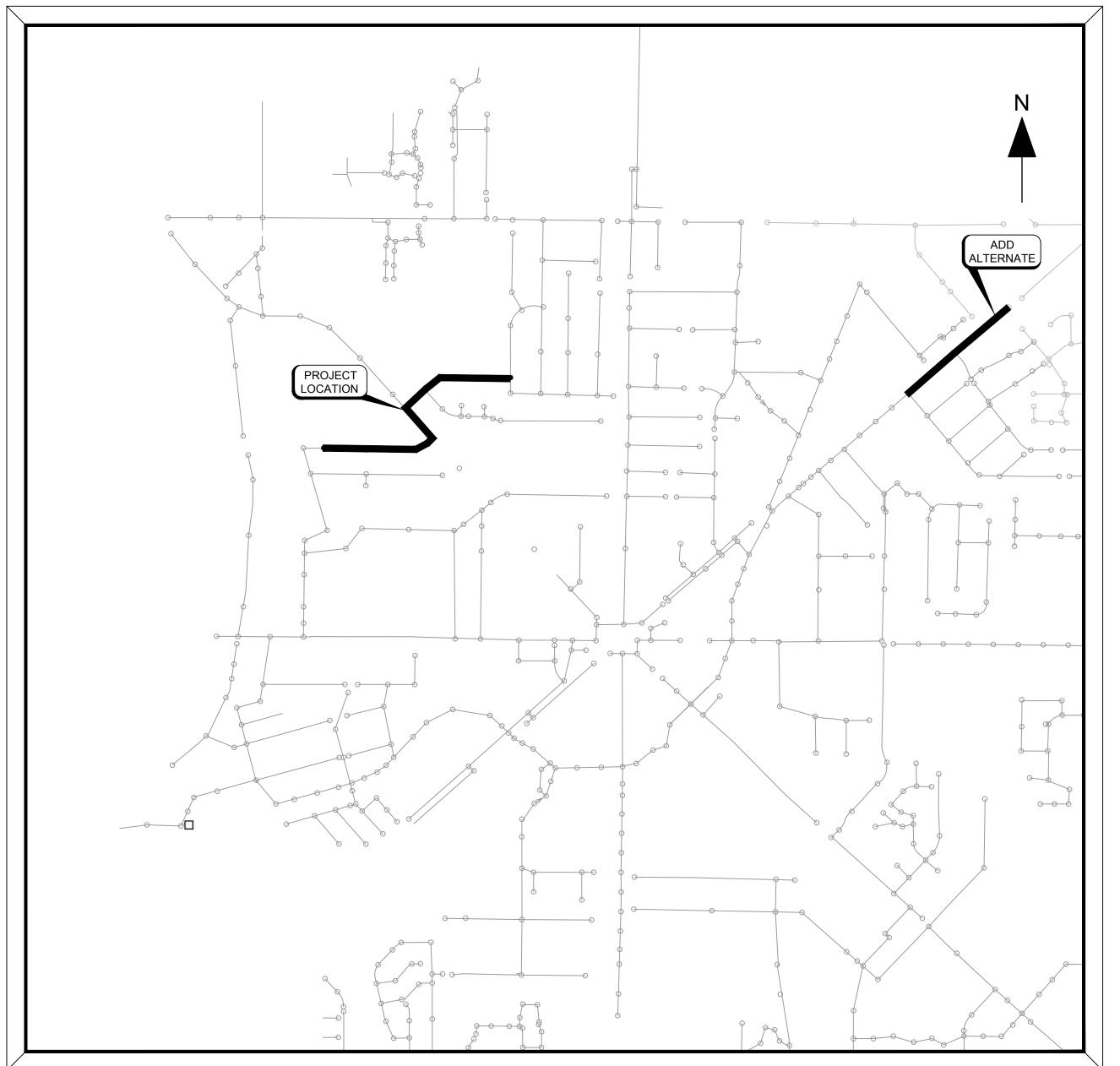
CITY OF TALLMADGE, OHIO

EVERGREEN DRIVE / MARK DRIVE SANITARY SEWER REHABILITATION

JUNE 2018



E-71748

6-14-18

P.E. No.

TITLE SHEET

JUNE 2018

AS NOTED

VICINITY MAP

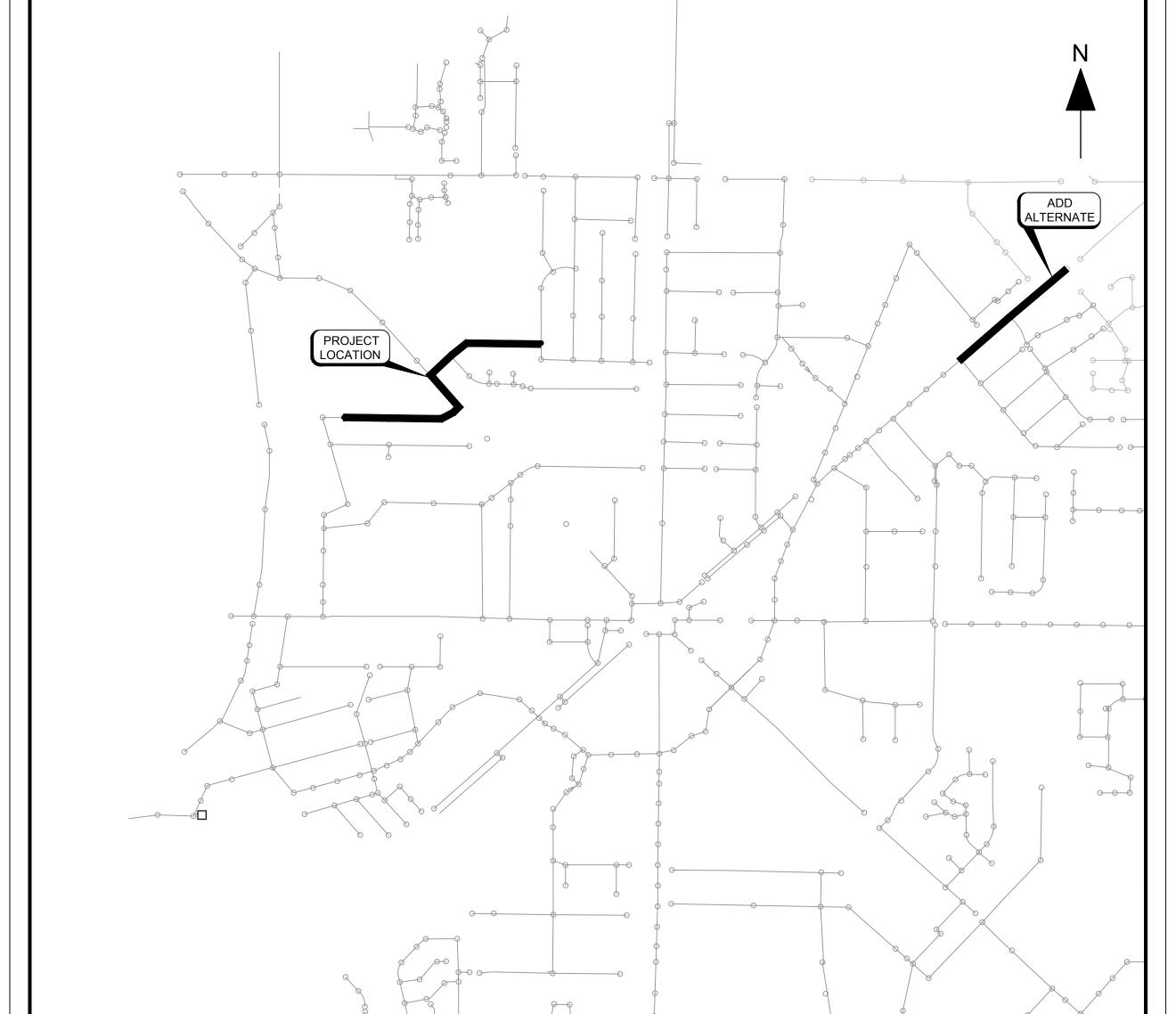
Utilities Protection SERVICE Call Before You Dig

CALL 1-800-362-2764 (TOLL FREE) OR 8-1-1

SHEET NO

SHEET LIST

DESCRIPTION TITLE SHEET GENERAL NOTES MISCELLANEOUS DETAILS SEWER REHABILITATION SCHEDULE MARK DRIVE MH NOS. 310-313 MARK DR, NORTHEAST AVE. MH NOS 314-316, 319 NORTHEAST AVE, EVERGREEN DR MH NOS. 320 & 322-323 **EVERGREEN DRIVE MH NOS. 324-326** ADD ALTERNATE - NORTHEAST AVE. MH NOS. 1-8



APPROVAL

DATE

CHECKED BY:

GENERAL NOTES AND UTILITIES

- 1. THE TERM "CONTRACTOR" AS USED IN THESE GENERAL NOTES, SHALL REFER TO THE CONTRACTOR OF CONTRACT, AS APPROPRIATE.
- 2. ALL EXISTING UTILITIES, SERVICES, POLES, AND CONNECTIONS SHALL BE PROTECTED AT THE CONTRACTOR'S EXPENSE. IF DAMAGE IS CAUSED BY CONSTRUCTION TO ANY EXISTING UTILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR RESTORATION OF SAME AT HIS EXPENSE, IN ACCORDANCE WITH THE DIRECTIONS OF THE ENGINEERS AND FOR ANY RESULTING CONTINGENT DAMAGES. EXISTING UTILITIES INCLUDE, BUT ARE NOT LIMITED TO WATERLINES, STORM SEWERS, SANITARY SEWERS, GAS, ELECTRICAL, TELEPHONE, FIBER OPTIC CABLE, TELEVISION CABLE, AND INDIVIDUAL SERVICE CONNECTIONS AND LATERALS.
- 3. BEFORE BEGINNING WORK, THE CONTRACTOR SHALL EXPOSE ALL UTILITIES, OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL LOCATIONS, DIMENSIONS, SIZE, MATERIAL, AND CLEARANCES OF THE UTILITY, OR STRUCTURE AND ITS EFFECT ON THE NEW CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY OWNER.
- 4. OSHA PROHIBITS CRANE AND BACKHOE OPERATIONS WITHIN 10 FEET OF ENERGIZED PRIMARY CONDUCTORS. TEMPORARY RELOCATION OF ELECTRICAL UTILITIES, INCLUDING RESTRAINT OF POLES, RELOCATION OF POLES, AND RUBBER COVERING OF ENERGIZED CONDUCTORS MAY BE REQUIRED. THE COORDINATION AND COST OF THESE SERVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MAY RESTRAIN POLES IF THE METHOD OF SUPPORT HAS BEEN SUBMITTED TO AND APPROVED BY THE UTILITY OWNER.
- 5. ANY EXISTING PROPERTY CORNER PINS OR MONUMENTS DAMAGED OR DESTROYED BY CONSTRUCTION SHALL BE RESET BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE UPON COMPLETION OF THE PROJECT AND PRIOR TO FINAL PAYMENT. A CERTIFICATION SHALL BE FURNISHED BY A REGISTERED SURVEYOR, STATING THAT SAID PINS AND MONUMENTS HAVE BEEN RESTORED.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL CONSTRUCTION DEBRIS INCLUDING BUT NOT LIMITED TO EXCESS SOIL, BEDDING, BACKFILL, BASE, PAVEMENT, SEWER LINER CUTTINGS, ROCK, OR ANY OTHER TYPE MATERIALS. THE CONTRACTOR SHALL NOT FILL ANY WETLANDS, LOW LANDS, FLOOD PLAINS, OR DRAINAGE WAYS WITH SAID DEBRIS WITHOUT OBTAINING PROPER APPROVALS, PERMITS, LICENSES, ETC. FROM LOCAL, STATE, OR FEDERAL AGENCIES.
- 7. ALL DISTURBED AREAS OUTSIDE OF THE WALKS, DRIVES, AND STRUCTURES SHALL BE SEEDED AND MULCHED AFTER THE AREAS HAVE BEEN FINISHED GRADED AND TOPSOIL HAS BEEN ADDED.
- 8. CONTRACTOR SHALL RESTORE YARDS, DRIVEWAYS, SWALES, ROADS, AND OTHER AREAS DISTURBED DURING CONSTRUCTION ACTIVITIES BACK TO THEIR ORIGINAL CONDITION WITHIN FORTY-FIVE (45) DAYS OF DISTURBANCE, WEATHER PERMITTING.
- 9. CONTRACTOR SHALL PROVIDE ONE MARK-UP SET OF AS-BUILT DRAWINGS TO THE OWNER AT THE COMPLETION OF THE PROJECT, THE MARK-UP SET MUST BE NEAT AND LEGIBLE AND MUST DOCUMENT ALL DEVIATIONS FROM THE ORIGINAL CONTRACT DOCUMENTS.
- 10. THE SCALE SHOWN ON THE DRAWINGS IS FOR FULL SIZE SHEETS (22"x34"). UNLESS OTHERWISE NOTED.
- 11. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST TWO (2) WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO CONSTRUCTION TO HAVE UTILITIES STAKED, MARKED OR OTHERWISE DESIGNATED IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED BY THE CONTRACTOR TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

OHIO UTILITIES PROTECTION SERVICE	800-362-2764
DOMINION EAST OHIO GAS (MARY LONG)	330-664-2409
OHIO EDISON (MIKE JANSON)	330-384-3861
LEVEL 3 COMMUNICATIONS	720-888-2960
TALLMADGE SERVICE DEPARTMENT	330-633-5950
TALLMADGE UTILITIES DEPARTMENT	330-633-0851

- 12. ACCESS TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ACCESS FOR RESIDENCES, BUSINESSES, MAIL SERVICE, SCHOOL, POLICE, FIRE, AND EMERGENCY VEHICLES.
- 13. THROUGHOUT THESE DRAWINGS AND THE SPECIFICATIONS, REFERENCES MADE TO THE OWNER, CITY, CITY ENGINEER, OR ENGINEER SHALL BE INTERPRETED AS THE CITY OF TALLMADGE OR THEIR AUTHORIZED REPRESENTATIVE.
- 14. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY OF TALLMADGE, PRIOR TO THE START OF CONSTRUCTION. PERMIT FEES FROM THE CITY OF TALLMADGE WILL BE WAIVED FOR CITY PROJECTS.
- 15. CONTRACTOR SHALL NOTIFY THE CITY, RESIDENCES, AND BUSINESSES AT LEAST 48-HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AND SUBMIT A LIST OF ALL SUBCONTRACTORS.
- 16. ANY DIGGING WITHIN THE RIGHT OF WAY AT ANY STREET REQUIRES A ROAD OPENING PERMIT. PLEASE CONTACT THE APPROPRIATE GOVERNMENTAL ENTITY FOR INFORMATION REGARDING THE PERMITTING PROCESS AND/OR FEES DUE.
- 17. PRIOR TO CONSTRUCTION, AUDIO-VIDEO COLOR TAPING SHALL BE COMPLETED ALONG ALL STREETS/EASEMENTS WHERE WORK WILL BE PERFORMED. A DUPLICATE COPY OF ALL MEDIA SHALL BE SUBMITTED TO THE CITY. SEE SPECIFICATION SECTION 01 32 34.

CONSTRUCTION NOISE

1. CONSTRUCTION NOISE ASSOCIATED WITH THE PROJECT, SHALL BE LIMITED TO LEVELS COMMENSURABLE WITH ADJOINING LAND AND THEIR ASSOCIATED USAGE AS DETERMINED BY THE CITY. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM, UNLESS AUTHORIZED BY THE CITY.

PROJECT SAFETY

1. THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL OSHA REGULATIONS. ADEQUATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING AND CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

TRAFFIC CONTROL

- 1. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN VEHICULAR TRAFFIC ACCESSIBILITY THROUGHOUT THE ENTIRE SITE DURING CONSTRUCTION.
- 2. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 01 55 27.
- 3. A MINIMUM OF ONE (1) LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UNLESS APPROVED BY THE CITY.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE, IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCO), CURRENT EDITION, LATEST REVISION; ODOT STANDARD CONSTRUCTION DRAWINGS; AND ODOT ITEM 604 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATION, FOR ALL TRAFFIC CONTROL DEVICES (SIGNS, LIGHTS, DRUMS, FLAGMEN, TEMPORARY PAVEMENT MARKINGS, ETC.) WITHIN THE WORK AREA WHICH SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
- 5. MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.

MISCELLANEOUS

- 1. THE CONTRACTOR SHALL PROVIDE FOR THE ENGINEER AND OWNER ACCESS TO VIEW VIDEOTAPES OR DVD'S ON THE PROJECT SITE AT ALL TIMES.
- 2. THE MANHOLES ON THIS PROJECT ARE ESTIMATED TO HAVE A 24-INCH INSIDE DIAMETER CHIMNEY TRANSITIONING TO A 48-INCH INSIDE DIAMETER BODY. MANHOLE REPAIR/RECONSTRUCTION WILL BE AS DIRECTED BY THE OWNER/ENGINEER.
- 3. THE CONTRACTOR SHALL HAVE ON SITE TWO (2) FULLY FUNCTIONAL CUTTING DEVICES FOR LATERAL SEWER REINSTATEMENT FOR EACH LINING CREW WHEN PERFORMING SEWER LINING. THE CONTRACTOR WILL NOT BE PERMITTED TO LINE ANY SEWERS UNLESS THIS CONDITION IS SATISFIED.
- THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE RESIDENTS 48 HOURS PRIOR TO PERFORMING ANY REHABILITATION WORK ON THE SEWERS, MANHOLES, OR SERVICE LATERALS THAT WILL EFFECT THEIR SANITARY SERVICE. THE ENGINEER MUST APPROVE THE METHOD OF NOTIFICATION.
- . HIGH DENSITY POLYETHYLENE SEWER PIPE LINER WILL NOT BE ACCEPTED.
- 6. THE CONTRACTOR SHALL RESPOND IMMEDIATELY TO ALL RESIDENT COMPLAINTS.
- 7. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE DISTURBANCE/INCONVIENCE TO RESIDENTS. IF THE CONTRACTOR MUST BLOCK A DRIVE TO PERFORM WORK, THE CONTRACTOR MUST NOTIFY AFFECTED RESIDENTS AT LEAST 24-HOURS BEFORE PERFORMING WORK.
- 8. THE CONTRACTOR SHALL PROVIDE A 24-HOUR PHONE NUMBER TO RESIDENTS FOR EMERGENCIES. THE CONTRACTOR SHALL BE ABLE TO RESOLVE ISSUES ON WEEKENDS WITHIN A REASONABLE TIME FROM THE RECEIPT OF THE COMPLAINT.
- 9. FINAL SEWER VIDEO-TAPING SHALL NOT BE PERFORMED UNTIL AFTER ALL WORK HAS BEEN COMPLETED.
- 10. CONTRACTOR SHALL NOT BE RESPONSIBLE FOR AND WILL NOT BE PAID FOR GROUTING SERVICE LATERALS THAT ARE FULL OF ROOTS UNLESS A POINT REPAIR IS MADE ON THAT SPECIFIC AREA OF SEWER.
- 11. CARE SHALL BE TAKEN NOT TO FLOOD OR BACKUP SERVICE LATERALS. ANY DAMAGE CAUSED INSIDE OF RESIDENT'S HOMES DUE TO CLEANING SEWERS SHALL BE CLEANED/REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- 12. WHERE NECESSARY TO DISTURB ASPHALT OR CONCRETE ROADWAYS OR DRIVES, PAVEMENT SHALL BE SAW CUT IN NEAT STRAIGHT LINES.
- 13. THE CONTRACTOR SHALL NOTIFY EACH RESIDENT AND BUSINESSES BY LETTER A MINIMUM OF 48 HOURS IN ADVANCE OF WORK WHICH SHALL LIMIT ACCESS TO THEIR DRIVEWAY.
- 14. CONTRACTOR SHALL FURNISH AND APPLY WATER AND/OR CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
- 15. INFILTRATION GUSHERS HAVE BEEN IDENTIFIED AND LOCATED ON THE PLANS.
 CONTRACTOR IS RESPONSIBLE FOR STOPPING INFILTRATION PRIOR TO LINING SEWER.
 CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER/OWNER THAT THE INFILTRATION
 HAS BEEN STOPPED BEFORE LINING. COST ASSOCIATED WITH STOPPING INFILTRATION
 GUSHERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CAST-IN-PLACE LINING.
- 16. SEWER MANHOLE LOCATIONS SHOWN ON PLANS WERE TAKEN FROM RECORD SEWER MAPS. SEWER LENGTHS LISTED WERE TAKEN FROM CCTV INSPECTION REPORTS. THE LENGTHS LISTED MAY NOT MATCH THE SCALED LENGTHS. IN SUCH CASES LISTED LENGTHS SHALL GOVERN.

MISCELLANEOUS (CON'T)

- ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SAME SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS RELATED ITEMS.
- 2. ALL PAVEMENT MARKINGS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED IN LIKE KIND, COST TO BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.
- 3. THE COST OF SECURING ANY UTILITY POLES AS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS OF THE CONTRACT.
- 4. PAVEMENT REPLACEMENT SHALL BE ACCOMPLISHED PER STANDARD DRAWING DETAIL AND SHALL BE IN LIKE KIND AND CHARACTER UNLESS OTHERWISE SHOWN ON THE PLANS. PARKING AREAS AND DRIVEWAYS SHALL BE REPLACED IN LIKE KIND AND CHARACTER.
- 5. THE CONTRACTOR SHALL FOLLOW THE OSHA REQUIREMENTS FOR "CONFINED SPACE ENTRY." TITLE 29 OF THE CODE OF FEDERAL REGULATIONS, PART 1910.146 WHILE PERFORMING THE REHABILITATION OF THE SANITARY SEWER ON THIS PROJECT.
- 6. ANY MODIFICATION TO THE WORK AS SHOWN ON THESE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE CITY ENGINEER.
- 7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND VERIFY THE EXTENT OF THE WORK TO BE PERFORMED PRIOR TO MAKING HIS BID.
- 8. THE CONTRACTOR SHALL MAKE PROPER ARRANGEMENTS WITH THE CITY OF TALLMADGE DIVISION OF WATER FOR THE USE OF FIRE HYDRANTS WHEN USED FOR WORK PERFORMED UNDER THIS CONTRACT. PERMITS SHALL BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE USAGE OF FIRE HYDRANTS UNDER THIS PLAN.
- 9. EXISTING SANITARY FLOWS SHALL BE MAINTAINED AT ALL TIMES. DURING CONSTRUCTION OF THE PROPOSED SEWER LINE, ANY EXISTING SANITARY SEWER MAIN OR LATERAL THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AS FOLLOWS AND AT THE CONTRACTOR'S OWN EXPENSE. THE DAMAGED SECTION OF EXISTING SEWER LINE SHALL BE REMOVED AND REPLACED WITH A SECTION POLYVINYL CHLORIDE (PVC) PIPE PER ASTM D-3034 for 8"-15", EQUAL TO THE DIAMETER AND LENGTH OF THE SECTION REMOVED. EACH END OF THE NEW SECTION OF PIPE SHALL BE CONNECTED TO THE EXISTING SEWER LINE WITH A FERNCO STRONG BACK RC 1000 SERIES OR EQUAL AS APPROVED BY THE CITY AND BEDDED AND BACKFILLED TO A MINIMUM OF 12 INCHES ABOVE THE PIPE WITH GRANULAR MATERIAL.
- 10. SEWER LATERALS AND OTHER SEWER LINES TYING INTO THE EXISTING SEWERS SHALL BE TESTED TO DETERMINE IF THEY ARE ACTIVE. IT IS THE INTENT OF THIS CONTRACT TO REESTABLISH ONLY THOSE LATERAL SEWERS THAT ARE ACTIVE, OR FOR WHICH INACTIVITY CANNOT BE CONFIRMED. THE CONTRACTOR SHALL PERFORM ALL TESTING TO DETERMINE THE STATUS OF LATERAL SEWERS PRIOR TO BEGINNING LINING OR PIPE INSTALLATION WORK ON THE SEWERS. A TESTING PROGRAM MUST BE APPROVED PRIOR TO THE START OF WORK. DOCUMENTATION OF THE FINDINGS SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND FINAL DETERMINATION OF THE STATUS OF EACH LATERAL SEWER. LATERAL SEWERS THAT ARE DETERMINED TO BE INACTIVE SHALL NOT BE REESTABLISHED FOLLOWING NEW PIPE CONSTRUCTION OR INTERNAL LINING OF THE EXISTING SEWER. PAYMENT FOR THE DETERMINATION OF ACTIVE SEWER LATERALS WILL BE AT THE UNIT PRICE BID PER EACH LATERAL SEWER THAT IS DYE TESTED. IT IS UNDERSTOOD THAT ALL TESTING PROGRAMS AND LATERAL DETERMINATION REPORTS SHALL BE INCLUDED IN THE DYE TEST LINE ITEM THEREIN. DO NOT PROCEED WITH PIPELINE REHABILITATION AND/OR REPLACEMENT UNLESS WORK IS EXECUTED AND APPROVED. REFER TO SPECIFICATION \$33 01 32.03.
- 11. BYPASS PUMPING IS REQUIRED WHEREVER THE FLOW IN ANY SEWER IS TOO GREAT FOR LINING INSTALLATION OR CONSTRUCTION OF NEW SEWER SEGMENTS, MANHOLES, OR ASSOCIATED ACTIVITIES. BYPASS PUMPING AND ITS ASSOCIATED ACTIVITIES SHALL BE PERFORMED BY THE CONTRACTOR. COST TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR BYPASS PUMPING.
- 12. THE LINER THICKNESS SHOWN ON THE PLANS ARE THE MINIMUM THICKNESS THAT SHALL BE INSTALLED USING A GROUND WATER ELEVATION OF 2' BELOW GROUND SURFACE ELEVATION AND A CONSTRAINED SOIL MODULUS OF 1,500psi. PRIOR TO THE LINING, THE CONTRACTOR SHALL SUBMIT LINER THICKNESS CALCULATIONS TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH SECTION 33 01 38.03 (CURED-IN-PLACE SEWER PIPE LINER) OF THE SPECIFICATIONS. THE APPROVED LINER THICKNESS SHALL GOVERN THE WORK, SUBJECT TO THE MINIMUM THICKNESS REQUIREMENT.
- 13. ALL PROTRUDING LATERAL TAPS SHALL BE REMOVED FLUSH WITH THE WALL OF THE MAIN LINE SEWER PRIOR TO INSTALLATION OF THE CIPP LINER. CARE SHALL BE TAKEN TO ENSURE THAT THE LATERAL SEWER IS NOT DAMAGED BEYOND THE CONNECTION POINT TO THE MAIN. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR TRIMMING PROTRUDING LATERALS.
- 14. HEAVY CLEANING TO REMOVE MATERIAL SUCH AS CONCRETE BOULDERS, BRICKS, ROCKS, ETC. FOUND IN THE SEWER SHALL BE REMOVED AS PART OF THE CLEANING PROCESS WITH NO SEPARATE PAYMENT. SEWER CLEANING SHALL BE DONE IN ACCORDANCE WITH SECTION 33 01 33 (SEWER CLEANING) OF THE SPECIFICATIONS.
- 15. THE CURED IN PLACE LINER SHALL MAKE A TIGHT SEAL AT THE MANHOLE OPENING WITH NO ANNULAR GAPS. PROVIDE AN LMK INSIGNIA® END SEAL, OR APPROVED EQUAL AT EACH MANHOLE. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- 16. SEWER PIPE POINT REPAIRS SHALL BE PER DETAILS SHOWN ON SHEET 3. THE PIPE MATERIAL USED SHALL BE PVC SDR35. ITEM SPECIAL OPEN-CUT POINT REPAIR SHALL INCLUDE REPLACEMENT OF UP TO 10-FT OF PIPE TO BE PAID FOR UNDER THE UNIT COST BID FOR OPEN-CUT POINT REPAIR FOR THE VARIOUS PIPE SIZES. POINT REPAIRS REQUIRING GREATER THAN 10-FT OF PIPE REPLACEMENT SHALL BE PAID ON A PER FOOT BASIS UNDER THE UNIT COST BID FOR OPEN-CUT POINT REPAIR EXTENDED FOR THE VARIOUS PIPE SIZES.

SAFETY AND LIABILITY

- 1. CONTRACTOR MUST CONTACT OHIO UTILITIES PROTECTION SERVICES TO HAVE UTILITIES MARKED BEFORE THE START OF THE PROJECT. CALL 811
- 2. CONTRACTOR IS RESPONSIBLE TO PROVIDE A SAFE WORKPLACE AND TO COMPLY WITH OSHA AND OTHER FEDERAL, STATE OR LOCAL HEALTH SAFETY REGULATIONS.
- CONTRACTOR MUST FOLLOW THE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD). http://www.dot.state.oh.us/Divisions/Engineering/Roadway/DesignStandards/traffic/OhioMUTCD/ Pages/OMUTCD2012 current default.aspx
- 4. CONTRACTOR SHALL ATTEST IN WRITING WITH THE SUBMISSION OF THE BID THAT ALL EQUIPMENT UTILIZED DURING THIS CONTRACT IS IN GOOD SERVICEABLE CONDITION.

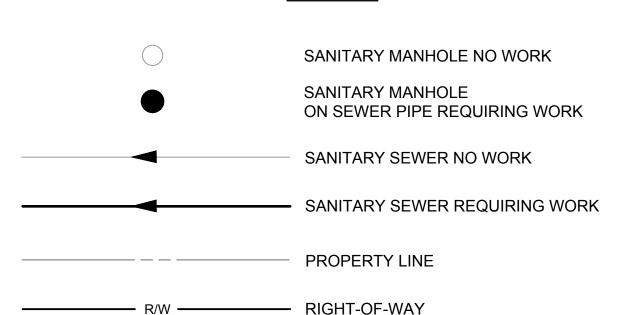
SAFETY AND LIABILITY (CON'T)

- 1. CONTRACTOR SHALL ASSUME THE ENTIRE RESPONSIBILITY AND LIABILITY FOR ALL DAMAGES OR INJURIES OF ANY KIND OR NATURE WHATSOEVER TO ALL PERSONS, WHETHER ITS EMPLOYEES OR OTHERWISE, AND TO ALL PROPERTY GROWING OUT OF OR RESULTING FROM THE EXECUTION OF THE WORK PROVIDED FOR IN THIS CONTRACT OR OCCURRING IN CONNECTION THEREWITH. CONTRACTOR AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY OF TALLMADGE, ITS AGENTS, EMPLOYEES, AND INSURERS FROM AND AGAINST ANY AND ALL LOSSES AND EXPENSES, INCLUDING COURT COSTS AND ATTORNEY'S FEES, DAMAGES OR INJURIES GROWING OUT OF OR RESULTING FROM OR OCCURRING IN CONNECTION WITH THE EXECUTION OF THE WORK HEREIN PROVIDED FOR; PROVIDE, HOWEVER, THAT CONTRACTOR WILL NOT BE HELD LIABLE FOR LOSS OF LIFE OR INJURY OR DAMAGE TO PERSON OR PROPERTY DUE TO THE SOLE NEGLIGENCE OF THE CITY, ITS AGENTS, OR ITS EMPLOYEES.
- 2. IF ANY DAMAGE IS DONE TO THE PROPERTY OF OTHERS BY CONTRACTOR, ITS EMPLOYEES, OR AGENTS DURING THE TERM OF THIS CONTRACT, CONTRACTOR WILL REPAIR AND RESTORE AT ITS SOLE COST ANY SUCH PROPERTY AND CORRECT ANY DAMAGES INFLICTD THERETO, RETURNING IT TO AS GOOD A CONDITION AS THE PROPERTY WAS IN BEFORE BEING DAMAGED, IN A MANNER SATISFACTORY TO THE OWNER(S) OF THE PROPERTY OF THE DAMAGE SUFFERED.

ABBREVIATIONS

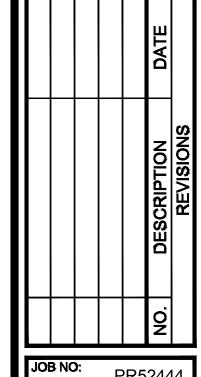
ASPHALT BENCHMARK CONC CONCRETE DR DRIVE **EAST** EX **EXISTING** FLOW LINE/INVERT GR GRAVEL **HSE** HOUSE **HDPE** HIGH DENSITY POLYETHYLENE INT INTERSECTION INV INVERT LINEAL FEET MAX MAXIMUM МН MANHOLE MIN MINIMUM NORTH NORTHEAST NW NORTHWEST OHETC OVERHEAD ELECTRIC TELEPHONE, AND CABLE PVC POLYVINYL CHLORIDE **PVMT** PAVEMENT RCP REINFORCED CONCRETE PIPE SOUTH SANITARY SEWER SE SOUTHEAST SOUTHWEST T/C TOP OF CASTING **TWP TOWNSHIP** TYP **TYPICAL** VCP VITRIFIED CLAY PIPE WEST

SYMBOLS



CITY OF TA VERGREEN D ANITARY SEW

GE, OF MARK HABILI



JOB NO: PR52444

DATE: JUNE 2018

DESIGNED BY: JAM

DRAWN BY: RRH

CHECKED BY: JAM

APPROVED BY: JAM

SCALE: NONE

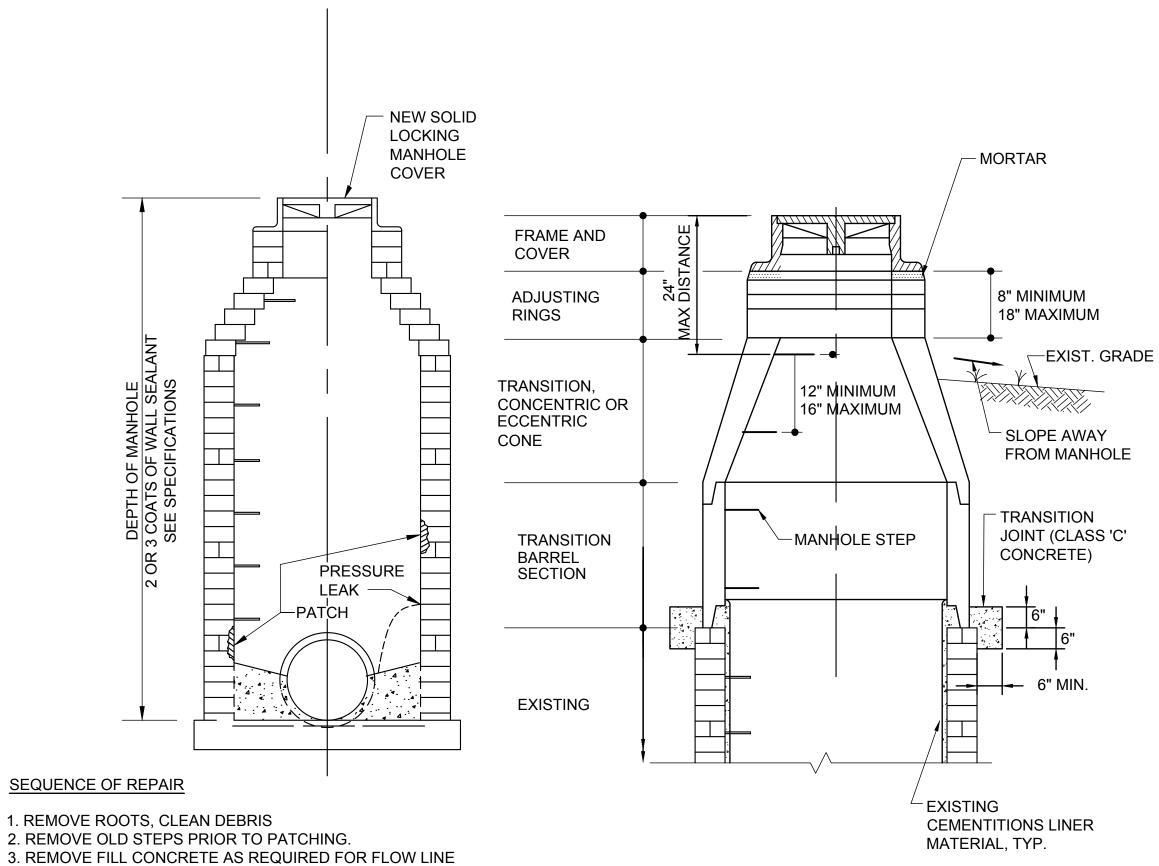
GENERAL NOTES

2

SHEET: OF (

SEWER PIPE REPLACEMENT DETAIL

NOT TO SCALE



SEQUENCE OF REPAIR

- 1. REMOVE ROOTS, CLEAN DEBRIS
- 2. REMOVE OLD STEPS PRIOR TO PATCHING.
- MODIFICATION. 4. SEAL PRESSURE LEAKS- IPANEX- R. OR STRONGPLUG
- 5. PATCH DAMAGED AREAS
- 6. INSTALL NEW CONCRETE IN BOTTOM. 7. APPLY WALL SEALANT
- 8. INSTALL NEW STEPS, REPAIR BENCH AND/OR INVERT. 9. INSERT CHIMNEY SEAL, REPLACE MANHOLE COVER

ALL REPAIR/RECONSTRUCTION ITEMS LISTED ABOVE ARE AS DIRECTED BY THE OWNER/ENGINEER FOR A GIVEN MANHOLE REPAIR. WORK SHALL BE PAID OUT OF THE MANHOLE REPAIR ALLOWANCE ITEM.

MANHOLE REPAIR DETAIL

NOT TO SCALE

MANHOLE RAISING DETAIL

CONFIRM EXISTING MANHOLE DIAMETER

BEFORE ORDERING PRECAST SECTIONS.

NOT TO SCALE

- REPLACE PAVEMENT TO MATCH EXISTING OR PER CITY STANDARDS, WHICHEVER IS GREATER ITEM 407 TACK COAT STRENGTH MORTAR BACKFILL SANITARY SEWER BEDDING NO. 46 **OR 57 LIMESTONE** 12" PIPE O.D.

LOW STRENGTH MORTAR BACKFILL SCALE: NONE

LOW STRENGTH

MATERIALS:

MORTAR BACKFILL

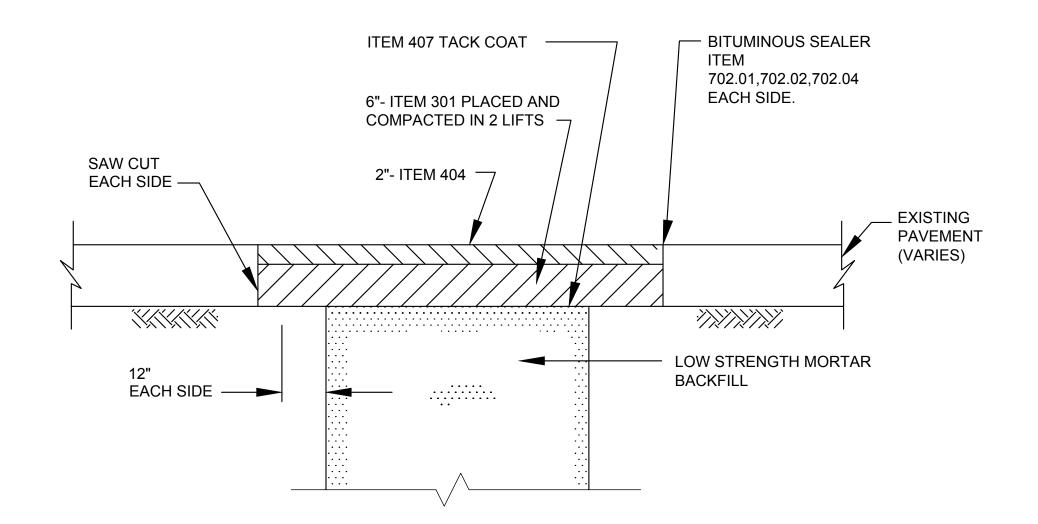
CEMENT: 100 LBS

FLY ASH: 250 LBS

WATER: 500 LBS

SAND: 350-2700 LBS

- ASPHALT MUST BE COMPACTED IN PLACE.
- TEMPORARY PAVEMENT: LOW STRENGTH MORTAR BACKFILL TO GRADE.
- 3. IF MORTAR IS USED FOR TOP 3-1/4" BECAUSE ASPHALT IS UNAVAILABLE (I.E. WINTER MONTHS), TOP 3-1/4" OF MORTAR TO BE REMOVED AND REPLACED WITH ASPHALT WHEN IT BECOMES AVAILABLE.
- 4. LOW STRENGTH MORTAR BACKFILL WILL BE USED UNDER ALL PAVEMENT EXCAVATIONS/REPLACEMENTS.
- 5. PLEASE SEE SPECIFICATION SECTION 31 23 23.14.



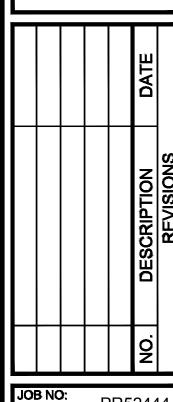
ASPHALT REPLACEMENT (OVER TRENCH)

NOT TO SCALE

NOTES:

- 1. LOW STRENGTH MORTAR BACKFILL WILL BE USED UNDER ALL PAVEMENT EXCAVATIONS/REPLACEMENTS.
- 2. PLEASE SEE SPECIFICATION SECTION 31 23 23.14.

TALLMADGE, OHIO I DRIVE / MARK DRIVE EWER REHABILITATION



PR52444 **JUNE 2018** DESIGNED BY: JAM DRAWN BY: CHECKED BY: APPROVED BY: JAM

MISCELLANEOUS

NONE

DETAILS

SCALE:

MANHOLE SCHEDULE (BASE PROJECT)

SHEET NO.	ROADWAY	MH NO.	INVERT ELEVATION	APPROX DEPTH (FT)	MANHOLE CONSTRUCTION	CHIMNEY CONSTRUCTION	INVERT BENCH	EXISTING STEPS	REPAIR
5	MARK DRIVE	310	1138.98	10	BRICK	BRICK	FULL	YES	REHABILITATE
5	MARK DRIVE	311	1143.44	10	BRICK	BRICK	FULL	YES	REHABILITATE
5	MARK DRIVE	312	1060.24	10	BRICK	BRICK	FULL	YES	NO WORK - PREVIOUSLY REHABILITATED
5	MARK DRIVE	313	1065.99	10	BRICK	BRICK	FULL	YES	REHABILITATE
6	MARK DRIVE	314	1069.89	10	BRICK	BRICK	FULL	YES	REHABILITATE
6	MARK DRIVE	315	1076.41	10	BRICK	BRICK	FULL	YES	REHABILITATE
6	MARK DRIVE	316	1081.75	12	BRICK	BRICK	FULL	YES	REHABILITATE
6	NORTHWEST AVENUE	319	1082.54	12	BRICK	BRICK	FULL	YES	REHABILITATE
7	NORTHWEST AVENUE	320	1083.29	12	BRICK	BRICK	FULL	YES	REHABILITATE
7	EVERGREEN DRIVE	322	1084.24	12	BRICK	BRICK	FULL	YES	REHABILITATE
7	EVERGREEN DRIVE	323	1084.31	12	BRICK	BRICK	FULL	YES	REHABILITATE
8	EVERGREEN DRIVE	324	1092.07	12	BRICK	BRICK	FULL	YES	REHABILITATE
8	EVERGREEN DRIVE	325	1104.07	12	BRICK	BRICK	FULL	YES	REHABILITATE
8	EVERGREEN DRIVE	326	1118.56	12	BRICK	BRICK	FULL	YES	REHABILITATE
				_				_	

 MANHOLE SCHEDULE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. INFORMATION IS PROVIDED BASED ON EXISTING DRAWINGS AND SEWER VIDEO. CONTRACTOR SHALL VERIFY ALL MANHOLE INFORMATION AS REQUIRED.

2. EXISTING MANHOLE STEPS SHALL REMAIN

IN PLACE.

NORTHEAST AVE. MANHOLE SCHEDULE (ALTERNATE PROJECT)

SHEET NO.	ROADWAY	MH NO.	INVERT ELEVATION	APPROX. DEPTH (FT.)	MANHOLE CONSTRUCTION	CHIMNEY CONSTRUCTION	INVERT BENCH	EXISTING STEPS	REPAIR
9	NORTHEAST AVE.	1	N/A	7	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE
9	NORTHEAST AVE.	2	N/A	9.3	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE
9	NORTHEAST AVE.	3	N/A	10	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE
9	NORTHEAST AVE.	4	N/A	9.6	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE
9	NORTHEAST AVE. AT WILSON AVE.	5	N/A	10	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE
9	NORTHEAST AVE.	6	N/A	11.8	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE
9	NORTHEAST AVE.	7	N/A	8.3	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE
9	NORTHEAST AVE. AT BARNES DR.	8	N/A	9.8	BRICK	BRICK	FULL	UNKNOWN	REHABILITATE

NOTES:

1. MANHOLE SCHEDULE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. INFORMATION IS PROVIDED BASED ON EXISTING DRAWINGS AND SEWER VIDEO. CONTRACTOR SHALL VERIFY ALL MANHOLE INFORMATION AS REQUIRED.

2. EXISTING MANHOLE STEPS SHALL REMAIN IN PLACE.

SANITARY SEWER REHABILITATION SCHEDULE (BASE PROJECT)

SHEET NO.	ROADWAY	UPSTREAM MH NO.	DOWNSTREAM MH NO.	SIZE (INCHES)	APPROX. 1 LENGTH (LF)	MATERIAL	LATERALS (2) (EA)	POINT REPAIR	MIN. LINER THICKNESS	NOTES
5	MARK DRIVE	311	310	8	306	VCP	5		4.5	
5	MARK DRIVE	312	311	8	350	VCP	6		4.5	
5	MARK DRIVE	313	312	8	356	VCP	7		4.5	
5-6	MARK DRIVE	314	313	8	388	VCP	6		4.5	
6	MARK DRIVE	315	314	8	173	VCP	1		4.5	
6	MARK DRIVE	316	315	8	140	VCP	1		4.5	
6	NORTHWEST AVENUE	316	319	10	321	VCP	3	Х	4.5	BROKEN PIPE 108-FT UPSTREAM FROM MH #319
6-7	NORTHWEST AVENUE	319	320	10	308	VCP	4		4.5	
7	EVERGREEN DRIVE	322	320	10	399	VCP	3		4.5	
7	EVERGREEN DRIVE	323	322	10	283	VCP	4	X	4.5	CAMERA UNDER WATER 205-FT DOWNSTREAM FROM MH #323
7-8	EVERGREEN DRIVE	324	323	8	355	VCP	6		4.5	
8	EVERGREEN DRIVE	325	324	8	360	VCP	7		4.5	
8	EVERGREEN DRIVE	326	325	8	355	VCP	2		4.5	

ALL PIPE IS ASSUMED TO BE VITRIFIED CLAY, BASED UPON EXISTING DRAWINGS AND SEWER VIDEO.

2. INFORMATION FOR MARK DR., NORTHWEST AVE., AND EVERGREEN DR. ARE FROM CCTV RECORDS FROM

LENGTH FROM CENTER OF MANHOLE TO CENTER OF MANHOLE IS OBTAINED FROM PREVIOUS SEWER VIDEOS AND DRAWINGS. PAYMENT WILL BE MADE AT THESE LENGTHS UNLESS VIDEO TAPES SHOW A DIFFERENCE OF GREATER THAT 2%±. SEE SCOPE OF BIDS IN

SPECIFICATIONS.

NUMBER OF LATERALS IS BASED UPON THE NUMBER OF HOMES BELIEVED TO BE TIED INTO THAT SECTION OF SEWER. ACTUAL NUMBER OF LATERALS WILL BE BASED UPON THE POST-LINED VIDEO OF THE SANITARY SEWER. CONTRACTOR WILL BE PAID FOR ACTUAL NUMBER OF LATERALS PER THE UNIT PRICE BID.

NORTHEAST AVE. SANITARY SEWER REHABILITATION SCHEDULE (ALTERNATE PROJECT)

SHEET NO.	ROADWAY	UPSTREAM MH NO.	DOWNSTREAM MH NO.	SIZE (INCHES)	APPROX. 1 LENGTH (LF)	MATERIAL	LATERALS (EA) 2	POINT REPAIR	MIN. LINER THICKNESS	NOTES
9	NORTHEAST AVE.	1	2	10	300	VCP	4	Х	4.5	INTRUDING LATERAL AT US MH 1, DROPPED PIPE 4' FROM DOWNSTREAM MH 2.
9	NORTHEAST AVE.	2	3	10	312	VCP	4		4.5	INTRUDING LATERAL AT EACH END, UNABLE TO COMPLETE CCTV.
9	NORTHEAST AVE.	3	4	10	300	VCP	3		4.5	
9	NORTHEAST AVE.	4	5	10	295	VCP	4		4.5	HEAVY ROOTS
9	NORTHEAST AVE.	5	6	12	326	VCP	6	Х	6.0	BROKEN PIPE AT 280' FROM MH 5.
9	NORTHEAST AVE.	6	7	12	300	VCP	3		6.0	
9	NORTHEAST AVE.	7	8	12	303	VCP	5		6.0	

1. ALL PIPE IS ASSUMED TO BE VITRIFIED CLAY, BASED UPON EXISTING DRAWINGS AND SEWER VIDEO.

2. INFORMATION FOR NORTHEAST AVE. ARE FROM CCTV RECORDS FROM 2018.

LENGTH FROM CENTER OF MANHOLE TO CENTER OF MANHOLE IS OBTAINED FROM PREVIOUS SEWER VIDEOS AND DRAWINGS. PAYMENT WILL BE MADE AT THESE LENGTHS UNLESS VIDEO TAPES SHOW A DIFFERENCE OF GREATER THAT 2%±. SEE SCOPE OF BIDS IN SPECIFICATIONS.

NUMBER OF LATERALS IS BASED UPON THE NUMBER OF HOMES BELIEVED TO BE TIED INTO THAT SECTION OF SEWER. ACTUAL NUMBER OF LATERALS WILL BE BASED UPON THE POST-LINED VIDEO OF THE SANITARY SEWER. CONTRACTOR WILL BE PAID FOR ACTUAL NUMBER OF LATERALS PER THE UNIT PRICE BID.

TALLMADGE, OHIO N DRIVE / MARK DRIVE EWER REHABILITATION

				DESCRIPTION DATE	REVISIONS
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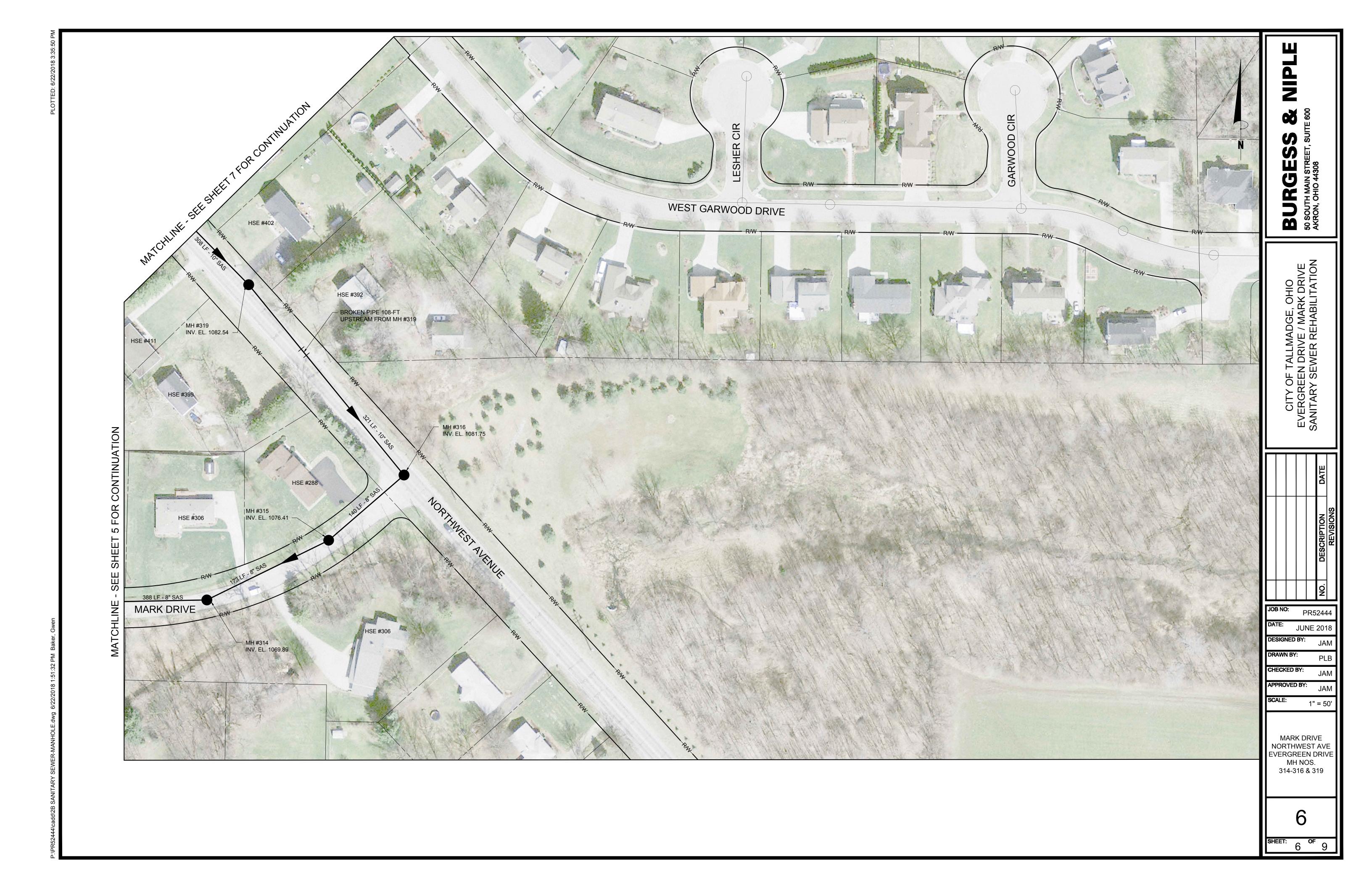
PR52444 JUNE 2018 DESIGNED BY: DRAWN BY: CHECKED BY:

SCALE: NONE

APPROVED BY:

SEWER REHABILITATION SCHEDULE







CITY OF TALLMADGE, OHIO EVERGREEN DRIVE / MARK DRIVE SANITARY SEWER REHABILITATION

PR52444 JUNE 2018 DESIGNED BY:

EVERGREEN DRIVE MH NOS. 320 & 322-323



CITY OF TALLMADGE, OHIO EVERGREEN DRIVE / MARK DRIVE SANITARY SEWER REHABILITATION

BURGESS 50 SOUTH MAIN STREET, 8 AKRON, OHIO 44308

PR52444 JUNE 2018

CHECKED BY:

EVERGREEN DRIVE MH NOS. 324-326

JOB NO: PR52444

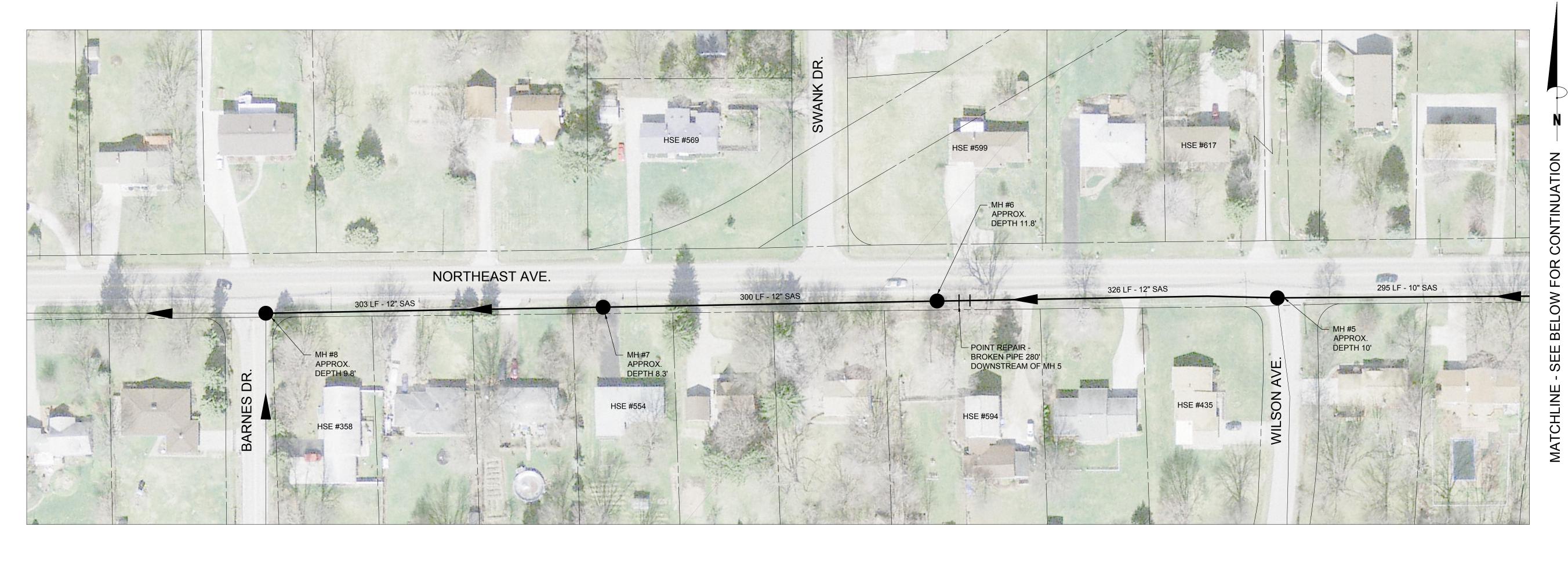
DESIGNED BY: RRH
DRAWN BY: RRH
CHECKED BY: JAM
APPROVED BY: JAM

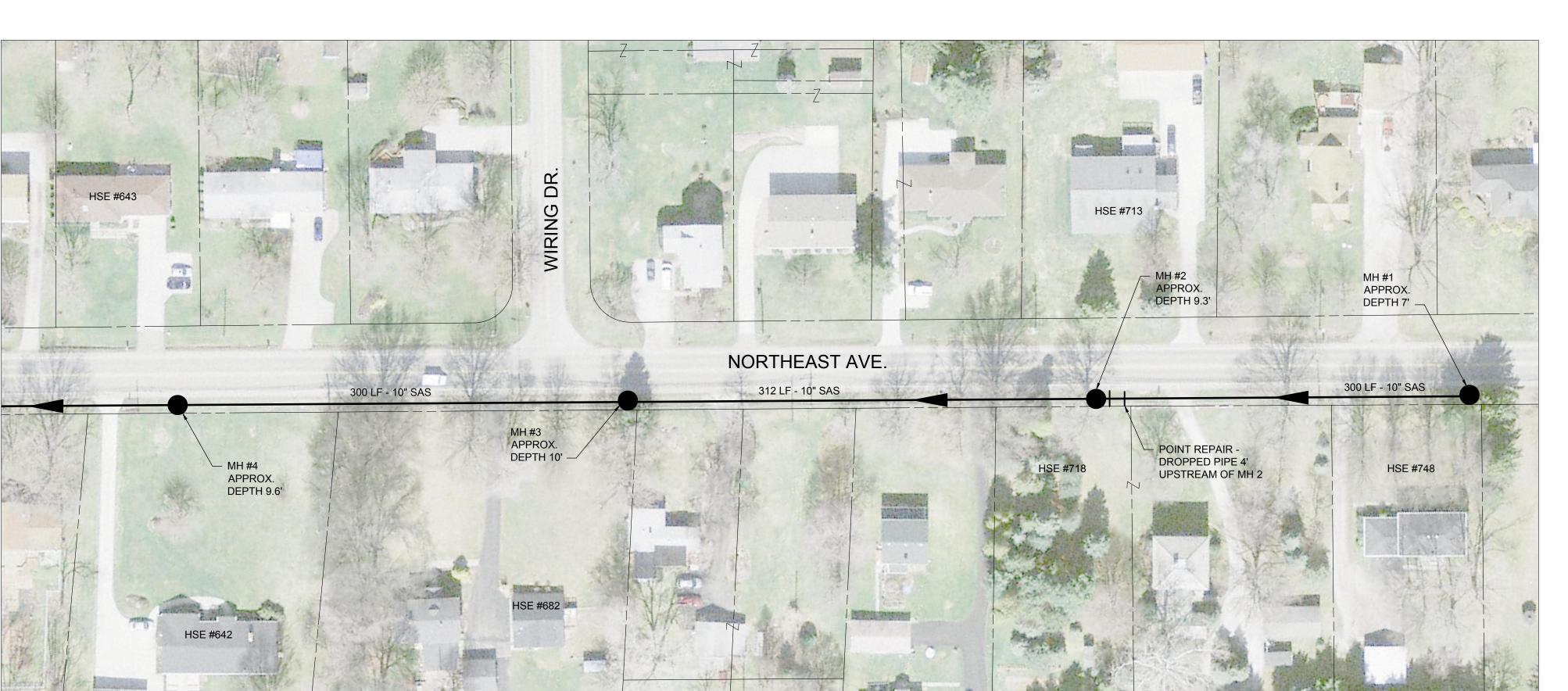
SCALE: NONE

ADD ALTERNATE NORTHEAST AVE. MH NOS. 1-8

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SHEET: 9 OF





MATCHLINE - SEE ABOVE FOR CONTINUATION