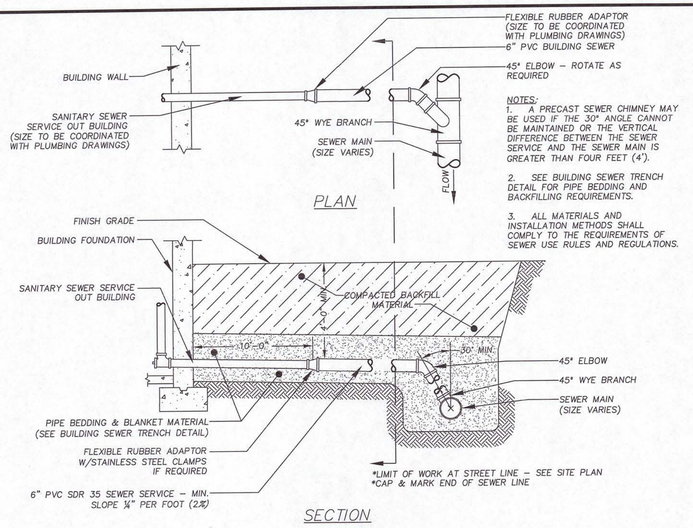
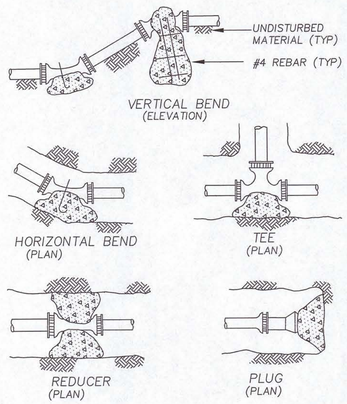


1 / 7.1 BUILDING SEWER CONNECTION
NOT TO SCALE



AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET BASED ON 250 P.S.I. & 1.5 TONS/S.F. ALLOWABLESOILBEARINGCAPACITY

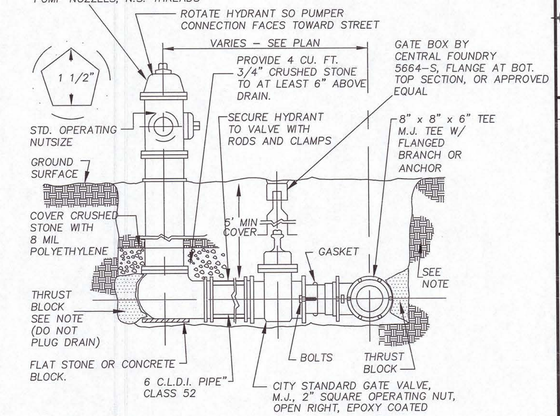
PIPE SIZE (M)BEND	1/4 BEND	1/8 BEND	1/16 &TEES	PLUG
4 6,8,	6.0	2.9	2.3	4.5
10	9.6	5.2	2.3	6.7
12	13.3	67.	37.	96.
16	24.0	11.8	37.	17.0

NORMAL FITTING DIAMETER	BEARING AREA – SQ. FT. FITTING 90° BEND	45° BEND	BETWEEN 10°-45°	BRANCH OF TEE	DEAD END
6"	4	2	2	4	4
8"	7	4	3	5	5

1. ALL BENDS, TEES, WYES, HYDRANTS AND DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS
2. BEARING AREA (H X L) IS AREA OF CONE IN CONTACT WITH WALL OF TRENCH
3. HEIGHT (H) & LENGTH (L) AS REQUIRED TO OBTAIN BEARING AREA IN TABLE
4. BOULDERS ARE NOT TO BE USED AS THRUST BLOCKS.

2 / 7.1 THRUST BLOCK DETAILS
NOT TO SCALE

KENNEDY HYDRANT K81D BY KENNEDY VALVE CO. INC. 5–1/4" VALVE DIAMETER. HYDRANT PAINTED HI–VISIBILITY YELLOW. PENTAGONAL OPERATING NUT SHALL BE 1–5/8" POINT TO FLAT, OPENING RIGHT. 2–2.5" HOSE AND 1–4.5" PUMP NOZZELS, N.S. THREADS



THRUST BLOCK SHALL BE MINIMUM 4,000PSI CONCRETE AT 28 DAYS PLACED AGAINST UNDISTURBED MATERIAL MINIMUM BEARING AREA TO BE 4 SQUARE FEET

HYDRANTS SHALL BE TO THE TOWN OF UPTON STANDARDS.

3 / 7.1 TYPICAL HYDRANT AND VALVE
NOT TO SCALE

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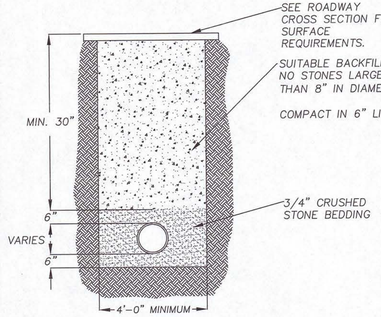
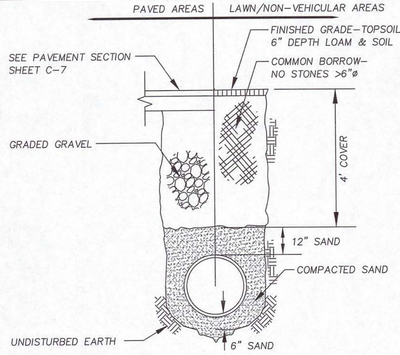
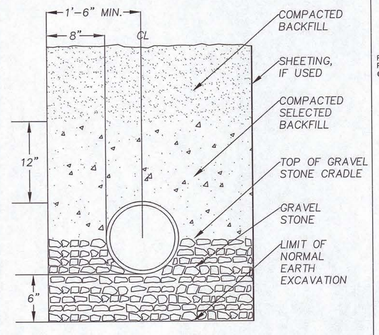


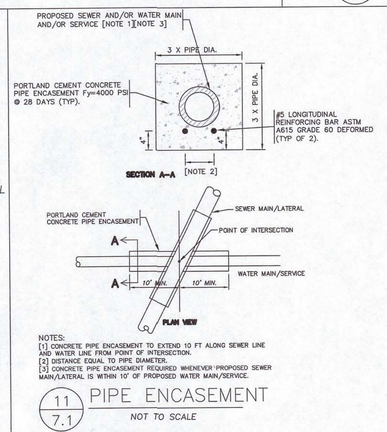
4 / 7.1 TYPICAL SEWER MAIN TRENCH
NOT TO SCALE



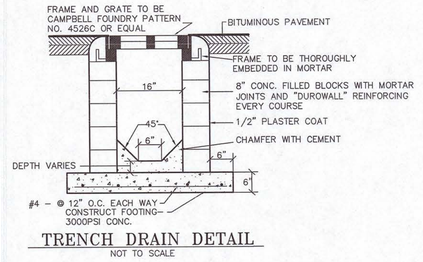
5 / 7.1 WATER MAIN TRENCH
NOT TO SCALE



6 / 7.1 TYPICAL DRAIN MAIN TRENCH
NOT TO SCALE



11 / 7.1 PIPE ENCASEMENT
NOT TO SCALE



TRENCH DRAIN DETAIL
NOT TO SCALE

10 / 7.1

REVISIONS		
REV.	DATE	DESCRIPTION
1	1/8/24	REVISED PLANS.
2	3/25/24	REVISED PLANS

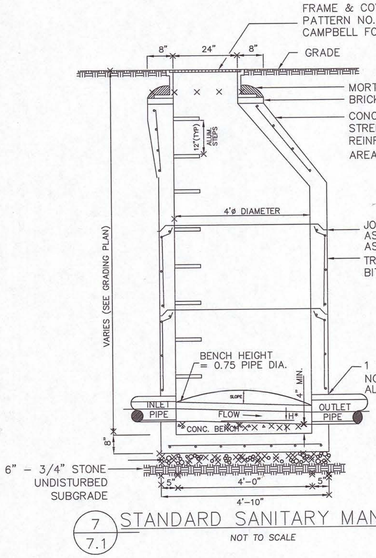
PROJECT NO.	J–016
DESIGNED BY	PML
CHECKED BY	MD
DATE	9/13/23
CAD FILE	J–016 SITE PLAN
PLAN NO.	

APPLICANT/DEVELOPER:
LOBISSER BUILDING CORP.
1 Charlesview Road • Hopedale, MA 01747
P:(508) 478-6235

TITLE:
Upton Apartments
47 Main Street, Upton Massachusetts
Preliminary
Residential Development Plans
Comprehensive Permit Application
Upton Zoning Board of Appeals

SHEET TITLE
CONSTRUCTION DETAILS
SHEET 1 OF 4

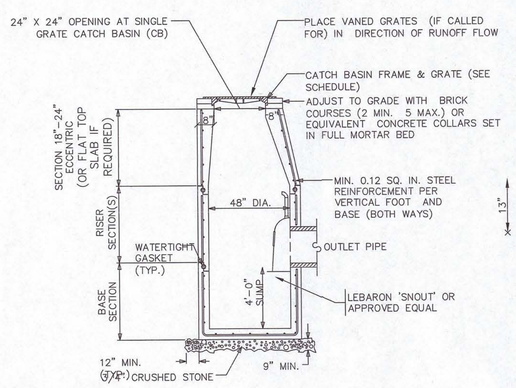
SHEET NO.
C-7.1



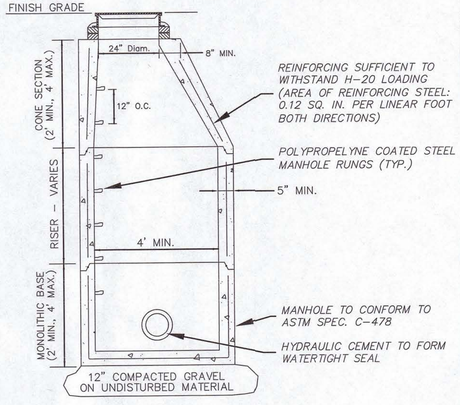
NOTE:
1. PIPE DIA. NOT TO EXCEED 36" DIAMETER.
2. IF H* IS GREATER THEN 24" USE DROP CONNECTION.

7 / 7.1 STANDARD SANITARY MANHOLE
NOT TO SCALE

NOTES:
1. USE 4–FLANGE LEBARON LF248–2 GRATES AT ALL CB STRUCTURES.
2. SUBMIT SHOP DRAWINGS FOR APPROVAL.
3. REINFORCED STEEL CONFORMS TO LATEST A185 SPEC. 0.12 SQ. IN./LINEAL FT. (0.15 SQ. IN. FOR 60" DIA) AND BASE BOTTOM.
4. CONCRETE COMPRESSIVE STRENGTH 4000 PSI MIN.
5. JOINT SEALANT SHALL BE SYNTHETIC RUBBER GASKET THAT COMPLIES W/ C–443 OR C–361.

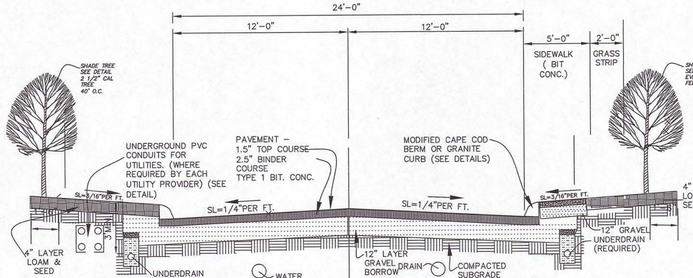


8 / 7.1 PRECAST CONCRETE DEEP SUMP CATCH BASIN
NOT TO SCALE



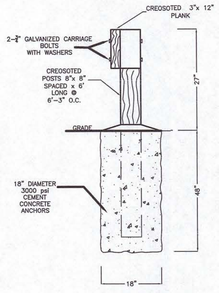
SECTION

9 / 7.1 PRECAST DRAIN MANHOLE
NOT TO SCALE

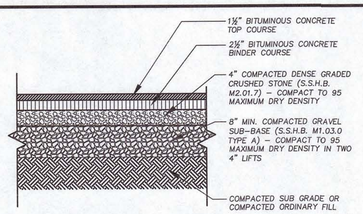


NOTES:
1. SIDE SLOPES TO BE 3:1 (HORIZ. TO VERT.) OR FLATTER. EXCEPT WHERE INDICATED ON THE PLANS.
2. TREES TO BE 40' O.C. SPECIES TO BE APPROVED BY PLANNING BOARD.
3. BINDER COURSE TO BE 26' WIDE WHERE BITUMINOUS BERMS ARE TO BE INSTALLED.
4. ALL WORK SHALL CONFORM TO THE STANDARDS OF THE MASS HIGHWAY DEPARTMENT AND AASHTO.
5. SUBGRADE MATERIAL
   A. IN CUT AREAS SHALL BE NATURALLY OCCURRING SOILS EXCAVATED TO THE REQUIRED DEPTH. ALL LOAM, SUBSOIL AND OTHER UNSUITABLE MATERIAL TO BE REMOVED.
   B. IN FILL AREAS SUBGRADE MATERIAL TO BE CLEAN GRANULAR SOIL PLACED AFTER LOAM, SUBSOIL AND OTHER UNSUITABLE MATERIALS IS REMOVED.
   C. SUBGRADE TO BE COMPACTED TO 95% DRY DENSITY.
6. GRAVEL BORROW TO MEET MASS HIGHWAY STANDARD M 1.03.0 TYPE b. COMPACTED TO 95% DRY DENSITY.

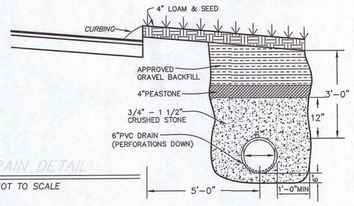
1 / 7.2 TYPICAL CROSS SECTION
NO SCALE



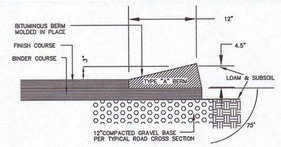
8 / 7.2 GUARDRAIL DETAIL
NOT TO SCALE



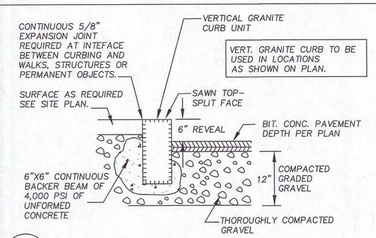
2 / 7.2 TYPICAL PAVING DETAIL
NOT TO SCALE



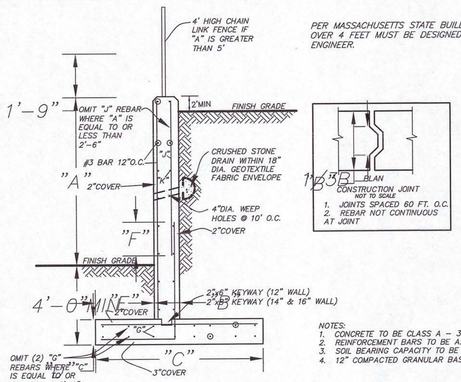
12 / 7.2 UNDERDRAIN DETAIL
NOT TO SCALE



3 / 7.2 BITUMINOUS CONCRETE BERM DETAIL
NOT TO SCALE



4 / 7.2 VERTICAL GRANITE CURB
NOT TO SCALE



PER MASSACHUSETTS STATE BUILDING CODE ANY WALL OVER 4 FEET MUST BE DESIGNED BY A STRUCTURAL ENGINEER.

NOTES:
1. CONCRETE TO BE CLASS A – 3000P.S.I., AIR ENTRAINED.
2. REINFORCEMENT BARS TO BE A.S.T.M. A615, GRADE 60.
3. SOIL BEARING CAPACITY TO BE 2000P.S.F. MIN.
4. 12" COMPACTED GRANULAR BASE BELOW FOOTING.

SECTION

WALL DIMENSIONS SCHEDULE

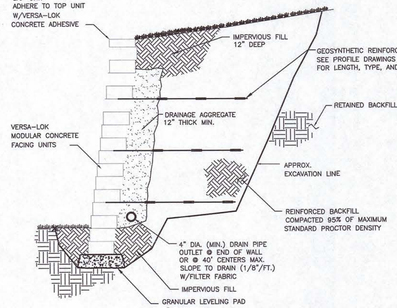
A**	B	C	D	E	F
2'–6"MAX.	1'–0"	0'–8"	1'–0"	1'–3"	–
5'–6"MAX.	1'–0"	0'–8"	1'–2"	1'–3"	27"
9'–0"MAX.	1'–0"	0'–8"	1'–4"	1'–3"	33"
12'–6"MAX.	1'–0"	1'–4"	1'–6"	2'–6"	39"

REINFORCEMENT BAR SCHEDULE

G** QUANTITY TOTAL (TOP, BOTTOM)	GA	LENG.	SPAC.	H GA	LENG.	SPAC.	I LENGTH TOTAL (HORIZ+VERT)	SPAC.	J GA	LENG.	K QUAN.	SPAC.	GA	LENG.
9 (4T., 5B.)	#5	CONT.	12"O.C.	#5	6'–8"	12"O.C.	#5 (11'3"+6'2")*2=35'0"	–	–	–	6	12"O.C.	#5	CONT.
11 (5T., 6B.)	#5	CONT.	9"O.C.	#5	5'–2"	9"O.C.	#5 (13'3"+6'2")*2=39'0"	18"O.C.	#5	5'–10"	6	16"O.C.	#5	CONT.
13 (6T., 7B.)	#5	CONT.	6"O.C.	#5	7'–5"	6"O.C.	#5 (15'3"+6'2")*2=43'0"	12"O.C.	#6	6'–2"	9	16"O.C.	#6	CONT.
16 (7T., 9B.)	#5	CONT.	6"O.C.	#5	9'–8"	6"O.C.	#5 (19'3"+6'2")*2=51'0"	12"O.C.	#7	11'–6"	13	14"O.C.	#6	CONT.

**SPACING OF "G" REBARS VARIES – SEE SECTION.
*FACE OF WALL TO BE BATTERED 1" OVER ENTIRE HEIGHT WHERE "A" IS GREATER THAN 5'–6" AND LESS THAN OR EQUAL TO 9'–0".
*FACE OF WALL TO BE BATTERED 2" OVER ENTIRE HEIGHT WHERE "A" IS GREATER THAN 9'–0".
CONCRETE COVERAGE: GA = GAUGE LENG. = LENGTH MAX. = MAXIMUM O.C. = ON CENTER QUAN. = QUANTITY SPAC. = SPACING VERT. = VERTICAL

5 / 7.2 CONCRETE RETAINING WALL DETAIL
NOT TO SCALE

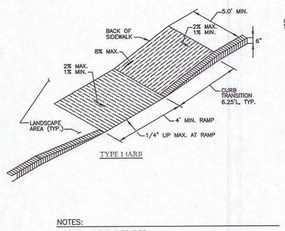


6 / 7.2 TYPICAL SECTION–REINFORCED RETAINING WALL
MODULAR CONCRETE UNIT
SCALE: NONE

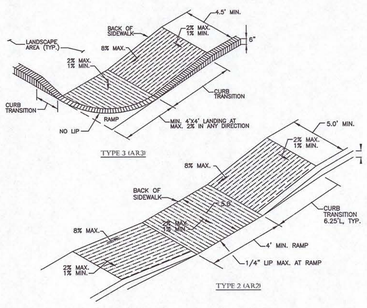
GENERAL NOTES

1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE SOILS ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6" FOR WALL HEIGHTS UNDER 4 FT. AND 12" FOR WALLS OVER 4 FT. UNLESS SHOWN DIFFERENTLY.
8. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
9. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
10. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D–698)
11. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
12. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
13. SEE ELEVATION DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION REQUIRED.
14. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
15. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
16. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
17. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.

IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.



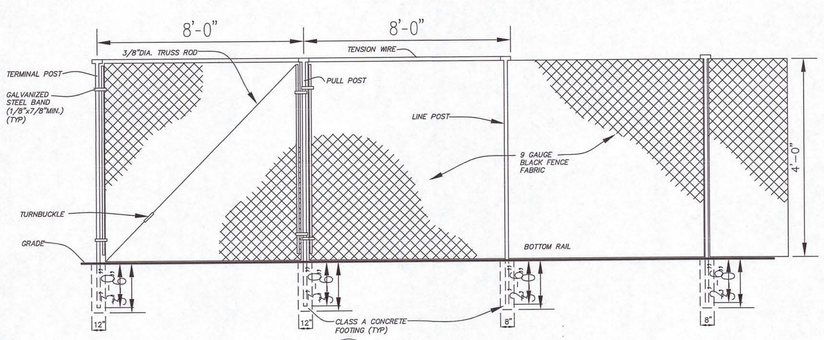
TYPE 1 (ARB)



TYPE 3 (ARB) TYPE 2 (ARB)

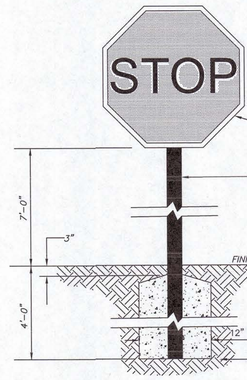
NOTES:
1. SEE PLANS FOR CURB TYPE.
2. CURBS AND WALKS ALONG ACCESSIBLE ROUTES SHALL MEET OR EXCEED THE APPLICABLE REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) OF JANUARY 1992.
3. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 2% (1:48 MIN.).
4. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTES, EXCLUDING CURB RAMPS SHALL BE 5%.
5. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE CURB RAMPS SHALL BE 8%.
6. ACCESS TO A MINIMUM OF 3 FEET CLEAR AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTES (I.E., TREE WELLS, HYDRANTS, UTILITY POLES, SIGNS, ETC.).
7. GRADE BASE OF RAMP TO PREVENT PONDING.
8. RAMP CONSTRUCTION SHALL CONFORM TO TYPICAL SIDEWALK SECTION.
9. WHERE ACCESSIBLE ROUTES OF LESS THAN 4' IN WIDTH (EXCLUDING CURBING) ARE UNAVOIDABLE, PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
10. ALL CURBING AT RAMPS SHALL BE VERTICAL CURBING SET FLUSH WHERE IT ABUTS ROADWAY.
11. ALL RAMPS SHALL BE CEMENT CONCRETE WITH ROUGHENED NON–SLIP SURFACE.

7 / 7.2 HANDICAP RAMP DETAIL
NOT TO SCALE



13 / 7.2 CHAIN LINK FENCE
NOT TO SCALE

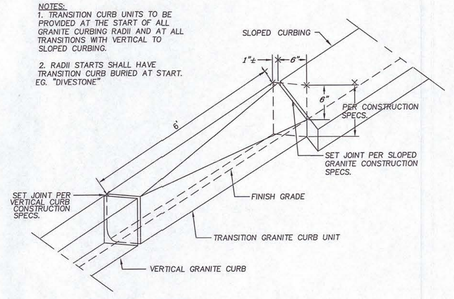
NOTES:
1. TOP TENSION WIRE SHALL BE 7 GAUGE ATTACHED WITH 12.5 GAUGE HOG RINGS, 12"O.C.
2. TOP RAIL WIRE TIES SHALL BE SPACED AT 24"MAX.
3. FENCE FABRIC TO BE LOCATED ON OUTSIDE OF FENCE POSTS.
4. BOTTOM OF FENCE FABRIC TO BE SECURED TO RETAINING WALL.



9 / 7.2 STOP SIGN
NOT TO SCALE

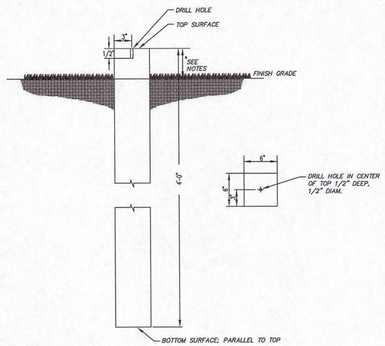
NOTES:
1. TRANSITION CURB UNITS TO BE PROVIDED AT THE START OF ALL GRANITE CURBING RADII AND AT ALL TRANSITIONS WITH VERTICAL TO SLOPED CURBING.

2. RADII STARTS SHALL HAVE TRANSITION CURB BURIED AT START. EG. "DIVESTONE"



10 / 7.2 TRANSITION CURBING
NOT TO SCALE

NOTES:
1. BOUNDS FOR FRONT YARD CORNERS AND STREET LAYOUT POINTS SHALL BE 48" IN LENGTH AND SET WITH THE TOP OF THE BOUND FLUSH WITH THE FINISH GRADE.
2. BOUNDS FOR SUBDIVISION PERIMETER SHALL BE 48" IN LENGTH AND SET WITH THE TOP OF THE BOUND 3" ABOVE FINISH GRADE.
3. BOUNDS SHALL BE BACKFILLED WITH CLEAN GRAVEL OR SAND, THOROUGHLY TAMPED.
4. WHERE BOUNDS FALL ON SOLID LEDGE OR IN UNSTABLE AREA, STEEL RODS, DRILL HOLES OR OFFSET MONUMENTS MAY BE USED WITH ENGINEER'S CONSENT.



11 / 7.2 GRANITE BOUND

D&L Design Group
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115 Water Street • Milford, MA 01757
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COMMONWEALTH OF MASSACHUSETTS MICHAEL DEAN CIVIL No. 46255 REGISTERED PROFESSIONAL ENGINEER 9/13/24 MD	

REVISIONS

REV.	DATE	DESCRIPTION
1	1/8/24	REVISED PLANS.
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DESIGNED BY	PML
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CAD FILE	J–016 SITE PLAN
PLAN NO.	

APPLICANT/DEVELOPER:

LOBISSER BUILDING CORP.
1 Charlesview Road • Hopedale, MA 01747
P:(508) 478-6235

TITLE:

Upton Apartments
47 Main Street,
Upton Massachusetts
Preliminary
Residential Development Plans
Comprehensive Permit Application
Upton Zoning Board of Appeals

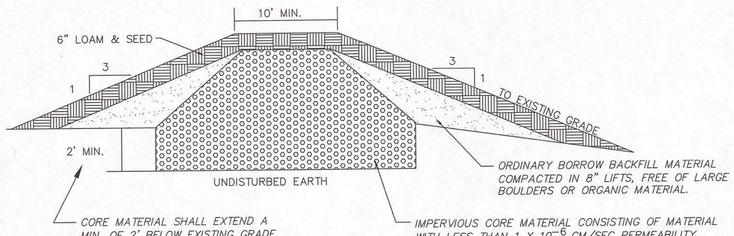
SHEET TITLE

CONSTRUCTION DETAILS

SHEET 2 OF 4

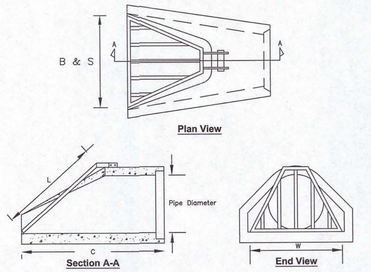
SHEET NO.

C–7.2



1 / 7.3 DETENTION BASIN DETAIL

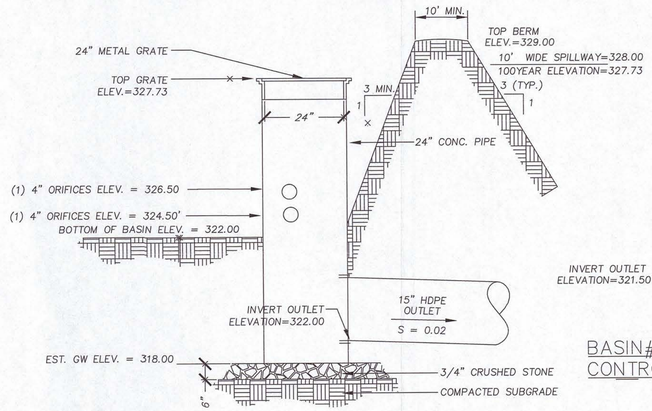
NOT TO SCALE



Pipe Diameter	Trash Rack Width W (in.)	Trash Rack Length L (in.)	Total # of Bars B	Bar Spacing S (in.)
12"	21.00"	30.00"	3	6.0"
15"	28.00"	32.00"	3	6.5"
18"	33.00"	34.00"	3	8.0"

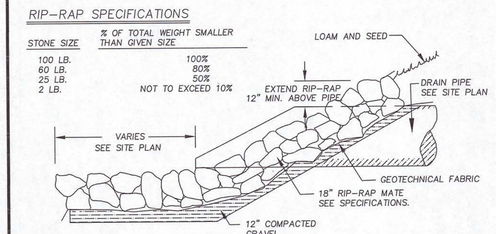
2 / 7.3 PIPE TRASH GUARD

NOT TO SCALE



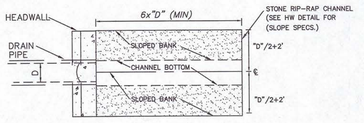
BASIN#1 ROUND OUTLET CONTROL STRUCTURE #1

NOT TO SCALE



4 / 7.3 FLARED END RIP RAP OUTLET

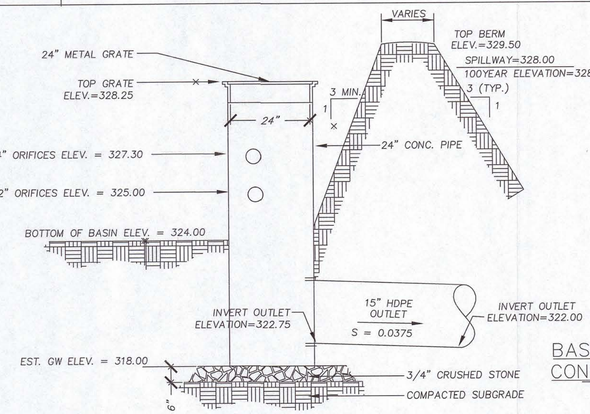
NOT TO SCALE



NOTES:
1. FILTER MATERAIL BENEATH RIP RAP UNLESS BANK IS OF GRAVEL & COURSE SAND MIX. (5" MIN. THICKNESS)
2. MINIMUM WEIGHT OF STONE = 50 LBS.; MAXIMUM WEIGHT = 125 LBS.
3. 75% OF TOTAL STONE VOLUME TO BE MIN. 75lb> STONES.
4. MINIMUM DEPTH OF RIP-RAP =18".

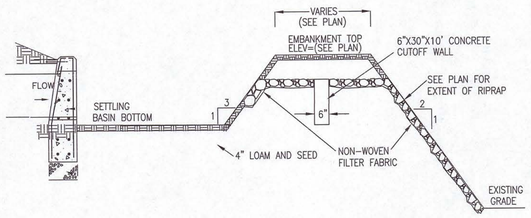
5 / 7.3 DRAIN OUTLET WITH RIP RAP

NOT TO SCALE

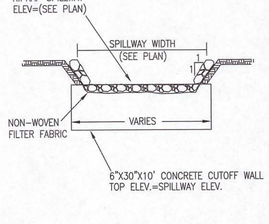


BASIN#2 ROUND OUTLET CONTROL STRUCTURE #2

NOT TO SCALE

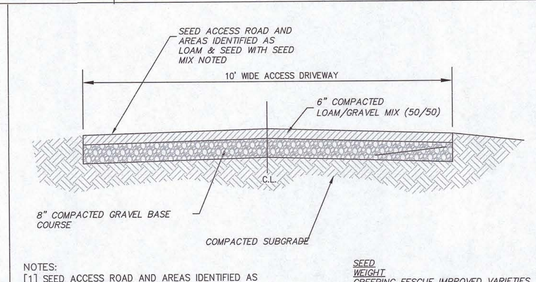


SECTION



SPILLWAY PROFILE

7 / 7.3 LEVEL SPREADER & SETTLING BASIN

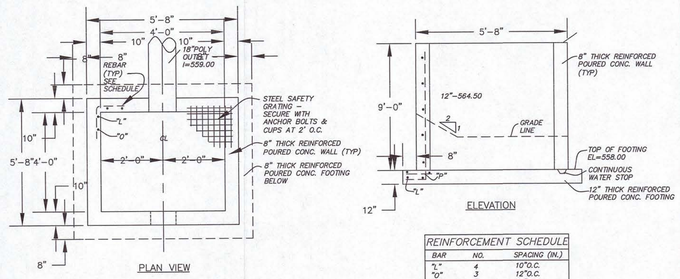


NOTES:
[1] SEED ACCESS ROAD AND AREAS IDENTIFIED AS LOAM & SEED WITH SEED MIX NOTED BELOW

SEED MIX	% BY WEIGHT
CREEPING FESCUE IMPROVED VARIETIES	70
KENTUCKY BLUE GRASS IMPROVED VARIETIES	15
PERENNIAL RYE GRASS IMPROVED VARIETIES	15

8 / 7.3 BASIN ACCESS DRIVE

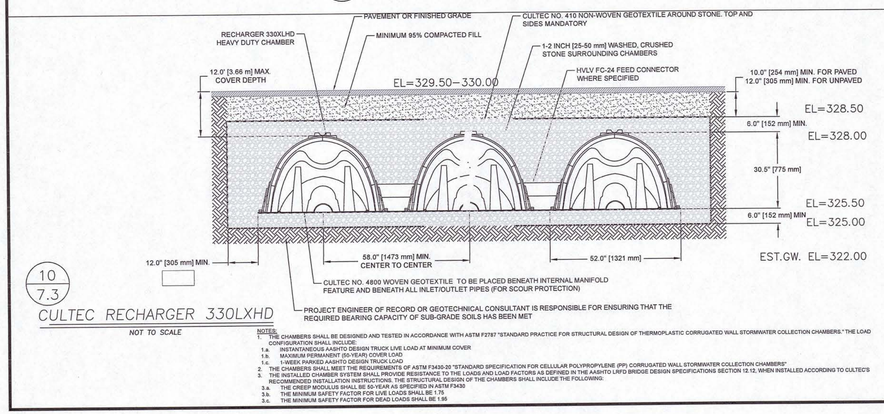
NOT TO SCALE



REINFORCEMENT SCHEDULE		
BAR	NO.	SPACING (IN.)
"L"	4	10"O.C.
"O"	3	12"O.C.
"P"	3	18"O.C.

6 / 7.3 OUTLET CONTROL STRUCTURE DETAIL

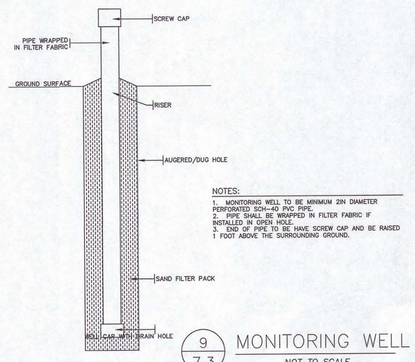
NOT TO SCALE



10 / 7.3 CULTEC RECHARGER 330LXHD

NOT TO SCALE

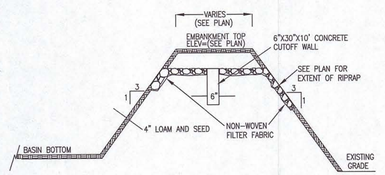
NOTES:
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
   1.a. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   1.b. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   1.c. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   3.a. THE CREEP MODULUS FOR THE 50-YEAR AS SPECIFIED IN ASTM F3430
   3.b. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95



NOTES:
1. MONITORING WELL TO BE MINIMUM 2IN DIAMETER PERFORATED SCH-40 PVC PIPE.
2. PIPE SHALL BE WRAPPED IN FILTER FABRIC IF INSTALLED IN OPEN HOLE.
3. END OF PIPE TO BE HAVE SCREW CAP AND BE RAISED 1 FOOT ABOVE THE SURROUNDING GROUND.

9 / 7.3 MONITORING WELL

NOT TO SCALE



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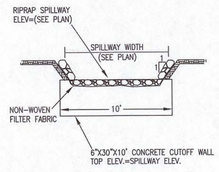

SPILLWAY PROFILE

NOTES:
1. EMBANKMENT TO BE CONSTRUCTED OF CLEAN FILL FREE OF ORGANIC SOILS/MATERIALS WITH NO STONES OVER 12" MAX. DIMENSION. EMBANKMENT TO TO BE CONSTRUCTED IN COMPACTED LIFTS NOT TO EXCEED 8".
2. BASIN BOTTOM AND SIDE SLOPES (INSIDE AND OUT) TO BE COVERED WITH 4" LOAM AND SEED.
3. RIP-RAP SPILLWAY STONE (M2.02.2).

12 / 7.3 TYPICAL BASIN EMBANKMENT/SPILLWAY

NOT TO SCALE

D&L Design Group
Civil Engineering & Land Surveying
115 Water Street • Milford, MA 01757
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www.dandldesigngroup.com

P.E.	P.L.S.
COMMONWEALTH OF MASSACHUSETTS MICHAEL DEAN CIVIL No. 46255 REGISTERED PROFESSIONAL ENGINEER 9/13/24	

REVISIONS

REV.	DATE	DESCRIPTION
1	1/8/24	REVISED PLANS.
2	3/25/24	REVISED PLANS

PROJECT NO.	J-016
DESIGNED BY	PML
CHECKED BY	MD
DATE	9/13/23
CAD FILE	J-016 SITE PLAN
PLAN NO.	

APPLICANT/DEVELOPER:

LOBISSER BUILDING CORP.
1 Charlesview Road • Hopedale, MA 01747
P:(508) 478-6235

TITLE:

Upton Apartments
47 Main Street,
Upton Massachusetts
Preliminary
Residential Development Plans
Comprehensive Permit Application
Upton Zoning Board of Appeals

SHEET TITLE

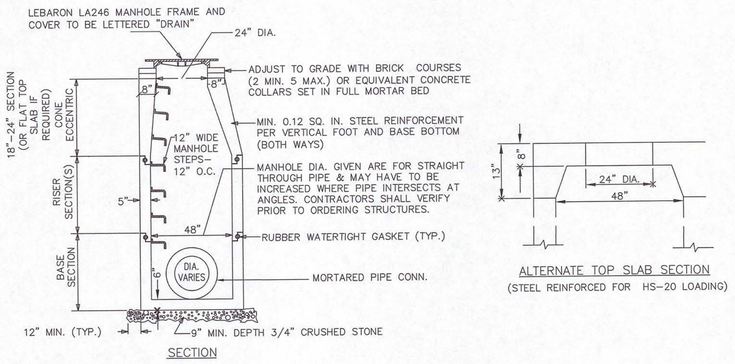
CONSTRUCTION DETAILS

SHEET 3 OF 4

SHEET NO.

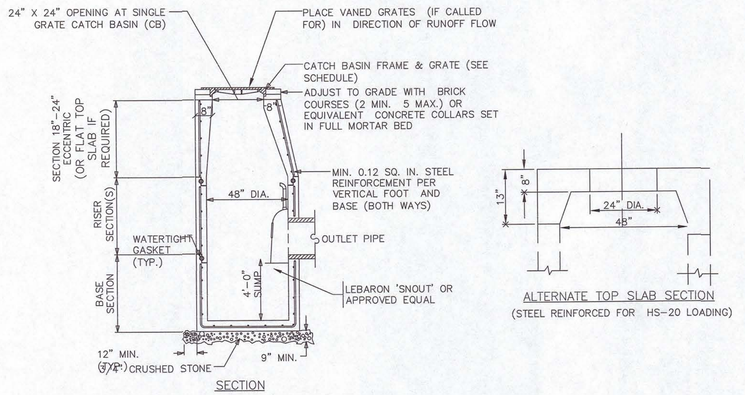
C-7.3

NOTES:
1. REINFORCED STEEL CONFORMS TO LATEST A185 SPEC. 0.12 SQ. IN./LINEAL FT. (0.15 SQ. IN. FOR 60" DIA) AND BASE BOTTOM.
2. CONCRETE COMPRESSIVE STRENGTH 4000 PSI MIN.
3. MANHOLE DESIGN CONFORMS TO LATEST ASTM C478 SPEC. FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
4. JOINT SEALANT SHALL BE SYNTHETIC RUBBER GASKET THAT COMPLIES W/ C-443 OR C-361. 5. BASE SECTION SHALL BE ONE POUR MONOLITHIC.



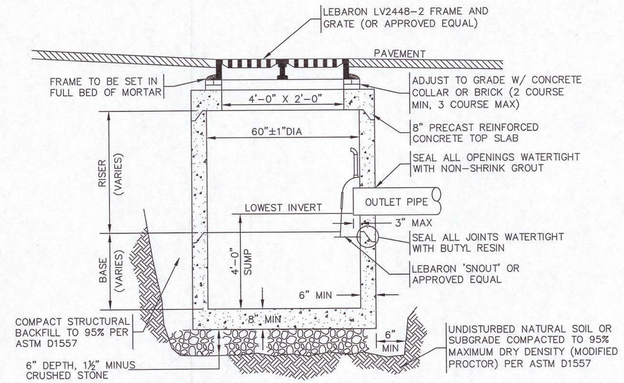
1 / 7.4 PRECAST CONCRETE DRAIN MANHOLE
N.T.S.

NOTES:
1. USE 4-FLANGE LEBARON LF248-2 GRATES AT ALL CB STRUCTURES.
2. SUBMIT SHOP DRAWINGS FOR APPROVAL.
3. REINFORCED STEEL CONFORMS TO LATEST A185 SPEC. 0.12 SQ. IN./LINEAL FT. (0.15 SQ. IN. FOR 60" DIA) AND BASE BOTTOM.
4. CONCRETE COMPRESSIVE STRENGTH 4000 PSI MIN.
5. JOINT SEALANT SHALL BE SYNTHETIC RUBBER GASKET THAT COMPLIES W/ C-443 OR C-361.



2 / 7.4 PRECAST CONCRETE DEEP SUMP CATCH BASIN
N.T.S.

NOTES:
1. 4,000 PSI PRECAST CONCRETE AT 28 DAYS CONFORMING WITH LATEST ASTM C478.
2. REINFORCING PER LATEST ASTM A185.
3. STRUCTURE SHALL BE RATED FOR H-20 LOADING UNLESS SPECIFIED OTHERWISE.
4. VERIFY FRAME AND GRATE TO SUIT APPLICATION



3 / 7.4 PRECAST CONCRETE DOUBLE GRATE DEEP SUMP CATCH BASIN
N.T.S.

D&L Design Group
Civil Engineering & Land Surveying
115 Water Street • Milford, MA 01757
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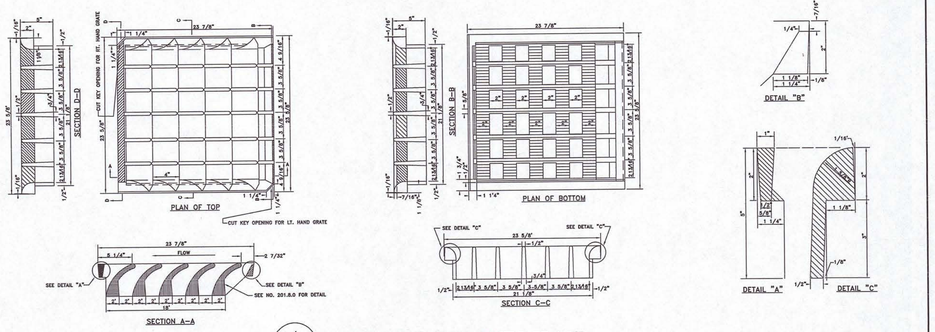
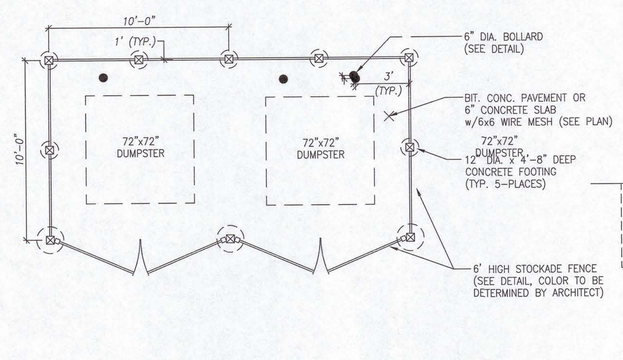
P.E.	P.L.S.
COMMONWEALTH OF MASSACHUSETTS MICHAEL DEAN CIVIL No. 46225 REGISTERED PROFESSIONAL ENGINEER 9/13/24 MD	

NOTE:
1. CASCADE GRATES ARE REQUIRED WHERE THE ROAD GRADE IS 7% (SEVEN PERCENT) OR GREATER PER SUBDIVISION RULES AND REGULATIONS.



4 / 7.4 CASCADE CATCH BASIN GRATE
N.T.S.



5 / 7.4 TRASH ENCLOSURE
N.T.S.

REVISIONS		
REV.	DATE	DESCRIPTION
1	1/8/24	REVISED PLANS.
2	3/25/24	REVISED PLANS

PROJECT NO.	J-016
DESIGNED BY	PML
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TITLE:
Upton Apartments
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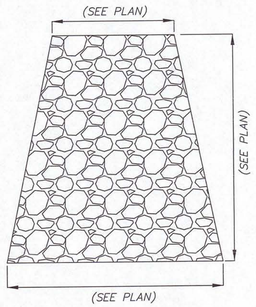
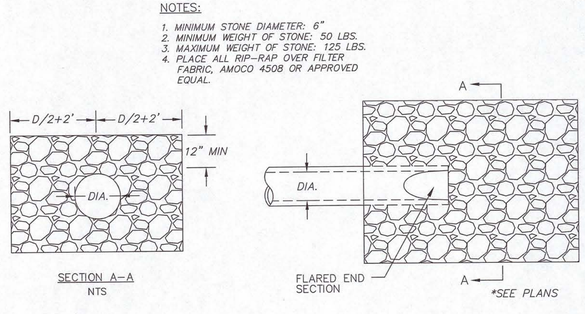
SHEET 4 OF 4

SHEET NO.
C-7.4

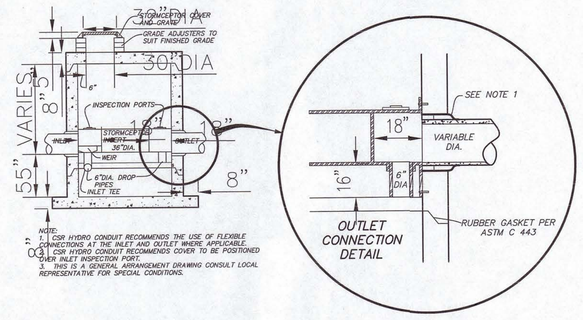


TYPICAL OUTFALL RIP-RAP APRON

NOTES:
1. MINIMUM STONE DIAMETER: 6"
2. MINIMUM WEIGHT OF STONE: 50 LBS.
3. MAXIMUM WEIGHT OF STONE: 125 LBS.
4. PLACE ALL RIP-RAP OVER FILTER FABRIC, AMOCO 4508 OR APPROVED EQUAL.

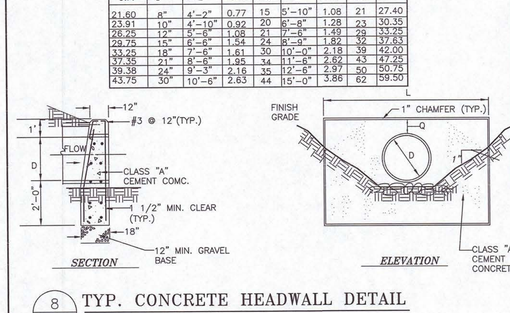


6 / 7.4 STONE RIP-RAP FOR PIPE ENDS
N.T.S.



7 / 7.4 STC 900 STORMCEPTOR
N.T.S.

TRENCH EXCAV. 1' DEPTH	PIPE DIA.	1 1/2:1 SLOPE			2:1 SLOPE			
C.F.	"D"	"L"	CONC. C.Y.	STEEL LBS	"L"	CONC. C.Y.	STEEL LBS	C.F.
21.60	8"	4'-2"	0.77	15	5'-10"	1.08	21	27.40
23.91	10"	4'-10"	0.92	20	6'-8"	1.28	23	30.35
26.25	12"	5'-6"	1.08	21	7'-6"	1.49	29	33.75
29.75	15"	6'-6"	1.54	24	8'-9"	1.82	32	37.63
33.25	18"	7'-6"	1.61	30	10'-0"	2.18	39	42.00
37.35	21"	8'-6"	1.95	34	11'-6"	2.62	43	47.25
39.38	24"	9'-3"	2.16	35	12'-6"	2.97	50	50.75
43.75	30"	10'-6"	2.63	44	15'-0"	3.86	62	59.50



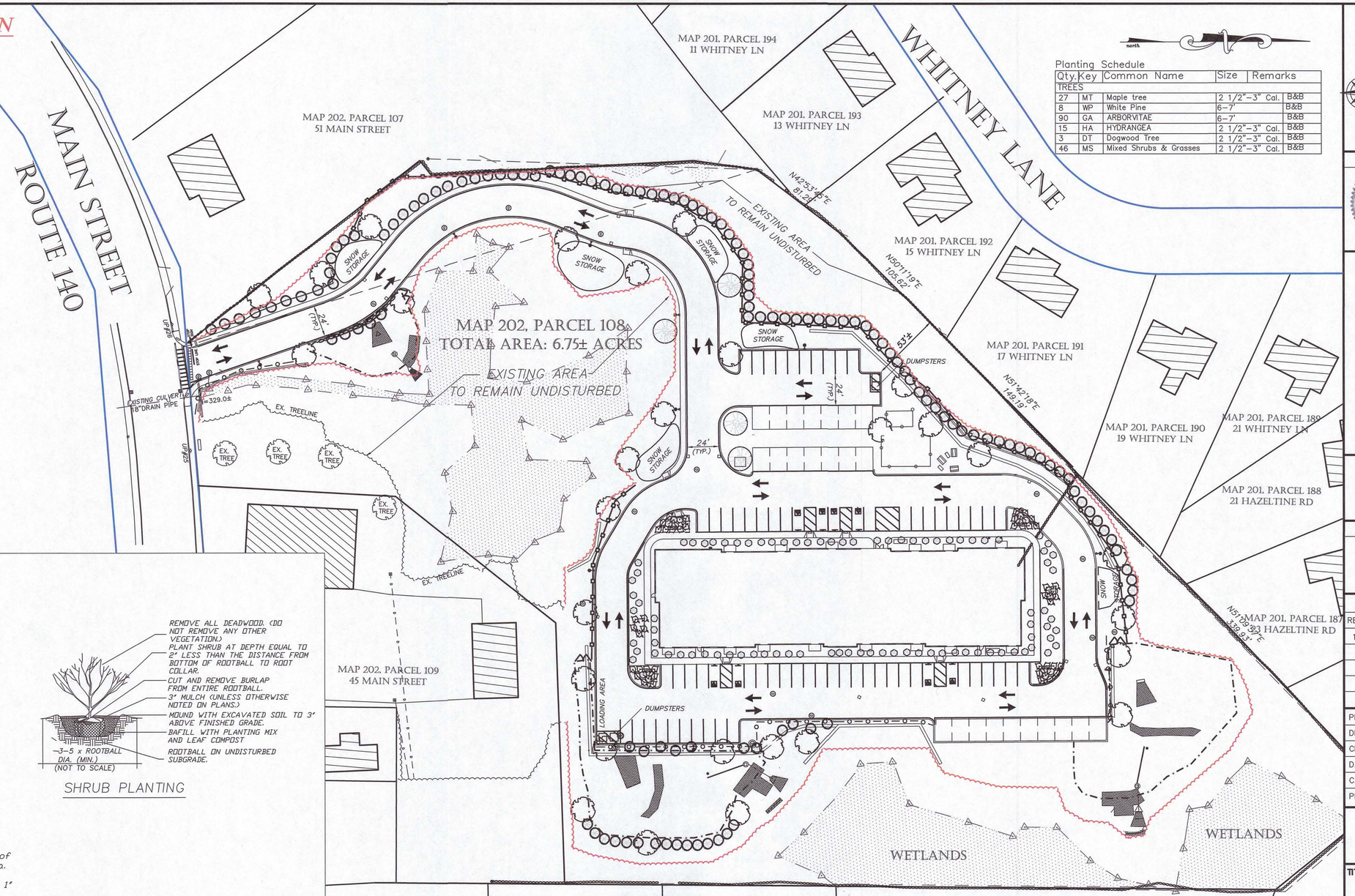
8 / 7.4 TYP. CONCRETE HEADWALL DETAIL
N.T.S.
NOTE: DEBRIS GRATE REQUIRED ON ALL PIPES WITH A DIAMETER GREATER THAN 36"

NOT FOR CONSTRUCTION

DIG SAFE NOTE:

UTILITIES ARE PLOTTED FROM FIELD LOCATION AND ANY RECORD INFORMATION AVAILABLE, AND SHOULD BE CONSIDERED APPROXIMATE. OTHER UTILITIES MAY EXIST WHICH ARE NOT EVIDENT OR FOR WHICH RECORD INFORMATION WAS NOT AVAILABLE. CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORE EXCAVATING AND DRILLING. ALSO, CALL "DIG-SAFE" AT 1(888)344-7233 (1(888)DIG-SAFE).

EXISTING LINES OTHER THAN THOSE INDICATED ON THESE DRAWINGS MAY BE ON THE SITE. THE CONTRACTOR IS WARNED TO PROCEED WITH CAUTION WITH ALL WORK, ESPECIALLY EXCAVATION WORK, AND TO MAKE ALL POSSIBLE INVESTIGATIONS AS TO POSSIBLE UNMARKED UTILITY LINES.

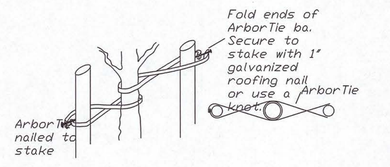


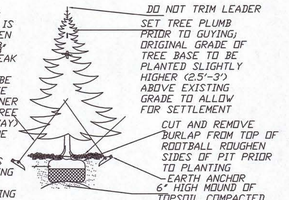
Planting Schedule

Qty.	Key	Common Name	Size	Remarks
TREES				
27	MT	Maple tree	2 1/2"-3" Cal.	B&B
8	WP	White Pine	6-7'	B&B
90	GA	ARBORVITAE	6-7'	B&B
15	HA	HYDRANGEA	2 1/2"-3" Cal.	B&B
3	DT	Dogwood Tree	2 1/2"-3" Cal.	B&B
46	MS	Mixed Shrubs & Grasses	2 1/2"-3" Cal.	B&B

LANDSCAPING NOTES:
1 NOTIFY DIG-SAFE AT 1-888-DIG-SAFE AND LOCAL AUTHORITIES PRIOR TO ANY TYPE OF SITE PREPARATION OR CONSTRUCTION.
2 THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL AND MULCH IN SUFFICIENT QUANTITIES TO COMPLETE PLANTING AS SHOWN ON THE DRAWINGS.
3 DRAWING QUANTITIES TAKE PRECEDENCE OVER PLANT LIST QUANTITIES.
4 ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES SET FORTH BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
5 ALL TREES AND SHRUBS SHALL BE PLANTED WITH THE "BEST FACE" SHOWING. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
6 ALL CONTAINER GROWN STO SHALL BE HEALTHY, VIGOROUS, WELL ROOTED AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE GROWING. THEY SHALL HAVE TOPS OF GOOD QUALITY, NO APPARENT INJURY AND BE IN A HEALTHY GROWING CONDITION. A CONTAINER GROWN PLANT SHALL HAVE A WELL ESTABLISHED ROOT SYSTEM REACHING THE SIDES OF THE CONTAINER TO MAINTAIN A FIRM BALL.
7 THE QUALITY OF ALL TREES & SHRUBS IS TO BE NORMAL FOR THE SPECIES. ALL PLANTS ARE TO HAVE DEVELOPED ROOT SYSTEMS, TO BE FREE OF INSECTS AND DISEASES AS WELL AS MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR PLANTINGS.
8 ALL CONIFERS SHALL HAVE DORMANT BUDS AND SECONDARY NEEDLES.
9 WHERE SPECIFIED, CALIPER SIZE IS TO BE THE OVERRIDING FACTOR IN TREE SELECTION. CALIPER SIZE SHALL BE MEASURED 12" ABOVE THE ROOTBALL.
10 PLANT SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED BY THE PROJECT LANDSCAPE ARCHITECT.
11 ALL DISTURBED AREAS NOT SHOWN OTHERWISE SHALL BE LOAMED AND SEEDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS.
12 PRIOR TO INSTALLING ANY PLANT MATERIAL, THE CONTRACTOR SHALL SUBMIT A LOAM SOIL SAMPLE FOR A ROUTINE, ORGANIC, SALTS, AND NITRATE SOIL TEST. UPON THE RESULTS OF THIS TEST, THE SITE CONTRACTOR SHALL AMEND THE LOAM AS RECOMMENDED.
13 LAWN SEED MIX SHALL BE THE PREVIOUS YEARS CROP: 35% JEFFERSON KENTUY BLUEGRASS, 35% CARMEN CHEWING FESCUE AND 30% STALLION PERENNIAL RYEGRASS, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 150 SQUARE FEET.
14 SLOPE SEED MIX SHALL BE THE PREVIOUS YEARS CROP. PLANT AT A RATE OF 1 LB. PER 150 SQUARE FEET. SEED MIX SHALL BE STALLION PERENNIAL RYE 10%, CREEPING RED FESCUE 50%, ANNUAL RYE GRASS 15%, JEFFERSON KENTUY BLUE GRASS 10%, RED TOP CLOVER 5%, AND LADINO CLOVER 5%, OR APPROVED EQUAL. PLANT AT A RATE OF 1 LB. PER 1500SF.
15 LAWN SEED AREAS SHALL BE NOT BE DEEMED ACCEPTABLE UNTIL IN EXCESS OF 90% OF EACH AREA, INDEPENDENTLY, IS GERMINATED, GROWING AND DISPLAYING HEALTHY, UNIFORM GROWTH AND HAS BEEN CUT TWICE. THE SITE CONTRACTOR IS RESPONSIBLE FOR APPLYING AT A MINIMUM 1" OF WATER A WEEK UNTIL THE SEEDED AREAS HAVE BEEN ACCEPTED. THE WATERING SHALL OCCUR IN SMALL DOSES. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY WEEDS (CRAB GRASS) WITHIN THE SEEDED AREAS UNTIL THE SEEDED AREAS HAVE BEEN ACCEPTED.
16 WITHIN THE DETENTION BASIN AND ON TOP OF THE SEPTIC SYSTEM LEACH FIELD, SEED WITH THE CONSERVATION SEED MIX FROM NEW ENGLAND WETLAND PLANT INC. PLANT AT A RATE OF ONE POUND PER 1,750SF.
17 THE HYDRO SEED SLURRY SHALL BE A WOOD BASED BONDED FIBER MATRIX. THE APPLICATION RATE SHALL BE 2,500-3,000LB. PER ACRE SPRAYED IN A LEAST TWO DIRECTIONS. DO NOT APPLY HYDRO SEED SLURRY IF RAIN IS EXPECTED WITHIN 12 HOURS, AND WHEN TEMPERATURES ARE BELOW 50 DEGREES.
18 PRIOR TO PLANTING, THE LANDSCAPER SHALL REVIEW AND COORDINATE WITH THE SITE UTILITY PLAN AND GRADING PLAN.
19 THE ROOTS OF NEWLY PLANTED TREES AND SHRUBS MUST BE KEPT STEADILY MOIST, AS THE DEVELOPING ROOTS ESTABLISH IN THE NEW SOIL. AT PLANTING, WATER THOROUGHLY TO SOAK THE ROOTS AND TO SETTLE THE NEW SOIL AROUND THE ROOT BALL. THE AMOUNT OF SUPPLEMENTAL WATER NEEDED EACH WEEK DURING THE FIRST GROWING SEASON AFTER PLANTING DEPENDS ON RECENT RAINFALL, TEMPERATURE, AND WIND. IF LESS THAN ONE-INCH OF RAIN HAS FALLEN OVER THE PAST FIVE TO SEVEN DAYS, THE NEW PLANTINGS MUST BE WATERED. LAWNS, TREES, AND SHRUBS WATERING SHALL OCCUR AT A MINIMUM OF TWO (2) TIMES A DAY FOR THE FIRST TWO (2) MONTHS, ONCE IN THE EARLY MORNING AND THEN THE OTHER IN THE LATE AFTERNOON. IN GENERAL TEN GALLONS OF WATER APPLIED TWICE A WEEK WILL WET A 20"-24" ROOT BALL AND PROVIDE THE EQUIVALENT OF ONE INCH OF RAIN FALL. NEW LAWNS SHALL BE WATERED SO THAT IS RECEIVES AT A MINIMUM ONE INCH (1") OF WATER EVERY WEEK.
20 WITHIN THE LANDSCAPE BEDS ADJACENT TO THE BUILDING FOUNDATIONS, NO HEMLOCK, PINE, SPRUCE, OR CEDAR) MULCH OR OTHER COMBUSTIBLE LANDSCAPE MATERIALS SHALL BE INSTALLED WITHIN 18" OF THE FOUNDATION.
21ALL LANDSCAPE BEDS SHALL RECEIVE THREE-INCHES OF BARK MULCH.
22 LANDSCAPE AREAS SHALL BE DEEP TILLED TO A DEPTH OF TWELVE INCHES TO FACILITATE DEEP WATER PENETRATION.

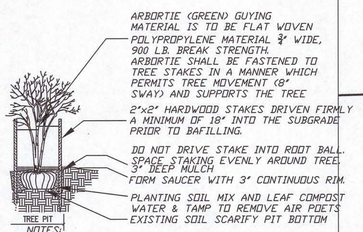
SHRUB PLANTING





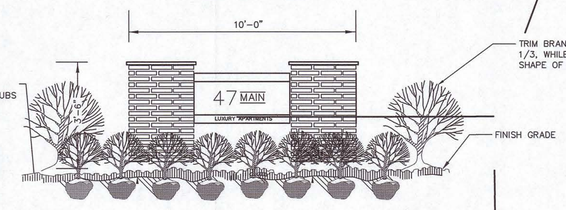
EVERGREEN TREE PLANTING

NOT TO SCALE



DECIDUOUS TREE PLANTING

NOT TO SCALE



PROPOSED SIGN DETAIL

N.T.S.

D&L Design Group
Civil Engineering & Land Surveying
115 Water Street • Milford, MA 01757
P:(508) 408-2577
www.dandldesigngroup.com

P.E. | P.L.S.

COMMONWEALTH OF MASSACHUSETTS — MICHAEL DEAN CIVIL No. 46265 — REGISTERED PROFESSIONAL ENGINEER — 9/13/24

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 feet

REVISIONS

REV.	DATE	DESCRIPTION
1	1/8/24	REVISED PLANS.
2	3/25/24	REVISED PLANS

PROJECT NO.	J-016
DESIGNED BY	PML
CHECKED BY	MD
DATE	9/13/23
CAD FILE	J-016 SITE PLAN
PLAN NO.	

APPLICANT/DEVELOPER:

LOBISSER BUILDING CORP.
1 Charlesview Road • Hopedale, MA 01747
P:(508) 478-6235

TITLE:

Upton Apartments
47 Main Street,
Upton Massachusetts
Preliminary
Residential Development Plans
Comprehensive Permit Application
Upton Zoning Board of Appeals

SHEET TITLE

LANDSCAPE PLAN

SHEET NO.

C-8.0

CONSTRUCTION SEQUENCE PLAN

1. EROSION CONTROL/LIMIT OF DISTURBANCE TO BE STAKED BY SURVEYOR FOR THE PROJECT INCLDING DRIVEWAY, PARKING AREA, BUILDING AREA & BASIN AREAS.
2. INSTALLATION OF EROSION CONTROL WILL BE INSTALLED AND THE DESIGN ENGINEER WILL INSPECT AND REPORT TO THE UPTON CONSERVATION WHEN DONE.
3. AREA TO BE CLEARED & GRUBED OUT AND ALL BRUSH AND TREES TO BE REMOVED. DESIGN ENGINEER TO INSPECTED AREA.
4. DRIVEWAY AREA TO HAVE ALL TOPSOIL REMOEVED AND STOCKPILED ON SITE IN THE DEGINATED AREA PER THE DESIGN ENGINEER. SEE EROSION CONTROL PLAN FOR LOCATION.
5. SITE TO BE GRADED PER GRADING PLAN WALLS TO BE CONSTRUCTED AND FILL MATERIAL TO BE PLACED IN THE REQUIRED AREAS.
6. PROPOSED DRAIN BASINS AND PIPES SHALL BE PLACED AT LOW POINTS FIRST THROUGHOUT THE PROJECT. REFER TO GRADING PLAN THIS WILL ENSURE FLOWS ON SITE CAN BE CONTROLED.
7. DRIVEWAY TO BE PAVED ONCEPROJECT HAS BEEEN CONSTRUCTED TO PROPOSED GRADES AS SHOWN ON THE GRADING PLAN.
8. ALL DISTURBED AREAS TO BE STABLIZED BY HYDROSEEDING.
9. PROPOSED BUILDING TO BE STAKED BY A SURVEYOR.
10. PROPOSED PARKING AND DRIVEWAY AREAS TO BE STAKED AND GRADED BY SURVYOR.
11. ALL DRAINAGE STRICTURES TO BE INSTALLED PER GARDING PLAN.
12. ALL SEWER STRUCTURES TO BE STAKED PER DESIGN PLAN BY SURVEYOR AND INSTALLED.
13. WETLAND DISTURBANCE FOR SEWER TO BE RESTORED ONCE SEWER INSTALLED.
14. PROPOSED WATER LINE AND HYDRANTS TO BE INSTALLED PER UTILITY PLAN.
15. PROPOSED DRIVEWAY AND PARKING AREAS TO BE PAVED PER GRADING PLAN.
16. PROPOSED BUILDING AND GARAGES TO BE STURCTURED.
17 PROPOSED FENCE AND LANDSCAPING TOBE INSTALLED PER LANDSCAPE PLAN. REPLICATION AREA AS WELL AS AREA ADJACENT TO WELL.
18. FINAL AS-BUILT PLAN TO BE PERFORMED BY SURVEYOR FOR THE ENTIRE PROJECT.
19 AS-BUILT PLAN TO BE SUBMITTED TO THE UPTON ZONING BOARD, PLANNING BOARD AND CONSERVATION COMMSSION

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www.dandldesigngroup.com

P.E.	P.L.S.
COMMONWEALTH OF MASSACHUSETTS MICHAEL DEAN CIVIL No. 46055 REGISTERED PROFESSIONAL ENGINEER 4/3/24	

NOTE:

1. *The Contractor shall give twenty-four notice to pertinent Town Departments before commencing any work in the field.*
2. *The Contractor shall add additional erosion control measures as needed with the determination of the design engineer and the town of Upton shall be informed for any changes to the erosion control plan.*

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 feet

REVISIONS

REV.	DATE	DESCRIPTION
1	1/8/24	REVISED PLANS.
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TITLE:

Upton Apartments
47 Main Street,
Upton Massachusetts
Preliminary
Residential Development Plans
Comprehensive Permit Application
Upton Zoning Board of Appeals

SHEET TITLE

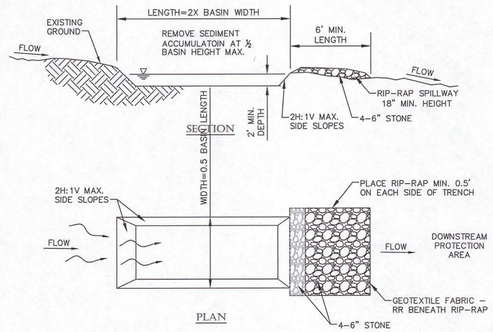
EROSION CONTROL PLAN

SHEET NO.

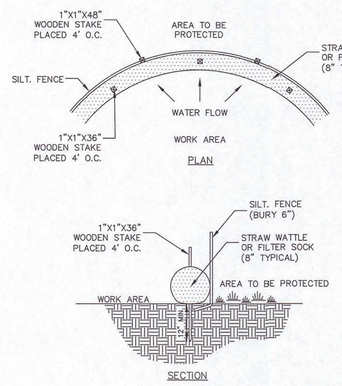
C-9.1

NOT FOR CONSTRUCTION

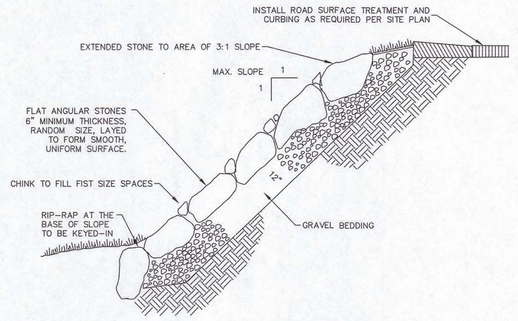
NOTES:
[1] TEMPORARY SEDIMENT TRAPS SHALL HAVE A DRAINAGE AREA OF NOT MORE THAN 5 ACRES.
[2] THE TEMPORARY SEDIMENT TRAP SHALL HAVE A MINIMUM VOLUME BASED ON 1/2 INCH OF STORAGE FOR EACH ACRE OF CONTRIBUTING DRAINAGE AREA OR 67 CUBIC YARDS OF VOLUME FOR EACH ACRE OF DRAINAGE AREA.
[3] SPILLWAY DEPTH SHALL BE A MINIMUM OF 1.5 BELOW DESIGNED, SETTLED TO OF EMBANKMENT. FREEBOARD SHALL BE A MINIMUM OF 0.5 FOOT.



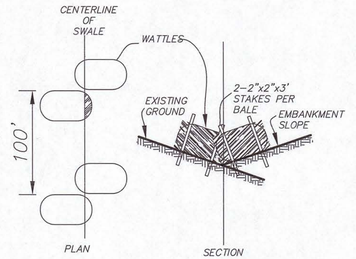
1 TEMPORARY SEDIMENT BASIN
NOT TO SCALE



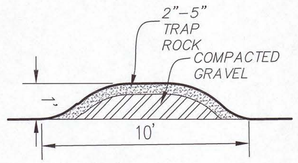
2 EROSION CONTROL BARRIER (ECB)
NOT TO SCALE



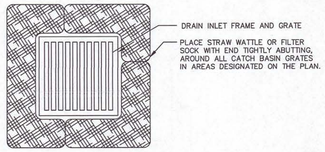
3 RIP-RAP SLOPE STABILIZATION
NOT TO SCALE



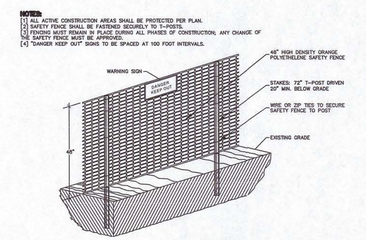
4 WATTLE EROSION CHECKS
NOT TO SCALE



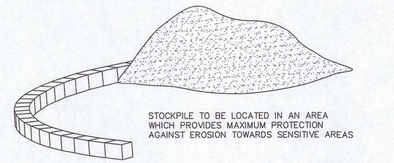
5 DIVERSION DETAIL
NOT TO SCALE



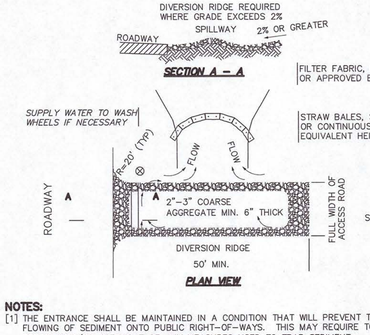
6 CATCH BASIN STRAW WATTLE/FILTER SOCK
NOT TO SCALE



7 CONSTRUCTION SAFETY FENCE
NOT TO SCALE

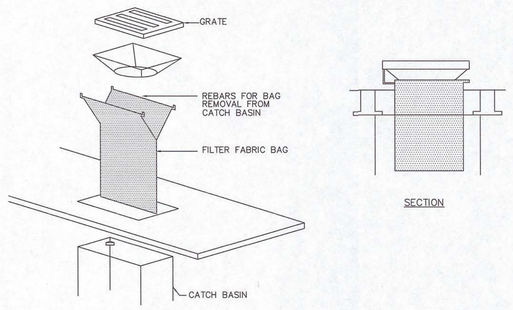


8 TEMPORARY STOCKPILE
NOT TO SCALE



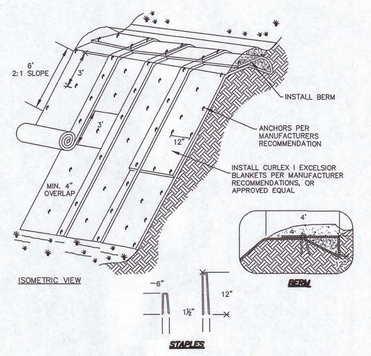
NOTES:
[1] THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
[2] WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
[3] WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
[4] USE SANDBAGS, STRAW BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

9 CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTES:
[1] TO BE SILTSTACK BY ATLANTIC CONSTRUCTION FABRICS, INC., OR APPROVED EQUAL.
[2] TO BE INSTALLED IMMEDIATELY FOLLOWING THE INSTALLATION OF CATCH BASIN STRUCTURE AND REMAIN UNTIL FINISH COURSE IS PLACED.
[3] FILTER BAG SHALL BE MAINTAINED AND CLEANED AS NEEDED.

10 CATCH BASIN FILTER BAG
NOT TO SCALE



11 EROSION CONTROL BLANKET SLOPE STABILIZATION
NOT TO SCALE

EROSION AND SEDIMENT CONTROL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

A. FURNISH, INSTALL, AND MAINTAIN TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS, BUT NOT NECESSARILY LIMITED TO, STRAW BALE AND SILT FENCE BARRIERS, RIPRAP, VEHICLE TRACKING PADS, DIVERSION CHANNELS AND BERMS, CHECK DAMS, STRATEGICALLY LOCATED STOCKPILES, SEDIMENT BASINS, MULCH, AND SEED MIX (HEREINAFTER "CONTROL MEASURES") ADEQUATE TO PREVENT THE CONVEYANCE OF EROSION PRODUCTS (E.G. SOIL, MULCH, SOD) OFF SITE, OR INTO ENVIRONMENTALLY SENSITIVE AREAS, OR INTO AREAS WHERE WORK WILL BE ADVERSELY IMPACTED. ENVIRONMENTALLY SENSITIVE AREAS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, WETLANDS, TRIBUTARIES TO WETLANDS, WETLAND BUFFER ZONES, INTERMITTENT AND PERENNIAL STREAMS / RIVERS, AND THEIR ATTENDANT BUFFER ZONES.

ALL METHODS AND MATERIALS USED FOR EROSION CONTROL SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN "EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS A GUIDE FOR PLANNERS, DESIGNERS, AND MUNICIPAL OFFICIALS" AS PUBLISHED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF RESOURCE PROTECTION, UNLESS OTHERWISE APPROVED IN WRITING.

1. REFER TO DRAWINGS FOR LOCATION AND DETAILS OF LIMITS OF DISTURBANCE AND CONTROL MEASURES REQUIRED TO COMMENCE WORK. LIMITS OF DISTURBANCE SHALL BE MARKED WITH TAPE, SIGNS, OR ORANGE CONSTRUCTION FENCE PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES. CONTROL MEASURES WILL BE ADEQUATE ONLY FOR VEGETATION CLEARING. THE DRAWINGS ARE NOT INTENDED TO GRAPHICALLY DEPICT ALL CONTROL MEASURES THAT WILL BE REQUIRED TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.

2. DEVISE AND EMPLOY CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT, OVER ALL AREAS DISTURBED OR UNDISTURBED BY CONSTRUCTION, AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A.

3. DEVISE AND EMPLOY TEMPORARY CONTROL MEASURES AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A, WHILE ALLOWING WORK TO PROCEED IN AN EFFICIENT, COST EFFECTIVE MANNER.

4. DEVISE, EMPLOY AND MAINTAIN CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA.

5. ONCE THE SITE IS PERMANENTLY STABILIZED AND CERTIFIED AS SUCH BY ENGINEER, REMOVE TEMPORARY CONTROL MEASURES WHILE PROTECTING STABILIZED SURFACES.

1.02 SUBMITTALS

A. SUBMIT PRODUCT DATA, WARRANTY, AND TEST REPORTS AS INDICATED ON THE DRAWINGS.

B. SUBMIT SKETCH SHOWING LOCATIONS OF PROPOSED STOCKPILE AREAS, CONSTRUCTION ENTRANCES AND EROSION CONTROLS IF NOT SHOWN ON THE SITE PLAN OR DIFFERENT FROM THOSE LOCATIONS SHOWN ON THE SITE PLAN.

C. A SITE SPECIFIC SEQUENCE OF CONSTRUCTION FOR EACH PORTION OF THE SITE. NO PORTION OF THE SITE SHALL EXCEED FIVE (5) ACRES.

1.03 QUALITY ASSURANCE

A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS FROM ACCEPTABLE MANUFACTURERS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. CONFORM TO CONDITIONS OF APPROVAL ISSUED BY REGULATORY AGENCIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, LOCAL PLANNING BOARD, CONSERVATION COMMISSION, CITY COUNCIL, BOARD OF HEALTH, PUBLIC WORKS / HIGHWAY DEPARTMENT, STATE ENVIRONMENTAL PROTECTION DEPARTMENT, AND U.S. GOVERNMENT, ENVIRONMENTAL PROTECTION AGENCY. WHERE CONDITIONS OF REGULATORY APPROVAL DIFFER FROM REQUIREMENTS CONTAINED HEREIN OR ON THE DRAWINGS, COMPLY WITH THE MORE STRINGENT REQUIREMENT.

PART 2 – PRODUCTS

2.01 MATERIALS

A. STRAW BALES: WEED FREE DRY GRASS OR STRAW, MACHINE BOUND WITH JUTE OR WIRE, APPROXIMATE SIZE EACH BALE 42" X 16" X 16", EACH BALE SHALL BE STAKED WITH A MINIMUM OF TWO 24" LONG HARDWOOD STAKES. NOTE: HAY SHALL NOT BE USED.

B. STRAW WATTLES: NORTH AMERICAN GREEN MODEL WS7210 OR APPROVED EQUAL.

C. SILT FENCE: NON-WOVEN, UV-RESISTANT, POLYPROPYLENE FABRIC, FLOW RATED AT 10 GPM/SF MINIMUM, GRAB TENSILE RATED AT 124 POUNDS MINIMUM, WITH INTEGRAL STAKE LOOPS, AND HARDWOOD STAKES. USE NO. 2130 BY AMOCO FABRICS & FIBERS, OR APPROVED EQUAL.

D. MULCH: ORGANICS INCLUDING STRAW, PROCESSED PINE / HEMLOCK TWIGS AND NEEDLES.

E. SEED MIXES: SHALL MEET THE REQUIREMENTS OF MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION SECTION 6.03.0 OR 6.03.1 AS APPROPRIATE.

F. EXCELSIOR BLANKET: CURLED WOOD FIBER ON PHOTODEGRADABLE EXTRUDED PLASTIC MATRIX, BOX OF FIBERS 6-INCHES LONG OR LONGER, WEIGHT 0.975 POUNDS / SY, CONTAINING NO CHEMICAL ADDITIVES. USE CURLEX I BLANKET BY AMERICAN EXCELSIOR COMPANY, OR APPROVED EQUAL.

G. ROCK RIPRAP: SOUND, ANGULAR, 6-INCH MINUS PROCESSED ROCK, BLAST ROCK, OR TALINGS.

H. CRUSHED STONE: SOUND, ANGULAR, 2-INCH MINUS PROCESSED CRUSHED STONE.

PART 3 – EXECUTION

3.01 THROUGHOUT CONSTRUCTION

A. DEVISE WORK SEQUENCE SO AS TO LIMIT DRAINAGE AREA THAT IS TRIBUTARY TO DISTURBED AREAS. DEVISE, EMPLOY, AND MAINTAIN CONTROL MEASURES SUCH AS DIVERSION CHANNELS AND BERMS, STRATEGICALLY LOCATED STOCKPILES, AND SEDIMENT BASINS TO SUBDIVIDE DRAINAGE AREAS INTO SMALL, MANAGEABLE SUBAREAS, THEREBY MINIMIZING RUNOFF AND THE POTENTIAL FOR EROSION.

B. MAINTAIN BARRIER AT LIMIT OF WORK AND PROTECT EXISTING VEGETATION / FACILITIES OUTSIDE OF LIMIT OF WORK.

C. MAINTAIN SPARE MATERIAL STOCKPILES FOR IMMEDIATE EMPLOYMENT / REPAIR / EXPANSION OF CONTROL MEASURES. AT A MINIMUM, SUCH MATERIALS SHALL INCLUDE HAY BALES, SILT FENCE AND STAKES, AND CRUSHED STONE.

D. INSPECT AND MAINTAIN EFFECTIVENESS OF CONTROL MEASURES BY REPAIRING AS NECESSARY TO ENSURE INTENDED FUNCTION; BY SUPPLEMENTING AS NECESSARY FOR ADEQUATE EXTENT; BY REMOVING TRAPPED PRODUCTS OF EROSION AS NECESSARY TO MAINTAIN EFFECTIVE TRAP VOLUME.

E. LIMIT EXTENT OF WORK AREA SO THAT ALL DISTURBED AREAS CAN BE STABILIZED WITH CONTROL MEASURES WITHIN A 24-HOUR PERIOD.

F. INSTALL CONTROL MEASURES AS SOON AS PRACTICABLE AFTER EACH MANAGEABLE PORTION OF EARTHWORK IS COMPLETE. EMPLOY TEMPORARY MEASURES AS NECESSARY TO STABILIZE DISTURBED AREAS, EVEN WHERE SUBSEQUENT CONSTRUCTION OPERATIONS MAY REQUIRE RE-DISTURBANCE.

PART 3 – CONTINUED

G. WHEN INTENSE RAINFALL IS EXPECTED, CONSIDER, DEVISE, AND EMPLOY REINFORCING CONTROL MEASURES PRIOR TO THE RAINFALL EVENT TO MEET THE REQUIREMENTS DESCRIBED IN 1.01.A. IF NECESSARY, EMPLOY TEMPORARY CONTROL MEASURES ON MATERIAL STOCKPILES TO COUNTERACT POTENTIAL SEDIMENT TRANSPORT DURING INTENSE RAINFALL.

H. WHEN VEHICLE REFUELING IS REQUIRED ON SITE, CONDUCT REFUELING OPERATIONS OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS.

I. PROPERLY DISPOSE OF DEBRIS, SOLID WASTE, TRASH, AND CONSTRUCTION WASTE / BYPRODUCTS OFF SITE.

J. SWEEP ON-SITE PAVED AREAS AND OFF-SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND / OR ENVIRONMENTALLY SENSITIVE AREAS. WHEN NECESSARY UTILIZE WATER SPRAYING, SURFACE ROUGHENING AND/OR APPLY POLYMERS, SPRAY-ON TACKIFIERS, CHLORIDES AND BARRIERS FOR DUST CONTROL.

K. INSPECT EROSION CONTROLS DAILY THROUGHOUT CONSTRUCTION REPAIR DAMAGED CONTROLS IMMEDIATELY.

3.02 SITE PREPARATION AND ACCESS

A. WALK SITE AND IDENTIFY LOCATIONS OF LIMIT OF WORK AND ENVIRONMENTALLY SENSITIVE AREAS. ESTABLISH CONSTRUCTION STAGING AREA, LOCATED BEYOND ENVIRONMENTALLY SENSITIVE AREAS.

B. INSTALL CONTROL MEASURES AS SHOWN ON THE DRAWINGS, INCLUDING THOSE DEFINING THE LIMIT OF WORK.

C. LIMIT VEHICULAR TRAFFIC TO AND FROM SITE TO MINIMIZE TRANSPORT OF SEDIMENT.

3.03 CLEARING, GRUBBING, AND STRIPPING

A. SCHEDULE GRUBBING AND STRIPPING TO OCCUR IMMEDIATELY PRIOR TO EARTH DISTURBANCE, DEPENDING ON SITE AREA, CONSIDER MULTIPLE GRUBBING PHASES, SEQUENCED TO TAKE ADVANTAGE OF THE EROSION PREVENTION POTENTIAL OF EXISTING VEGETATIVE COVER.

B. MINIMIZE THE AREA OF EXISTING VEGETATION REMOVED WHEREVER POSSIBLE. NO GREATER THAN FIVE (5) ACRES SHALL BE UNSTABLE AT ANY TIME.

C. LOCATE AND SIZE STOCKPILES TO MINIMIZE EROSION POTENTIAL, TAKING ADVANTAGE OF TERRAIN SLOPE AND ASPECT, WHERE APPROPRIATE.

D. PROTECT VEGETATION, INCLUDING ROOT SYSTEMS, BEYOND LIMIT OF CLEARING.

E. PROCESS TIMBER, STUMPS, SLASH, AND BRUSH SO AS TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND INSTALLED CONTROL MEASURES; PROPERLY DISPOSE OF EXCESS OFF SITE. BURIAL OF STUMPS ON SITE IS PROHIBITED.

3.04 EXCAVATION FOR BUILDING FOUNDATIONS AND UTILITIES

A. DEVISE AND INSTALL CONTROL MEASURES ADEQUATE TO HANDLE DISCHARGES AND TRAP SEDIMENT FROM FOOTING SUMP AND WELL POINT PUMPS PRIOR TO EXCAVATION.

B. ARMOR SUMP PUMP DISCHARGE LOCATIONS TO PREVENT EROSION AT POINT OF DISCHARGE AND AREAS DOWNSTREAM.

C. IF FOUNDATION EXCAVATIONS GRADE TO DAYLIGHT ON THE LOW SIDE, DEVISE AND INSTALL CONTROL MEASURES TO HANDLE SURFACE AND GROUNDWATER FLOW FROM EXCAVATION LOW POINT.

D. STOCKPILE EXCAVATED MATERIALS TO BAFFLE OVERLAND RUNOFF, AVOIDING THE CREATION OF LENGTHY PATHS OF CONCENTRATED RUNOFF. STOCKPILE SLOPES SHALL NOT EXCEED 2:1.

E. BACKFILL UTILITY TRENCHES AS SOON AS PRACTICABLE TO PREVENT FLOODING, SLOUGHING, POTENTIAL OVERFLOW, AND REPETITIVE EARTH DISTURBANCE.

3.05 SITE GRADING

A. WHERE APPLICABLE, FOLLOW EXCAVATION AND FILL PRACTICES SHOWN ON DRAWINGS TO LOCALIZE AND MINIMIZE EROSION.

B. MONITOR SEDIMENT VOLUME IN TEMPORARY SEDIMENT BASINS AND AT DIVERSION BERMS AND CHECK DAMS. IN ALL AREAS EXCEPT THOSE THAT DO NOT PRESENT POTENTIAL PROBLEMS WITH REGARD TO FUTURE SOIL STABILITY, DRAINAGE, OR BEARING CAPACITY, REMOVE AND PROPERLY DISPOSE OF TRAPPED SEDIMENT BEFORE BRINGING SITE TO FINAL SUBGRADE.

C. EXPOSED SOILS SHALL BE PERMANENTLY STABILIZED WITHIN FIVE (5) BUSINESS DAYS OF COMPLETION OF CONSTRUCTION OF A GIVEN AREA. EXPOSED AREAS WHERE NO WORK HAS OCCURRED FOR FOURTEEN (14) DAYS SHALL BE TEMPORARILY STABILIZED WITH HYDROSEED OR OTHER APPROVED METHOD.

D. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IMMEDIATELY AFTER COMPLETION.

3.06 LANDSCAPING

A. COMPLETE LANDSCAPING AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL SUBGRADE.

B. IMMEDIATELY AFTER PLACEMENT OF TOPSOIL, STABILIZE WITH CONTROL MEASURES INCLUDING, BUT NOT NECESSARILY LIMITED TO, SEED MIX, MULCH, AND / OR BLANKET.

C. PERMANENT SEEDING MAY BE PERFORMED IN THE SPRING PRIOR TO JULY 1 AND IN BETWEEN AUGUST 1 AND OCTOBER 15. PERMANENT SEEDING AT OTHER TIMES SHALL BE APPROVED AND SHALL ONLY BE ALLOWED WITH AN APPROVED MULCHING AND IRRIGATION PROGRAM.

NOT FOR CONSTRUCTION

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P.E.	P.L.S.
COMMONWEALTH OF MASSACHUSETTS MICHAEL DEAN CIVIL No. 46255 REGISTERED PROFESSIONAL ENGINEER 9/9/24	

GRAPHIC SCALE

REVISIONS

REV.	DATE	DESCRIPTION
1	1/8/24	REVISED PLANS.
2	3/25/24	REVISED PLANS

PROJECT NO.	J-016
DESIGNED BY	PML
CHECKED BY	MD
DATE	9/13/23
CAD FILE	J-016 SITE PLAN
PLAN NO.	

APPLICANT/DEVELOPER:
LOBISSER BUILDING CORP.
1 Charlesview Road • Hopedale, MA 01747
P:(508) 478-6235

TITLE:
Upton Apartments
47 Main Street, Upton Massachusetts
Preliminary
Residential Development Plans
Comprehensive Permit Application
Upton Zoning Board of Appeals

SHEET TITLE

EROSION CONTROL NOTES & DETAILS

SHEET NO.

C-9.2