

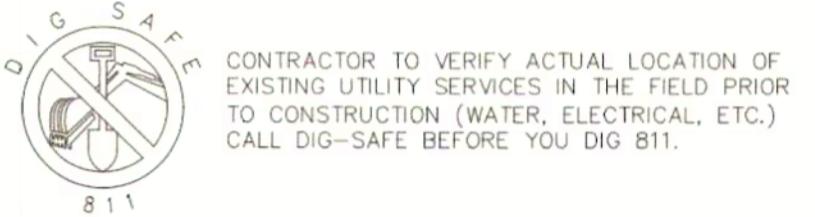
NOTES:

1. SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 512, BLOCK 126B, LOT 1. RECORD TITLE FROM DEED BOOK 17513, PAGE 108.

2. UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY, RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS. METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BEHIND THE GROUND SURFACE AT THE TIME OF THE SURVEY.

3. CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING EXISTING LOCATIONS OF ALL SUB-SURFACE UTILITIES AND MAN-MADE IMPROVEMENTS AND FOR THE REQUIREMENTS TO REPLACE, RELOCATE OR REPAIR EXISTING UTILITIES IN THE EVENT OF DAMAGE OCCURRING DURING CONSTRUCTION. MWE IS NOT RESPONSIBLE OR LIABLE FOR DELAYS OR COSTS ASSOCIATED WITH REMOVING/REPLACING/RELOCATING OF EXISTING UTILITIES REGARDLESS OF WHETHER SAID UTILITIES ARE ACCURATELY DEPICTED ON THIS SURVEY.

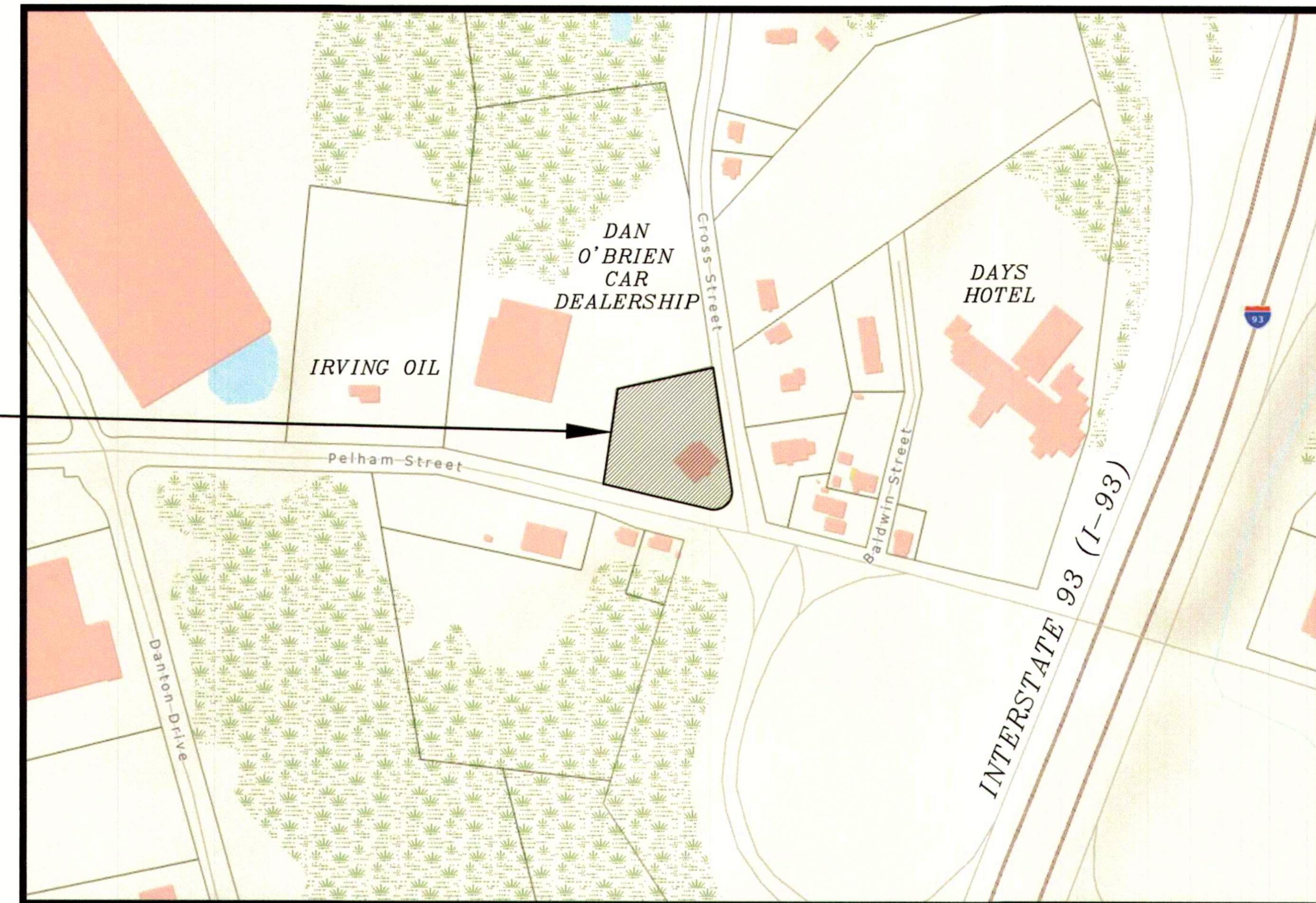
4. THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE "X" OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAP NUMBER 25009C0202F, BEARING AN EFFECTIVE DATE OF JULY 03, 2012.



LEGEND

A/C	AIR CONDITIONER
APPROX.	APPROXIMATE
Bo	BOLLARD
BIT.	BITUMINOUS
BCC	BITUMINOUS CONCRETE CURB
BRG.	BEARING
B.W.	BOTTOM OF WALL
C.I.	CAST IRON
C.L.	CEMENT LINED
CB	CONCRETE BOUND
CHD.	CHORD
CHS.	CHISELED
C.P.	CONCRETE PAD
C.L.F.	CHAIN-LINKED FENCE
CONC.	CONCRETE
□D.C.B.	DRAIN CATCH BASIN
□D.M.H.	DRAIN MANHOLE
D.H.N.	DOUBLE HEADED NAIL
D.H.	DRILL HOLE
D	DUMPSTER
EHH	ELECTRIC HAND HOLE
ELEV.	ELEVATION
E.M.	ELECTRIC METER
E.O.P.	EDGE OF PAVEMENT
(F)	FOUND
GG	GAS GATE
G.M.	GAS METER
HP	HIGH POINT
XX	HYDRANT
I.P.	IRON PIPE
I.R.	IRON ROD
INV.	INVERT
LS	LANDSCAPING
L=	LENGTH
ØL.P.	LIGHTPOST
L.O.W.	LIMIT OF WORK
M.H.	MANHOLE
MAG.	MAGNETIC
N/A	NOT APPLICABLE
N/F	NOW OR FORMALLY
NL	NAIL
OHW	OVERHANG WIRE
P.T.	POINT OF TANGENT
PROP.	PROPOSED
R=	RADIUS
(S)	SET
⑤S.M.H.	SEWER MANHOLE
†	SIGN
S=	SLOPE
S.F.	SQUARE FEET
SB	STONE BOUND
STC	STORMCEPTOR
SQU.	SQUARE
①T.M.H.	TELEPHONE MANHOLE
TBM	TEMPORARY BENCH MARK
T.B.R.	TO BE REMOVED
②TOB-#	TOP OF BANK FLAG
T.D.	TRENCH DRAIN
TSFM	TRANSFORMER
T.W.	TOP OF WALL
QU#	UTILITY POLE
W/G	WATER GATE
W/	WITH
WF-	WETLAND FLAG
VAC	VACUUM STATION
VCC	VERTICAL CONCRETE CURB
VGC	VERTICAL GRANITE CURB
V.C.	VITRIFIED CLAY
+100.0	EXISTING SPOT GRADE
○-100-○	EXISTING GRADE
○-○	FENCE
FG100	FINISHED GRADE
GAS	GAS SERVICE LINE
S	SEWER SERVICE LINE
W	WATER SERVICE LINE
E	ELECTRICAL SERVICE LINE

PROJECT SITE



SHEET INDEX

SHEET C000	COVER SHEET
SHEET C100	EXISTING CONDITIONS PLAN
SHEET C200	EROSION AND SEDIMENT CONTROL PLAN
SHEET C300	PROPOSED LAYOUT PLAN
SHEET C400	PROPOSED GRADING PLAN
SHEET C500	PROPOSED DRAINAGE PLAN
SHEET C600	PROPOSED SITE PLAN
SHEET C700	PROPOSED UTILITY PLAN
SHEET C800	LOCUS PLAN
SHEET C900	PROPOSED DETAILS PLAN
SHEET C901	PROPOSED DETAILS PLAN

PARKING REQUIREMENTS

PRINCIPLE USE	PARKING REQUIREMENT	REQUIRED	PROPOSED
AUTOMOBILE WASH FACILITY (RELEGATED UNDER GASOLINE STATION OR REPAIR GARAGE)	ONE (1) SPACE PER 300 SQUARE FEET OF GROSS FLOOR AREA ¹	16 PARKING SPACES (4,743 S.F.) & 3 PARKING SPACES (6 EMPLOYEES)	8 PARKING SPACES, 1 VAN HANDICAP SPACE & 15 VACUUM STALLS
	PLUS ONE (1) SPACE PER 2 EMPLOYEES ON MAXIMUM SHIFT ¹		
	TOTAL NUMBER OF PARKING SPACES =	19 SPACES	24 SPACES

1. PARKING REQUIREMENTS TAKEN FROM "TABLE OF REQUIRED OFF-STREET PARKING" OF THE CITY OF METHUEN COMPREHENSIVE ZONING ORDINANCE FOR "GASOLINE STATION OR REPAIR GARAGE".

ZONING TABLE
BUSINESS HIGHWAY DISTRICT (BH)

	REQUIRED	EXISTING	PROPOSED
AREA	10,000 S.F.	47,763 S.F.	47,763 S.F.
FRONTAGE	100 FEET	495.14 FEET	495.14 FEET
LOT WIDTH	100 FEET	446.75 FEET	446.75 FEET
SETBACKS:			
FRONT YARD	25 FEET	17.0 FEET	14.9 FEET (CANOPY)
SIDE YARD	30 FEET	92.5 FEET	11.6 FEET (VACUUM)
REAR YARD*	30 FEET	116.1 FEET	17.0 FEET (VACUUM)
BUILDING HEIGHT	40 FEET/3 STORIES	18.3 FEET	29.7 FEET/2 STORIES
OPEN SPACE	N/A	5.2%	34.7%
LOT COVERAGE	35% MAXIMUM	94.8%	65.3%
GROSS FLOOR AREA	N/A	3,875 S.F.	4,743 S.F.

*NORTHERN PROPERTY LINE DESIGNATED AS REAR LOT LINE.

LIST OF CONSULTANTS:

Architect:

Cripe Architecture
9339 Priority Way West Drive, Suite 100
Indianapolis, IN 46240
317.844.6777
www.cripe.biz

Landscape Architect:
Hawk Design, Inc.
P.O. Box 1309
Sandwich, MA 02563
508.833.8800
www.hawkdesigninc.com

Land Surveyor/Civil Engineer:
MetroWest Engineering, Inc.
75 Franklin Street
Framingham, MA 01702
508.626.0063
info@mwengineering.com

Builder/General Contractor:
Dixon, Inc.
361 West Main Street
Northborough, MA 01532
508.393.4411
www.dixon-inc.com



FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046

GRAPHIC SCALE
1 inch = 20 ft.
(FEET)
0 10 20 30
(METERS)
0 4 8 12 16 20 24

COVER SHEET
#171 PELHAM STREET
IN
METHUEN, MASS.
(NORTH ESSEX COUNTY)

PREPARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
Natick, MA 01760

PROPERTY OF:
DONNA & THOMAS SWERCHESKY, ET AL. TRUSTEES
SWERCHESKY FAMILY REVOCABLE LIVING TRUST
171 PELHAM STREET
METHUEN, MA 01844

ENGINEERS &
SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE: (508)626-0063

SHEET C000 DATE: JULY 28, 2023
CALC'D BY: PHA FIELD BK: 751 CAD FILE: SCRUB_SP_03.DWG
DRAFTER: CJC PROJECT: MET_PEL DWG FILE:

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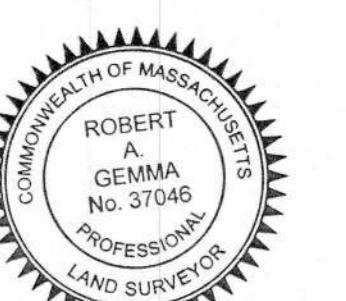
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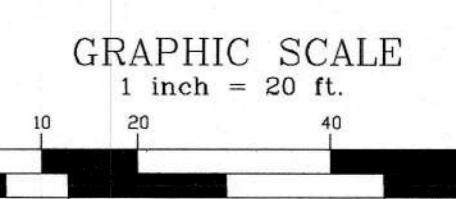
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CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.



FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.L.S. # 37046



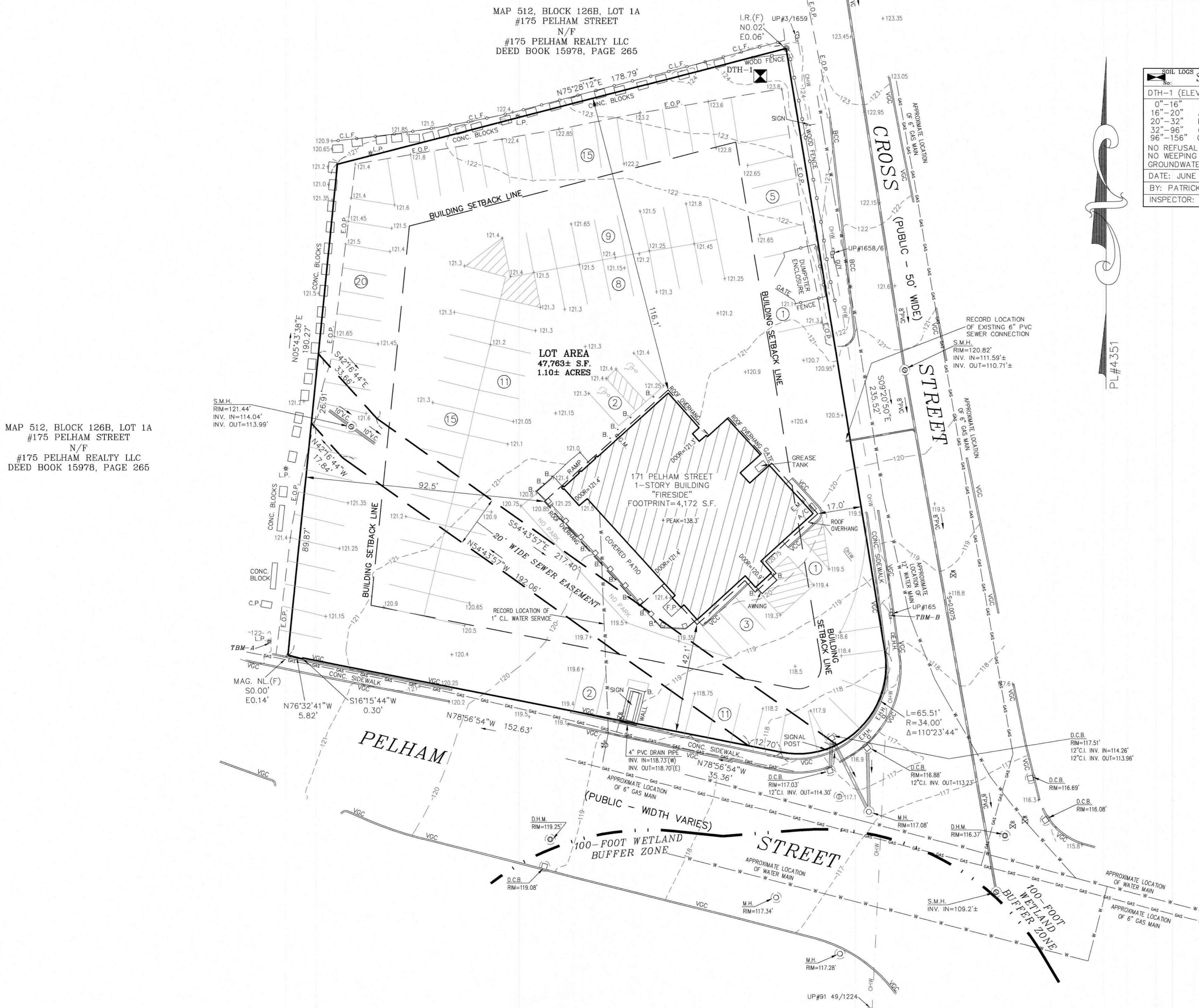
EXISTING CONDITIONS PLAN
#171 PELHAM STREET
IN
METHUEN, MASS.
(NORTH ESSEX COUNTY)

PREPARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
NATICK, MA 01760

PROPERTY OF:
DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES
SWERCHESKY FAMILY REVOCABLE LIVING TRUST
171 PELHAM STREET
METHUEN, MA 01844

ENGINEERS &
SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE: (508) 626-0063
EMAIL: INFO@MWENGINEERING.COM

SHEET C100 DATE: JULY 28, 2023
CALC'D BY: PHA FIELD BK: 751 CAD FILE: SCRUB_SP_03.DWG
DRAFTER: CJC PROJECT: MET_PEL DWG FILE:



EROSION CONTROL NOTES:

1.) CONTRACTOR SHALL MODIFY SEDIMENTATION CONTROLS AS NECESSARY DURING CONSTRUCTION.

2.) CONTRACTOR SHALL INSPECT AND CLEAN ALL SILTATION CONTROL MEASURES ON A WEEKLY BASIS AND AFTER ALL STORMS WITH A PRECIPITATION AMOUNT IN EXCESS OF 1". CONTRACTOR SHALL IMMEDIATELY REPAIR ANY DEFICIENCIES FOUND ON SILTATION CONTROL MEASURES.

3.) CONTRACTOR SHALL MAINTAIN AN INVENTORY OF EMERGENCY SUPPLIES ON SITE IN A PROTECTED LOCATION INCLUDING, BUT NOT LIMITED TO HAYBALES, SILT FENCE, WASHED STONE, PVC PIPE, MULCH AND SEED.

4.) THE BASE OF ALL STOCKPILES SHALL BE PROTECTED WITH A HAYBALE, FILTER SOCK OR SILT FENCE BARRIER.

5.) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED BEFORE OR THROUGH THE WINTER TO ELIMINATE DESTABILIZATION OR SILTATION DURING THE SPRING THAW.

6.) ANY RELEASE OF WATER FROM TEMPORARY SILTATION PONDS SHALL BE FREE OF SILT AND SEDIMENT AND SHALL MEET WATER QUALITY STANDARDS FOR CLASS B WATER IN THE COMMONWEALTH OF MASSACHUSETTS.

7.) IF GROUNDWATER DE-WATERING IS REQUIRED, CONTRACTOR SHALL IMPLEMENT A FILTERING SYSTEM FOR PUMPED GROUNDWATER TO REMOVE SILT AND SEDIMENT. THE DIRECT DISCHARGE OF ANY DE-WATERING OPERATION INTO A WETLAND IS PROHIBITED.

8.) CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL SEDIMENTS WHEN THEY HAVE ACCUMULATED TO A HEIGHT APPROXIMATELY EQUAL TO ONE HALF OF THE HEIGHT OF THE CORRESPONDING EROSION AND SEDIMENTATION CONTROL MEASURE.

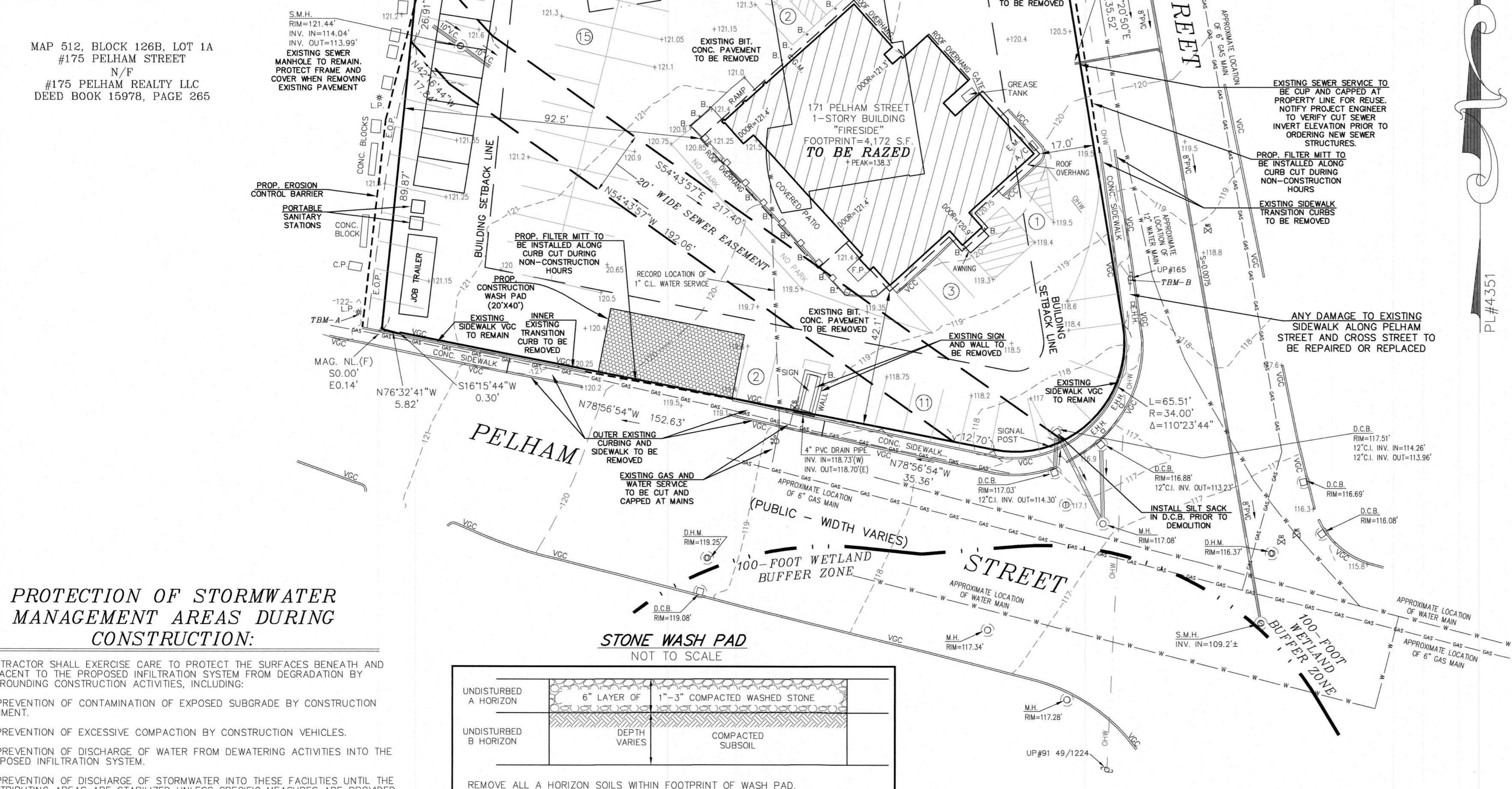
9.) CONTRACTOR SHALL KEEP COPIES OF THE EROSION CONTROL PLAN, INSPECTION REPORTS AND THE STORMWATER POLLUTION PREVENTION PLAN SO THEY ARE ACCESSIBLE AT ALL TIMES.

10.) CONTRACTOR TO PROTECT ALL DRAINAGE INLETS FROM SILT AND SEDIMENT UNTIL THEIR TRIBUTARY AREAS ARE FULLY STABILIZED.

11.) DESIGN ENGINEER TO VERIFY LOCATION AND INSTALLATION OF ALL EROSION CONTROL MEASURES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

12.) CONTRACTOR TO SWEEP STREET IN FRONT OF WORK AREA WEEKLY TO PREVENT ACCUMULATION OF SILT AND SEDIMENT ON CROSS STREET AND PELHAM STREET.

MAP 512, BLOCK 126B, LOT 1A
#175 PELHAM STREET
N/F
#175 PELHAM REALTY LLC
DEED BOOK 15978, PAGE 265



PROTECTION OF STORMWATER MANAGEMENT AREAS DURING CONSTRUCTION:

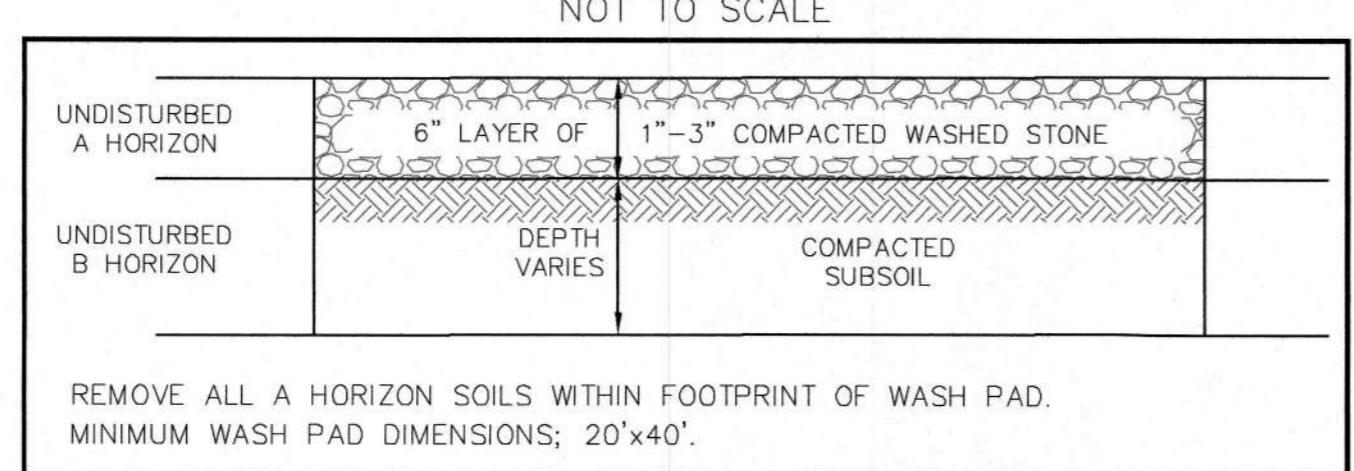
CONTRACTOR SHALL EXERCISE CARE TO PROTECT THE SURFACES BEHIND AND ADJACENT TO THE PROPOSED INFILTRATION SYSTEM FROM DEGRADATION BY SURROUNDING CONSTRUCTION ACTIVITIES, INCLUDING:

A. PREVENTION OF CONTAMINATION OF EXPOSED SUBGRADE BY CONSTRUCTION SEDIMENT.

B. PREVENTION OF EXCESSIVE COMPACTION BY CONSTRUCTION VEHICLES.

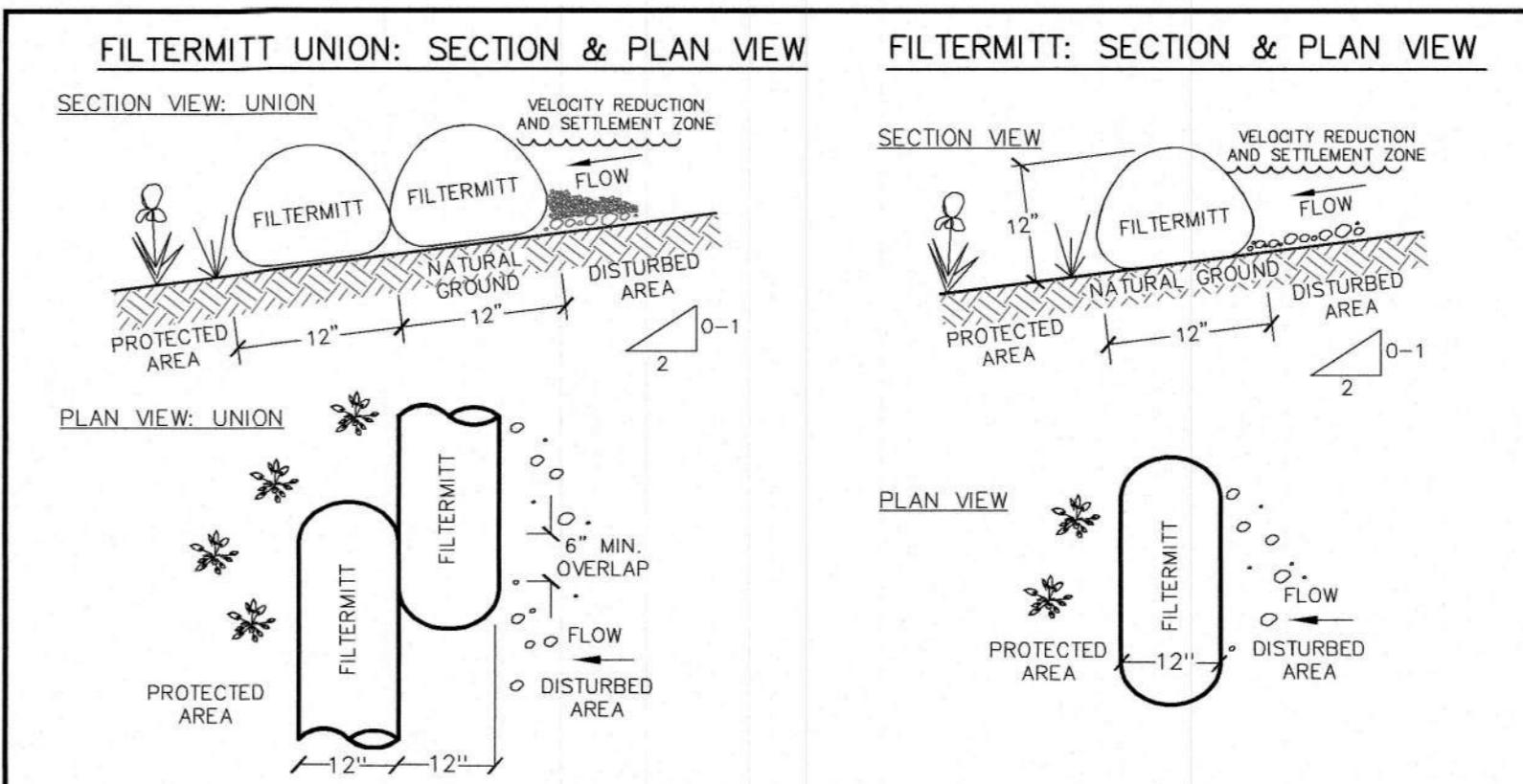
C. PREVENTION OF DISCHARGE OF WATER FROM DEWATERING ACTIVITIES INTO THE PROPOSED INFILTRATION SYSTEM.

D. PREVENTION OF DISCHARGE OF STORMWATER INTO THESE FACILITIES UNTIL THE CONTRIBUTING AREAS ARE STABILIZED UNLESS SPECIFIC MEASURES ARE PROVIDED FOR PROTECTING AND RESTORING THE INFILTRATION SURFACE.



FILTER MITT EROSION CONTROL BARRIER

NOT TO SCALE



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CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.

BENCHMARKS

ELEVATION SHOWN IS BASED ON N.A.V.D. 1988 DATUM

T.B.M.	DESCRIPTION	ELEVATION
A	D.H.N. SET 1' UP IN LIGHT POLE	122.91'
B	D.H.N. SET 1' UP IN UP#165	119.66'



FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046
GRAPHIC SCALE
1 inch = 20 ft.
0 10 20 40 80
0 10 20 30 (METERS)

EROSION & SEDIMENT CONTROL PLAN

#171 PELHAM STREET
IN
METHUEN, MASS.
(NORTH ESSEX COUNTY)

PREPARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
NATICK, MA 01760

PROPERTY OF:
DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES
SWERCHESKY FAMILY REVOCABLE LIVING TRUST
171 PELHAM STREET
METHUEN, MA 01844

ENGINEERS &
SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE: (508)626-0063
EMAIL: INFO@MWENGINEERING.COM

SHEET C200 DATE: JULY 28, 2023
CALC'D BY: PHA FIELD BK: 751 CAD FILE: SCRUB_SP_03.DWG
DRAFTER: CJC PROJECT: MET_PEL DWG FILE:

NOTES:

SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 512, BLOCK 126B, LOT 1.
RECORD TITLE FROM DEED BOOK 17513, PAGE 108.

BENCHMARKS

EL E V A T I O N S H O W N I S B A S E D O N N . A . V . D . 1 9 8 8 D A T U M

T.B.M.	DESCRIPTION	ELEVATION
A	D.H.N. SET 1' UP IN LIGHT POLE	122.91'
B	D.H.N. SET 1' UP IN UP#165	119.66'

SOIL LOGS **SOIL TEST** **RESULTS**

No:					
DTH-1 (ELEV.= 124.1')					
0"-16"		FILL (HTM)			
16"-20"	A	LOAMY SAND	10YR	5/3	
20"-32"	Bw	LOAMY SAND	7.5YR	7/4	
32"-96"	C1	SAND	2.5Y	7/4	
96"-156"	C2	FINE SAND	2.5Y	7/2	
NO REFUSAL					
NO WEEPING OR STANDING WATER					
GROUNDWATER= BELOW ELEV. 111.1'					
DATE: JUNE 05, 2023 F.B. 727A, PG. 66					
BY: PATRICK ARNOW, SOIL EVALUATOR					
INSPECTOR: NONE					

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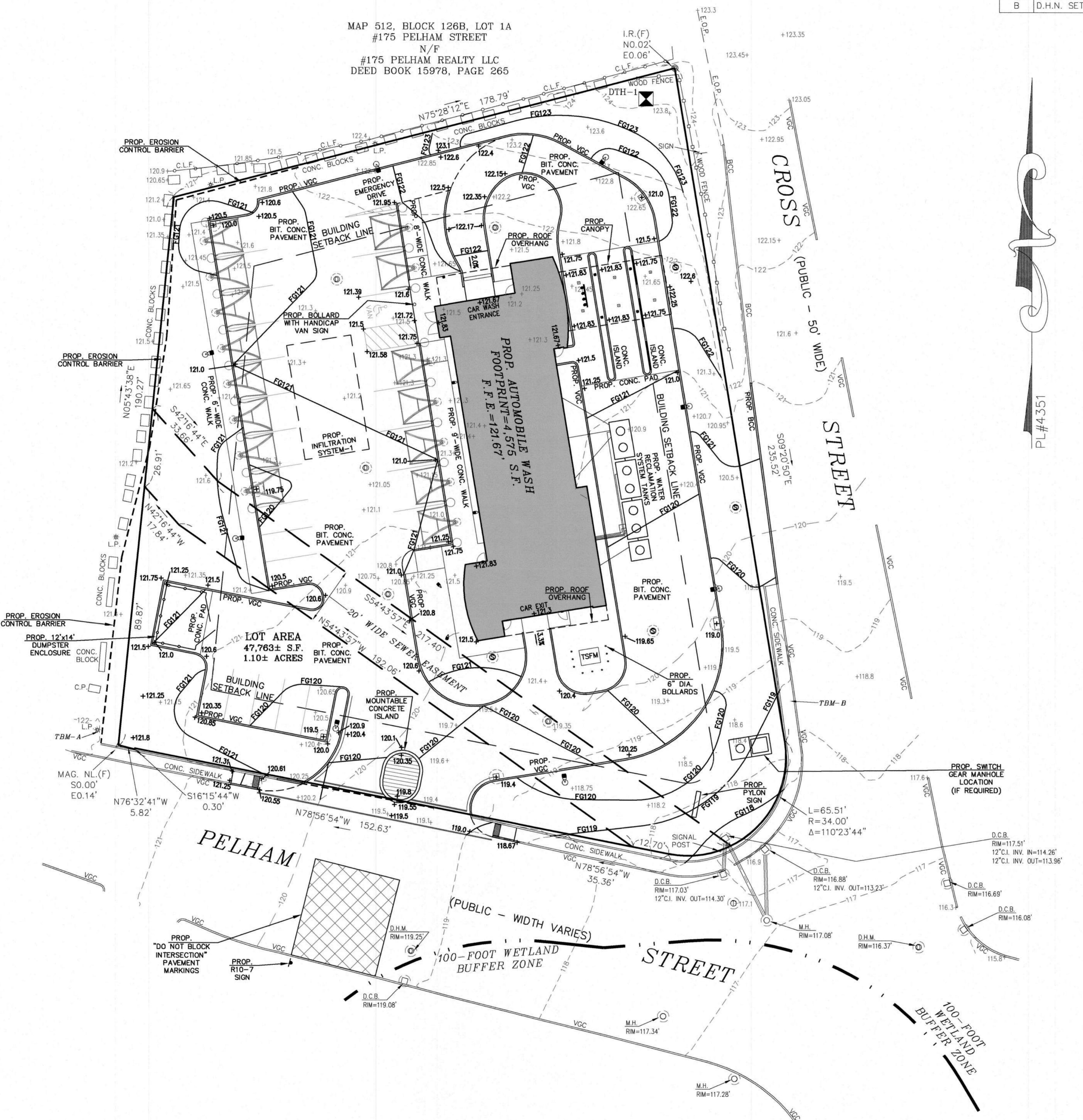
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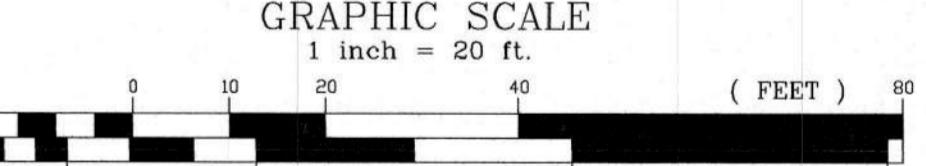
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MAP 512, BLOCK 126B, LOT 1A
#175 PELHAM STREET
N/F
#175 PELHAM REALTY LLC
DEED BOOK 15978, PAGE 265

MAP 512, BLOCK 126B, LOT 1A
#175 PELHAM STREET
N/F
#175 PELHAM REALTY LLC
DEED BOOK 15978, PAGE 265



~~FOR METROWEST ENGINEERING, INC.~~ DATE
~~ROBERT A. GEMMA, P.E.(CIVIL) # 31967~~
~~P.L.S. # 32046~~



PROPOSED GRADING PLAN
#171 PELHAM STREET
IN
METHUEN, MASS.

(NORTH ESSEX CO
PARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
NATICK, MA 01760

PROPERTY OF:
DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES
SWERCHESKY FAMILY REVOCABLE LIVING TRUST
171 PELHAM STREET
METHUEN, MA 01844

ENGINEERS &
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MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE.: (508)626-0063
EMAIL: INFO@MWENGINEERING.COM

HEET C400		DATE: JULY 28, 2023
C'D BY: PHA	FIELD BK: 751	CAD FILE: SCRUB_SP_03.DWG
FTER: CJC	PROJECT: MET PEL	DWG FILE:

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3. CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING EXISTING LOCATIONS OF ALL SUB-SURFACE UTILITIES AND MAN-MADE IMPROVEMENTS AND FOR THE REQUIREMENTS TO REPLACE, RELOCATE, OR REPAIR EXISTING UTILITIES IN THE EVENT OF DAMAGE OCCURRING DURING CONSTRUCTION. MWE IS NOT RESPONSIBLE OR LIABLE FOR DELAYS OR COSTS ASSOCIATED WITH REMOVING/REPLACING/RELOCATING OF EXISTING UTILITIES REGARDLESS OF WHETHER SAID UTILITIES ARE ACCURATELY DEPICTED ON THIS SURVEY.

4. THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE "X" OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAP NUMBER 25009C0202F, BEARING AN EFFECTIVE DATE OF JULY 03, 2012.

BENCHMARKS

ELEVATION SHOWN IS BASED ON N.A.V.D. 1988 DATUM

T.B.M.	DESCRIPTION	ELEVATION
A	D.H.N. SET 1' UP IN LIGHT POLE	122.91'
B	D.H.N. SET 1' UP IN UP #165	119.66'

SOIL TEST RESULTS

SOIL LOGS		SOIL TEST RESULTS		
DTH-1 (ELEV. = 124.1')				
0'-16"		FILL (HTM)		
16'-20"	A	LOAMY SAND		
20'-32"	Bw	LOAMY SAND	7.5YR 5/3	
32'-96"	C1	SAND	2.5YR 7/4	
96'-156"	C2	FINE SAND	2.5YR 7/2	
NO REFUSAL				
NO WEEPING OR STANDING WATER				
GROUNDWATER = BELOW ELEV. 111.1'				
DATE: JUNE 05, 2023				
BY: PATRICK ARNOW, SOIL EVALUATOR				
INSPECTOR: NONE				

CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.



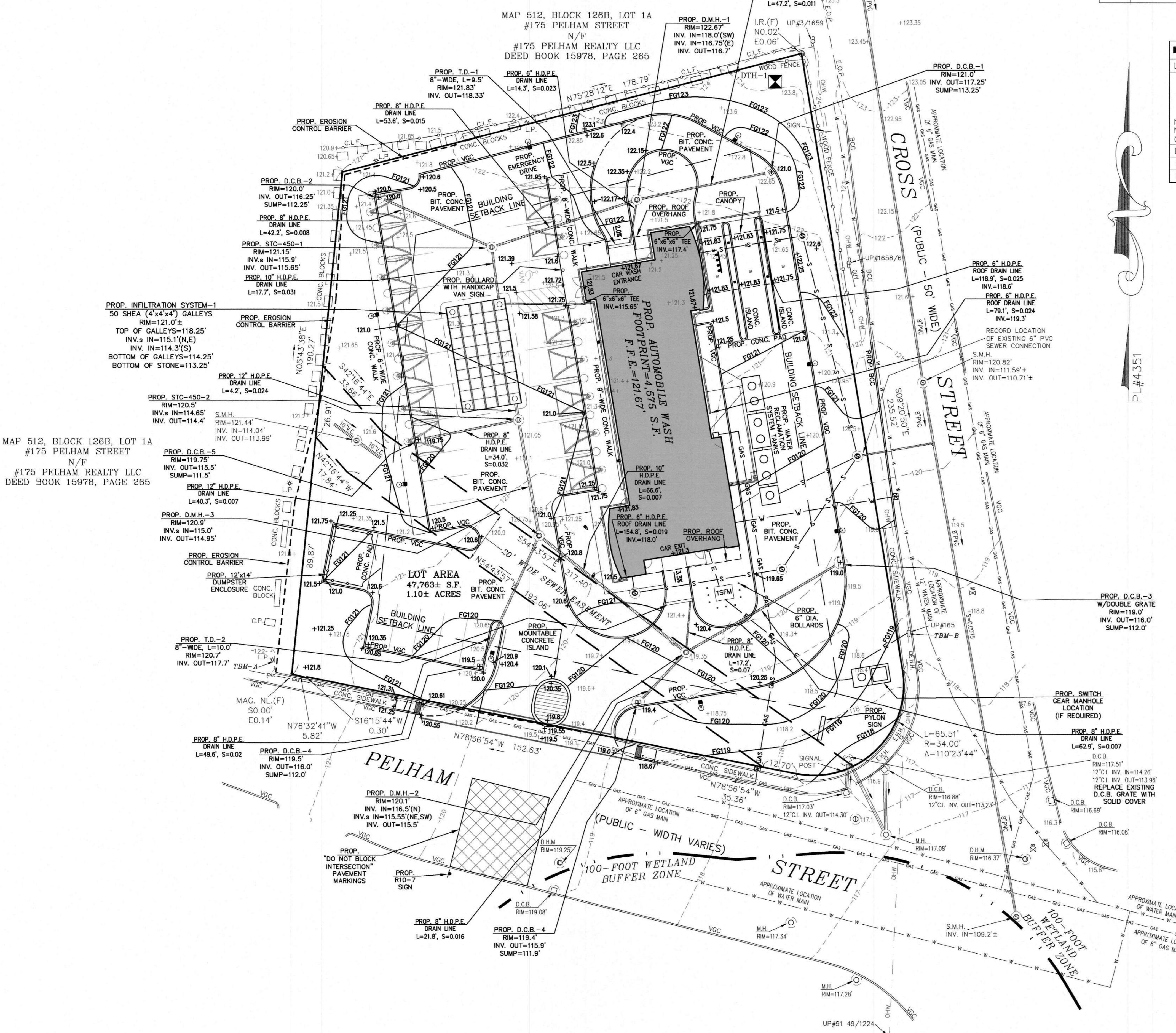
Robert A. Gemma 8/3/23
FOR METROWEST ENGINEERING, INC.
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046
DATE

GRAPHIC SCALE
1 inch = 20 ft.
(FEET)
0 4 8 12 16 20 24 28 32
(METERS) 0 10 20 30

PROPOSED DRAINAGE PLAN
#171 PELHAM STREET
IN
METHUEN, MASS.
(NORTH ESSEX COUNTY)

PREPARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
NATICK, MA 01760
PROPERTY OF:
DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES
SWERCHESKY FAMILY REVOCABLE LIVING TRUST
171 PELHAM STREET
METHUEN, MA 01844
ENGINEERS &
SURVEYORS:

MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE: (508)626-0063
EMAIL: INFO@MWENGINEERING.COM
SHEET C500 DATE: JULY 28, 2023
CALC'D BY: PHA FIELD BK: 751 CAD FILE: SCRUB_SP_03.DWG
DRAFTER: CJC PROJECT: MET_PEL DWG FILE: SP072823



NOTES:

SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 512, BLOCK 126B, LOT 1.
RECORD TITLE FROM DEED BOOK 17513, PAGE 108.

UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY, RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS. METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BENEATH THE GROUND SURFACE AT THE TIME OF THE SURVEY.

CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING EXISTING LOCATIONS OF ALL SUB-SURFACE UTILITIES AND MAN-MADE IMPROVEMENTS AND FOR THE REQUIREMENTS TO REPLACE, RELOCATE OR REPAIR EXISTING UTILITIES IN THE EVENT OF DAMAGE OCCURRING DURING CONSTRUCTION. MWE IS NOT RESPONSIBLE OR LIABLE FOR DELAYS OR COSTS ASSOCIATED WITH REMOVING/REPLACING/RELOCATING OF EXISTING UTILITIES REGARDLESS OF WHETHER SAID UTILITIES ARE ACCURATELY DEPICTED ON THIS SURVEY.

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BENCHMARKS

EL E V A T I O N S H O W N I S B A S E D O N N . A . V . D . 1 9 8 8 D A T U M

T.B.M.	DESCRIPTION	ELEVATION
A	D.H.N. SET 1' UP IN LIGHT POLE	122.91'
B	D.H.N. SET 1' UP IN UP#165	119.66'

SOIL LOGS **SOIL TEST RESULTS**

No:					
DTH-1 (ELEV.= 124.1')					
0"-16"		FILL (HTM)			
16"-20"	A	LOAMY SAND	10YR	5/3	
20"-32"	Bw	LOAMY SAND	7.5YR	7/4	
32"-96"	C1	SAND	2.5Y	7/4	
96"-156"	C2	FINE SAND	2.5Y	7/2	
NO REFUSAL					
NO WEEPING OR STANDING WATER					
GROUNDWATER= BELOW ELEV. 111.1'					
DATE: JUNE 05, 2023	F.B. 727A, PG. 66				
BY: PATRICK ARNOW, SOIL EVALUATOR					
INSPECTOR: NONE					

CONTRACTOR TO VERIFY ACTUAL LOCATION OF
EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO
CONSTRUCTION (WATER, ELECTRICAL, ETC.)
CALL DIG-SAFE BEFORE YOU DIG 811.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 32046

A graphic scale bar representing 20 feet. The bar is divided into four segments: a black segment on the left, a white segment in the middle, and two black segments on the right. Above the bar, the text 'GRAPHIC SCALE' is centered, and below it, '1 inch = 20 ft.' is centered. To the right of the bar, the text '(FEET)' is enclosed in parentheses. The numbers 20, 0, 10, 20, 40, and 80 are positioned above the bar, corresponding to the segments.

PROPOSED SITE PLAN
#171 PELHAM STREET
IN
METHUEN, MASS.
(NORTH ESSEX COUNTY)

(NORTH ESSEX COUNTY)

PARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
NATICK, MA 01760

PERTY OF:
DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES

171 PELHAM STREET
METHUEN, MA 01844

ERS &
EYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE.: (508)626-0063
EMAIL: INFO@MWENGINEERING.COM

ET C600		DATE: JULY 28, 2023
BY: PHA	FIELD BK: 751	CAD FILE: SCRUB_SP_03.DWG

R: CJC PROJECT: MET_PEL DWG FILE: XXXXXXXXXX

SP072

S101202

SP07282

MAP 512, BLOCK 126B, LOT 1A
#175 PELHAM STREET
N/F
#175 PELHAM REALTY LLC
DEED BOOK 15978, PAGE 265

MAP 512, BLOCK 126B, LOT 1A
#175 PELHAM STREET
N/F
#175 PELHAM REALTY LLC
DEED BOOK 15978, PAGE 265

SOIL LOGS
No:
DTH-1 (ELEV)
0"-16"
16"-20"
20"-32"
32"-96"
96"-156"
NO REFUSAL
NO WEPPING
GROUNDWATER
DATE: JUNE
BY: PATRICK
INSPECTOR:

PL#4351

NOTES:

SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 512, BLOCK 126B, LOT 1.
RECORD TITLE FROM DEED BOOK 17513, PAGE 108.

BENCHMARKS

EL E V A T I O N S H O W N I S B A S E D O N N . A . V . D . 1 9 8 8 D A T U M

T.B.M.	DESCRIPTION	ELEVATION
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B	D.H.N. SET 1' UP IN UP#165	119.66'

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NO WEEPING OR STANDING WATER				
GROUNDWATER= BELOW ELEV. 111.1'				
DATE: JUNE 05, 2023 F.B. 727A, PG. 66				
BY: PATRICK ARNOW, SOIL EVALUATOR				
INSPECTOR: NONE				

CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING EXISTING LOCATIONS OF ALL SUB-SURFACE UTILITIES AND MAN-MADE IMPROVEMENTS AND FOR THE REQUIREMENTS TO REPLACE, RELOCATE OR REPAIR EXISTING UTILITIES IN THE EVENT OF DAMAGE OCCURRING DURING CONSTRUCTION. MWE IS NOT RESPONSIBLE OR LIABLE FOR DELAYS OR COSTS ASSOCIATED WITH REMOVING/REPLACING/RELOCATING OF EXISTING UTILITIES REGARDLESS OF WHETHER SAID UTILITIES ARE ACCURATELY DEPICTED ON THIS SURVEY.

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CONTRACTOR TO VERIFY ACTUAL LOCATION OF
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ALL DIG-SAFE BEFORE YOU DIG 811.

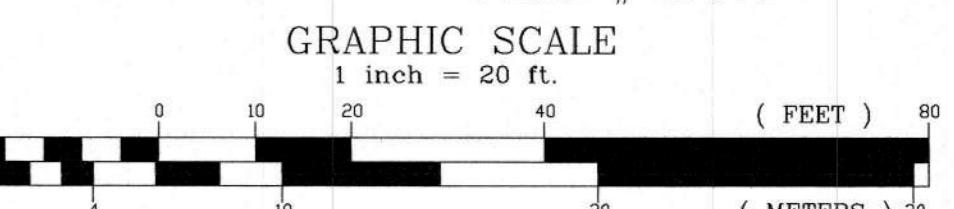
MAP 512, BLOCK 126B, LOT 1A
#175 PELHAM STREET
N/F
#175 PELHAM REALTY LLC
DEED BOOK 15978, PAGE 265

MAP 512, BLOCK 126B, LOT 1A
#175 PELHAM STREET
N/F
#175 PELHAM REALTY LLC
DEED BOOK 15978 PAGE 265

PROP. 6"
PVC SEW
L=4.4', S

PROP. S.M.H.-4
RIM=121.4'
INV. IN=116.4'
INV. OUT=116.35

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.G. # 25243



PROPOSED UTILITY PLAN
#171 PELHAM STREET
IN
METHUEN, MASS.

(NORTH ESSEX COUNTY)

NATICK, MA 01760

PROPERTY OF:

DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES
SWERCHESKY FAMILY REVOCABLE LIVING TRUST
171 PELHAM STREET

METHUEN, MA 01844

ENGINEERS &
SURVEYORS:

MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE.: (508)626-0063
EMAIL: INFO@MWENGINEERING.COM

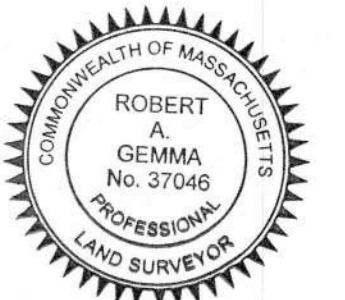
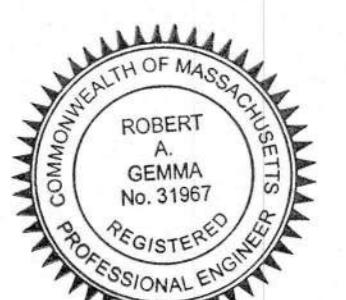
SHEET C700		DATE: JULY 28, 2023
CALC'D BY: PHA	FIELD BK: 751	CAD FILE: SCRUB_SP_03.DWG
DRAFTER: CJC	PROJECT: MET_PEL	DWG FILE:

NOTES:

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CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.



FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046

GRAPHIC SCALE
1 inch = 100 ft.
0 50 100 150 200 250 300 350 400
(FEET)
0 30 50 75 100 125 150
(METERS)

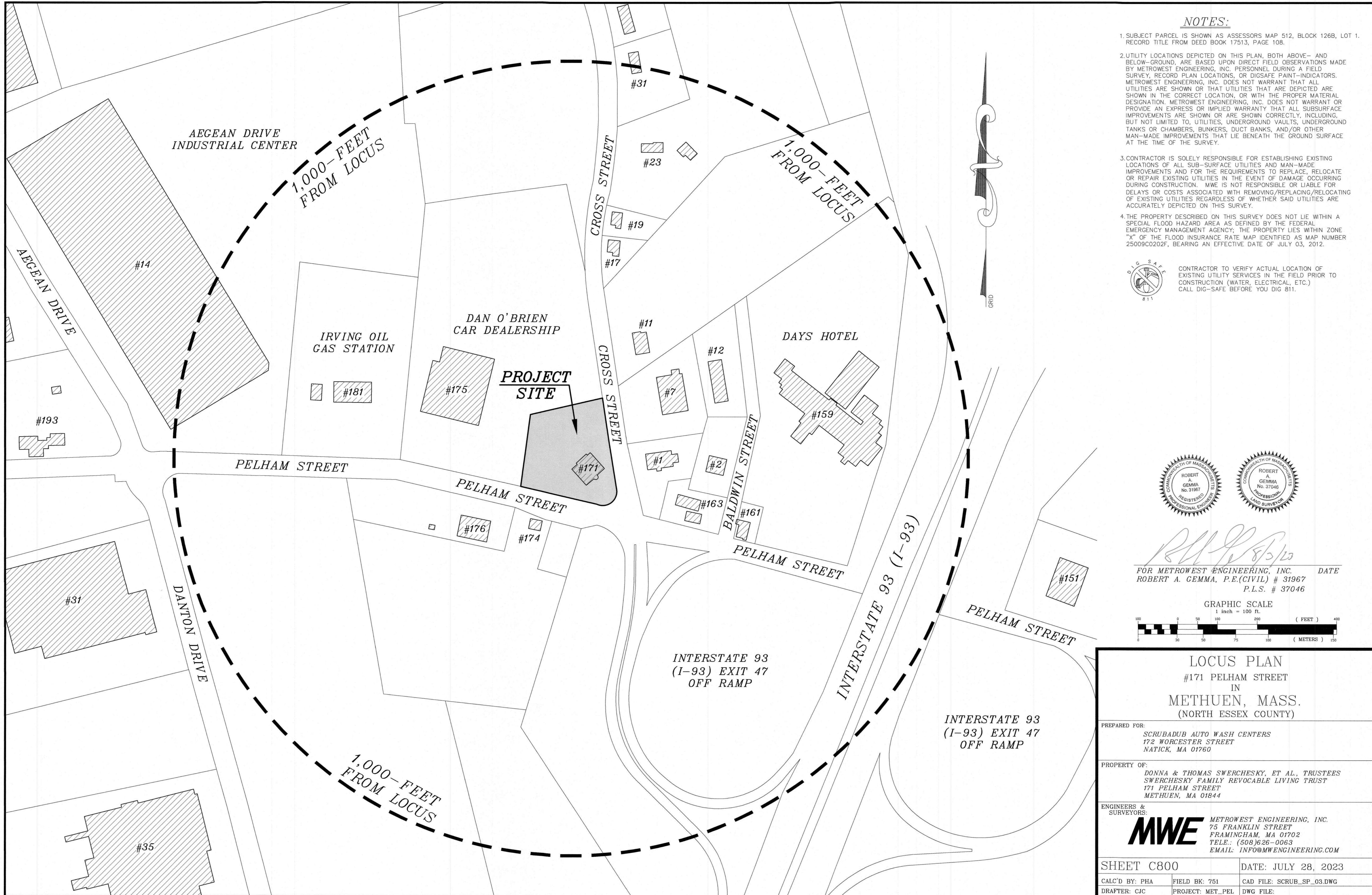
LOCUS PLAN
#171 PELHAM STREET
IN
METHUEN, MASS.
(NORTH ESSEX COUNTY)

PREPARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
NATICK, MA 01760

PROPERTY OF:
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ENGINEERS &
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75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE: (508)626-0063
EMAIL: INFO@MWENGINEERING.COM

SHEET C800 DATE: JULY 28, 2023
CALC'D BY: PHA FIELD BK: 751 CAD FILE: SCRUB_SP_03.DWG
DRAFTER: CJC PROJECT: MET_PEL DWG FILE: SP072823



WATER SYSTEM MATERIALS AND INSTALLATION

- 1) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE CITY OF METHUEN DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS AND REQUIREMENTS OF THE METHUEN FIRE DEPARTMENT.
- 2.) ALL PIPE AND OTHER APPURTENANCES SHALL BE HANDLED CAREFULLY AND INSPECTED PRIOR TO INSTALLATION.
- 3.) ALL MATERIALS INCLUDING PIPE AND FITTINGS SHALL BE LEAD FREE.
- 4.) ALL WATER MAINS SHALL BE MINIMUM DUCTILE IRON CLASS 52, SINGLE GASKET, DOUBLE SEALING PIPE WITH CEMENT LINING. ALL DUCTILE IRON PIPE SHALL BE RATED FOR A MINIMUM OPERATING PRESSURE OF 350 P.S.I.
- 5.) MECHANICAL JOINT RESTRAINTS SHALL CONSIST OF ACTUATED WEDGES THAT INCREASE RESISTANCE TO PULL OUT AS PRESSURE INCREASES.
- 6.) USE SERIES 1100 MEGA-LUG RESTRAINTS OR APPROVED EQUAL FOR PIPE RESTRAINTS.
- 7.) PIPE FITTINGS SHALL BE CEMENT LINED DUCTILE IRON AND RATED FOR 350 P.S.I.
- 8.) PIPE FITTINGS SHALL BE FITTED WITH MECHANICAL JOINT RESTRAINTS WITH ALL NUTS AND BOLTS OF A SIMILAR TYPE DUCTILE IRON OR KOR-10 STEEL T BOLTS AND NUTS.
- 9.) RESILIENT SEAT GATE VALVES SHALL BE MANUFACTURED OF DUCTILE IRON, OPEN LEFT (COUNTER CLOCKWISE) AND BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 250 P.S.I.
- 10.) GATE VALVE BOXES SHALL BE ADJUSTABLE, BUFFALO STYLE, WITH THE LOWER PART MADE OF CAST IRON AND THE UPPER PART OF STEEL OR CAST IRON. THE VALVE BOX SHALL BE DESIGNED TO PREVENT DIRECT TRANSMISSION OF TRAFFIC LOADS TO THE VALVE OR PIPE.
- 11.) ALL WATER PIPING SHALL BE INSTALLED WITH A MINIMUM OF FIVE-FEET (5') OF COVER. PIPE SHALL BE PROPERLY INSULATED WHEN THE PROPER COVER CAN NOT BE ACHIEVED.
- 12.) PIPE SHALL BE LAID ACCURATELY TO LINE AND GRADE IN SAND BEDDING (MASSDOT SPEC. M1.04.0, SAND BORROW) IN ACCORDANCE WITH AWWA GUIDELINES.
- 13.) PUSH-ON PIPE GASKETS SHALL BE CLEAN AND THOROUGHLY COATED WITH LUBRICANT SUPPLIED BY THE MANUFACTURER DURING INSTALLATION.
- 14.) ALL PIPE LINES SHALL BE PRESSURE TESTED FOR STRENGTH AND LEAKAGE AT A PRESSURE OF 200 P.S.I. BY A QUALIFIED THIRD PARTY.
- 15.) ALLOWABLE LEAKAGE AMOUNTS DURING TESTING SHALL CONFORM TO AWWA STANDARDS FOR PRESSURE TESTING DUCTILE IRON PIPE (AWWA C600.)
- 16.) CONTRACTOR SHALL REPAIR ANY LEAKS DISCOVERED UNDER ANY OF THE REQUIRED TESTS AND RETEST PIPES IF NECESSARY.
- 17.) CONTRACTOR SHALL SUBMIT A DETAILED DISINFECTION PLAN TO THE WORCESTER D.P.W. AND WATER SUPERINTENDENT AND SHALL NOT BEGIN DISINFECTION UNTIL THE PLAN HAS BEEN APPROVED BY THE WORCESTER D.P.W.
- 18.) THE DISINFECTION PLAN SHALL INCLUDE THE INTENDED CHLORINE DOSAGE, METHOD FOR ESTABLISHING DOSAGE AND LOCATIONS FOR APPLICATION OF DOSAGE.
- 19.) THE CONTACT PERIOD FOR DISINFECTION SHALL BE AT LEAST 24-HOURS.
- 20.) THE PIPELINE SHALL BE ADEQUATELY FLUSHED WITH POTABLE WATER FOR THE DE-CHLORINATION OF RESIDUAL CHLORINATED WATER.

PAVEMENT MATERIALS AND INSTALLATION

- 1.) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE CITY OF METHUEN DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- 2.) BITUMINOUS PAVING SHALL NOT BE PLACED WHEN AMBIENT TEMPERATURE IS BELOW 40-DEGREES FAHRENHEIT, OR WHEN THERE IS FROST IN THE BASE, OR WHEN WEATHER CONDITIONS ARE UNSUITABLE IN ANY WAY.
- 3.) CONTRACTOR SHALL SAWCUT ALL EXISTING TRENCHES AND EXCAVATIONS WHEN LOCATED WITHIN LIMITS OF EXISTING PAVEMENT. PAVEMENT BREAKER MAY BE USED FOR INITIAL EXCAVATION AND A SAWCUT MAY BE EMPLOYED TO PROVIDE NEATER CUT FOR TRENCH PRIOR TO PLACEMENT OF NEW PAVEMENT.
- 4.) SAWCUTS SHALL EXTEND COMPLETELY THROUGH BINDER AND TOP COURSE LAYERS.
- 5.) PAVEMENT EDGES SHALL BE TRIMMED AND CLEANED FOR A NEAT VERTICAL FACE FREE OF LOOSE MATERIALS AND DEBRIS.
- 6.) CONTRACTOR SHALL EXERCISE CARE TO PREVENT OR MINIMIZE DAMAGE TO EXISTING PAVEMENT SURROUNDING EXCAVATION WORK.
- 7.) BACKFILL IN TRENCHES SHALL BE IN ACCORDANCE WITH SPECIFIC UTILITY TRENCH REQUIREMENTS. BACKFILL MATERIAL IN TRENCHES SHALL CONSIST OF GRANULAR GRAVEL BORROW, PROCESSED GRAVEL, SAND OR CRUSHED STONE MATERIAL. BACKFILL MATERIAL SHALL BE PLACED AND COMPAKTED IN LAYERS NOT EXCEEDING 12-INCH LIFTS AND COMPAKTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO DESIGNATION T99 COMPAKCTION TEST METHODS.
- 8.) BROKEN PAVEMENT, LARGE STONES, ROOTS AND OTHER DEBRIS SHALL NOT BE USED IN TRENCH BACKFILL.
- 9.) PERMANENT PAVEMENT SHALL CONSIST OF A TOP COURSE LAYER OF NOT LESS THAN ONE AND A HALF-INCHES (1.5") AND A BINDER COURSE LAYER OF NOT LESS THAN TWO-INCHES (2") AFTER COMPAKCTION. PAVEMENT SHALL BE MIXED IN ACCORDANCE WITH MASSDOT SPECIFICATION SECTION M3.07.0
- 10.) PAVEMENT SHALL BE COMPAKTED AND ROLLED BY AN OSCILLATING ROLLER WITH A WEIGHT OF NOT LESS THAN 10-TONS. ROLLER SHALL MAKE AT LEAST FOUR PASSES OVER ALL NEWLY PLACED PAVEMENT.
- 11.) ROLLER SHALL NOT EXCEED A SPEED OF 3 MILES PER HOUR DURING ROLLING OPERATIONS TO ENSURE PROPER COMPAKCTION. ANY RIDGES, INDENTATIONS SHALL BE ROLLED ADDITIONALLY UNTIL THEY ARE REMOVED.
- 12.) GRAVEL BASE MATERIAL SHALL CONSIST OF A LAYER OF EITHER DENSE GRADE CRUSHED STONE COMPLYING WITH REQUIREMENTS OF MASSDOT SECTION M2.01.7 OR GRAVEL BORROW COMPLYING WITH REQUIREMENTS OF MASSDOT SECTION M1.03.0.
- 13.) BASE MATERIALS SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT-INCHES (8") AND COMPAKTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.
- 14.) SUITABLE SUBBASE MATERIALS SHALL BE COMPAKTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.
- 15.) UNSUITABLE SUBBASE MATERIAL SHALL BE REMOVED AND REPLACED WITH MATERIAL IN CONFORMANCE WITH MASSDOT SPECIFICATION M1.02.0, SPECIAL BORROW OR SPECIFICATION M.2.03.0 FOR GRAVEL BORROW.
- 16.) IMPORTED SUBBASE MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING TWELVE-INCHES (12") AND COMPAKTED IN TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.

SEWER SYSTEM MATERIALS AND INSTALLATION

- 1.) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE CITY OF METHUEN DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- 2.) ALL PIPE AND OTHER APPURTENANCES SHALL BE HANDLED CAREFULLY AND INSPECTED PRIOR TO INSTALLATION.
- 3.) POLYVINYL CHLORIDE PIPE AND FITTINGS (P.V.C.) SHALL BE MINIMUM SDR 35 WITH DIAMETER DIMENSIONS CONFORMING TO SPECIFICATIONS FOR TYPE PSM P.V.C. SEWER PIPES AND FITTINGS, ASTM D-3034, LATEST REVISION.
- 4.) ALL P.V.C. PIPE SHALL HAVE AN INTEGRAL WALL BELL AND SPIGOT PUSH-ON JOINT WITH ELASTOMERIC GASKETS SECURED IN THE BELL END OF THE PIPE. ELASTOMERIC GASKETS SHALL CONFORM TO ASTM D3212.
- 5.) SPIGOT ENDS SHALL HAVE BEVELS FROM THE MANUFACTURER TO ENSURE PROPER INSERTION AND SHALL HAVE AN ASSEMBLY STRIP IMPRINTED THEREIN TO WHICH THE BELL END OF THE MATED PIPE WILL EXTEND UPON JOINING THE PIPES.
- 6.) ALL PRECAST REINFORCED CONCRETE MANHOLES SHALL CONFORM TO ASTM DESIGNATION C478 AND SHALL BE MANUFACTURED WITH 4,000 P.S.I. (MINIMUM) COMPRESSIVE STRENGTH CONCRETE AND BE DESIGNED FOR HS-20 LOADING REQUIREMENTS.
- 7.) PRECAST SECTIONS SHALL BE JOINED BY BUTYL RUBBER SEALANT.
- 8.) MANHOLE FRAMES AND COVERS SHALL HAVE A MINIMUM CLEAR OPENING OF 24-INCHES AND BE A MINIMUM OF SIX-INCHES (6") IN HEIGHT.
- 9.) MANHOLE FRAMES AND COVERS SHALL BE MANUFACTURED BY EAST JORDAN IRON WORKS (FORMERLY LEBARON FOUNDRY) AND CONSIST OF 2111Z FRAME AND 2111A SEWER COVER.
- 10.) FRAMES SHALL BE ADJUSTED TO FINISH GRADE WITH MORTAR AND HARD RED BRICK; MINIMUM OF TWO COURSES AND MAXIMUM OF FIVE COURSES OF BRICK.
- 11.) GRAVITY SERVICE CONNECTION SHALL BE A MINIMUM OF SIX-INCH DIAMETER SDR 35 SEWER PIPE AND SHALL HAVE A MINIMUM SLOPE OF ONE-PERCENT (1.0%).
- 12.) ALL SERVICE CONNECTIONS TO THE SEWER MAIN SHALL BE MADE BY WYES, T-WYES OR SADDLE TYPE CONNECTIONS.
- 13.) PIPE SHALL BE LAID ACCURATELY TO LINE AND GRADE IN APPROVED BEDDING OR 3/4" CRUSHED STONE. BEDDING SHALL EXTEND NO LESS THAN SIX-INCHES (6") AROUND THE PIPE IN ALL DIRECTIONS.
- 14.) BEDDING MATERIAL SHALL BE COMPACTED BY HAND UNDER AND AROUND THE SEWER PIPE IN LAYERS NOT EXCEEDING SIX-INCHES (6").
- 14.) SEWER PIPE SHALL BE LAID AT LEAST TEN-FEET (10') FROM A WATER MAIN WHENEVER POSSIBLE.
- 15.) ALL SEWER PIPES SHALL BE CUT FLUSH WITH THE INSIDE FACE OF MANHOLE STRUCTURES UNLESS NOTED OTHERWISE ON DRAWINGS.
- 16.) THE CONTRACTOR SHALL PROVIDE TEMPORARY PLUGS AT ENDS OF SEWER LINES TO PREVENT THE ACCUMULATION OF DIRT OR SEDIMENT IN SEWER PIPES WHEN PIPE LAYING OPERATIONS ARE NOT IN PROGRESS.
- 17.) ALL PIPE JOINTS SHALL BE MADE WATERTIGHT AND ALL JOINTING SHALL BE DONE IN CONFORMANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

LIGHT POLE BASE DETAIL

NOT TO SCALE

NOTES:

1. ALL LIGHT POLE BASES TO SHALL BE SEBACK A MINIMUM OF THREE-FEET FROM CURB LINE.
2. ALL LIGHT POLES ARE REQUIRED TO HAVE BASE COVERS.
3. ALL LIGHT POLES SHALL NOT EXCEED A MAXIMUM HEIGHT OF 18-FEET.

BOLT/BASE COVER
JAM NUT
NUT
FLAT WASHERS
LEVELING NUT

ALL ANCHOR BOLTS, WASHERS AND NUTS TO BE GALVANIZED COATED.
 (GALVANIZED COATING TO COVER FULL LENGTH OF BOLT).

FINISH GRADE

MAX. 6" REVEAL

BASE HEIGHT*

* BASE HEIGHT AS REQUIRED BY OR TO ACHIEVE ADEQUATE SOIL BEARING PER RECOMMENDATIONS OF SOIL REPORTS.
 SEE LIGHTING CUT SHEETS FOR SPECIFIC TEMPLATE OF ANCHOR BOLT PATTERN

TYPICAL SEWER SERVICE CONNECTION

NOT TO SCALE

PLAN VIEW

TEE-WYE
6" MIN. PVC SERVICE

30°

FLOW

GRAVITY SEWER PIPE (SEWER MAIN)
(SIZE VARIES)

ELEVATION VIEW

SANITARY 6"
TEE-WYE

1 FT. OF $\frac{3}{4}$ " CRUSHED
STONE OVER PIPE

2% SLOPE (MIN)
6% SLOPE (MAX)

6" MIN.
 $\frac{3}{4}$ " CRUSHED
STONE IN
PIPE IN
SERVICE
TRENCH

1 FT.

6" MIN. OF $\frac{3}{4}$ " CRUSHED
STONE IN NATIVE SOIL
12" MIN. IN LEDGE UNDER PIPE

TYPICAL SEWER TRENCH

NOT TO SCALE

SURFACE TREATMENT AS REQUIRED

3" MIN.

12" MIN.

6" SDR-35

12" MIN.

12" MIN.

12" MIN.

SAND BEDDING OR
3/4" CRUSHED STONE

12" MIN.

COMPACTED
ROAD GRAVEL

COMPACTED
GRAVEL FILL

SEWER MANHOLE FRAME AND COVER

BITUMINOUS CONCRETE CURB

NOT TO SCALE

Diagram illustrating a shoulder cross-section and a road profile.

Shoulder Cross-Section (Type - 3):

The shoulder cross-section is trapezoidal with the following dimensions:

- Width at the top: 2"
- Width at the bottom: 8"
- Total height: 6"
- Width of the transition curve (inner vertical line): 4"
- Width of the straight line (outer vertical line): 2"

Road Profile:

The profile shows a shoulder on the left with a slope indicated by an arrow. The shoulder has a hatched top course and a solid base. The main road surface is labeled "LEVEL". The right side of the profile shows a slope labeled "SLOPE VARIES" with a hatched surface.

Layer Labels:

- SHOULDER
- LEVEL
- SLOPE VARIES
- TOP COURSE
- BINDER
- BASE
- SUBBASE

PRECAST CONCRETE SEWER MANHOLE

NOT TO SCALE

METHUEN SPEC. SEWER FRAME & COVER
SET ON FULL BED OF MORTAR
FINISH GRADE

TOTAL DEPTH VARIES

24" MINIMUM

18" - 24" ECCENTRIC SECTION

PRE-FORMED FLEXIBLE
SEALANT OR RUBBER "O"
RING SET IN RECESS

BARREL SECTION
HEIGHT VARIES

BASE SECTION

RUBBER RESILIENT SEAL BOOTS FOR
PIPE CONNECTION (ASTM C923)
WITH STAINLESS STEEL CLAMP(S)
APPLY HYDRAULIC CEMENT SEAL
WHEN CONSTRUCTING INVERT OR
TIME OF TESTING.

CEMENT CONCRETE OR
BRICK IN MORTAR

TABLE TO BE RED HARD BRICK
HEADERS LAID FLAT SET TO
CROWN OF HIGHEST SEWER

NOTES:

1. ALL SEWER STRUCTURES AND MATERIALS SHALL CONFORM TO CITY OF METHUEN D.P.W. SPECIFICATIONS.
2. ALL SEWER STRUCTURES AND MANHOLES DEEPER THAN 9-FEET SHALL HAVE AN INSIDE DIAMETER OF AT LEAST 60-INCHES.

TYPICAL POLYETHYLENE BOLLARD

BITUMINOUS CONCRETE PAVEMENT

TYPICAL VACUUM STALL DETAIL

A photograph of a modern, curved red and silver bus stop shelter with red spherical planters, located in a parking lot next to a blue pickup truck. The shelter is a prominent feature in the foreground, with a curved red roof and silver support poles. Several red spherical planters are arranged around the base of the shelter. In the background, a blue pickup truck is parked in a parking lot. The scene is set outdoors with trees and a clear sky in the background.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E. (CIVIL) # 31962

GRAPHIC SCALE
1 inch = 20 ft.

VACUUM BA

SECTION

PLAN VIEW

PROPOSED DETAILS PLAN
#171 PELHAM STREET
IN
METHUEN, MASS.
(NORTH ESSEX COUNTY)

(NORTH ESSEX COUNTY)		
D FOR:		
<p>SCRUBADUB AUTO WASH CENTERS 172 WORCESTER STREET NATICK, MA 01760</p>		
TY OF:		
<p>DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES SWERCHESKY FAMILY REVOCABLE LIVING TRUST 171 PELHAM STREET METHUEN, MA 01844</p>		
ERS & EYORS:		
 <p>METROWEST ENGINEERING, INC. 75 FRANKLIN STREET FRAMINGHAM, MA 01702 TELE.: (508)626-0063 EMAIL: INFO@MWENGINEERING.COM</p>		
ET C900		DATE: JULY 28, 2023
BY: PHA	FIELD BK: 751	CAD FILE: SCRUB_SP_03.DWG
BY: CIC	PROJECT: MET_PEL	DWG FILE:

DRAINAGE MATERIALS NOTES:

PRECAST CONCRETE DRAIN MANHOLE MATERIALS AND INSTALLATION

- ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS AND THE CITY OF METHUEN DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- FILTER FABRIC SHALL BE MIRAFI 140N (TENCATE INDUSTRIES) OR APPROVED EQUAL.
- MANHOLES SHALL BE CONSTRUCTION OF REINFORCED PRECAST CONCRETE BASE SECTION, BARREL SECTION AND DOME SECTION MEETING THE REQUIREMENTS OF ASTM C478 AND AASHTO M199. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I.
- IN CASE WHERE VERTICAL TOLERANCE DOES NOT PERMIT A CONE TOP SECTION, A PRECAST CONCRETE FLAT SECTION MAY BE USED.
- MANHOLES SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- MANHOLES SHALL HAVE A MINIMUM OPENING OF 26-INCHES AND A MINIMUM INSIDE DIAMETER OF FOUR FEET (4').
- MANHOLES SHALL HAVE TONGUE AND GROOVE JOINTS BETWEEN SECTIONS THAT ARE MORTARED OR SEALED WITH BUTYL RUBBER SEALANTS.
- PIPE INLETS AND OUTLETS SHALL BE SEALED WITH MORTAR OR RUBBER SEALANTS OR BOOT TYPE CONNECTIONS.
- DRAIN MANHOLES SHALL BE PLACED ON A LAYER OF COMPACTED, LEVEL, BEDDING MATERIAL NOT LESS THAN SIX-INCHES IN HEIGHT.
- MANHOLE SECTIONS SHALL BE CAREFULLY PLACED SO THAT ALL SECTIONS ARE LEVEL AND PLUMB.
- EXCAVATION AROUND THE MANHOLE STRUCTURES SHALL BE BACKFILLED AND COMPAKTED IN TWELVE-INCH (12") LIFTS WITH SUITABLE MATERIALS.
- ROAD BASE MATERIAL AND PAVEMENT MATERIALS SHALL BE INSTALLED AROUND STRUCTURES IN ACCORDANCE WITH BASE AND PAVEMENT PREPARATION INSTRUCTIONS.
- MANHOLE ACCESS FRAME AND COVER SHALL CONSIST OF EAST JORDAN IRONWORKS 2111A/2111Z FRAME AND COVER.
- FRAME AND COVER SHALL BE ADJUSTED TO FINISH GRADE USING LAYERS OF MORTAR AND BRICK.
- FRAME AND COVERS SHALL MEET ASTM A888 AND MADE FROM CLASS 20, GREY CAST IRON.

PRECAST CONCRETE DRAIN CATCH BASIN MATERIALS AND INSTALLATION

- ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS AND THE CITY OF METHUEN DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
- ALL CATCH BASINS SHALL HAVE A SUMP OF AT LEAST FOUR FEET (48-INCHES) BELOW THE INVERT OF THE OUTLET PIPE AND SHALL HAVE A HOOD ON OUTLET PIPES.
- CATCH BASIN HOODS SHALL EXTEND AT LEAST ONE FOOT BELOW THE INVERT OF THE OUTLET PIPE.
- CATCH BASINS SHALL BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE BASE SECTION, BARREL SECTION AND DOME SECTION MEETING THE REQUIREMENTS OF ASTM C478 AND AASHTO M199. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I.
- IN CASE WHERE VERTICAL TOLERANCE DOES NOT PERMIT A CONE TOP SECTION, A PRECAST CONCRETE FLAT SECTION MAY BE USED.
- CATCH BASINS SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- CATCH BASINS SHALL HAVE A MINIMUM OPENING OF 26-INCHES AND A MINIMUM INSIDE DIAMETER OF FIVE FEET (5').
- CATCH BASINS SHALL HAVE TONGUE AND GROOVE JOINTS BETWEEN SECTIONS THAT ARE MORTARED OR SEALED WITH BUTYL RUBBER SEALANTS.
- PIPE INLETS AND OUTLETS SHALL BE SEALED WITH MORTAR OR RUBBER SEALANTS OR BOOT TYPE CONNECTIONS.
- CATCH BASINS SHALL BE PLACED ON A LAYER OF COMPACTED, LEVEL, BEDDING MATERIAL NOT LESS THAN SIX-INCHES IN HEIGHT.
- CATCH BASIN SECTIONS SHALL BE CAREFULLY PLACED SO THAT ALL SECTIONS ARE LEVEL AND PLUMB.
- EXCAVATION AROUND THE MANHOLE STRUCTURE SHALL BE BACKFILLED AND COMPAKTED IN TWELVE-INCH (12") LIFTS WITH SUITABLE MATERIALS.
- ROAD BASE MATERIAL AND PAVEMENT MATERIALS SHALL BE INSTALLED AROUND STRUCTURES IN ACCORDANCE WITH BASE AND PAVEMENT PREPARATION INSTRUCTIONS.
- FRAME AND GRATE SHALL BE ADJUSTED TO FINISH GRADE USING LAYERS OF MORTAR AND BRICK.

H.D.P.E. DRAIN PIPE MATERIALS AND INSTALLATION

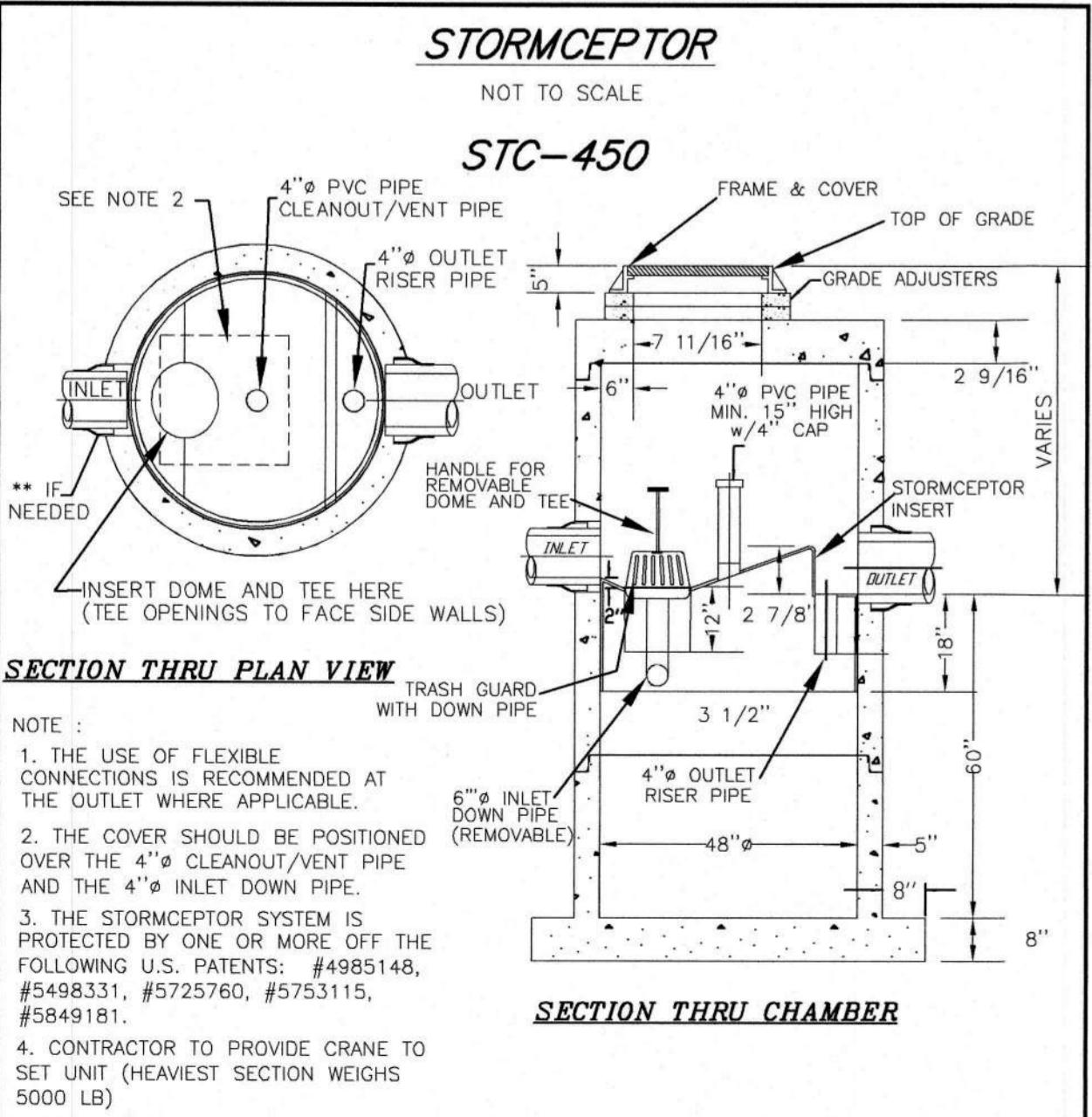
- ALL PIPE SHALL CONFORM TO MASSDOT SECTION M5.03.10.
- PIPE SHALL BE SMOOTH INTERIOR WALL AND CORRUGATED EXTERIOR WALL AND SHALL BE BELL AND SPIGOT CONNECTION.
- PIPE SHALL COMPLY WITH REQUIREMENTS AND MARKINGS FOUND IN AASHTO DESIGNATIONS M252 AND M294.
- ALL PIPE AND SUPERSTRUCTURE SHALL BE LOAD WITH A MAXIMUM DEFLECTION OF 5% OF THE PIPE DIAMETER.
- ALL PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN POLYETHYLENE COMPOUNDS WHICH CONFORM TO CURRENT AASHTO CLASSIFICATIONS AND ALSO AS DEFINED IN ASTM D3530.
- PIPES SHALL BE CAREFULLY LAID TO LINES AND GRADES AS SHOWN ON DESIGN PLANS.
- PIPE BEDDING MATERIAL SHALL BE PLACED TO A DEPTH OF NO LESS THAN SIX-INCHES BELOW THE INVERT OF THE PIPE.
- TRENCHES FOR DRAIN LINES SHALL PROVIDE MINIMUM OF TWELVE-INCHES (12") OF HORIZONTAL CLEARANCE FROM SIDES OF PIPE TO EDGE OF TRENCH.
- INSTALLATION OF H.D.P.E. PIPE SHALL BE IN ACCORDANCE WITH ASTA D2321 OR AS RECOMMENDED BY THE MANUFACTURER.
- WATER TIGHT JOINTS SHALL BE USED ON ALL PIPES IN ACCORDANCE WITH ASTM D3212. PIPE JOINTS SHALL BE BELL AND SPIGOT WITH ELASTOMERIC RUBBER GASKETS OR EXCEEDING ASTM F477.
- PIPE BEDDING MATERIALS ON 3/4" CRUSHED STONE SHALL BE CAREFULLY BACKFILLED AND COMPAKTED AROUND PIPE TO A DEPTH OF NO LESS THAN SIX-INCHES ABOVE THE INVERT OF THE PIPE.
- MATERIAL FOR BACKFILLING THE REMAINDER OF THE TRENCH, PAVEMENT AND PAVEMENT BASE MATERIAL EXCLUDED, SHALL BE BACKFILLED AND COMPAKTED IN TWELVE-INCH LIFTS WITH SUITABLE MATERIAL WITH NO STONES GREATER THAN FOUR-INCHES IN DIAMETER. MATERIAL SHOULD BE FREE OF ORGANICS AND DEBRIS.
- TRENCH SHALL BE FINISHED WITH SIX-INCHES (6") OF LOAM AND SEED IN NON-PAVED AREAS AND PREPARED IN ACCORDANCE WITH PAVEMENT STRUCTURE IN PAVED AREAS.

SUBSURFACE INFILTRATION SYSTEM MATERIALS AND INSTALLATION

- ONE SURFACE LEACHING CHAMBERS SHALL BE SHEA PRECAST GALLEYS OR APPROVED EQUAL.
- FILTER FABRIC SHALL BE MIRAFI 140N (TENCATE INDUSTRIES) OR APPROVED EQUAL.
- ACCESS MANHOLES SHALL BE REQUIRED AT LOCATIONS SPECIFIED ON DESIGN PLANS.
- ACCESS MANHOLES SHALL CONSIST OF EAST JORDAN IRON WORKS 2111Z/2111A, HEAVY DUTY FRAME AND COVER AND SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
- ACCESS MANHOLES SHALL BE ADJUSTED TO FINISH GRADE WITH PRECAST CONCRETE RISERS AND/OR LAYERS OF BRICK AND MORTAR.
- EXCAVATION FOR PRECAST LEACHING CHAMBERS SHALL BE DONE CAREFULLY TO AVOID SMEARING AND COMPAKTING OF BOTTOM AND EXCAVATION SURFACES.
- AN UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH FREE DRAINING MATERIAL INCLUDING BUT NOT LIMITED TO TITLE V SAND.
- ALL PRECAST LEACHING CHAMBERS SHALL BE PLACED ON A TWELVE-INCH (12") DEEP LAYER OF COMPACTED 3/4" TO 1-1/2" DOUBLE WASHED CRUSHED STONE.
- PRECAST LEACHING CHAMBERS SHALL BE CAREFULLY PLACED AT THE SAME ELEVATION IN ROWS AND BUTTED TOGETHER SO NO VOIDS EXIST BETWEEN UNITS.
- AREAS BETWEEN ROWS OF PRECAST LEACHING CHAMBERS SHALL BE FILLED WITH 3/4" TO 1-1/2" DOUBLE WASHED CRUSHED STONE.
- ALL PIPES SHALL BE SECURELY MORTARED IN PLACE TO PROVIDE WATER TIGHT CONNECTIONS.
- PIPE FABRIC SHALL BE INSTALLED AROUND THE SIDES, AND ON TOP OF THE PRECAST LEACHING CHAMBERS.
- CONTRACTOR SHALL OVERLAP ROWS OF FILTER FABRIC ONE-HALF FOOT (0.5') AND CAREFULLY BACKFILL AROUND AND ON TOP OF THE LEACHING CHAMBERS TO AVOID SHIFTING OR TEARING FILTER FABRIC.
- INSTALL AND COMPACT 3/4" TO 1-1/2" DOUBLE WASHED STONE IN TWELVE-INCH (12") LIFTS FOR A DISTANCE OF TWO FEET (2') AROUND THE PERIMETER OF LEACHING CHAMBERS.

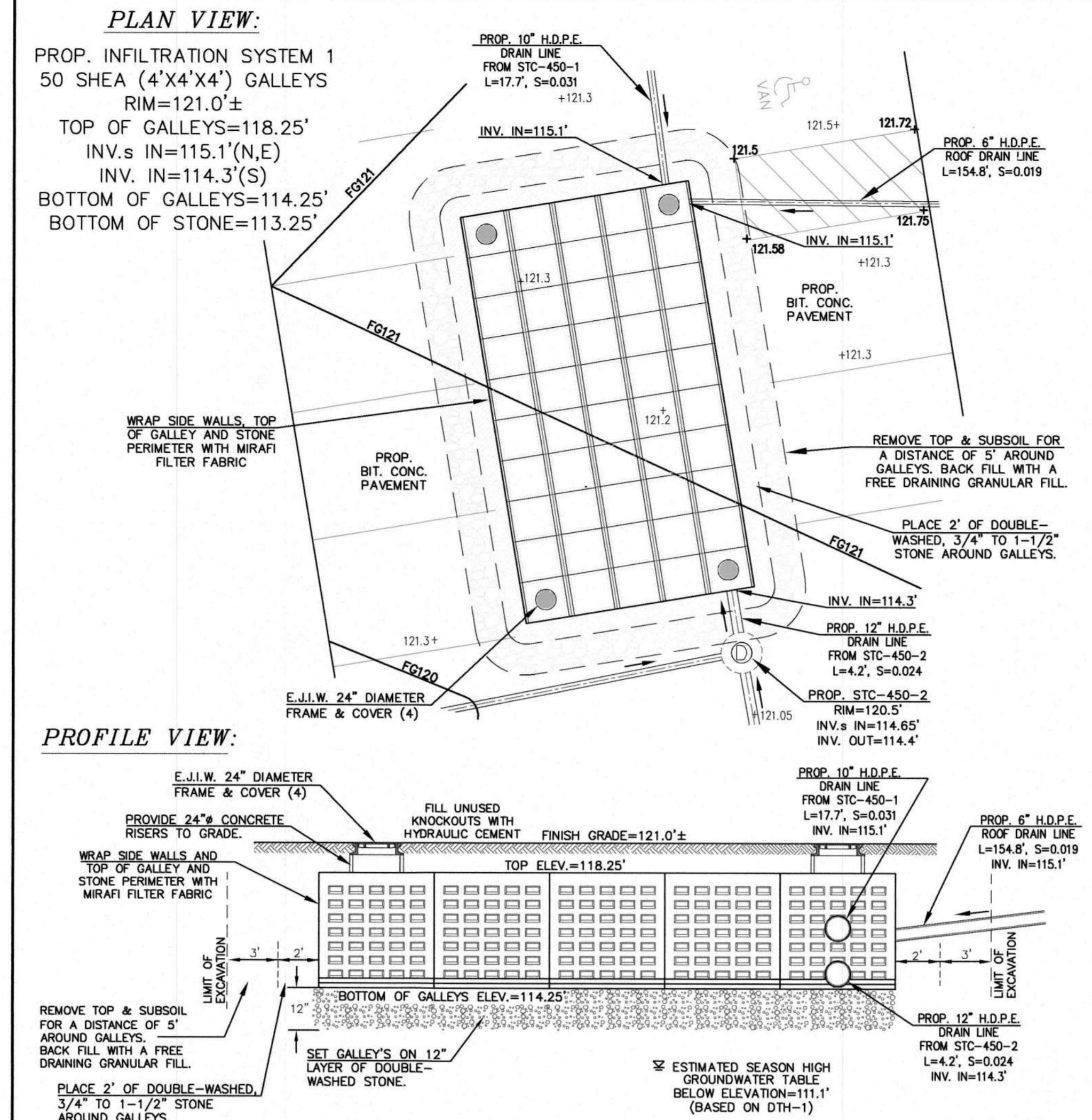
STORMWATER QUALITY TREATMENT UNIT

NOT TO SCALE



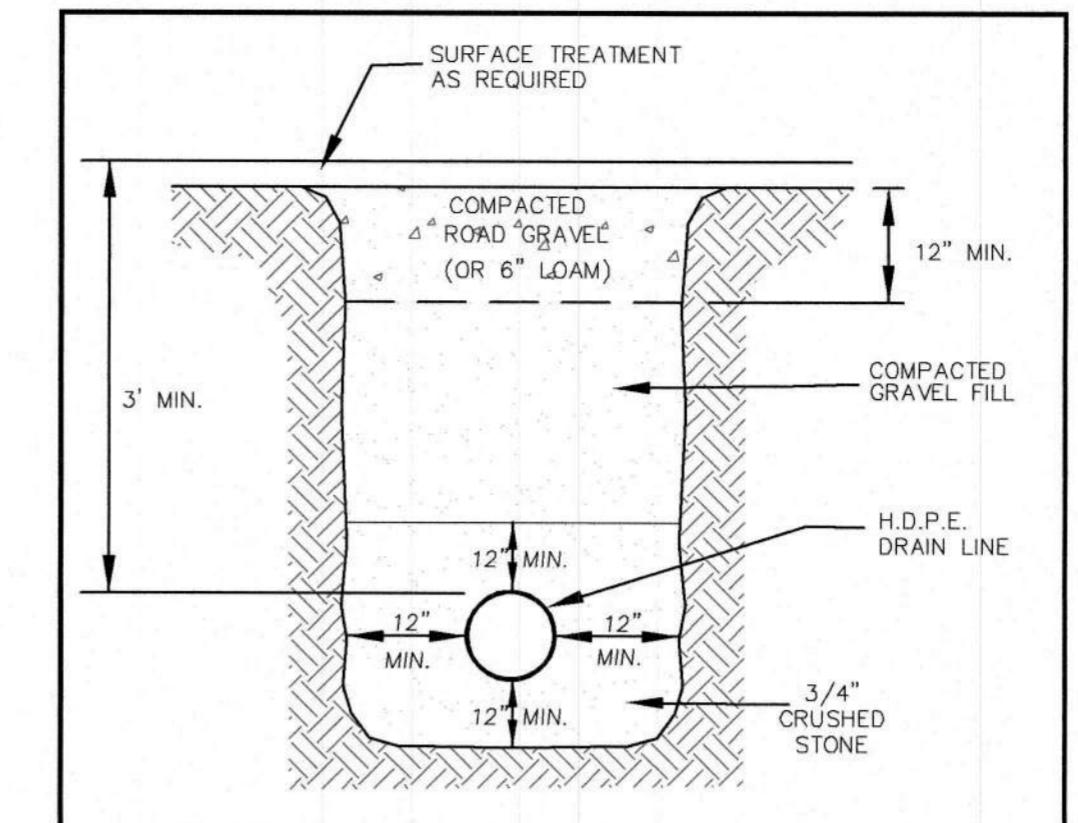
PROPOSED INFILTRATION SYSTEM 1

NOT TO SCALE



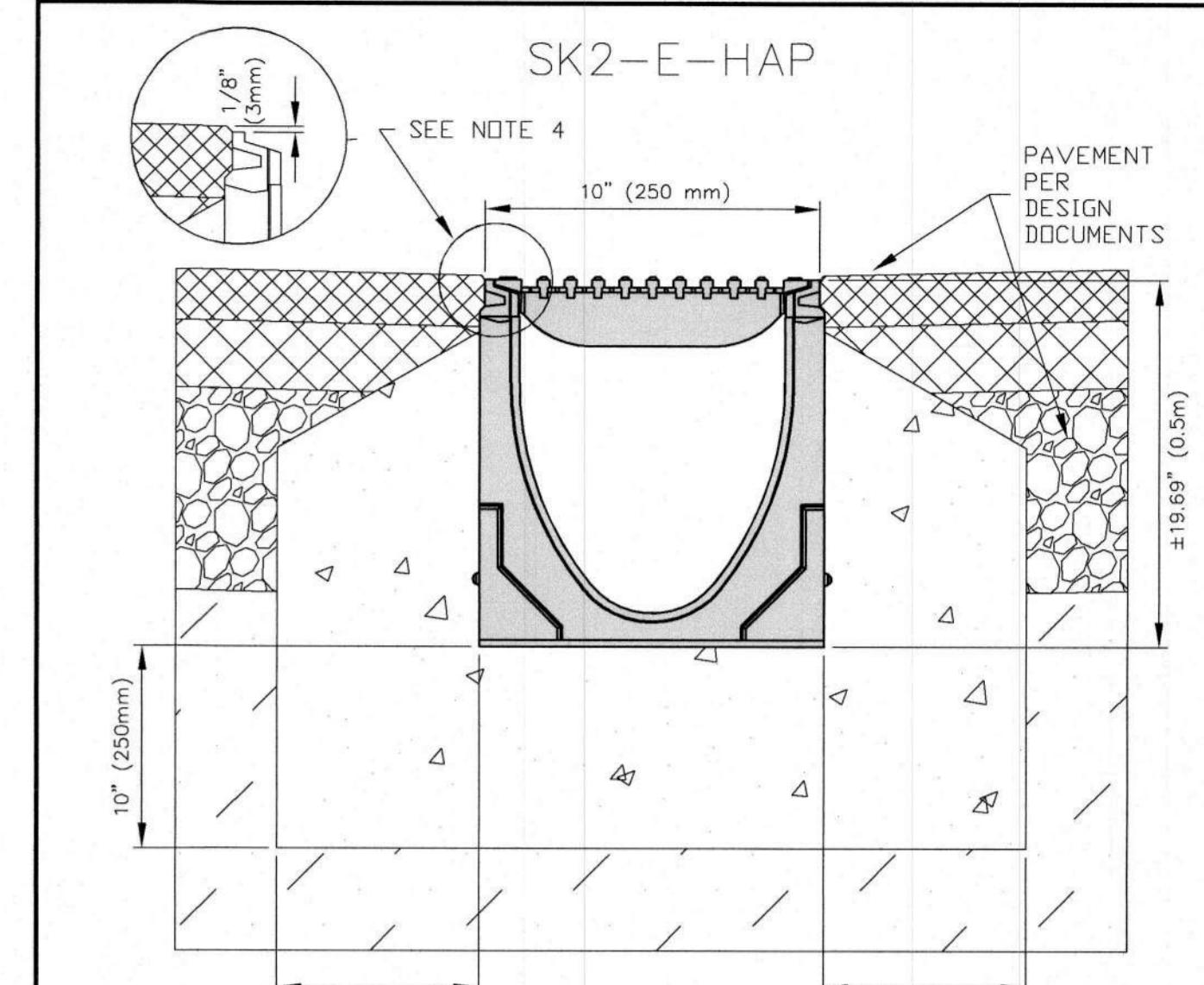
TYPICAL DRAIN LINE TRENCH

NOT TO SCALE



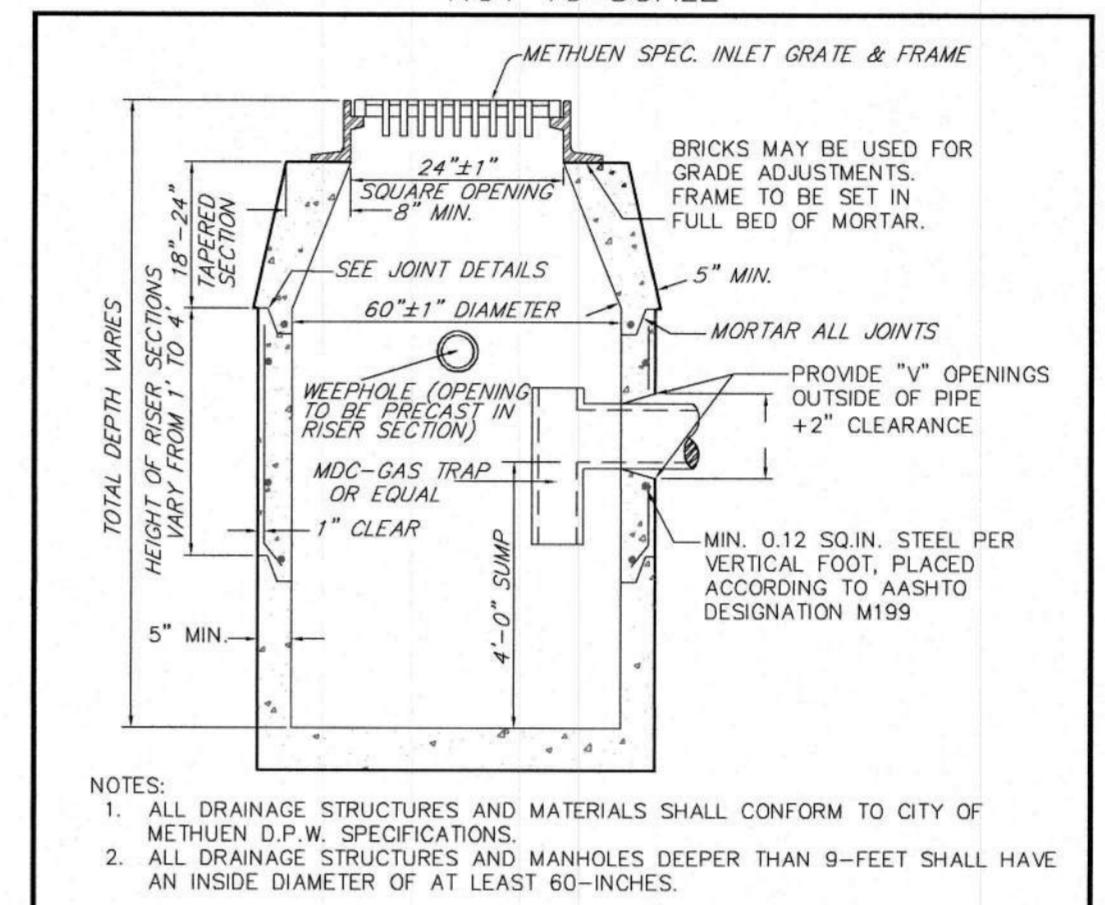
DRIVEWAY TRENCH DRAIN

NOT TO SCALE



PRECAST CONCRETE CATCH BASIN

NOT TO SCALE



POWERDRAIN - S200K - LOAD CLASS: E
Haunch Asphalt Pavement
INSTALLATION DRAWING - ACO DRAIN

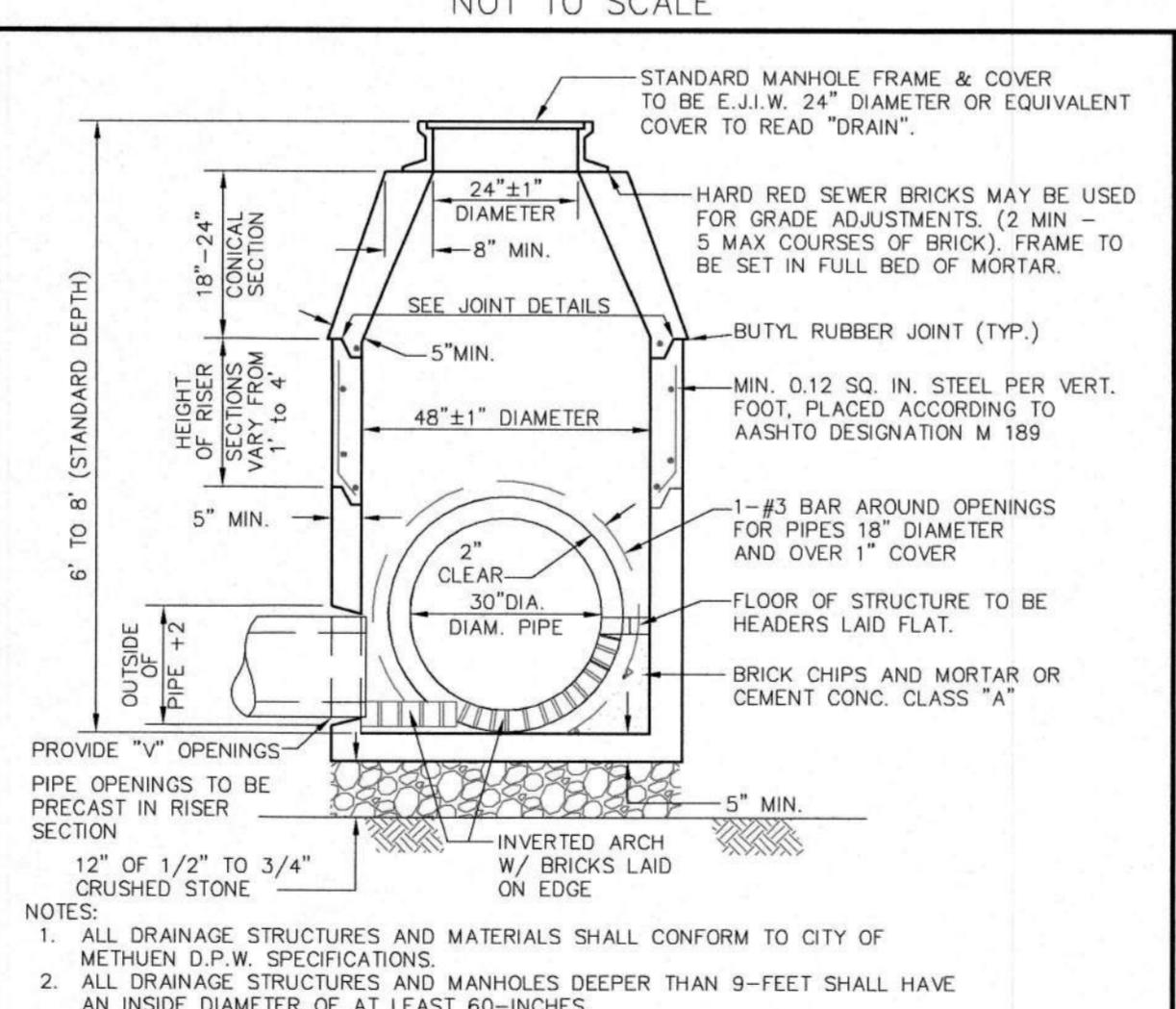


FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967

GRAPHIC SCALE
1 inch = 20 ft.
0 10 20 40 (FEET)
0 10 20 30 (METERS)

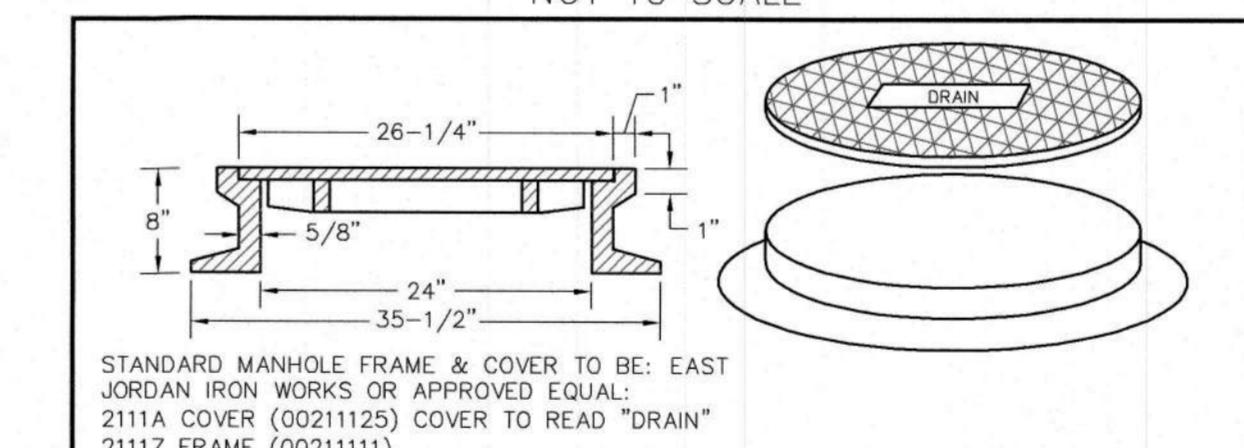
PRECAST CONCRETE DRAIN MANHOLE

NOT TO SCALE



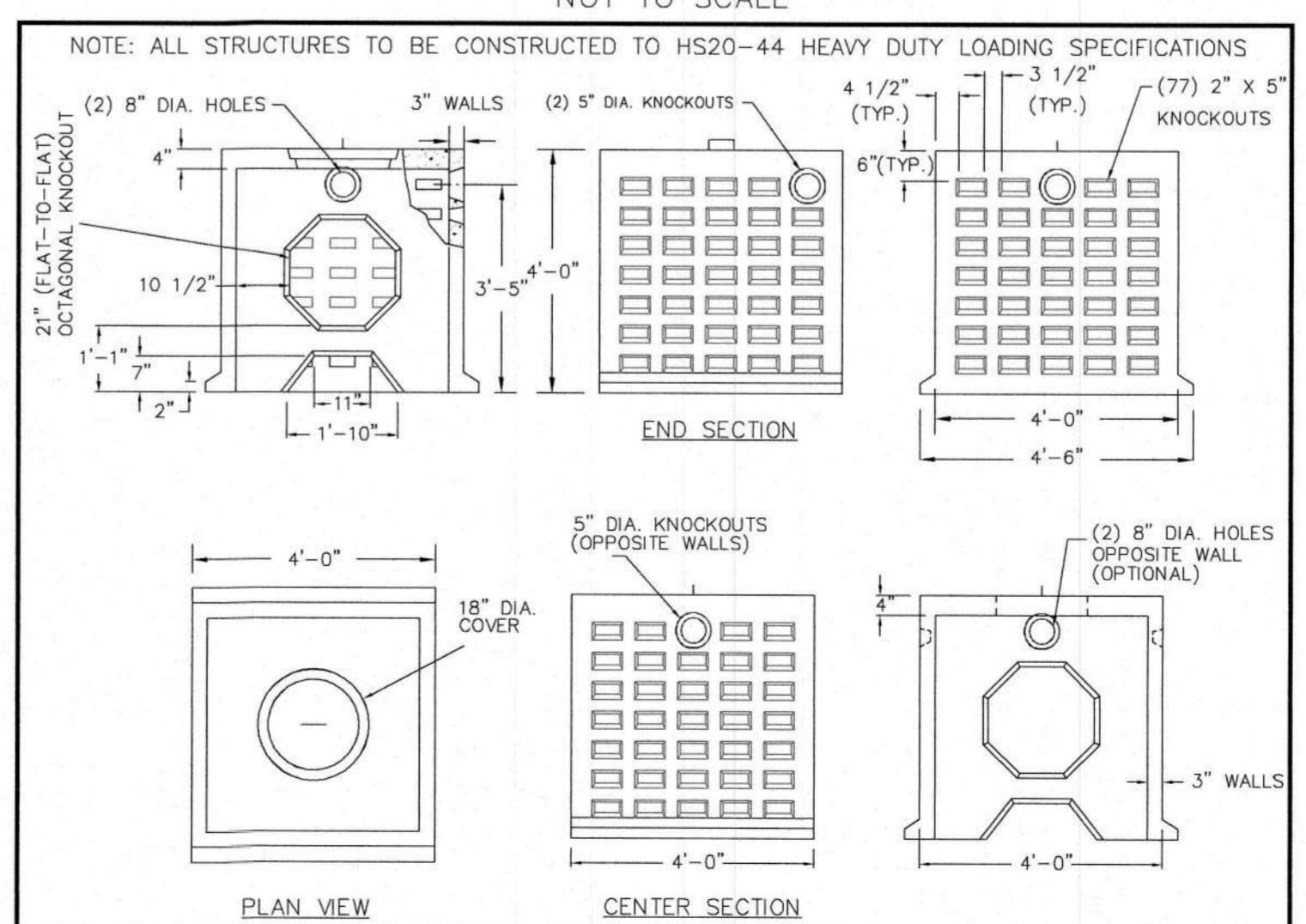
STANDARD DRAIN MANHOLE FRAME & COVER

NOT TO SCALE



DRAINAGE INFILTRATION LEACHING GALLEYS

NOT TO SCALE



PROPOSED DETAILS PLAN

#171 PELHAM STREET

IN

METHUEN, MASS.

(NORTH ESSEX COUNTY)

PREPARED FOR:
SCRUBADUB AUTO WASH CENTERS
172 WORCESTER STREET
NATICK, MA 01760

PROPERTY OF:
DONNA & THOMAS SWERCHESKY, ET AL., TRUSTEES
SWERCHESKY FAMILY REVOCABLE LIVING TRUST
171 PELHAM STREET
METHUEN, MA 01844

ENGINEERS &
SURVEYORS:
MWE METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TELE: (508) 626-0063
EMAIL: INFO@MWENGINEERINGINC.COM

SHEET C901

DATE: JULY 28, 2023

CALC'D BY: PHA

FIELD BK: 751

DRAFTER: CJC

CAD FILE: SCRUB_SP_03.DWG