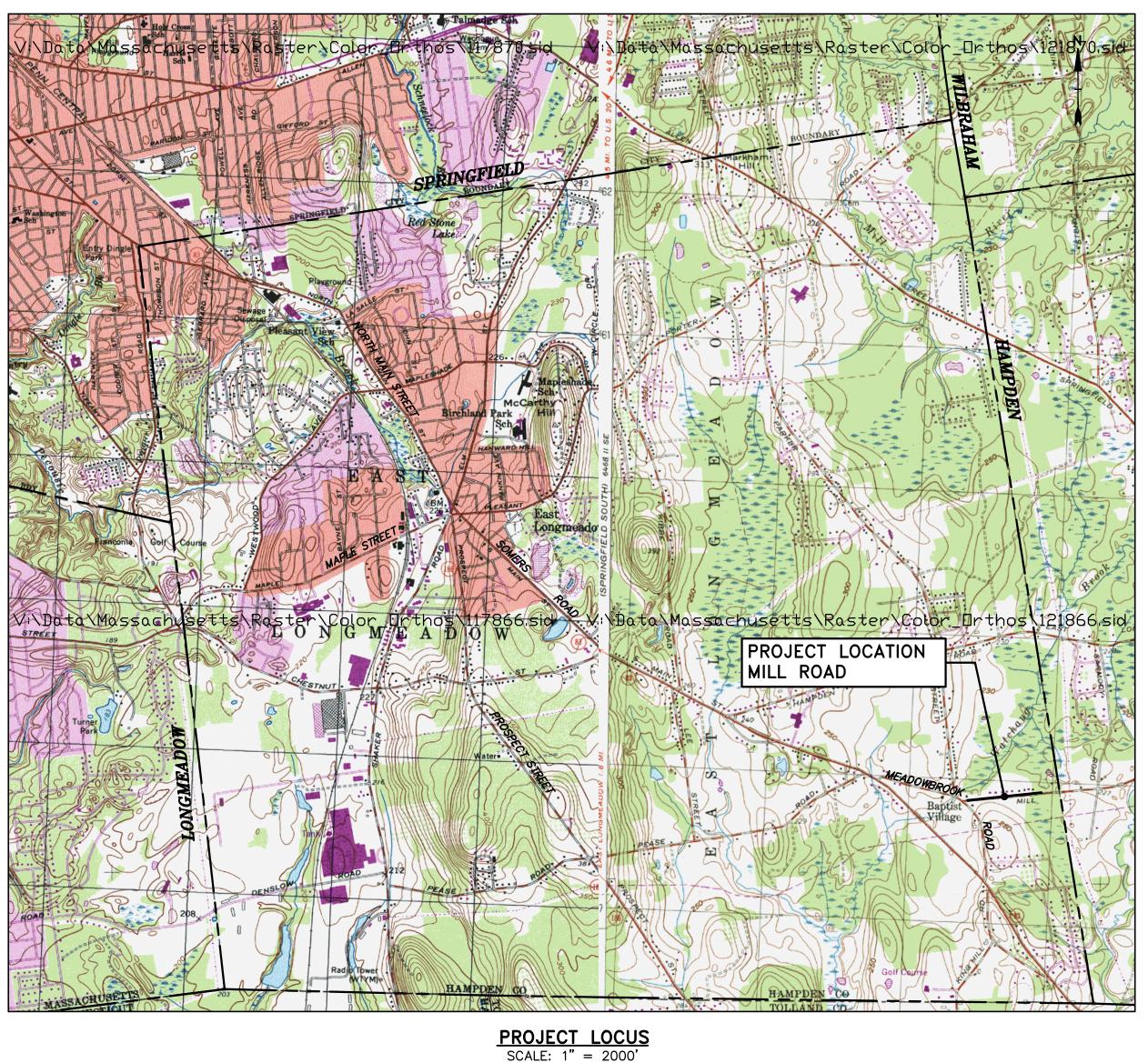
BOARD OF PUBLIC WORKS MILL ROAD SANITARY SEWER PROJECT EAST LONGMEADOW, MASSACHUSETTS

JULY 2004

BOARD OF PUBLIC WORKS

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TOWN ENGINEER / DIRECTOR

DAVID J. GROMASKI, P.E.



RECORD PLAN

THIS RECORD PLAN WAS PREPARED BASED ON LIMITED INFORMATION
GATHERED DURING CONSTRUCTION OF THE PROJECT AND INDICATES ONLY
SIGNIFICANT CHANGES MADE FROM THE DESIGN PLANS DURING CONSTRUCTION.

COMPLETE SET 7 SHEETS

LEGEND

EXISTING DRAIN MANHOLE	DMH (🔘		
EXISTING SANITARY MANHOLE	SMH (\$)		
EXISTING CATCH BASIN	CB ⊞		
PROPOSED SANITARY OR COMBINED MANHOLE	SMH (S)		
PROPOSED DRAIN MANHOLE	DMH (1)		
PROPOSED CATCH BASIN	СВ 🗆		
EXISTING PUBLIC WATER LINE	PW		
EXISTING SANITARY SEWER LINE	SS		
EXISTING GAS LINE			
EXISTING TELEPHONE LINE	————Т		
EXISTING ELECTRICAL LINE	Е		
EXISTING SANITARY FORCE MAIN	ss		
EXISTING STORM DRAIN LINE	SD		
PROPOSED SEWER LINE	ss		
PROPOSED HAYBALE/SILTATION FENCE			
PROPERTY LINE			
EDGE OF PAVEMENT			
RETAINING WALL			
GUARDRAIL			
RAILROAD TRACKS	+ + + + + + + + + + + + + + + + + + + +		
STONE WALL			
WIRE OR CHAIN LINK FENCE	- * * * * * * * *		
WETLANDS FLAGGING	♦ <i>C</i> −1		
APPROXIMATE WETLANDS BOUNDARY			
APPROXIMATE 100' BUFFER ZONE BOUNDARY			
PROPOSED LOW PRESSURE SANITARY SEWER	——————————————————————————————————————		
EDGE OF WOODED AREA			
HEDGES			
STREET LIGHT	☆		
UTILITY POLE	₩.		

(*)

L=21'

D = 4.5'

---- B−2

UTILITY POLE WITH LIGHT

DECIDUOUS TREE

CONIFEROUS TREE

CONIFEROUS SHRUB

EXISTING WATER GATE

WATER SHUT OFF

EXISTING HYDRANT

HEADWALL

GAS GATE

MISC. OBJECT

BORE HOLE

TEST PIT REQUIRED

LENGTH OF 6" SEWER SERVICE PIPE FROM WYE

DEPTH TO CROWN OF PIPE AT END OF SERVICE

STREET SIGN

ABBREVIATIONS

ASBESTOS CEMENT PIPE	AC	IRON PIPE	IP
BITUMINOUS CONCRETE	BIT CONC	MAIL BOX	MB
BITUMINOUS CONCRETE CAPE COD BERM	BIT CAPE	MANHOLE	МН
CAST IRON	CI	MECHANICAL JOINT	MJ
CATCH BASIN	СВ	NOT TO SCALE	N.T.S.
CHAIN LINK FENCE	CLF	PAVED WALK	PW
CLASS OF PIPE	CL	POLYETHYLENE PIPE	PE
CONCRETE	CONC	POLY-VINYL CHLORIDE	PVC
CONCRETE WALK	CW	PROPERTY LINE	PL
CORRUGATED METAL PIPE	CMP	REINFORCED CONCRETE PIPE	RCP
DEBRIS	DB	RIGHT OF WAY	R.O.W
DIMENSION RATIO	DR	SANITARY MANHOLE	SMH
DRAIN MANHOLE	DMH	STATION	STA
DRIVEWAY	DW	STONE BOUND	SB
DUCTILE IRON	DI	STREET LINE	§
EROSION CONTROL	EC	TEMPORARY BENCH MARK	TBM
GARAGE	GAR	TELEPHONE POLE	TP
GAS GATE	GG	TRAFFIC CONTROL	TC
GRANITE CURB	GR CURB	UNDER CONSTRUCTION	UC
GUY WIRE	GW	UTILITY POLE	U.P.
GUY POLE	GP	UTILITY STRUCTURE	UT
HIGH PRESSURE	HP	UNDELINEATED WETLAND AREA WATER GATE	UWA
HOUSE	HSE	WATER GATE	WG
HYDRANT	HYD		
INVERT	INV		

N.S.

NOT SERVICED

SHEET INDEX

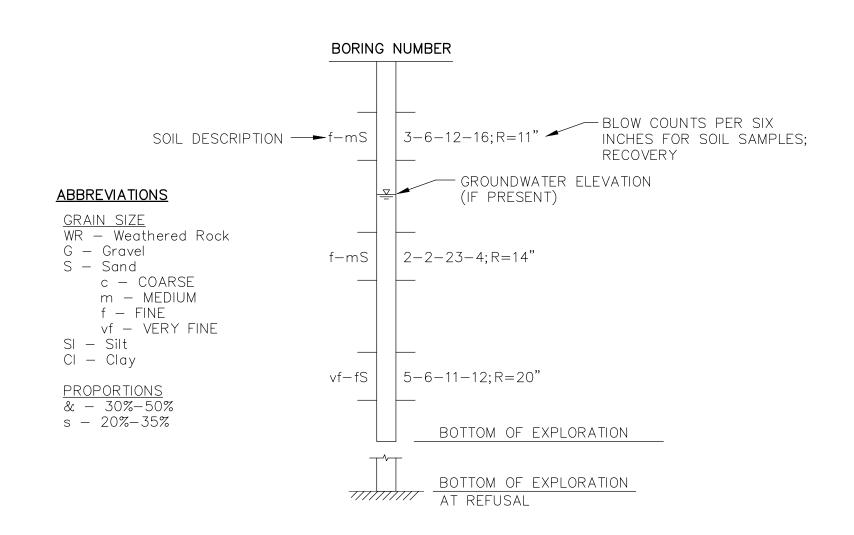
SHEET NO.	<u>TITLE</u>
1	COVER SHEET
2	LEGEND, ABBREVIATIONS AND NOTES
3	PLAN & PROFILE: MILL ROAD STA 0+00 TO STA 11+00
4	PLAN & PROFILE: MILL ROAD STA 11+00 TO STA 18+00
5	DETAILS 1
6	DETAILS 2
7	TRAFFIC CONTROL PLAN

GENERAL NOTES

- 1. EXISTING UTILITY LOCATIONS ARE BASED ON AVAILABLE INFORMATION. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF UTILITIES BY TEST PIT WHEN AUTHORIZED OR DIRECTED BY THE ENGINEER.
- 2. PRIOR TO COMMENCING SEWER CONSTRUCTION WORK, THE CONTRACTOR SHALL EXCAVATE TEST PITS WHERE INDICATED AND AS DIRECTED BY THE ENGINEER TO LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION. SECTIONS OF PROPOSED SEWER MAY HAVE TO BE ADJUSTED BASED ON LOCATION AND DEPTH OF EXISTING UTILITIES.
- 3. PRIOR TO COMMENCING SEWER CONSTRUCTION WORK, THE CONTRACTOR SHALL INVESTIGATE ALL WATER MAIN, CULVERT AND OTHER EXISTING UTILITY CROSSINGS TO VERIFY ELEVATIONS. IN THE EVENT OF CONFLICT, THE ENGINEER SHALL DETERMINE CROSSING "UNDER" OR "OVER", OR MAY DIRECT THE CONTRACTOR TO RELAY SECTIONS OF EXISTING PIPE, IF NO OTHER FEASIBLE SOLUTION IS PRACTICAL.
- 4. THE CONTRACTOR SHALL REMOVE AND REPLACE FENCES, MAILBOXES, CURBING, ETC. AS NECESSARY. CONDITION OF REPLACED ITEMS SHALL BE EQUAL OR BETTER THAN ORIGINAL CONDITION PRIOR TO REMOVAL.
- 5. BORING LOCATIONS SHOWN ARE APPROXIMATE ONLY AND BORINGS ARE NOT WARRANTED OR GUARANTEED IN ANY WAY TO REPRESENT THE EXISTING CONDITIONS. BORING LOGS ARE INCLUDED IN THE SPECIFICATIONS (SECTION 00300).
- 6. PROPERTY LINE INFORMATION SHOWN ON THE PLANS WAS TAKEN FROM AVAILABLE ASSESSOR MAP INFORMATION AND IS SHOWN FOR REFERENCE PURPOSES ONLY.
- 7. LOCATION OF PROPOSED SEWER AND SANITARY SERVICES ARE APPROXIMATE ONLY AND MAY BE ADJUSTED AFTER INVESTIGATION WORK. FINAL LOCATIONS TO BE APPROVED IN THE FIELD BY THE ENGINEER.
- 8. WHEREVER POSSIBLE, THE SANITARY SEWERS SHALL BE LAID AT LEAST 10 FEET (HORIZONTALLY) AND 18 INCHES (VERTICALLY) FROM ALL EXISTING WATER MAINS.
- 9. TRENCH DAMS SHALL BE CONSTRUCTED AROUND THE PROPOSED PVC SEWER PIPE IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DETAILS INCLUDED HEREWITH.
- 10. CONTRACTOR TO REPLACE ANY AND ALL DAMAGED STORM DRAINS WITH SECTION OF SAME PIPE TYPE AND SIZE, EXCEPT AS PROVIDED FOR IN THE BID ITEMS AND AS SHOWN ON THE PLANS. THIS WORK SHALL BE IN ACCORDANCE WITH ENGINEER'S INSTRUCTION, AND AT NO ADDITIONAL COST TO THE OWNER.
- 11. DAMAGE TO UNDERGROUND UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. PROPER REPAIRS SHALL BE MADE BY THE CONTRACTOR OR UTILITY COMPANY, AS ARRANGED BY THE CONTRACTOR, AND AS ACCEPTABLE TO THE ENGINEER. NO COMPENSATION SHALL BE ALLOWED UNDER THIS CONTRACT FOR THE REPAIR OF THIRD—PARTY UTILITIES IN THE PROJECT AREA.
- 12. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO MAINTAIN EXISTING WATER AND GAS SERVICES TO RESIDENTS ALONG THE PROJECT ROUTE. DAMAGED SERVICES SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
- 13. RELOCATION AND/OR REPLACEMENT OF EXISTING WATER MAINS, AS FOUND TO BE REQUIRED, WILL BE MADE IN ACCORDANCE WITH THE BID ITEMS AS AUTHORIZED BY THE ENGINEER.
- 14. ALL SERVICES LEFT AT THE PROPERTY LINE SHALL BE CAPPED.
- 15. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AT ALL TIMES.
- 16. SANITARY SEWER MANHOLES SHALL BE 48-INCH DIAMETER, UNLESS SHOWN OTHERWISE.
- 17. THE CONDITION OF EXISTING CULVERT CROSSINGS IS UNKNOWN. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE INTEGRITY OF ALL CONDUITS WHILE INSTALLING THE PROPOSED SEWERS, INCLUDING THE REPAIR OR REPLACEMENT OF ANY CONDUITS THAT ARE DAMAGED OR REMOVED AS A RESULT OF INSTALLATION OF THE SEWERS.
- 18. SILTATION CONTROL MEASURES SHALL BE TAKEN AT ALL CATCH BASINS WITHIN THE PROJECT AREA TO PREVENT SILTATION OF THE TOWN'S STORM DRAINAGE SYSTEM.
- 19. ALL EXISTING DRIVEWAYS ARE BITUMINOUS CONCRETE TYPE UNLESS OTHERWISE SOWN ON THE PLANS.
- 20. A SINGLE BENCHMARK HAS BEEN PROVIDED HEREIN. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING HIS OWN TEMPORARY BENCHMARKS ALONG THE PROPOSED PROJECT. PLEASE REFER TO SECTION 01720 FOR ADDITIONAL REQUIREMENTS.

BORING LOG PROFILE LEGEND

PREDOMINANT GRAIN SIZE FROM BORING LOGS. REFER TO SOIL BORING LOGS CONTAINED IN THE BIDDING DOCUMENTS FOR ADDITIONAL DETAILS.



RECORD PLAN

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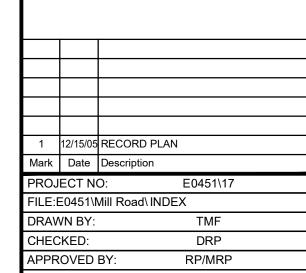
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Board of Public Works

Mill Road Sanitary Sewer Project

East Longmeadow, Massachusetts

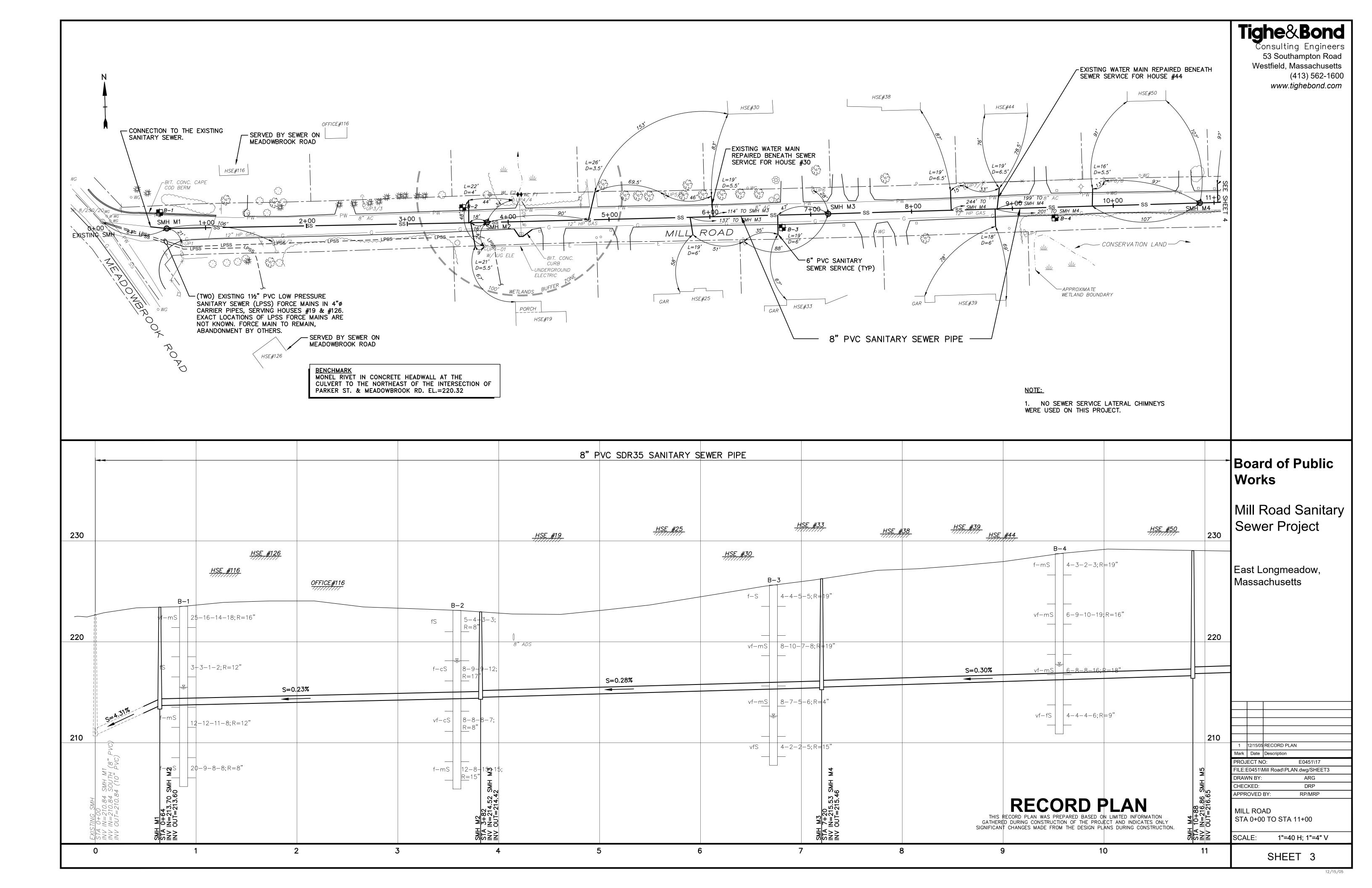


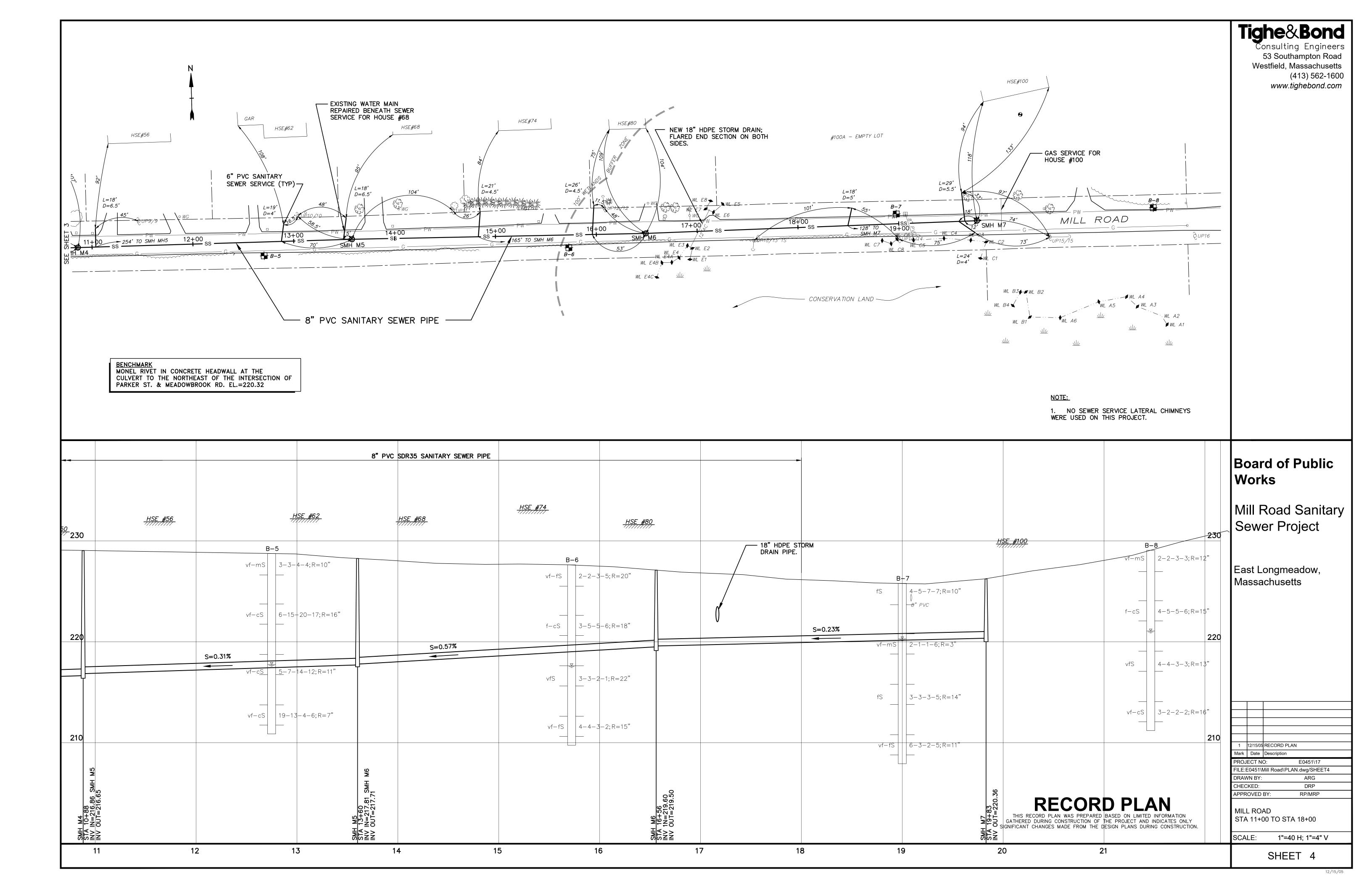
LEGEND, ABBREVIATIONS AND NOTES

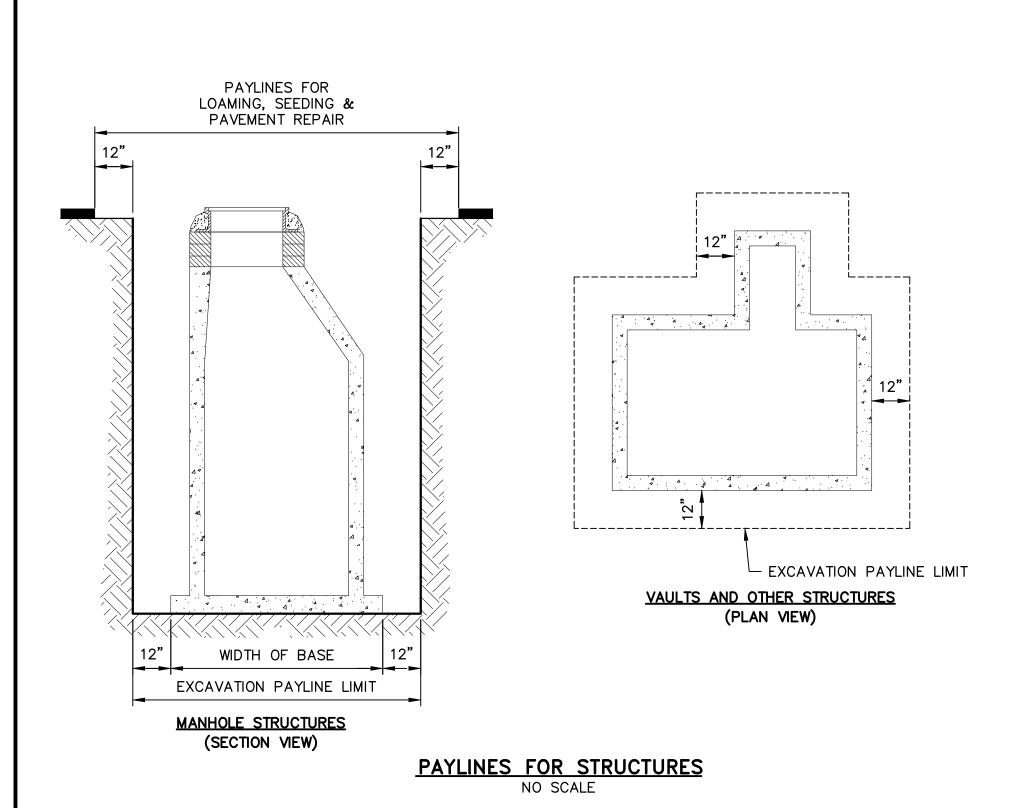
SCALE: NONE

SHEET 2

11/15/05







NOTES:

1. EXCAVATION WILL BE PAID FOR ONCE REGARDLESS OF HOW OFTEN IT FALLS WITHIN THE PAYLINES FOR VARIOUS PIPES AND STRUCTURES DUE TO OVERLAPPING OF PAYLINES, AND REGARDLESS OF HOW OFTEN CONTRACTOR REHANDLES MATERIALS.

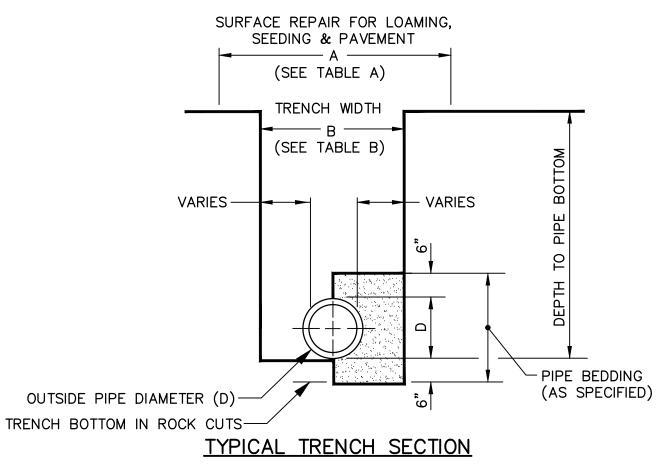
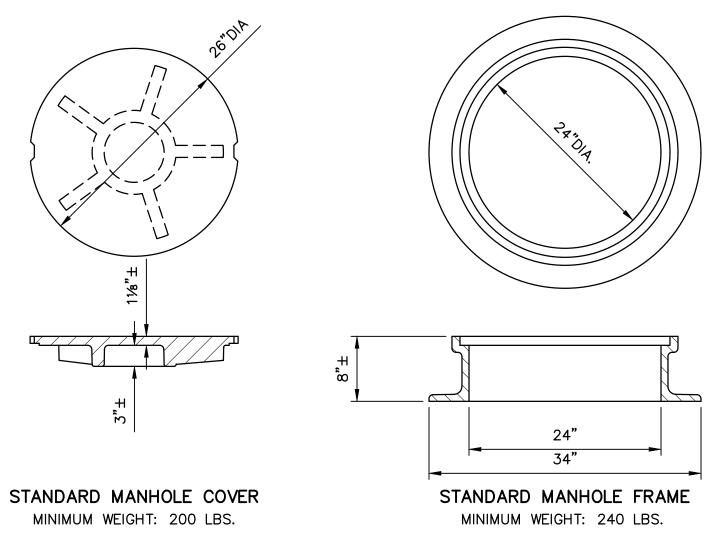


TABLE A - N	MAXIMUM SURFACE	REPAIR PAY WIDT	HS (SEE NOTE)		
OUTSIDE PIPE DIAMETER 0 — 24"		OUTSIDE PIPE DIAMETER GREATER THAN 24"			
TEMPORARY PAVEMENT 6'-6" MAX.	PERMANENT PAVEMENT & LOAMING & SEEDING 8'-6" MAX.	TEMPORARY PAVEMENT D + 4'-0" MAX.	PERMANENT PAVEMENT & LOAMING & SEEDING D + 6'-0" MAX.		
TABLE B - MAXIMUM TRENCH EXCAVATION PAY WIDTHS (SEE NOTE)					
OUTSIDE PIPE DIAMETER 0 - 24"		OUTSIDE PIPE DIAMETER GREATER THAN 24"			
5'-0"		D + 3'-0"			

NOTES:

- 1. THE PAYLINE DIMENSIONS SHOWN REPRESENT THE MAXIMUM PAYLINE LIMITS TO BE PAID. WHEN THE ACTUAL SURFACE REPAIR OR TRENCH WIDTH IS LESS, THE ACTUAL WIDTH SHALL BE PAID FOR AT THE APPLICABLE UNIT PRICE.
- 2. THE PAYMENT DEPTH FOR ROCK (AS DEFINED HEREIN) WHICH IS ENCOUNTERED IN A TRENCH SHALL NOT BE LESS THAN THRE (3) FEET.

TRENCH PAYLINES NO SCALE

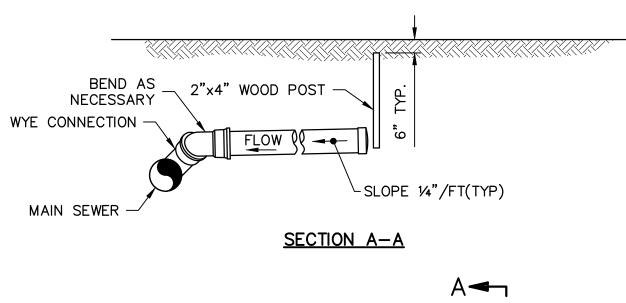


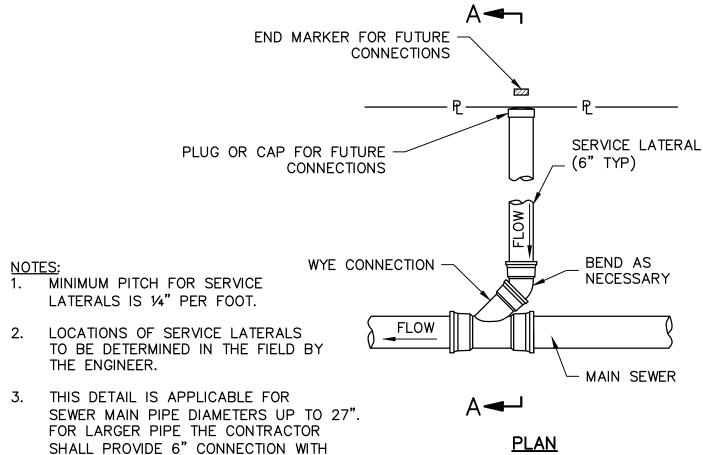
NOTES:

1. FRAME AND COVER SHALL BE PROVIDED FROM THE SAME

2. LETTERING SHALL BE CAST INTO COVERS AS SPECIFIED.

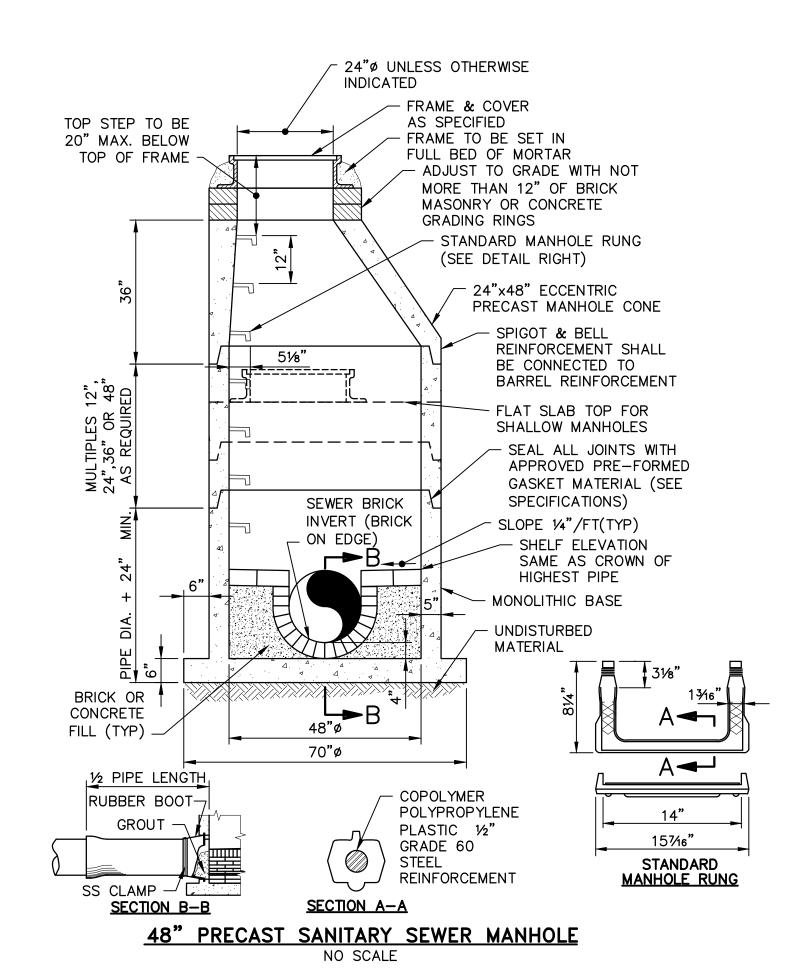
MANHOLE FRAME & COVER NO SCALE





SANITARY SERVICE LATERAL NO SCALE

SADDLE AND TAP.



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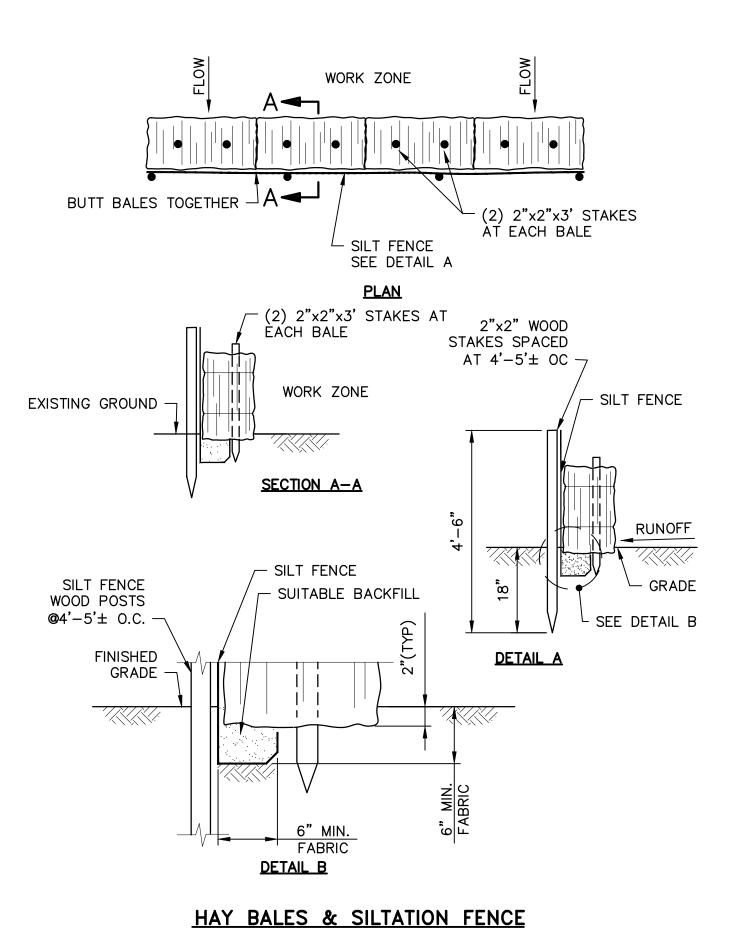
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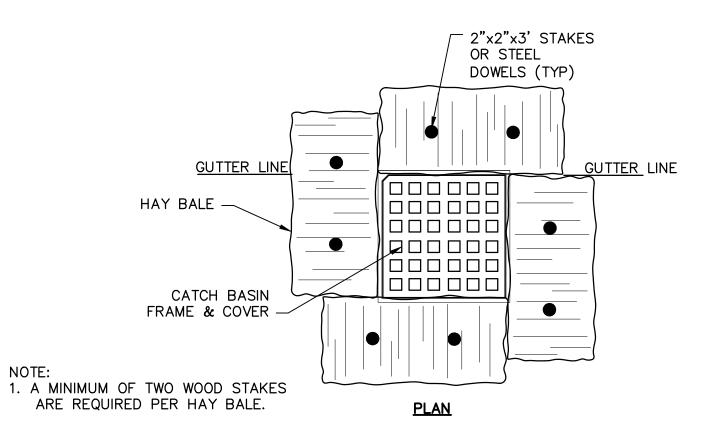
East Longmeadow, Massachusetts

1 12/15/05 RECORD PLAN Mark Date Description PROJECT NO: FILE:E0451\Mill Road\ Mill Road\DETAILS DRAWN BY: TMF DRP CHECKED: APPROVED BY: RP/MRP DETAILS 1 SCALE: AS NOTED SHEET 5

RECORD PLAN

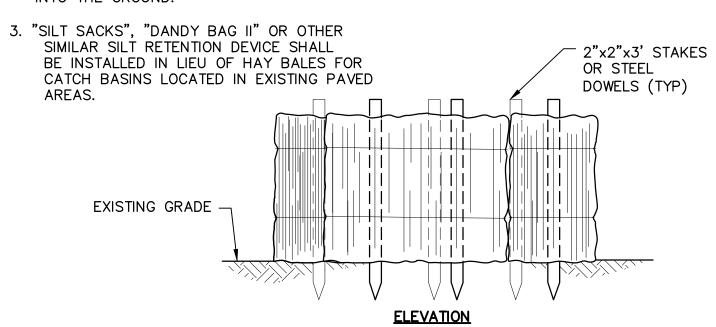
GATHERED DURING CONSTRUCTION OF THE PROJECT AND INDICATES ONLY SIGNIFICANT CHANGES MADE FROM THE DESIGN PLANS DURING CONSTRUCTION.





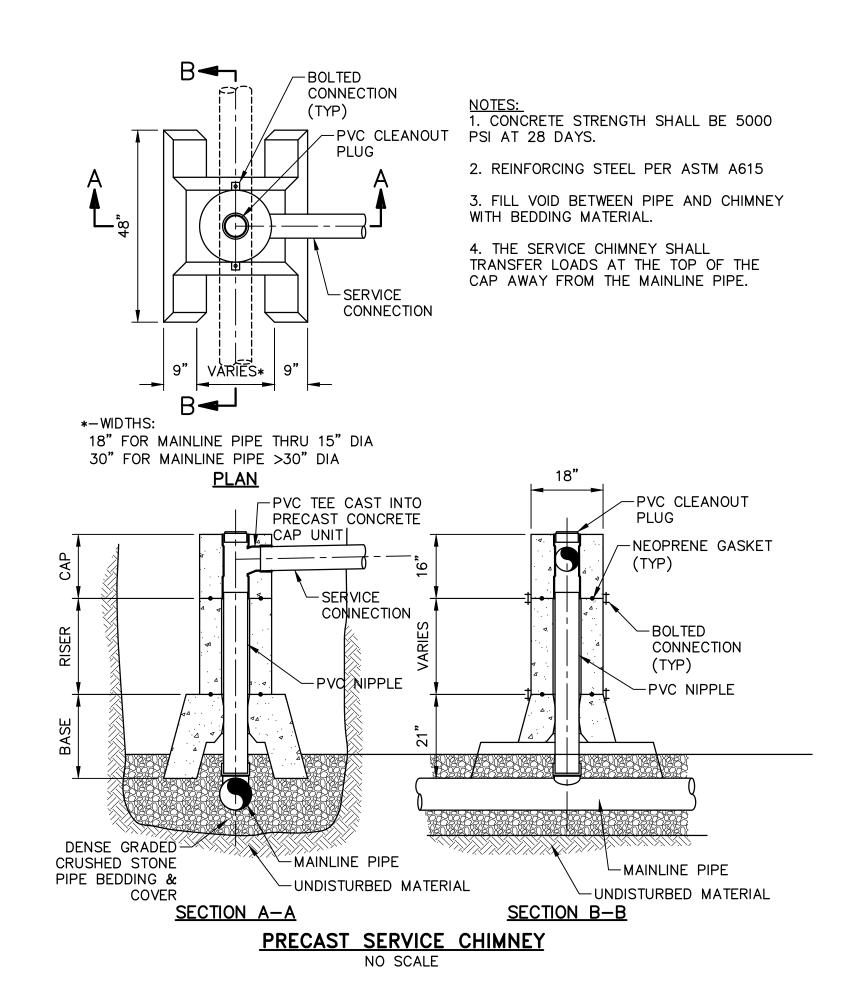
NO SCALE

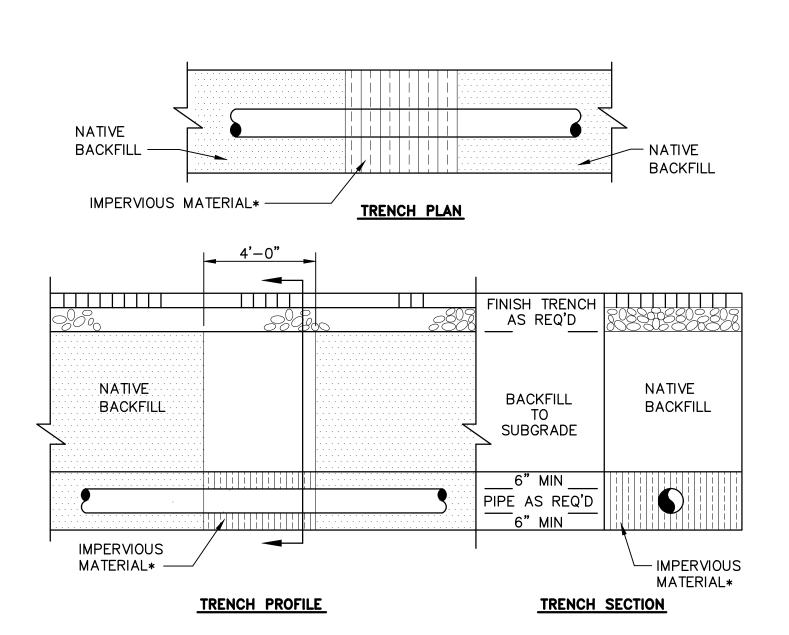
2. STEEL DOWELS MAY BE USED WHERE WOOD STAKES CANNOT BE DRIVEN INTO THE GROUND.



CATCH BASIN INLET SEDIMENT CONTROL

NO SCALE





* IMPERVIOUS MATERIALS SHALL HAVE A COEFFICIENT OF PERMEABILITY NOT TO EXCEED 1x10⁻⁵CM/SEC.

IMPERVIOUS TRENCH DAMS

NO SCALE

RECORD PLAN

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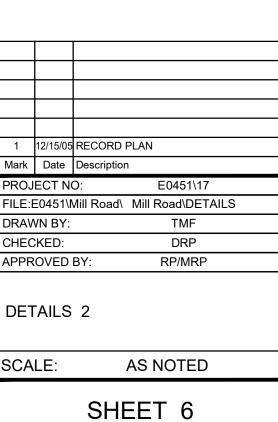
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Board of Public Works

Mill Road Sanitary Sewer Project

East Longmeadow, Massachusetts



GENERAL NOTES:

- 1. FLAGS SHALL BE AT LEAST 16"x16".
- 2. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN FIELD BY ENGINEER.
- 3. = CHANNELIZING DEVICE
- 4. MAXIMUM SPACING OF CHANNELIZING DEVICES IS EQUAL IN FEET TO SPEED LIMIT.
- 5. NO TRAFFIC CONTROL DEVICES SHALL REMAIN ON THE ROADWAY AT THE END OF EACH WORK DAY.
- 6. SIGNS MUST BE COVERED OR REMOVED AT THE END OF EACH
- WORK DAY, OR WHENEVER BOTH LANES ARE OPEN TO TRAFFIC.

 7. ALL WARNING SIGNS SHALL BE BLACK LEGEND ON A
- REFLECTIVE ORANGE BACKGROUND.
- 8. ADVISORY SPEED PLATES (W13-1) TO BE USED WHERE APPROPRIATE.
- 9. ALL TRAFFIC CONTROL DEVICES USED SHALL CONFORM TO THE LATEST EDITION OF THE "FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD) IN BOTH SPECIFICATION AND APPLICATION.
- 10. TYPICAL LAYOUTS:

TYPICAL LAYOUT "A" SHALL BE USED WHEN THE TRAVEL WIDTH FROM THE CHANNELING DEVICES TO THE EDGE OF PAVEMENT IS GREATER THAN 22 FEET.

TYPICAL LAYOUT "B" SHALL BE USED WHEN THE TRAVEL WIDTH FROM THE CHANNELING DEVICES TO THE EDGE OF PAVEMENT IS LESS THAN 22 FEET.

TYPICAL LAYOUT "C" SHALL BE USED FOR ALL INTERSECTIONS, WHETHER OR NOT THE PROPOSED WATER OR SEWER LINE CROSSES THE INTERSECTION.

- 11. FOR TYPICAL LAYOUT B & C THE CONTRACTOR SHALL MAINTAIN ONE OPEN TRAVEL LANE OF NOT LESS THAN 12 FEET AT ALL
- 12. THE WORK ZONE AS SHOWN ON THESE PLANS IS REPRESENTATIVE ONLY AND MAY VARY IN BOTH LENGTH AND LOCATION AS CONSTRUCTION PROGRESSES. REGARDLESS OF THESE VARIATIONS, THE OFFSET DISTANCES TO THE TRAFFIC CONTROL DEVICES SHOWN SHALL BE MAINTAINED.
- 13. NO CONSTRUCTION EQUIPMENT OR MATERIALS (EXCEPT THOSE IN USE) SHALL BE STORED CLOSER THAN 8 FEET TO THE EDGE OF TRAVELLED LANES.
- 14. ALL OPERATIONS SHALL BE CONDUCTED SO AS NOT TO INTERFERE WITH, INTERRUPT, OR ENDANGER THE GENERAL PUBLIC OR THE TRAFFIC FLOW.
- 15. THE NUMBER AND LOCATION OF ALL SIGNS AND DEVICES SHALL BE AS DEEMED NECESSARY BY THE ENGINEER FOR THE SAFE AND EFFICIENT PERFORMANCE OF THE WORK AND THE SAFETY OF THE TRAVELING PUBLIC. ALL WARNING DEVICES SHALL BE SUBJECT TO REMOVAL, REPLACEMENT AND/OR REPOSITIONING BY THE CONTRACTOR AS OFTEN AS DEEMED NECESSARY BY THE ENGINEER.
- 16. ALL PERSONNEL WHO ARE WORKING ON THE TRAVELLED WAY OR BREAKDOWN LANES AND WHO ARE NOT PROTECTED BY TRAFFIC CONES OR SIMILAR PROTECTIVE DEVICES SHALL WEAR SAFETY VESTS.
- 17. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT. IF IT BECOMES NECESSARY FOR SAID TRENCH TO BE LEFT OVERNIGHT, THEN IT SHALL BE COVERED WITH STEEL PLATES.

PLASTIC DRUMS

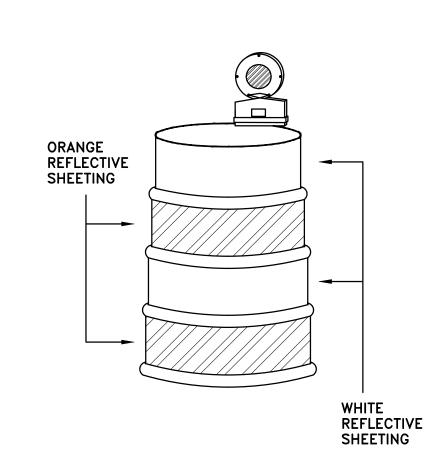
ITEM NO. DESCRIPTION

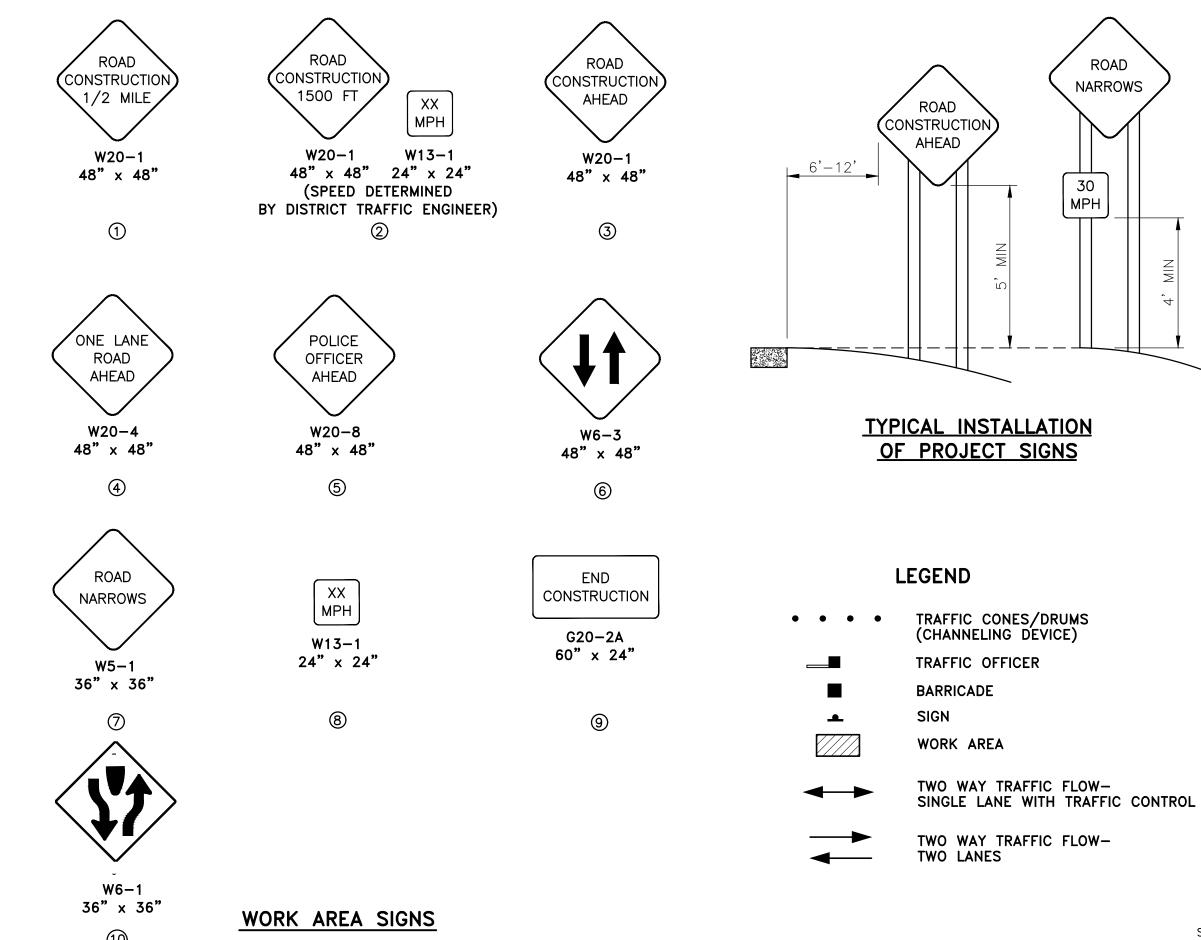
859. —— REFLECTORIZED DRUM

859.1 —— REFLECTORIZED DRUM WITH FLASHER (TYPE A) — USED TO CONTINUALLY WARN DRIVERS THAT THEY ARE APPROACHING OR PROCEEDING IN A HAZARDOUS AREA (SEE MUTCD SECT. 6E4,6E5)

NOTES:

- 1. DRUM DESIGN AND APPLICATION SHALL BE AS PER THE CURRENT EDITION OF THE MUTCD.
- 2. DRUMS SHALL BE APPROXIMATELY 36"
 IN HEIGHT, HAVING A MINIMUM WALL
 THICKNESS OF 3/32" AND A MINIMUM
 DIAMETER OF 18" REGARDLESS OF
 ORIENTATION.
- 3. DRUM MATERIAL MUST BE APPROVED U.V. RESISTANT, LOW DENSITY, IMPACT RESIST—ANT, LINEAR POLYETHYLENE (OR APPROVED EQUIVALENT). METAL DRUMS ARE PROHIBITED FROM USE ON ALL STATE HIGHWAY PROJECTS.
- 4. SHEETING SHALL BE APPROVED ORANGE AND WHITE TYPE IV REFLECTORIZED SHEETING CONFORMING TO M.9.30.0.
- 5. ALL DRUMS SHALL BE WELL MAINTAINED INCLUDING REMOVAL OF DUST OR ROAD FILM, SO AS NOT TO REDUCE REFLECTIVE EFFICIENCY. WHEN A DRUM LOSES TARGET VALUE IT SHALL BE REPLACED.
- 6. WHEN A DRUM IS NO LONGER NEEDED IT SHALL BE STORED IN A DRUM STOR—AGE AREA, UNLESS IT IS REQUIRED FOR FUTURE USE WITHIN A FIVE DAY PERIOD, IN WHICH CASE IT MAY BE STORED ON LOCATION.





RECORD PLAN

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TYPICAL LAYOUT "B" TYPICAL LAYOUT "A" TYPICAL LAYOUT "C" TWO OPERATING LANES TWO LANE ROADWAY INTERSECTION LANE CLOSURE WITH ONE LANE CLOSED WHEN WORKING AT A CORNER WITHIN AN INTERSECTION **→** | W20−1 ② W20-1 (2) **→** | W20−1 ② **-** | W20−4 6 W5-1 W13-1 ⑦⑧ ▼ W20-8 (4) W6-3 6 - | ₩20-8 ④ **★** W6−1① TRAVEL WIDTH MAXIMUM LENGTH EQUAL TO 1.2 DAYS WORK 150'-200' AREA 50'-100' 10 W6-1+ **■** W20−8 ④ **♣** W20−4 ⑥ 12' MIN. **♣** W20−1 ② **■** W20-1 ② TRAVEL WIDTH **▲** W20−8 ④ **♣** W20−4 ⑥

♣ W20−1②

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Mill Road Sanitary Sewer Project

East Longmeadow, Massachusetts

1 12/15/05 RECORD PLAN

Mark Date Description

PROJECT NO: E0451\17

FILE:E0451\Mill Road\ TCPLAN

DRAWN BY: TMF

CHECKED: DRP

APPROVED BY: RP/MRP

TRAFFIC CONTROL PLAN

SCALE: NOT TO SCALE

SHEET 7

12/15/05