

CITY OF CHEFORNAK, ALASKA

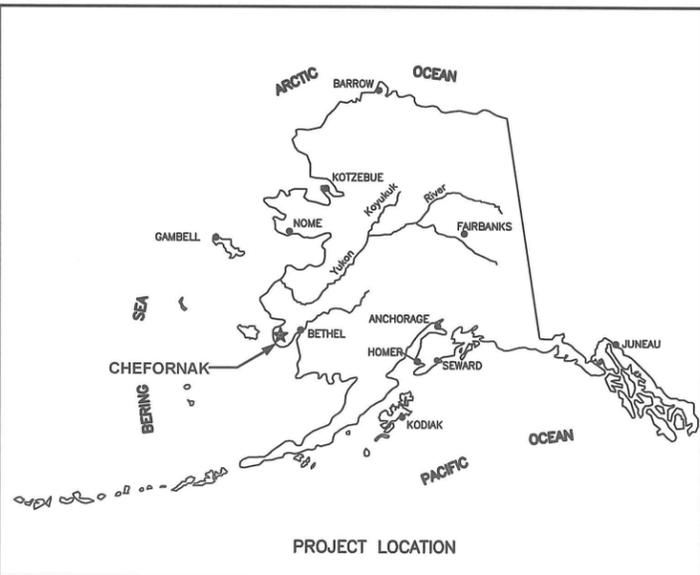
WASHETERIA AND WATER TANK

IN COOPERATION WITH STATE OF ALASKA
VILLAGE SAFE WATER AND THE CITY OF
CHEFORNAK, ALASKA

CIVIL, ARCHITECTURAL AND STRUCTURAL ISSUED FOR AGENCY APPROVAL

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Location Map



PO BOX 232946 ANCHORAGE, AK 99523 PH: 907-349-1010 FAX: 907-349-1015



Consultant

RECORD DRAWING CERTIFICATE

THESE DRAWINGS REFLECT RECORDED
INFORMATION OBTAINED DURING
CONSTRUCTION.
INFORMATION PROVIDED HEREIN IS
ACCURATE TO THE BEST OF MY
KNOWLEDGE.

NAME _____ DATE _____

Construction Foreman _____

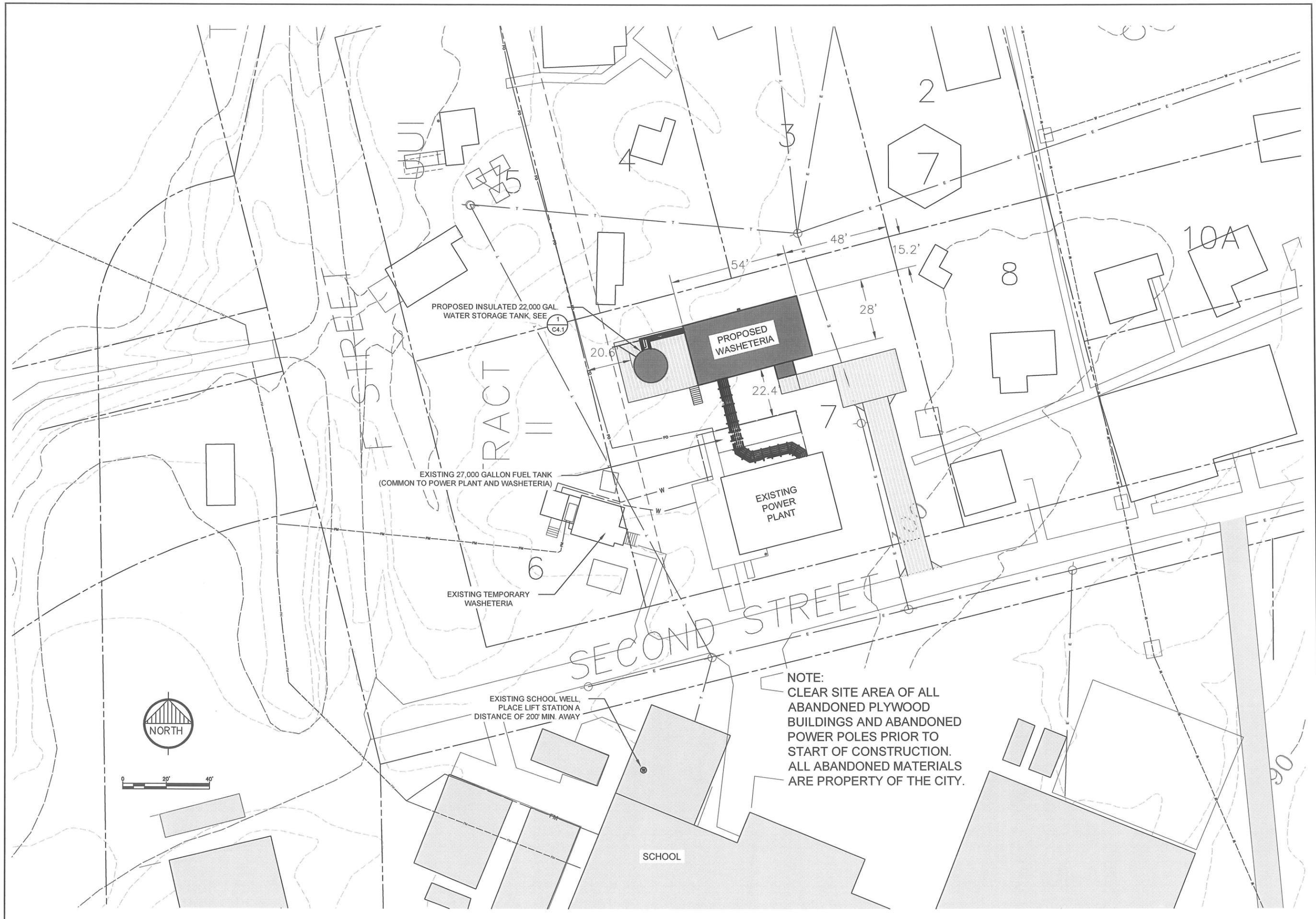
FINAL DESIGN (Date) _____

ADEC APPROVAL (Date) _____

Construction Period (From) _____ (To) _____

As-Builts (Date) _____

G:\ACAD\CHEFORNAK\2016 Washeteria and Water Tank\G2.1 PROJECT AREA.dwg, 6/15/2016 4:23:43 PM, cmerz, \\Cezmain\LANIER MP C2050\LD520C PCL 6



Project No. _____ Date <u>JUNE 2016</u> Designed <u>PCW</u> Drawn <u>CM</u> Approved <u>PCW</u>	SHEET <u>G2.1</u> OF _____	REVISION <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>									BY / DATE <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>									RECORD DRAWING CERTIFICATE THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION. INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE. NAME _____ DATE _____
CHE ENGINEERS, INC. ANCHORAGE, AK 99503 PH: 907-346-1010 FAX: 907-346-0116		WASHETERIA AND WATER TANK PROJECT AREA CHEFORNAK, ALASKA			CONSTRUCTION RECORD FIELD BOOK _____ STAKING _____ FOREMAN _____ AS-BUILT _____ INSPECTOR _____															
SCALE: AS SHOWN <small>SCALE ONE INCH ON ORIGINAL DRAWING EQUALS ONE FOOT</small> <small>IF NOT ONE INCH ON ORIGINAL DRAWING, SCALES ACCORDINGLY</small>																				

G:\ACAD\CHEFORNAK\2016 Washeteria and Water Tank\G3.0 Schematic and Design Criteria.dwg, 6/15/2016 3:12:31 PM, cmez, LANIER MP C2050_LD520C PCL 6 COLOR.pcl

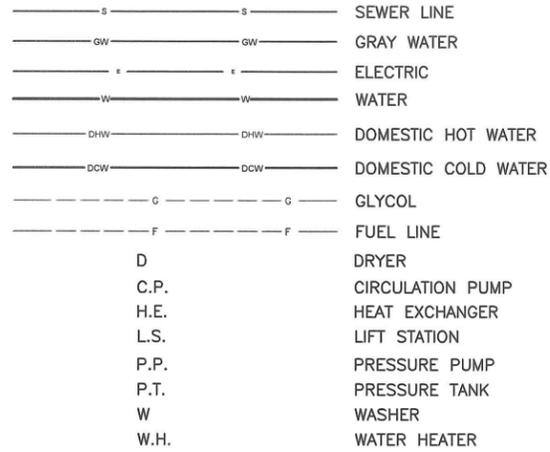
PROJECT SCOPE

- CONSTRUCT A 1,512 SQUARE FOOT WASHETERIA BUILDING, WHICH INCLUDES LAUNDRY FACILITIES, TWO RESTROOMS, UTILITY OFFICE AND MECHANICAL ROOM.
- WORK WILL INCLUDE ACCESS BOARDWALK AND A HANDICAP ACCESSIBLE RAMP.
- CONSTRUCTION OF WASHETERIA AND WATER STORAGE TANK.

PROJECT DESIGN CRITERIA

- DESIGN POPULATION (2033): 532 PERSONS
- AVERAGE WATER DEMAND (2033): 3,000 GAL/DAY
- FINISH FLOOR ABOVE FLOOD HIGH WATER ELEVATION.
- PUBLIC FACILITY DESIGNED TO BE ADA ACCESSIBLE.
- BOARDWALK WILL BE CONNECTED TO PARKING AREA AND EXISTING BOARDWALK TO ACCOMMODATE WASHETERIA.
- POWER IS SUPPLIED FROM CITY'S DISTRIBUTION SYSTEM. IT WILL BE STEPPED DOWN TO 208/120V AT THE WASHETERIA SERVICE.
- BOILERS AND RECOVERED WASTE HEAT FROM THE CITY POWER PLANT WILL PROVIDE SUPPLEMENTAL HEAT TO WASHETERIA AND FUTURE HONEY BUCKET DUMP STATION.
- DRYERS WILL OPERATE BY HOT GLYCOL AND UTILIZE A TWO STAGE ENGINEERED COIL.
- FUEL FOR THE BOILERS IS SUPPLIED TO A DAY TANK SUPPLIED FROM THE POWER PLANT 27,000 GALLON TANK AND THE FUEL USE WILL BE METERED.
- A HYDRONICALLY HEATED WATER HEATER WILL PROVIDE HOT WATER TO THE WASHERS, BATHROOMS, AND SHOWERS.
- WASHERS, DRYERS AND SHOWERS ARE TOKEN-OPERATED .
- WASTE WILL BE DISCHARGED BY GRAVITY FROM WASHETERIA TO A FUTURE LIFT STATION AT THE HONEY BUCKET DUMP STATION.
- WASHETERIA WILL SUPPLY PRESSURIZED UTILITY WATER AND FILTERED GRAY WATER TO HONEY BUCKET DUMP STATION.

LEGEND

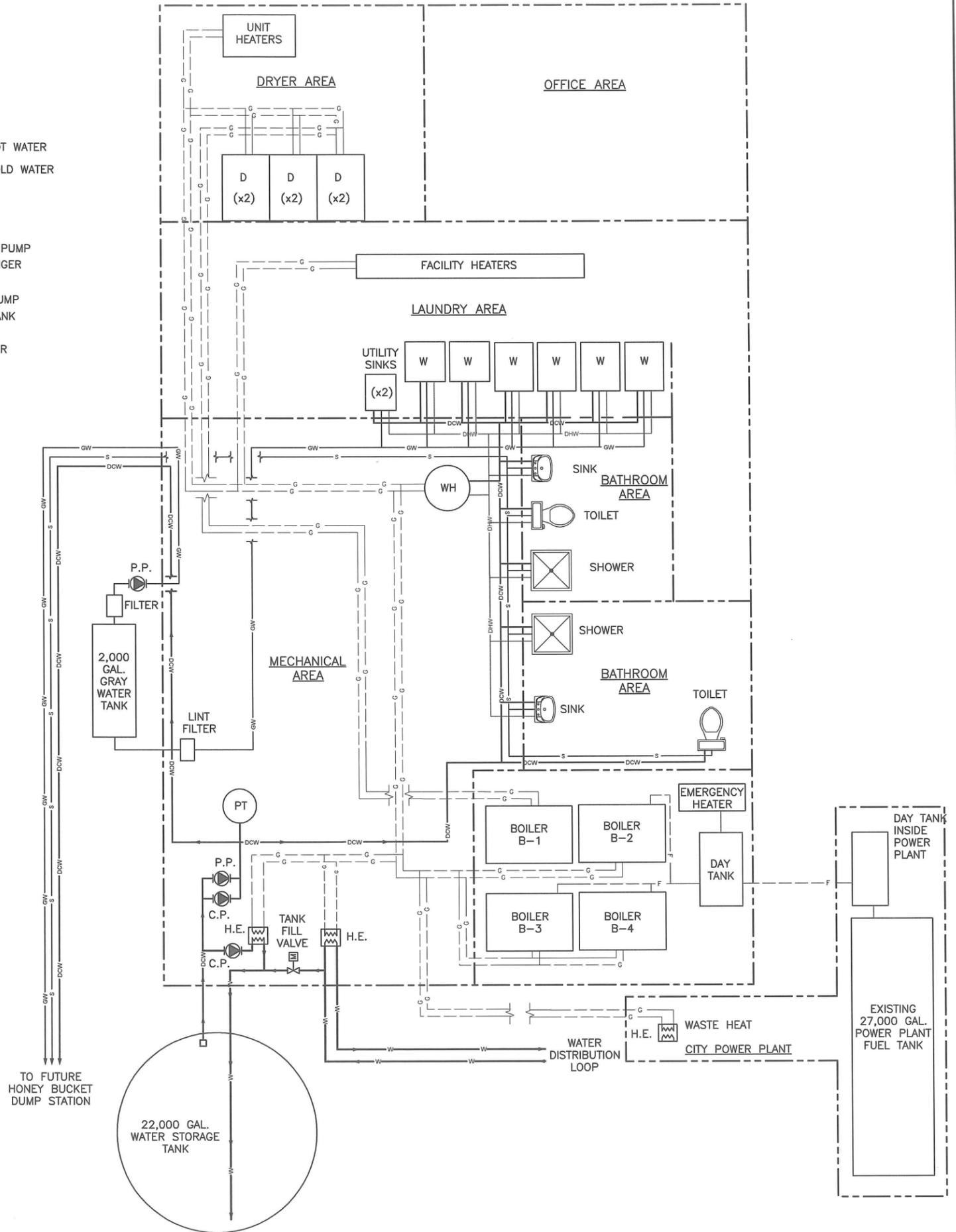


NOTE:

SCHEMATIC ONLY - EQUIPMENT LOCATIONS MAY VARY. SEE MECHANICAL SHEETS.

DAILY WASHETERIA WATER CONSUMPTION FOR DESIGN

Item	Consumption Rate	Water Consumption
30-lb washer/extractors (4 ea)	31 loads/day @ 44 gallons/load	1400 gallons
18-lb washers (2 ea)	20 loads/day @ 22 gallons/load	500 gallons
Toilets (2 ea)	30 flushes/day @ 1.6 gallons/flush	200 gallons
Showers (2 ea)	20 showers/day @ 25 gallons/shower	500 gallons
Lavatory (2 ea)	50 gallons/day	50 gallons
Utility sinks (2 ea)	30 gallons/day	30 gallons
Total estimated daily water consumption		2680 gallons per day
Engineering design consideration		3000 gallons per day



RECORD DRAWING CERTIFICATE
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 NAME _____ DATE _____

SCALE: AS SHOWN
 1" = 10'-0"
 IF NOT ONE INCH ON ORIGINAL DRAWING, SCALES ACCORDINGLY

CONSTRUCTION RECORD	FIELD BOOK	STARTING	FOREMAN	AS-BUILT	INSPECTOR
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WASHETERIA AND WATER TANK
 SYSTEM SCHEMATIC AND DESIGN CRITERIA
 CHEFORNAK, ALASKA



REVISION	BY	DATE

Project No. _____
 Date: MARCH 2016
 Designed: PCW
 Drawn: CM
 Approved: PCW

Sheet No. G3.0
 SHEET OF

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN A SAFE WORKMANLIKE MANNER TO INDUSTRY STANDARDS AND IN CONFORMANCE WITH APPLICABLE LOCAL STATE AND FEDERAL CODES AND REGULATIONS. HIGH STANDARDS OF WORKMANSHIP SHOWING A SENSE OF PRIDE BY WORKMEN SHALL BE MAINTAINED. WORKERS SHALL BE PREPARED TO SIGN THEIR INDIVIDUAL WORK AS IF IT WAS THEIR OWN ARTWORK.
- ALL MATERIALS SHALL MEET OR EXCEED THE MINIMUM QUALITY STANDARDS SPECIFIED IN THE DRAWINGS. ANY MATERIAL IN CONTACT WITH THE WELL WATER OR POTABLE WATER SHALL BE NSF 61 APPROVED. SOLDER CONTAINING LEAD SHALL NOT BE ALLOWED.
- THE BASIS OF VERTICAL CONTROL IS THE 3" BLM BRASS CAP OF USS 4412, TR-A, CORNER 11, BLOCK 6, AS SHOWN ON SURVEY CONTROL SHEET C1.0 AS POINT IDENTIFIER 616. THE ELEVATION OF THE TOP OF CAP IS 77.68 FT.
- THE BASIS OF HORIZONTAL CONTROL IS THE BEARING BETWEEN POINT IDENTIFIER 600 AND POINT IDENTIFIER 616 AS SHOWN ON SURVEY CONTROL SHEET C1.0. THE BEARING IS NORTH 7° 14' 42" E WITH A LENGTH OF 2988.5 FEET.
- EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATION TO THE BEST KNOWLEDGE OF THE ENGINEER AT THE TIME OF DESIGN. UTILITY RECORDS MAY NOT BE COMPLETELY ACCURATE. THE PROJECT SUPERINTENDENT SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF UTILITIES WITHIN EACH CONSTRUCTION REACH PRIOR TO CONSTRUCTION. ALL UTILITIES ARE ABOVE GROUND UNLESS OTHERWISE NOTED.

WATER AND SEWER - CHEFORNAK WATER AND SEWER UTILITY (907) 867-8301
ELECTRIC - NATERKAQ LIGHT PLANT (907) 867-8213
TELEPHONE - UNITED UTILITIES, INC. (800) 478-2020
- THE PROJECT SUPERINTENDENT SHALL BE RESPONSIBLE FOR MAINTAINING A CLEAN SET OF AS-BUILT "RED LINE" RECORD DRAWINGS SHOWING LOCATION AND SWING TIES TO ALL BURIED SYSTEM COMPONENTS. ALL ELEVATIONS SHALL BE MARKED ASB (AS-BUILT) OR F.C. (FIELD CHANGED) WITH THE CORRECT VALUE INSERTED. DRAWINGS SHALL BE KEPT CURRENT IN RED PENCIL AND UPDATED DAILY IN A NEAT AND LEGIBLE FASHION. A COPY OF THE AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE CITY OF CHEFORNAK AND THE VILLAGE SAFE WATER PROJECT ENGINEER.
- GENERAL RESTORATION - THE AREAS IMPACTED BY CONSTRUCTION SHALL BE RETURNED TO PRECONSTRUCTION CONDITION OR BETTER. CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE AREA AND DISPOSED OF IN A PROPER MANNER. DUE CARE AND CAUTION SHALL BE TAKEN TO AVOID DISTURBING PERSONAL PROPERTY.
- CONSTRUCTION IN SENSITIVE AREAS - TIMBER MATS OR PADS SHALL BE USED TO PROTECT VEGETATIVE COVER DURING CONSTRUCTION. ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR RESEED AS NECESSARY TO RETURN THE AREAS AFFECTED BY CONSTRUCTION TO ITS PRECONSTRUCTION STATE.
- THE CONSTRUCTION SITE SHALL BE ADEQUATELY PROTECTED, RESTRICTED AND BARRICADED IN THE BEST PUBLIC INTERESTS OF HEALTH, SAFETY AND WELFARE, WITH VISIBLE AND STABLE BARRIERS, UNDERSTANDABLE, LARGE-PRINT WARNING SIGNS, AND OTHER PRECAUTIONARY EQUIPMENT AND MEASURES AS REQUIRED. ALL SAFETY MEASURES SHALL BE IN CONFORMANCE WITH APPLICABLE STATE OF ALASKA DOT AND OSHA SAFETY REQUIREMENTS.
- EXISTING BOARDWALK SHALL BE REMOVED ONLY WHERE INDICATED ON THE PLANS AND IN ALL AREAS WHERE THE EXISTING BOARDWALK CONFLICTS WITH THE PROPOSED BOARDWALK ALIGNMENT. REMOVED BOARDWALK MATERIAL WITH ANY SALVAGE VALUE SHALL BE CLEANED OF FASTENERS (NAILS, SCREWS, PLATES, ETC.) AND NEATLY STACKED AT A LOCATION DESIGNATED BY THE CITY. PROVIDE STICKERS BETWEEN EVERY THIRD ROW IN THE STACK. EXISTING BOARDWALK MATERIAL WITH NO SALVAGE VALUE SHALL BE DISPOSED OF AT THE LANDFILL.

GENERAL DESIGN CRITERIA:

DESIGN TEMPERATURE:	13,200 HEATING DEGREE DAYS
LOOP WATER TEMPERATURE	40°F ± 2°F
HEATING LOADS:	
BUILDING	50,000 Btu-HR
DOMESTIC WATER	50,000 Btu-HR
DRYERS	(6) @ 60,000 Btu-HR
WASHERS	(SEE MECHANICAL)
AIR CHANGES	4 / HOUR

WATERLINES / WATER TANK:

- TESTING - ALL TESTING SHALL BE IN CONFORMANCE WITH THE FOLLOWING REQUIREMENTS.
 - PLUMBING TESTING - PERFORM A TEST OF WATERLINES. ALL POTABLE WATER PIPING MUST BE PRESSURIZED TO 90 PSI WITH WATER AND LEFT FOR 1 HOUR. AFTER THE INITIAL STABILIZATION PERIOD WITH NO LOSS IN PRESSURE.
 - ALL TESTS SHALL BE WITNESSED BY A REPRESENTATIVE DESIGNATED BY THE OWNER (CITY OF CHEFORNAK). UPON SUCCESSFUL COMPLETION OF A TEST THE RESULTS OF THE TEST SHALL BE DOCUMENTED ON A TEST FORM AND ACKNOWLEDGED BY SIGNATURE OF THE OWNER'S REPRESENTATIVE WITNESSING THE TEST AND BY THE PROJECT SUPERINTENDENT. THE SUPERINTENDENT'S RED LINED AS-BUILT DRAWINGS SHALL ALSO NOTE, FOR EACH SEGMENT OF THE SYSTEM TESTED, THE TIME AND DATE OF THE TEST AND THE NAME OF THE OWNER'S WITNESS. COPIES OF THIS TEST SHALL BE SENT TO VSW ENGINEER.
 - THE CONSTRUCTION MANAGER WILL SUBMIT A QA/QC MANUAL OF ALL TESTING FOR REVIEW.
- WATER PIPING SHALL BE BUTT FUSED, HDPE SDR 11 (PE 3408), ROUTED THROUGH AN INSULATED ARCTIC PIPE DUCT. THE DUCT SHALL HAVE A 4" Ø HDPE, SDR 17 CORE PIPE, 3" MINIMUM OF 3-4 LB/CF POLYURETHANE FOAM AND AN 12"ØX16 GAUGE CORRUGATED ALUMINUM JACKET.
- DISINFECTION - ALL WATERLINES AND WATER TANKS TO BE DISINFECTED AND TESTED FOR COLIFORM IN ACCORDANCE WITH AWWA C651 AND C652.

BOARDWALK:

- ALL BOARDWALK MATERIALS SHALL BE AS SPECIFIED IN THE DRAWINGS AND MEET THE FOLLOWING REQUIREMENTS:
 - LUMBER: HEMLOCK AND DOUGLAS FIR (HEM-FIR) GRADE #2 OR BETTER. ALL SIZES ARE GIVEN IN NOMINAL DIMENSIONS (I.E., 4X12 WILL MEASURE 3 1/2" THICK BY 11 1/2" WIDE).
 - WOOD TREATMENT: ALL WOOD MATERIALS USED SHALL BE TREATED WITH THE WOOD PRESERVATIVE CROMATED COPPER ARSENATE (CCA) AT THE FOLLOWING CONCENTRATIONS:
"SOIL CONTACT" (INCLUDES ALL SLEEPERS) - 0.6 POUNDS PER CUBIC FOOT ABOVE GROUND (>6" ABOVE GROUND) - 0.4 POUNDS PER CUBIC FOOT

GENERAL STRUCTURAL NOTES

- UNLESS NOTED OTHERWISE, ALL CONSTRUCTION SHALL CONFORM TO 2009 IBC STANDARD SPECIFICATIONS. IN ADDITION TO DEAD LOADS, THE BOARDWALK WAS DESIGNED FOR THE LIVE AND ENVIRONMENTAL LOADS AS SHOWN ON THE STRUCTURAL GENERAL NOTES, SHEET S0.1

BOARDWALK FOUNDATION

- A FOUNDATION INVESTIGATION WAS PREPARED FOR A PREVIOUS PROJECT BY DUANE MILLER AND ASSOCIATES. SOILS IN THE AREA GENERALLY CONSIST OF A PUMICE BOLDER MATRIX WITH A THIN ORGANIC MAT OVERLAYING SILT. MARGINAL TEMPERATURE PERMAFROST AS WELL AS THAWED SOIL CONDITIONS EXIST IN THE PROJECT AREA.

- LUMBER SHALL BE HEM-FIR, GRADE NO. 2 OR BETTER. ALL WOOD MEMBERS SHALL BE TREATED WITH THE WOOD PRESERVATIVE CCA, CROMATED COPPER ARSENATE, WITH THE FOLLOWING CONCENTRATIONS:
Soil Contact - 0.6 pounds per cubic foot
Above Grade - 0.4 pounds per cubic foot

- STEEL HARDWARE AND FASTENERS, INCLUDING STRUCTURAL PLATES, SHAPES, BARS, AND ASSEMBLIES, SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A-123. BOLTS, NUTS AND SIMILAR THREADED FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153. SURFACES SHALL BE THOROUGHLY CLEANED OF RUST AND SCALE PRIOR TO GALVANIZING. FIELD REPAIRS TO GALVANIZING SHALL BE MADE USING "GALVINOX", GALVO-WELD, OR EQUAL.

PIPING (GENERAL):

- ALL PIPING AND FITTINGS SHALL BE NSF-61 COMPLIANT WHERE SUCH PIPING AND FITTINGS ARE IN CONTACT WITH RAW OR POTABLE WATER IN THE WATER TREATMENT OR DISTRIBUTION PROCESS.
- ALL PIPING SHALL BE LEAD FREE.
- ALL PLUMBING USING SOLDERED JOINTS SHALL USE A SOLDER CERTIFIED TO NOT TO CONTAIN LEAD (BRIDGET OR EQUAL)

COPPER TUBING AND FITTINGS:

- ALL COPPER TUBING SHALL BE ASTM B75 DRAWN TEMPER, ANSI/NSF-61 CERTIFIED, TYPE L THICKNESS.
- COPPER SOLDER FITTINGS SHALL BE PRODUCED IN ACCORDANCE WITH ASME/ANSI B16.22, AND SHALL BE ANSI/NSF-61 CERTIFIED.

SERVICE LINES:

1. HDPE MATERIAL

- LISTED BY THE PPI WITH DESIGNATION OF PE-3408
- CELL CLASSIFICATION OF 345434C OR BETTER IN ACCORDANCE WITH ASTM D3350
- MUST EXCEED 1000 HOURS WHEN TESTED IN ACCORDANCE WITH ASTM F1248 RING ENVIRONMENTAL STRESS CRACK RESISTANCE TEST) WITH FEWER THAN 50 PERCENT FAILURES.
- APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF) FOR POTABLE WATER SERVICE.
- SHALL CONTAIN TWO PERCENT (2%) CARBON BLACK FOR ULTRAVIOLET (UV) PROTECTION AND SHALL BE HOMOGENEOUS THROUGHOUT.

MECHANICAL: FOR MECHANICAL NOTES SEE SHEET M1.1

HYDRONIC HEAT TRACE:

- HYDRONIC HEAT TRACE:
HYDRONIC HEAT TRACE (WHERE SPECIFIED) SHALL BE A MINIMUM OF 1-1/2" DIA. HDPE, SDR 11 AND LISTED BY THE PLASTIC PIPE INSTITUTE (PPI) WITH A DESIGNATION OF PE4710 AND A CELL CLASSIFICATION OF PE445574C OR BETTER AS PER ASTM D3350.

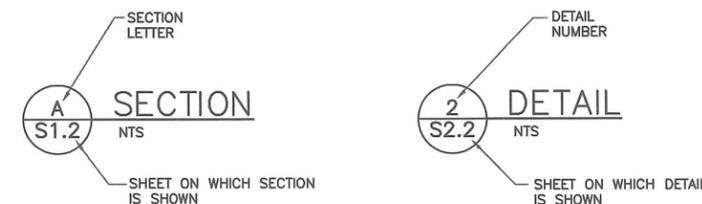
PIPELINE TESTING:

- GENERAL:
ALL TESTING SHALL BE IN CONFORMANCE WITH THE FOLLOWING REQUIREMENTS:
ALL TESTS SHALL BE WITNESSED BY A REPRESENTATIVE DESIGNATED BY THE COMMUNITY. UPON SUCCESSFUL COMPLETION OF A TEST THE RESULTS OF THE TEST SHALL BE DOCUMENTED ON A TEST FORM AND ACKNOWLEDGED BY SIGNATURE OF THE COMMUNITY'S REPRESENTATIVE WITNESSING THE TEST AND BY THE PROJECT SUPERINTENDENT. THE SUPERINTENDENT'S RED LINED AS-BUILT DRAWINGS SHALL ALSO NOTE THE TIME AND DATE OF THE TEST, AS WELL AS THE NAME OF THE COMMUNITY'S WITNESS, FOR EACH PIPE SEGMENT TESTED.
- FORCEMAIN TESTING:
PERFORM HYDROSTATIC TESTING OF ALL FORCEMAIN PIPING. FILL THE LINES WITH POTABLE WATER AND REMOVE AIR POCKETS PRIOR TO STARTING THE TEST. PRESSURIZE TO 100 PSI AND LEAVE FOR A MINIMUM OF 1 HOUR. AFTER THIS INITIAL PERIOD, ADD WATER TO BRING THE PRESSURE UP TO 100 PSI AND BEGIN A ONE HOUR TEST. THERE SHALL BE NO LOSS IN PRESSURE DURING THE 1 HOUR TEST FOR THE PIPING TO BE ACCEPTED.
- GLYCOL HEAT TRACE TESTING - PERFORM HYDROSTATIC TESTING OF GLYCOL HEAT TRACE. HYDROSTATIC TESTS SHALL BE PERFORMED AFTER INSTALLATION. FILL THE LINE WITH WATER AND REMOVE AIR PRIOR TO STARTING THE TEST. PRESSURIZE TO 1.5 X OPERATING PRESSURE (80 PSI) = 120 PSI AND LEAVE FOR A MINIMUM OF 1-HOUR. AFTER THIS INITIAL PERIOD, ADD WATER TO BRING THE PRESSURE UP TO 120 PSI AND BEGIN A 4-HOUR TEST. FOR THE GLYCOL LOOP TO BE ACCEPTED THERE SHOULD BE NO LOSS IN PRESSURE. NO VISIBLE LEAKS SHOULD BE NOTED UPON A VISUAL INSPECTION OF EACH JOINT UNDER PRESSURE.

LEGEND

EXISTING		PROPOSED		DESCRIPTION
PLAN VIEW	PROFILE VIEW	PLAN VIEW	PROFILE VIEW	
				PROPOSED BOARD ROAD (WIDTH AS NOTED)
				EXISTING BOARD ROAD TO REMAIN EXISTING BOARD ROAD TO BE REMOVED
				GROUND PROFILE
				WATERMAIN
				FUTURE WATERMAIN
				FUTURE WASTEWATER FORCEMAIN
				OVERHEAD ELECTRIC
				PETROLEUM/OIL/LUBRICANTS
				UTILITY POLE AND GUY WIRE ANCHOR
				FENCE
				CONTOUR LINE
				SHORELINE
				EXISTING GROUND
				STRUCTURE
				EARTHWORK SLOPE
				NATURAL GROUND OR COMPACTED SOIL
				DIRECTION OF DRAINAGE
				PROPERTY LINE OR SECTION LINE
				MATCHLINE
				PERMANENT EASEMENT
				ALL WEATHER WOOD
				CORRUGATED METAL PIPE
				EXISTING GRADE ELEV.
				TOP OF BOARD ROAD ELEV.
				BRASS CAP MONUMENT AS NOTED
				TEST HOLE
				SPOT ELEVATION
				BLOCK NUMBER
				LOT NUMBER
				IRON PIPE SIZE (INDUSTRY STANDARD OUTSIDE PIPE DIAMETER)
				6" WELL
				MECHANICAL BOLT
				GALVANIZED RIGID CONDUIT
				ELEVATION

SECTION AND DETAIL DESIGNATIONS



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SCALE: AS SHOWN
DATE: _____
NAME: _____

CONSTRUCTION RECORD

FIELD BOOK: _____
STARTING: _____
FOREMAN: _____
AS-BUILT: _____
INSPECTOR: _____



WASHERIA AND WATER TANK
GENERAL NOTES AND LEGEND
CHEFORNAK, ALASKA



REVISION	DATE

Project No. _____ Date: JUNE 2016
Designed: _____ Drawn: _____ Approved: _____
ECM

Sheet No. G4.0
SHEET OF

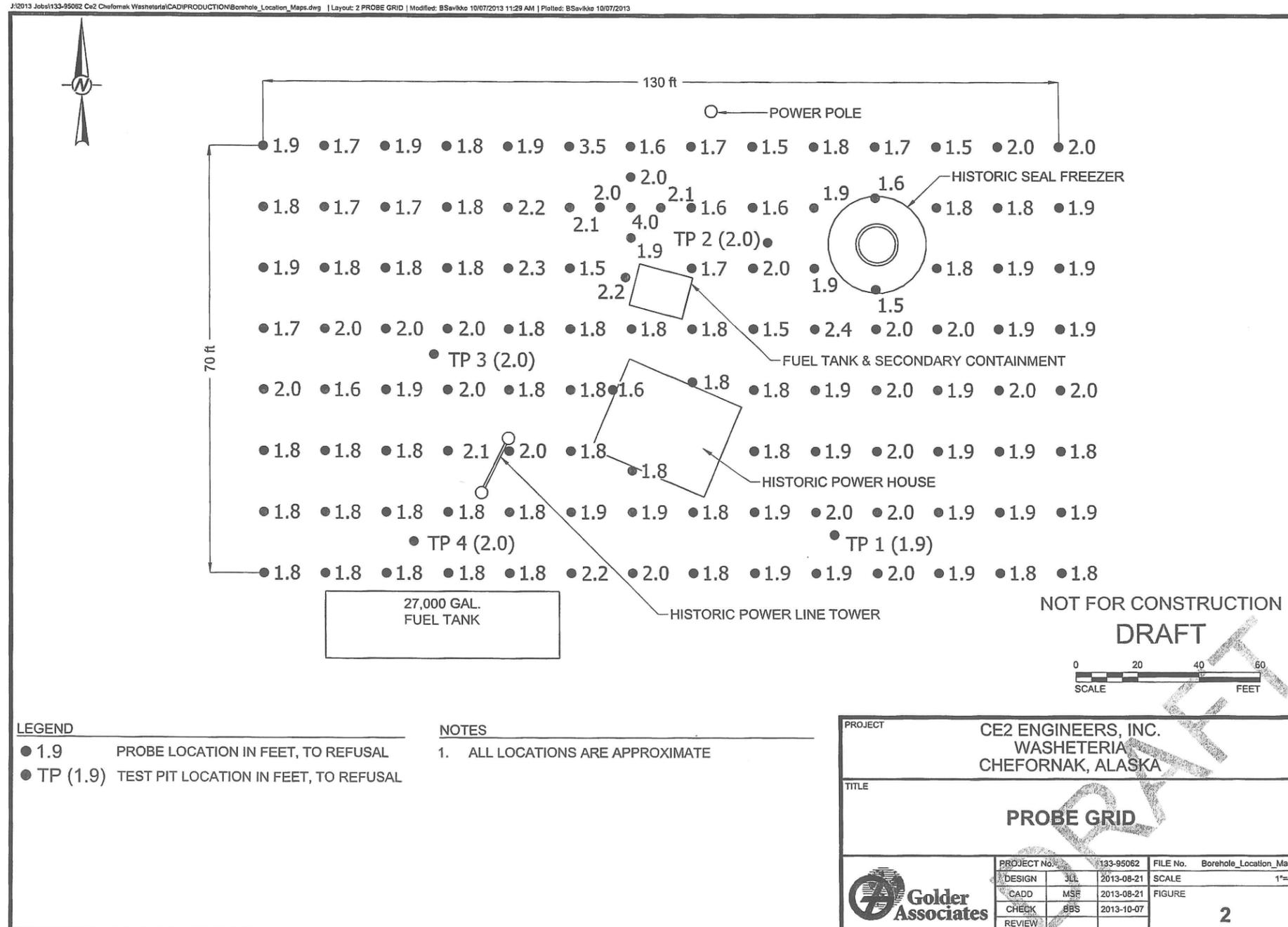
G:\ACAD\CHEFORNAK\2016 Washeria and Water Tank\G4.0 GENERAL NOTES AND LEGEND.dwg, 6/15/2016 4:06:03 PM, cmerz, \\ce2main\LANIER MP C2050\LD520C PCL 6

**EXERPT FROM GOLDER ASSOCIATES REPORT DATED OCTOBER 7, 2013,
SECTION 3.0 SITE AND SUBSURFACE CONDITIONS:**

THE SUBSURFACE CONDITIONS AT THE SITE WERE GENERALLY CONSISTENT BASED ON HAND PROBE DEPTHS AND THE HAND DUG TEST PITS. FROZEN SOILS, GENERALLY INTERPRETED AS THE TOP OF THE PERMAFROST, WERE ENCOUNTERED ACROSS THE SITE. IN GENERAL, THE ACTIVELY LAYER DEPTH WAS APPROXIMATELY 2 FEET. SUBSURFACE CONDITIONS GENERALLY CONSISTED OF APPROXIMATELY 1.5 FEET OF UNFROZEN ORGANIC MATERIAL (ORGANIC MAT) OVERLYING 0.5 FEET OF FROZEN ORGANIC SILT, OVERLYING FROZEN SILT. IN SOME AREAS, THE HAND PROBE AND TEST PITS ENCOUNTERED BURIED TRASH SEVERAL INCHES UNDER THE ORGANIC MAT.

HAND PROBES WERE NOT CONDUCTED WITHIN THE FOOTPRINT OF THE EXISTING ABANDONED BUILDING AT THE SITE. IT IS UNKNOWN IF THE BUILDING WAS HEATED WHEN IT WAS IN USE. INCREASED DEPTH OF THAW MAY BE PRESENT UNDER THE FOOTPRINT OF THE BUILDING.

BASED ON OUR EXPERIENCE IN CHEFORNAK AND A REVIEW OF HISTORICAL DATA, OUR FINDINGS ARE GENERALLY SIMILAR TO SUBSURFACE CONDITIONS ENCOUNTERED IN OTHER GEOTECHNICAL EXPLORATIONS.



- LEGEND**
- 1.9 PROBE LOCATION IN FEET, TO REFUSAL
 - TP (1.9) TEST PIT LOCATION IN FEET, TO REFUSAL

- NOTES**
1. ALL LOCATIONS ARE APPROXIMATE

PROJECT		CE2 ENGINEERS, INC. WASHETERIA CHEFORNAK, ALASKA	
TITLE		PROBE GRID	
PROJECT No.	133-95062	FILE No.	Borehole_Location_Maps
DESIGN	JLL 2013-08-21	SCALE	1"=40'
CADD	MSF 2013-08-21	FIGURE	
CHECK	BBS 2013-10-07		
REVIEW			2

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<p>CONSTRUCTION RECORD</p> <p>FIELD BOOK _____</p> <p>STAKING _____</p> <p>FOREMAN _____</p> <p>AS-BUILT _____</p> <p>INSPECTOR _____</p>	
<p>WASHETERIA AND WATER TANK</p> <p>GEOTECHNICAL INFORMATION</p> <p>CHEFORNAK, ALASKA</p>	
<p>PO BOX 22946 ANCHORAGE, AK 99523 PH: 907-346-1000 FAX: 907-346-1016</p>	
BY / DATE	
REVISION	
Project No.	JUNE 2016
Date	PCW
Designed	CM
Drawn	PCW
Approved	
<p>Sheet No. G5.0</p> <p>SHEET _____ OF _____</p>	