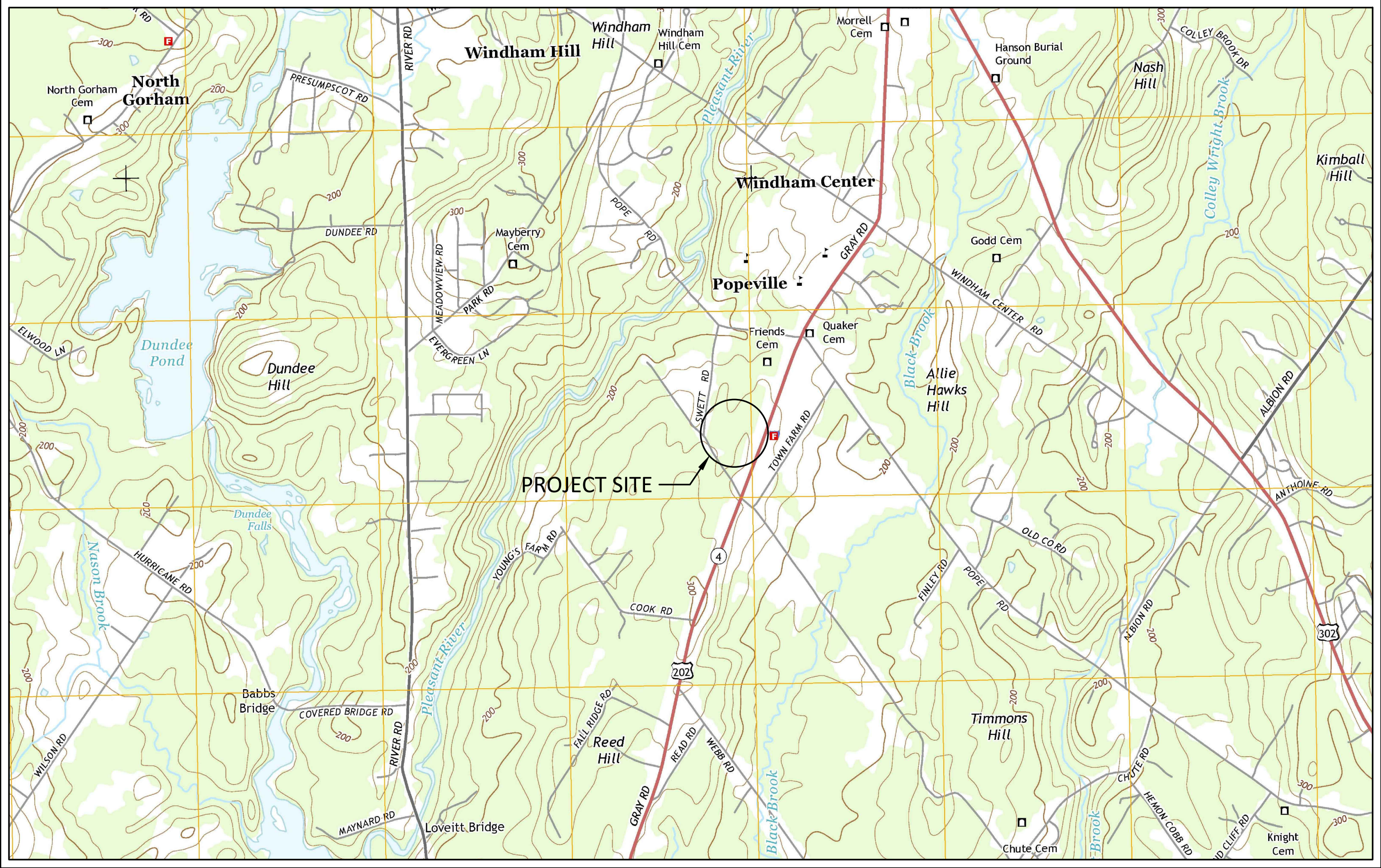


WOODSIDE CONDOMINIUM RETIREMENT COMMUNITY

GRAY ROAD
WINDHAM, MAINE

CONSULTANTS	
CIVIL ENGINEER	DM ROMA CONSULTING ENGINEERS
LAND SURVEYOR	SURVEY, INC.
SITE EVALUATOR	SUMMIT GEOENGINEERING SERVICES
WETLAND SCIENTIST	MARK HAMPTON ASSOCIATES, INC.
GEOLOGIST	SUMMIT GEOENGINEERING SERVICES



PROJECT VICINITY MAP

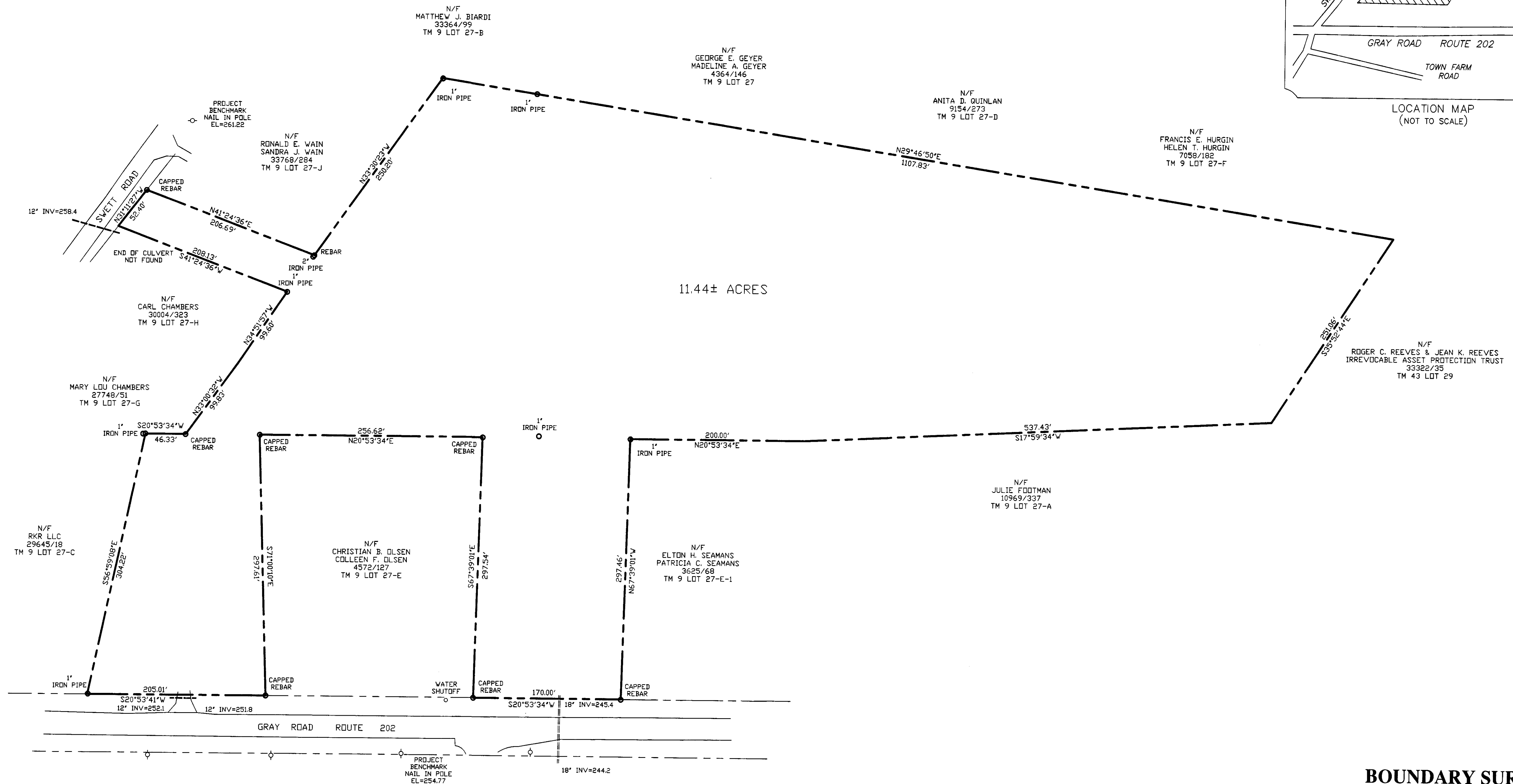
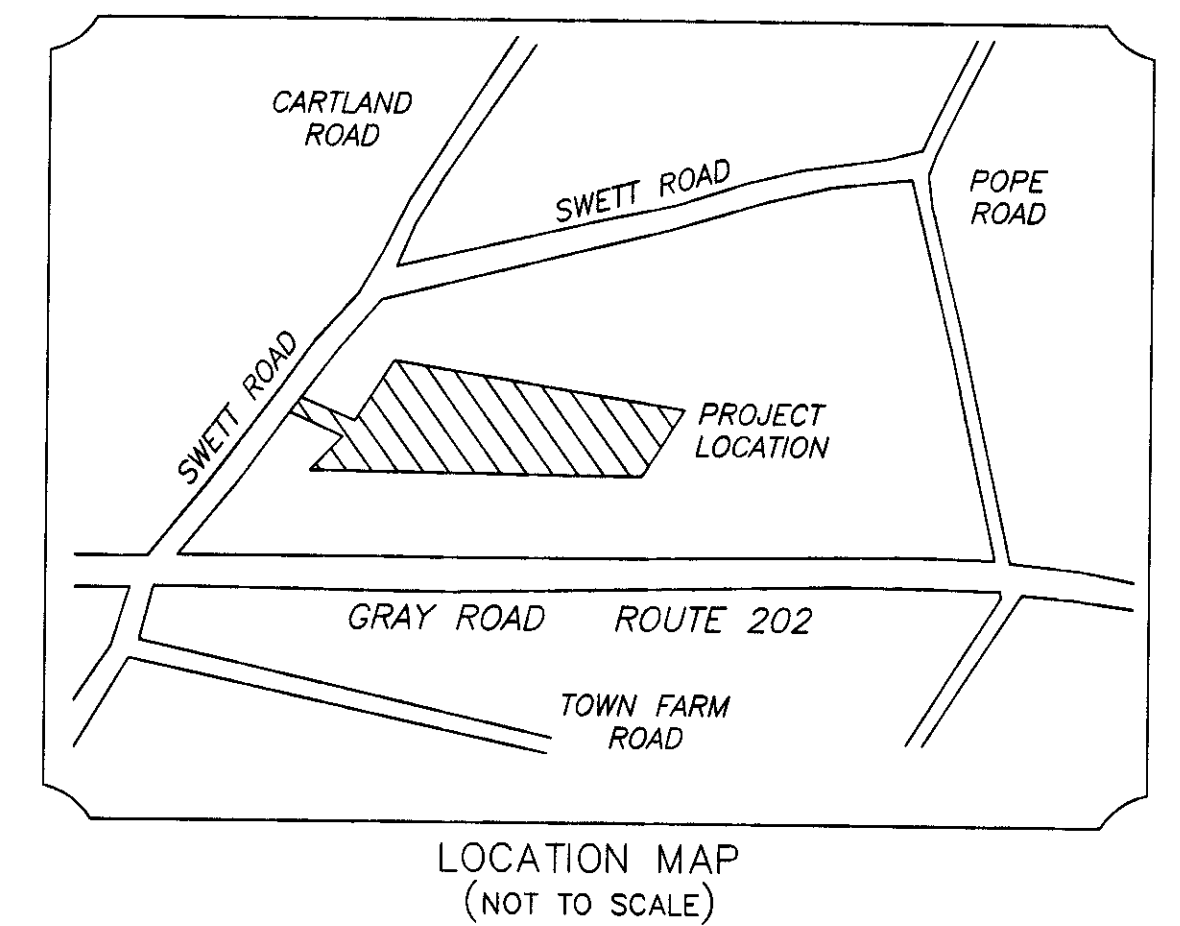
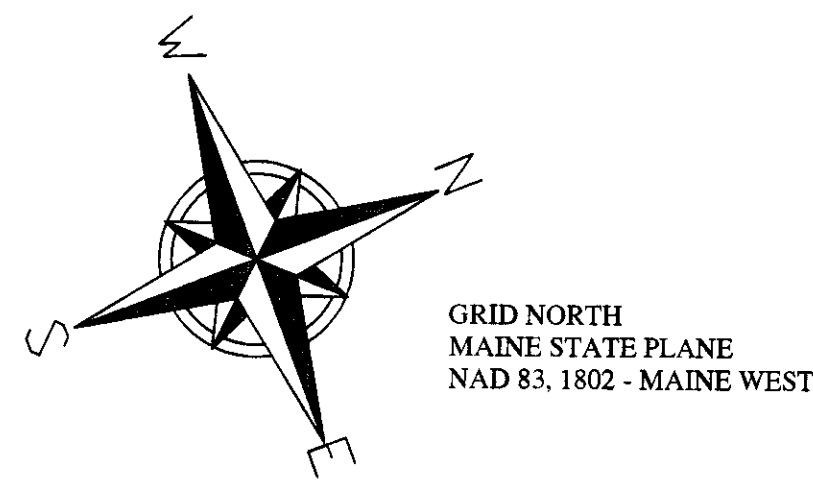
ISSUED FOR PRELIMINARY SUBDIVISION REVIEW - NOT FOR CONSTRUCTION
APRIL 22, 2019

PREPARED BY:
DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

APPLICANT:
WELD, LLC
P.O. BOX 1361
WINDHAM, MAINE 04062

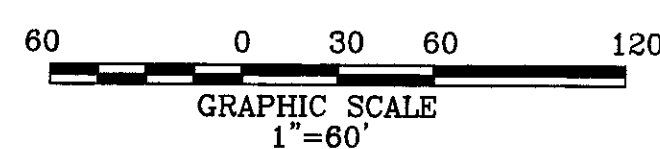
GRAY ROAD RETIREMENT COMMUNITY
DRAWING SHEET INDEX

PAGE NO.	DESCRIPTION
1	TITLE SHEET
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3	AMENDED SUBDIVISION PLAN
4	PLAN & PROFILE
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6	GRADING & UTILITY PLAN
7	GRADING & UTILITY PLAN
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9	ROADWAY PROFILE
10	PLAN & PROFILE: SECONDARY ROAD CONNECTION
11	DETAILS
12	DETAILS
13	DETAILS
14	DETAILS



PLAN REFERENCE:

- (1) PLAN OF LAND ON SWETT ROAD IN WINDHAM, MAINE FOR LAURIE CHAMPAGNE DATED DECEMBER 2016 BY WAYNE T. WOOD & CO.
- (2) PLAN SHOWING A STANDARD BOUNDARY SURVEY MADE FOR CHRISTIAN B. AND COLLEEN F. OLSEN 360 GRAY ROAD WINDHAM, MAINE DATED 08-02-05 BY DANIEL J. DALFONSO LLC.



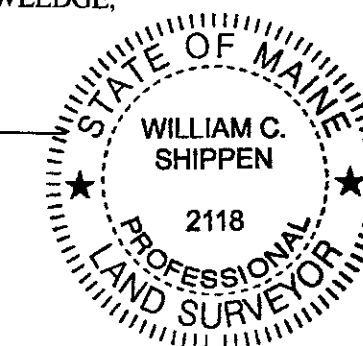
SURVEY NOTES:

- (1) THE RECORD OWNER OF THE PARCEL IS WELD, LLC AS DESCRIBED IN DEEDS RECORDED IN BOOK 33768 PAGE 286 AND BOOK 34816 PAGE 291 IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
- (2) THE PARCEL IS SHOWN AS LOT 27-K AND PORTIONS OF LOT 27-E ON THE TOWN OF WINDHAM'S ASSESSORS MAP 9.
- (3) BEARINGS ARE GRID NORTH, MAINE STATE PLANE 1802 WEST ZONE, BASED ON GPS OBSERVATIONS DURING APRIL 2018.
- (4) VERTICAL DATUM- NAVD 88 BASED ON GPS OBSERVATIONS DURING APRIL 2018.
- (5) BOUNDARIES HEREON REPRESENT A RETRACEMENT OF PLAN REFERENCE 1.

CERTIFICATION:

I CERTIFY THAT THIS SURVEY CONFORMS TO THE STANDARDS OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS AND IS CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

WILLIAM C. SHIPPEN
P.L.S. 2118
7-19-18



BOUNDARY SURVEY
SWETT ROAD AND ROUTE 202
WINDHAM, MAINE

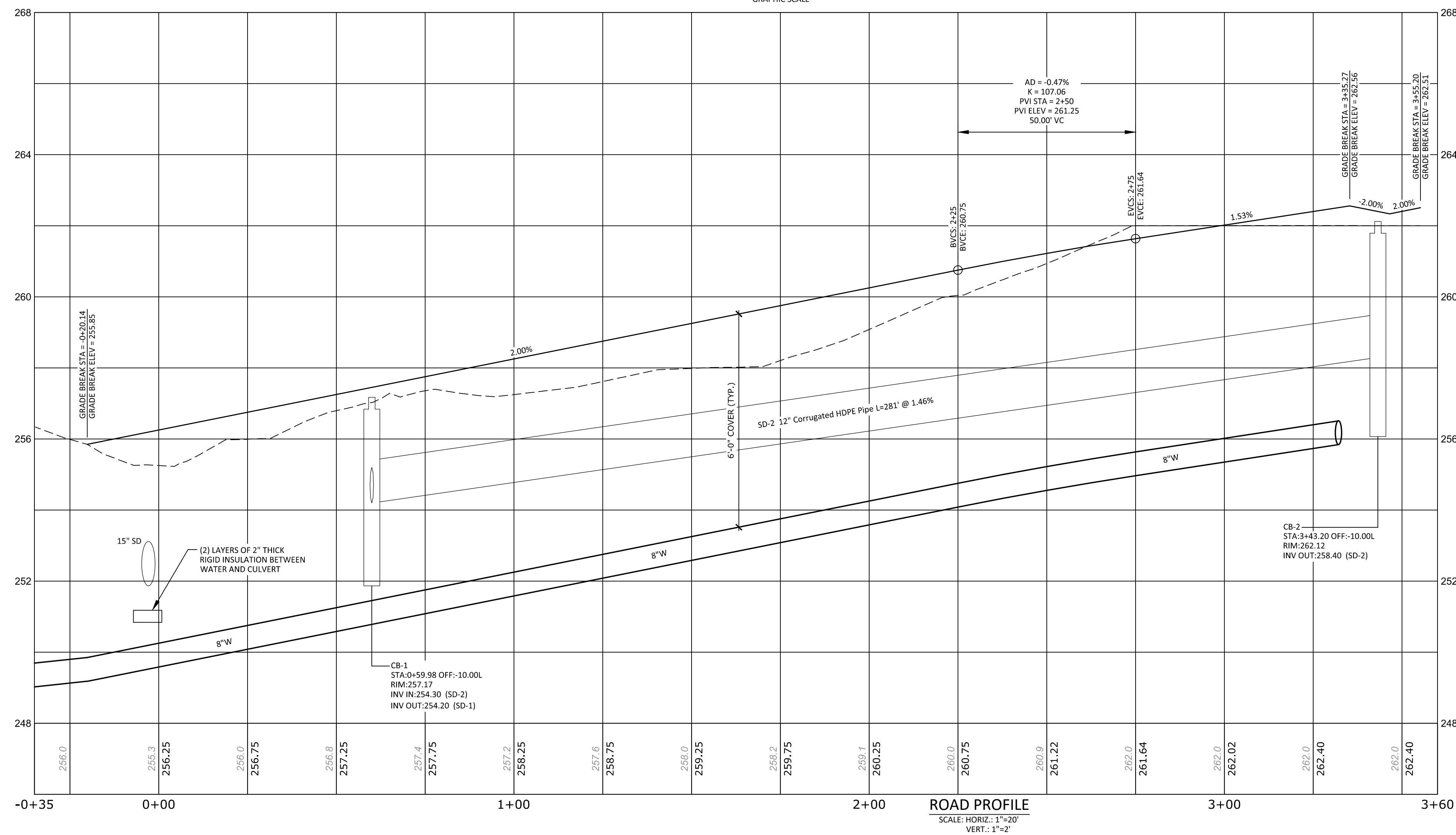
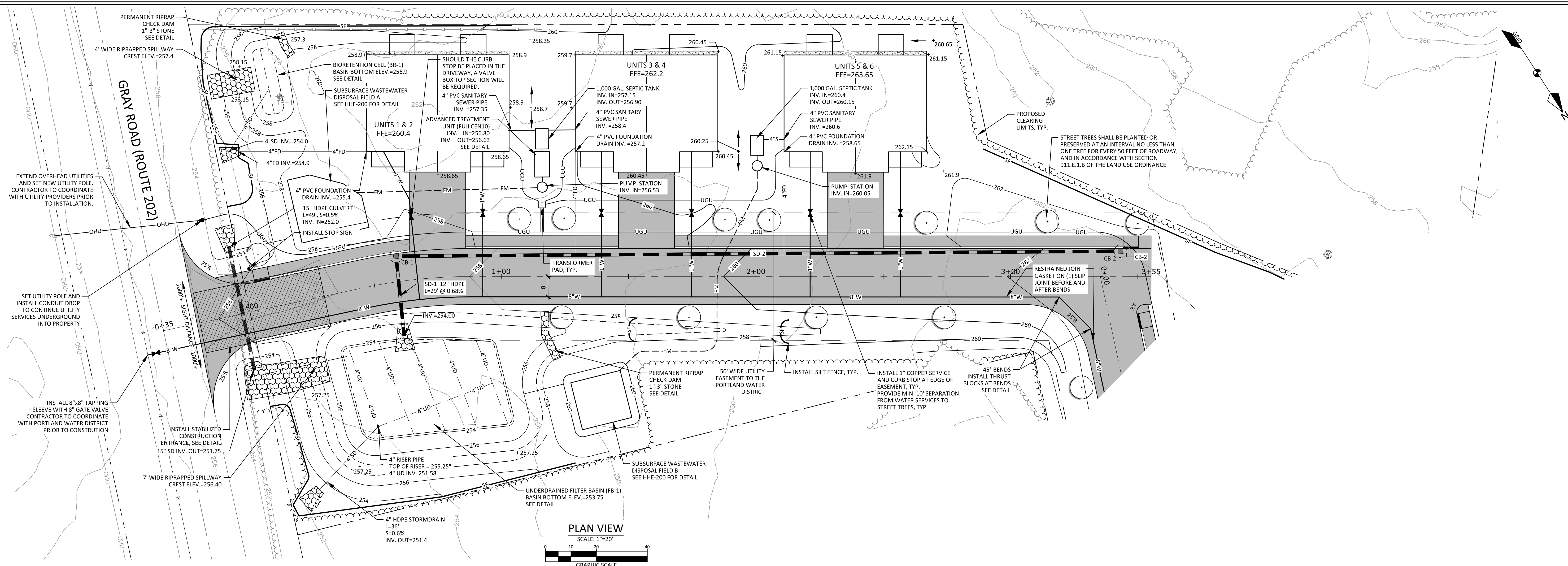
FOR: **HOLMAN DEVELOPMENT CORPORATION**

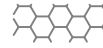
PO BOX 1361
WINDHAM, MAINE 04062
(CLIENT)

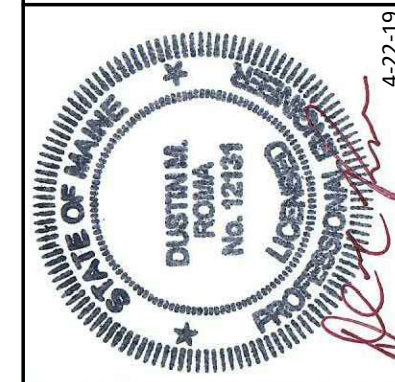
SURVEY BY: **SURVEY, INC.**
P.O. BOX 210
WINDHAM, ME 04062
(207) 892-2556
INFO@SURVEYINCORPORATED.COM

DWN: WCS
DATE: MAY 2018
CHK: DRR
JOB NO. 18042

17070 JOB NUMBER:
1" = 60' SCALE:
4-22-2019 DATE:
SHEET 3 OF 14
ASB-1



EXISTING		PROPOSED
----	PROPERTY LINE/R.O.W.	----
----	ABUTTER PROPERTY LINE	----
----	EASEMENT LINE	----
----	CENTERLINE	----
=====	BUILDING	=====
=====	EDGE OF PAVEMENT/CURB	=====
-----	EDGE OF GRAVEL	-----
-----  -----	EDGE OF WETLANDS	-----
---200'---201'---	CONTOUR LINE	---200'---201'---
~~~~~	TREELINE	~~~~~
	CATCHBASIN	
=====	CULVERT/STORMDRAIN	=====
-----	UNDERDRAIN	-----UD-----
	SEWER MANHOLE	
-----SM-----	SANITARY SEWER PIPE	-----SM-----
-----	FORCE MAIN	-----FM-----
W	WATER MAIN	W
WW	WATER VALVE	WW
	UTILITY POLE	
OHU	OVERHEAD UTILITIES	OHU
UGU	UNDERGROUND UTILITIES	UGU
	TRANSFORMER PAD	
	RIPRAP	
	SILT FENCE	SF



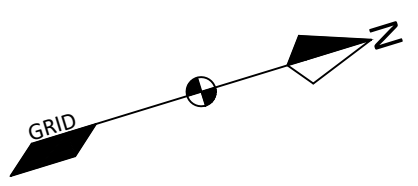
**DM ROMA**  
CONSULTING ENGINEERS  
P.O. BOX 11116  
WINDHAM, ME 04062  
(207) 310 - 0506

REV	DATE	BY	DESCRIPTION
A	4-22-19	DMR	ISSUED TO TOWN FOR PRELIMINARY REVIEW

**PLAN & PROFILE**  
GRAY ROAD RETIREMENT COMMUNITY  
WINDHAM, MAINE

FOR:  
**WELD, LLC**  
PO BOX 1361  
WINDHAM, MAINE 04092

17070 JOB NUMBER:
AS NOTED SCALE:
4-22-2019 DATE:
SHEET 4 OF 14
PP-1

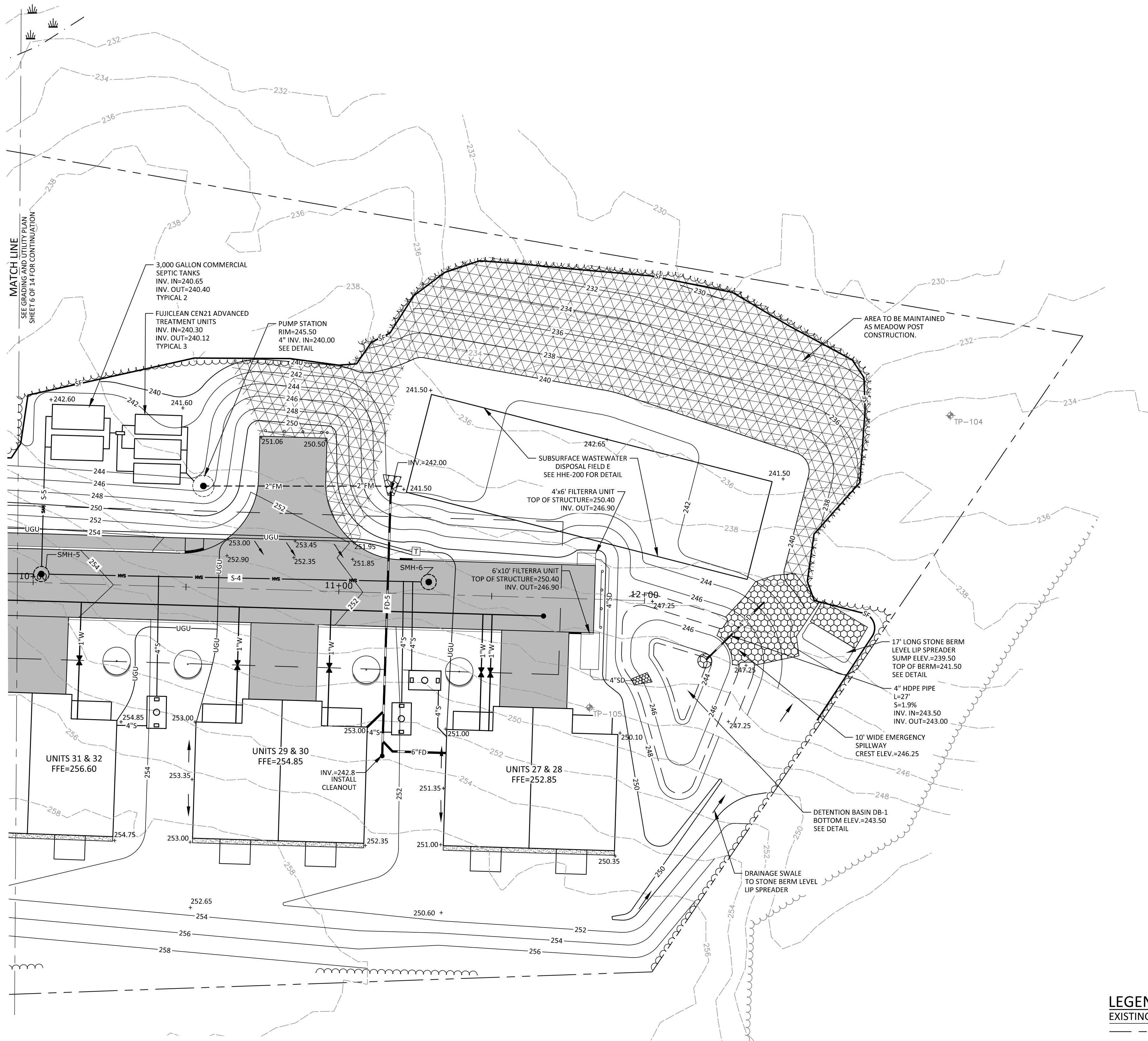


LEGEND		EXISTING	PROPOSED
---	PROPERTY LINE/R.O.W.	---	---
---	ABUTTER PROPERTY LINE	---	---
---	EASEMENT LINE	---	---
---	CENTERLINE	---	---
---	BUILDING	---	---
---	EDGE OF PAVEMENT/CURB	---	---
---	EDGE OF GRAVEL	---	---
	EDGE OF WETLANDS	---	---
	CONTOUR LINE		---
---	TREELINE	---	---
	CATCHBASIN		---
---	CULVERT/STORMDRAIN UNDERDRAIN	---	---
---	SEWER MANHOLE	---	---
	SANITARY SEWER PIPE		---
---	FORCE MAIN	---	---
	WATER MAIN	---	---
	WATER VALVE		---
---	UTILITY POLE	---	---
	OVERHEAD UTILITIES		---
---	UNDERGROUND UTILITIES	---	---
---	TRANSFORMER PAD	---	---
---	ELECTRICAL PULL BOX	---	---
	RIPRAP		---
---	SILT FENCE	---	---

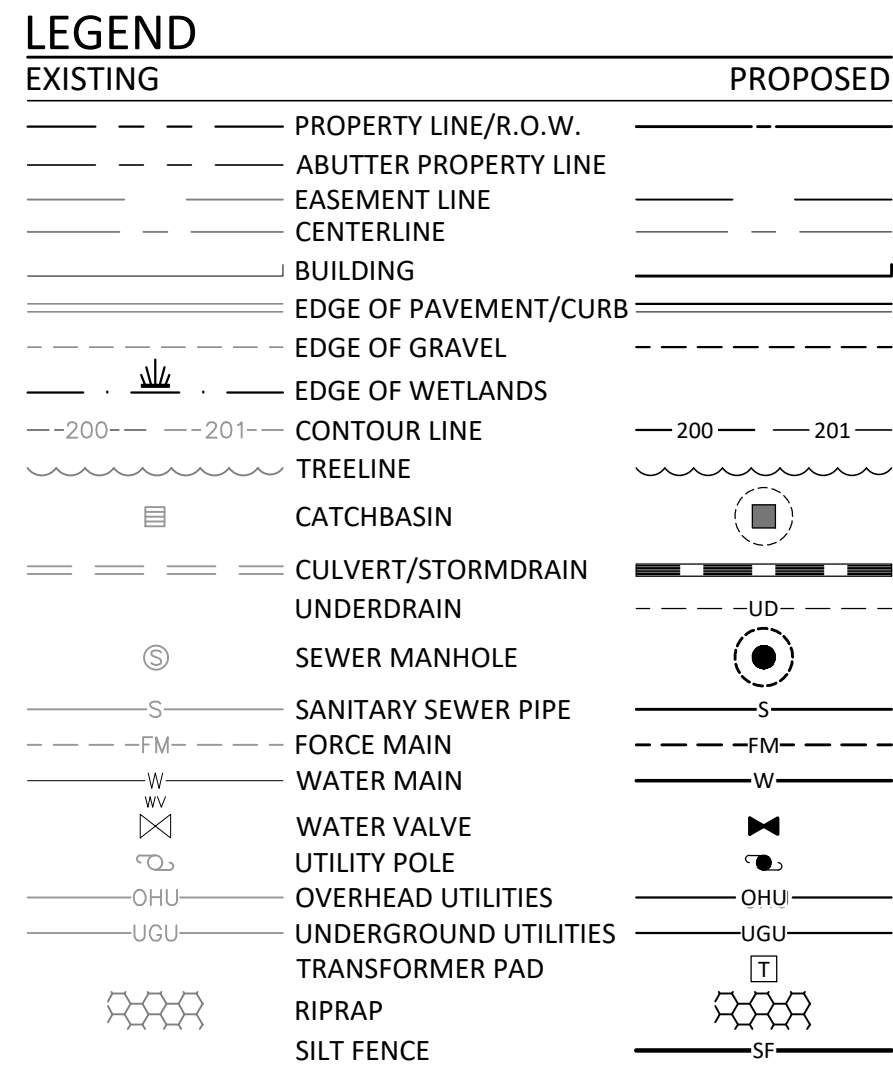
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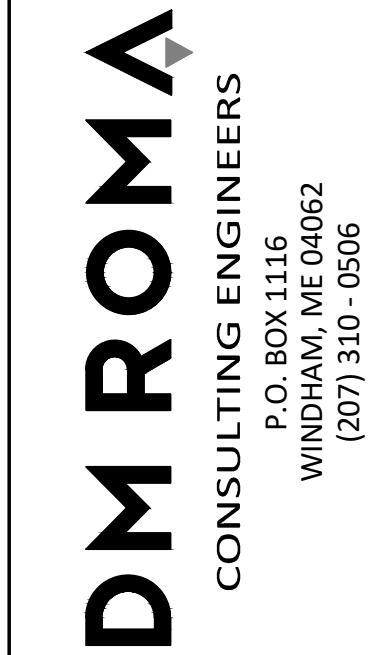
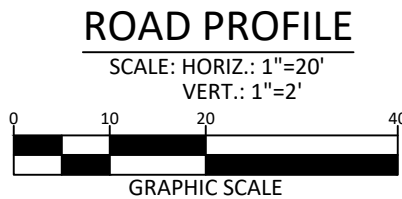


NAME	SIZE	LENGTH	SLOPE
S-4	8"	127'	1.34%
S-5	8"	42'	9.10%
S-6	8"	74'	1.06%



GU-3



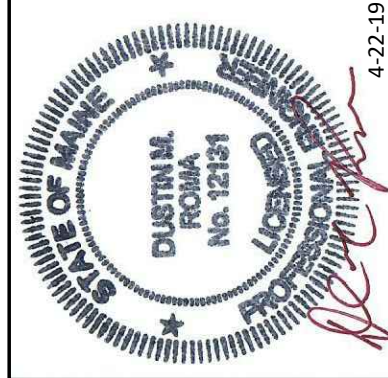
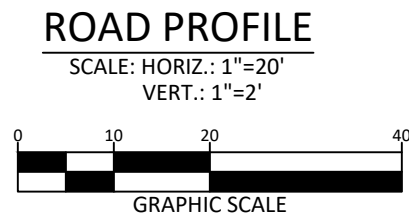
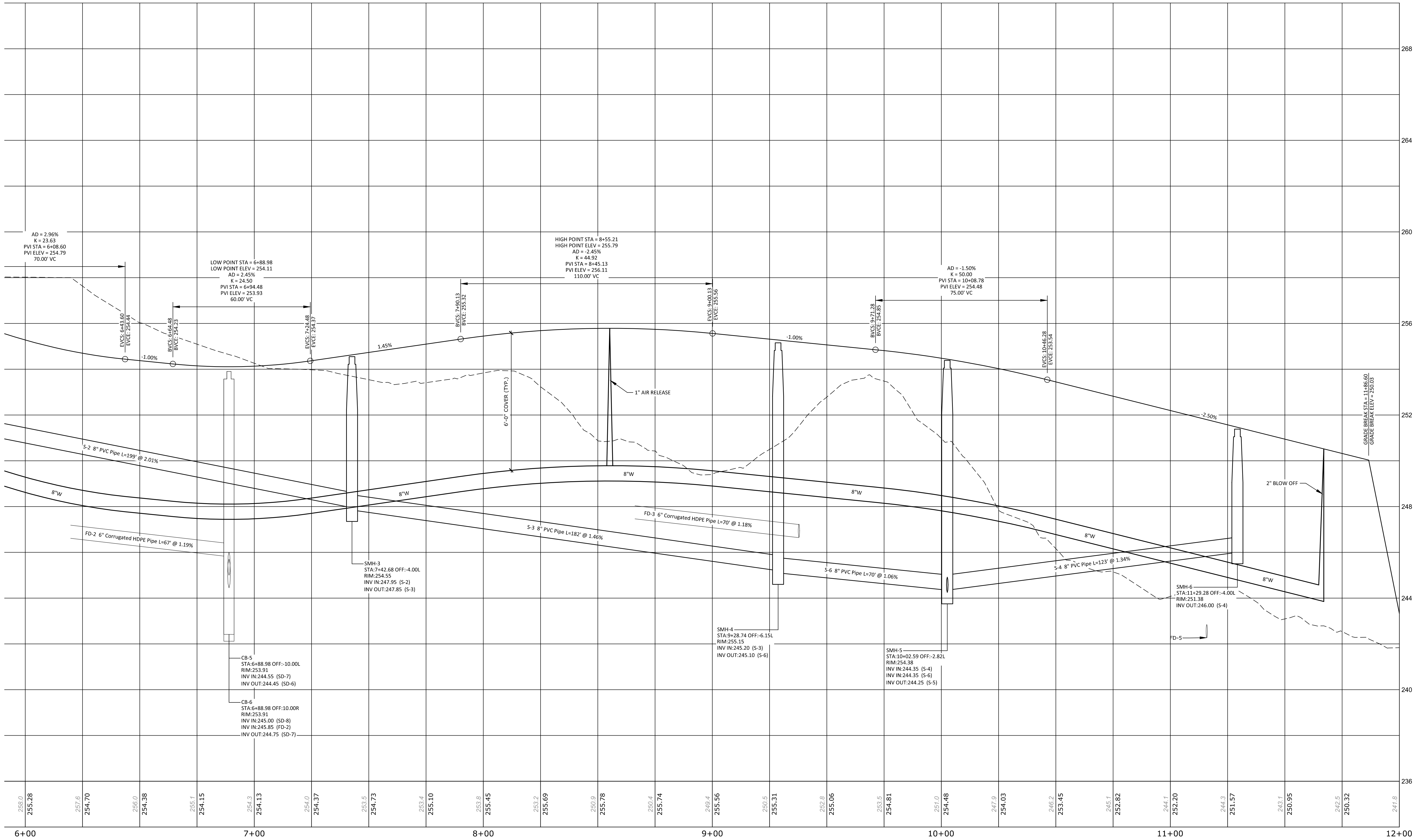


**ROADWAY PROFILE**  
WOODSIDE CONDOMINIUM RETIREMENT COMMUNITY  
WINDHAM, MAINE

---

FOR: **WELD, LLC**  
PO BOX 1361  
WINDHAM, MAINE 04092

17070 JOB NUMBER:
AS NOTED SCALE:
4-22-2019 DATE:
SHEET 8 OF 14
P-1

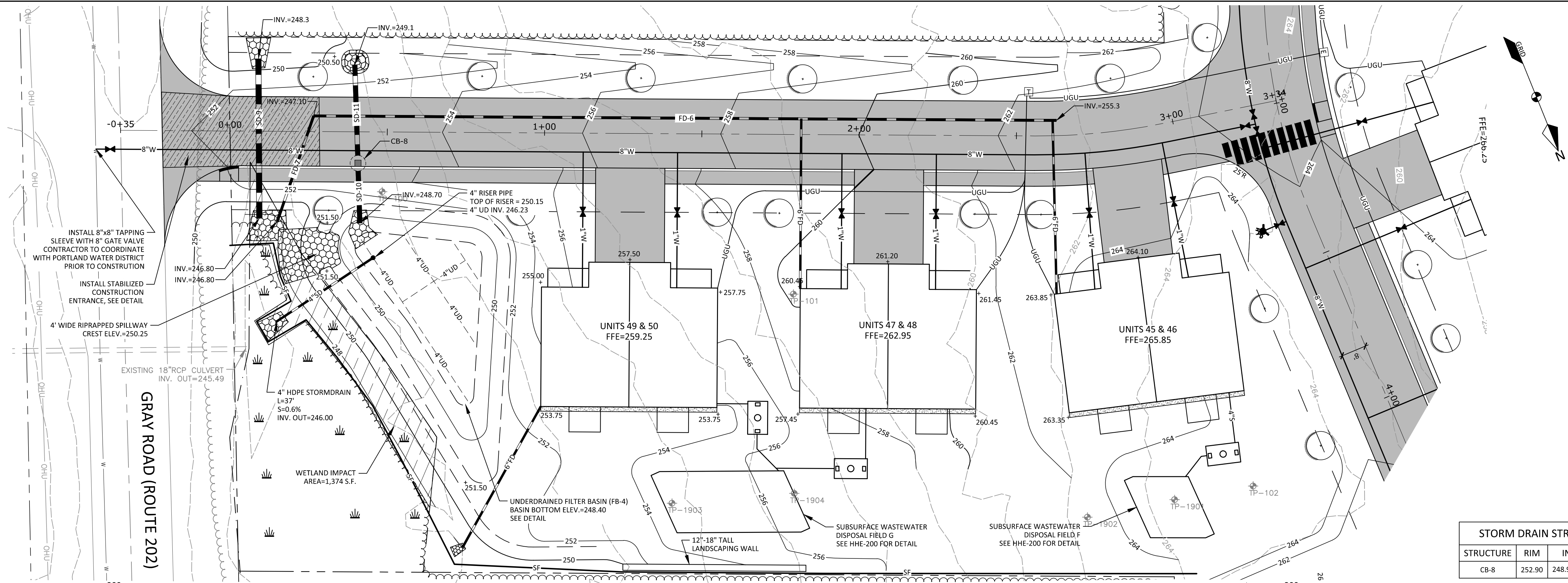


**DM ROMA**  
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REV	DATE	BY	DESCRIPTION
A	4-22-19	DMR	ISSUED TO TOWN FOR PRELIMINARY REVIEW

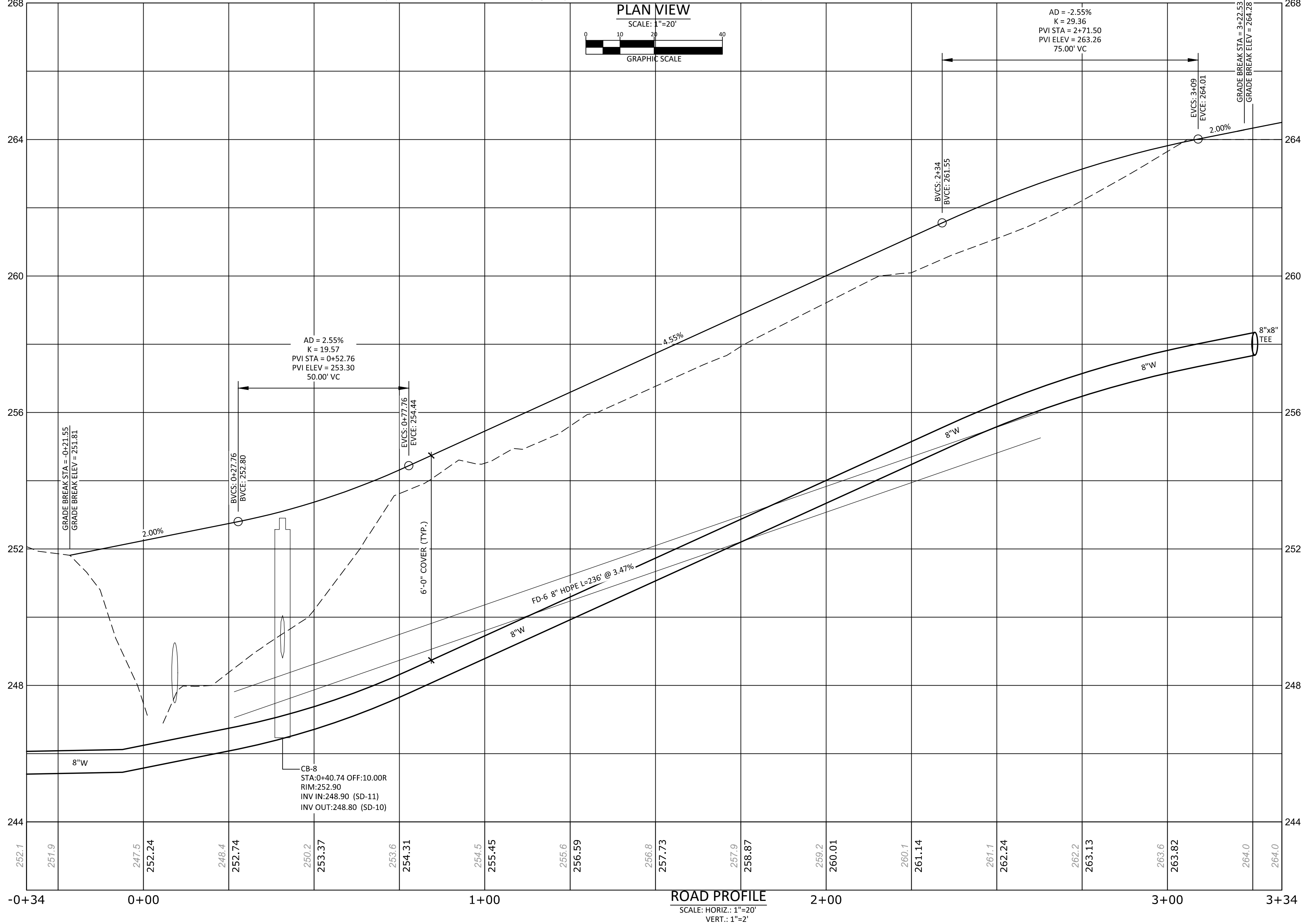
**ROADWAY PROFILE**  
WOODSIDE CONDOMINIUM RETIREMENT COMMUNITY  
WINDHAM, MAINE  
FOR: **WELD, LLC**  
PO BOX 1351  
WINDHAM, MAINE 04062

17070 JOB NUMBER:
AS NOTED SCALE:
4-22-2019 DATE:
SHEET 9 OF 14
P-2



STORM DRAIN STRUCTURE TABLE			
STRUCTURE	RIM	INV. IN	INV. OUT
CB-8	252.90	248.90 (SD-11)	248.80 (SD-10)

STORM DRAIN PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
FD-6	8"	236'	3.47%
FD-7	8"	35'	0.85%
SD-9	18"	51'	2.96%
SD-10	15"	19'	0.59%
SD-11	15"	31'	0.68%



LEGEND

EXISTING

PROPOSED

PROPERTY LINE/R.O.W.

ABUTTER PROPERTY LINE

EASEMENT LINE

CENTERLINE

BUILDING

EDGE OF PAVEMENT/CURB

EDGE OF GRAVEL

EDGE OF WETLANDS

CONTOUR LINE

TREELINE

CATCHBASIN

CULVERT/STORMDRAIN

UNDERDRAIN

SEWER MANHOLE

SANITARY SEWER PIPE

FORCE MAIN

WATER MAIN

WATER VALVE

UTILITY POLE

OVERHEAD UTILITIES

UNDERGROUND UTILITIES

TRANSFORMER PAD

RIPRAP

SILT FENCE

PROPERTY LINE/R.O.W.

ABUTTER PROPERTY LINE

EASEMENT LINE

CENTERLINE

BUILDING

EDGE OF PAVEMENT/CURB

EDGE OF GRAVEL

EDGE OF WETLANDS

CONTOUR LINE

TREELINE

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CULVERT/STORMDRAIN

UNDERDRAIN

SEWER MANHOLE

SANITARY SEWER PIPE

FORCE MAIN

WATER MAIN

WATER VALVE

UTILITY POLE

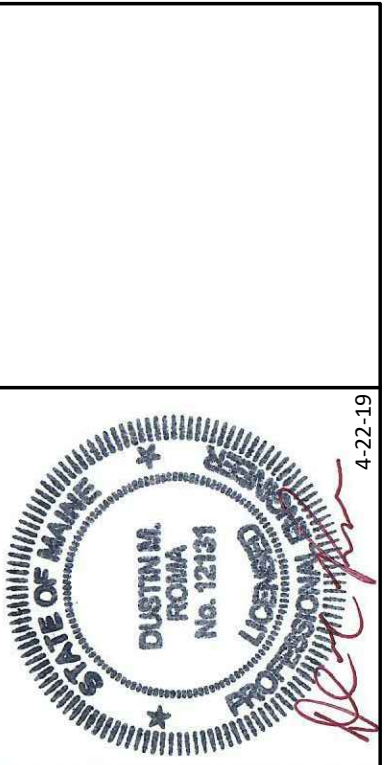
OVERHEAD UTILITIES

UNDERGROUND UTILITIES

TRANSFORMER PAD

RIPRAP

SILT FENCE



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A	4-22-19	DMK	ISSUED TO TOWN FOR PRELIMINARY REVIEW

**PLAN & PROFILE: SECONDARY ROAD CONNECTION**  
WOODSIDE CONDOMINIUM RETIREMENT COMMUNITY  
WINDHAM, MAINE  
FOR: **WELD, LLC**  
PO BOX 1351  
WINDHAM, MAINE 04092

17070
JOB NUMBER:
AS NOTED
SCALE:
4-22-2019
DATE:
SHEET 10 OF 14
PP-2

EROSION AND SEDIMENTATION CONTROL NOTES:

IN ORDER TO EFFECTIVELY PREVENT AND CONTROL EROSION RELATED TO SOIL DISTURBANCE, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPs) SHALL BE EMPLOYED:

1. POLLUTION PREVENTION

MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE. CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION; MINIMIZE THE DISTURBANCE OF STEEP SLOPES. CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND VOLUME, TO MINIMIZE EROSION AT OUTLETS. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY OPEN DRAINAGE CHANNELS, SWALES, STREAM CHANNELS OR STREAM BANKS, UPLAND, OR COASTAL OR FRESHWATER WETLANDS OF THE PROJECT SITE.

WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.

2. TEMPORARY SOIL STABILIZATION BMPs

TEMPORARY MULCHING SHALL BE APPLIED IMMEDIATELY TO ANY AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED. ANY DISTURBED SOIL WITHIN 75' OF A STREAM, WATER BODY OR WETLAND MUST RECEIVE TEMPORARY MULCH WITHIN 48 HOURS FOLLOWING DISTURBANCE AND BEFORE ANY STORM EVENT. ALL OTHER AREAS SHALL RECEIVE TEMPORARY MULCH WITHIN 7 DAYS OF DISTURBANCE. AREAS WHICH CANNOT BE SEEDED DURING THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION. THE FOLLOWING ARE ACCEPTABLE TEMPORARY MULCHING METHODS:

HAY OR STRAW MULCHES NEED TO BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS. APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SQ. FT. OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75-90% OF THE GROUND SURFACE. HAY OR STRAW CAN BE DRIVEN INTO THE GROUND WITH TRACKED EQUIPMENT IF SLOPES ARE LESS THAN 3%, OR CAN BE ANCHORED WITH JUTE, WOOD FIBER OR PLASTIC NETTING ON STEEPER SLOPES.

EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND WILL INCLUDE ANY OF THE FOLLOWING: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK OR OTHER ACCEPTABLE PRODUCTS BASED ON A SIMILAR RAIN SOURCE. WOOD OR BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE. EROSION CONTROL MIX CAN BE USED AS A STAND-ALONE REINFORCEMENT ON SLOPES OF 2 HORIZONTAL TO 1 VERTICAL OR LESS AND DRAINING IN SHEET FLOW. IT CAN BE PLACED WITH A HYDRAULIC BUCKET, WITH A PNEUMATIC BLOWER OR BY HAND, AND MUST PROVIDE 100% SOIL COVERAGE.

EROSION CONTROL MIX SHALL MEET THE FOLLOWING SPECIFICATIONS:  
-ORGANIC MATTER CONTENT SHALL BE BETWEEN 80-100%, DRY WEIGHT BASIS.  
-PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 1/8" IN. SCREEN AND BETWEEN 70-85% PASSING 0.75 IN. SCREEN  
-ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED  
-LARGE PORTIONS OF SLITS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX

WHEN USED AS MULCH, THE THICKNESS OF THE EROSION CONTROL MIX IS BASED UPON THE FOLLOWING:

LENGTH OF SLOPE	3:1 SLOPE OR LESS	BETWEEN 2:1 AND 3:1 SLOPE
LESS THAN 20 FT	2.0 IN.	4.0 IN.
BETWEEN 20 - 60 FT	3.0 IN.	5.0 IN.
BETWEEN 60 - 100 FT	4.0 IN.	6.0 IN.

CHEMICAL MULCHES AND SOIL BINDERS MAY BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER TO DETERMINE ADEQUATE APPLICATION RATES AND METHODS.

EROSION CONTROL BLANKETS AND MATS SHALL BE USED ON STEEP SLOPES AND IN THE BOTTOM OF GRASSED WATERWAYS, OR AS OTHERWISE DIRECTED BY THE ENGINEER. THE MAT SHALL BE INSTALLED WITH FIRM CONTINUOUS CONTACT WITH THE SOIL AND STAPLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

TEMPORARY MULCH SHALL BE INSPECTED FOLLOWING ANY SIGNIFICANT RAINFALL EVENT. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. EROSION CONTROL MATS AND MULCH ANCHORING MUST BE INSPECTED AFTER RAINFALL EVENTS FOR DISLOCATION OR FAILURE, AND REPAIRED IMMEDIATELY. INSPECTIONS SHALL TAKE PLACE UNTIL 95% OF THE SOIL SURFACE IS COVERED WITH PERMANENT VEGETATION. WHERE MULCH IS USED WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE, AND REPAIR AS NEEDED.

TEMPORARY VEGETATION SHALL BE ESTABLISHED ON SOILS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS. IF TEMPORARY VEGETATION CANNOT BE ESTABLISHED PRIOR TO OCTOBER 15, TEMPORARY MULCH SHALL BE APPLIED THROUGH THE WINTER AND TEMPORARY VEGETATION SHALL BE PLANTED AT THE BEGINNING OF THE GROWING SEASON THE FOLLOWING YEAR. TO PREPARE THE SEEDED, THE CONTRACTOR SHALL APPLY FERTILIZER AT A RATE OF 10-10-10 (N-P205-K20) OR EQUIVALENT AND LIME/STONE AT A RATE OF 3 TONS PER ACRE, IF NECESSARY. LOOSEN SOIL TO A DEPTH OF 2 INCHES IN AREAS THAT HAVE BEEN COMPACTED BY CONSTRUCTION ACTIVITIES. GRASS SEED SHALL BE SELECTED BASED UPON THE TIME OF YEAR THE PLANTING WILL TAKE PLACE AS SUMMARIZED IN THE FOLLOWING TABLE:

SEED	LB. PER ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	112	8/15 - 10/1
OATS	80	4/1 - 7/1 8/15 - 9/15
ANNUAL RYEGRASS	40	4/1 - 7/1

TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED TO MAINTAIN AT LEAST 95% VEGETATIVE COVER OF SOIL SURFACE. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES SHALL BE USED IN THE INTERIM SUCH AS TEMPORARY MULCH, FILTER BARRIERS, ETC.

3. SEDIMENT BARRIER BMPs

PRIOR TO CONSTRUCTION TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED AT THE DOWNGRADIENT EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. SEDIMENT BARRIERS INCLUDE ANY OF THE FOLLOWING:

FILTER BARRIER FENCE, ALSO CALLED SILT FENCE, SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL PROVIDE A MINIMUM OF 6 MONTHS LIFE INCLUDING PROTECTION AGAINST ULTRA-VIOLET LIGHT. THE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES INSTALLED AND POST SPACING SHALL NOT EXCEED 6 FEET. JOINTS IN THE FENCE SHALL BE AVOIDED TO THE EXTENT POSSIBLE, AND IF NECESSARY SHALL BE SPICED TOGETHER AT A SUPPORT POST WITH A MINIMUM 6 INCH OVERLAP. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP, AND THE BOTTOM 6-8 INCHES OF FABRIC SHALL BE "TOED-IN" TO THE TRENCH AND COMPACTED. THE TRENCH SHOULD BE UPHILL OF THE FABRIC PRIOR TO BURAL.

STRAW/HAY BALES SHALL BE INSTALLED WHERE SPECIFIED ON THE PLANS IN A SINGLE ROW WITH THE ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. ALL BALES SHALL BE EITHER WIRE BOUND OR STRING-TIED. THE BARRIER SHALL BE ENTRENCHED AND BACKFILLED TO A DEPTH OF AT LEAST 4 INCHES, AND THE BALES SHALL BE SECURED WITH TWO WOODEN STAKES OR STEEL REBAR PER BALE. STAKES SHALL BE DRIVEN IN A DIRECTION TO PUSH THE BALES TOGETHER. GAPS BETWEEN BALES SHALL BE CHINKED WITH HAY.

EROSION CONTROL MIX BERMS ARE LINEAR BARRIERS COMPOSED OF EROSION CONTROL MIX AS SPECIFIED ABOVE. THE BERM MUST BE A MINIMUM OF 12 INCHES TALL AND 24 INCHES WIDE AT THE BASE IF UPHILL SLOPES ARE LESS THAN 5%. STEEPER SLOPES OR SLOPES GREATER THAN 20 FEET LONG MAY REQUIRE A LARGER WIDTH BERM. EROSION CONTROL MIX BERMS AT THE BASE OF A LONG OR STEEP SLOPE MAY ALSO REQUIRE A FILTER FENCE TO BE INSTALLED ON THE DOWNHILL SIDE OF THE BERM TO PROVIDE ADDITIONAL STABILIZATION AGAINST HIGH RUNOFF FLOWS.

CONTINUOUS CONCENTRATED BERMS, WHICH ARE ALSO REFERRED TO AS A FILTER SOD, PROVIDES ADDITIONAL STABILITY TO AN EROSION CONTROL MIX BERM AND SHOULD BE USED IN FROZEN GROUND CONDITIONS OR IN AREAS THAT RECEIVE CONCENTRATED FLOW.

SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED RUNNING ONTO THE STOCKPILE. SEDIMENT BARRIERS SHALL BE INSTALLED AFTER ANY SIGNIFICANT RAINFALL EVENT AND REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE BARRIERS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR EDGES OF THE BARRIER, OR IF LARGE VOLUMES OF WATER ARE IMPOUNDED BEHIND THE BARRIER, IT MAY BE NECESSARY TO REPLACE THE BARRIER WITH A TEMPORARY STONE CHECK DAM. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF THE BARRIER HEIGHT. AFTER THE BARRIER IS REMOVED, ANY REMAINING SILT SHALL EITHER BE REMOVED OR GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

4. TEMPORARY CHECK DAMS

STONE CHECK DAMS SHALL BE INSTALLED IN SWALES OR DRAINAGE DITCHES TO REDUCE STORMWATER VELOCITIES AS SHOWN ON THE PLANS. STONE CHECK DAMS ARE NOT EFFECTIVE IN REMOVING SEDIMENT AND SHOULD BE USED IN CONJUNCTION WITH SEDIMENT BARRIERS IDENTIFIED ABOVE. TEMPORARY CHECK DAMS MAY BE LEFT IN PLACE PERMANENTLY IN MOST CASES. CHECK DAMS SHOULD BE NO HIGHER THAN 24 INCHES, AND THE CENTER OF THE CHECK DAM MUST BE AT LEAST 6 INCHES LOWER THAN THE OUTSIDE EDGES. CHECK DAMS SHOULD BE SPACED SUCH THAT THE CREST OF THE DOWNSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM CHECK DAM. CHECK DAMS IN A DRAINAGE DITCH OR WATERWAY SHOULD BE INSTALLED PRIOR TO DIRECTING RUNOFF TO THEM.

5. STORM DRAIN INLET PROTECTION

STORM DRAIN INLETS THAT ARE MADE OPERATIONAL BEFORE THEIR DRAINAGE AREA IS STABILIZED SHALL BE PROTECTED WITH A FILTER UNTIL THE DRAINAGE AREA IS EITHER PAVED OR STABILIZED WITH 95% VEGETATIVE GROWTH. THE FOLLOWING ARE ACCEPTABLE BMPs ASSOCIATED WITH STORM DRAIN INLET PROTECTION:

HAY BALE OR SILT FENCE INLET STRUCTURE CONSISTS OF HAY BALES OR SILT FENCE CONFIGURED AROUND A CATCH BASIN INLET FRAME AND INSTALLED ACCORDING TO THE METHODS OUTLINED ABOVE. THIS METHOD IS SUITABLE FOR OPEN PIPE (CULVERT) INLETS, FIELD INLETS OR ROAD INLETS THAT HAVE NOT YET BEEN PAVED.

MANUFACTURED SEDIMENT FILTERS ARE THE PREFERRED METHOD FOR PROTECTING CATCH BASIN INLETS IN PAVED OR GRAVEL ROADWAYS. THE FILTERS TYPICALLY CONSIST OF A FABRIC OR OTHER PERVIOUS MATERIAL THAT IS PLACED ABOVE OR BELOW THE GRATE THAT TRAPS SEDIMENT ON THE SURFACE TO FLOW THROUGH THE GRATE. CONSIDERED SUCCESSFUL CHECK DAMS SHOULD BE NO HIGHER THAN 24 INCHES, AND THE CENTER OF THE CHECK DAM MUST BE AT LEAST 6 INCHES LOWER THAN THE OUTSIDE EDGES. CHECK DAMS SHOULD BE SPACED SUCH THAT THE CREST OF THE DOWNSTREAM CHECK DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM CHECK DAM. CHECK DAMS IN A DRAINAGE DITCH OR WATERWAY SHOULD BE INSTALLED PRIOR TO DIRECTING RUNOFF TO THEM.

6. STABILIZED CONSTRUCTION ENTRANCE/EXIT

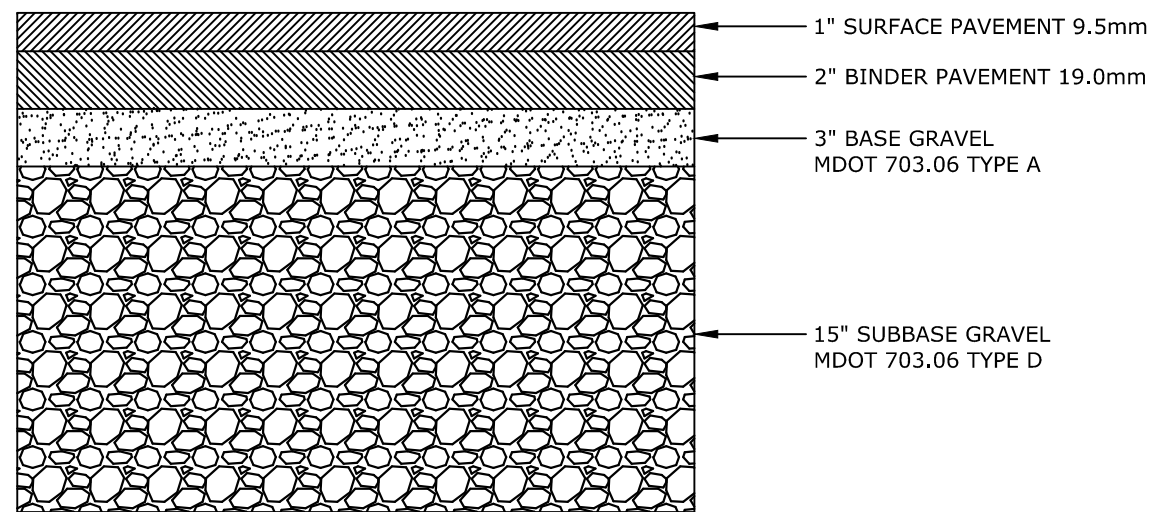
TO REDUCE THE TRACKING OF SEDIMENT ONTO ROADWAYS, A STABILIZED CONSTRUCTION EXIT SHALL BE INSTALLED AT ALL POINTS OF EGRESS WHERE VEHICLES MAY TRAVEL FROM THE PROJECT SITE TO A PUBLIC ROAD OR OTHER PAVED AREA. THE STONE PAD SHALL CONSIST OF A MINIMUM 6-INCH DEPTH OF 2-3 INCH CRUSHED STONE, AND SHALL BE PLACED ON A GEOTEXTILE FABRIC. THE PAD SHALL EXTEND AT LEAST 50 FEET INTO THE PROJECT SITE AND BE A MINIMUM OF 10 FEET WIDE. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, AND THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS THAT HAVE EXPERIENCED ANY MUD-TRACKING. MAINTAIN THE PAD UNTIL ALL DISTURBED AREAS ARE STABILIZED.

7. DUST CONTROL

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST ON THE PROJECT SITE AND ON ADJACENT ROADWAYS. EXPOSED SOIL SURFACES SHALL BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST. GRAVEL SURFACES SHALL EITHER BE TREATED WITH AN APPLICATION OF CALCIUM CHLORIDE OR COVERED WITH CRUSHED STONE IF DUST CONTROL BECOMES DIFFICULT WITH NORMAL WATER APPLICATIONS.

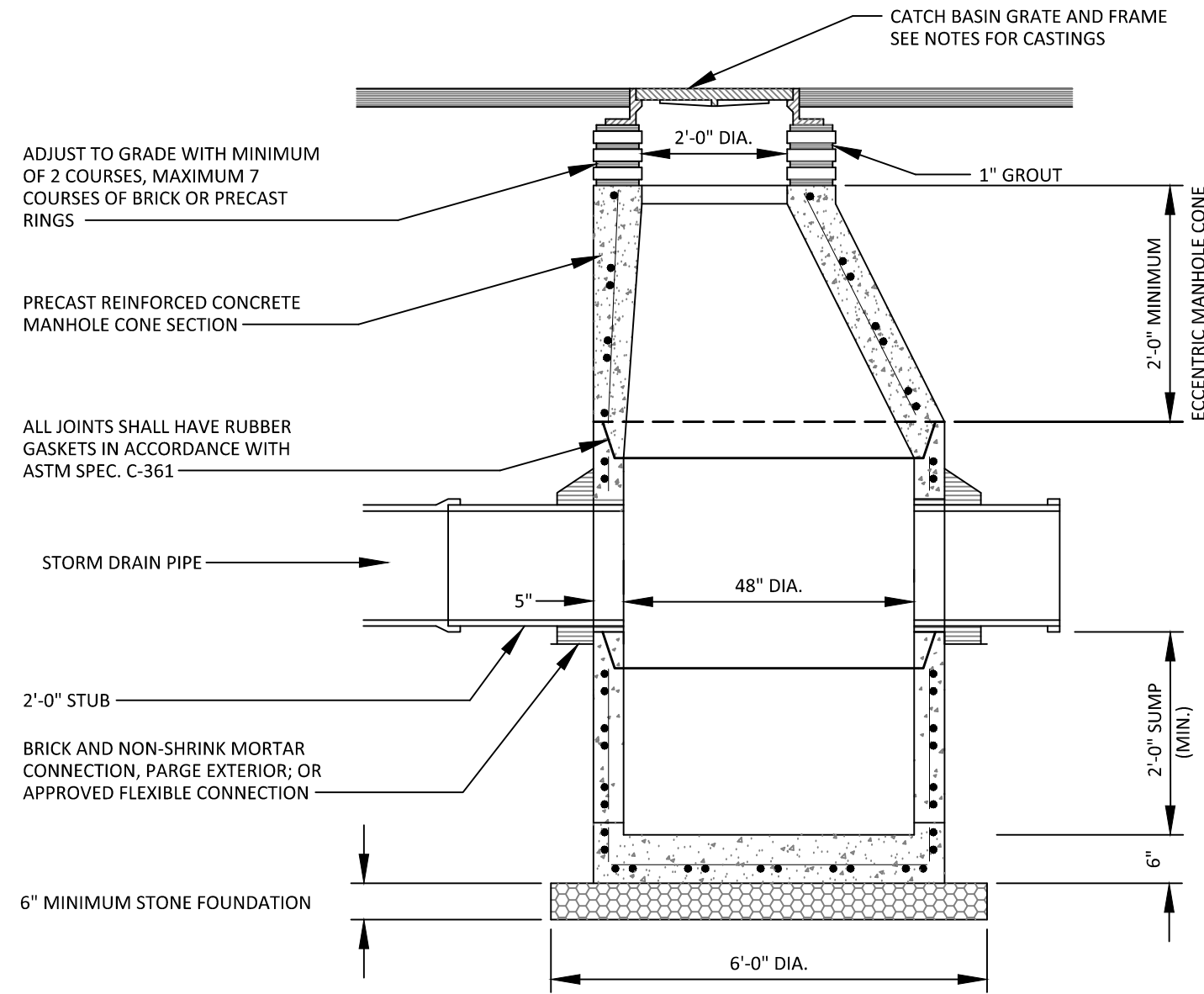
8. LAND GRADING AND SLOPE REPAIR/RECONSTRUCTION

GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE NEXT PHASE. ANY EXPOSED AREA THAT WILL NOT BE FINISH GRADED WITHIN 14 DAYS SHALL BE TREATED WITH MULCH OR PLANTED WITH TEMPORARY VEGETATION. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASS SHALL NOT BE STEEPER THAN 2:1. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. 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TYPICAL UNIT DRIVEWAY SECTION

NOT TO SCALE

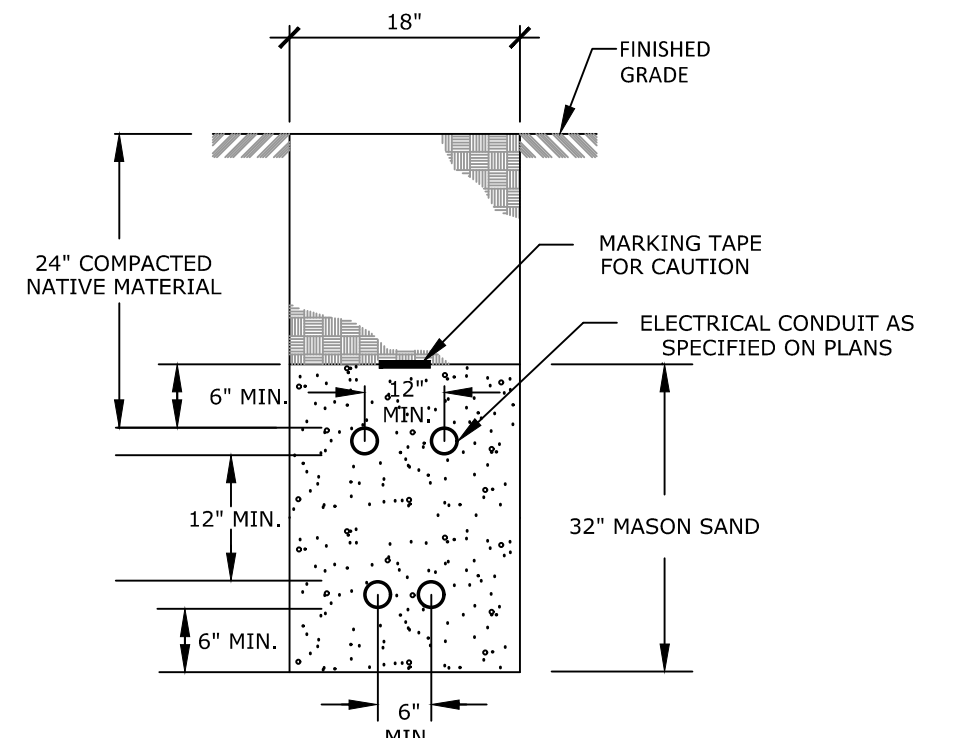


NOTES:

1. LARGER DIAMETER STRUCTURES MAY BE REQUIRED DUE TO SIZE OR GEOMETRY OF PIPE CONNECTIONS AT MANHOLE. WALL THICKNESS TO INCREASE BY 1" FOR EACH 1'-0" DIA. INCREASE. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
3. CAST IRON GRATES AND FRAMES SHALL BE EQUAL TO GENERAL FOUNDRIES, INC. PRODUCT NO. 12442 - 24"DIA. 4" FRAME HEIGHT HEAVY DUTY, BUILT UP TYPE FRAME, SLOTTED GRATE. SUBMIT CATALOG SHEETS TO ENGINEER FOR APPROVAL.

PRECAST CONCRETE CATCH BASIN STRUCTURE

NOT TO SCALE

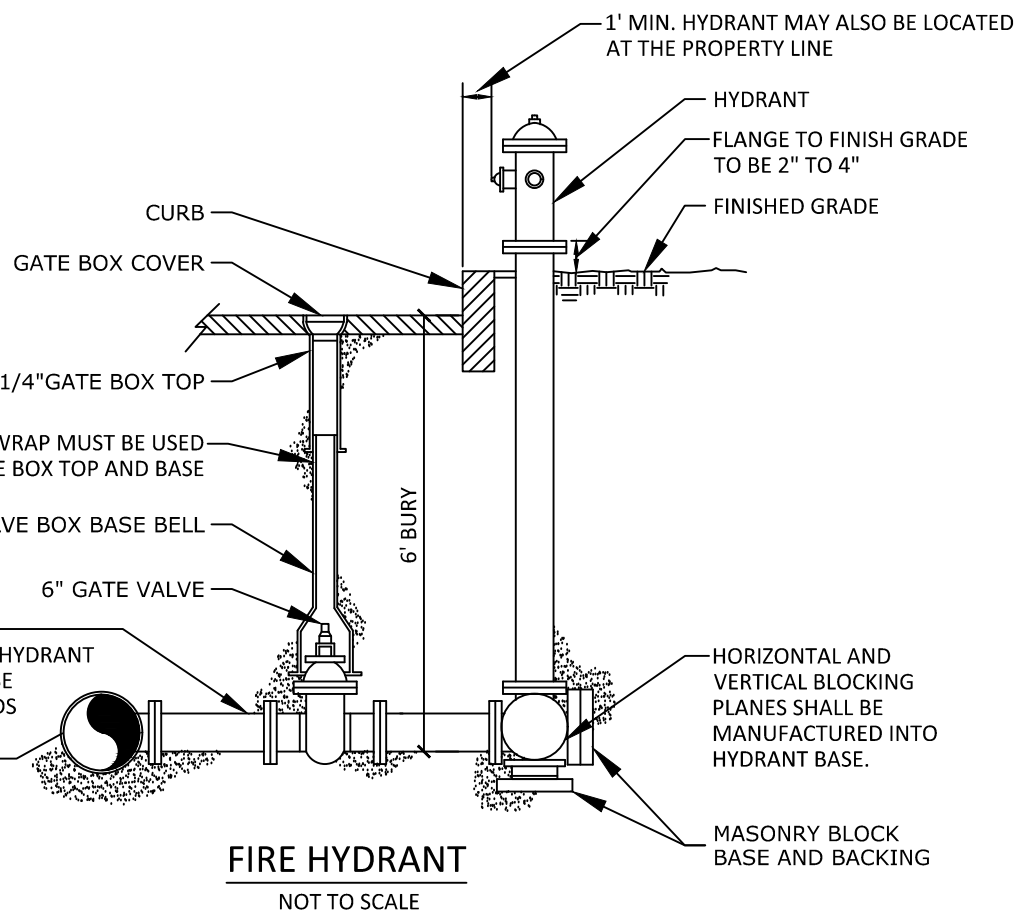


UTILITY TRENCH DETAIL

NOT TO SCALE

NOTES:

1. ALL CONDUITS SHALL BE 4" DIA. PVC SCH 40 EXCEPT FOR ROAD CROSSINGS SHALL BE PVC SCH 80
2. INSTALLATION SHOULD NOT ALLOW THE INTER-TWINGING OF CABLES.
3. BEDDING AND BACKFILL SHALL BE FREE OF ROOTS, STUMPS AND OTHER DEBRIS.
4. COMMUNICATION CABLE AND POWER CABLE SHALL HAVE NO LESS THAN 12 INCHES OF RADIAL SEPARATION.

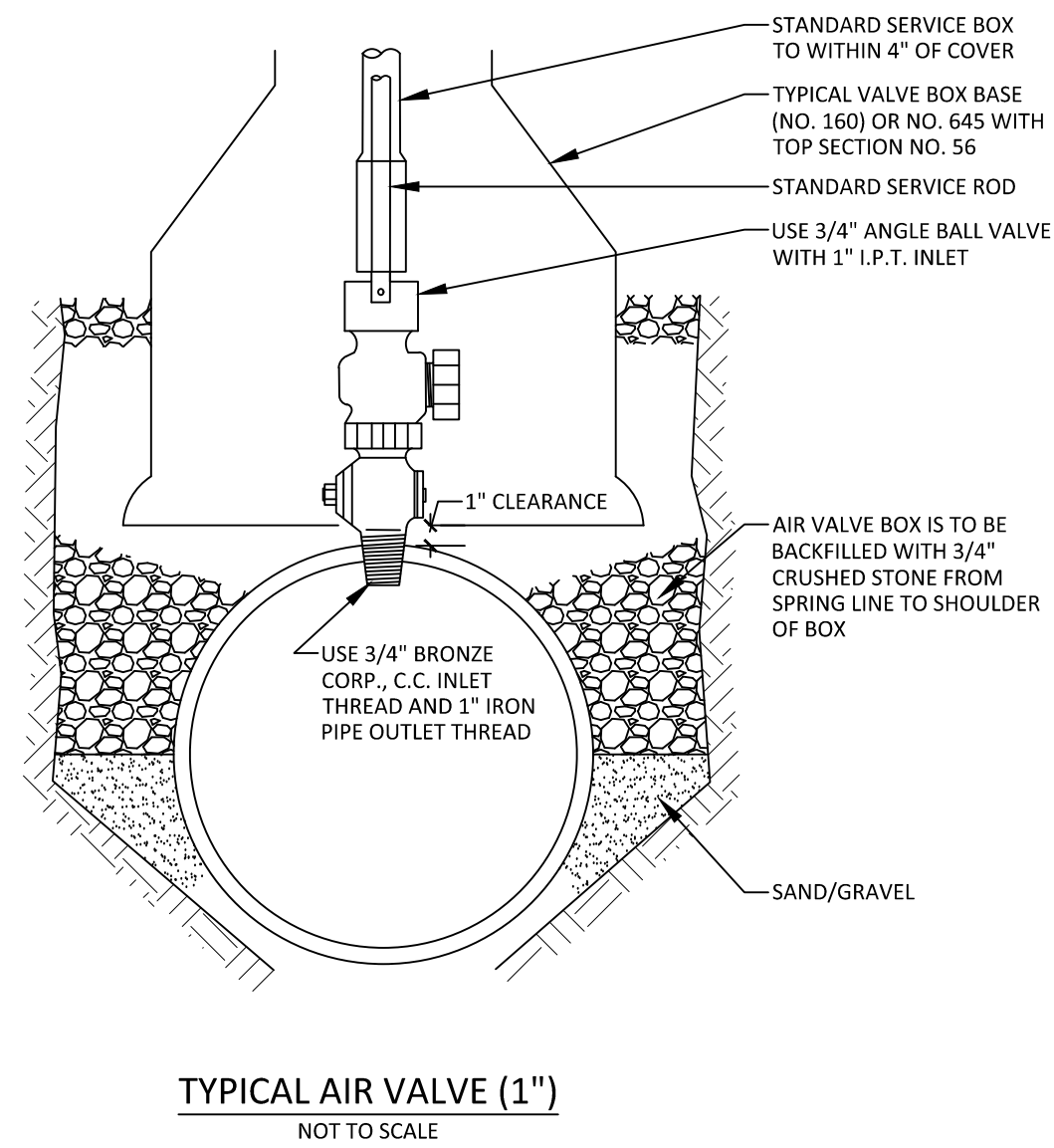
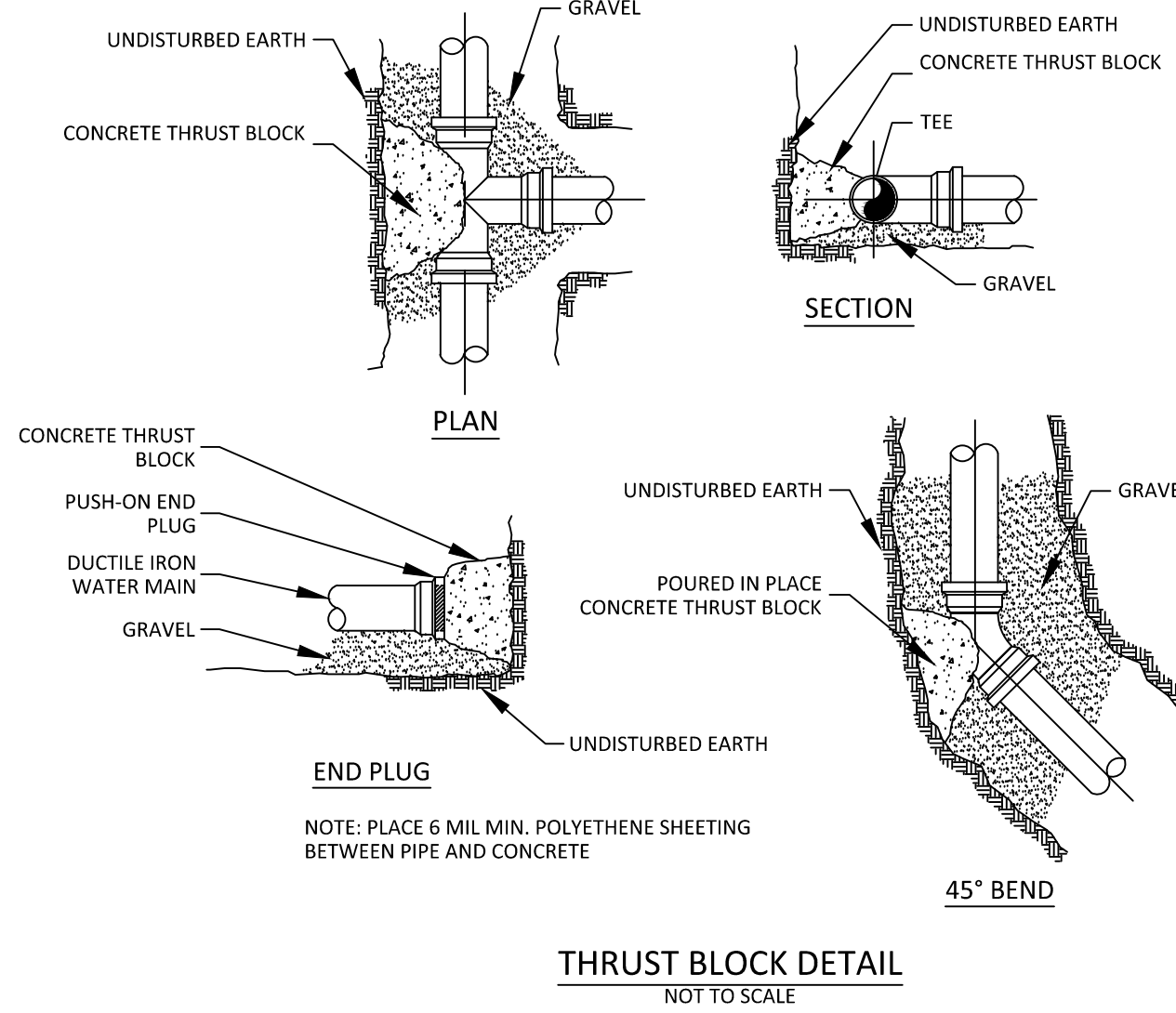


FIRE HYDRANT

NOT TO SCALE

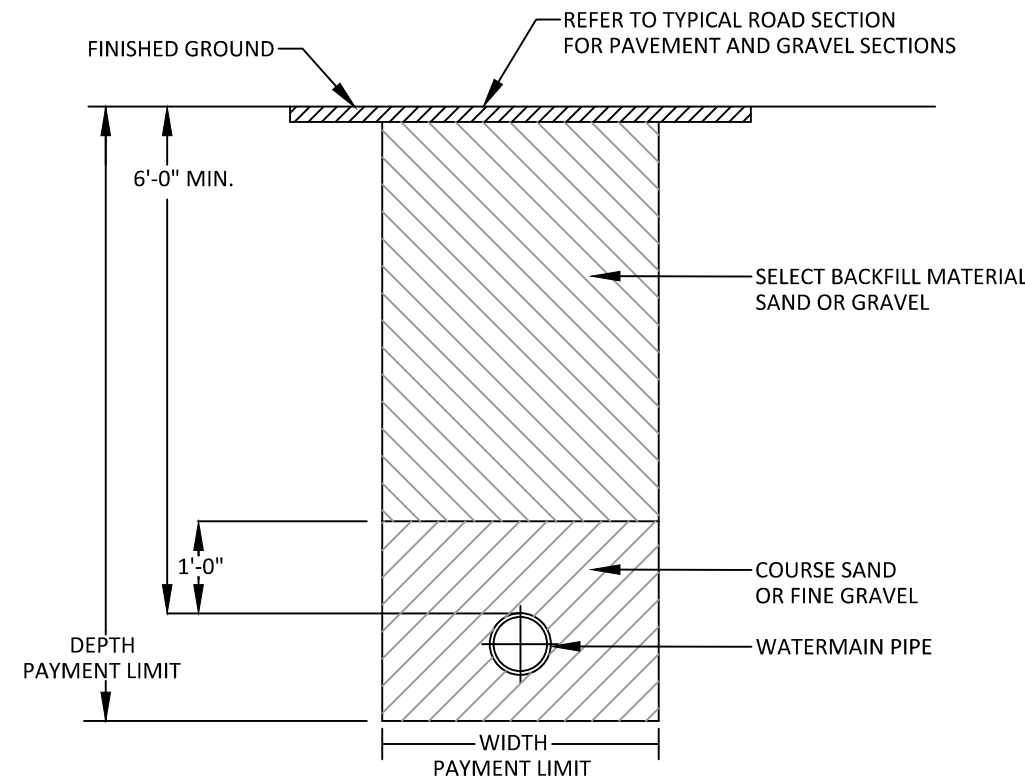
FITTINGS	SQ. FT. OF BEARING ON UNDISTURBED SOIL		
	90° BENDS	45° BENDS	TEES AND PLUGS
PIPE SIZE	6"	4.0	2.0
	8"	8.0	4.0
	12"	15	9
	16"	26	14
	20"	40	22

BASED ON SOIL BEARING PRESSURE OF 2000PSF AND 100PSI LINE PRESSURE. COMPACT COURSE TO FINE SANDS AND CLAYS REQUIRE ENGINEERED BLOCKS. ENGINEERED BLOCKS WILL TYPICALLY REQUIRE REINFORCING STEEL OF #5 AT 12".



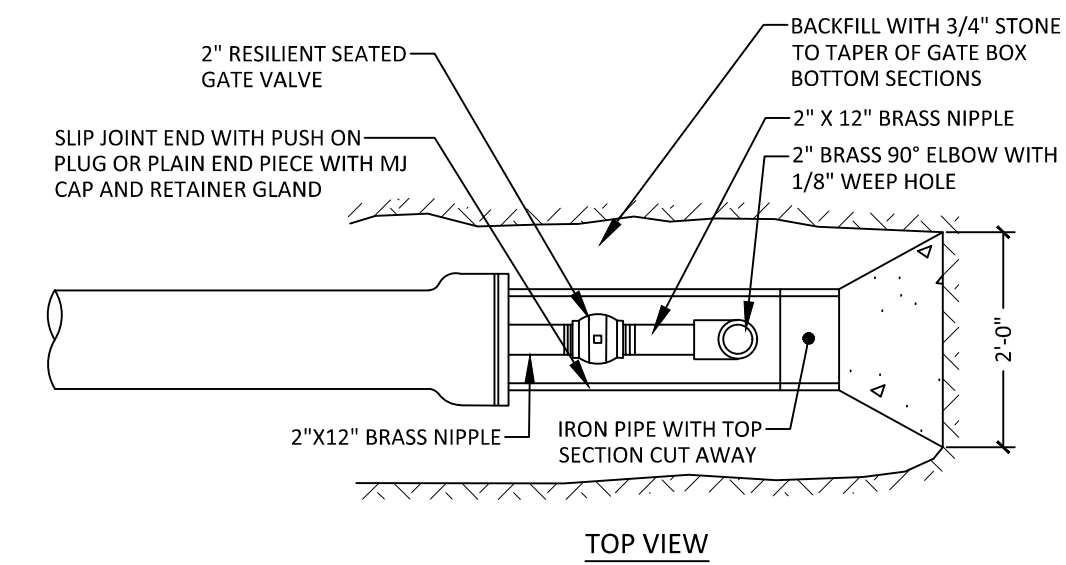
TYPICAL AIR VALVE (1")

NOT TO SCALE

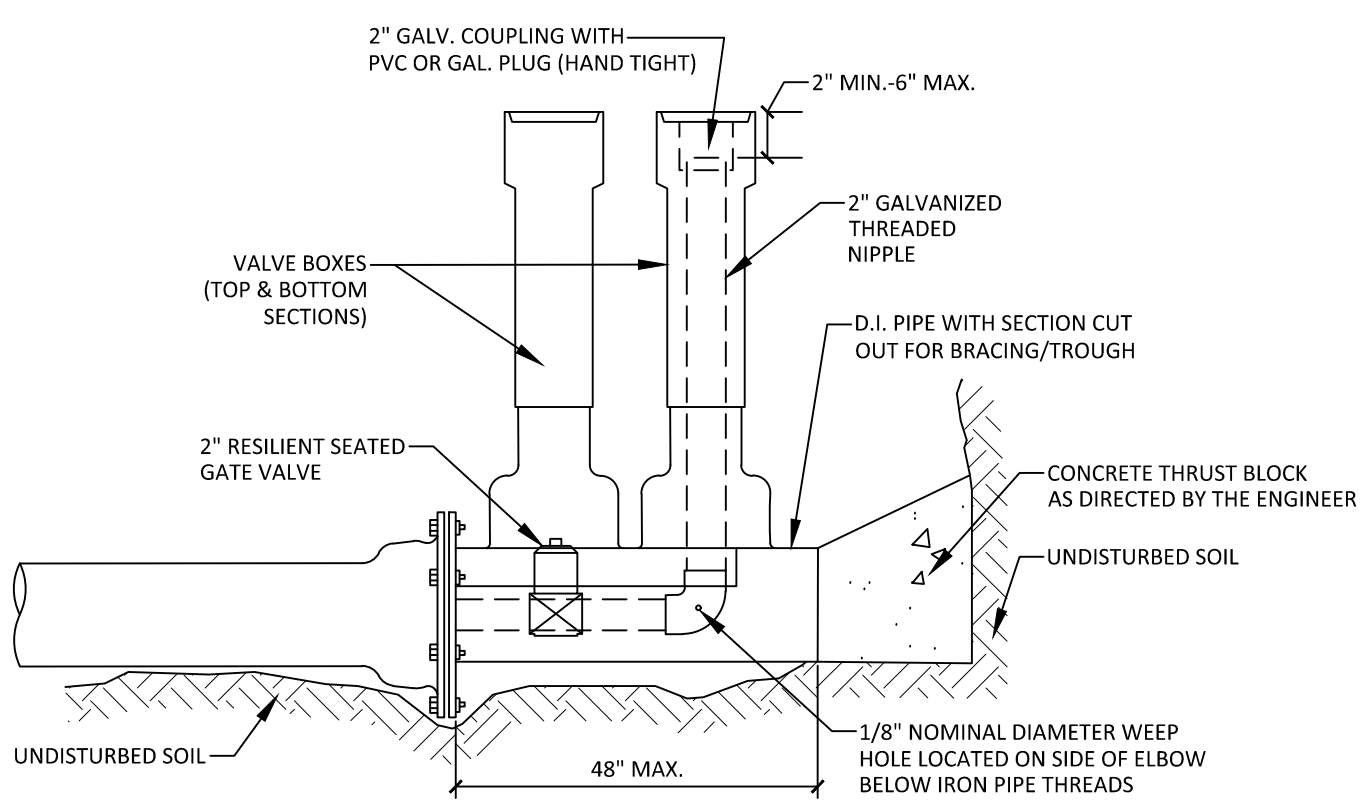


WATERMAIN TYPICAL TRENCH CROSS-SECTION

NOT TO SCALE

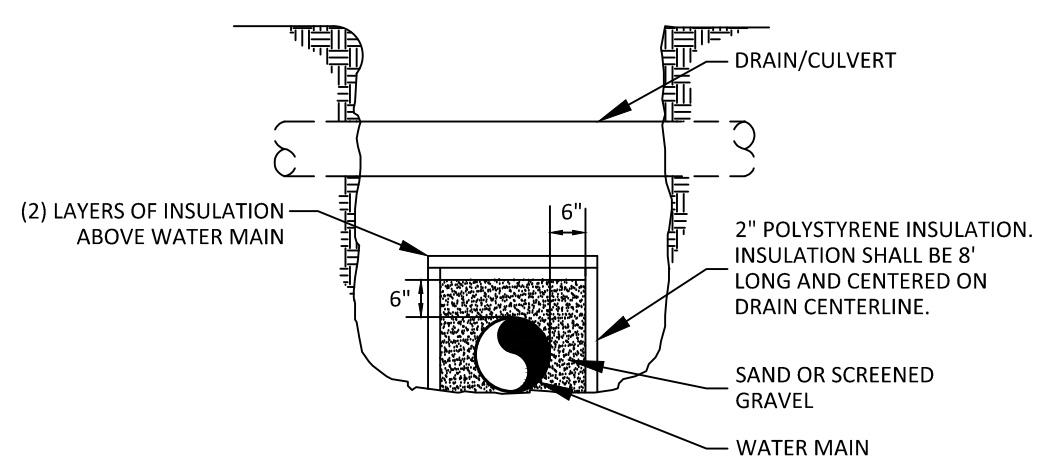


TOP VIEW



STANDARD 2" BLOW OFF

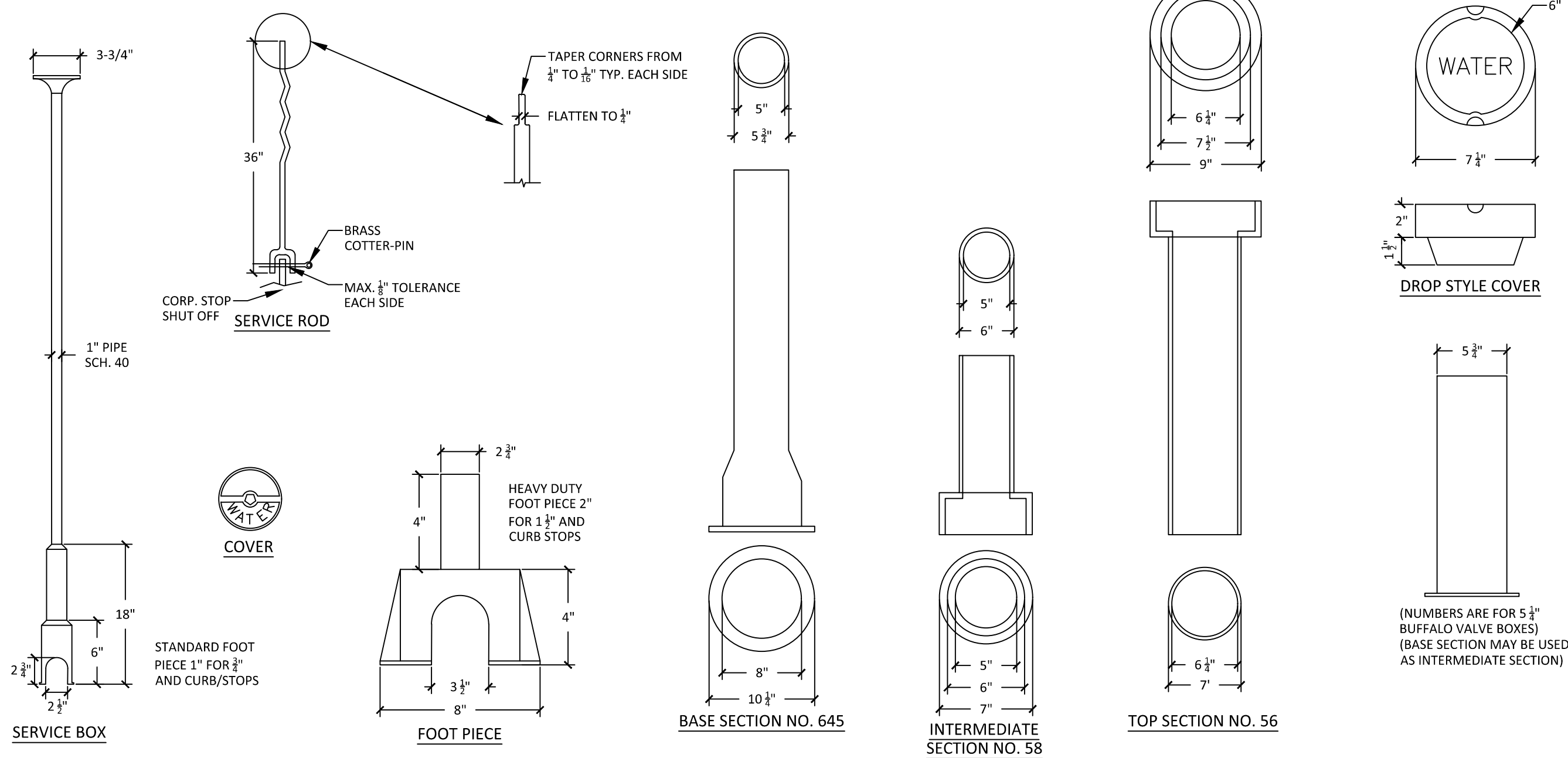
NOT TO SCALE



NOTES: INSULATION IS REQUIRED AT ALL DRAIN & CULVERT CROSSINGS THAT DO NOT PROVIDE A MINIMUM OF 18" OF VERTICAL SEPARATION

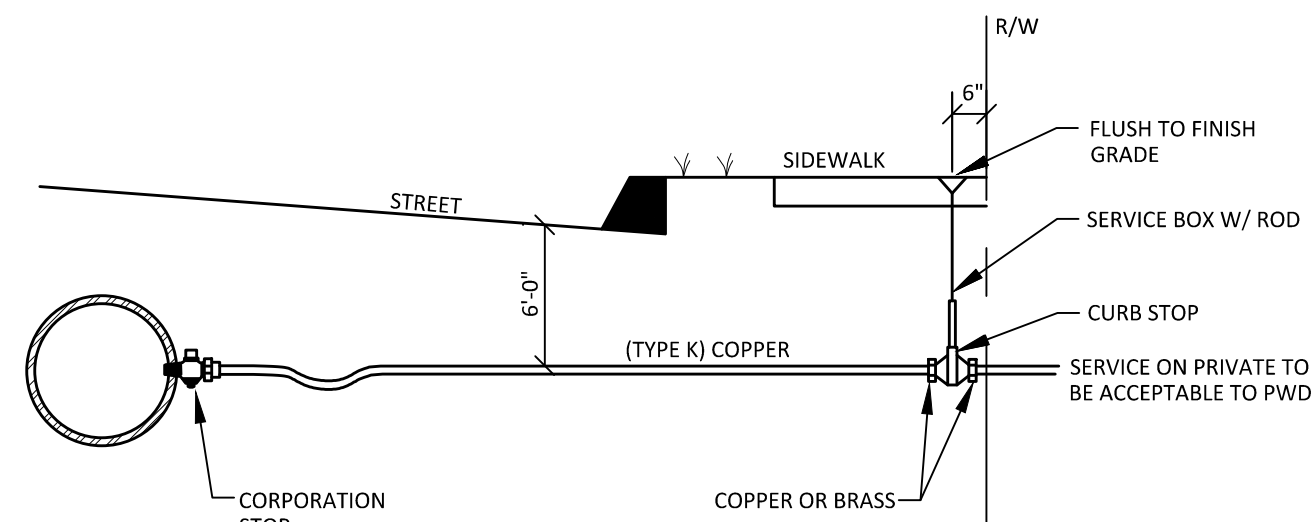
INSULATION DETAIL

NOT TO SCALE



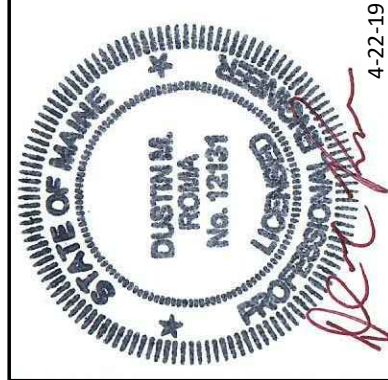
VALVE BOX & COVER

NOT TO SCALE



TYPICAL SERVICE CONNECTION

NOT TO SCALE

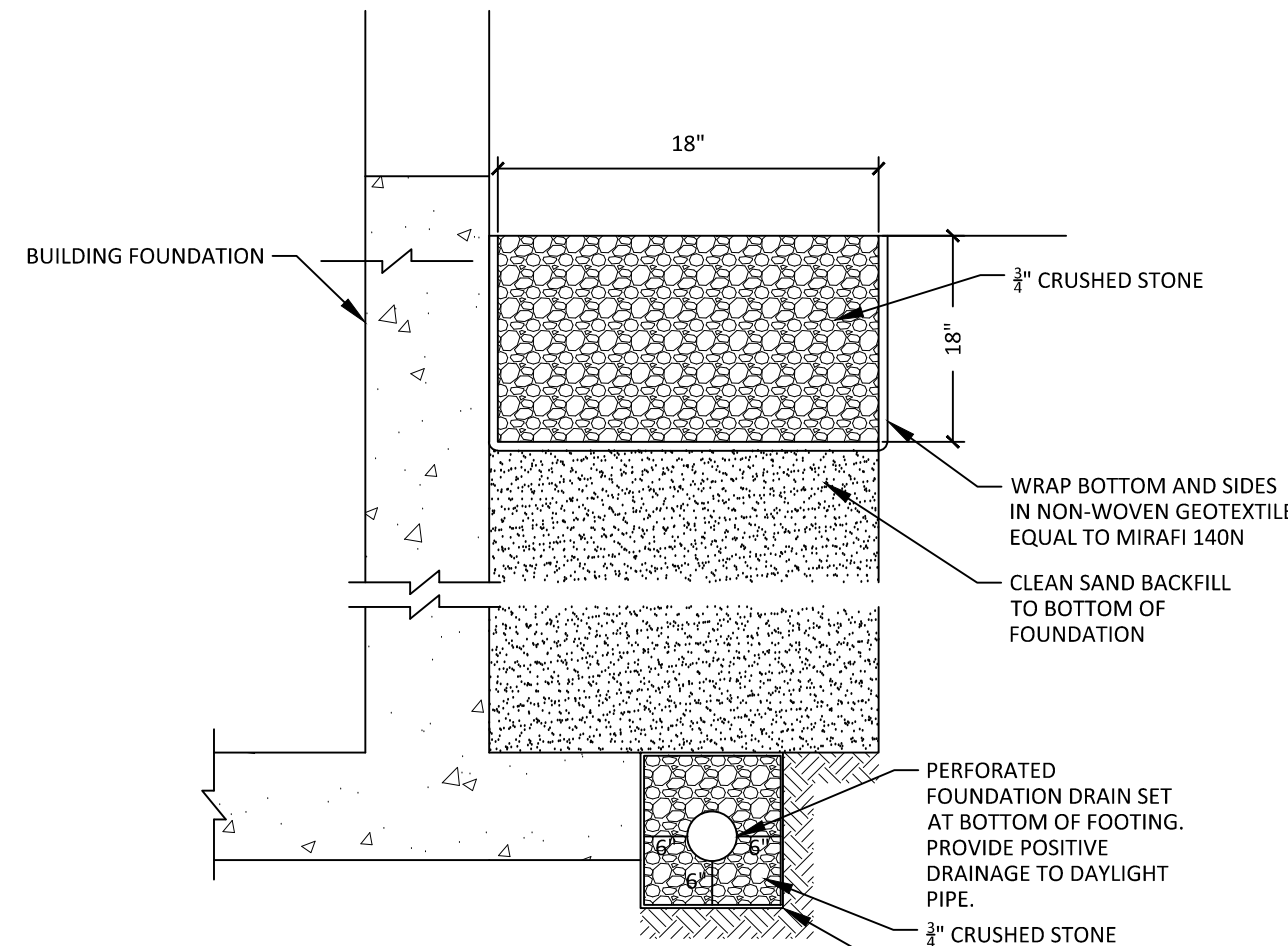


**DM ROMA**  
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REV	DATE	BY	DESCRIPTION
A	4-22-19	DMR	ISSUED TO TOWN FOR PRELIMINARY REVIEW

**DETAILS**  
WOODSIDE CONDOMINIUM RETIREMENT COMMUNITY  
WINDHAM, MAINE  
FOR: **WELD, LLC**  
PO BOX 1393  
WINDHAM, MAINE 04062

17070 JOB NUMBER:
AS NOTED SCALE:
4-22-2019 DATE:
SHEET 12 OF 14
D-2

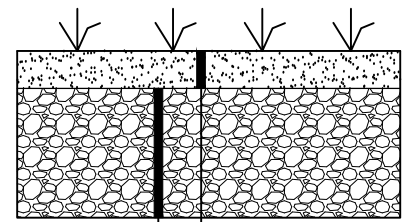


NOTES:

1. ALL NEW BUILDINGS REQUIRE ROOF DRIFT EDGES

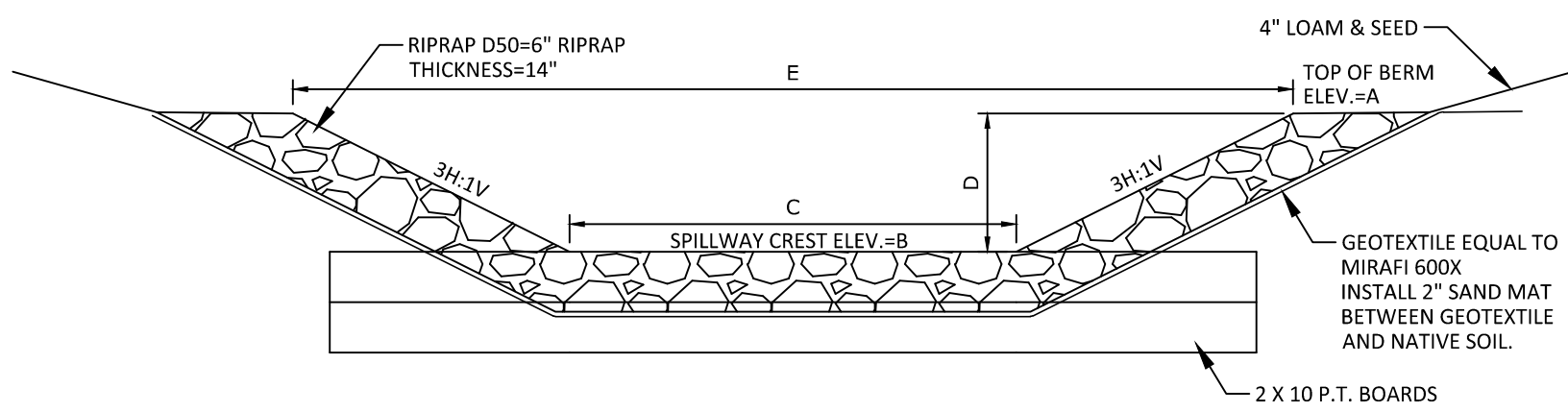
#### ROOF DRIFT EDGE

NOT TO SCALE



#### TYPICAL POND ACCESS ROAD SECTION

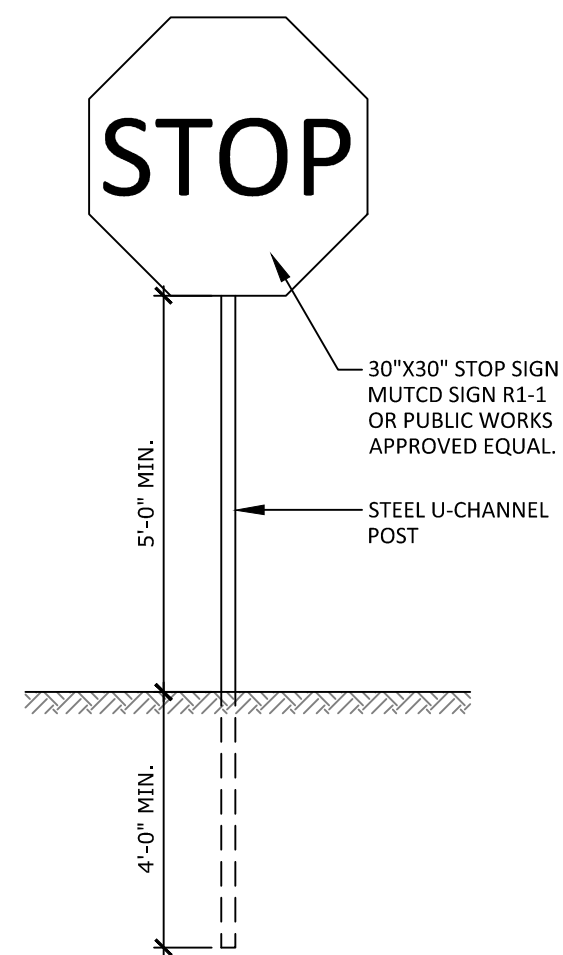
NOT TO SCALE



SPILLWAY DATA					
POND ID	A	B	C	D	E
FB-1	257.25	256.40	7'	0.85'	12.1'
FB-2	245.25	244.20	6'	1.05'	12.3'
FB-3	242.80	241.80	10'	1.00'	16.0'
FB-4	251.50	250.25	4'	1.25'	11.5'
BR-1	258.15	257.40	4'	0.75'	8.5'

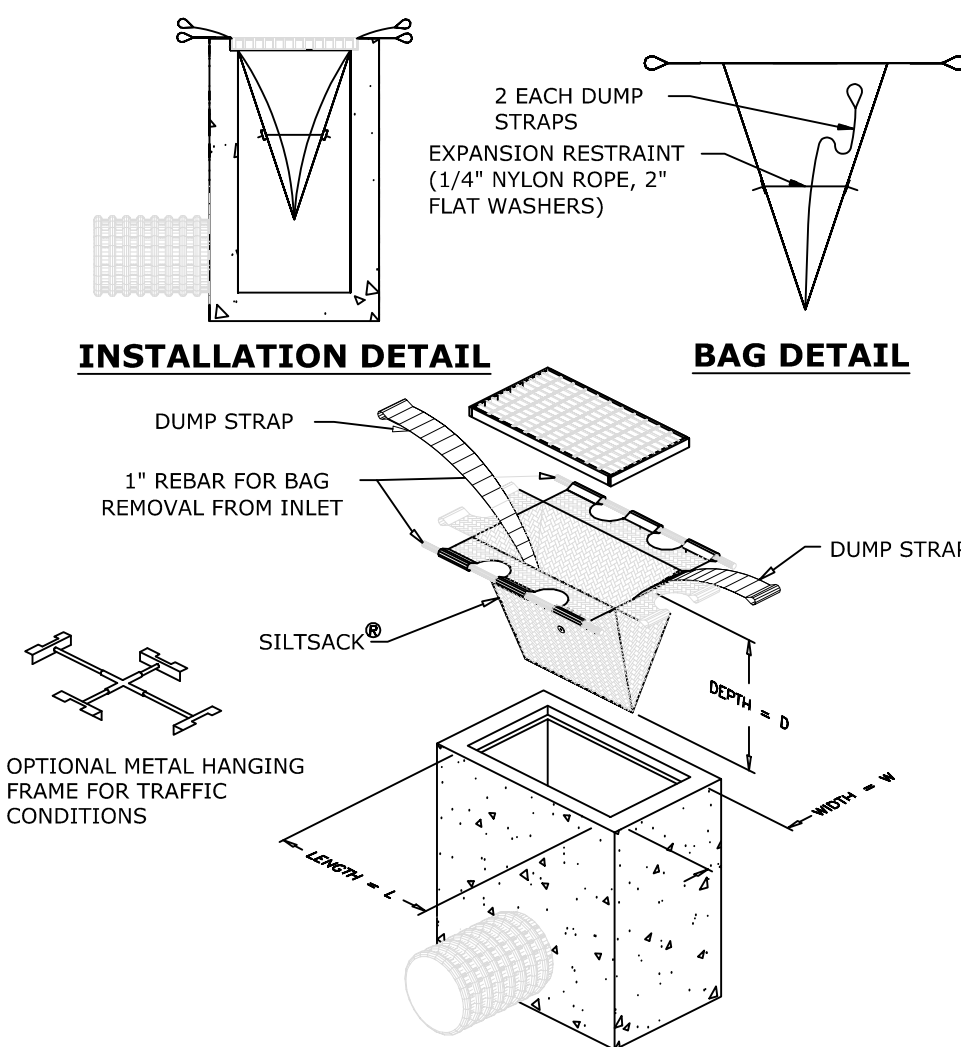
#### RIPRAPPED SPILLWAY CROSS-SECTION

NOT TO SCALE



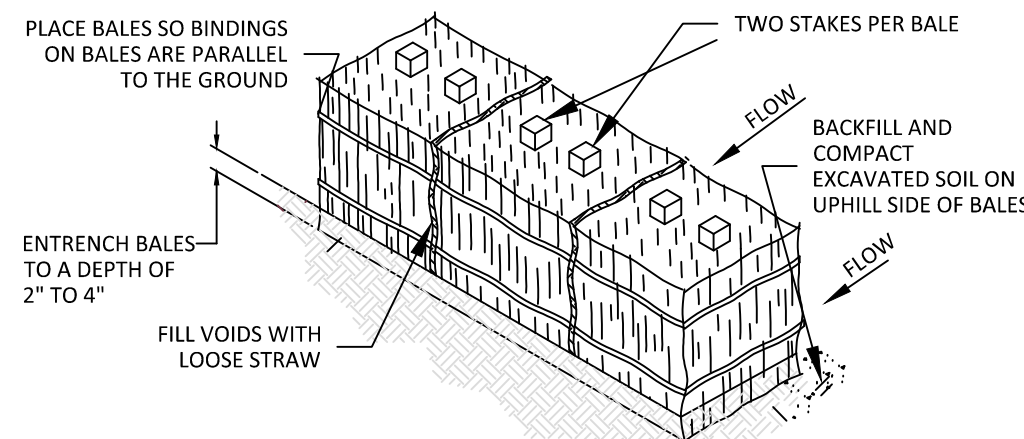
#### STOP SIGN INSTALLATION

NOT TO SCALE



#### INLET PROTECTION (IP)

NOT TO SCALE



1. IDEALLY, BALES SHOULD BE ENTRENCHED 2 TO 4 INCHES AND TIGHTLY BUTTED TOGETHER. BALES CAN BE SUCCESSFULLY PLACED WITHOUT A TRENCH IF GOOD GROUND CONTACT IS MADE. REMOVE HEAVY BRUSH AND FILL ALL VOIDS WITH LOOSE STRAW.
2. BALES SHALL BE ONLY USED AS A TEMPORARY BARRIER AND FOR NO LONGER THAN 60 DAYS.
3. WHEN SEDIMENTATION DEPOSITS REACH WITHIN 3" OF THE TOP OF BALES, REMOVE SEDIMENTATION OR ADD ADDITIONAL BALES ON SEDIMENTATION DIRECTLY BEHIND FIRST ROW OF BALES AS DIRECTED BY THE ENGINEER.
4. UPON ESTABLISHMENT OF GROUND COVER ON DISTURBED AREAS AND WHEN DIRECTED BY THE ENGINEER, HAY BALES WILL BE RELOCATED AND USED AS MULCH. ANY SEDIMENTATION WILL BE THINLY SPREAD UPON ESTABLISHED GROUND COVER.

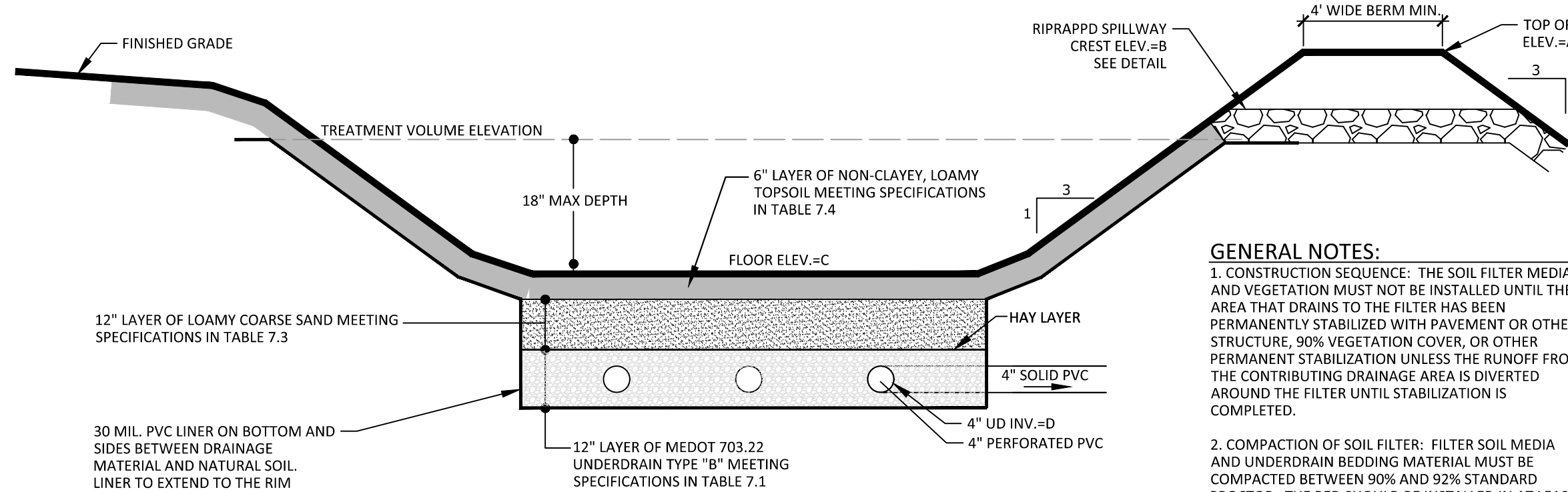
#### STAKED HAYBALES (HB)

NOT TO SCALE

TABLE 7.1 UNDERDRAIN 703.22 TYPE "B"		
SIEVE SIZE	% PASSING BY WEIGHT	
1"	90-100	
1/2"	75-100	
#4	50-100	
#20	15-80	
#50	0-15	
#200	0-5	

TABLE 7.3 LOAMY COARSE SAND		
SIEVE SIZE	% PASSING BY WEIGHT	
#10	85-100	
#20	70-100	
#60	15-40	
#200	8-15	
200 CLAY	<2.0	

TABLE 7.4 SANDY LOAM		
SIEVE SIZE	% PASSING BY WEIGHT	
#4	75-95	
#10	60-90	
#40	35-85	
#200	20-70	
200 CLAY	<2.0	



#### FILTER BASIN SECTION

NOT TO SCALE

FILTER BASIN DATA				
POND ID	A	B	C	D
FB-1	257.25	256.40	253.75	251.58
FB-2	245.25	244.20	242.00	239.83
FB-3	242.80	241.80	239.50	237.33
FB-4	251.50	250.25	248.40	246.23

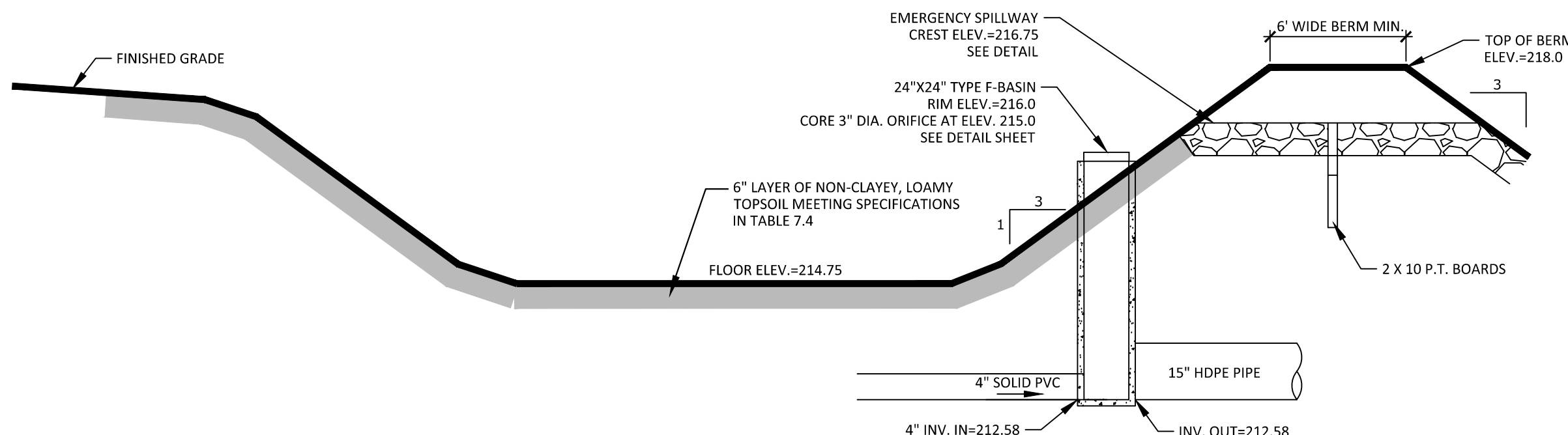
#### GENERAL NOTES:

1. CONSTRUCTION SEQUENCE: THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OR OTHER PERMANENT STABILIZATION UNLESS THE RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA IS DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.

2. COMPACTION OF SOIL FILTER: FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL MUST BE COMPACTED BETWEEN 90% AND 92% STANDARD PROCTOR. THE BED SHOULD BE INSTALLED IN AT LEAST TWO LIFTS TO PREVENT POCKETS OF LOOSE MEDIA.

#### FILTRATION BMPs CONSTRUCTION OVERSIGHT NOTES:

1. INSPECTION BY THE DESIGN ENGINEER OR SUITABLE THIRD PARTY WILL OCCUR AT A MINIMUM:
  - A) AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
  - B) AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
  - C) AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDING.
  - D) AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
 E) ALL THE MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN MUST BE CONFIRMED AS SUITABLE BY THE DESIGN ENGINEER. TESTING MUST BE DONE BY A CERTIFIED LABORATORY TO SHOW THAT THEY ARE PASSING MDEP SPECIFICATIONS.
2. TESTING AND SUBMITTALS: THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL:
  - A) SELECT SAMPLES FOR SAMPLING OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
  - B) PERFORM A SIEVE ANALYSIS CONFORMING TO STM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED BY HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
  - C) PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698

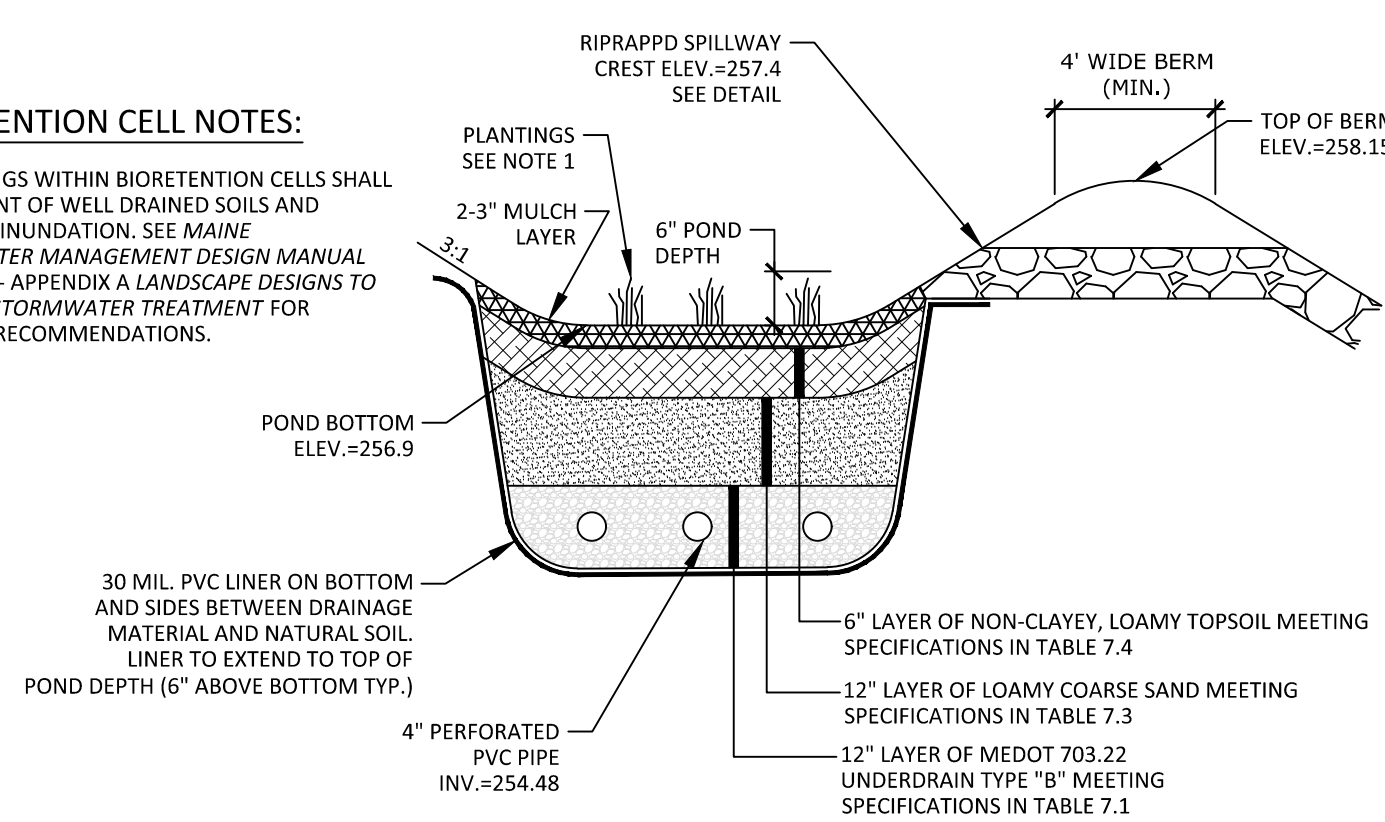


#### DETENTION BASIN 1 SECTION (DB-1)

NOT TO SCALE

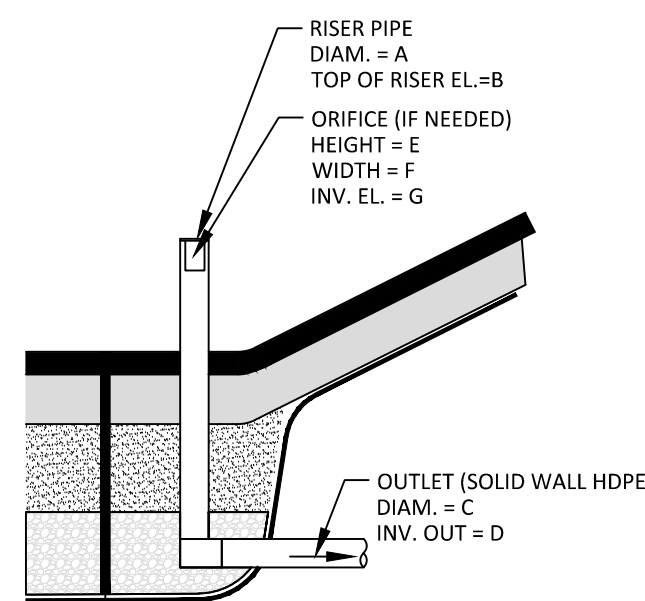
#### BIORETENTION CELL NOTES:

1. PLANTINGS WITHIN BIORETENTION CELLS SHALL BE TOLERANT OF WELL DRAINED SOILS AND FREQUENT INUNDATION. SEE MAINE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME 1 - APPENDIX A LANDSCAPE DESIGNS TO ENHANCE STORMWATER TREATMENT FOR PLANTING RECOMMENDATIONS.



#### BIORETENTION CELL (BR-1)

NOT TO SCALE

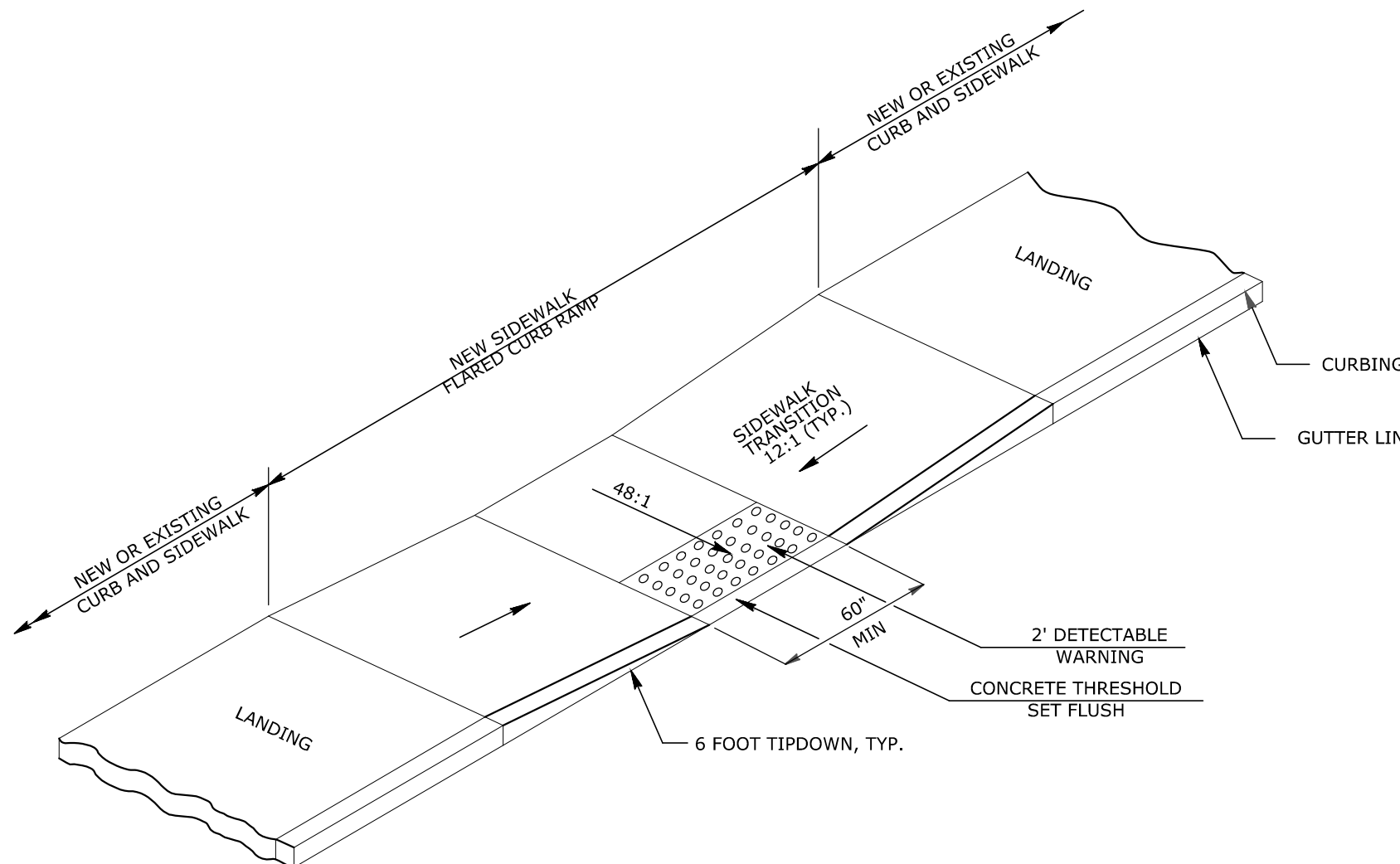


TYPICAL FILTER BASIN SECTION, SEE DETAIL

#### RISER PIPE DETAIL (FB-1, FB-2 & FB-3)

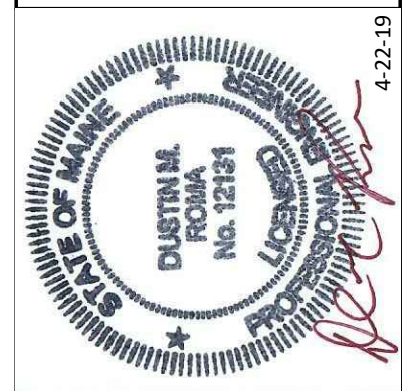
NOT TO SCALE

FILTER BASIN DATA							
POND ID	A	B	C	D	E	F	G
FB-1	4"	255.25	4"	251.58	N/A	N/A	N/A
FB-2	4"	243.10	4"	239.83	N/A	N/A	N/A
FB-3	8"	240.70	8"	237.33	N/A	N/A	N/A
FB-4	4"	250.15	4"	246.23	3"	4"	249.90



#### TYPICAL SIDEWALK RAMP DETAIL

NOT TO SCALE

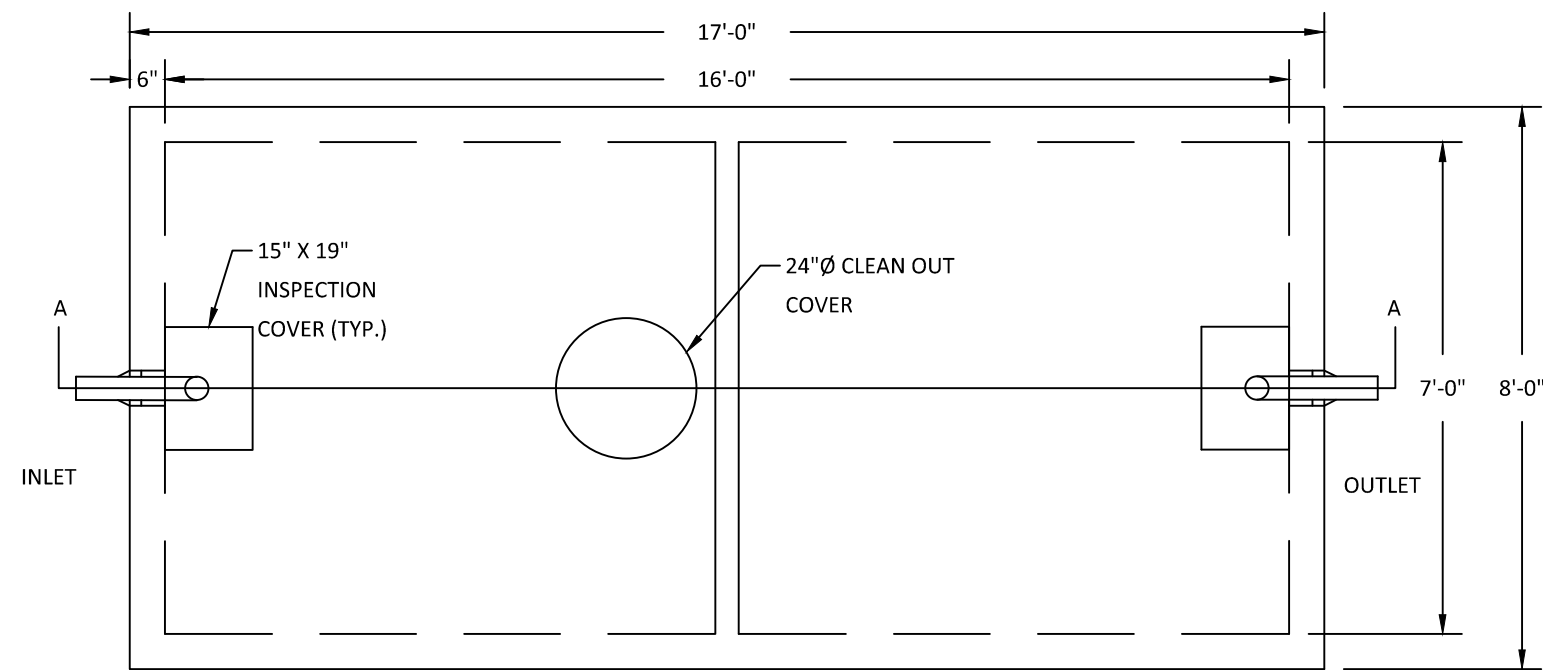


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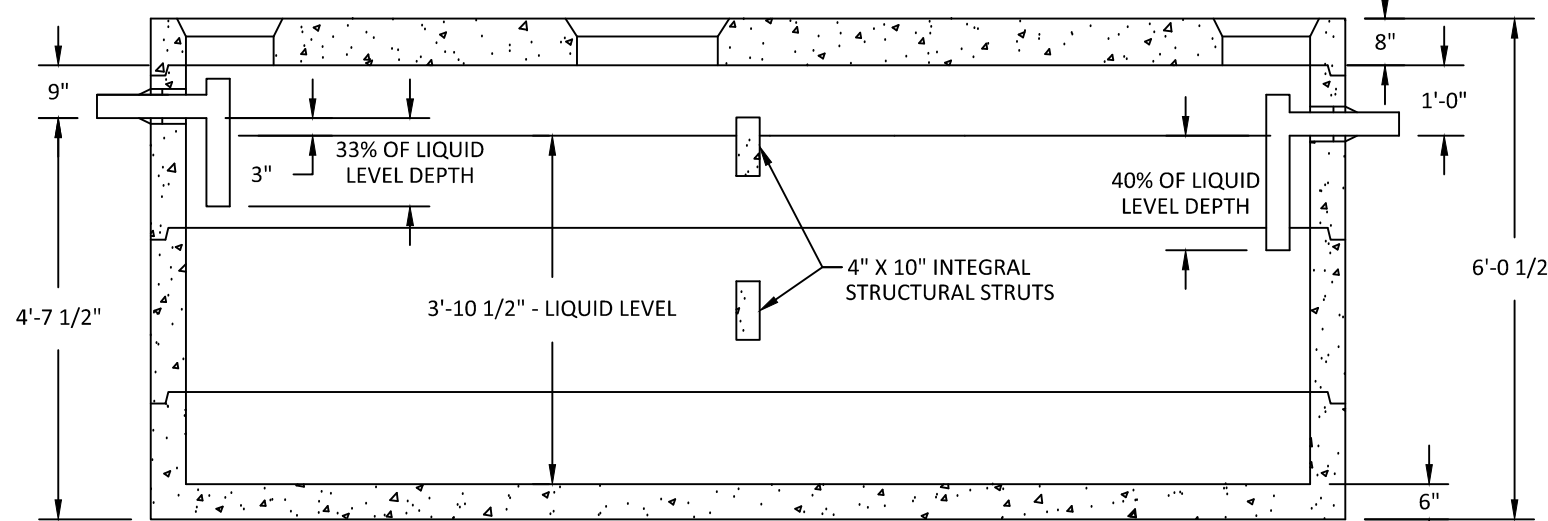
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**DETAILS**  
WOODSIDE CONDOMINIUM RETIREMENT COMMUNITY  
WINDHAM, MAINE  
FOR: WELD, LLC  
PO BOX 1351  
WINDHAM, MAINE 04092

17070 JOB NUMBER:
AS NOTED SCALE:
4-22-2019 DATE:
SHEET 13 OF 14
D-3



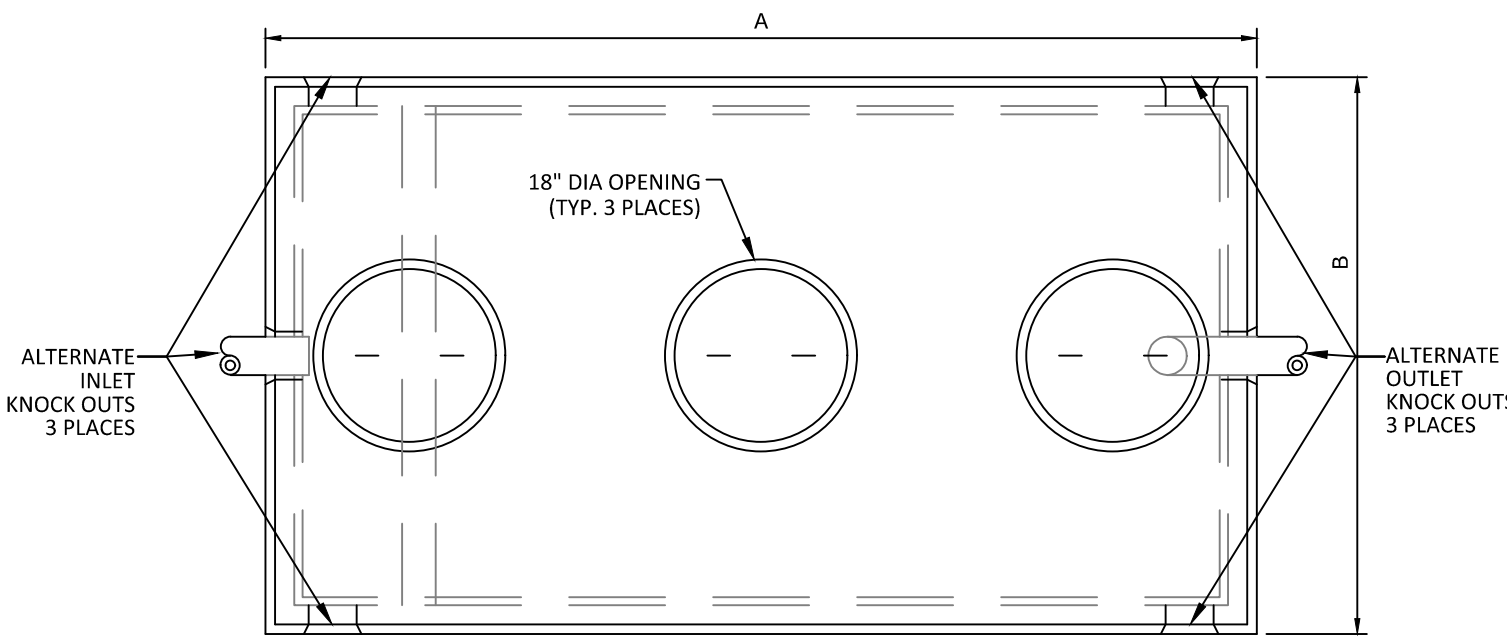
TOP VIEW



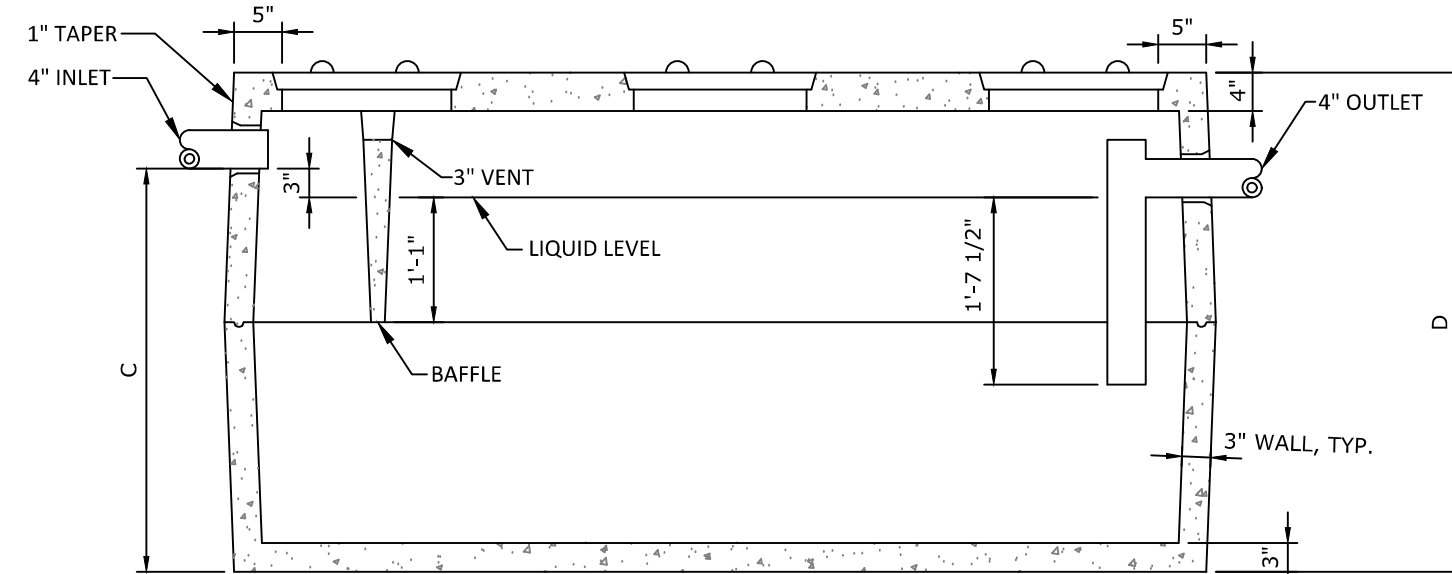
SECTION VIEW A-A

- TANK NOTES:**
1. CONCRETE TO BE 5,000 PSI AT 28 DAYS.
  2. SHIPLAP JOINTS SEALED WITH A 2x1-1/4" STRIP OF ASPHALTIC BUTYL RUBBER.
  3. TANK TO BE A 3,000 GAL. COMMERCIAL SINGLE SERIES SEPTIC TANK MODEL C-703 AS MANUFACTURED BY PRECAST CONCRETE PRODUCTS OF MAINE, INC. OR APPROVED EQUAL.

**3,000 GALLON COMMERCIAL SEPTIC TANK**  
NOT TO SCALE



TOP VIEW

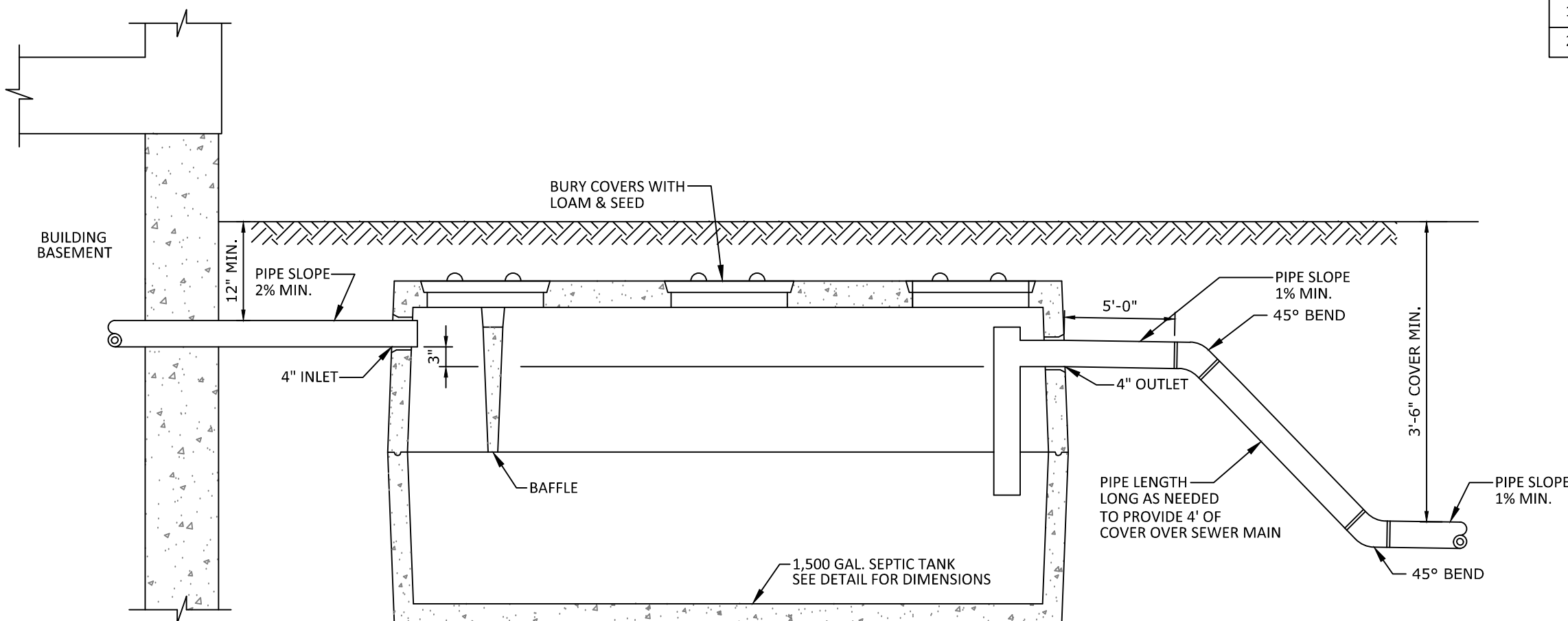


SECTION

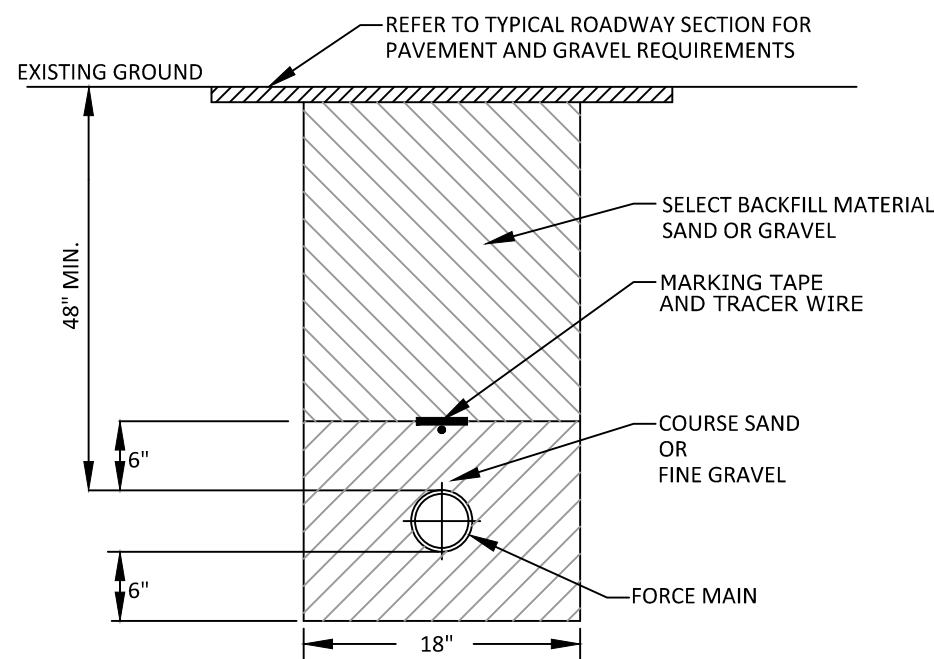
- TANK NOTES:**
1. CONCRETE TO BE 4,000 PSI AT 28 DAYS.
  2. THE INLET BAFFLE IS PRECAST AS ONE UNIT WITH THE TOP SECTION OF THE SEPTIC TANK.
  3. TANKS REINFORCED WITH 6X6X10 G.A. WIRE.
  4. KEYED JOINTS SEALED WITH ASPHALT SEALANT.
  5. TANKS IN PAVED AREAS TO BE REINFORCED WITH WITH 1/2" REBAR SPACED 6" O.C. EACH WAY.
  6. TANKS TO BE RESIDENTIAL SEPTIC TANKS AS MANUFACTURED BY PRECAST CONCRETE PRODUCTS OF MAINE, INC. OR APPROVED EQUAL.

SEPTIC TANK DIMENSIONS				
SIZE	A	B	C	D
1,000 GAL.	8'-6"	4'-10"	55 1/2"	64"
1,500 GAL.	10'-6"	6'-4"	55"	64"
2,000 GAL.	10'-6"	6'-4"	65"	74"

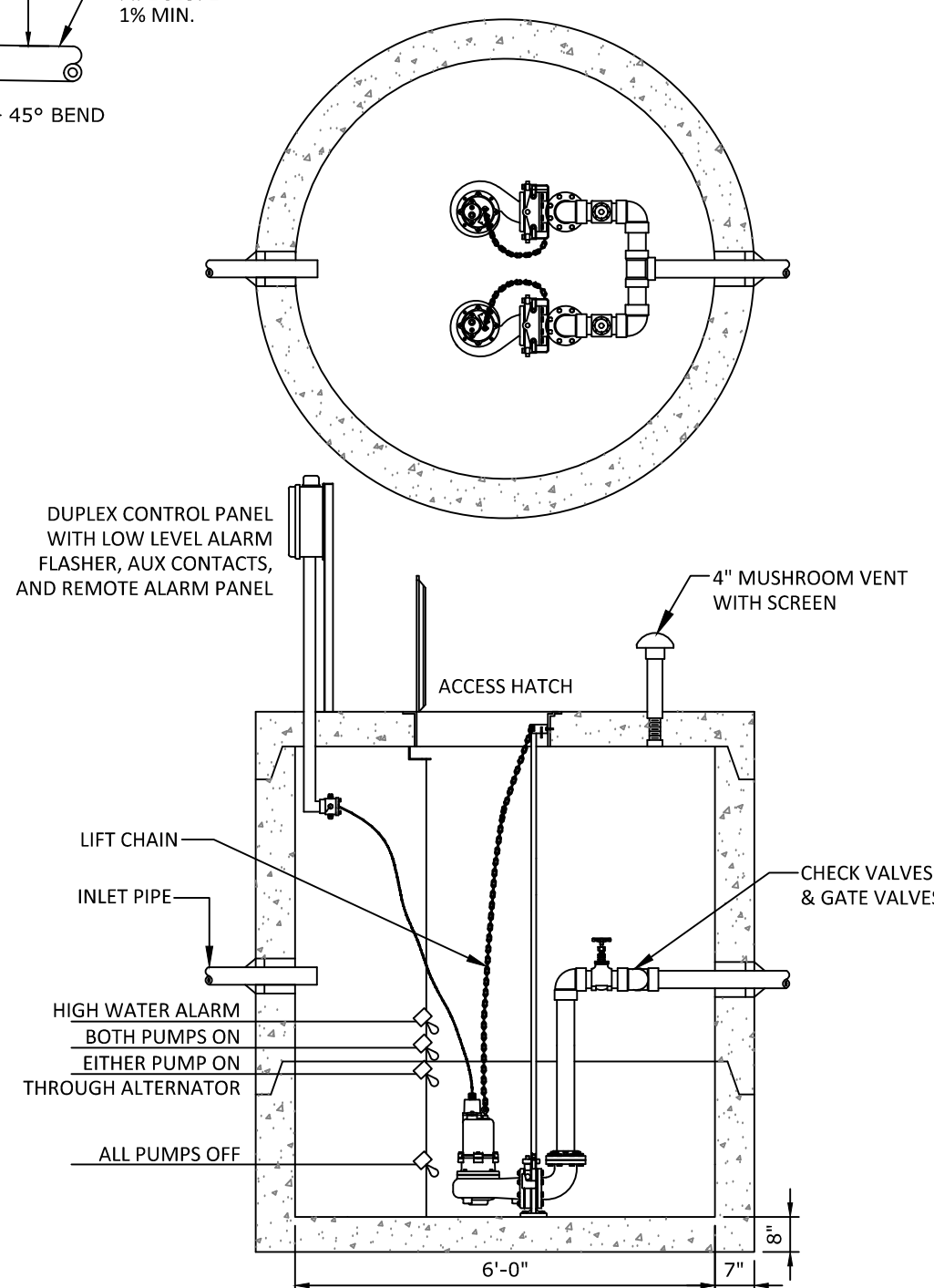
**RESIDENTIAL SEPTIC TANK**  
NOT TO SCALE



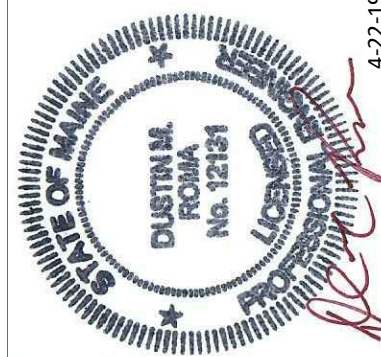
**SEWER SERVICE AND SEPTIC TANK DETAIL**  
NOT TO SCALE



**FORCE MAIN TYPICAL TRENCH CROSS-SECTION**  
NOT TO SCALE



**PUMP STATION DETAIL**  
NOT TO SCALE



**DM ROMA**  
CONSULTING ENGINEERS  
P.O. BOX 1116  
WINDHAM, ME 04062  
(207) 310 - 0506

REV.	DATE	BY	DESCRIPTION
A	4-22-19	DMK	ISSUED TO TOWN FOR PRELIMINARY REVIEW

**DETAILS**  
WOODSIDE CONDOMINIUM RETIREMENT COMMUNITY  
WINDHAM, MAINE  
FOR: **WELD, LLC**  
P.O. BOX 1393  
WINDHAM, MAINE 04062

17070  
JOB NUMBER:  
**AS NOTED**  
SCALE:  
4-22-2019  
DATE:  
SHEET 14 OF 14  
**D-4**