

BLOSSOM STREET CONDENSATE LINE REPLACEMENT PROJECT

**PROJECT NUMBER CP00422803
COLUMBIA, SC
CONSTRUCTION DOCUMENTS**

DRAWING INDEX

GENERAL

T1 TITLE SHEET

MECHANICAL

**M1 SITE PLAN
M2 DETAILS, NOTES, SCHEDULES,
AND LEGEND**

ELECTRICAL

E1 ELECTRICAL PLAN

**CAMPUS PLANNING
AND CONSTRUCTION
COLUMBIA, SC 29208**

SEAL:

CHECKED BY: **WCL**

ORIG. BY

DATE

DRAWN BY:

DATE: **31MAR15**

DESCRIPTION

DRAWING: **CP00422803**

BUILDING:

REV.

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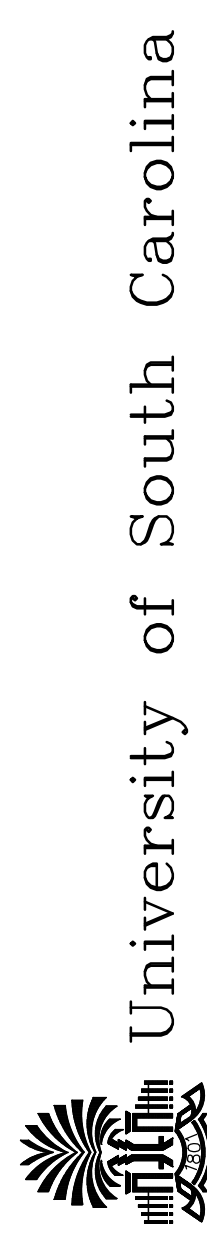
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PROJECT TITLE: **BLOSSOM STREET CONDENSATE LINE
REPLACEMENT PROJECT**



Swygert & Associates
CONSULTING ENGINEERS

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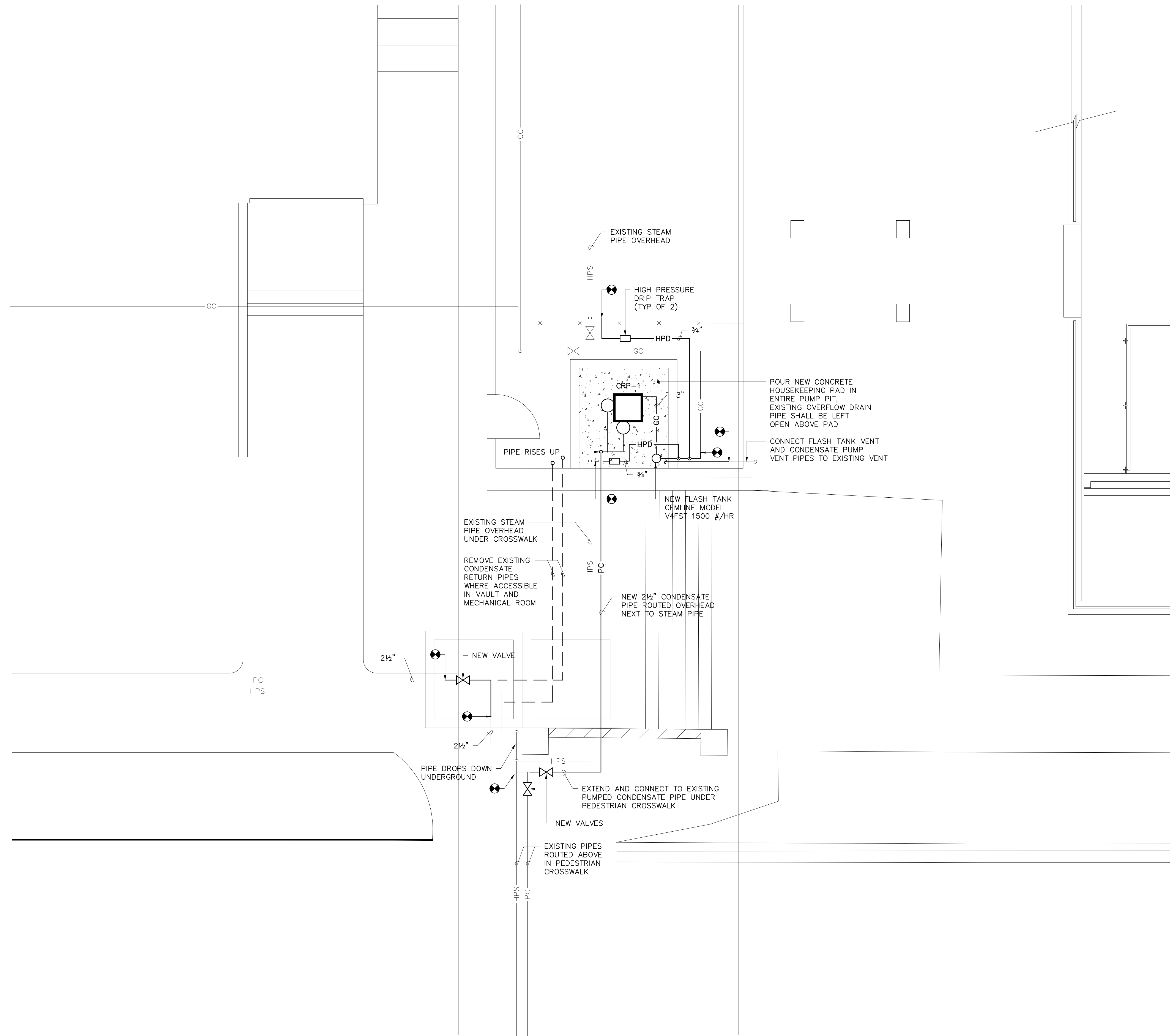
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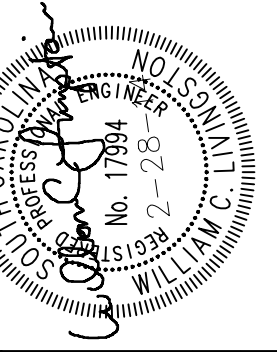
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1 SITE PLAN - RENOVATION
SCALE: 1/4" = 1'-0"

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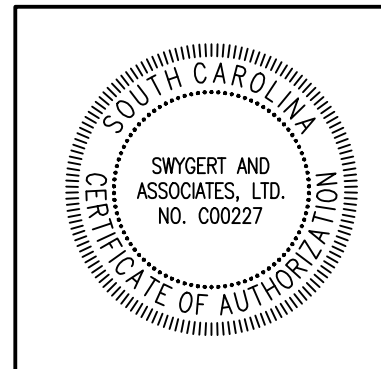


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University of South Carolina

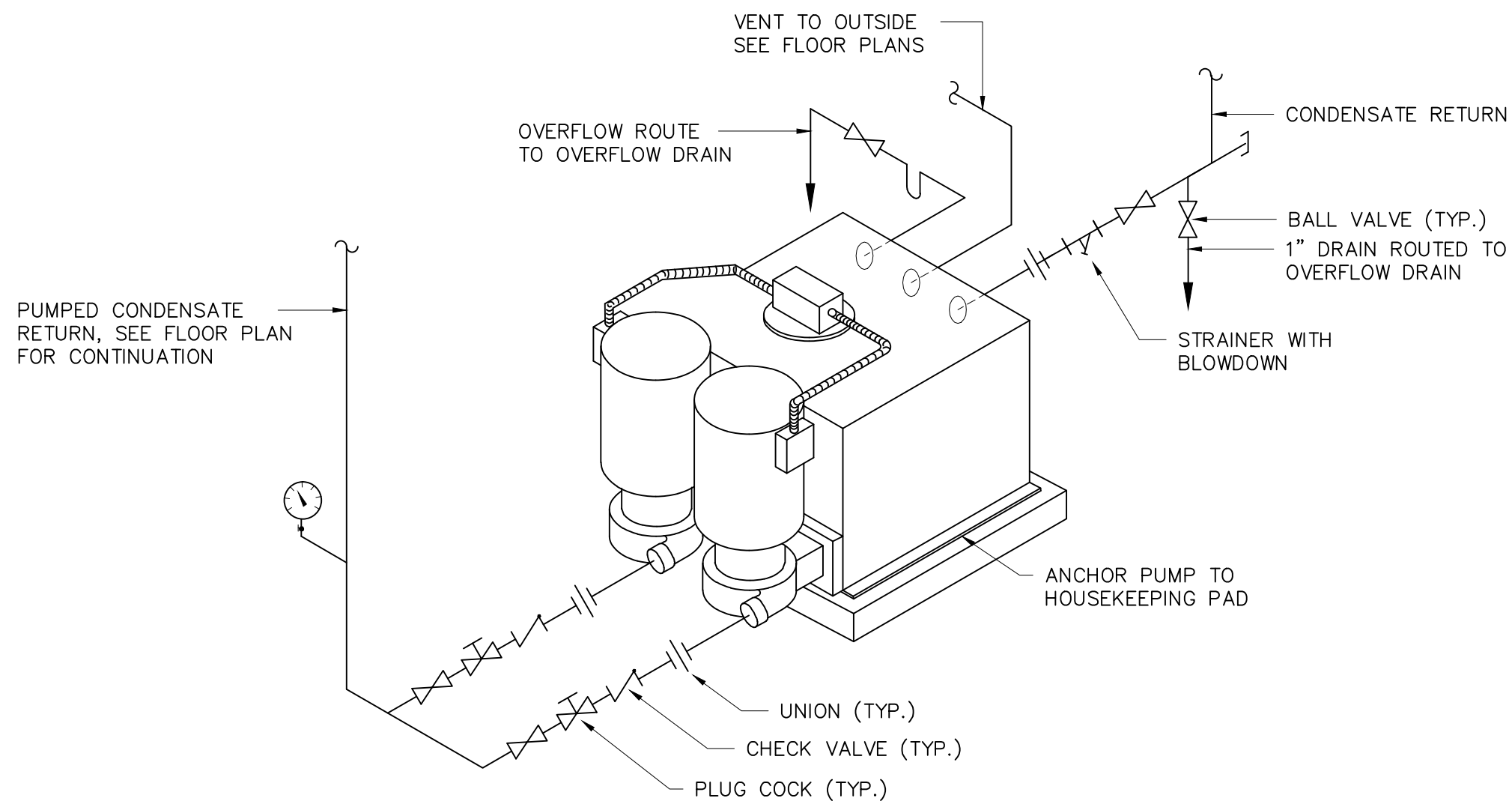
SHEET: M-1
OF
SHEET IN SET: OF



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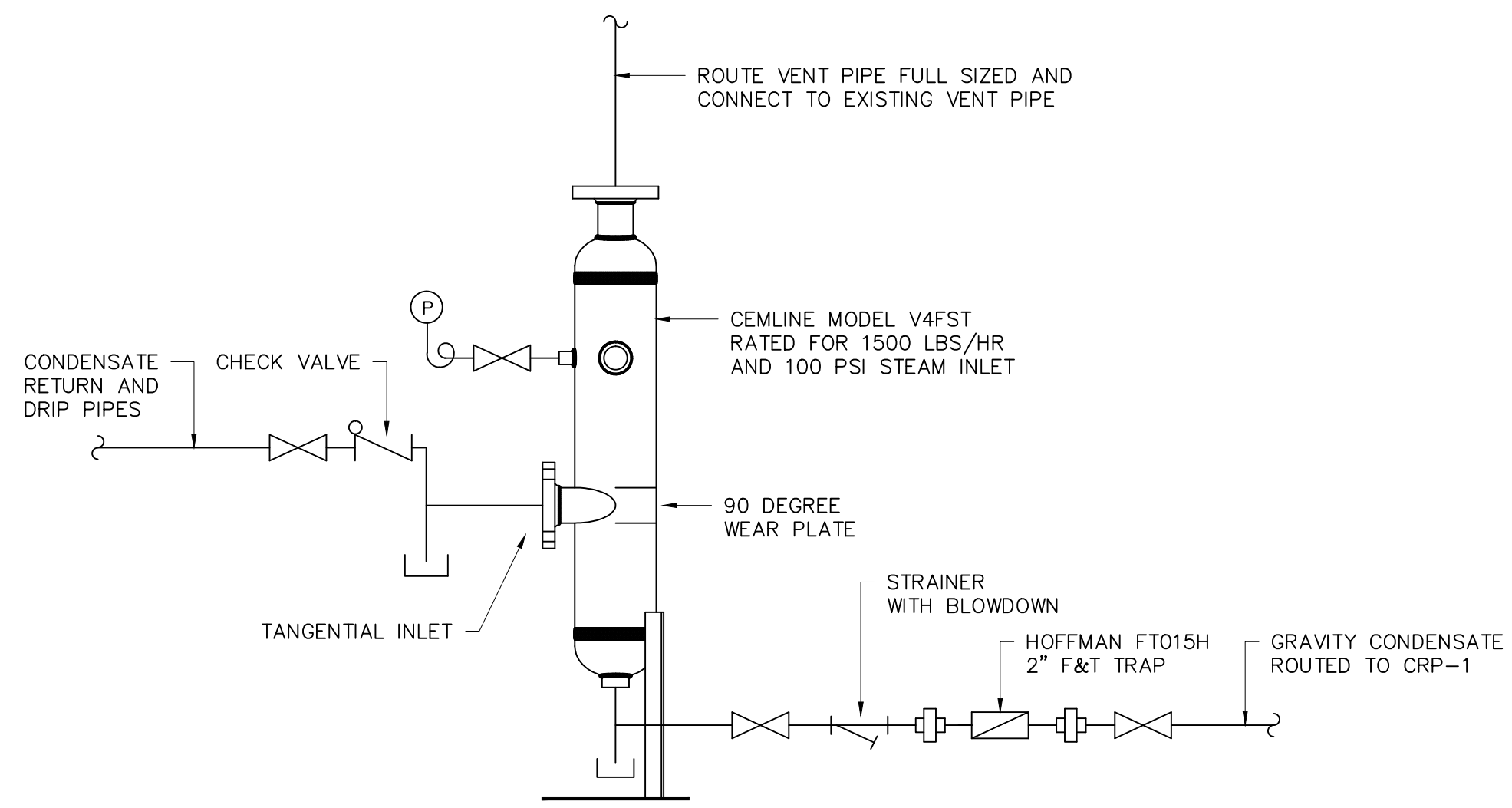
CONDENSATE RETURN UNIT						
TAG	DOMESTIC PUMP MODEL NO.	CAP. GPM	DIS. PRESS. PSIG	MOTOR H.P.	RECEIVER CAP., -GALS.	REMARKS
CRP-1	303CC	30	30	1	36	1,2
1. PROVIDE MECHANICAL ALTERNATOR PUMP CONTROL, NEMA 2 TYPE CONTROL PANEL, VENT AND OVERFLOW AND FUSED DISCONNECT. 2. PUMPS SHALL BE DUPLEX ARRANGEMENT.						

- ### GENERAL NOTES
- VISIT SITE PRIOR TO BIDDING. THIS CONTRACTOR SHALL DETERMINE DIFFICULTY OF INSTALLATION AND REFLECT THIS IN HIS BIDDING.
 - DO NOT SCALE DRAWINGS. THIS CONTRACTOR SHALL VERIFY ALL EXISTING ITEMS AND LOCATIONS IN THE FIELD.
 - ALL PIPING LOCATIONS SHALL BE COORDINATED WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID INTERFERENCE.
 - EXISTING PIPE, DUCTWORK, CONDUIT, ETC. THAT INTERFERES WITH THE ROUTING OF NEW SYSTEMS SHALL BE RELOCATED. THIS CONTRACTOR SHALL INCLUDE THE COST OF SUCH IN HIS BID UNLESS NOTED OTHERWISE.
 - SEE SITE PLAN FOR CONTINUATION OF UTILITIES.
 - WATER SYSTEMS SHALL BE DRAINED AS REQUIRED FOR INSTALLATION AND VENTED OF ALL AIR. UPON COMPLETION, SYSTEM SHALL BE FILLED WITH WATER AND VENTED OF ALL AIR.
 - ALL PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS, ROOFS AND PARTITIONS.
 - ALL PIPING IS SHOWN DIAGRAMMATIC. HOWEVER, THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED FITTINGS, PIPING AND INSULATION FOR ALL OFFSETS AND/OR CHANGES IN ELEVATION.
 - EXTEND ALL DRAIN LINES TO NEAREST FLOOR DRAIN OR AS INDICATED - SO ROUTED AS TO AVOID INTERFERENCE WITH PASSAGEWAYS AND MAINTENANCE DRAINS FROM AIR HANDLING UNITS SHALL BE TRAPPED PER STATIC PRESSURE REQUIREMENTS.
 - EXTEND DRAIN LINES FROM RELIEF VALVES TO NEAREST FLOOR DRAIN UNLESS OTHERWISE NOTED OR INDICATED.
 - ALL VALVES AND SPECIALTIES SHALL BE LINE SIZE UNLESS NOTED OTHERWISE, USING ECCENTRIC REDUCERS ON PUMP SUCTION AND CONCENTRIC REDUCERS ON PUMP DISCHARGE. USE ECCENTRIC REDUCERS ON AUTOMATIC VALVES AS REQUIRED.
 - ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS AND FURTHER SUPPORTS OR HANGERS SHALL BE PROVIDED TO PREVENT WEIGHT OF PIPING BEING PLACED ON EQUIPMENT.
 - INSTALL ANCHORS AND EXPANSION LOOPS WHERE INDICATED ON DRAWINGS AND WHERE REQUIRED TO ALLOW FOR EXPANSION.
 - STEAM MAINS SHALL PITCH DOWN IN DIRECTION OF FLOW A MINIMUM OF ONE INCH IN FIFTY FEET. CONDENSATE RETURN MAINS SHALL PITCH DOWN IN DIRECTION OF FLOW A MINIMUM OF ONE INCH IN FIFTY FEET.
 - ALL ITEMS OF EQUIPMENT IN MECHANICAL ROOM SHALL BE LOCATED ON REINFORCED CONCRETE FOUNDATIONS, MINIMUM 6-INCH THICK OR AS DETAILED ON THESE PLANS AND SPECIFICATIONS AND 6 INCHES LARGER THAN EQUIPMENT IN EACH DIRECTION. PADS SHALL BE REINFORCED PER THE HOUSEKEEPING PAD SECTION OF THE ASHRAE PRACTICAL GUIDE FOR SEISMIC RESTRAINT. ALL UNITS SHALL BE SECURED TO THE HOUSEKEEPING PAD WITH SEISMIC RESTRAINTS. PROVIDE 1-INCH CHAMFERS ON ALL SIDES.
 - PROVIDE FOR ACCESS TO ALL EQUIPMENT REQUIRING CLEANING OR ADJUSTMENT.
 - THIS CONTRACTOR SHALL PROVIDE ALL ITEMS OF MISCELLANEOUS STEEL AS REQUIRED FOR INSTALLATION OF ALL MECHANICAL ITEMS.
 - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY DISMANTLING OF EQUIPMENT TO BE REMOVED.
 - ITEMS REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY.
 - THIS CONTRACTOR SHALL PATCH ALL WALLS AND FINISHED TO MATCH EXISTING WHERE ALL ITEMS OR EQUIPMENT ARE REMOVED.



DUPLEX CONDENSATE RETURN UNIT

NO SCALE

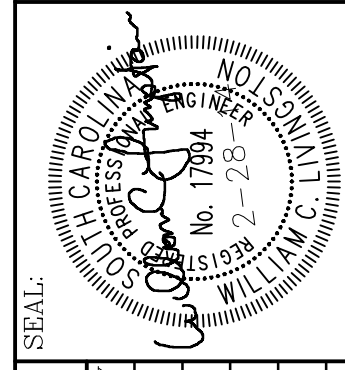


FLASH TANK DETAIL

NO SCALE

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING HIGH PRESSURE STEAM
	EXISTING PUMPED CONDENSATE
	EXISTING GRAVITY CONDENSATE
	HIGH PRESSURE STEAM LINE
	HIGH PRESSURE CONDENSATE DRIP LINE
	PUMPED CONDENSATE LINE
	GRAVITY CONDENSATE LINE
	PIPE TURNS TO, AWAY
	UNION
	SHUTOFF VALVE
	CHECK VALVE
	STRAINER WITH BLOWDOWN
	CONNECTION POINT OF NEW TO EXISTING

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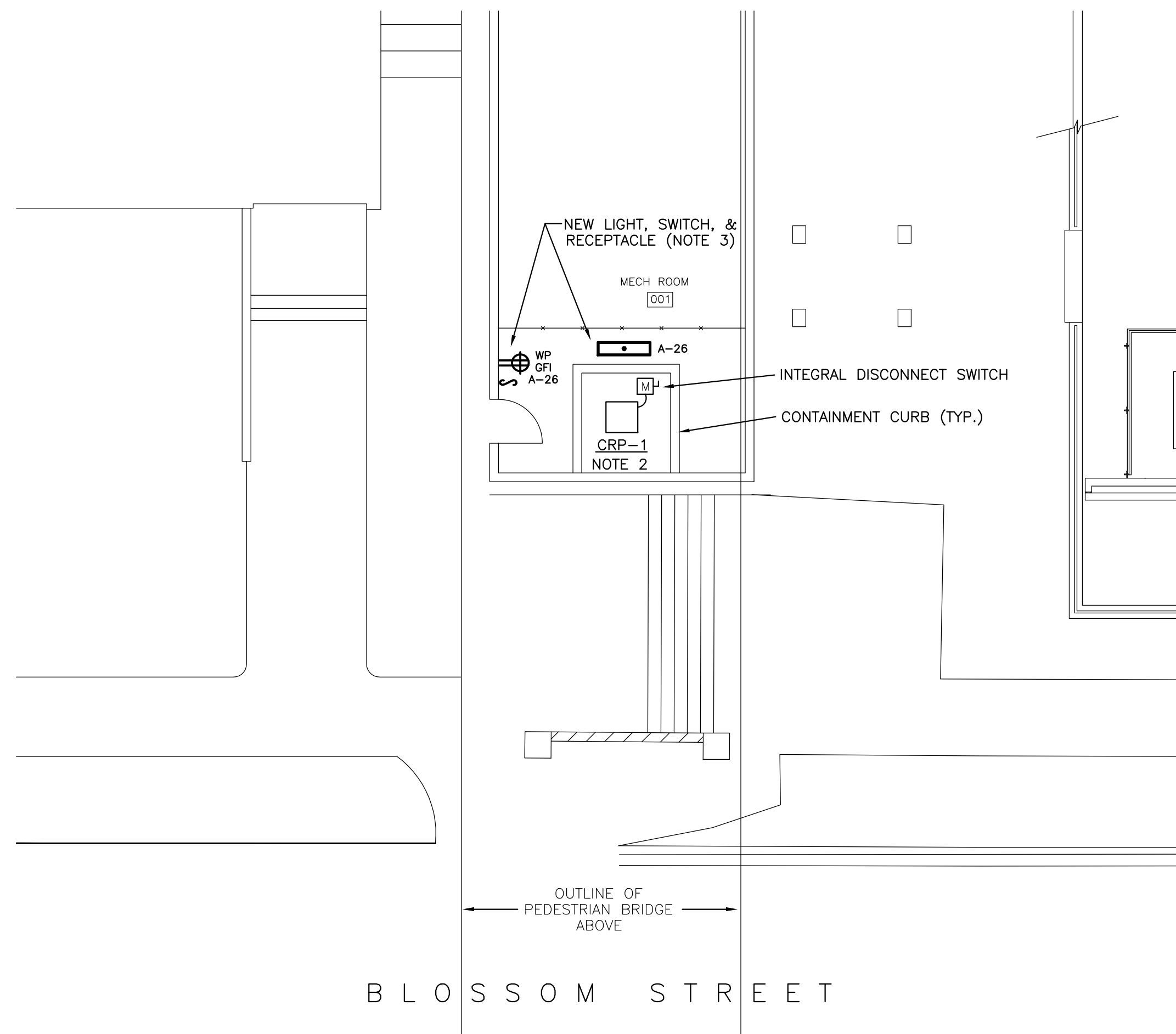
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SHEET: **M-2**

OF

SHEET IN SET:

OF



120/208V, 3 PH., 4W, 60 HZ
100 AMP MAIN BREAKER
SURFACE MOUNTED
10,000 A.I.C. SYM. (MINIMUM)

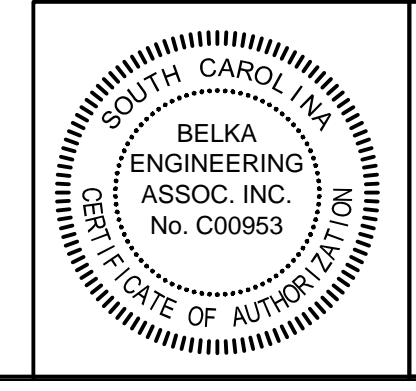
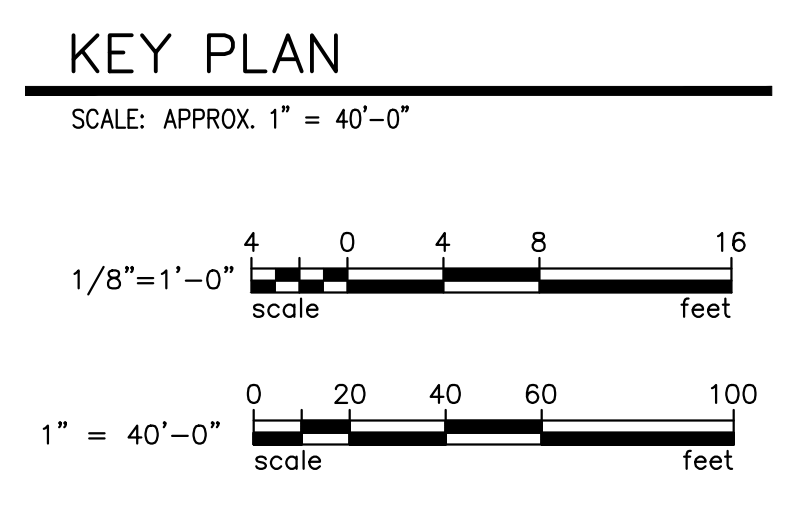
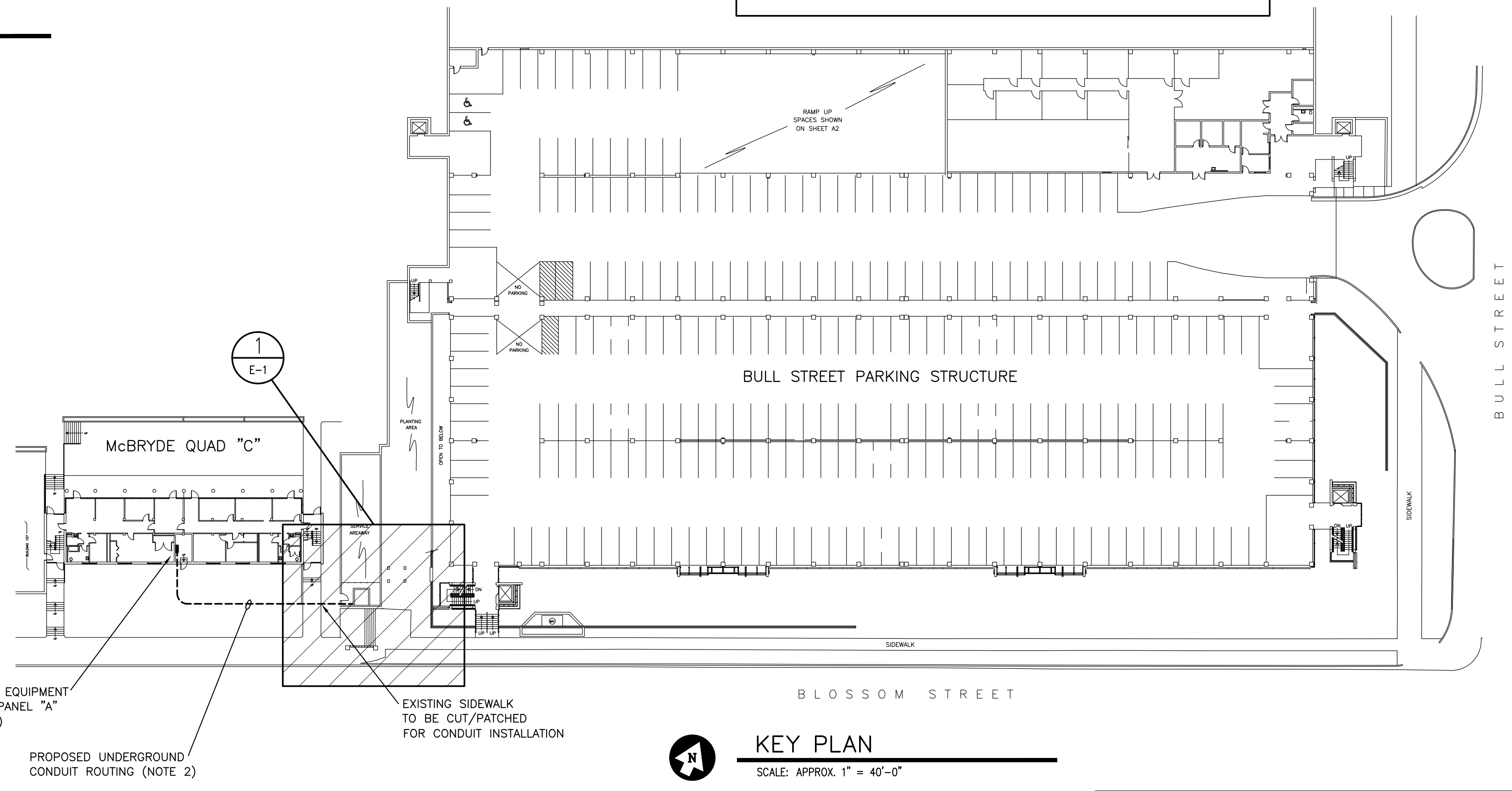
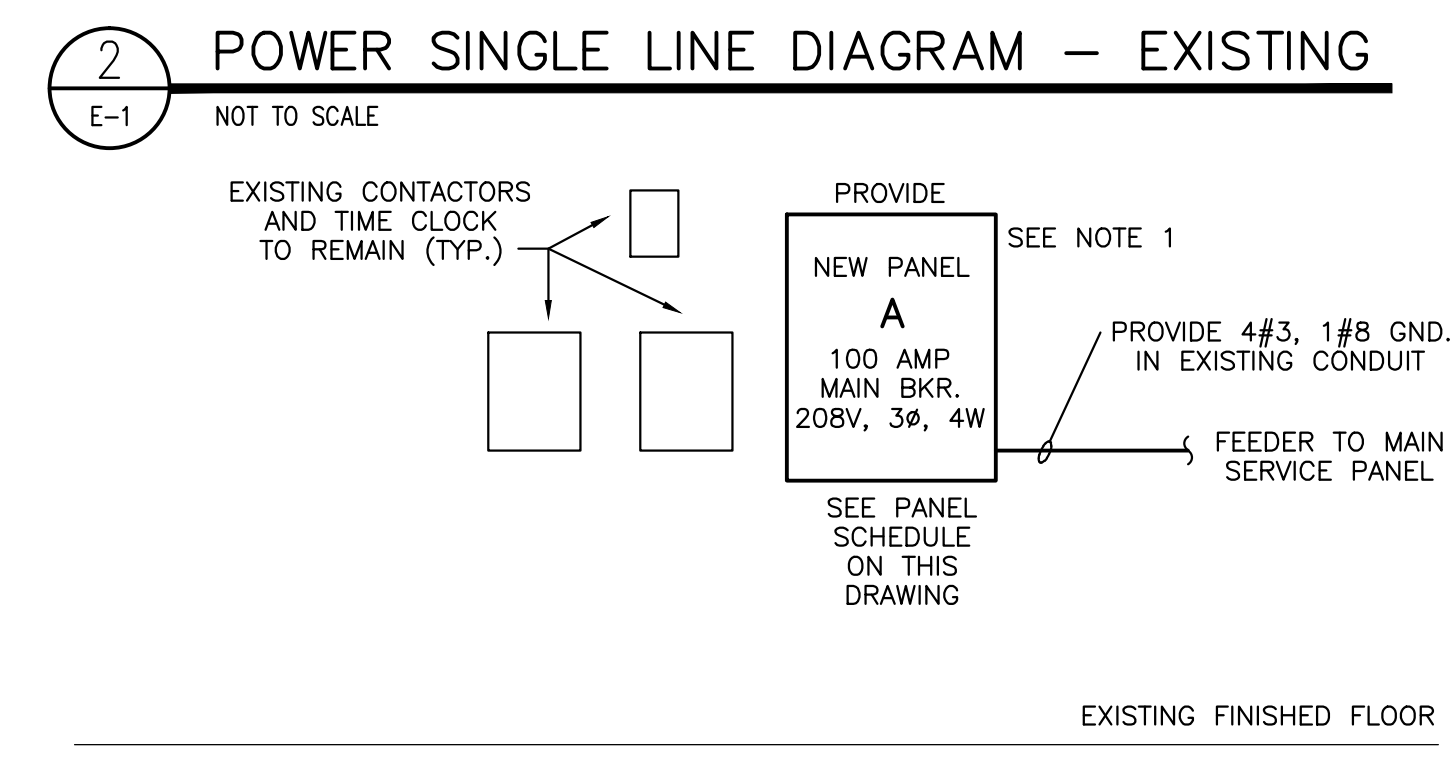
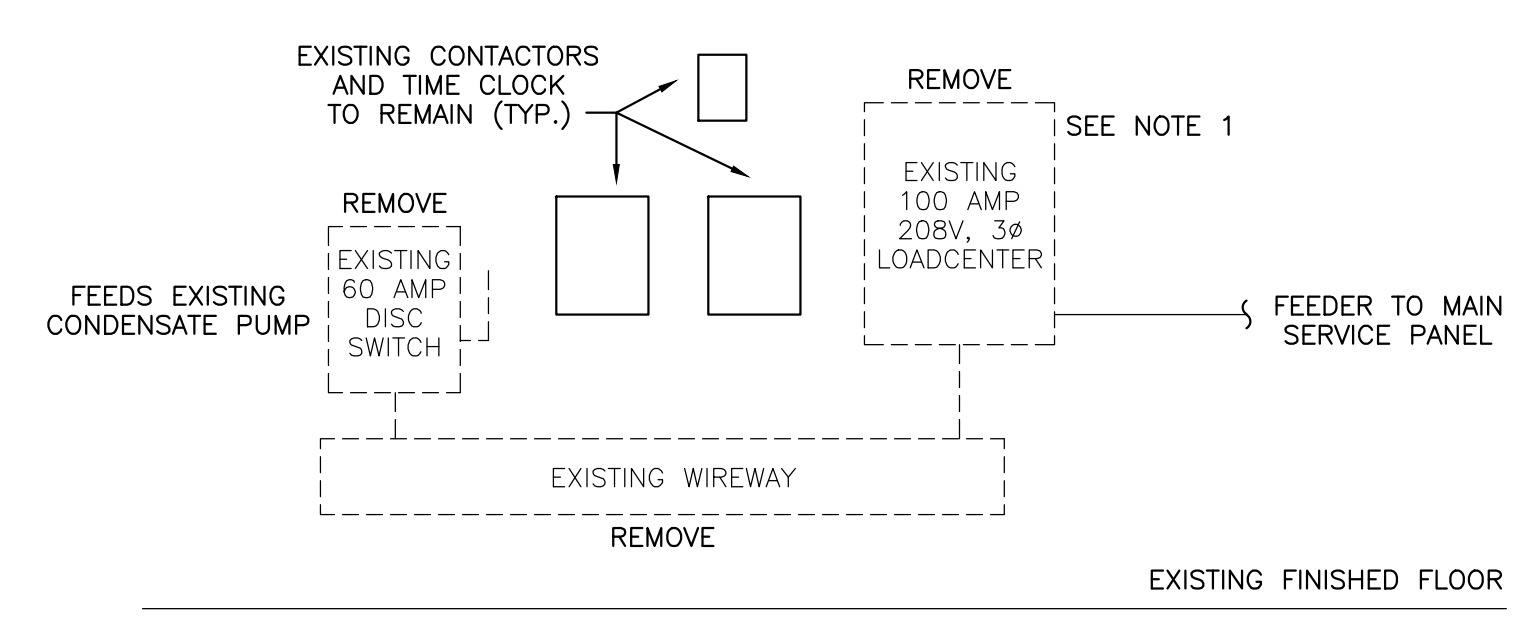
NEW PANEL "A"

LOADS SERVED	BKR. AMP	LOAD KVA	CKT. NO.	(S / N)	CKT. NO.	LOAD KVA	BKR. AMP	LOADS SERVED
EXISTING HACR	20	*	1		2	1.2		
EXISTING UNKNOWN	20	*	3		4	1.2	20	NEW CONDENSATE PUMP
EXISTING UNKNOWN	20	*	5		6	1.2		
EXISTING TOP PUMP	20	*	9		10	*	20	EXISTING UNKNOWN
EXISTING UNKNOWN	20	*	11		12	*	20	EXISTING UNKNOWN
EXISTING UNKNOWN	20	*	13		14	*	30	EXISTING UNKNOWN
EXISTING TIME CLOCK	20	*	15		16	*		
EXISTING BOILER PUMP	20	*	17		18	*	30	EXISTING UNKNOWN
EXISTING UNKNOWN	20	*	19		20	*		
EXISTING EXHAUST FAN	20	*	23		24	*	20	EXISTING JCI CIRCUIT
SPARE	20	-	25		26	0.3	20	EXISTING UNKNOWN
SPARE	20	-	27		28	-	20	PUMP ROOM LIGHT & RECP.
SPARE	20	-	29		30	-	20	SPARE
APPROX. TOTAL LOAD (KVA)								
25.0								

* DENOTES EXISTING LOAD

- ELECTRICAL NOTES**
- REMOVE EXISTING 100 AMP LOADCENTER, EXISTING 60 AMP DISCONNECT SWITCH, AND EXISTING WIREWAY. TRANSFER EXISTING LOADS IN LOADCENTER TO NEW PANEL "A" AS INDICATED IN PANEL SCHEDULE ABOVE. PROVIDE NEW PANEL FEEDER FROM McBRYDE MAIN PANEL (APPROXIMATE DISTANCE OF FEEDER SHALL BE 75 FEET). EXISTING CONDUIT MAY BE USED. IF NEW CONDUCTORS CANNOT BE PULLED IN EXISTING CONDUIT, PROVIDE NEW 1-1/2" C. STAGE WORK TO MINIMIZE POWER OUTAGE. COORDINATE POWER OUTAGE WITH USC-HOUSING GIVING 7-DAY ADVANCE NOTICE. EXISTING CONTACTORS ABOVE WIREWAY SHALL REMAIN; RECONNECT AS REQUIRED.
 - PROVIDE 20 AMP, 208V, 3 PHASE BRANCH CIRCUIT FOR NEW CONDENSATE PUMP. PROVIDE 3#12, 1#12G. IN 1" C. FROM NEW PANEL "A" TO PUMP. THIS SHALL BE A SINGLE POINT CONNECTION; COORDINATE LOCATION AND CONNECTION WITH MECHANICAL CONTRACTOR. ROUTE CONDUIT UNDERGROUND FROM McBRYDE FIRST LEVEL MECHANICAL/ELECTRICAL ROOM TO EXISTING MECHANICAL ROOM UNDER BLOSSOM STREET PEDESTRIAN BRIDGE. CUT AND PATCH EXISTING CONCRETE WALKWAYS; COORDINATE WITH OTHER TRADES THAT REQUIRE WALKWAY CUTTING/PATCHING. THERE ARE SEVERAL POTENTIAL UNDERGROUND CONFLICTS WITH PROPOSED PATH; COORDINATE UNDERGROUND UTILITIES LOCATOR SERVICE WITH USC.
 - IN EXISTING MECHANICAL PUMP ROOM, PROVIDE ONE NEW 4' WET LOCATION LED LIGHT FIXTURE (LITHONIA# WL4 2000 LP840 OR APPROVED EQUAL), ASSOCIATED SINGLE POLE SWITCH, AND ONE 20 AMP GFI DUPLEX RECEPTACLE WITH METALLIC WEATHERPROOF "WHILE IN USE" COVER. FEED THIS WITH 20 AMP CIRCUIT FROM NEW PANEL "A" (CIRCUIT 26). PROVIDE 2#12, 1#12G. IN SAME 1" CONDUIT WITH PUMP CIRCUIT.

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



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CAMPUS PLANNING AND CONSTRUCTION COLUMBIA, SC 29208

SEAL: DONALD L. ARETE, PROFESSIONAL ENGINEER, SOUTH CAROLINA, No. 26181, 4-22-15

CHECKED BY: JLA	DATE: 31MAR15
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REV. 1	DESCRIPTION

PROJECT TITLE: BLOSSOM STREET CONDENSATE LINE REPLACEMENT PROJECT

US21503 SHEET: E-1

1 OF 1

SHEET IN SET: 3 OF 3

University of South Carolina