



TOWN OF LONGMEADOW COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC WORKS

MORNINGSIDE DRIVE CULVERT REPLACEMENT PROJECT

June 2020

LYN N. SIMMONS - TOWN MANAGER MARIO MAZZA - DIRECTOR OF PUBLIC WORKS PETER THURBER - ASSIST. DIRECTOR - WATER AND WASTEWATER OPERATIONS **TIMOTHY KEANE - TOWN ENGINEER**







ISSUED FOR BIDDING **JUNE 2020**

| DESCRIPTION | EXISTING | PROPOSED |
|---------------------------|--|----------------|
| SANITARY SEWER | s | |
| WATER MAIN | W | |
| TEMPORARY WATER | | TW |
| STORM DRAIN | D | — 18" ADS — |
| GAS | —— G—— | G |
| TEMPORARY GAS | | —TGAS — |
| ELECTRIC | —— Е—— | —Е— |
| TELEPHONE | | —т |
| SANITARY SEWER MANHOLE | <u>\$</u> | ● SMH |
| STORM DRAIN MANHOLE | (D) | ● DMH |
| CATCH BASIN | | ■ СВ |
| CATCH BASIN (CURB INLET) | | |
| HYDRANT | X | + |
| CURB STOP | *50 | ₩ |
| WATER VALVE | W | |
| UTILITY POLE | <u>ن</u> | |
| LIGHT POST | * | |
| EDGE OF PAVEMENT | | |
| EDGE OF UNPAVED ROAD | | |
| CURB | <u> </u> | <u></u> |
| RETAINING WALL | RET WALL | RET WALL |
| FENCE | x | |
| INDIVIDUAL DECIDUOUS TREE | \odot | \odot |
| INDIVIDUAL EVERGREEN TREE | £ 2 | * |
| TREE LINE | | \sim |
| SURVEY MARKER | | |
| PROPERTY LINE | | |
| EASEMENT LINE | | |
| LIMIT OF WORK | | |
| APPROX. LIMIT OF REFUSE | | |
| SPOT ELEVATIONS | × 100.2 | × 101.5 |
| CONTOUR LINES | 56 | |
| DEPRESSION CONTOUR LINES | | |
| HOUSE NUMBER | #35 | |
| WETLAND | | |
| WETLAND FLAGS | •1 | |
| RIP RAP | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | *** |
| GUARD POST | Δ | A |
| SIGN | -0- | |
| BORING | ⊕ B−1 | ⊕ B−3 |
| HAY BALES | | 0000000 |
| | - I | |

NOTE: ITEMS SHOWN IN THE LEGEND MAY NOT BE PRESENT IN THESE PLANS

DRAINAGE DITCH / SWALE

PROJECT GENERAL NOTES AND INFORMATION

GENERAL CIVIL NOTES:

1. THE CONTRACTOR SHALL CALL "DIG SAFE" AT (888) 344-7233 AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE "DIG SAFE" PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.

2. LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.

TEST PITS TO LOCATE EXISTING UTILITIES SHALL BE CONDUCTED BY THE CONTRACTOR AS REQUIRED TO COMPLETE THE WORK OR REQUESTED BY THE ENGINEER/OWNER. IF NO TEST PIT PAYMENT ITEM IS PROVIDED WITHIN THE CONTRACT DOCUMENTS, TEST PITS TO LOCATE EXISTING UTILITIES SHALL BE INCIDENTAL TO CONSTRUCTION OF THE PROJECT.

STONE WALLS, FENCES, MAIL BOXES, SIGNS, CURBS, LIGHT POLES, ETC. SHALL BE REMOVED AND REPLACED AS NECESSARY TO PERFORM THE WORK. UNLESS OTHERWISE INDICATED, ALL SUCH WORK SHALL BE INCIDENTAL TO CONSTRUCTION OF THE PROJECT.
 ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS. ALL AREAS

DISTURBED BY THE CONTRACTOR BEYOND PAYMENT LIMITS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.

6. THE CONTRACTOR SHALL MAINTAIN SIDE SLOPES AND DRAINAGE SWALES DURING CONSTRUCTION TO PREVENT PONDING AND EROSION. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, AND EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN THE DISTANCE AS DEFINED BY THE INLAND WETLANDS COMMISSION OR 100 FEET OF WETLANDS, WHICH EVER IS GREATER.

7. THE CONTRACTOR SHALL GRADE PROPOSED SLOPES TO MEET EXISTING SLOPES WHERE SHOWN ON PLANS, IN ACCORDANCE WITH THE MINIMUM AND MAXIMUM SLOPES SPECIFIED.

THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL DEVICES BEFORE BEGINNING OTHER WORK ON SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND AS NECESSARY REPLACING ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT. ALL EROSION CONTROL DEVICES SHALL BE REVIEWED AFTER EACH RAIN EVENT WITH MODIFICATIONS COMPLETED AS NECESSARY TO MAINTAIN THE EROSION CONTROL DEVICES.

9. THE CONTRACTOR SHALL NOTIFY THE LOCAL UTILITY COMPANIES A MINIMUM OF 72 HOURS PRIOR TO EXCAVATING NEAR EXISTING UTILITIES (ABOVE OR BELOW GROUND).

CONCRETE CRADLES OR ARCHES SHALL BE CONSTRUCTED WHERE SHOWN ON THE DRAWINGS OR WHERE REQUIRED BY THE ENGINEER. UNLESS OTHERWISE INDICATED, CONCRETE USED FOR PIPE ANCHOR BLOCKS, BACKING, PIPE CRADLES, ARCHES, AND FILL SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
 CONCRETE THRUST BLOCKS, ANCHOR BLOCKS, OR APPROVED JOINT RESTRAINT METHODS SHALL BE PROVIDED FOR PRESSURE PIPE SYSTEMS (WATER MAINS, FORCE MAINS, SERVICE)

WATER MAINS, ETC.) WHERE ANY BENDS, TEES, PLUGS, OR WYES ARE INSTALLED. FOR THRUST BLOCK DETAILS AND MINIMUM BLOCK BEARING AREAS, SEE DETAILS.

12. TRENCHES MAY BE EXCAVATED WIDER THAN THE `LIMIT OF EXCAVATION FOR EARTH EXCAVATION' ABOVE THE `LINE OF NARROW TRENCH LIMIT.' ANY SUCH ADDITIONAL EXCAVATION

SHALL BE AT THE CONTRACTORS EXPENSE AND SHALL NOT BE MEASURED FOR PAYMENT.

13. BELOW THE `LINE OF NARROW TRENCH LIMIT' THE TRENCH SHOULD NOT BE EXCAVATED BEYOND THE TRENCH WIDTH `W'. IF MATERIAL IS LOOSENED OR REMOVED BEYOND THE

ABOVE-MENTIONED LIMITS, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE CRUSHED STONE FOR THE FULL WIDTH OF THE TRENCH AT NO ADDITIONAL COST TO THE OWNER.

14. SHEETING TO BE LEFT IN PLACE SHALL BE USED WHERE SHOWN ON THE DRAWINGS OR WHERE REQUIRED BY THE ENGINEER. IT SHALL BE LEFT IN PLACE BELOW A LINE 12 INCHES ABOVE THE TOP OF THE PIPE/STRUCTURE UNLESS OTHERWISE REQUIRED BY THE ENGINEER.

15. PROTECTION OF WATER SUPPLIES - WHENEVER A SEWER MUST CROSS UNDER A WATER MAIN, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS A MINIMUM OF 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THE ABOVE REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED BY THE CONTRACTOR AS REQUIRED BY THE ENGINEER TO PROVIDE THIS SEPARATION OR THE CONTRACTOR SHALL CONSTRUCT THE NEW SEWER OF CLASS 150 PRESSURE PIPE FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE WATER MAIN. ONE FULL LENGTH OF CLASS 150 PRESSURE PIPE SEWER SHALL BE CENTERED ON THE WATER MAIN AS MUCH AS POSSIBLE. THE SEWER CONSTRUCTED OF THE PRESSURE PIPE MUST BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS AND THE INTERIOR OF THE PIPE SHALL BE COATED WITH THE SEWER PROTECTION COATING FOR DUCTILE IRON PIPES.

16. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS AND COORDINATE ALL THE DIFFERENT CONSTRUCTION DISCIPLINES FOR LOCATION, SIZE, SERVICEABILITY, SUPPORT SYSTEMS, CONNECTIONS (PIPING, ELECTRICAL, INSTRUMENTATION, ETC.), INCIDENTALS AND ALL OTHER COMPONENTS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM MEETING THE APPROVAL OF THE ENGINEER. IF ONE SYSTEM IS SHOWN ON ONE SET OF DISCIPLINE DRAWINGS/SPECIFICATIONS BUT THE SAME SYSTEM IS MISSING OR INCOMPLETE ON ANOTHER SET OF DISCIPLINE DRAWINGS/SPECIFICATIONS THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER, SHALL PROVIDE ALL NECESSARY EQUIPMENT, MATERIALS, LABOR, SUPPORT SYSTEMS, CONNECTIONS (PIPING, ELECTRICAL, INSTRUMENTATION, ETC.), COORDINATION, INCIDENTALS AND ANY AND ALL OTHER COMPONENTS REQUIRED FOR FURNISHING AND INSTALLING THE SYSTEM COMPLETE AS WELL AS PROVIDING A COMPLETE AND FUNCTIONAL SYSTEM MEETING THE APPROVAL OF THE ENGINEER.

GENERAL SITE GRADING NOTES:

1. ALL ROAD AND PARKING AREA SURFACES SHALL PITCH A MINIMUM OF 1/4" PER FOOT UNLESS OTHERWISE NOTED. REFER TO DRAWING FOR DETAILS.

2. ALL AREAS THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. AT A MINIMUM, THE TOP 6 INCHES OF SOIL SHALL BE LOAM.

3. THE CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS. THE CONTRACTOR SHALL PROVIDE ANTI TRACKING PADS AT THE ENTRANCE TO THE CONSTRUCTION SITE AND SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP OF ANY SPILLED OR TRACKED DEBRIS.

4. ALL CATCH BASINS, MANHOLES, VALVE BOXES, VALVE PITS, CONCRETE STRUCTURES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.

5. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS AND EXCESS EXCAVATED MATERIAL FROM WITHIN THE CONSTRUCTION LIMIT OF WORK. IF THE OWNER DESIRES TO KEEP THE MATERIAL, THE CONTRACTOR SHALL RELOCATE THE MATERIAL TO A SUITABLE SITE LOCATED WITHIN THE CONFINES OF THE OWNERS JURISDICTION AT NO ADDITIONAL COST TO THE OWNER. IF THE OWNER DOES NOT DESIRE TO KEEP THE MATERIAL THE CONTRACTOR SHALL RELOCATE THE MATERIAL TO A SUITABLE SITE PROVIDED BY THE CONTRACTOR AT

NO ADDITIONAL COST TO THE OWNER. THE TRANSPORTATION AND RELOCATION OF THE MATERIAL SHALL BE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES. COORDINATE FINE GRADING WITH THE ENGINEER.

GENERAL SITE LAYOUT NOTES:

1. REFER TO THE SITE PLANS FOR ADDITIONAL LAYOUT INFORMATION.

2. THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND ENGINEER. THE CONTRACTOR SHALL LIMIT HIS ACTIVITIES TO THESE AREAS.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY HIS OPERATIONS. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS AT NO ADDITIONAL COST TO THE OWNER.

DONE BY A LAND SURVEYOR REGISTERED IN THE **COMMONWEALTH OF MASSACHUSETTS** AT NO ADDITIONAL COST TO THE OWNER.

4. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

GENERAL SITE PIPING NOTES:

ALL BURIED CONNECTIONS TO STRUCTURES SHALL HAVE SLEEVE TYPE FLEXIBLE CONNECTIONS APPROXIMATELY 4 FEET FROM THE STRUCTURES WHETHER OR NOT SHOWN ON DRAWINGS. ALL SLEEVE TYPE COUPLINGS ON PRESSURE LINES SHALL BE RESTRAINED. **NOTE:** NOT ALL COUPLINGS ARE SHOWN, COUPLINGS REQUIRED FOR THE ALIGNMENT SHOWN SHALL BE INCIDENTAL TO CONSTRUCTION OF THE PROJECT AND PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

2. PROVIDE CAST IN PLACE WALL PIPES/PIPE SLEEVES FOR ALL PIPE PENETRATIONS MADE THROUGH NEW CONCRETE FOUNDATIONS, WALLS AND SLABS. ALL WALL SLEEVES SHALL HAVE

INTEGRAL WATERSTOPS. SEE PROCESS, MECHANICAL DRAWINGS FOR LOCATIONS OF PENETRATIONS. SEE DETAIL DRAWINGS.

A MINIMUM OF 5 FEET OF COVER IS REQUIRED ON ALL LIQUID CARRYING RIDES. INSULATION SHALL BE LISED WHERE DEATH OF COVER IS LESS TH

3. A MINIMUM OF 5 FEET OF COVER IS REQUIRED ON ALL LIQUID CARRYING PIPES. INSULATION SHALL BE USED WHERE DEPTH OF COVER IS LESS THAN 5 FEET.

4. DMH#1 TO BE 8' SQUARE PRECAST CONCRETE MANHOLE (10 FEET DEEP) WITH A 4' DIAMETER PRECAST RISER TO GRADE PER MH DETAIL.

5. COMPACTION TESTING SHALL BE PERFORMED BY THE CONTRACTOR AND ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED

BY THE CONTRACTOR AT NO ADDITIONAL COST.

6. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

7. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO

COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.

8. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE DEMOLITION PLAN OR REQUIRED BY THE ENGINEER.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS.

10. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO ANY TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT BECAUSE OF CONTRACTORS CONSTRUCTION ACTIVITIES ON THE PROJECT SHALL BE COORDINATED THROUGH THE OWNER AND UTILITY COMPANY.

EXISTING CONDITIONS GENERAL NOTES:

1. TOPOGRAPHIC SURVEY DATA AND UTILITY SURVEY INFORMATION PROVIDED BY DESIGN PROFESSIONALS, INC. ON NOVEMBER 7, 2018. WETLAND DELINEATIONS PERFORMED BY JAMES MCMANUS OF JMM WETLAND CONSULTING SERVICES, LLC.

2. THE LOCATIONS OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND MAY NOT BE COMPLETE. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD WITH TEST PITS AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION OF NEW FACILITIES OR PIPING. THE CONTRACTOR SHALL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.

DISPOSAL OF ASBESTOS SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
 PROPERTY LINE INFORMATION, TOPOGRAPHIC INFORMATION, EDGE OF PAVEMENT, UTILITY POLE LOCATIONS, AND LOCATIONS OF EXISTING ABOVE GROUND STRUCTURES WERE TAKEN AND INTERPOLATED FROM AVAILABLE MAPPING PROVIDED BY THE OWNER. THE INFORMATION IS PROVIDED FOR INFORMATIONAL AND COORDINATION PURPOSES, NO GUARANTEES ON THE ACCURACY OF SAID INFORMATION IS PROVIDED BY THE ENGINEER.

5. EXISTING UNDERGROUND UTILITY INFORMATION, PIPE SIZES, PIPE TYPES, AND LOCATIONS WERE TAKEN AND INTERPOLATED FROM AVAILABLE MAPPING PROVIDED BY THE OWNER AND THE LOCAL UTILITY COMPANIES IN CONJUNCTION WITH DETAILED FIELD MARKINGS PROVIDED BY THE LOCAL UTILITY COMPANIES. THE INFORMATION IS PROVIDED FOR INFORMATIONAL

AND COORDINATION PURPOSES, NO GUARANTEES ON THE ACCURACY OF SAID INFORMATION IS PROVIDED BY THE ENGINEER.
6. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS INCLUDED IN THE NOTICE OF INTENT AND ORDER OF CONDITIONS ISSUED FOR THIS PROJECT. COPIES ARE INCLUDED IN SECTION 00800.

<u>ABBREVIATIONS</u>

HYD HYDRAN

INV INVERT ELEVATION

ASBESTOS CEMENT VC VITRIFIED CLAY ADS ADVANCED DRAINAGE OHE OVERHEAD ELECTRICAL W WATER OHW OVERHEAD WIRES SYSTEMS WL WETLAND CB CATCH BASIN PVC POLYVINYL CHLORIDE RCP REINFORCED CONCRETE CPP CORRUGATED PLASTIC DUCTILE IRON PIPE SEWER DRAIN STORM DRAIN GAS SMH SEWER MANHOLE

TGAS TEMPORARY GAS

TW TEMPORARY WATER

DRAWING INDEX TITLE COVER GENERAL NOTES AND DRAWING INDEX EXISTING CONDITIONS AND DEMOLITION SITE PLAN EXISTING CONDITIONS, DEMOLITION AND PROPOSED CONDITIONS SITE PLAN

CHANNEL GRADING AND ESTABLISHMENT AT CRESTVIEW CULVERT

SHEET

DRAWING

<u>NO.</u>

G-1

C-2

C-3

CD-01

CD-02

CD-03

CIVIL DETAILS SHEET 1

CIVIL DETAILS SHEET 2

CIVIL DETAILS SHEET 3



