PLUMBING ABBREVIATIONS

AD	AREA DRAIN
ASR	AUTOMATIC SPRINKLER RISER
BFP	BACK FLOW PREVENTER
BFS	BELOW FLOOR SLAB
BWV	BACK WATER VALVE
CB	CATCH BASIN
CI	CAST IRON
CO	CLEAN OUT
CV	CONTROL VALVE
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DN	DOWN
DWH	DOMESTIC WATER HEATER
E.T.C.	ELECTRICAL TRADES CONTRACTOR
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FD	FLOOR DRAIN
FC	FINAL CONNECTIONS
FDC	FIRE DEPT. CONNECTION
FF	FINISH FLOOR
FHV	FIRE HOSE VALVE
FT	FEET
GAL	GALLON
GD	GARBAGE DISPOSAL
GI	GREASE INTERCEPTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIB
HD	HEAD (FT)
HP	HORSE POWER
ID	INSIDE DIAMETER
I.E.	INVERT ELEVATION
LAV	LAVATORY
LT	LAUNDRY TRAY
MA	MEDICAL AIR
MAX	MAXIMUM
MGC	MEDICAL GAS CONSOLE
MH	MAN HOLE
MIN	MINIMUM
MS	MOP SINK
M.T.C.	MECHANICAL TRADES CONTRACTOR
NTS	NOT TO SCALE
ORD	OVERFLOW ROOF DRAIN
OXY	OXYGEN
P	PUMP
PD	PRESSURE DROP
PVC	POLY-VINYL-CHLORIDE
RC	RAIN CONDUCTOR
RD	ROOF DRAIN
RI	ROUGH-IN
REQ'D	REQUIRED
SAN	SANITARY
SHWR	SHOWER
SK	SINK
SP	STAND PIPE
SQ. FT.	SQUARE FEET
SS	SERVICE SINK
ST	STORM
S&W	STOP & WASTE
STR	STRAINER
SV	STACKED VENT
TYP.	TYPICAL
UR	URINAL
VB	VACUUM BREAKER
V.F.A.	VARIABLE FREQUENCY DRIVE
VS	VENT STACK
VTR	VENT THRU ROOF
W	WASTE
WB	WET BULB
WC	WATER CLOSET
WH	WALL HYDRANT
WS	WASTE STACK
W&V	WASTE AND VENT
X-CW	EXIST. CW PIPING
	ITEM
	EXISTING

PLUMBING SYMBOLS LEGEND

PLUMBING PIPING

- SAN — SANITARY WASTE
- SAN — — — SANITARY WASTE BELOW FINISH SLAB
- V — — — — VENT PIPING
- V - - - - VENT PIPING BELOW FINISH SLAB
- — — — — — DEMOLITION

MISCELLANEOUS NOTES

- POINT OF CONNECTION BETWEEN NEW AND EXISTING
- POINT OF EXISTING TO REMAIN AND EXISTING TO BE REMOVED
- (X) INDICATES PLAN NOTE
- ⟨X⟩ INDICATES DEMOLITION NOTE
- DETAIL BUBBLE
- XX — DETAIL NUMBER
- XXXX — PAGE LOCATION INDICATES
- XX / XXXX — DIRECTION OF DETAIL SECTION

PLUMBING EQUIPMENT

FLOW DIRECTION	UNION
PIPING DROP	PIPE ANCHOR
PIPING RISE	PIPE GUIDE
FLOOR CLEANOUT	FLOOR DRAIN & FLOOR SINK
PLUMBING TRAP	PIPE CAP
CONNECTION	PIPE BREAK

GENERAL PLUMBING NOTES

1. ALL PLUMBING WORK SHALL CONFORM TO MICHIGAN PLUMBING CODE, LATEST APPLICABLE EDITION.
2. INSTALL ALL EQUIPMENT, MATERIALS, AND ACCESSORIES PER MANUFACTURERS WRITTEN INSTRUCTIONS.
3. ALL INVERT ELEVATIONS ARE BASED ON A FINISH FLOOR LEVEL OF 100'-0".
4. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING WORK.
5. FIELD VERIFY LOCATIONS OF EXISTING PIPING THAT MAY CONFLICT WITH NEW CONSTRUCTION AND RELOCATE AS NEEDED.
6. NOTIFY OWNER OF ANY PIPING DEMOLITION THAT MAY AFFECT NORMAL OPERATION OF OTHER AREAS.
7. 1% SLOPE FOR ALL SANITARY PIPING 3" OR MORE IN DIAMETER.
8. THE CONTRACTOR SHALL FIELD VERIFY THE SIZES, LOCATION, ELEVATIONS, AND DETAILS OF ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EQUIPMENT AND MATERIALS IN A "NEW" CONDITION DURING CONSTRUCTION.
10. ALL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS AND SUBCONTRACTORS AS REQUIRED BY LAW.
11. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CODES AND REGULATIONS ENFORCED BY LOCAL BUILDING OFFICIALS.
12. IF THERE IS CONFLICTING INFORMATION IN THE PLANS OR SPECIFICATIONS THE MORE STRINGENT AND GREATER COST ITEM SHALL BE USED.
13. DRAWINGS INDICATE REQUIRED SIZES AND POINTS OF TERMINATION OF PIPES AND SUGGESTED ROUTES. IT IS NOT INTENTION OF DRAWINGS TO INDICATE ALL NECESSARY OFFSETS. INSTALL WORK IN MANNER TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. DO NOT SCALE FROM DRAWINGS.

PLUMBING SPECIFICATIONS

1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REGULATIONS.
2. IN CASE OF DIFFERENCE BETWEEN BUILDING CODES, SPECIFICATIONS, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS, CONTRACT DOCUMENTS, AND AUTHORITY HAVING JURISDICTION, THE MOST STRINGENT SHALL GOVERN. CONTRACTOR SHALL PROMPTLY NOTIFY OWNER IN WRITING OF ANY SUCH DIFFERENCE.
3. NON-COMPLIANCE: SHOULD CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH REQUIREMENTS OF APPLICABLE BUILDING CODES, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS, CONTRACT DOCUMENTS, OR AUTHORITY HAVING JURISDICTION, HE SHALL BEAR ALL COSTS ARISING IN CORRECTING THE DEFICIENCIES.
4. APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL STATE LAWS, LOCAL ORDINANCES, UTILITY COMPANY REGULATIONS AND APPLICABLE REQUIREMENTS OF MICHIGAN BUILDING CODE, MICHIGAN PLUMBING CODE, MICHIGAN DEPARTMENT OF FIRE AND BUILDING SERVICES.
5. EXCEPT AS OTHERWISE SPECIFIED HEREIN, ALL PIPING WORK AND MATERIAL ARE TO CONFORM TO THE AMERICAN STANDARDS ASSOCIATION CODE FOR PRESSURE PIPING.
6. PERMITS: CONTRACTOR SHALL PAY FOR ALL BUILDING PERMITS REQUIRED BY WORK AND ANY OTHER REQUIREMENTS NECESSARY TO CARRY OUT HIS WORK. PERMITS SHALL BE POSTED IN A PROMINENT PLACE AT THE BUILDING SITE AND BE PROPERLY PROTECTED FROM WEATHER AND PHYSICAL DAMAGE.

GUARANTEE

1. CONTRACTOR SHALL, BY ACCEPTING THESE DRAWINGS AND SPECIFICATIONS, GUARANTEE THE FOLLOWING:
   - 1.1. HE WILL FURNISH ALL MATERIAL AND EQUIPMENT AS SPECIFIED EXCEPT WHERE SPECIFIC WRITTEN APPROVAL IS GIVEN BY ENGINEER FOR SUBSTITUTION.
   - 1.2. ALL MATERIAL AND EQUIPMENT WILL BE INSTALLED SUBSTANTIALLY AS SHOWN ON DRAWINGS AND AS REQUIRED WITHIN INTENT OF THESE SPECIFICATIONS. ALL EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
   - 1.3. ALL EQUIPMENT, PIPING, ETC., WILL BE DRIPTIGHT, AIRTIGHT, FREE OF VIBRATION, POUNDING AND OTHER OBJECTIONABLE NOISES.
   - 1.4. ALL EQUIPMENT, ACCESSORIES AND MATERIAL FURNISHED BY THE CONTRACTOR, INCLUDING INSTALLATION, PIPE JOINTS, ETC., FURNISHED AND/OR DONE BY HIM FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN MATERIAL AND WORKMANSHIP.
   - 1.5. IF ANY EQUIPMENT, MATERIAL AND/OR PIPE JOINTS, CONNECTIONS, ETC., FAILS OR DOES NOT OPERATE SATISFACTORILY OR SHOWS UNDUE WEAR, HE WILL, UPON BEING NOTIFIED, IMMEDIATELY REMEDY DEFECT AT HIS OWN EXPENSE.

WORK AND WORKMANSHIP

1. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT AND CONTRACTOR'S SERVICES NECESSARY FOR COMPLETE INSTALLATION OF SYSTEMS REQUIRED IN FULL CONFORMITY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, ALL AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.
2. FINISHED JOB SHALL BE FUNCTIONAL AND COMPLETE IN EVERY DETAIL, INCLUDING ANY AND ALL SUCH ITEMS REQUIRED FOR A COMPLETE SYSTEM WHETHER OR NOT THESE ITEMS BE SPECIFIED OR SHOWN ON DRAWINGS.
3. SPECIAL ATTENTION SHALL BE GIVEN TO ACCESSIBILITY OF WORKING PARTS AND CONTROLLING PARTS. ADJUSTABLE PARTS SHALL BE WITHIN EASY REACH. REMOVABLE PARTS SHALL HAVE SPACE FOR REMOVAL.
4. EACH CONTRACTOR SHALL ACQUAINT HIMSELF WITH DETAILS OF ALL WORK TO BE PERFORMED BY OTHER TRADES AND TAKE NECESSARY STEPS TO INTEGRATE AND COORDINATE HIS WORK WITH OTHER TRADES.
5. IT IS ASSUMED THE CONTRACTOR IS FAMILIAR WITH STANDARD 1ST CLASS INSTALLATION PROCEDURES. THEREFORE, THESE SPECIFICATIONS DO NOT ATTEMPT TO INCLUDE EVERY DETAIL OR OPERATION NECESSARY FOR THE COMPLETE INSTALLATION.
6. IT SHOULD BE PARTICULARLY NOTED THAT THE TERMS "FURNISH" AND "PROVIDE" ARE INTERCHANGEABLE AND THAT EACH OF THESE MEANS TO PROVIDE, INSTALL AND CONNECT, UNLESS OTHERWISE STATED.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION, SAFE-KEEPING AND CLEANLINESS OF ALL EXISTING EQUIPMENT, MATERIAL, ETC., LOCATED IN SPACES TO BE REMODELED IN WHICH HE IS WORKING. AS PART OF HIS RESPONSIBILITY, HE SHALL PROVIDE NECESSARY COVERS, STRUCTURES, ETC., AS REQUIRED TO KEEP ALL DIRT, WATER, MOISTURE AND DUST FROM EQUIPMENT. METHOD THE CONTRACTOR PROPOSES TO USE IN PROTECTING EQUIPMENT SHALL BE COORDINATED WITH ENGINEER AND OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE ANY WORK IS STARTED. ANY DAMAGE SUSTAINED DURING CONSTRUCTION SHALL BE CORRECTED OR REPLACED BY CONTRACTOR.
8. MECHANICAL INSTALLATIONS: COORDINATE MECHANICAL EQUIPMENT AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
9. OPERATION AND MAINTENANCE DATA: MANUFACTURER'S PRINTED OPERATION PROCEDURES TO INCLUDE START-UP, BREAK-IN, ROUTINE, NORMAL, SUMMER AND WINTER OPERATION INSTRUCTIONS, REGULATION, CONTROL, STOPPING, SHUT-DOWN, AND EMERGENCY INSTRUCTIONS. PROCEDURES FOR ROUTINE PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING DISASSEMBLY, REPAIR, AND REASSEMBLE, ALIGNING AND ADJUSTING INSTRUCTIONS, TRAIN OWNER'S PERSONNEL ON PROCEDURES FOR STARTING, STOPPING, TROUBLESHOOTING, SERVICING, AND MAINTAINING EQUIPMENT. TURN OVER TO THE OWNER.
10. RECORD DRAWINGS: THE CONTRACTOR SHALL KEEP A RUNNING RECORD OF EACH CHANGE AND DEVIATION FROM THE DRAWINGS. UPON THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT ONE COMPLETE SET OF CLEAN DRAWINGS NEATLY SHOWING DEVIATIONS FROM THE CONTRACT DOCUMENTS WITH DIMENSIONS SHOWING THE EXACT LOCATION OF CONCEALED OR INACCESSIBLE PIPING, DUCTS, ETC.

ASSIGNMENT OF MISCELLANEOUS WORK

1. CUTTING AND PATCHING: MECHANICAL CONTRACTOR SHALL CUT AND PATCH FINISHED AREAS AS REQUIRED BY MECHANICAL CONTRACTOR. IN ABSENCE OF GENERAL CONTRACTOR, EACH CONTRACTOR SHALL DO HIS OWN CUTTING AND PATCHING.
2. EXCAVATING AND BACKFILLING FOR MECHANICAL WORK SHALL BE BY MECHANICAL CONTRACTOR.

SHOP DRAWING

1. COMPLETE SCHEDULE OF EQUIPMENT, ETC., PROPOSED FOR INSTALLATION SHALL BE SUBMITTED FOR APPROVAL BEFORE ORDERS ARE PLACED.
2. ELECTRONIC SHOP DRAWINGS SHALL BE REQUIRED WITHIN 30 DAYS OF AWARD ON CONTRACT AND SHALL INCLUDE CATALOG NUMBERS AND OTHER PERTINENT INFORMATION.
3. THE CONTRACTOR SHALL SUBMIT EQUIPMENT SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING OF ANY OF THE FOLLOWING:
   - 1.1. PIPING & ACCESSORIES
   - 1.2. OIL/GRIT INTERCEPTOR
   - 1.3. TRENCH DRAIN (IF APPLICABLE)

DRAWINGS

1. MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT OF ALL PIPING EQUIPMENT AND APPURTENANCES. THEY SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT.
2. MECHANICAL WORK SHALL CONFORM TO REQUIREMENTS SHOWN ON ALL DRAWINGS. GENERAL AND STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER MECHANICAL DRAWINGS.
3. BECAUSE OF SMALL SCALE OF MECHANICAL DRAWINGS IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. CONTRACTOR SHALL INVESTIGATE STRUCTURAL AND FINISH CONDITIONS AFFECTING WORK AND SHALL ARRANGE HIS WORK ACCORDINGLY, PROVIDING SUCH FITTINGS, VALVES AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.

COORDINATION BETWEEN CONTRACTORS

1. EACH CONTRACTOR AND SUBCONTRACTOR SHALL STUDY ALL DRAWINGS APPLICABLE TO THIS WORK SO COMPLETE COORDINATION BETWEEN TRADES WILL BE EFFECTED. SPECIAL ATTENTION SHALL BE GIVEN TO POINTS WHERE DUCTS CROSS OTHER DUCTS OR PIPING, WHERE LIGHTS FIT INTO CEILINGS AND WHERE PIPE, DUCTS AND CONDUIT PASS THRU WALLS AND COLUMNS.
2. IT IS RESPONSIBILITY OF EACH CONTRACTOR AND SUBCONTRACTOR TO LEAVE NECESSARY ROOM FOR OTHER TRADES. NO EXTRA COMPENSATION WILL BE ALLOWED TO COVER COST OF REMOVING PIPING, CONDUIT, DUCTS OR EQUIPMENT FOUND ENCROACHING ON SPACE REQUIRED BY OTHERS.

MINOR DEVIATIONS

1. FOR PURPOSE OF CLARITY AND LEGIBILITY, DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC ALTHOUGH SIZE AND LOCATION OF EQUIPMENT AND PIPING ARE DRAWN TO SCALE WHEREVER POSSIBLE. VERIFY CONTRACT DOCUMENT INFORMATION AT SITE.
2. DRAWINGS INDICATE REQUIRED SIZES AND POINTS OF TERMINATION OF PIPES AND DUCTS AND SUGGESTED ROUTES. IT IS NOT INTENTION OF DRAWINGS TO INDICATE ALL NECESSARY OFFSETS. INSTALL WORK IN MANNER TO CONFORM TO STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. DO NOT SCALE FROM DRAWINGS.

PLUMBING

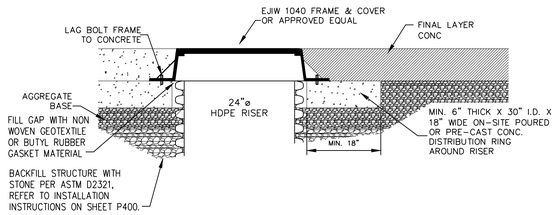
1. FURNISHED AND INSTALL EQUIPMENT, SPECIALTIES AND ACCESSORIES TO PROVIDE SYSTEMS AS SHOWN ON DRAWINGS OR HEREUNDER SPECIFIED.
2. FOR PLUMBING FIXTURES, REFER TO EQUIPMENT SCHEDULE ON DRAWINGS.
3. SANITARY& VENT PIPING
   - 3.1. ALL UNDERGROUND PIPING SHALL BE: PVC PLASTIC PIPE, ASTM D2665, SCHEDULE 40 WITH DRAINAGE PATTERN SOCKET FITTINGS.
   - 3.2. RUN LOCAL HORIZONTAL DRAINAGE PIPING AT GRADE A MINIMUM OF 1/8"/FT.. MAKE CHANGES IN DIRECTION OF DRAINING PIPING WITH APPROPRIATE USE OF 45 DEGREE WYES, LONG SWEEP QUARTER, SIXTH, EIGHTH OR SIXTEENTH BENDS, EXCEPT THAT WHERE SPACE CONDITIONS REQUIRE, SHORT TURN SANITARY TEES MAY BE USED ON VERTICAL LINES. SLIP JOINTS: PERMITTED ONLY ON FIXTURE TRAP INLETS OR ELBOWS CONNECTING TO FIXTURE TAILPIECES. UNIONS NOT PERMITTED ON SEWER SIDE OF TRAPS, USE TUCKER OR HUB END FITTINGS.
   - 3.3. RUN PIPING FREE OF TRAPS WHEREVER POSSIBLE AND GRADE AND VALVE FOR COMPLETE CONTROL AND DRAINAGE OF SYSTEM WITH DRAIN COCKS AT LOW POINTS, AT BASE OF VALVED RISERS AND WHERE INDICATED.
4. TEST WITH COLD WATER @ 100 PSIG OR 1-1/2 TIMES WORKING PRESSURE, WHICHEVER IS GREATER. MAINTAIN FOR ONE HOUR.

OIL INTERCEPTOR

1. THE OIL/GRIT INTERCEPTOR SHALL BE MODEL HDPE, MANUFACTURED BY KENNEDY SOLUTIONS, INC. (KSI). IF THE CONTRACTOR WISHES TO DEVIATE FROM THE BASIS OF DESIGN, A PRE-APPROVAL REQUEST MUST BE SUBMITTED TO THE ENGINEER PRIOR TO ISSUING THEIR BID.
2. THE KSI HDPE GRAVITY OIL/GRIT SEPARATOR UNIT SHALL BE AS MANUFACTURED BY KSI (KENNEDY SOLUTIONS, INC.) OR PRE-APPROVED EQUIVALENT.
3. THE OIL SEPARATOR SHALL REMOVE OIL, GRIT AND GREASE FROM THE SANITARY SEWER LINE PRIOR TO DISCHARGE. THE OIL SEPARATOR SHALL BE INSTALLED UNDERGROUND AS PART OF THE SANITARY SEWER SYSTEM AND BE STRUCTURALLY DESIGNED FOR (MIN. HS-25) TRAFFIC LOADING AT THE SURFACE. THE OIL SEPARATOR SHALL BE MAINTAINABLE FROM THE SURFACE VIA ACCESS POINTS.
4. THE OIL SEPARATOR SHALL BE CIRCULAR AND CONSTRUCTED FROM HDPE MATERIAL. IT SHALL BE DESIGNED AND MANUFACTURED BY KSI OR PRE-APPROVED EQUIVALENT. APPLICABLE SPECIFICATIONS ARE AASHTO M294, ASTM 2306, ASTM F894, AND ASTM F2649. FUSION WELDED JOINTS SHALL BE OIL RESISTANCE, VIRTUALLY WATERTIGHT AND MEET THE DESIGN CRITERIA OF DVS 2207. THE UNIT SHALL BE TESTED HYDROSTATICALLY, AIR, OR VACUUM PRESSURE FOR WATER TIGHTNESS.
5. THE DIFFERENCE BETWEEN THE INLET PIPE ELEVATION TO THE OIL SEPARATOR AND THE OUTLET PIPE ELEVATION SHOULD BE MINIMIZED TO ALLOW INSTALLATIONS INTO EXISTING SYSTEMS. THE FOOTPRINT OF THE UNIT SHALL BE MINIMIZED TO PREVENT CONFLICTS WITH OTHER PIPING AND UTILITIES.
6. THE OIL SEPARATOR IS CAPABLE OF CONTAINING FLOATABLE SUBSTANCES SUCH AS FREE OIL AND SETTABLE SOLIDS AND NOT BE COMPROMISED BY TEMPORARY BACKWATER CONDITIONS. THE CAPABILITIES OF THE SELECTED UNIT MUST BE DOCUMENTED WITH SCIENTIFIC STUDIES AND REPORTS.
7. THE MANUFACTURER SHALL WILL PROVIDE A MANUFACTURERS CERTIFICATE OF COMPLIANCE FOR EACH GRAVITY OIL/GRIT SEPARATOR (OWNER, DESIGN ENGINEER & MUNICIPAL ENGINEER/INSPECTORS).
8. INSTALLATION OF THE OIL SEPARATOR TANK SHALL BE IN ACCORDANCE WITH ASTM D2321 AND THE MANUFACTURER'S TANK INSTALLATION AND MAINTENANCE DETAIL.

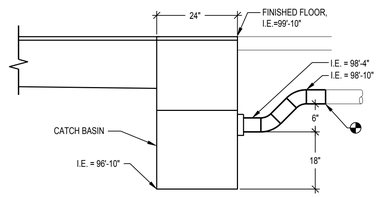
PLUMBING FIXTURE SCHEDULE (ADD ALTERNATE #1)

TAG	FIXTURE	ROUGH-IN CONNECTION SIZE				FAUCET TYPE	FIXTURE SIZE	ACCESSORIES AND COMMENTS
		CW	HW	SAN	VENT			
TD-1	TRENCH DRAIN	-	-	3"	-	-	12"x192" (INCLUDES CATCH BASIN LENGTH)	BASED ON ZURN Z882 , 12" INTERNAL DRAIN WIDTH. CONSISTING OF (1) 8' SECTION, (1) 6' SECTION, AND (1) Z887 CATCH BASIN. CATCH BASIN 24" WIDE x 24" LONG X 36" DEEP. GRATE BASED ON DUCTILE IRON SLOTTED GRATE CERTIFIED FOR LOAD CLASS D, CORROSION RESISTANT COATING.



3 MANHOLE & RISER DETAIL

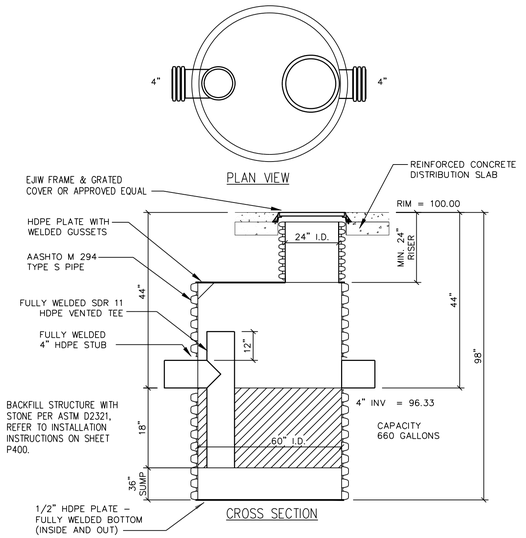
SCALE: NTS



NOTES:
1. INSTALL TRENCH DRAIN PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
2. CONTRACTOR SHALL FIELD VERIFY INVERT ELEVATION OF EXISTING SANITARY PIPING.

2 ADD ALTERNATE #1: TRENCH DRAIN DETAIL

SCALE: NTS



60" DIA. SMOOTH LINED CORRUGATED POLYETHYLENE VERTICAL OIL SEPARATOR

NOTES:
1. CONTRACTOR TO VERIFY EXCAVATION AREA WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.
2. CONTRACTOR TO PROVIDE 4x3 FERNCO TO CONNECT TO OIL/GRIT INTERCEPTOR TO SANITARY PIPING.

1 660 GALLON - OIL/GRIT SEPARATOR DETAIL

SCALE: NTS

REVISIONS

9/6/2024 - ISSUED FOR BIDDING	

DRAWN: RSW

APPROVED: CAT

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Matrix Project No. 23433.00

PROJECT

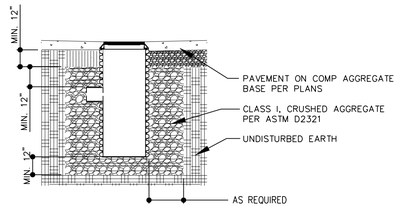
CLARE COUNTY TRANSIT
WASH BAY - SEDIMENT TRAP DESIGN
1473 TRANSPORTATION DRIVE
HARRISON, MI 48625

SHEET DESCRIPTION: PLUMBING SYMBOLS, NOTES, AND ABBREVIATIONS

DATE: 9/6/2024

PROJECT NUMBER: 23433.00

SHEET NUMBER: P-100



INSTALLATION GUIDELINES:

1. EXCAVATE AREA FOR KSI STRUCTURE AND PREPARE TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.
2. THE KSI STRUCTURE SHALL BE INSTALLED ON A BED OF NO LESS THAN 6"-12" CLASS I OR II BEDDING MATERIALS COMPACTED TO 95% PROCTOR DENSITY.
3. INSTALL KSI STRUCTURES AT ELEVATIONS INDICATED ON SITE PLAN. COUPLE INLET AND OUTLET STUBS WITH APPROPRIATE PIPE COUPLINGS, FERNCOS, OR HDPE SPLIT COUPLERS TO CONVEYANCE PIPE.
4. BACKFILL UNIT WITH CLASS I OR II MATERIALS PER ASTM D 2321. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.
5. THE HDPE ACCESS RISERS SHALL BE FIELD CUT TO FINISH GRADE BY THE CONTRACTOR. SEE RISER INSTALLATION DETAIL ON SHEET P-100.

1 OIL/GRIT SEPARATOR BACKFILL DETAIL

SCALE: NTS

DEMOLITION NOTES

1. DISCONNECT, REMOVE, AND DEMO EXISTING SANITARY PIPING TO EXTENTS SHOWN.
2. SAWCUT AND EXCAVATE AS REQUIRED TO INSTALL NEW OIL/GRIT INTERCEPTOR AS SHOWN ON NEW PLANS.

ADD-ALTERNATE DEMOLITION NOTES

[1] ADD ALTERNATE #1: DISCONNECT, REMOVE, AND DEMO EXISTING TRENCH DRAIN. MODIFY EXISTING SANITARY PIPING AS REQUIRED TO CONNECT TO NEW TRENCH DRAIN AS SHOWN ON NEW PLANS.

PLUMBING KEY NOTES

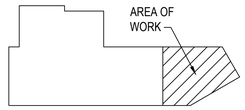
1. INSTALL NEW OIL/GRIT SEPARATOR AT LOCATION SHOWN. MODIFY EXISTING SANITARY PIPING AS REQUIRED. POUR AND FINISH NEW CONCRETE TO MATCH ADJACENT EXISTING CONDITIONS.

ADD-ALTERNATE PLUMBING KEY NOTES

1. ADD ALTERNATE #1: INSTALL NEW TRENCH DRAIN AT LOCATION SHOWN. MODIFY EXISTING SANITARY PIPING AND SAWCUT EXISTING CONCRETE FLOOR AS REQUIRED. POUR AND FINISH NEW CONCRETE TO MATCH ADJACENT EXISTING CONDITIONS. THE CONTRACTOR IS ALLOWED CLOSE BOTH DRIVE AISLES FOR TEN (10) BUSINESS DAYS TO SIMULTANEOUSLY COMPLETE THE TRENCH DRAIN REPLACEMENT. COORDINATE WITH OWNER PRIOR TO SHUTTING DOWN THE DRIVE AISLE A MINIMUM OF (4) WEEKS IN ADVANCE.
2. ADD ALTERNATE #1: SANITARY CONNECTION ON CATCH BASIN TO BE A MINIMUM OF 18" ABOVE BOTTOM OF CATCH BASIN. REFER TO DETAIL 2 ON P-100 FOR INVERT ELEVATIONS OF SANITARY PIPING.
3. ADD ALTERNATE #2: CONTRACTOR SHALL MAINTAIN A DRIVE AISLE THROUGH ONE OF THE GARAGE DOORS THROUGHOUT CONSTRUCTION. REPLACEMENT OF TRENCH DRAINS SHALL NOT OCCUR SIMULTANEOUSLY.

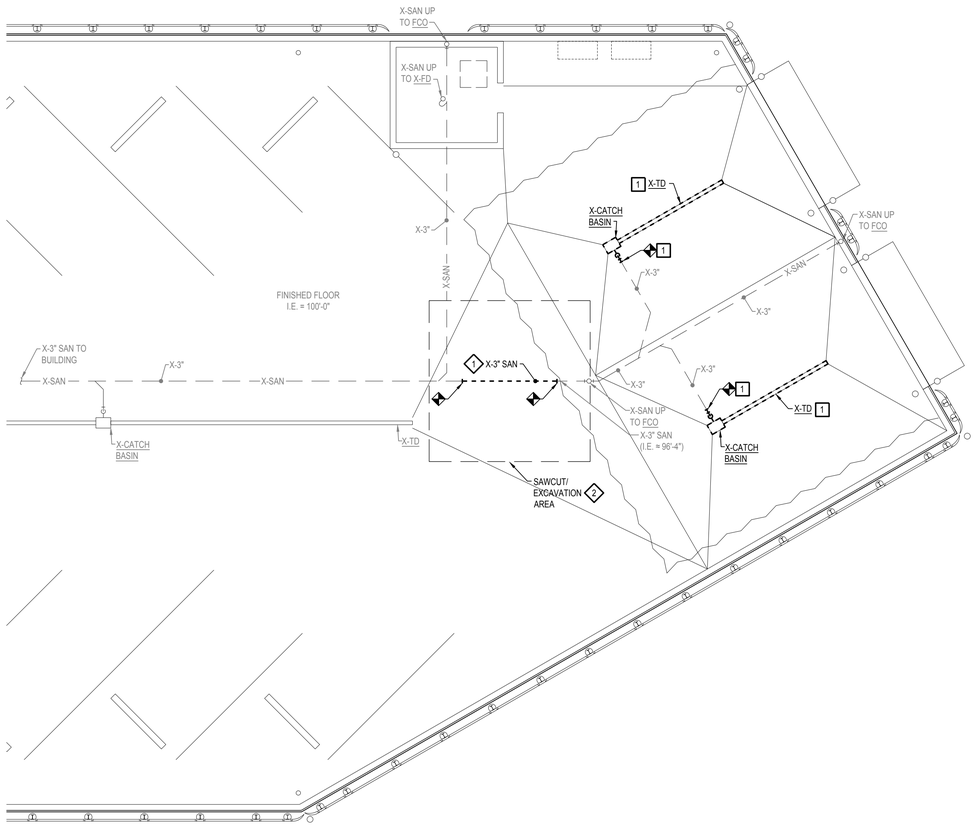
GENERAL PLUMBING NOTES

1. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO STARTING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR FEILD VERIFYING EXACT LOCATION AND DEPTH OF EXISTING SANITARY PIPING PRIOR TO STARTING CONSTRUCTION.
3. THE PARKING GARAGE WILL REMAIN IN OPERATION DURING CONSTRUCTION. THE CONTRACTOR SHALL LEAVE A MINIMUM DRIVE AISLE OF 16'-0" TO THE EAST OR WEST OF THE AREA OF WORK.
4. IT IS ANTICIPATED THAT THE EXISTING CONCRETE SLAB IS APPROXIMATELY 6" THICK.



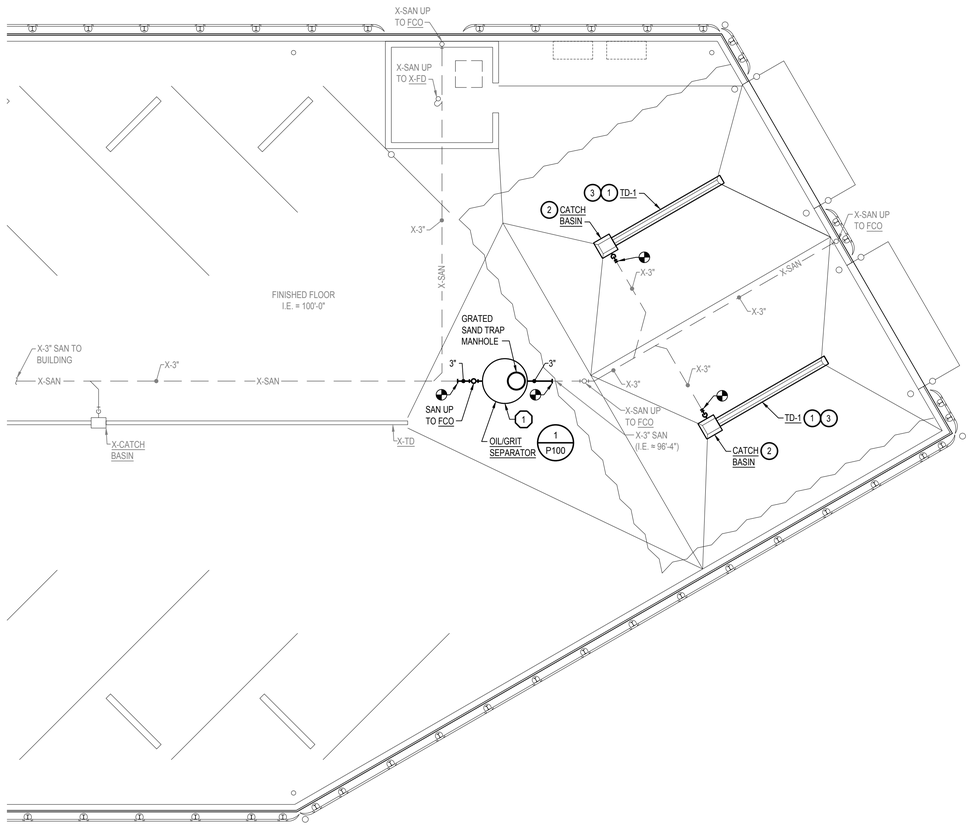
KEY PLAN

SCALE: NTS



PARTIAL BELOW FLOOR PLAN - PLUMBING DEMOLITION

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



PARTIAL BELOW FLOOR PLAN - PLUMBING NEW

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

REVISIONS

9/10/2024 - ISSUED FOR BIDDING	

DRAWN: RSW

APPROVED: CAT

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PROJECT

CLARE COUNTY TRANSIT
WASH BAY - SEDIMENT TRAP DESIGN
1473 TRANSPORTATION DRIVE
HARRISON, MI 48625

SHEET DESCRIPTION: PARTIAL BELOW FLOOR PLAN - PLUMB. DEMO AND NEW

DATE: 9/6/2024

PROJECT NUMBER: 23433.00

SHEET NUMBER: P-400