ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

PALMER AVENUE TANK REHABILITATION PROJECT

ASHTABULA TOWNSHIP, OHIO

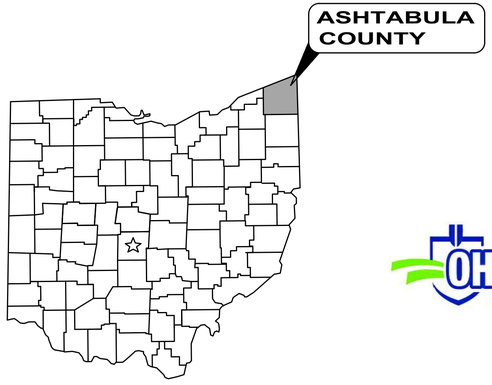
OCTOBER 2024

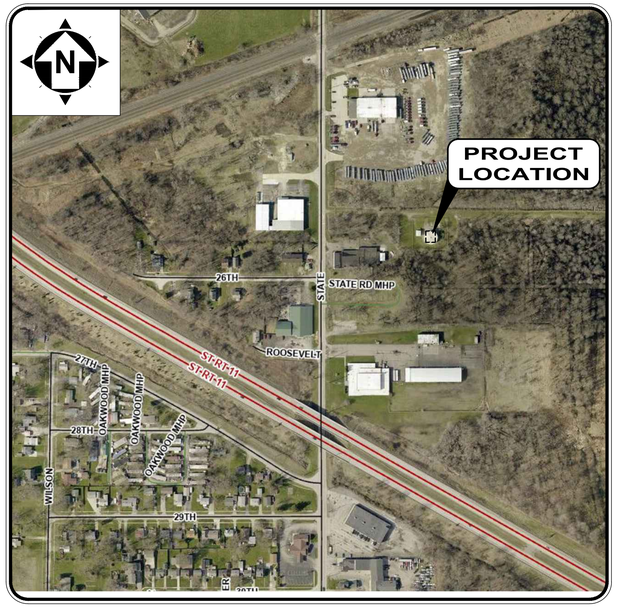
ASHTABULA COUNTY APPROVALS:

KATHRYN L. WHITTINGTON, COUNTY COMMISSIONER — 10-17-24 DATE

CASEY R. KOZLOWSKI, COUNTY COMMISSIONER — 10-17-24 DATE

J.P. DUCRO IV, COUNTY COMMISSIONER — 10-17-24 DATE





LOCATION MAP
NOT TO SCALE

ENGINEER'S PROJECT No. 230155

OWNER:

DOUGLAS G. STARKEY, DIRECTOR — 10-17-24 DATE

OFFICE:

ENVIRONMENTAL SERVICES
36 W. WALNUT STREET
JEFFERSON, OHIO 44047

DEPARTMENTS:

WATER & SEWER DEPARTMENT
(440) 576-3722 PHONE
(440) 576-3781 FAX

ENGINEER:

CT CONSULTANTS, INC.
8150 STERLING COURT
MENTOR, OH 44060

(440) 951-9000 PHONE
(440) 951-7487 FAX

PROJECT SITE:

THE PROJECT IS LOCATED AT AN EXISTING TANK SITE IN ASHTABULA COUNTY, OHIO. THE TANK IS LOCATED NEAR 2501 STATE ROAD, ASHTABULA TOWNSHIP, OHIO.

STATE OF OHIO — RYAN S. SCHUSTER 72755 — REGISTERED PROFESSIONAL ENGINEER

RYAN SCHUSTER — P.E. No. 72755 — 10-17-24 DATE

REVISIONS: NO. | DESCRIPTION | REV. | DATE

ISSUED FOR: EPA APPROVAL | ISSUE DATE: | SCALE: N/A | DESIGNED BY: RSS | DRAWN BY: BEK | CHECKED BY: RSS

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
PALMER AVENUE TANK REHABILITATION
ASHTABULA COUNTY — ASHTABULA, OHIO

TITLE SHEET

PROJECT NO. 230155
DISCIPLINE
SHEET NAME: CS-1
SHEET 1 OF 14

GENERAL:

1. THE CONTRACTOR SHALL PERFORM ALL OF THE WORK AND FURNISH ALL OF THE LABOR AND MATERIALS NECESSARY FOR THE FINAL COMPLETION OF THIS CONTRACT IN THE MANNER AND UNDER THE CONDITIONS HEREIN SPECIFIED AND PROVIDED AND IN ACCORDANCE WITH THE CONTRACT DRAWINGS.

2. THE CONTRACTOR SHALL NOTIFY THE ASHTABULA TOWNSHIP A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE A PRE-CONSTRUCTION MEETING. NO WORK SHALL BEGIN UNTIL A PRE-CONSTRUCTION MEETING HAS BEEN HELD.

3. A PRE-CONSTRUCTION VIDEO TAPE OF THE PROJECT AREA WILL BE REQUIRED AND SUBMITTED TO THE ENGINEER BEFORE CONSTRUCTION BEGINS.

4. ACCESS TO ALL DRIVEWAYS WILL BE MAINTAINED AT ALL TIMES EXCEPT THE TIME WHEN UTILITY INSTALLATION AND PAVEMENT REPLACEMENT WILL NOT PERMIT.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING A SITE FOR DISPOSAL OF ALL EXCAVATED MATERIAL THAT IS UNSUITABLE FOR USE AS BACKFILL AND ALL OTHER EXCESS EXCAVATED MATERIALS. THE CONTRACTOR SHALL PROVIDE THE TOWNSHIP WITH THE LOCATION OF THE DISPOSAL SITE AND WRITTEN PERMISSION FOR USE OF THE SITE FROM THE PROPERTY OWNER.

6. ALL OVER-THE-ROAD VEHICLES USED ON THE PROJECT BY ALL CONTRACTORS AND SUBCONTRACTORS WILL BE CLEARLY MARKED SHOWING ITS COMPANY SYMBOL.

7. BEFORE THE COUNTY WILL APPROVE AND ACCEPT THE WORK AND RELEASE THE GUARANTY RETAINER, THE CONTRACTOR WILL FURNISH THE COUNTY AND THE TOWNSHIP A WRITTEN REPORT INDICATING THE RESOLUTION OF ANY AND ALL PROPERTY DAMAGE CLAIMS FILED WITH THE CONTRACTOR BY ANY PARTY DURING THE CONSTRUCTION PERIOD. THE INFORMATION TO BE SUPPLIED SHALL INCLUDE, BUT NOT BE LIMITED TO, NAME OF CLAIMANT, DATE FILED WITH CONTRACTOR, NAME OF INSURANCE COMPANY AND/OR ADJUSTOR HANDLING CLAIM, HOW CLAIM WAS RESOLVED AND IF CLAIM WAS NOT RESOLVED FOR THE THE FULL AMOUNT, A STATEMENT INDICATING THE REASON FOR SUCH ACTION.

8. MATERIALS FOR "AS-DIRECTED" ITEMS SHALL NOT BE ORDERED OR DELIVERED TO THE PROJECT SITE OR WORK PERFORMED UNTIL AUTHORIZED BY THE ENGINEER.

9. ALL SHOP DRAWINGS WILL BE SUBMITTED TO THE ENGINEER FOR CHECKING.

10. THE CONTRACTOR SHALL NOTIFY THE TOWNSHIPS POLICE AND FIRE DEPARTMENTS AND THE TOWHNSHIP ADMINISTRATOR AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSING OR TRAFFIC CHANGE.

11. THE CONTRACTOR SHALL PERFORM WORK AS TO NOT DISTURB, DAMAGE OR DESTROY ANY MAILBOX, PAPERBOX, TELEPHONE OR POWER POLES, SIGNS, LANDSCAPING ITEMS, ETC.. ANY ITEM DAMAGED OR DESTROYED SHALL BE REPLACED AT THE CONTRATOR'S EXPENSE. ANY ITEM DISTURBED OR IN CONFLICT WITH THE WORK TO BE PERFORMED SHALL BE REMOVED AND RESET AT THE CONTRACTOR'S EXPENSE. PRIOR ENGINEER APPROVAL IS REQUIRED BEFORE ANY OF THE ABOVE ITEMS ARE PERFORMED.

12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO APPLY, WHEN ORDERED BY THE OWNER, WATER OR CALCIUM CHLORIDE FOR THE ALLEVIATION OR PREVENTION OF DUST NUISANCE ORIGINATING FROM HIS CONSTRUCTION ACTIVITIES. SUFFICIENT QUANTITIES OF CALCIUM CHLORIDE SHALL BE STORED ON THE JOB SITE AT ALL TIMES TO BE USED FOR DUST CONTROL. THE COST OF DUST CONTROL SHALL BE INCLUDED IN THE UNIT BID PRICES FOR ALL ITEMS OF THE PROPOSAL.

13. ALL SOIL AREAS DISTURBED SHALL BE TOPSOILED (4" THICK), SEEDED AND MULCHED. ALL TOPSOIL WORK INSIDE THE STREET RIGHT-OF-WAY SHALL BE INCLUDED IN THE UNIT BID PRICES FOR ALL ITEMS OF THE PROPOSAL.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT.

15. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE INSTALLING ANY PROPOSED CONDUIT. ANY ADJUSTMENTS NEEDED SHALL BE APPROVED BY THE ENGINEER.

16. THE TOWNSHIPS SPECIFICATIONS SUPPLEMENTED WHERE NECESSARY BY THE OHIO DEPT. OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS - CURRENT EDITION) SHALL GOVERN THE INSTALLATION OF WATER MAIN AND ASSOCIATED APPURTENANCES.

SANITARY, STORM, AND WATER SERVICE CONNECTIONS:

1. THE FOLLOWING NOTES APPLY TO SANITARY, STORM, AND WATER CONNECTIONS

   a. LOCATIONS OF EXISTING SERVICE CONNECTIONS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD LOCATE ALL EXISTING CONNECTIONS AT NO ADDITIONAL COST TO THE TOWNSHIPS. THE CONTRACTOR SHALL RECORD ACTUAL LOCATION INFORMATION ON HIS RECORD DRAWINGS AS CONSTRUCTION OCCURS.

   b. THERE SHALL BE NO ADDITIONAL PAYMENT MADE FOR SAW CUTTING, EXCAVATION OR BACKFILL, INCLUDING MATERIALS AND LABOR FOR, PIPING, CAPS, BULKHEADS AND APPURTENANCES PLACED FOR LATERALS WHICH ARE DETERMINED TO BE INACTIVE AND THUS ARE TO BE ABANDONED.

   c. NO INACTIVE LATERALS SHALL BE RECONNECTED TO THE SEWER.

2. INTERIOR WORK ON THE TANK SHALL BE PERFORMED DURING PERIODS OF DRY WEATHER. PRIOR TO WORKING INSIDE OF THE TANK. THE CONTRACTOR SHALL MEET WITH THE OWNER TO REVIEW INCOMING WEATHER AND OPERATIONAL REQUIREMENTS FOR THE PALMER AVENUE TANK. THE TANK IS USED TO STORE EXCESS SANITARY FLOWS FROM THE SANITARY SEWER DURING STORM EVENTS. THE CONTRACTOR SHALL BE REQUIRED TO MAKE THE TANK OPERATIONAL DURING A WET WEATHER EVENT..

3. THE CONTRACTOR SHALL SUPPLY ALL PIPE AND ADAPTERS TO CONNECT TO EXISTING PIPING. THE ADAPTERS MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

4. EXISTING SEWER AND WATER SERVICE CONNECTIONS SHALL BE PROTECTED AND MAINTAINED IN SERVICE. ANY EXISTING WATERLINE, SANITARY SEWER, AND GAS LINE, IN OR OUTSIDE OF THE CONSTRUCTION LIMITS, DAMAGED DURING CONSTRUCTION OF THE PROPOSED PROJECT, WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PRESERVATION OF PROPERTY CORNERS AND SURVEY MARKERS:

1. THE CONTRACTOR WILL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS, AND STAKES AND IN CASE OF DISTURBANCE, HE SHALL ENGAGE A REGISTERED SURVEYOR TO REPLACE THEM AT HIS EXPENSE AND SHALL BE RESPONSIBLE FOR ANY MISTAKES THAT MAY BE CAUSED BY THEIR LOSS OR DISTURBANCE.

STATIONING AND LOCATIONS:

1. ALL LOCATIONS AND ITEMS CALLED OUT BY STATION ARE SUBJECT TO ADJUSTMENT IN THE FIELD AS APPROVED BY THE ENGINEER.

PROTECTION AGAINST VANDALISM:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SUFFICIENT SITE SECURITY MEASURES AND / OR PERSONNEL TO PROTECT ALL NEW CONCRETE WORK FROM VANDALISM UNTIL THE CONCRETE IS SUFFICIENTLY CURED AT NO ADDITIONAL COST.

EXISTING UTILITIES:

1. EACH CONTRACTOR SHALL VISIT THE SITE PERSONALLY TO ASCERTAIN THE NATURE OF THE WORK AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE PRIOR TO BID SUBMISSION.

2. THE DATA SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. THE EXISTENCE OF FACILITIES ABOVE OR BELOW GROUND, WHICH MAY NOT BE SHOWN, MAY NOT BE A BASIS FOR A CLAIM FOR EXTRA WORK.

3. THE LOCATIONS OF THE UNDERGROUND UTILITIES ARE PLOTTED ACCORDING TO THE INFORMATION FURNISHED BY THE UTILITIES CONCERNED AND THE COUNTY DOES NOT GUARANTEE THE ACCURACY THEREOF.

4. WHERE EXISTING POWER OR TELEPHONE POLES ARE IN CLOSE PROXIMITY TO WORK, THE CONTRACTOR SHALL COORDINATE HIS WORK EFFORTS WITH THOSE OF THE UTILITY COMPANIES SUCH THAT THEIR EXISTING FACILITIES CAN BE MAINTAINED AND PROTECTED DURING THE TIME WORK IS GOING ON ADJACENT TO THE POLE. THE COST FOR ANY REQUIRED PROTECTION OR RELOCATION OF EXISTING POWER OR TELEPHONE POLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THAT OF THE COUNTY.

5. BEFORE ANY WORK IS STARTED THAT WILL INTERFERE WITH THE EXISTING UTILITIES, THE CONTRACTOR SHALL CALL THE "OHIO UTILITIES PROTECTION SERVICE" AT 1-800-362-2764, FORTY-EIGHT (48) HOURS IN ADVANCE OF THE WORK. NON-MEMBER UTILITIES MUST BE CONTACTED DIRECTLY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, AT NO ADDITIONAL EXPENSE TO THE COUNTY, TO AVOID DAMAGE TO EXISTING UNDERGROUND AND OVERHEAD UTILITY LINES DURING THE ENTIRE PROJECT. IN THE EVENT OF DAMAGE TO EXISTING PUBLIC AND/OR PRIVATE UTILITIES, THE AGENCY CONCERNED SHALL BE NOTIFIED IMMEDIATELY AND ALL REPAIR WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE RESPECTIVE AGENCY AT NO ADDITIONAL EXPENSE TO THE COUNTY, INCLUDING ANY INSPECTION FEES OR MAINTENANCE CREWS.

6. WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

7. IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

8. IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

RESTORATION:

1. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM HIS OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES AND PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER. ANY DITCHES DISTURBED DURING CONSTRUCTION SHALL BE REGRADED BY THE END OF THE SAME WORKDAY.

2. ALL EXISTING STORM AND SANITARY SEWER FACILITIES, INCLUDING TILE, DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR RECONNECTED TO THE EXISTING OR PROPOSED SYSTEM AS DIRECTED BY THE ENGINEER AT NO COST TO THE OWNER.

DEMOLITION:

1. THE CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS AND CONSTRUCTION DRAWINGS.

1. PROHIBITED CONSTRUCTION ACTIVITIES

A. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER;

B. LOCATING STOCKPILE STORAGE AREAS IN ENVIRONMENTALLY SENSITIVE AREAS;

C. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS;

D. PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS DIRECTLY INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS; ALL SUCH WATER WILL BE PROPERLY FILTERED OR SETTLED TO REMOVE SILT PRIOR TO RELEASE;

E. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE AND OTHER HARMFUL WASTE INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO;

F. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF ANY STREAM;

G. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA;

H. DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS;

I. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT;

J. DISCHARGING INJURIOUS SILICA DUST CONCENTRATIONS INTO THE ATMOSPHERE RESULTING FROM BREAKING, CUTTING, CHIPPING, RILLING, BUFFING, GRINDING, POLISHING, SHAPING OR SURFACING CLOSER THAN 200 FEET TO PLACES OF RESIDENCES OR COMMERCIAL, PROFESSIONAL, QUASI-PUBLIC OR PUBLIC PLACES OF HUMAN OCCUPATION;

K. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED ON THE PLANS BY THE ENGINEER FOR SUCH PURPOSES;

L. RUNNING WELL POINT OR PUMP DISCHARGE LINES THROUGH PRIVATE PROPERTY OR PUBLIC PROPERTY AND RIGHTS-OF-WAY WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER AND THE CONSENT OF THE ENGINEER;

M. OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS OUTSIDE THE HOURS OR 8:00 AM AND 5:00 P.M. OR OUTSIDE THE HOURS ALLOWED FOR CONSTRUCTION BY LOCAL ORDINANCES OR REGULATIONS; AND

N. CLOSING OFF CLEAR ACCESS TO ANY PUBLIC ALLEY, STREET, ROAD, AVENUE OR BOULEVARD WITHOUT THE PRIOR CONSENT OF MUNICIPAL OFFICIALS AND THE ENGINEER, AND CLOSING CLEAR ACCESS:

- BY FIRE PROTECTION EQUIPMENT AND EMERGENCY VEHICLES;

- BY THE PUBLIC TO ANY COMMERCIAL OR PROFESSIONAL PLACE OF BUSINESS, QUASI-PUBLIC OR PUBLIC ESTABLISHMENT, OR PLACE OF RESIDENCE; OR

- BY VEHICLES TO DRIVEWAYS WITHOUT THE PROVISION OF ALTERNATIVE MEANS OF BUILDING INGRESS AND EGRESS.

2. MITIGATIVE MEASURES

AIR POLLUTION / NOISE CONTROL

1. CONSTRUCTION ACTIVITIES WILL BE LIMITED TO DAYTIME HOURS UNLESS APPROVED 48 HOURS IN ADVANCE BY ASHTABULA TOWNSHIP AND ACDES.

2. CONSTRUCTION EQUIPMENT WILL BE PROVIDED WITH INTAKE SILENCERS AND MUFFLERS, AS REQUIRED BY SAFETY STANDARDS.

3. ALL CONSTRUCTION VEHICLES SHOULD BE EQUIPPED WITH PROPER EMISSIONS CONTROL EQUIPMENT.

4. PERIODICALLY CHECK EQUIPMENT AND MACHINERY FOR PROPER TUNING TO MINIMIZE EXHAUST EMISSIONS AND NOISE.

5. UNPAVED AREAS WILL BE WET DOWN (AS NECESSARY) DURING CONSTRUCTION TO MINIMIZE DUST GENERATION.

TREE / VEGETATION PROTECTION

6. TREE REMOVAL WILL BE LIMITED TO THAT NECESSARY FOR CONSTRUCTION AND WILL BE LIMITED FURTHER TO THE PERMANENT EASEMENT WHEREVER POSSIBLE.

7. NO TREE REMOVAL WILL BE PERMITTED OUTSIDE THE TEMPORARY EASEMENT WITHOUT PERMISSION OF THE ENGINEER.

8. TREES WHICH ARE NOT REMOVED WILL BE PROTECTED BY ENSURING THAT TREES TO BE REMOVED ARE FELLED SO AS NOT TO INJURE THE REMAINING TREES.

9. PRIOR TO CLEARING, THE CONTRACTOR AND ENGINEER, SHALL WALK THE ACQUIRED EASEMENTS IN AN EFFORT TO DESIGNATE THE TREES THAT ARE TO BE SAVED. TREES TO BE SAVED WILL BE CLEARLY MARKED BY PAINT WITH THE LETTER "S". TREES TO BE PROTECTED BY AN APPROPRIATE BARRIER SHALL BE MARKED WITH AN "S" ENCLOSED IN A CIRCLE.

10. SOIL AND OTHER MATERIAL WILL NOT BE STORED NEXT TO OR WITHIN THE DRIP-LINE OF TREES.

11. PRESERVATION OF LANDSCAPING SHOULD TAKE PRECEDENCE OVER REMOVAL. IF REMOVAL OR DAMAGE IS UNAVOIDABLE, EXISTING VEGETATION SHOULD BE REPAIRED OR REPLACED "IN-KIND" UNLESS THE HOMEOWNER SPECIFIES OTHERWISE.

12. IF TREES/SHRUBS CANNOT BE REPLACED IN THE SAME LOCATION DUE TO INSTALLATION OF THE SEWER SYSTEM, RELOCATION SHOULD BE CONSIDERED.

13. THE CONTRACTOR'S ARBORIST SHALL REPAIR ALL INJURIES TO BARK, TRUNKS, LIMBS, AND ROOTS OF REMAINING VEGETATION BY PROPERLY DRESSING, CUTTING, BRACING AND PAINTING, USING ONLY APPROVED TREE SURGERY METHODS, TOOLS, AND MATERIALS.

14. SELECTIVE PRUNING OF TREE LIMBS PRIOR TO INITIATION OF CONSTRUCTION SHOULD ONLY BE USED WITHIN ESTABLISHED EASEMENTS WHERE REMOVAL IS NECESSARY FOR OPERATION OF EQUIPMENT.

ARCHAEOLOGICAL / HISTORICAL RESOURCES

1. CONTRACTORS AND SUBCONTRACTORS ARE REQUIRED UNDER OHIO REVISED CODE SECTION 149.53 TO NOTIFY THE OHIO HISTORICAL SOCIETY AND THE OHIO HISTORIC SITE PRESERVATION BOARD OF ARCHAEOLOGICAL DISCOVERIES LOCATED IN THE PROJECT AREA, AND TO COOPERATE WITH THOSE ENTITIES IN ARCHAEOLOGICAL AND HISTORIC SURVEYS AND SALVAGE EFFORTS IF SUCH DISCOVERIES ARE UNCOVERED WITHIN THE PROJECT AREA.

CONTACT: STATE HISTORIC PRESERVATION OFFICE
PHONE: 1-614-298-2000

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REVISIONS

REV.	DESCRIPTION	DATE

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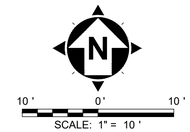
ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
PALMER AVENUE TANK REHABILITATION
ASHTABULA, OHIO
ASHTABULA COUNTY

GENERAL NOTES

PROJECT NO.
230155
DISCIPLINE
SHEET NAME
GN-1
SHEET 2 OF 14



GENERAL NOTES:

1. TANK: 353,500 GALLON CALDWELL TANKS, INC. AT-GRADE STEEL TANK

2. EXTERIOR COATING IS URETHANE SYSTEM

3. INTERIOR COATING IS PRESUMED TO BE AN EPOXY SYSTEM. CONTRACTOR TO CONFIRM PRIOR TO WORK.

4. EXPOSED CONCRETE FOUNDATION HAS NO SIGNIFICANT DETERIORATION AND IS NOT COATED. THE GROUT BETWEEN THE STEEL BASEPLATE AND THE CONCRETE FOUNDATION IS IN FAIR CONDITION WITH MISSING SECTIONS OF GROUT.

5. EXISTING OVERFLOW PIPE EXITS THE UPPER SIDEWALL, EXTENDS DOWN ALONG THE SIDEWALL, AND DOWN INTO THE GROUND TO BE BURIED. THERE IS A REPAIR CLAMP ON THE OVERFLOW PIPE.

6. ROOF HATCH TO THE WET INTERIOR IS IN GOOD CONDITION. THE HINGED COVER IS IN GOOD CONDITION. THERE ARE TWO 24" DIAMETER MANWAYS IN THE SIDEWALL THAT ARE IN GOOD CONDITION. THERE ARE TWO 12"x16" MANWAYS IN THE SIDEWALL THAT ARE IN FAIR CONDITION.

7. THE ROOF VENT IS A FLOW-THROUGH DESIGN. SCREENS ARE PRESENT. THE VENT IS HINGED AND IT CAN BE USED TO ACCESS THE WET INTERIOR.

8. THERE IS NO VANDAL GUARD ON THE SIDEWALL LADDER.

9. DIXON ENGINEERING INC. MAINTENANCE INSPECTION 353,500 GALLON RESERVOIR FOR FURTHER REFERENCE TO EXISTING CONDITIONS INCLUDED.

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REVISIONS

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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
PALMER AVENUE TANK REHABILITATION
ASHTABULA, OHIO
ASHTABULA COUNTY

EXISTING SITE PLAN

PROJECT NO.
230155
DISCIPLINE

SHEET NAME
Ex Cond

SHEET 3 OF 14

N

5 ' 0' 5 '

SCALE: 1" = 5 '

NOTES:

INCLUDES THE REHABILITATION OF EXISTING STEEL TANK THAT IS USED FOR WASTEWATER STORAGE WITHIN THE SANITARY COLLECTION SYSTEM DURING WET WEATHER FLOWS. THE EXISTING TANK IS A STEEL TANK WITH A DIAMETER OF 52 FT. WITH AN OVERFLOW ELEVATION OF 22 FT.

OWNER SHALL FLUSH TANK OF WASTEWATER PRIOR TO CONTRACTOR MOBILIZING TO THE SITE. THE CONTRACTOR SHALL PROVIDE OWNER A 48 HOUR NOTICE PRIOR TO MOBILIZATION.

CONTRACTOR SHALL PREPARE INTERIOR AND EXTERIOR SURFACES BY SSPC-SP10 NEAR WHITE BLAST. CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER OF ANY DEFICIENCIES IN THE STEEL WITH THE COMPLETION OF THE BLASTING ACTIVITY.

THERE ARE TWO 24" MANWAYS AND TWO 16"x12" MANWAYS IN THE SIDEWALL. AN ADDITIONAL 24" ROOF HATCH IS PRESENT. HATCHES SHALL BE PREPARED BY SSPC-SP10 NEAR WHITE BLAST AND COATED WITH THE REQUIRED COATING. EX. HARDWARE SHALL BE REPLACED WITH NEW 304 STAINLESS STEEL BOLTS. EX. GASKET SHALL BE REPLACED WITH NEW EPDM GASKETS. CONTRACTOR SHALL ENSURE THAT THE HATCHES ARE WATERTIGHT WITH THE COMPLETION OF THE COATING. THE COATING SYSTEM SHALL NOT IMPEDE THE OPERATION OF THE HATCHES.

COATING SYSTEMS SHALL BE PROVIDED ON ALL SURFACES INSIDE OF THE TANK, INCLUDING THE EXTERIOR OF ALL PIPES AND THE EXTERIOR OF THE OVERFLOW PIPE. THE COATING SYSTEM SHALL NOT IMPAIR THE OPERATION OF THE INTERIOR FLUSHING SYSTEM.

CONTRACTOR SHALL REMOVE LOOSE GROUT BETWEEN THE STEEL BASEPLATE AND CONCRETE FOUNDATION REPAIR WITH NON-SHRINK GROUT. AFTER THE NON-SHRINK GROUT HAS CURED. THE PROPOSED COATING SHALL BE EXTENDED OVER THE GROUT AND EXPOSED CONCRETE.

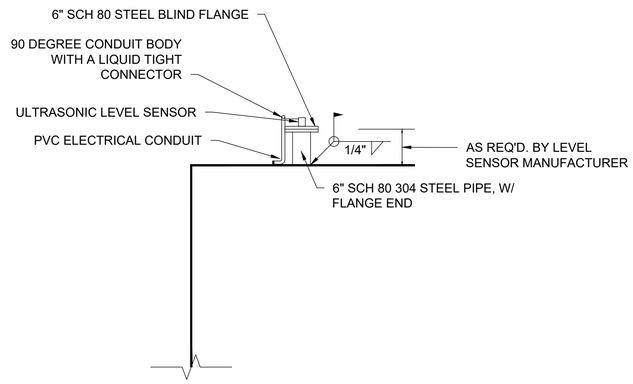
CONTRACTOR SHALL FURNISH AND INSTALL PERMANENT HORIZONTAL LIFELINE SYSTEM THAT CONNECTS TO THE ROOF OF THE STEEL TANK FROM EXISTING ROOF HATCH TO VENT. LIFELINE SHALL BE STAINLESS STEEL AND MEET OSHA REGULATIONS. MINIMUM LOAD RATING SHALL BE A MINIMUM OF 400 LBS WITH INLINE ENERGY ABSORBER. ANCHOR SYSTEM SHALL BE DESIGNED FOR CONNECTION TO METAL SURFACES AND HORIZONTAL LIFELINES IN PERMANENT APPLICATIONS. INSTALLATION SHALL BE PERFORMED AS RECOMMENDED BY THE MANUFACTURER. MANUFACTURERS SHALL BE DBI-SALA OR APPROVED EQUAL.

CONTRACTOR SHALL FURNISH AND INSTALL A NEW FIXED STEEL CAGE DOOR ATTACHED TO THE BOTTOM OF THE CAGE BY A HINGE. DOOR SHALL BE LOCKABLE.

CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING 4" DIP WASHDOWN RISER PIPE WITH A NEW CL 53 DUCTILE IRON PIPE WITH FLANGE JOINTS. LIMITS OF REPACEMENT SHALL BE BETWEEN 90 DEGREE BEND AT TOP OF TANK TO THE FLANGE JOINT AT GROUND LEVEL. INTERIOR COATING SHALL BE LINED WITH CEMENT MORTAR MEETING ANSI A21.4/AWWA C104. PIPE SHALL BE COATED TO MATCH TANK COATING.

CONTRACTOR SHALL CUT NEW HOLE IN THE TOP OF THE TANK ROOF FOR THE INSERTION OF A NEW RADAR LEVEL SENSOR. REFER TO LEVEL SENSOR INSTALLATION DETAIL. WELD NEW 6" STEEL PIPE TO ROOF OF TANK, WATER TIGHT. NEW LEVEL SENSOR SHALL BE CONNECTED TO THE MCC IN THE EX. GENERATOR BUILDING.

CONTRACTOR SHALL COORDINATE WORK EFFORT TO THE INTERIOR OF THE WATER STORAGE TANK WITH THE COUNTY.



NOTES:
1. CORE HOLE ROOF AND SEAL ROOF THROUGH WELD.
2. ALL CONDUIT FOR LEVEL SENSOR SHALL BE SCH 40 NON-METALLIC PVC TO RESIST MOISTURE, MEETING UL AND ETL STANDARDS.
3. CONDUIT SHALL BE ATTACHED TO THE SIDEWALL OF THE STEEL TANK A MINIMUM OF TWO SUPPORTS PER LENGTH OF CONDUIT, MEETING UL LISTING

LEVEL SENSOR INSTALLATION DETAIL

N.T.S.

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REVISIONS

REV.	DESCRIPTION	DATE

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EPA APPROVAL
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SCALE: N/A
DESIGNED BY: RSS
DRAWN BY: BEK
CHECKED BY: RSS

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

PALMER AVENUE TANK REHABILITATION

ASHTABULA COUNTY ASHTABULA, OHIO

TANK REHABILITATION DETAILS

PROJECT NO.
230155
DISCIPLINE
SHEET NAME
Details1
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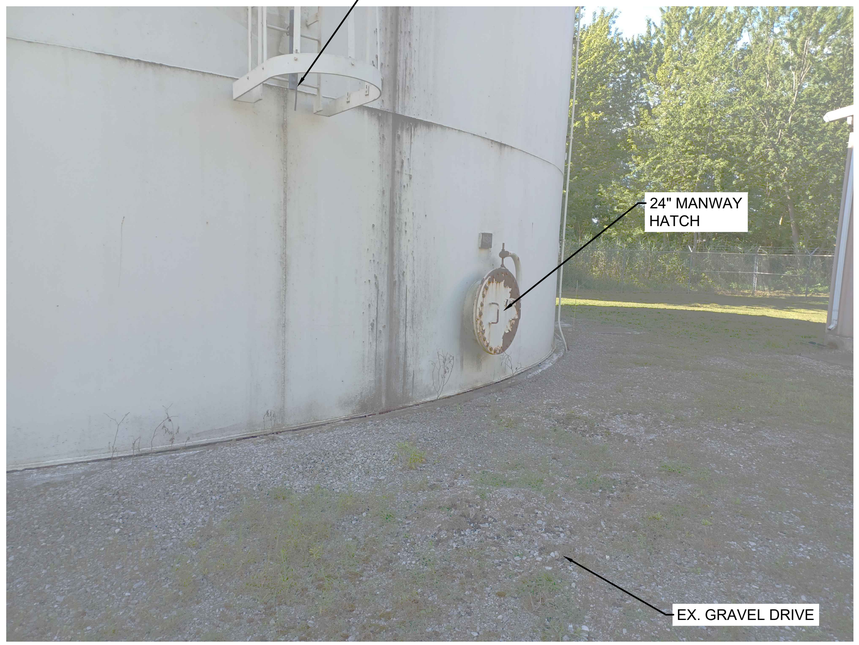
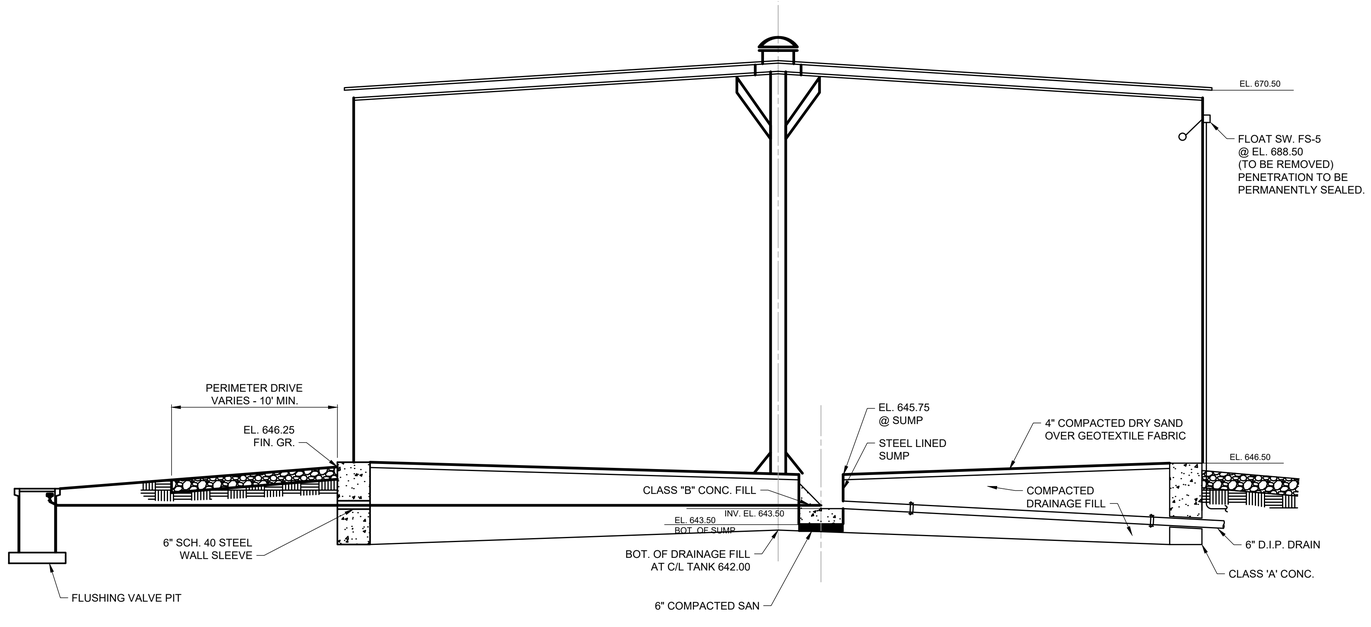


PHOTO 1 - PALMER AVE. TANK
TANK FIXED LADDER

PHOTO 2 - PALMER AVE. TANK
GROUT BETWEEN STEEL BASE AND FOUNDATION

PHOTO 3 - PALMER AVE. TANK
TANK SITE



RETENSION BASIN TYPICAL SECTION
NOT TO SCALE

REVISIONS

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PALMER AVENUE TANK REHABILITATION
ASHTABULA, OHIO
ASHTABULA COUNTY

TANK REHABILITATION DETAILS

PROJECT NO.
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SHEET NAME
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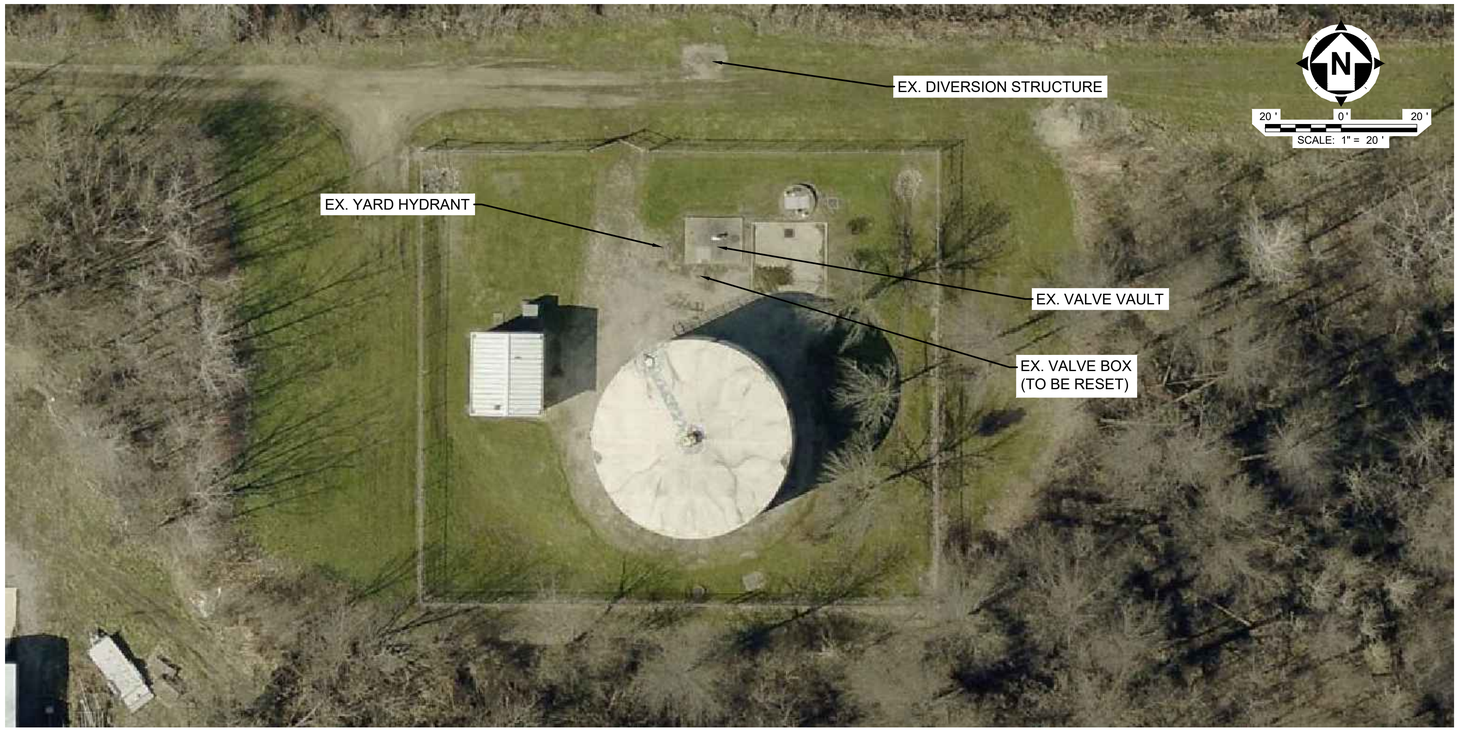

NOTES:

REPLACE EXISTING 14" PLUG VALVE

CONTRACTOR SHALL REMOVE AND REPLACE TWO EXISTING 14" PLUG VALVES AND ELECTRIC ACTUATOR LOCATED WITHIN THE EX. DIVERSION STRUCTURE.

TWO NEW 14" PLUG VALVES SHALL BE FURNISHED AND INSTALLED WITH NEW ELECTRIC ACTUATOR.

REPLACE EXISTING DIVERSION STRUCTURE LEVEL SENSOR

CONTRACTOR SHALL REMOVE THE EXISTING LEVEL SENSOR IN ITS ENTIRETY. A NEW RADAR LEVEL SENSOR SHALL BE CONSTRUCTED WITHIN THE DIVERSION CHAMBER.

RADAR LEVEL SENSOR SHALL BE CONNECTED TO THE MCC WITHIN THE EX. GENERATOR BUILDING.

REPLACE EXISTING 6" PINCH VALVE

CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING 8" PINCH VALVE AND ELECTRIC ACTUATOR LOCATED WITHIN THE EX. VALVE VAULT.

A NEW 6" PINCH VALVE SHALL BE FURNISHED AND INSTALLED WITH NEW ELECTRIC ACTUATOR.

YARD HYDRANT REPLACEMENT

CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING YARD HYDRANT AND CONCRETE PAD. THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW 3/4" KUPFERLE TOTAL ECLIPSE YARD HYDRANT, OR APPROVED EQUAL. HYDRANTS SHALL BE SELF DRAINING, NON-FREEZING, AND SERVICEABLE FROM ABOVE GROUND.

CONCRETE PAD SHALL BE REPLACED WITH NEW 6" CONCRETE PAD, 5'x5' IN DIMENSIONS. 6" OF 304 AGGREGATE SHALL BE COMPACTED UNDER NEW PAD. FINISH GRADE SHALL BE SET 2" ABOVE EXISTING GRADE.

CLEANOUT RESET

CONTRACTOR SHALL REMOVE THE EXISTING CONCRETE PAD AND EXCAVATE THE EXISTING GROUT AND RESET THE CLEANOUT, PLUM AND VERTICALLY STRAIGHT. BACKFILL WITH 304 AGGREGATE. CONCRETE PAD SHALL BE REPLACED WITH NEW 6" CONCRETE PAD, 4'x4' IN DIMENSIONS. 6" OF 304 AGGREGATE SHALL BE COMPACTED UNDER THE NEW PAD. FINISH GRADE SHALL BE SET 2" ABOVE EXISTING GRADE.

PHOTO 4 - PALMER AVE. TANK
EX. YARD HYDRANT

PHOTO 5 - PALMER AVE. TANK
VALVE VAULT

PHOTO 6 - PALMER AVE. TANK
VALVE VAULT

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ASHTABULA, OHIO
ASHTABULA COUNTY

TANK REHABILITATION DETAILS

PROJECT NO.
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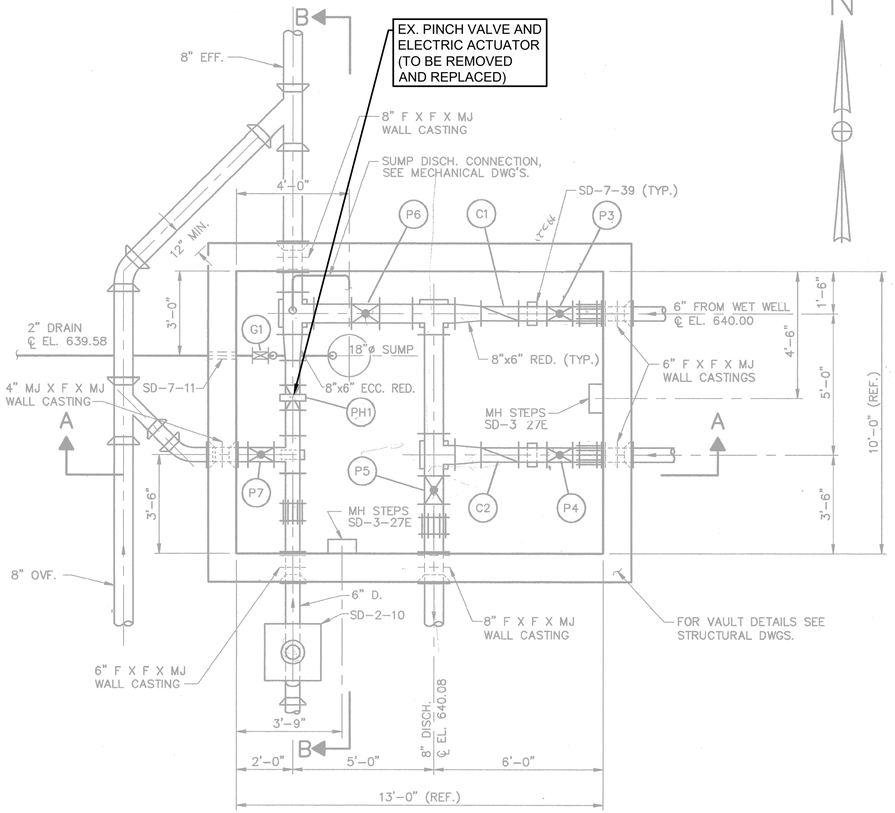
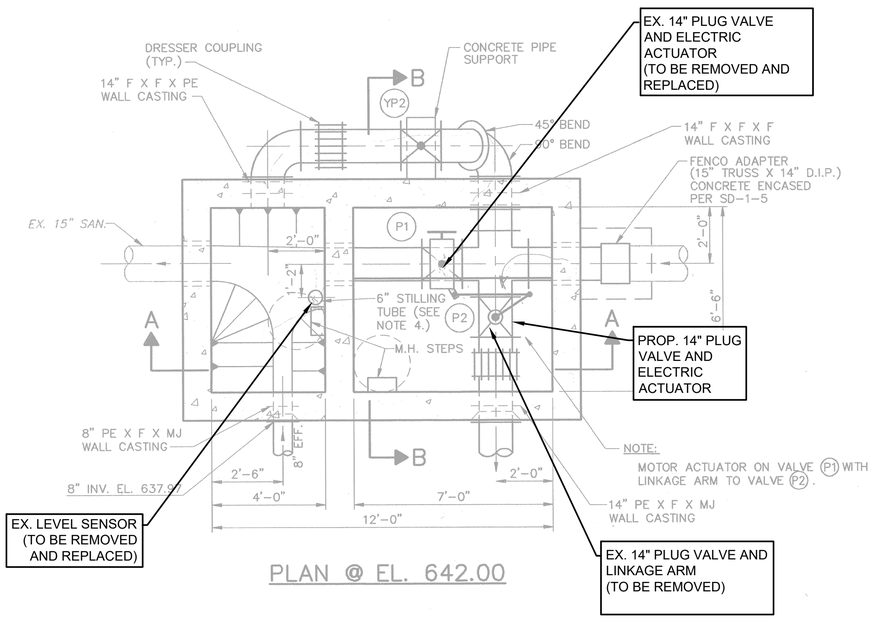


PLAN EL. 644.00

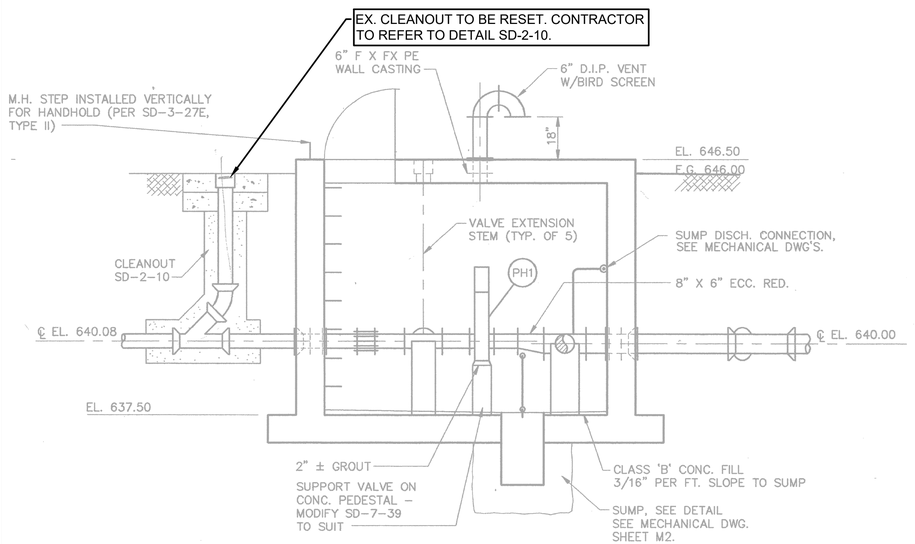
SCALE: 3/8" = 1'-0"



PLAN @ EL. 642.00

NOTE:

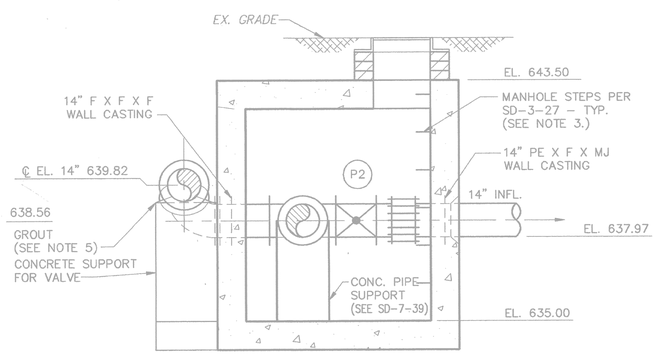
FOR VALVE BOX PHOTOS, SEE NEXT SHEET.



SECTION B-B

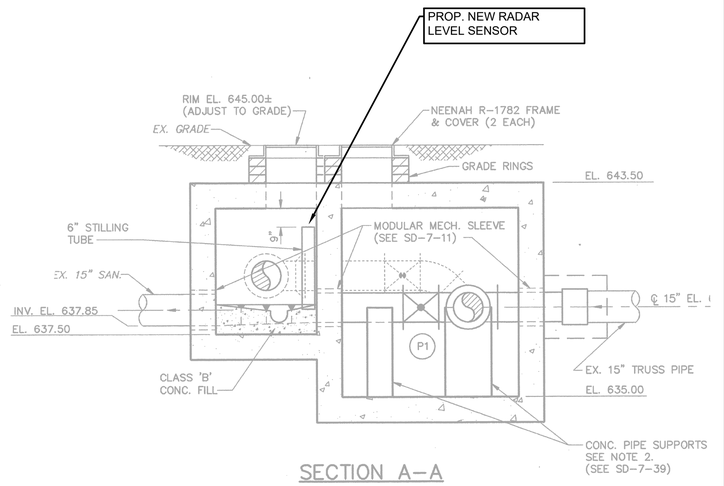
SCALE: 3/8" = 1'-0"

VALVE VAULT



SECTION B-B

DIVERSION CHAMBER



SECTION A-A

DIVERSION CHAMBER PLAN & SECTIONS

DIVERSION CHAMBER

REV.	DESCRIPTION	DATE

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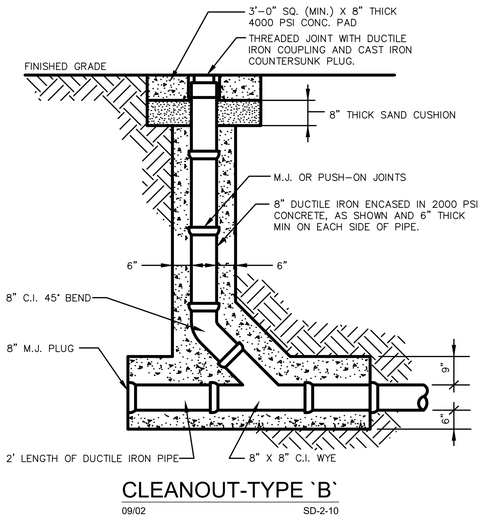
EX. GRAVEL DRIVE

PROP. GRAVEL DRIVE

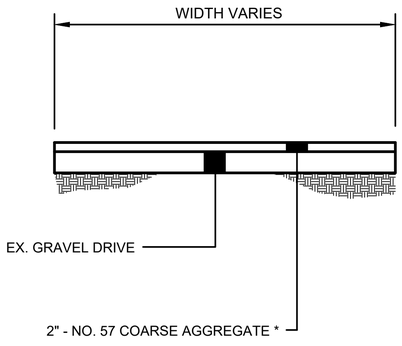
NOTES:

WITH THE COMPLETION OF WORK, THE CONTRACTOR SHALL PLACE 2" OF NO. 57 COARSE AGGREGATE OVER EXISTING GRAVEL. TOTAL OF 60 S.Y. OF GRAVEL.



CLEANOUT-TYPE `B`

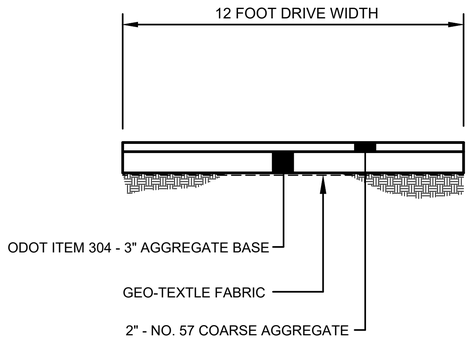
09/02 SD-2-10



EX. GRAVEL DRIVE

NOT TO SCALE

* NOTE: CONTRACTOR SHALL SPRAY HERBICIDE ON EXISTING VEGETATION WITHIN EXISTING DRIVE PRIOR TO PLACING NEW GRAVEL.



PROP. GRAVEL DRIVE

NOT TO SCALE

PHOTO 7 - PALMER AVE. TANK

VALVE BOX

PHOTO 8 - PALMER AVE. TANK

DIVERSION CHAMBER LEVEL SENSOR

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PALMER AVENUE TANK REHABILITATION

ASHTABULA COUNTY — ASHTABULA, OHIO

TANK REHABILITATION DETAILS

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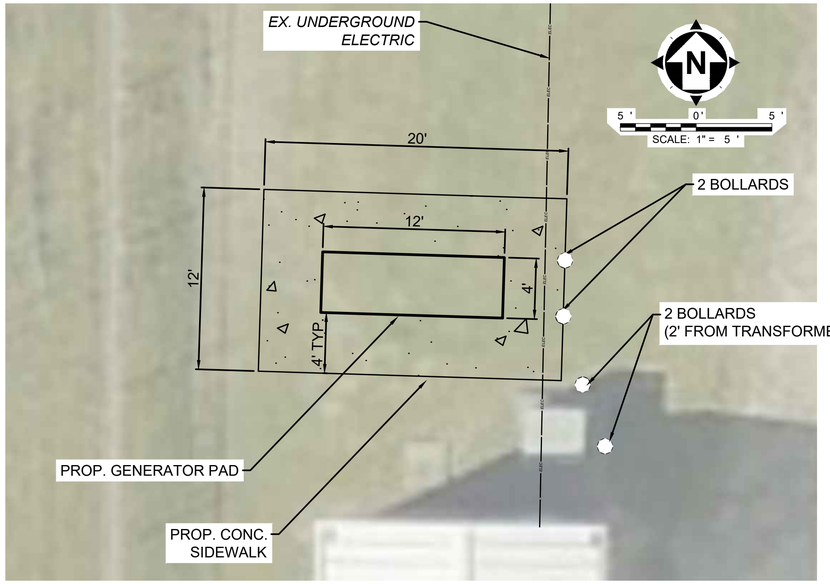


NOTES:

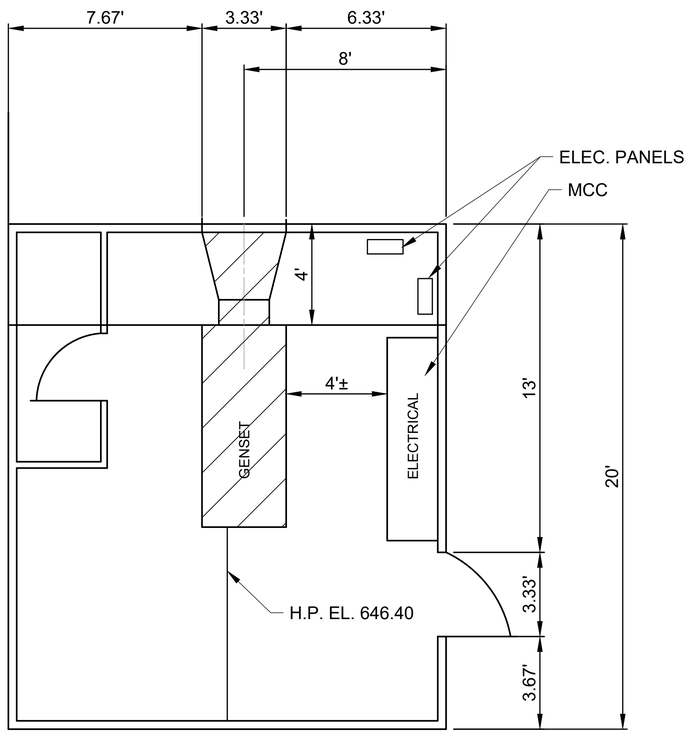
CONTRACTOR SHALL REMOVE THE EX. GENERATOR AUTOMATIC TRANSFER SWITCH, CONTROL PANEL, DUCTWORK, EXHAUST PIPING, AND APPURTENANCES INSIDE THE EX. GENERATOR BUILDING. THE CONCRETE PAD SHALL BE REMOVED IN ITS ENTIRETY AND A NEW 6" THICK CONCRETE PAD SHALL BE POURED FLUSH WITH THE EXISTING FLOOR. #4 REBAR SHALL BE DRILLED INTO THE EXISTING FLOOR, 2' O.C. A MINIMUM OF 6" EMBEDMENT INTO EXISTING AND PROPOSED CONCRETE.

CONTRACTOR TO REMOVE EXISTING LOUVERS AS SHOWN IN DRAWINGS FOR EX. GENERATOR. FILL WALL CAVITY WITH 3" EXTRUDED POLYSTYRENE BOARD INSULATION. CONTRACTOR SHALL PLACE METALLIC-COATED STEEL SHEET OVER THE OPENING, INTERIOR AND EXTERIOR. METALLIC-COATED STEEL SHEET SHALL BE ZINC COATED (GALVANIZED) STEEL SHEET COMPLYING WITH ASTM A653, G90 COATING DESIGNATION, OR ALUMINUM ZINC ALLOY-COATING STEEL SHEET COMPLYING WITH ASTM A792, CLASS AZ50 COATING DESIGNATION, STRUCTURAL QUALITY. PREPAINTED BY THE COIL-COATING PROCESS TO COMPLY WITH ASTM A755. NOMINAL THICKNESS SHALL BE 0.0040 INCH. EXTERIOR FINISH SHALL CONSIST OF A TWO-COAT FLUOROPOLYMER, COLOR TO MATCH EXISTING COLOR. A SILICON SEALANT SHALL BE PROVIDED AT ALL JOINTS. NEW SHEET SHALL BE UNDER EXISTING.

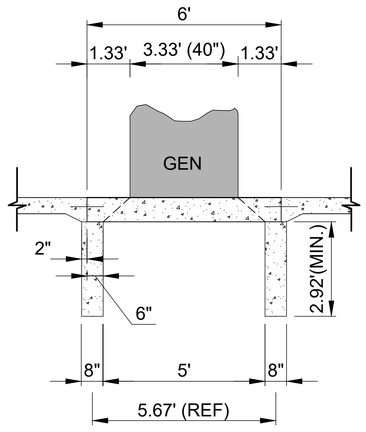
IT IS ASSUMED THAT THE BEARING CAPACITY IS 1,500 PSF. NO SOIL BORINGS WERE PERFORMED FOR THIS PROJECT.

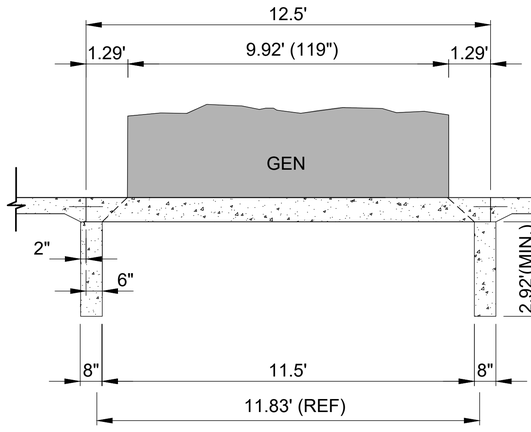
AT A MINIMUM THE SIZE OF THE GENERATOR PAD SHALL BE A MINIMUM OF 6" IN EXCESS OF THE DIMENSIONS OF THE GENERATOR IF THE SIZE OF THE GENERATOR EXCEEDS THE PROPOSED NOTED DIMENSIONS.

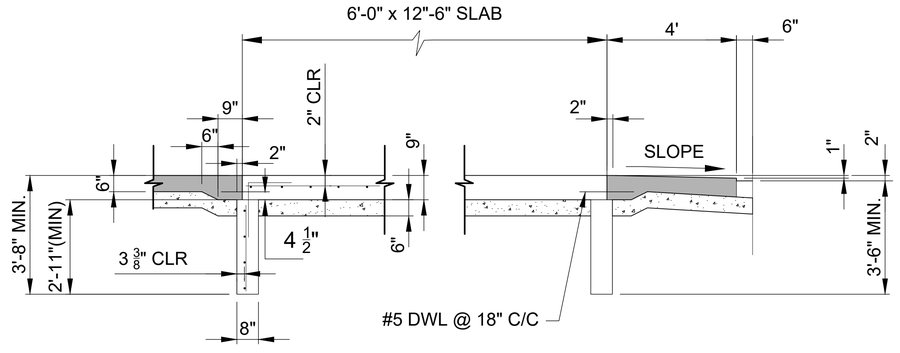
CONCRETE WALKS SHALL BE SLOPED AWAY FROM THE GENERATOR PAD. PREFORMED EXPANSION JOINT SHALL BE PROVIDED BETWEEN THE CONCRETE WALK AND BOLLARDS. MINIMUM THICKNESS OF THE SIDEWALK 6" WITH ODOT 709.10 6"x6" (W4 X W4) WIRE FABRIC MESH, INSTALLED PER ODOT DETAIL BP-1.1. CONCRETE WALKS SHALL BE PROVIDED WITH A 6" ODOT TYPE 304 COMPACTED AGGREGATE BASE.



FLOOR PLAN
NOT TO SCALE

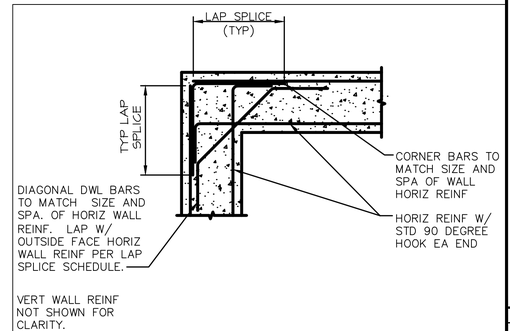






ALL REBAR #5 @ 12" C/C UNO

DIESEL GENERATOR FOUNDATION DETAIL
NOT TO SCALE



TYPICAL CONCRETE WALL CORNER REINFORCING PLAN DETAIL
SCALE: N.T.S. SD-7-1

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ASHTABULA COUNTY — ASHTABULA, OHIO

TANK REHABILITATION DETAILS

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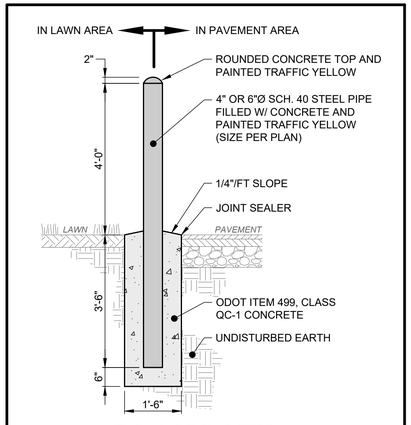
PHOTO 11 - PALMER AVE. TANK
PROP. GENERATOR SITE

PHOTO 12 - PALMER AVE. TANK
PROP. GENERATOR SITE

PHOTO 13 - PALMER AVE. TANK
WEST ELEVATION OF EX. GENERATOR BUIILDING

PHOTO 9 - PALMER AVE. TANK
EXISTING GENERATOR

PHOTO 10 - PALMER AVE. TANK
EXISTING GENERATOR



BOLLARD DETAIL
SCALE: NONE

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TANK REHABILITATION DETAILS

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DISCIPLINE

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Details7

SHEET 10 OF 14

H:\230155\DWG\SHEETSIC_230155_EX COND.DWG - DETAILS7 - 10/8/2024 12:01:17 PM - BRIAN KELL

ELECTRICAL SYMBOLS - PLAN:

- HOME RUN TO PANEL
- MOTOR
- MOTOR CONTROLLER
- FUSIBLE SAFETY SWITCH
- NON-FUSIBLE DISCONNECT SWITCH
- SIMPLEX RECEPTACLE, EXPLOSION PROOF
- DUPLEX RECEPTACLE
- QUADPLEX RECEPTACLE
- COMMUNICATIONS RECEPTACLE WITH TWO RJ45 JACKS
- SPECIAL RECEPTACLE, NEMA TYPE NOTED
- SINGLE-POLE SWITCH, "3" INDICATES 3-WAY, "4" INDICATES 4-WAY, "HOA" INDICATES HAND-OFF-AUTO
- DRY-TYPE TRANSFORMER
- PUSHBUTTON STATION
- LOUVER OPERATOR
- JB — JUNCTION BOX
- SV — SOLENOID VALVE
- ZS — LIMIT SWITCH
- FS FE FIT — FLOW: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
- LS LE LIT — LEVEL: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
- PS PE PIT — PRESSURE: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
- TS TE TIT — TEMPERATURE: SWITCH, SENSOR, TRANSMITTER W / DISPLAY
- AE AIT — OTHER SENSOR / INDICATING TRANSMITTER AS NOTED

NOTE ON THE WORK OF SYSTEM INTEGRATOR:

E.C. SHALL CONTRACT WITH CATTRON SYSTEMS THROUGH THEIR VENDOR HP THOMPSON, OF MILFORD OH TO ACT AS THE PROJECT SYSTEM INTEGRATOR (S.I). E.C. TO INCLUDE THE S.I. ALLOWANCE IN THE BID AS DESCRIBED IN DIVISION 1 SPECIFICATIONS AND TO PAY S.I. FOR THEIR WORK FROM THIS ALLOWANCE UPON PROJECT COMPLETION.

S.I. SHALL PROVIDE AND CONFIGURE REMOTE TERMINAL UNITS (RTUs) FOR EACH OF THE PROJECT SITES. (INSTALLATION BY E.C.)

S.I. SHALL CONFIGURE THE CLOUD BASED SCADA FOR ACCESS THROUGH A WEBBROWSER AT THE CENTRAL MONITORING LOCATION FOR REMOTE MONITORING OF THE SITES. IN ADDITION TO EQUIPMENT MONITORING, EQ DRAIN VALVE (PV-41) SHALL BE CONFIGURED FOR REMOTE CONTROL THROUGH SCADA.

S.I. SHALL COORDINATE WITH OWNER AND CONFIGURE ALARM CALL-OUTS.

S.I. SHALL COORDINATE WITH THE E.C. FOR THE CONNECTION OF THE SIGNALS AT EACH SITE.

ALL WIRING AND PANEL INSTALLATION IS BY E.C.

SINGLE LINE, ELEMENTARY, & INTERCONNECTION DIAGRAMS (ONLY) SYMBOLS:

- 30A — DISCONNECT SWITCH - AMP RATING
- 20A — FUSE - AMP RATING
- 30A (S) — SHUNT TRIP
- 30A — CIRCUIT BREAKER - AMP RATING
- 40 — MOTOR W/ HORSEPOWER INDICATED
- AM — AMMETER
- VM — VOLT METER
- PF — POWER FACTOR METER
- GF — GROUND FAULT RELAY
- TRANSFORMER
- R — RELAY COIL
- TR — TIMING RELAY COIL
- M — MOTOR STARTER COIL
- ETM — ELAPSED TIME TOTALIZER
- G — GROUNDING BUS
- SPD — TRANSIENT VOLTAGE SURGE SUPPRESSOR
- N.O. LIMIT SWITCH
- N.O. FLOW SWITCH
- N.O. LEVEL SWITCH
- N.O. PRESSURE SWITCH
- N.O. TEMPERATURE SWITCH
- N.O. TIME DELAY AFTER ENERGIZATION
- N.C. TIME DELAY AFTER ENERGIZATION
- N.C. TIME DELAY AFTER DE-ENERGIZATION
- N.O. TIME DELAY AFTER DE-ENERGIZATION
- N.O. SWITCH (GENERAL)
- START PUSHBUTTON NORMALLY OPEN
- STOP PUSHBUTTON NORMALLY CLOSED
- CONTACT - NORMALLY OPEN
- CONTACT - NORMALLY CLOSED
- SOLENOID COIL
- G — PILOT LIGHT - PUSH TO TEST (COLOR)
- GROUND
- CAPACITOR
- XO OX — 2 POSITION SELECTOR SWITCH
- XOO OOX — 3 POSITION SELECTOR SWITCH
- EQUIPMENT FIELD TERMINAL

ELECTRICAL ABBREVIATIONS:

A	AMPS
AF	AMPERE FRAME
AI	ANALOG INPUT (PLC)
AL	ALUMINUM
AM	AMMETER
AO	ANALOG OUTPUT (PLC)
AP	ALARM PANEL
AT	AMPERE TRIP
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CJB	CONTROL JUNCTION BOX
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CORROSION RESISTANT
x-CSC	"X" NUMBER CONDUCTOR SHIELDED CABLE
CS	CONTROL STATION
CT	CURRENT TRANSFORMER
CU	COPPER
DB	DUCT BANK
DI	DIGITAL INPUT (PLC)
DO	DIGITAL OUTPUT (PLC)
EAG	ELECTRICALLY ACTIVATED GATE
EAV	ELECTRICALLY ACTIVATED VALVE
EF	EXHAUST FAN
ESPB	EMERGENCY STOP PUSHBUTTON (MAINTAINED)
ETT	ELAPSED TIME TOTALIZER
EWD	ELEMENTARY WIRING DIAGRAM
FDS	FUSED DISCONNECT SWITCH
FLA	FULL LOAD AMPERES
FS	FLOW SWITCH
FVC	FULL VOLTAGE CONTACTOR
FVNR-1	FULL VOLTAGE NON-REVERSING STARTER SIZE 1
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GFR	GROUND FAULT RELAY
HOA	HAND/OFF/AUTO SELECTOR SWITCH
HP	HORSEPOWER
HT	HIGH TORQUE SWITCH
HTR	HEATER
Hz	HERTZ
IAW	IN ACCORDANCE WITH
ICP	INSTRUMENTATION & CONTROL PANEL
IPP	INSTRUMENT POWER PANEL
JB	JUNCTION BOX
JBC	JUNCTION BOX-CONTROL
JBM	JUNCTION BOX-METERING
JBP	JUNCTION BOX-POWER
kCM	KILO (1000) CIRCULAR MILL
kVA	KILOVOLT AMPERES
kVAR	KILOVOLT AMPERES-REACTIVE
kW	KILOWATT
LA	LIGHTING ARRESTOR
LGT	LIGHT
LOR	LOCAL/OFF/REMOTE SELECTOR SWITCH
LP	LIGHTING PANEL
LS	LEVEL SWITCH
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MJB	METERING JUNCTION BOX
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MFR ASSOC.
NEUT	NEUTRAL
NFDS	NON-FUSED DISCONNECT SWITCH
OCSS	OPEN/CLOSE SELECTOR SWITCH
OL	OVERLOAD
OOSS	ON/OFF SELECTOR SWITCH
OS	OCCUPANCY SENSING
OT	OVER TORQUE SWITCH
P	POLE
PB	PUSHBUTTON
PBC	PULLBOX-CONTROL
PBM	PULLBOX-METERING
PBP	PULLBOX-POWER
PC	PHOTO CONTROL
PF	POWER FACTOR
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PJB	POWER JUNCTION BOX
PP	POWER PANEL
PRI	PRIMARY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
R	RELAY
RCP	REINFORCED CONCRETE PIPE
RL	RUN LIGHT
SCP	SURGE CONTROL PANEL
SCR	SILICON-CONTROLLED RECTIFIER
SEC	SECONDARY
SF	SUPPLY FAN
SHLD	SHIELDED
SP	SHEAR PIN SWITCH
SPK	SPEAKER
SS	SELECTOR SWITCH OR STAINLESS STEEL
SSOR	SOLID STATE OVERLOAD RELAY
SSPB	START/STOP PUSHBUTTON
SSS	SOLID STATE STARTER
STD	STANDARD
STRTR	STARTER
SV	SOLENOID VALVE
SW	SWITCH
T	TELEPHONE
TB	TERMINAL BOARD
TC	TIME CLOCK
TD	TRENCH DUCT
TEB	TELEPHONE EQUIPMENT BACKBOARD
TEMP	TEMPERATURE
TOR	THERMAL OVERLOAD RELAY
TR	TIMING RELAY
TSP	TWISTED SHIELDED PAIR
TSTAT	THERMOSTAT
TVSS	TRANSIENT VOLTAGE SUPPRESSOR
UH	UNIT HEATER
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VC	VOLUME CONTROL
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLT METER
XP	EXPLOSION PROOF
XFMR	TRANSFORMER
WP	WATERPROOF
ZS	LIMIT SWITCH

ELECTRICAL SPECIFICATIONS:

1. THE ELECTRICAL CONTRACTOR SHALL APPLY FOR AND SECURE ALL COSTS AND CHARGES FOR PERMITS, REQUIRED FOR CONSTRUCTION, AND MISCELLANEOUS WORK ASSOCIATED WITH AND NECESSARY FOR THE COMPLETION OF THE PROJECT ELECTRICAL WORK.
2. THE ELECTRICAL CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS OF ELECTRICAL WORK BY ALL INSPECTION AUTHORITIES HAVING JURISDICTION. COPIES OF INSPECTION REPORTS SHALL BE MADE AVAILABLE TO THE OWNER UPON REQUEST, AND THREE (3) COPIES OF THE APPROVED FINAL INSPECTION REPORT SHALL ACCOMPANY THE REQUEST FOR FINAL PAYMENT.
3. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC 2017), OHIO BUILDING CODE, LOCAL CODES AND ORDINANCES WHERE APPLICABLE, AND REQUIREMENTS OF O.S.H.A.
4. ALL MATERIALS AND EQUIPMENT FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE NEW, U.L. LISTED OR LABELED, AND CONFORM TO NEMA AND ANSI STANDARD WHERE APPLICABLE.
5. THE CONTRACTOR SHALL VISIT EACH SITE AND FULLY FAMILIARIZE HIMSELF WITH ALL CONDITIONS WHICH AFFECT HIS WORK PRIOR TO BID. COORDINATE AND SCHEDULE WORK WITH OTHER TRADES TO ENSURE SATISFACTORY PERFORMANCE, AVOID DELAYS AND DUPLICATIONS AND MEET THE OWNER'S COMPLETION SCHEDULE FOR THE USE OF THE SITES.
6. ALL WORK SHALL BE INSTALLED BY WORKMEN FULLY SKILLED IN THE WORK TO BE PERFORMED. REPAIR OR REPLACE EXISTING EQUIPMENT OR PROPERTY OF THE OWNER DAMAGED BY ELECTRICAL TRADES WORKMEN.
7. THE ELECTRICAL CONTRACTOR SHALL GUARANTEE MATERIALS AND WORKMANSHIP PROVIDED BY HIM FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF OWNER'S FINAL ACCEPTANCE. REPAIR OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER WITHIN THE GUARANTEE PERIOD.
8. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT. ALL ABOVE GRADE CONDUIT SHALL BE RIGID GALVANIZED. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, 1" MINIMUM. INSTALL UNDERGROUND CONDUIT AT 24" BELOW GRADE, PROVIDE WARNING TAPE 12" ABOVE THE DUCTS. TRANSITION TO ABOVE GRADE WITH PVC-COATED RGC SWEEPS. SEAL ALL CONDUIT AFTER TRANSITION FROM UNDERGROUND AT ENTRY INTO ENCLOSURES.
9. FURNISH AND INSTALL PULL BOXES, JUNCTION, AND DEVICE BOXES OF SUITABLE CODE GAUGE AND SIZE. ALL TERMINATIONS IN IN-GROUND PULL BOXES SHALL BE LIQUID-TIGHT.
10. ELECTRICAL WIRES SHALL BE MINIMUM #12 AWG, COPPER, 600 V RATED. #14 AWG COPPER SHALL BE PERMISSIBLE FOR CONTROL CIRCUITRY. AMPACITY RATINGS SHALL BE BASED UPON 75°C RATINGS.
    A. #14, #12, AND #10 AWG CONDUCTORS SHALL BE "THHN/THWN".
    B. #8 AND LARGER SHALL BE STRANDED "THHN/THWN".
13. FLEXIBLE METAL CONDUIT INCLUDING LIQUIDTIGHT SHALL BE PERMITTED WHERE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND LOCAL CODE PROVISIONS. FLEXIBLE METAL CONDUIT SHALL CONTAIN A SEPARATE GROUNDING CONDUCTOR AND BE TERMINATED WITH APPROPRIATE FITTINGS.
14. THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO DESCRIBE THE WORK REQUIRED. THE ELECTRICAL CONTRACTOR SHALL ACCURATELY FIELD MEASURE AND LAY OUT HIS WORK TO EFFECTIVELY ACHIEVE A STRUCTURALLY COORDINATED INSTALLATION WITH THE BUILDING LAYOUT AND OTHER TRADES.
15. COONFIRM ALL SERVICE ENTRANCE REQUIREMENTS AND METERING EQUIPMENT RECONNECTION WITH THE LOCAL ELECTRIC UTILITY COMPANY TO ENSURE COMPLIANCE TO UTILITY COMPANY REQUIREMENTS. PROVIDE A COMPLETE GROUNDING SYSTEM.
16. DISCONNECTION, RECONNECTION, AND RELOCATION OF EQUIPMENT SHALL BE COORDINATED SO AS TO CAUSE MINIMAL DISRUPTION OF SERVICE.
17. THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL NECESSARY DEMOLITION WORK OF ELECTRICAL DISTRIBUTION EQUIPMENT, CONDUIT AND WIRE, SO THAT NO ABANDONED EQUIPMENT IS LEFT AT ANY OF THE SITES. WHERE NOT BEING REUSED, BELOW-GRADE CONDUIT MAY BE LEFT ABANDONED. REMOVE ALL WIRE, AND CAP 12" BELOW GRADE.
18. ELECTRICIAN TO CONFIRM LOCATIONS OF ALL ELECTRICAL EQUIPMENT AND ELECTRICAL CHARACTERISTICS OF PROCESS EQUIPMENT PROVIDED BY OTHER TRADES PRIOR TO INSTALLING ROUGH-INS AS SHOWN ON THE ELECTRICAL PLANS. ALL SHOP DRAWING REQUIREMENTS WILL BE CONSIDERED AS THE MEANS AND METHODS OF INSTALLATION.
19. THIS PROJECT INVOLVES WORK AT AN INDUSTRIAL FACILITY AND THE CONTRACTOR IS EXPECTED TO PROVIDE CRAFTSMANSHIP REFLECTING THE NATURE OF THE FACILITY. CONDUITS IN PROCESS AREAS ARE TO BE SURFACE MOUNTED RIGID GALVANIZED STEEL (RGS). IN CLASSIFIED AREAS SEAL ALL CONDUITS TO RESTRICT THE PASSAGE OF GASSES AND VAPORS, AND ARRANGE SEALING FITTING DRAINS IN CONDUIT SYSTEMS TO PREVENT ACCUMULATION OF CONDENSATE ABOVE SEALS. ALL CONDUITS ENTERING OR LEAVING A MOTOR CONTROL CENTER, CONTROL PANEL, VALVE ACTUATOR, INSTRUMENT, A BUILDING, OR A PANELBOARD SHALL BE MADE WATERTIGHT. ALL HARDWARE IS TO BE STAINLESS STEEL UNLESS OTHERWISE DIRECTED.

    ALL ENCLOSURES ARE TO BE RATED AS FOLLOWS:

    - OUTDOORS: NEMA 4X (STAINLESS STEEL) (UNLESS NOTED OTHERWISE)

23. ELECTRICIAN SHALL REVIEW ALL OTHER TRADES' CONSTRUCTION DOCUMENTS AND/OR COORDINATE WITH OTHER TRADES AND VERIFY IF THERE ARE ANY ADDITIONAL ELECTRICAL REQUIREMENTS NOT SHOWN ON ELECTRICAL DRAWINGS. COST FOR WORK SHOWN ON OTHER TRADES' DRAWINGS SHALL BE INCLUDED IN BASE BID. ALL FIELD WIRING AND TERMINATIONS OF PROCESS EQUIPMENT AND INSTRUMENTATION AND CONTROLS SHALL BE THE RESPONSIBILITY OF THE ELECTRICIAN. ALL CABLES AND WIRES PROVIDED BY VENDORS SHALL BE INSTALLED AND TERMINATED BY THE ELECTRICIAN. WIRE ALL MISCELLANEOUS POWER AND CONTROLS AS REQUIRED TO PROVIDE A COMPLETE FUNCTIONING SYSTEM.
24. THE ELECTRICIAN SHALL INSTALL & DISTRIBUTE TEMPORARY POWER SERVICE FOR THE DURATION OF THIS PROJECT AT EACH SITE AS DIRECTED BY THE GENERAL CONTRACTOR. ALL COSTS ASSOCIATED WITH THE INSTALLATION, DISTRIBUTION AND MAINTENANCE OF THE TEMPORARY POWER IS THE RESPONSIBILITY OF THE ELECTRICIAN. ALL TEMPORARY EQUIPMENT, CONDUITS & CONDUCTORS SHALL BE COMPLETELY REMOVED AT COMPLETION OF PROJECT.
25. ALL ELECTRICAL EQUIPMENT, DEVICES, LIGHTING FIXTURES, CONDUIT, AND WIRING SHOWN ON THE ELECTRICAL DRAWINGS IS NEW UNLESS CLEARLY CALLED OUT AS EXISTING. ALL EXISTING ELECTRICAL EQUIPMENT THAT IS CALLED OUT TO BE REUSED SHALL BE INSPECTED IN THE FIELD BY THE ELECTRICIAN AND THE CONSTRUCTION MANAGER TO DETERMINE ITS CONDITION PRIOR TO STARTING ANY WORK. PROVIDE DOCUMENTATION TO OWNER INDICATING CONDITION OF THE EXISTING EQUIPMENT, AND REUSE EXISTING EQUIPMENT ONLY IF ALL PARTIES AGREE THE CONDITION IS ACCEPTABLE. ALL EXISTING EQUIPMENT DETERMINED TO BE UNUSABLE SHALL BE REPLACED WITH LIKE KIND AS DIRECTED BY THE OWNER. ANY OF THE OWNERS EQUIPMENT DETERMINED TO BE REUSED THAT IS DAMAGED BY ANY CONTRACTOR DURING SWITCHOVER SHALL BE REPLACED BY THAT CONTRACTOR. ALL EXISTING EQUIPMENT IS THE PROPERTY OF THE OWNER (NOT THE CONTRACTOR) AND SHALL BE TREATED ACCORDINGLY.

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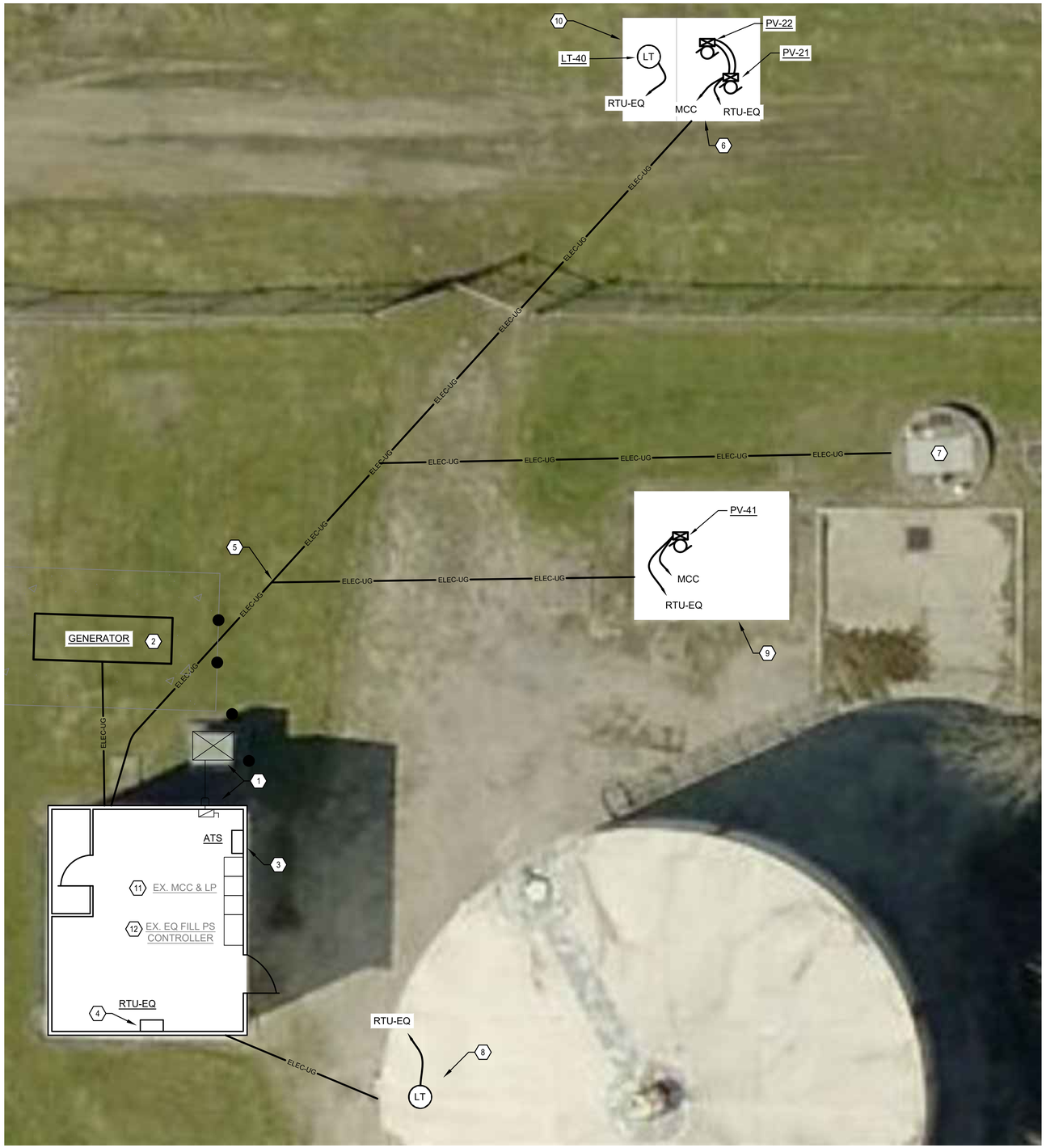
CHECKED BY: RSS

ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
PALMER AVENUE TANK REHABILITATION
ASHTABULA COUNTY — ASHTABULA, OHIO

GENERAL NOTES & LEGEND

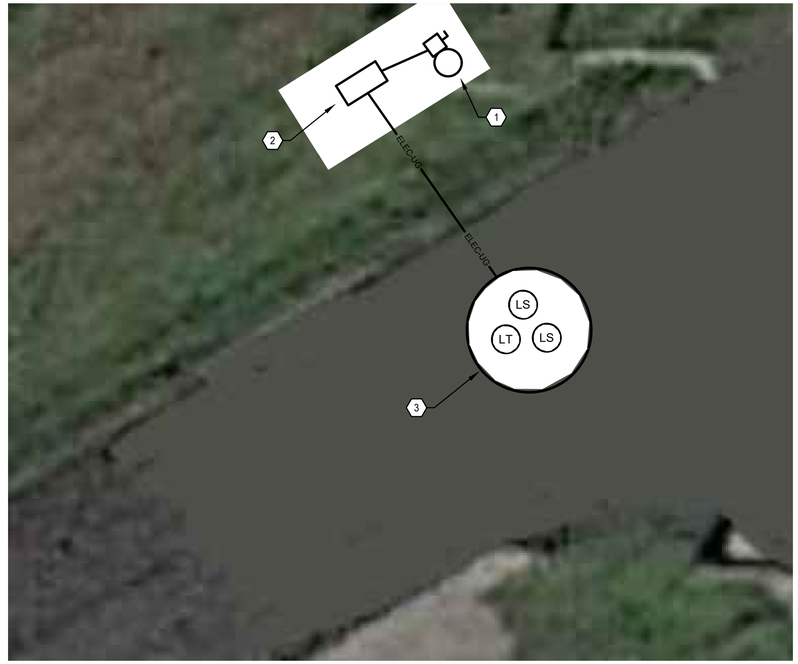
PROJECT NO. 230155
DISCIPLINE
SHEET NAME: GN-2
SHEET 11 OF 14

C:\CT\CAD_DRIVES_H\230155\DWG\SHEETS\E_230155 - GENERAL NOTES & LEGEND.DWG - GN-2 - 8/14/2023 3:32:30 PM - BRIAN KELL



PALMER AVE EQ TANK SITE PLAN

SCALE: 3/16" = 1'0"



27TH ST MONITORING MANHOLE SITE PLAN

SCALE: 3/16" = 1'0"

(X) CODED NOTES - 27TH ST MANHOLE SITE:

1. EXISTING SERVICE POLE, 120V-1Ø SERVICE, METER AND DISCONNECT TO REMAIN.
2. REPLACE EXISTING STRUT EQUIPMENT RACK WITH SS CHANNEL AND HARDWARE. INSTALL NEW RTU, FURNISHED BY THE SYSTEM INTEGRATOR.
3. INSTALL NEW LEVEL SENSOR AND FLOAT SWITCHES IN THE MANHOLE. EXTEND WIRING TO THE NEW RTU VIA EXISTING UNDERGROUND CONDUIT. MANHOLE IS A CLASS 1, DIVISION 1 HAZARDOUS AREA; VERIFY THAT INSTRUMENTS ARE LISTED FOR THE ENVIRONMENT, SEAL CONDUIT LEAVING THE MANHOLE.

(X) CODED NOTES - PALMER AVE EQ TANK SITE:

1. EXISTING PAD MOUNTED UTILITY TRANSFORMER, UG SERVICE, METER, AND SERVICE DISCONNECT TO REMAIN.
2. REPLACEMENT STAND-BY GENERATOR IN WEATHERPROOF SOUND ATTENUATED OUTDOOR ENCLOSURE ON NEW CONCRETE PAD. EXTEND WIRE IN UNDERGROUND CONDUIT FROM THE GENERATOR OUTPUT BREAKER TO THE EXISTING CONTROL BUILDING. CONNECT A SUPPLEMENTAL #8 CU GROUND FROM GENERATOR FRAME TO FOUNDATION REBAR AT THE UNIT; DO NOT BOND NEUTRAL TO GROUND AT THE GENERATOR. PROVIDE (4) #12 & (1) #12G IN 1"C FROM SPARE BREAKERS IN THE EXISTING LIGHTING PANEL FOR GENERATOR JACKET HEATER AND BATTERY CHARGER.
3. REPLACEMENT 3P 100A ATS. INSTALL ON EXISTING SUPPORTS AND RECONNECT TO NORMAL, EMERGENCY, AND LOAD WIRING. EXTEND MONITORING SIGNALS TO NEW RTU.
4. PROPOSED RTU-EQ, FURNISHED BY THE SYSTEM INTEGRATOR AND INSTALLED BY THE CONTRACTOR. PROVIDE (2) #12 & (1) #12G IN 3/4"C. FROM SPARE BREAKER IN THE EXISTING LIGHTING PANEL..
5. EXISTING DUCTBANK SERVING SITE STRUCTURES. VERIFY ROUTING AND CONDUIT SIZE AND QUANTITY IN THE FIELD PRIOR TO BID.
6. DIVERSION STRUCTURE - CLASS 1 DIVISION 2 HAZARDOUS AREA. VERIFY THAT ACTUATORS ARE LISTED FOR THE SPACE. UTILIZE NEC APPROVED WIRING METHODS AND PROVIDE XP CONDUIT SEALS AT AREA BOUNDARY.
7. EQ FILL PUMPING STATION - NOT AFFECTED BY THIS PROJECT.
8. EQ TANK - PROVIDE A NEW JUNCTION BOX FOR LEVEL SENSOR WIRE TERMINATION AT THE TOP OF THE TANK. REUSE EXISTING CONDUIT RISER AND DUCTBANK. SEE PROCESS PLANS FOR INSTRUMENT MOUNTING DETAILS.
9. VALVE VAULT AND EQ DRAIN CONTROL VALVE WITHIN - C1 D2 HAZARDOUS AREA, SEE NOTE 6 ABOVE.
10. DRAIN DISCHARGE MANHOLE - CLASS 1 DIVISION 1 HAZARDOUS AREA. VERIFY THAT INSTRUMENT IS LISTED FOR THE SPACE. UTILIZE NEC APPROVED WIRING METHODS AND PROVIDE XP CONDUIT SEALS AT AREA BOUNDARY.
11. EXISTING MCC WITH STEPDOWN TRANSFORMER AND LIGHTING PANEL INSIDE. PROVIDE NEW FEEDER BREAKER UNIT FOR PV-22 VALVE ACTUATOR.
12. EXISTING EQ FILL PUMP STATION CONTROLLER AND TELEMETRY. COORDINATE TELEMETRY DECOMMISSIONING FOLLOWING NEW SYSTEM INSTALLATION WITH THE OWNER.

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DRAWN BY:	BEK
CHECKED BY:	RSS

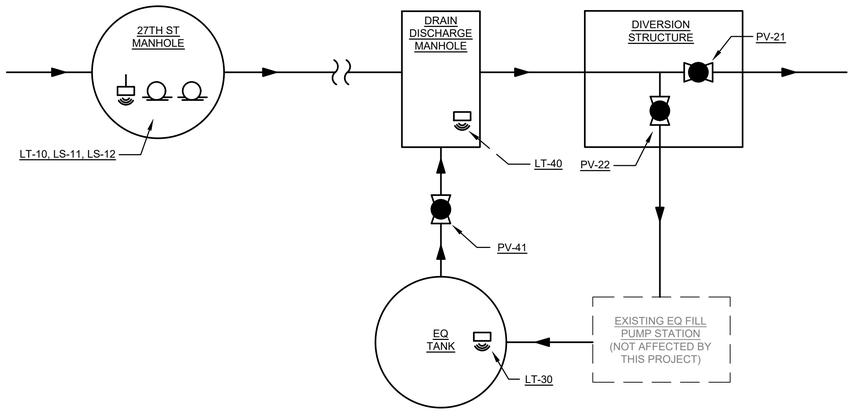
ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES

PALMER AVENUE TANK REHABILITATION

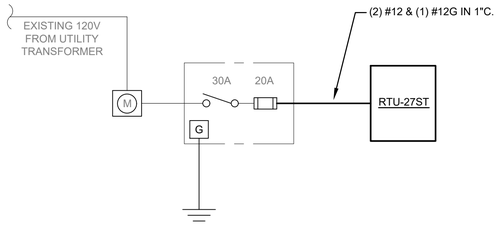
ASHTABULA COUNTY — ASHTABULA, OHIO

PUMP STATION POWER PLAN

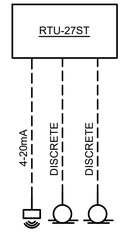
PROJECT NO.	
230155	
DISCIPLINE	
SHEET NAME	
EP-1	
SHEET	OF
12	14



FLOW CONTROL DIAGRAM
N.T.S. (MANUAL BYPASS PIPING NOT SHOWN)



27TH ST MONITORING MANHOLE SINGLE LINE DIAGRAM
N.T.S.



LT-10, LS-11, LS-12
LEVEL SENSOR AND
FLOATS IN MANHOLE

27TH ST MONITORING MANHOLE I&C INTERCONNECTION DIAGRAM
N.T.S.

I&C WIRING NOTE:

4-20mA	- 2C-#18SHIELDED
MODBUS	- RS-485 CABLE (BELDEN 3105 OR EQUAL)
DISCRETE	- (2) #14

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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
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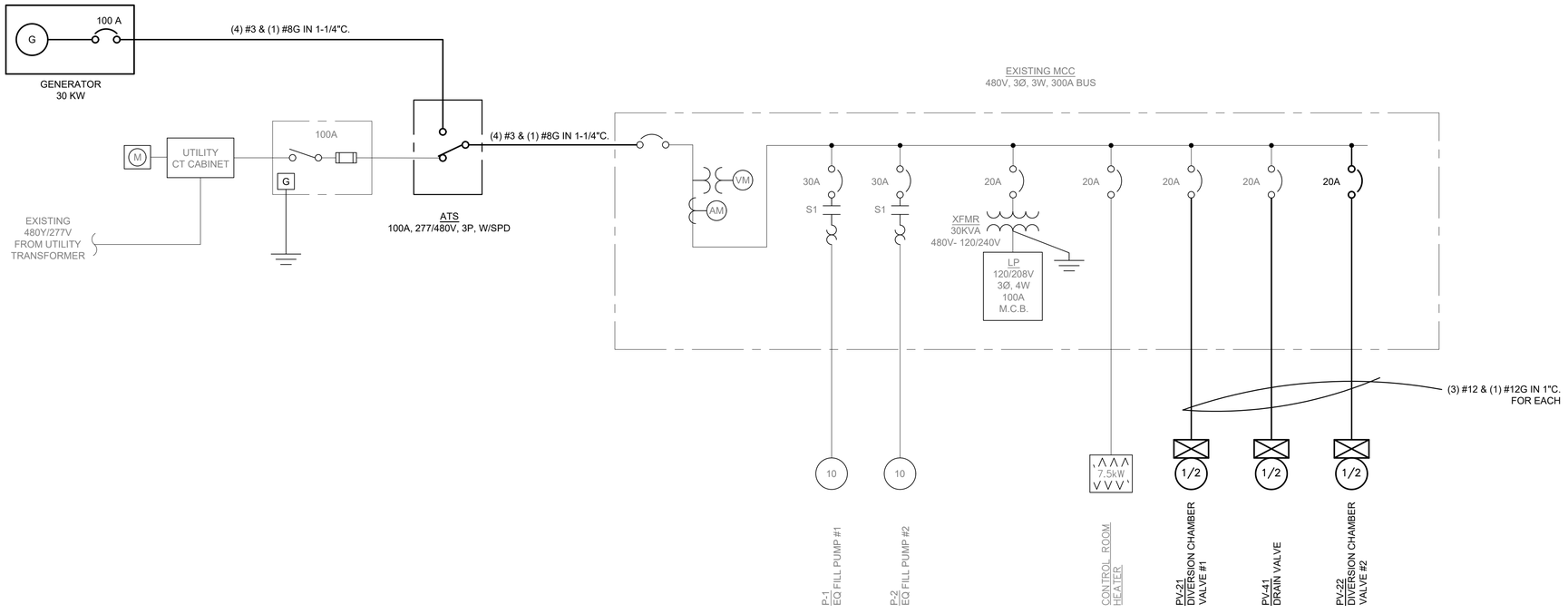
ASHTABULA, OHIO
ASHTABULA COUNTY

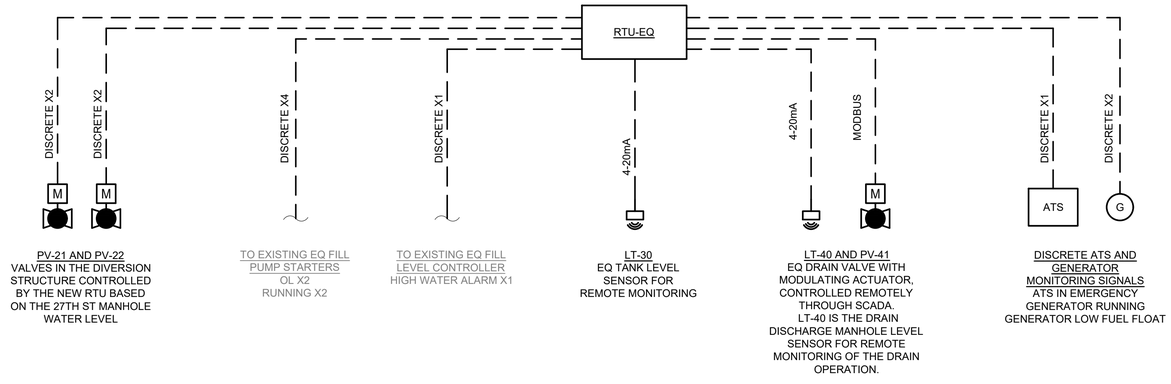
SINGLELINE DIAGRAM

PROJECT NO.
230155
DISCIPLINE
SHEET NAME
ED-1
SHEET 13 OF 14



PALMER AVE EQ TANK SINGLE LINE DIAGRAM

N.T.S.



PALMER AVE EQ TANK I&C INTERCONNECTION DIAGRAM

N.T.S.

I&C WIRING NOTE:

4-20mA	- 2C-#18SHIELDED
MODBUS	- RS-485 CABLE (BELDEN 3105 OR EQUAL)
DISCRETE	- (2) #14

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ASHTABULA COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
PALMER AVENUE TANK REHABILITATION
ASHTABULA, OHIO
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MOTOR CONTROLLED ELEMENTARY DIAGRAMS

PROJECT NO.
230155
DISCIPLINE
SHEET NAME
ED-2
SHEET 14 OF 14

C:\CT\CAD_DRIVES_H\230155\DWG\SHEETS\E_230155 - ELECTRICAL DIAGRAMS.DWG - ED-2 - 8/15/2023 8:15:30 AM - BRIAN KELL