SCOPE OF WORK

PROJECT: MPHA 2728 East Franklin Ave
Underground Fuel Oil Tank Removal
MPE 19-002

DATE: March 4, 2019

GENERAL

1. This document includes general requirements for removal / permanent closure of Underground Fuel Oil Tank at the above referenced location.

2. The scope of Contractor's work shall include complete installation including:
   - Supply of equipment and material.
   - Supply of construction, including management, supervision, labor, equipment, tools and testing.
   - All permits and regulatory requirements including those by Minnesota Pollution Control Agency (MPCA).

3. All work shall be performed by an MPCA-certified contractor experienced in such work.

TECHNICAL REQUIREMENTS

1. The work shall meet or exceed the requirements of all applicable industry codes, standards and practices including but not limited to the following:
   - Minnesota State Building Code
   - Minnesota State Mechanical Codes
   - National Electrical Code
   - Occupational safety and Health Administration (OSHA)
   - American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)
   - Minnesota Pollution Control Agency (MPCA)

DESCRIPTION OF WORK

1. Original underground fuel oil storage tank is located at the northwest corner of the building, approximately 20-30 feet from the building.
2. Based on original documentation, the tank is approximately 9-foot diameter and 21-foot long (10,000-gallon capacity). Refer to attached site plan from record set of plans.

3. The tank has not been used since 2009-2010 when original dual-fuel boilers were replaced with gas-only boilers. Most of the oil has been removed from the tank prior to or at the time of the boiler conversion. However, some residual oil may still remain in the tank.
4. Follow MPCA requirements and procedures for permanent tank closure/removal.
5. Empty and clean the tank and piping (fuel oil supply return and vent piping).
6. Recycle all petroleum products in accordance with current regulations.
7. Excavate as required to expose the tank and piping.
8. All existing utilities in the excavated area shall be protected.
9. Remove the tank and dispose of properly.
10. Remove fuel oil supply, return and vent piping as required. Piping inside the building has been removed and capped at the wall. No work in the building is required.
11. Provide site assessment including soil testing in accordance with MPCA requirements.
12. Site assessment shall include soil sampling (one at each end or as required by MPCA).
13. Samples should be taken from freshly exposed soil (from the open excavation or from a soil boring) using appropriate laboratory sample bottles, and be clearly labeled with the date, time, building name, sample location, and the analysis parameters requested.
14. If soil contamination is found, it must be reported to the Minnesota Duty Officer. Then a cleanup program must be established through MPCA. All necessary cleanup procedures including soil replacement shall not be part of this contract.
15. Contractor shall include complete excavation and backfil including site restoration to match existing conditions. Contractor shall review the site prior to bid to determine the extent of site work required including pavement, sidewalks, grass, and etc. A walk through will be arranged by the Owner.
16. Attached are guideline specifications for excavation and backfill. These should be used as guidelines only. Sod requirements should be coordinated with Owner.

WARRANTY:

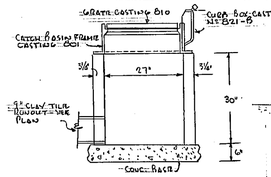
1. Provide complete warranty including labor and material for a minimum of 1 year from the date of substantial completion.

END OF DOCUMENT

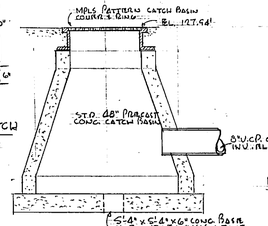
Google Maps 2728 E Franklin Ave

2728 E Franklin Ave
Minneapolis, MN 55406

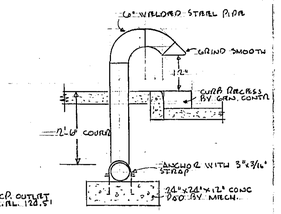
NOTE: MUNICIPAL REFER TO MINN. HIGHWAY DEPT. STANDARDS AS MUNICIPAL BY CITY OF MPLS. STREET DEPT.



DETAIL (M1) STREET CATCH BASIN 1/2"=1'-0" APPROX



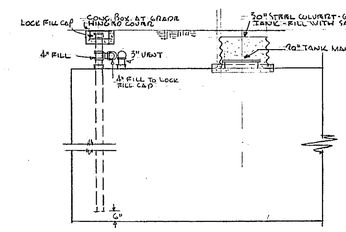
DETAIL (M1) CATCH BASIN 1/2"=1'-0" APPROX.



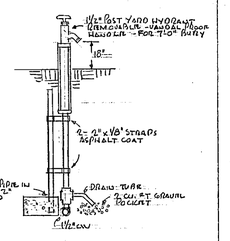
DETAIL (M1) FIRE PUMP RELIEF VALVE DISCHARGE 1/2"=1'-0"

MECHANICAL SYMBOLS

SANITARY OR STORM SEWER ABOVE FLOOR	GATE VALVE
SANITARY SEWER BELOW FLOOR OR GRADE	GLOBE VALVE
STORM SEWER BELOW FLOOR OR GRADE	CHECK VALVE
V.C.P. OR CONC. SEWER	TEMPERATURE REGULATING OR MOTOR OPERATED VALVE
SANITARY VENT	SQUARE HEAD COCK
C.W. COLD WATER	STRAIGHT WAY VALVE
H.W. HOT WATER	HOSE CONNECTION
R.H.W. HOT WATER RETURN	SQUARE HEAD COCK OR W.H. WALL HYDRANT
CHILLED (D.F.) SUPPLY	PRESSURE REGULATING VALVE
CHILLED (D.F.) RETURN	PRESSURE RELIEF VALVE
GAS	STRAINER
OXYGEN	ANGLE
VACUUM	UNION
AIR	ECCENTRIC REDUCER
FIRE LINE	EXPANSION JOINT & GUIDES
SPRINKLER LINE	DRAIN (DOWN OF PITCH (DOWN)
HOT WATER HEATING SUPPLY	THERMOMETER
HOT WATER HEATING RETURN	PRESSURE GAUGE
CHILLED WATER	AIR VENT
CHILLED WATER RETURN	AQUASTAT
CONDENSER WATER	F & T FLOAT & THERMOSTATIC TRAP
CONDENSER WATER RETURN	THERMOSTATIC TRAP
LOW PRESSURE STEAM	THERMOSTAT (PNEUMATIC OR ELECTRONIC)
LOW PRESSURE RETURN	THERMOSTAT (ELECTRIC)
MEDIUM PRESSURE STEAM	HUMIDISTAT
MEDIUM PRESSURE RETURN	PUMP RISER
HIGH PRESSURE STEAM	HEATING RISER
HIGH PRESSURE RETURN	TURNING VANES
PUMP DISCHARGE	AIR DEFLECTOR
F.O. FUEL OIL	DUCT SECTION (SUPPLY)
DRAIN LINE	DUCT SECTION (FRESH AIR-RETURN-EXHAUST)
CANVAS CONNECTOR	DOOR LOUVER
DUCT RISE IN RESPECT TO AIR FLOW	UNDERCUT DOOR
DUCT DROP IN RESPECT TO AIR FLOW	
DUCT SIZE (FIRST SIZE FOR SIDE SHOWN)	
SPLITTER DAMPER	
VOLUME DAMPER	



DETAIL (M1) OIL TANK M.H. FILL & VENT 1/2"=1'-0"



DETAIL (M1) YARD HYDRANT NO SCALE

NOTES

1. REFER TO DWGS. 1, 2 & 3 FOR ADDITIONAL SITE INFORMATION
2. REFER TO DWG E-1 FOR ELECTRICAL SITE WORK SERVICE LOCATION SHOWN FOR INFORMATION.
3. ELEVATIONS SHOWN ARE FINISHED GRADES - REFER TO DWG M-1 FOR PAVING GRADES

NORTH

SCALE - 1" = 16'-0"

"AS BUILTS" 11/24/08 LB
CHANGED LOCATION OF CATCH BASIN DETAILED 3/M1
CHANGED YARD HYDRANT & WATER LINE LOCATION
CHANGED 8" C.I. SANITARY DRAIN AND MANHOLE LOCATION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.
Date 4-7-65 Reg. No. 4068

FREY AND BERGSTEN
CONSULTING ENGINEERS
734 EAST LAKE STREET
MINNEAPOLIS 7, MINNESOTA

NASON, LAW, WEHRMAN & KNIGHT
SITE PLANNERS AND ENGINEERS
2101 HENNEPIN AVENUE
MINNEAPOLIS, MINNESOTA

ELDERLY HOUSING PROJECT NO. MINNESOTA 2-11A

PHA-AIDED LOW RENT PUBLIC HOUSING PROJECT FOR THE ELDERLY
FRANKLIN AND RIVERSIDE AVENUES, MINNEAPOLIS, MINNESOTA

THE HOUSING AND REDEVELOPMENT AUTHORITY
IN AND FOR THE CITY OF MINNEAPOLIS, MINNESOTA

LANG RAUGLAND AND BRUNET INC.
ARCHITECTS • ENGINEERS
802 WESLEY TEMPLE BUILDING
MINNEAPOLIS 3, MINNESOTA

TITLE OF SHEET
SITE PLAN
MECHANICAL WORK

DRAWN BY EBJ | CHKD EBJ
4/7/65
CONTR. NO. 6422

M1 | OF 11

SECTION 312000 – EXCAVATION AND BACKFILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Excavating and filling for rough grading the site and for utilities.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D2487; Groups A-1, A-2-4, A-2-5, and A-3 according to AASHTO M 145; or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D2487; Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7 according to AASHTO M 145; or a combination of these groups.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.

F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and zero to 5 percent passing a No. 8 sieve.

I. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and zero to 5 percent passing a No. 4 sieve.

J. Sand: ASTM C33/C33M; fine aggregate.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.

B. Protect and maintain erosion and sedimentation controls during earth-moving operations.

C. Protect plants, lawns and other features to remain.

D. Grade top perimeter of excavation to prevent surface water from draining into excavation.

3.2 EXCAVATION

A. Excavate to accommodate structures and construction operations.

B. Per OSHA 29 CFR, Part 1926, Subpart P, “Excavations and Trenches”, excavation safety is the sole responsibility of the Contractor.

C. Do not interfere with 45 degree bearing splay of foundations.

D. Keep excavations dry. Remove vet or saturated material.

E. Excavation which extends down to static groundwater or below shall be dewatered.

F. Provide temporary means and methods, as required, to remove all water from excavations. Remove and replace soils deemed suitable by classification and which are excessively moist due to lack of dewatering or surface water control.

3.3 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water.

3.4 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring, bracing, and sheeting.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

C. Final Backfill:

1. Soil Backfill: Place and compact final backfill of satisfactory soil to final subgrade elevation.
2. Controlled Low-Strength Material: Place final backfill of controlled low-strength material to final subgrade elevation.

D. Warning Tape: Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.5 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:

1. Under grass and planted areas, use satisfactory soil material.
2. Under walks and pavements, use satisfactory soil material.
3. Under steps and ramps, use engineered fill.
4. Under building slabs, use engineered fill.
5. Under footings and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.6 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.7 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D698:

1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
3. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.

3.8 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to elevations required to achieve indicated finish elevations, within the following subgrade tolerances:

1. Turf or Unpaved Areas: Plus or minus 1 inch .
2. Walks: Plus or minus 1 inch .
3. Pavements: Plus or minus 1/2 inch .

3.9 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course under pavements and walks as follows:

1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
2. Place base course material over subbase course under hot-mix asphalt pavement.
3. Shape subbase course to required crown elevations and cross-slope grades.
4. Place subbase course 6 inches or less in compacted thickness in a single layer.
5. Place subbase course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.

6. Compact subbase course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D698.

3.10 FIELD QUALITY CONTROL

A. Top Surface of General Filling: Plus or minus 1 inch from required elevation.

B. Top Surface of Filling Under Paved Areas: Plus or minus 1 inch from required elevation

3.11 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.12 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

B. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Architect.

1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000