

CHICAGO PARK DISTRICT
541 NORTH FAIRBANKS
CHICAGO, IL 60611

MULLER+MULLER
architects

700 N SANGAMON CHICAGO, IL 60622
T: 312.432.4180 F: 312.432.4184
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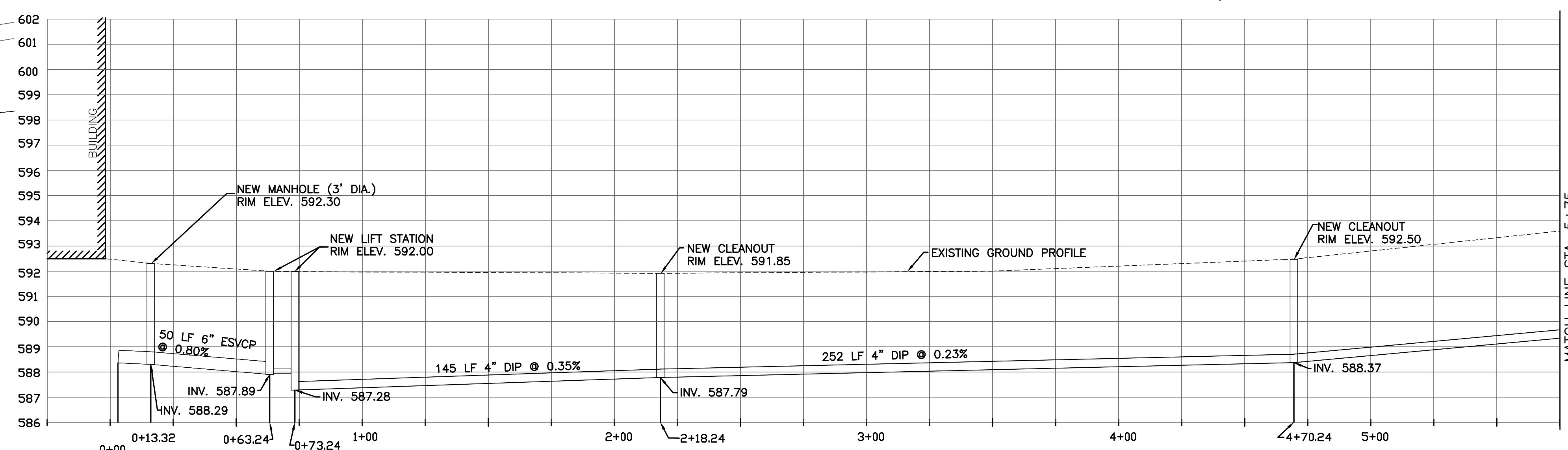
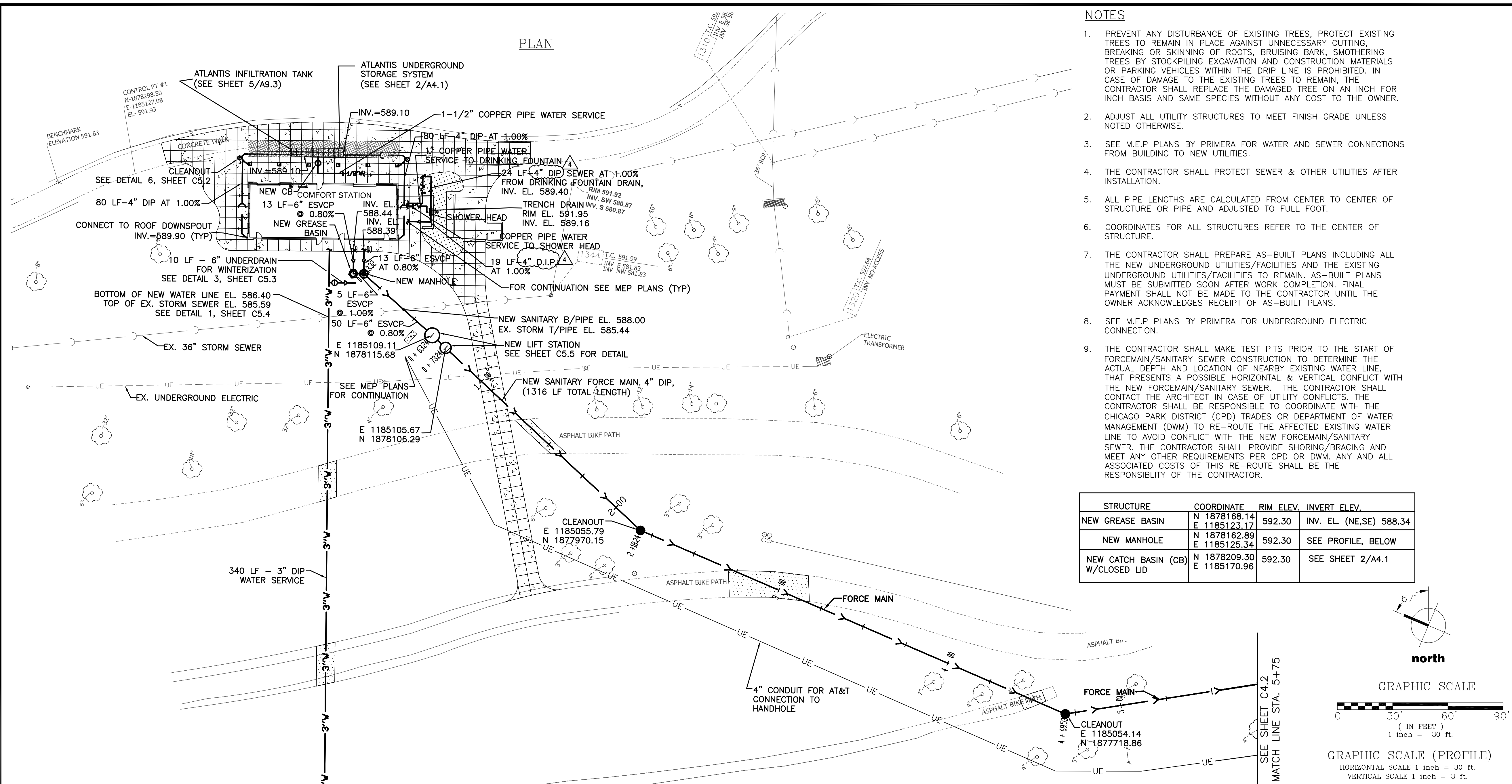
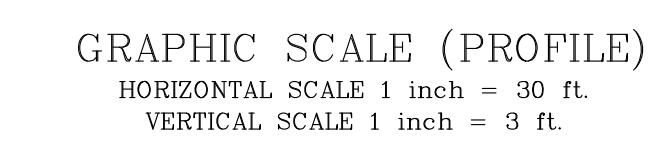
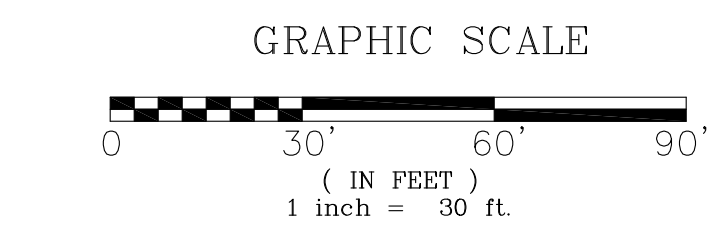
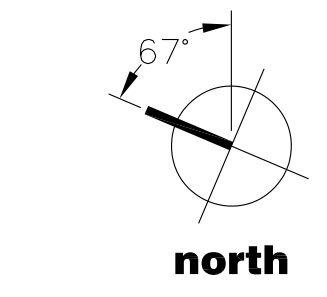
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INFRASTRUCTURE ENGINEERING INCORPORATED
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NOTES

1. PREVENT ANY DISTURBANCE OF EXISTING TREES, PROTECT EXISTING TREES TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, BRUISING BARK, SMOTHERING TREES BY STOCKPILING EXCAVATION AND CONSTRUCTION MATERIALS OR PARKING VEHICLES WITHIN THE DRIP LINE IS PROHIBITED. IN CASE OF DAMAGE TO THE EXISTING TREES TO REMAIN, THE CONTRACTOR SHALL REPLACE THE DAMAGED TREE ON AN INCH FOR INCH BASIS AND SAME SPECIES WITHOUT ANY COST TO THE OWNER.
2. ADJUST ALL UTILITY STRUCTURES TO MEET FINISH GRADE UNLESS NOTED OTHERWISE.
3. SEE M.E.P PLANS BY PRIMERA FOR WATER AND SEWER CONNECTIONS FROM BUILDING TO NEW UTILITIES.
4. THE CONTRACTOR SHALL PROTECT SEWER & OTHER UTILITIES AFTER INSTALLATION.
5. ALL PIPE LENGTHS ARE CALCULATED FROM CENTER TO CENTER OF STRUCTURE OR PIPE AND ADJUSTED TO FULL FOOT.
6. COORDINATES FOR ALL STRUCTURES REFER TO THE CENTER OF STRUCTURE.
7. THE CONTRACTOR SHALL PREPARE AS-BUILT PLANS INCLUDING ALL THE NEW UNDERGROUND UTILITIES/FACILITIES AND THE EXISTING UNDERGROUND UTILITIES/FACILITIES TO REMAIN. AS-BUILT PLANS MUST BE SUBMITTED SOON AFTER WORK COMPLETION. FINAL PAYMENT SHALL NOT BE MADE TO THE CONTRACTOR UNTIL THE OWNER ACKNOWLEDGES RECEIPT OF AS-BUILT PLANS.
8. SEE M.E.P PLANS BY PRIMERA FOR UNDERGROUND ELECTRIC CONNECTION.
9. THE CONTRACTOR SHALL MAKE TEST PITS PRIOR TO THE START OF FORCEMAIN/SANITARY SEWER CONSTRUCTION TO DETERMINE THE ACTUAL DEPTH AND LOCATION OF NEARBY EXISTING WATER LINE, THAT PRESENTS A POSSIBLE HORIZONTAL & VERTICAL CONFLICT WITH THE NEW FORCEMAIN/SANITARY SEWER. THE CONTRACTOR SHALL CONTACT THE ARCHITECT IN CASE OF UTILITY CONFLICTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE CHICAGO PARK DISTRICT (CPD) TRADES OR DEPARTMENT OF WATER MANAGEMENT (DWM) TO RE-ROUTE THE AFFECTED EXISTING WATER LINE TO AVOID CONFLICT WITH THE NEW FORCEMAIN/SANITARY SEWER. THE CONTRACTOR SHALL PROVIDE SHORING/BRACING AND MEET ANY OTHER REQUIREMENTS PER CPD OR DWM. ANY AND ALL ASSOCIATED COSTS OF THIS RE-ROUTE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

STRUCTURE	COORDINATE	RIM ELEV.	INVERT ELEV.
NEW GREASE BASIN	N 1878168.14 E 1185123.17	592.30	INV. EL. (NE,SE) 588.34
NEW MANHOLE	N 1878162.89 E 1185125.34	592.30	SEE PROFILE, BELOW
NEW CATCH BASIN (CB) W/CLOSED LID	N 1878209.30 E 1185170.96	592.30	SEE SHEET 2/A4.1



- LEGEND**
- UE — UNDERGROUND ELECTRIC
 - 3"W — WATER SERVICE
 - - - - - UNDERDRAIN
 - - - - - STORM SEWER
 - SANITARY LINE
 - EXISTING SANITARY LINE
 - W — EXISTING WATER LINE
 - ⊙ MANHOLE, DETAIL 3, SHEET C5.2
 - ⊙ GREASE BASIN, DETAIL 2, SHEET C5.2
 - ⊙ WATER VALVE BOX, DETAIL 5, SHEET C5.1
 - CLEANOUT, DETAIL 1, SHEET C5.2
 - CATCH BASIN
 - LIFT STATION, DETAIL SHEET C5.5
 - ⊠ WATER METER VAULT, DETAIL 2, SHEET C5.4
 - CLEANOUT, SEE DETAIL 6, SHEET C5.2

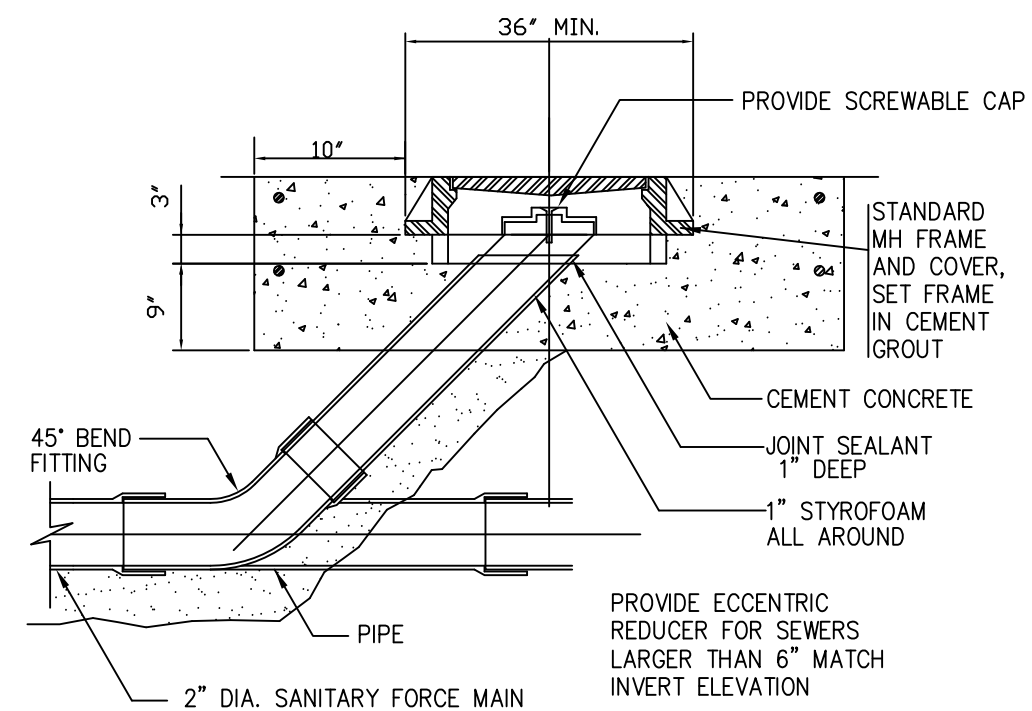
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6	10.21.2009	ISSUED FOR ADDENDUM #2
5	10.20.2009	ISSUED FOR ADDENDUM #1
4	9.25.2009	ISSUED FOR BID
3	9.21.2009	ISSUED FOR PERMIT/95% DESIGN
2	9.04.2009	ISSUED FOR 90% DESIGN
1	3.31.2009	ISSUED FOR 30% DESIGN

PROJECT
40TH STREET COMFORT STATION
CHICAGO, IL

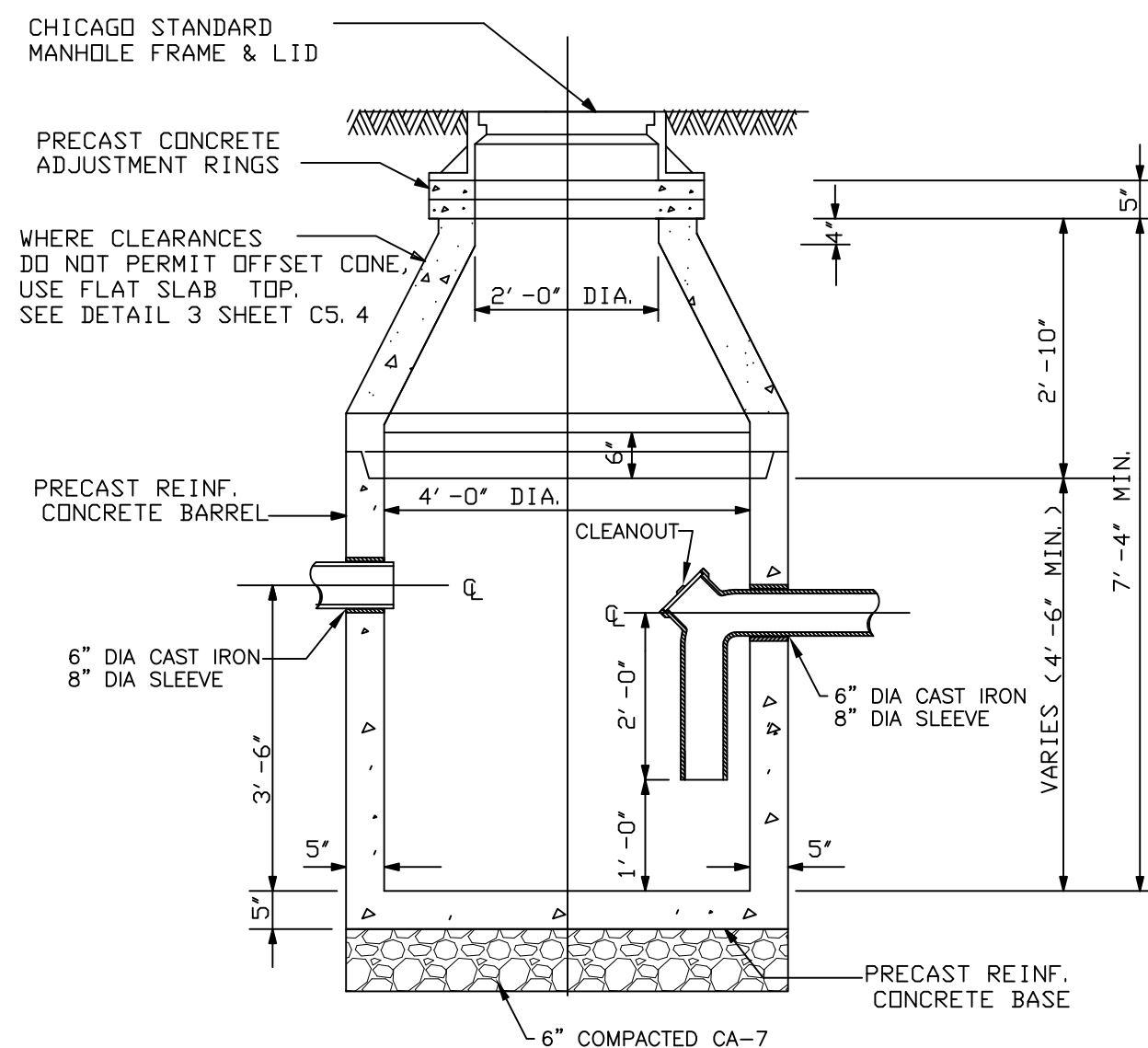
SHEET TITLE
UTILITY PLAN AND PROFILE

DRAWN: RP
CHECKED: HG
APPROVED:
JOB NO. 09.01.08

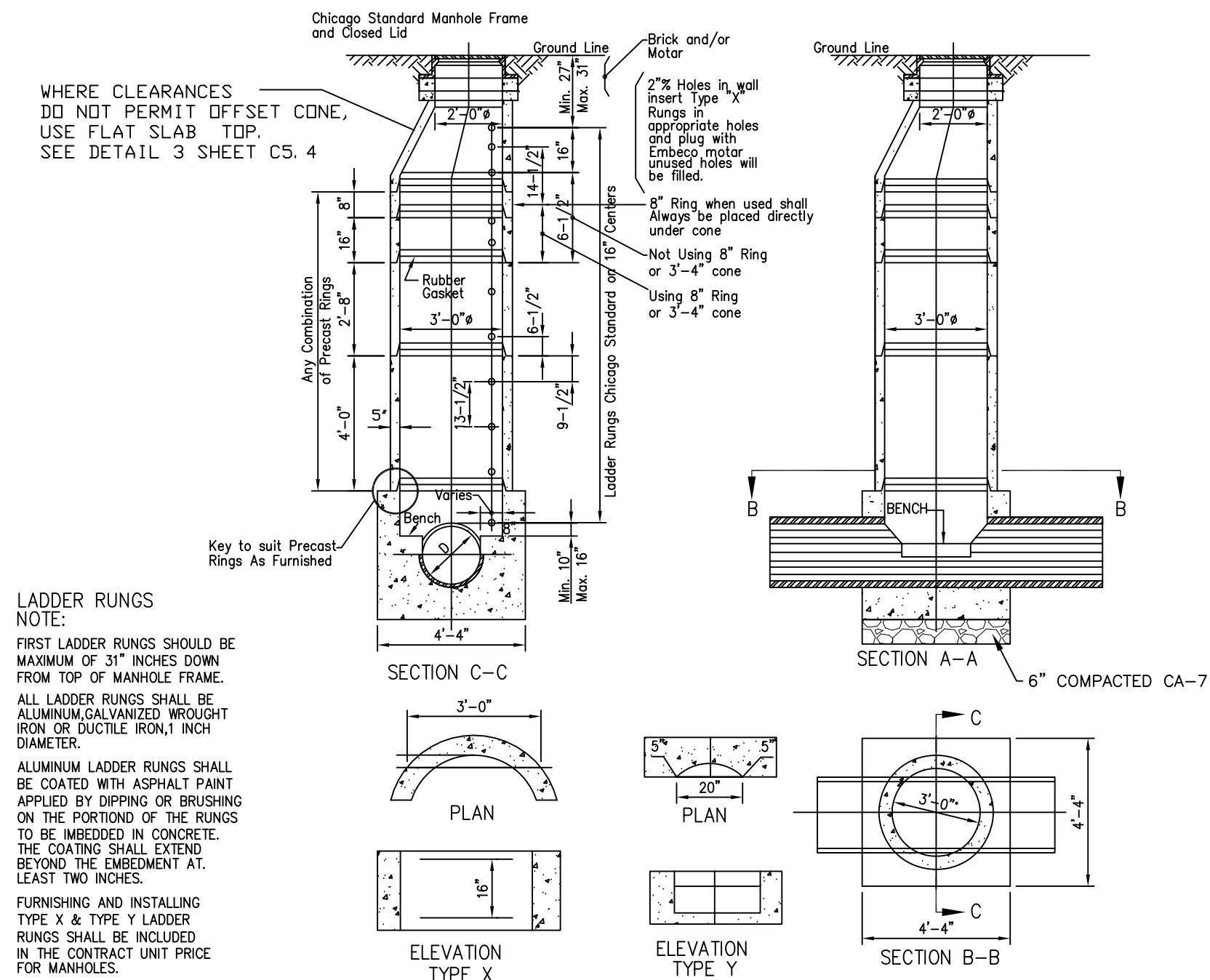
SHEET NO.
C4.1



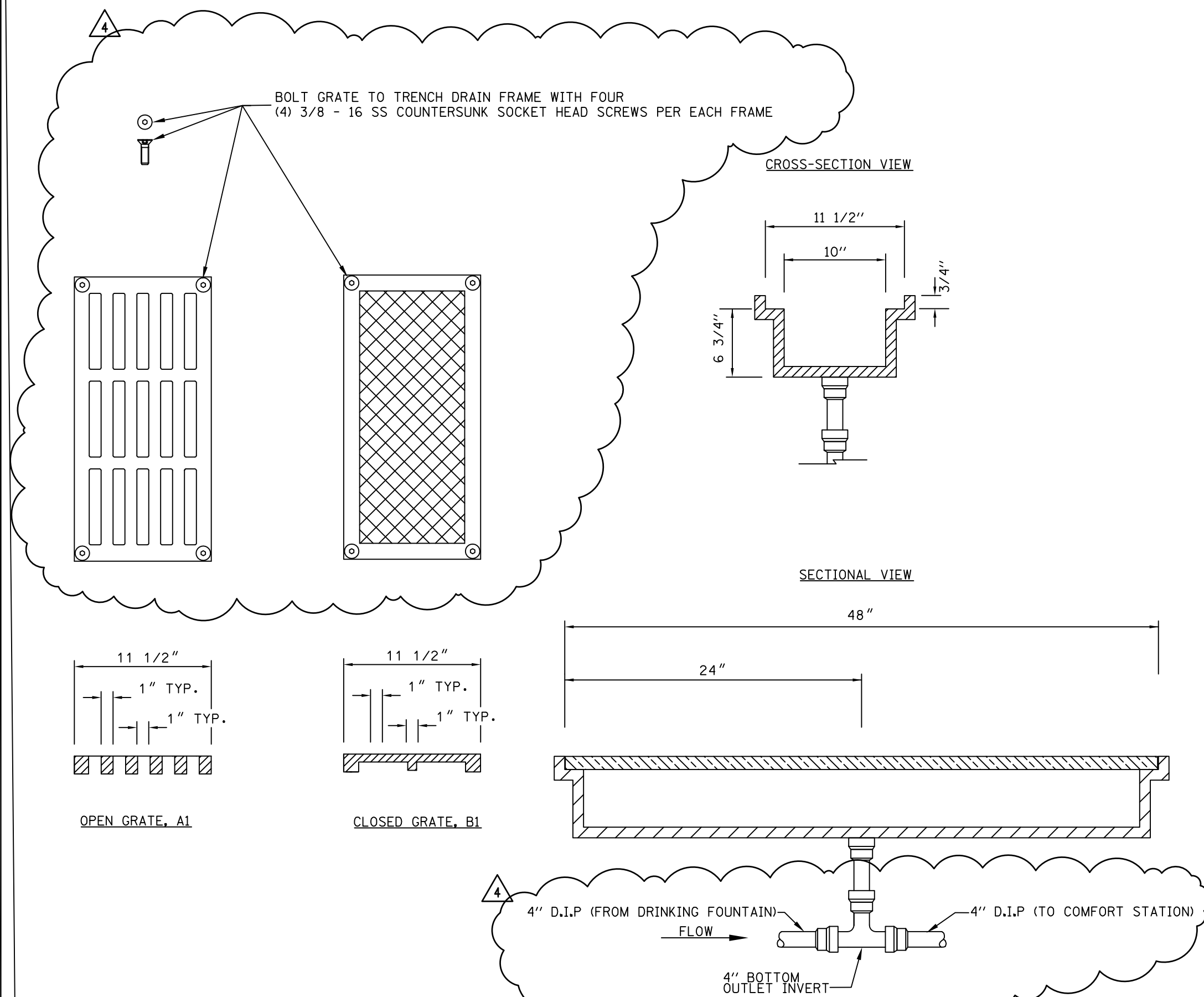
1 CLEANOUT DETAIL FOR FORCE MAIN
NOT TO SCALE



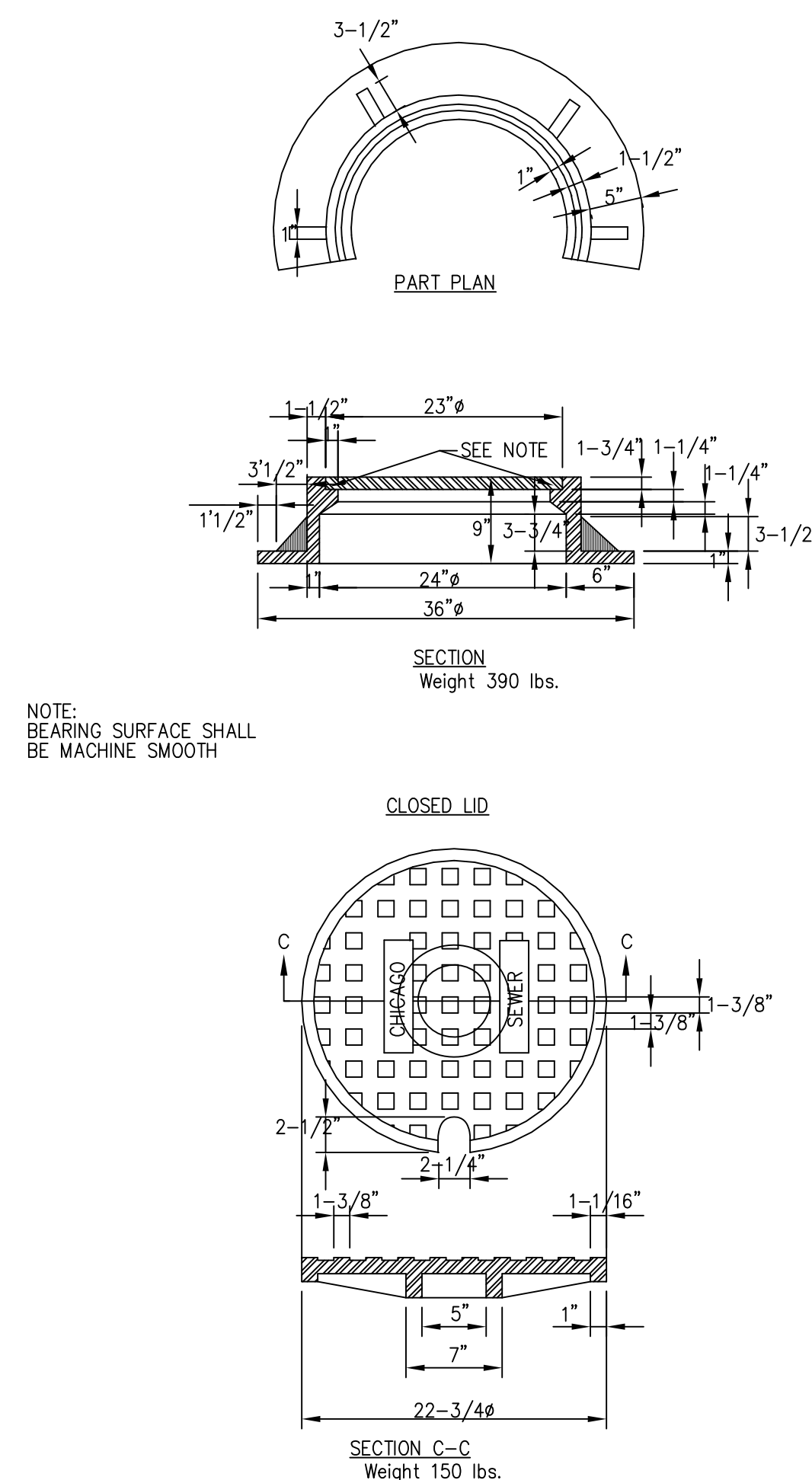
2 PRECAST GREASE BASIN
NOT TO SCALE



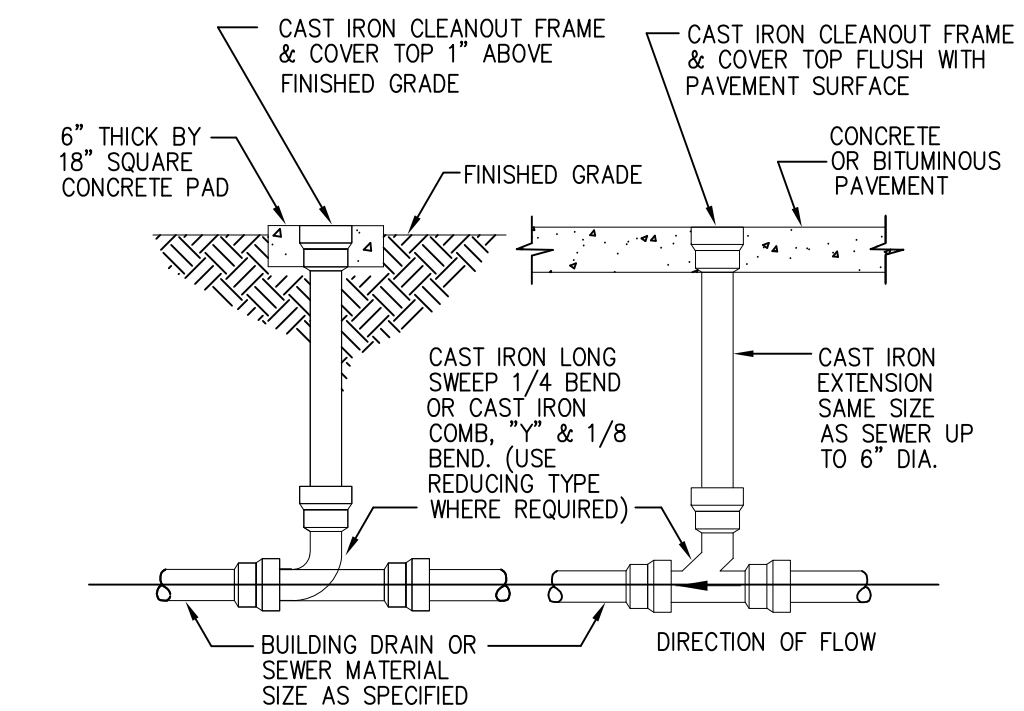
3 TYPE "A" MANHOLE FOR SEWER 21" AND SMALLER
NOT TO SCALE



4 TRENCH DRAIN DETAIL - NEENAH R-4995-A1 & B1 OR APPROVED EQUAL
NOT TO SCALE



5 CHICAGO STANDARD FRAME & GRATE
NOT TO SCALE



6 CLEANOUT DETAIL
NOT TO SCALE

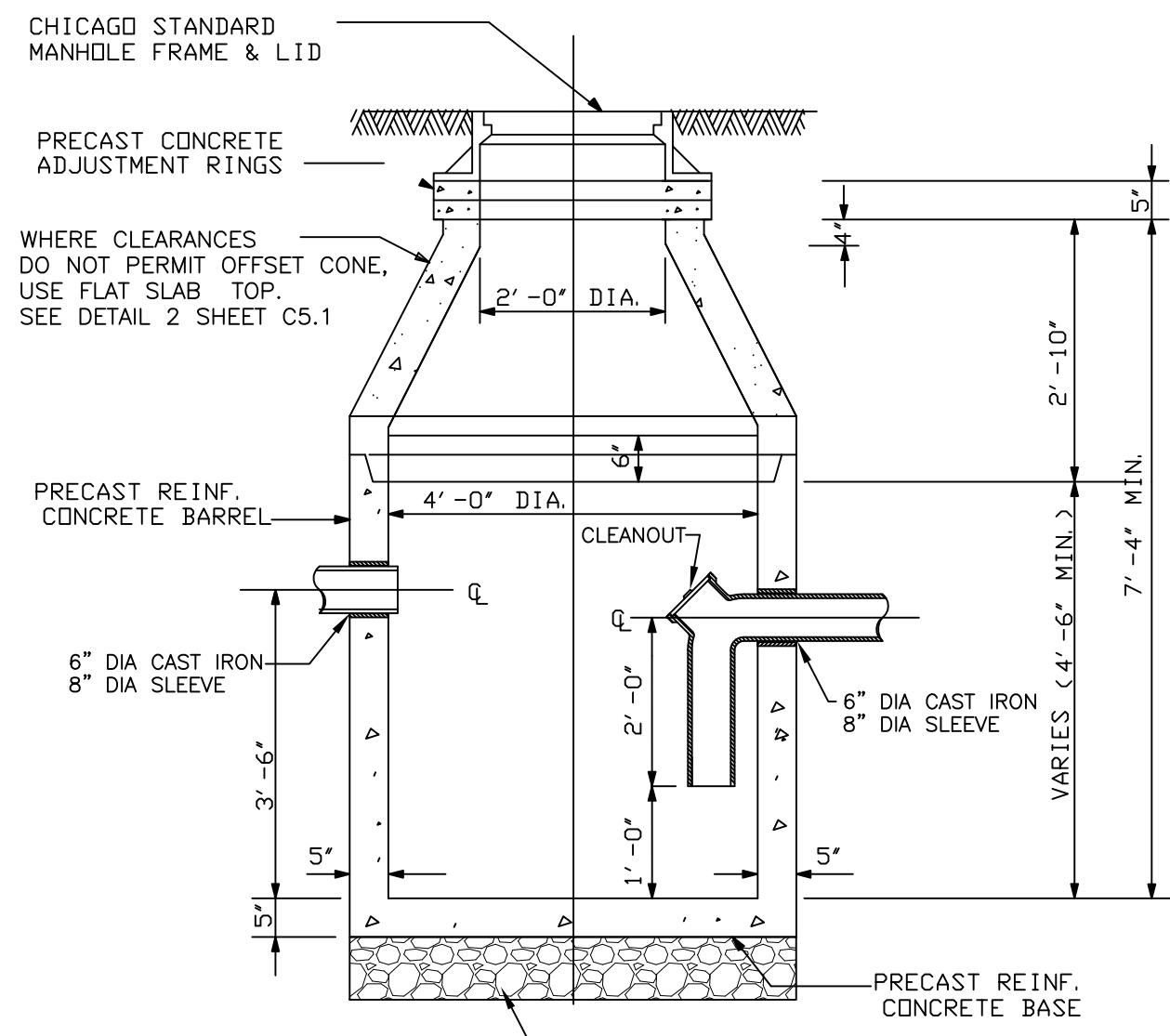
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PROJECT
40TH STREET COMFORT STATION
CHICAGO, IL

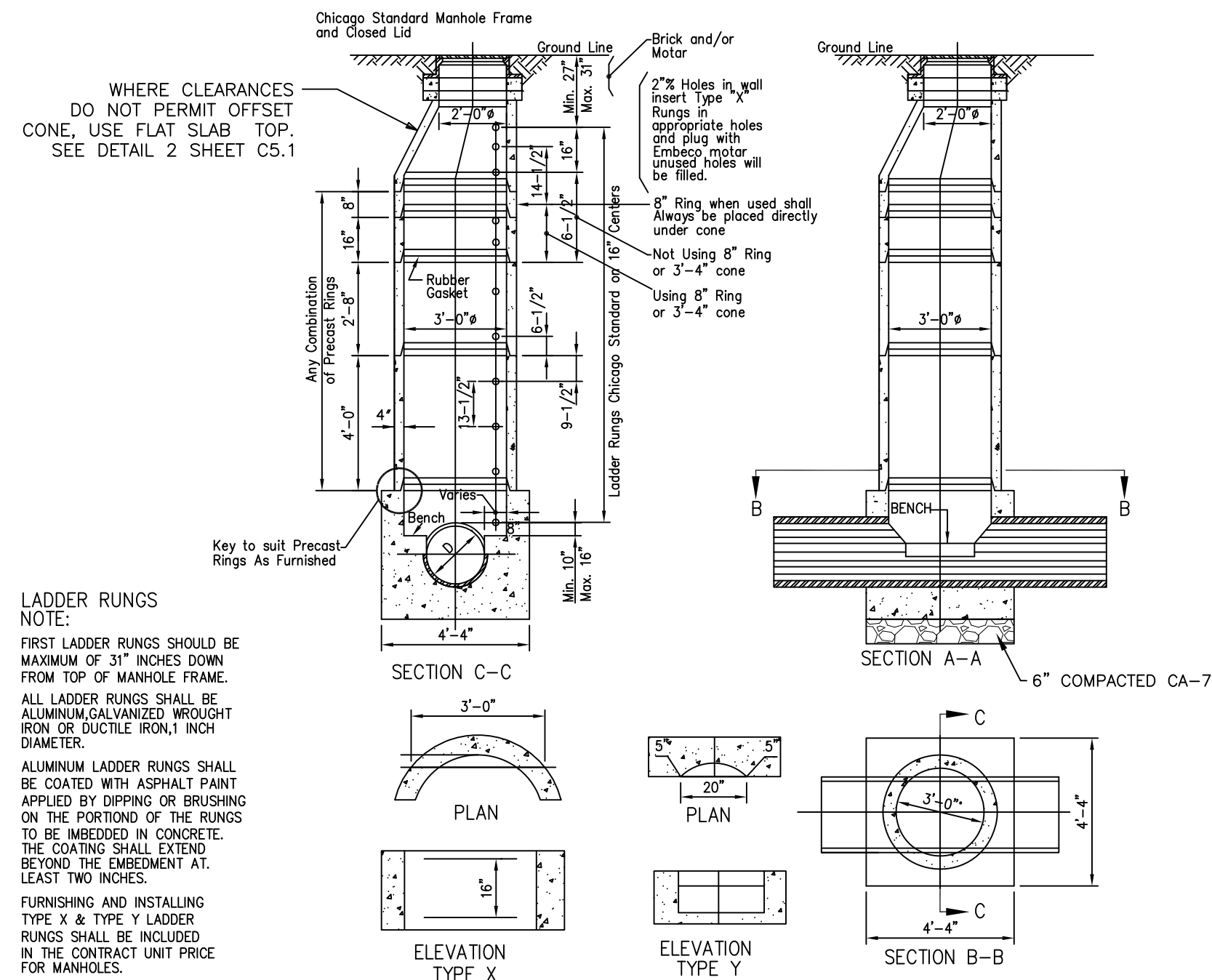
SHEET TITLE
CIVIL DETAILS

DRAWN: RP
CHECKED: HG
APPROVED:
JOB NO. 09.01.08

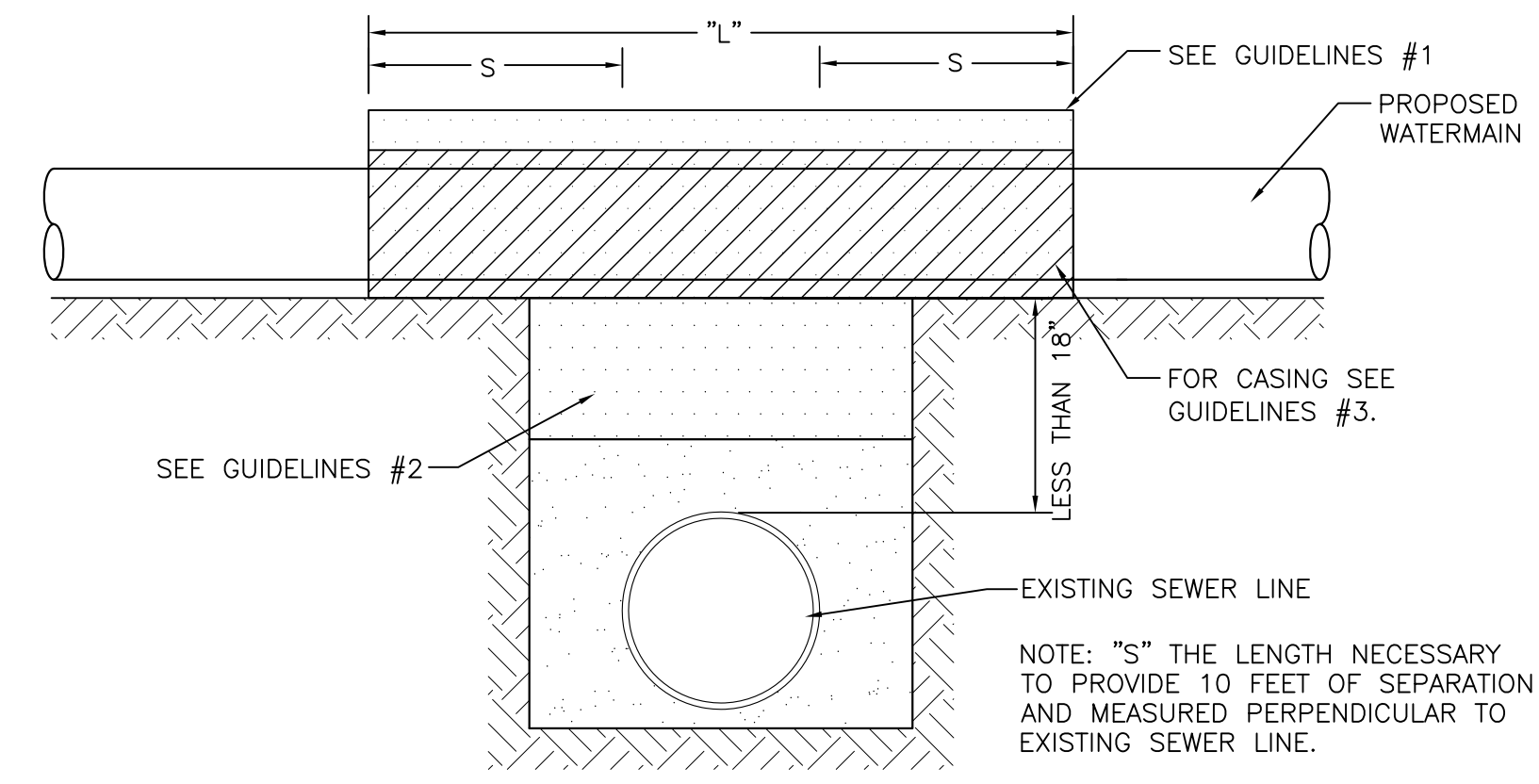
SHEET NO.
C5.2



1 PRECAST GREASE BASIN
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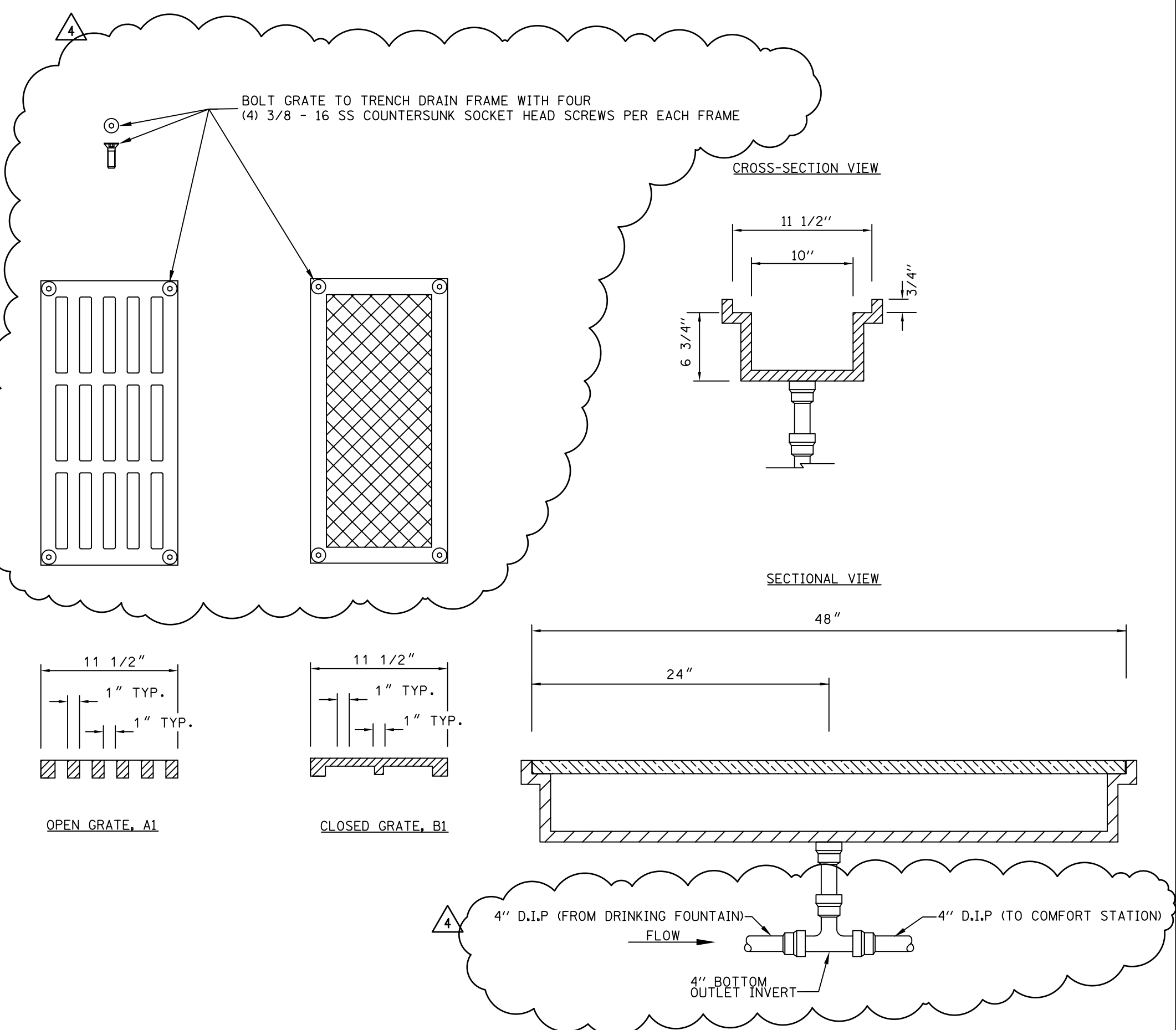


2 TYPE 'A' MANHOLE FOR SEWER 21" AND SMALLER
NOT TO SCALE

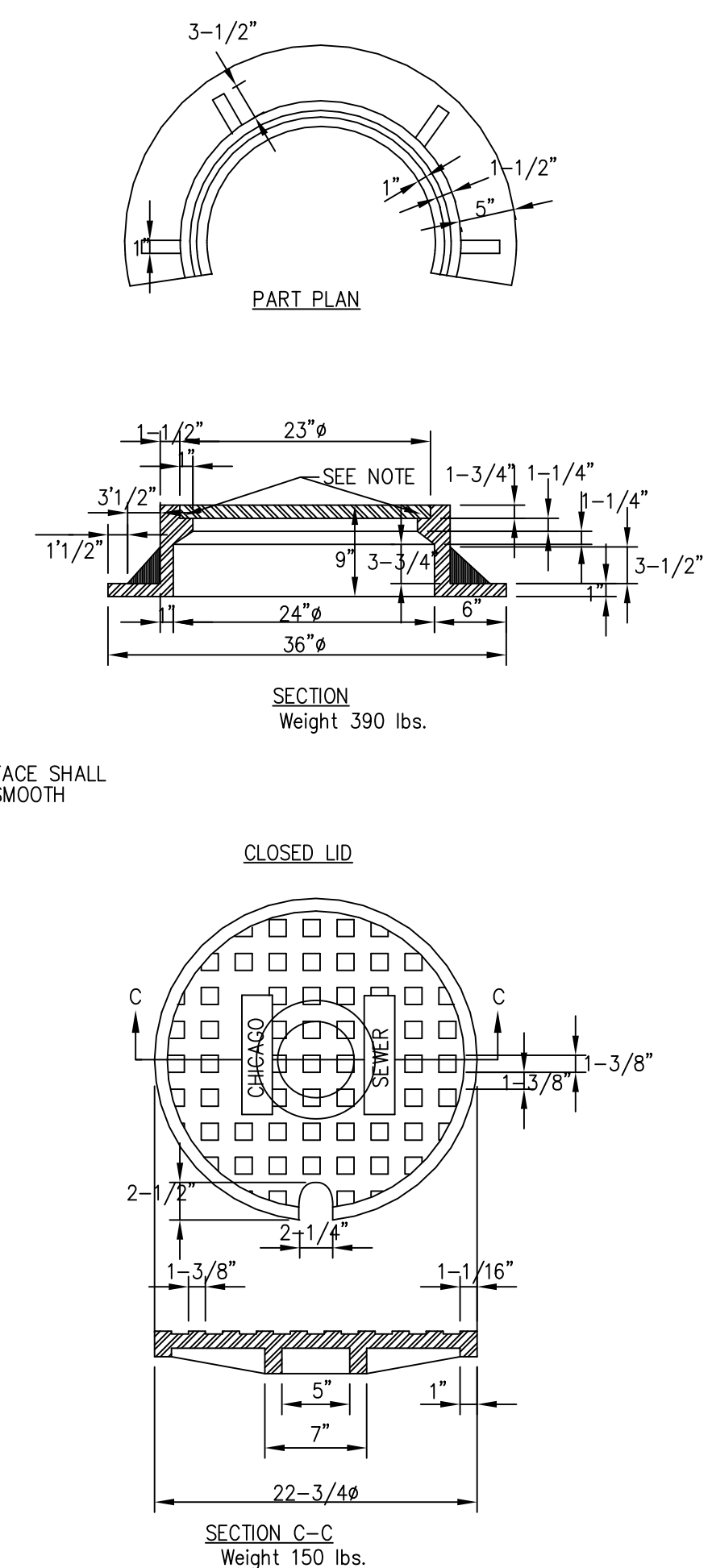


3 PROPOSED WATER MAIN ABOVE EXISTING SEWER
WITH LESS THAN 18" MINIMUM VERTICAL SEPARATION (NOT TO SCALE)

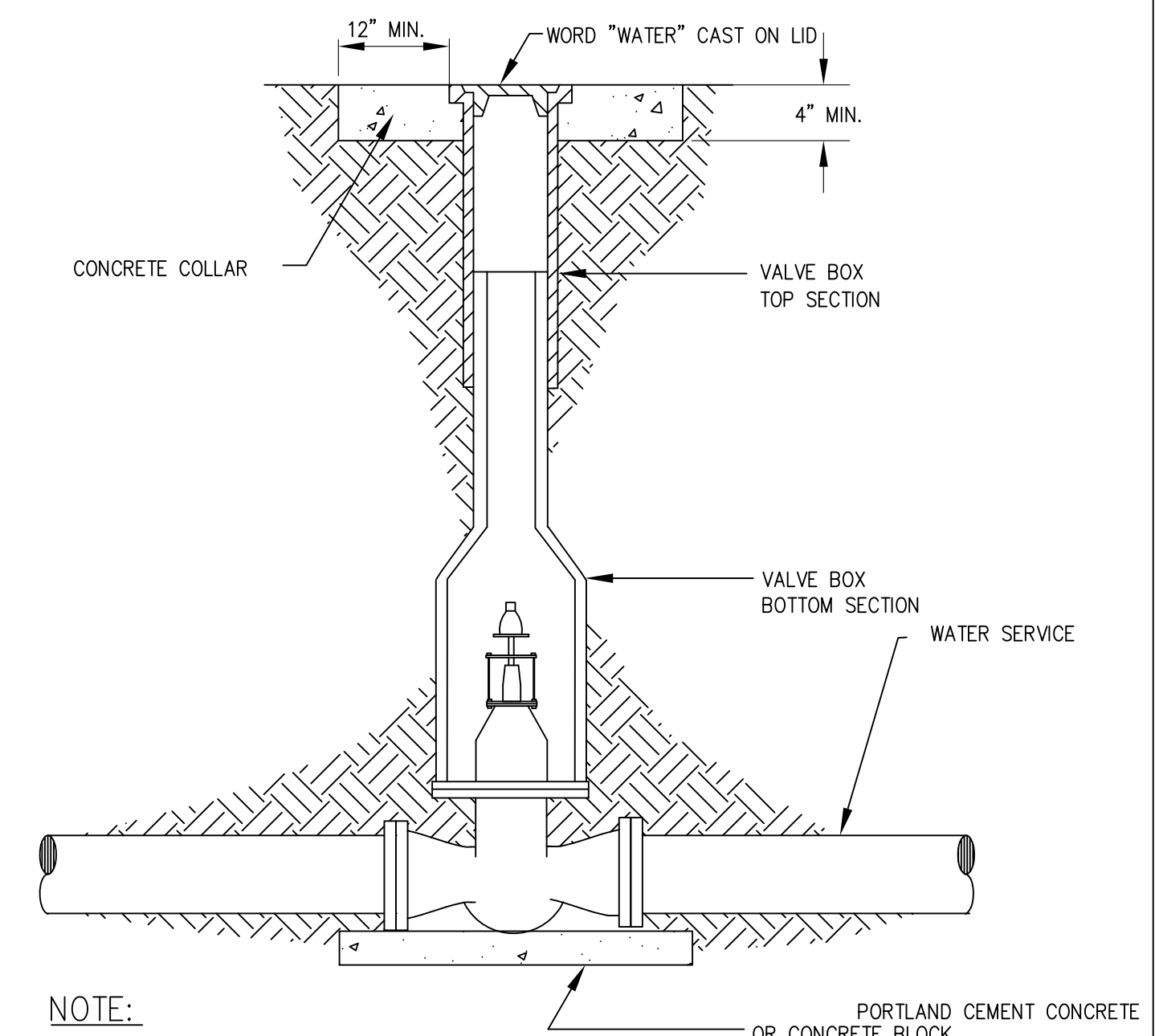
- GUIDELINES**
- OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
 - IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF EXISTING SEWER LINE TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
 - USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED WATER MAIN AND SEAL ENDS OF CASING.
 - POINT LOADS SHALL NOT BE ALLOWED BETWEEN WATER MAIN CASING AND SEWER.



4 TRENCH DRAIN DETAIL - NEENAH R-4995-A1 & B1 OR APPROVED EQUAL
NOT TO SCALE



5 CHICAGO STANDARD FRAME & GRATE
NOT TO SCALE



- NOTE:**
- CAST IRON VALVE BOX SHALL BE EAST JORDAN 6860/6500 SERIES OR EQUAL AND SHALL BE PROVIDED AS REQUIRED BY DEPARTMENT OF WATER.
 - VALVE EXTENSION PIECE SHALL BE USED AS REQUIRED.

6 BUFFALO VALVE BOX
NOT TO SCALE

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2	9.04.2009	ISSUED FOR 90% DESIGN
1	3.31.2009	ISSUED FOR 30% DESIGN

PROJECT
OSTERMAN BEACH
COMFORT STATION
CHICAGO, IL

SHEET TITLE
CIVIL DETAILS

DRAWN: RP
CHECKED: HG
APPROVED:
SHEET NO.
C5.2
JOB NO. 09.01.08

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PIPE MATERIALS SCHEDULE

BUILDING DRAINAGE & VENT PIPING, INDOOR ABOVE & BELOW FLOOR (SAN, DW):

- SERVICE CLASS HUB & SPIGOT CAST IRON SOIL PIPE & FITTINGS WITH LEAD & OAKUM CAULKED JOINTS CONFORMING TO ASTM A74; SUSPENDED.
- SERVICE CLASS HUB & SPIGOT CAST IRON SOIL PIPE & FITTINGS WITH GASKETED JOINTS; UNDERGROUND.
- GALVANIZED STEEL PIPE & FITTINGS CONFORMING TO ASTM A 53.
- COPPER/COPPER ALLOY PIPE & FITTINGS CONFORMING TO ASTM B 42 & ASTM B 302. COPPER/COPPER ALLOY TUBING & FITTINGS (TYPE M) CONFORMING TO ASTM B 75, ASTM B 88, ASTM B 251.

DOMESTIC WATER DISTRIBUTION PIPING (CW, HW, HWR):

- ABOVE GROUND: COPPER/COPPER ALLOY PIPE & FITTINGS CONFORMING TO ASTM B 42 & ASTM B 302. COPPER/COPPER ALLOY TUBING & FITTINGS (TYPE L) CONFORMING TO ASTM B 88. LEAD FREE SOLDER.

VALVES:

- APOLLO BALL VALVES, FULLPORT, ALL SIZES.

INSULATION:

- 1" THICK FIBERGLASS WITH ALL SERVICE JACKET.

PLUMBING FIXTURE ROUGH-IN SCHEDULE

FIXTURE TYPE	TRAP	WASTE	VENT	AIR CHAMBER		INLET TO STOP		REMARKS
				Ø	H	Ø	H	
WATER CLOSET	3"	4"	2"	1 1/4"	-	1"	-	
URINAL	1 1/2"	2"	1 1/2"	3/4"	-	3/4"	-	
LAVATORY	1 1/4"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
SHOWER	2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
SINK	1 1/2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
MOP BASIN	2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
FLOOR DRAIN (ED-1, ED-2)	4"	4"	2"	-	-	-	-	

DRAIN SCHEDULE

TAG.	TYPE	MFGR.	MODEL NO.	LOCATION	MATERIAL	NOTES/OPTIONS
FD-1	FLOOR DRAIN	SMITH	2010-A-NB	FINISHED FLOOR	CAST IRON	WITH ROUND TOP, VANDAL PROOF GRATE & DEEP SEAL TRAP
FD-2	MECH. ROOM FLOOR DRAIN	SMITH	2010-A-F38	FINISHED FLOOR	CAST IRON	CAST IRON WITH RECESSED GRATE & DEEP SEAL TRAP
HD-1	HUB DRAIN	WATTS	FD-100-DD	FINISHED FLOOR	CAST IRON	WITH DEEP SEAL TRAP.

SPECIALTY EQUIPMENT SCHEDULE

TAG.	TYPE	MFGR.	MODEL NO.	NOTES/OPTIONS
TMV-1	POINT OF USE MIXING VALVE	WATTS	USG-B	WITH 3/8" INLET & OUTLETS, MEETS ASSE 1016. PROVIDE AT ALL LAV-1 OUTLET TEMPERATURE: 105°F
HB-1	EXPOSED HOSE BIBB	CHICAGO FAUCET	387-E27CP	WITH INTEGRAL VACUUM BREAKER. INCLUDE TESTABLE DOUBLE CHECK VALVE ON WATER SUPPLY.
NFSC-1	EXTERIOR HOSE CONNECTION	JR SMITH	5509 QT	POLISHED BRONZE BOX WITH HOSE CONNECTION WITH VACUUM BREAKER. INCLUDE TESTABLE DOUBLE CHECK VALVE IN WALL BOX ON WATER SUPPLY.
DCVA-1	DOUBLE CHECK VALVE ASSEMBLY	WATTS	SERIES 007	ASSE 1015 RATED, STAINLESS STEEL CORROSION RESISTANT CONSTRUCTION. INSTALL IN WALL WITH ACCESS PANEL AS REQUIRED. PROVIDE AT HB-1 AND NFSC-1 AS REQUIRED PER PLANS, EQUIPMENT SCHEDULES, AND DETAILS.
DCVA-2	DUAL CHECK VALVE ASSEMBLY	WATTS	SERIES 7	ASSE 1024 RATED, 3/8" CONNECTION. BRASS BODY CONSTRUCTION. PROVIDE AT ALL ICE MAKER.
RPZ-1	REDUCED PRESSURE ZONE BACKFLOW PREVENTER	WATTS	SERIES 009	ASSE 1013 RATED, FIELD TESTABLE. BRONZE BODY. PROVIDE DRAIN TO FLOOR DRAIN WITH APPROVED AIR GAP. WITH STRAINER. PROVIDE PER DETAILS, SCHEDULES, AND PLANS.

WATER HEATER SCHEDULE

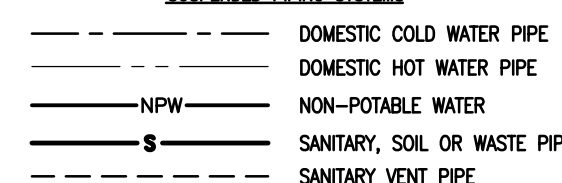
TAG	QTY.	MANUFACTURER MODEL No.	STORAGE CAPACITY	DIMENSIONS		ELECTRICAL INFORMATION			RECOVERY RATE (100°F RISE)	CW CONN.	HW CONN.	REMARKS	
				DIAMETER INCHES	HEIGHT INCHES	KW	V/PHASE/HZ	AMPS					
WH-1	1	A.O. SMITH #ESE-120	120 GAL	2'-6"	5'-5"	24	208/3/60	66.6	-----	98 GPH	1-1/4"	1-1/4"	ROUTE PIPE INDIRECTLY TO FLOOR DRAIN
WH-2	1	A.O. SMITH #DEL-20	20 GAL	22"	31"	5.0	208/3/60	20.5	-----	20 GPH	3/4"	3/4"	ROUTE PIPE INDIRECTLY FROM DRAIN PAN TO MB-1
WH-3	1	A.O. SMITH #DEL-50	50 GAL	26"	32"	12.0	208/3/60	57.7	-----	61 GPH	3/4"	3/4"	ROUTE PIPE INDIRECTLY FROM DRAIN PAN TO FLOOR DRAIN IN MECHANICAL ROOM

- NOTES:
- MOUNT WH-2 OVERHEAD.
 - MOUNT WH-3 ABOVE CEILING.
 - PROVIDE WH-1 WITH AMTROL ST-12 EXPANSION TANK.
 - PROVIDE WH-2 & WH-3 WITH AMTROL ST-5 EXPANSION TANK.

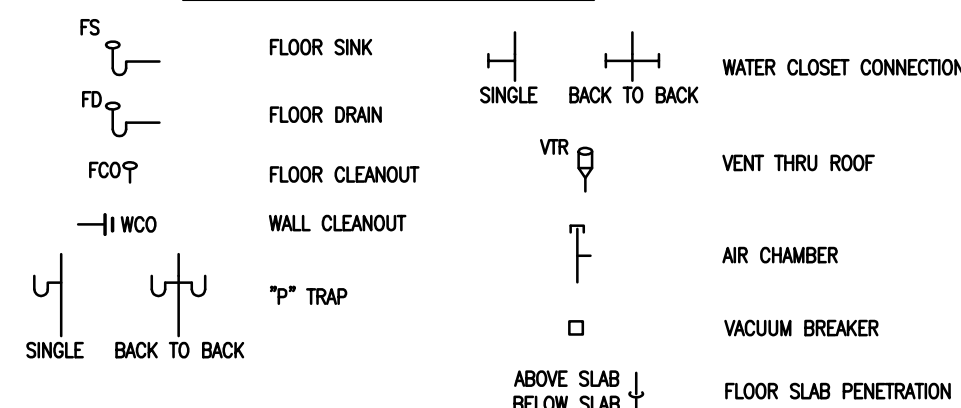
PLUMBING NOTES

- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND FEES FOR HIS WORK.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIXTURE LOCATIONS.
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SIZING ALL WATER HAMMER ARRESTERS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO "PLUMBING ACCESSORIES" SECTION OF THE SPECIFICATIONS.
- THE MINIMUM SIZE OF ALL VENT PIPING SHALL BE 1/2 THE SIZE ASSOCIATED DRAIN, BUT NOT LESS THAN 1-1/2".
- CONTRACTOR TO PROVIDE DEEP SEAL TRAPS FILLED WITH MINERAL OIL ON ALL FLOOR DRAINS LOCATED IN AREAS SUSCEPTIBLE TO DRYING OUT, MECHANICAL ROOMS.
- CONTRACTOR SHALL PROVIDE DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND AT THE END OF EACH HORIZONTAL RUN OF WATER PIPING. DRAIN VALVE SHALL BE INCLUDED WITH A 3/4" THREADED CONNECTION FOR WINTER DRAINAGE.
- HORIZONTAL DRAINS WITHIN THE BUILDING SHALL BE PROVIDED WITH CLEANOUTS LOCATED NOT MORE THAN 50' APART FOR DRAINS 4" DIAMETER.
- INSTALL DRAIN VALVES AT BASE OF EACH WATER RISER, AT LOW POINTS IN HORIZONTAL PIPING, AND WHERE REQUIRED TO DRAIN WATER PIPING. DRAIN VALVES ARE SPECIFIED IN DIVISION 15 SECTION "DOMESTIC WATER PIPING SPECIALTIES." PROVIDE ACCESS PANELS AS REQUIRED.

SUSPENDED PIPING SYSTEMS



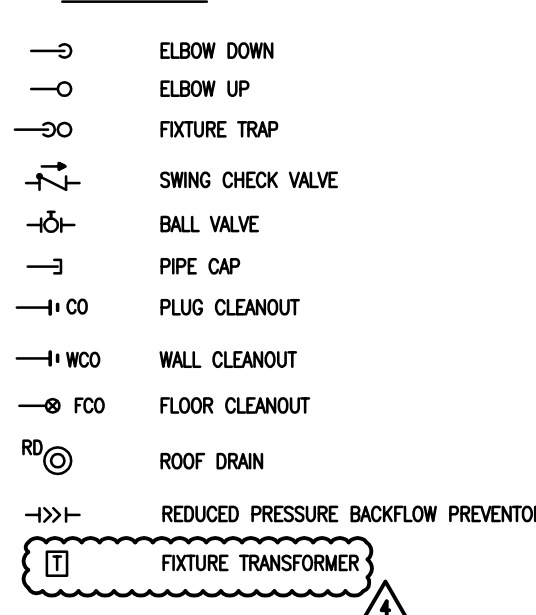
RISER DIAGRAM SYMBOLS



ABBREVIATIONS

AD ACCESS DOOR	FLR FLOOR	PG PRESSURE GAUGE
AFV ABOVE FINISHED FLOOR	FSM FEET PER MINUTE	PSI PER SQUARE INCH
AP ACCESS PANEL	FT FEET	RET RETURN
ARCH ARCHITECTURAL	GA GAUGE	RM ROOM
BOP BOTTOM OF PIPE	GCO GRADE CLEANOUT	RFM REVOLUTIONS PER MINUTE
BALV BALANCING VALVE	GV GATE VALVE	SF SQUARE FEET
BV BALL VALVE	OPM GALLONS PER MINUTE	SK SINK
CI CAST IRON	HOR HORIZONTAL	SS SERVICE SINK
CL CENTER LINE	HW HOT WATER	TH THERMOMETER
CLG CEILING	HWR HOT WATER RECIRCULATING	T&P TEMPERATURE AND PRESSURE RELIEF VALVE
CO CLEANOUT	HTR HEATER	TMV THERMOSTATIC MIXING VALVE
CON CONCRETE	HVAC HEATING, VENTILATION & AIR CONDITIONING	TOS TOP OF SLAB
CV CHECK VALVE	HZ HERTZ	TYP TYPICAL
CW COLD WATER	IN INCHES	V VENT
DFU DRAIN FIXTURE UNITS	INS INSULATION	VB VACUUM BREAKER
DIA DIAMETER	KW KILOWATT	VEL VELOCITY
DN DOWN	LAV LAVATORY	VTR VENT THROUGH ROOF
DWG DRAWING	MFR MANUFACTURER	WC WATER CLOSET
DWH DOMESTIC WATER HEATER	MAX MAXIMUM	WHA WATER HAMMER ARRESTOR
EA EACH	MIN MINIMUM	
EL ELEVATION	MS MOP SINK	
EWC ELECTRIC WATER COOLER	NC NORMALLY CLOSED	
F DEGREES FAHRENHEIT	NIC NOT IN CONTRACT	
FLEX FLEXIBLE	NO NORMALLY OPEN	
FF FINISHED FLOOR	NPW NON-POTABLE WATER	
	NTS NOT TO SCALE	
	OD OUTSIDE DIAMETER	
	OFRD OVERFLOW ROOF DRAIN	
	OW OPEN WASTE	

SYMBOLS



REFERENCE SYMBOLS



PLUMBING FIXTURE SCHEDULE

PLBC SYMBOL	FIXTURE NAME	QTY	LOCATION	FIXTURE		VALVE/FAUCET/TRIM		SUPPLIES	ADDITIONAL REQUIREMENTS & NOTES
				TYPE	MFR/MODEL	TYPE	MFR/MODEL		
WC-1	WATER CLOSET	7	REST ROOM	WALL HUNG ELONGATED STAINLESS STEEL	ACORN / 1680-W	HARD-WIRED CONCEALED SENSOR	SLOAN / 140-1.6 ES-S 1.6 GPF	1" ANGLE STOP	STANDARD RIM HEIGHT. WITH OPEN FRONT SEAT LESS COVER.
WC-2	WATER CLOSET	3	REST ROOM	WALL HUNG ELONGATED STAINLESS STEEL	ACORN / 1680-W-1	HARD-WIRED CONCEALED SENSOR	SLOAN / 140-1.6 ES-S 1.6 GPF	1" ANGLE STOP	WITH RIM HEIGHT AT 17-1/2" WITH OPEN FRONT SEAT LESS COVER.
WC-3	WATER CLOSET	1	LIFEGUARD REST ROOM	WALL HUNG ELONGATED VITREOUS CHINA	KOHLER / K-4325	MANUAL EXPOSED	SLOAN / CROWN - 111 1.28 GPF	1" ANGLE STOP	WITH RIM HEIGHT AT 17-1/2" WITH OPEN FRONT SEAT LESS COVER.
UR-1	URINAL	3	MEN'S RESTROOM	WALL HUNG STAINLESS STEEL	ACORN / 1702-W-1	HARD-WIRED CONCEALED SENSOR	SLOAN / 190-1.0-ES-S 1.0 GPF	3/4" ANGLE STOP	WITH RIM HEIGHT AT 16". WITH WALL CARRIER.
UR-2	URINAL	1	MEN'S RESTROOM	WALL HUNG STAINLESS STEEL	ACORN / 1702-W-1	HARD-WIRED CONCEALED SENSOR	SLOAN / 190-1.0-ES-S 1.0 GPF	3/4" ANGLE STOP	WITH STANDARD RIM HEIGHT. WITH WALL CARRIER.
LAV-1	LAVATORY	7	PUBLIC TOILET ROOMS	WALL HUNG STAINLESS STEEL	ACORN / 1955-1-9-H24-GT	METERING	CHICAGO FAUCET / 333-E2805-665PSHBCP 0.5 GPM	LOOSE KEY ANGLE STOPS	WITH TMV-1 WITH GRID STRAINER (WITH 2) FAUCETS, (1) FOR HOT & (1) FOR COLD
LAV-2	LAVATORY	1	LIFEGUARD REST ROOM	WALL HUNG VITREOUS CHINA	KOHLER / K-2035-4	GOOSENECK WITH WRISTBLADES	CHICAGO FAUCET / 201-AGN2AE3-317CF 0.5 GPM	LOOSE KEY ANGLE STOPS	WITH 0.5 GPM AERATOR AND TMV-1 WITH GRID STRAINER
SK-1	SINK	1	LIFEGUARD OFFICE	REFER TO ARCHITECTURAL DOCUMENTS	DWYER UNIT	INCLUDED	----	LOOSE KEY ANGLE STOPS	MODULAR KITCHENETTE UNIT. ROUTE WATER & WASTE PIPING IN PARTIAL HEIGHT WALL TO FULL HEIGHT WALL BETWEEN LIFEGUARD AND CONCESSION.
SK-2	HAND SINK	1	CONCESSION	WALL HUNG STAINLESS STEEL	ELKAY / CHSB1716C	GOOSENECK WITH WRISTBLADES	ELKAY / LKB400	LOOSE KEY ANGLE STOPS	WITH ELKAY LKB8 STAINLESS STEEL BODY AND GRID STRAINER.
SK-3	TRIPLE BASIN SINK	1	CONCESSION	FLOOR MOUNTED STAINLESS STEEL	ELKAY / RNSF8354	GOOSENECK WITH WRISTBLADES	ELKAY / LK940AT08L2H	LOOSE KEY ANGLE STOPS	WITH ELKAY LK188 STAINLESS STEEL BODY AND GRID STRAINER.
SH-1	SHOWER	1	LIFEGUARD REST ROOM	SHOWER	SYMMONS / S-4701-1.5	PRESSURE BALANCE	SYMMONS	INTEGRAL STOPS WITH VALVE	WITH FD-1 WITH SQUARE GRATE. 1.5 GPM FLOW RATE. ADJUST STOP SCREW FOR OUTLET TEMP MAX: 105°F
MB-1	MOP BASIN	1	JANITOR	FLOOR MOUNTED PRECAST TERRAZZO	FIAT / TSB 3000 SERIES	LEVER HANDLES AND VACUUM BREAKER	CHICAGO FAUCET / 911	SUPPLIES WITH INTEGRAL STOPS. ALL CONCEALED PIPING.	WITH VACUUM BREAKER AT 7'-6" AFF. WITH CHICAGO FAUCET 390-PRJKCP LEVER HANDLES. WITH 1453 FLAT STEEL STRAINER. SIZE PER ARCHITECTURAL DOCUMENTS.
DF-1	DRINKING FOUNTAIN	1	OUTDOORS	STAINLESS STEEL PEDESTAL	HAWS / 3500D	PUSH BUTTON	HAWS	LINE VALVE	BARRIER FREE BI-LEVEL WITH PET FOUNTAIN. FOUNTAIN SHALL BE BLACK COLOR FINISH.
OSH-1	OUTDOOR SHOWER	1	REFER TO CIVIL DOCUMENTS	PEDESTAL STAINLESS STEEL	BRADLEY / COL-6B-SV-ST	PUSH BUTTON	BRADLEY	SUPPLIES WITH INTEGRAL STOPS.	SHOWERHEAD HEIGHT TO BE AT 6'-0".

- NOTES:
- PROVIDE TRANSFORMER (SLOAN EL-154) AS INDICATED ON PLANS FOR HARD WIRED WATER CLOSETS AND URINALS.
 - DAISY CHAIN AS MANY AS (10) WATER CLOSETS AND URINALS OFF OF (1) SLOAN EL-154 TRANSFORMER.

PROJECT
**40TH STREET BEACH
COMFORT STATION
CHICAGO, IL**

SHEET TITLE
**PLUMBING GEN. NOTES,
ABBREVIATIONS & SYMB.**

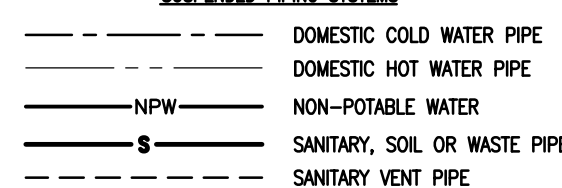
DRAWN: BDT	SHEET NO.
CHECKED: MJC	P0.01
APPROVED: MJC	
JOB NO. 09.01.08	

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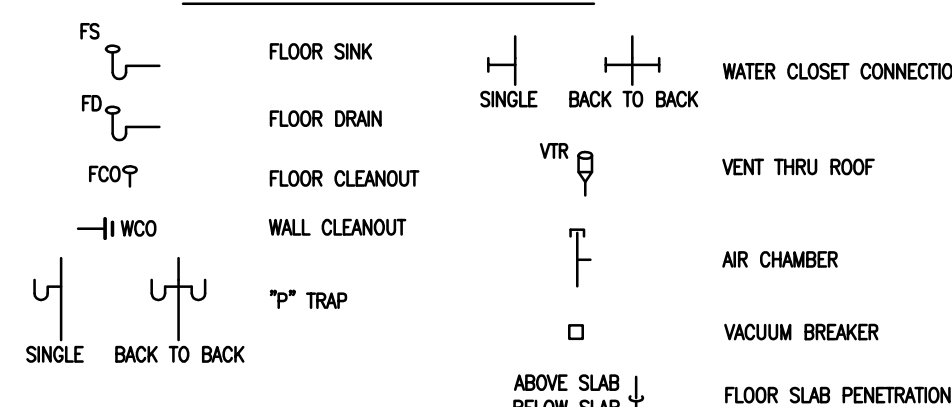
PLUMBING NOTES

- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND FEES FOR HIS WORK.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIXTURE LOCATIONS.
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SIZING ALL WATER HAMMER ARRESTERS PER MANUFACTURER'S RECOMMENDATIONS. REFER TO "PLUMBING ACCESSORIES" SECTION OF THE SPECIFICATIONS.
- THE MINIMUM SIZE OF ALL VENT PIPING SHALL BE 1/2 THE SIZE ASSOCIATED DRAIN, BUT NOT LESS THAN 1-1/2".
- CONTRACTOR TO PROVIDE DEEP SEAL TRAPS FILLED WITH MINERAL OIL ON ALL FLOOR DRAINS LOCATED IN AREAS SUSCEPTIBLE TO DRYING OUT, MECHANICAL ROOMS.
- CONTRACTOR SHALL PROVIDE DRAIN VALVES AT THE BOTTOM OF ALL RISERS AND AT THE END OF EACH HORIZONTAL RUN OF WATER PIPING. DRAIN VALVE SHALL BE INCLUDED WITH A 3/4" THREADED CONNECTION FOR WINTER DRAINAGE.
- HORIZONTAL DRAINS WITHIN THE BUILDING SHALL BE PROVIDED WITH CLEANOUTS LOCATED NOT MORE THAN 50' APART FOR DRAINS 4" DIAMETER.
- INSTALL DRAIN VALVES AT BASE OF EACH WATER RISER, AT LOW POINTS IN HORIZONTAL PIPING, AND WHERE REQUIRED TO DRAIN WATER PIPING. DRAIN VALVES ARE SPECIFIED IN DIVISION 15 SECTION "DOMESTIC WATER PIPING SPECIALTIES." PROVIDE ACCESS PANELS AS REQUIRED.

SUSPENDED PIPING SYSTEMS



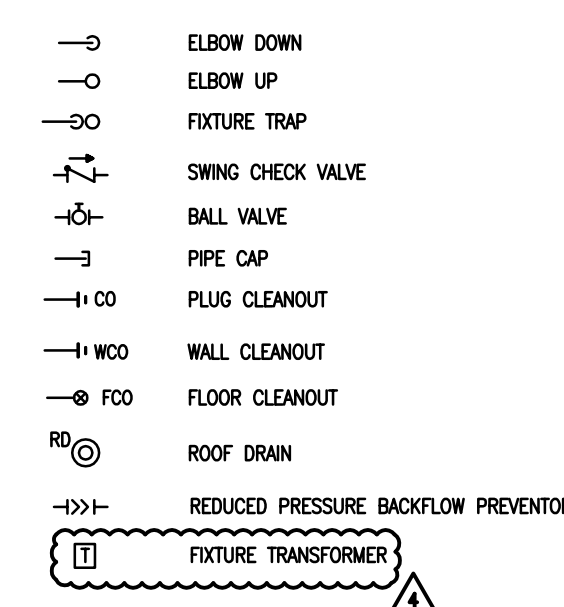
RISER DIAGRAM SYMBOLS



ABBREVIATIONS

AD ACCESS DOOR	FLR FLOOR	PG PRESSURE GAUGE
AFB ABOVE FINISHED FLOOR	FPM FEET PER MINUTE	PSI PER SQUARE INCH
AP ACCESS PANEL	FT FEET	RET RETURN
ARCH ARCHITECTURAL	GA GAUGE	RM ROOM
BOP BOTTOM OF PIPE	GCO GRADE CLEANOUT	RPM REVOLUTIONS PER MINUTE
BALV BALANCING VALVE	GV GATE VALVE	SF SQUARE FEET
BV BALL VALVE	GPM GALLONS PER MINUTE	SK SINK
CI CAST IRON	HOR HORIZONTAL	SS SERVICE SINK
CL CENTER LINE	HW HOT WATER	TH THERMOMETER
CLG CEILING	HWR HOT WATER RECIRCULATING	T&P TEMPERATURE AND PRESSURE RELIEF VALVE
CO CLEANOUT	HTR HEATER	TMV THERMOSTATIC MIXING VALVE
CON CONCRETE	HVAC HEATING, VENTILATION & AIR CONDITIONING	TOS TOP OF SLAB
CV CHECK VALVE	HZ HERTZ	TYP TYPICAL
CW COLD WATER	IN INCHES	V VENT
DFU DRAIN FIXTURE UNITS	INS INSULATION	VB VACUUM BREAKER
DA DIAMETER	KW KILOWATT	VEL VELOCITY
DN DOWN	LAV LAVATORY	VTR VENT THROUGH ROOF
DWG DRAWING	MFR MANUFACTURER	WC WATER CLOSET
DWH DOMESTIC WATER HEATER	MAX MAXIMUM	WHA WATER HAMMER ARRESTOR
EA EACH	MIN MINIMUM	
EL ELEVATION	MS MOP SINK	
EWG ELECTRIC WATER COOLER	NC NORMALLY CLOSED	
F DEGREES FAHRENHEIT	NIC NOT IN CONTRACT	
FLEX FLEXIBLE	NO NORMALLY OPEN	
FF FINISHED FLOOR	NPW NON-POTABLE WATER	
	NTS NOT TO SCALE	
	OD OUTSIDE DIAMETER	
	OFRD OVERFLOW ROOF DRAIN	
	OW OPEN WASTE	

SYMBOLS



REFERENCE SYMBOLS



PIPE MATERIALS SCHEDULE

BUILDING DRAINAGE & VENT PIPING, INDOOR ABOVE & BELOW FLOOR (SAN, DWG):

- SERVICE CLASS HUB & SPIGOT CAST IRON SOIL PIPE & FITTINGS WITH LEAD & OAKUM CAULKED JOINTS CONFORMING TO ASTM A74; SUSPENDED.
- SERVICE CLASS HUB & SPIGOT CAST IRON SOIL PIPE & FITTINGS WITH GASKETED JOINTS; UNDERGROUND.
- GALVANIZED STEEL PIPE & FITTINGS CONFORMING TO ASTM A 53.
- COPPER/COPPER ALLOY PIPE & FITTINGS CONFORMING TO ASTM B 42 & ASTM B 302. COPPER/COPPER ALLOY TUBING & FITTINGS (TYPE M) CONFORMING TO ASTM B 75, ASTM B 88, ASTM B 251.

DOMESTIC WATER DISTRIBUTION PIPING (CW, HW, HWR):

- ABOVE GROUND:** COPPER/COPPER ALLOY PIPE & FITTINGS CONFORMING TO ASTM B 42 & ASTM B 302. COPPER/COPPER ALLOY TUBING & FITTINGS (TYPE L) CONFORMING TO ASTM B 88. LEAD FREE SOLDER.

VALVES:

- APOLLO BALL VALVES, FULLPORT, ALL SIZES.

INSULATION:

- 1" THICK FIBERGLASS WITH ALL SERVICE JACKET.

PLUMBING FIXTURE ROUGH-IN SCHEDULE

FIXTURE TYPE	TRAP	WASTE	VENT	AIR CHAMBER		INLET TO STOP		REMARKS
				CW	HW	CW	HW	
WATER CLOSET	3"	4"	2"	1 1/4"	-	1"	-	
URINAL	1 1/2"	2"	1 1/2"	3/4"	-	3/4"	-	
LAVATORY	1 1/4"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
SHOWER	2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
SINK	1 1/2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
MOP BASIN	2"	2"	1 1/2"	3/4"	3/4"	1/2"	1/2"	
FLOOR DRAIN (ED-1, ED-2)	4"	4"	2"	-	-	-	-	

DRAIN SCHEDULE

TAG.	TYPE	MFR.	MODEL NO.	LOCATION	MATERIAL	NOTES/OPTIONS
FD-1	FLOOR DRAIN	SMITH	2010-A-NB	FINISHED FLOOR	CAST IRON	WITH ROUND TOP, VANDAL PROOF GRATE & DEEP SEAL TRAP
FD-2	MECH. ROOM FLOOR DRAIN	SMITH	2010-A-F38	FINISHED FLOOR	CAST IRON	CAST IRON WITH RECESSED GRATE & DEEP SEAL TRAP
HD-1	HUB DRAIN	WATTS	FD-100-DD	FINISHED FLOOR	CAST IRON	WITH DEEP SEAL TRAP.

SPECIALTY EQUIPMENT SCHEDULE

TAG.	TYPE	MFR.	MODEL NO.	NOTES/OPTIONS
TMV-1	POINT OF USE MIXING VALVE	WATTS	USG-B	WITH 3/8" INLET & OUTLETS, MEETS ASSE 1016. PROVIDE AT ALL LAV-1 OUTLET TEMPERATURE: 105°F
HB-1	EXPOSED HOSE BIBB	CHICAGO FAUCET	387-E27CP	WITH INTEGRAL VACUUM BREAKER. INCLUDE TESTABLE DOUBLE CHECK VALVE ON WATER SUPPLY.
NFSC-1	EXTERIOR HOSE CONNECTION	JR SMITH	5509 QT	POLISHED BRONZE BOX WITH HOSE CONNECTION WITH VACUUM BREAKER. INCLUDE TESTABLE DOUBLE CHECK VALVE IN WALL BOX ON WATER SUPPLY.
DCVA-1	DOUBLE CHECK VALVE ASSEMBLY	WATTS	SERIES 007	ASSE 1015 RATED. STAINLESS STEEL CORROSION RESISTANT CONSTRUCTION. INSTALL IN WALL WITH ACCESS PANEL AS REQUIRED. PROVIDE AT HB-1 AND NFSC-1 AS REQUIRED PER PLANS, EQUIPMENT SCHEDULES, AND DETAILS.
DCVA-2	DUAL CHECK VALVE ASSEMBLY	WATTS	SERIES 7	ASSE 1024 RATED. 3/8" CONNECTION. BRASS BODY CONSTRUCTION. PROVIDE AT ALL ICE MAKER.
RPZ-1	REDUCED PRESSURE ZONE BACKFLOW PREVENTER	WATTS	SERIES 009	ASSE 1013 RATED. FIELD TESTABLE. BRONZE BODY. PROVIDE DRAIN TO FLOOR DRAIN WITH APPROVED AIR GAP. WITH STRAINER. PROVIDE PER DETAILS, SCHEDULES, AND PLANS.

WATER HEATER SCHEDULE

TAG	QTY.	MANUFACTURER & MODEL NO.	STORAGE CAPACITY	DIMENSIONS		ELECTRICAL INFORMATION			RECOVERY RATE (100°F RISE)	CW CONN.	HW CONN.	REMARKS	
				DIAMETER INCHES	HEIGHT INCHES	KW	V/PHASE/HZ	AMPS					
WH-1	1	A.O.SMITH #DE-120	120 GAL.	2'-6"	5'-5"	24	208/3/60	66.6	-----	98 GPH	1-1/4"	1-1/4"	ROUTE PIPE INDIRECTLY TO FLOOR DRAIN
WH-2	1	A.O.SMITH #DEL-20	20 GAL.	22"	31"	5.0	208/3/60	20.5	-----	20 GPH	3/4"	3/4"	ROUTE PIPE INDIRECTLY FROM DRAIN PAN TO MB-1
WH-3	1	A.O.SMITH #DEL-50	50 GAL.	26"	32"	12.0	208/3/60	57.7	-----	61 GPH	3/4"	3/4"	ROUTE PIPE INDIRECTLY FROM DRAIN PAN TO FLOOR DRAIN IN MECHANICAL ROOM

- NOTES:**
- MOUNT WH-2 OVERHEAD.
 - MOUNT WH-3 ABOVE CEILING.
 - PROVIDE WH-1 WITH AMTROL ST-12 EXPANSION TANK.
 - PROVIDE WH-2 & WH-3 WITH AMTROL ST-5 EXPANSION TANK.

PLUMBING FIXTURE SCHEDULE

PLBG SYMBOL	FIXTURE NAME	QTY	LOCATION	FIXTURE		VALVE/FAUCET/TRIM		SUPPLIES	ADDITIONAL REQUIREMENTS & NOTES
				TYPE	MFR/MODEL	TYPE	MFR/MODEL		
WC-1	WATER CLOSET	7	REST ROOM	WALL HUNG ELONGATED STAINLESS STEEL	ACORN / 1680-W-1	HARD-WIRED CONCEALED SENSOR	SLOAN / 140-1.6 ES-S 1.6 GPF	1" ANGLE STOP	STANDARD RIM HEIGHT. WITH OPEN FRONT SEAT LESS COVER.
WC-2	WATER CLOSET	3	REST ROOM	WALL HUNG ELONGATED STAINLESS STEEL	ACORN / 1680-W-1	HARD-WIRED CONCEALED SENSOR	SLOAN / 140-1.6 ES-S 1.6 GPF	1" ANGLE STOP	WITH RIM HEIGHT AT 17-1/2" WITH OPEN FRONT SEAT LESS COVER.
WC-3	WATER CLOSET	1	LIFEGUARD REST ROOM	WALL HUNG ELONGATED VITREOUS CHINA	KOHLER / K-4325	MANUAL EXPOSED	SLOAN / CROWN - 111 1.28 GPF	1" ANGLE STOP	WITH RIM HEIGHT AT 17-1/2" WITH OPEN FRONT SEAT LESS COVER.
UR-1	URINAL	3	MEN'S RESTROOM	WALL HUNG STAINLESS STEEL	ACORN / 1702-W-1	HARD-WIRED CONCEALED SENSOR	SLOAN / 190-1.0 ES-S 1.0 GPF	3/4" ANGLE STOP	WITH RIM HEIGHT AT 16". WITH WALL CARRIER.
UR-2	URINAL	1	MEN'S RESTROOM	WALL HUNG STAINLESS STEEL	ACORN / 1702-W-1	HARD-WIRED CONCEALED SENSOR	SLOAN / 190-1.0 ES-S 1.0 GPF	3/4" ANGLE STOP	WITH STANDARD RIM HEIGHT. WITH WALL CARRIER.
LAV-1	LAVATORY	7	PUBLIC TOILET ROOMS	WALL HUNG STAINLESS STEEL	ACORN / 1955-1-9-H24-GT	METERING	CHICAGO FAUCET / 333-E2805-66SPHBCP 0.5 GPM	LOOSE KEY ANGLE STOPS	WITH TMV-1 WITH GRID STRAINER WITH (2) FAUCETS, (1) FOR HOT & (1) FOR COLD
LAV-2	LAVATORY	1	LIFEGUARD REST ROOM	WALL HUNG VITREOUS CHINA	KOHLER / K-2035-4	GOOSENECK WITH WRISTBLADES	CHICAGO FAUCET / 201-AGN2AE3-317CP 0.5 GPM	LOOSE KEY ANGLE STOPS	WITH 0.5 GPM AERATOR AND TMV-1 WITH GRID STRAINER
SK-1	SINK	1	LIFEGUARD OFFICE	REFER TO ARCHITECTURAL DOCUMENTS	DWYER UNIT	INCLUDED	----	LOOSE KEY ANGLE STOPS	MODULAR KITCHENETTE UNIT. ROUTE WATER & WASTE PIPING IN PARTIAL HEIGHT WALL TO FULL HEIGHT WALL BETWEEN LIFEGUARD AND CONCESSION.
SK-2	HAND SINK	1	CONCESSION	WALL HUNG STAINLESS STEEL	ELKAY / CHSB1716C	GOOSENECK WITH WRISTBLADES	ELKAY / LKB400	LOOSE KEY ANGLE STOPS	WITH ELKAY LKB8 STAINLESS STEEL BODY AND GRID STRAINER.
SK-3	TRIPLE BASIN SINK	1	CONCESSION	FLOOR MOUNTED STAINLESS STEEL	ELKAY / RNSF8354	GOOSENECK WITH WRISTBLADES	ELKAY / LK940AT08L2H	LOOSE KEY ANGLE STOPS	WITH ELKAY LK18B STAINLESS STEEL BODY AND GRID STRAINER.
SH-1	SHOWER	1	LIFEGUARD REST ROOM	SHOWER	SYMMONS / S-4701-1.5	PRESSURE BALANCE	SYMMONS	INTEGRAL STOPS WITH VALVE	WITH ED-1 WITH SQUARE GRATE. 1.5 GPM FLOW RATE. ADJUST STOP SCREW FOR OUTLET TEMP MAX: 105°F
MB-1	MOP BASIN	1	JANITOR	FLOOR MOUNTED PRECAST TERRAZZO	FIAT / TSB 3000 SERIES	LEVER HANDLES AND VACUUM BREAKER	CHICAGO FAUCET / 911	SUPPLIES WITH INTEGRAL STOPS. ALL CONCEALED PIPING.	WITH VACUUM BREAKER AT 7"-6" AFF. WITH CHICAGO FAUCET 390-PRJKCP LEVER HANDLES. WITH 1453 FLAT STEEL STRAINER. SIZE PER ARCHITECTURAL DOCUMENTS.
DF-1	DRINKING FOUNTAIN	1	OUTDOORS	STAINLESS STEEL PEDESTAL	HAWS / 3500D	PUSH BUTTON	HAWS	LINE VALVE	BARRIER FREE BI-LEVEL WITH PET FOUNTAIN. FOUNTAIN SHALL BE BLACK COLOR FINISH.
OSH-1	OUTDOOR SHOWER	1	REFER TO CIVIL DOCUMENTS	PEDESTAL STAINLESS STEEL	BRADLEY / COL-6B-SV-ST	PUSH BUTTON	BRADLEY	SUPPLIES WITH INTEGRAL STOPS.	SHOWERHEAD HEIGHT TO BE AT 6'-0".

- NOTES:**
- PROVIDE TRANSFORMER (SLOAN EL-154) AS INDICATED ON PLANS FOR HARD WIRED WATER CLOSETS AND URINALS.
 - DAISY CHAIN AS MANY AS (10) WATER CLOSETS AND URINALS OFF OF (1) SLOAN EL-154 TRANSFORMER.

5	10.27.2009	ISSUED FOR ADDENDUM 4	4
4	9.25.2009	ISSUED FOR BID	
3	9.21.2009	ISSUED FOR PERMIT/95% DESIGN	
2	9.04.2009	ISSUED FOR 90% DESIGN	
1	3.31.2009	ISSUED FOR 30% DESIGN	

PROJECT

OSTERMAN BEACH COMFORT STATION CHICAGO, IL

SHEET TITLE

PLUMBING GEN. NOTES, ABBREVIATIONS & SYMB.

DRAWN: NAP	BDT	SHEET NO.
CHECKED: TS	MJC	P0.01
APPROVED: JM	MJC	
JOB NO. 09.01.08		

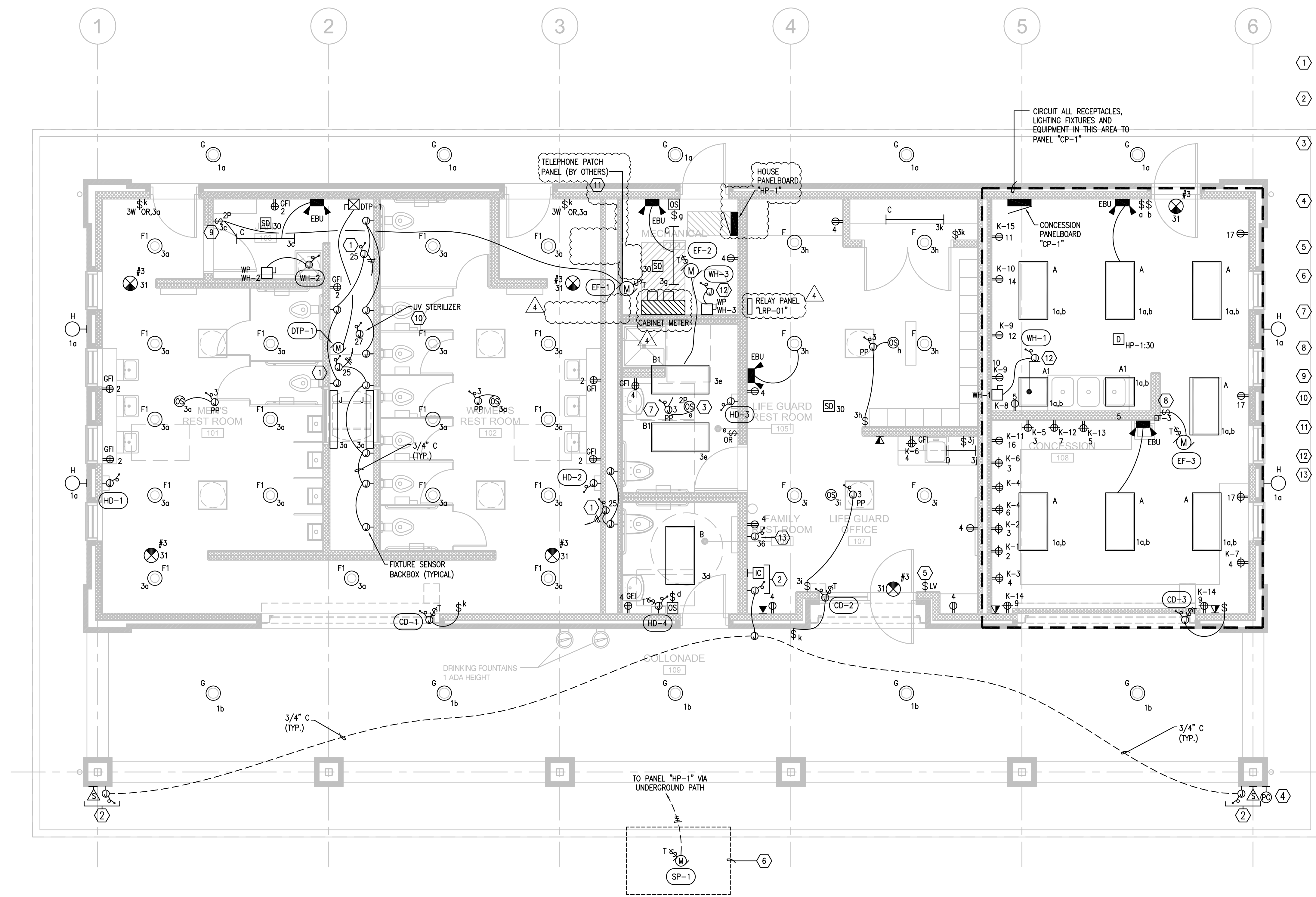
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SHEET NOTES:

1. WIRE ALL EMERGENCY BATTERY UNITS AHEAD OF NORMAL-POWER LIGHTING FIXTURE.
2. CIRCUIT EXTERIOR LIGHTING FIXTURES THROUGH RELAY PANEL.
3. PROVIDE LINE-VOLTAGE, STAND ALONE, FIRE ALARM DEVICE AS INDICATED. (SMOKE DETECTOR, HEAT DETECTOR).
4. ALL OCCUPANCY SENSORS SHALL BE LOW-VOLTAGE (STAND-ALONE) TYPE EXCEPT LIFE-GUARD RESTROOM. PUBLIC RESTROOM SHALL BE PROVIDED WITH DUAL PASSIVE-INFRARED AND ULTRASONIC SENSING.

KEYED NOTES:

1. PROVIDE 120V POWER CONNECTION FOR PLUMBING EQUIPMENT LOW VOLTAGE TRANSFORMER. COORDINATE WITH PLUMBING DRAWINGS FOR EXACT LOCATION OF FIXTURE TRANSFORMER.
2. PROVIDE CONDUIT, BACKBOXES, AND ALL OTHER ROUGH-INS FOR PUBLIC ADDRESS SPEAKERS (PROVIDED BY OTHERS) BACK TO INTERCOM STATION IN LIFE GUARD OFFICE. COORDINATE WITH CPD VENDOR FOR EQUIPMENT LOCATION.
3. PROVIDE A DUAL RELAY (2-POLE) OCCUPANCY SENSOR (CEILING-MOUNTED WITH OVERRIDE SWITCH). ONE (1) POLE SHALL SWITCH LAMPS AND THE OTHER POLE SHALL SWITCH THE EXHAUST FAN. REFER TO DWG E3.01 FOR OCCUPANCY SENSOR SPECIFICATIONS.
4. OUTDOOR PHOTOSENSOR SHALL BE ROOF MOUNTED AND AIMED NORTH AND SUITABLE FOR WET LOCATIONS. OUTDOOR RATED JUNCTION BOX. REFER TO DETAIL 6/E2.01 FOR FURTHER INFORMATION.
5. OVERRIDE LOW-VOLTAGE DIGITAL SWITCH FOR EXTERIOR FIXTURES. REFER TO DETAIL 5/E2.01 FOR FURTHER INFORMATION.
6. SUMP PUMP SP-1 (PROVIDED BY OTHERS) LOCATED UNDERGROUND AND OUTSIDE OF BUILDING. REFER TO DRAWING A4.1 FOR EXACT LOCATION. PROVIDE WEATHERPROOF DISCONNECT SWITCH.
7. PROVIDE A LINE VOLTAGE POWER PACK TO CONTROL OCCUPANCY SENSOR. WIRE POWER PACK TO TURN ON BOTH ROOM LIGHTS AND EXHAUST FAN UPON ACTIVATION.
8. PROVIDE A TIMER SWITCH FOR EXHAUST FAN (EF-3) IN KITCHEN AREA ONLY.
9. PROVIDE TWO-POLE TOGGLE SWITCH TO CONTROL BOTH LIGHT FIXTURE AND EXHAUST FAN.
10. PROVIDE 120V POWER TO WATER HARVESTING UV STERILIZER. UTILIZE 2#12, AND 1#12 GRD, 3/4"C.
11. PROVIDE FIRE-TREATED BACKBOARD FOR TELEPHONE SYSTEM (TTB). PROVIDE #6 GRD FROM TTB TO METER CABINET GROUND BUS.
12. PROVIDE A 4" CONCRETE PAD FOR WATER HEATER FLOOR MOUNTED.
13. PROVIDE 120V POWER TO RAINWATER HARVESTING DIGITAL DISPLAY PANEL. UTILIZE 2#12 AND 1#12 GRD, 3/4"C. COORDINATE WITH VENDOR FOR CONDUIT ROUGH-IN REQUIREMENTS TO/FROM ATLANTIS UNDER GROUND STORAGE TANK.



A ELECTRICAL FIRST-FLOOR PLAN
 SCALE: 1/4" = 1'-0"

6	10.27.2009	ISSUED FOR ADDENDUM 4
5	10.12.2009	ISSUED FOR ADDENDUM 1
4	9.25.2009	ISSUED FOR BID
3	9.21.2009	ISSUED FOR PERMIT/95% DESIGN
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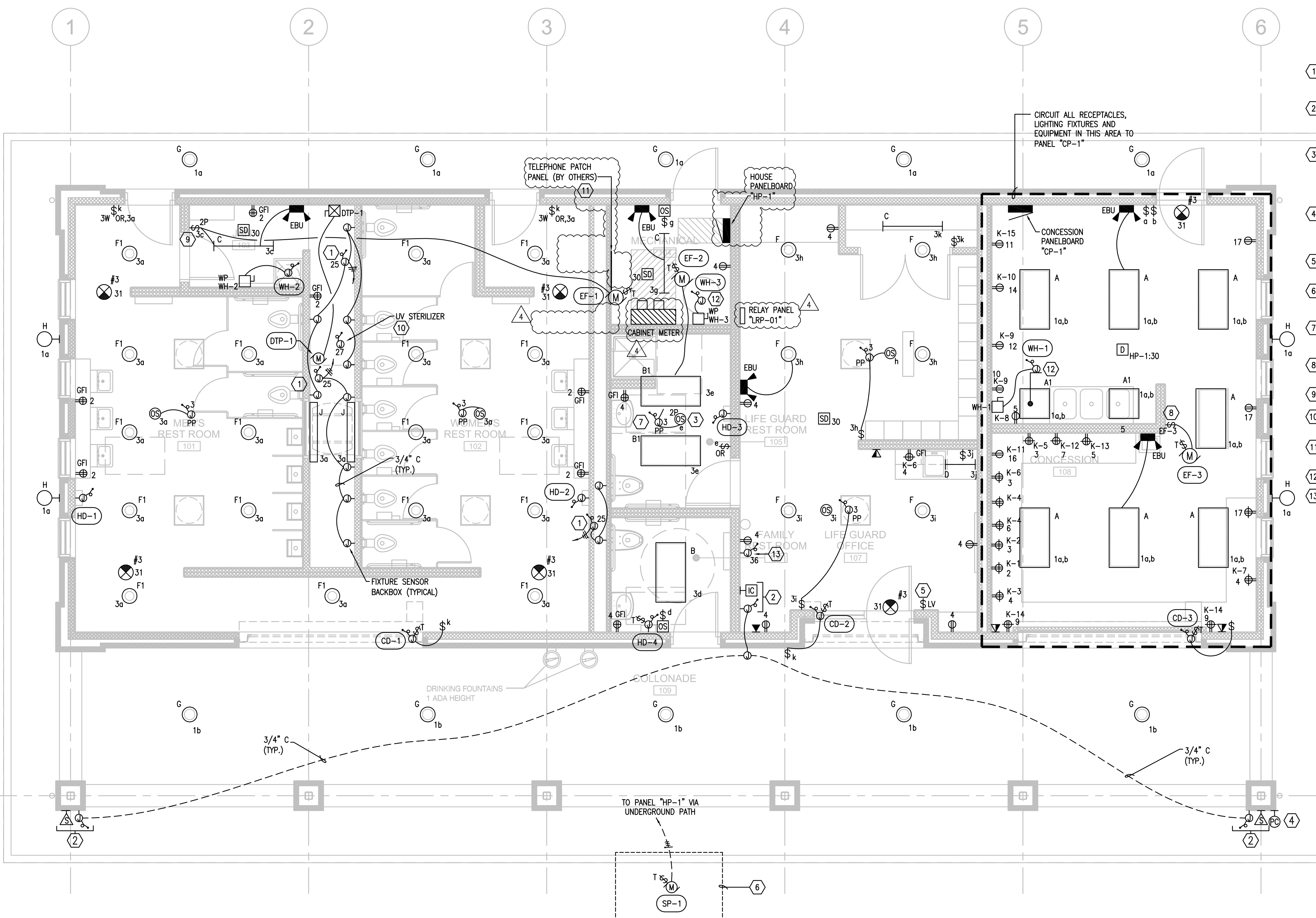
PROJECT
 40TH STREET BEACH
 COMFORT STATION
 CHICAGO, IL

SHEET TITLE
ELECTRICAL FIRST-FLOOR PLAN

DRAWN:	MH	SHEET NO.
CHECKED:	PCH	E1.01
APPROVED:	DNT	
JOB NO. 09.01.08		

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A ELECTRICAL FIRST-FLOOR PLAN
 SCALE: 1/4" = 1'-0"

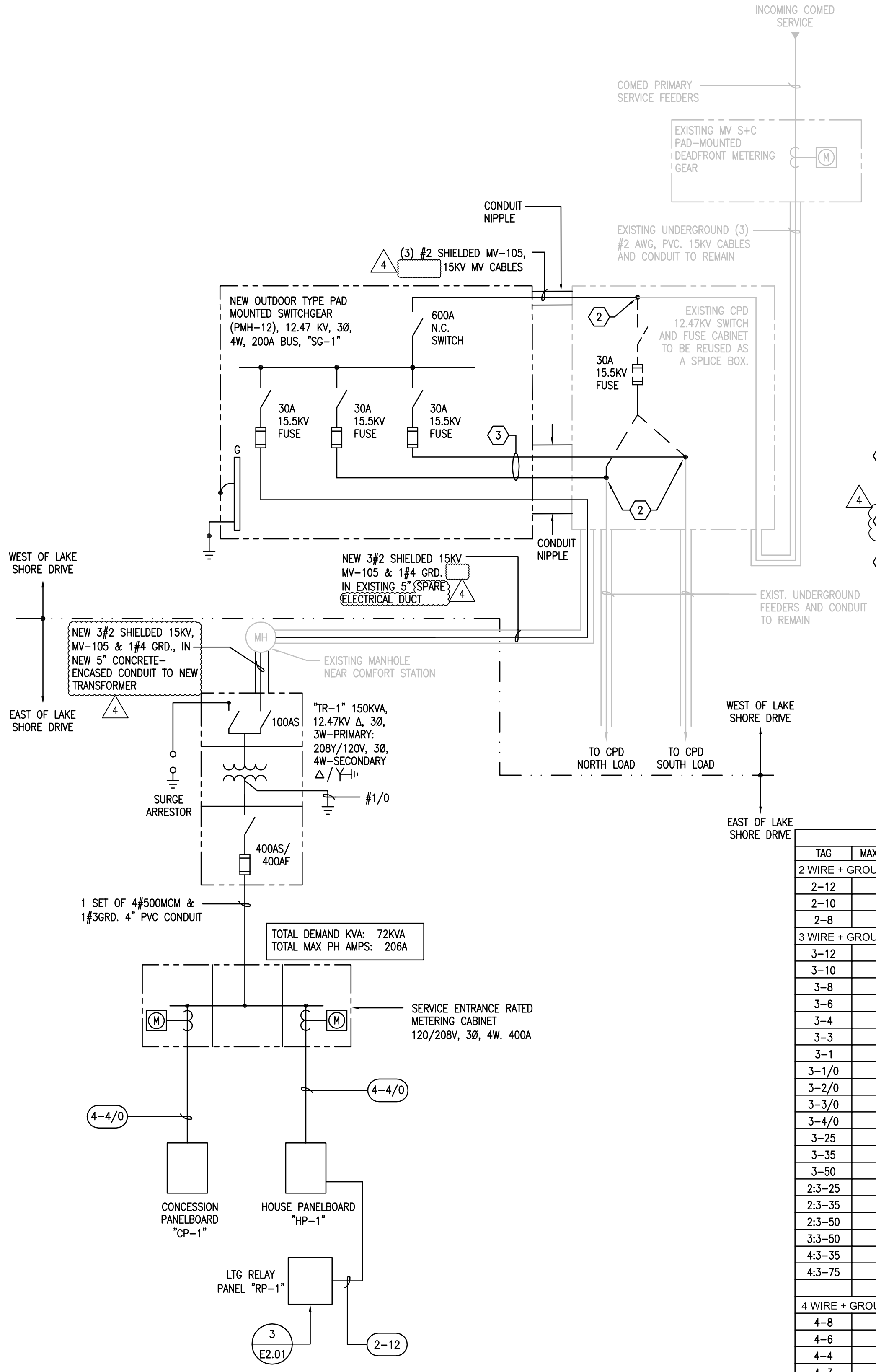
6	10.27.2009	ISSUED FOR ADDENDUM 4
5	10.12.2009	ISSUED FOR ADDENDUM 1
4	9.25.2009	ISSUED FOR BID
3	9.21.2009	ISSUED FOR PERMIT/95% DESIGN
2	9.04.2009	ISSUED FOR 90% DESIGN
1	3.31.2009	ISSUED FOR 30% DESIGN

PROJECT
OSTERMAN BEACH
COMFORT STATION
CHICAGO, IL

SHEET TITLE
ELECTRICAL FIRST-FLOOR PLAN

DRAWN: NAP	MH	SHEET NO. E1.01
CHECKED: TS	PCH	
APPROVED: JM	DNT	
JOB NO. 09.01.08		

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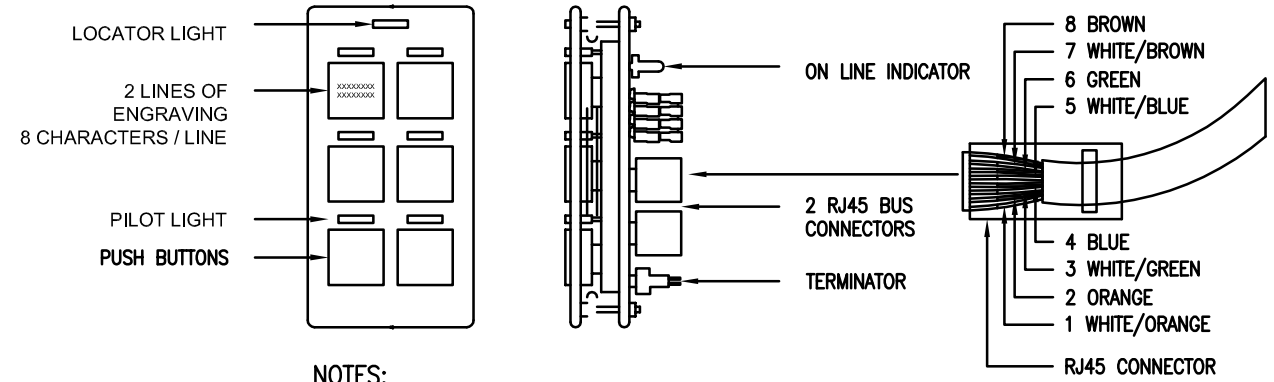


1 ELECTRICAL SINGLE-LINE DIAGRAM
 SCALE: NTS

- SHEET NOTES**
- ALL ITEMS INDICATED BY A DARK SOLID LINE ARE NEW.
 - ALL ITEMS INDICATED BY A LIGHT SOLID LINE ARE EXISTING TO REMAIN.
 - ALL ITEMS INDICATED BY A DARK DASHED LINE ARE EXISTING TO BE REMOVED.
 - ALL ITEMS INDICATED BY A LIGHT PHANTOM LINE SHALL INDICATED EQUIPMENT ENCLOSURE.
 - REFER TO FEEDER SCHEDULE THIS SHEET FOR CONDUIT AND WIRE SIZING.
 - REFER TO DWG E3.01 FOR ELECTRICAL PANEL SCHEDULES.
 - CONTRACTOR SHALL CONDUCT A SITE-SURVEY AND ASSESS THE EXISTING SITE CONDITIONS OF ELECTRICAL EQUIPMENT PRIOR TO ORDERING NEW.
 - FOLLOW NATIONAL SAFETY CODE, PART 341A FOR PULLING CALCULATIONS REFERENCE.

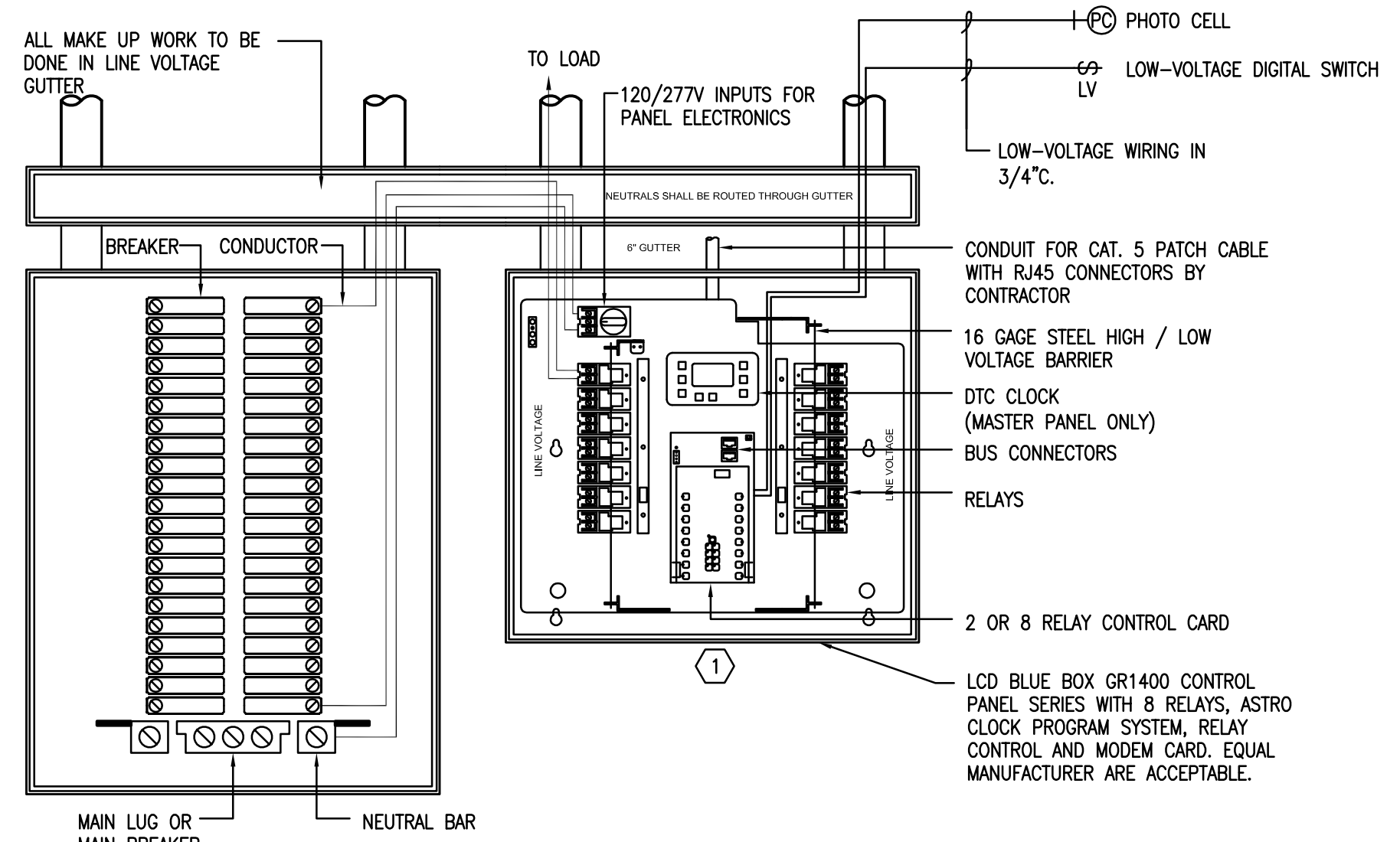
- KEYED NOTES**
- PROVIDE AND INSTALL A STAND-ALONE LIGHTING RELAY PANEL. LCD BLUE BOX GR1400 CONTROL PANEL SERIES WITH 8 RELAYS, ASTRO CLOCK PROGRAM SYSTEM, RELAY CONTROL AND MODEM CARD. EQUAL MANUFACTURER ARE ACCEPTABLE.
 - INTERCEPT AND PROVIDE COLD SHRINK SPLICING OF MEDIUM VOLTAGE CABLES TO BE EXTENDED TO NEW SWITCHGEAR.
 - PROVIDE 3#2 SHIELDED, 15KV, MV-10S CONDUCTORS TO MATCH EXISTING FOR SPLICING.

FEEDER SCHEDULE		
TAG	MAXIMUM OCPD	FEEDER SIZE
2 WIRE + GROUND		
2-12	20A	2 #12, #12 GRD, 3/4" C.
2-10	30A	2 #10, #10 GRD, 3/4" C.
2-8	50A	2 #8, #10 GRD, 3/4" C.
3 WIRE + GROUND		
3-12	20A	3 #12, #12 GRD, 3/4" C.
3-10	30A	3 #10, #10 GRD, 3/4" C.
3-8	50A	3 #8, #10 GRD, 3/4" C.
3-6	60A	3 #6, #10 GRD, 1" C.
3-4	80A	3 #4, #8 GRD, 1 1/4" C.
3-3	90A	3 #3, #8 GRD, 1 1/4" C.
3-1	100A	3 #1, #8 GRD, 1 1/4" C.
3-1/0	150A	3 #1/0, #6 GRD, 1 1/2" C.
3-2/0	175A	3 #2/0, #6 GRD, 2" C.
3-3/0	200A	3 #3/0, #6 GRD, 2" C.
3-4/0	225A	3 #4/0, #4 GRD, 2" C.
3-25	250A	3-250 KCMIL, #4 GRD, 2 1/2" C.
3-35	300A	3-350 KCMIL, #4 GRD, 3" C.
3-50	400A	3-500 KCMIL, #3 GRD, 3 1/2" C.
2:3-25	500A	(2) SETS: 3-250 KCMIL, #2 GRD, 2 1/2" C.
2:3-35	600A	(2) SETS: 3-350 KCMIL, #1 GRD, 3" C.
2:3-50	800A	(2) SETS: 3-500 KCMIL, #1/0 GRD, 3 1/2" C.
3:3-50	1000A	(3) SETS: 3-500 KCMIL, #2/0 GRD, 3 1/2" C.
4:3-35	1200A	(4) SETS: 3-350 KCMIL, #3/0 GRD, 3" C.
4:3-75	1600A	(4) SETS: 3-750 KCMIL, #4/0 GRD, 4" C.
4 WIRE + GROUND		
4-8	50A	4 #8, #10 GRD, 1" C.
4-6	60A	4 #6, #10 GRD, 1 1/4" C.
4-4	80A	4 #4, #8 GRD, 1 1/4" C.
4-3	90A	4 #3, #8 GRD, 1 1/4" C.
4-1	100A	4 #1, #8 GRD, 1 1/2" C.
4-1/0	150A	4 #1/0, #6 GRD, 2" C.
4-2/0	175A	4 #2/0, #6 GRD, 2" C.
4-3/0	200A	4 #3/0, #6 GRD, 2 1/2" C.
4-4/0	225A	4 #4/0, #4 GRD, 2 1/2" C.
4-25	250A	4-250 KCMIL, #4 GRD, 3" C.
4-35	300A	4-350 KCMIL, #4 GRD, 3 1/2" C.
4-50	400A	4-500 KCMIL, #3 GRD, 3 1/2" C.
2:4-25	500A	(2) SETS: 4-250 KCMIL, #2 GRD, 3" C.
2:4-35	600A	(2) SETS: 4-350 KCMIL, #1 GRD, 3 1/2" C.
2:4-50	800A	(2) SETS: 4-500 KCMIL, #1/0 GRD, 3 1/2" C.
3:4-50	1000A	(3) SETS: 4-500 KCMIL, #2/0 GRD, 3 1/2" C.
4:4-35	1200A	(4) SETS: 4-350 KCMIL, #3/0 GRD, 3 1/2" C.
4:4-75	1600A	(4) SETS: 4-750 KCMIL, #4/0 GRD, 4" C.
6:4-50	2000A	(6) SETS: 4-500 KCMIL, #2/0 GRD, 3 1/3" C.



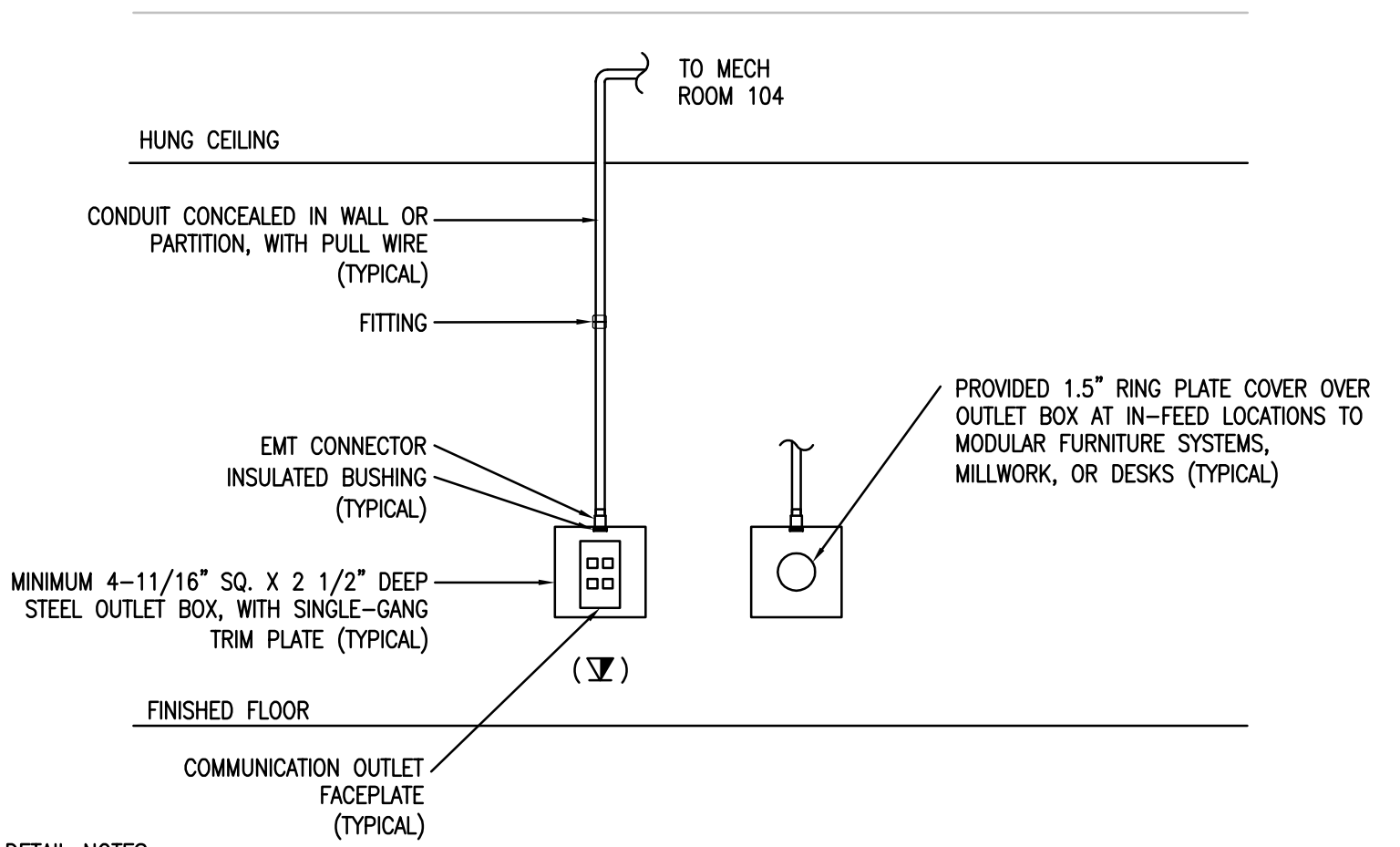
- NOTES:**
- SWITCH BUTTONS ARE FACTORY ENGRAVED.
 - PUSH BUTTONS MAY CONTROL ANY RELAY(S) IN ANY COMBINATION.
 - LED PILOT LIGHTS INDICATE STATUS.
 - SWITCH LINKED TO THE GR 1400 DIGITAL BUS VIA CAT. 5 PATCH CABLE WITH RJ45 CONNECTORS.
 - DECORA STYLE FACE PLATE BY CONTRACTOR.

2 LOW-VOLTAGE SWITCH DETAIL
 SCALE: NTS



HOUSE PANELBOARD "HP-1" GR 1400 SERIES RELAY PANEL "RP-1"
 PANEL DETAIL PANEL DETAIL

3 RELAY PANEL CONNECTION DETAIL
 SCALE: NTS



- DETAIL NOTES:**
- REFER TO ARCHITECTURAL PLANS FOR INFORMATION REGARDING OUTLET ELEVATION AND PLACEMENT WITH RESPECT TO FINISHED FLOOR, MILLWORK AND FURNITURE.
 - EACH OUTLET LOCATION MUST BE SERVED BY A DEDICATED CONDUIT. LOOPED (DAISY-CHAINED) OR BACK-TO-BACK OUTLETS ARE NOT ACCEPTABLE.
 - TELECOM OUTLET BOXES SHALL BE MINIMUM 4-11/16"x4-11/16"x2-1/2". TELECOM WALL OUTLETS SHALL BE ALIGNED WITH ADJACENT ELECTRICAL RECEPTACLE, AND LOCATED NO MORE THAN 12" FROM RECEPTACLE. INSTALL PLUMB AND LEVEL TO EACH OTHER.
 - DETAIL IS DIAGRAMMATIC OF GENERAL PROJECT CONDITIONS AND IS NOT NECESSARILY INCLUSIVE OF ALL POSSIBLE DISTRIBUTION REQUIREMENTS. CONSULT PROJECT SPECIFICATIONS AND FLOOR PLAN DRAWINGS, WHICH INCLUDE ADDITIONAL INFORMATION ON PATHWAY REQUIREMENTS.
 - INSTALL WALL PHONE LOCATIONS AT 42" AFF TO CENTER OF BOX.

4 TYPICAL CONDUIT STUBS FOR TELECOMMUNICATIONS OUTLETS
 SCALE: NTS

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PROJECT
 40TH STREET BEACH
 COMFORT STATION
 CHICAGO, IL

SHEET TITLE
 ELECTRICAL SINGLE-LINE DIAGRAM

DRAWN:	MH	SHEET NO.
CHECKED:	PCH	E2.01
APPROVED:	DNT	
JOB NO. 09.01.08		