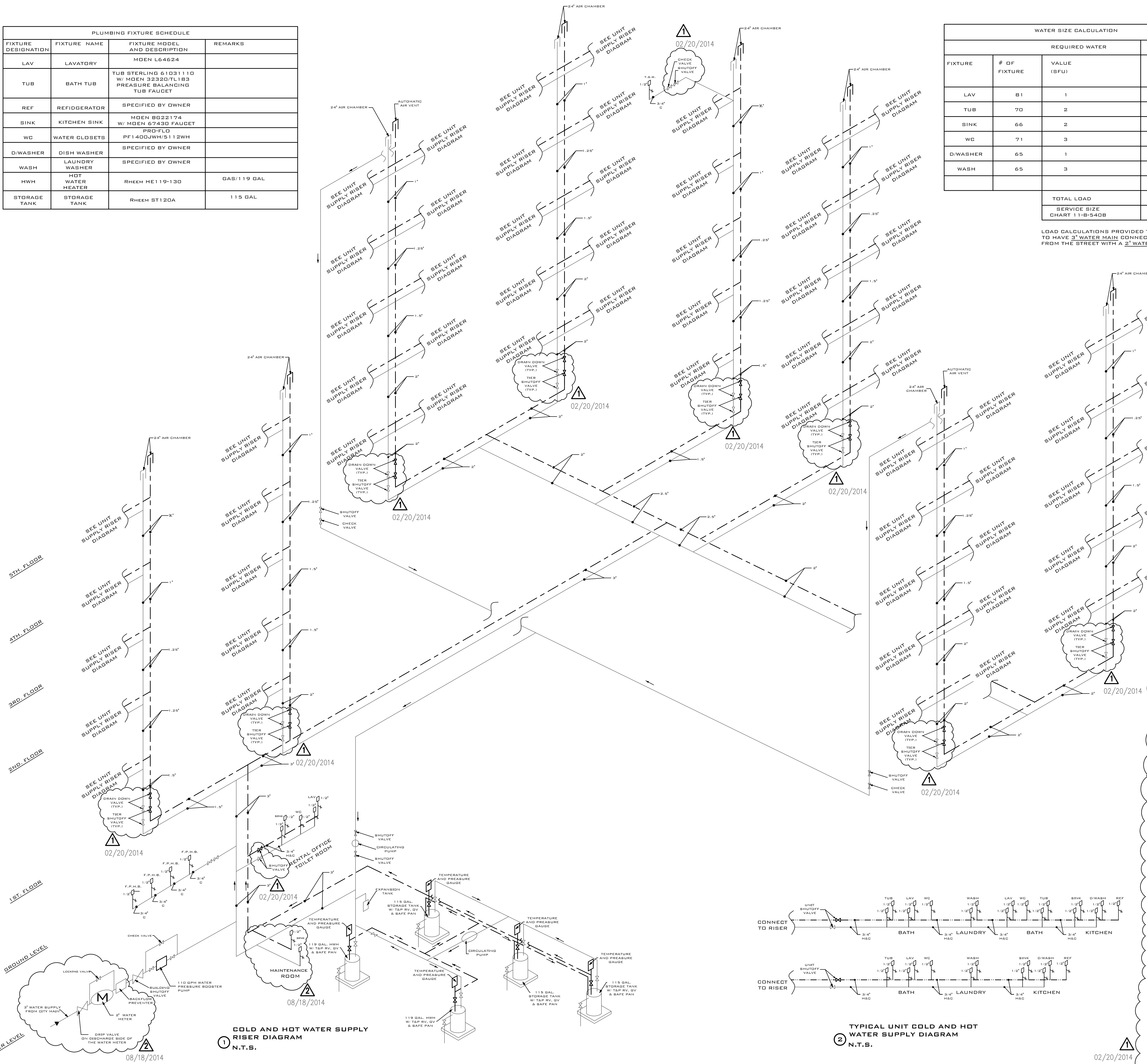


PLUMBING FIXTURE SCHEDULE			
FIXTURE DESIGNATION	FIXTURE NAME	FIXTURE MODEL AND DESCRIPTION	REMARKS
LAV	LAVATORY	MOEN L64624	
TUB	BATH TUB	TUB STERLING 61D311D W/ MOEN 32320/TL183 PRESURE BALANCING TUB FAUCET	
REF	REFRIDGERATOR	SPECIFIED BY OWNER	
SINK	KITCHEN SINK	MOEN 8622174 W/ MOEN 67430 FAUCET	
WC	WATER CLOSETS	PRO-FLO PF1400JWH/5112WH	
D.WASHER	DISH WASHER	SPECIFIED BY OWNER	
WASH	LAUNDRY WASHER	SPECIFIED BY OWNER	
HWH	HOT WATER HEATER	RHEEM HE119-130	GAS/119 GAL
STORAGE TANK	STORAGE TANK	RHEEM ST120A	115 GAL

WATER SIZE CALCULATION			
REQUIRED WATER			
FIXTURE	# OF FIXTURE	VALUE (SFU)	FIXTURES LOAD
LAV	81	1	81
TUB	70	2	140
SINK	66	2	132
WC	71	3	213
D.WASHER	65	1	65
WASH	65	3	195
TOTAL LOAD			826
SERVICE SIZE			3"

- CONTRACTOR TO VISIT JOB SITE OR PREMISES AND BE FAMILIAR WITH JOB CONDITIONS PRIOR TO SUBMITTING BID.
- CONTRACTOR TO PAY FOR ALL TAXES AND FEES AND GIVE LOCAL AUTHORITIES ALL NOTICES RELATING TO HIS WORK.
- ALL WORK SHALL BE DONE IN FIRST CLASS-MANNER.
- ALL MATERIALS USED FOR JOB SHALL BE NEW AND BEST OF THEIR KIND.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH STATE AND LOCAL CODES.
- CONTRACTOR IS TO GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR AFTER COMPLETION AGAINST ALL DEFECTS OF MATERIALS, EQUIPMENT AND WORKMANSHIP.
- CONTRACTOR TO TEST SYSTEM PRIOR TO OPERATION.
- ALL CUTTING AND PATCHING CAUSED BY THIS WORK SHALL BE DONE BY THIS CONTRACTOR.
- ALL UNDERGROUND SEWER LINES SHALL BE PVC AND FITTINGS.
- ALL SEWER PIPING ABOVE FLOOR SHALL BE PVC AND FITTINGS.
- ALL DOMESTIC HOT AND COLD WATER LINES SHALL BE COPPER PIPING TYPE "L".
- INSULATE COLD AND HOT WATER LINES WITH 1" THICK FACTORY PRE-INSULATED FIBERGLASS PIPE INSULATION WITH VAPOR BARRIER JACKET.
- ALL VALVES SHALL BE SIMILAR TO CRANE OR AMERICAN.
- ALL CONDENSATES TO BE INSULATED AT EACH CHANGE IN DIRECTION OF SEWER LINES.
- ALL PLUMBING & PLUMBING FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ILLINOIS STATE PLUMBING CODE.
- POLY VINYL CHLORIDE (PVC) PLASTIC PIPE AND FITTINGS SHALL CONFORM TO ASTM DESIGNATION D2665-88, INCLUDING THE APPENDIX, BEING MANDATORY, AND SHALL BE LIMITED TO SIZE 1-1/2", 2", 3" PIPE, THE SOLVENT CEMENT SHALL CONFORM TO ASTM DESIGNATION D2564-88 AND THE PLASTIC PRIMER SHALL CONFORM TO ASTM DESIGNATION F656-88 AND BE OF A CONTRASTING COLOR.
- ALL PIPES TO BE COPPER; PROVIDE AIR CHAMBERS MIN. 24" PROVIDE THERMO EXPANSION TANK 1.9 GAL. W.H.
- NEW SANITARY SERVICE WILL BE USED.
- NEW WATER SERVICE WILL BE USED.
- ALL TUBS & SHOWERS NEED 2" P-TRAPS.
- TUBS & SHOWER TEMPERATURE NOT TO EXCEED 115° DEGREES
- ALL HAND HELD SHOWERS NEED VACUUM BREAKERS.
- PROVIDE BACK FLOW PREVENTION DEVICE ON ALL HAND HELD SPRAY @ TUBS.
- INSTALL PRESSURE RELIEF VALVES ON THE HIGH PRESSURE SIDE OF THE SYSTEM, UPSTREAM OF ANY INTERVENING VALVES
- MAX. LENGTH 1-1/2" VENT PIPING IS 10'
- MAX. LENGTH 1/2" WATER PIPING IS 10'
- PROVIDE THERMO EXPANSION TANK 1.9 GAL. W.H.
- FURNISH AND INSTALL GAS PIPING WITH SHUTOFF COCKS AT EACH AND EVERY APPLIANCE REQUIRING GAS, INCLUDING FURNACE, DOMESTIC WATER HEATERS, ETC. PIPING SHALL BE SCHEDULE 40 BLACK STEEL. "GRADE A" FITTINGS SHALL BE STANDARD WEIGHT, BLACK MALLEABLE IRON OR CAST IRON SCREWED AND RATED AT 150 PSI.



PLUMBING DIAGRAM LEGEND	
SYMBOL	DESCRIPTION
(M)	WATER METER
---	VENT LINE
---	WASTE LINE
---	COLD WATER SUPPLY LINE
---	HOT WATER SUPPLY LINE

NOTES:

ALL PLUMBING FIXTURES MUST HAVE SHUT-OFF VALVES INCLUDING SHOWER VALVES

ALL SHOWER COMPARTMENTS AND SHOWER-BATH COMBINATIONS SHALL BE PROVIDED WITH AN AUTOMATIC SAFETY WATER MIXING DEVICE TO PREVENT SUDDEN UNANTICIPATED CHANGES IN WATER TEMPERATURE OR EXCESSIVE WATER TEMPERATURES. THE AUTOMATIC SAFETY WATER MIXING DEVICE SHALL BE ADJUSTED TO A MAXIMUM SETTING OF 115° AT THE TIME OF INSTALLATION

ASSE 1016-1996 APPROVED SHOWER VALVE IS REQUIRED.

SHOWER LOOKOUT REQUIRES A 90 DROP-EAR ELL SCREWED TO WOOD BACKING

DOMESTIC WATER SHOULD BE FED OFF FIRE SYSTEM

UNUSED SECTION OF WATER SERVICE OR WATER DISTRIBUTION PIPING ("DEAD ENDS"), WHERE THE WATER IN THE PIPING MAY BECOME STAGNANT, ARE PROHIBITED. A DEVELOPED LENGTH OF MORE THAN 3 FEET SHALL BE CONSIDERED A DEAD END

THE WATER DISTRIBUTION SYSTEM SHALL BE PROTECTED AGAINST BACKFLOW. EACH WATER OUTLET SHALL BE PROTECTED FROM BACKFLOW BY HAVING THE OUTLET END FROM WHICH THE WATER FLOWS SPACED A DISTANCE ABOVE THE FLOOD-LEVEL RIM OF THE RECEPTACLE INTO WHICH THE WATER FLOWS SUFFICIENT TO PROVIDE A MINIMUM FIXED AIR GAP. WHERE IT IS NOT POSSIBLE TO PROVIDE A MINIMUM FIXED AIR GAP, THE WATER OUTLET SHALL BE EQUIPPED WITH AN ACCESSIBLE BACKFLOW PREVENTION DEVICE OR ASSEMBLY IN ACCORDANCE WITH ILLINOIS PLUMBING CODE SUBSECTION (F) OF SECTION 890.1140

TYPE-M COPPER PIPE IS PROHIBITED AND NOT APPROVED MATERIAL FOR WATER DISTRIBUTION PIPE

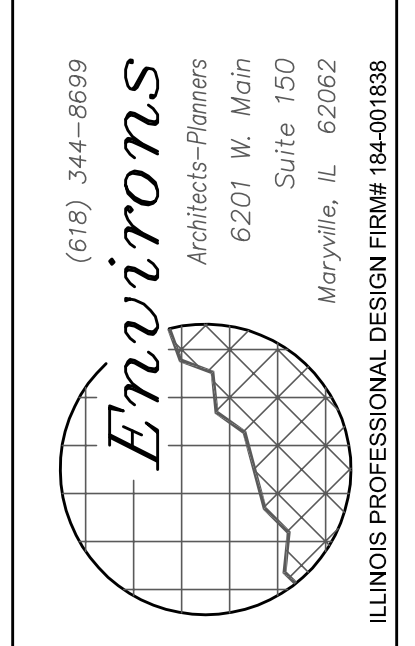
FLANGES CONNECTING WATER CLOSETS TO THE FLOOR MUST BE SECURED USING NONFERROUS OR DALVANIZED SCREWS. ALL FIXTURES MUST BE ANCHORED TO THE FLOOR OR WALL, WITH THE USE OF NON-COMPRESSIVE SHIMS IF NECESSARY, THEN GROUTED COMPLETE TO AFFORD A SANITARY SEAL

WHEN WATER MAIN PRESSURE EXCEEDS 80 P.S.I., A PRESSURE REDUCING VALVE AND A STRAINER WITH A BY-PASS RELIEF VALVE SHALL BE INSTALLED IN THE WATER SERVICE PIPE NEAR THE ENTRANCE TO THE BUILDING TO REDUCE THE WATER PRESSURE TO 80 P.S.I. OR LOWER, EXCEPT WHERE THE WATER SERVICE PIPE SUPPLIES WATER DIRECTLY TO A WATER PRESSURE BOOSTER SYSTEM, AN ELEVATED WATER TANK, OR TO PUMPS PROVIDED IN CONNECTION WITH HYDRO-PNEUMATIC OR ELEVATED WATER SUPPLY TANK SYSTEM. SILL COCKS AND OUTSIDE HYDRANTS MAY BE LEFT ON FULL WATER MAIN PRESSURE.

THE MINIMUM CONSTANT WATER SERVICE PRESSURE ON THE DISCHARGE SIDE OF THE WATER METER SHALL BE AT LEAST 20 P.S.I., AND THE MINIMUM CONSTANT WATER PRESSURE AT EACH FIXTURE SHALL BE AT LEAST 8 P.S.I. OR THE MINIMUM RECOMMENDED BY THE FIXTURE MANUFACTURER

WHEN A BOOSTER PUMP EXCEPT THOSE USED FOR FIRE PROTECTION IS USED ON AN AUXILIARY PRESSURE SYSTEM, THERE SHALL BE INSTALLED A LOW-PRESSURE CUT-OFF SWITCH ON THE BOOSTER PUMP TO PREVENT THE CREATION OF PRESSURES LESS THAN 5 P.S.I. ON THE SUCTION SIDE OF PUMP. A SHUTOFF VALVE SHALL BE INSTALLED ON THE SUCTION SIDE OF THE WATER SYSTEM AND WITHIN 5 FEET FROM THE PUMP SUCTION INLET, AND A PRESSURE GAUGE SHALL BE INSTALLED BETWEEN THE SHUTOFF VALVE AND PUMP

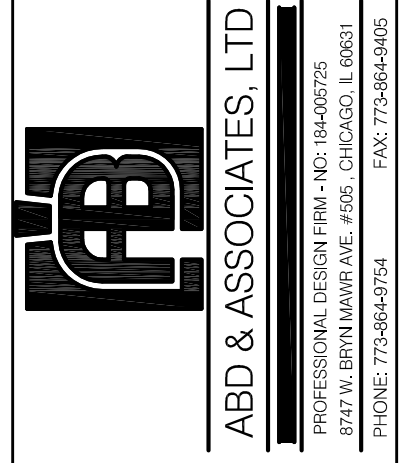
WHEN THE WATER PRESSURE EXCEEDS 80 P.S.I. AT ANY PLUMBING FIXTURE, A PRESSURE REDUCING VALVE, PRESSURE GAUGE AND A STRAINER WITH A BY-PASS RELIEF VALVE SHALL BE INSTALLED IN A WATER SUPPLY PIPE SERVING THE FIXTURE TO REDUCE THE WATER PRESSURE AT THE FIXTURE TO 80 P.S.I. OR LOWER



JOB NO. 13022

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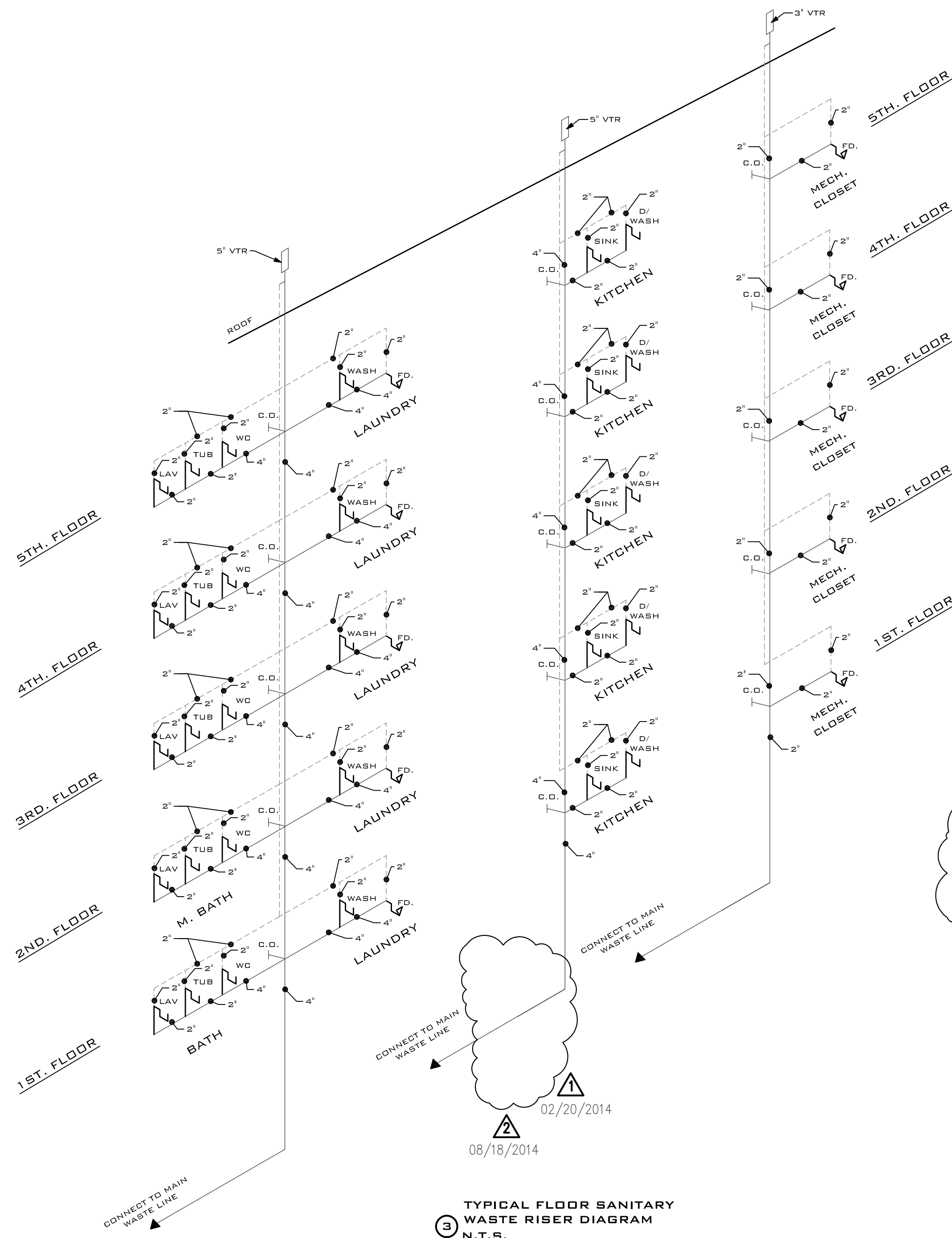
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A NEW APARTMENT BUILDING 'C':
CARDINAL SQUARE APARTMENTS
MCKINLEY + ANTHONY AVE.
MUNDELEIN, ILLINOIS

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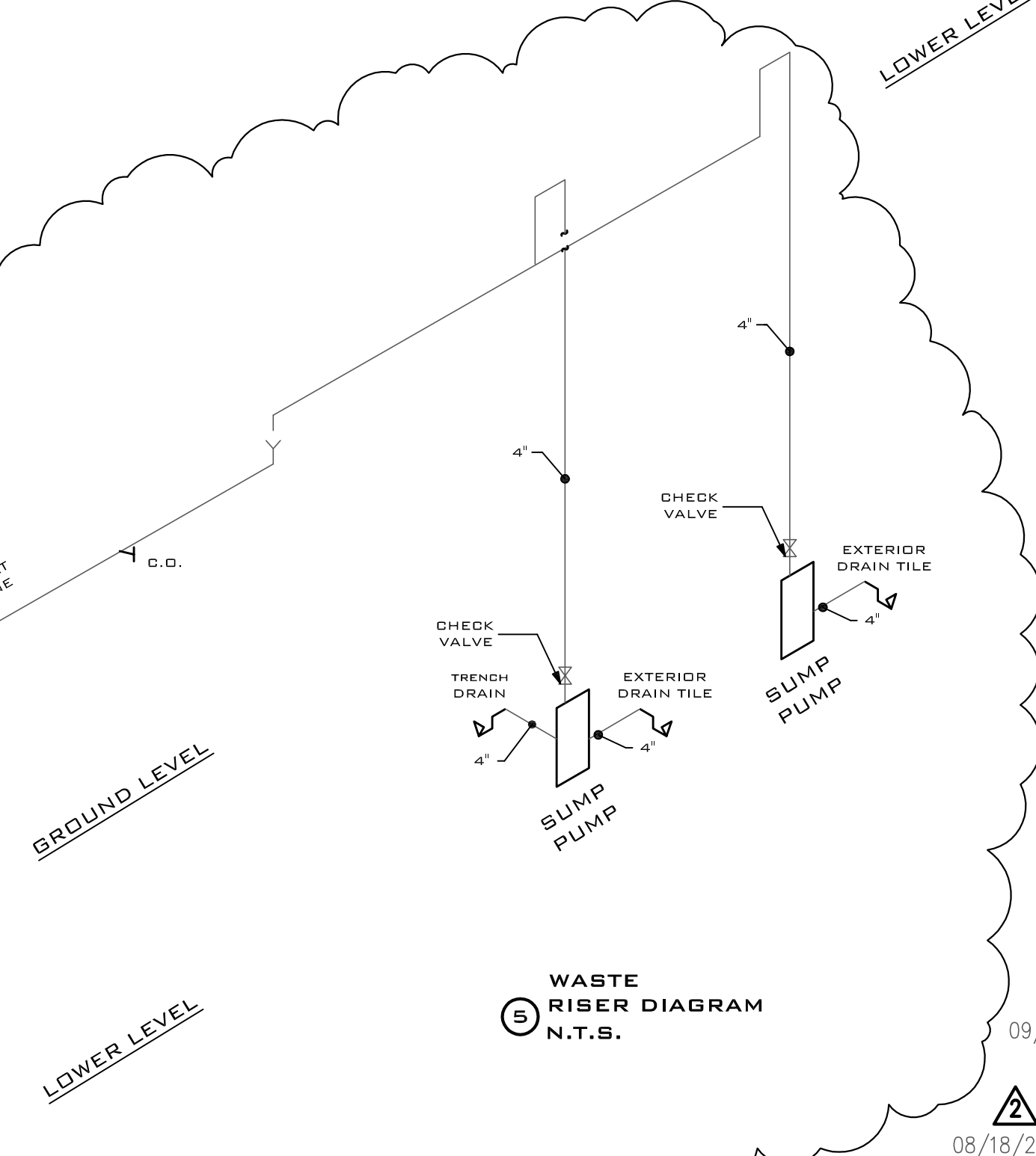


3 TYPICAL FLOOR SANITARY WASTE RISER DIAGRAM N.T.S.

NOTES:

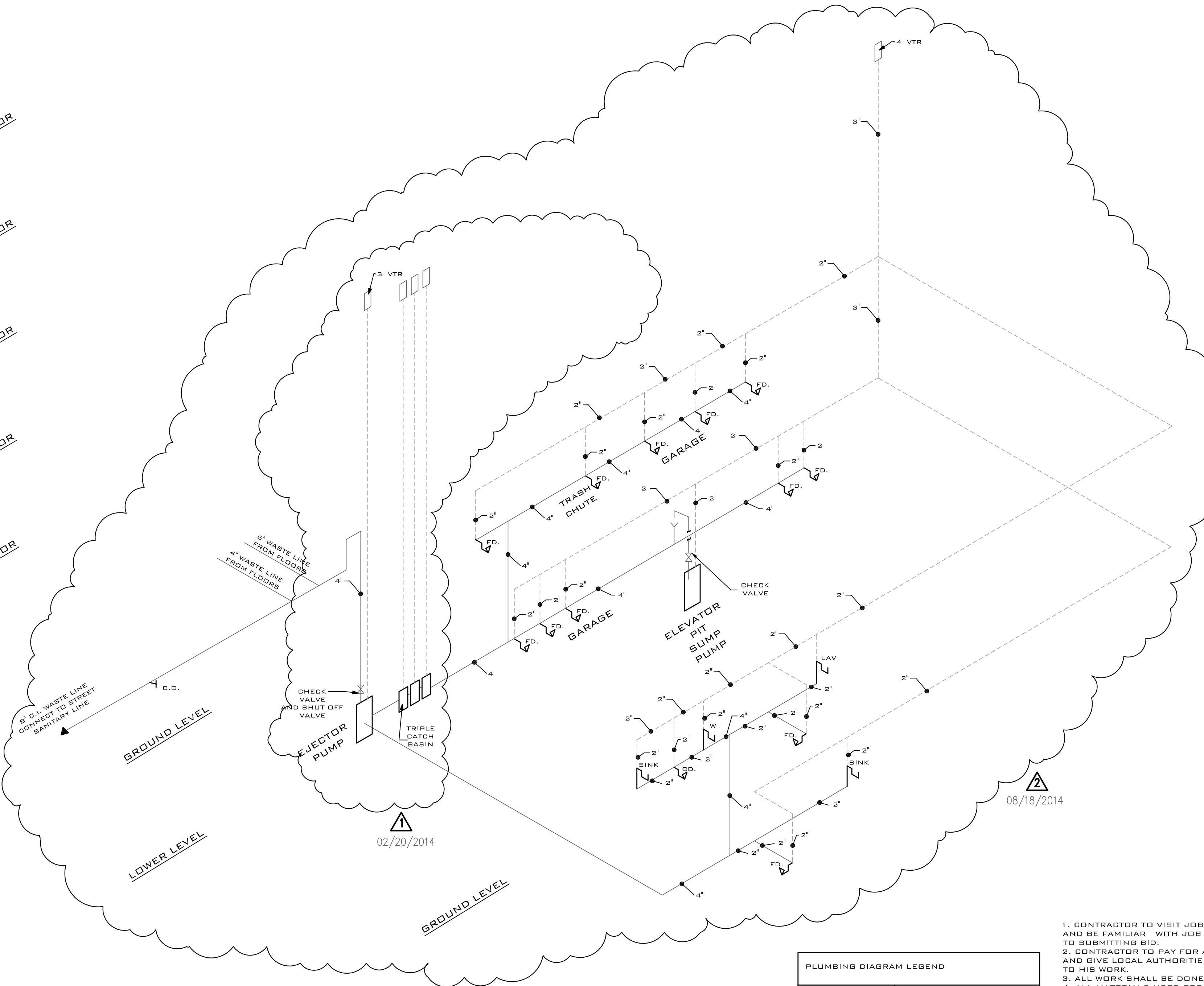
- CONTRACTOR TO CONFIRM WITH VILLAGE ENGINEER TYPE OF PIPING NECESSARY TO CONNECT THE SUMP PUMP WITH STORM SEWER TILE.
- ALL KITCHEN SINKS MUST BE PROVIDED WITH 2 INCH DRAIN AND INDIVIDUAL TRAPS AND AN ACCESSIBLE CLEAN-OUT, THE SAME SIZE AS THE DRAIN PIPE
- CONTRACTOR TO PREFORM STACK TEST WITH WATER SHALL BE REQUIRED FOR ALL ROUGH AND UNDERGROUND PLUMBING PIPING.
- CONTRACTOR TO PREFORM 25LB AIR TEST SHALL BE REQUIRED ON ALL GAS PIPING AT TIME OF ROUGH INSPECTION
- CONTRACTOR TO PREFORM 75LB AIR TEST OF WATER PRESSURE SHALL BE REQUIRED ON ALL WATER PIPING AT TIME OF ROUGH INSPECTION
- WHEN A P-TRAP IS USED ON A BATH WASTE, IT SHALL BE DIRECTLY BELOW THE TUB OVERFLOW. THE OVERFLOW SHALL BE FASTENED TO THE TUB BY MEANS OTHER THAN THE FACEPLATE
- WHEN A DOMESTIC DISHWASHER MACHINE DRAIN LINE IS CONNECTED TO THE HOUSE SIDE OF A TRAP FROM A SINK, THE DRAIN FROM THE DISHWASHER SHALL BE CARRIED UP TO THE UNDERSIDE OF THE SPILL RIM OF THE SINK. DISHWASHING MACHINES SHALL DISCHARGE SEPARATELY INTO A TRAP OR TAIL PIECE OF THE KITCHEN SINK AND SHALL NOT CONNECT TO THE FOOD WASTE DISPOSAL UNIT.

02/20/2014



5 WASTE RISER DIAGRAM N.T.S.

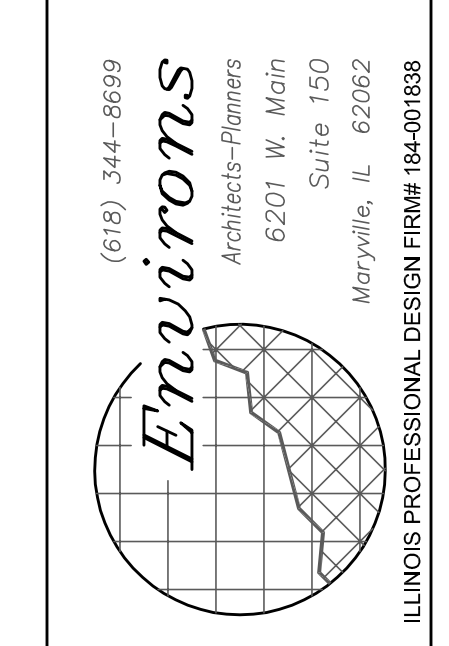
09/29/2014
08/18/2014



4 WASTE RISER DIAGRAM N.T.S.

PLUMBING DIAGRAM LEGEND	
SYMBOL	DESCRIPTION
(M)	WATER METER
---	VENT LINE
---	WASTE LINE
---	COLD WATER SUPPLY LINE
---	HOT WATER SUPPLY LINE

- CONTRACTOR TO VISIT JOB SITE OR PREMISES AND BE FAMILIAR WITH JOB CONDITIONS PRIOR TO SUBMITTING BID.
- CONTRACTOR TO PAY FOR ALL TAXES AND FEES AND GIVE LOCAL AUTHORITIES ALL NOTICES RELATING TO HIS WORK.
- ALL WORK SHALL BE DONE IN FIRST CLASS-MANNER.
- ALL MATERIALS USED FOR JOB SHALL BE NEW AND BEST OF THEIR KIND.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH STATE AND LOCAL CODES.
- CONTRACTOR IS TO GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR AFTER COMPLETION AGAINST ALL DEFECTS OF MATERIALS, EQUIPMENT AND WORKMANSHIP.
- CONTRACTOR TO TEST SYSTEM PRIOR TO OPERATION.
- ALL CUTTING AND PATCHING CAUSED BY THIS WORK SHALL BE DONE BY THIS CONTRACTOR.
- ALL UNDERGROUND SEWER LINES SHALL BE PVC AND FITTINGS.
- ALL SEWER PIPING ABOVE FLOOR SHALL BE PVC AND FITTINGS.
- ALL DOMESTIC HOT AND COLD WATER LINES SHALL BE COPPER PIPING TYPE "L"
- INSULATE COLD AND HOT WATER LINES WITH 1" THICK FACTORY PRE-MOLDED FIBERGLASS PIPE INSULATION WITH VAPOR BARRIER JACKET.
- ALL VALVES SHALL BE SIMILAR TO CRANE OR AMERICAN.
- ALL CLEANOUTS TO BE INSULATED AT EACH CHANGE IN DIRECTION OF SEWER LINES.
- ALL PLUMBING & PLUMBING FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ILLINOIS STATE PLUMBING CODE.
- POLY VINYL CHLORIDE (PVC) PLASTIC PIPE AND FITTINGS SHALL CONFORM TO ASTM DESIGNATION D2665-88, INCLUDING THE APPENDIX, BEING MANDATORY, AND SHALL BE LIMITED TO SIZE 1-1/2", 2", 3" PIPE. THE SOLVENT CEMENT SHALL CONFORM TO ASTM DESIGNATION D2564-88 AND THE PLASTIC PRIMER SHALL CONFORM TO ASTM DESIGNATION F656-88 AND BE OF A CONTRASTING COLOR.
- ALL PIPES TO BE COPPER; PROVIDE AIR CHAMBERS MIN. 24"; PROVIDE ACCESSIBLE SHUTOFF VALVES AT ALL FIXTURES; ALL PLUMBING WORK TO COMPLY WITH ILLINOIS PLUMBING CODE AND STATE OF ILLINOIS PLUMBING CODE
- NO DRUM TRAPS.
- PROVIDE:
 - 24" AIR CHAMBER AT ALL RISER MAINS.
 - 12" AIR CHAMBER AT ALL PLUMBING FIXTURES.
 - SHUT OFF VALVES AT ALL PLUMBING FIXTURES AND RISERS.
 - NON-FREEZE SILL COCKS - VACUUM BREAKER TYPE 2.
 - NEW SANITARY SERVICE WILL BE USED.
 - NEW WATER SERVICE WILL BE USED
 - ALL TUBS & SHOWERS NEED 2" P-TRAPS.
 - TUB, & SHOWER TEMPERATURE NOT TO EXCEED 115° DEGREES
 - ALL HAND HELD SHOWERS NEED VACUUM BREAKERS.
 - PROVIDE BACK FLOW PREVENTION DEVICE ON ALL HAND HELD SPRAY @ TUBS.
 - INSTALL PRESSURE RELIEF VALVES ON THE HIGH PRESSURE SIDE OF THE SYSTEM, UPSTREAM OF ANY INTERVENING VALVES
 - MAX. LENGTH 1-1/2" VENT PIPING IS 10'
 - MAX. LENGTH 1/2" WATER PIPING IS 10'
 - INSTALL METAL DRAIN PAN UNDER ALL HOT WATER HEATERS.
 - PROVIDE THERMO EXPANSION TANK FOR 98 GAL. H.W.H.
 - FURNISH AND INSTALL GAS PIPING WITH SHUTOFF COCKS AT EACH AND EVERY APPLIANCE REQUIRING GAS, INCLUDING FURNACE, DOMESTIC WATER HEATERS, ETC. PIPING SHALL BE SCHEDULE 40 BLACK STEEL. "GRADE A" FITTINGS SHALL BE STANDARD WEIGHT, BLACK MALLEABLE IRON OR CAST IRON SCREENED AND RATED AT 150 PSI.

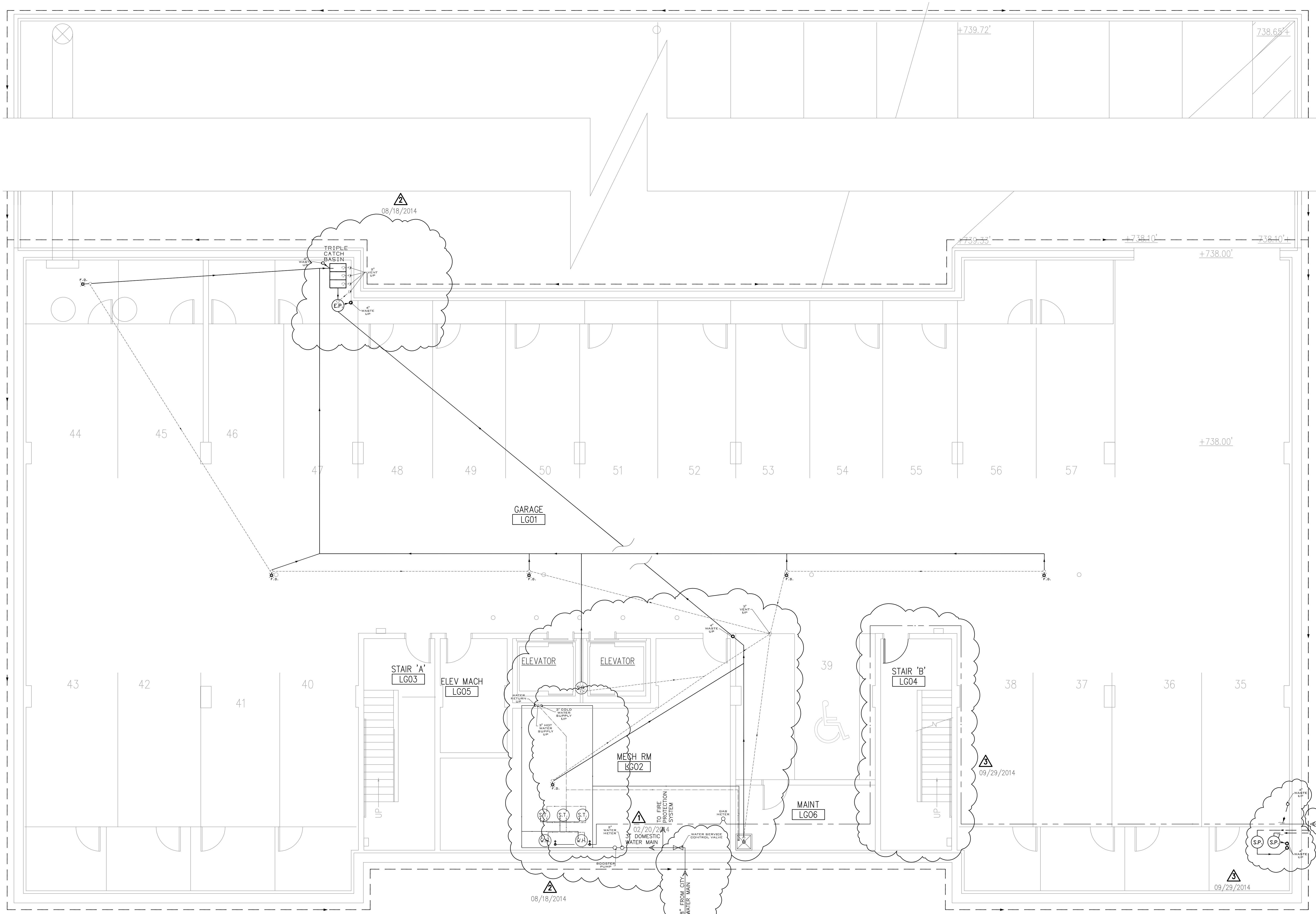


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DATE: DECEMBER 11, 2013
REVISED: FEBRUARY 20, 2014
AUGUST 18, 2014



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CARDINAL SQUARE APARTMENTS
McKinley + Anthony Ave. MUNDELEIN, ILLINOIS

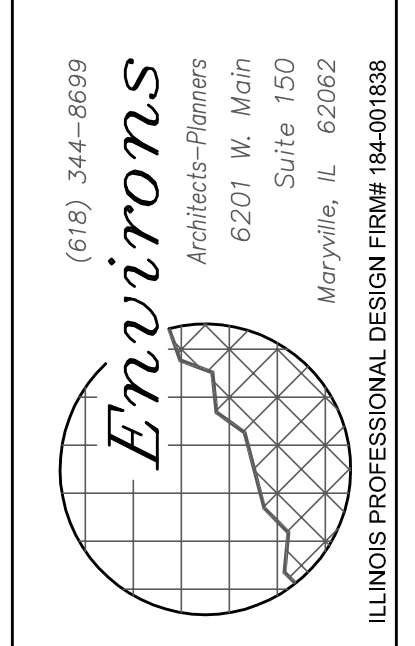
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LEGEND:

- WASTE LINE
- VENT LINE
- COLD WATER
- HOT WATER
- 1/2" H DROP
- 1/2" C DROP
- GAS CONNECTOR AND VALVE

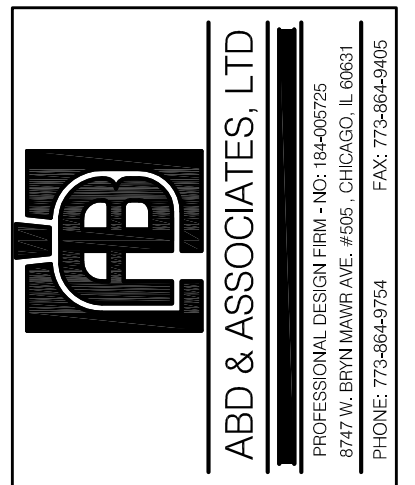
**PLUMBING
LOWER LEVEL PARKING PLAN**
SCALE: 3/16"=1'-0"



JOB NO.
1 3 0 2 2

DATE:
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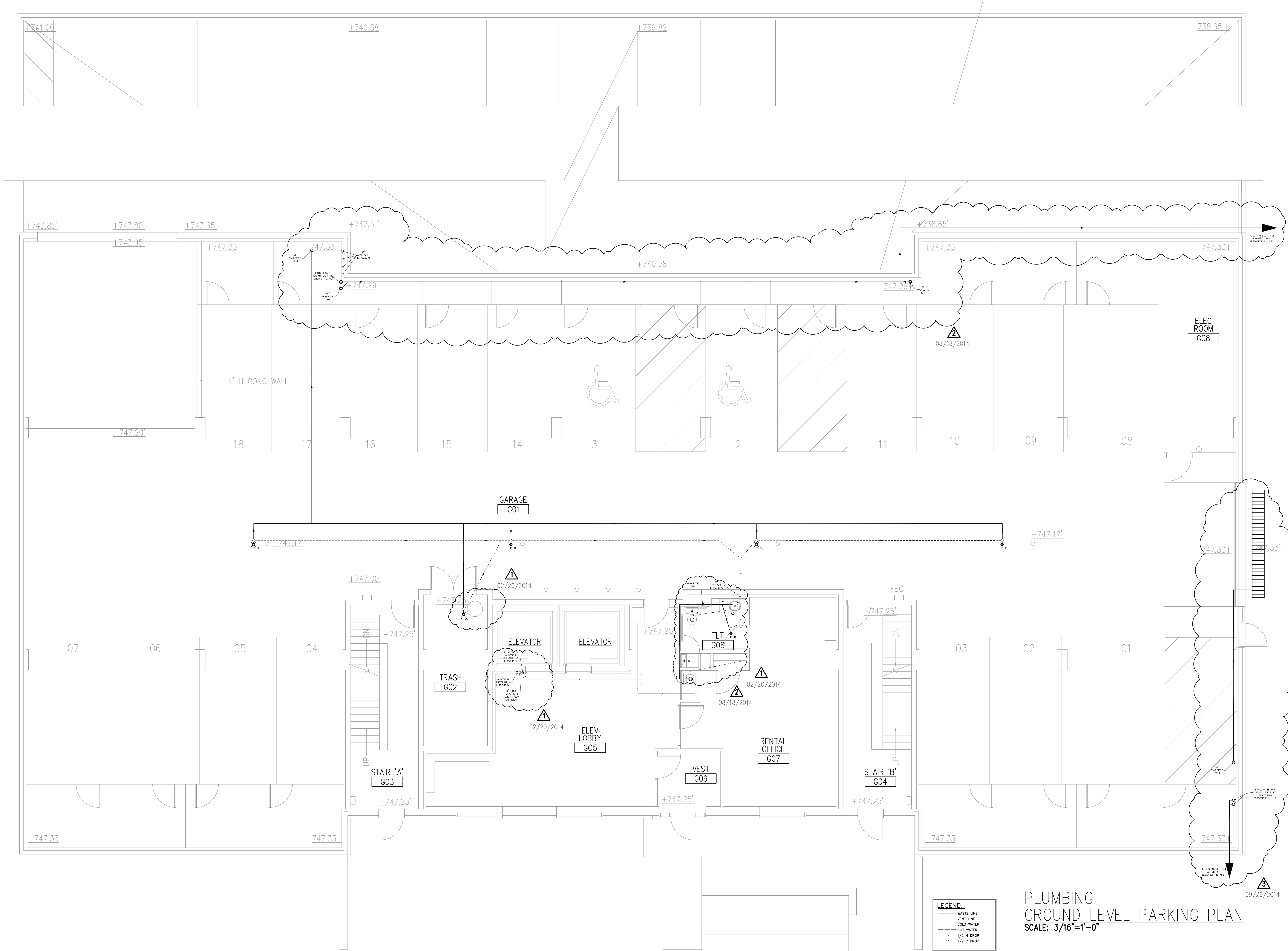
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 MCKINLEY + ANTHONY AVE. MUNDELEIN, ILLINOIS

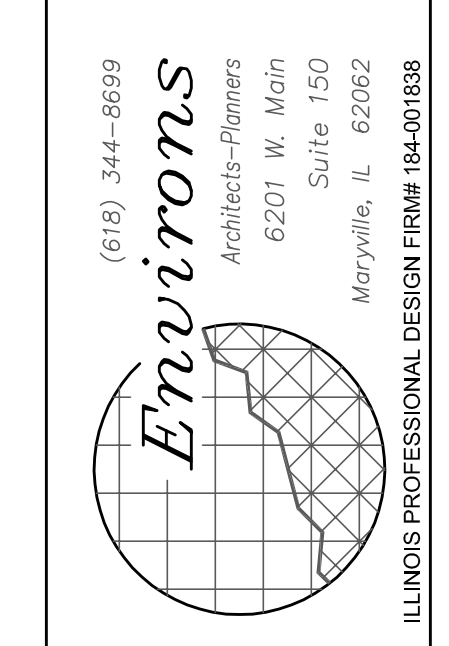
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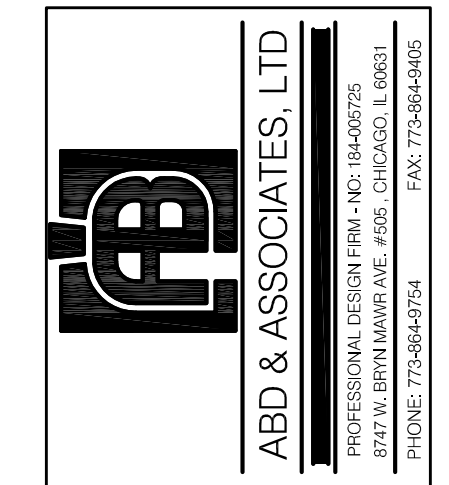
LEGEND:
 - - - - - WASTE LINE
 - - - - - VENT LINE
 - - - - - COLD WATER
 - - - - - HOT WATER
 - - - - - 1/2" H DROP
 - - - - - 1/2" C DROP

**PLUMBING
 GROUND LEVEL PARKING PLAN
 SCALE: 3/16"=1'-0"**



JOB NO.
13022

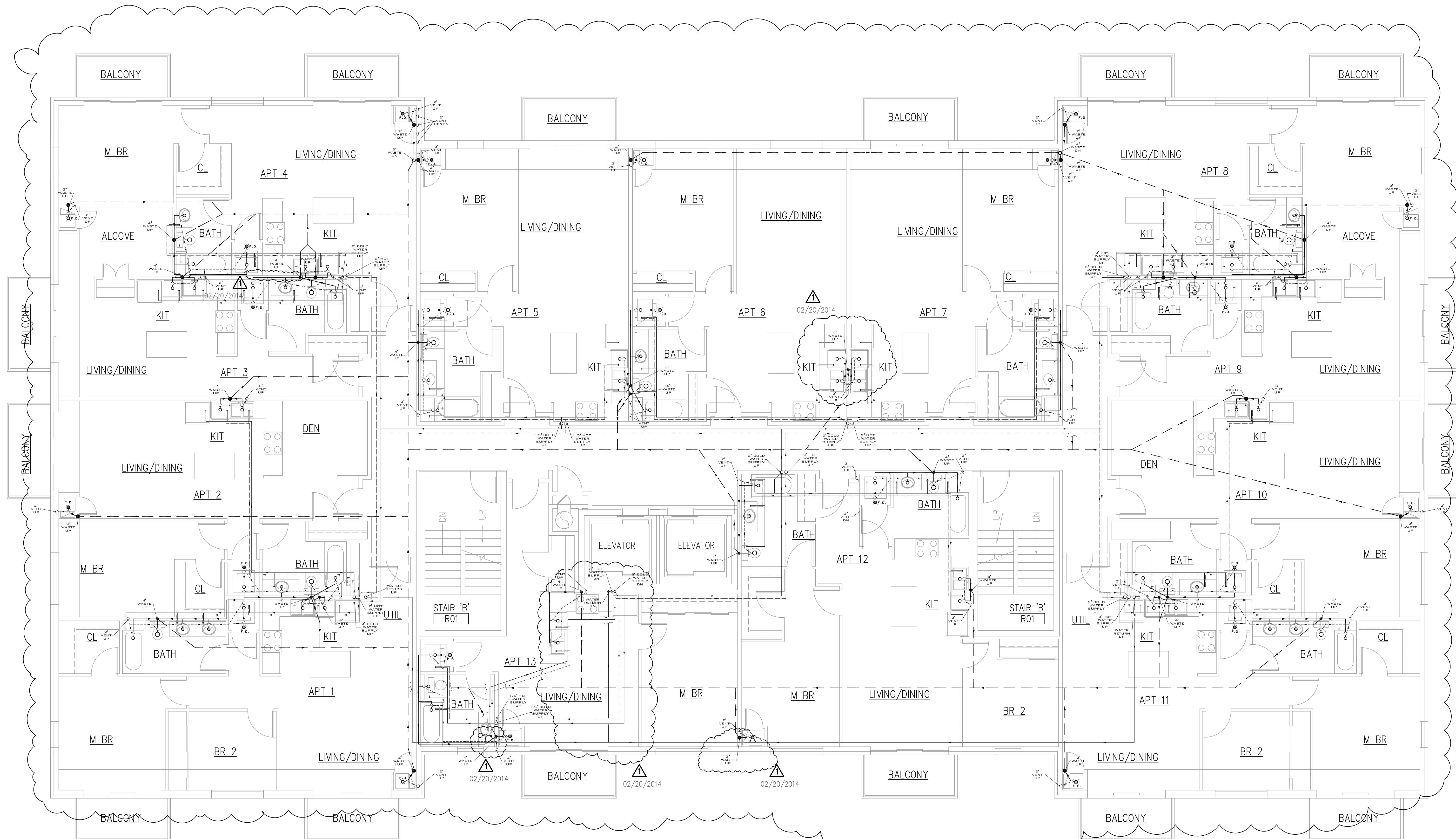
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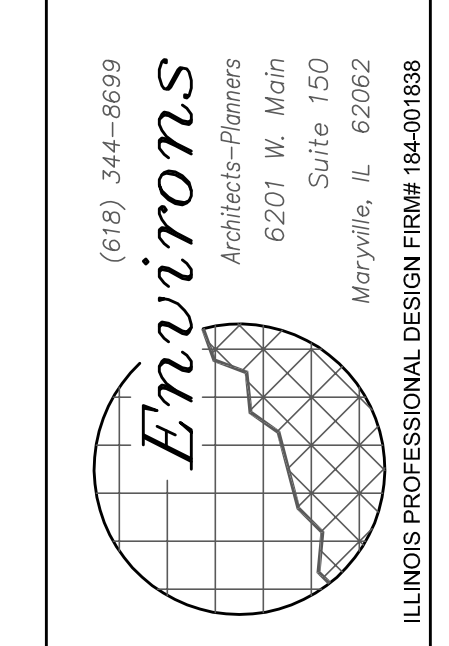


LEGEND:

- WASTE LINE
- VENT LINE
- COLD WATER
- HOT WATER
- 1/2" H DROP
- 1/2" C DROP

PLUMBING
FIRST FLOOR PLAN
 SCALE: 3/16"=1'-0" APPROX. 12,093 SF

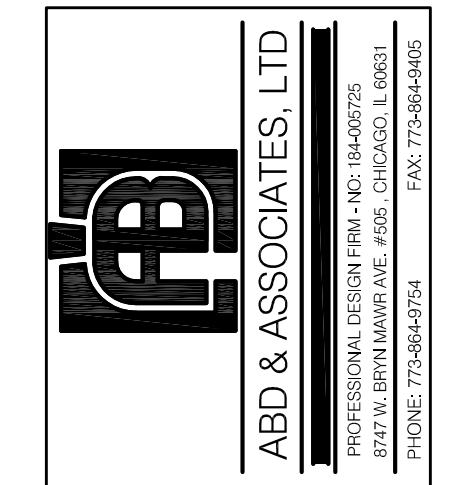
08/18/2014



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DATE:
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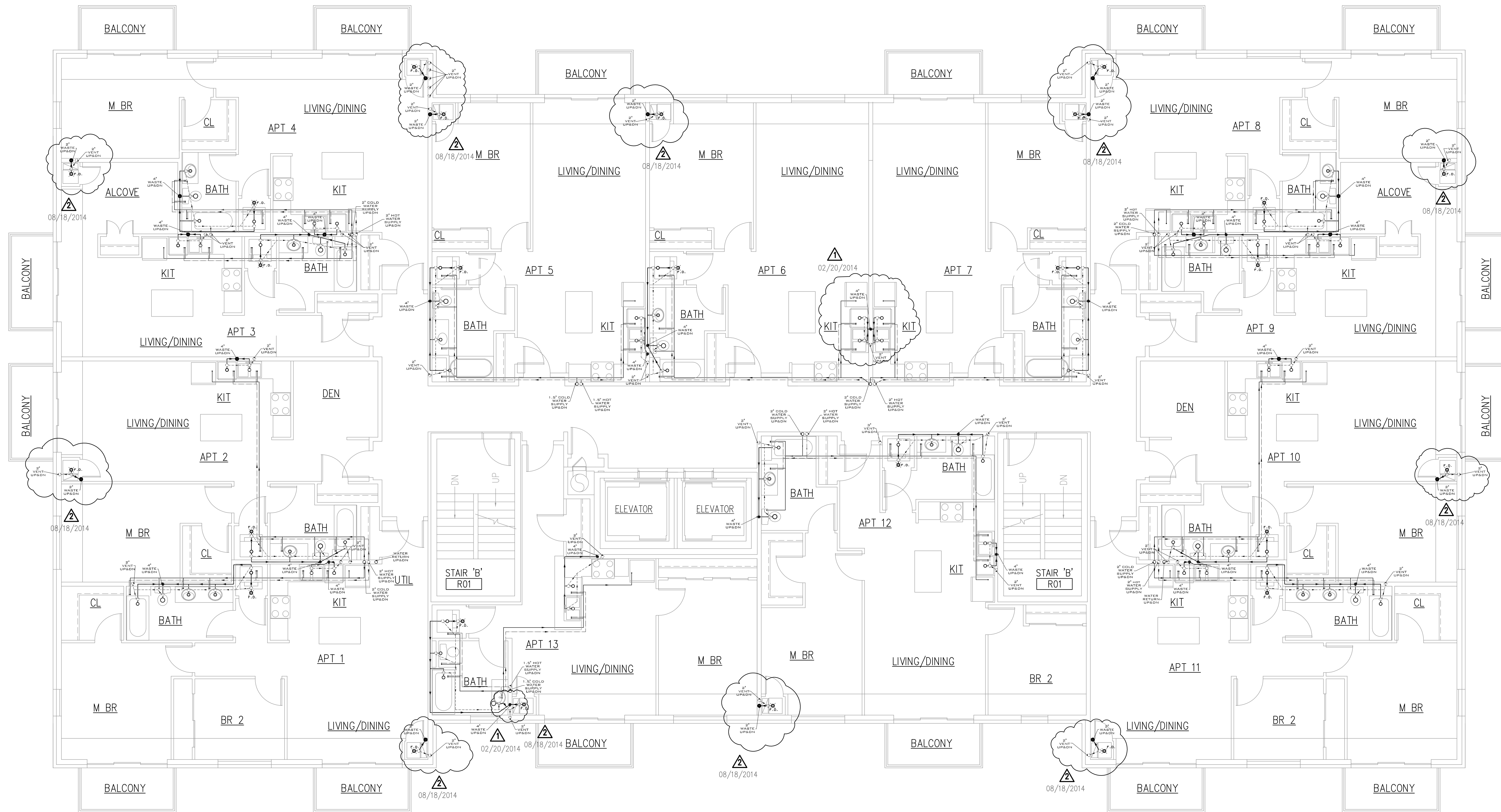
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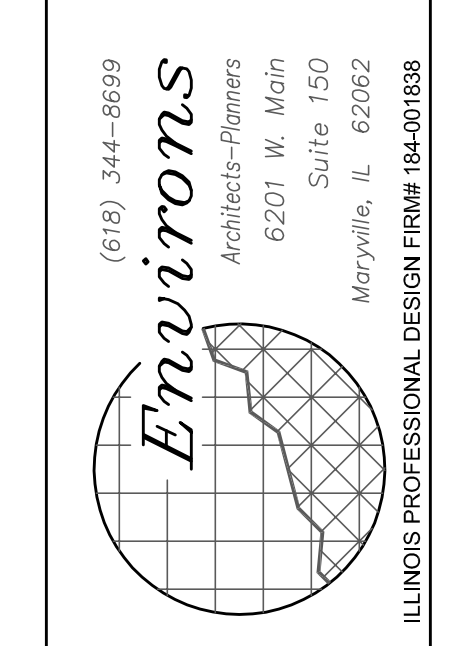
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LEGEND:
 - - - - - WASTE LINE
 - - - - - VENT LINE
 - - - - - COLD WATER
 - - - - - HOT WATER
 - - - - - 1/2" DROP
 - - - - - 1/2" C DROP

PLUMBING SECOND FLOOR PLAN
 SCALE: 3/16"=1'-0" APPROX. 12,093 SF
 FLOORS 3 AND 4 - SIMILAR



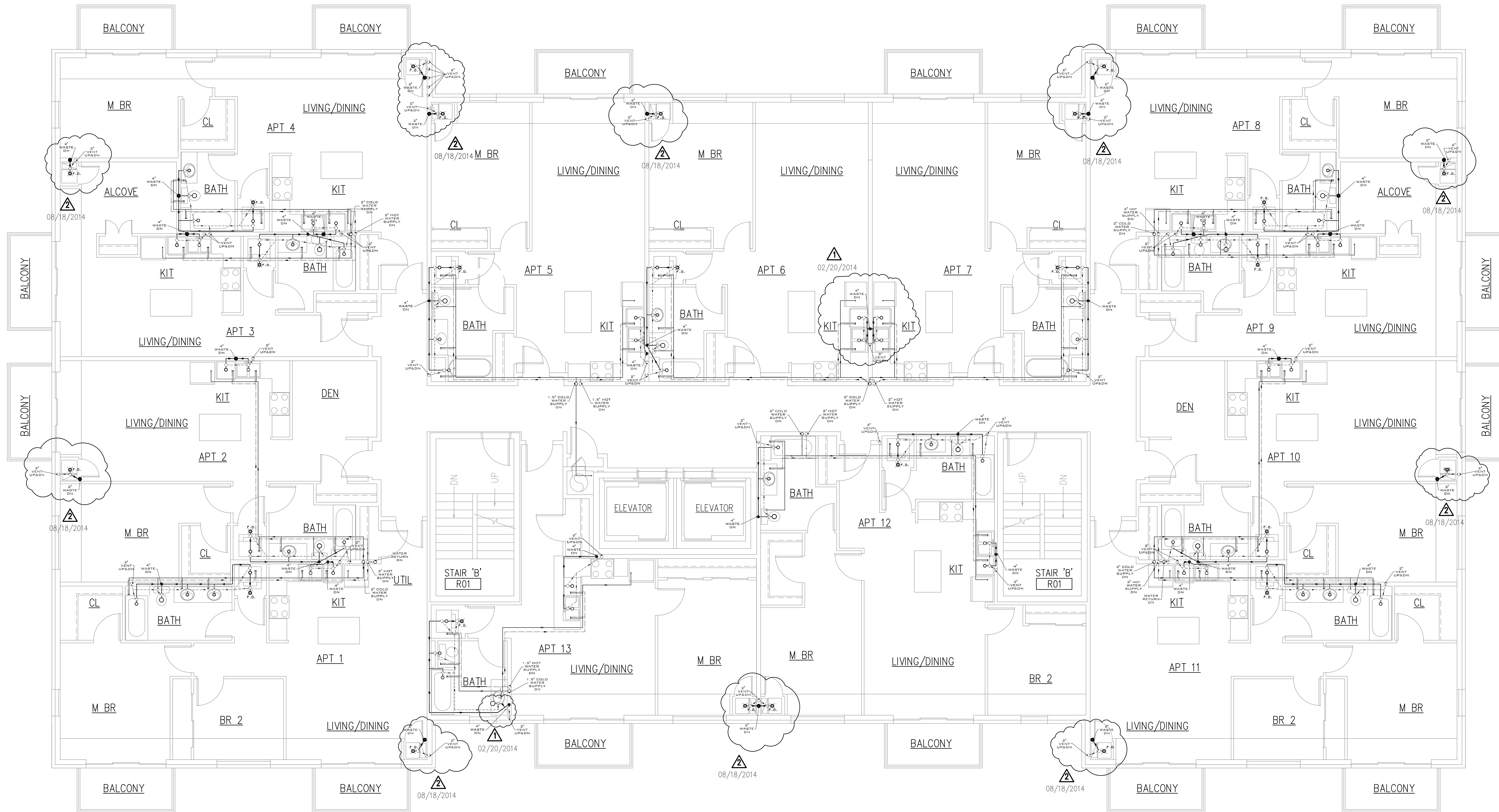
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 MCKINLEY + ANTHONY AVE. MUNDELEIN, ILLINOIS

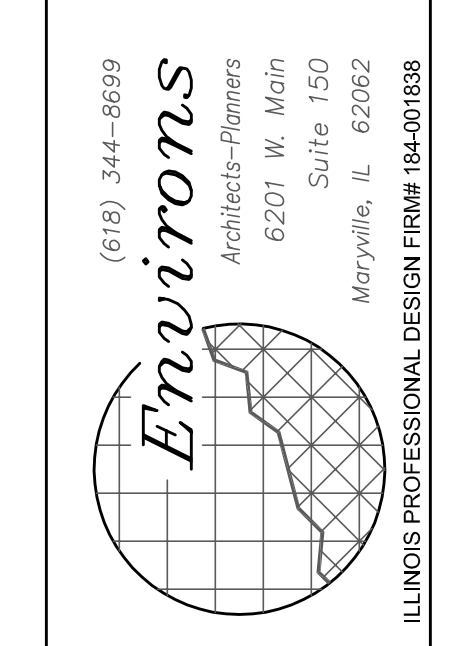
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LEGEND:
 - - - - - WASTE LINE
 - - - - - VENT LINE
 - - - - - COLD WATER
 - - - - - HOT WATER
 - - - - - 1/2" H DROP
 - - - - - 1/2" C DROP

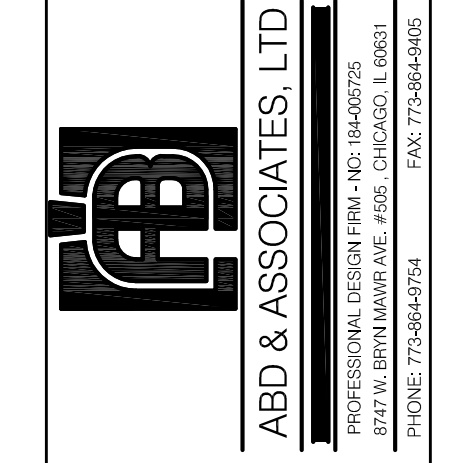
**PLUMBING
 FIFTH FLOOR PLAN**
 SCALE: 3/16"=1'-0" APPROX. 12,093 SF



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13022

DATE:
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