

# LEWIS LANDING

## PROPOSED MULTI-UNIT RESIDENTIAL DEVELOPMENT

### HUTTLESTON AVE.

### FAIRHAVEN, MASSACHUSETTS

**APPLICANT/OWNER:**

DANA LEWIS  
18 TANNER LANE  
FAIRHAVEN, MA 02719

**LOCUS:**

MAP 31 - LOT 117C AND LOT 115A  
HUTTLESTON AVENUE  
FAIRHAVEN, MA



**SCHEDULE OF DRAWINGS**

SHEET NUMBER	PLAN TITLE
-	COVER SHEET
1	EXISTING CONDITIONS PLAN
2	SITE LAYOUT AND LANDSCAPING PLAN
3	GRADING & UTILITIES PLAN
4	EROSION CONTROL PLAN
5	DETAIL SHEET-1
6	DETAIL SHEET-2
7	ARCHITECTURALS

**PLANNING BOARD WAIVERS REQUESTED FOR STORMWATER MANAGEMENT REGULATIONS**

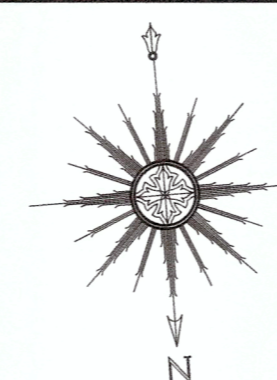
1. FAIRHAVEN ZONING BYLAW 198-31.1 (C) (2) (g) [6] REQUIRING BASINS AND PONDS TO HAVE 4:1 SIDE SLOPES AND SEDIMENT FOREBAYS TO HAVE 3:1 SIDE SLOPES.
2. FAIRHAVEN ZONING BYLAW 198-31.1 (A) (1) (a) [2] ALLOWING NO INCREASE IN THE 10-YEAR STORM RUNOFF VOLUME DUE TO SOILS UNSUITABLE FOR INFILTRATION.



**PREPARED BY:**



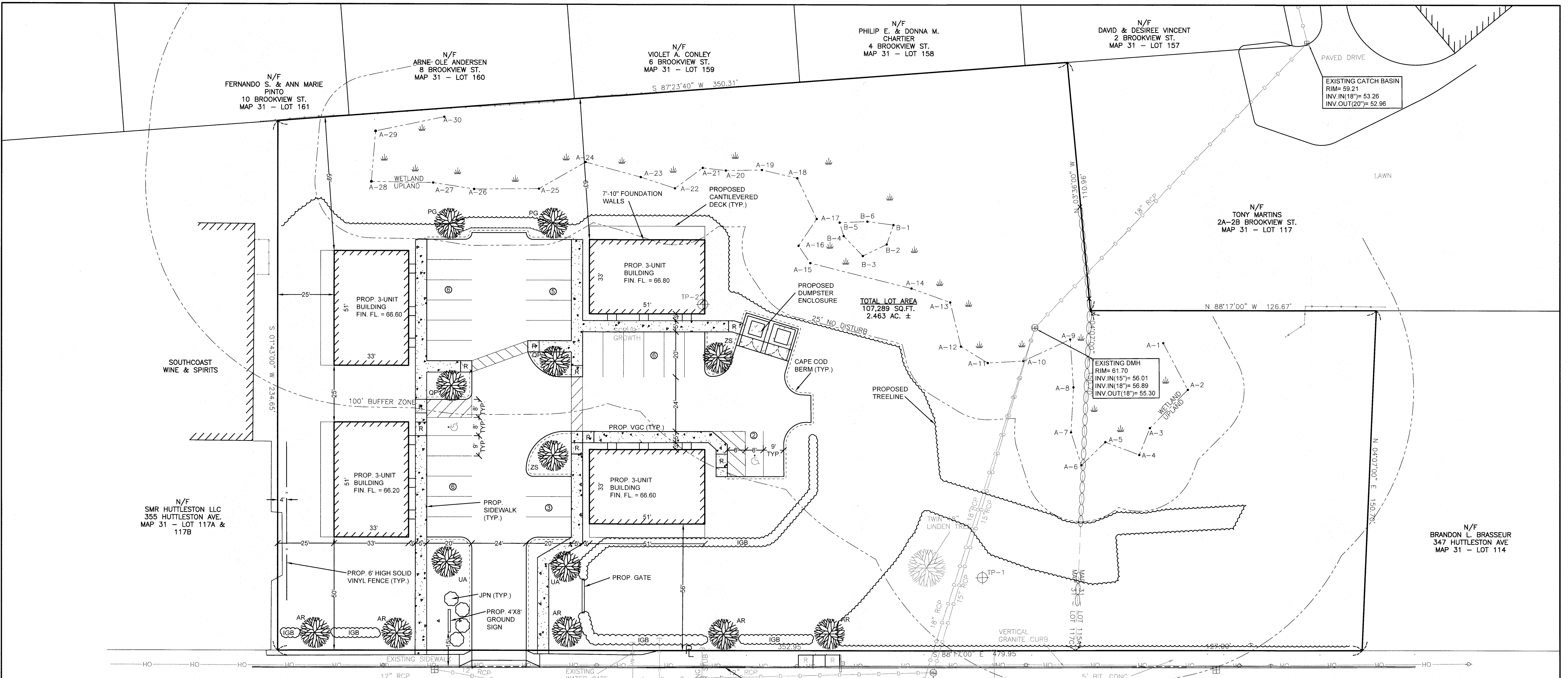
CIVIL ENGINEERING—LAND SURVEYING—ENVIRONMENTAL ASSESSMENT  
P.O. BOX 1088, 350 BEDFORD STREET, LAKEVILLE, MA 02347  
TEL: 508.947.0050 FAX: 508.947.2004



SCALE: 1"=100'

**SEPTEMBER 9, 2019**

REVISED FEBRUARY 14, 2020



**SITE ADDRESS**  
 0 HUTTLESTON AVENUE  
 FAIRHAVEN, MA 02719  
 (VACANT LOT)

**CURRENT OWNERS**  
 DANA LEWIS  
 18 TANNER LANE  
 FAIRHAVEN, MA 02719

**ASSESSORS' REFERENCE**  
 MAP 31 - LOT 115A & 117C

## HUTTLESTON (U.S. ROUTE 6) AVE.

**DEED REFERENCE**  
 BK 12776 - PG 341

**PLAN REFERENCE**  
 PB 11 - PG 2 PB 65 - PG 16

**ZONING DESIGNATION**  
 SINGLE RESIDENCE DISTRICTS- RC

**VERTICAL DATUM SHOWN**  
 NAVD88

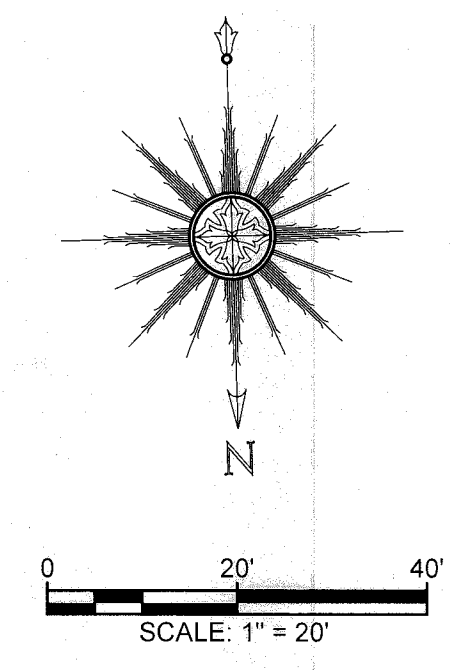
**FEMA FLOODZONE DESIGNATION**  
 ZONE X- AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS SCALED FROM FLOOD INSURANCE RATE MAP NUMBER: 25005-C-0413F, EFFECTIVE DATE: 1/17/2009

**NOTE:**  
 THE WETLAND DELINEATION LINE SHOWN HEREON WAS BASED ON A PLAN BY ALLEN D. QUINTIN, DATED JANUARY 11, 2017 AND WAS NOT FIELD LOCATED BY PRIME ENGINEERING INC. DELINEATION APPROVED BY FAIRHAVEN CONSERVATION COMMISSION.

LOT 2 PLANTING SCHEDULE (REQUIRED TREES ONLY)						
DECIDUOUS TREES						
SYMBOL	QUANTITY	% OF TOTAL	BOTANICAL NAME	COMMON NAME	SIZE	MATURE HEIGHT
AR	5	40%	ACER RUBRUM 'RED SUNSET'	RED MAPLE	2.5"-3" CAL.	60'
QP	2	15%	QUERCUS PALUSTRIS	PIN OAK	2.5"-3" CAL.	65'
UA	2	15%	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5"-3" CAL.	70'
ZS	2	15%	ZELKOVA SERRATA 'VILLAGE GREEN'	JAPANESE ZELKOVA	2.5"-3" CAL.	60'
<b>% DECIDUOUS TREES: 85%</b>						
EVERGREEN TREES						
PG	2	15%	PICEA GLAUCA	BLUE SPRUCE	4'-6" HT.	75'
DECIDUOUS SHRUBS						
SHRUBS						
IGB	75	-	ILEX GABRA	INKBERRY HOLLY	GAL	4' x 4'
JPN	4	-	JUNIPER PROCUMBENS NANA	DWARF JAPANESE JUIPER	GAL	1' x 3'

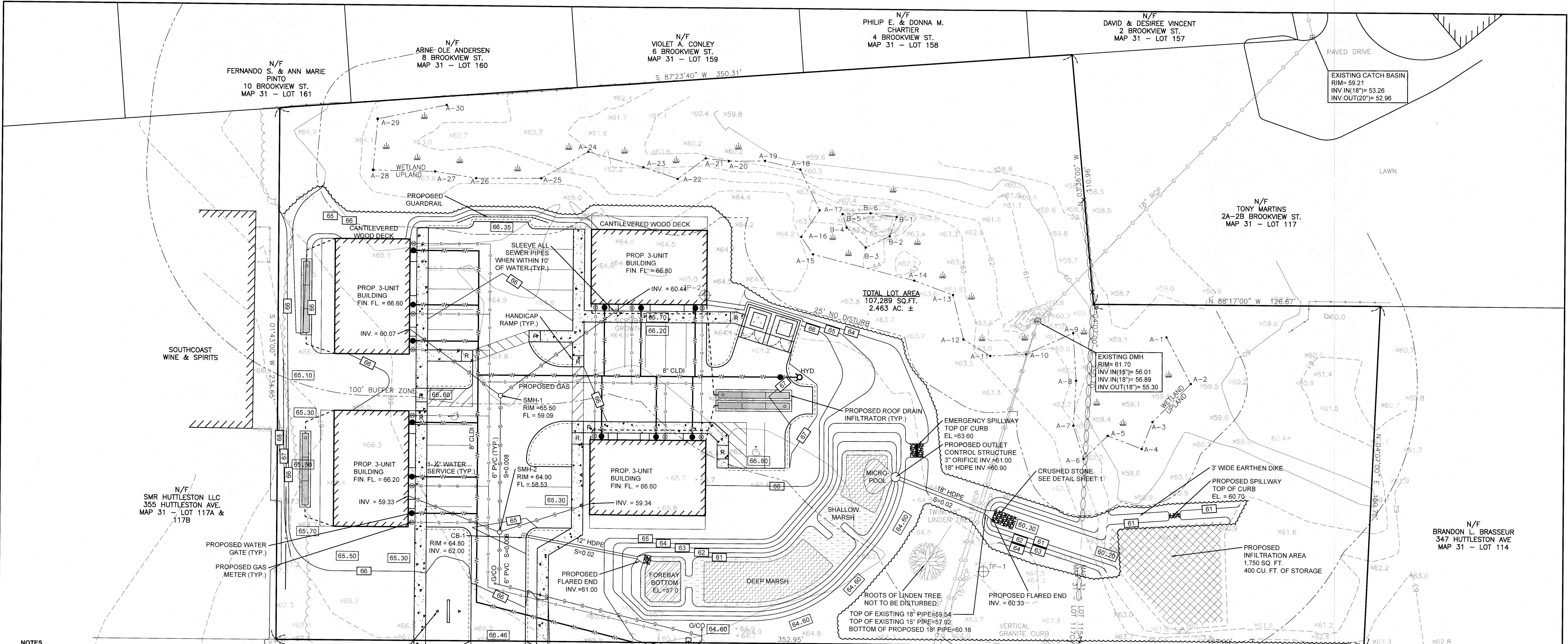
**RC ZONING TABLE**

REQUIREMENT	REQUIRED	PROVIDED
MINIMUM FRONTAGE	100 L.F.	479.95 L.F.
MINIMUM LOT AREA	15,000 S.F.	107,289 S.F.
MINIMUM SETBACKS:		
FRONT	50 FT	50.0 FT
SIDES	25 FT	25.0 FT
REAR	50 FT	58.4 FT
MINIMUM CONTIGUOUS UPLAND	70,000 S.F.	85,151 S.F.
MAXIMUM LOT COVERAGE	50%	21.9%
MAXIMUM BUILDING COVERAGE	25%	6.3%



REV	DATE	DESCRIPTION	BY	APP
4	2/14/2020	RESPONSE TO COMMENTS	SWL	RJR
3	1/22/2020	RESPONSE TO COMMENTS	SWL	RJR
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE <b>SITE LAYOUT AND LANDSCAPING PLAN</b>		SCALE 1" = 20'
PROJECT MAP 31- LOT 117C FAIRHAVEN, MASSACHUSETTS		DATE SEPT. 9, 2019
CLIENT DANA LEWIS FAIRHAVEN, MASSACHUSETTS		DRAWN BY SWL
DESIGNED BY RJR		CHECKED BY RJR
CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL ASSESSMENT		SHEET NO. <b>2 OF 7</b>
P.O. BOX 1088 350 BEDFORD ST. LAKEVILLE, MA 02347 TEL: 508.947.0050 FAX: 508.947.2004		APPROVED BY RJR
PROJECT NO. 2729-01-01		



**HUTTLESTON (U.S. ROUTE 6) AVE.**

**NOTES**  
 LIGHTING WILL BE LED WALLPACKS MOUNTED ON THE CORNERS OF EACH BUILDING.  
**SITE ADDRESS**  
 0 HUTTLESTON AVENUE  
 FAIRHAVEN, MA 02719  
 (VACANT LOT)  
**CURRENT OWNERS**  
 DANA LEWIS  
 18 TANNER LANE  
 FAIRHAVEN, MA 02719  
**ASSESSORS' REFERENCE**  
 MAP 31 - LOT 115A & 117C

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 BK. 12776 - PG. 341  
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 PB. 11 - PG. 2 - PB. 65 - PG. 16  
**ZONING DESIGNATION**  
 SINGLE RESIDENCE DISTRICTS- RC  
**VERTICAL DATUM SHOWN**  
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**FEMA FLOODZONE DESIGNATION**  
 ZONE X- AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SCALED FROM FLOOD INSURANCE RATE MAP  
 NUMBER: 25005-C-0413F  
 EFFECTIVE DATE: 7/7/2009

**NOTE:**  
 THE WETLAND DELINEATION LINE SHOWN HEREON WAS BASED ON A PLAN BY ALLEN D. QUINTIN, DATED JANUARY 11, 2017 AND WAS NOT FIELD LOCATED BY PRIME ENGINEERING INC. DELINEATION APPROVED BY FAIRHAVEN CONSERVATION COMMISSION.

**DEEP MARSH PLANTINGS**

BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
NUPHAR LUTEUM	YELLOW WATER LILY	TUBERS	10
NYMPHAEA ODORATA	WHITE WATER LILY	TUBERS	10
PONTEDERIA CORDATA	PICKEREL WEED	2" PLUG	10
POTAMOGETON NODOSUS	LONG LEAF PONDWEED	RHIZOMES	10
POTAMOGETON	SAGO PONDWEED	TUBERS	10
PECTINATUS			
VALLISNERIA AMERICANA	WILD CELERY	TUBERS	10

**SHALLOW MARSH PLANTINGS**

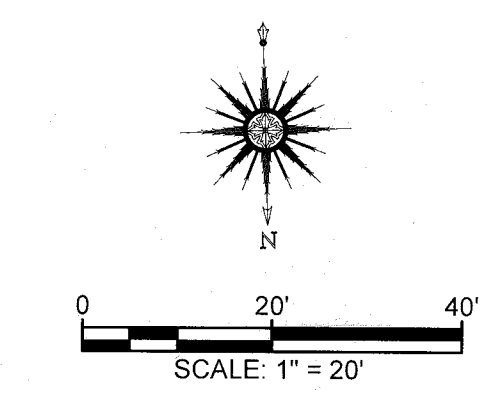
BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
ALISMA	SWEET FLAG	2" PLUG	10
PLANTAGO-AQUATICA	WATER PLANTAIN	2" PLUG	10
ASTER PUNICEUS	SWAMP ASTER	2" PLUG	20
CALAMAGROSTIS			
CANADENSIS	BLUE JOINT GRASS	2" PLUG	20
CAREX COMOSA	BEARDED SEDGE	2" PLUG	20
CAREX STRICTA	TUSsock SEDGE	2" PLUG	20

**DETENTION BASIN PLANTING SCHEDULE**

**ROOF DRAIN CALCULATIONS**  
 REQUIRED STORM CATCHMENT = 0.25/SF OF IMP. AREA  
 INFILTRATION REQUIREMENT = 23,449 SF IMP. X 0.25/SF = 489 CF  
 CULTEC 150XLHD INFILTRATOR W/ 12" CRUSHED STONE BOTTOM = 56.8 CF STORAGE  
 489 CF / 56.8 CF/CHAMBER = 9 CHAMBERS REQUIRED (MIN.)  
 CHAMBERS PROVIDED = 12, TOTAL STORM CATCHMENT PROVIDED = 682 CF  
**TOP OF PIPE CALCULATIONS**  
 EXISTING 15" RCP  
 SLOPE = (56.92 - 56.01) / 159 FT = .0057 SLOPE  
 INV. AT PIPE CROSSING = 56.92 - (.66 FT TO BASIN X .0057) = 56.54  
 TOP EL. OF PIPE AT CROSSING = 56.54 + 1.25 FT DIAM. + .21 PIPE THICKNESS = 58.00  
 EXISTING 18" RCP  
 SLOPE = (59.06 - 56.89) / 209 FT = .0103 SLOPE  
 INV. AT BASIN = 59.06 - (.119 FT TO BASIN X .0103) = 57.83  
 TOP EL. OF PIPE AT CROSSING = 57.83 + 1.5 FT DIAM. + .21 PIPE THICKNESS = 59.54

**LEGEND**

--- 100 ---	EXISTING CONTOURS
x 98.5	EXISTING SPOT ELEVATION
TP-101	OBSERVATION HOLE LOCATION
---	PROPOSED CONTOURS
---	PROPOSED SPOT ELEVATION
---	PROPOSED WATER
---	EXISTING TREETLINE
---	PROPOSED TREETLINE
R	HANDICAP RAMP
---	PROPOSED GAS
---	PROPOSED SEWER



EXISTING DMH  
 RIM = 63.60  
 CENTERLINE OF TROUGH  
 INV. = 56.92

EXISTING INV 18" RCP  
 ELEV. = 59.06

EXISTING DMH  
 RIM = 61.70  
 INV./IN(15") = 56.01  
 INV./IN(18") = 56.89  
 INV. OUT(18") = 55.30

EXISTING 18" PIPE = 59.54  
 TOP OF EXISTING 15" PIPE = 57.92  
 BOTTOM OF PROPOSED 18" PIPE = 60.16

PROPOSED FLARED END  
 INV. = 60.33

EMERGENCY SPILLWAY  
 TOP OF CURB  
 EL. = 63.60

PROPOSED OUTLET CONTROL STRUCTURE  
 3" ORIFICE INV. = 61.00  
 18" HDPE INV. = 60.90

TOTAL LOT AREA  
 107,289 SQ. FT.  
 2.463 AC. ±

PROP. 3-UNIT BUILDING  
 FIN. FL. = 66.80  
 INV. = 60.44

PROP. 3-UNIT BUILDING  
 FIN. FL. = 66.60  
 INV. = 59.34

PROP. 3-UNIT BUILDING  
 FIN. FL. = 66.60  
 INV. = 60.07

**GRADING AND UTILITIES PLAN**

MAP 31- LOT 117C  
 FAIRHAVEN, MASSACHUSETTS  
 DANA LEWIS  
 FAIRHAVEN, MASSACHUSETTS

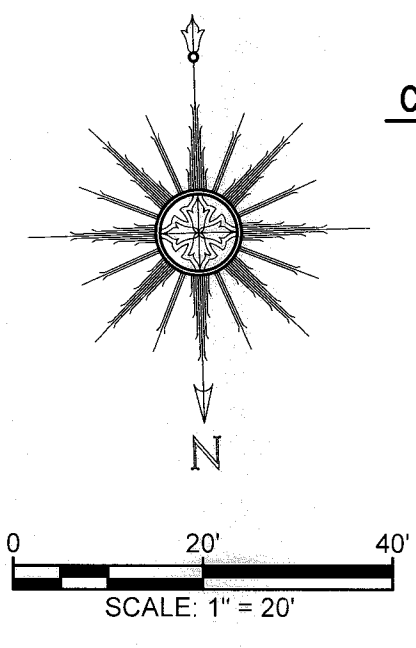
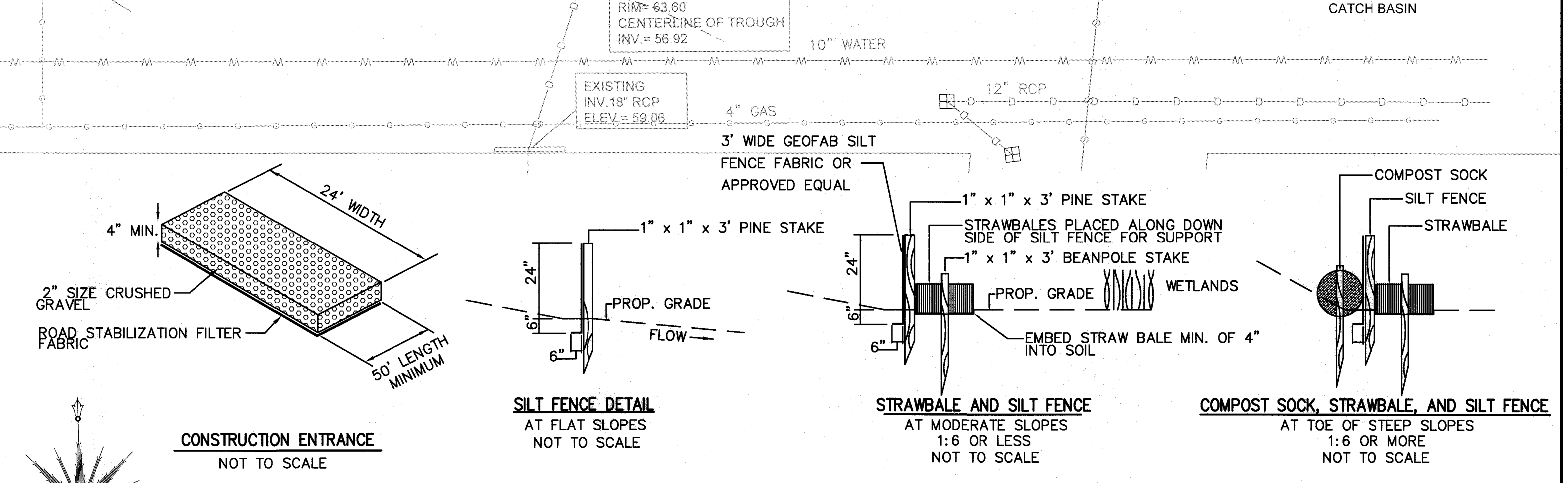
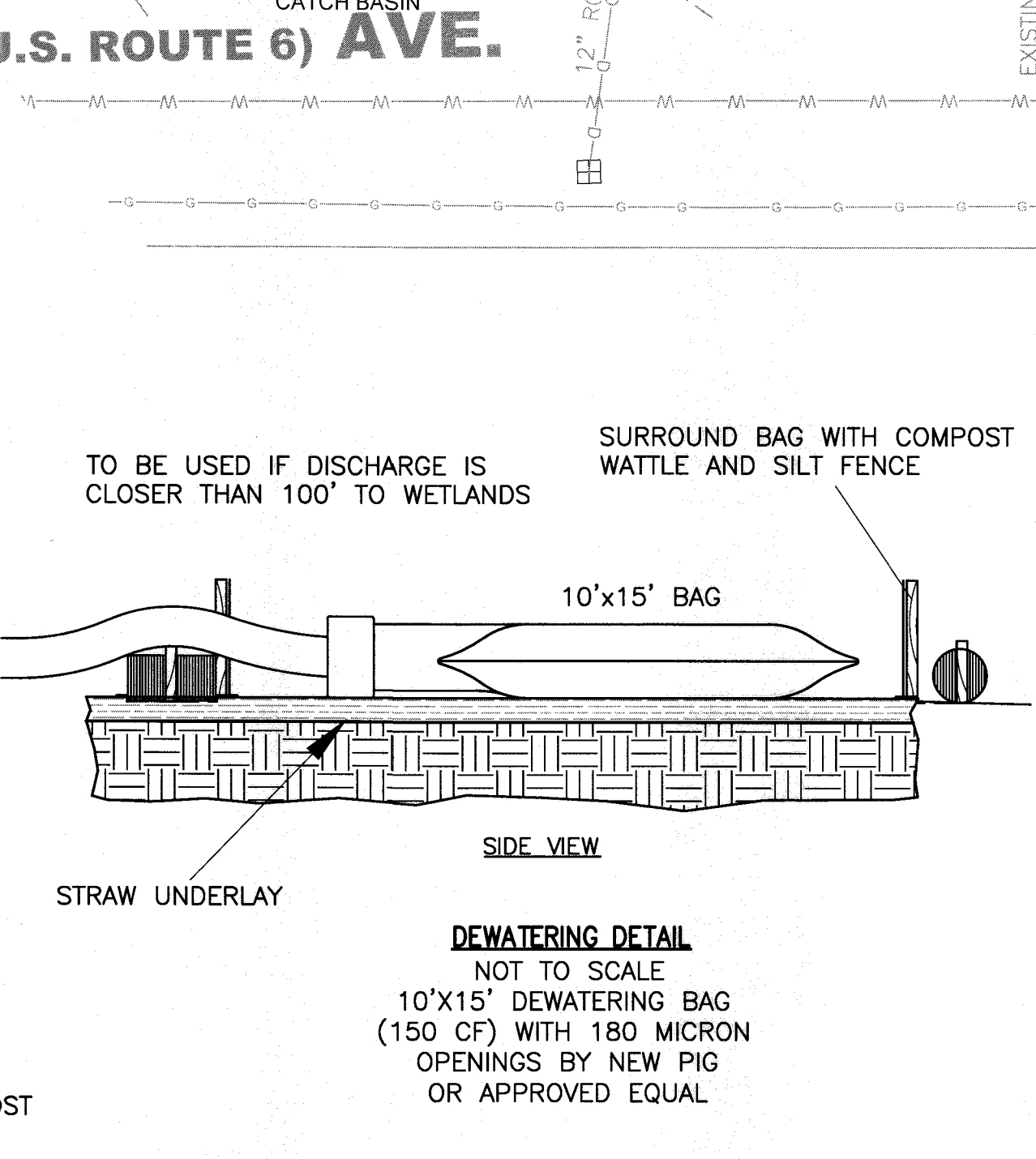
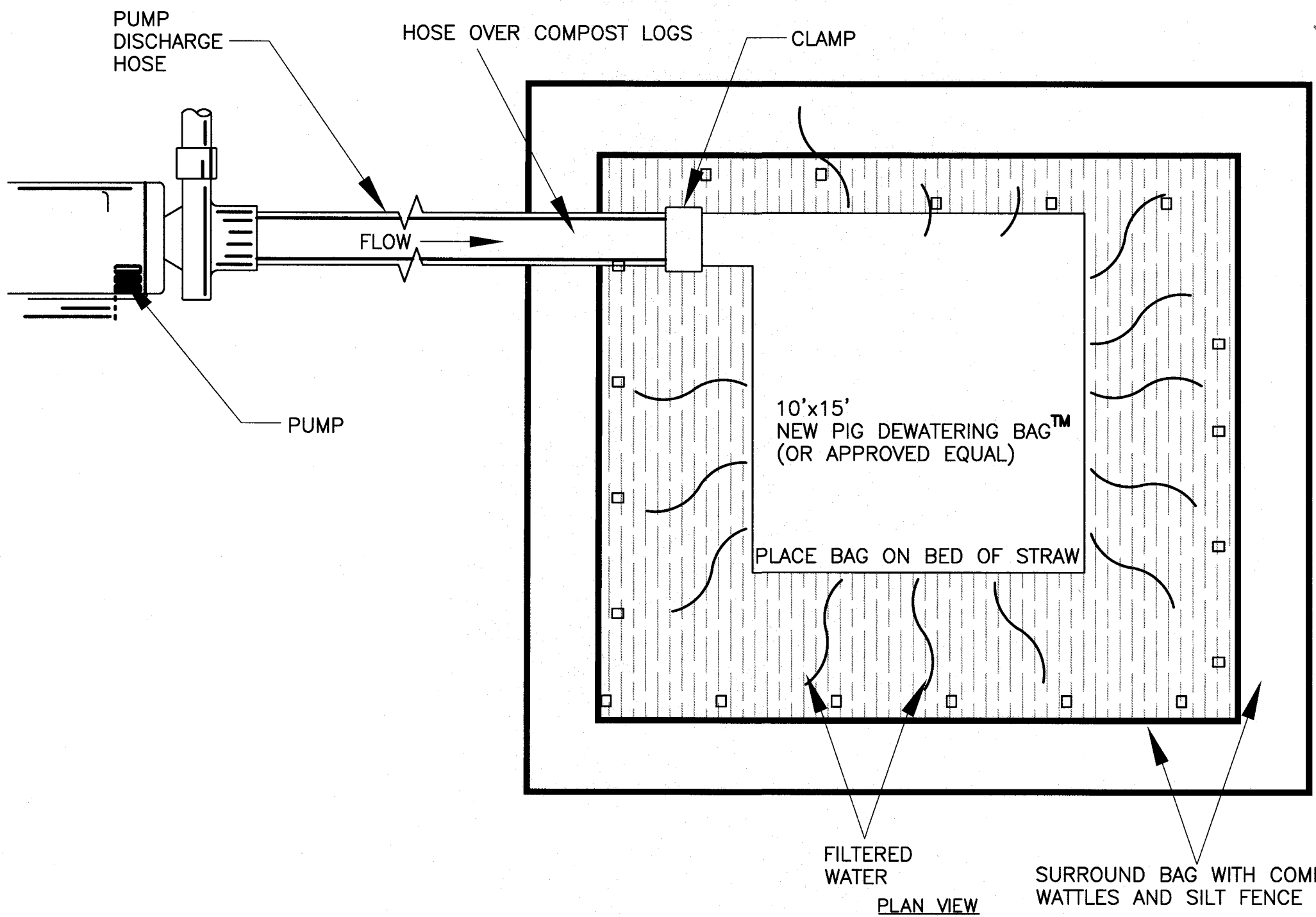
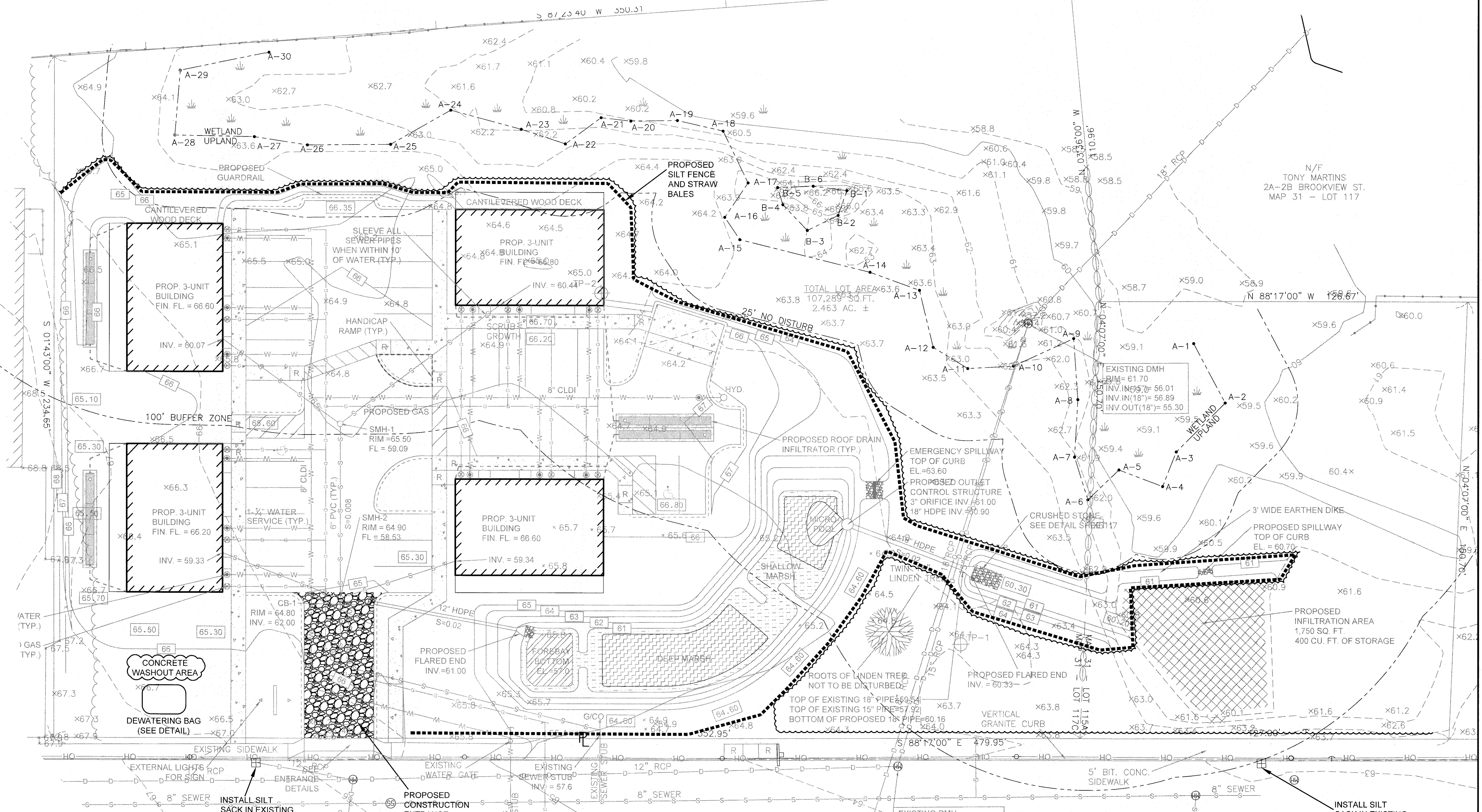
SCALE: 1" = 20'  
 DATE: SEPT. 9, 2019  
 DRAWN BY: SWL  
 DESIGNED BY: RJR  
 CHECKED BY: RJR  
 APPROVED BY: RJR

CLIENT: DANA LEWIS  
 PROJECT: GRADING AND UTILITIES PLAN  
 SHEET NO. 3 OF 7  
 PROJECT NO. 2729-01-01

PRIME ENGINEERING  
 P.O. BOX 1088  
 350 BEDFORD ST.  
 LAKEVILLE, MA 02347  
 TEL: 508.947.0050  
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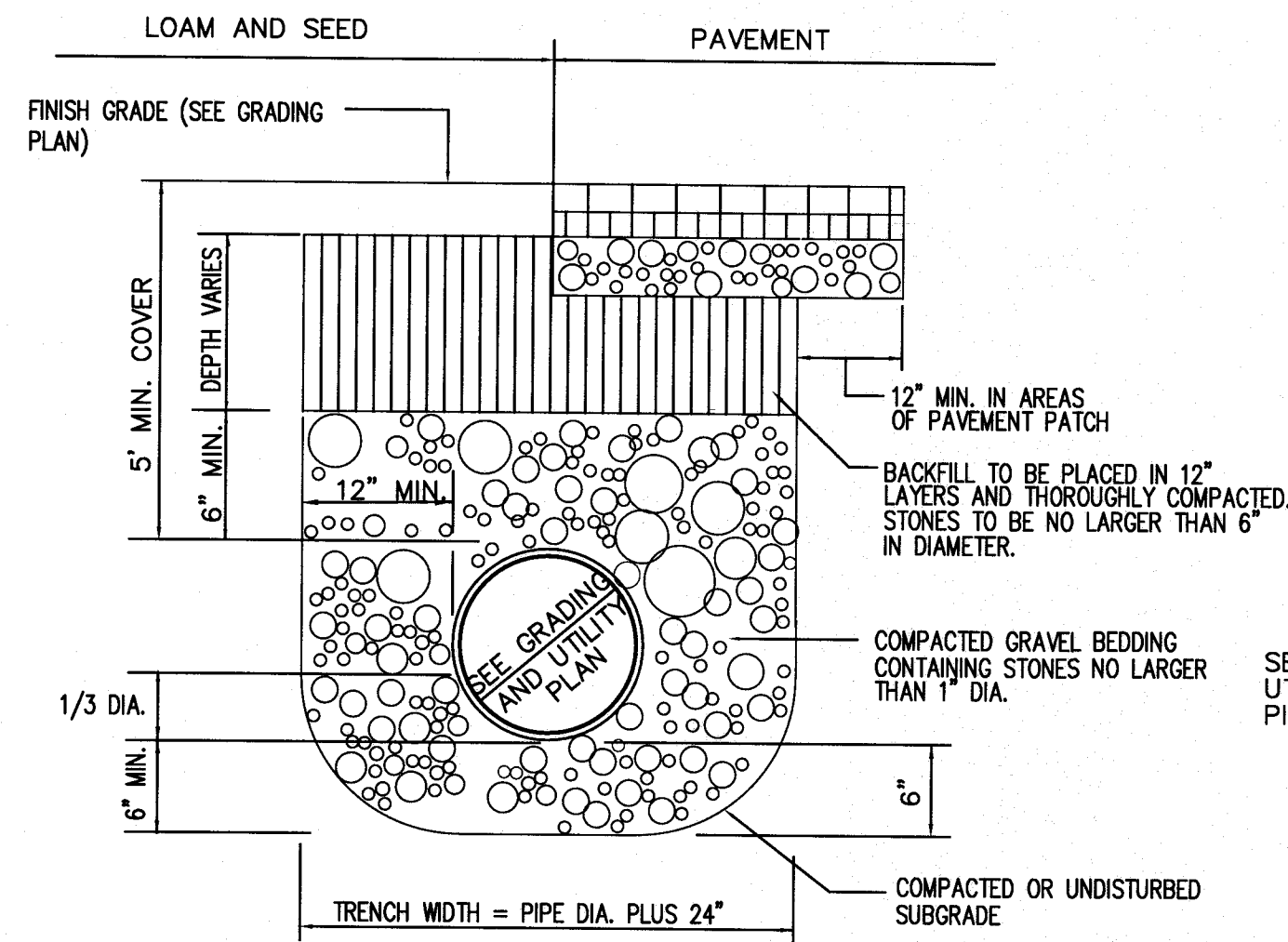
**EROSION & SEDIMENT CONTROL NOTES:**

- THE FOLLOWING IS THE MINIMUM REQUIREMENTS THE CONTRACTOR SHALL FOLLOW TO PREVENT IMPACTS CAUSED BY EROSION AND SEDIMENTATION DURING CONSTRUCTION. THE CONTRACTOR MAY, AT HIS DISCRETION, IMPLEMENT ADDITIONAL MEASURES IF NECESSARY.
1. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO STUMP REMOVAL AND CONSTRUCTION. STABILIZATION OF ALL REGRADED AND SOIL STOCKPILE AREAS WILL BE INITIATED AND MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
  2. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL MUNICIPAL REGULATIONS. ALL EROSION CONTROL MEASURES ARE TO BE MAINTAINED AND UPGRADED AS REQUIRED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION. A STAKED STRAW BALE DAM SHALL BE INSTALLED DOWN GRADIENT OF ALL DRAINAGE OUTFALLS.
  3. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF DEEMED NECESSARY BY THE OWNER OR AGENTS OF THE OWNER.
  4. CATCH BASINS WILL BE PROTECTED WITH STRAW BALE FILTERS THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED. FILTER FABRIC SHOULD BE INSTALLED UNDER GRATE OPENING UNTIL PAVEMENT IS IN PLACE AND GROUND SURFACE IS STABILIZED.
  5. SEEDING MIXTURE FOR FINISHED GRASSED AREAS WILL BE AS FOLLOWS:  
 KENTUCKY BLUE GRASS 45%  
 CREEPING RED FESCUE 45%  
 PERENNIAL RYEGRASS 10%  
 SEED TO BE APPLIED AT A RATE OF 4 LBS./1000 SQ. FT.  
 FERTILIZER SHALL BE APPLIED AT A RATE OF 2 LBS./1000 SQ. FT.  
 PLANTING SEASONS SHALL BE APRIL 1 TO JUNE 1 AND AUGUST 1 TO OCTOBER 1. AFTER OCTOBER 1, AREAS WILL BE STABILIZED WITH STRAWBALE CHECK, FILTER FABRIC, OR WOODCHIP MULCH, AS REQUIRED, TO CONTROL EROSION.
  6. AREAS TO BE LEFT BARE BEFORE FINISHED GRADING AND SEEDING IS ACHIEVED, SHALL RECEIVE A TEMPORARY SEEDING OF PERENNIAL RYEGRASS APPLIED TO A RATE OF 2 LBS./1,000 SQ. FT. AT A DEPTH OF 1/2 INCH. LIMESTONE (EQUIVALENT TO BE 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) SHALL BE APPLIED AS SEEDBED PREPARATION AT A RATE OF 90 LBS./1,000 SQ. FT. PLANTING SEASONS SHALL BE APRIL 1 TO JUNE 1 AND AUGUST 1 TO OCTOBER 1. WHERE GRASS PREDOMINATES, FERTILIZE ACCORDING TO A SOIL TEST AT A MINIMUM APPLICATION RATE OF 1 LB. OF NITROGEN PER 1,000 SQ. FT. AREAS TO BE LEFT BARE BEFORE FINISH GRADING AND SEEDING OUTSIDE OF PLANTING SEASONS SHALL RECEIVE AN AIR-DRIED WOOD CHIP MULCH, FREE OF COARSE MATTER, TREATED WITH 1-2 LBS. NITROGEN PER TON, APPLIED AT A RATE OF 185-275 LBS./1,000 SQ. FT.
  7. AT ALL PROPOSED FILL AREAS WHICH ARE NOT CURRENTLY SHOWN ON THESE PLANS, THE CONTRACTOR SHALL ESTABLISH AN EROSION CONTROL LINE (STRAW BALE CHECK OR FILTER FABRIC) ABOUT TEN (10) FEET FROM TOE TO SLOPE OF PROPOSED FILL AREAS PRIOR TO BEGINNING FILL INSTALLATION. STABILIZATION OF SLOPES IN FILL AREAS (USING MULCH OR GRASS) SHALL BE INITIATED WITHIN THIRTY (30) DAYS OF COMMENCEMENT OF FILL INSTALLATION.
  8. STABILIZATION OF SLOPES IN CUT AREAS (USING MULCH OR GRASS) AND THE INSTALLATION OF CONTROL LINE (STRAW BALE CHECK OR FILTER FABRIC) AT THE TOE OF SLOPE SHALL BE INITIATED WITHIN THIRTY (30) FEET.
  9. SEDIMENT REMOVED FROM CONTROL STRUCTURES WILL BE DISPOSED IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN. ALL STRAW BALES OR SILT FENCE RETAINING SEDIMENT OVER 12" HEIGHT SHALL HAVE THE SEDIMENT REMOVED AND ALL DAMAGED EROSION CONTROLS SHALL BE REPAIRED OR REPLACED.
  10. CONTRACTOR WILL BE ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER TOWN AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY. THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
  11. THE CONTRACTOR SHALL SECURE THE SERVICES OF A PROFESSIONAL ENGINEER, WHO SHALL VERIFY IN THE FIELD THAT THE CONTROLS REQUIRED BY THIS PLAN ARE PROPERLY INSTALLED, SHALL MAKE INSPECTION OF SUCH FACILITIES NOT LESS FREQUENTLY THAN EVERY 14 DAYS OR AFTER A RAINFALL IN EXCESS OF 1/4 INCH, WHICHEVER OCCURS FIRST.
  12. STOCKPILES OF SOIL SHALL BE SURROUNDED BY A SEDIMENT BARRIER. SOIL STOCKPILES TO BE LEFT BARE FOR MORE THAN THIRTY (30) DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION OR MULCH. IF SOIL STOCKPILES ARE TO REMAIN FOR MORE THAN SIXTY (60) DAYS, FILTER FABRIC SHALL BE USED IN PLACE OF STRAW BALES. SIDE SLOPES SHALL NOT EXCEED 2:1.
  13. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE LIFE OF HIS CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO SPRINKLING OF WATER ON EXPOSED SOILS AND HAUL ROADS AS NEEDED. CONTRACTOR SHALL CONTROL DUST TO PREVENT A HAZARD TO TRAFFIC.
  14. IF FINAL GRADING IS TO BE DELAYED FOR MORE THAN THIRTY (30) DAYS AFTER LAND DISTURBANCES CEASE, TEMPORARY VEGETATION OR MULCH SHALL BE USED TO STABILIZE SOILS.
  15. STRAW BALES SHALL BE USED ONLY AS A TEMPORARY MEASURE. WHERE CONTROL MEASURES WILL BE REQUIRED FOR LONGER THAN SIXTY (60) DAYS, FILTER FABRIC SHALL BE USED.
  16. WHERE DEWATERING IS NECESSARY, THERE SHALL NOT BE A DISCHARGE DIRECTLY INTO WETLANDS OR WATERCOURSES. PROPER METHODS AND DEVICES SHALL BE UTILIZED TO THE EXTENT PERMITTED BY LAW, SUCH AS PUMPING WATER INTO A TEMPORARY SEDIMENTATION BOWL, PROVIDING SURGE PROTECTION AT THE INLET AND THE OUTLET OF PUMPS, OR FLOATING THE INTAKE OF THE PUMP, OR OTHER METHODS TO MINIMIZE AND RETAIN THE SUSPENDED SOLIDS. IF A PUMPING OPERATION IS CAUSING TURBIDITY PROBLEMS, SAID OPERATION SHALL CEASE UNTIL SUCH TIME AS FEASIBLE MEANS OF CONTROLLING TURBIDITY ARE DETERMINED AND IMPLEMENTED. SAID DISCHARGE POINTS SHALL BE LOCATED OVER 100 FEET FROM THE DELINEATED WETLANDS AS INDICATED ON THIS PLAN.
  17. THE CONTRACTOR SHALL OBTAIN AN NPDES PERMIT PRIOR TO THE START OF CONSTRUCTION.



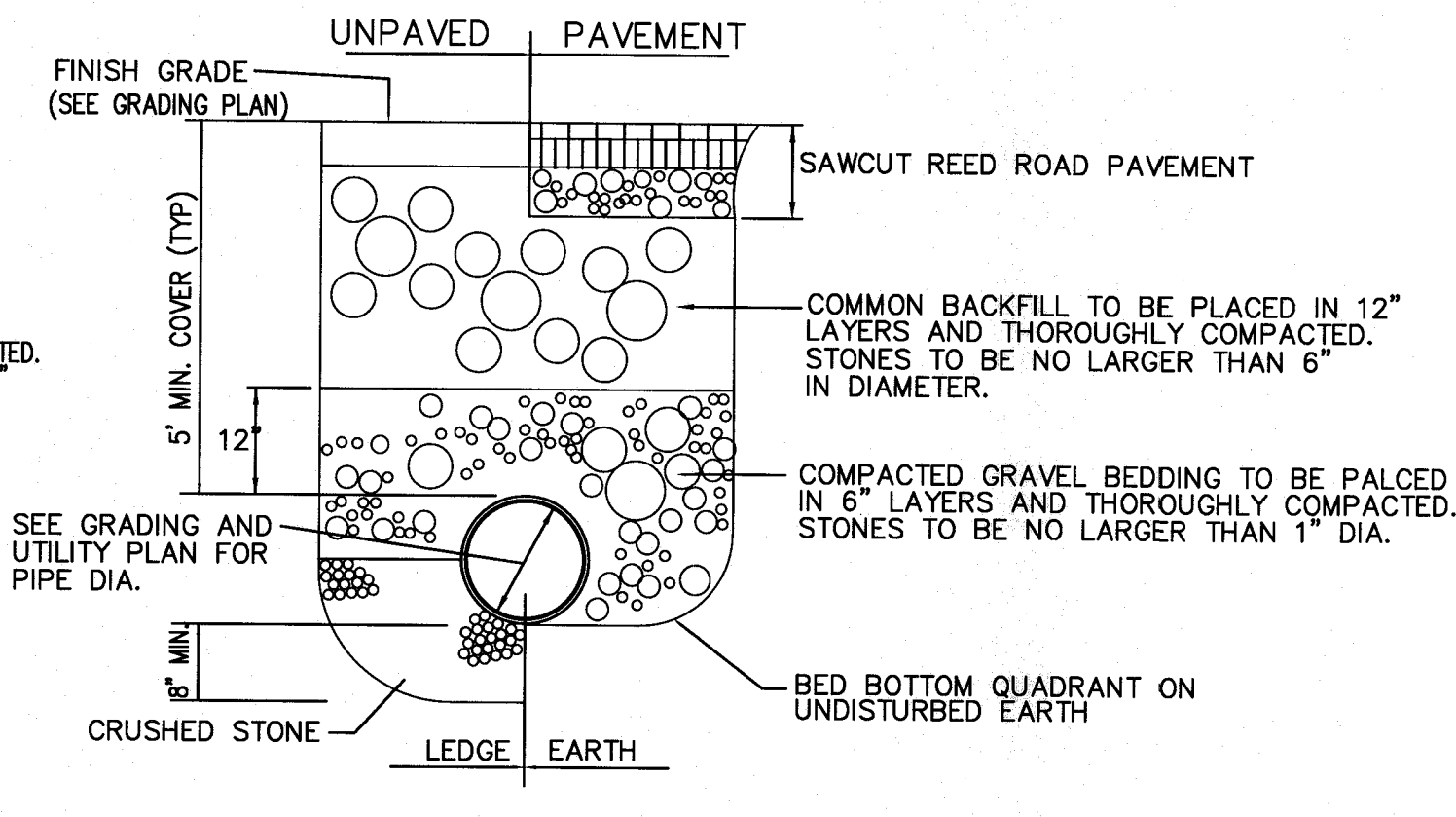
REV	DATE	DESCRIPTION	BY	APP
4	2/14/2020	RESPONSE TO COMMENTS	SWL	RJR
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DRAWING TITLE		EROSION CONTROL PLAN	
PROJECT		MAP 31- LOT 117C FAIRHAVEN, MASSACHUSETTS	
CLIENT		DANA LEWIS FAIRHAVEN, MASSACHUSETTS	
DRAWN BY		SWL	
DESIGNED BY		RJR	
CHECKED BY		RJR	
APPROVED BY		RJR	
DRAWING NO.		PROJECT NO.	
PRIME ENGINEERING		2729-01-01	



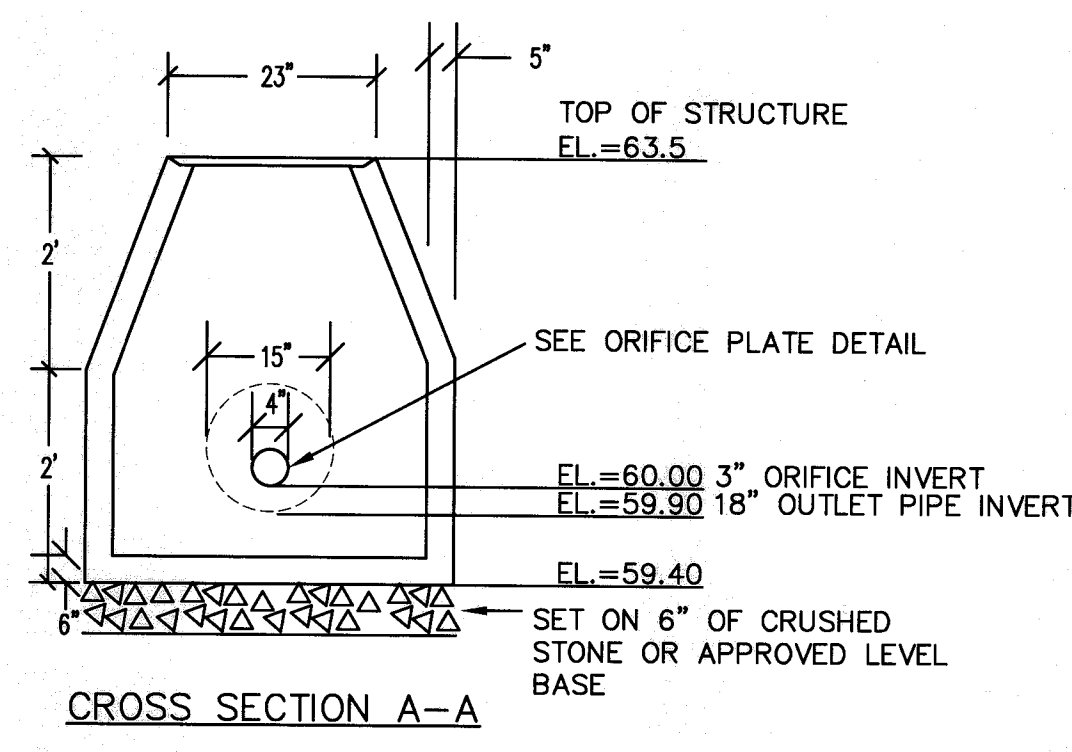
NOTE: ALL DRAINAGE PIPING DIAMETERS SPECIFIED ON GRADING AND UTILITIES PLAN DRAINAGE PIPING SHALL BE HDPE ASTM D 3350 OR APPROVED EQUAL

**DRAINAGE PIPE TRENCH DETAIL**  
NOT TO SCALE

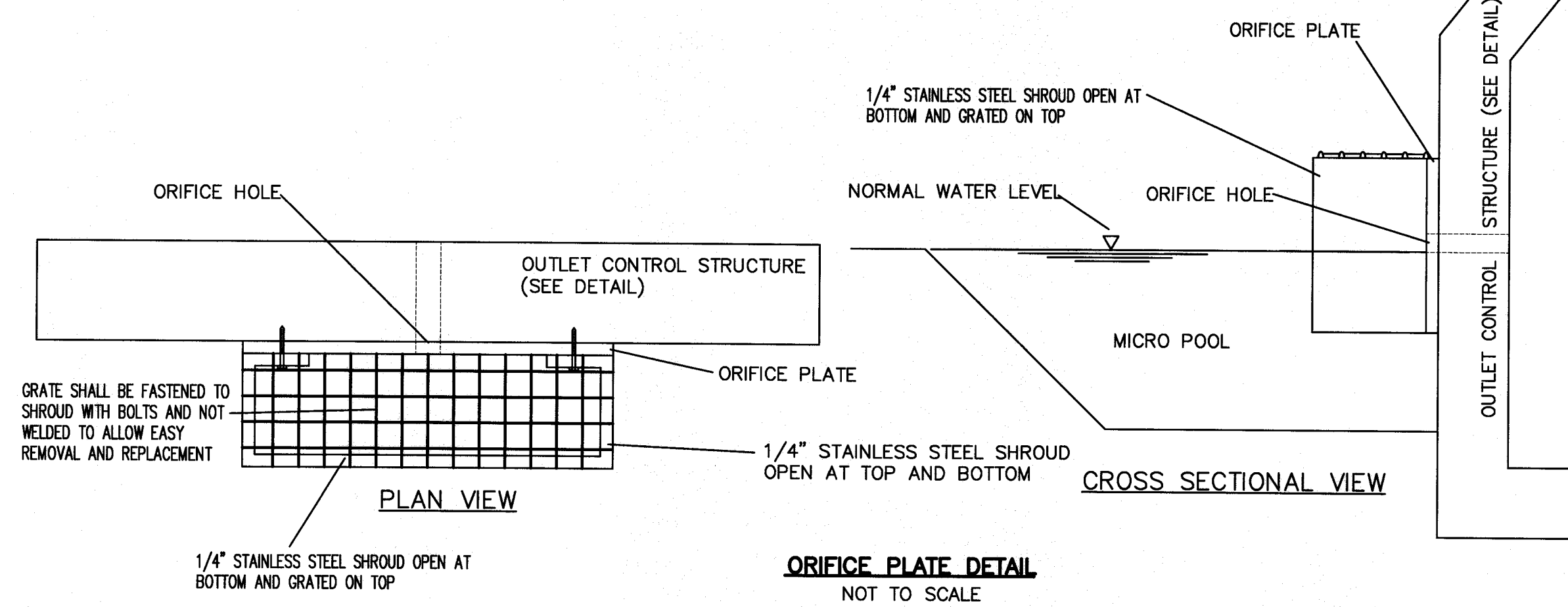


NOTE: WATER MAIN SHALL BE CDI CLASS 52. GATE VALVES SHALL BE (OPEN RIGHT) U.S. PIPE A-USPO-23, MUELLER A2360-23 RESILIENT SEATED OR AMERICAN FLOW CONTROL SERIES 2500

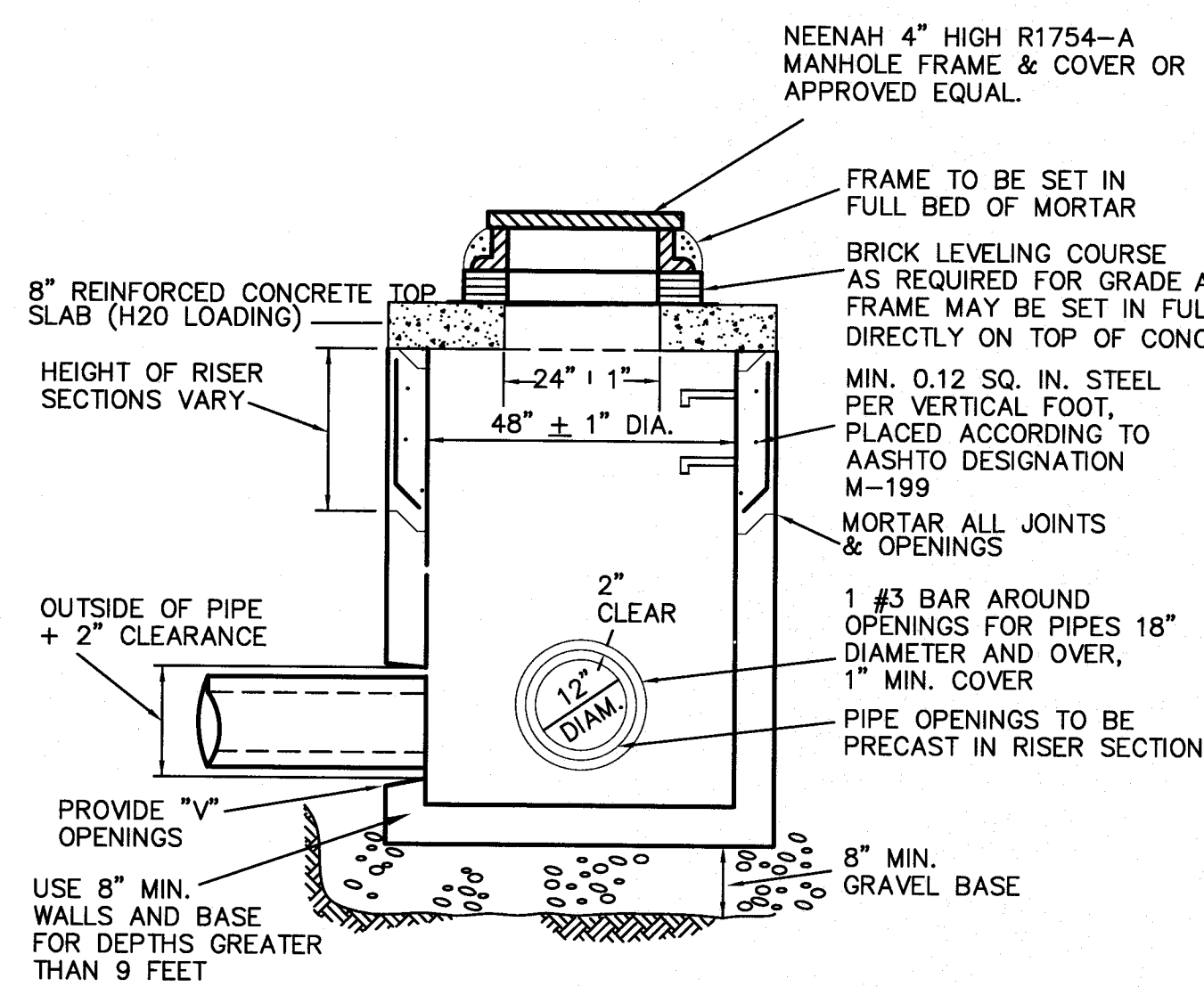
**WATER MAIN TRENCH DETAIL**  
NOT TO SCALE



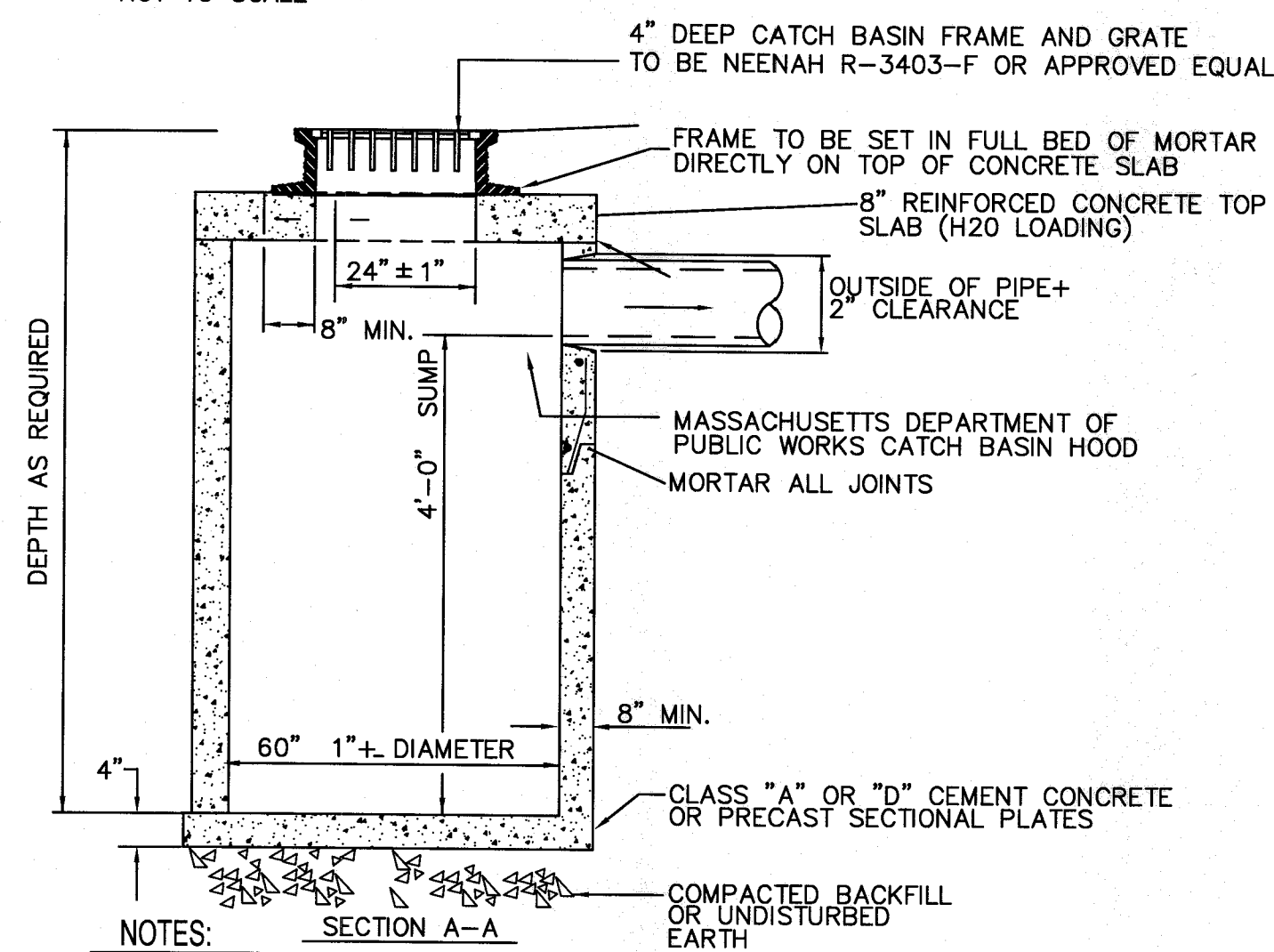
**DETENTION BASIN OUTLET STRUCTURE DETAIL**  
NOT TO SCALE



**ORIFICE PLATE DETAIL**  
NOT TO SCALE

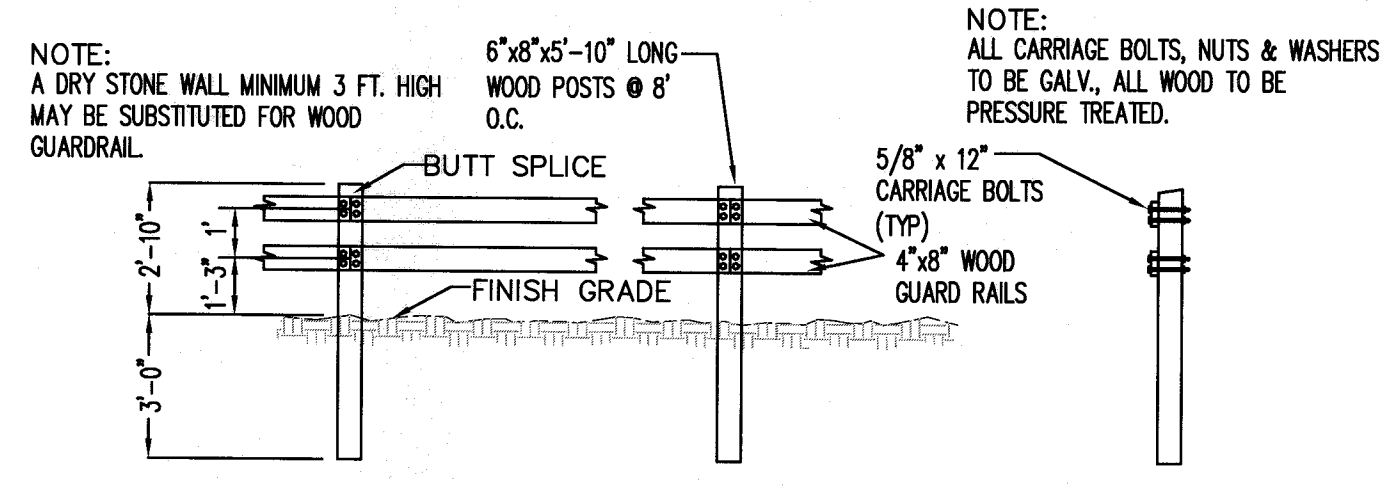


**PRECAST CONCRETE FLAT TOP DRAIN MANHOLE**  
NOT TO SCALE

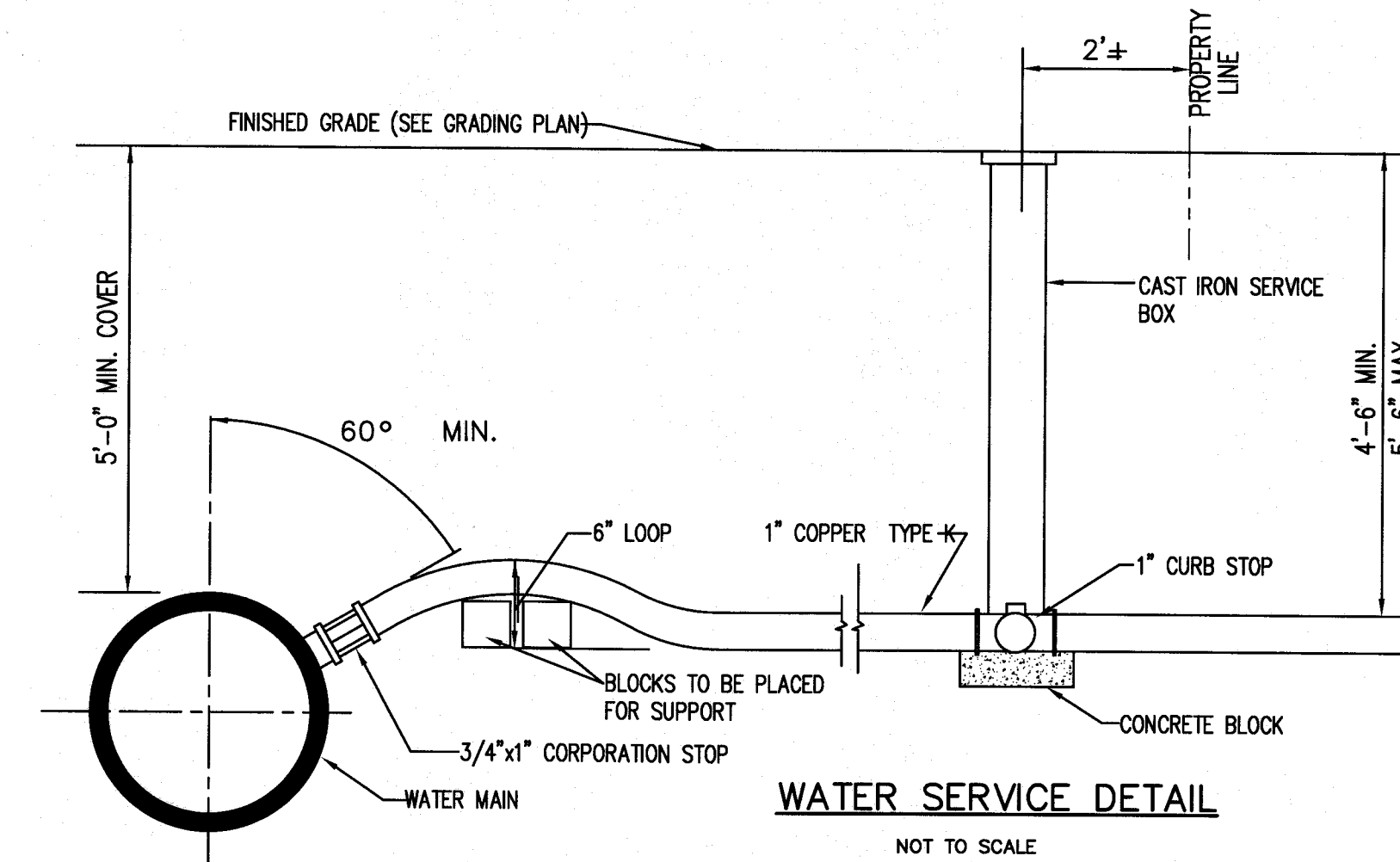


NOTES:  
1. MASSACHUSETTS STANDARD CATCH BASIN HOOD SHALL BE INSTALLED ON OUTLET PIPE.

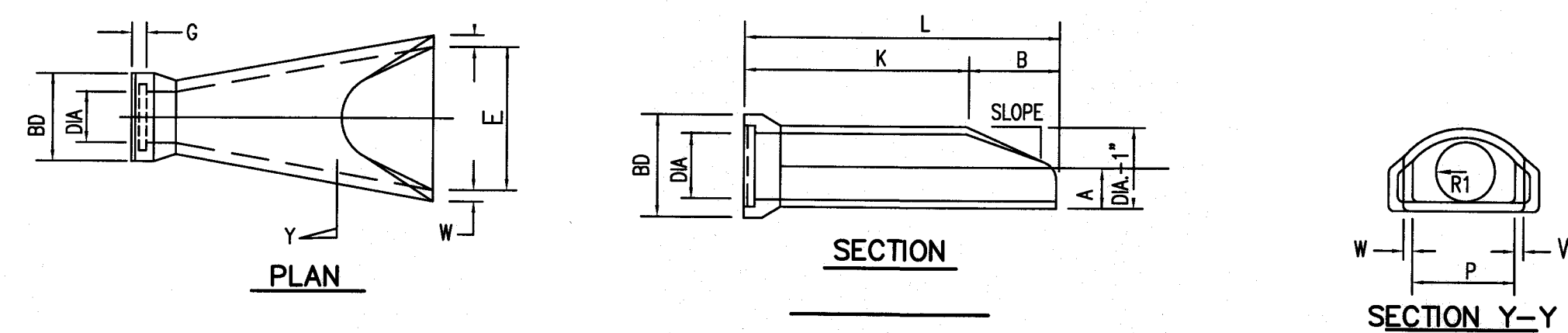
**TYPICAL FLAT TOP CATCH BASIN**  
NOT TO SCALE



**TYPICAL WOOD GUARD RAIL DETAILS**  
NOT TO SCALE

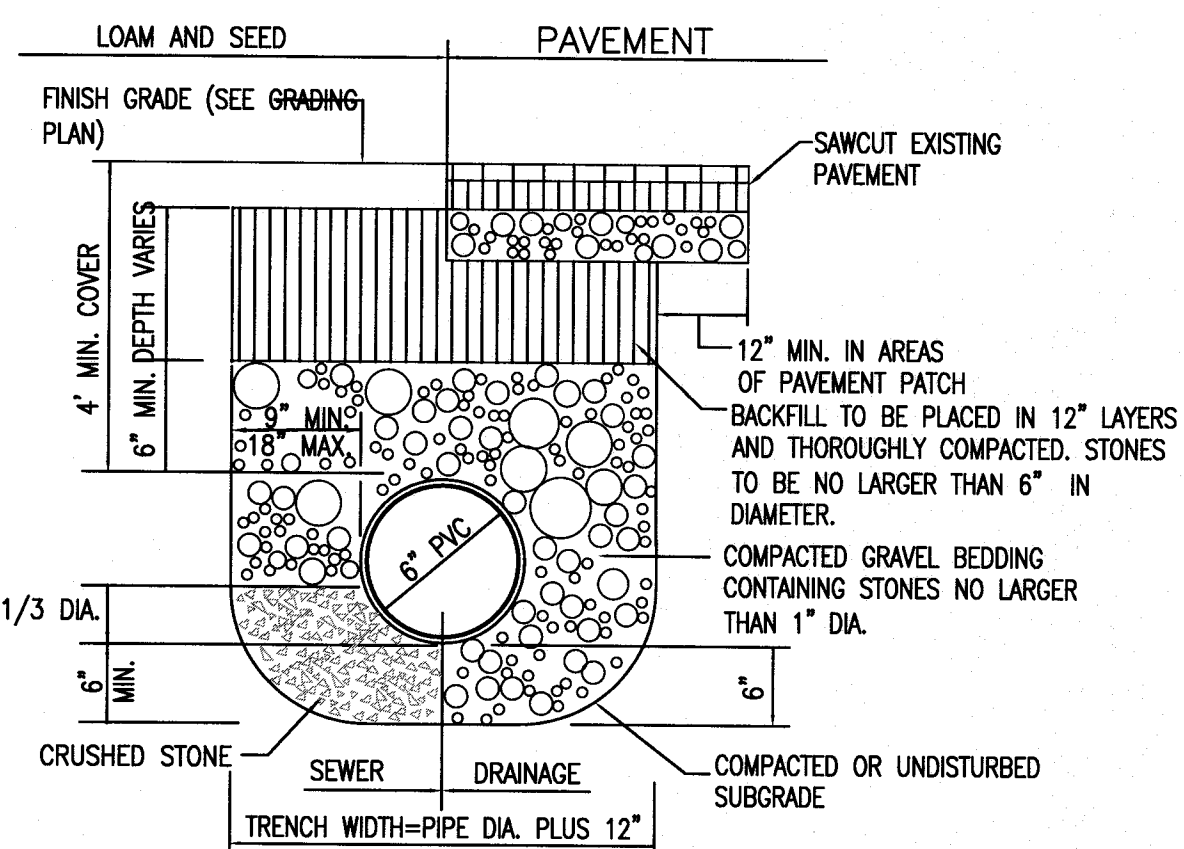


**WATER SERVICE DETAIL**  
NOT TO SCALE



**CONCRETE FLARED END SECTION**  
NOT TO SCALE

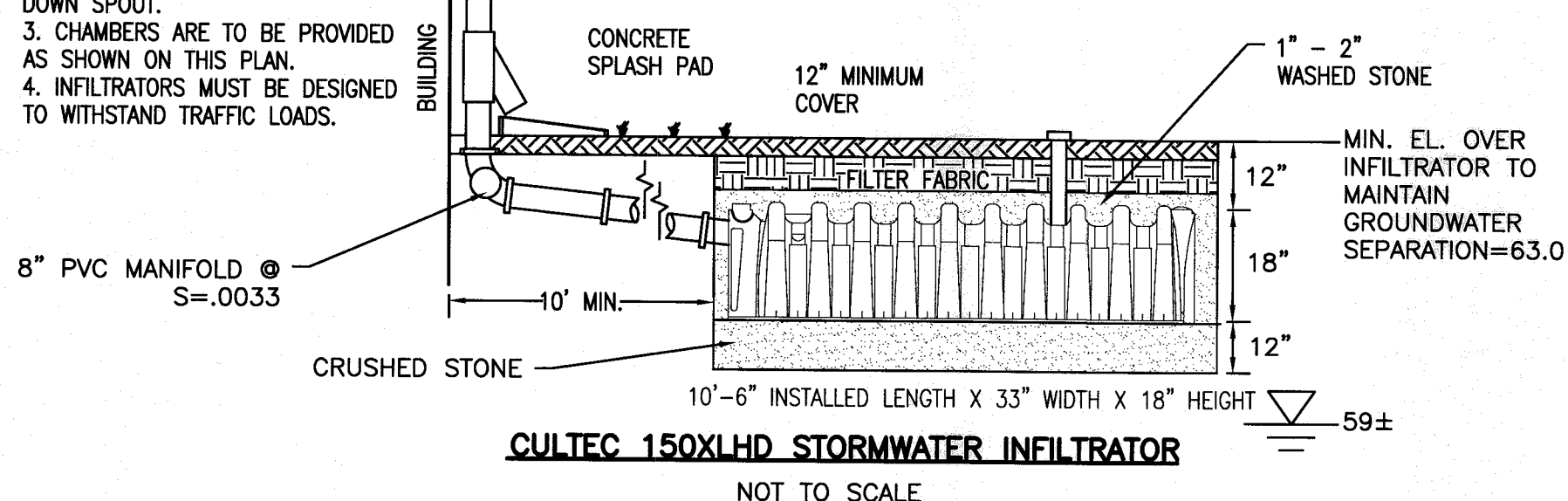
DIA.	W	A	B	C	D	E	BD	K	L	P	DIA. +1"	R1	R2	S	G	SLOPE
12" OR 18"	2"	4"	2'-0"	4'-07/8"	6'-1 3/4"	2'-0"	23"	4'-6 1/8"	6'-6 1/8"	19 13/16"	13" OR 19"	10 1/2"	9"	4"	2 1/2"	3:1



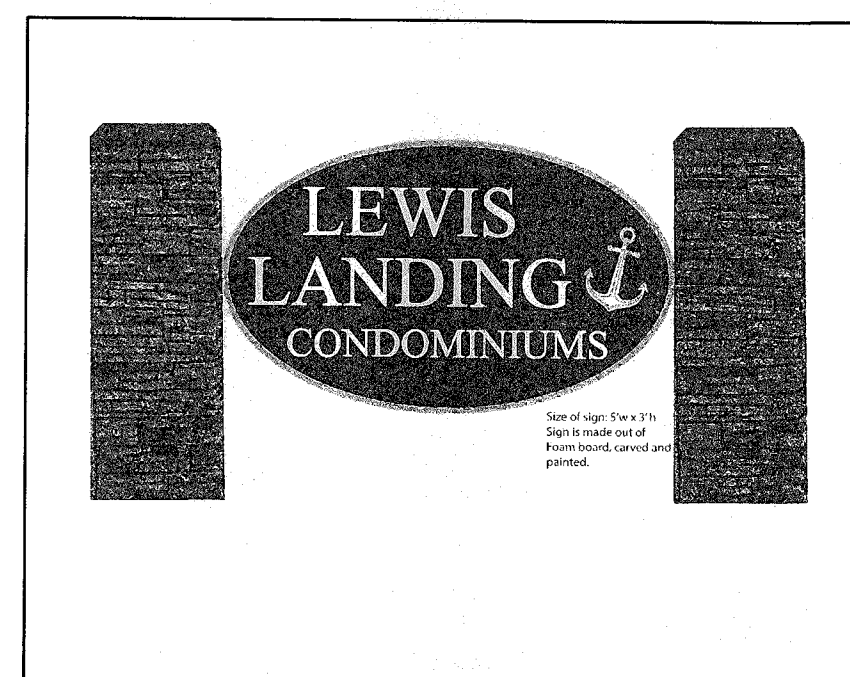
**SEWER PIPE TRENCH DETAIL**  
NOT TO SCALE

**CONSTRUCTION NOTES:**

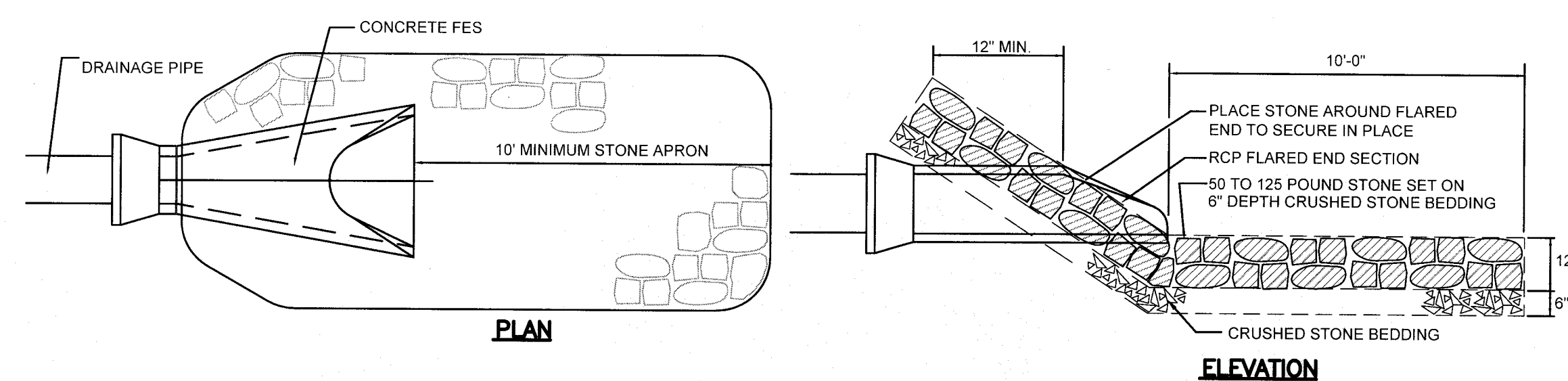
1. TOPSOIL AND SUBSOIL SHALL BE REMOVED BENEATH CHAMBER.
2. HEAVY DUTY WIRE STRAINERS ARE TO BE INSTALLED AT ALL DOWN SPOUTS. THIS IS TO PREVENT LEAVES AND OTHER DEBRIS FROM CLOGGING DOWN SPOUT.
3. CHAMBERS ARE TO BE PROVIDED AS SHOWN ON THIS PLAN.
4. INFILTRATORS MUST BE DESIGNED TO WITHSTAND TRAFFIC LOADS.



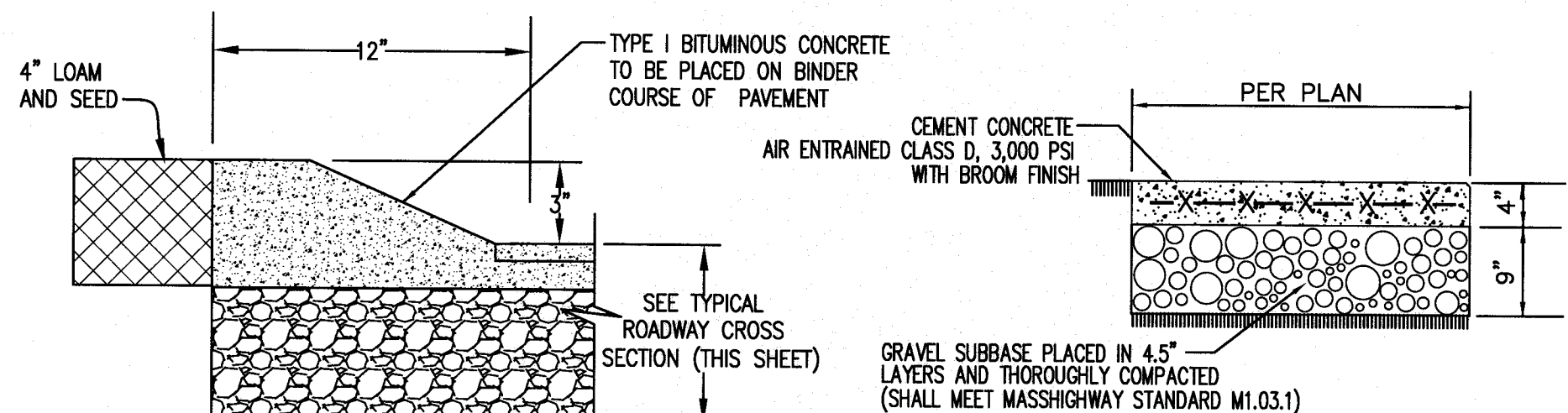
**CULTEC 150XLHD STORMWATER INFILTRATOR**  
NOT TO SCALE



**PROPOSED GROUND SIGN**  
NOT TO SCALE

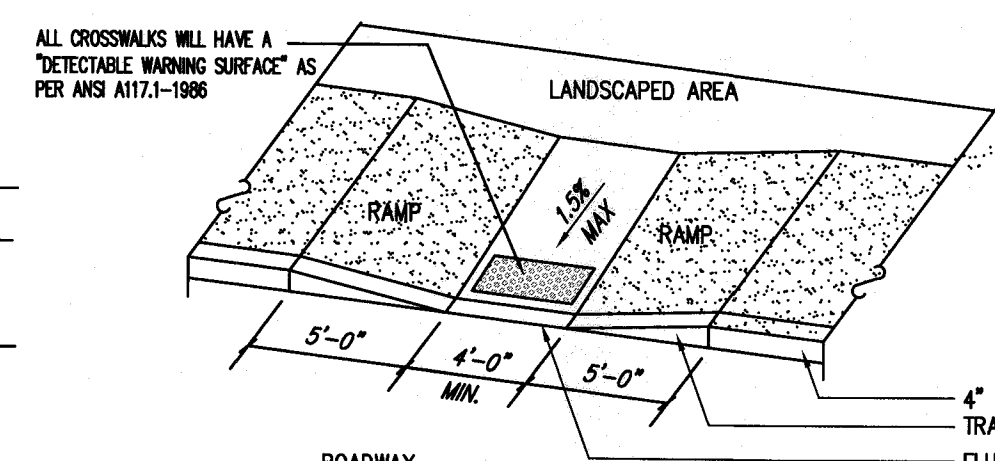


**STONE APRON AT PIPE END**  
NOT TO SCALE

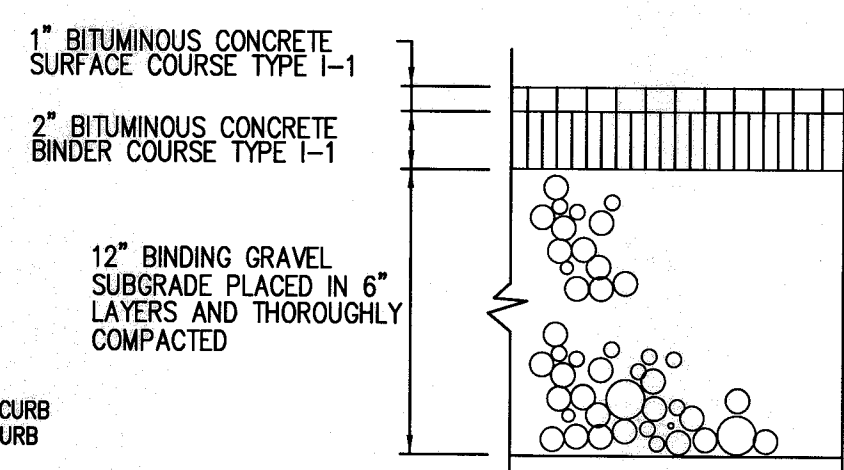


**CAPE COD BERM**  
NOT TO SCALE

**CONCRETE WALK**  
NOT TO SCALE



**HANDICAP RAMP**  
NOT TO SCALE

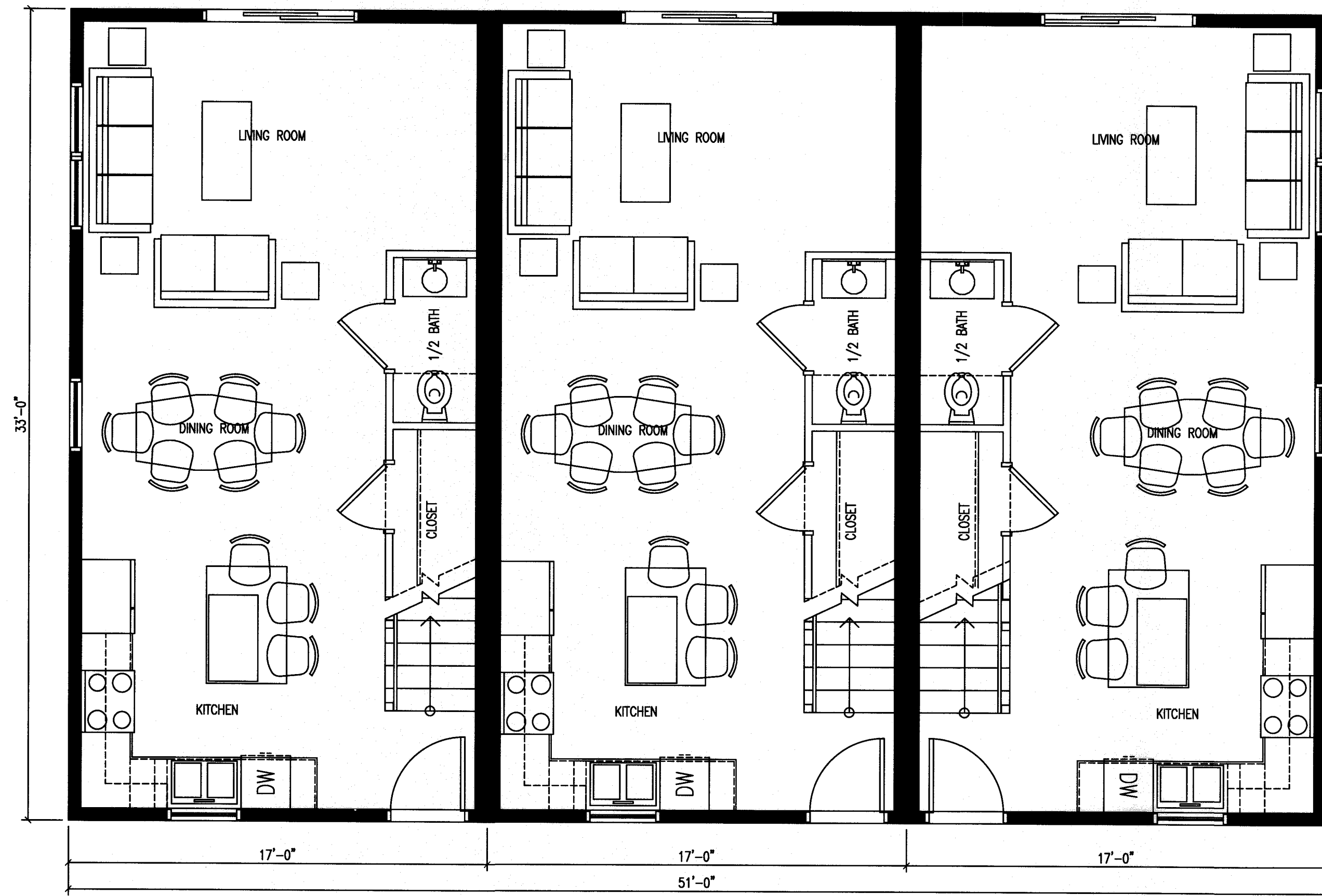


**BITUMINOUS CONCRETE PAVEMENT**  
NOT TO SCALE

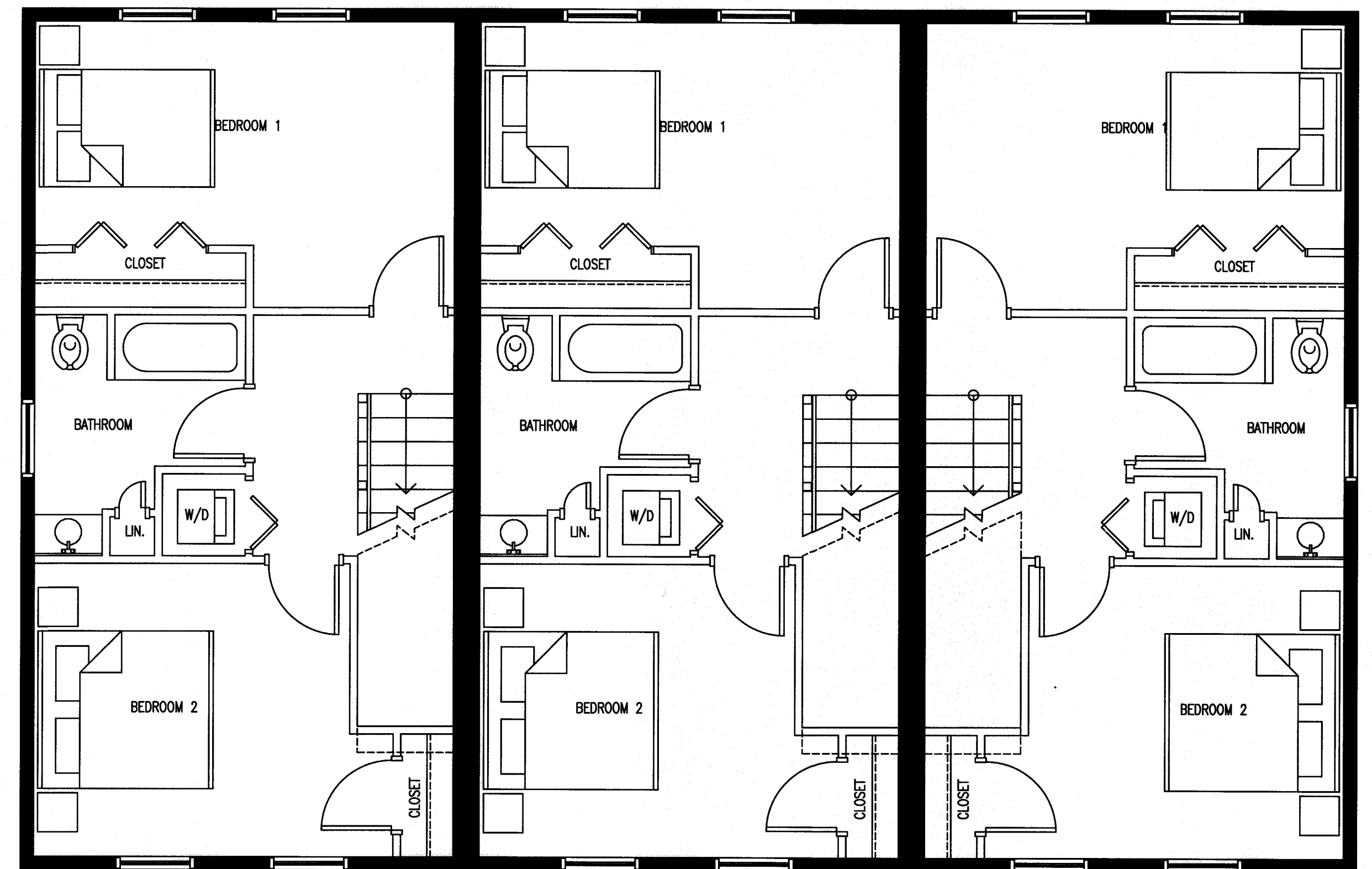
REV	DATE	DESCRIPTION	BY	APP
4	2/14/2020	RESPONSE TO COMMENTS	SWL	RJR
3	1/22/2020	RESPONSE TO COMMENTS	SWL	RJR
2	12/4/2019	RESPONSE TO COMMENTS	SWL	RJR
1	11/8/2019	RESPONSE TO COMMENTS	SWL	RJR

DRAWING TITLE		DETAIL SHEET-1	
PROJECT		MAP 31- LOT 117C FAIRHAVEN, MASSACHUSETTS DANA LEWIS FAIRHAVEN, MASSACHUSETTS	
CLIENT		PRIME ENGINEERING	
SCALE		1" = 20'	
DATE		SEPT. 9, 2019	
DRAWN BY:		SWL	
DESIGNED BY:		RJR	
CHECKED BY:		RJR	
APPROVED BY:		RJR	
PROJECT NO.		2729-01-01	
SHEET NO.		5 OF 7	





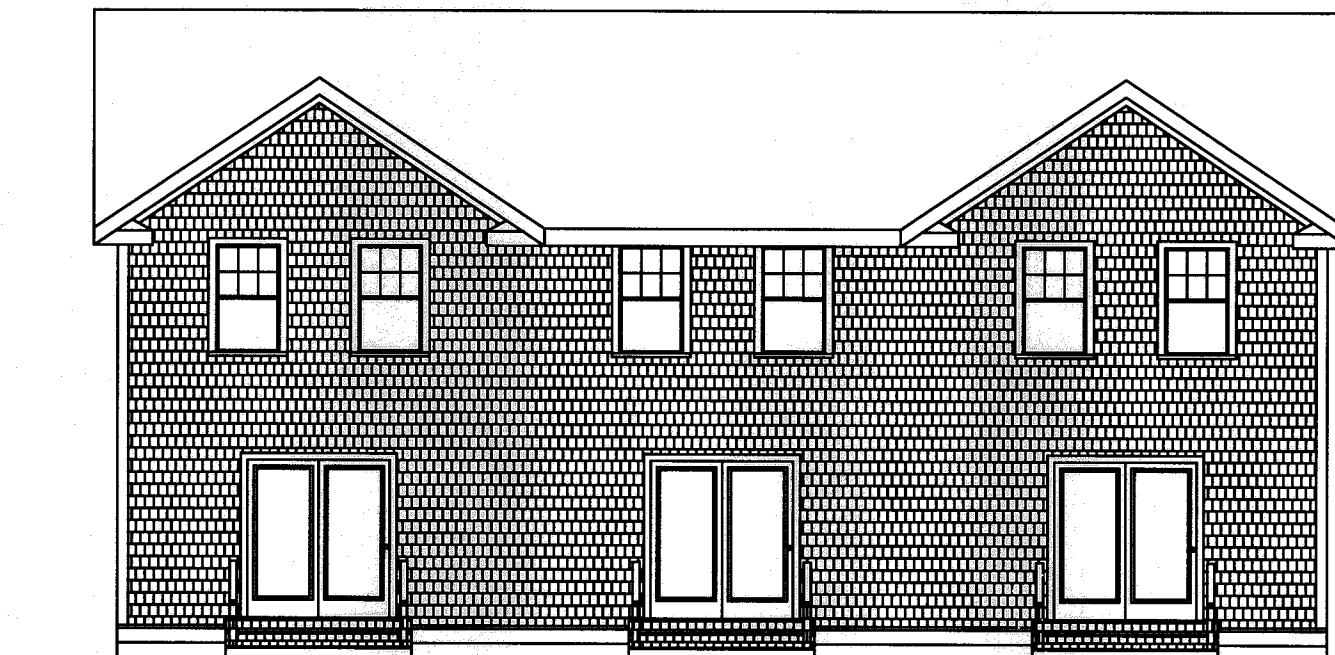
1 PROPOSED FIRST FLOOR PLAN  
A-1.1 1/4"=1'-0"



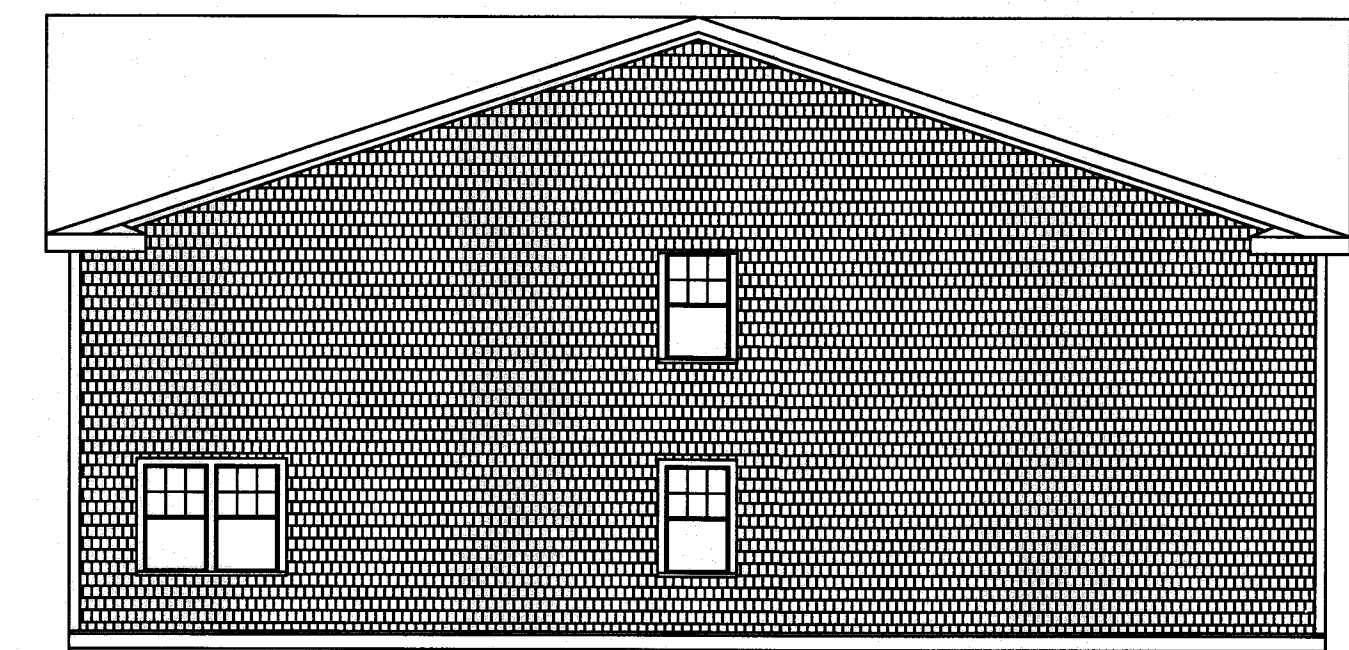
1 PROPOSED SECOND FLOOR PLAN  
A-1.2 1/4"=1'-0"



1 PROPOSED FRONT ELEVATION  
A-2.0 1/8"=1'-0"



1 PROPOSED REAR ELEVATION  
A-2.1 1/8"=1'-0"



1 PROPOSED SIDE ELEVATION  
A-2.2 1/8"=1'-0"

REV	DATE	DESCRIPTION	BY	APP.	DRAWING TITLE	SCALE:
					ARCHITECTURALS	1" = 20'
					PROJECT	DATE:
					MAP 31- LOT 117C	SEPT 9 2019
					FAIRHAVEN, MASSACHUSETTS	DRAWN BY:
					CLIENT	SWL
					DANA LEWIS	DESIGNED BY:
					FAIRHAVEN, MASSACHUSETTS	RJR
					CIVIL ENGINEERING	CHECKED BY:
					LAND SURVEYING	RJR
					ENVIRONMENTAL ASSESSMENT	APPROVED BY:
						RJR
						SHEET NO.
						7 OF 7
						PROJECT NO.
						2729-01-01