BID SET No. ______________

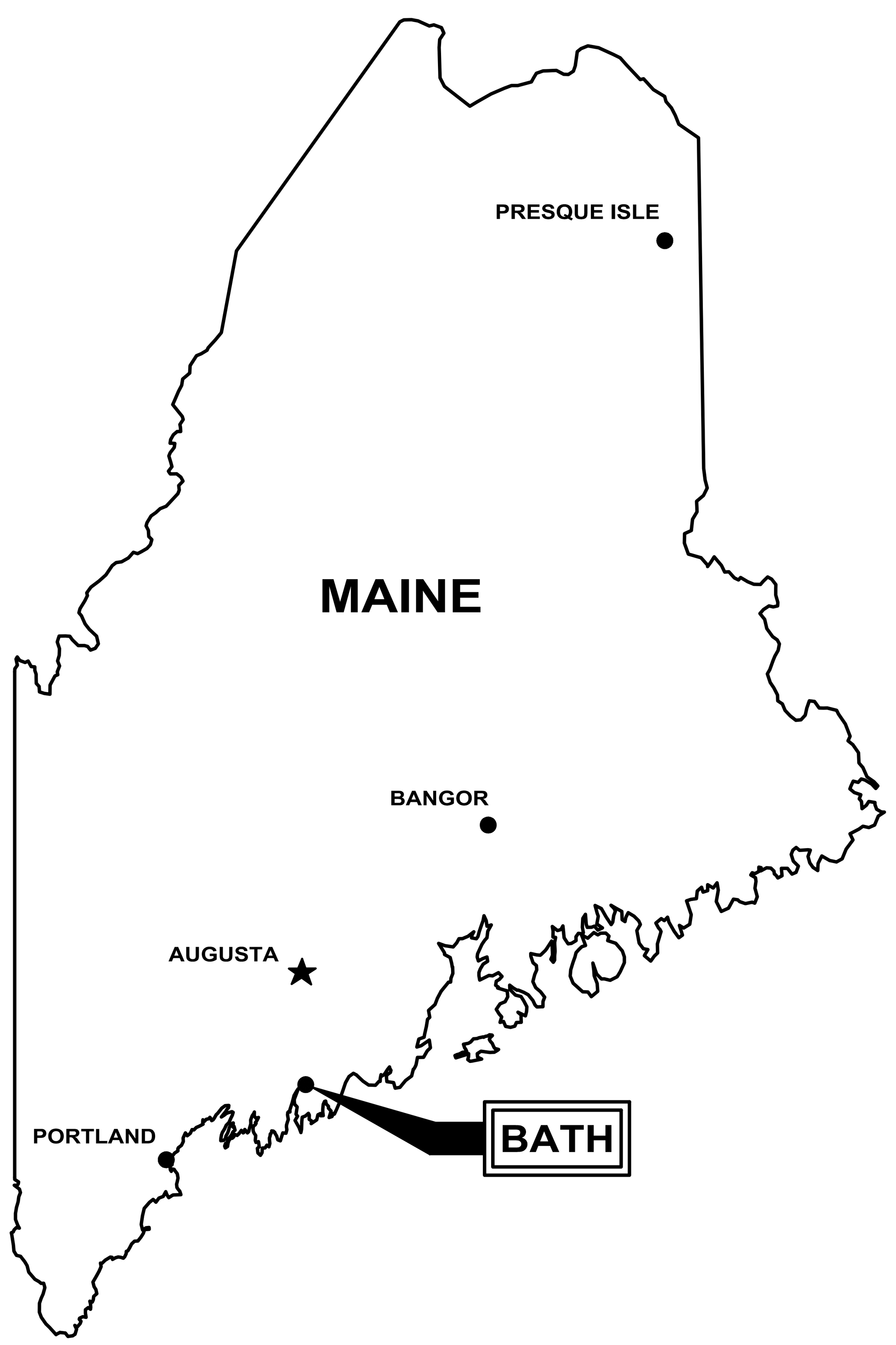
CITY OF BATH

CONTRACT DRAWINGS FOR

SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT

BATH, MAINE

APRIL 2020



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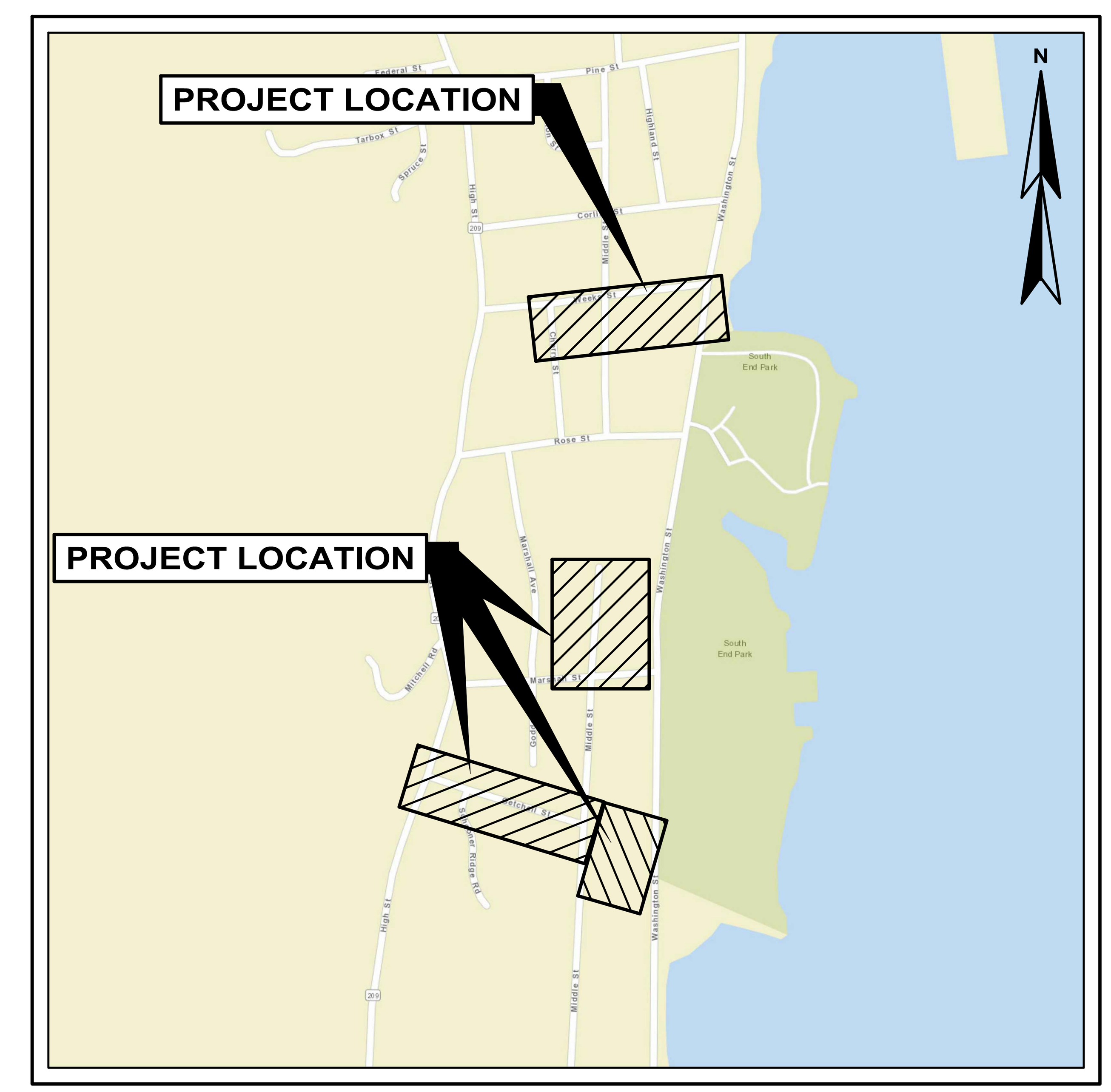

LOCATION PLAN
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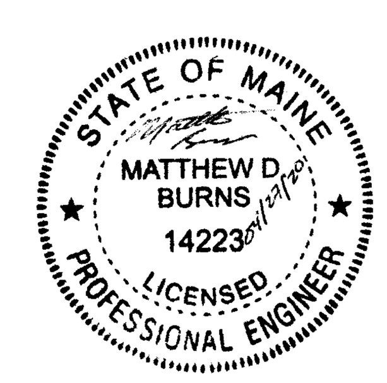

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FOR REVIEW MARCH 2020

FOR BIDDING APRIL 2020

WP PROJECT No. 13859F

GENERAL NOTES

1. THE OWNER WILL BE RESPONSIBLE FOR OBTAINING THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE OWNER. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

2. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS_OF_WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE OWNER.

3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL SIGNS IN ACCORDANCE WITH THE MUTCD AND ALL STATE AND LOCAL REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER PRIOR TO COMMENCING CONSTRUCTION. THE POLICE DEPARTMENT AND FIRE DEPARTMENT ARE TO BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY STREET CLOSING OR DETOUR. REFER TO SPECIFICATION SECTION 01570.

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

5. CONTRACTOR SHALL COMPLY WITH THE COORDINATION REQUIREMENTS AND RELATED COSTS, IF ANY, AS SPECIFIED IN SPECIFICATION SECTION 01050.

6. CONTRACTOR SHALL NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH A SLANTED TYPE TEXT.

7. THE LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND MAY NOT BE COMPLETE.

8. ALL EXISTING SEWER AND STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING SEWERS, STORM DRAIN LINES OR CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW SEWER OR WHEN NOT SHOWN OR INDICATED.

9. ALL EXISTING COMBINED SEWER AND STORM DRAIN LINES LOCATED WITHIN THE PROJECT LIMITS THAT ARE TO BE REPLACED BY NEW SEWER AND STORM DRAIN LINES SHALL BE REMOVED, UNLESS OTHERWISE INDICATED. EXISTING SEWER AND STORM DRAIN LINES TO BE ABANDONED SHALL BE PLUGGED WITH FLOWABLE FILL AS APPROVED BY THE ENGINEER.

10. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY AND OWNER.

11. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTICE TO THE RESPECTIVE UTILITY POLE OWNER. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.

12. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION LAYOUT AND RESULTS REPORTED TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE PLANS. TESTS PITS ARE REQUIRED WHERE SHOWN ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER. TEST PITS WILL BE DUG PRIOR TO CONNECTING PROPOSED SEWERS TO EXISTING SEWERS. THE RESULTS OF TEST PITS DUG TO DETERMINE EXISTING SEWER ELEVATIONS AND LOCATIONS WILL BE REPORTED TO THE ENGINEER. ADJUSTMENTS TO INVERTS, LENGTHS, AND SLOPES OF PROPOSED SEWER MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. THE HORIZONTAL ALIGNMENT OF THE NEW SEWERS AND FORCE MAINS MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR APPROVAL OF THE ENGINEER.

13. SERVICE CONNECTIONS ARE SHOWN FOR ESTIMATING PURPOSES ONLY. THE ACTUAL NUMBER, LENGTH, AND LOCATION SHALL BE AS FIELD DETERMINED AT THE TIME OF CONSTRUCTION. A NEW SERVICE LEAD SHALL BE INSTALLED FROM THE NEW SEWER LINE BACK TO THE EDGE OF THE PERMANENT EASEMENT BUT NO CLOSER THAN 5-FEET TO EXISTING BUILDINGS. NEW SERVICE SERVICES SHALL BE 6-INCH DIAMETER UNLESS OTHERWISE INDICATED.

14. INSULATE OVER ANY GRAVITY SEWER OR FORCE MAIN PIPE WHEN COVER IS LESS THAN 5-FEET IN PAVED AREAS OR 4-FEET IN CROSS-COUNTRY AREAS, OR THERE IS LESS THAN 2-FEET BETWEEN THE SEWER OR FORCE MAIN AND A CULVERT.

15. INITIAL PAVING SHALL BE CONDUCTED WITHIN TWO WEEKS OF COMPLETION OF PLACEMENT OF FINAL BACKFILL UNLESS OTHERWISE AUTHORIZED BY ENGINEER. INITIAL PAVEMENT SHALL BE INSTALLED AND MAINTAINED BY CONTRACTOR FOR A MINIMUM PERIOD OF TWO MONTHS BEFORE FINAL PAVEMENT IS PLACED UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. FINAL PAVEMENT MAY BE PLACED OVER THE INITIAL PAVING PROVIDED INITIAL PAVING COURSE IS IN GOOD REPAIR. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND SHIMMING THE INITIAL PAVEMENT AS NECESSARY TO ACCEPT THE FINAL PAVING COURSE. IF CONDITIONS WARRANT, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE INITIAL PAVING PRIOR TO FINAL PAVING.

16. THE CONTRACTOR MAY ENCOUNTER ASBESTOS CEMENT PIPE DURING EXECUTION OF THE WORK. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF OSHA AND ALL OTHER FEDERAL, STATE AND LOCAL REGULATIONS WHEN HANDLING, REMOVING AND DISPOSING OF ASBESTOS CEMENT PIPE. A BID ITEM HAS BEEN INCLUDED IN THE BID FORM TO ESTABLISH A UNIT PRICE FOR THE REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PIPE.

17. WHEREVER PROPOSED STRUCTURES ARE LOCATED PARTLY WITHIN A PAVED AREA AND PARTLY IN A NON-PAVED AREA, A BITUMINOUS CONCRETE PAVED APRON 2-FEET WIDE SHALL BE SUPPLIED AROUND THE PROPOSED COVER. PAVEMENT SHALL SLOPE AWAY FROM THE COVER.

EXISTING SITE CONDITIONS

1. THE LOCATIONS OF UNDERGROUND 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 THAT MAY BE AFFECTED. THE CONTRACTOR WILL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING LINES AND AS APPROVED BY THE ENGINEER.

2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. PRIVATE UNDERGROUND SEWER LINES THAT IMPACT THE WORK SHOWN ARE ONLY APPROXIMATE AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

ELECTRIC:	SEWER/STORM DRAINS:	TELEPHONE:	DIG SAFE:
CENTRAL MAINE POWER	BATH PUBLIC WORKS	GWI,INC	WILMINGTON, MA
AUGUSTA, ME	TEL. 207.443.8357	BIDDEFORD, ME	TEL. (888) 344-7233
TEL. 1.800.565.3181		TEL. 207.286.8686	
NATURAL GAS:	**WATER:**	**EMERGENCY:**	
MAINE NATURAL GAS	BATH WATER DISTRICT	BATH FIRE AND RESCUE	
BRUNSWICK, ME	TEL. 207.443.2391	TEL. 207.443.5034	
TEL. 207.729.0420		BATH POLICE DEPARTMENT	
		TEL. 207.443.5563	

3. THERE ARE NO KNOWN HAZARDOUS ENVIRONMENTAL CONDITIONS WITHIN THE AREA OF WORK. REFER TO SPECIFICATION SECTION 00800-SC-5.06. IF THE PRESENCE OF HAZARDOUS ENVIRONMENTAL CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY. ALL ACTIVITIES, HANDLING AND DISPOSAL OF HAZARDOUS ENVIRONMENTAL CONDITIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS.

SITE DEMOLITION

1. REFER TO SPECIFICATION SECTION 01010, WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.

2. DEMOLISH/REMOVE EXISTING PIPING AS REQUIRED FOR CONSTRUCTION OF NEW FACILITIES. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK. EXISTING PIPING THAT NEEDS TO BE REMOVED TO CONSTRUCT THE NEW FACILITIES, BUT IS TO REMAIN, SHALL BE REINSTALLED/REPLACED AS NEEDED. EXISTING PIPESDESIGNATED AS "ABANDONED" MAY BE REMOVED IF THE CONTRACTOR SO CHOOSES. IF ABANDONED PIPE CONFLICTS WITH NEW SITE PIPING OR FACILITIES, THEN A PORTION OF THE ABANDONED PIPE SHALL BE REMOVED, AND THE NEW ENDS OF ABANDONED PIPE CAPPED OR PLUGGED WITH CONCRETE.

3. ALL EXISTING PIPING AND UTILITIES WHICH ARE BENEATH PROPOSED STRUCTURES, AND ARE TO BE ABANDONED, SHALL BE REMOVED TO A MINIMUM OF 5-FEET OUTSIDE OF THE STRUCTURE. PIPE AND UTILITIES BENEATH PROPOSED STRUCTURES THAT ARE TO REMAIN SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE INDICATED.

4. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES, RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ENGINEER.

6. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND GROUNDWATER DEWATERING OPERATIONS.

SITE CLEARING, GRUBBING AND GRADING

1. STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115.

2. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS_OF_WAY AND PROPERTY LINES ON STATE OR COUNTY_OWNED PROPERTY OR EASEMENTS. ALL CLEARING AND GRUBBING MATERIAL SHALL BE THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.

3. THE CONTRACTOR SHALL FOLLOW ALL ENDANGERED SPECIES ACT 4(D) RULES REGARDING THE NORTHERN LONG EARED BAT. THIS INCLUDES AVOIDANCE OF TREE REMOVAL DURING THE MONTHS OF JUNE AND JULY. CONTRACTOR SHALL PLAN ACCORDINGLY.

4. CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.

5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY SILT FENCE AND HAY BALE BARRIERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM. REFER TO THE CIVIL DETAIL DRAWINGS.

6. TEST BORINGS TO DEPTH OF REFUSAL LOGS FOR THE PROJECT SITE ARE SHOWN ON THE DRAWINGS. THESE ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. PLEASE NOTE THAT THE DESCRIPTIONS PROVIDED ON THE DRAWINGS DO NOT REPRESENT FIELD CONDITIONS OTHER THAN AT THE SPECIFIC TEST BORING LOCATIONS. THE CONDITIONS BETWEEN BORING LOCATIONS MAY VARY FROM THOSE SHOWN ON THE DRAWINGS.

7. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562.

8. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.

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

10. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.

11. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.

12. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.

13. ALL ROAD AND DRIVE CROSS SLOPES SHALL PITCH 1/4-INCH PER FOOT MINIMUM. ALL PAVED SURFACES SHALL PITCH 1% UNLESS OTHERWISE NOTED. REFER TO THE CIVIL DETAIL DRAWINGS.

14. ALL NON-ROADWAY AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4-INCHES OF SOIL SHALL BE LOAM. REFER TO SPECIFICATION SECTION 02485, LANDSCAPING/LOAM AND SEED.

15. ALL LAWN AREAS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE LOAMED AND SEEDED AS SPECIFIED.

SITE LAYOUT

1. DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS AND STATIONING SHALL PREVAIL. TOPOGRAPHY BASED ON SURVEY DATED MAY 2018 BY FALLA & SONS LAND SURVEYS, INC. ELECTRONIC FILES OF ENGINEER'S DRAWINGS WILL BE PROVIDED TO THE SUCCESSFUL BIDDER AFTER CONTRACT AWARD FOR LAYOUT OF THE PROPOSED WORK. ALL LAYOUT INFORMATION PROVIDED ON THE SEALED COPIES OF THE CONTRACT DRAWINGS SHALL PREVAIL IN THE CASE OF DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE WORK BASED ON EXISTING CONTROL POINTS PROVIDED BY THE ENGINEER AND ITS CONSULTANTS. ANY DISCREPANCIES FOUND SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THIS PROVIDED LAYOUT INFORMATION THROUGHOUT THE COURSE OF CONSTRUCTION.

3. REFER TO THE SITE PIPING AND SITE GRADING DRAWINGS FOR ADDITIONAL LAYOUT INFORMATION.

4. THE LOCATIONS 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 ACTIVITIES TO THESE AREAS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION. THIS WORK SHALL BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MAINE, AT NO ADDITIONAL COST TO THE OWNER.

6. ALL ELEVATIONS REFER TO THE NAVD88. ORIENTATION IS GRID NORTH ON THE NAD83 MAINE STATE PLAN, WEST ZONE, U.S. FOOT, COORDINATE SYSTEM. PROJECT BENCH MARKS ARE SHOWN ON THE DRAWINGS. CONTRACTOR SHALL VERIFY BENCHMARK ELEVATIONS PRIOR TO USING IN CONSTRUCTION.

7. EXISTING CONDITIONS SITE PLAN DEVELOPED FROM SURVEY DRAWING PREPARED BY FALLA & SONS LAND SURVEYS INC., DATED MAY 2018, AND EXISTING RECORD DRAWING INFORMATION.

SITE PIPING

1. MANHOLES ARE 4-FEET IN DIAMETER UNLESS OTHERWISE NOTED. THE TOP OF MANHOLE FRAMES SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE NOTED ON DRAWINGS. SEWER MANHOLE INVERTS SHOWN ON THE DRAWINGS ARE TO THE INSIDE FACE OF THE MANHOLE.

2. CONTRACTOR SHALL RE-SHAPE OR RE-BUILD INVERTS AS REQUIRED WHEN CONNECTING INTO EXISTING MANHOLES. NEW PENETRATIONS THROUGH EXISTING MANHOLE WALLS SHALL BE BY CORING MACHINE AND HAVE WATERTIGHT SEALS, UNLESS OTHERWISE INDICATED. REFER TO SPECIFICATION SECTION 02601.

3. REFER TO SPECIFICATION SECTION 02200 FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.

4. COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE-YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.

5. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF THE WORKDAY. OPEN TRENCHES OUTSIDE OF THE WAY MAY BE LEFT OPEN IF THE CONTRACTOR PROVIDES ADEQUATELY SAFE BARRICADING AND LIGHTS.

6. 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.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH SPECIFICATION SECTION 02050.

8. WHERE POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER LINES. A MINIMUM SEPARATION OF 18-INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED, IF POSSIBLE. WHERE A WATER LINE CROSSES UNDER A WASTEWATER LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.

CIVIL ABBREVIATIONS

&	AND
Ø, DIA	DIAMETER
#, NO	NUMBER
APP'D	APPROVED
BLDG	BUILDING
CB	CATCH BASIN
CEN	CENTER
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DEMO	DEMOLITION
DMH	DRAIN MANHOLE
DI	DUCTILE IRON
DR	DRAIN
DWG	DRAWING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
FM	FORCE MAIN
FT	FEET
G	GAS
HYD	HYDRANT
IN	INCH
INF	INFLUENT
INV	INVERT
LBS	POUNDS
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MW	MONITORING WELL
N	NORTH
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N/A	NOT AVAILABLE/APPLICABLE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PC	PERFORATED CLAY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PS	PRIMARY SLUDGE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REQ'D	REQUIRED
S	SLOPE, SEWER
SD	STORM DRAIN
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
SQ	SQUARE
STA	STATION
T, XFMR	TRANSFORMER
TBM	TEMPORARY BENCH MARK
THK	THICKNESS
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
W/	WITH
W	POTABLE WATER

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
122	CONTOUR	123
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	STOCKADE FENCE	
	BARB WIRE FENCE	
	RETAINING WALL	
	GUARDRAIL	
8"S	SEWER	8"S
4"FM	SEWER FORCE MAIN	4"FM
4"G	GAS	4"G
8"W	WATER	8"W
15"SD	STORM DRAIN	15"SD
6"UD	UNDERDRAIN	6"UD
12" CMP	CULVERT	12" CMP
UGE UGE	UNDERGROUND ELECTRIC	UGE UGE
OHE OHE	OVERHEAD ELECTRIC	OHE OHE
UGT UGT	UNDERGROUND TELEPHONE	
CATV CATV	UNDERGROUND CABLE TV	
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
124.6	SPOT ELEVATION	134.5
SMH	SEWER MANHOLE	SMH
DMH	DRAINAGE MANHOLE	DMH
CB CB CB	CATCH BASIN	CB CB
EMH	ELECTRIC MANHOLE	EMH
TMH	TELEPHONE MANHOLE	TMH
	SHUTOFF VALVE	
	WATER SERVICE SHUTOFF	
	YARD HYDRANT	
	HYDRANT	
	GAS SERVICE SHUTOFF	
	GAS GATE VALVE	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
MB	MAILBOX	
	TEMPORARY BENCH MARK	
TP	TEST PIT	
B	TEST BORING	
P	TEST PROBE	
MW	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	
	ROCK OUTCROP	

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY:.. K.FOX
CAD COORD:.. D.FUD
CAD:.. D.FUD
CHECKED BY:.. K.OBE
DATE:.. MARCH 2020
APPROVED BY:.. M.BUR
DATE:.. APRIL 2020
PROJECT NO:.. 13859F

STATE OF MAINE · MATTHEW D. BURNS · 14229 · LICENSED PROFESSIONAL ENGINEER

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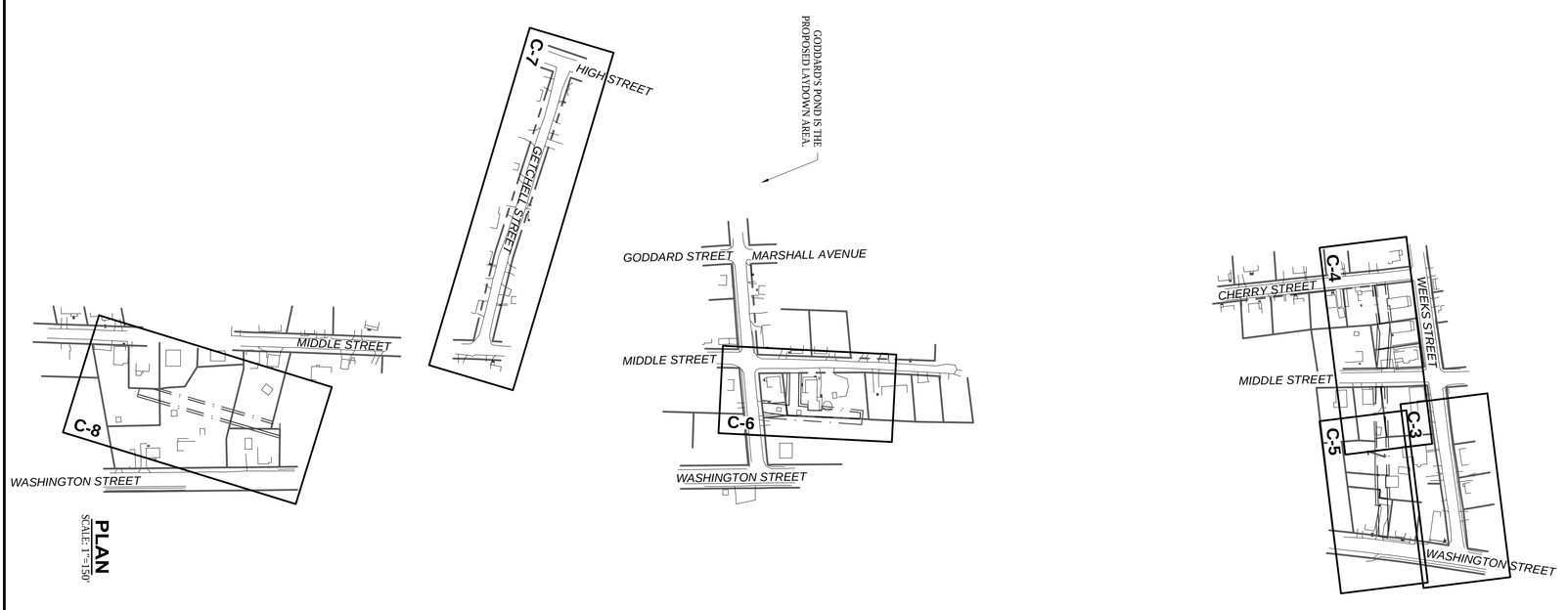
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

GENERAL NOTES, LEGEND AND ABBREVIATIONS

DRAWING
C-1



PLAN
SCALE: 1"=150'

0
150
300

N

CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

SITE KEY PLAN

DRAWING C-2

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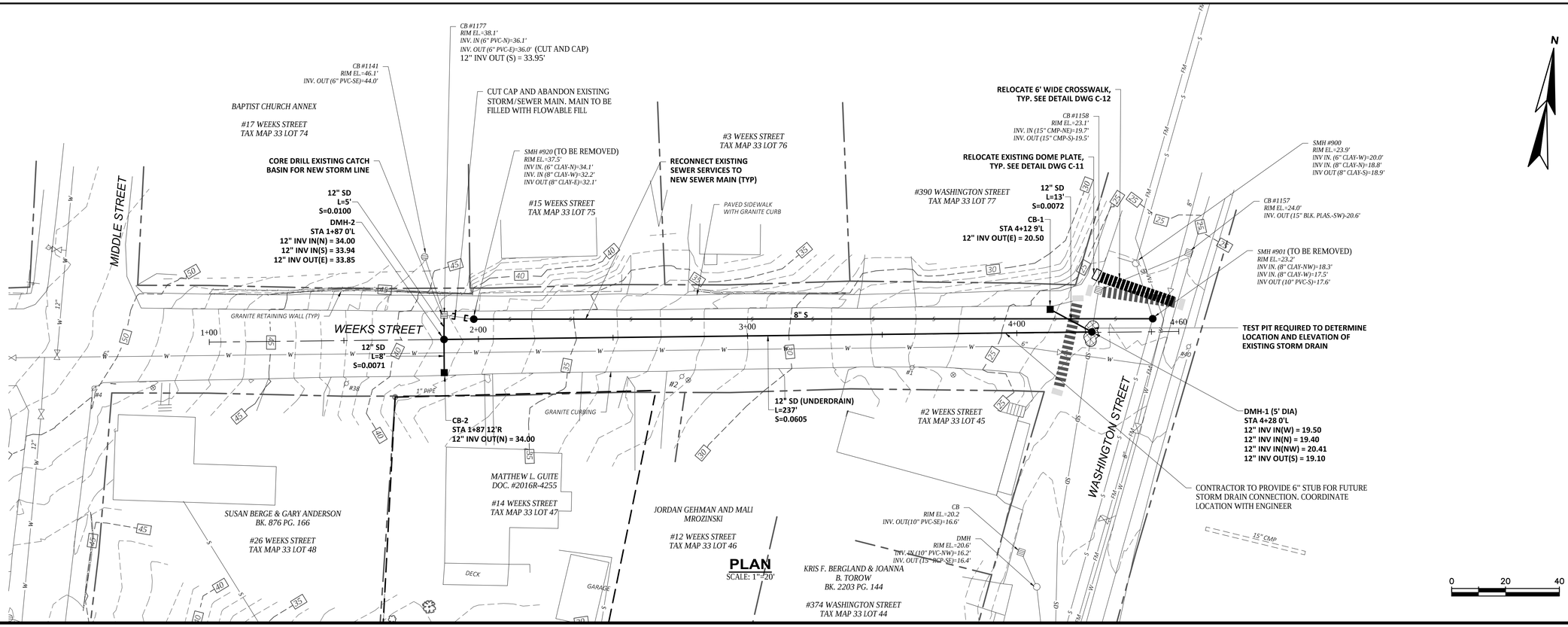
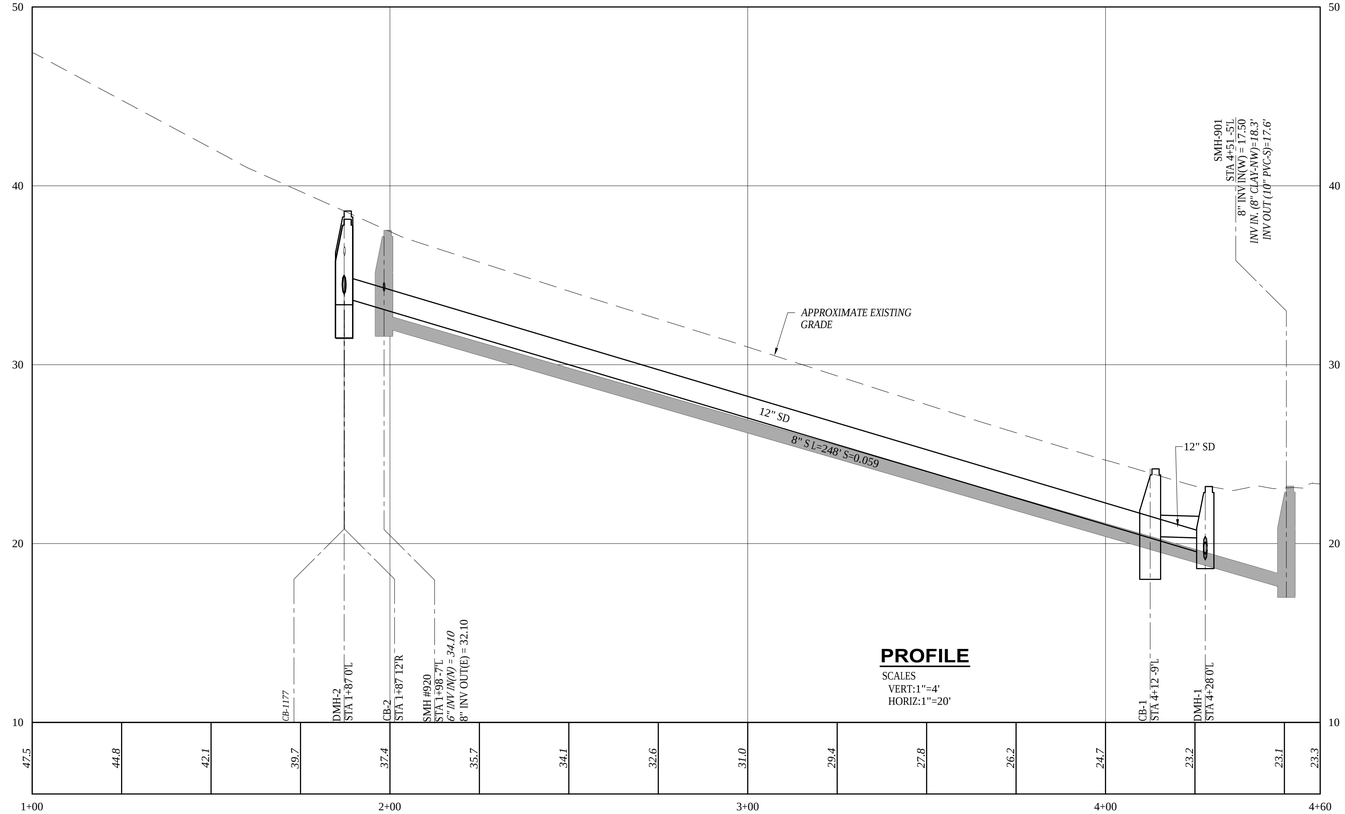
NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20
1			
2			
3			
4			





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	CONTRACT DOCUMENTS	M.BUR	4/20

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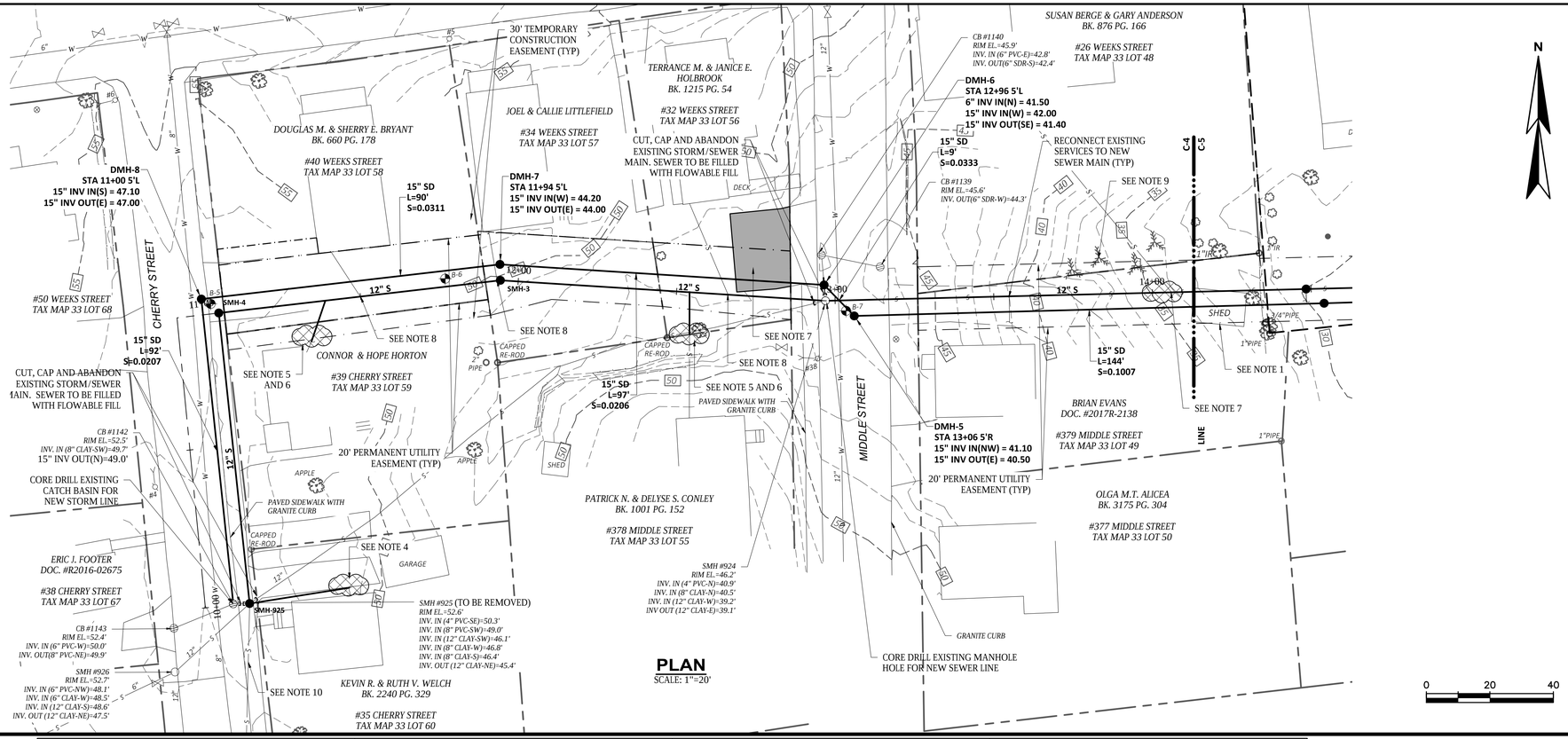
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

PLAN AND PROFILE: WEEKS STREET STA 1+00 TO STA 3+62

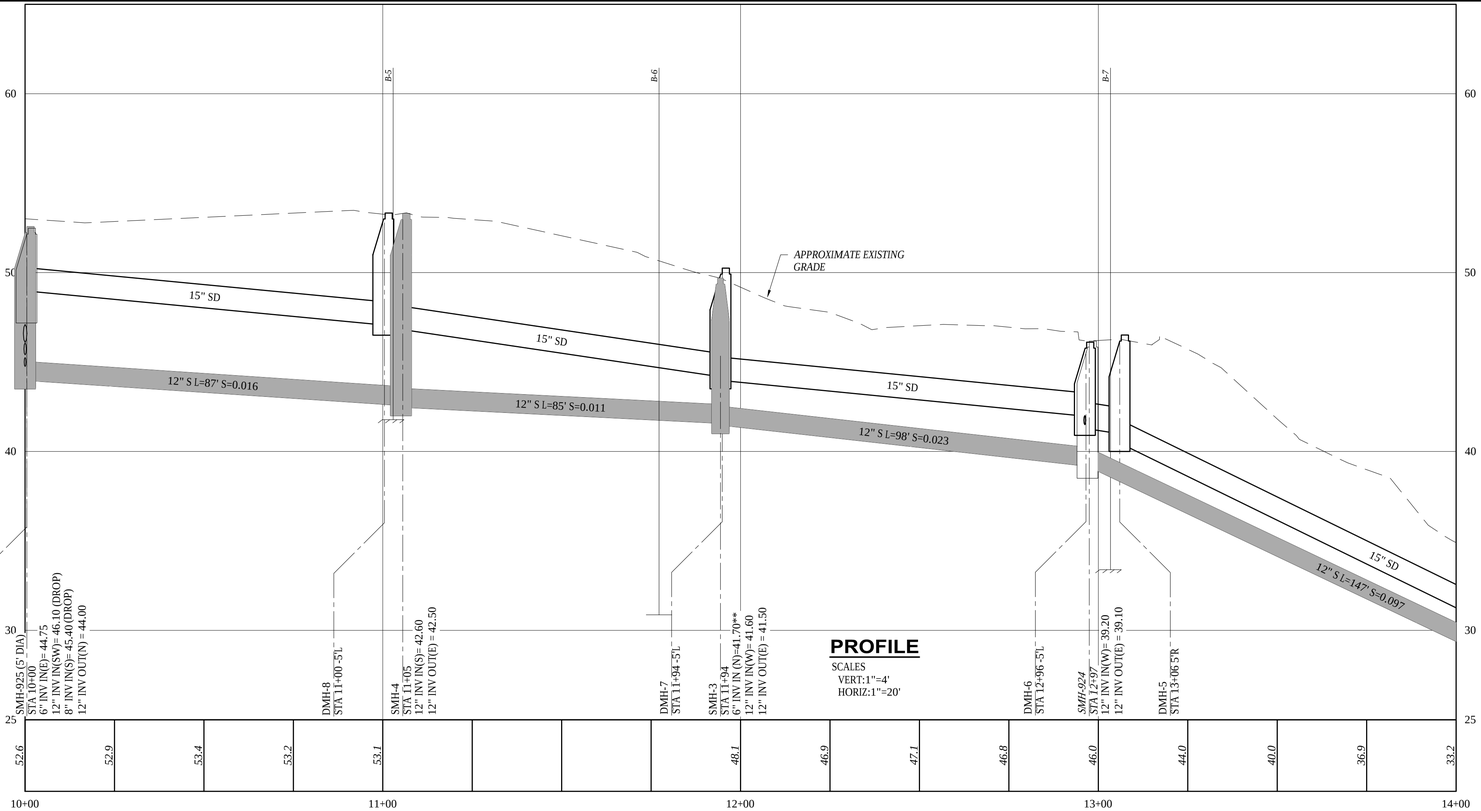
DRAWING
C-3

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION OF EXISTING SHED. CITY TO FURNISH AND INSTALL REPLACEMENT SHED.
2. TAP LOCATIONS AT SEWER MAIN ARE APPROXIMATE BASED ON CCTV DATA. CONTRACTOR TO DIG TEST PITS AND FIELD VERIFY TAP LOCATIONS AS NECESSARY.
3. LOCATION OF EXISTING INTERIOR SEWER SERVICES SHOWN ARE APPROXIMATE BASED ON INTERIOR HOME INSPECTIONS COMPLETED. CONTRACTOR SHALL LOCATE EXISTING SEWER LATERAL LOCATIONS AND DEVELOP PROPOSED ROUTING OF NEW SEWER LATERALS FOR REVIEW BY THE ENGINEER AND PROPERTY OWNERS AS NECESSARY.
4. CONTRACTOR TO DIG TEST PIT TO DETERMINE LOCATION AND ELEVATION OF EXISTING LATERAL. LATERAL SHALL BE REROUTED/EXTENDED TO SMH-925 AND SHALL MAINTAIN A MINIMUM SLOPE TO SMH-925. ADJUST LATERAL INVERT AND SMH-925 BOTTOM ELEVATION TO ENSURE MINIMUM SLOPE IF NECESSARY. REVIEW ELEVATIONS WITH ENGINEER PRIOR TO PROCEEDING.
5. EXTEND SEWER SERVICE TO SEWER MAIN AS SHOWN. CONNECT TO NEW SEWER MAIN WITH FITTINGS AND ADAPTERS AS NECESSARY.
6. TEST PIT TO DETERMINE LOCATION OF EXISTING SEWER SERVICE.
7. CONTRACTOR TO REMOVE DRIVEWAY PAVEMENT TO EXTENTS SHOWN AND REPLACE WITH NEW PAVEMENT. SEE DETAIL DWG C-12 FOR DRIVEWAY PAVEMENT DETAIL.
8. INTERCEPT SEWER SERVICE WITH NEW SEWER MAIN AND CONNECT TO NEW SEWER MAIN WITH FITTINGS AND ADAPTERS AS NECESSARY.
9. CONTRACTOR TO USE CARE AND PROTECTION WHEN WORKING IN CLOSE PROXIMITY TO LANDSCAPING AND GARDENS ON PRIVATE PROPERTY WITHIN EASEMENTS. CONTRACTOR SHALL CONSULT WITH THE CITY ARBORIST REGARDING PROPER PROCEDURES TO BE USED TO MOVE, PROTECT, AND REINSTALL ANY EXISTING PLANTS ON PROPERTY THAT MAY BE IMPACTED BY THE WORK, AND FOLLOW THOSE RECOMMENDATIONS. REFER TO SPECIFICATION SECTION 02110.
10. CONTRACTOR TO DYE TEST SEWER LINE TO VERIFY THAT SEWER LINE IS ACTIVE. IF LINE IS ACTIVE, INSTALL SEWER MANHOLE WITH CONNECTION AS SHOWN. IF SEWER LINE IS NOT ACTIVE, CUT, CAP, AND ABANDON PIPE. REVIEW WITH ENGINEER PRIOR TO INSTALLATION OF NEW SMH-925.



PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

NO	SUBMISSIONS/REVISIONS	APPD	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY:.. M.FOX
CAD COORD:.. D.FUD
CAD:.. D.FUD
CHECKED BY:.. K.OBE
DATE:.. MARCH 2020
APPROVED BY:.. M.BUR
DATE:.. APRIL 2020
PROJECT NO:.. 13859F

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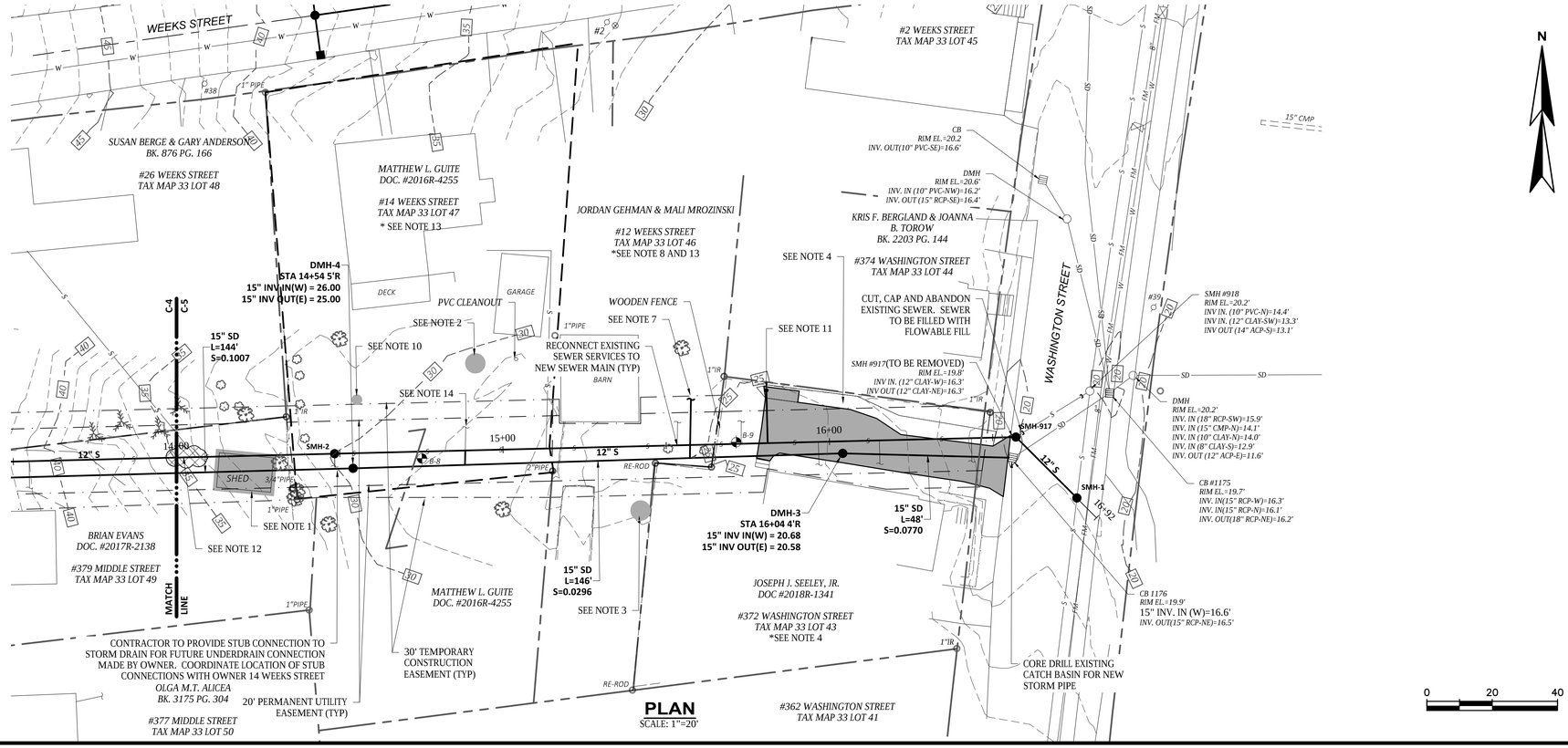
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

PLAN AND PROFILE: CROSS COUNTRY STA 10+00 TO STA 14+00

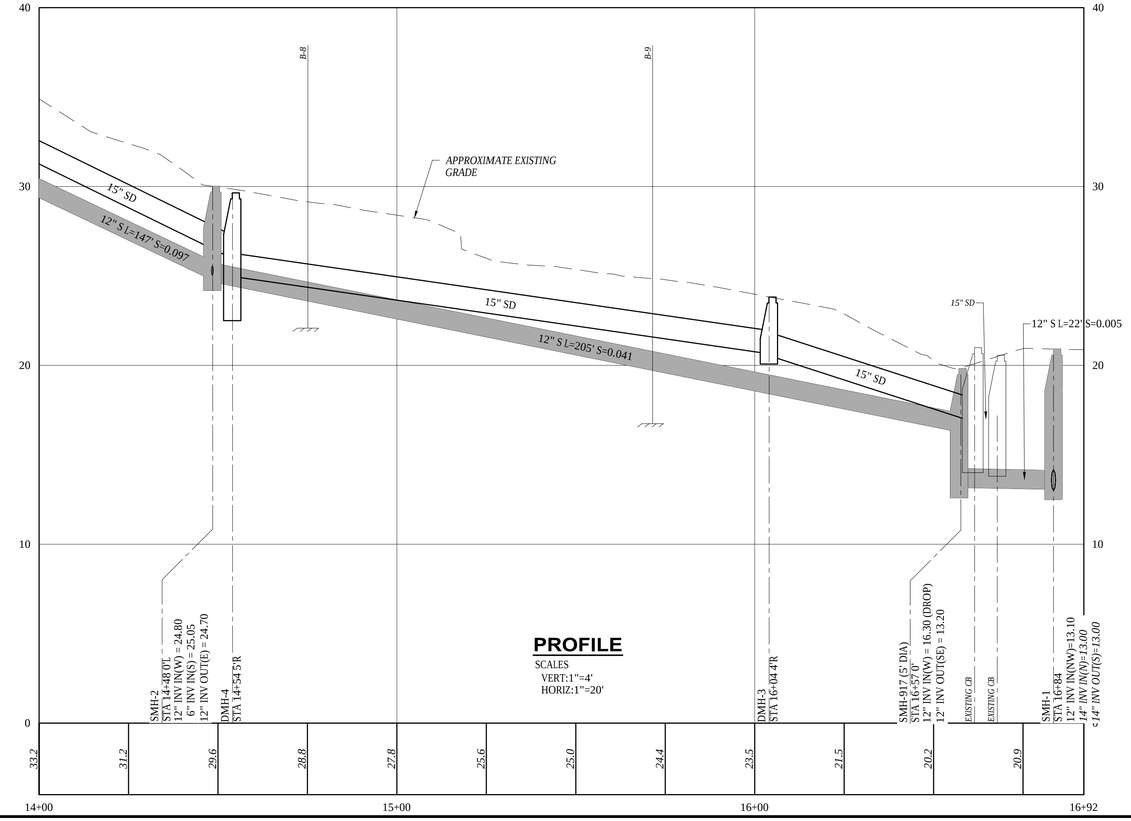
DRAWING
C-4

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION OF EXISTING SHED. CITY TO FURNISH AND INSTALL REPLACEMENT SHED.
2. CITY OF BATH WILL REMOVE WILLOW TREE. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF RESULTING TREE STUMP.
3. CITY OF BATH WILL REMOVE MAPLE TREE. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF RESULTING TREE STUMP.
4. REMOVE EXISTING RIPRAP ALONG EDGE OF DRIVEWAY. AFTER INSTALLATION OF PIPE AND DRIVEWAY, LOAM AND SEED REMAINING AREAS WHERE PAVEMENT IS NOT SHOWN.
5. CONTRACTOR TO TEMPORARILY REMOVE EXISTING WOOD FENCE DURING INSTALLATION OF SEWER AND STORM DRAIN AND THEN REINSTALL TO ITS EXISTING CONDITION.
6. TAP LOCATIONS AT SEWER MAIN ARE ESTIMATED BASED ON CCTV DATA. CONTRACTOR TO DIG TEST PITS AND FIELD VERIFY TAP LOCATIONS AS NECESSARY.
7. INSTALL SURFACE INLET DRAIN CONNECTED TO THE NEW STORM DRAIN. GRADE THE IMPACTED AREA SUCH THAT WATER WILL BE DIRECTED TO THE SURFACE INLET. COORDINATE LOCATION OF SURFACE INLET DRAIN WITH OWNER. SEE YARD DRAIN WITH RISER DETAIL, DWG C-10
8. REINSTALL EXISTING ROCK WALL TO ITS CURRENT CONDITION IF IMPACTED BY THE PROJECT.
9. LOCATION OF EXISTING INTERIOR SEWER SERVICES SHOWN ARE APPROXIMATE BASED ON INTERIOR HOME INSPECTION COMPLETED. CONTRACTOR SHALL LOCATE EXISTING SEWER LATERAL LOCATIONS AND DEVELOP PROPOSED ROUTING OF NEW SEWER LATERALS FOR REVIEW BY THE ENGINEER AND PROPERTY OWNERS AS NECESSARY.
10. REMOVE EXISTING STUMP.
11. CONTRACTOR TO REINSTALL EXISTING SEWER SERVICE STUB ACROSS DRIVEWAY FOR USE BY RV.
12. TEST PIT TO DETERMINE LOCATION OF EXISTING SEWER SERVICE.
13. CONTRACTOR SHALL CONSULT WITH THE CITY ARBORIST REGARDING PROPER PROCEDURES TO BE USED TO MOVE, PROTECT, AND REINSTALL ANY EXISTING PLANTS ON PROPERTY THAT MAY BE IMPACTED BY THE WORK, AND FOLLOW THOSE RECOMMENDATIONS.
14. PROVIDE STUB FOR FUTURE CONNECTION TO STORM DRAIN BY PROPERTY OWNER. COORDINATE LOCATION OF CONNECTION WITH PROPERTY OWNER AND ENGINEER.



PLAN
SCALE: 1"=20'



NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY:.. M.FOX
CAD COORD:.. D.FUD
CAD:.. D.FUD
CHECKED BY:.. K.OBE
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APPROVED BY:.. B.BUR
DATE:.. APRIL 2020
PROJECT NO:.. 13859F

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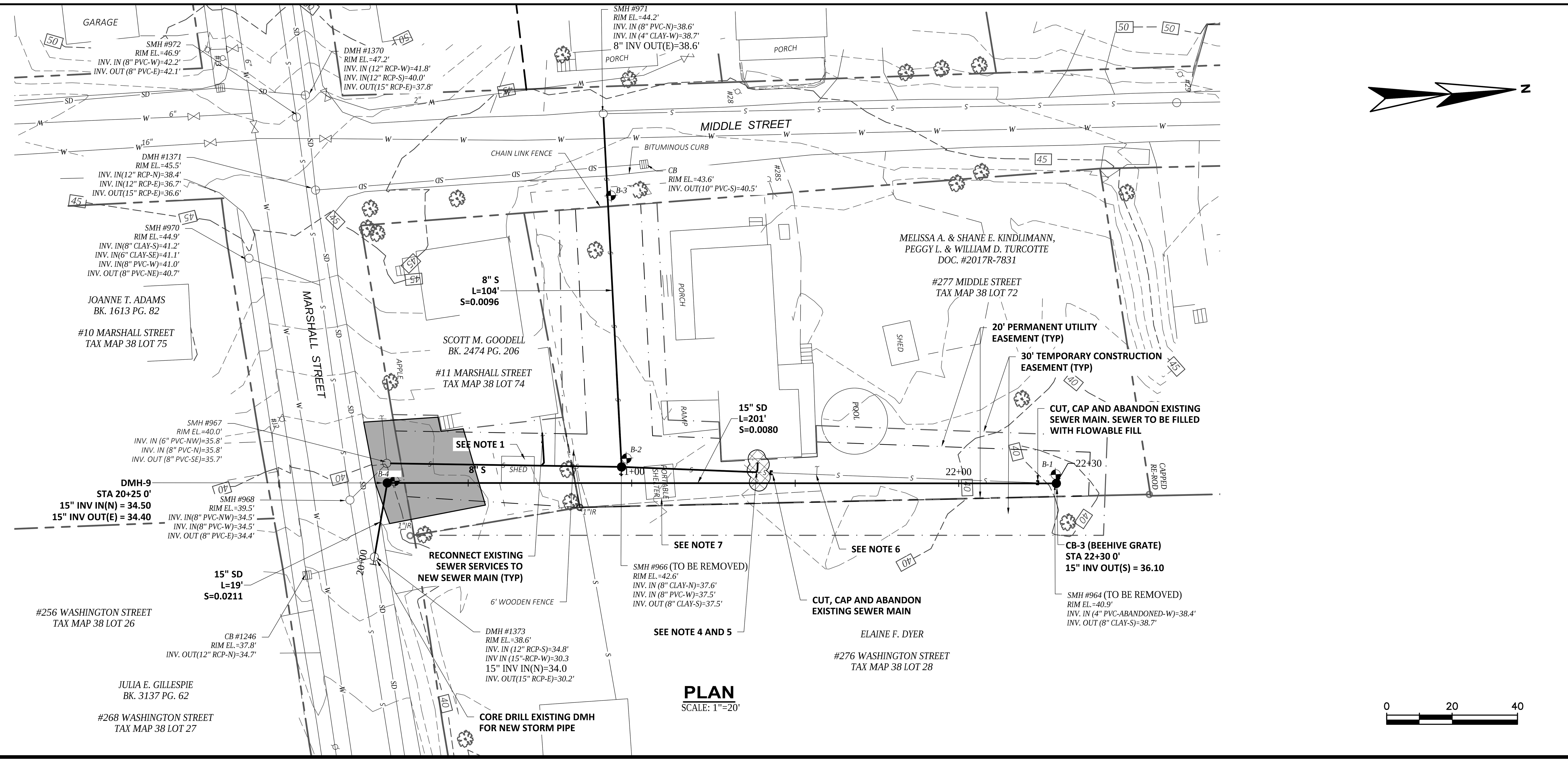
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

PLAN AND PROFILE: CROSS COUNTRY STA 14+00 TO STA 16+92

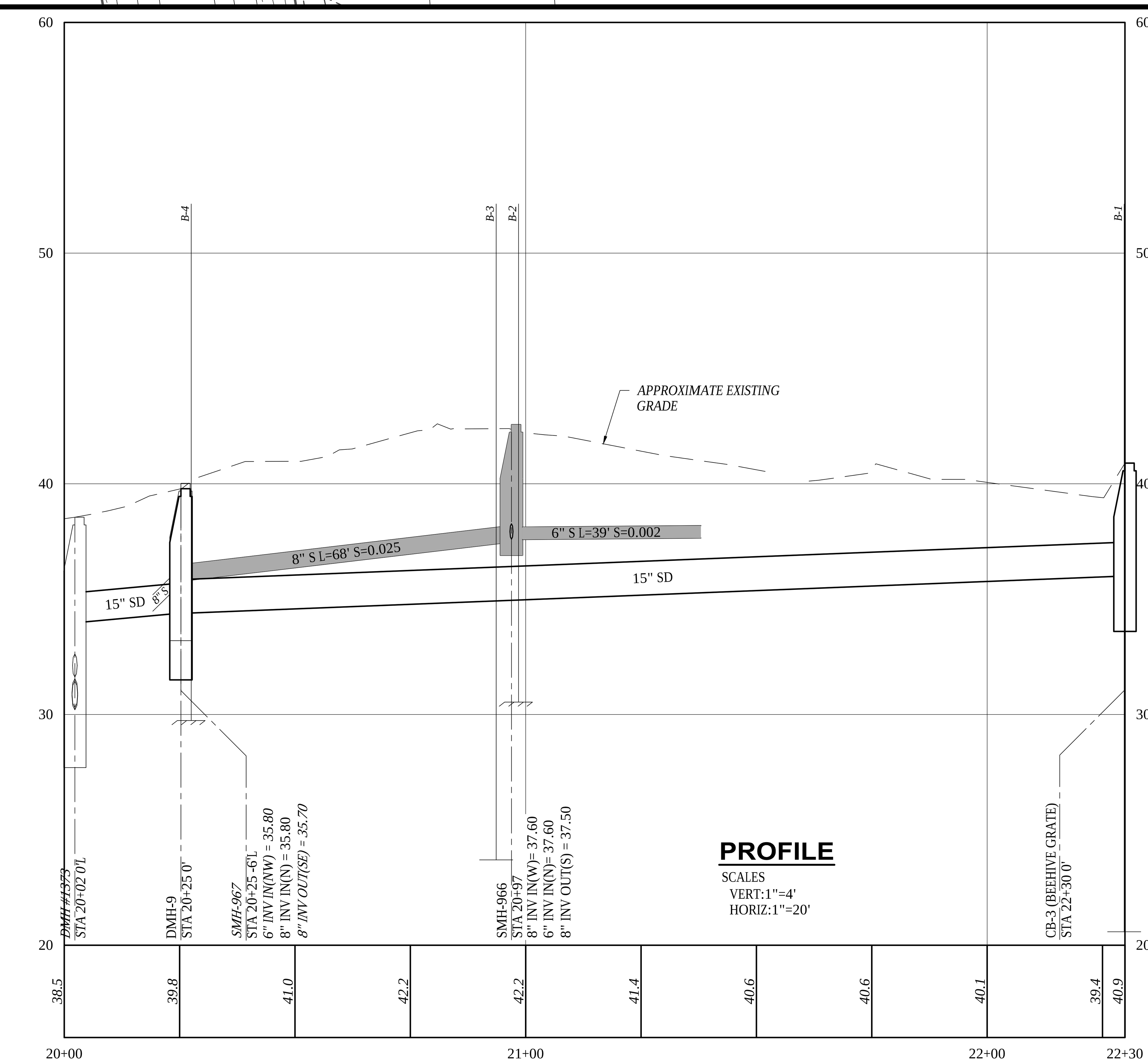
DRAWING
C-5

NOTES:

1. RELOCATE EXISTING 8'X10' SHED TO A MUTUALLY AGREED UPON LOCATION ON THE PROPERTY BY THE ENGINEER AND OWNER.
2. SEWER SERVICE LOCATIONS AT SEWER MAIN ARE ESTIMATED BASED ON CCTV DATA. CONTRACTOR TO DIG TEST PITS AND FIELD VERIFY TAP LOCATIONS AS NECESSARY.
3. LOCATION OF EXISTING INTERIOR SEWER SERVICES SHOWN ARE APPROXIMATE BASED ON INTERIOR HOME INSPECTIONS COMPLETED. CONTRACTOR SHALL LOCATE EXISTING SEWER LATERALS AND DEVELOP PROPOSED ROUTING OF NEW SEWER LATERALS FOR REVIEW BY THE ENGINEER AND PROPERTY OWNERS AS NECESSARY.
4. EXTEND SEWER SERVICE TO NEW SEWER MAIN AS SHOWN. CONNECT TO NEW SEWER MAIN WITH FITTINGS AND ADAPTERS AS NECESSARY.
5. TEST PIT TO DETERMINE LOCATION OF EXISTING SEWER SERVICES.
6. CONTRACTOR TO VERIFY THAT SEWER SERVICE IS NOT ACTIVE. IF SERVICE IS FOUND TO BE ACTIVE, CONTRACTOR TO DIG TEST PIT TO LOCATE SERVICE AND EXTEND NEW SEWER SERVICE TO THIS LOCATION.
7. TEMPORARILY RELOCATE EXISTING 8X12 PORTABLE SHELTER DURING INSTALLATION OF SEWER LINE. RETURN TO ORIGINAL LOCATION AFTER INSTALLATION OF SEWER LINE.



PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20
1			
2			
3			
4			

DESIGNED BY: K.FOX
CAD COORD: D.FUD
CAD: D.FUD
CHECKED BY: K.OBE
DATE: MARCH 2020
APPROVED BY: M.BUR
DATE: APRIL 2020
PROJECT NO: 13859F

STATE OF MAINE
MATTHEW D. BURNS
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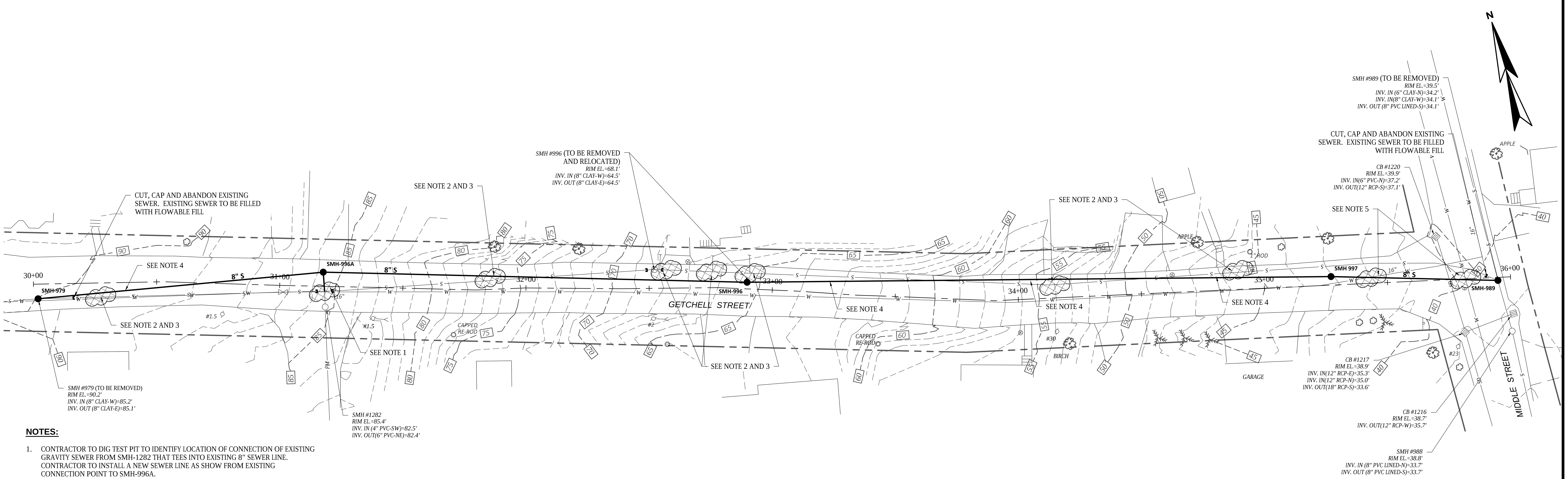
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

PLAN AND PROFILE: MARSHALL STREET STA 20+00 TO STA 22+30

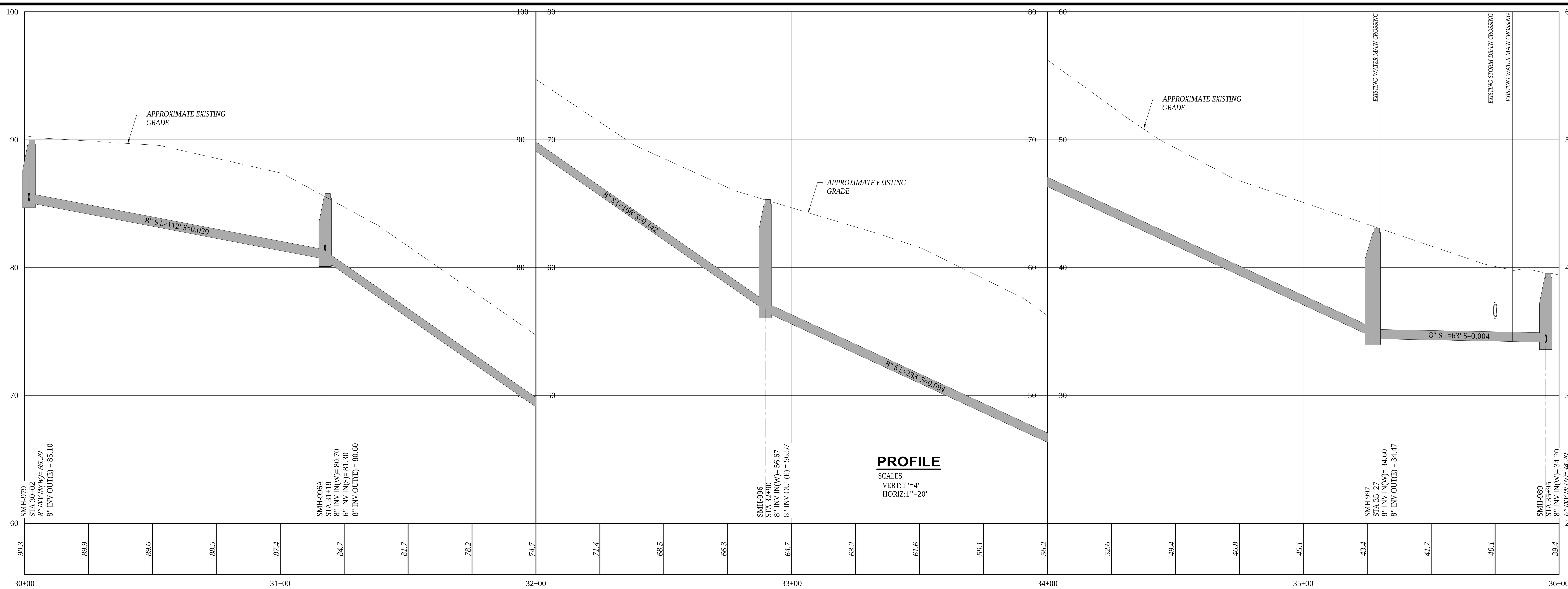
DRAWING
C-6



NOTES:

1. CONTRACTOR TO DIG TEST PIT TO IDENTIFY LOCATION OF CONNECTION OF EXISTING GRAVITY SEWER FROM SMH-1282 THAT TEES INTO EXISTING 8" SEWER LINE. CONTRACTOR TO INSTALL A NEW SEWER LINE AS SHOW FROM EXISTING CONNECTION POINT TO SMH-996A.
2. EXTEND SEWER SERVICE TO SEWER MAIN. CONNECT TO NEW SEWER MAIN WITH FITTINGS AND ADAPTERS AS NECESSARY.
3. TEST PIT TO DETERMINE LOCATION OF EXISTING SEWER SERVICE.
4. INTERCEPT SEWER SERVICE WITH NEW SEWER MAIN AND CONNECT TO NEW SEWER MAIN WITH FITTINGS AND ADAPTERS AS NECESSARY.
5. TEST PIT TO DETERMINE LOCATION OF EXISTING WATER MAIN.

PLAN
SCALE: 1"=20'



PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

NO.	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY: M.FOX
CAD COORD: D.FUD
CAD: D.FUD
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APPROVED BY: M.BUR
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PROJECT NO: 13859F

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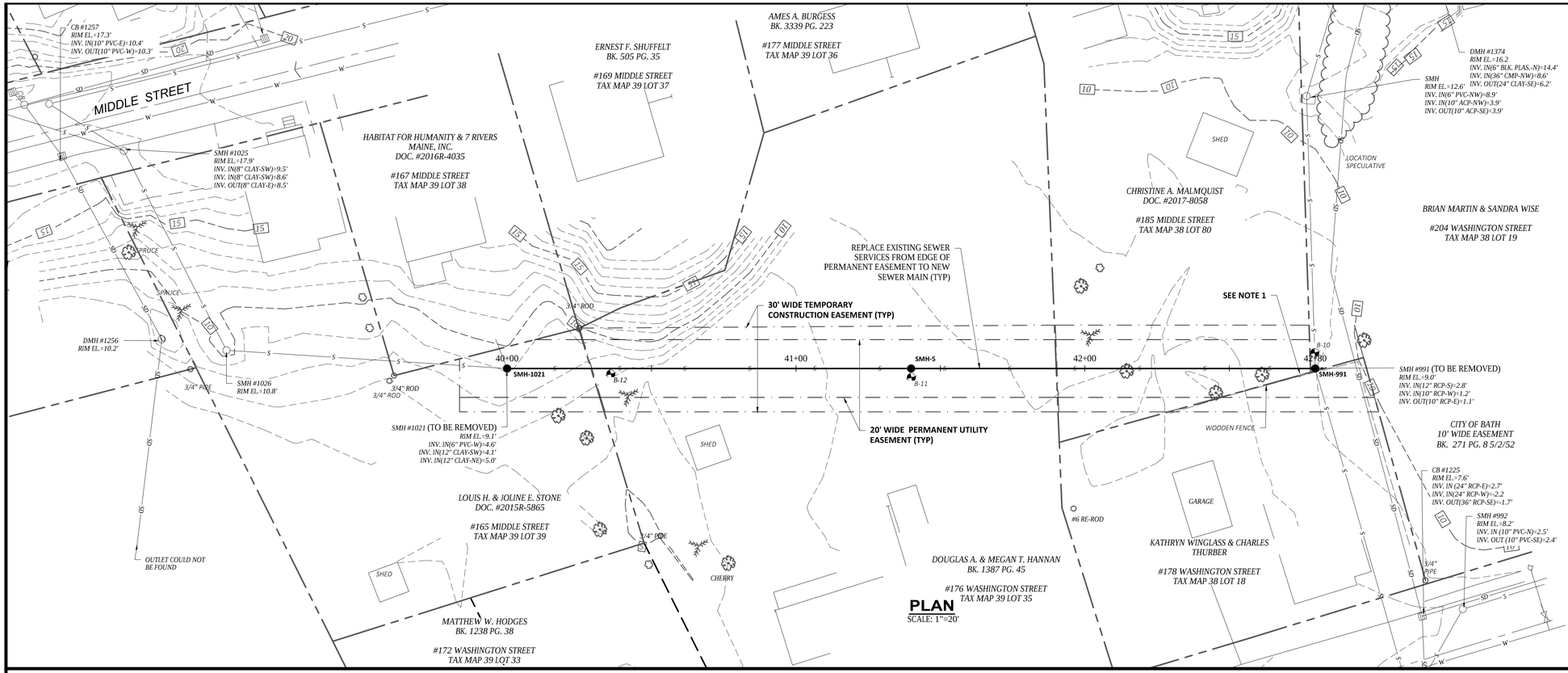
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

PLAN AND PROFILE: GETCHELL STREET STA 30+00 TO STA 36+00

DRAWING
C-7

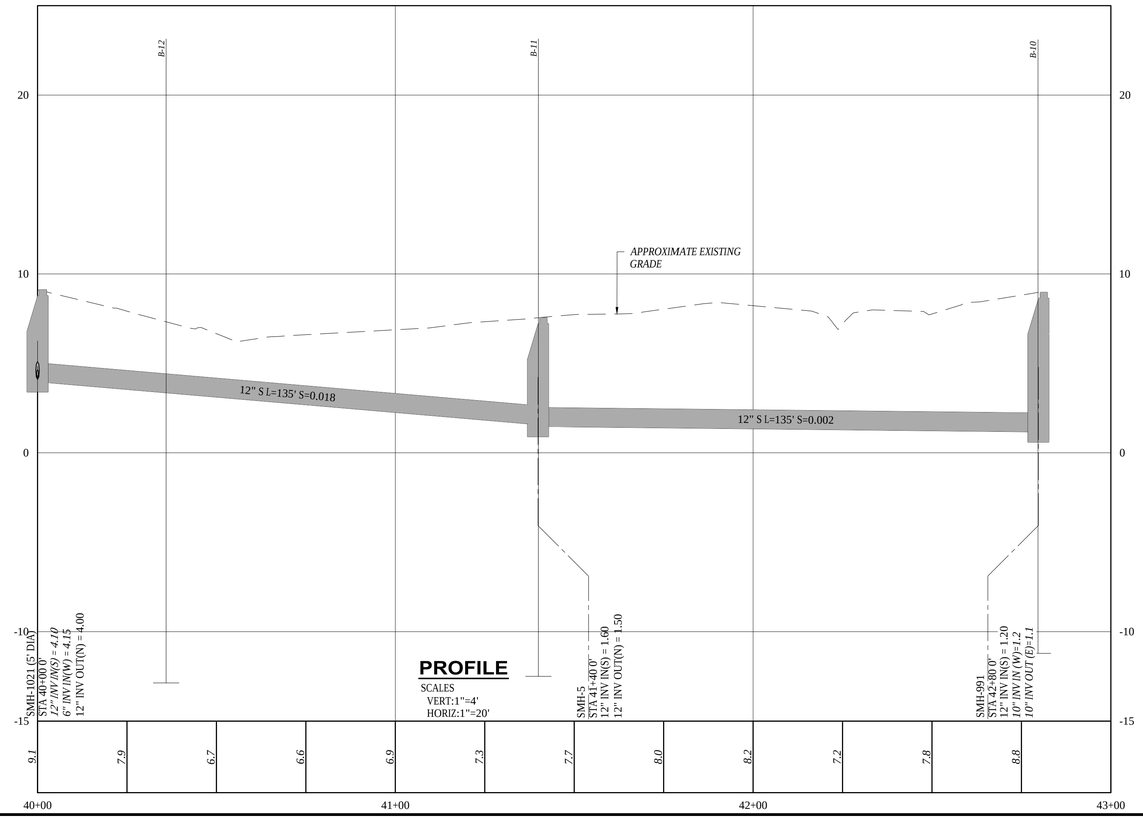


PLAN
SCALE: 1"=20'

NOTES:

1. CONTRACTOR TO REMOVE AND REINSTALL EXISTING FENCE TO ITS CURRENT CONDITION. CONTRACTOR TO REMOVE AND REINSTALL EXISTING LANDSCAPING, IF IT IS IMPACTED BY PROJECT. REFER TO SPECIFICATION SECTION 02110

2. LOCATION OF EXISTING INTERIOR SEWER SERVICES ARE SHOWN AS APPROXIMATE BASED ON INTERIOR HOME INSPECTIONS. CONTRACTORS SHALL LOCATE EXISTING SEWER LATERALS AND REPLACE THE EXISTING SERVICE LINES TO THE EXTENT OF THE PERMANENT EASEMENT. CCTV DATA OF THE SEWER MAIN FROM SMH-1021 TO SMH-991 IS NOT AVAILABLE.



PROFILE
SCALES
VERT:1"=4'
HORIZ:1"=20'

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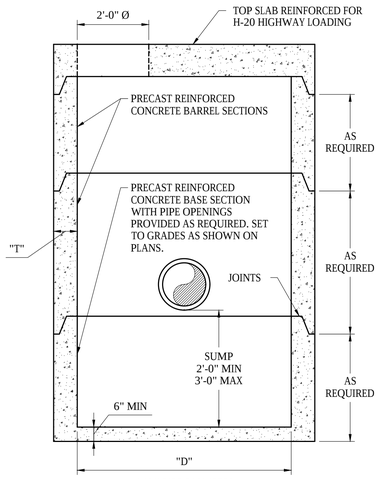
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

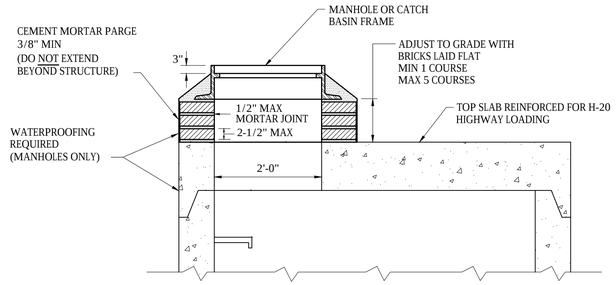
PLAN AND PROFILE: CROSS COUNTRY STA 40+00 TO STA 43+00

DRAWING
C-8

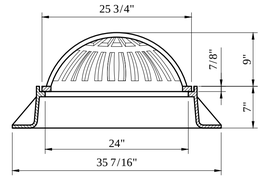


DIAMETER ("D")	MAX PIPE DIAMETER STRAIGHT THRU TO 45° DEFLECTION	MINIMUM WALL THICKNESS ("T")
48"	UP TO 30" O.D.	5"
60"	UP TO 44" O.D.	6"
72"	UP TO 51" O.D.	7"
96"	UP TO 72" O.D.	9"

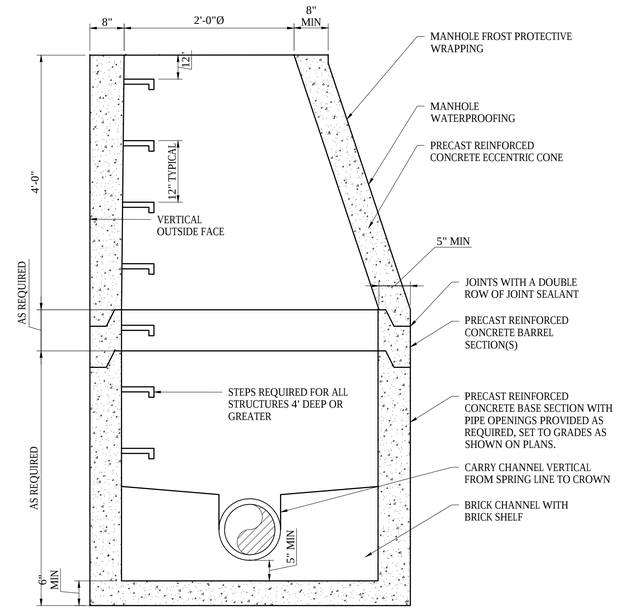
FLAT SLAB TOP CATCH BASIN
SCALE: "NTS"



FLAT SLAB TOP MANHOLE AND CATCH BASIN FRAME INSTALLATION
NTS

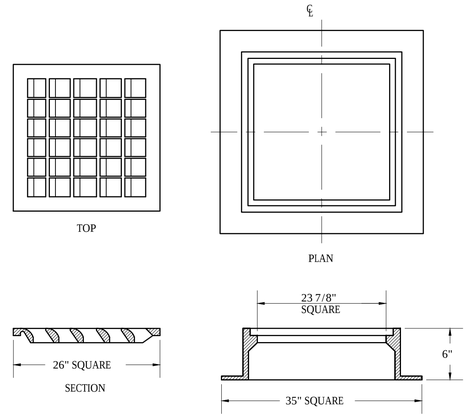


HIGH BEEHIVE GRATE & FRAME
SCALE: "NTS"

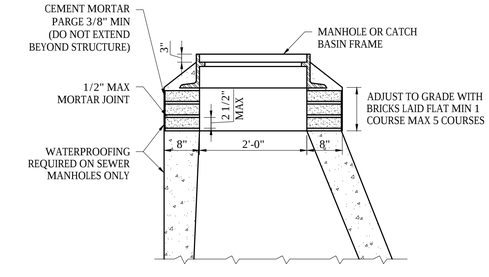


NOTES:
1. MANHOLE CHANNELS REQUIRING A CHANGE IN DIRECTION ARE TO BE BUILT ON A SMOOTH CURVE OF THE LONGEST POSSIBLE RADIUS. IF SIDE PIPES ENTER CHANNEL, SHAPE TO RECEIVE ADDED SIDE FLOW.
2. USE A FLAT SLAB TOP MANHOLE WHEN THE HEIGHT DIFFERENCE BETWEEN THE HIGHEST INVERT AND RIM IS LESS THAN 6'-0" AND WHEN MANHOLE DIAMETER IS GREATER THAN 4'-0".

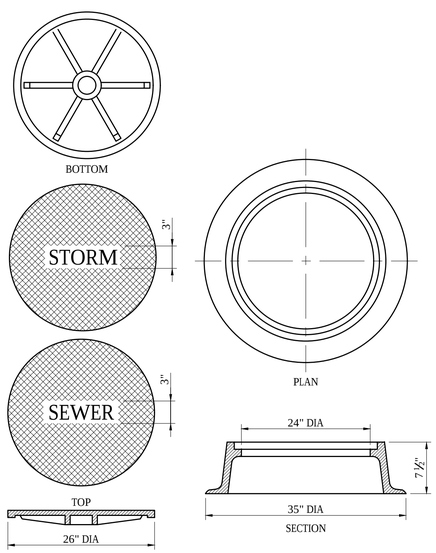
TYPICAL 4-FT MANHOLE
SCALE: "NTS"



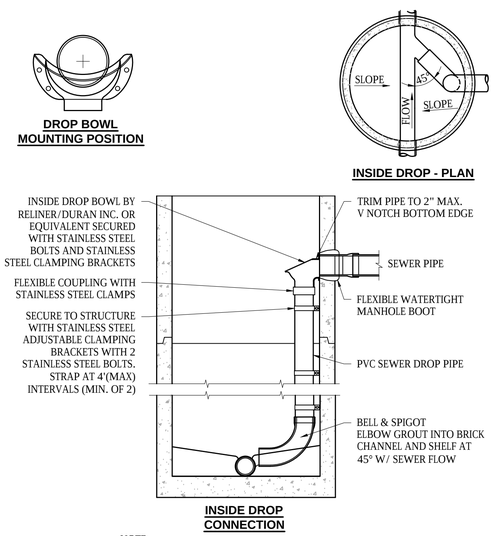
CASCADE GRATE AND FRAME
NTS



MANHOLE AND CATCH BASIN FRAME INSTALLATION
SCALE: NTS

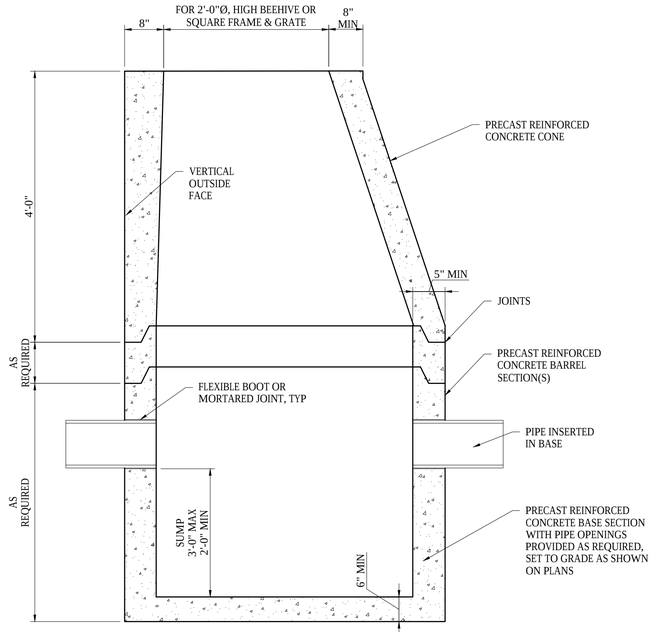


STORM DRAIN & SEWER MANHOLE STANDARD COVER AND FRAME
SCALE: NTS



NOTE:
ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS SHOWN.

INSIDE DROP MANHOLE DETAIL WITH DROP BOWL
SCALE: NTS



NOTE:
USE FLAT SLAB TOP CATCH BASIN WHERE REQUIRED TO MATCH GRADE

4-FT CATCH BASIN
SCALE: NTS

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY:.. K.FOX
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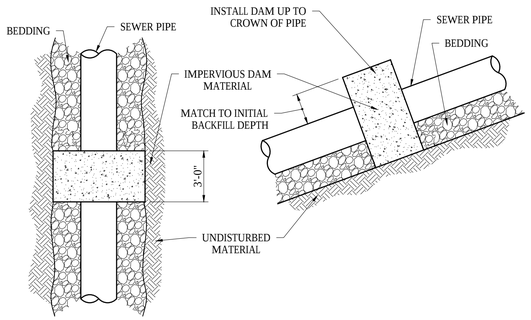
CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

DETAILS I

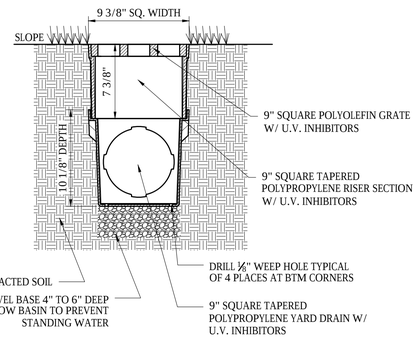
DRAWING
C-9



IMPERVIOUS DAM DETAIL

SCALE: NTS

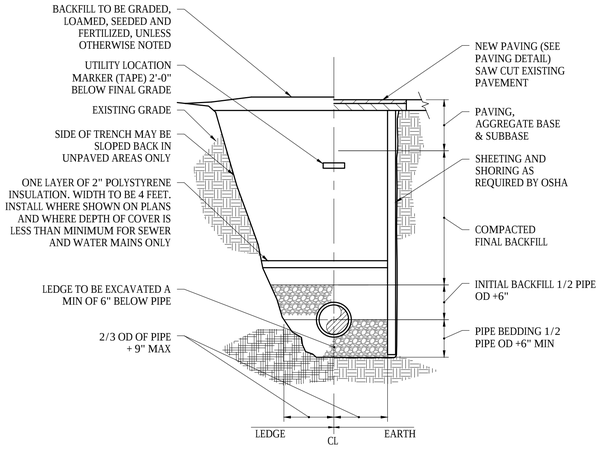
NOTE:
INSTALL IMPERVIOUS DAMS EVERY 100 FT AND WHERE REQUIRED BY ENGINEER.



NOTES:
1. GRATE TO BE ATTACHED TO YARD DRAIN WITH SCREW PROVIDED AT TIME OF INSTALLATION.
2. RISER CAN BE CUT TO ACHIEVE EXACT ELEVATION.
3. DO NOT USE MORE THAN 5 RISERS WITH ANY SINGLE YARD DRAIN.

YARD DRAIN WITH RISER

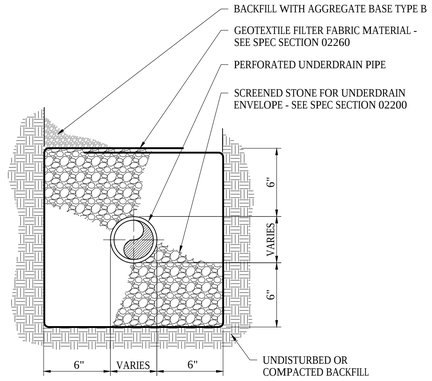
SCALE: NTS



NOTES:
1. ALL EXCAVATION MUST MEET OSHA STANDARDS.
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' AND WHERE SHOWN ON PLANS TO PREVENT TRENCH GROUNDWATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.
3. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS.
4. FOR 12" CROSS-COUNTRY SEWER ON WASHINGTON ST., WRAP BEDDING AND INITIAL BACKFILL MATERIAL IN GEOTEXTILE FABRIC AS SHOWN IN UNDERDRAIN BEDDING DETAIL.

PIPE TRENCH

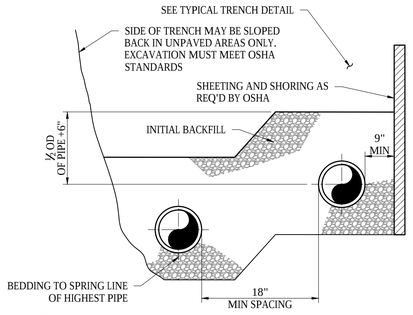
SCALE: "NTS"



UNDERDRAIN BEDDING

SCALE: NTS

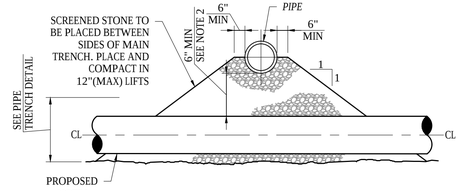
1. FOR USE ON 12" STORM DRAIN UNDERDRAIN ON WEEKS STREET



NOTES:
1. THIS SECTION IS SHOWN FOR TWO PIPES. IT IS TO BE USED FOR ANY NUMBER OF PIPES.
2. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL MATERIALS AND COMPACTED BACKFILL REQUIREMENTS.
3. PIPE SPACING SHOWN IS TYPICAL UNLESS OTHERWISE NOTED.
4. SEE SPECIFICATIONS SECTION 01150 - MEASUREMENT AND PAYMENT FOR PAY WIDTH REQUIREMENTS.

MULTIPLE PIPE TRENCH

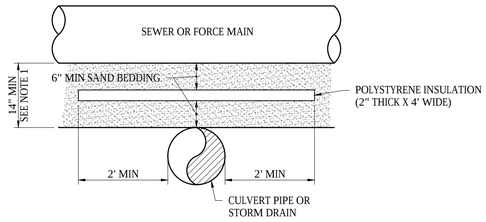
SCALE: NTS

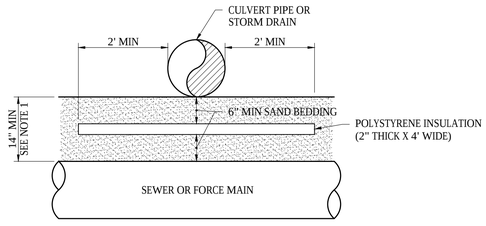


NOTES:
1. JOINTS ON EACH PIPE TO BE AS FAR FROM INTERSECTION AS POSSIBLE.
2. IF LESS THAN 12", FLOWABLE FILL MAY BE REQUIRED RATHER THAN SCREENED STONE TO FACILITATE PROPER PIPE BEDDING AND COMPACTION AT ENGINEER'S DISCRETION. REFER TO SPECIFICATIONS SECTION 022225 FOR ADDITIONAL INFORMATION.

PIPE CROSSING

SCALE: NTS

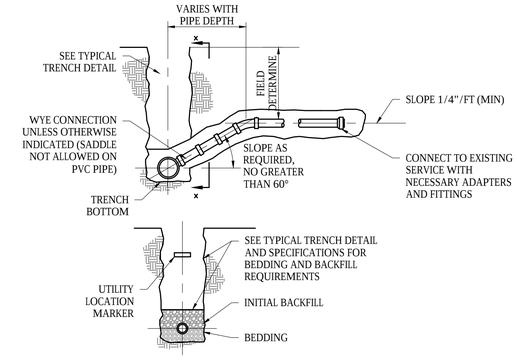




NOTE:
INSULATION TO BE USED WHERE PIPE SEPARATION IS 24" OR LESS

CULVERT/STORM DRAIN PIPE CROSSING

SCALE: NTS



SECTION X-X

NOTES:
1. ALL SERVICE CONNECTIONS TO BE 6"Ø UNLESS OTHERWISE SHOWN ON THE PLANS.

SEWER SERVICE CONNECTION

SCALE: "NTS"

NO	SUBMISSIONS/REVISIONS	APPD	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY:.. K.FOX
CAD COORD:.. D.FUD
CAD:.. D.FUD
CHECKED BY:.. K.OBE
DATE:.. MARCH 2020
APPROVED BY:.. M.BUR
DATE:.. APRIL 2020
PROJECT NO:.. 13859F

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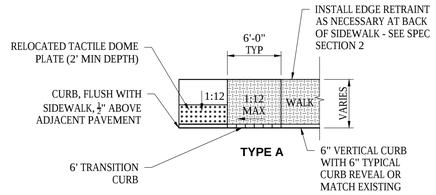
BATH, ME

DETAILS II

DRAWING
C-10

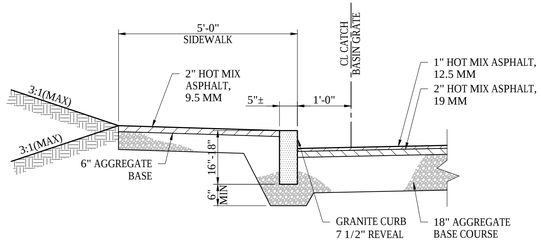


NOTES:

1. RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA).
2. DETECTABLE WARNING STRIPS REQUIRED ON ALL RAMPS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.

HANDICAP RAMP

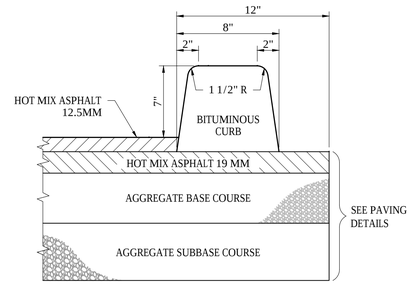
SCALE: NTS



SIDEWALK WITH GRANITE CURB

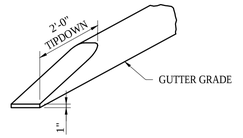
SCALE: NTS

NOTE:
PROVIDE HANDICAP RAMPS AT SITE ENTRANCE.



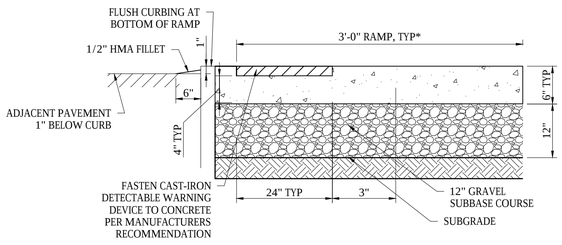
BITUMINOUS CURB

SCALE: NTS



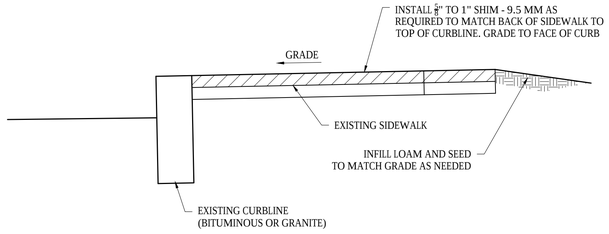
BITUMINOUS TERMINAL CURB

SCALE: NTS



RELOCATED - CAST IRON DOME PLATE

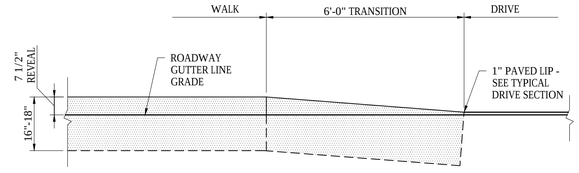
SCALE: NTS



NOTE:
SIDEWALK SHIM LOCATION UNDETERMINED, COORDINATE

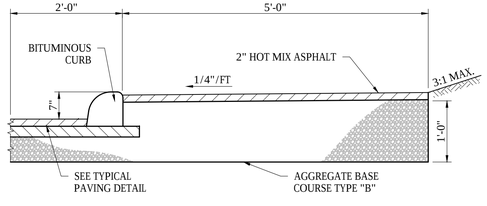
SIDEWALK SHIM

SCALE: NTS



GRANITE CURB TRANSITION

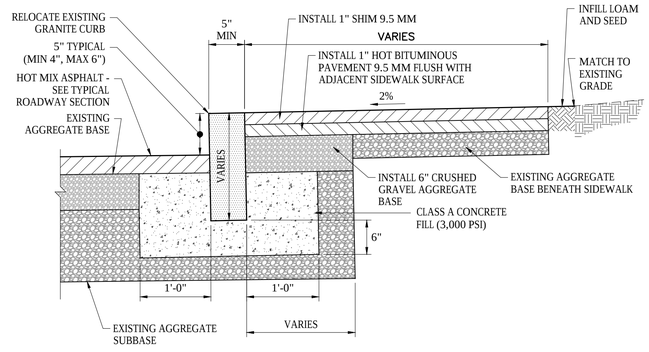
SCALE: NTS



NOTE:
SAWCUT EXISTING PAVEMENT AT ALL MATCH LINES WITH NEW PAVEMENT.

SIDEWALK CONSTRUCTION NEW BITUMINOUS CURBING

SCALE: NTS



CONCRETE FILL NOTE - CONCRETE FILL MIX PROPERTIES SHALL BE PROPORTIONED TO A MINIMUM STRENGTH OF 3,000 PSI AT 28 DAYS

GRANITE CURB RESET WITH CONCRETE

SCALE: NTS

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	CONTRACT DOCUMENTS	M.BUR	4/20

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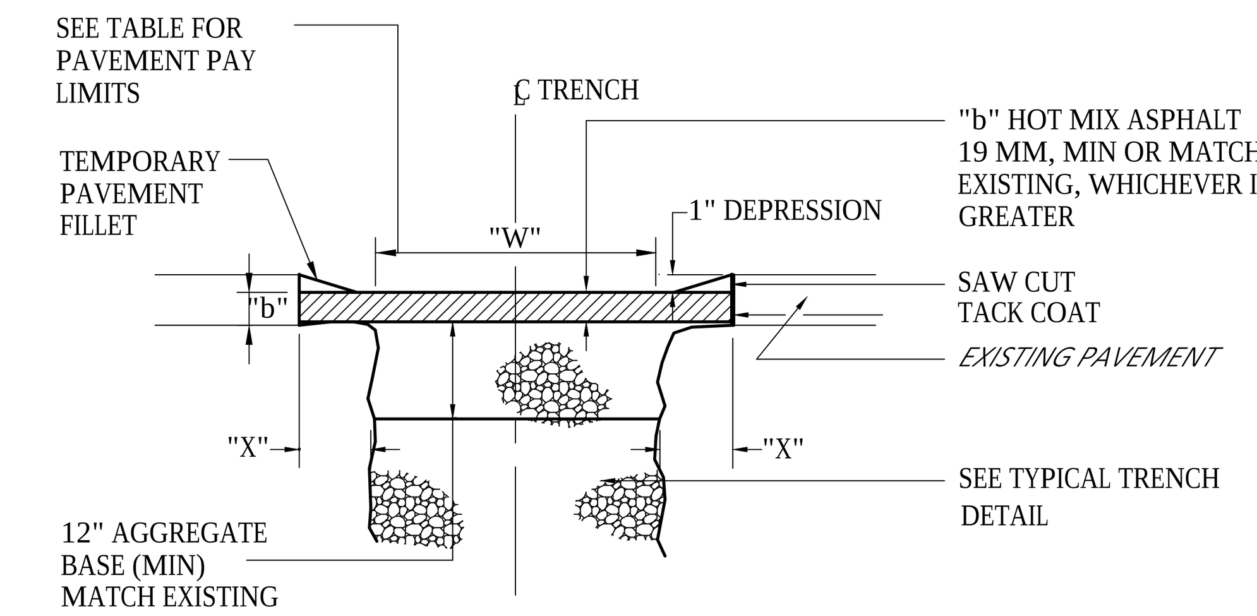
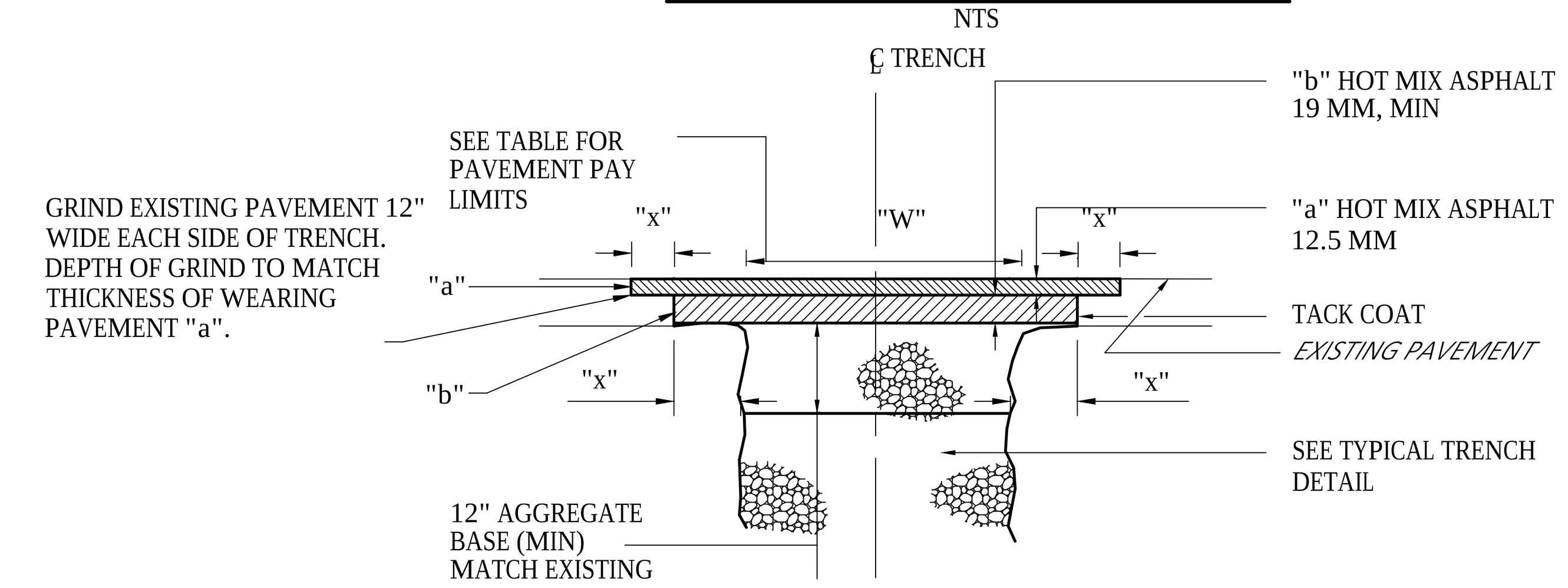
DETAILS III

DRAWING
C-11



INITIAL TRENCH PAVING

NTS



FINAL TRENCH PAVING

SCALE: NTS

NOTE:
INITIAL TRENCH PAVING MAY BE USED AS THE BASE COURSE FOR FINAL PAVING IF IN GOOD REPAIR AND OF THE MINIMUM REQUIRED THICKNESS.

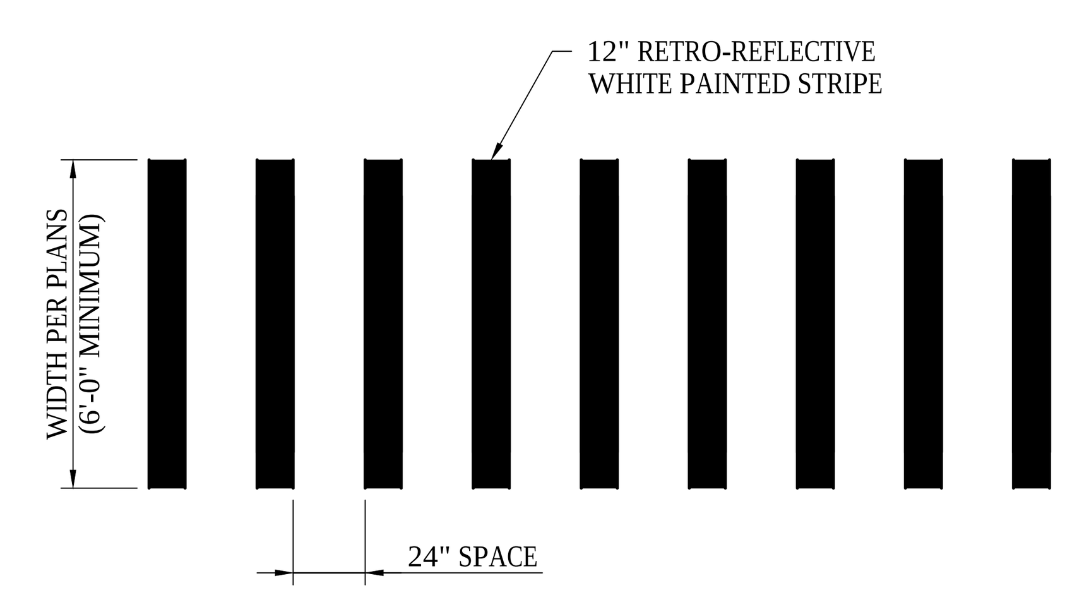
LOCATION	WEARING "a"	BINDER "b"	"x"
ALL STREETS	1 1/2"	2 1/2"	1'

PAVING SCHEDULE

PIPE ID	W (FOR 0'-10' DEEP TRENCH)
6"-30"	7'

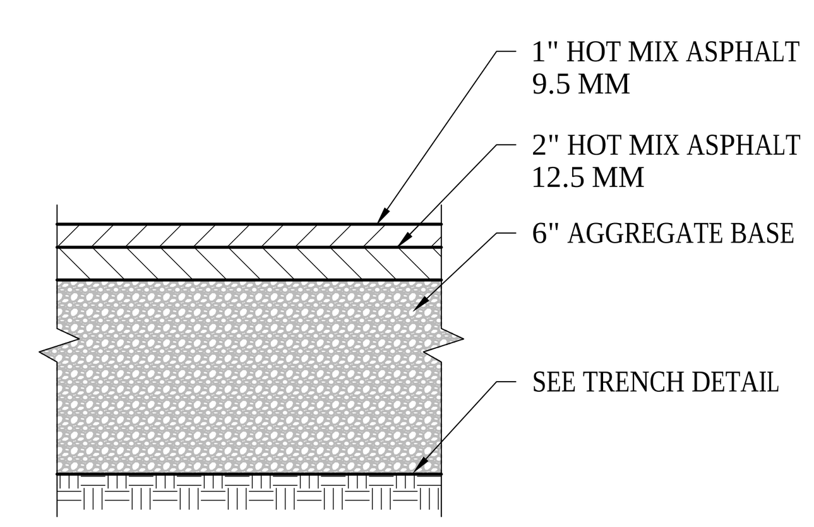
NOTE: "W" SHALL BE INCREASED BY 1' FOR TRENCHES 10'-15' DEEP AND BY 2' FOR TRENCHES 15'-20' DEEP.

TRENCH PAVEMENT PAY LIMITS



PAINTED CROSSWALKS WASHINGTON STREET AND WEEKS STREET

SCALE: NTS



DRIVEWAY PAVEMENT

SCALE: "NTS"

NO.	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY: K.FOX
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BATH, ME

DETAILS IV

DRAWING
C-12

EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS AS CONTAINED IN THE "MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES", MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION DATED MARCH 2003.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES", MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DATED MARCH 2003.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
3. SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPGRADIENT DRAINAGE AREAS.
4. INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. SEDIMENT DEPOSITS MUST BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2 TO 1) UNLESS STABILIZED WITH RIPRAP OR OTHER STRUCTURAL MEANS.
7. IF FINAL SEEDING AND SODDING IS NOT EXPECTED PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY ANNUAL RYEGRASS SEEDING AND MULCHING ON ROUGH GRADED SUBSOIL TO PROTECT THE SITE AND DELAY PERMANENT LOAMING, FINE GRADING, AND SEEDING OR SODDING UNTIL SPRING.
8. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
12. STABILIZATION SCHEDULE BEFORE WINTER:

<u>SEPTEMBER 15</u> ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED.
ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED.
SLOPES 3:1 OR GREATER TO BE STABILIZED WITH EROSION CONTROL MATTING AND SEEDED.
ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND MULCHED.

<u>OCTOBER 1</u> ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR EROSION CONTROL BLANKET.

<u>NOVEMBER 15</u> ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED.
SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.

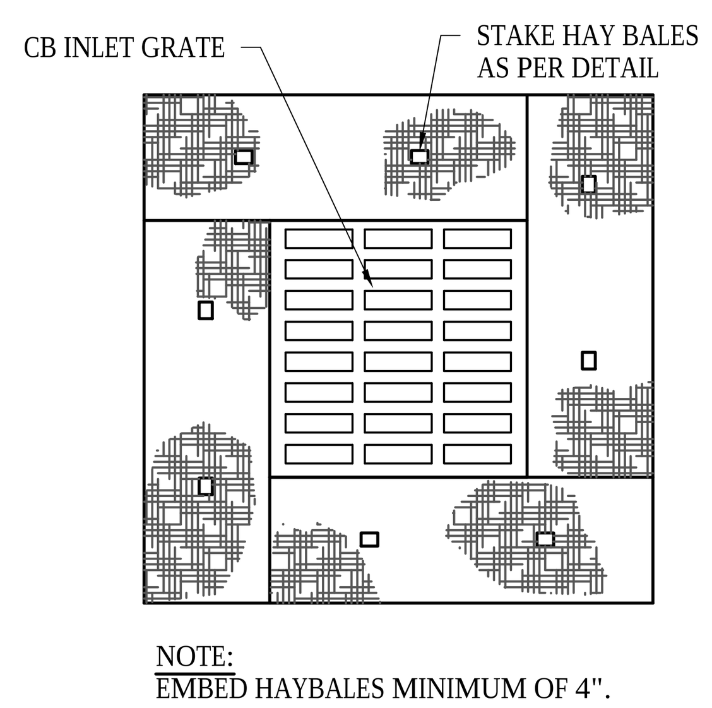
<u>DECEMBER 1</u> ALL DISTURBED AREAS WHERE THE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.

EROSION CONTROL - WINTER CONSTRUCTION

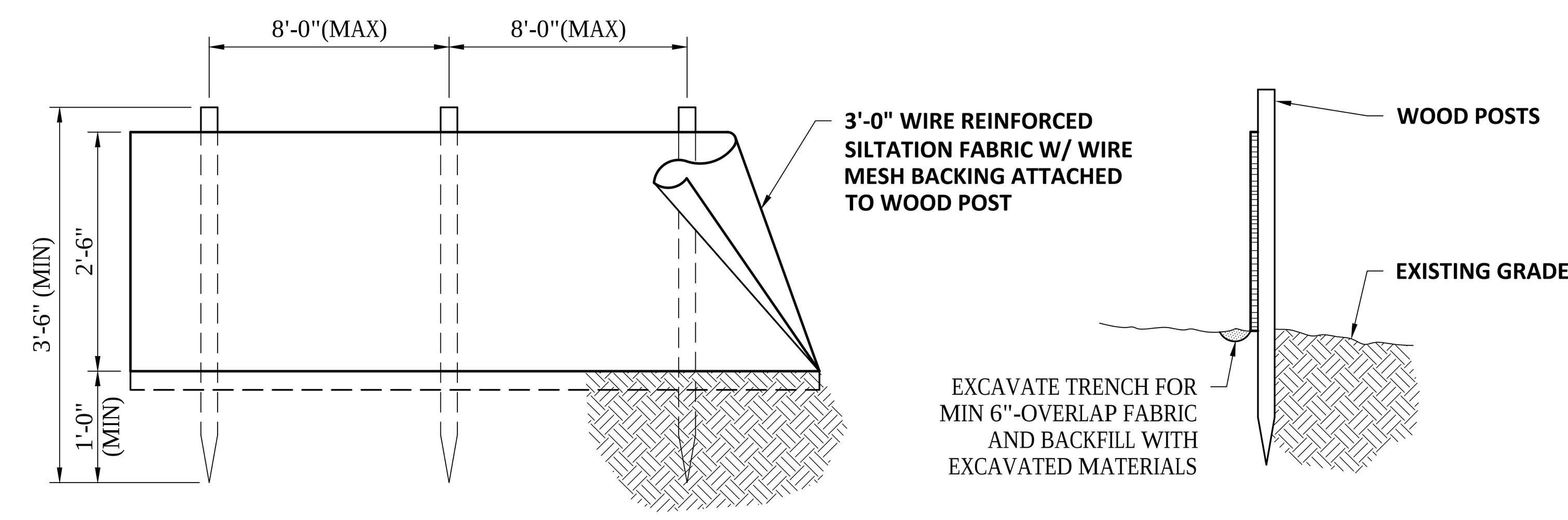
1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED SUCH THAT THE AREA CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MUST BE STABILIZED WITH MULCH. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
7. THE APPLICATION OF MULCH TO FINE GRADED AREAS WILL BE STABILIZED AS FOLLOWS:
   A. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION, CHEMICAL TACK OR WOOD CELLULOSE FIBER.
   B. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GRATER THAN 8%.
   C. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
8. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
9. DURING WINTER CONSTRUCTION PERIODS ALL SNOW SHALL BE REMOVED FROM AREAS OF MULCHING PRIOR TO PLACEMENT.

EROSION CONTROL - WETLAND NOTES

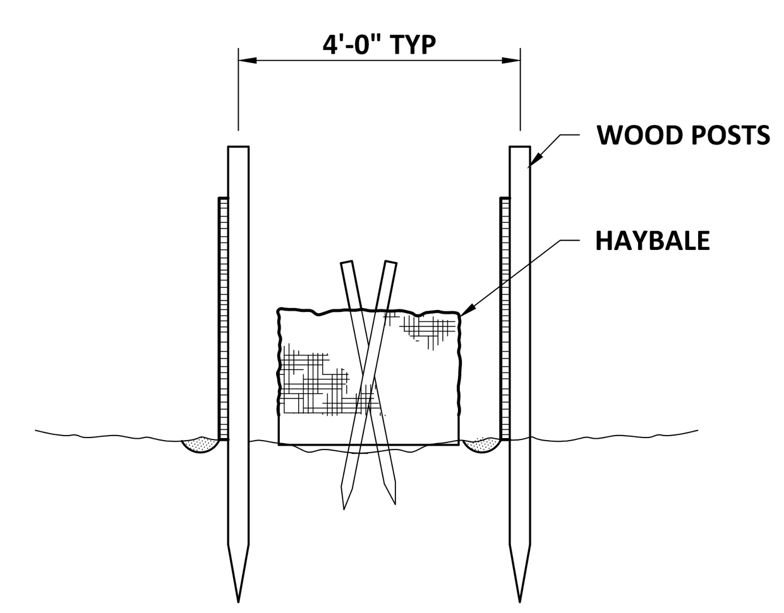
1. WETLANDS AND SURFACE WATERS (EXCEPTING THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
2. IF THE WORK INCLUDES CROSSING OF WETLANDS AND/OR STREAMS, THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS WORKING IN THESE AREAS
3. ANY WETLAND CROSSING WORK SHALL BE COMPLETED BETWEEN THE PERIOD OF MAY 1 AND SEPTEMBER 30
4. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION WITHIN OR ADJACENT TO WETLAND AREAS.
5. WETLAND VEGETATIVE LAYERS SHALL BE REMOVED AND SALVAGED FOR RESTORATION OF THE DISTURBED AREAS.
6. STORAGE AREAS FOR WETLAND MATERIALS SHALL BE PROPERLY PROTECTED AGAINST EROSION.
7. SEEDING OF THE DISTURBED AREAS WITHIN WETLAND AREAS SHALL UTILIZE MIXTURES APPROPRIATE FOR WETLAND AREAS AS OUTLINED IN THE SPECIFICATIONS.



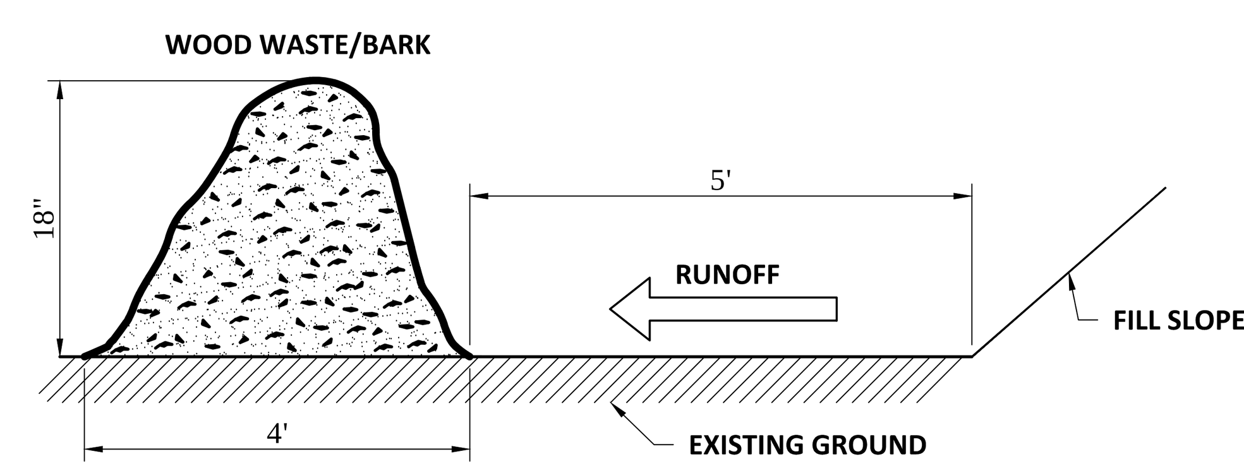
HAY BALE CB INLET PROTECTION
SCALE: "NTS"



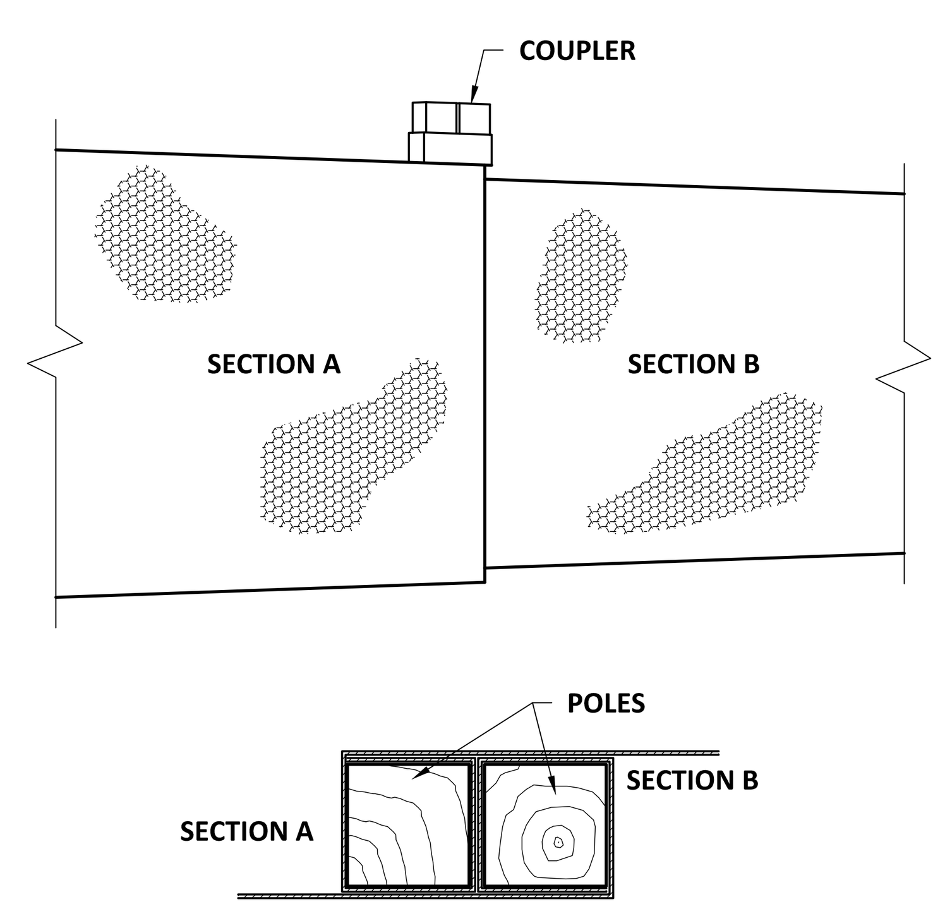
SILT FENCE INSTALLATION DETAIL
SCALE: NTS



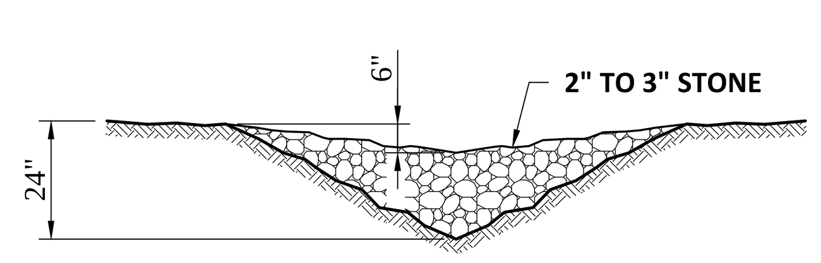
COMBINATION SILT FENCE AND HAY BALE BARRIER
SCALE: NTS



WOOD WASTE/BARK FILTER BERM
SCALE: "NTS"

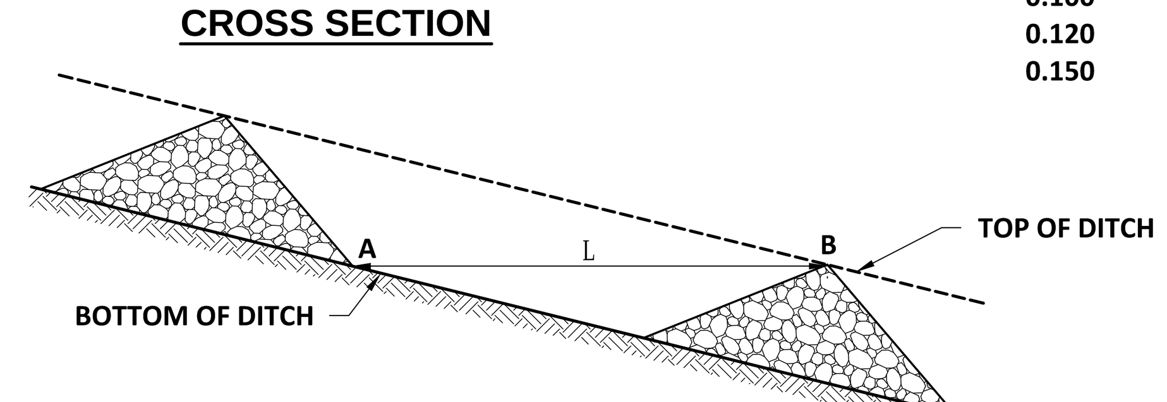


JOINING SILT FENCE SECTIONS
SCALE: "NTS"



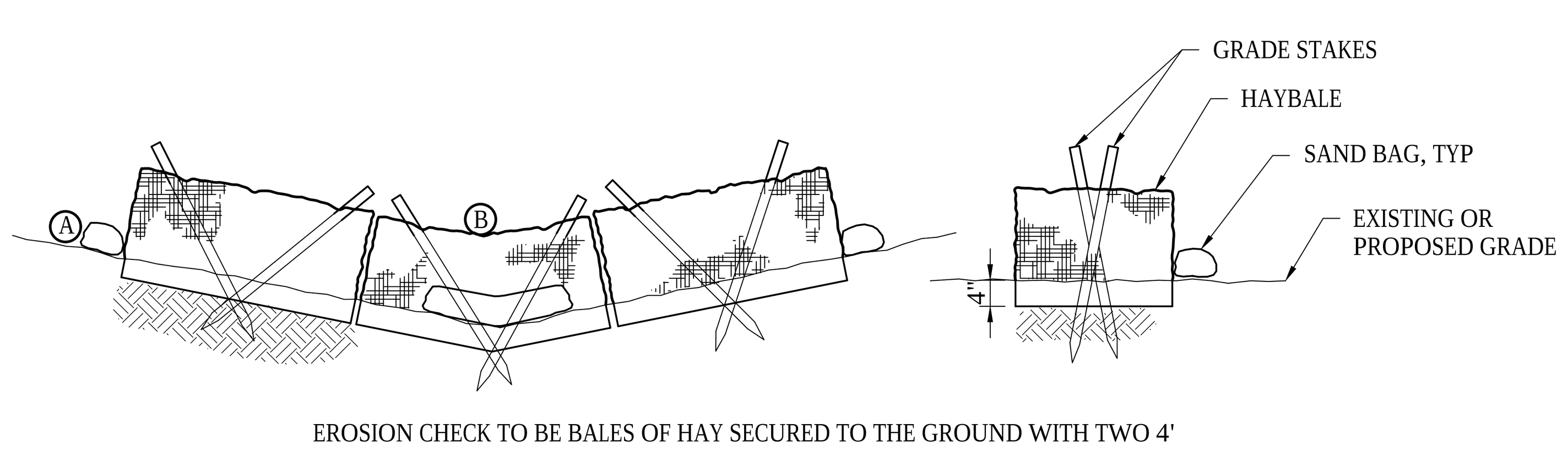
CROSS SECTION

DITCH SLOPE (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13



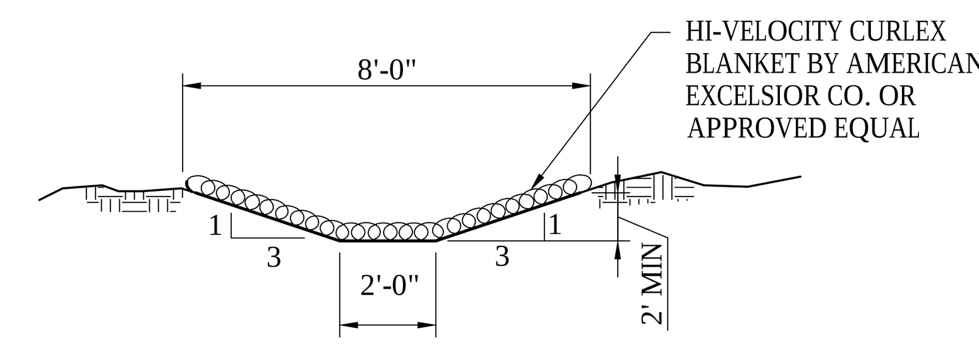
PROFILE

STONE CHECK DAM DETAIL
SCALE: NTS



EROSION CHECK TO BE BALES OF HAY SECURED TO THE GROUND WITH TWO 4' LONG GRADE STAKES FOR EACH BALE. SAND BAG AS REQUIRED, PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT (A) AT LEAST 6 INCHES ABOVE OVERFLOW AT (B)

HAY BALE CHECK DAM
SCALE: "NTS"



EROSION CONTROL MATTING - DITCHES
SCALE: "NTS"

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	CONTRACT DOCUMENTS	M.BUR	4/20

DESIGNED BY: K.FOX
CAD COORD: D.FUD
CAD: D.FUD
CHECKED BY: K.OBE
DATE: MARCH 2020
APPROVED BY: M.BUR
DATE: APRIL 2020
PROJECT NO: 13859F

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CITY OF BATH
SOUTH END PHASE 2
SEWER AND STORM DRAIN REPLACEMENT
BATH, ME

EROSION CONTROL NOTES AND DETAILS

DRAWING
C-13