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HUNTER KNEPSHIELD COMPANY

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**TYPICAL STANDARD
PRE-MANUFACTURED BUILDING SPECIFICATIONS
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STANDARD MODEL
FLOORED REST ROOM
FACILITY STRUCTURE SPECIFICATION
SECTION 1.0

SPECIAL PROVISIONS - BUILDING CONSTRUCTION SPECIFICATION

I. BASIC CONSIDERATIONS

A. Furnishing a plant-fabricated rest room facility and installed in accordance with this and other sections of these specifications. Other manufacturers products are acceptable so long as the building meets or exceeds these specifications and equals or exceeds the quality of materials, finishes, design, and function of the cited product.

B. The building must be engineered and factory constructed, including building structure, plumbing, fixtures, wiring, and other elements shown on the drawings.

C. The **owner** shall furnish and install plant fabricated facility, **Model # R32-1222**, as provided by Hunter Knepshield Company Inc. or approved equal.

II. SITE PREPARATION, EXCAVATION AND FILL

A. In preparing for arrival of building, the site preparation will consist of the following:

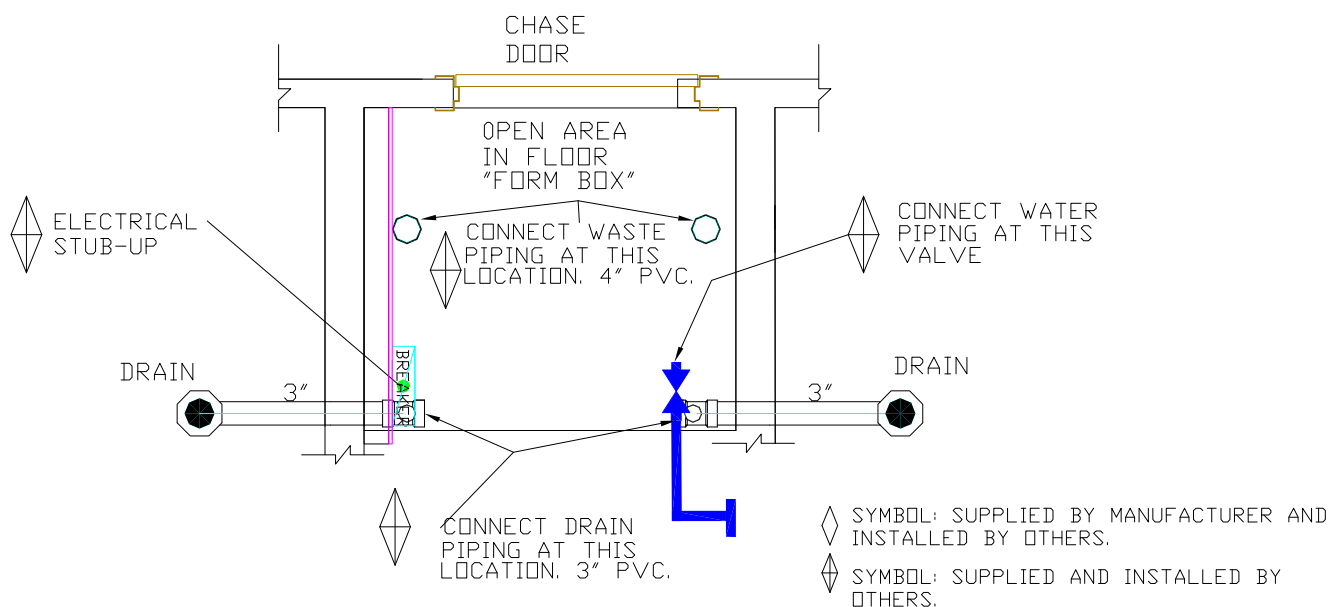
1. Building will arrive on double drop trailers and cannot travel over rough terrain, hills, or muddy conditions. It is not the responsibility of the manufacturer to provide the off loading onto another trailer or excavate and provide a clear dry flat path for transportation to the site. It is the responsibility of the **owner** to off load the building or buildings with the appropriate equipment.

2. In preparing for arrival of building, disturb existing lawn, shrubs, trees, and walks as little as possible.

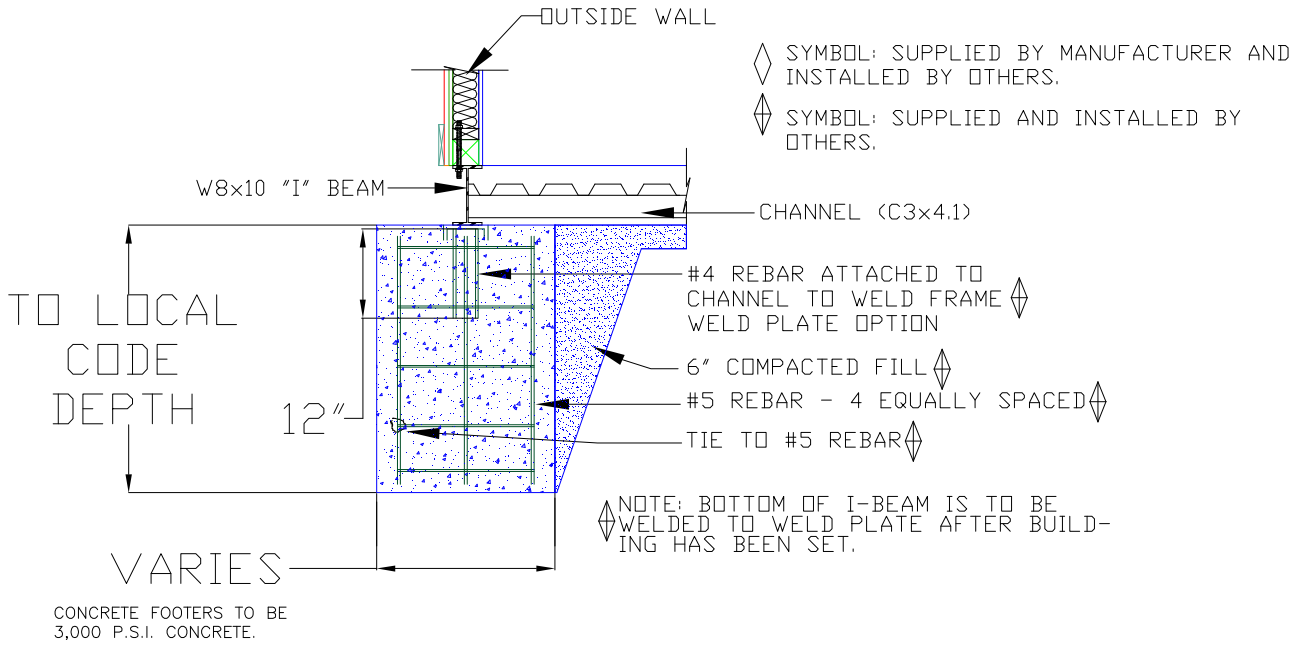
3. Extra soil excavated for footings and trenches and not used on the building site shall be removed by the **owner**.

4. Initial preparation shall consist in the removal of existing lawns, shrubs, or dirt in the area of the building and at building entrances. Surface soil will need to be removed to provide for level building.

5. Excavate and run all utilities to the **form box** of the building, leaving utility stubs open at local code depth an cover to form box area. Form box depth should be 1'(min) below deepest utility ditch depth.

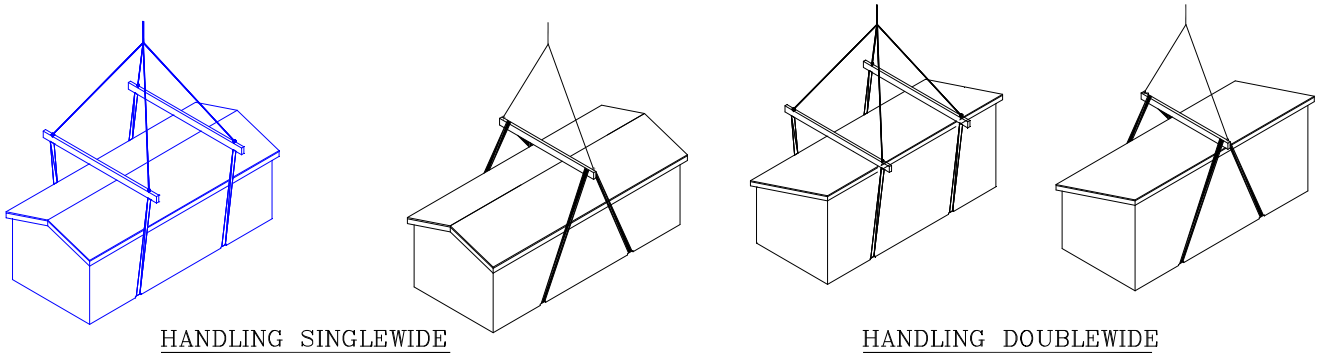


6. Install concrete footers as outlined on the project construction drawings. See typical below.



7. Dimensions of the footers are shown on the construction drawings. The depth of the footers will need to be determined by contacting local soils engineer for information and testing. Testing is not supplied by the building manufacturer.

8. The crane for handling the rest room once it has been delivered will also be the responsibility of the owner. **A spreader bar assembly or cage will be required.** The dimensions for the lifting points are outlined on the shop drawings. These should be reviewed with the crane company for clarification as to the requirements of the cage or spreader bar assembly.



III. ANCHORING OF THE REST ROOM

Install weld plates in the piers and weld the entire building I-Beam to the weld plates as outlined on the construction drawings. See Typical Footer Detail.

IV. UTILITY CONNECTIONS

A. The main electrical connection should be brought to the chase opening prior to setting of the building.

B. The plumbing connections will be similar to the electrical. The main waste and water should be brought in prior to the set. The waste is 4" PVC or cast iron (per local code). The water will be determined by volume and pressure required for the building and will be outlined on the construction drawings.

SECTION 2.0

BUILDING MATERIAL / CONSTRUCTION SPECIFICATION

The structure shall be a factory constructed unit, built on 4x bottom sill system anchored to the I-beam of floor. Building shall be design to be relocatable with little effort.

Manufacturer shall be certified by the governing bodies of the State of manufacture, and the State of destination. Structure shall be constructed according to their regulations, codes and laws.

The shop drawings shall be signed by an Professional Engineer licensed in the State of Installation and all plans shall bear his seal.

V. CONCRETE FLOOR SYSTEM

A. Shall be manufactured in a closed in environmentally controlled plant.

1. The floor shall be factory installed, poured in place with nonskid broom finish and sealed with hardener. Concrete to develop 3,500 psi in 28 days (min.). Slump maximum 4". Concrete nominal 4" thick.

2. Structural construction shall be with a perimeter W8x10 steel I-Beam and C3x4.1 structural channels support with pick up points using TS8x3/16 cut through the I-beam. Structural members shall be an all welded assembly and prime painted after fabrication.

3. Floor decking shall be 24 gauge galvanized corrugated steel over lapped and fastened to structural members at 2' on center (min).

4. Composite floor action shall be constructed from #4 rebar parallel with length of the building at 2' on center (min).

5. Manufacturers must have minimum 10 years experience in building relocatable steel and concrete floor systems.

VI. WOOD (All wood to be #2 S.Y.P. or better)

A. Wall Framing: Kiln dried pressure treated pine, nominal 2x4 4x4 bottom plate with 2x6 chase wall. 2x4 pressure treated studs at nominal 16" centers with 4x door headers and chase wall 2x6 pressure treated studs at nominal 2' centers. Walls shall be built in single piece sections before assembly.

___B1. Roof Framing Single wide: Rafters shall be 2x6 kiln dried Southern Yellow Pine. The ridge beam shall be kiln dried untreated 2x10 on each side of a 2x6 to create a raceway for electrical. The beam shall be built to extend the total length of the building with no visual seems showing in any room but the chase. The rafters and ridge beam shall be sealed with natural tone UV Sunblock Wood sealer or approved equals. Connections shall be attached using rated "Simpson" tie straps.

___B2. Roof Framing Double wide: Kiln dried, untreated, nominal Southern Yellow Pine, 2x8 rafters at nominal 24" centers. Ridge beam to be 2x10 Southern Yellow Pine. The rafters shall be sealed with natural tone UV Sunblock Wood sealer or approved equals. Rated framing anchors to be fastened with galvanized nails at each end. 1/2" hex head bolts and rated straps over ridge will connect opposing rafters and ridge beam of the second building half.. 2x6 collar ties with 2x4 center web will connect the two buildings together using one 1/2" hex head bolt on both sides of the collar tie and a rated "Simpson" tie plate. Collar ties shall be placed at nominal 4' centers.

C. Roof Sheathing: Kiln Dried #2 EV1S southern yellow pine tongue & groove decking sealed on the bottom side with natural tone UV Sunblock Wood sealer or approved equals.

D. Fascia: Nominal 5/4" x 6" Abtco Pro-Trim with textured wood finish. Wood shall be factory painted with two coats of Sherwin Williams "SuperPaint" latex. Touch-up shall be applied in the field after building is set. Color by owner.

VII. FINISHES

A. Interior Finish: 3/32" thick, white, class 'C', pebble grain finish, **continuous** (floor to 7'6" A.F.F. corner to corner) fiberglass reinforced plastic (FRP) over 1/2" BC exterior plywood glued and nailed to wall framing with coated galvanized nails. FRP shall be UL classified, flame spread 20 (class I), smoke developed 200 (per ASTM E-84, ASTM D-2843).

B. Interior Wall Corner: 1.5 x 1.5 x .125, 90 degree, 3/16", extruded aluminum angle fastened to wall with stainless steel vandal resistant screws.

C. Interior Base: 4" extruded aluminum 6063-T6, clear anodized finish, with eased edge and fastened to wall with stainless steel vandal resistant screws.

D1. Open Air Ceiling: 2" x 6" #2 Tongue & Groove Southern Yellow Pine roof deck boards nailed with galvanized finish Ceiling shall receive U.V. protective wood sealer, Moorewood or approved equal.

D2. Insulated Roof Ceiling: 1" x 6" Pattern 116 Tongue & Groove Southern Yellow Pine boards nailed with galvanized finish nails and holes filled with wood putty. Ceiling shall receive U.V. protective wood sealer, Moorewood or approved equal.

Interior Gable: 1" x 6" Pattern 116 Tongue & Groove Southern Yellow Pine boards nailed with galvanized finish nails and holes filled with wood putty. Ceiling shall receive U.V. protective wood sealer, Moorewood or approved equal.

Chase: 1/2" BCX plywood on chase door side, front side. Side walls will receive 1/2" BCX plywood where electrical needs mounting. All other areas are open stud framing.

VIII. THERMAL AND MOISTURE PROTECTION

A. Roof: 24 Gauge vertical seam 12" metal roof. Kynar 500 standard colors.

B Open Air Vents: One layer of galvanized expanded lath with one layer of aluminum insect screen outside framed between each rafter bay, and mechanically fastened to wall framing, rafters, and roof decking.

C Insulated Roof Vents: **C. Vents:** Soffit Vent shall be .016" x 2.651 aluminum louvered soffit vent. Ridge vent shall be roll type and end one foot from the end of the roof.

D. Sealant: 100% silicone sealant. Color to be 1100 clear, by Superior Sealants, Inc. or equal.

IX. EXTERIOR FINISHES

A. Exterior Building Siding: 5/16" 4'x8' Wood Textured w/grooves 8"o.c. Cetainteed Fiber Cement Lap siding prime painted from supplier and with Sherwin Williams "Super Paint" exterior latex applied by manufacturer. Color by owner. Owner has choice of siding finished available from the Certainteed Fiber Cement supplier available.

B. Exterior Trim: Nominal 5/4"x 4" Abtco Pro-Trim with textured wood finish. Prime painted from supplier and manufacturer to apply Sherwin Williams "Super Paint" . Color by owner.

C. Note: Additional coat of finish paint may be required afer building is set.

X. DOORS

A. Rest room door: 3' x 6'8"

1. Material: Curries 707S 18 gauge steel doors with hardware. Steel frame to be 16 gauge "C" type drywall frame prime painted.

2. Hardware: Stainless steel Hager #3B51 NRPx32D hinges with Schlage #B660 dead bolt lock, Norton # CLP-8501 surface mount automatic closure with stainless steel Hager #30-h93e-3.5x15 door pull, #30s-3.5x15 push, and #190s-12-32 kick plates. Threshold shall be aluminum Hager # 412Ax36 with # 891savx3068 weather-stripping and #756svax36 door sweep.

3. Finish: Doors and frames shall be painted with Sherwin Williams Industrial Enamel. Color to be chosen by owner from standard Sherwin Williams Enamel color chart.

B. Chase doors: 3' x 6'8"

1. Material: Curries 707S 18ga. Steel door with 16ga. "C" type drywall frame, prime painted.

2. Hardware: To receive stainless steel hinge Hager #3B51 NRPx32D with Schlage #B660 dead bolt lock, Ives #115b26d-25.5 crash stop with stainless steel Hager #30-h93e-3.5x15 door pull, and #30s-3.5x15 push plates. Threshold shall be aluminum Hager # 412Ax36 with # 891savx3068 weather-stripping and #756svax36 door sweep.

XI. MECHANICAL

PLUMBING FIXTURE SCHEDULE					
MARK	FIXTURE	C	H	W	DESCRIPTION
WC(HC)	WATER CLOSET	1'	-	4'	WATER CLOSET: Z5620 BACK SPUD SIPHON JET VITREOUS CHINA WATER CLOSET 1.6 GAL FLUSH, ELONGATED BOWL, WALL MOUNTED WITH OPEN FRONT, WHITE SEAT; ZURN Z6140-WS1-FW CONCEALED WATER CLOSET HYDRAULIC ACTUATED FLUSH VALVE 1.6 GAL. FLUSH, FURNISHED WITH ZURN Z1204-2H4-8888 VERTICAL OR Z1203-(NR/L)4 ADJUSTABLE HORIZONTAL SIPHON JET CARRIER HUB & SPIGOT WITH Z1212 LEGS (OR APPROVED EQUALS). WATER CLOSETS TO BE INSTALLED AT HANDICAP HEIGHT.
UR	URINAL	1'	-	2'	URINAL: ZURN Z5760 10 GPF WASHOUT URINAL W/3/4" BACK SPUD VITREOUS CHINA WASHOUT URINAL, WALL WITH ZURN ZH9195AV-WS1-FW CONCEALED URINAL HYDRAULIC ACTUATED PUSH BUTTON (OR APPROVED EQUALS) URINAL TO BE INSTALLED AT HANDICAP HEIGHT.
LAV	LAVATORY	3/8"	-	1-1/4"	LAVATORY: Z5344 20"x18" WALL HUNG LAVATORY WITH 4" CENTER FAUCET HUNG; W/ ZURN Z1231 CONCEALED CARRIER; ZURN Z86100 ZURN SINGLE BASIN PUSH BUTTON METERING FAUCET (COLD ONLY) FOR 4" CENTER HOLE LAV. LAVATORIES TO INCLUDE ZURN Z8743-PC 1-1/4" GRID DRAIN Z8700-B-D-PC 1-1/4" INLET OUTLET P-TRAP WITH Z8943-NT TRAP PROTECTOR. (OR APPROVED EQUALS). LAVATORIES TO BE INSTALLED AT HANDICAP HEIGHT.
□	EXPANSION TANK	3/4"	-	-	EXPANSION TANK: WATTS INDUSTRIES DET-5 2-GAL. POTABLE WATER EXPANSION TANK WITH THERMALLY FUSED EPOXY LINER, FLEXIBLE BUTYL DIAPHRAGM AND FIELD ADJUSTABLE PRE-CHARGE.
DRAIN	FLOOR DRAIN	-	-	3"	FLOOR DRAIN: MIFAB F1120-C TERRACE DRAIN WITH INTEGRAL DEEP SEAL TRAP, IRON BODY WITH SIDE OUTLET, ANCOR FLANGE AND ADJUSTABLE NICKEL BRONZE SLOTTED STRAINER SECURED WITH VANDAL PROOF SCREWS. (OR APPROVED EQUAL).

ALTERNATE PLUMBING FIXTURE SCHEDULE					
MARK	FIXTURE	C	H	W	DESCRIPTION
WC	WATER CLOSET	1'	-	4'	WATER CLOSET: WILLOUGHBY #ETW-1490-CM-BS STAINLESS STEEL W/ BLOWOUT ACTION, ELONGATED BOWL, WALL MOUNTED, #CTA-1700 OPEN FRONT, WHITE SEAT, SLOAN ROYAL #952-1.6-MBFW WITH HY100-A PUSH BUTTON HYDROLIC FLUSHMETER. WATER CLOSETS SHALL BE MOUNTED WITH JAY R. SMITH #SQ-0-1237 CARRIER. (OR APPROVED EQUALS) WATER CLOSETS TO BE INSTALLED AT HANDICAP HEIGHT.
UR	URINAL	1-1/2"	-	2'	URINAL: WILLOUGHBY "STRADDLE" #UW-1412 (1.0 GPF WATER SAVER) STAINLESS STEEL BLOWJET URINAL, WALL MOUNTED; SLOAN ROYAL #990-1-MBFW WITH HY100-A PUSH BUTTON HYDROLIC VALVE. (OR APPROVED EQUALS) URINAL TO BE INSTALLED AT HANDICAP HEIGHT.
LAV	LAVATORY	3/8"	-	1-1/4"	LAVATORY: WILLOUGHBY #ES-1015-HC COMMERCIAL LAVATORY FOR HDPC WALL HUNG; W/ T&S BRASS FAUCET #B-0712 COLD (PUSH BUTTON TYPE SLOW SELF CLOSING FAUCET); 1 1/4" P-TRAP. (OR APPROVED EQUALS) LAVATORIES TO BE INSTALLED AT HANDICAP HEIGHT.
DRAIN	FLOOR DRAIN	-	-	2"	FLOOR DRAIN: MIFAB F1120-C TERRACE DRAIN WITH INTEGRAL DEEP SEAL TRAP, IRON BODY WITH SIDE OUTLET, ANCOR FLANGE AND ADJUSTABLE NICKEL BRONZE SLOTTED STRAINER SECURED WITH VANDAL PROOF SCREWS. (OR APPROVED EQUAL).
□	EXPANSION TANK	3/4"	-	3/4"	EXPANSION TANK: WATTS INDUSTRIES DET-5 2-GAL. POTABLE WATER EXPANSION TANK WITH THERMALLY FUSED EPOXY LINER, FLEXIBLE BUTYL DIAPHRAGM AND

SEE INDIVIDUAL BUILDINGS MATERIAL LIST FOR OTHER PLUMBING EQUIPMENT

A. Water Supply: Below grade to be Type "L" hard copper sleeved in Schedule 40 PVC. Above grade to be Type 'L' copper. Supply to lavatories from straight stop to be type "L" soft copper. Main supply to have wye strainer, and a drainage vent system for winterization.

B. Waste System: Schedule 40 PVC waste and vents. Grade all waste piping to drain. Vents to extend 10" above finished roof and shall be flashed with poly flashing.

C. Fixtures: Vitreous china water closets and urinals, concealed "Zurn" flush valves with push button hydro-flush.

D. Floor drains: Shall have integral P-Trap and vandal resistant polished bronze strainer head. One shall be pre installed in each rest room and stubbed out to form box for final hookup by the ___ contractor ___ owner.

E. Testing: Test in accordance with governing agency.

F. Contractor/owner shall furnish all items complete, including valves, traps, drains, clean outs, etc. as required for complete operation. Waste and water piping to be installed in accordance with health department requirements. The contractor may need to install a pressure reducing valve and a back flow preventer valve as necessary to meet local code requirements.

G. Note: Per fixture & flush valve manufacturer's specification, the water closets require a minimum working pressure of 25 psi at valve while flushing. The equipment for water filtration and pumping pressure will be the responsibility of the others.

XII. ELECTRICAL

A. Underground sleeve: Schedule 40 gray PVC (by others).

B. Panel: 100 AMP capacity, 12 breaker.

C. Conduit: EMT, IMC cable and Greenfield throughout. For salt environments PVC nonmetallic boxes and conduit shall be used in place of metallic. **Chase Outlet:** Ground Fault Interrupt type (GFI).

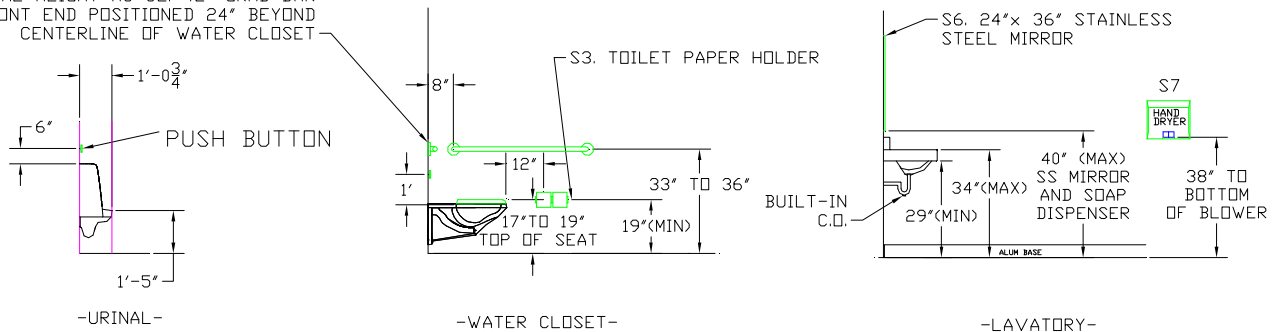
E. Testing: Test in accordance with governing agency.

F. Code: All electrical work shall be performed in accordance with the requirements of the National Electric Code (N.E.C.)

SEE INDIVIDUAL BUILDINGS MATERIAL LIST FOR ELECTRICAL EQUIPMENT

XIII. SPECIALTIES

S1. 36" LONG GRAB BAR TO BE MOUNTED AT SAME HEIGHT AS S2. 42" GRAB BAR WITH FRONT END POSITIONED 24" BEYOND CENTERLINE OF WATER CLOSET



S1. 36" Grab Bar: 1 1/2" diameter stainless steel with concealed fasteners. Bobrick # B-6806x36.

S2. 42" Grab Bar: See spec. for S1. Bobrick # B-6806x42.

S3. Toilet Paper Holders: Heavy duty cast aluminum with satin finish, exposed roll type with tumbler locking device and fastened to wall with stainless steel vandal resistant screws. Holds up to a 6" diameter roll. Two per stall. Bobrick # B-27460.

S4. Toilet Partitions and Doors: 1" thick, white, high density polyethylene, mounted on continuous aluminum brackets at walls and pilasters. System is floor mounted. Door hinges, slide bolts, and hardware can be aluminum or stainless steel. Comtec Industries. Partition are not included in rest rooms with only one fixture and one lavatory.

S5. Urinal Screen: 1" x 18" x 42". See specs for S5..

S6. Mirrors: 16"x 24" "One piece channel frame mirror with electrolytically copper-plated glass. Bobrick # B-165-1624.

S7. Hand Drier: Excel XL-C sensor activated hand drier. Hand dryer cover shall be a one-piece, heavy-duty, rib-reinforced, die-cast zinc alloy. It shall be lightweight, unbreakable, rustproof and all exposed surfaces shall be bright chrome plated or finished with chip-proof, electrostatically applied epoxy paint and fastened to a wall plate by two chrome plated tamper-proof bolts. Dryer to be Greenspec approved.

S8. Soap Dispenser: Trimline stainless steel recessed soap dispenser for liquid soaps, lotions and detergents. Bobrick #B-306

S9. Hand Drier: Excel sensor activated hand drier.

SEE INDIVIDUAL BUILDINGS MATERIAL LIST FOR OTHER SPECIALTY EQUIPMENT

XIV. MATERIALS NOT SUPPLIED BY MANUFACTURER

1. Site preparation and fill before arrival of building.
2. Digging, filling, materials for utilities.
3. Access for heavy equipment and tractor trailer.
4. Installation and materials for concrete footers i.e.. Install weld plates in the piers and weld the entire building I-Beam to the weld plates
5. Final coat of sealer on wood portions of building.
6. Final connection of utilities.
7. All Plumbing items to complete system operation, including underground supply, valves, traps, drains, clean outs, etc. Waste and water piping to be installed in accordance with health department requirements. The contractor may need to install a pressure reducing valve and a back flow preventer valve as necessary to meet local code requirements.
8. The equipment for water filtration and pressure.
9. Electrical underground work and materials i.e., conduit, hardware, disconnects, etc.. for final connection to the panel.
10. Walk ways, sidewalks, finish grading, or any site work applicable to the project.
11. Any work marked on the drawings supplied by the manufacturer installed by others and materials supplied by others.

XV. PRODUCT INSURANCE

1. Manufacture to provide minimum \$1,000,000 PRODUCT/COMPLETED OPERATIONS coverage.
2. Carrier providing the coverage is rated BEST'S rating A or higher.
3. PRODUCT/COMPLETED OPERATIONS is an "occurrence" form basis.