OTHERWISE.

C. EXCEPT WHERE NOTED, INSULATION SYSTEM AND AVERAGE WINDING TEMPERATURE RISE FOR RATED KVA AS FOLLOWS: INSULATION SYSTEMS SHALL BE 220°C (150°C RISE) FOR 37.5 KVA AND ABOVE. SINGLE PHASE, OR 30 KVA AND ABOVE, THREE-PHASE UNITS. INSULATION SYSTEMS SHALL BE 185°C (115°C RISE) FOR 0.25 KVA THROUGH 25 KVA. SINGLE-PHASE, OR 3 THROUGH 15 KVA. THREE-PHASE UNITS. BASIC IMPULSE LEVEL (BIL) UNITS RATED 600 VOLTS OR LESS: 10 KV.

PULL AND JUNCTION BOXES

A. PULL BOXES SHALL BE INSTALLED AT ALL NECESSARY POINTS, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO PREVENT INJURY TO THE INSULATION OR OTHER DAMAGES THAT MIGHT RESULT FROM PULLING RESISTANCE OF FOR OTHER REASONS. NECESSARY FOR PROPER INSTALLATION. MINIMUM DIMENSIONS SHALL NOT BE LESS THAN NEC REQUIREMENTS AND SHALL BE INCREASED IF NECESSARY FOR PRACTICAL REASONS OR WHERE REQUIRED TO FIT A JOB CONDITION.

B. ALL BOXES SHALL BE GALVANIZED STEEL, RIGIDLY SECURED IN POSITION TO THE STRUCTURE.

C. CABINETS REQUIRED FOR USE IN VARIOUS SYSTEMS FOR THE MOUNTING OF ACCESSORIES OR TERMINALS, RELAYS AND THE LIKE SHALL BE CONSTRUCTED OF CODE GAUGE GALVANIZED STEEL. BACKBOARDS SHALL BE PROVIDED FOR THE MOUNTING OF ALL ACCESSORIES OF MINIMUM 3/4" PLYWOOD AND PAINTED TO MATCH THE CABINET.

D. WIREWAYS SHALL BE PROVIDED AS REQUIRED. WIREWAYS SHALL BE UL LISTED AS WIREWAYS OR AUXILIARY GUTTERS.

POWER LEGEND

SYMBOL	DESCRIPTION
[Symbol]	APPLIANCE RECEPTACLE, MOUNT AT +1'-6" AFF. PROVIDE NEMA CONFIGURATION TO MATCH PLUG FOR EQUIPMENT SERVED.
[Symbol]	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6" AFF.
[Symbol]	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10" AFF.
[Symbol]	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +7'-6" AFF.
[Symbol]	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6" AFF. PROVIDE NEMA 3R "WHILE IN USE" ENCLOSURE.
[Symbol]	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6" AFF.
[Symbol]	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10" AFF.
[Symbol]	JUNCTION BOX, CONCEALED ABOVE CEILING, UNO.
[Symbol]	EQUIPMENT POWER CONNECTION.
[Symbol]	HAND DRYER EQUIPMENT POWER DIRECT CONNECTION.
[Symbol]	MOTOR CONNECTION.
[Symbol]	PANELBOARD.
[Symbol]	TRANSFORMER, PROVIDE CONCRETE HOUSEKEEPING PAD UNLESS NOTED OTHERWISE.

LIGHTING LEGEND

SYMBOL	DESCRIPTION
[Symbol]	LIGHT SWITCH, RATED 120/277 VOLTS, 20-AMPS, MOUNT AT +3'-10" AFF.
[Symbol]	KEY OPERATED LIGHT SWITCH, RATED 120/277 VOLTS, 20-AMPS, MOUNT AT +3'-10" AFF.
[Symbol]	LIGHT FIXTURE, SURFACE MOUNT.
[Symbol]	LIGHT FIXTURE, WALL MOUNT, HEIGHT AS INDICATED.
[Symbol]	EXIT SIGN, WALL MOUNT, DIRECTIONAL ARROWS AS INDICATED. SHADING INDICATES FACE(S) OF SIGN.
[Symbol]	DUAL TECHNOLOGY OCCUPANCY SENSOR, CEILING MOUNTED.

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	SERIES NO.	VOLTAGE	WATTAGE	LUMENS	LAMP	COLOR TEMP.	MOUNTING	OPTIONS	COMMENTS
A	4" VANDAL RESISTANT FIXTURE	LUMAX	VWB7LED	120 V	45	4700 lm	LED	4000 K	SURFACE		
AE	4" VANDAL RESISTANT FIXTURE - EM	LUMAX	VWB7LED	120 V	45	4700 lm	LED	4000 K	SURFACE	1400 IM BATTERY	
B	LED WALL PACK	GARCO	1611BL-530L	120 V	28	3900 lm	LED	4000 K	WALL @ 8'-4"	PHOTOCELL/BATTERY	TYPE 2 DISTRIBUTION

DIV 23 ELECTRICAL CONNECTION SCHEDULE

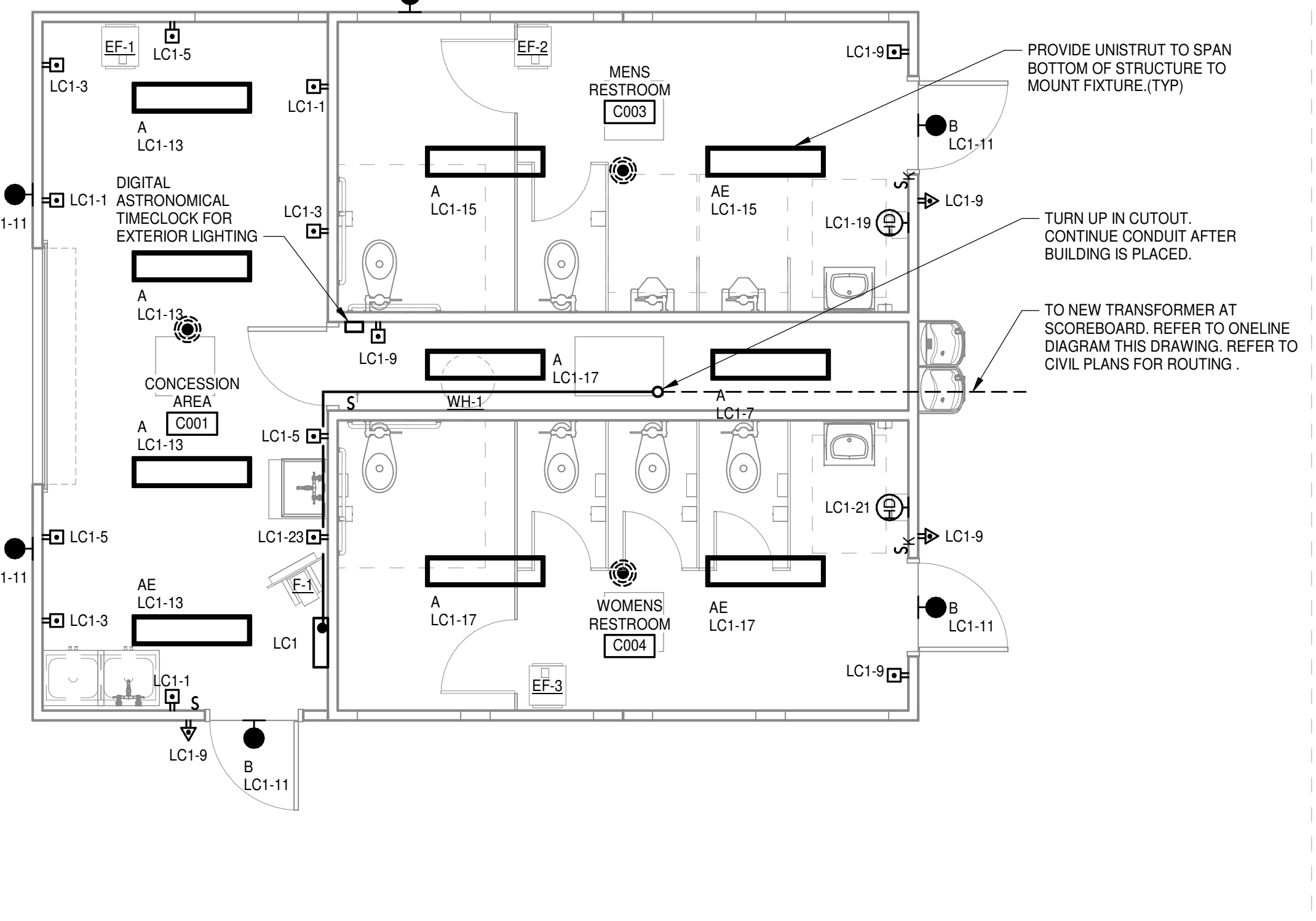
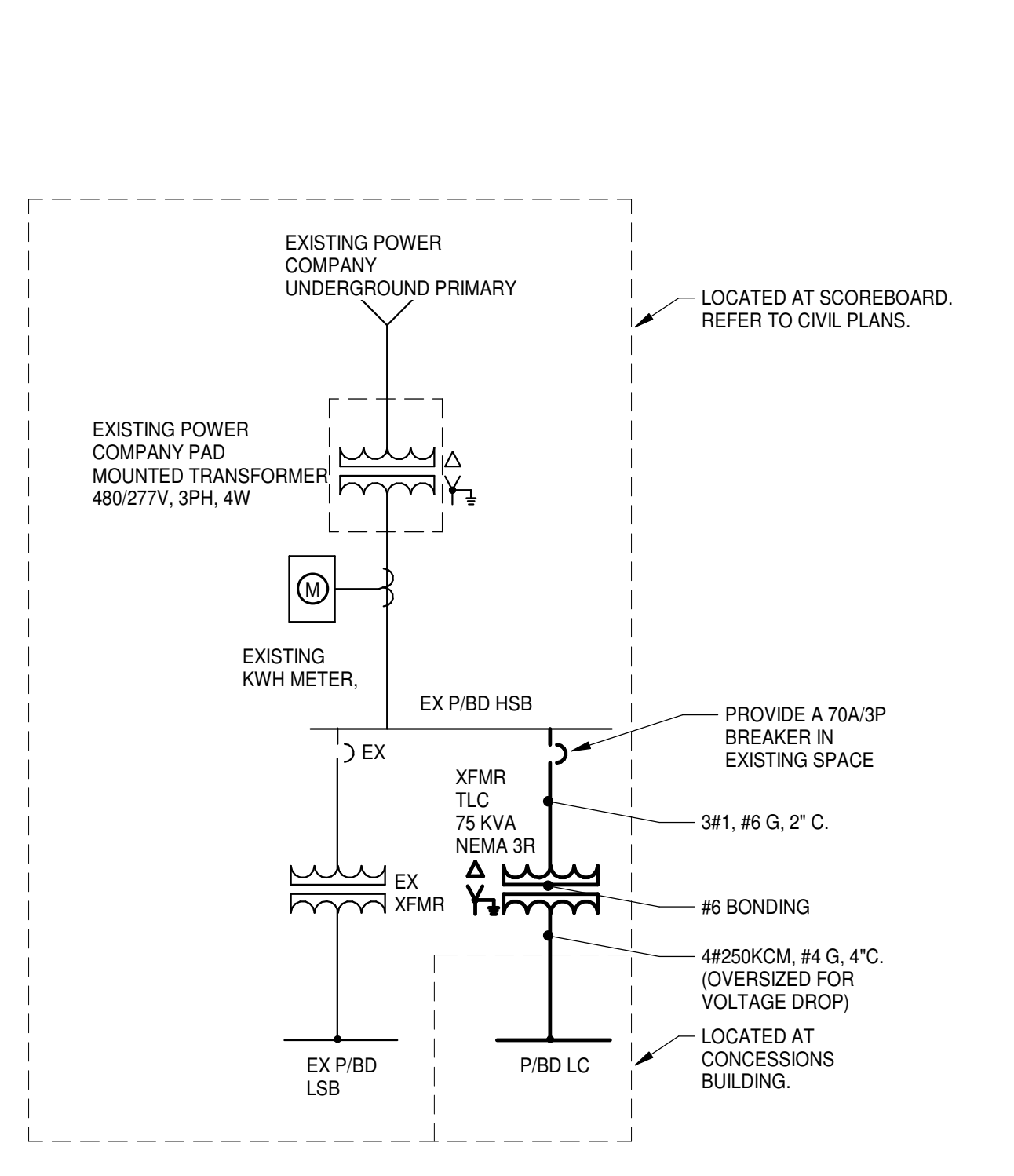
TAG	VOLTAGE	# POLES	LOAD	PANEL	CCT#	WIRE	DISCONNECTING MEANS	REMARKS
EF-1	120 V	1	1.0 kVA	LC1	13	2#12 #12G, 3/4" C	PROVIDED WITH UNIT	SWITCH WITH LIGHTS
EF-2	120 V	1	1.0 kVA	LC1	15	2#12 #12G, 3/4" C	MOTOR RATED SWITCH	SWITCH WITH LIGHTS
EF-3	120 V	1	1.0 kVA	LC1	17	2#12 #12G, 3/4" C	MOTOR RATED SWITCH	SWITCH WITH LIGHTS
F-1	120 V	1	0.1 kVA	LC1	13	2#12 #12G, 3/4" C	MOTOR RATED SWITCH AT 40"	PROVIDE OUTLET AT 7'-6"
WH-1	208 V	1	4.0 kVA	LC1	40, 42	2#10 #10G, 3/4" C	240V, 30A, 2P, NF, DISC	

PANELBOARD SCHEDULE LC1

225 AMP MCB, 120/208 Vwye, 3 PH 4 W, LOCATION: CONCESSION AREA C001, MOUNT: SURFACE, PANEL ASSEMBLY RATED (KAIC): 10 KAIC, FED FROM: TC1

CKT	BRKR	POLE	LOAD	A	B	C	LOAD	POLE	BRKR	CKT
1	20 A	1	CONCESSIONS RECEPTACLES	1.2	0.0		SPACE ONLY			2
3	20 A	1	CONCESSIONS RECEPTACLES		1.5	0.0	SPACE ONLY			4
5	20 A	1	CONCESSIONS RECEPTACLES			1.5	SPACE ONLY			6
7	20 A	1	INTERIOR LIGHTING	0.0	0.0		SPACE ONLY			8
9	20 A	1	EXT RECEPTACLES		1.1	0.0				10
11	20 A	1	EXTERIOR LTG VIA TIMECLOCK			0.2	SPARE			12
13	20 A	1	LIGHTS: EF-1	1.3	0.0			3	20 A	14
15	20 A	1	LIGHTS: EF-2			1.1		3	20 A	16
17	20 A	1	LIGHTS: EF-3			1.1		3	20 A	18
19	20 A	1	HAND DRYER - MENS	1.0	0.0		SPARE			20
21	20 A	1	HAND DRYER - WOMENS		1.0	0.0		3	20 A	22
23	20 A	1	ICE MAKER			0.5	SPARE			24
25	20 A	1	SPARE	0.0	0.0			3	20 A	26
27	20 A	1	SPARE		0.0	0.0		3	20 A	28
29	20 A	1	SPARE		0.0	0.0		3	20 A	30
31	20 A	1	SPARE	0.0	0.0			3	20 A	32
33	20 A	1	SPARE		0.0	0.0		3	20 A	34
35	20 A	1	SPARE			0.0	SPARE			36
37	20 A	1	SPARE	0.0	0.0			3	20 A	38
39	20 A	1	SPARE		0.0	2.3		2	40 A	40
41	20 A	1	SPARE			0.0	WATER HEATER			42

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
INTERIOR LIGHTING	0.5 kVA	125.00%	0.6 kVA	Total Conn. Load: 17.8 kVA Total Est. Demand: 17.9 kVA Total Conn. Current: 49 A Total Est. Demand: 50 A
EXTERIOR LIGHTING	0.2 kVA	125.00%	0.2 kVA	
RECEPTACLES	5.8 kVA	100.00%	5.8 kVA	
AC/HEAT PUMP	0.0 kVA	0.00%	0.0 kVA	
ELECTRIC HEAT	0.0 kVA	0.00%	0.0 kVA	
KITCHEN	0.0 kVA	0.00%	0.0 kVA	
MISCELLANEOUS	5.0 kVA	100.00%	5.0 kVA	



General Questions Received + Substitutions:

- 1) On sheet C 4.0 and C 4.1, the design indicates the 6" PVC sewer line changes to an 8" HDPE for the distance of the directional bore under Eden Terrace and then back to 6" PVC to final connection. We do not understand how this will work, why the change in pipe size and materials is necessary. We do not believe the City of Rock Hill would approve this design. Please explain the methodology for changing pipe sizes and materials and if CRH approval for this design has been permitted.
 - a. The 8" HDPE pipe for directional drilling is to be DR 9 (250 PSI), which has an inside diameter of 6.59". This is the closest size available that provides an inside diameter equal to or slightly larger than the ID of the PVC sewer service pipe. The HDPE pipe has fittings available to transition between the pipe types.

- 2) The sanitary sewer profile on sheet C 4.1 indicates very close clearances between the existing gas/water mains and the proposed sewer directional bore. How much research was put into determining the exact location of the existing lines, and who is responsible, or what alternative methods would be employed if these lines do not permit a safe installation of the directional bore?
 - a. Note #1 on sheet C4.0 directs the contractor to field verify the locations of all existing utilities and to notify the Engineer of any discrepancies. The proposed slope of the HDPE pipe crossing Eden Terrace and the remaining portion of 6" PCV pipe connecting to the existing sanitary sewer main is 2.00%. The minimum slope for a 6" service line is 1:00% If the field locates of the existing 8" water main and the 6" natural gas line are deeper than shown, the slope of these two sections of pipe could be reduced to that 1.00% slope to clear those conflicts. Within this 105 LF of the sewer service line, reduction of the slope to 1.00% would lower the invert of the cleanout at the school side of Eden Terrace to 645.92. A vertical drop can be installed at this cleanout to set up for the installation of the 6" D.I. pipe crossing over the 24" water main.

- 3) Drawing Number: 4.0 Will, any City of Rock Hill fees (i.e. impact, water, sewer, tap, etc.), be required? If so, which party is responsible for payment?
 - a. Any Utility Fee (Tap, Impact, Water/Meter fee) shall be by Owner.

- 4) On page C4.0, the directional bore shows 8" HDPE at 2% is that a sleeve? The sewer is 6" SDR35 everywhere else.
 - a. See response to Civil Question #1 regarding the HDPE section of pipe.

- 5) What color is the retaining wall?
 - a. Final retaining wall color has not been selected. It will be selected from the manufacturer's available standard colors as part of the product submittal process.

- 6) Is the GC required to supply the conduit and mainline for the electrical from the scoreboard to the concession building?
 - a. Yes. Under Bid Package 1, the successful bidder will supply the conduit and service wire to the building. After the building is set under Bid Package 2, the contractor under Bid Package 1 will terminate the connection to the panel in the building.

- 7) Who supplies and pays the geo-tec?
 - a. Third-party geotechnical testing will be provided for and paid for by the Owner.

- 8) Does the sewer and water need to be tested before the connection? Who pays for the testing?
 - a. The contractor is responsible for testing of both service lines in accordance with the City of Rock Hill Specifications.

- 9) Can an air punch be used to place conduit for the electrical under the concrete crossings as long as the required depth is maintained in place of a directional bore?
 - a. That would be acceptable.
- 10) Will red lines be acceptable in place of asbuilts?
 - a. Red-line record drawings will be acceptable in place of asbuilt surveys.
- 11) Has the depth of the 8" sewer line been verified where the 6" service line ties in?
 - a. See response to question #2. It would be recommended that prior to prosecuting utility work, existing utilities in question be "pot-holed" to confirm elevation and location. Any discrepancies in location and/or elevation should be brought to the attention of the EOR.
- 12) Are the retaining wall plans issued to be used for permitting? Who will pay for the permit. Does the wall construction need to be certified by a 3rd party? If so, who pays for that?
 - a. The engineered retaining wall design has been performed by the Owners Civil Engineer. No further design is required. The issued drawings will be the drawings submitted for retaining wall permit.
 - b. The scope of the retaining wall is under the jurisdiction of OSF. Therefore, no retaining wall permit is required
 - c. Third-Party geotechnical inspections will be provided/paid for by the Owner.
 - d. Certification of the wall construction will be by the engineer of record employed by the Owner.
- 13) Bid Package #1 and Bid Package #2 drawings appear to be the same. Are there manufacturer drawings specific to the concession stand that can be viewed?
 - a. The drawings for Bid Package #1 and Bid Package #2 are the same as they show the completed project as the result of coordination between both packages. Generally speaking, Bid Package #1 consists of all work related to site improvements, site utilities, site concrete, and final utility connections to plumbing and electrical systems. Bid Package #2 provides for the structural design, manufacturing/production of the building structure, and setting of the same structure in place upon site improvements by others. Included in the production of the structure are all associated finishes, accessories, and installation of all specified plumbing and electrical fixtures and infrastructure complete back to the point of final connection to site water/sewer and electrical utilities stubbed into the service chase. The building shown represents the basis of design for a restroom concession building that will meet the occupancy requirements of the bleacher seating. The building is a modular precast building that will be designed by the precast manufacturer and meet the specifications and program requirements of the building shown. Each manufacturer may have a slightly different building.
- 14) Please list or refer to the section that states specifically which fixtures will be provided by the plumbing contractor and which fixtures will need to be installed by the plumbing contractor. We realize we will have to install the floor drains, floor sinks, backflow preventer, PRV, and all piping in the chase and the to a couple of fixtures in the concession area. Will the hose bibs, exterior wall hydrant, stops, p-traps, flush valves already be in place, and just the connection of or will the installation be required as well?
 - a. All plumbing (and electrical) fixtures scheduled shall come "pre-installed" and piped/wired back to the service chase as part of the modular precast structure to be set in place. Final connections of site water to water riser shall be part of Bid Package #1 as will be pulling and terminating service wire into built panel provided with the modular precast structure. The backflow preventer and PRV shall be furnished and installed in Bid Package #1 in the service chase as part of the final connection.

- 15) How will the FD-1 in the chase, as well as Women's C004, be vented? Which of the two trap primers or trap guards to be used on the floor drains?
- a. The new under-slab vent is shown on plans as ADD 01.
 - b. Trap Guards shall be installed along with deep seal p-traps on ALL floor drains and floor sinks per Plumbing drawing P2.0.1, Drain, and Cleanout Schedule.
- 16) Substitution Request: Machflow had drier in lieu of Xlerator.
- a. Approved Substitution