PROPOSED BUILDING FOR:

MANITOWOC FAMILY AQUATIC CENTER

MANITOWOC, WI.

INTEGRITY ENGINEERING & DESIGN, LLC

2637 Tulip Lane Green Bay, WI 54313
Phone: (920) 469-9288 Fax: (920) 469-6809
E-mail: Info@IntegrityEngineering.biz

INTEGRITY MISSION STATEMENT

WE PROVIDE HIGH QUALITY ARCHITECTURAL DESIGN AND STRUCTURAL ENGINEERING. OUR PLANS MOVE SMOOTHLY THROUGH THE STATE REVIEW PROCESS AND MAKE BUILDING CONSTRUCTION MORE ENJOYABLE. OUR SERVICE IS UNMATCHED AND OUR INTEGRITY IS IMPECCABLE.

IF YOU HAVE ANY QUESTIONS OR COMMENTS ABOUT THE CONTENT OR PRESENTATION OF MATERIAL ON THIS PLAN, PLEASE CALL (920) 469-9288

GENERAL CONDITIONS:

THESE PLANS ARE PRESENTED TO LEAD A HIGH QUALITY DESIGN/BUILD TEAM. EACH CONTRACTOR AND SUBCONTRACTOR IS RESPONSIBLE TO PROVIDE EXCELLENT DESIGN, BUILDING MATERIALS, AND CRAFTSMANSHIP WHICH WE CAN ALL BE PROUD OF. WE ENCOURAGE YOU TO PROVIDE EXPERTISE IN YOUR CHOSEN FIELD AND TO BRING IDEAS AND CONCERNS TO THE ATTENTION OF THE GENERAL CONTRACTOR.

THESE DRAWINGS COVER STRUCTURAL AND GENERAL CONSTRUCTION ONLY. ALL WORK SHALL CONFORM TO STANDARD PRACTICES AND APPLICABLE LAWS, WHETHER THEY ARE SPECIFICALLY STATED IN THESE PLANS OR NOT.

EACH CONTRACTOR SHALL:

- VISIT THE SITE TO VERIFY EXISTING CONDITIONS, ACCESS, ETC. PRIOR TO BIDDING
- MAINTAIN A CLEAN JOB SITE AT ALL TIMES.
- OBTAIN AND PAY FOR PERMITS, LICENSES, FEES, ETC. AS MAY BE REQUIRED FOR COMPLETION OF HIS OWN PORTION OF THE PROJECT.
- FIELD VERIFY DIMENSIONS.
- REPORT ANY DISCREPANCY NOTED BETWEEN THESE PLANS AND APPLICABLE CODES TO THE GENERAL CONTRACTOR.
- PROVIDE ALL BARRIERS, FENCES, SAFETY EQUIPMENT AND PRECAUTIONS REQUIRED BY APPLICABLE LAWS AND STANDARD PRACTICES.

ALL MATERIALS SHALL BE INSTALLED PER MANUFACTURERS REQUIREMENTS AND RECOMMENDATIONS.

ANY HAZARDOUS MATERIALS ENCOUNTERED DURING DEMOLITION, REMODELING, OR EXCAVATION SHALL BE REMOVED AND/OR CONTAINED IN ACCORDANCE WITH GOVERNING LOCAL, STATE, AND FEDERAL REGULATIONS.

QUICK SPEC

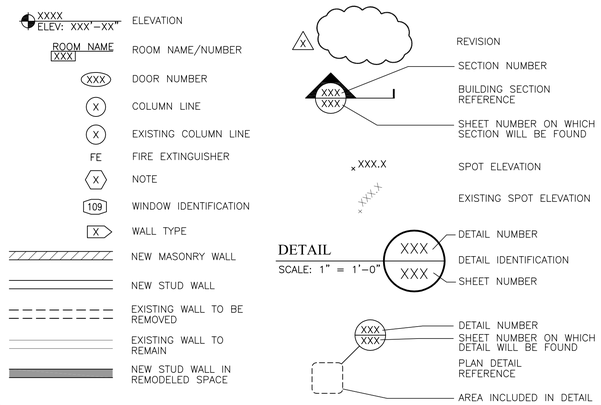
TO MAKE THIS PLAN MORE CONTRACTOR FRIENDLY, WE HAVE PREPARED IT WITH OUR QUICK SPEC SYSTEM.

THE WRITTEN SPEC IS GENERAL AND DOES NOT GO INTO DEPTH TO REITERATE STANDARD PRACTICES OR APPLICABLE LAWS. IT IS WRITTEN IN AN EASY TO READ FORMAT. THE SPECIFICATION IS SPLIT INTO APPROPRIATE SECTIONS AND LISTED ON THE PLAN WHERE IT IS NEEDED. YOU WILL FIND THESE SECTIONS QUICKLY BY THE SHADOW BOX AROUND IT (SIMILAR TO THIS ONE).

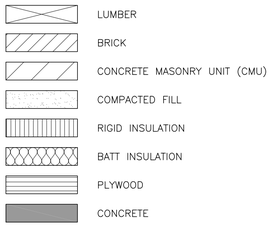
SPECIFIC CASES THAT CANNOT BE DESCRIBED IN A GENERAL SPEC ARE NOTED ON THE PLANS. IF THERE IS A DISCREPANCY BETWEEN THE PLAN AND THE GENERAL SPEC, THE PLAN NOTES WILL SUPERSEDE THE GENERAL SPEC.

KEY TO SYMBOLS AND MATERIALS

SYMBOLS



MATERIALS



CALL 3 WORK DAYS BEFORE YOU DIG

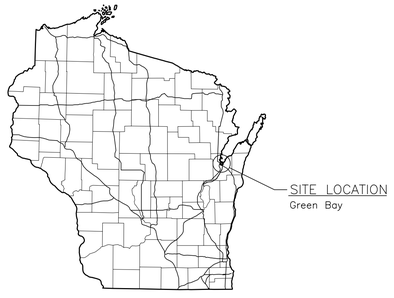
DIGGERS HOTLINE

(800) 242-8511

FAX (800) 388-3860

WEBSITE: www.diggershotline.com

SITE LOCATION MAP



BUILDING DATA

BUILDING CODE: IBC 2015

BUILDING SIZE:

FIRST FLOOR AREA (SQ. FT.):	XX
SECOND FLOOR AREA (SQ. FT.):	XX
MEZZANINE AREA (SQ. FT.):	XX
EXISTING AREA (SQ. FT.):	XX
ALLOWABLE AREA PER FLOOR (SQ. FT.):	XX
NUMBER OF STORIES:	XX
EAVE HEIGHT:	XX
MAXIMUM OVERALL HEIGHT:	XX

CONSTRUCTION CLASSIFICATION:

EXISTING – TYPE IA IB IIA IIB IIIA IIIB IV–HT VA VB
NEW – TYPE IA IB IIA IIB IIIA IIIB IV–HT VA VB

OCCUPANCY:

XXXX

DESIGN LOADS: PER IBC 2015, CHAPTER 16

Pg =	40 PSF
ULTIMATE DESIGN WIND SPEED =	115 MPH
WIND EXPOSURE =	B
SEISMIC CATEGORY =	A
SOIL BEARING PRESSURE =	2000 PSF PRESUMED/VERIFIED

FIRE PROTECTION SYSTEMS

AUTOMATIC FIRE SPRINKLER SYSTEM – REQUIRED/NOT REQUIRED
STANDPIPE SYSTEMS – REQUIRED/NOT REQUIRED SEE IBC 905
FIRE ALARM SYSTEM – REQUIRED/NOT REQUIRED SEE IBC 907
SMOKE DETECTORS – INSTALL PER APPLICABLE CODES
EXIT SIGNS – PROVIDE EXIT SIGNS PER IBC SECTION 1011
FIRE EXTINGUISHERS – INSTALL PER NFPA 1 AND APPLICABLE LOCAL CODES

DRAWING INDEX

NOTE:
THE STAMP OF INTEGRITY ENGINEERING'S SUPERVISING PROFESSIONAL ON THIS SET OF DRAWINGS IS IN NO WAY ATTESTING TO THE ACCURACY AND COMPLETENESS OF THE DRAWINGS PREPARED BY SUB–CONSULTANTS INCLUDED HEREIN. THE RESPONSIBILITY FOR THE DRAWINGS BY SUB–CONSULTANTS LIES WITH THE RESPECTIVE SUB–CONSULTANTS (CIVIL, MEPFP, ETC.) THEY ARE INCLUDED HERE FOR CONVENIENCE AND INFORMATIONAL PURPOSES ONLY.

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ISSUE NO	REVISIONS	ISSUE DATE
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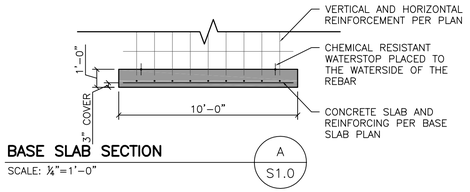
Manitowoc Family Aquatic Center
940 NORTH 18TH STREET
MANITOWOC, WISCONSIN
Pool Expansion

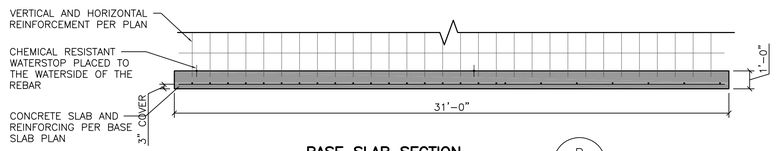
Project number 19024
Date MAY 21, 2019
Drawn by C. DUESCHER
Checked by -

T1.0



BASE SLAB SECTION — A / S1.0

SCALE: ¼"=1'-0"



BASE SLAB SECTION — B / S1.0

SCALE: ¼"=1'-0"

NOTE:

1) PROVIDE CONTINUOUS 6" PVC WATERSTOP AT ALL JOINTS. PVC WATERSTOP IS PLACED ON THE WATER SIDE OF THE REBAR.
2) WATERSTOP SHALL BE FUSION WELDED PER MANUFACTURE REQUIREMENTS.
3) PROVIDE A MINIMUM 1½" CONCRETE COVERAGE AROUND WATERSTOP. SECURELY.
4) SECURELY FASTEN WATERSTOP TO REINFORCING STEEL TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.
5) PROVIDE 1" DEEP CONE SHAPED PLASTIC BREAKAWAY FORM TIES.
6) PATCH ALL FORM TIE HOLES WITH EPOXY FORTIFIED NON-SHRINK NON-METALIC GROUT.
7) A SURGE TANK DRAIN AND OVERFLOW PIPE MUST BE INSTALLED BY THE POOL CONTRACTOR IN EACH SURGE TANK BEFORE POURING THE TANK WALL AND FLOORS POOL PIPING BY THE POOL CONTRACTOR MUST BE INSTALLED THROUGH THE SURGE TANK AND BUILDING WALLS AFTER POURING THE FLOORS AND WALLS. THE POOL CONTRACTOR WILL PROVIDE PIPING SLEEVES FOR THE INSTALLATION BY THE GENERAL CONTRACTOR DURING THE STEEL PLACEMENT. (SEE REINFORCEMENT AT OPENINGS DETAIL X/XX). COORDINATE THIS WORK WITH THE POOL CONTRACTOR.
8) PRIOR TO BACKFILLING AROUND SURGE TANKS, CONTRACTOR SHALL WATER TEST TANKS PER ACI 350.1-01 AND 350.1R-01.
9) SURGE TANK CONTRACTOR IS RESPONSIBLE FOR ALL COSTS RELATED TO SURGE TANK TESTING.
10) FOR ADDITIONAL WATERPROOFING PROTECTION, THE CONTRACTOR SHALL INCLUDE A XYPEX CONCRETE ADMIXTURE IN THE CONCRETE MIX USED FOR THE SURGE TANK WALLS AND FLOORS.
11) STRUCTURAL ENGINEER SHALL VERIFY DOCUMENTATION OF ALL SURGE TANK WATER TESTING AND RESULTS.
12) SURGE TANK LEAKAGE SHALL BE CORRECTED AT THE CONTRACTOR'S COST.
13) ALL SURGE TANK REINFORCING STEEL SHALL BE BONDED AND GROUNDED IN ACCORDANCE WITH NEC REQUIREMENTS. COORDINATE THIS WORK WITH THE ELECTRICAL CONTRACTOR PRIOR TO PLACING FORMWORK.

SITE WORK

THE SITE WORK CONTRACTOR IS REQUIRED TO CONTACT DIGGER'S HOTLINE. ALL UTILITIES SHALL BE LOCATED PRIOR TO STARTING EXCAVATION.

ALL EXCAVATION AND BACK FILL FOR MECHANICALS ARE THE RESPONSIBILITY OF THE RESPECTIVE MECHANICAL CONTRACTOR. THESE TRENCHES ARE TO BE FILLED IN 8" LIFTS AND COMPACTED TO 95% OF THE MODIFIED PROCTOR VALUE. ENSURE TRENCH ROUTE IS CLEAR OF UTILITIES AND OTHER OBSTRUCTIONS PRIOR TO DIGGING.

THE EXCAVATION CONTRACTOR SHALL ADVISE THE GENERAL CONTRACTOR OF ANY SOIL CONDITIONS WHICH APPEAR OUT OF THE ORDINARY. THE SOIL BEARING CAPACITY IS LISTED ON THE COVER SHEET.

ALL ORGANIC TOPSOIL INSIDE THE BUILDING AREA, UNDER PAVED AREAS AND AT SITE FILL AREAS SHALL BE REMOVED. CONTRACTOR SHALL VERIFY TOPSOIL DEPTHS PRIOR TO CONSTRUCTION.

ALL SUB GRADE FILL UNDER PAVED AREAS AND BUILDING AREAS SHALL BE PIT RUN GRAVEL PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO 95% OF THE MODIFIED PROCTOR VALUE. GRAVEL BASE BENEATH FLOOR SLABS SHALL BE 6 INCHES OF ¾" CRUSHED STONE OR SAND COMPACTED TO THE ABOVE STANDARD. GRAVEL BASE BENEATH DRIVES, PARKING AREAS, AND APRONS SHALL BE 12" OF COMPACTED CRUSHED STONE. TYPAR SHALL BE INSTALLED WHENEVER THIS 12" BASE RESTS ON CLAY OR LOOSE SOILS. FILL SHALL NOT BE PLACED ON FROZEN GROUND AND NO FROZEN MATERIALS MAY BE USED FOR BACKFILL.

FOUNDATION TRENCHES MUST BE BACK FILLED UNIFORMLY ON EACH SIDE WITH SAND. PLACE FILL IN 8" LIFTS AND COMPACT TO 95% OF THE MODIFIED PROCTOR VALUE. THE EXTERIOR SIDE MAY BE FILLED WITH COMPACTED NON-STRUCTURAL FILL IF THERE WILL NEVER BE A PARKING LOT OR ADDITION ON THAT SIDE. WHEN IN DOUBT, BACK FILL WITH SAND.

THE BUILDING SITE SHALL BE GRADED TO PROVIDE DRAINAGE AWAY FROM THE BUILDING AT A MINIMUM OF 2% SLOPE FOR 20'-0" AWAY FROM THE BUILDING, STARTING AT 5" BELOW THE FLOOR LINE OR AS INDICATED ON THE PLANS. PROVIDE 6" OF TOPSOIL AT ALL GRASS AND LANDSCAPED AREAS AND GRADE TO +/- 0.10 FEET.

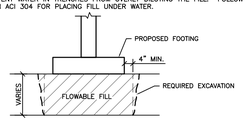
SPLASH BLOCKS ARE TO BE PLACED AT ALL DOWN SPOUTS WHICH DISCHARGE AT GRADE AND AT SPRINKLER DRAIN VALVES.

IF A CURRENT GEOTECHNICAL REPORT OR PLANS BY A CIVIL CONSULTANT ARE AVAILABLE, ALL REQUIREMENTS OF THAT REPORT AND PLANS MUST BE FOLLOWED. WHEN THE STRUCTURAL/ARCHITECTURAL PLANS OR THE INFORMATION ABOVE CONFLICT WITH THE GEOTECHNICAL REPORT OR THE CIVIL PLANS, THE INFORMATION IN THE GEOTECHNICAL REPORT AND CIVIL PLANS SUPERCEDE.

FLOWABLE FILL SUPPORT FOR POOR SOIL CONDITIONS

IN LIEU OF OVER-EXCAVATING POOR SOILS AND BACKFILLING, THE USE OF FLOWABLE FILL IS ALLOWED. EXTEND EXCAVATION 4" MINIMUM HORIZONTALLY BEYOND THE PROPOSED FOOTING SIZE TO A DEPTH NEEDED TO REACH SUITABLE BEARING SOIL PER THE GEOTECH REPORT. FILL EXCAVATION WITH FLOWABLE FILL TO THE FOOTING BEARING DEPTH. FLOWABLE FILL SHALL BE A CONTROLLED LOW-STRENGTH MATERIAL PER ACI-229 AND THE NRMCA.

1. FLOWABLE FILL SHALL HAVE A STRENGTH OF 500 – 1000 PSI.
2. SLUMP SHALL BE 6"-8".
3. PLACEMENT SHALL NOT OCCUR ON FROZEN GROUND OR WITH AMBIENT TEMPERATURE LESS THAN 35°F UNLESS PROTECTED FROM FREEZING TEMPERATURES UNTIL CURED.
4. DO NOT PLACE FOOTING UNTIL ADEQUATE CURING OF FLOWABLE FILL HAS OCCURED.
5. FLOWABLE FILL WILL DISPLACE WATER WHEN PLACED CORRECTLY. CARE SHALL BE TAKEN TO PREVENT WATER IN TRENCHES FROM OVERLY DILUTING THE FILL. FOLLOW PROCEDURES IN ACI 304 FOR PLACING FILL UNDER WATER.



CONCRETE

CONCRETE CONTRACTOR SHALL VERIFY SOIL CONDITIONS BEFORE PLACING FOUNDATIONS AND SLABS. NOTIFY THE GENERAL CONTRACTOR IF ANY SOIL CONDITIONS APPEAR OUT OF THE ORDINARY.

FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR STRUCTURAL FILL. DO NOT PLACE FOOTINGS ON FROZEN GROUND.

DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94.

1) FOOTINGS AND WALLS SHALL HAVE STRENGTH EQUAL TO 4,000 PSI AT 28 DAYS.
2) SLABS ON GRADE SHALL HAVE STRENGTH EQUAL TO 4,000 PSI AT 28 DAYS.
3) EXTERIOR CONCRETE SHALL HAVE STRENGTH EQUAL TO 4,000 PSI AT 28 DAYS.
4) COLUMNS, BEAMS AND STRUCTURAL SLABS SHALL HAVE STRENGTH EQUAL TO 4,000 PSI AT 28 DAYS.
5) PRE CAST TOPPING SHALL HAVE STRENGTH EQUAL TO 4000 PSI AT 28 DAYS.
6) SLUMP SHALL NOT EXCEED 4".
7) ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED WITH 4-7% AIR CONTENT. NO OTHER ADMIXTURES SHALL BE USED WITHOUT THE APPROVAL OF THE GENERAL CONTRACTOR. CALCIUM CHLORIDE SHALL NOT BE USED.
8) MAXIMUM AGGREGATE SIZE FOR FOOTING TO BE 1 1/2" AND MAXIMUM AGGREGATE SIZE FOR ALL OTHER WORK TO BE 3/4".

PLACE FLOOR SLABS WITH CONSTRUCTION JOINTS OR SAW JOINTS NOT EXCEEDING A MAXIMUM OF 156 SQUARE FEET OR AS INDICATED ON THE PLANS. SAW CUTTING TO BE DONE AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED.

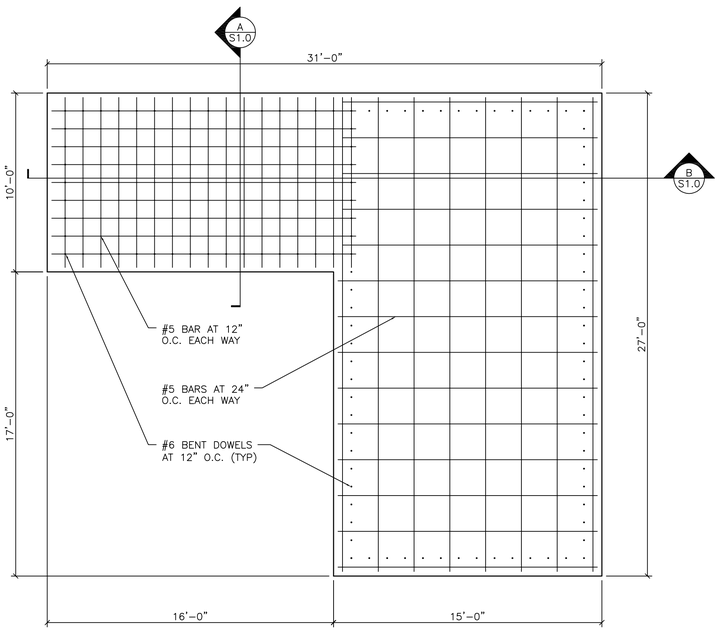
INTERIOR SLABS TO HAVE A TROWEL FINISH AND EXTERIOR SLABS TO HAVE A LIGHT BROOM FINISH. MAINTAIN FLOOR LEVEL AT WALLS AND PITCH SURFACES UNIFORMLY TO DRAINS. CONCRETE TO BE SEALED OR WET CURED FOR 7 DAYS. FLOORS TO RECEIVE TILE OR EPOXY TO BE WET CURED ONLY. EXTERIOR SLABS SHALL BE SEPARATED FROM BUILDINGS WITH CONTINUOUS 1/2" FIBER EXPANSION JOINT.

DESIGN AND CONSTRUCTION OF CAST-IN-PLACE CONCRETE SHALL CONFORM TO ACI 318 AND CRSI STANDARDS.

ANCHOR BOLTS AND THREADED RODS TO BE ASTM F1554. MINIMUM GRADE A36.

REINFORCING STEEL

REINFORCING STEEL TO CONFORM TO ASTM-A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM-A185. LAP ALL HORIZONTAL REINFORCING AT SPLICES AND AROUND CORNERS 30 BAR DIAMETERS. WELDED WIRE FABRIC IS TO BE LAPPED 6" AND PLACED IN THE CENTER OF THE SLAB UNLESS INDICATED OTHERWISE. REINFORCING SHALL BE PLACED IN CONFORMANCE WITH CRSI "RECOMMENDED PRACTICES FOR PLACING BARS" AND ACI 318. THE REINFORCEMENT SHALL NOT BE PAINTED AND MUST BE FREE OF GREASE, DIRT OR DEEP RUST WHEN PLACED. PROVIDE CONCRETE PROTECTION FOR REBARS PER ACI 318 SECTION 7.7.



BASE SLAB

SCALE: ¼""=1'-0"

Quasius — a construction services company

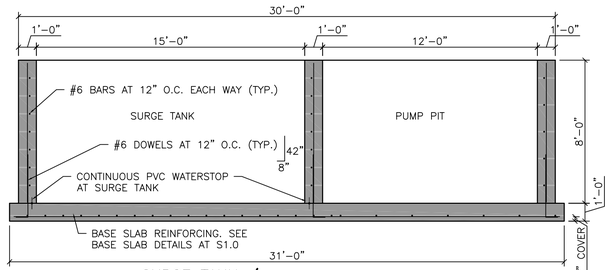
ISSUE NO	REVISIONS	ISSUE DATE
.	.	.

Manitowoc Family Aquatic Center
940 NORTH 18TH STREET
MANITOWOC, WISCONSIN

Pool Expansion

Project number 19024
Date MAY 21, 2019
Drawn by C. DUESCHER
Checked by -

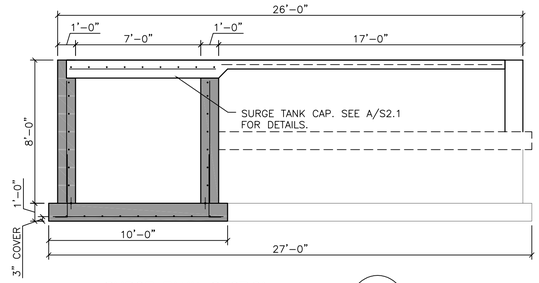
S1.0



SURGE TANK / PUMP PIT SECTION

SCALE: ¼"=1'-0"

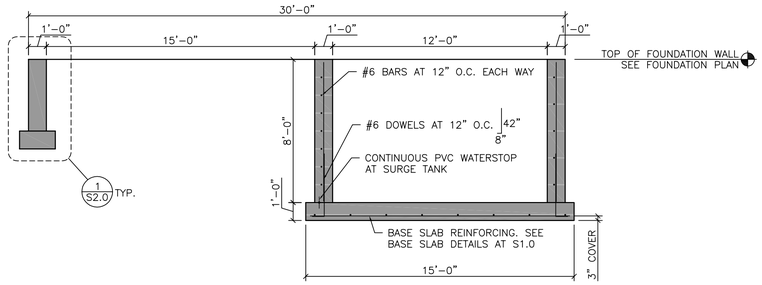
D S2.0



SURGE TANK SECTION

SCALE: ¼"=1'-0"

C S2.0



FROST WALL / PUMP PIT SECTION

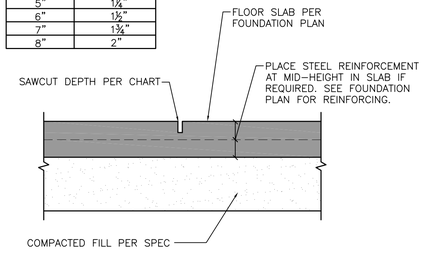
SCALE: ¼"=1'-0"

E S2.0

TOP OF FOUNDATION WALL KEY

- TOP OF CONCRETE = (100'-0")
- TOP OF CONCRETE = (99'-4")
- TOP OF CONCRETE = (99'-0")

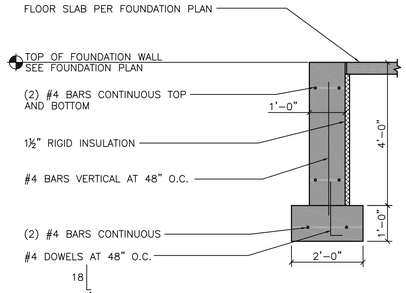
SLAB DEPTH	SAWCUT DEPTH
4"	1"
5"	1¼"
6"	1½"
7"	1¾"
8"	2"



SAWCUT DETAIL

SCALE: 1½"=1'-0"

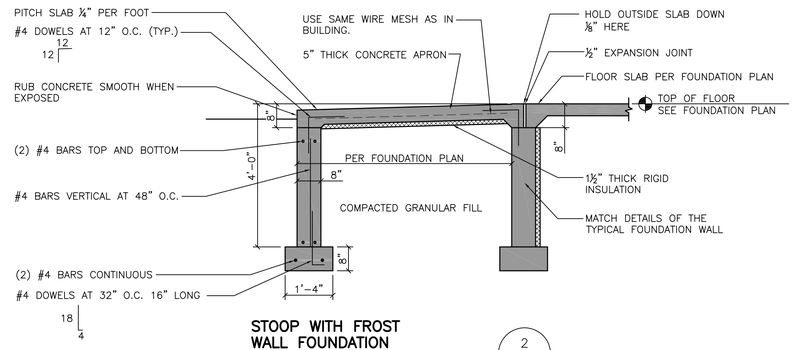
2 S2.0



4'x12" FOUNDATION WALL

SCALE: ½"=1'-0"

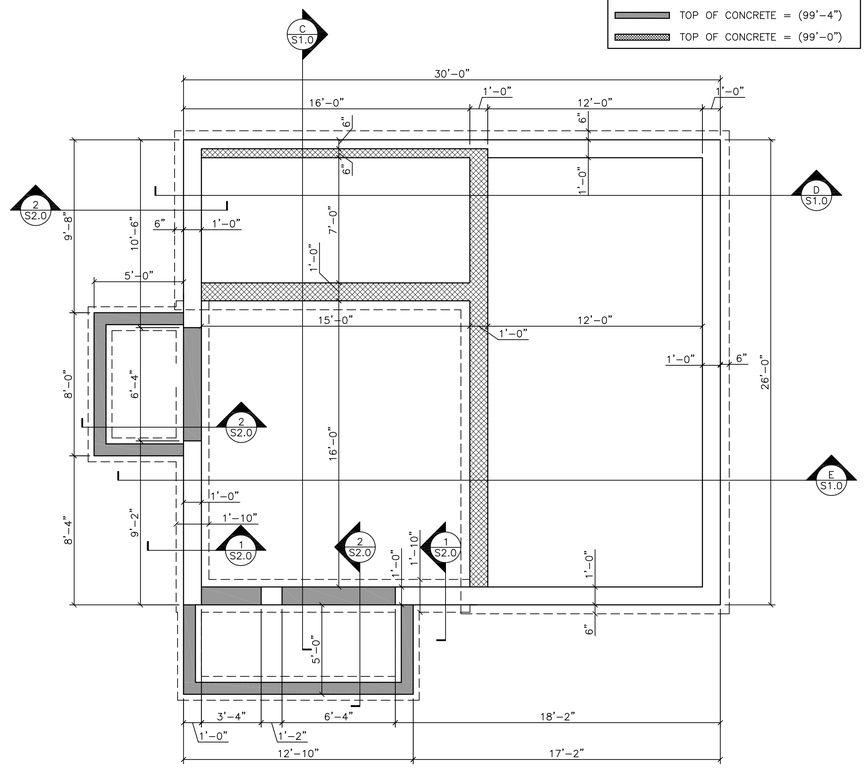
1 S2.0



STOOP WITH FROST WALL FOUNDATION

SCALE: ½"=1'-0"

2 S2.0



FOUNDATION PLAN

SCALE: ¼""=1'-0"

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Manitowoc Family Aquatic Center

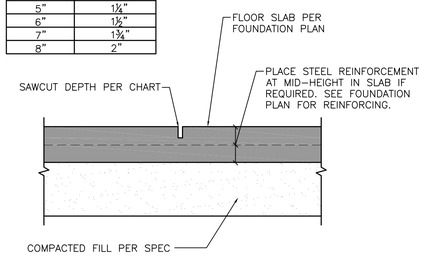
940 NORTH 18TH STREET
MANITOWOC, WISCONSIN

Pool Expansion

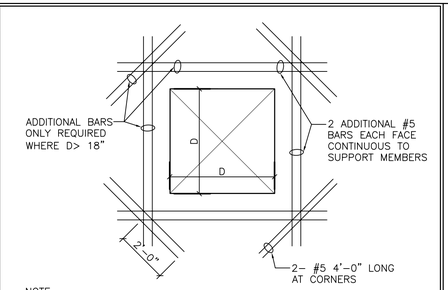
Project number 19024
Date MAY 21, 2019
Drawn by C. DUESCHER
Checked by -

S2.0

SLAB DEPTH	SAWCUT DEPTH
4"	1"
5"	1¼"
6"	1½"
7"	1¾"
8"	2"

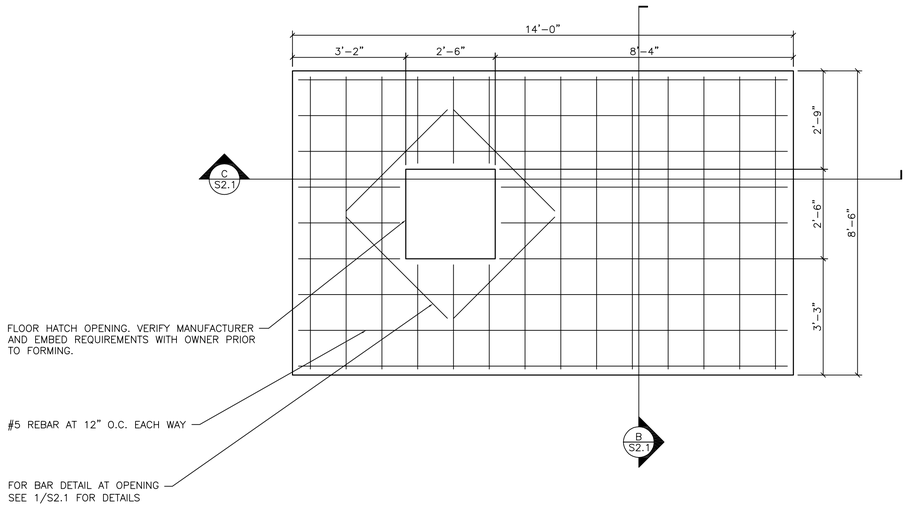


SAWCUT DETAIL — 2 / S2.0
SCALE: 1½"=1'-0"

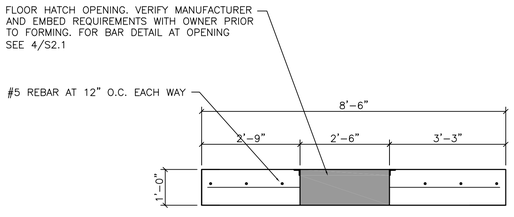


NOTE:
DETAIL ALSO APPLIES TO CIRCULAR OPENING GREATER THAN 18" DIAMETER.

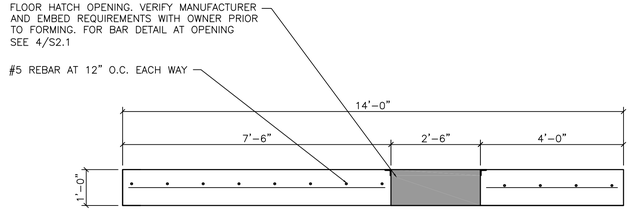
TYPICAL BAR DETAIL AT OPENING — 1 / S2.1
SCALE: ½"=1'-0"



SURGE TANK CAP — A / S2.1
SCALE: ½"=1'-0"



SURGE TANK CAP — B / S2.1
SCALE: ½"=1'-0"



SURGE TANK CAP — C / S2.1
SCALE: ½"=1'-0"

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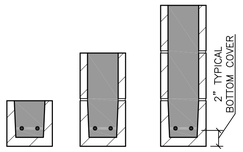


FILL LINTELS WITH 3000 PSI CONCRETE
REINFORCING: (2) #5 BARS CONTINUOUS

MASONRY LINTELS

SCALE: 1" = 1'–0"

LINTEL SCHEDULE

MARK	LINTEL	BEARING (EACH SIDE)	BEARING HEIGHT	REMARKS
L–1	8"x8" MASONRY LINTEL	8"	7'–4"	(1) CORE ON EACH SIDE OF OPENING TO GET A #5 BAR VERTICAL (CONTINUOUS TO TOP OF WALL) AND SOLID GROUT.
L–2	8"x16" MASONRY LINTEL	8"	7'–4"	(2) CORES ON EACH SIDE OF OPENING TO GET A #5 BAR VERTICAL (CONTINUOUS TO TOP OF WALL) AND SOLID GROUT.
L–3				

NOTE: 1. PROVIDE A BOND BEAM WITH (2) #5 BARS AT ALL MASONRY OPENINGS NOT LISTED IN THIS SCHEDULE. USE 8" OF BEARING.
2. PROVIDE (1) #5 BAR IN GROUTED SOLID CORE AT EACH SIDE OF ALL MASONRY OPENINGS UNLESS NOTED OTHERWISE IN THE REMARKS ABOVE. VERTICAL BARS TO BE CONTINUOUS THROUGH LINTEL TO TOP OF WALL.
3. OTHER OPENINGS NOT LISTED IN THIS SCHEDULE REQUIRE NO SPECIAL STRUCTURAL HEADERS.

GENERAL NOTES:

ICE AND WATERSHIELD TO BE USED AT EAVES.

ROOF TRUSSES AT 24" O.C.

PROVIDE SIMPSON H10A HOLD DOWN CLIPS ON ALL TRUSSES UNLESS OTHERWISE SPECIFIED BY THE TRUSS SUPPLIER.

STRAP DOWN ALL GIRDER TRUSSES WITH (1) CS16 STRAP. USE 26 8d NAILS PER END OF STRAP. ALSO USE (1) CS16 STRAP TO ATTACH EACH GIRDER TRUSS SUPPORT POST TO THE SILL PLATE. ADD TWO ½" DIA. EXPANSION BOLTS THROUGH THE SILL PLATE AT THESE LOCATIONS UNLESS OTHERWISE NOTED.

FOR ROOF SHEATHING USE 5/8" OSB WITH 10d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.

BALANCED SNOW LOAD = 33.6 PSF
UNBALANCED SNOW LOAD = 40 PSF

ADDITIONAL TRUSS LOADING

BOTTOM CORD COLLATERAL LOAD = 5 PSF
1,250 CRANE BEAM POINT LOAD AT EACH TRUSS CONNECTION. SEE ROOF FRAMING PLAN.

REQUIRED ATTIC VENTILATION:

OVERALL ROOF AREA INCLUDING OVERHANGS (S.F.)=	832
REQUIRED VENTILATED AREA (1,947/300)(S.F.)=	2.77
PROVIDE 50% BY RIDGE VENT (S.F.)=	1.50
PROVIDE 50% BY SOFFIT VENTILATION (S.F.)=	1.50

NAILING SCHEDULE

CONNECTION	NAILING (COMMON NAILS UNLESS OTHER CONNECTION IS REQUIRED)	STAPLES
BRIDGING TO TRUSSES, FACE NAIL EACH END TOP PLATE TO STUD, END NAIL STUD TO SOLE PLATE	(2) 8d (2) 16d (4) 8d, TOE NAIL OR 2–16d, END NAIL	(2) 3" 14 GAGE (3) 3" 14 GAGE (3) 3" 14 GAGE (TOE NAIL OR END NAIL)
DOUBLED STUDS, FACE NAIL BUILT–UP CORNER STUDS DOUBLED TOP PLATES, TYPICAL FACE NAIL DOUBLED TOP PLATES, LAP SPLICES	16d AT 24" O.C. 16d AT 24" O.C. 16d AT 16" O.C. (8) 16d	3" 14 GAGE AT 8" O.C. 3" 14 GAGE AT 16" O.C. 3" 14 GAGE AT 12" O.C. (12) 3" 14 GAGE
CONTINUOUS HEADER, TWO PIECES CONTINUOUS HEADER TO STUD, TOENAIL	16d AT 12" O.C. ALONG EACH EDGE (4) 8d TOE NAIL	
OSB ROOF SHEATHING EXTERIOR WALL SHEATHING	8d AT 6" O.C. AT EDGES 8d AT 12" O.C. AT INTERMEDIATE MEMBERS 8d AT 6" O.C. AT EDGES 8d AT 12" O.C. AT INTERMEDIATE MEMBERS	1¾" 16 GA. AT 4" O.C. AT EDGES 1¾" 16 GA. AT 8" O.C. AT INTERMEDIATE SUPPORTS 1¾" 16 GA. AT 4" O.C. AT EDGES 1¾" 16 GA. AT 8" O.C. AT INTERMEDIATE SUPPORTS

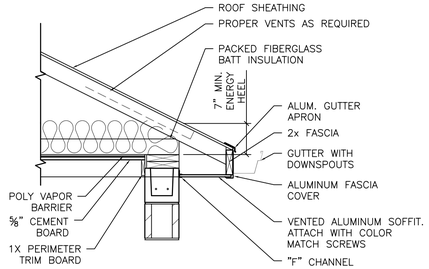
NOTES: 1. USE THESE PATTERNS UNLESS NOTED OTHERWISE IN THE PLANS
2. THESE PATTERNS COMPLY WITH IBC TABLE 2304.9.1

WOOD TRUSSES

TRUSSES MUST BE INSTALLED PER TRUSS SUPPLIER SHOP DRAWINGS AND MUST MEET ALL REQUIREMENTS OF THE TRUSS SHOP DRAWINGS. WHERE THE TRUSS SHOP DRAWINGS CONFLICT WITH THE ROOF FRAMING PLAN, THE SHOP DRAWINGS SUPERCEDE.

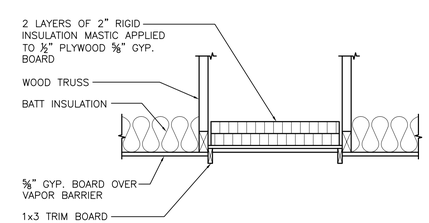
WOOD TRUSSES SHALL BE DESIGNED FOR ALL LOADS AND REQUIREMENTS AS INDICATED ON THESE PLANS, AND AS OUTLINED BY IBC, CHAPTER 16. WOOD TRUSSES MUST MEET APPLICABLE REQUIREMENTS OF IBC, CHAPTER 23. TRUSS MANUFACTURER SHALL SPECIFY REQUIRED TRUSS BRACING AND HOLD DOWN CLIPS.

BUILDER MUST PROPERLY INSTALL ALL BRACING SPECIFIED BY THE TRUSS MANUFACTURER.



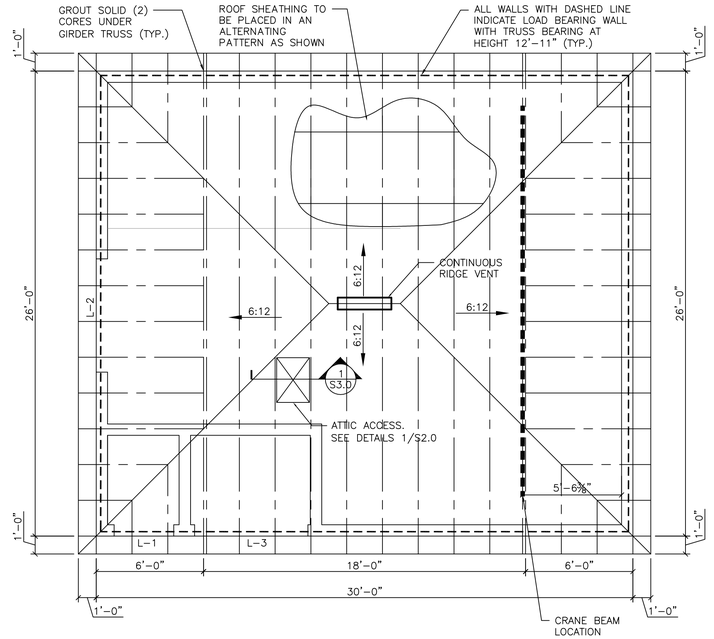
WOOD FRAME SOFFIT DETAIL (1 / S3.0)

SCALE: ¾"=1'–0"



ATTIC ACCESS PANEL (2 / S3.0)

SCALE: 1"=1'–0"



ROOF PLAN

SCALE: ¼"=1'–0"

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MANITOWOC, WISCONSIN
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Date MAY 21, 2019
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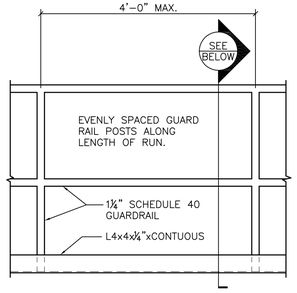
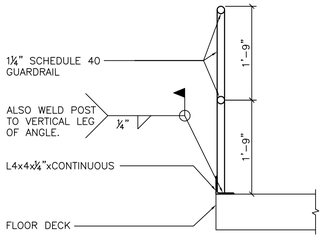
S3.0



ELEVATION



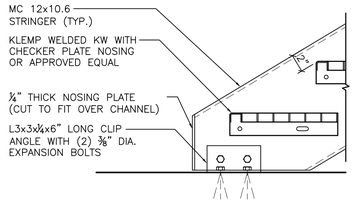
NOTE:
EXPANSION BOLT ANGLE TO FLOOR DECK. USE ⅝" DIA. BOLTS. USE (2) PER VERTICAL POST AND AT 24" O.C.

CROSS SECTION

GUARDRAIL DETAILS

SCALE: ¾"=1'-0"

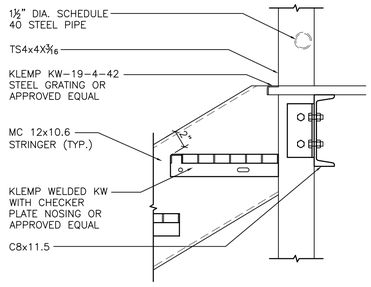
8 / A1.0



STEEL GRATE STAIR CONNECTION DETAIL

SCALE: 1½"=1'-0"

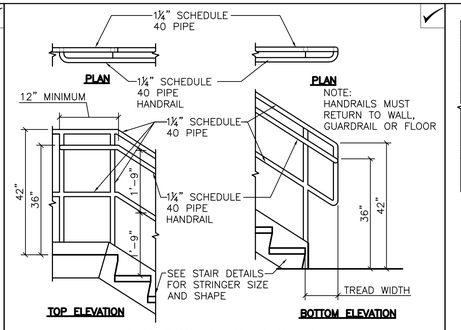
7 / A1.0



STEEL GRATE STAIR CONNECTION DETAIL

SCALE: 1½"=1'-0"

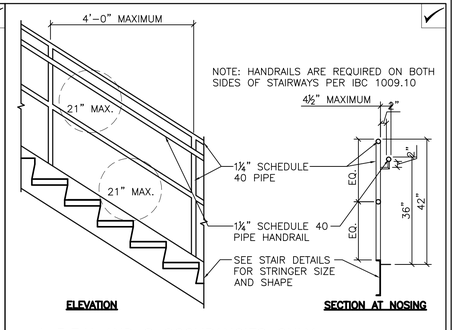
5 / A1.0



I-3,F,H, AND S OCCUPANCIES ONLY OPEN STAIRWAY GUARD WITH HANDRAIL

SCALE: ½"=1'-0"

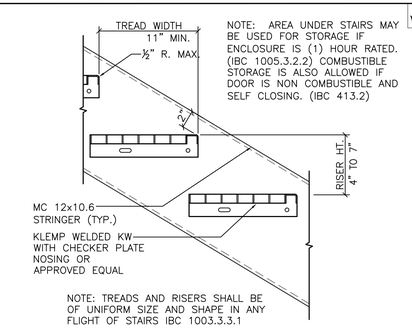
3 / A1.0



I-3,F,H AND S OCCUPANCIES ONLY OPEN STAIRWAY GUARD WITH HANDRAIL

SCALE: ½"=1'-0"

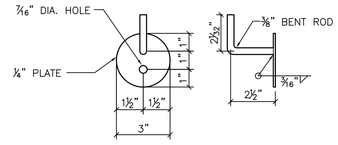
1 / A1.0



STEEL GRATE STAIR DETAIL

SCALE: 1½"=1'-0"

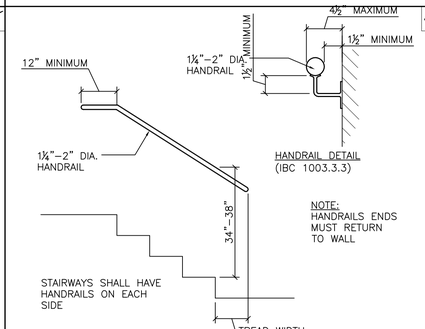
6 / A1.0



HANDRAIL MOUNT

SCALE: 3"=1'-0"

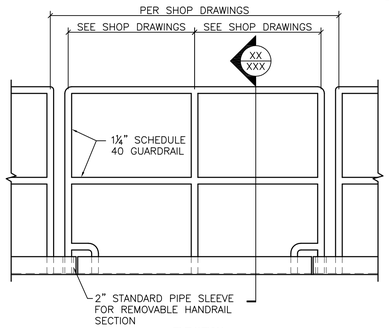
4 / A1.0



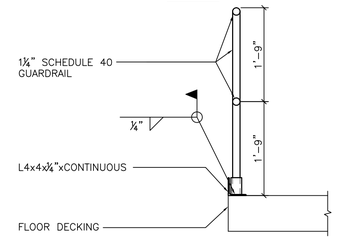
WALL MOUNTED HANDRAIL DETAIL

SCALE: ½"=1'-0"

2 / A1.0



ELEVATION



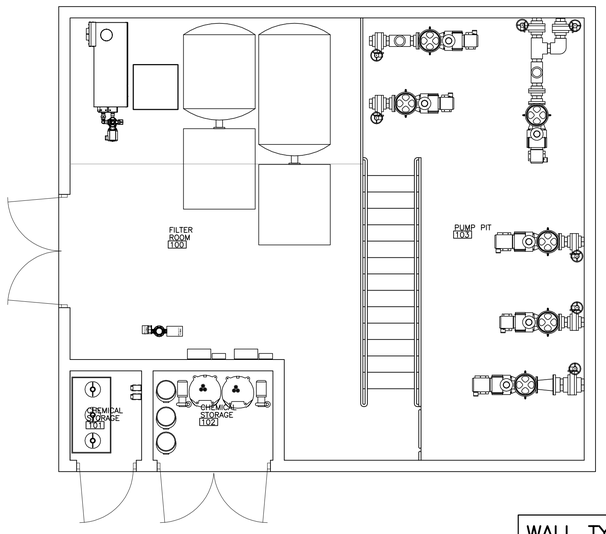
NOTE:
EXPANSION BOLT ANGLE TO FLOOR DECK. USE ⅝" DIA. BOLTS (2) PER VERTICAL POST AND AT 24" O.C.

CROSS SECTION

REMOVABLE GUARDRAIL SECTION

SCALE: ¾"=1'-0"

9 / A1.0

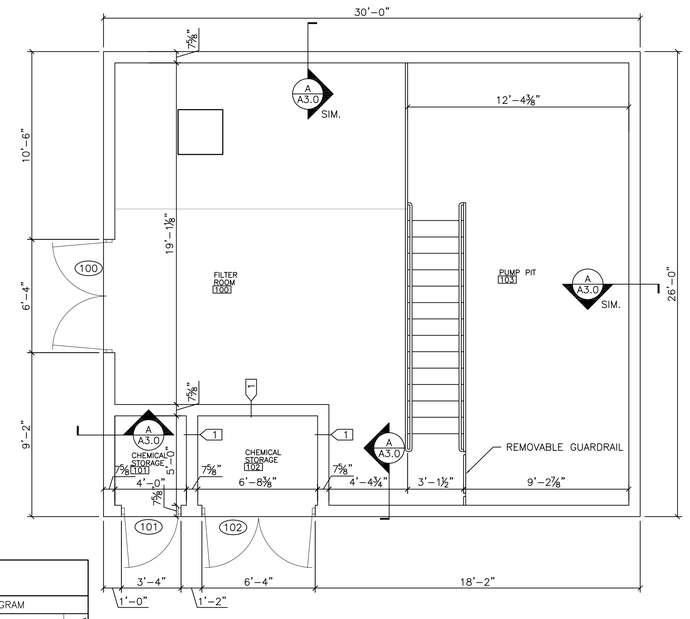


EQUIPMENT PLAN

SCALE: ¼"=1'-0"

WALL TYPE SCHEDULE

NO.	DESCRIPTION	WALL DIAGRAM
1	8" CMU WITH HORIZONTAL LADDER REINFORCING AT 16" O.C. PER SPEC AND #4 BARS AT 48" O.C. HEIGHT: 12'-8"	



FLOOR PLAN

SCALE: ¼"=1'-0"

X — WALL TYPE SYMBOL SEE WALL TYPE SCHEDULE ON THIS SHEET

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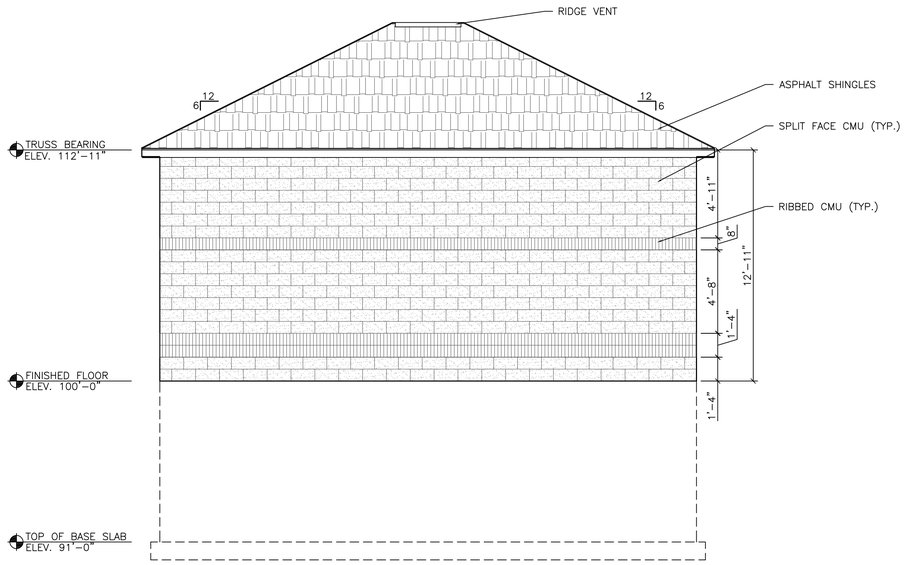
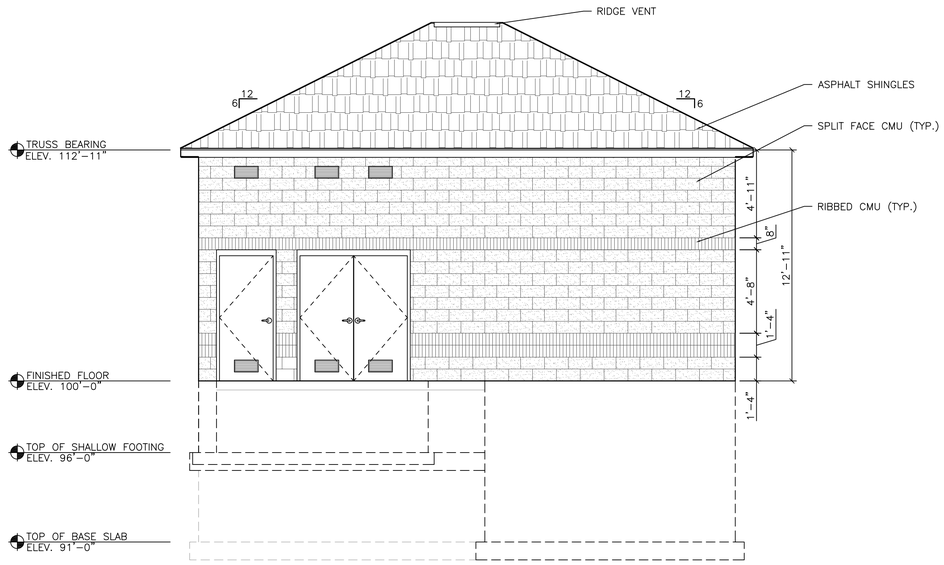
Checked by -

A1.0



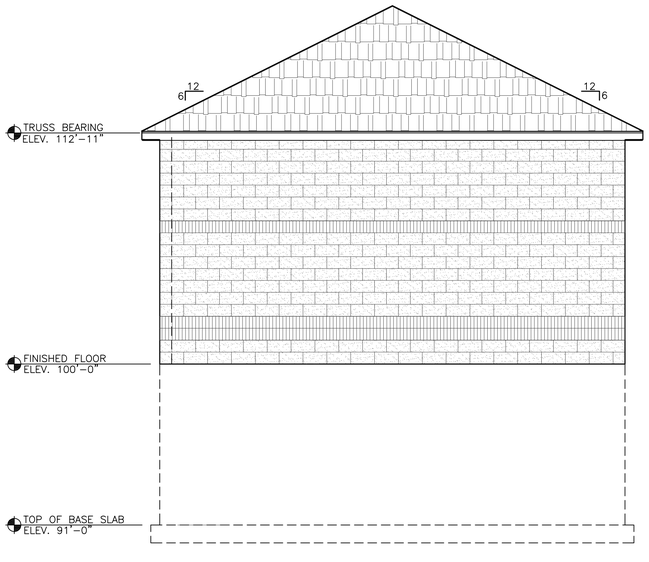
SOUTH ELEVATION

SCALE: ¼"=1'-0"



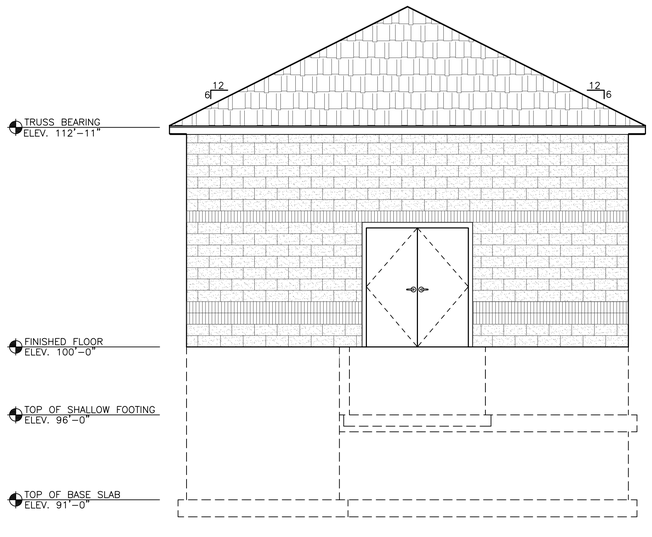
NORTH ELEVATION

SCALE: ¼"=1'-0"



EAST ELEVATION

SCALE: ¼"=1'-0"



WEST ELEVATION

SCALE: ¼"=1'-0"

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Checked by -

A2.0

ROOM FINISH SCHEDULE

NO.	DESCRIPTION	FLOOR	BASE	WALLS	CEILING	CLG. HT.	REMARKS
100	FILTER ROOM	SEALED CONCRETE	N/A	BLOCK FILL AND PAINT	PAINTED CEMENT BOARD	FULL HEIGHT	–
101	CHEMICAL STORAGE	SEALED CONCRETE	N/A	BLOCK FILL AND PAINT	PAINTED CEMENT BOARD	8'–1½"	
102	CHEMICAL STORAGE	SEALED CONCRETE	N/A	BLOCK FILL AND PAINT	PAINTED CEMENT BOARD	8'–1½"	
103	PUMP PIT	SEALED CONCRETE	N/A	BLOCK FILL AND PAINT	PAINTED CEMENT BOARD	FULL HEIGHT	

DOOR SCHEDULE

NO.	DOOR DESCRIPTION			FRAME			HARDWARE			REMARKS
	SIZE (WxH)	DIAGRAM	MATERIAL	DIAGRAM	MATERIAL	DETAIL	FUNCTION	PANIC	CLOSER	
100	(2) 3'–0"x7'–0"	A	HM	2	HM	1/A3.0	ENTRANCE	–	HYDRAULIC	ASTRAGAL, WEATHERSTRIP, KICKPLATE
101	3'–0" X 7'–0"	A	HM	1	HM	1/A3.0	ENTRANCE		HYDRAULIC	WEATHERSTRIP, KICKPLATE, LATCHGUARD
102	(2) 3'–0"x7'–0"	A	HM	2	HM	1/A3.0	ENTRANCE		HYDRAULIC	ASTRAGAL, WEATHERSTRIP, KICKPLATE

PASSAGE
Both levers always unlocked.

SINGLE DUMMY TRIM
Single dummy trim for one side of door. Used for door pull or as matching inactive trim.

OFFICE
Push–button locking. Push–button locks outside lever until unlocked with key or by rotating inside lever.

CLASSROOM
Outside lever locked and unlocked by key. Inside lever always unlocked.

EXIT
Blank plate outside. Inside lever always unlocked.

PRIVACY
Push–button locking. Can be opened from outside with small screwdriver. Turning inside lever or closing door releases button.

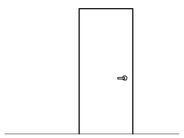
ENTRANCE
Turn/push–button locking: pushing and turning button locks outside lever requiring use of key until button is manually unlocked

STOREROOM
Outside lever fixed. Entrance by key only. Inside lever always unlocked.

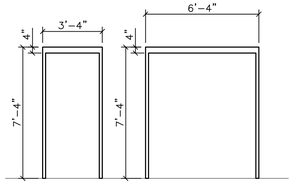
PUSH/PULL
Blank plate on push side. Lever on pull side.

STOREFRONT
Blank plate on push side. Handle on pull side. Deadbolt lock.

NOTES:
1. ALL EXTERIOR DOORS TO BE INSULATED AND HAVE WEATHER–STRIPPING AND A THRESHOLD.
2. THE GLAZING CONTRACTOR IS REQUIRED TO PROVIDE TEMPERED GLASS WHERE REQUIRED BY CODE.
3. COLOR OF DOOR, FRAME AND HARDWARE TO BE DETERMINED BY OWNER.
4. DOOR PROVIDER MUST MEET ALL APPLICABLE CODES.



DOOR DIAGRAMS
NOT TO SCALE



FRAME DIAGRAMS
NOT TO SCALE

NOTE:
- ALL OVERALL DIMENSIONS INDICATE FRAME SIZE.
- ALL METAL FRAMES AND MULLIONS ARE DRAWN AS 2" UNLESS DIMENSIONED OTHERWISE.

DOORS, WINDOWS AND FRAMES

FURNISH AND INSTALL ALL DOORS AND WINDOW ASSEMBLIES AS INDICATED ON THE PLANS. INCLUDE ALL HARDWARE INDICATED AND THAT MAY BE REQUIRED FOR A COMPLETE JOB. DOORS AND WINDOWS SHALL OPERATE SMOOTHLY WITHOUT BINDING AND BE INSTALLED PLUM AND TRUE. HARDWARE SHALL FIT PROPERLY AND BE ADJUSTED AS REQUIRED. PROVIDE INSECT SCREENS ON ALL OPERABLE WINDOW UNITS.

HARDWARE

UNLESS SPECIFIED IN THE HARDWARE SCHEDULE:

–ALL LOCK SETS SHALL BE LEVER TYPE AS REQUIRED TO MEET REQUIREMENTS OF THE A.D.A.
–ALL OTHER HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF THE A.D.A.
–ALL EXIT DOORS SHALL BE EQUIPPED WITH LEVER TYPE EXIT HARDWARE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A LATCH, KEY, OR BOLT.

FINISHES

PROVIDE AND INSTALL ALL FINISHES AS INDICATED ON PLANS. INSTALL ALL MATERIALS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. "FINISH" INSTALLER INSPECT SUBSURFACE AND PREPARE AS REQUIRED PRIOR TO INSTALLATION OF THE PRODUCT.

INTERIOR FINISHES TO MEET THE REQUIREMENTS OF IBC CHAPTER 8.

PAINTING

PAINT ALL AREAS REQUIRED FOR A COMPLETE JOB.

APPLY PAINT AS RECOMMENDED BY STANDARD PRACTICE AND MANUFACTURER'S RECOMMENDATIONS.

REMOVE OR PROTECT HARDWARE, PLATES, LIGHT FIXTURES, SPRINKLER HEADS, ETC. THAT ARE NOT INTENDED TO BE PAINTED. PROVIDE MASKING AS REQUIRED.

DISPOSAL OF EXCESS PAINT MATERIALS IS THE RESPONSIBILITY OF THE PAINTING CONTRACTOR. DISPOSAL MUST BE IN ACCORDANCE WITH APPLICABLE LAWS AND CODES.

SEALANTS

PROVIDE CAULKING AND BACKER ROD AS RECOMMENDED BY THE MANUFACTURER TO SEAL EXTERIOR AND INTERIOR JOINTS, AT EXPANSION JOINTS, FRAMES OF DOORS, WINDOWS, AND OTHER EXTERIOR OPENINGS. ALSO CAULK AROUND PLUMBING FIXTURES, COUNTERTOPS, ROOF OPENINGS, ETC. AND AS REQUIRED FOR A COMPLETE JOB. CAULK TO BE INSTALLED AFTER FINISH IS APPLIED TO SURFACES. PENETRATIONS THROUGH FIRE RATED ASSEMBLIES MUST MEET U.L. REQUIREMENTS.

SIGNAGE

SIGNAGE SHALL MEET THE REQUIREMENTS OF THE A.D.A.

WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING AT DOUBLE–LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL.

MOUNTING HEIGHT SHALL BE 60" ABOVE FINISH FLOOR TO THE CENTERLINE OF THE SIGN UNLESS INDICATED OTHERWISE.

PROVIDE HANDICAP PARKING SIGNS AS INDICATED ON THE PLANS AND AS REQUIRED BY APPLICABLE LAWS.

WALL AND ROOF TYPE SCHEDULE

LETTER	DESCRIPTION
A	ASPHALT SHINGLES TAR PAPER ⅝" OSB SHEATHING WITH H–CLIPS WOOD ROOF TRUSSES AT 24" O.C. R–40 BLOWN–IN INSULATION REINFORCED POLY VAPOR BARRIER
B	8" CMU PER ELEVATIONS WITH HORIZONTAL LADDER PER SPEC. AND #4 BARS AT 48" O.C. CORE FILL 500 INSULATION

PLUMBING

PLUMBING SHALL BE COMPLETED AS A DESIGN/BUILD PACKAGE. THE PLUMBING SUBCONTRACTOR IS RESPONSIBLE TO PROVIDE EXCELLENT DESIGN, BUILDING MATERIALS, AND CRAFTSMANSHIP. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH STATE AND LOCAL CODES. SEPARATE PLANS SHALL BE SUBMITTED TO THE STATE FOR APPROVAL. THE PLUMBING WORK IS NOT A PART OF THIS PLAN. SEE PLUMBING PLAN FOR SPECIFICATIONS. ALL PENETRATIONS THRU RATED CONSTRUCTION SHALL BE A U.L. APPROVED METHOD. PLUMBING FIXTURES TO MEET ALL APPLICABLE REQUIREMENTS.

HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

HVAC SHALL BE COMPLETED AS A DESIGN/BUILD PACKAGE. THE HVAC SUBCONTRACTOR IS RESPONSIBLE TO PROVIDE EXCELLENT DESIGN, BUILDING MATERIALS, AND CRAFTSMANSHIP. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH STATE AND LOCAL CODES. SEPARATE PLANS AND CALCULATIONS SHALL BE SUBMITTED TO THE STATE FOR APPROVAL. THE HEATING AND VENTILATION WORK IS NOT A PART OF THIS PLAN. SEE HVAC PLAN FOR SPECIFICATIONS. ALL PENETRATIONS THRU RATED CONSTRUCTION SHALL BE A U.L. APPROVED METHOD.

ELECTRICAL

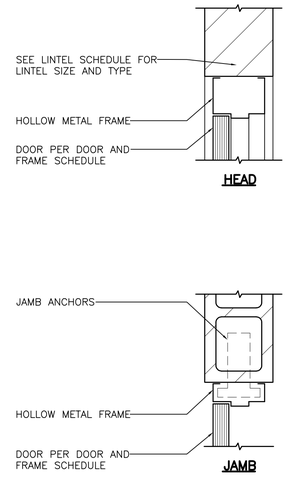
ELECTRICAL SHALL BE COMPLETED AS A DESIGN/BUILD PACKAGE. THE ELECTRICAL SUBCONTRACTOR IS RESPONSIBLE TO PROVIDE EXCELLENT DESIGN, BUILDING MATERIALS, AND CRAFTSMANSHIP. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH STATE AND LOCAL CODES.

THE ELECTRICAL WORK IS NOT DEFINED ON THIS PLAN. SEE THE ELECTRICAL PLAN AND SPECIFICATIONS FOR DETAILS. SEPARATE PLANS AND CALCULATIONS SHALL BE SUBMITTED TO THE STATE FOR APPROVAL. THESE INCLUDE A GENERAL LIGHTING AND EMERGENCY LIGHTING PLAN AND CALCULATIONS TO SHOW COMPLIANCE WITH THE INTERNATIONAL ENERGY COMPLIANCE CODE (IECC).

PROVIDE MEANS OF EGRESS ILLUMINATION PER IBC 1006. THE ILLUMINATION LEVEL SHALL NOT BE LESS THAN 1 FOOT CANDLE AT THE WALKING SURFACE LEVEL.

ALL PENETRATIONS THRU RATED CONSTRUCTION SHALL BE A U.L. APPROVED SPECIFICATIONS.

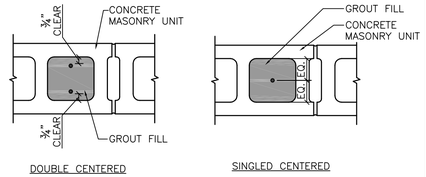
INTERIOR WALL FINISHES PER ROOM FINISH SCHEDULE



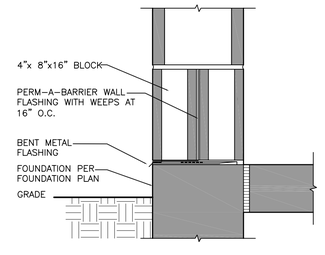
HOLLOW METAL DOOR FRAME
SCALE: 1½"=1'–0"
1 / A3.0

WALL SECTION
SCALE: ½"=1'–0"
A / A3.0

NOTE:
1. SEE PLAN FOR BAR SIZES
2. LOCATE REINFORCING AT ALL CORNERS, EACH SIDE OF OPENINGS AND CONTROL JOINTS, AND AT SPACING SHOWN ON PLANS.



TYPICAL WALL REINFORCING TYPES IN CMU WALLS
SCALE: 1½"=1'–0"
3 / A3.0



FULL WYTHE MASONRY FLASHING
SCALE: 1"=1'–0"
2 / A3.0

Quasius
a construction services company

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Manitowoc Family Aquatic Center
940 NORTH 18TH STREET
MANITOWOC, WISCONSIN
Pool Expansion

Project number 19024
Date MAY 21, 2019
Drawn by C. DUESCHER
Checked by -

A3.0