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# MALDEN WOODS WORCESTER, MASSACHUSETTS

APRIL 19, 2018

## DEFINITIVE SUBDIVISION PLAN AMENDMENT & DEFINITIVE SITE PLAN NOTICE OF INTENT

- WAIVERS:
- SECTION IX - DESIGN STANDARDS:**
- A. SECTION IX, C.9. TO UNDERGROUND ALL UTILITIES WITHIN WHIPPOORWILL DRIVE;
  - B. SECTION IX, E.1. MAXIMUM CENTERLINE GRADE;
  - C. SECTION IX, E.4. MAXIMUM GRADE.
  - D. SECTION IX, G. WAIVER OF STRICT COMPLIANCE WITH THE REQUIREMENTS FOR FENCING DETENTION PONDS, IN ORDER TO PERMIT A FOUR (4) FOOT BLACK VINYL-COATED CHAIN LINK FENCE AROUND BASINS.
- SECTION X - REQUIRED IMPROVEMENTS:**
- E. SECTION X, D.5. DECREASE REQUIRED PAVEMENT WIDTH FROM 30 FEET TO 28 FEET;
  - F. SECTION X, E.1. PROVIDE CATCH BASINS EVERY 300 FEET ON WHIPPOORWILL DRIVE;
  - G. SECTION X, F.1. SIDEWALKS ON BOTH SIDES OF STREET; WAIVER TO ALLOW SIDEWALKS ON THE NORTHERLY SIDE OF WHIPPOORWILL DRIVE AND THE EASTERLY SIDE OF DANIELLE'S WAY FROM LOT13A TO LOT 12B;
  - H. SECTION X, F.1. TYPICAL CROSS-SECTION RELATING TO PROPOSED SIDEWALK WIDTH AND LANDSCAPE STRIP ORIENTATION FOR WHIPPOORWILL DRIVE.
- SECTION VI.H-G - PLAN REQUIREMENTS:**
- I. SECTION VI.H-G, G.12. TO SHOW ALL LOCATIONS AND OUTLINES OF EXISTING BUILDINGS AND SITE FEATURES WITHIN OR ADJACENT TO PROPOSED SUBDIVISION;
  - J. SECTION VI.H-G, G.6.1. TO SHOW ALL CONSTRUCTION PLAN REQUIREMENTS ON THE EROSION AND SEDIMENT CONTROL PLAN.

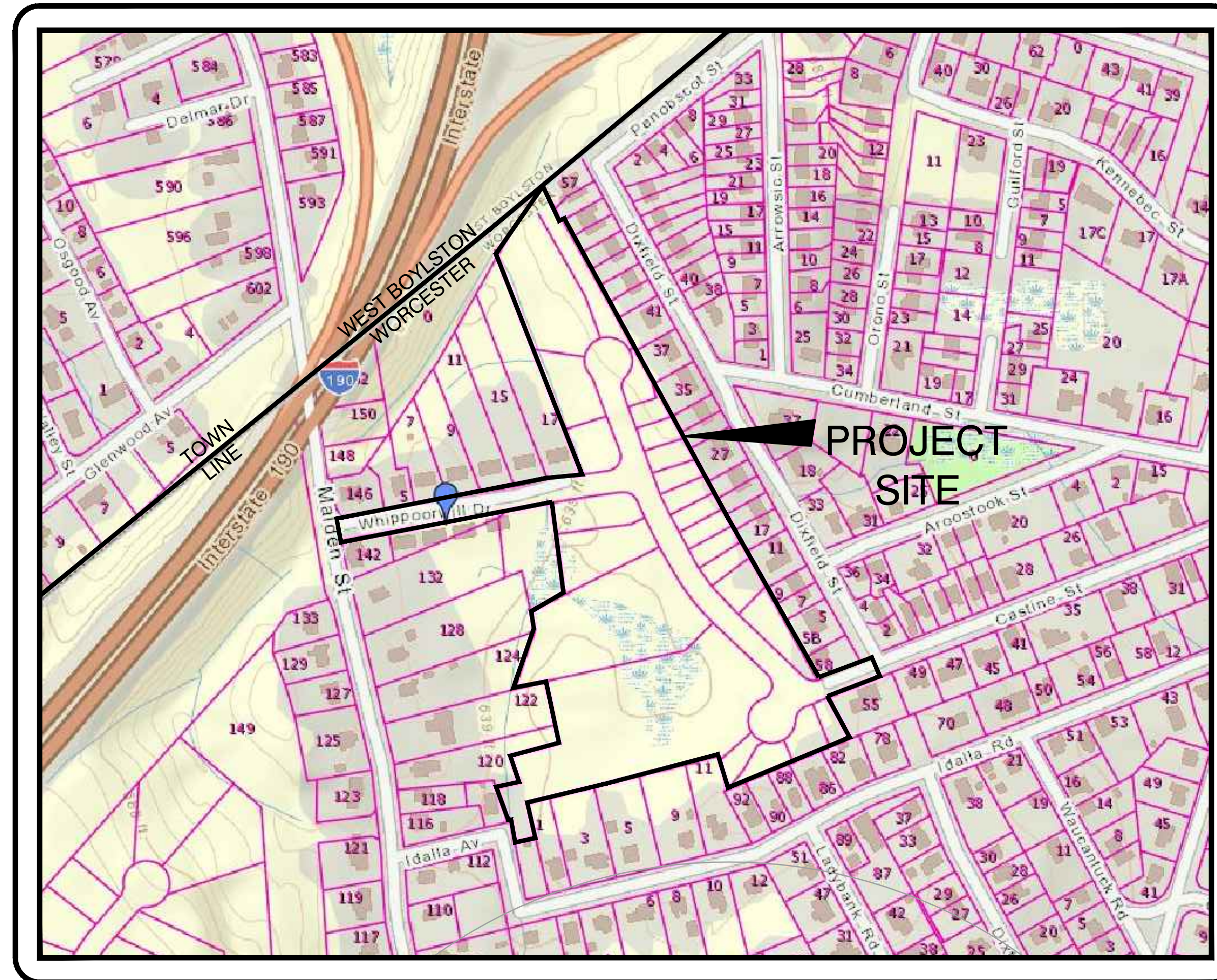
**LOT AND USE SUMMARY**

TOTAL LOT AREA: 10.29 ACRES ±  
ZONING DISTRICT: RESIDENCE, LIMITED-7 (RL-7)

PROPOSED USE: SUBDIVISION WITH A TOTAL OF 30 SINGLE-FAMILY SEMI-DETACHED DWELLING LOTS

**LEGEND**

- PROPERTY LINE/ROW
- ⊙ PROPOSED STORMCEPTOR
- ⊙ PROPOSED SEWER MANHOLE
- ⊙ PROPOSED DRAIN MANHOLE
- ⊙ PROPOSED CATCH BASIN
- ⊙ PROPOSED WATER VALVE
- PROPOSED SEWER LINE
- PROPOSED WATER LINE
- PROPOSED DRAIN LINE
- EOP
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- PROPOSED CONTOUR
- ⊙ BORDERING VEGETATED WETLANDS
- BORDERING VEGETATED WETLANDS BOUNDARY (BVW)
- TPW ⊙ TEST PIT LOCATION (WETLAND)
- TPU ⊙ TEST PIT LOCATION (UPLAND)
- ⊙ PROPOSED STREET LIGHT
- WH ⊙ PROPOSED CITY OF WORCESTER HIGHWAY BOUND
- ⊙ EXISTING CITY OF WORCESTER HIGHWAY BOUND FOUND
- ⊙ HYDRANT
- ⊙ WETLAND FLAG
- WF-A19 ⊙ TEST PIT
- 15' WETLAND BUFFER
- 30' WETLAND BUFFER
- 50' WETLAND BUFFER
- 100' WETLAND BUFFER
- SIDEWALK
- DRAINAGE EASEMENT
- ELEC/TELEPHONE/CABLE LINE
- LIMIT OF WORK
- HAYBALE LINE
- STREET SIGNS
- ⊙ WETLAND REPLICATION
- TREELINE
- GUARDRAIL



**LOCUS PLAN**

SCALE: 1"=200'

**NOTES:**

- THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.
- SUBJECT TO COVENANT DATED AND RECORDED AT WORCESTER DISTRICT REGISTRY OF DEEDS IN
- BOOK \_\_\_\_\_ PAGE \_\_\_\_\_ INSTRUMENT # \_\_\_\_\_ SUBJECT TO CERTIFICATE OF APPROVAL AND ITS CONDITIONS OF APPROVAL.
- NOTE THIS PLAN IS PREPARED AS PART OF A 37 SHEET DEFINITIVE SUBDIVISION PLAN FOR MALDEN WOODS SUBDIVISION, PREPARED BY H.S.&T. GROUP, INC. AND DATED APRIL 18TH, 2018 AND REVISED THROUGH 06/11/2021.

LOT INFORMATION:  
WORCESTER ASSESSORS MAP BLOCK LOTS  
32-011-0001A-1B TO 7A-7B  
32-011-00008 TO 00013  
32-011-0014A-14B TO 15A-15B

DEED REFERENCES:  
DEED BOOK 51283, PAGE 361

PLAN REFERENCE:  
PLAN BOOK 538, PLAN 34  
PLAN BOOK 849, PLAN 77  
PLAN BOOK 849, PLAN 14

\*NOTE: THIS PLAN SUPERSEDES/MODIFIES ALL PREVIOUSLY APPROVED SUBDIVISION PLANS

**CONDITIONS OF APPROVAL:**

- PRIOR TO ANY CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AND REQUISITE NOTICE SHALL BE GIVEN TO BOTH THE OFFICE OF THE PLANNING BOARD (C/O DIVISION OF PLANNING & REGULATORY SERVICES) AND THE DEPARTMENT OF PUBLIC WORKS & PARKS - ENGINEERING DIVISION AS REQUIRED BY SECTION X. A SCHEDULE OF OPERATIONS TO INCLUDE STARTING AND COMPLETION DATES FOR MAJOR DEVELOPMENT PHASES SUCH AS LAND CLEARING AND GRADING, STREET, SIDEWALK AND STORM SEWER INSTALLATION AND SEDIMENT CONTROL MEASURES) SHALL BE PROVIDED AT THIS TIME IN COMPLIANCE WITH THE REQUIREMENT OF SECTION H.6.4.
- CONSTRUCTION PHASING SHALL BE CONSISTENT WITH THE APPROVED PLANS.
- DURING ALL PHASES OF CONSTRUCTION, TEMPORARY TURN-AROUND MEASURES SHALL BE PROVIDED AS NEEDED IN A LOCATION AND CONDITION ACCEPTABLE TO THE FIRE DEPARTMENT AND CONSISTENT WITH THE REQUIREMENTS OF THE SUBDIVISION REGULATIONS (X. C.B.A.).
- EXCEPT FOR ACCESS NECESSARY TO CONSTRUCT STREAM CROSSING COMPONENTS, DURING PHASES 1 & 2, CONSTRUCTION VEHICLES SHALL ACCESS THE SITE VIA CASTINE STREET AND SHALL NOT USE WHIPPOORWILL DRIVE.
- DURING PHASE 4 MATERIAL SHALL BE LIVE-LOADED, WHERE POSSIBLE, AND ALL OVERNIGHT STOCKPILING AND EQUIPMENT STAGING SHALL OCCUR ON LOT 9 OR 10 TO PREVENT DISRUPTION TO WHIPPOORWILL DRIVE RESIDENTS.
- ALL PUBLIC SAFETY FEATURES (GUARDRAIL, FENCING, ETC.) SHALL BE INSTALLED TO THE SATISFACTION OF THE COMMISSIONER OF INSPECTIONAL SERVICES OR THE DEPARTMENT OF PUBLIC WORKS & PARKS FOR A GIVEN PROJECT PHASE PRIOR TO THE PROGRESSION TO THE SUBSEQUENT PROJECT PHASE. THE APPLICANT SHALL MAKE GOOD FAITH EFFORTS (AS REASONABLY DEMONSTRATED TO THE DEPARTMENT OF PUBLIC WORKS AND PARKS) TO INSTALL AND TO MAKE OPERATIONAL STREETLIGHTS PRIOR TO STARTING SUBSEQUENT PROJECT PHASES.
- LOTS WITHIN PHASE 2 & 3 (I.E. LOTS # 5A, 5B, 6A, 6B, 7A, 7B, 8A & 8B) SHALL REMAIN SUBJECT TO A RESTRICTIVE COVENANT, HELD AS ADDITIONAL SECURITY AND NOT TO BE BUILT UPON, UNTIL THE CONSTRUCTION OF THE WETLAND/STREAM CROSSING AND RELATED IMPROVEMENTS ARE COMPLETE.
- PRIOR TO CONSTRUCTION OF PHASE 3, A PERFORMANCE AGREEMENT SECURED BY AN APPROVED MONETARY FORM SHALL BE REQUIRED IN ORDER TO SECURE THE FULL COST OF THE IMPROVEMENTS PROPOSED TO RECONSTRUCT WHIPPOORWILL DRIVE (FROM MALDEN STREET TO DANIELLE'S WAY) WITHIN PHASE 4. SAID SECURITY SHALL BE SEPARATE FROM ANY OTHER FORM OF SECURITY FOR THE PROJECT.
- PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR AND/OR COMMENCEMENT OF CONSTRUCTION FOR THE CROSSING, ONE (1) TO-SCALE PROPERLY STAMPED AND SEALED ORIGINAL WALL AND FOOTING PLANS, WITH SECTIONS, PREPARED BY A CURRENTLY LICENSED MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER SHALL BE SUBMITTED TO THE DIVISION OF PLANNING AND REGULATORY SERVICES. SAID PLAN SHALL RECONCILE WITH THE APPROVED SITE LAYOUT PLANS ON FILED.
- UPON COMPLETION OF CONSTRUCTION, THE DEVELOPER SHALL PETITION TO MAKE PUBLIC ALL OF THE EFFECTED STREETS, INCLUDING DANIELLE'S WAY, THE EXTENSION OF CASTINE STREET, AND THE EXTENSION OF WHIPPOORWILL DRIVE.
- NO SINGLE SPECIES OF STREET TREE SHALL CONSTITUTE MORE THAN TWENTY-FIVE PERCENT OF THE TOTAL NUMBER OF STREET TREES SHOWN ON THE APPROVED PLAN IN ORDER TO PROVIDE CANOPY RESILIENCY. TREES SHALL BE PLANTED IN COMPLIANCE WITH SECTION X.J. ANY STAKES SHALL BE REMOVED AFTER 1 YEAR TO PREVENT GIRDLING.
- INFRASTRUCTURE SHALL BE INSTALLED AND MAINTAINED IN COMPLIANCE WITH THE OPERATIONS AND MAINTENANCE PLANS ON FILE WITH THE DIVISION OF PLANNING & REGULATORY SERVICES.
- PRIOR TO AND CONTINUING DURING ALL CONSTRUCTION ACTIVITIES, APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDING HAY BALES AND SILT FENCES, SHALL BE INSTALLED AND MAINTAINED SUBJECT TO THE OVERSIGHT AND DIRECTION OF THE COMMISSIONER OF INSPECTIONAL SERVICES.
- ALL TREE AND STUMP REMOVAL SHALL BE IN ACCORDANCE WITH THE ASIAN LONGHORNED BEETLE PROGRAM REQUIREMENTS AND ALL NEW TREES AND SHRUB PLANTINGS SHALL BE ASIAN LONGHORNED BEETLE AND EMERALD ASH BORER RESISTANT.
- NO ROCK CRUSHING OR GRINDING OPERATIONS SHALL BE PERMITTED ON SITE AND THE CONTRACTOR SHALL TAKE STEPS TO LIMIT UNNECESSARY NOISE AND COMPLY WITH THE CITY OF WORCESTER'S GENERAL REVISED ORDINANCE RELATIVE TO NOISE CONTROL.
- NOISE MITIGATION - ALL CONSTRUCTION SHALL TAKE PLACE IN ACCORDANCE WITH CITY OF WORCESTER ORDINANCES AND REGULATIONS. CONSTRUCTION ACTIVITIES SHALL COMPLY WITH ALL STATE AND MUNICIPAL NOISE REGULATIONS. EQUIPMENT SHALL BE WELL MAINTAINED AND HAVE FUNCTIONING MUFFLERS. ALL EQUIPMENT SHALL COMPLY WITH D.E.P.'S ANTI IDLING REGULATIONS TO PREVENT UNNECESSARY NOISE AND AIR POLLUTION WHILE NOT IN PRODUCTIVE USE.
- DUST AND AIR QUALITY CONTROL - TO MITIGATE DUST ON THE WORKSITE, THE CONTRACTORS SHALL HAVE ON SITE WATER TRUCKS, MISTERS AND CHEMICAL TREATMENT SUCH AS CALCIUM CHLORIDE DURING EARTH MOVING ACTIVITIES. IN ADDITION TO THESE MEASURES EXCAVATED SOILS SHALL BE DIRECTLY TRANSFERRED TO COVERED TRUCKS, AND NOT STOCKPILED AS TO CONTRIBUTE TO DUST FROM THE WORK SITE.
- FUELS, WASTE OIL, AND HAZARDOUS WASTES - ALL WORK SHALL BE CONDUCTED IN AN ENVIRONMENTALLY SAFE MANNER IN ACCORDANCE WITH ALL REGULATIONS FOR THE MANAGEMENT OF FUELS, WASTE OILS AND HAZARDOUS MATERIALS. ALL HAZARDOUS MATERIALS SHALL BE TRANSPORTED, STORED AND HANDLED IN COMPLIANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.
- ALL WORK SHALL CONFORM TO THE CITY OF WORCESTER'S SUBDIVISION RULES AND REGULATIONS, ZONING ORDINANCE, PLANNING BOARD DECISION AND CONDITIONS OF APPROVAL, AND TO THE STANDARDS CONTAINED IN THE CITY OF WORCESTER, DEPARTMENT OF PUBLIC WORKS & PARKS, ENGINEERING DIVISION, CONSTRUCTION MANAGEMENT SECTION, STANDARD SPECIFICATIONS & DETAILS, MOST RECENT EDITION.
- SUBJECT TO THE ZONING ENFORCEMENT OFFICER'S DETERMINATION THAT THE PARCELS COMPLY WITH ALL THE RELEVANT PROVISIONS OF THE ZONING ORDINANCE.
- PURSUANT TO SECTION VI, I.2.B. OF THE CITY OF WORCESTER SUBDIVISION REGULATIONS, THIS APPROVAL SHALL AUTOMATICALLY EXPIRE AND RESCIND AFTER 5 YEARS (MARCH 24, 2026) FROM THE DATE OF CONDITIONAL APPROVAL (MARCH 24, 2021), IF ALL REQUIRED IMPROVEMENTS (I.E., CONSTRUCTION OF THE WAY(S) AND INSTALLATION OF MUNICIPAL SERVICES) HAVE NOT BEEN COMPLETED.

I CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE PLANNING BOARD APPROVAL AND THAT NO APPEAL HAS BEEN FILED IN THIS OFFICE.

DATE \_\_\_\_\_ CITY CLERK, WORCESTER, MA

CITY OF WORCESTER PLANNING BOARD DATE: \_\_\_\_\_

ENDORSED BY THE WORCESTER PLANNING BOARD: \_\_\_\_\_

**PLAN REVISIONS:**

NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
11	11/12/2020	ORDER OF CONDITIONS	LLW
10	09/17/2020	CITY COMMENTS	LLW
9	08/17/2020	CITY COMMENTS	LLW
8	07/13/2020	CITY COMMENTS	LLW
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4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS	LLW
2	08/08/18	CITY COMMENTS	PJB

**OWNER/APPLICANT:**

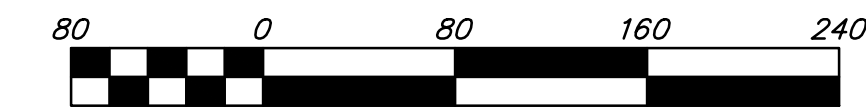
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B  
NATICK, MA 01760

**ENGINEER/SURVEYOR:**

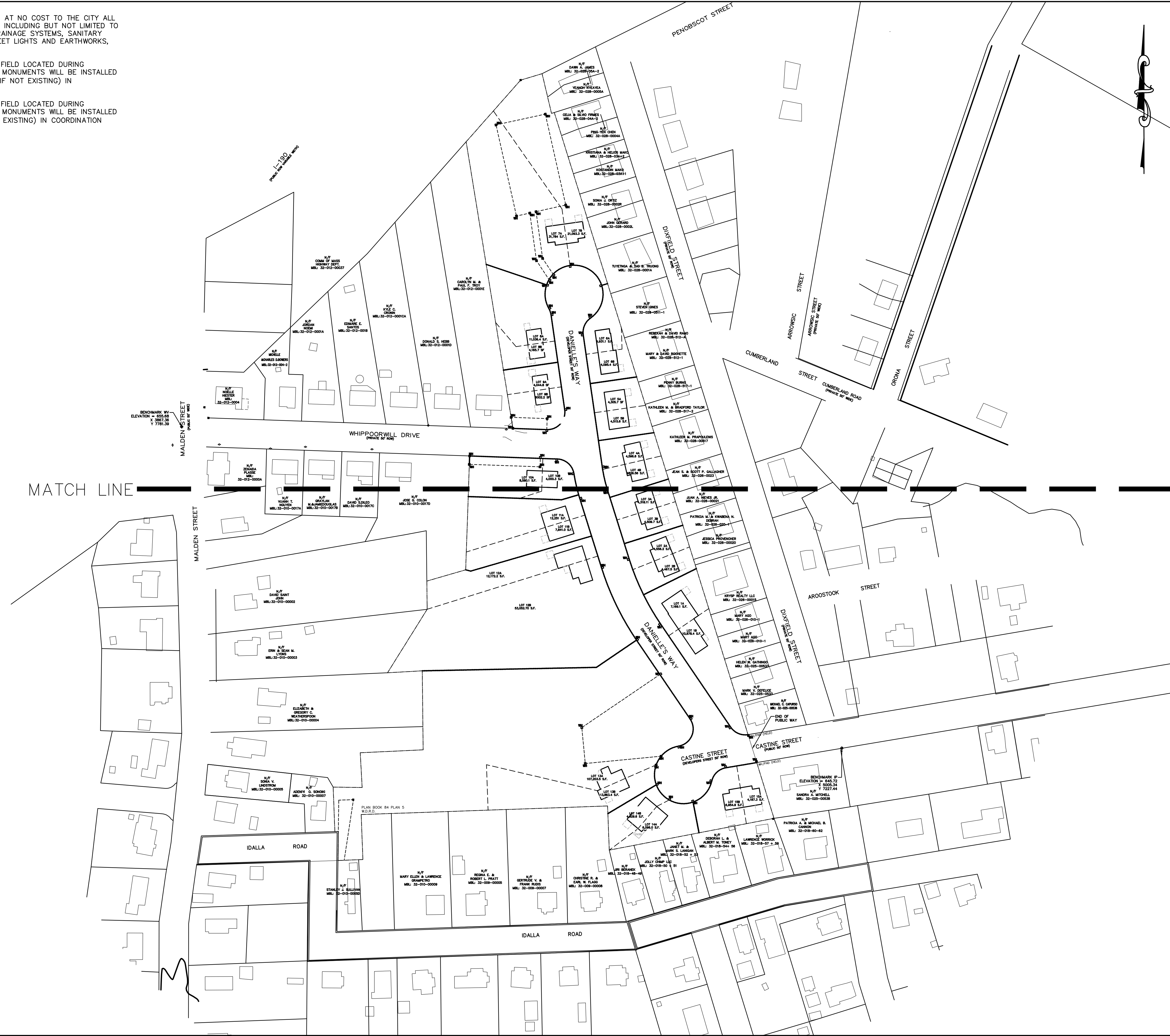
**H. S. & T. GROUP, INC.**  
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

SHEET NUMBER  
JOB NUMBER: 5956  
DWG NUMBER: 5004  
**1** OF **37**

- NOTES:
1. THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.
  2. EXISTING MONUMENTS TO BE FIELD LOCATED DURING CONSTRUCTION AND ADDITIONAL MONUMENTS WILL BE INSTALLED AT MALDEN & WHIPPOORWHILL (IF NOT EXISTING) IN COORDINATION WITH DPW
  3. EXISTING MONUMENTS TO BE FIELD LOCATED DURING CONSTRUCTION AND ADDITIONAL MONUMENTS WILL BE INSTALLED AT CASTINE & DIXFIELD (IF NOT EXISTING) IN COORDINATION WITH DPW



HORIZONTAL SCALE 1"=80'

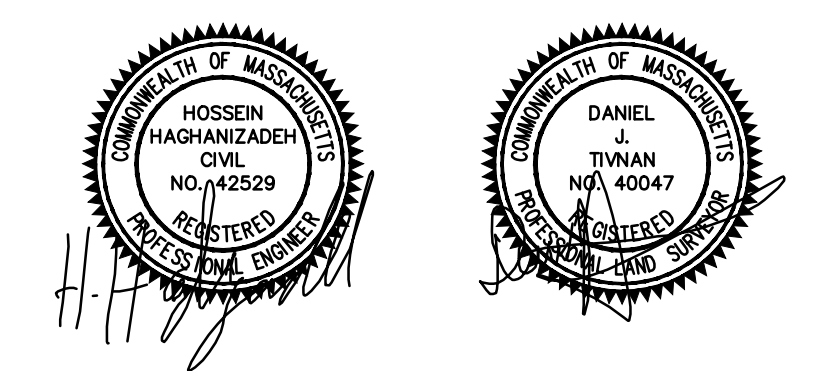


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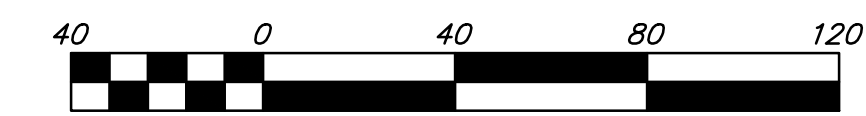
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**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 KEY PLAN**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=80'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER	
DWG NUMBER: 5004	2 OF 37	





HORIZONTAL SCALE 1"=40'

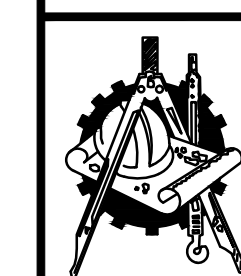
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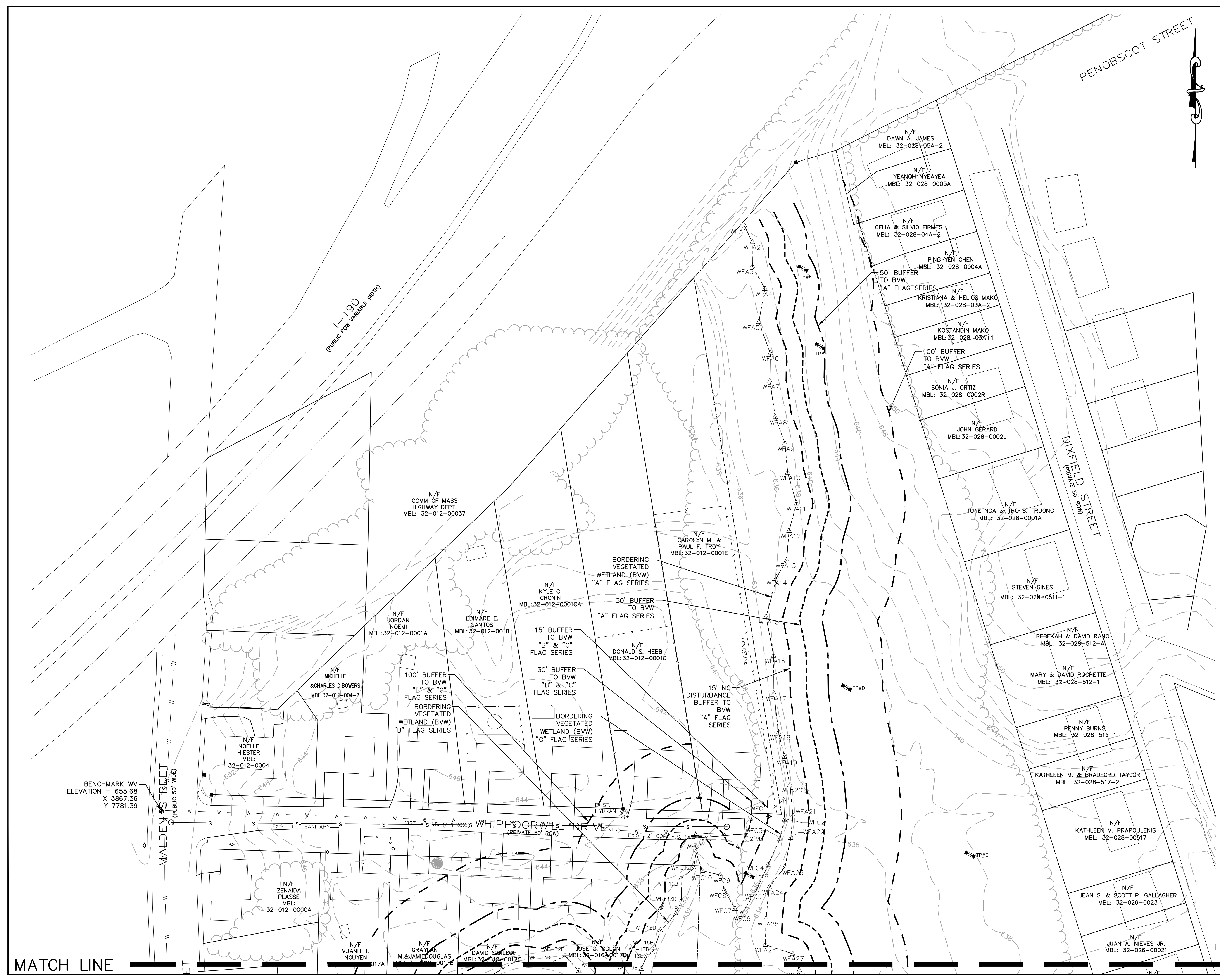


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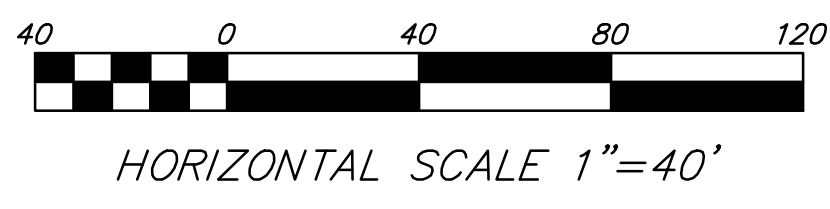
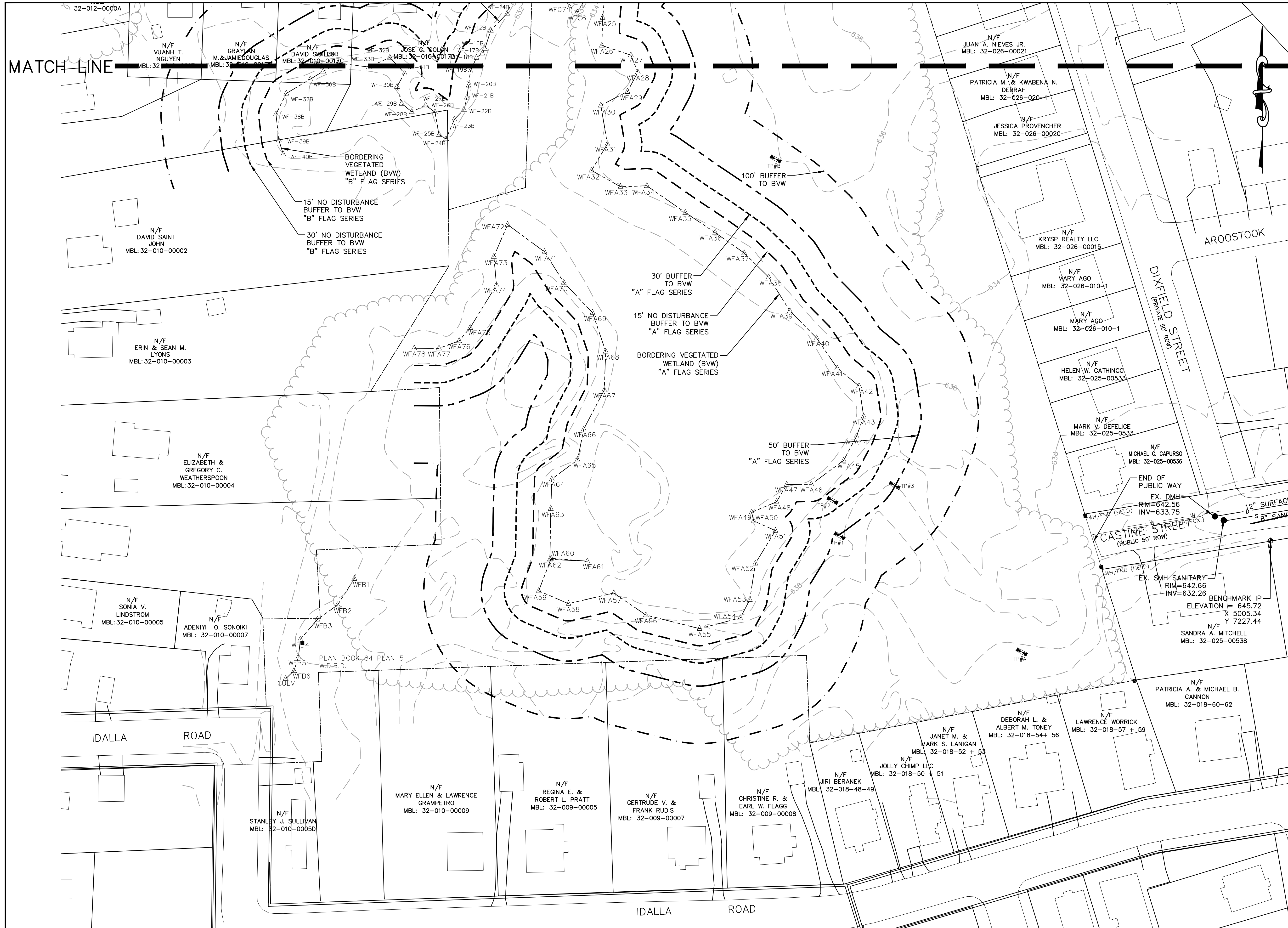
**MALDEN WOODS SUBDIVISION  
AMENDMENT  
EXISTING CONDITIONS**

APPLICANT/OWNER:  
WHIPPOORWILL, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND	
JOB NUMBER: 5956	SHEET NUMBER		
DWG NUMBER: 5004	4 OF 37		



MATCH LINE



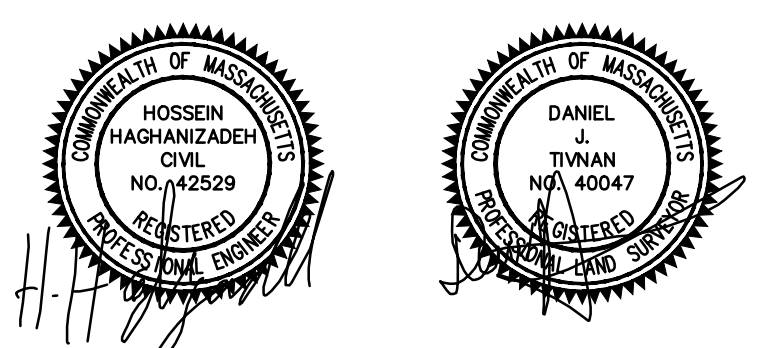
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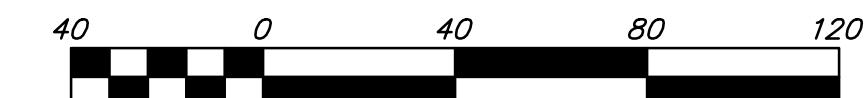


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**MALDEN WOODS SUBDIVISION  
AMENDMENT  
EXISTING CONDITIONS 2**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA  
01760

DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND	
JOB NUMBER: 5956	SHEET NUMBER <b>5 OF 37</b>		
DWG NUMBER: 5004			



HORIZONTAL SCALE 1"=40'

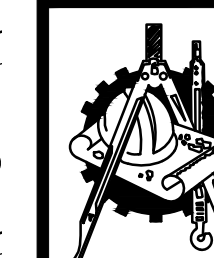
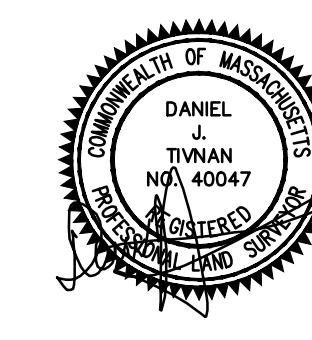
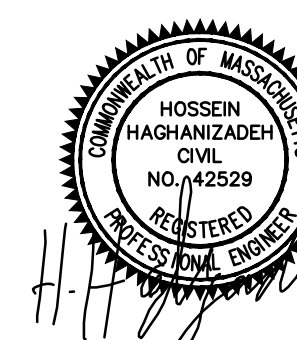
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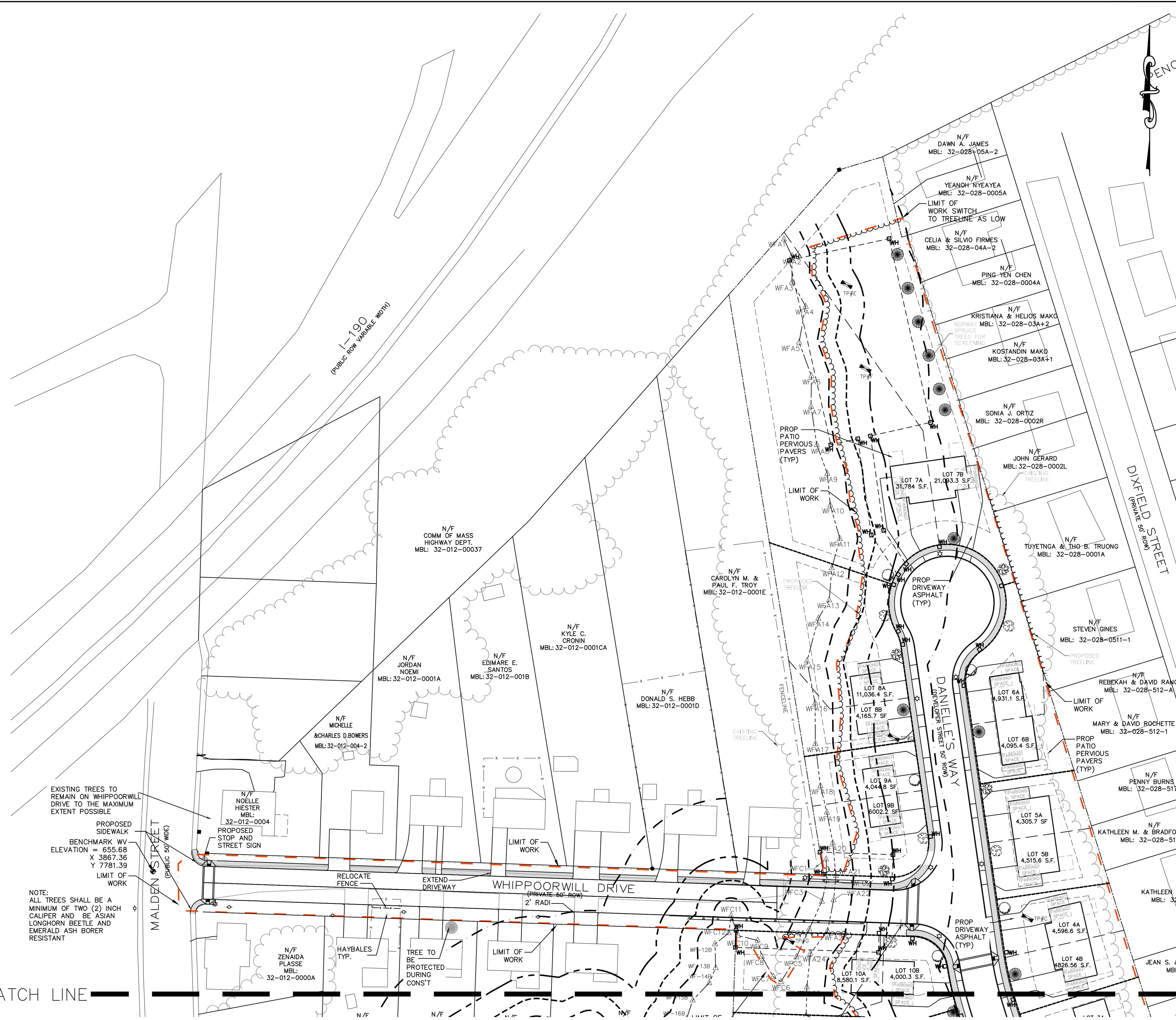
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EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

MALDEN WOODS SUBDIVISION  
AMENDMENT  
SITE PLAN SHEET 1

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

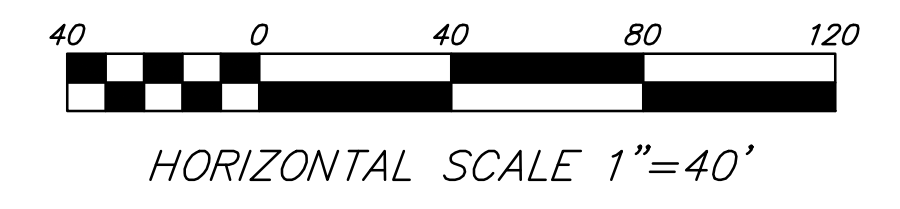
DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND	
JOB NUMBER: 5956	SHEET NUMBER		
DWG NUMBER: 5004	6 OF 37		



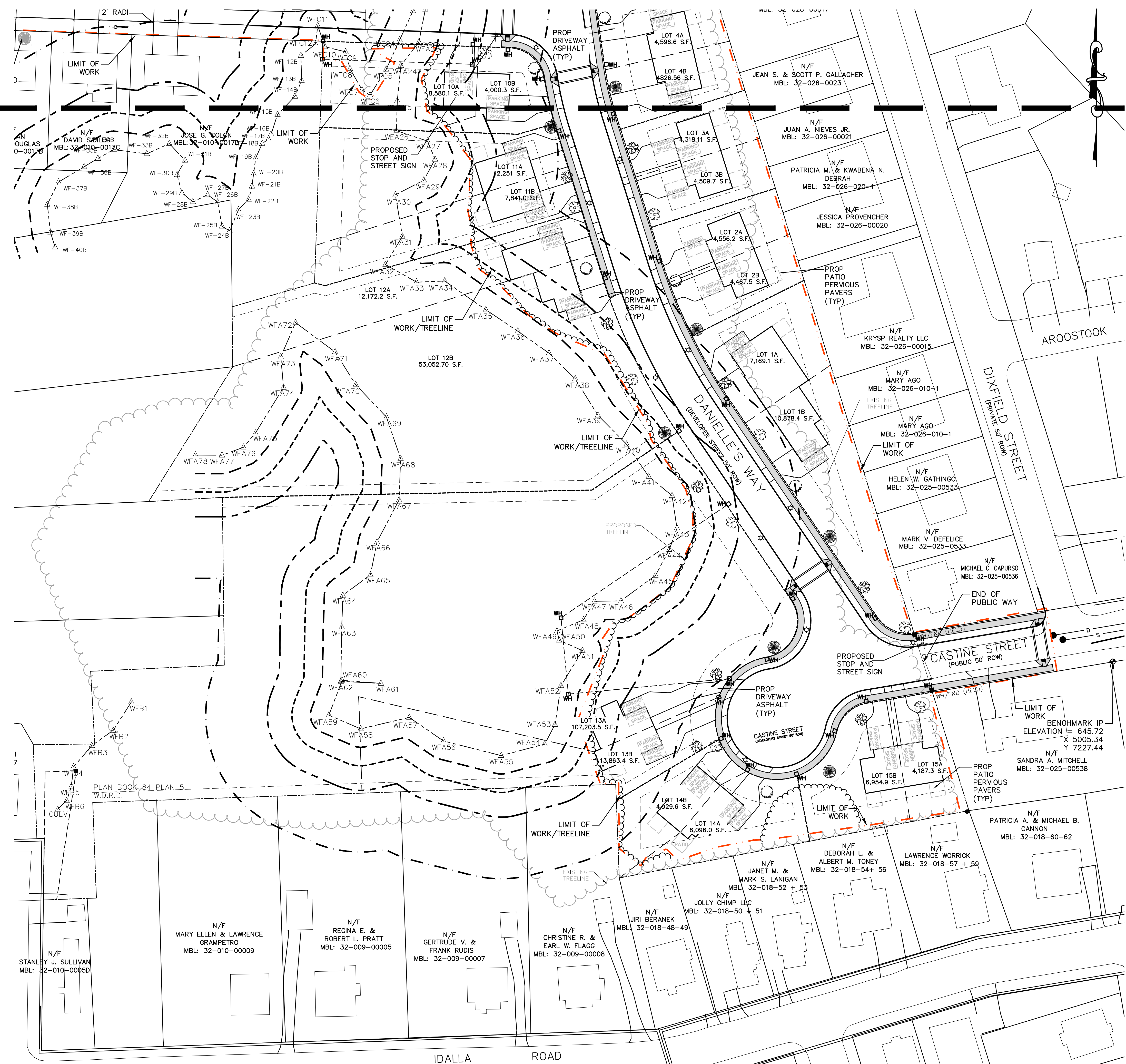
EXISTING TREES TO REMAIN ON WHIPPOORWILL DRIVE TO THE MAXIMUM EXTENT POSSIBLE  
PROPOSED SIDEWALK  
BENCHMARK WY  
ELEVATION = 655.68  
X 3867.36  
Y 7781.39  
LIMIT OF WORK

NOTE:  
ALL TREES SHALL BE A MINIMUM OF TWO (2) INCH CALIPER AND BE ASIAN LONGHORN BEETLE AND EMERALD ASH BORER RESISTANT

MATCH LINE



MATCH LINE



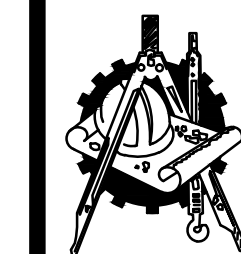
NOTE:  
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PLAN REVISIONS:

NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
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10	09/17/2020	CITY COMMENTS	LLW
9	08/17/2020	CITY COMMENTS	LLW
8	07/13/2020	CITY COMMENTS	LLW
7	06/16/2020	CITY COMMENTS	LLW
6	03/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	08/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



**H. S. & T. GROUP, INC.**  
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION  
AMENDMENT  
SITE PLAN SHEET 2**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

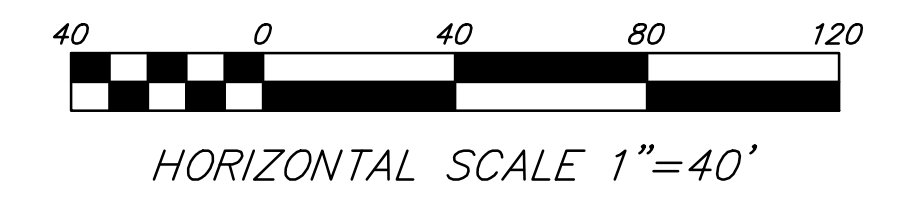
DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124

ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND
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JOB NUMBER: 5956	SHEET NUMBER: 7 OF 37
DWG NUMBER: 5004	

ZONING SUMMARY TABLE

ZONING REQUIREMENTS	PROPOSED												
	LOT 1A	LOT 1B	LOT 2A	LOT 2B	LOT 3A	LOT 3B	LOT 4A	LOT 4B	LOT 5A	LOT 5B	LOT 6A	LOT 6B	
SINGLE FAMILY SEMI-DETACHED	LOT 7A	LOT 7B	LOT 8A	LOT 8B	LOT 9A	LOT 9B	LOT 10A	LOT 10B	LOT 11A	LOT 11B	LOT 12A		
MINIMUM LOT AREA	4,000 SF	7,169.1 SF	10,878.4 SF	4,556.2 SF	4,467.5 SF	4,514 SF	4,509.7 SF	4,596.57 SF	4,826.6 SF	4,305.7 SF	4,514.6 SF	4,931.1 SF	4,095.4 SF
MIN. LOT FRONTAGE	35 Ft	82.76 FT	224.79 FT	47.15 FT	47.03 FT	42.65 FT	42.65 FT	47.39 FT	46.94 FT	49.97 FT	50.73 FT	132.36 FT	49.31 FT
FRONT YARD SETBACK	20 Ft	20.5 FT	20.5 FT	40.02 FT	40.02 FT	38.5 FT	38.5 FT	39.12 FT	37.42 FT	21.50 FT	21.50 FT	20.67 FT	21.02 FT
SIDE YARD SETBACK	8 Ft	21.66 FT	NOT APPLICABLE	9.61 FT	9.25 FT	10.65 FT	10.65 FT	10.03 FT	10.34 FT	18.23 FT	18.23 FT	36.26 FT	11.484 FT
REAR YARD SETBACK	20 Ft	20.70 FT	20.49 FT	31.46 FT	28.85 FT	30.30 FT	33.22 FT	28.02 FT	30.43 FT	26.89 FT	32.03 FT	20.51 FT	20.60 FT
EXTERIOR SIDE YARD SETBACK	15 FT	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
LOT IRREGULARITY FACTOR	0.40	0.99	.061	0.82	0.83	0.84	0.82	0.86	0.85	0.93	0.90	0.77	0.64
% OF FRONT YARD IMPERVIOUS		24.29%	9.33%	35.09%	33.31%	38.54%	37.54%	27.39%	25.46%	36.99%	36.99%	15.77%	36.25%
SINGLE FAMILY SEMI-DETACHED	LOT 7A	LOT 7B	LOT 8A	LOT 8B	LOT 9A	LOT 9B	LOT 10A	LOT 10B	LOT 11A	LOT 11B	LOT 12A		
MINIMUM LOT AREA	31,784 SF	21,093.3 SF	11,036.4 SF	4,165.7 SF	4,044.8 SF	6,002.2 SF	8,580.1 SF	4,000.3 SF	12,251.0 SF	7,840.9 SF	12,172.2 SF		
MIN. LOT FRONTAGE	55.15 FT	70.22 FT	101.42 FT	35.00 FT	42.83 FT	150.82 FT	126.24 FT	103.36 FT	35.00 FT	35.00 FT	35.00 FT		
FRONT YARD SETBACK	38.0 FT	38.0 FT	20.67 FT	20.67 FT	21.5 FT	21.50 FT	21.50 FT	21.50 FT	20.61 FT	20.61 FT	20.73 FT		
SIDE YARD SETBACK	11.27 FT	9.44 FT	87.76 FT	10.0 FT	17.83 FT	NOT APPLICABLE	99.74 FT	NOT APPLICABLE	10.41 FT	9.59 FT	10.41 FT		
REAR YARD SETBACK	220.57 FT	264.09 FT	48.82 FT	48.35 FT	46.53 FT	20.50 FT	132.49 FT	140.74 FT	220.63 FT				
EXTERIOR SIDE YARD SETBACK	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	41.50 FT	NOT APPLICABLE	32.90 FT	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE		
LOT IRREGULARITY FACTOR	0.89	0.44	0.94	0.59	0.86	1.04	0.94	0.70	0.68	0.48	0.41		
% OF FRONT YARD IMPERVIOUS	21.67%	16.75%	17.68%	47.86%	43.82%	31.03%	14.57%	0%	41.15%	41.48%	47.83%		
SINGLE FAMILY SEMI-DETACHED	LOT 12B	LOT 13A	LOT 13B	LOT 14A	LOT 14B	LOT 15A	LOT 15B						
MINIMUM LOT AREA	53,052.1 SF	107,203.3 SF	13,863.6 SF	6,096.0 SF	4,929.6 SF	4,187.3 SF	6,954.7 SF						
MIN. LOT FRONTAGE	165.82 FT	277.79 FT	35.00 FT	42.64 FT	35.00 FT	35.00 FT	35.00 FT						
FRONT YARD SETBACK	20.73 FT	60.51 FT	41.62 FT	21.50 FT	215.0 FT	38.12 FT	25.49 FT						
SIDE YARD SETBACK	133.32 FT	169.64 FT	11.56 FT	47.18 FT	8.83 FT	8.85 FT	51.93 FT						
REAR YARD SETBACK	223.29 FT	415.17 FT	219.04 FT	20.50 FT	32.54 FT	28.77 FT	29.55 FT						
EXTERIOR SIDE YARD SETBACK	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE						
LOT IRREGULARITY FACTOR	0.78	0.49	0.41	0.64	0.72	0.83	0.95						
% OF FRONT YARD IMPERVIOUS	11.65%	5.86%	35.74%	28.94%	49.65%	41.69%	14.46%						



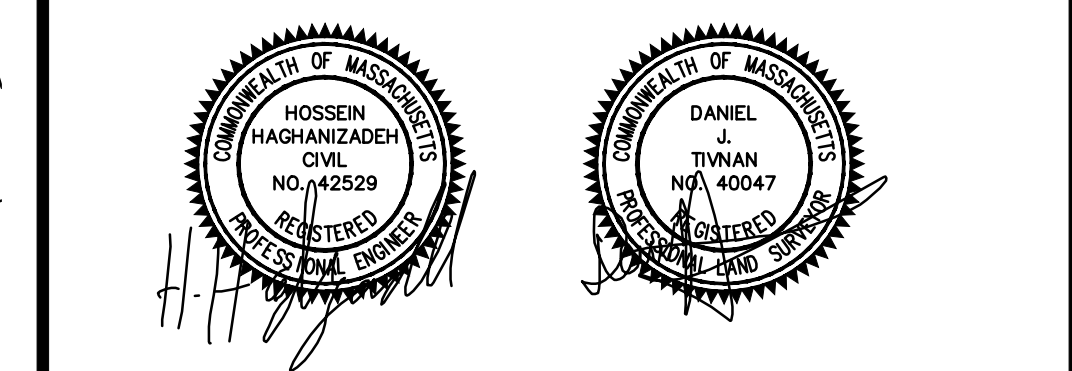
NOTES:  
 1. THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.  
 2. EXISTING MONUMENTS TO BE FIELD LOCATED DURING CONSTRUCTION AND ADDITIONAL MONUMENTS WILL BE INSTALLED AT MALDEN & WHIPPOORWILL (IF NOT EXISTING) IN COORDINATION WITH DPW

PLAN REVISIONS:

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2	8/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

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**H. S. & T. GROUP, INC.**  
 PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
 75 HAMMOND STREET - 2ND FLOOR  
 WORCESTER, MASSACHUSETTS 01610-1723  
 PHONE: (508) 757-4944 FAX: (508) 752-8895  
 EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 LOT BEARING AND DISTANCE SHEET 1**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018 COMP'D: DJT FIELD: PS  
 SCALE: 1"=40' CAD: STF FLD. BK: 639-124  
 ZONE: RL-7 REV'D: HH DWG: MALDENWOODSUBAMEND  
 JOB NUMBER: 5956 SHEET NUMBER: 8 OF 37  
 DWG NUMBER: 5004

MATCH LINE

BENCHMARK WV  
 ELEVATION = 655.68  
 X 3867.36  
 Y 7781.39

MALDEN STREET  
 (PUBLIC 50' WIDE)

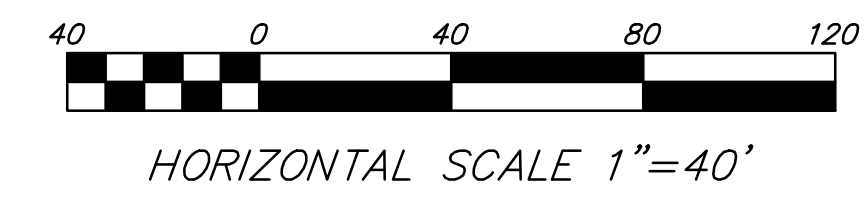
WHIPPOORWILL DRIVE  
 (PRIVATE 50' ROW)

DIXFIELD STREET  
 (PRIVATE 50' ROW)

PENOFF



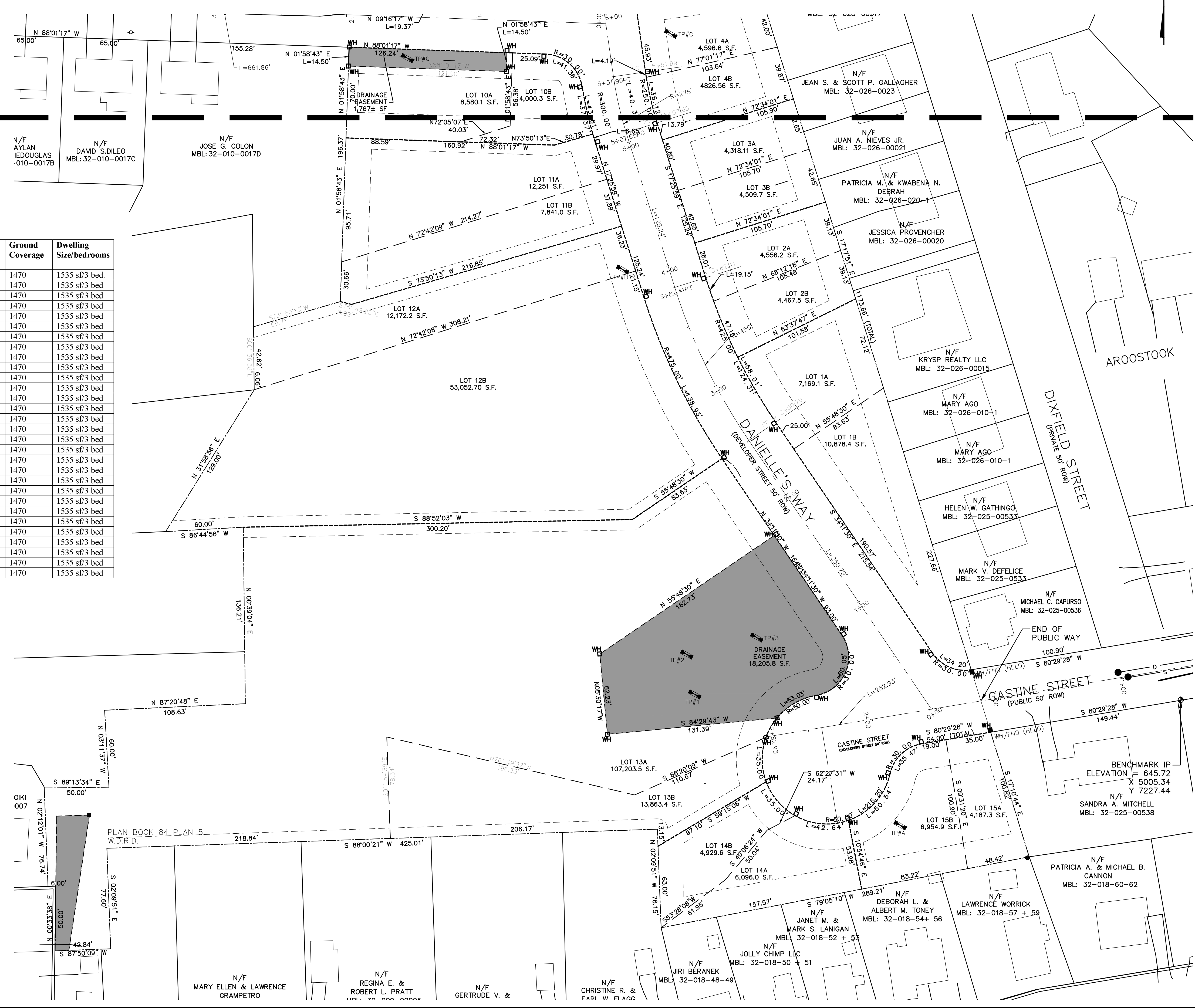




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 2. EXISTING MONUMENTS TO BE FIELD LOCATED DURING CONSTRUCTION AND ADDITIONAL MONUMENTS WILL BE INSTALLED AT CASTINE & DIXFIELD (IF NOT EXISTING) IN COORDINATION WITH DPW

MATCH LINE

Location	Lot Size SF	Height (ft/stories)	FAR	Total Floor Area	Ground Coverage	Dwelling Size/bedrooms
1A	7,169	32/2	0.27	1910	1470	1535 sq/3 bed.
1B	10,878	32/2	0.18	1910	1470	1535 sq/3 bed.
2A	4556	32/2	0.42	1910	1470	1535 sq/3 bed.
2B	4468	32/2	0.43	1910	1470	1535 sq/3 bed.
3A	4514	32/2	0.42	1910	1470	1535 sq/3 bed.
3B	4510	32/2	0.42	1910	1470	1535 sq/3 bed.
4A	4597	32/2	0.42	1910	1470	1535 sq/3 bed.
4B	4827	32/2	0.40	1910	1470	1535 sq/3 bed.
5A	4,306	32/2	0.44	1910	1470	1535 sq/3 bed.
5B	4515	32/2	0.42	1910	1470	1535 sq/3 bed.
6A	4931	32/2	0.39	1910	1470	1535 sq/3 bed.
6B	4095	32/2	0.47	1910	1470	1535 sq/3 bed.
7A	31,784	32/2	0.06	1910	1470	1535 sq/3 bed.
7B	21,093	32/2	0.09	1910	1470	1535 sq/3 bed.
8A	11,036	32/2	0.15	1700	1470	1535 sq/3 bed.
8B	4166	32/2	0.41	1700	1470	1535 sq/3 bed.
9A	4,045	32/2	0.42	1700	1470	1535 sq/3 bed.
9B	6,002	32/2	0.28	1700	1470	1535 sq/3 bed.
10A	8,580	32/2	0.20	1700	1470	1535 sq/3 bed.
10B	4,000	32/2	0.43	1700	1470	1535 sq/3 bed.
11A	12,251	32/2	0.16	1910	1470	1535 sq/3 bed.
11B	7,841	32/2	0.24	1910	1470	1535 sq/3 bed.
12A	12,172	32/2	0.16	1910	1470	1535 sq/3 bed.
12B	53,052	32/2	0.04	1910	1470	1535 sq/3 bed.
13A	107,203	32/2	0.02	1700	1470	1535 sq/3 bed.
13B	13,863	32/2	0.12	1700	1470	1535 sq/3 bed.
14A	6,096	32/2	0.28	1700	1470	1535 sq/3 bed.
14B	4930	32/2	0.34	1700	1470	1535 sq/3 bed.
15A	4,187	32/2	0.41	1700	1470	1535 sq/3 bed.
15B	6,955	32/2	0.24	1700	1470	1535 sq/3 bed.

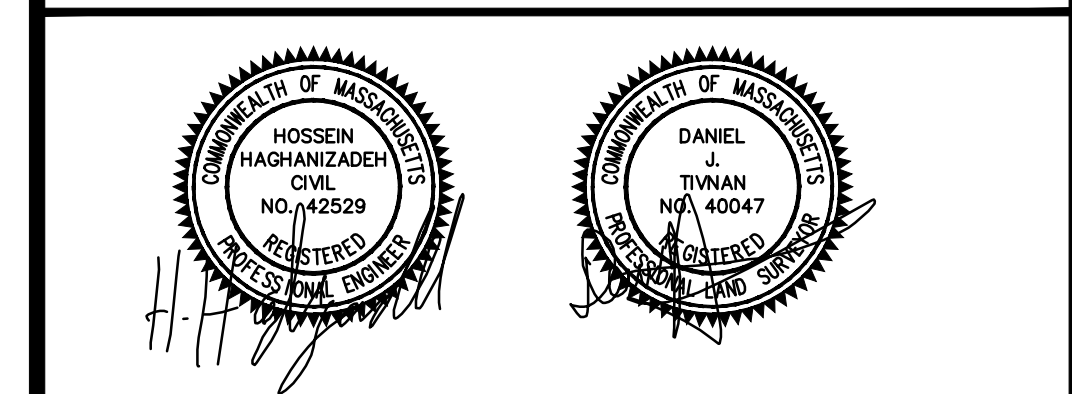


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NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



**H. S. & T. GROUP, INC.**  
 PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
 75 HAMMOND STREET - 2ND FLOOR  
 WORCESTER, MASSACHUSETTS 01610-1723  
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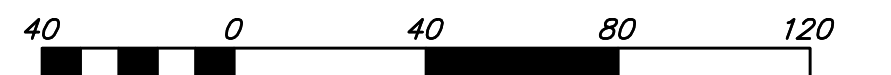
**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 LOT BEARING AND DISTANCE SHEET 2**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER 9 OF 37	
DWG NUMBER: 5004		

**GENERAL NOTES**

- REFER TO EROSION CONTROL SHEETS FOR PHASED SEDIMENT AND EROSION CONTROL PLAN.



HORIZONTAL SCALE 1"=40'

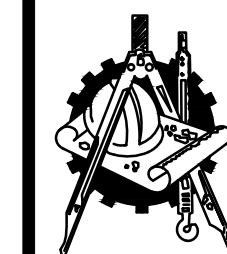
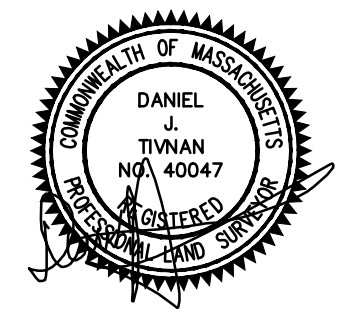
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**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 GRADING AND DRAINAGE PLAN 1**

APPLICANT/OWNER:  
 WHIPPOORWILL, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018 COMP'D: DJT FIELD: PS

SCALE: 1"=40' CAD: STF FLD. BK: 639-124

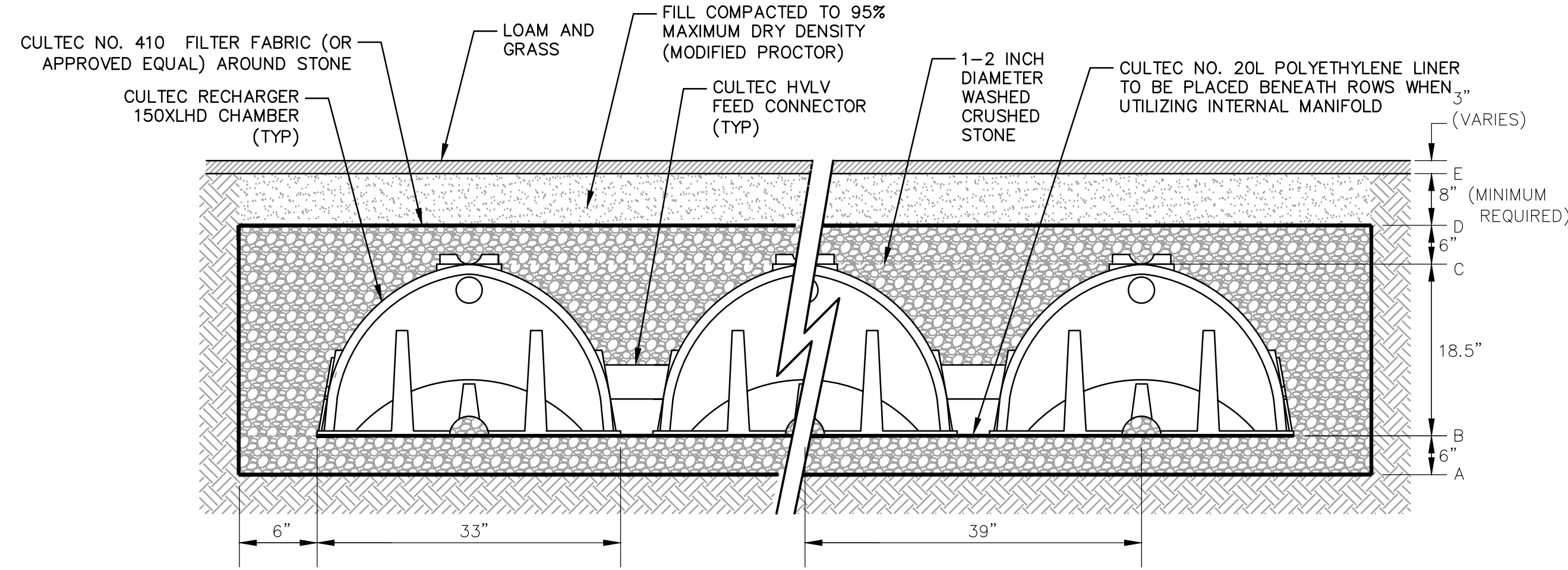
ZONE: RL-7 REV'D: HH DWG: MALDENWOODSUBAMEND

JOB NUMBER: 5956

DWG NUMBER: 5004

SHEET NUMBER

10 OF 37



CULTEC UNIT ELEVATIONS

Unit	6A	6B	5A	5B	4A	4B	3A	3B	2A	2B
A	643.78	643.78	641.78	639.78	639.78	639.78	637.78	636.78	635.78	635.78
B	643.28	643.28	641.28	639.28	639.28	639.28	637.28	636.28	635.28	635.28
C	641.74	641.74	639.74	637.74	637.74	637.74	635.74	634.74	633.74	633.74
D	641.24	641.24	639.24	637.24	637.24	637.24	635.24	634.24	633.24	633.24
E	640.57	640.57	638.57	636.57	636.57	636.57	634.57	633.57	632.57	632.57
PROPOSED GRADE (A)	644.00	644.00	642.00	640.00	642.00	642.00	642.00	642.00	636.00	636.00
EXISTING GRADE	642.00	642.00	640.00	638.00	638.00	638.00	636.00	635.00	634.00	634.00
GROUNDWATER	638.58	638.58	636.58	634.58	634.58	634.58	632.58	631.58	630.58	630.58

SECTION VIEW

Unit	1A	1B	15A	15B	14A	14B	13A	13B	7A	7B
A	635.78	637.78	643.03	639.03	639.03	643.03	637.53	637.53	648.20	652.20
B	635.28	637.28	642.53	638.53	638.53	642.53	637.03	637.03	647.70	651.70
C	633.74	635.74	640.99	636.99	636.99	640.99	635.49	635.49	646.16	650.16
D	633.24	635.24	640.49	636.49	636.49	640.49	634.99	634.99	645.66	649.66
E	632.57	634.57	639.82	635.82	635.82	639.82	634.32	634.32	644.99	648.99
PROPOSED GRADE (A)	636.00	638.00	644.00	642.00	640.00	644.00	641.00	641.00	648.20	652.20
EXISTING GRADE	634.00	636.00	644.00	640.00	640.00	644.00	640.00	640.00	646.00	650.00
GROUNDWATER	630.58	632.58	637.83	633.83	633.83	637.83	632.33	632.33	643.00	647.00

**CULTEC RECHARGER 150XLHD CHAMBER SYSTEM**

NTS

PERFORMED BY ART ALLEN, ECOTEC.  
 ON MARCH 21, 2019

**TP#C**  
 0 - 4" A STONY FINE SANDY LOAM, 10YR 2/1, VERY FRIABLE  
 4" - 25" Bw1 STONY FINE SANDY LOAM, 10YR 5/4, LOOSE  
 25" - 41" Bw2 STONY FINE SANDY LOAM, 7.5YR 4/4, FRIABLE  
 41" - 60" Cd STONY FINE SANDY LOAM, 2.5Y 5/2, FIRM 10% GRAVEL  
 GROUNDWATER WEeping AT 60"  
 REDOX OBSERVED AT 41"

**TP#D**  
 0 - 7" A FINE SANDY LOAM, 10YR 2/1, VERY FRIABLE  
 7" - 16" Bw STONY FINE SANDY LOAM, 10YR 5/4, VERY FRIABLE  
 16" - 23" Cg STONY FINE SANDY LOAM, 10YR 5/2, FRIABLE  
 23" - 44" Cgd STONY FINE SANDY LOAM, 2.5Y 5/1, FIRM 15% GRAVEL  
 GROUNDWATER WEeping AT 23"  
 REDOX OBSERVED AT 16"

**TP#E**  
 0 - 5" A FINE SANDY LOAM, 10YR 2/2, VERY FRIABLE  
 5" - 11" Bw1 STONY FINE SANDY LOAM, 10YR 5/6, VERY FRIABLE  
 11" - 19" Bw2 STONY FINE SANDY LOAM, 2.5Y 5/4, VERY FRIABLE  
 19" - 28" Bw3 STONY FINE SANDY LOAM, 7.5YR 5/6, FRIABLE  
 28" - 41" C STONY FINE SANDY LOAM, 2.5Y 5/3, FRIABLE  
 41" - 58" Cd STONY FINE SANDY LOAM, 2.5Y 5/2, FIRM 20% GRAVEL  
 GROUNDWATER WEeping AT 48"  
 REDOX OBSERVED AT 41"

**TP#F**  
 0 - 6" A FINE SANDY LOAM, 10YR 2/2, VERY FRIABLE  
 6" - 28" Bw1 FINE SANDY LOAM, 10YR 5/4, VERY FRIABLE  
 28" - 36" Bw2 STONY FINE SANDY LOAM, 7.5YR 5/6, FRIABLE  
 36" - 49" C STONY FINE SANDY LOAM, 2.5Y 5/3, FRIABLE 15% GRAVEL  
 49" - 64" Cd STONY FINE SANDY LOAM, 2.5Y 5/2, FIRM 20% GRAVEL  
 GROUNDWATER WEeping AT 55"  
 REDOX OBSERVED AT 36"

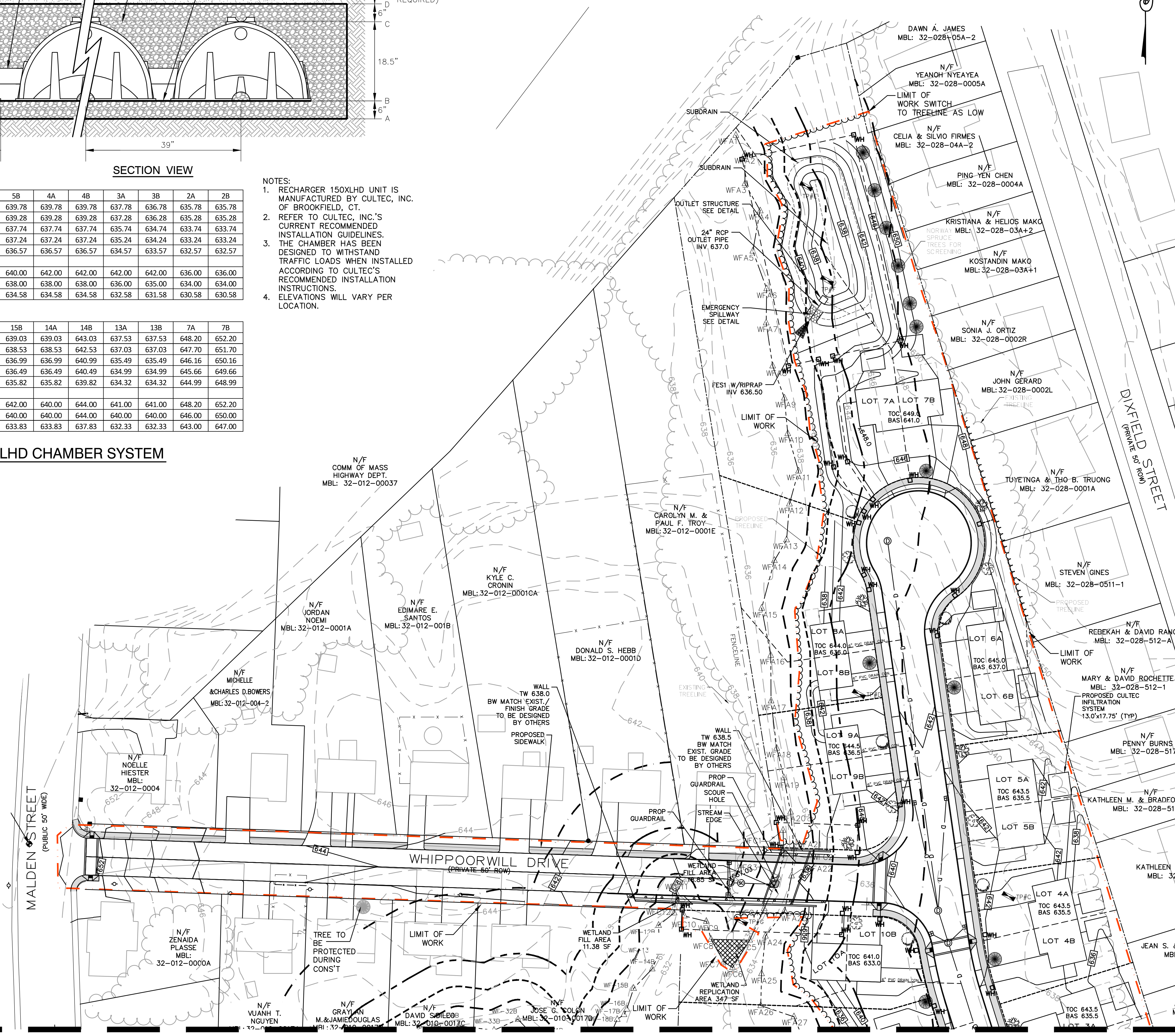
**TP#G**  
 0 - 5" A FINE SANDY LOAM, 10YR 2/2, VERY FRIABLE  
 5" - 16" C1 SANDY LOAM, 10YR 5/4, LOOSE  
 16" - 18" C2 FINE SANDY LOAM, 7.5YR 5/6, LOOSE, 10% GRAVEL  
 18" - 26" Ab MUKY FINE SANDY LOAM, 10YR 6/4, FRIABLE  
 26" - 30" Bbp SILT LOAM, 2.5Y 5/2, FRIABLE 20% GRAVEL  
 FREE GROUNDWATER AT 26"  
 REDOX OBSERVED AT 18"

PERFORMED BY PATRICK BURKE, H.S.&T GROUP, INC.  
 ON JUNE 12, 2017

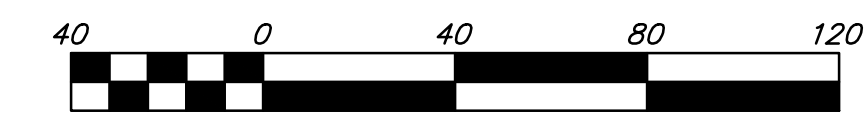
**TP#1**  
 0 - 4" Ap FINE SANDY LOAM, 10YR 3/2, FRIABLE  
 4" - 19" Bw FINE SANDY LOAM, 10YR 6/4, FRIABLE  
 19" - 100" C SAND, 2.5Y 3/4, COARSE, SINGLE GRAIN, 25% GRAVEL  
 GROUNDWATER WEeping AT 92"  
 REDOX OBSERVED AT 88"

**TP#2**  
 0 - 5" Ap FINE SANDY LOAM, 10YR 3/2, FRIABLE  
 5" - 18" Bw FINE SANDY LOAM, 10YR 6/4, FRIABLE  
 18" - 52" C1 SAND, 2.5Y 3/4, COARSE, SINGLE GRAIN, 25% GRAVEL  
 52" - 90" C2 SAND, 2.5Y 8/1, COARSE, SINGLE GRAIN, 25% GRAVEL  
 GROUNDWATER WEeping AT 52"  
 REDOX OBSERVED AT 42"

**TP#3**  
 0 - 4" Ap FINE SANDY LOAM, 10YR 3/2, FRIABLE  
 4" - 19" Bw FINE SANDY LOAM, 10YR 6/4, FRIABLE  
 19" - 100" C SAND, 2.5Y 3/4, COARSE, SINGLE GRAIN, 25% GRAVEL  
 GROUNDWATER WEeping AT 87"  
 REDOX OBSERVED AT 78"



MATCH LINE



HORIZONTAL SCALE 1"=40'

**GENERAL NOTES**

- REFER TO EROSION CONTROL SHEETS FOR PHASED SEDIMENT AND EROSION CONTROL PLAN.

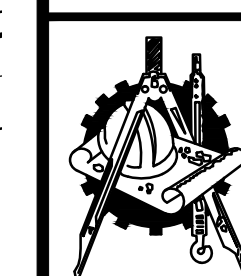
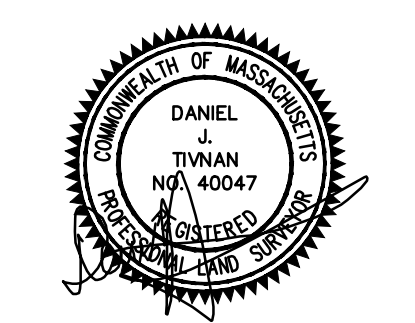
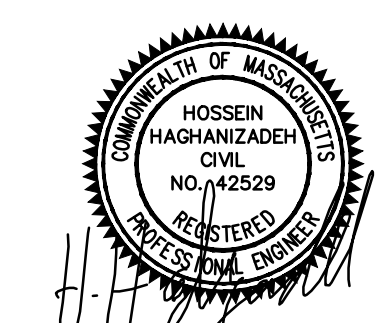
NOTE: THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.

**PLAN REVISIONS:**

NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
11	11/12/2020	ORDER OF CONDITIONS	LLW
10	9/17/2020	CITY COMMENTS	LLW
9	8/17/2020	CITY COMMENTS	LLW
8	7/13/2020	CITY COMMENTS	LLW
7	6/16/2020	CITY COMMENTS	LLW
6	3/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB
NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:

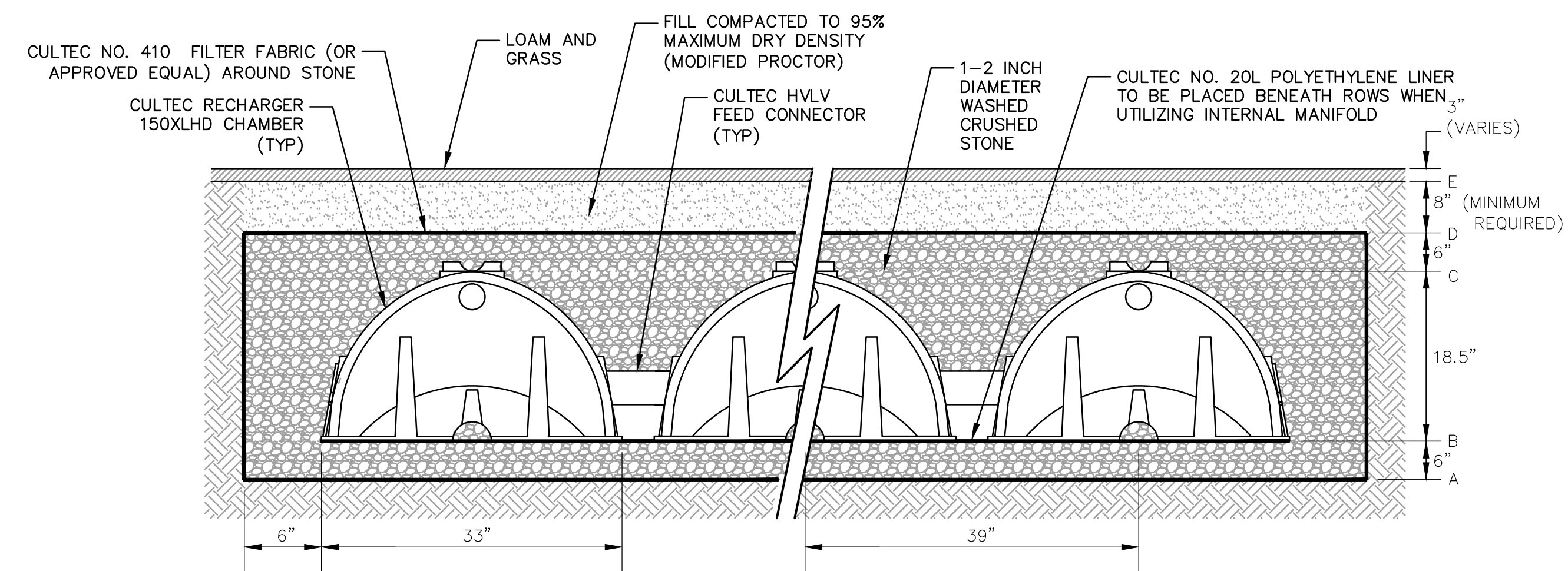


**H. S. & T. GROUP, INC.**  
 PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
 75 HAMMOND STREET - 2ND FLOOR  
 WORCESTER, MASSACHUSETTS 01610-1723  
 PHONE: (508) 757-4944 FAX: (508) 752-8895  
 EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 GRADING AND DRAINAGE PLAN 2**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER <b>11</b> OF <b>37</b>	
DWG NUMBER: 5004		



**CULTEC RECHARGER 150XLHD CHAMBER SYSTEM**  
 NTS

- NOTES:
- RECHARGER 150XLHD UNIT IS MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT.
  - REFER TO CULTEC, INC.'S CURRENT RECOMMENDED INSTALLATION GUIDELINES. THE CHAMBER HAS BEEN DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
  - ELEVATIONS WILL VARY PER LOCATION.

**CULTEC UNIT ELEVATIONS**

Unit	6A	6B	5A	5B	4A	4B	3A	3B	2A	2B
A	643.78	643.78	641.78	639.78	639.78	639.78	637.78	636.78	635.78	635.78
B	643.28	643.28	641.28	639.28	639.28	639.28	637.28	636.28	635.28	635.28
C	641.74	641.74	639.74	637.74	637.74	637.74	635.74	634.74	633.74	633.74
D	641.24	641.24	639.24	637.24	637.24	637.24	635.24	634.24	633.24	633.24
E	640.57	640.57	638.57	636.57	636.57	636.57	634.57	633.57	632.57	632.57
PROPOSED GRADE (A)	644.00	644.00	642.00	640.00	642.00	642.00	642.00	642.00	636.00	636.00
EXISTING GRADE	642.00	642.00	640.00	638.00	638.00	638.00	636.00	635.00	634.00	634.00
GROUNDWATER	638.58	638.58	636.58	634.58	634.58	634.58	632.58	631.58	630.58	630.58

Unit	1A	1B	15A	15B	14A	14B	13A	13B	7A	7B
A	635.78	637.78	643.03	639.03	639.03	643.03	637.53	637.53	648.20	652.20
B	635.28	637.28	642.53	638.53	638.53	642.53	637.03	637.03	647.70	651.70
C	633.74	635.74	640.99	636.99	636.99	640.99	635.49	635.49	646.16	650.16
D	633.24	635.24	640.49	636.49	636.49	640.49	634.99	634.99	645.66	649.66
E	632.57	634.57	639.82	635.82	635.82	639.82	634.32	634.32	644.99	648.99
PROPOSED GRADE (A)	636.00	638.00	644.00	642.00	640.00	644.00	641.00	641.00	648.20	652.20
EXISTING GRADE	634.00	636.00	644.00	640.00	640.00	644.00	640.00	640.00	646.00	650.00
GROUNDWATER	630.58	632.58	637.83	633.83	633.83	637.83	632.33	632.33	643.00	647.00

**SOIL LOGS**

PERFORMED BY PATRICK BURKE, H.S. & T GROUP, INC.  
 ON JUNE 12, 2017

**TP#1**  
 0 - 4" Ap FINE SANDY LOAM, 10YR 3/2, FRIABLE  
 4" - 18" Bw FINE SANDY LOAM, 10YR 6/4, FRIABLE  
 18" - 100" C SAND, 2.5Y 3/4, COARSE, SINGLE GRAIN, 25% GRAVEL  
 GROUNDWATER WEeping AT 92"  
 REDOX OBSERVED AT 88"

**TP#2**  
 0 - 5" Ap FINE SANDY LOAM, 10YR 3/2, FRIABLE  
 5" - 18" Bw FINE SANDY LOAM, 10YR 6/4, FRIABLE  
 18" - 52" C1 SAND, 2.5Y 3/4, COARSE, SINGLE GRAIN, 25% GRAVEL  
 52" - 90" C2 SAND, 2.5Y 8/1, COARSE, SINGLE GRAIN, 25% GRAVEL  
 GROUNDWATER WEeping AT 52"  
 REDOX OBSERVED AT 42"

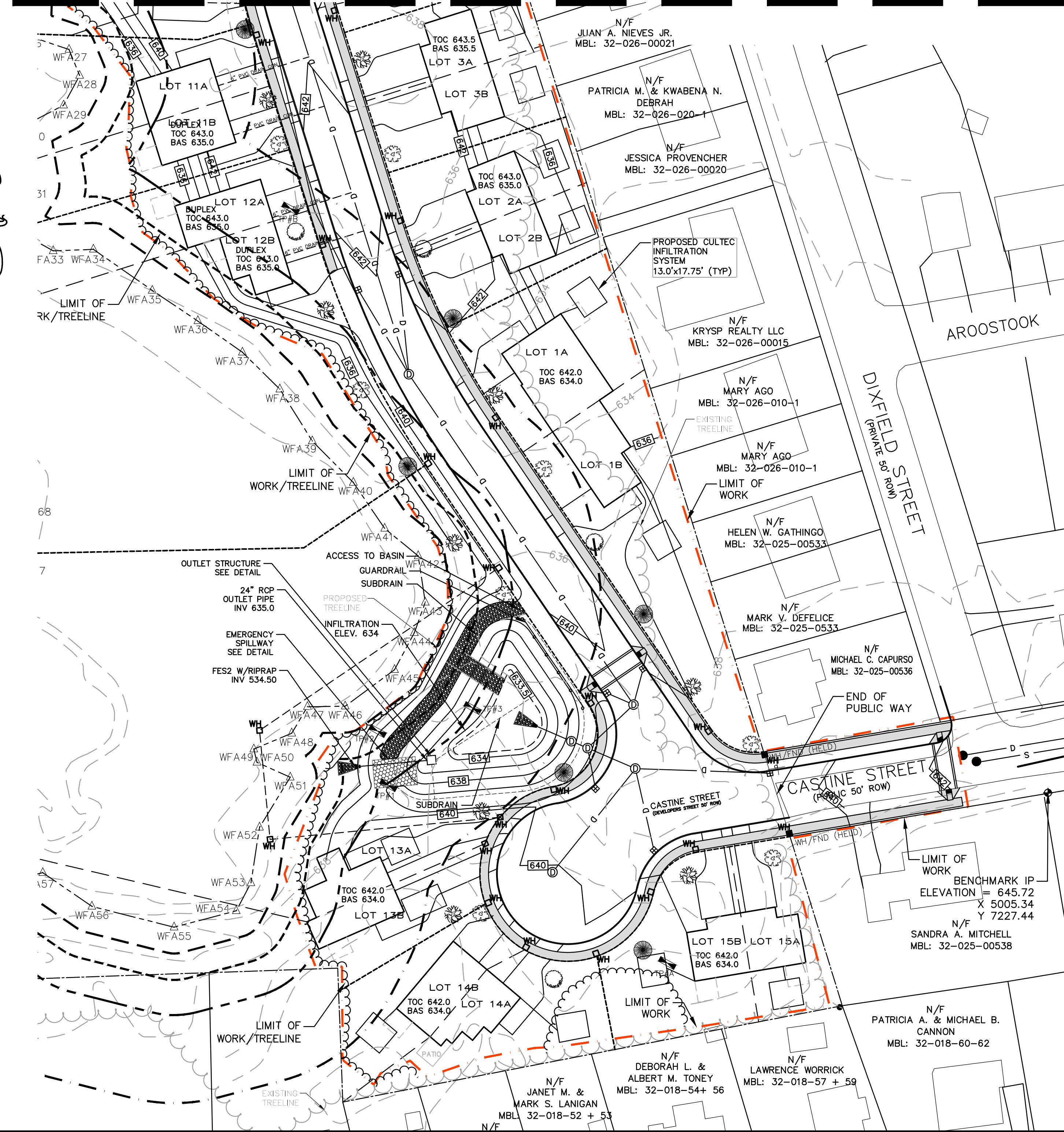
**TP#3**  
 0 - 4" Ap FINE SANDY LOAM, 10YR 3/2, FRIABLE  
 4" - 19" Bw FINE SANDY LOAM, 10YR 6/4, FRIABLE  
 19" - 100" C SAND, 2.5Y 3/4, COARSE, SINGLE GRAIN, 25% GRAVEL  
 GROUNDWATER WEeping AT 87"  
 REDOX OBSERVED AT 78"

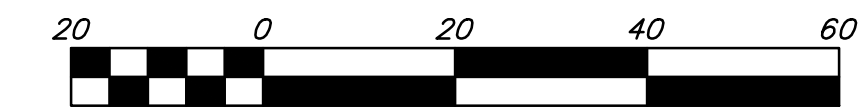
PERFORMED BY ART ALLEN, ECOTEC.  
 ON MARCH 21, 2019

**TP#4**  
 0 - 6" A GRAVELLY SANDY LOAM, 10YR 3/3, VERY FRIABLE  
 6" - 21" Bw1 GRAVELLY COBBLY FINE SANDY LOAM, 10YR 5/6, VERY FRIABLE  
 21" - 36" Bw2 GRAVELLY LOAMY SAND, 7.5YR 4/6, VERY LOOSE  
 36" - 74" 2C1 GRAVELLY COARSE SAND, 2.5Y 5/4, LOOSE  
 74" - 93" 2C2 COARSE SAND, 2.5Y 5/2, LOOSE 15% GRAVEL  
 GROUNDWATER WEeping AT 78"  
 REDOX OBSERVED AT 74"

**TP#5**  
 0 - 10" A GRAVELLY FINE SANDY LOAM, 10YR 2/2, VERY FRIABLE  
 10" - 28" Bw GRAVELLY FINE SANDY LOAM, 10YR 5/6, FRIABLE  
 28" - 47" Bg STONY FINE SANDY LOAM, 10YR 5/1, LOOSE  
 47" - 60" Cgd STONY SILT LOAM, 2.5Y 5/2, FIRM 10% GRAVEL  
 GROUNDWATER WEeping AT 55"  
 REDOX OBSERVED AT 28"

**MATCH LINE**





HORIZONTAL SCALE 1"=20'

**GENERAL NOTES**

- REFER TO EROSION CONTROL SHEETS FOR PHASED SEDIMENT AND EROSION CONTROL PLAN.

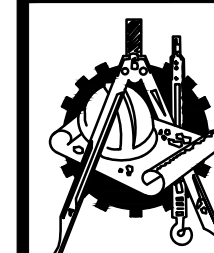
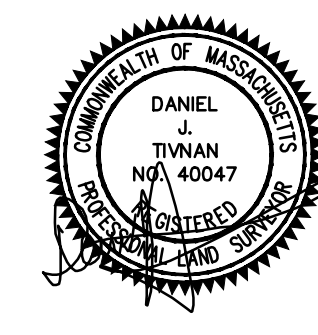
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8	7/13/2020	CITY COMMENTS	LLW
7	6/16/2020	CITY COMMENTS	LLW
6	3/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB
NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:

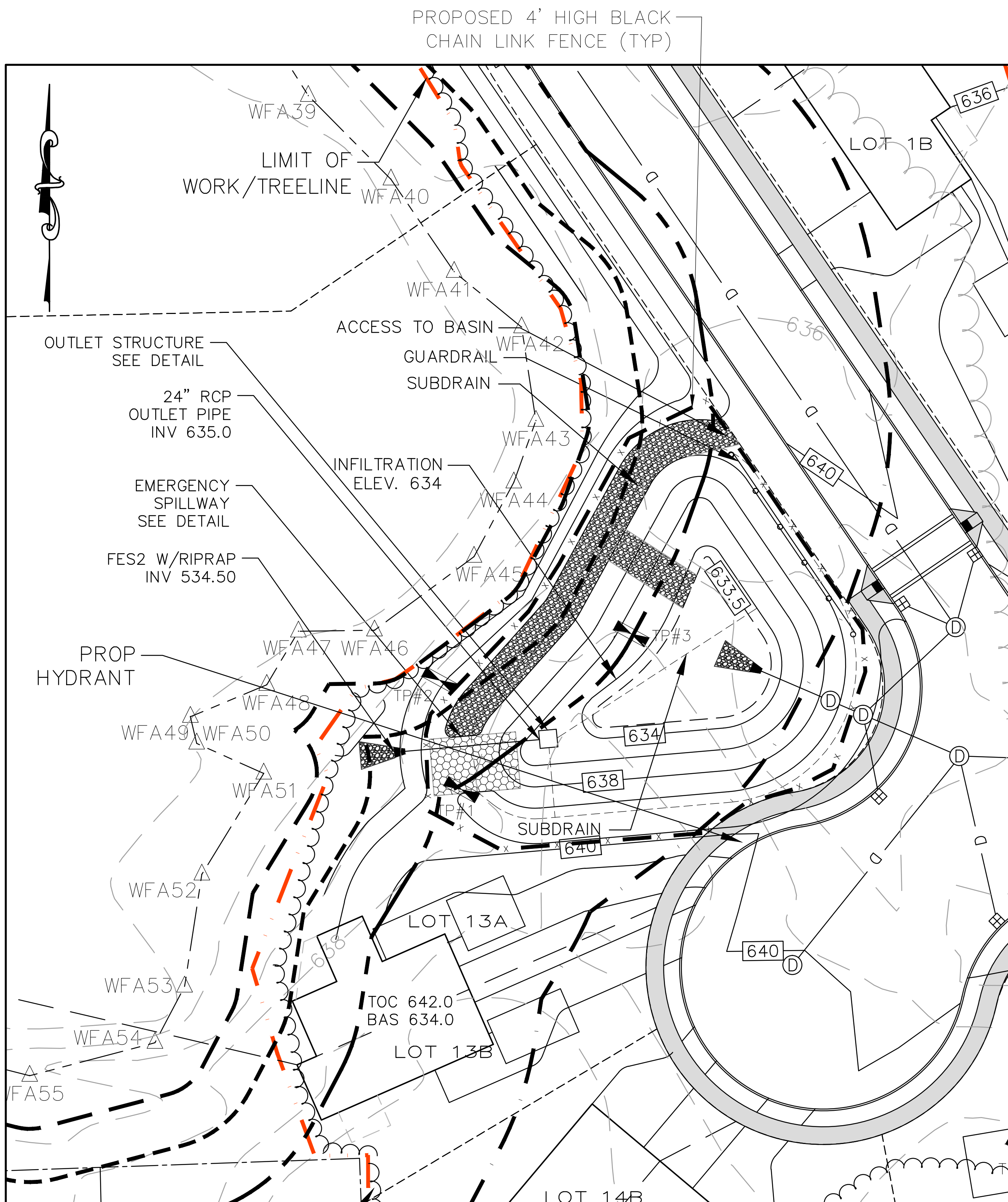


**H. S. & T. GROUP, INC.**  
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 EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

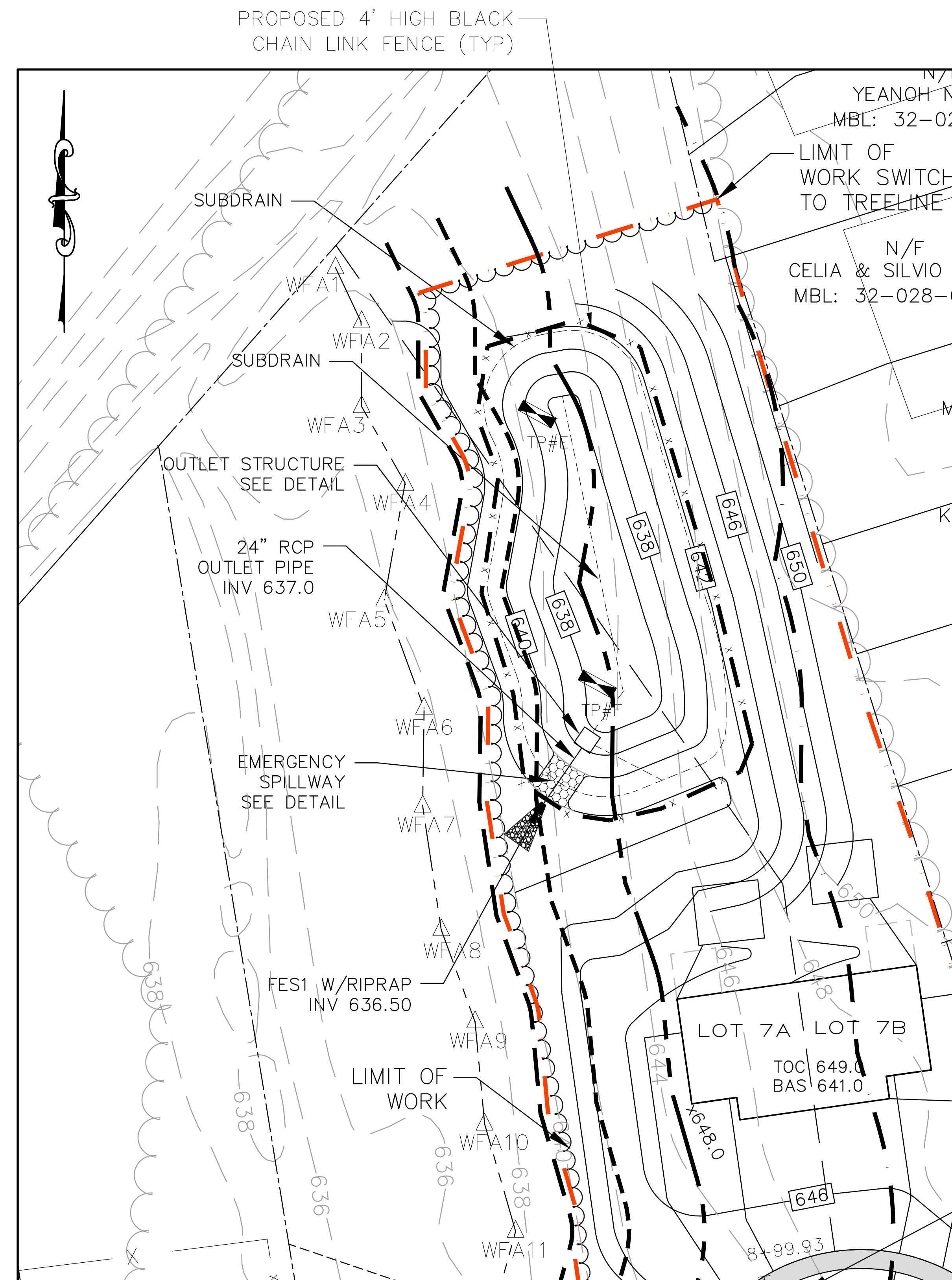
**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 DETENTION BASINS**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=20'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER	
DWG NUMBER: 5004	12 OF 37	



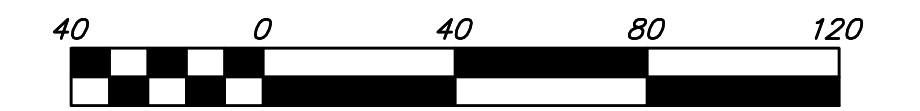
**SOUTHERN DETENTION BASIN #1**  
 NTS



**NORTHERN DETENTION BASIN #2**  
 NTS

**GENERAL NOTES**

1. REFER TO EROSION CONTROL SHEETS FOR PHASED SEDIMENT AND EROSION CONTROL PLAN.



HORIZONTAL SCALE 1"=40'

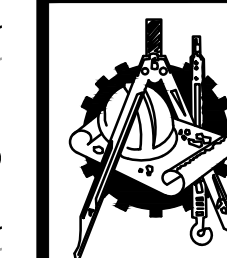
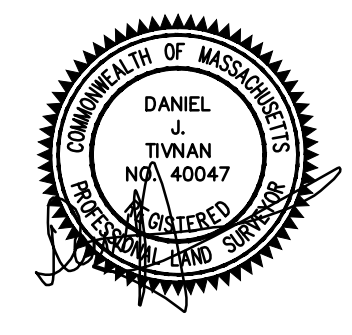
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PLAN REVISIONS:

NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
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9	08/17/2020	CITY COMMENTS	LLW
8	07/13/2020	CITY COMMENTS	LLW
7	06/16/2020	CITY COMMENTS	LLW
6	03/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	08/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



**H. S. & T. GROUP, INC.**

PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

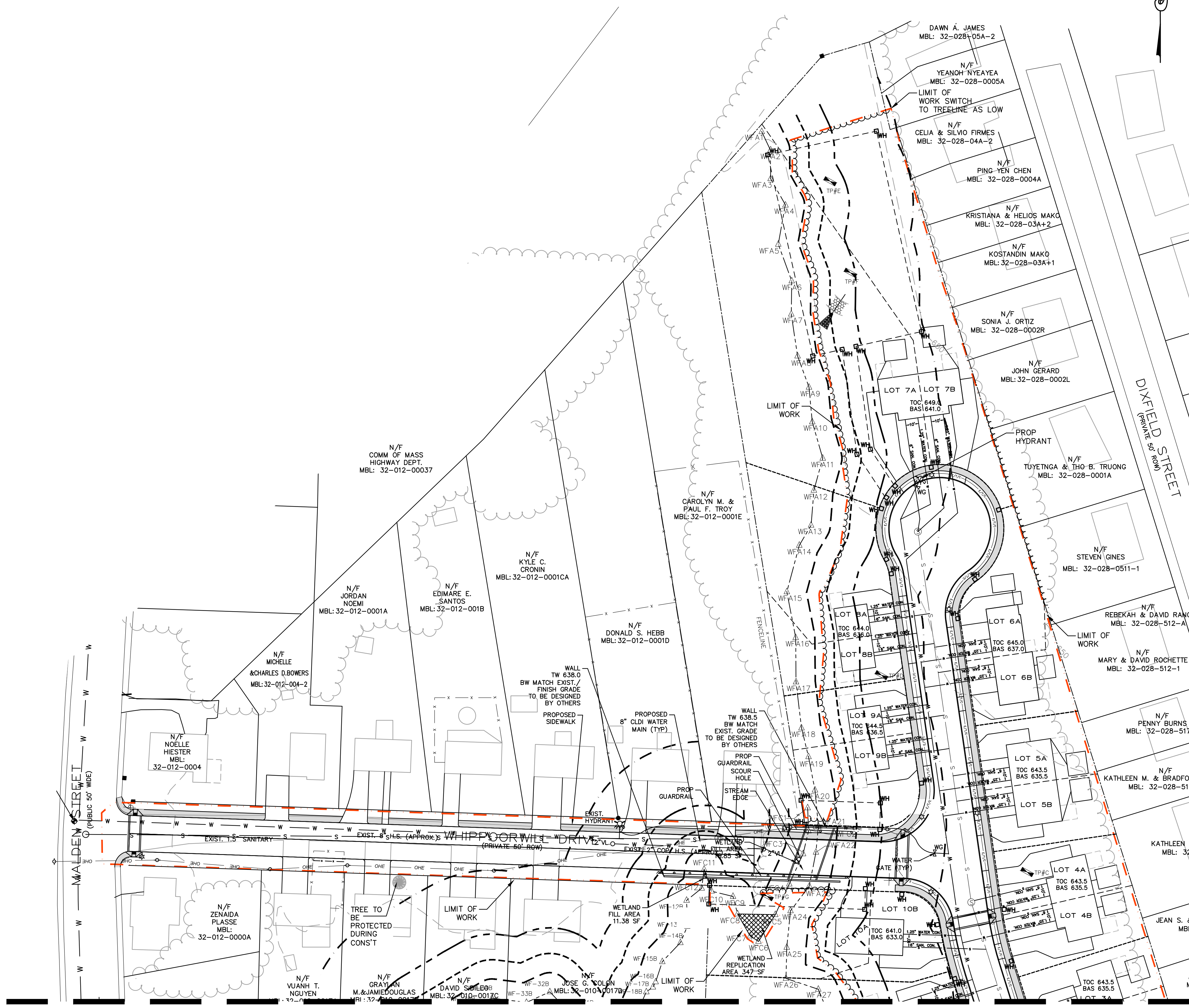
**MALDEN WOODS SUBDIVISION  
AMENDMENT  
UTILITY PLAN 1**

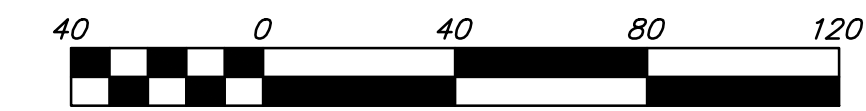
APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018 COMP'D: DJT FIELD: PS  
SCALE: 1"=40' CAD: STJ FLD. BK: 639-124

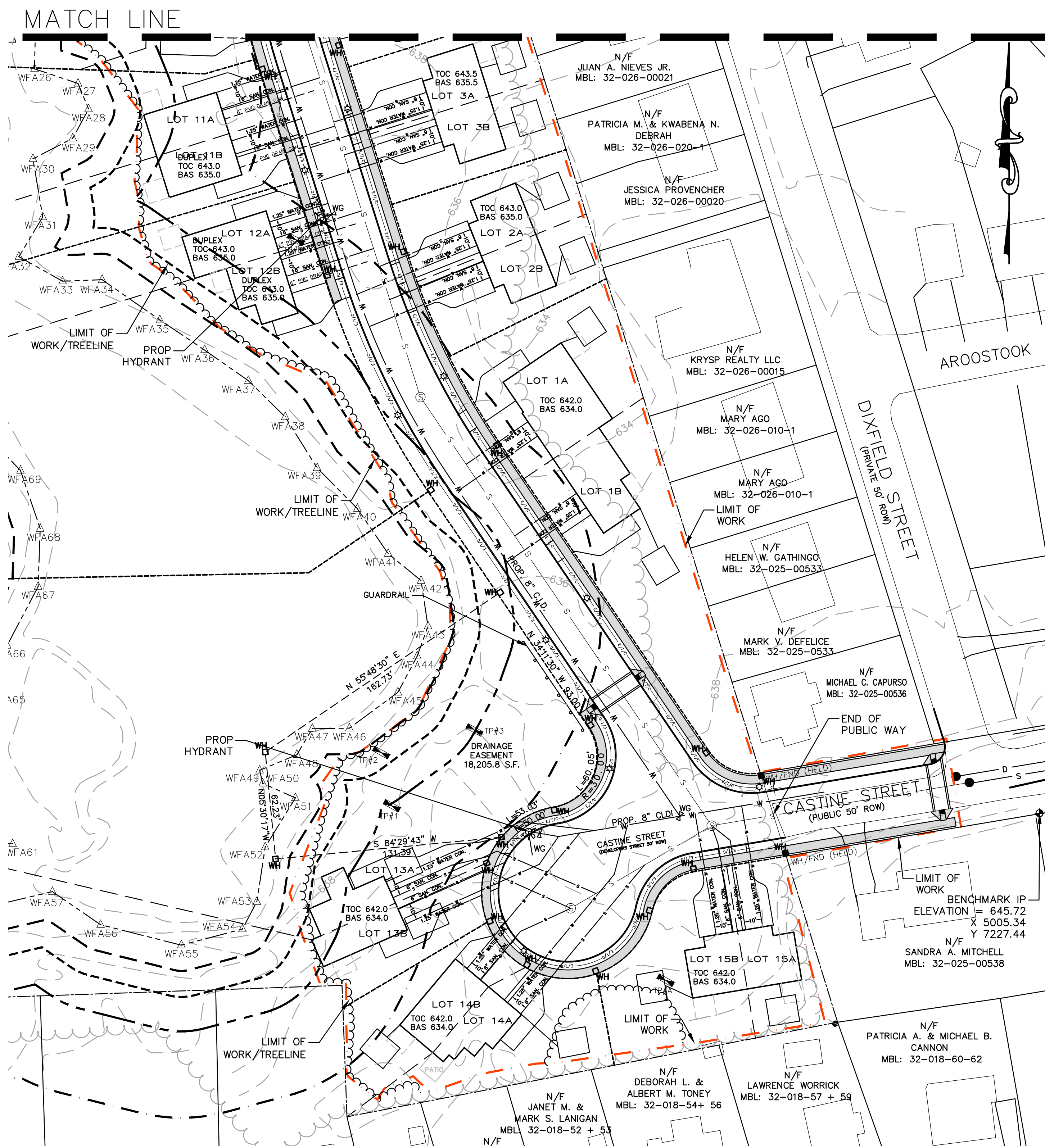
ZONE: RL-7 REV'D: HH DWG: MALDENWOODSSUBAMEND

JOB NUMBER: **5956** SHEET NUMBER  
DWG NUMBER: **5004** **13** OF **37**





HORIZONTAL SCALE 1"=40'



**GENERAL NOTES**

- REFER TO EROSION CONTROL SHEETS FOR PHASED SEDIMENT AND EROSION CONTROL PLAN.

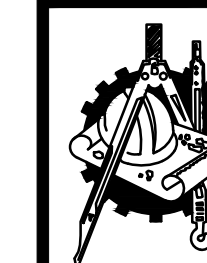
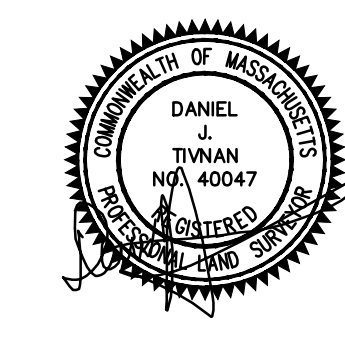
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PLAN REVISIONS:

NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
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3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:

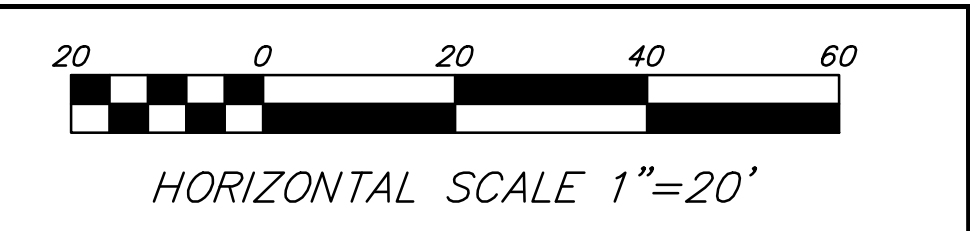
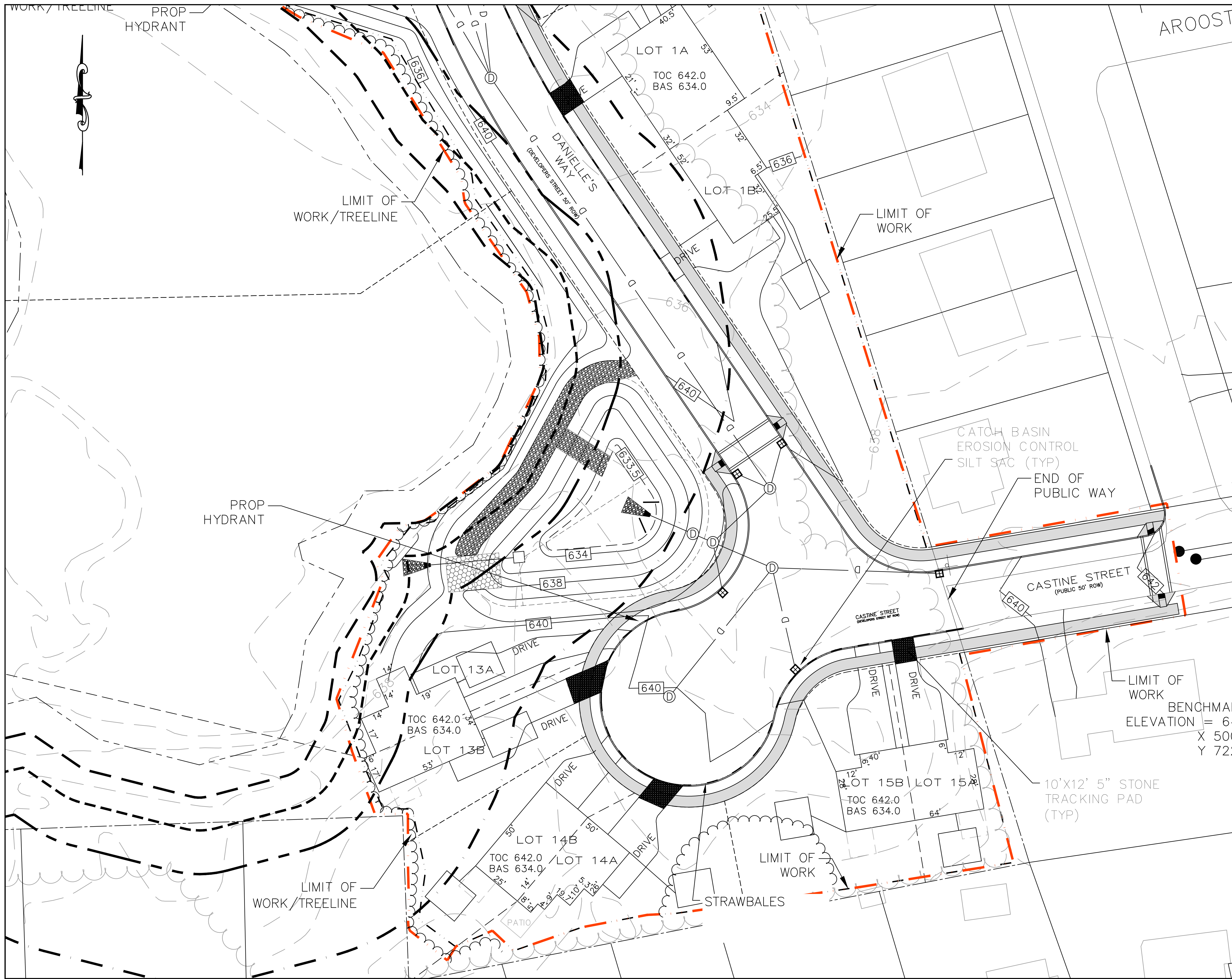


**H. S. & T. GROUP, INC.**  
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**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 UTILITY PLAN 2**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER 14 OF 37	
DWG NUMBER: 5004		



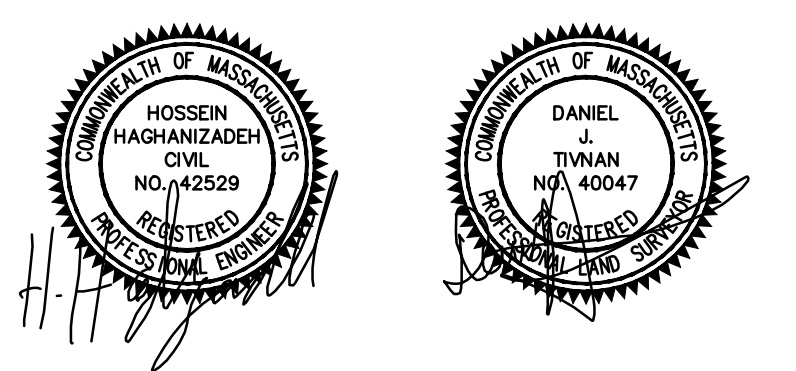
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8	7/13/2020	CITY COMMENTS	LLW
7	6/16/2020	CITY COMMENTS	LLW
6	3/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:

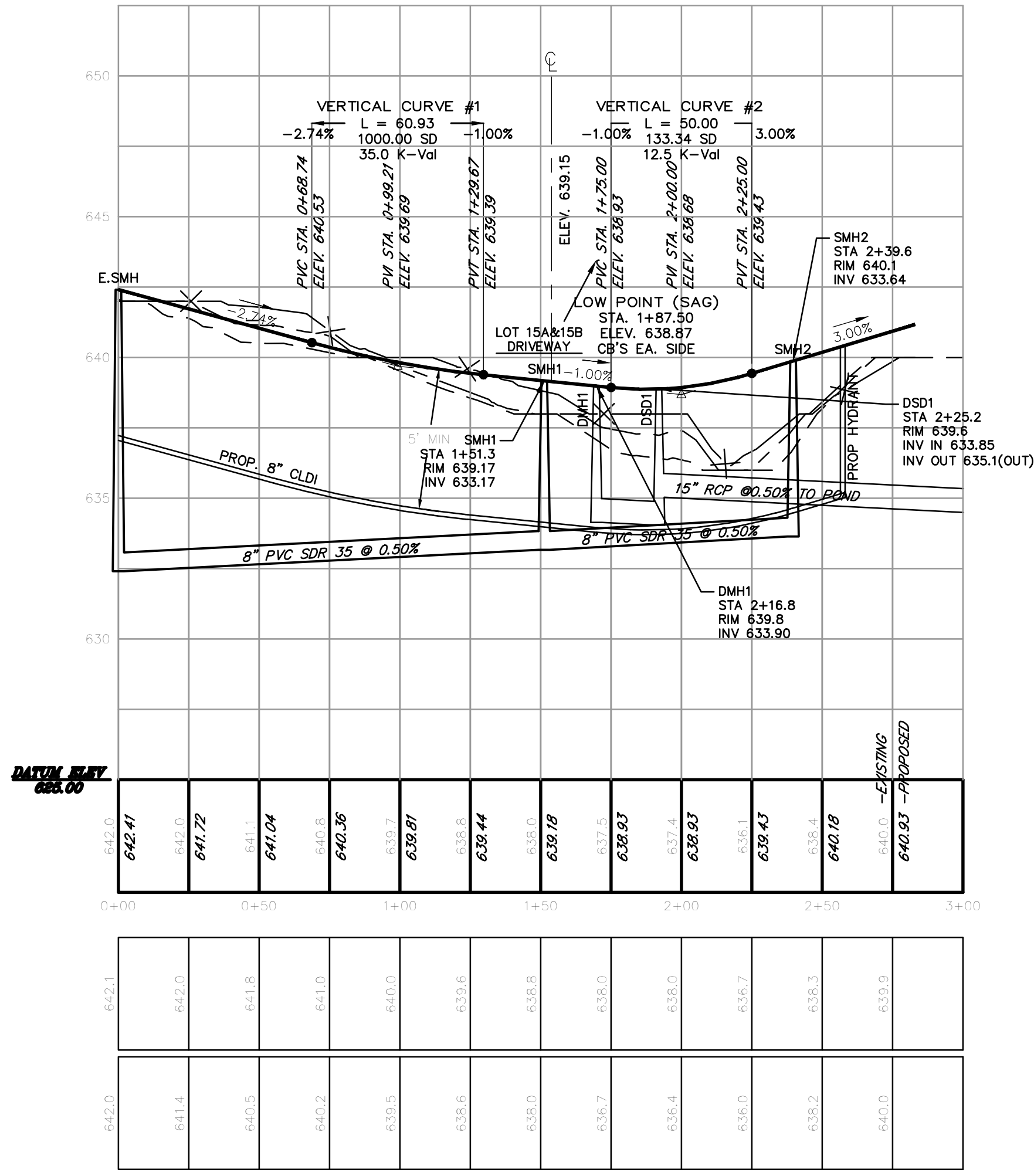
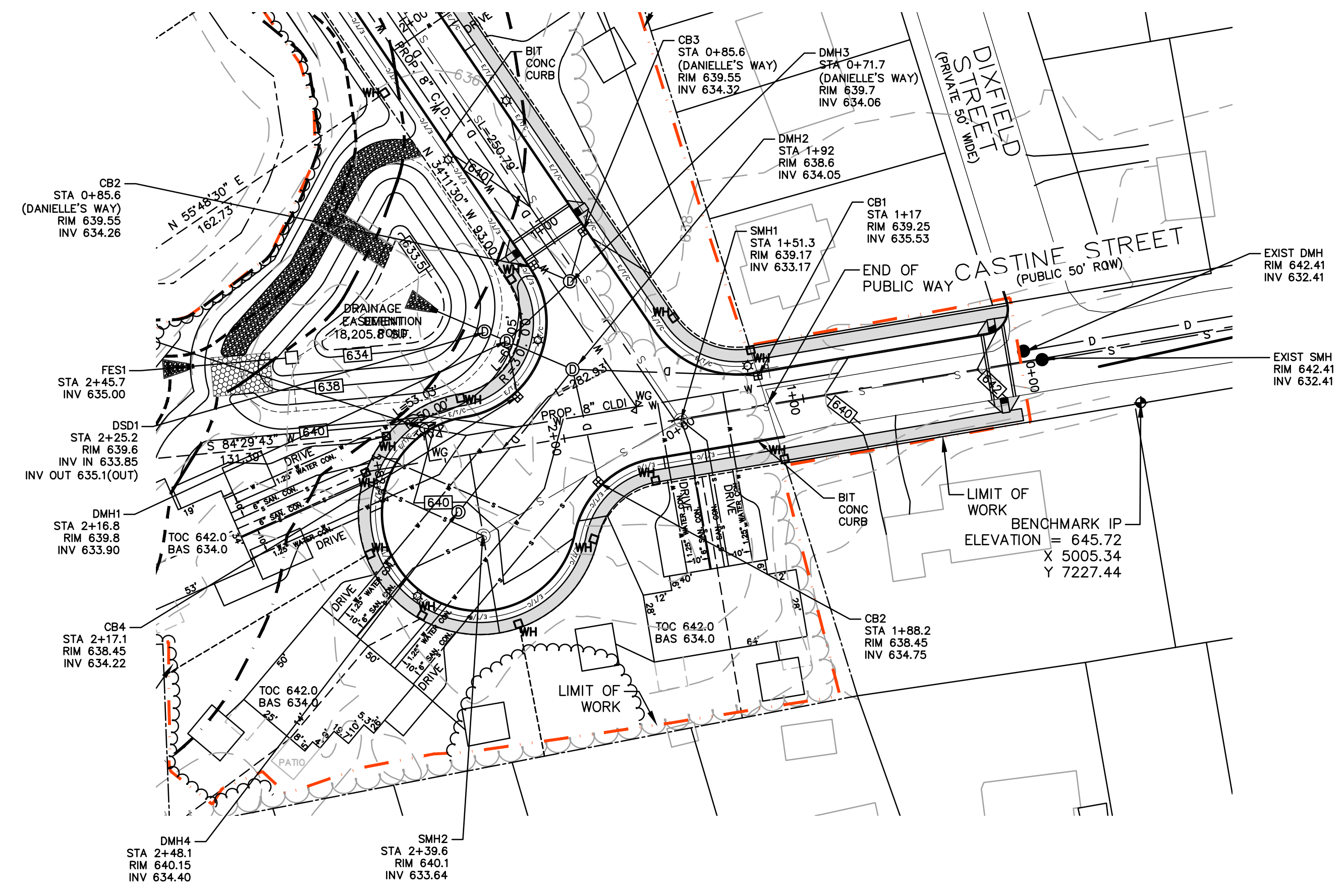
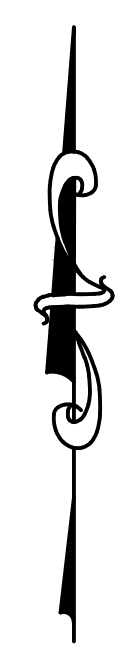


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**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 EROSION CASTINE STREET**

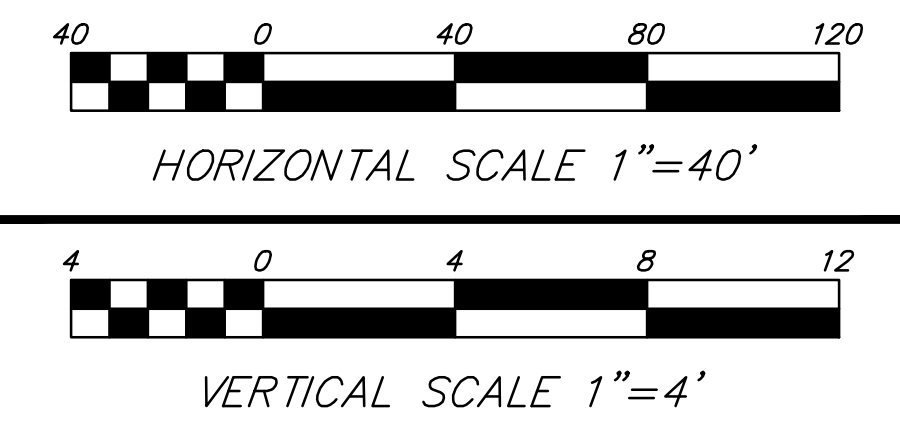
APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=20'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER 15 OF 37	
DWG NUMBER: 5004		



PROFILE ALONG CASTINE STREET

VERTICAL SCALE: 1"=4'  
HORIZONTAL SCALE: 1" = 40'



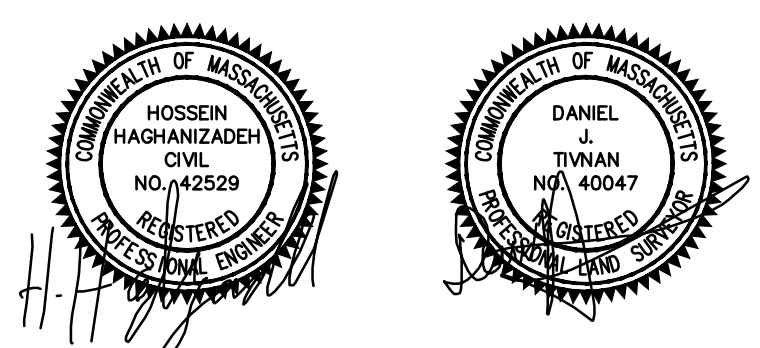
NOTE:  
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PLAN REVISIONS:

NO.	DATE	DESCRIPTION	BY
12	05/25/2021	FINAL REVISIONS	ZC
11	11/12/2020	ORDER OF CONDITIONS	LLW
10	09/17/2020	CITY COMMENTS	LLW
9	08/17/2020	CITY COMMENTS	LLW
8	07/13/2020	CITY COMMENTS	LLW
7	06/16/2020	CITY COMMENTS	LLW
6	03/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	08/8/18	CITY COMMENTS	PJB
NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



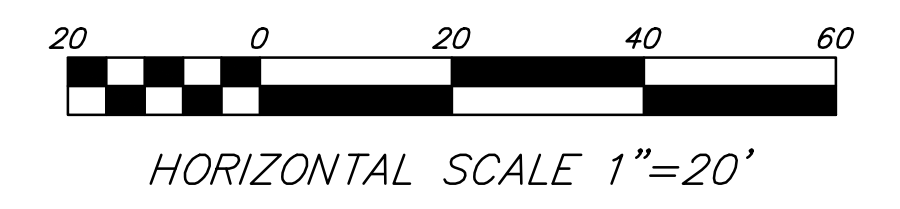
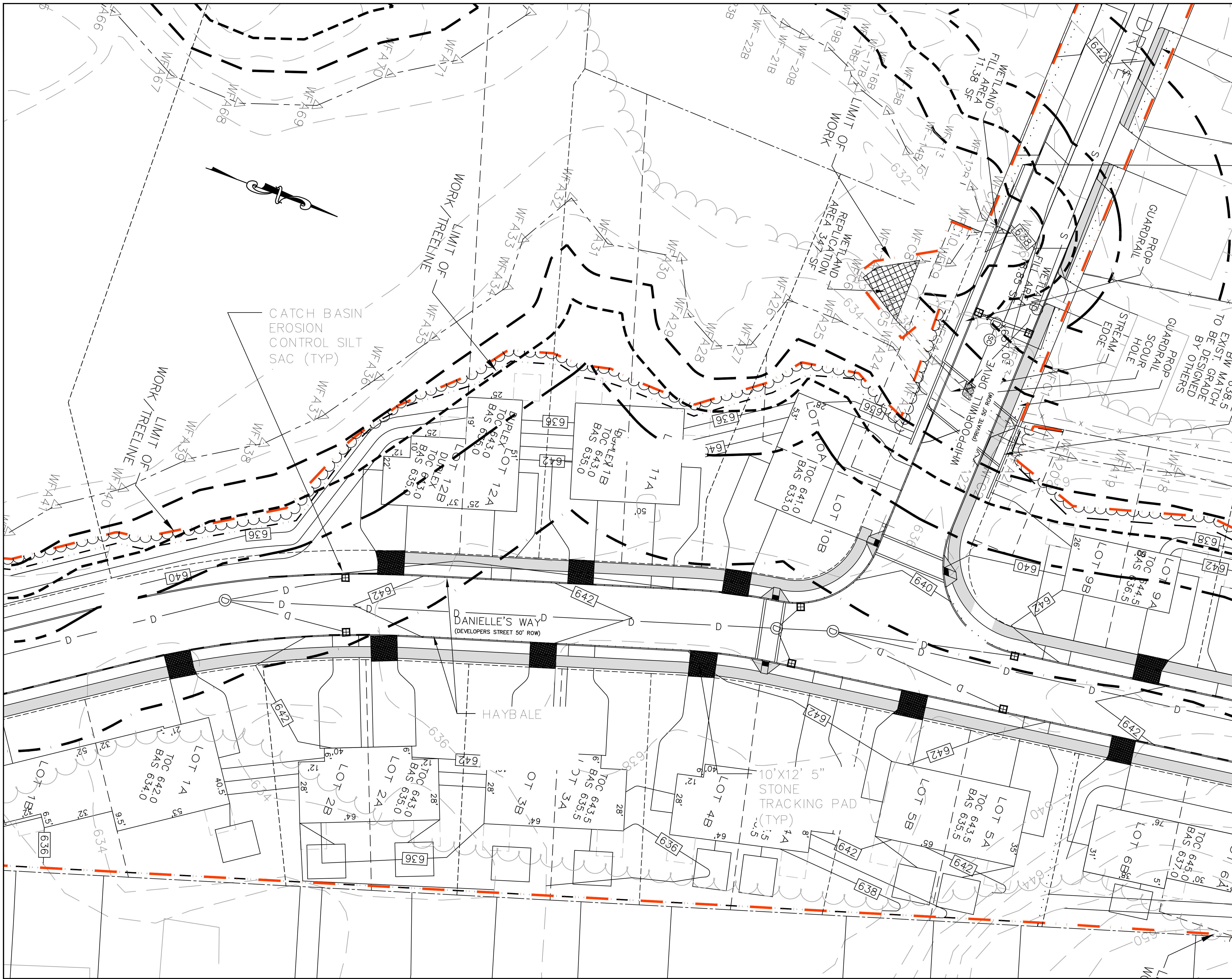
**H. S. & T. GROUP, INC.**  
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

MALDEN WOODS SUBDIVISION  
AMENDMENT  
PLAN & PROFILE CASTINE STREET

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER 16 OF 37	
DWG NUMBER: 5004		





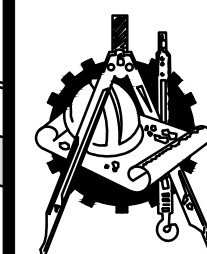
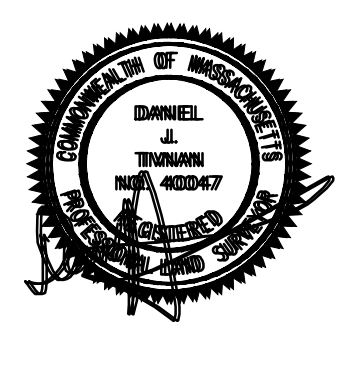
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2	8/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



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**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 EROSION DANIELLE'S WAY**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=20'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND	
JOB NUMBER: 5956	SHEET NUMBER		
DWG NUMBER: 5004	17 OF 37		



HORIZONTAL SCALE 1"=20'

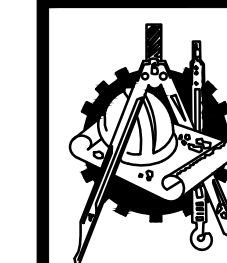
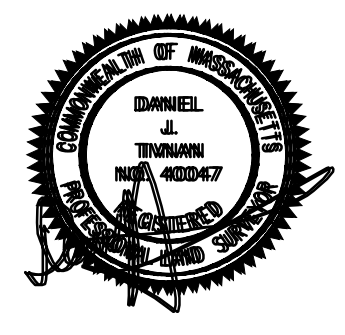
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WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



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**MALDEN WOODS SUBDIVISION  
AMENDMENT  
EROSION DANIELLE'S WAY**

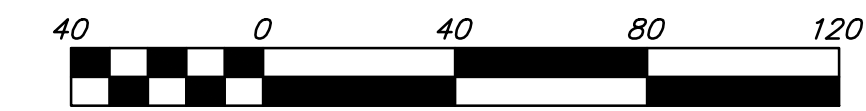
APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=20'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND	
JOB NUMBER: 5956	SHEET NUMBER 18 OF 37		
DWG NUMBER: 5004			

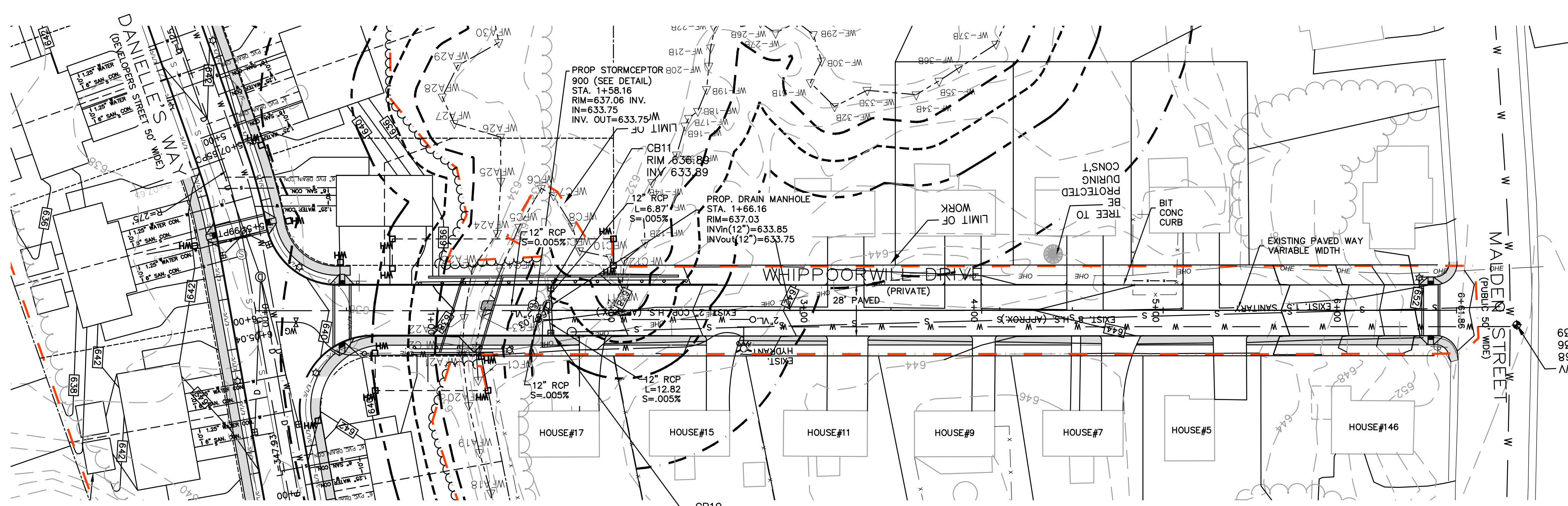








HORIZONTAL SCALE 1"=40'



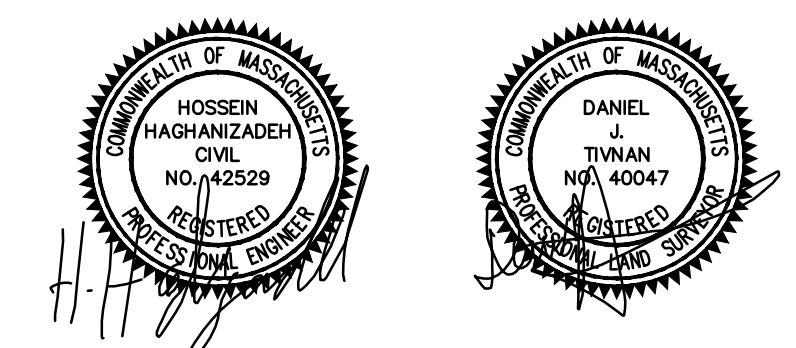
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PLAN REVISIONS:

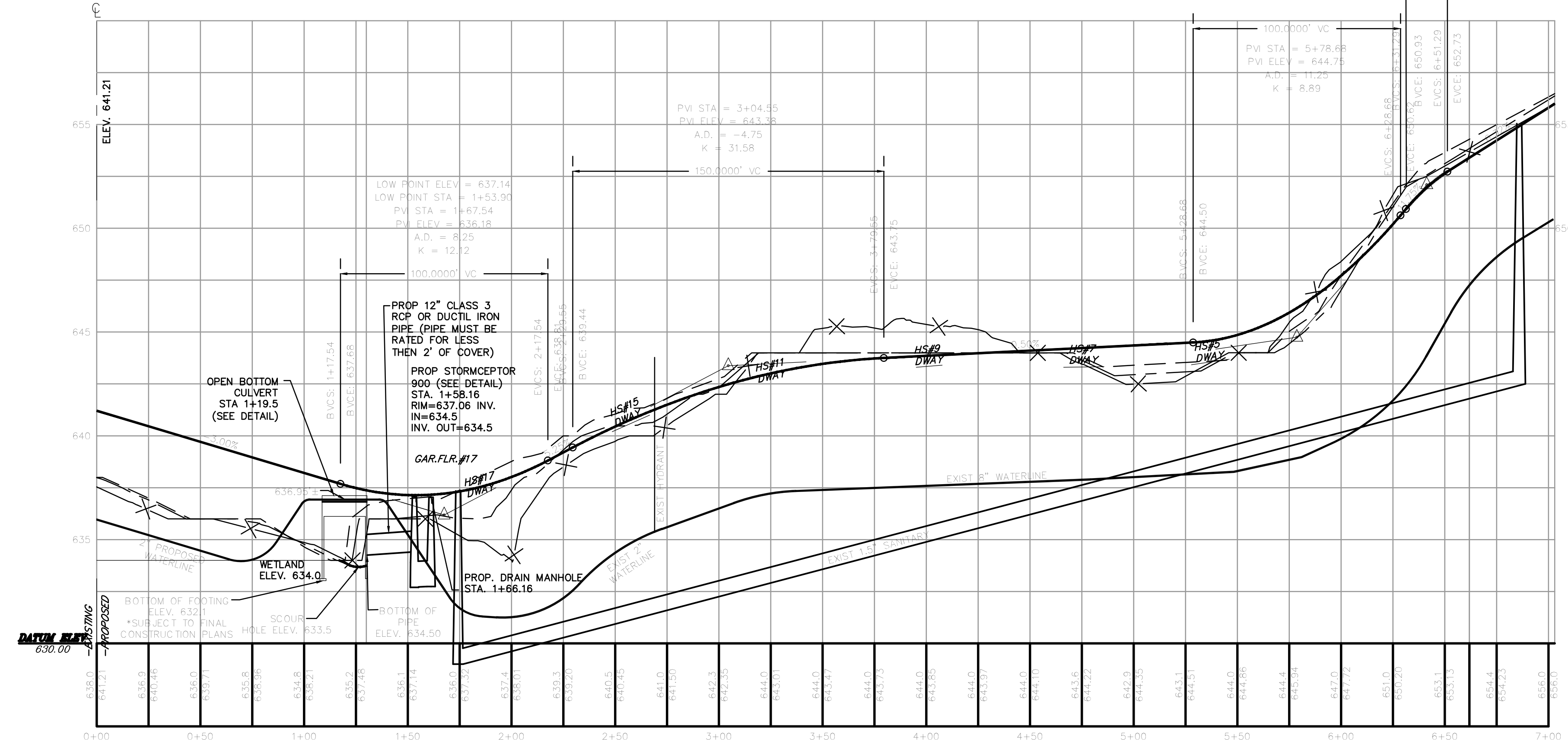
NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
11	11/12/2020	ORDER OF CONDITIONS	LLW
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4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB
NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



DANIELLE'S WAY



STATION	LEFT ELEV.	RIGHT ELEV.
0+00	637.5	637.0
0+50	636.4	636.0
1+00	636.0	636.0
1+50	635.5	635.0
2+00	634.9	634.7
2+50	634.0	633.2
3+00	634.0	633.0
3+50	633.7	632.4
4+00	633.5	631.8
4+50	633.3	631.5
5+00	633.2	631.4
5+50	633.1	631.3
6+00	633.0	631.2
6+50	632.9	631.1
7+00	632.8	631.0

PROFILE ALONG WHIPPOORWILL DRIVE

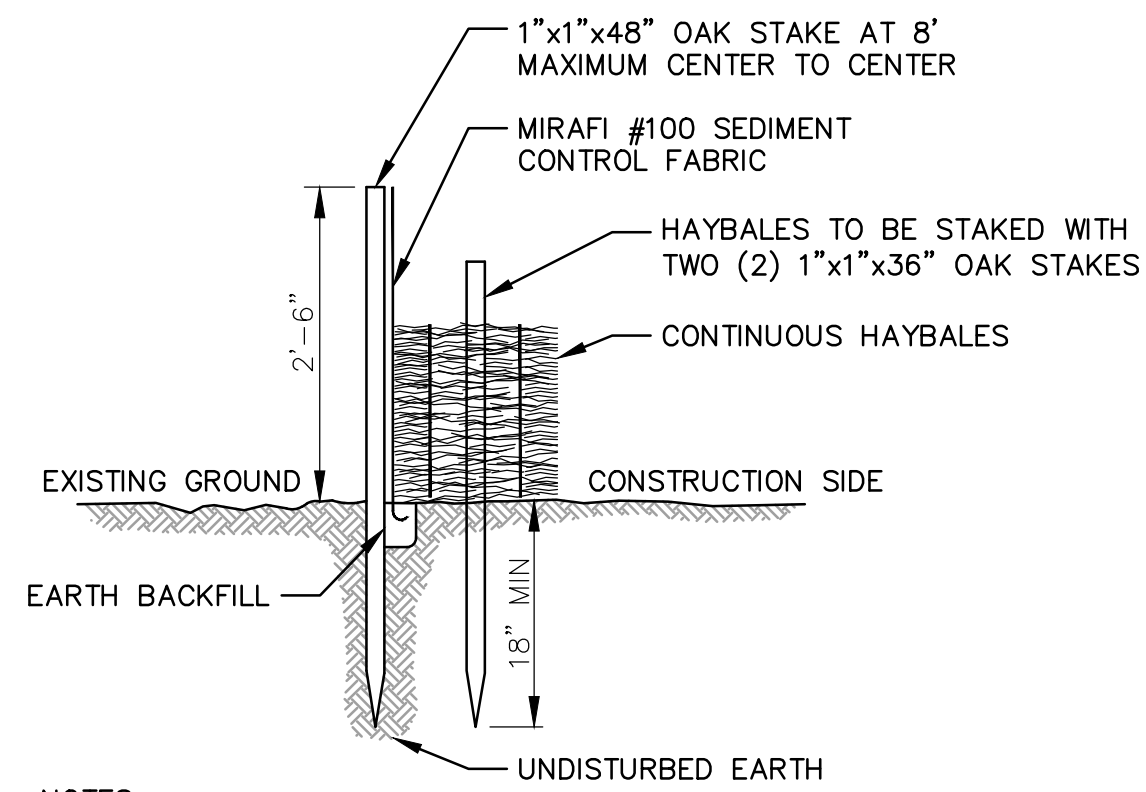
VERTICAL SCALE: 1"=4'  
HORIZONTAL SCALE: 1" = 40'

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**MALDEN WOODS SUBDIVISION  
AMENDMENT PLAN & PROFILE  
WHIPPOORWILL DRIVE**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

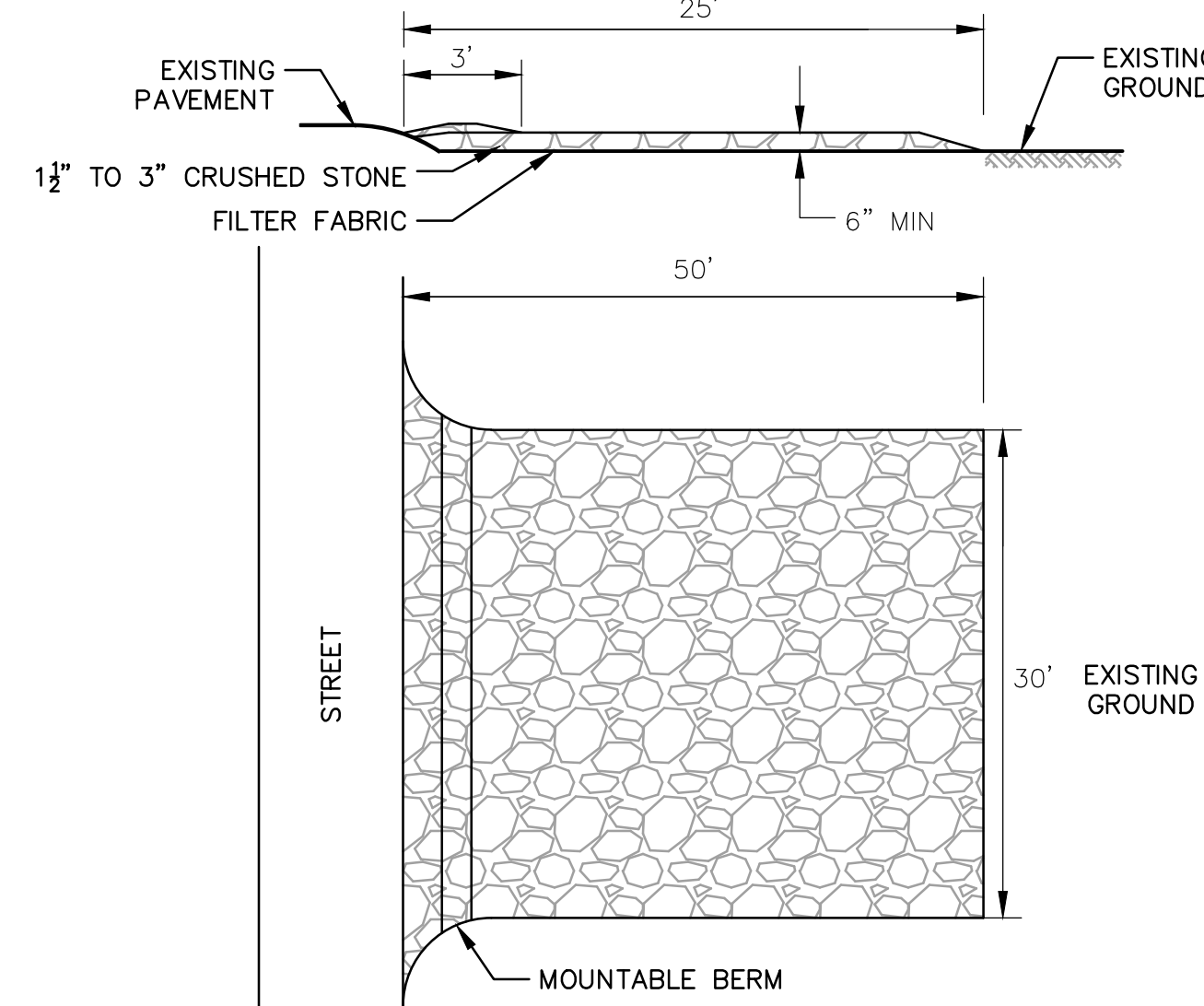
DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND	
JOB NUMBER: 5956	SHEET NUMBER		
DWG NUMBER: 5004	22 OF 37		



- NOTES:
- HAYBALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
  - HAYBALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO (2) 1" x 1 1/2" x 36" OAK STAKES DRIVEN THROUGH THE HAYBALES. THE FIRST STAKE IN EACH HAYBALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID HAYBALE TO FORCE HAYBALES TOGETHER.
  - HAYBALES SHALL BE TWINE BOUND.
  - INSPECTION OF THE HAYBALES SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
  - HAYBALES SHALL BE REMOVED AND REPLACED WHEN THEY BECOME FILLED WITH SEDIMENT AND BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
  - HAYBALES SHALL BE REMOVED WHEN THE PROJECT IS COMPLETED.

**SILT FENCE WITH HAYBALES DETAIL**

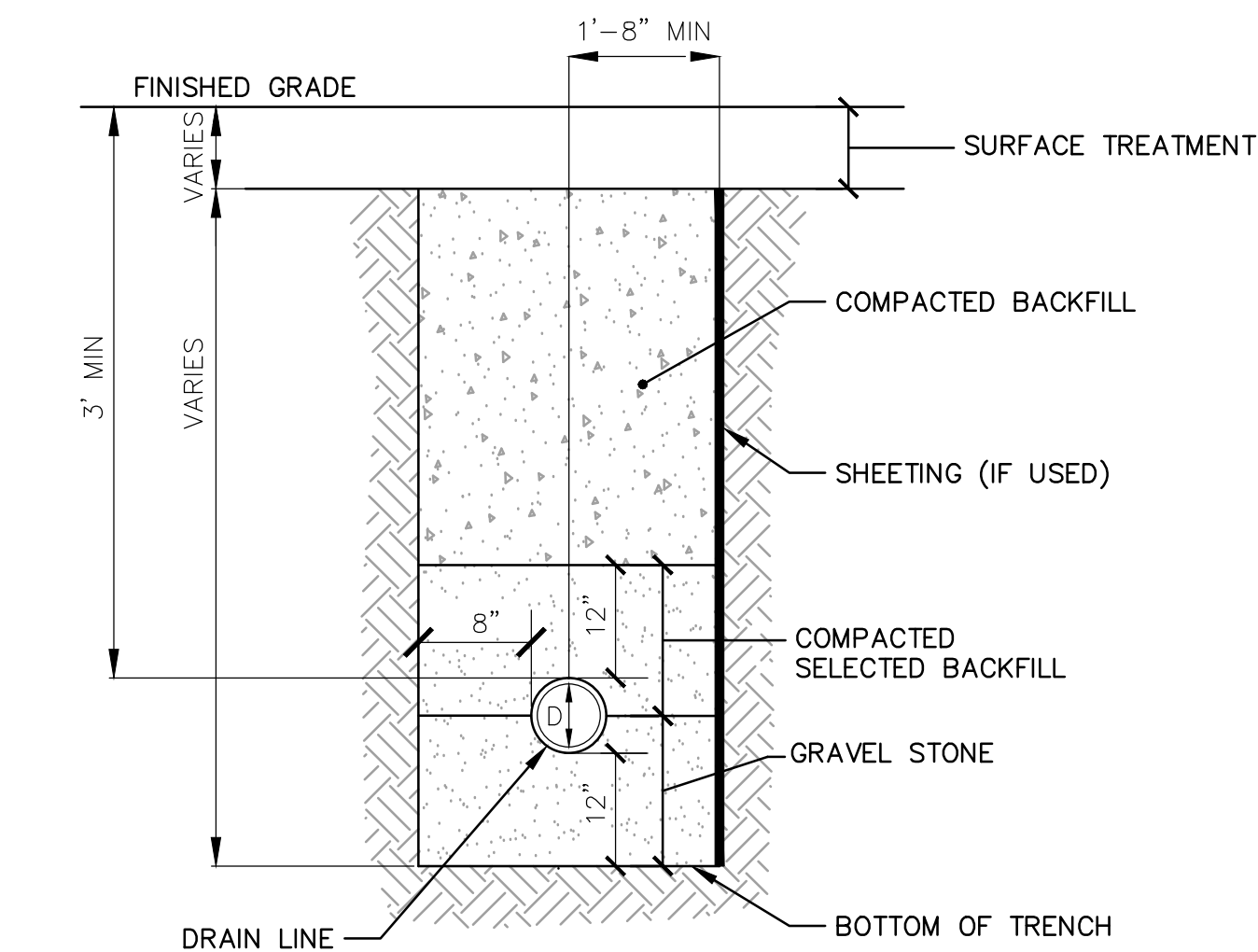
NTS



NOTE: THE MOUNTABLE BERM SHALL BE USED TO ASSIST REMOVAL OF MUD FROM THE TIRES OF VEHICLES LEAVING THE SITE DURING CONSTRUCTION.

**STABILIZED CONSTRUCTION ENTRANCE DETAIL**

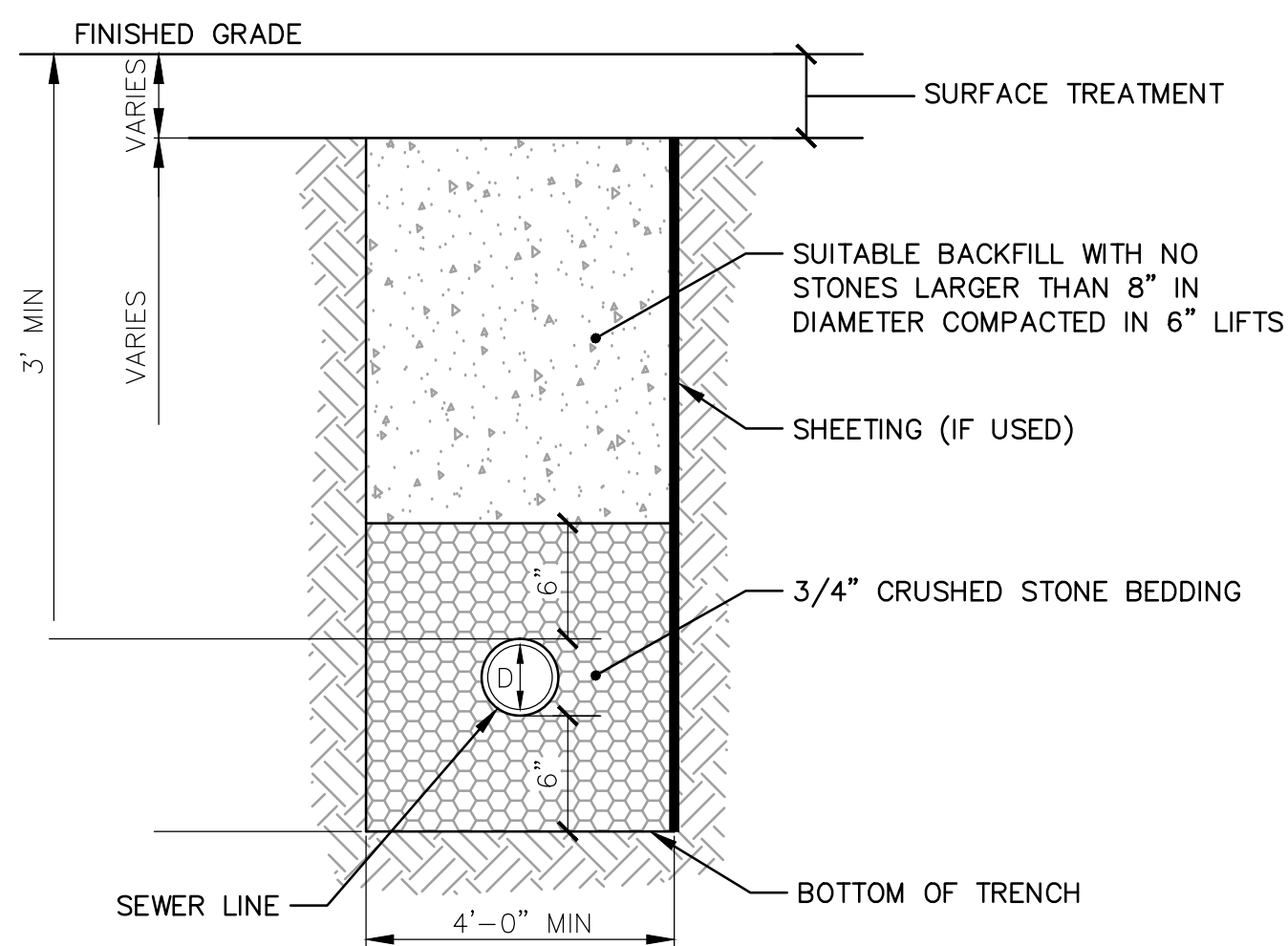
NTS



- NOTES:
- THE PROPOSED DRAIN LINE SHALL MAINTAIN A MINIMUM SEPARATION OF 12" TO BEDROCK IN ALL DIRECTIONS.
  - THE TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA STANDARDS AND OTHER APPLICABLE STANDARDS.

**STORM DRAIN TRENCH DETAIL**

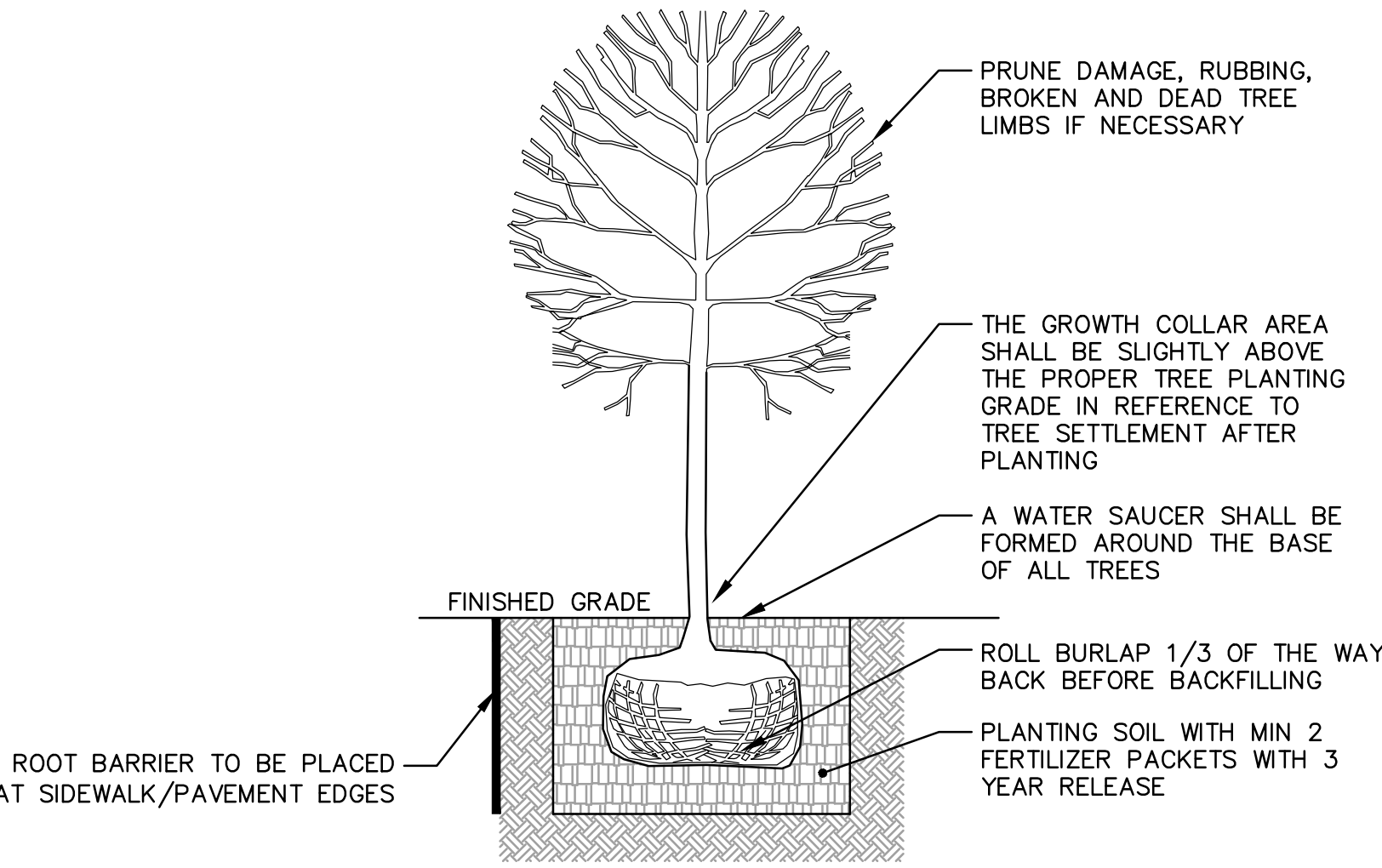
NTS



- NOTES:
- THE PROPOSED SEWER LINE SHALL MAINTAIN A MINIMUM SEPARATION OF 6" TO BEDROCK IN ALL DIRECTIONS.
  - THE TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA STANDARDS AND OTHER APPLICABLE STANDARDS.

**SEWER TRENCH DETAIL**

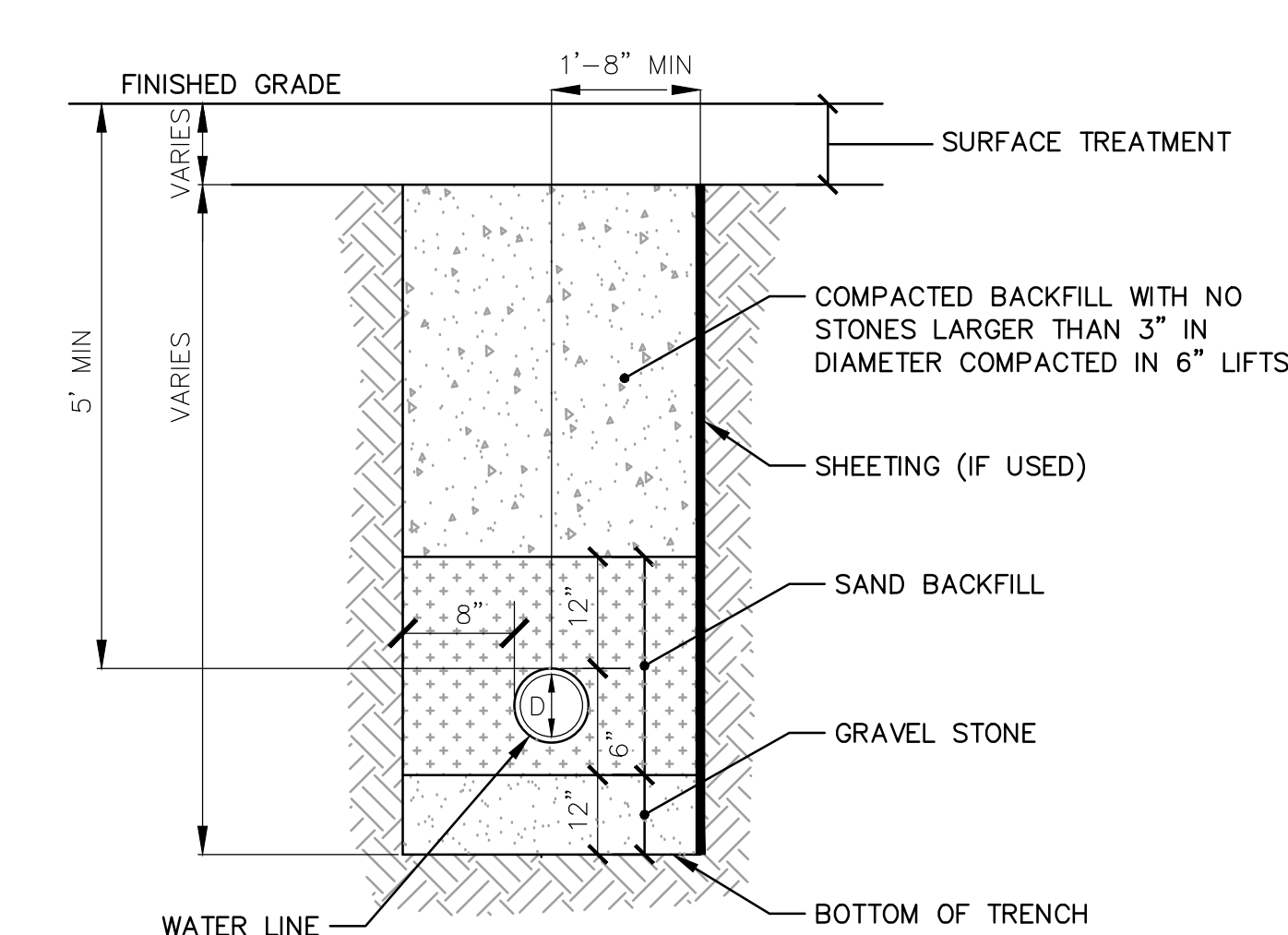
NTS



- NOTES:
- ALL TREES AND SHRUBS TO BE PLANTED SHALL BE ASIAN LONGHORNED BEATLE RESISTANT.
  - TREES SHALL BE A MINIMUM OF 3 1/2" IN DIAMETER.
  - THE CONTRACTOR IS TO LOCATE AND/OR PLACE ALL UNDERGROUND UTILITIES BEFORE DIGGING TREE PLANTING PITS.
  - NO TREE STAKES NOR TREE WRAP IS REQUIRED.
  - THE TREE ROOT BALL SHALL BE SET ON COMPACTED SOIL AREA TO REDUCE SETTLEMENT OF THE TREE.

**TREE PLANTING DETAIL**

NTS

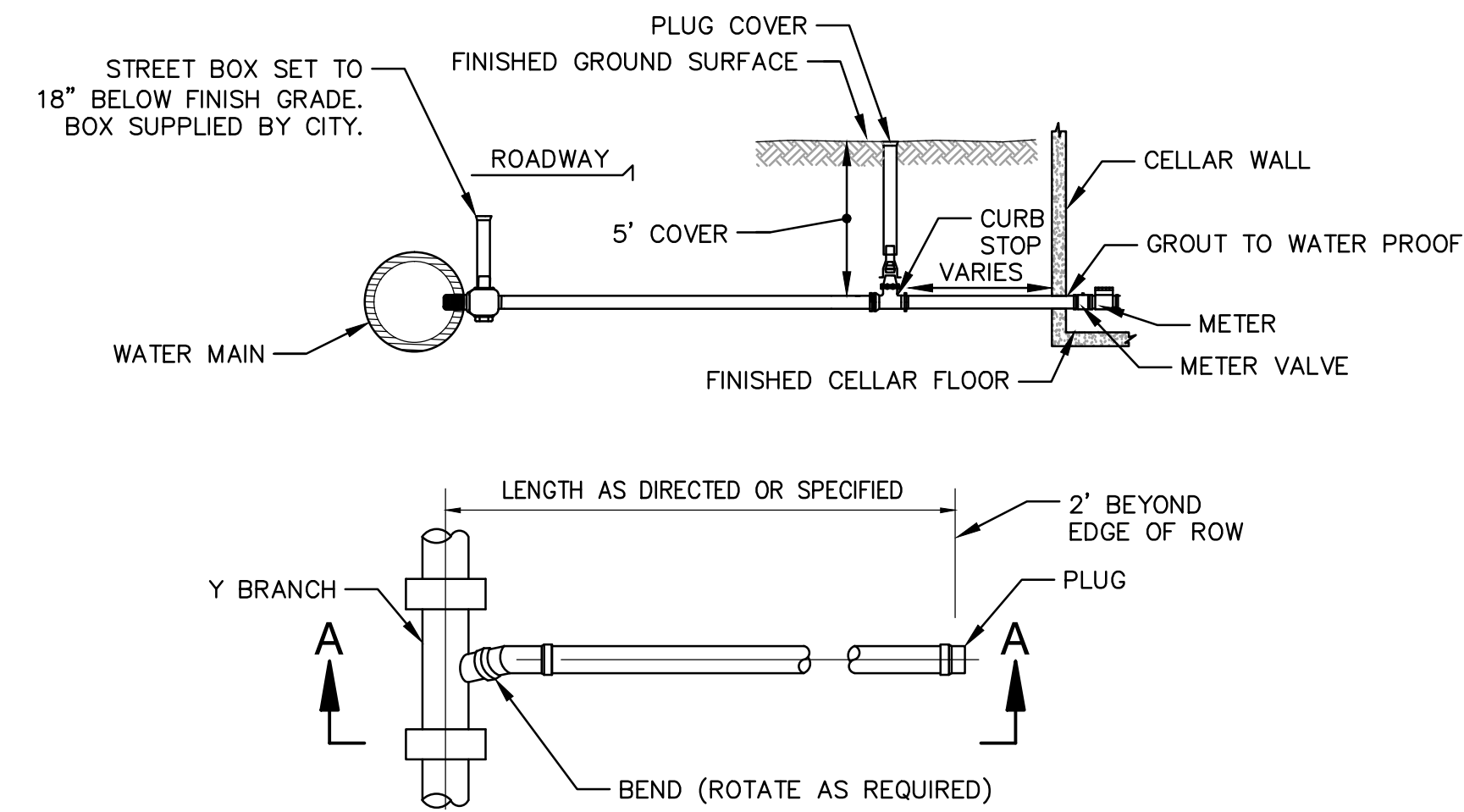


- NOTES:
- THE PROPOSED WATER LINE SHALL MAINTAIN A MINIMUM SEPARATION OF 12" TO BEDROCK IN ALL DIRECTIONS.
  - THE TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA STANDARDS AND OTHER APPLICABLE STANDARDS.

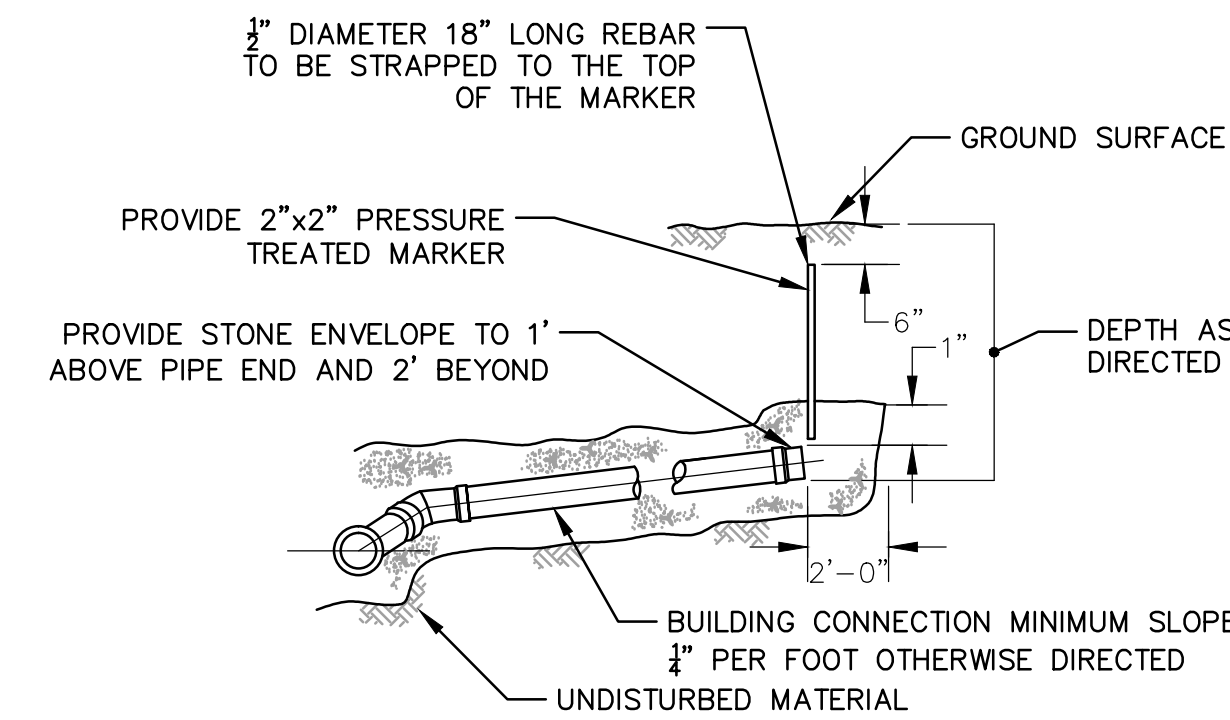
**WATER MAIN TRENCH DETAIL**

NTS

NOTE: ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STANDARDS.



**PLAN**

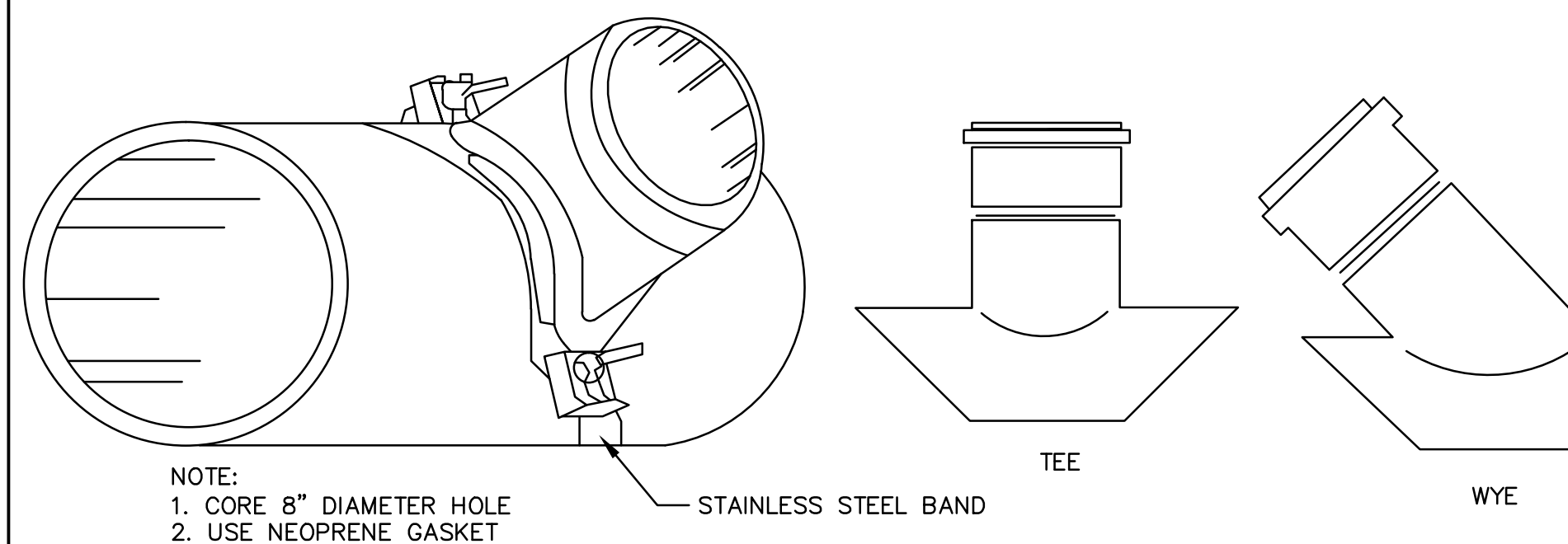


**SECTION A-A**

- NOTES:
- FITTINGS AND VALVES SHALL BE MANUFACTURED BY FORD OR APPROVED EQUAL. CORPORATION: FORD FB1000 WITH TEE HEAD ADAPTER (CC THREADxCOMP) BALL VALVE CURB STOP: FORD B44 FULL PORT (COMPxCOMP).
  - SERVICE SADDLES SHALL BE USED FOR WATERMANS SMALLER THAN 16 INCHES IN DIAMETER. SADDLES SHALL BE DOUBLE STRAP EQUAL TO ROCKWELL 313.
  - SAND SHALL BE USED FOR BACKFILLING FROM A POINT 6 INCHES BELOW THE PIPE TO A POINT 12 INCHES ABOVE THE PIPE. THE REMAINING BACKFILL SHALL HAVE NO STONES GREATER THAN 3 INCHES IN THEIR LARGEST DIMENSION. BEFORE ANY EXCAVATION IS DONE AND ANY PIPE IS INSTALLED, PERMITS SHALL BE OBTAINED FROM THE MANAGEMENT SERVICES OFFICE AT 20 EAST WORCESTER STREET AND THE WATER ENGINEERING OFFICE AT 18 EAST WORCESTER STREET. ALL PAVING SHALL CONFORM TO CITY OF WORCESTER DPW STANDARDS.
  - SERVICES SHALL BE FLUSHED BEFORE ACTIVATING TO AVOID METER CLOGGING.
  - MAIN VALVES ARE TO BE OPERATED BY THE CITY ONLY. COSTS INCURRED IN SHUTTING DOWN MAINS DUE TO NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE FIELD INSPECTOR, SHALL BE PAID BY THE CONTRACTOR.
  - THE CONTRACTOR SHALL INFORM THE OWNER AND THE CITY WIRE INSPECTOR OF PROPER GROUNDING REQUIREMENTS PURSUANT TO M.G.L. CHAPTER 165, SECTION 1C.
  - THE WATER SERVICE SHALL BE A MINIMUM OF 10 HORIZONTAL FEET FROM THE SEWER SERVICE.
  - THE CONTRACTOR SHALL FURNISH AND COMPLETELY INSTALL THE WATER SERVICE FROM CORPORATION TO METER VALVES WITH NEW MATERIALS.
  - UPON INSTALLATION OF THE SERVICE BOX, THE CONTRACTOR SHALL OPERATE THE VALVE TO THE SATISFACTION OF THE FIELD INSPECTOR PRIOR TO ACCEPTANCE OF THE JOB.

**TYPICAL PERMANENT SERVICE CONNECTION DETAIL**

NTS



**WYE & TEE SADDLE FOR 6" LATERAL SEWER CONNECTIONS DETAIL**

NTS



HORIZONTAL SCALE 1"=40'

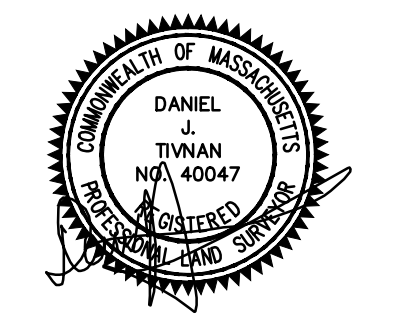
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2	8/8/18	CITY COMMENTS	PJB
NO.	DATE	DESCRIPTION	BY

**WORCESTER PLANNING BOARD APPROVED:**

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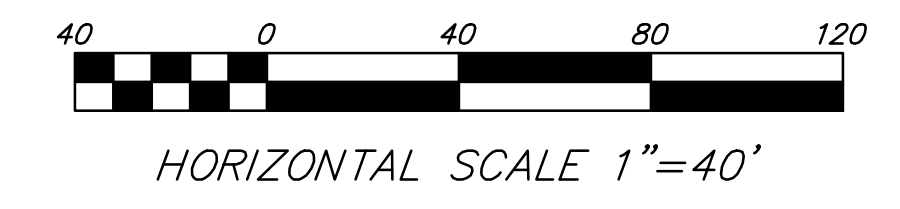


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**MALDEN WOODS SUBDIVISION AMENDMENT DETAIL SHEET**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 11/1/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER 23 OF 37	
DWG NUMBER: 5004		



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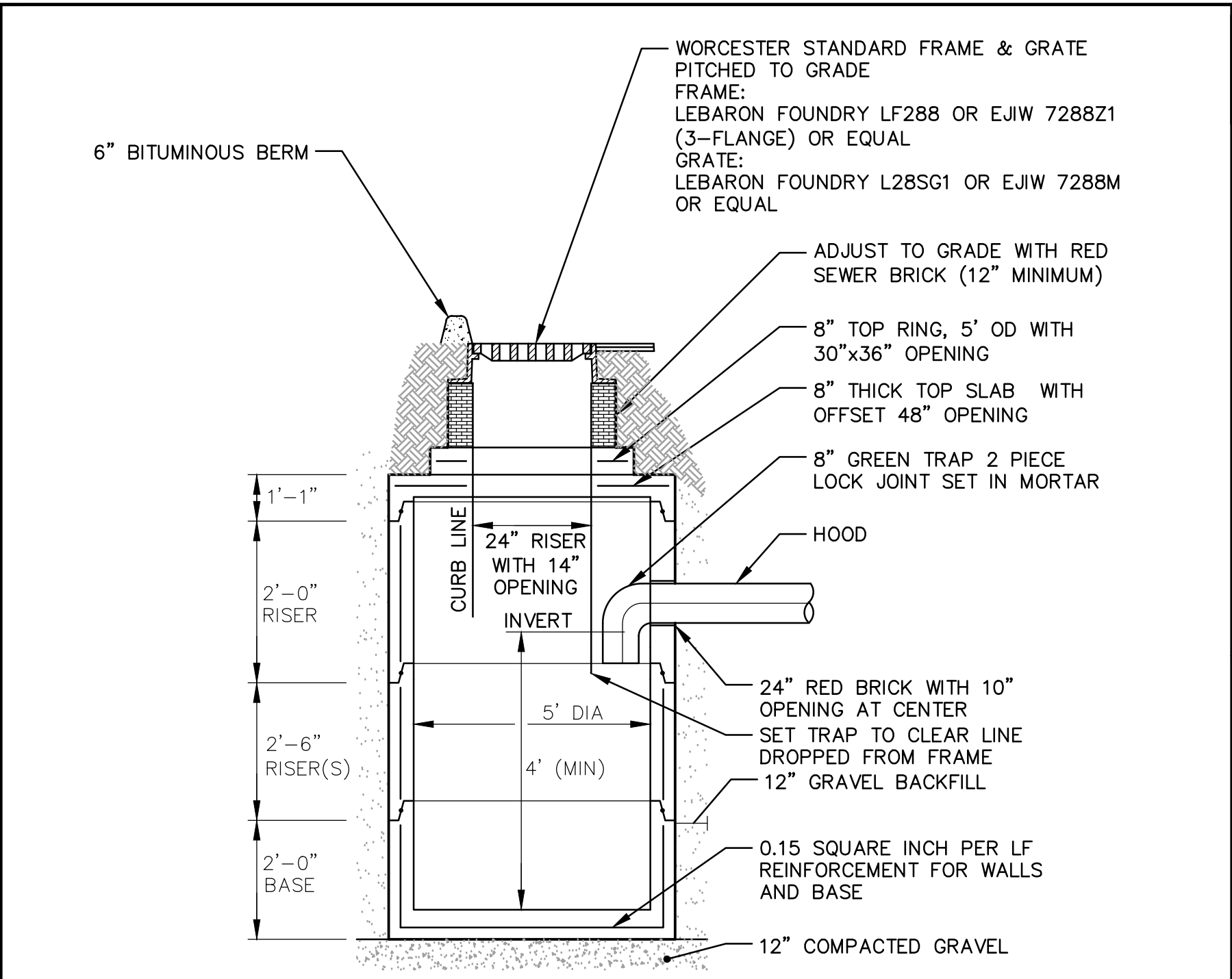


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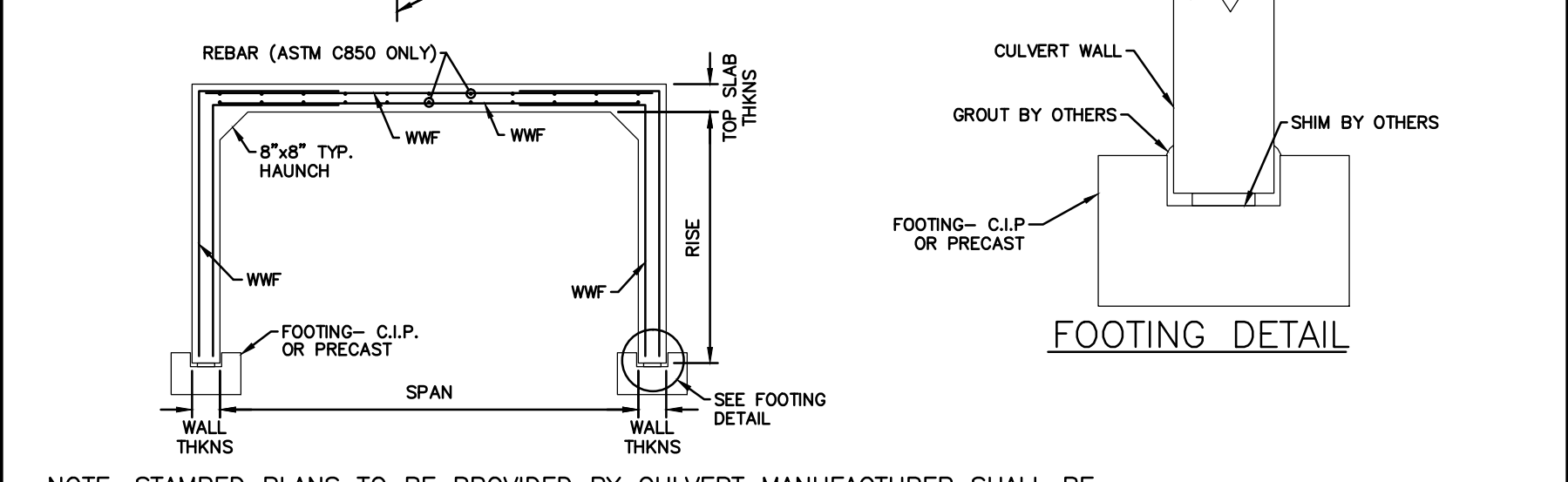
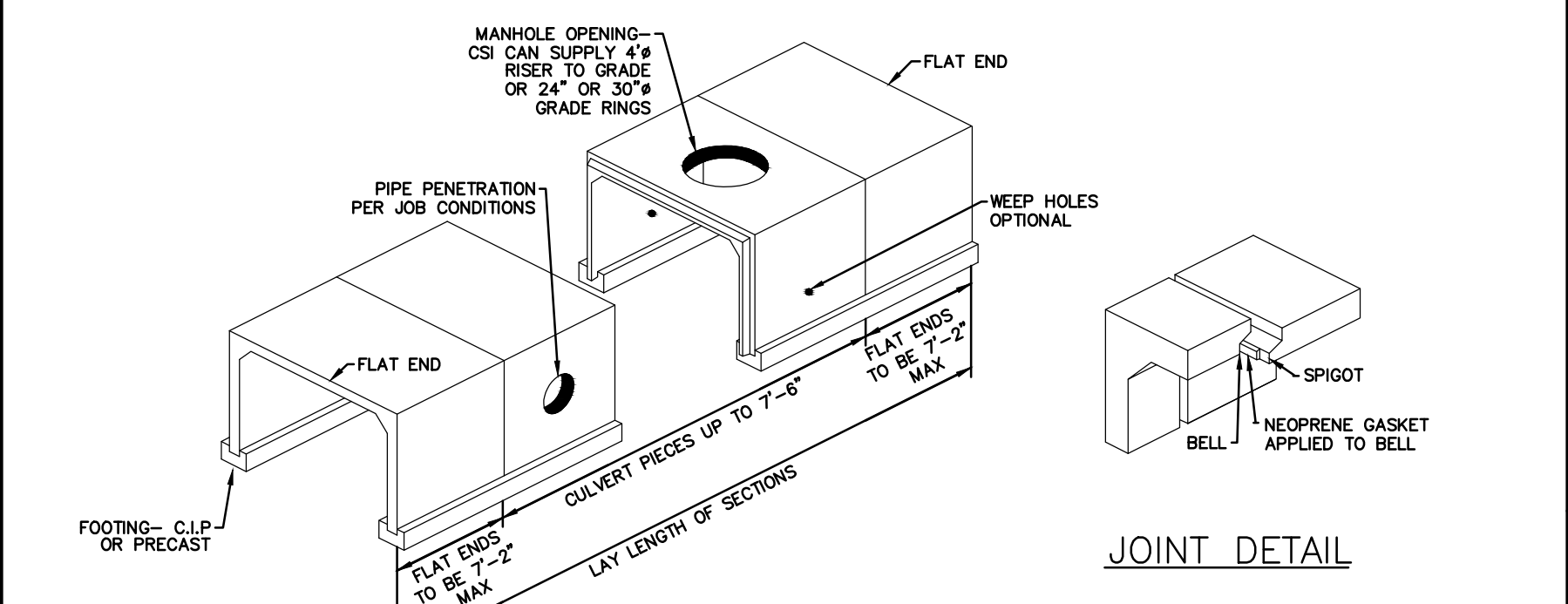
**MALDEN WOODS SUBDIVISION  
AMENDMENT  
DETAIL SHEET**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

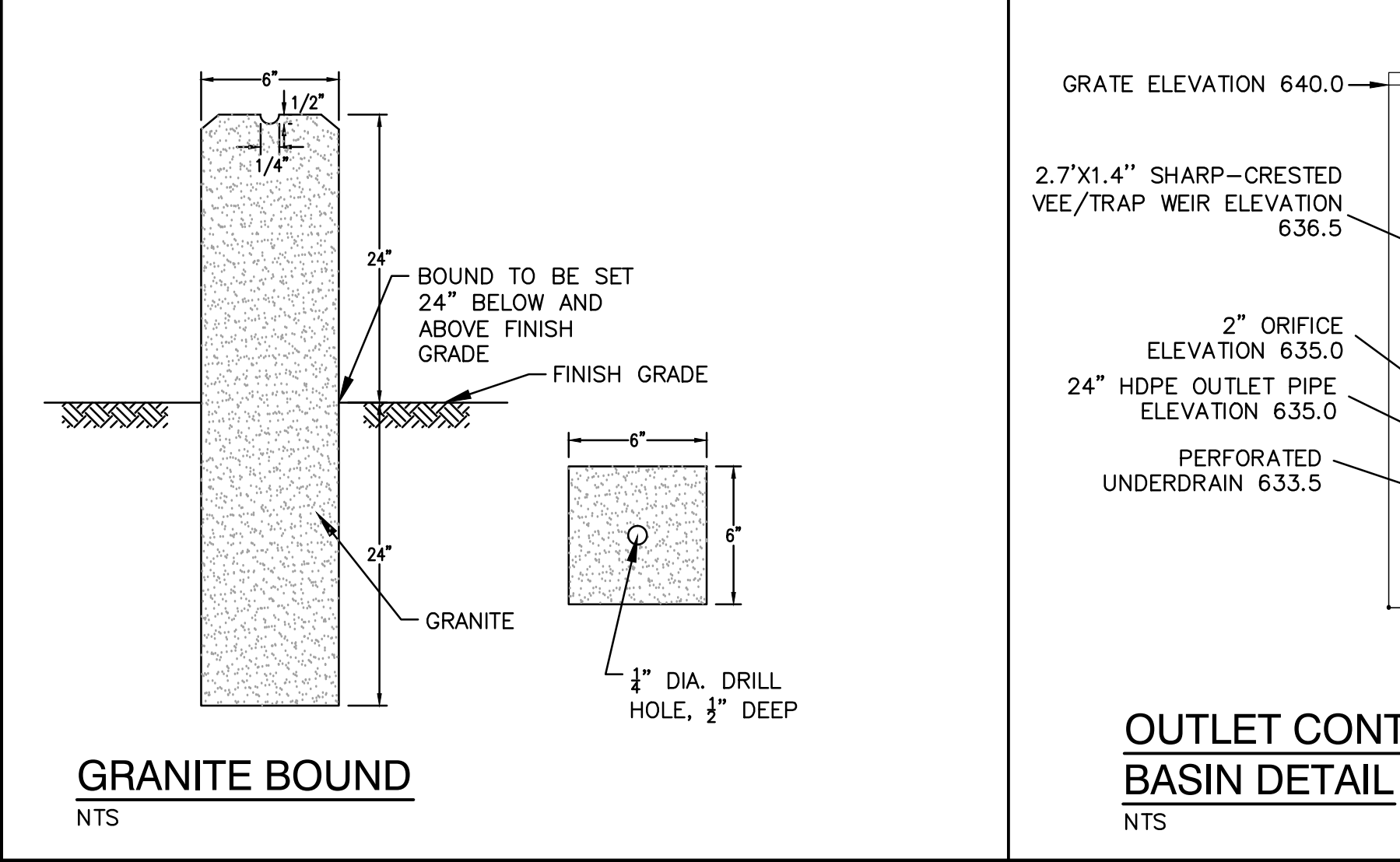
DATE: 11/1/2018	COMP'D: DJT	FIELD: PS
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ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER	
DWG NUMBER: 5004	24 OF 37	



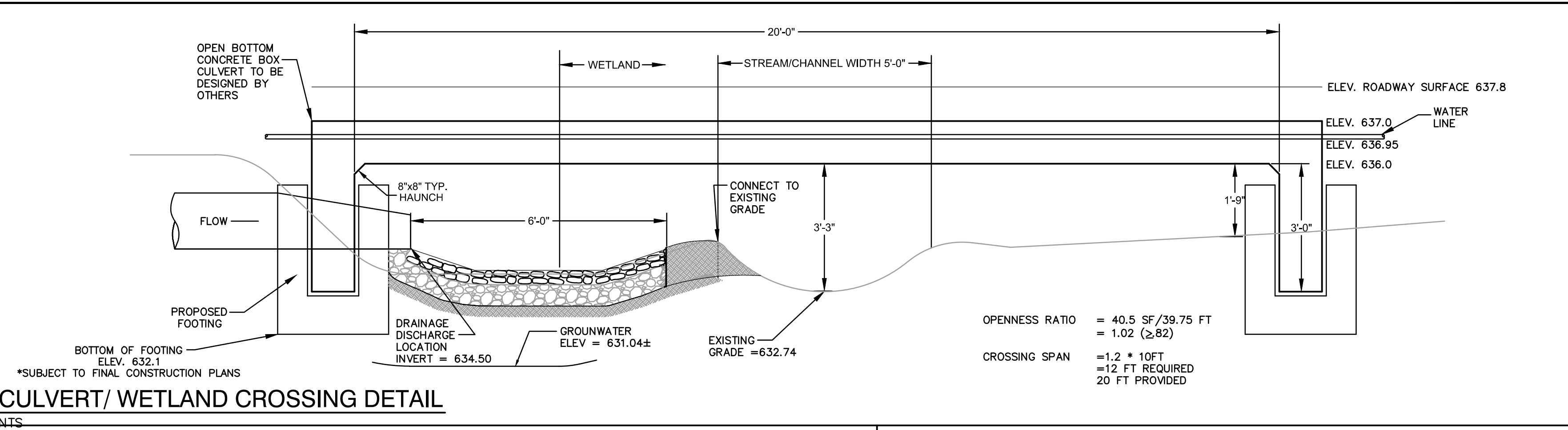
**PRECAST CATCH BASIN DETAIL**  
NTS



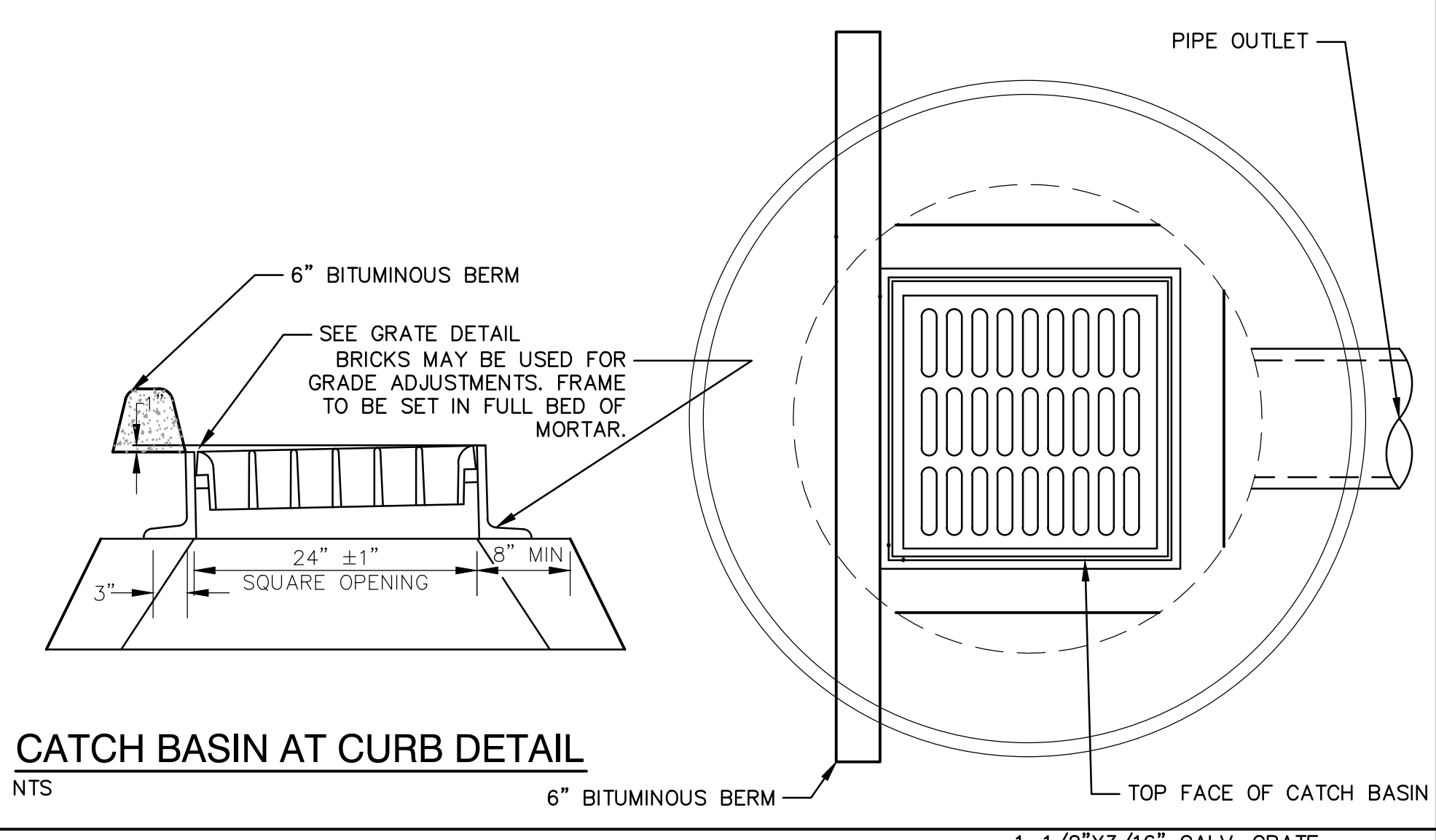
**PRECAST REINFORCED CONCRETE 3-SIDED BOX CULVERT DETAIL**  
NTS



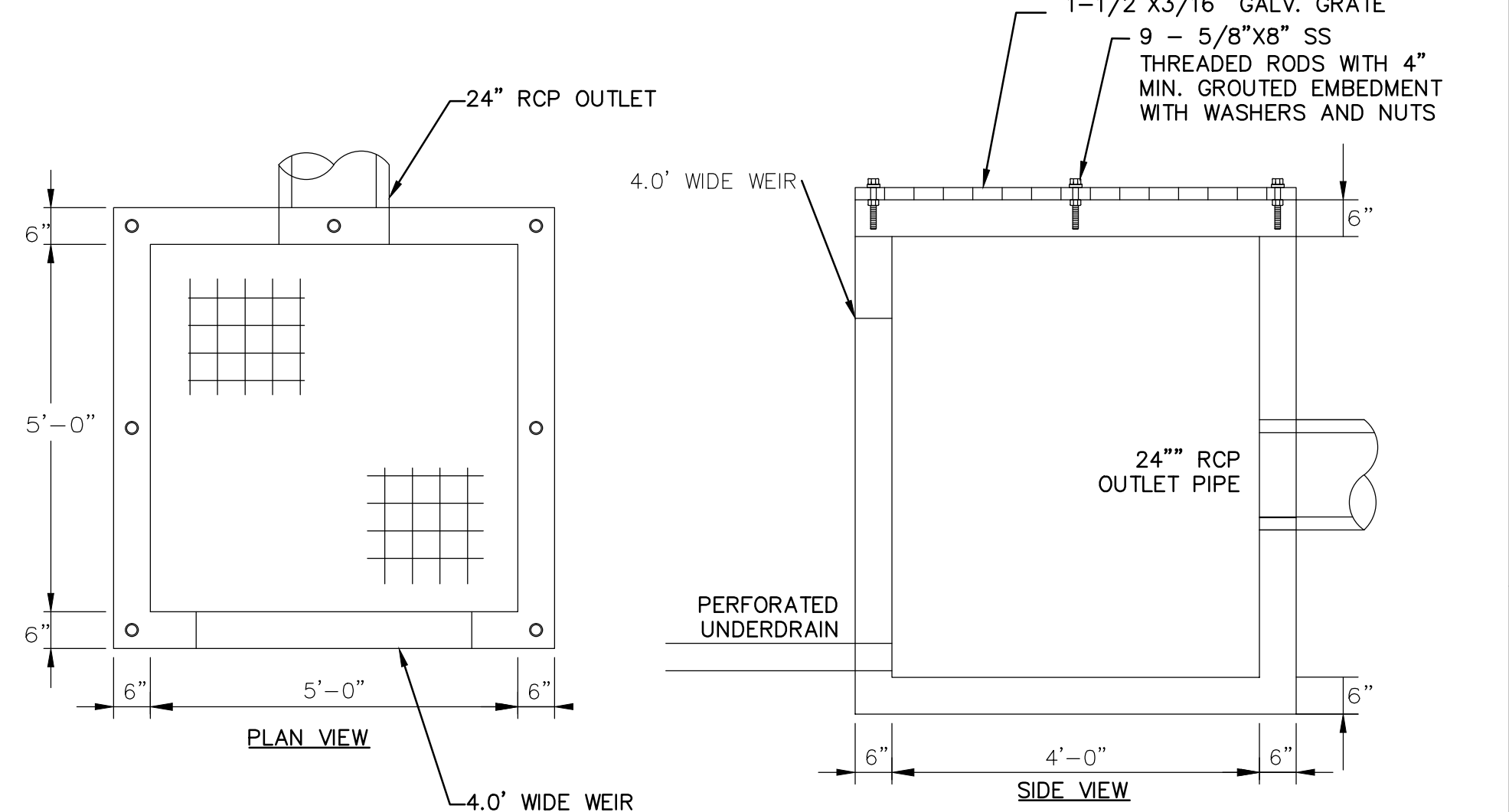
**GRANITE BOUND**  
NTS



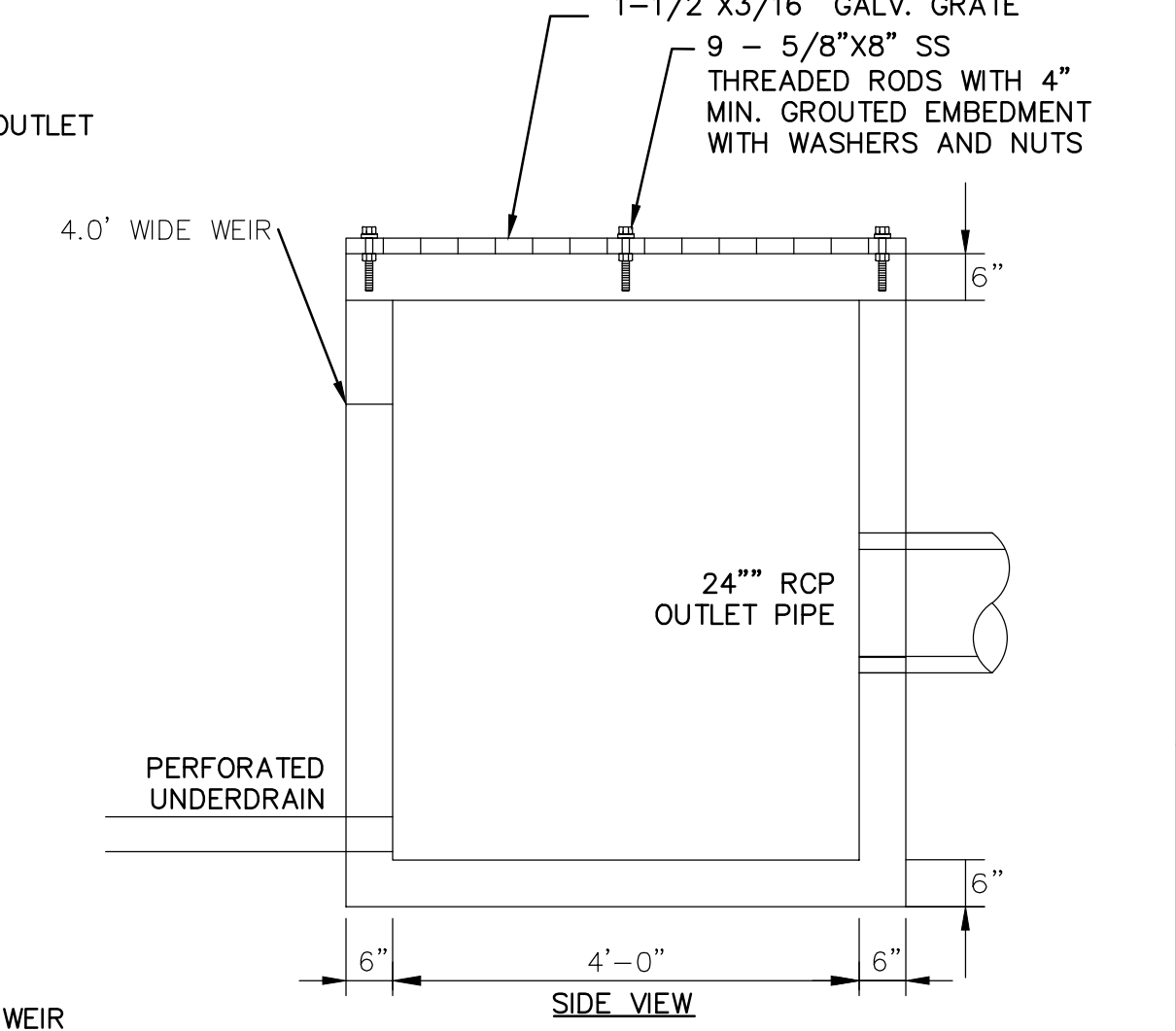
**CULVERT/ WETLAND CROSSING DETAIL**  
NTS



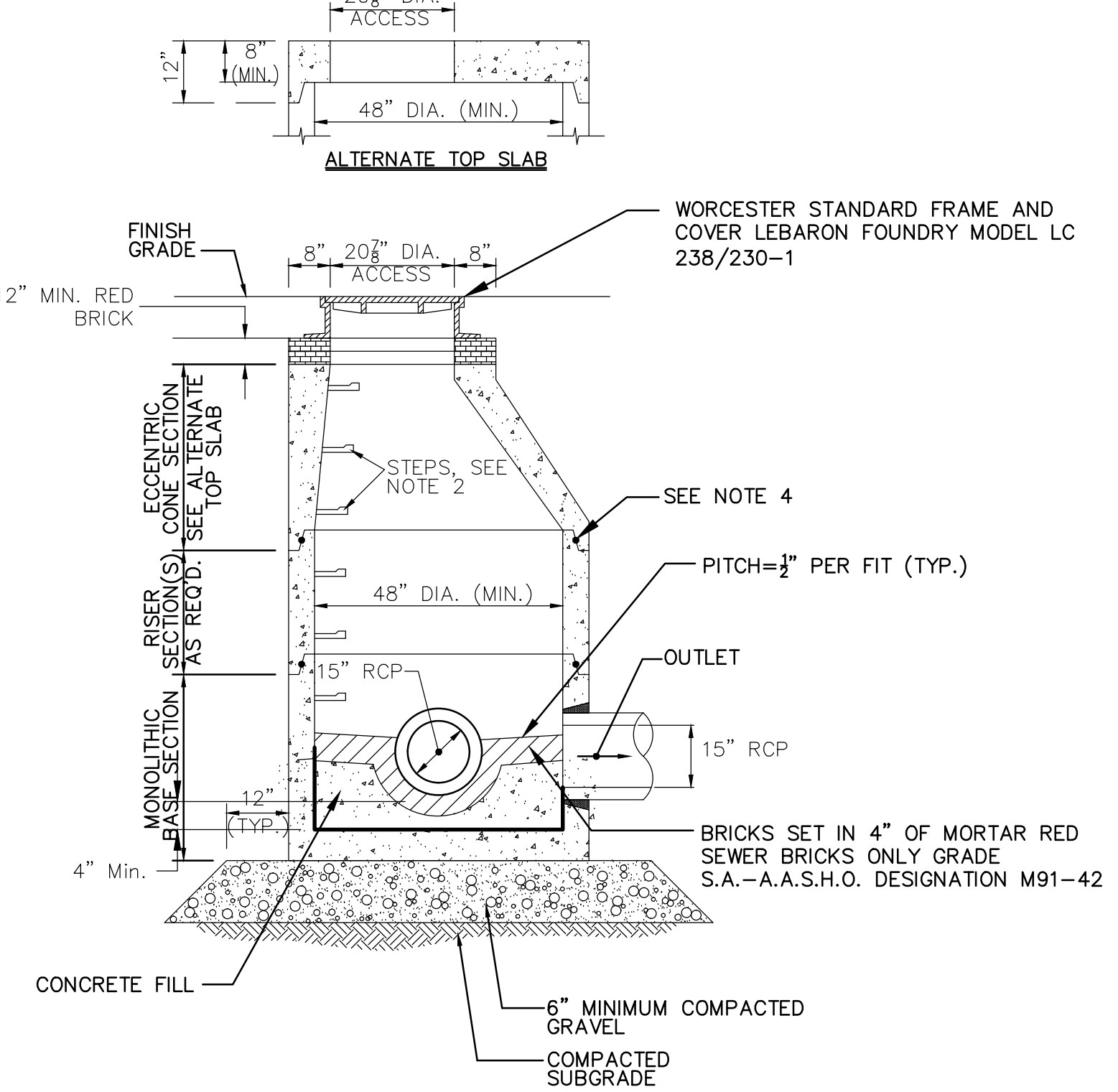
**CATCH BASIN AT CURB DETAIL**  
NTS



**OUTLET CONTROL STRUCTURE-DETENTION BASIN DETAIL**  
NTS

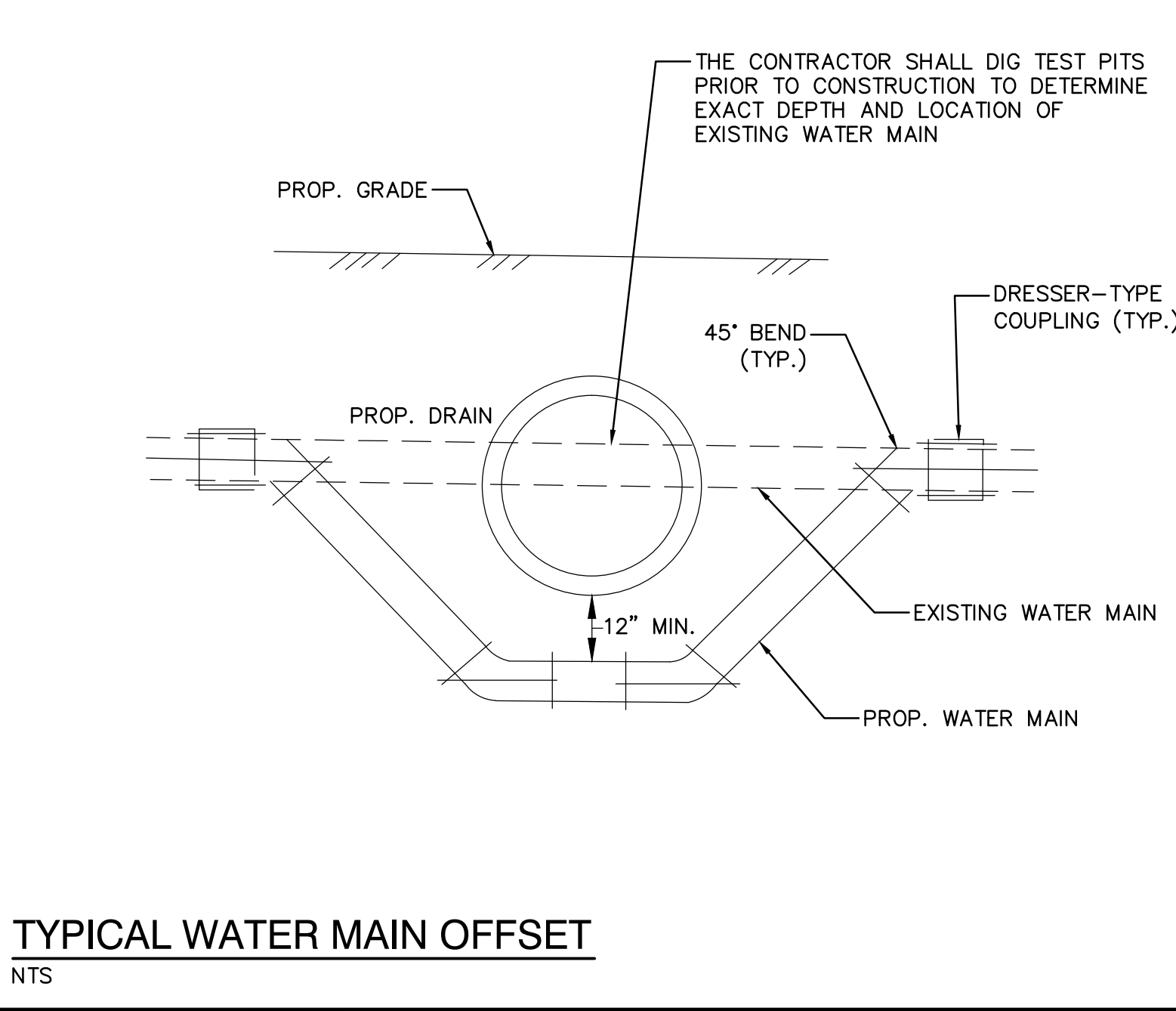


**OUTLET CONTROL STRUCTURE-INILTRATION BASIN DETAIL**  
NTS



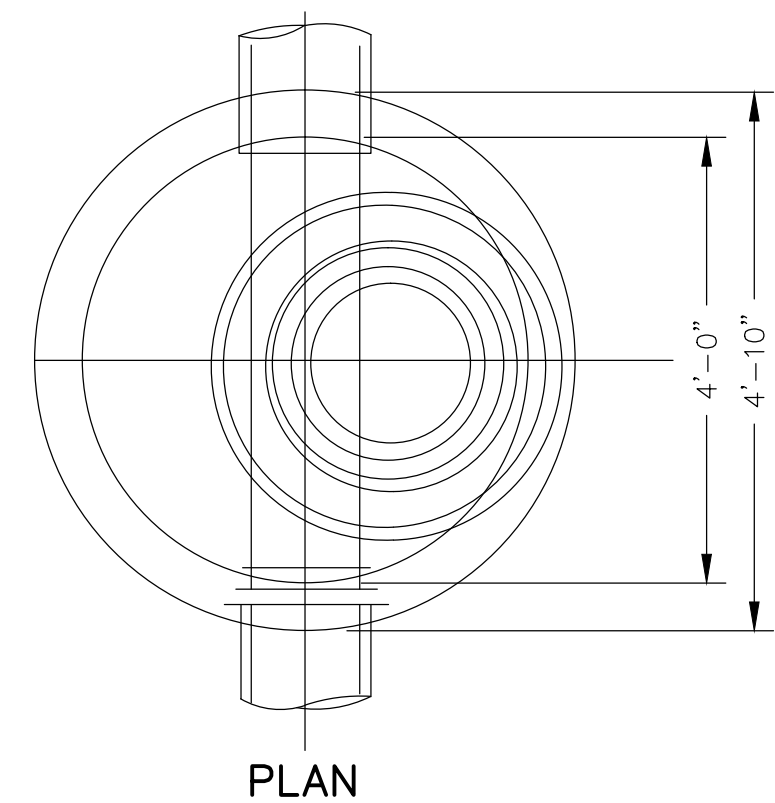
NOTES:  
1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.  
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12\"/>

**DRAIN MANHOLE**  
NTS

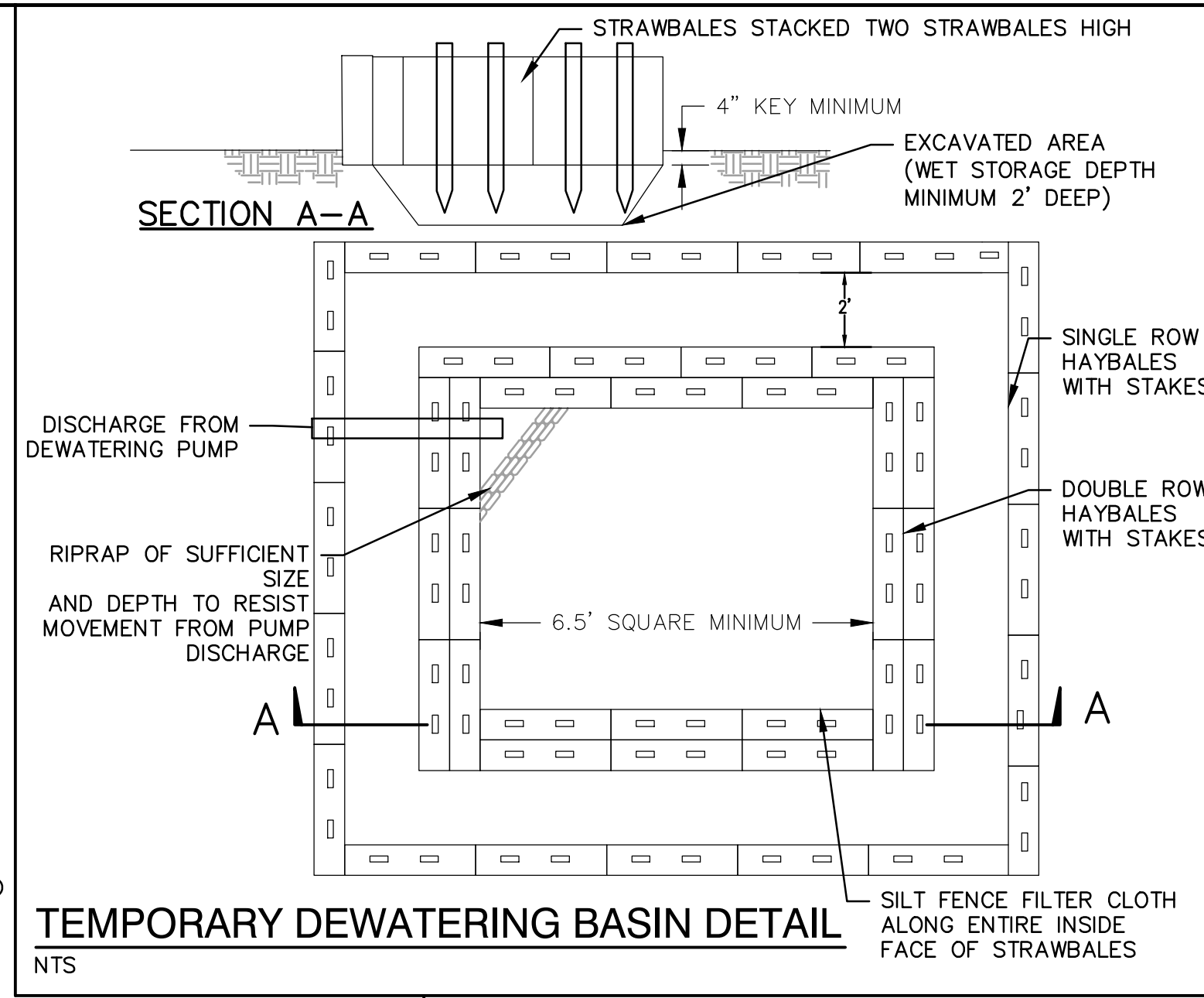


**TYPICAL WATER MAIN OFFSET**  
NTS

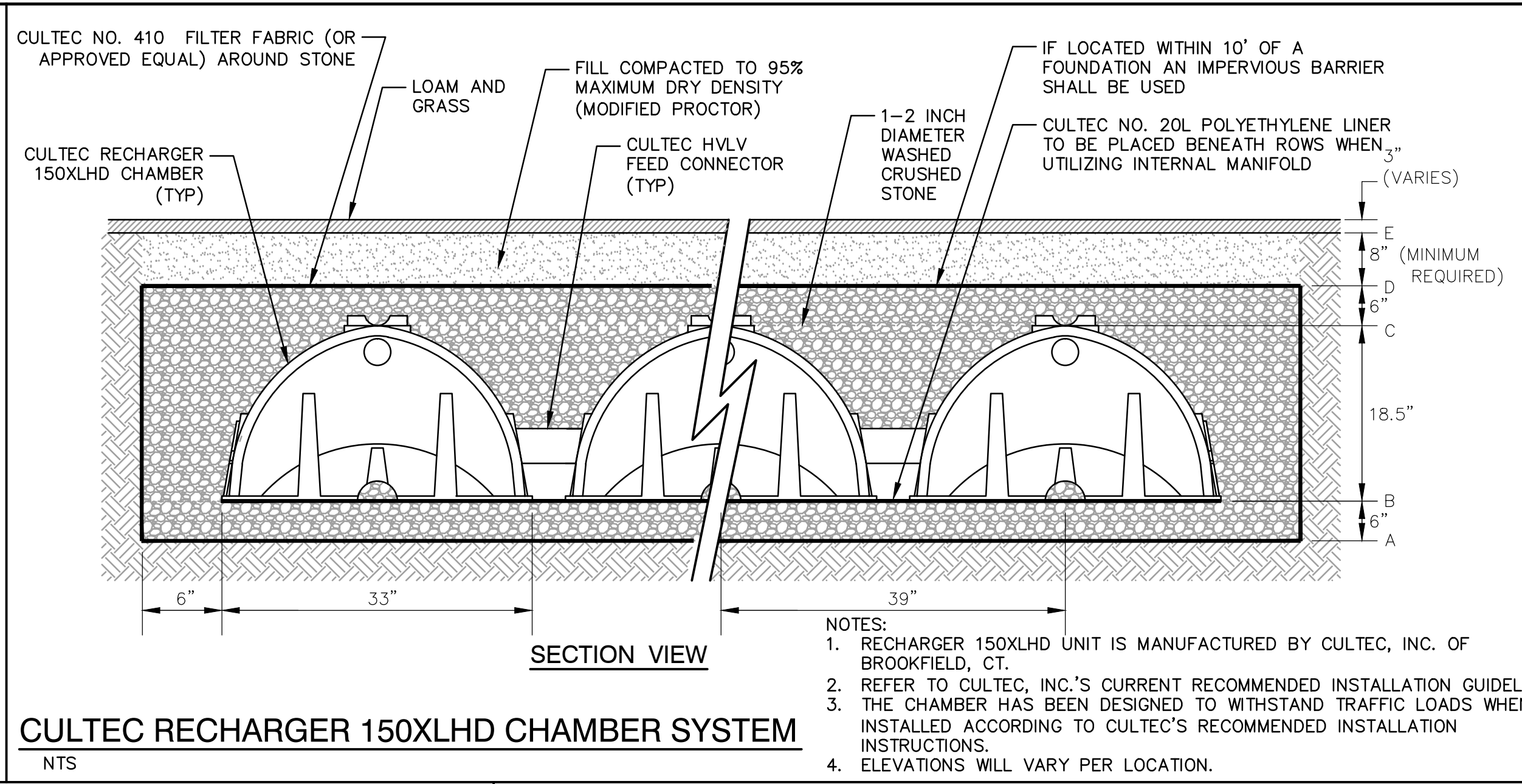




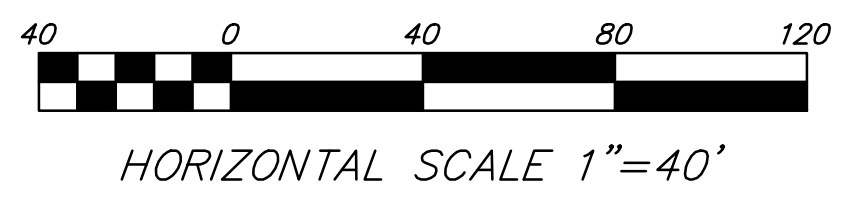
PLAN



TEMPORARY DEWATERING BASIN DETAIL  
NTS

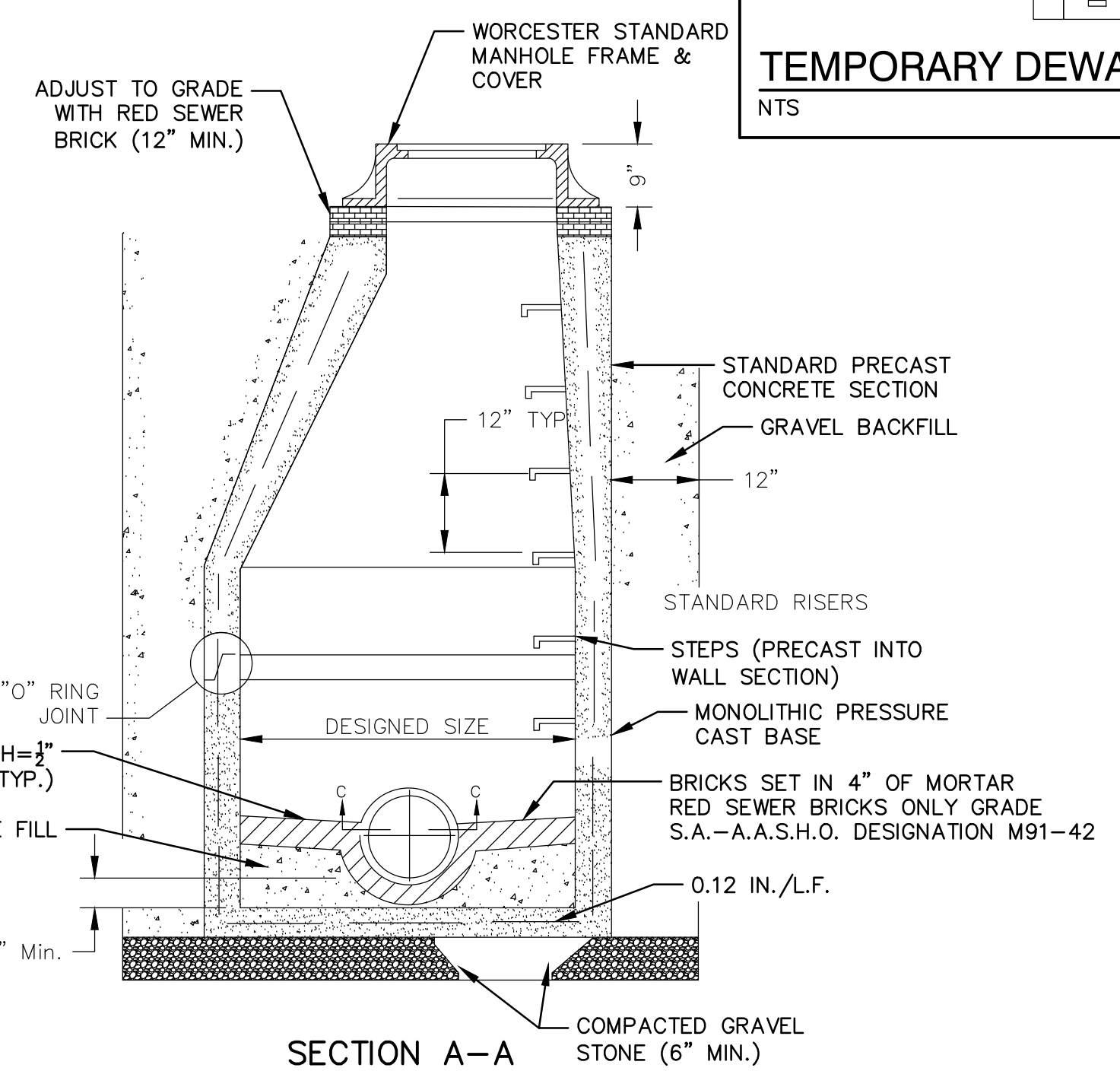


CULTEC RECHARGER 150XLHD CHAMBER SYSTEM  
NTS

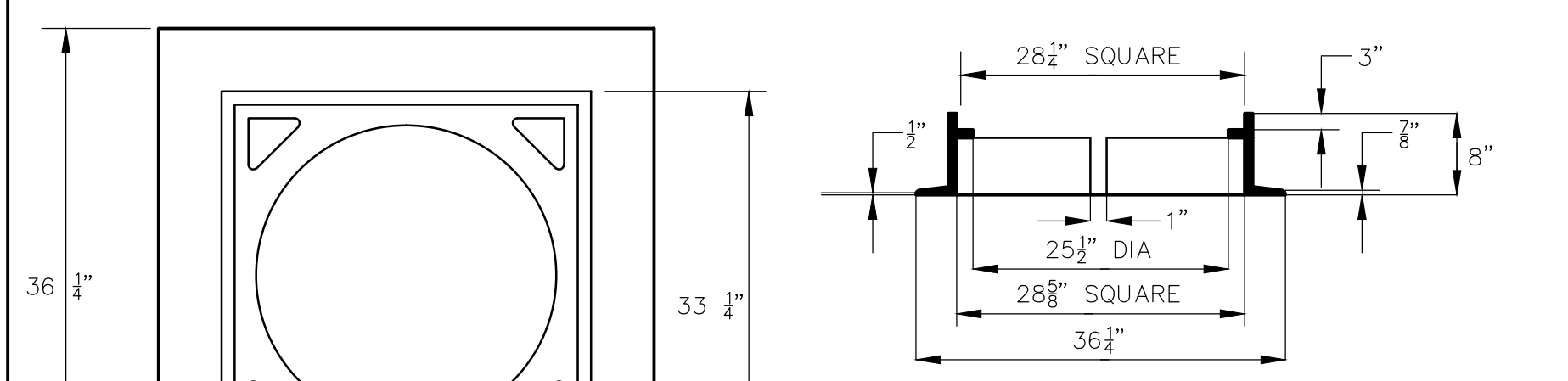


NOTE:  
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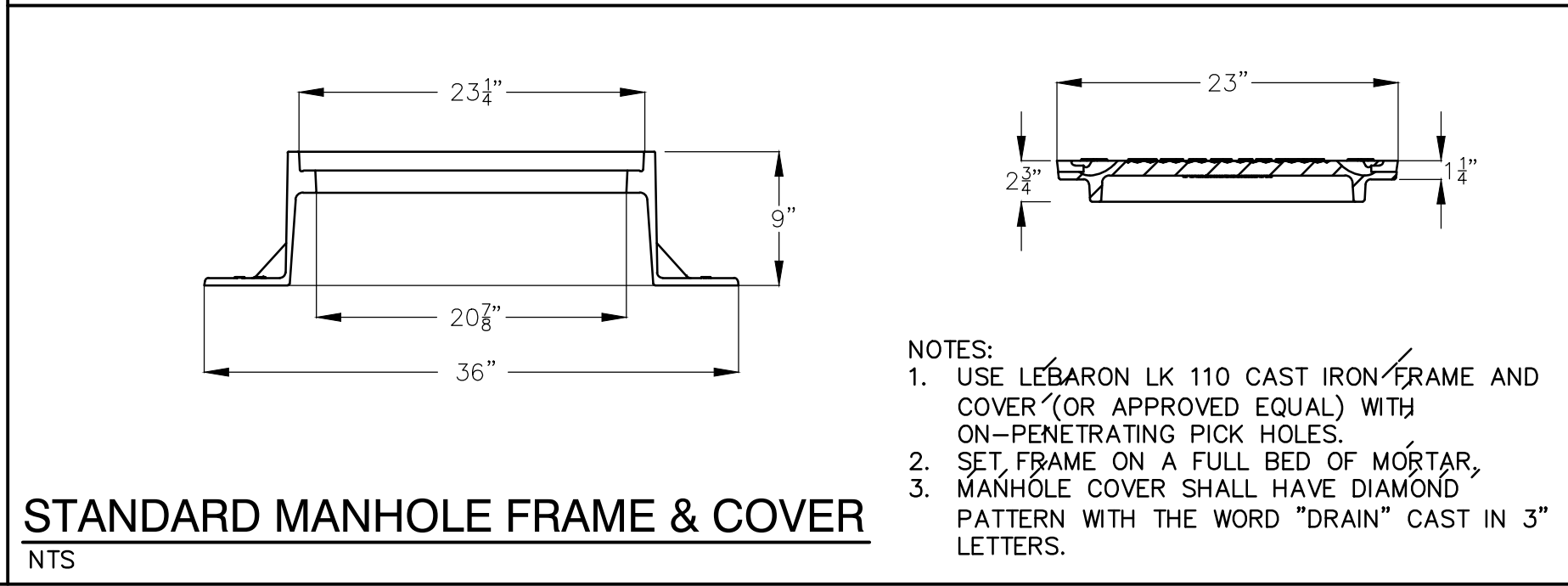
THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.



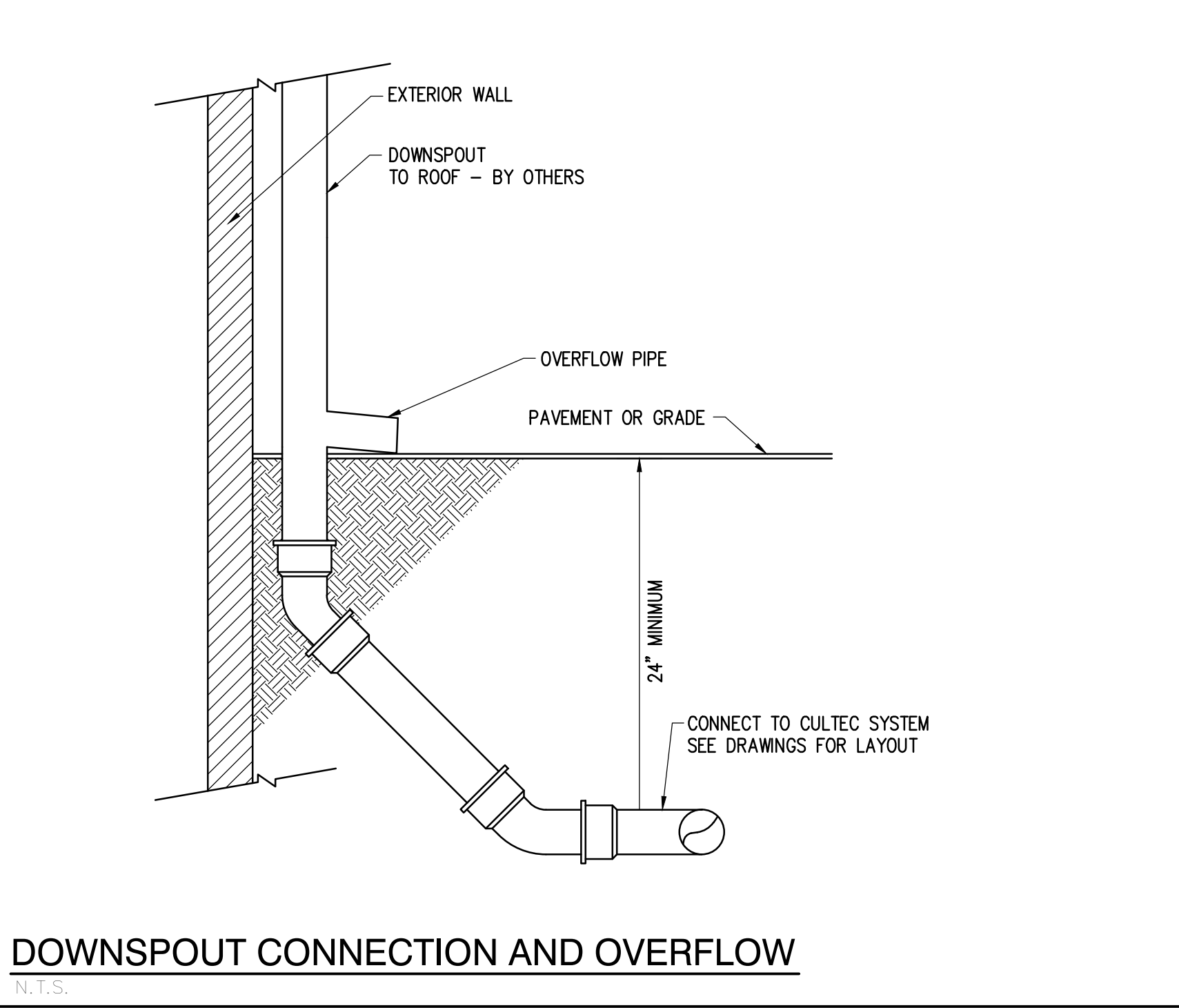
SANITARY SEWER MANHOLE DETAIL  
NTS



CATCH BASIN FRAME DETAIL  
NTS



STANDARD MANHOLE FRAME & COVER  
NTS



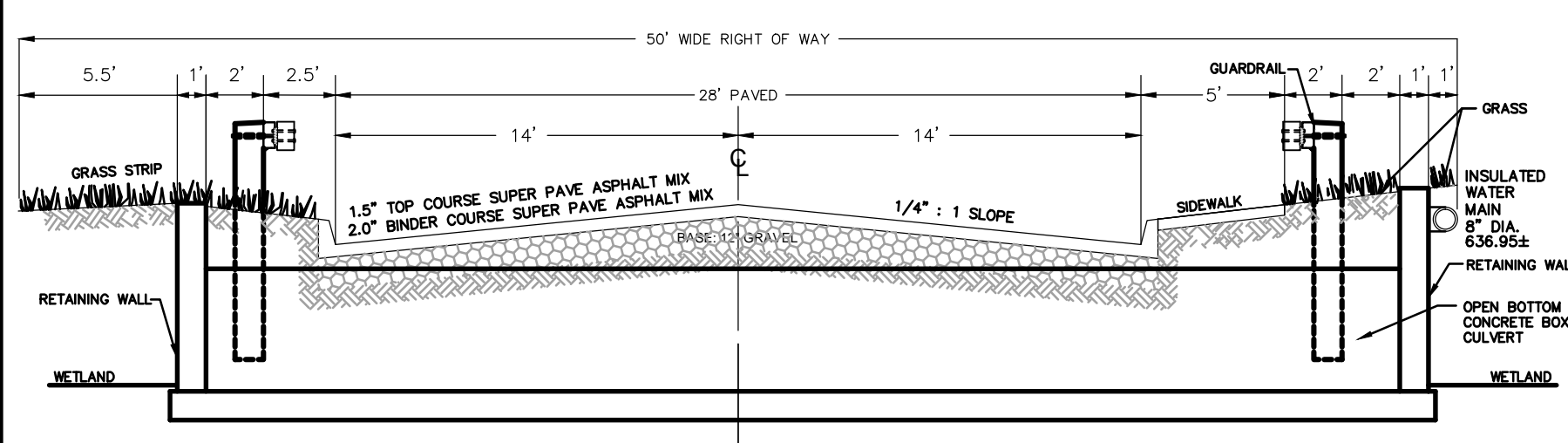
DOWNSPOUT CONNECTION AND OVERFLOW  
N.T.S.

PLAN REVISIONS:

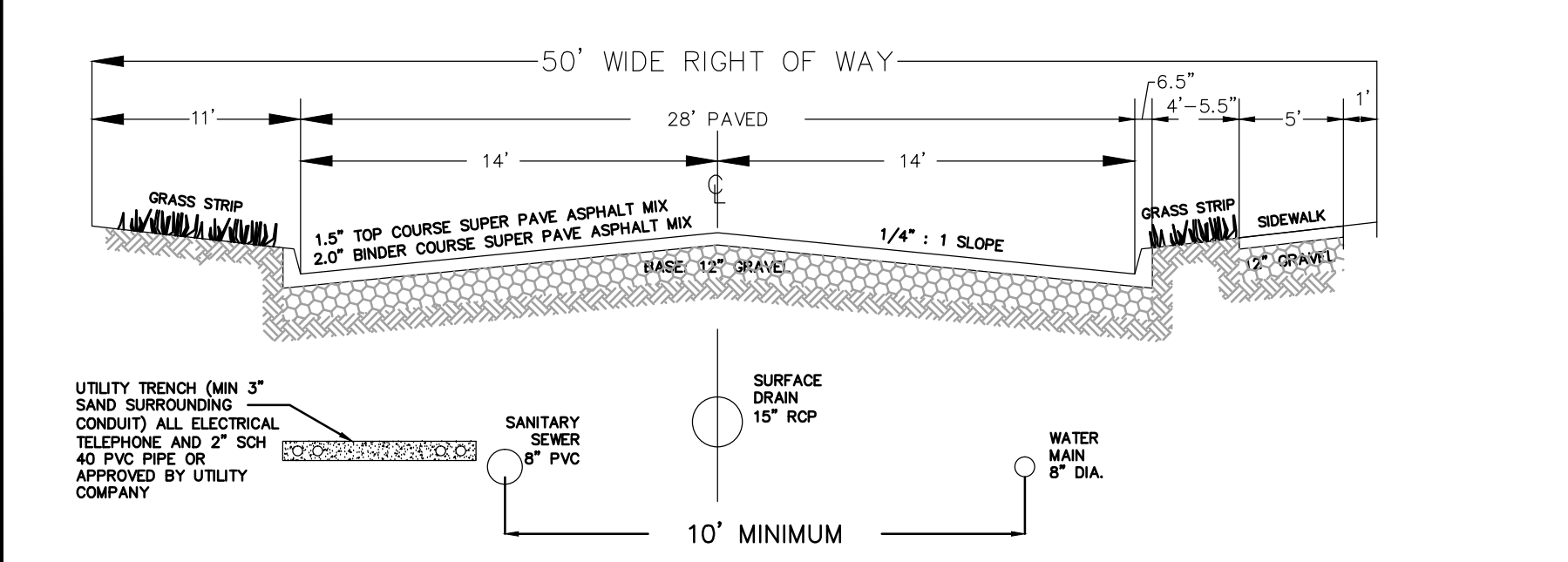
NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
11	11/12/2020	ORDER OF CONDITIONS	LLW
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4	04/18/19	CITY COMMENTS	LLW
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NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

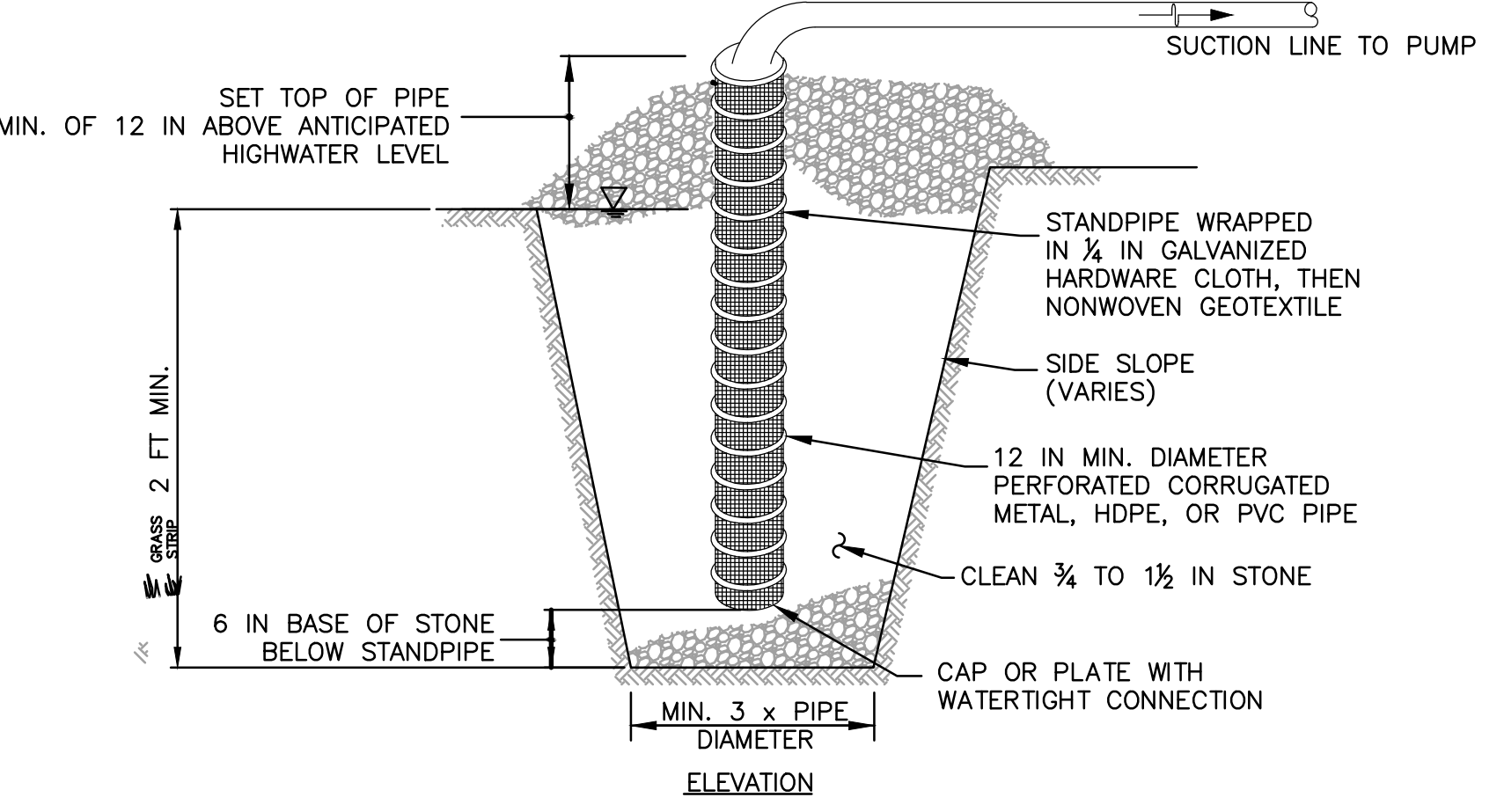
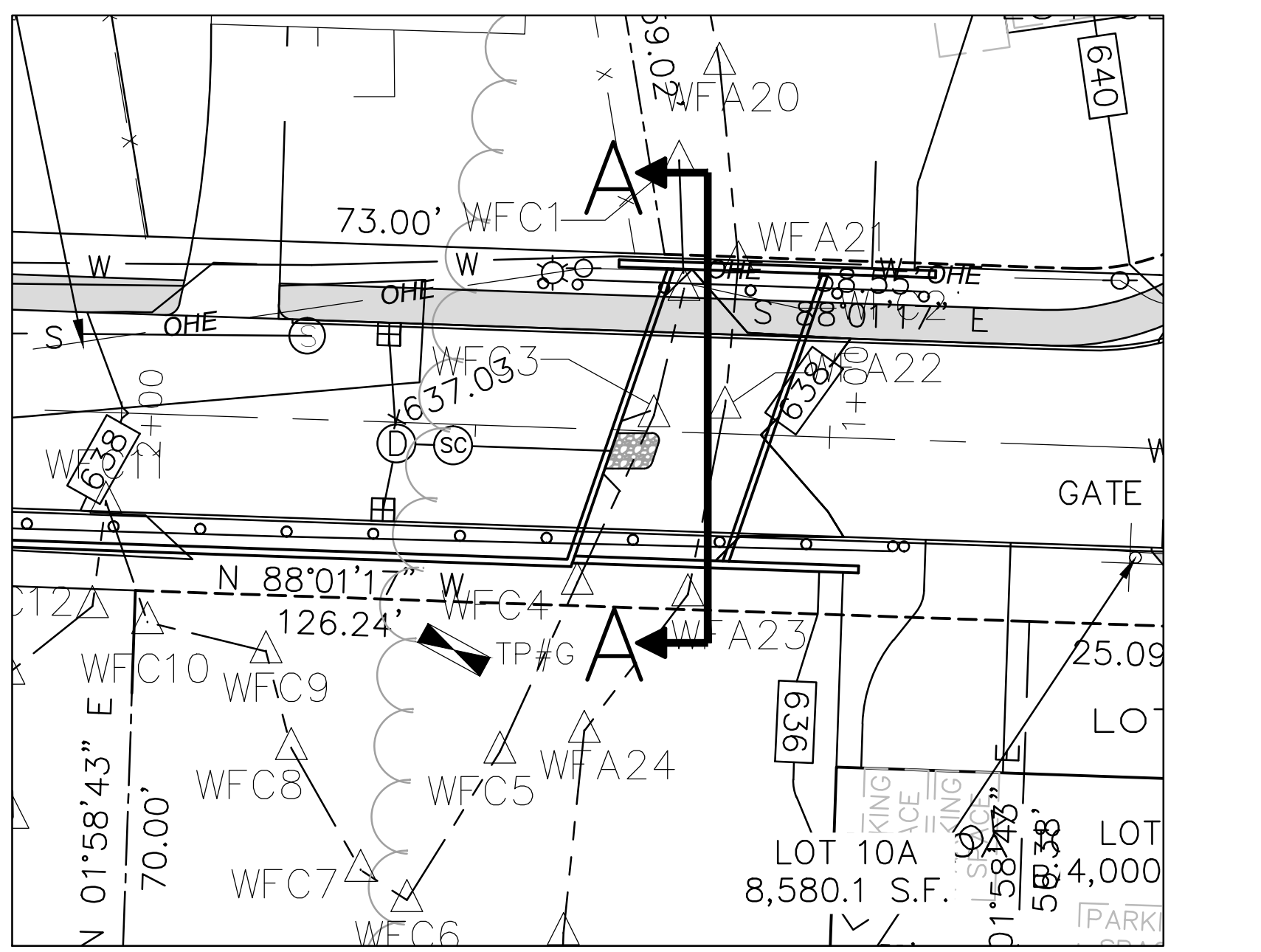
ENDORSED APPROVED DATE:



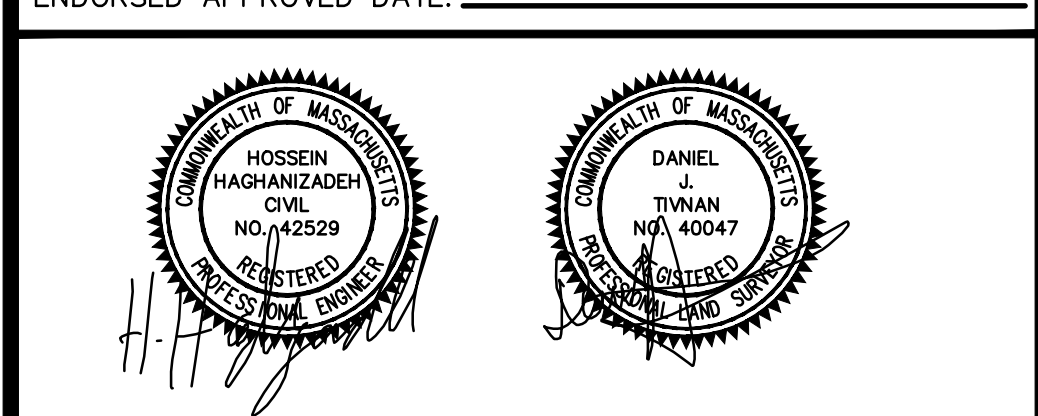
WETLAND ROADWAY CROSS SECTION A-A - GRASS OPTION  
NTS



TYPICAL ROADWAY CROSS SECTION  
NTS



DEWATERING SUMP PIT DETAIL  
NTS

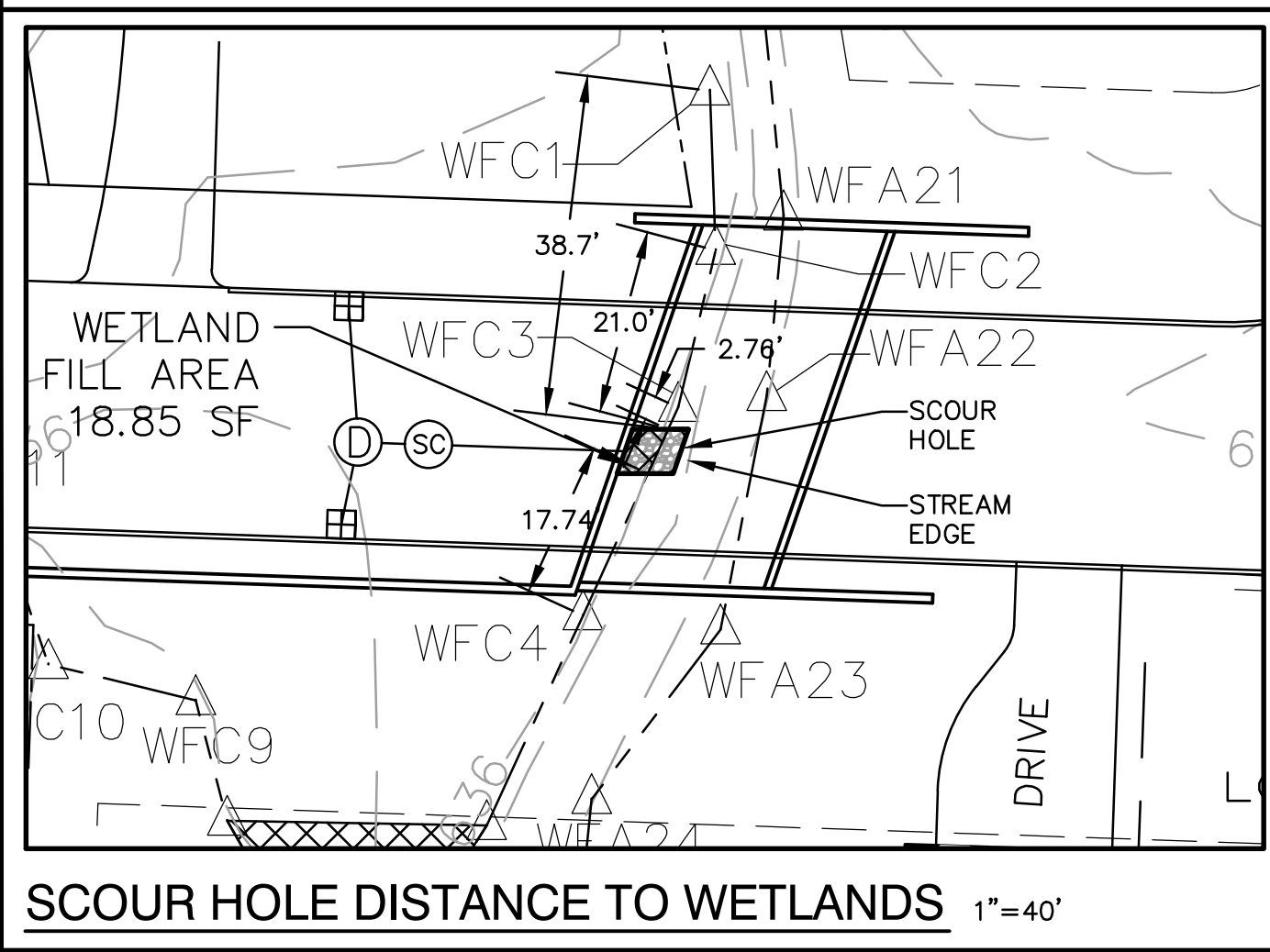
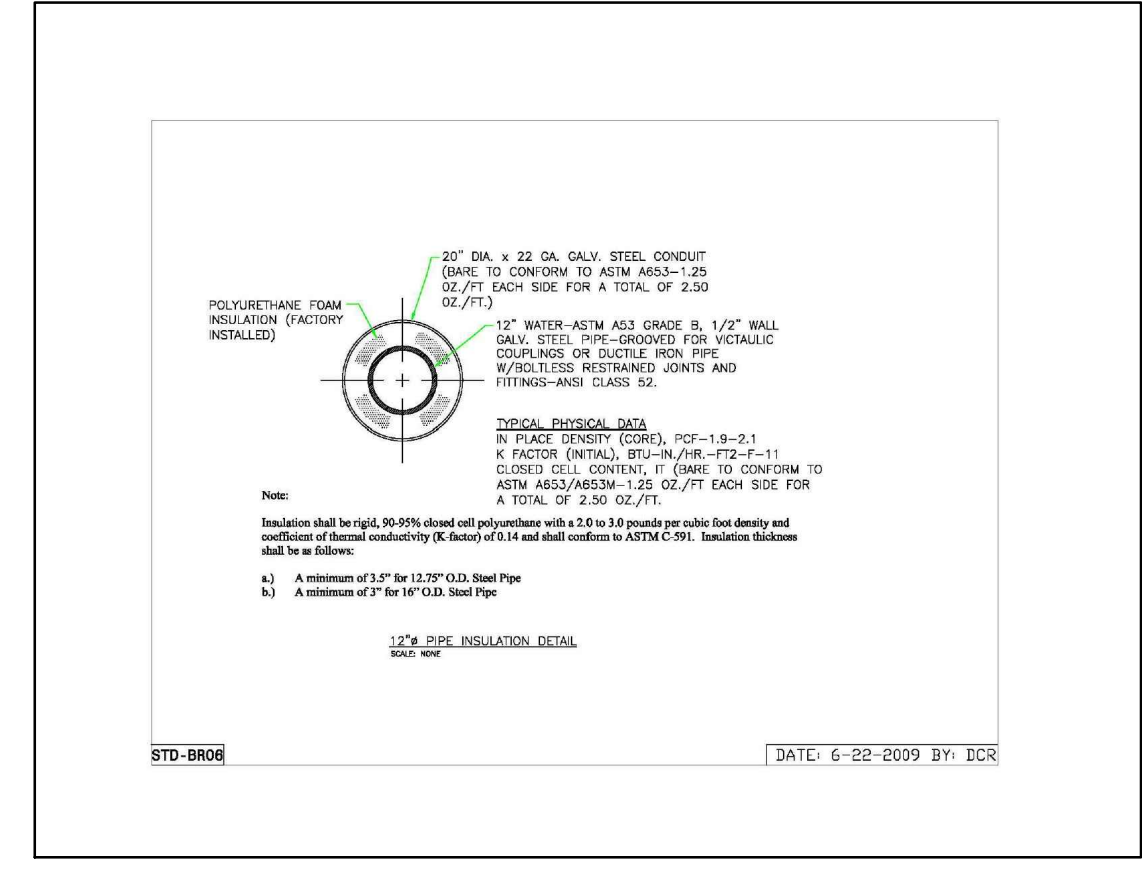
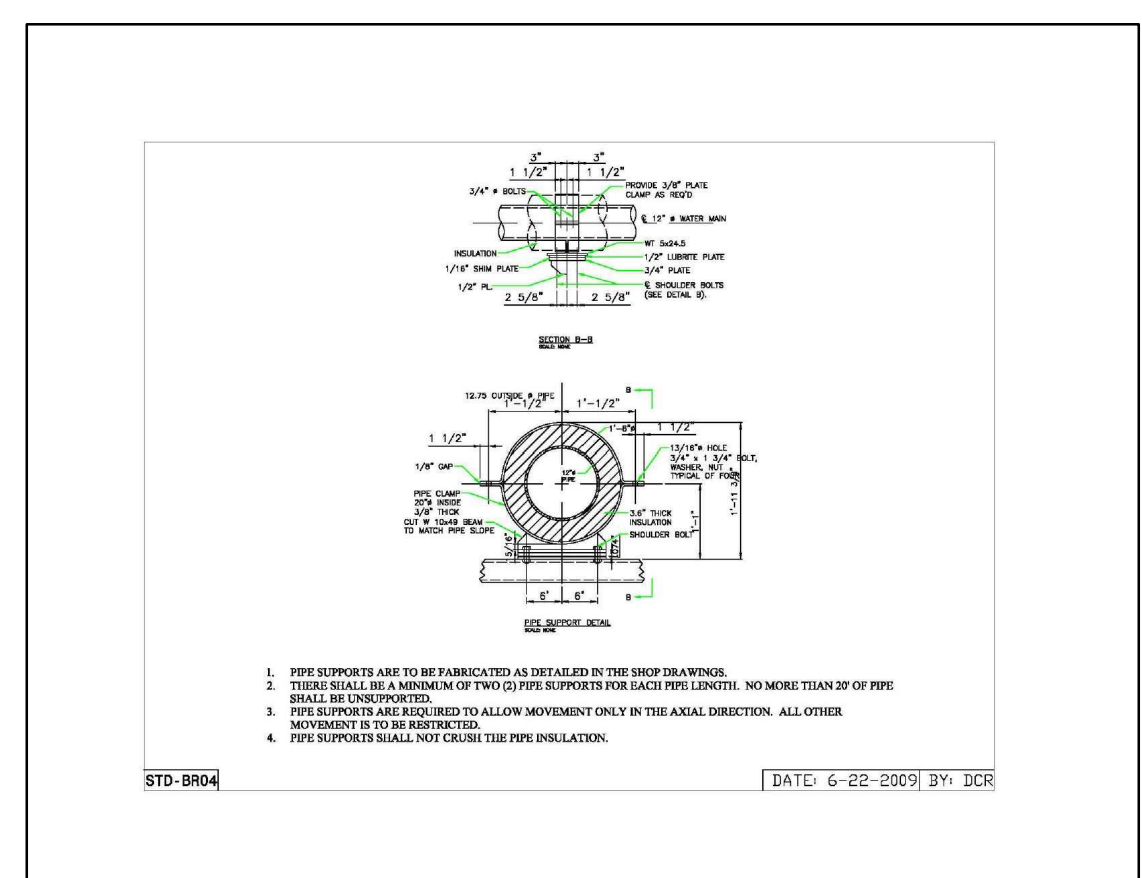
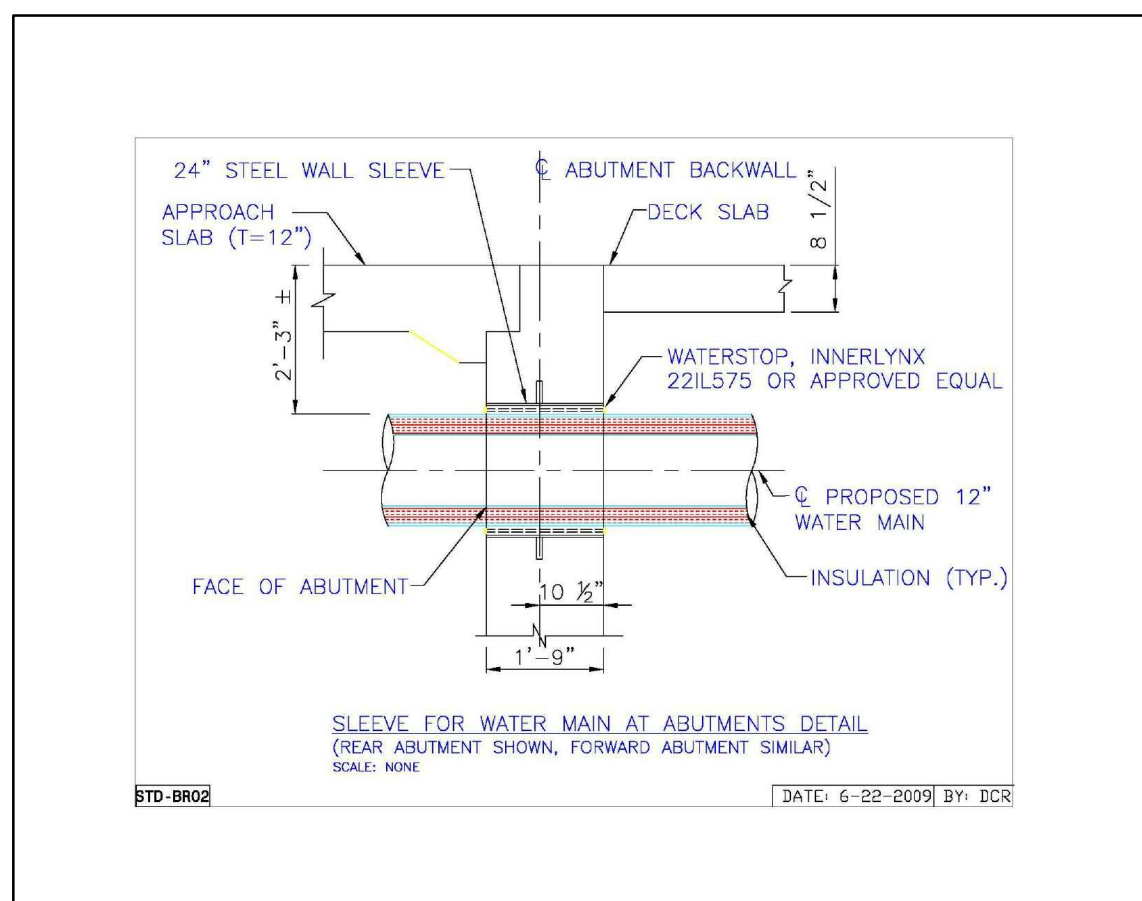


**H. S. & T. GROUP, INC.**  
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75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION  
AMENDMENT  
DETAIL SHEET**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 11/1/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND	
JOB NUMBER: 5956		SHEET NUMBER: 25 OF 37	
DWG NUMBER: 5004			



**PIPE SUPPORT ASSEMBLIES**  
 PIPE SUPPORT ASSEMBLIES SHALL BE FABRICATED AS DETAILED ON THE PLANS AND SHALL BE COMPLETE IN ALL RESPECTS INCLUDING ALL MATERIALS, CADMIUM PLATED SHOULDER AND CLAMP BOLTS, FASTENERS AND NUTS. THE SUPPORT ASSEMBLY CLAMP, SEAT PLATE ("LUBRITIC" PLATE) AND SHIMS SHALL ALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A-123, LATEST REVISION. THEREOF. NO FIELD WELDING OF GALVANIZED STEEL PIPE WILL BE PERMITTED. THERE SHALL BE A MINIMUM OF TWO (2) PIPE SUPPORTS FOR EACH PIPE LENGTH.

**INSULATION AND OUTER PROTECTIVE JACKET**  
 INSULATION SHALL BE MINIMUM THREE AND ONE-HALF (3-1/2") FOR 12.75" O.D. STEEL PIPE AND MINIMUM THREE INCHES (3") FOR 18" O.D. STEEL PIPE OF A MINIMUM DENSITY OF 2 POUNDS PER CUBIC FOOT OF POLYURETHANE FOAM FACTORY APPLIED TO COMPLETELY FILL THE SPACE BETWEEN THE PIPE AND THE OUTER WEATHERPROOF JACKET. THE OUTER JACKET SHALL BE GALVANIZED STEEL OF THE DIMENSIONS SHOWN ON THE PLANS. THE OUTER JACKET SHALL BE A MINIMUM 24 GAUGE GALVANIZED STEEL, SPIRAL LOCK SEAM CONSTRUCTION, TO ASSURE NO VOIDS IN THE FOAM INSULATION ARE PRESENT, AN INFRARED OR X-RAY INSPECTION OF EACH PREINSULATED UNIT AT THE FACTORY IS REQUIRED.

EXTERIOR PIPE COATING ON 24" O.D., OR LARGER, STEEL WATER MAINS SHALL BE APPLIED IN ACCORDANCE WITH ANSI/AWWA C203-91, "COAL-TAR PROTECTIVE COATINGS AND LININGS FOR STEEL WATER PIPELINES - ENAMEL AND TAPE - HOT APPLIED" CONSISTING OF THE FOLLOWING:

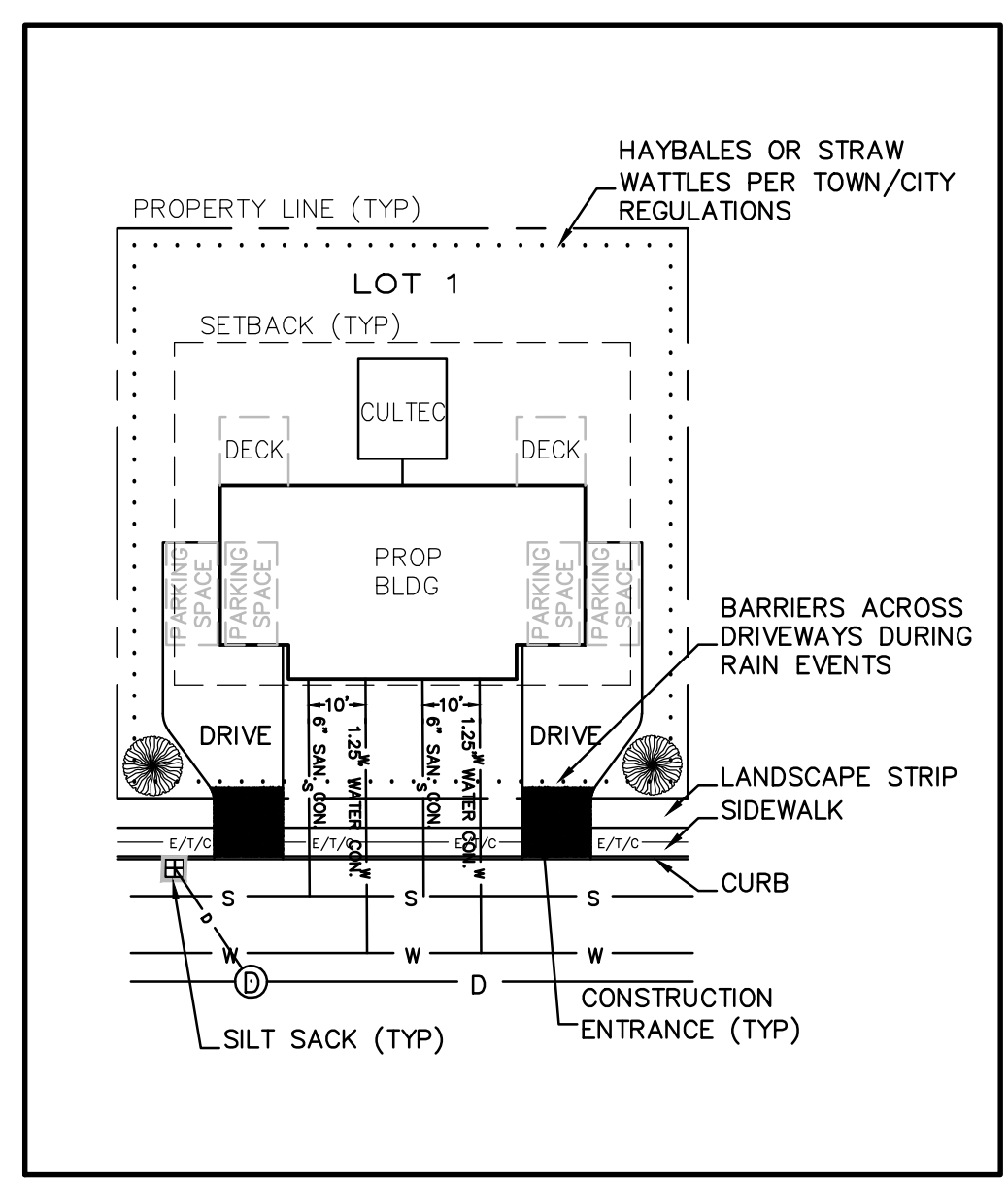
- 1) COAL TAR PRIMER - TYPE A;
- 2) COAL TAR ENAMEL - TYPE A, 1/32" THICK;
- 3) FIBROUS GLASS MAT;
- 4) 2ND COAT OF COAL TAR ENAMEL - TYPE A, 1/32" THICK;
- 5) 2ND LAYER OF FIBROUS GLASS MAT;
- 6) A COAT OF HEAVY BODIED COAL TAR EMULSION; AND
- 7) TWO (2) FINISH COATS OF ALUMINUM PAINT.

IN LIEU OF THE ABOVE, CONTRACTOR MAY FURNISH A FACTORY PREINSULATED SPRAY APPLIED POLYURETHANE FOAM INSULATION, THICKNESS AS INDICATED ABOVE, WITH A FIBERGLASS REINFORCED POLYESTER RESIN (FRP) JACKET APPLIED DIRECTLY OVER THE FOAM INSULATION. EXTERIOR PIPE COATING IS NOT REQUIRED. THE SYSTEM HEREIN SPECIFIED SHALL BE ONE WHICH IS DESIGNED TO BE SUPPORTED DIRECTLY ON THE FIBERGLASS JACKET AND PIPE SUPPORTS.

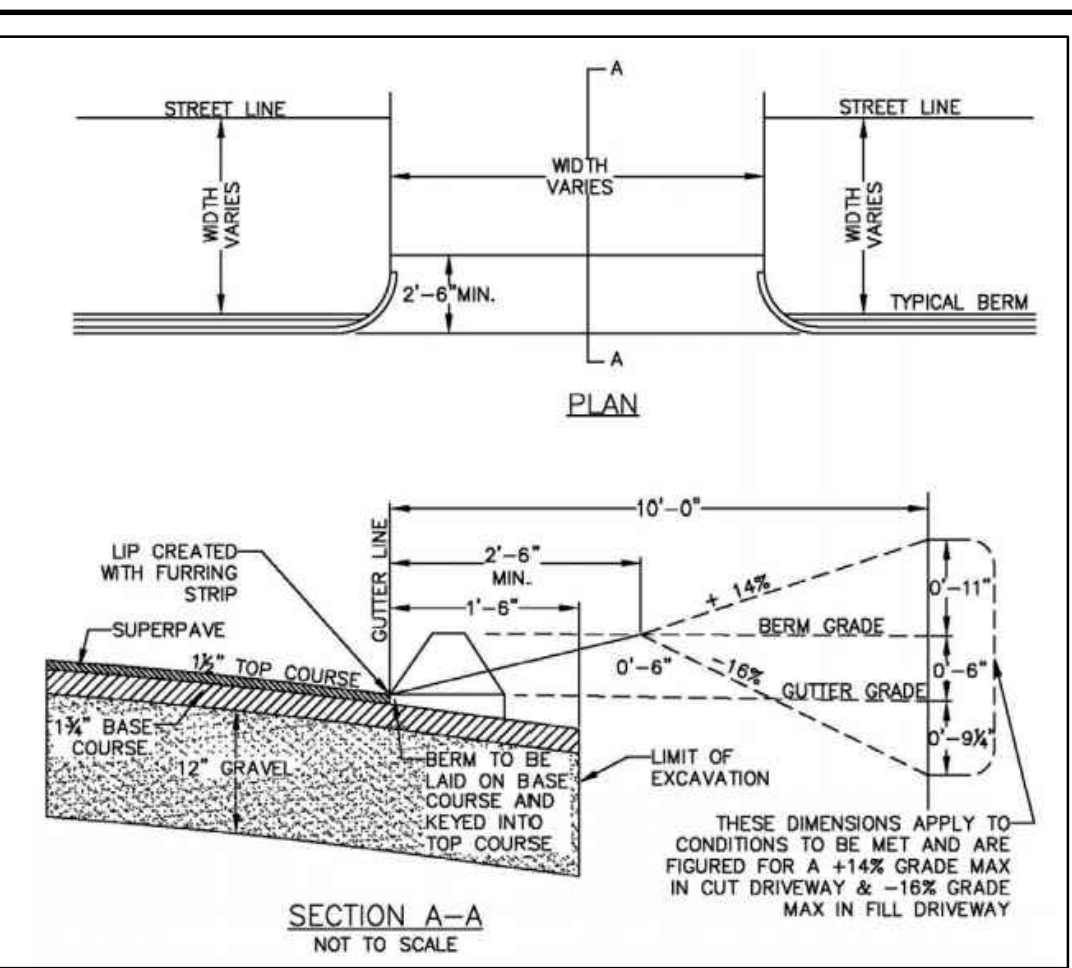
PIPE JOINTS, INCLUDING EXPANSION JOINTS AND SUPPORT AREAS, AND PIPE BETWEEN THE BACKWALLS OF THE BRIDGE ABUTMENTS SHALL BE FIELD INSULATED WITH FIBERGLASS OR PREFORMED POLYURETHANE FOAM (OR FRP IF APPLICABLE) AND JACKETED WITH GALVANIZED STEEL BANDED OVER ADJACENT JACKET. ALL FIELD APPLIED INSULATION SHALL BE INSTALLED TO FULLY FILL ANY VOIDS. FIELD PLACED INSULATION AND JACKET SHALL BE REMOVABLE IN ORDER TO PERFORM MAINTENANCE OR MAKE ADJUSTMENTS TO THE PACKING GLAND OF THE EXPANSION JOINT(S).

BURIED PIPE BEYOND THE BACKWALLS OF THE BRIDGE ABUTMENTS HAVING LESS THAN FOUR AND ONE-HALF (4-1/2") FEET OF COVER SHALL BE INSULATED WITH A MINIMUM OF A ONE (1) FOOT INSULATION ENVELOPE EQUAL TO "WITCOLITE" OR "GILSULATE 500KR".

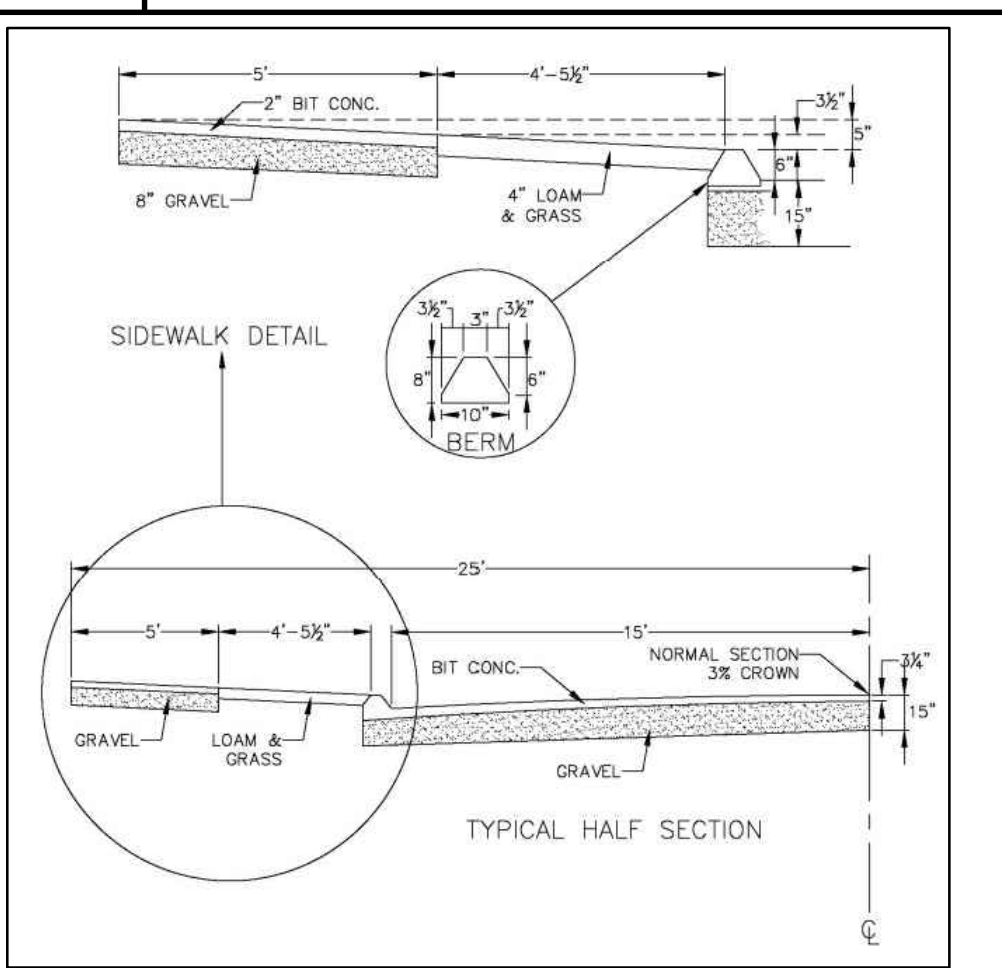
THE VOID BETWEEN THE SLEEVE AND THE STEEL WATER MAIN THROUGH EACH BRIDGE ABUTMENT WALL SHALL BE FILLED WITH JUTE PACKING AND SEALED AT BOTH ENDS WITH THREE (3") INCHES OF NON-SHRINKING GROUT AS SHOWN IN THE "SLEEVE PACKING DETAIL" ON THE PLANS.



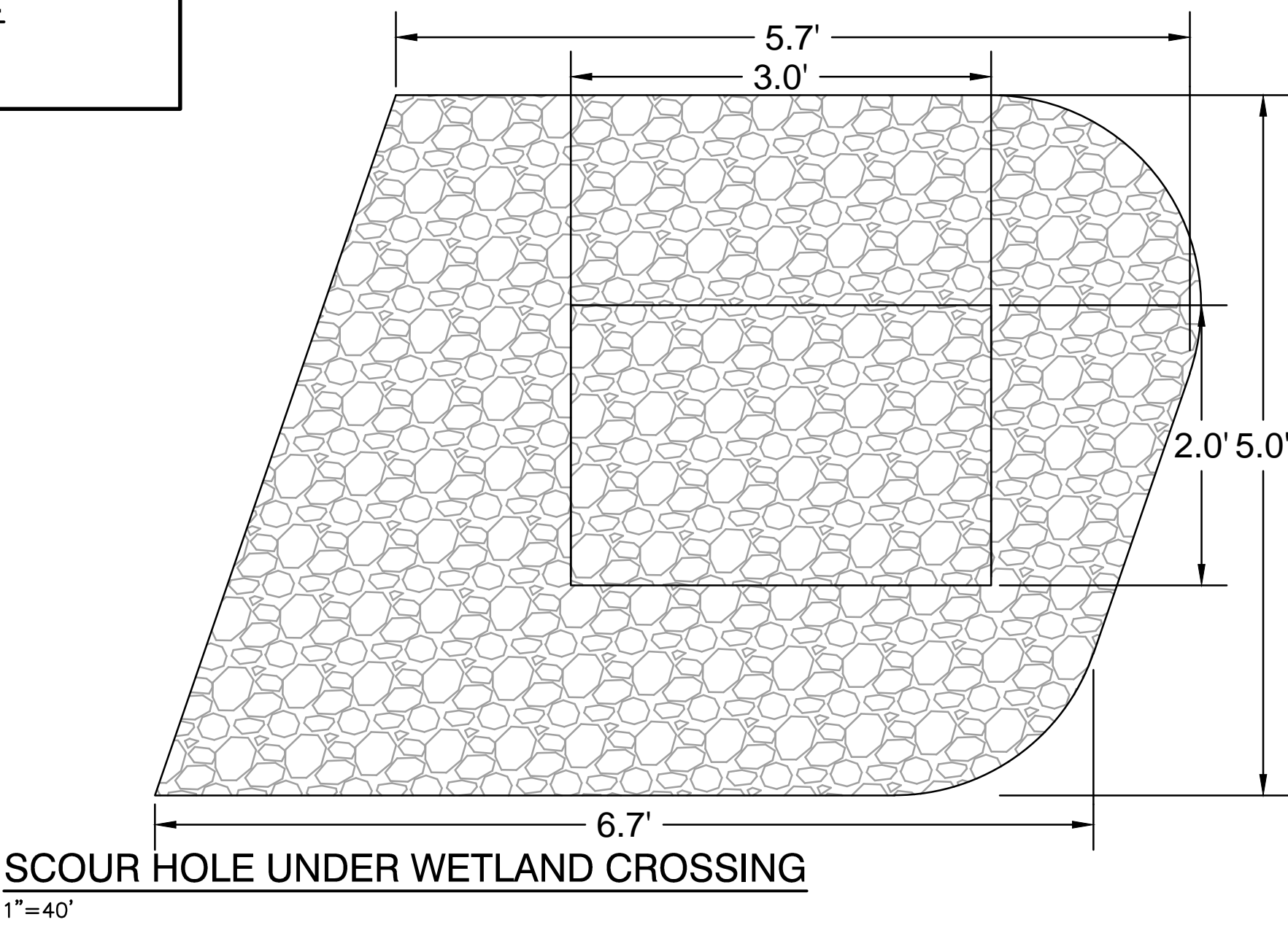
TYPICAL LOT EROSION CONTROL  
NTS



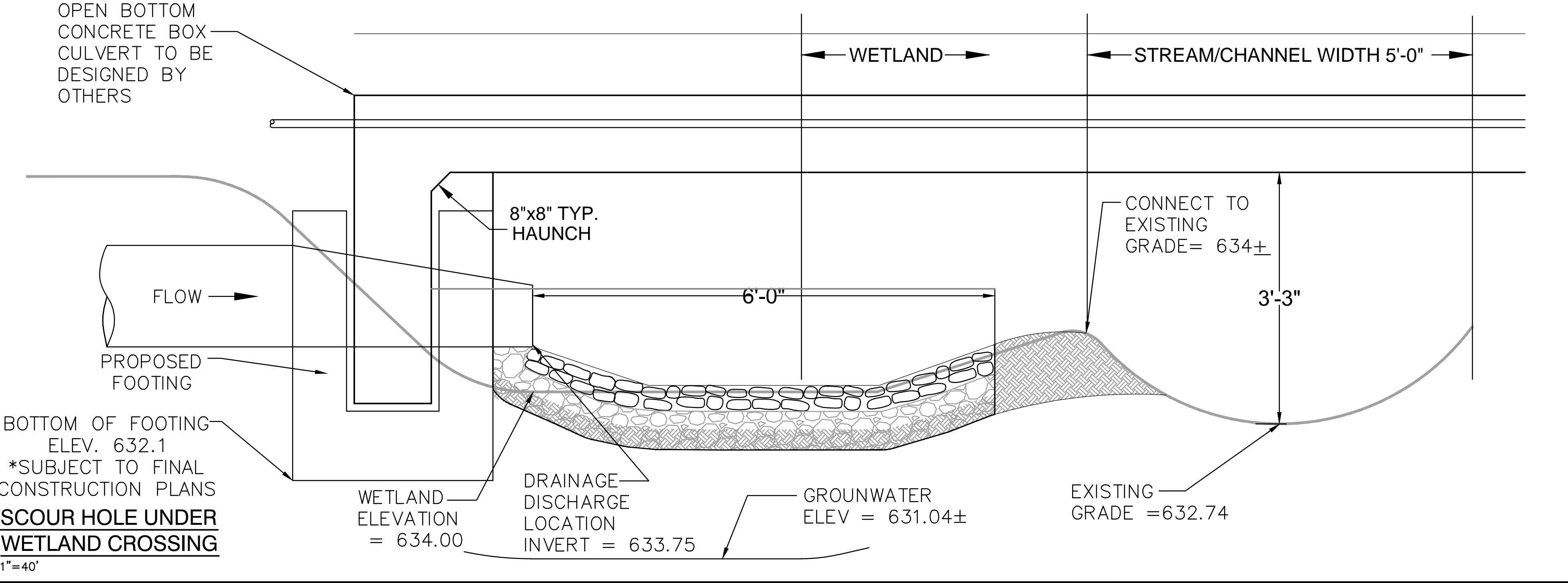
TYPICAL DRIVEWAY DETAIL  
NTS



TYPICAL CURB AND SIDEWALK DETAIL  
NTS



SCOUR HOLE UNDER WETLAND CROSSING  
1"=40'



SCOUR HOLE UNDER WETLAND CROSSING  
1"=40'

PREFORMED SCOUR HOLE  
FROM CONNECTICUT DOT DRAINAGE MANUAL (Oct. 2000)

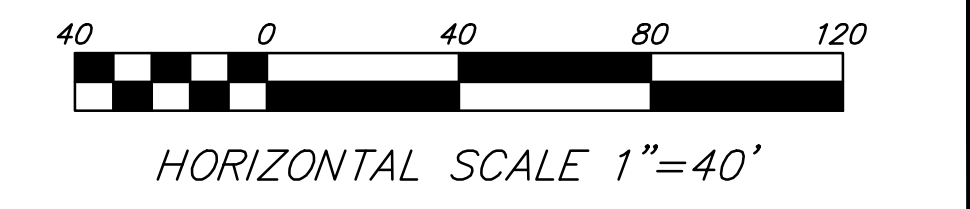
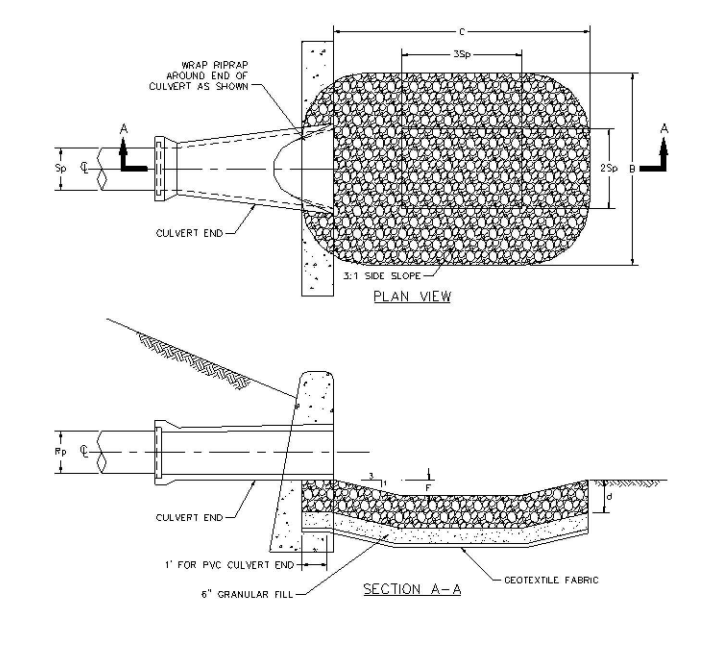
GIVEN:	R <sub>0</sub> = 1.00 ft	Max. inside pipe rise
	Q = 2.00 cfs	(see Q <sub>0</sub> )
	T <sub>w</sub> = 0.50 ft	
FOUND:	D <sub>50</sub> = Average Rock Diameter Required	
	D <sub>50</sub> = ((0.0125/R <sub>0</sub> <sup>2</sup> ) / T <sub>w</sub> ) <sup>1/2</sup> (Q / (R <sub>0</sub> <sup>2.5</sup> * (1.333))) = 0.063 ft	
		0.8 in.
		Use: 6 in.

The type of riprap required is as follows:

Modified	d <sub>50</sub> < 0.15m (0.42 ft)	Required
Intermediate	0.15m (0.42 ft) < d <sub>50</sub> < 0.20m (0.67 ft)	d = 0 in.
Standard	0.20m (0.67 ft) < d <sub>50</sub> < 0.30m (1.25 ft)	
Special Design	0.30m (1.25 ft) < d <sub>50</sub>	

Reference: Report No. FHWA-RD-75-508 ("Culvert Outlet Protection Design: Computer Program Documentation")

C =	35#HF	6 ft
B =	25#HF	5 ft
F =	50#(TYPE 1)	0.5 ft
R <sub>p</sub> (TYPE 2)		1 ft



HORIZONTAL SCALE 1"=40'

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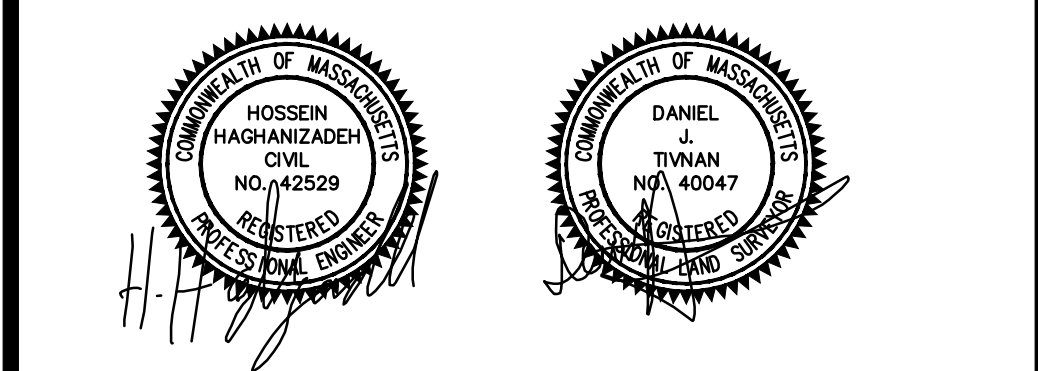
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WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



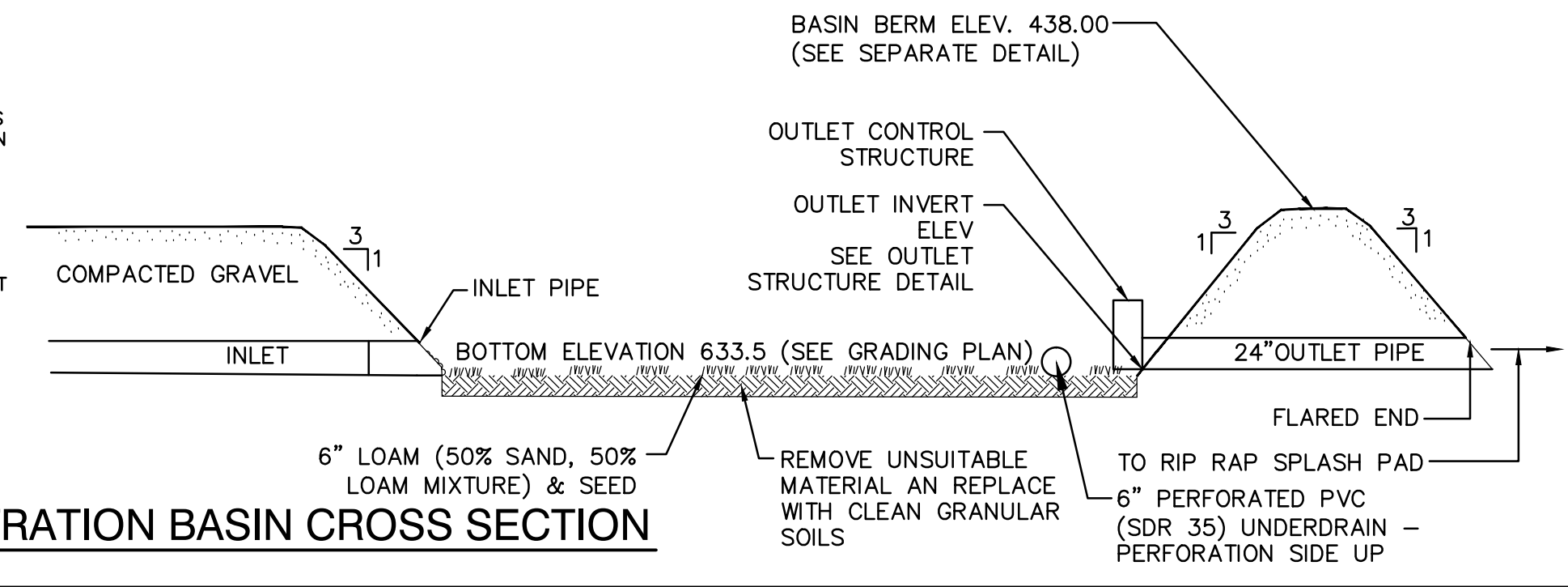
**H. S. & T. GROUP, INC.**  
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 EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 DETAIL SHEET**

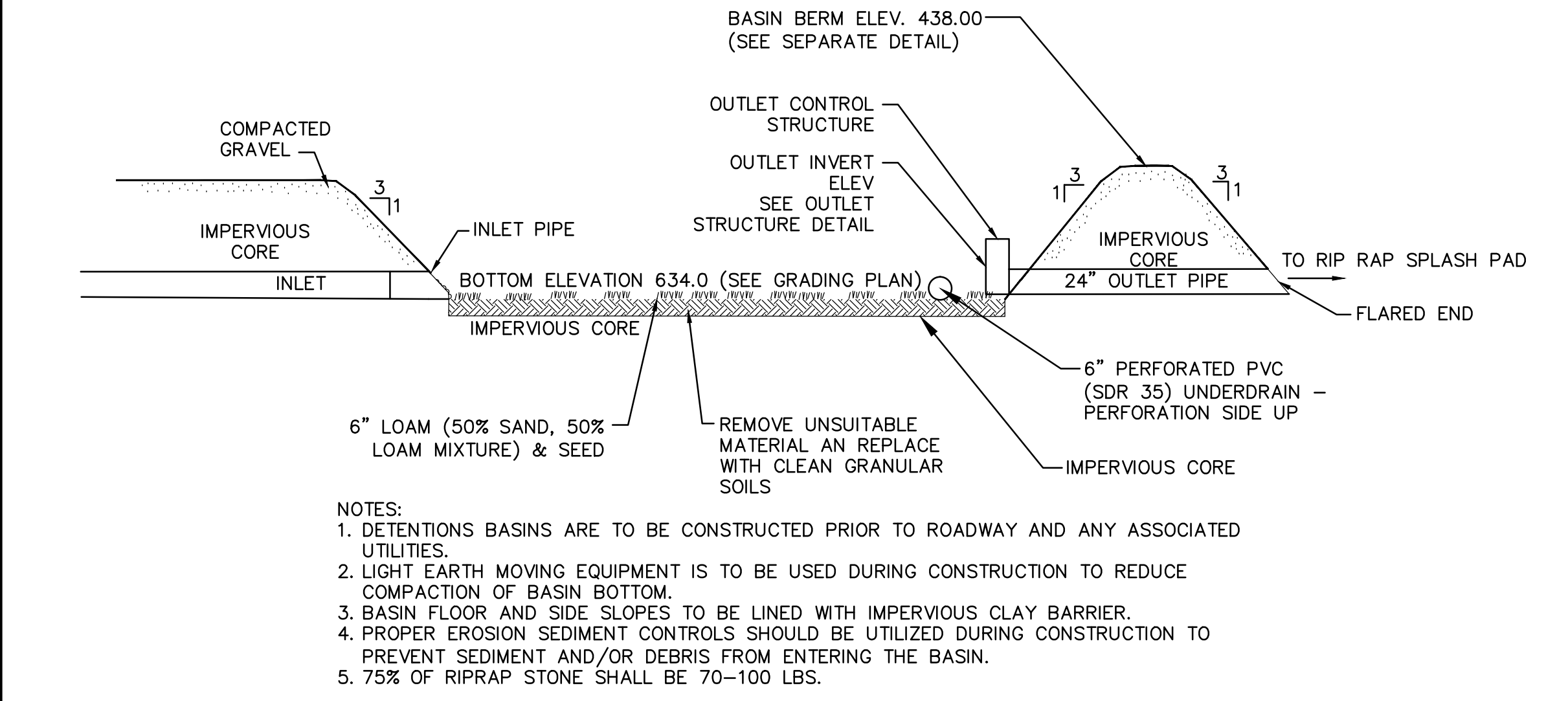
APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE:	11/1/2018	COMP'D:	DJT	FIELD:	PS
SCALE:	1"=40'	CAD:	STF	FLD. BK:	639-124
ZONE:	RL-7	REV'D:	HH	DWG:	MALDENWOODSSUBAMEND
JOB NUMBER:	5956	SHEET NUMBER		26 OF 37	
DWG NUMBER:	5004				

- NOTES:  
 1. INFILTRATION BASINS ARE TO BE CONSTRUCTED PRIOR TO ROADWAY AND ANY ASSOCIATED UTILITIES.  
 2. LIGHT EARTH MOVING EQUIPMENT IS TO BE USED DURING CONSTRUCTION TO REDUCE COMPACTION OF BASIN BOTTOM.  
 3. BASIN FLOOR IS TO BE DEEPLY TILLED AFTER FINAL GRADING.  
 4. PROPER EROSION SEDIMENT CONTROLS SHOULD BE UTILIZED DURING CONSTRUCTION TO PREVENT SEDIMENT AND/OR DEBRIS FROM ENTERING THE BASIN.  
 5. 75% OF RIPRAP STONE SHALL BE 70-100 LBS.



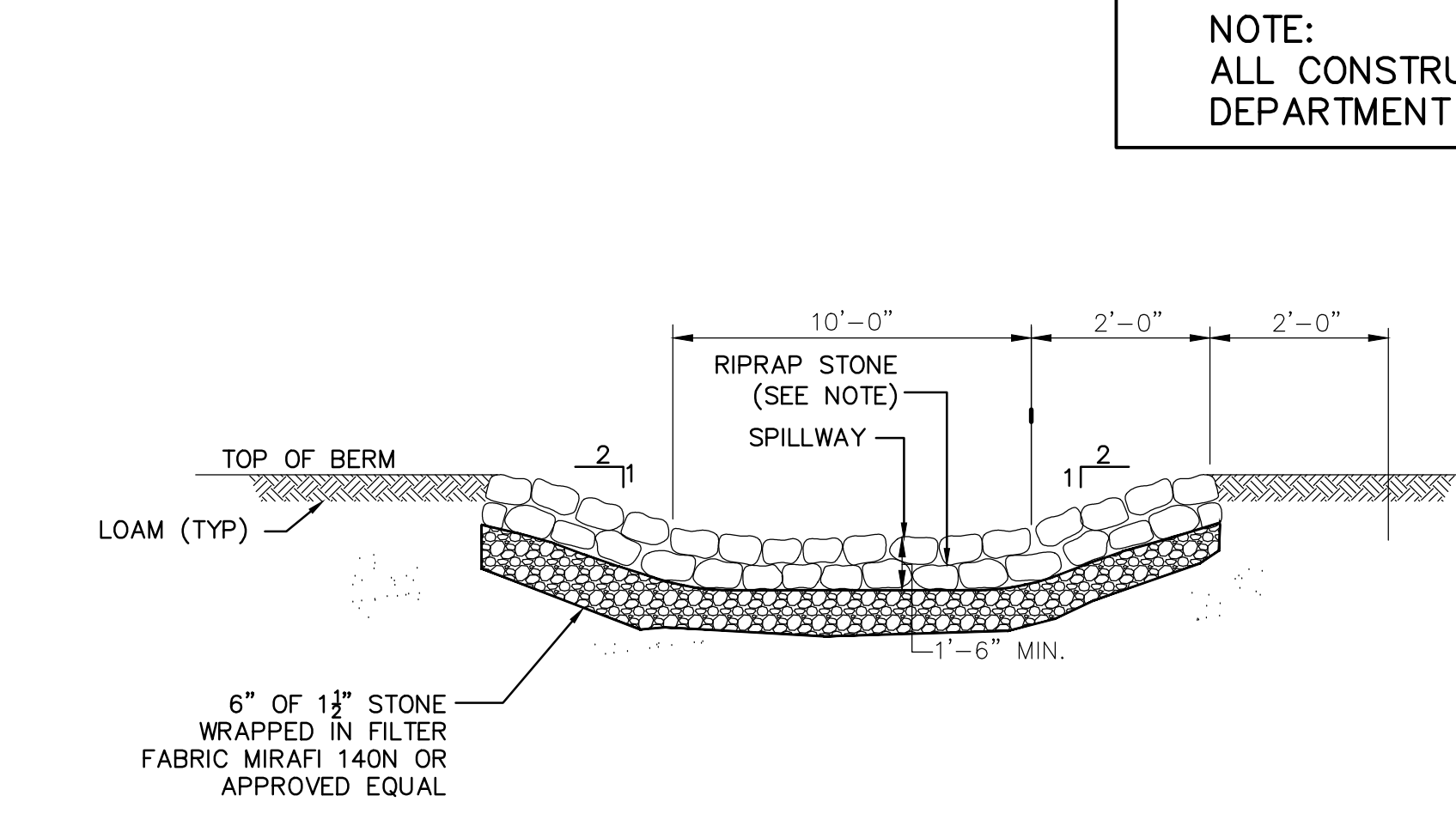
**SOUTHERN INFILTRATION BASIN CROSS SECTION**  
 NTS



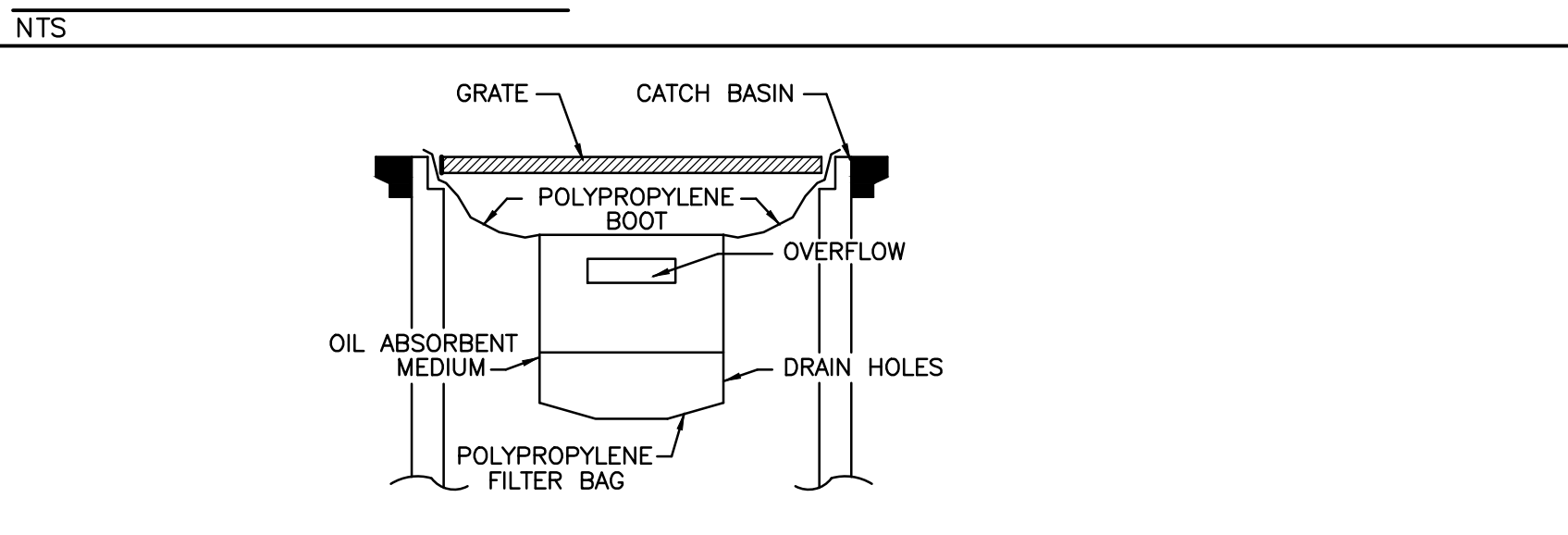
**NORTHERN DETENTION BASIN CROSS SECTION**  
 NTS



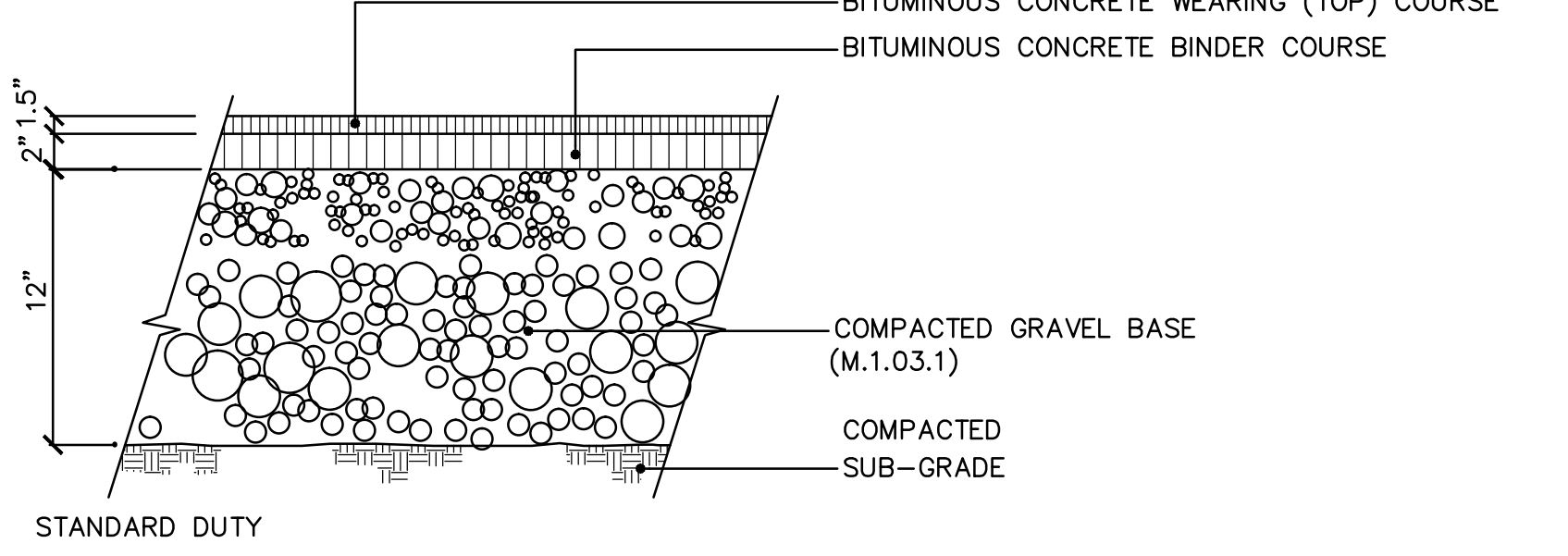
**UNDERDRAIN DETAIL**  
 NTS



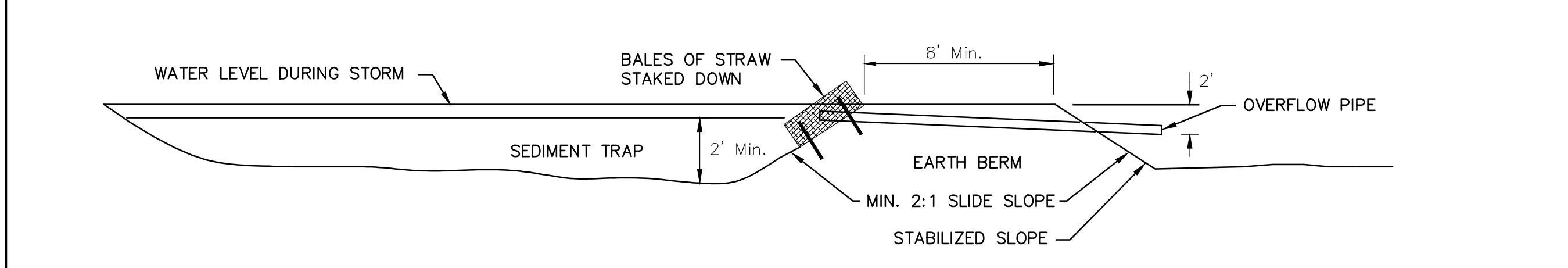
**EMERGENCY SPILLWAY**  
 NTS



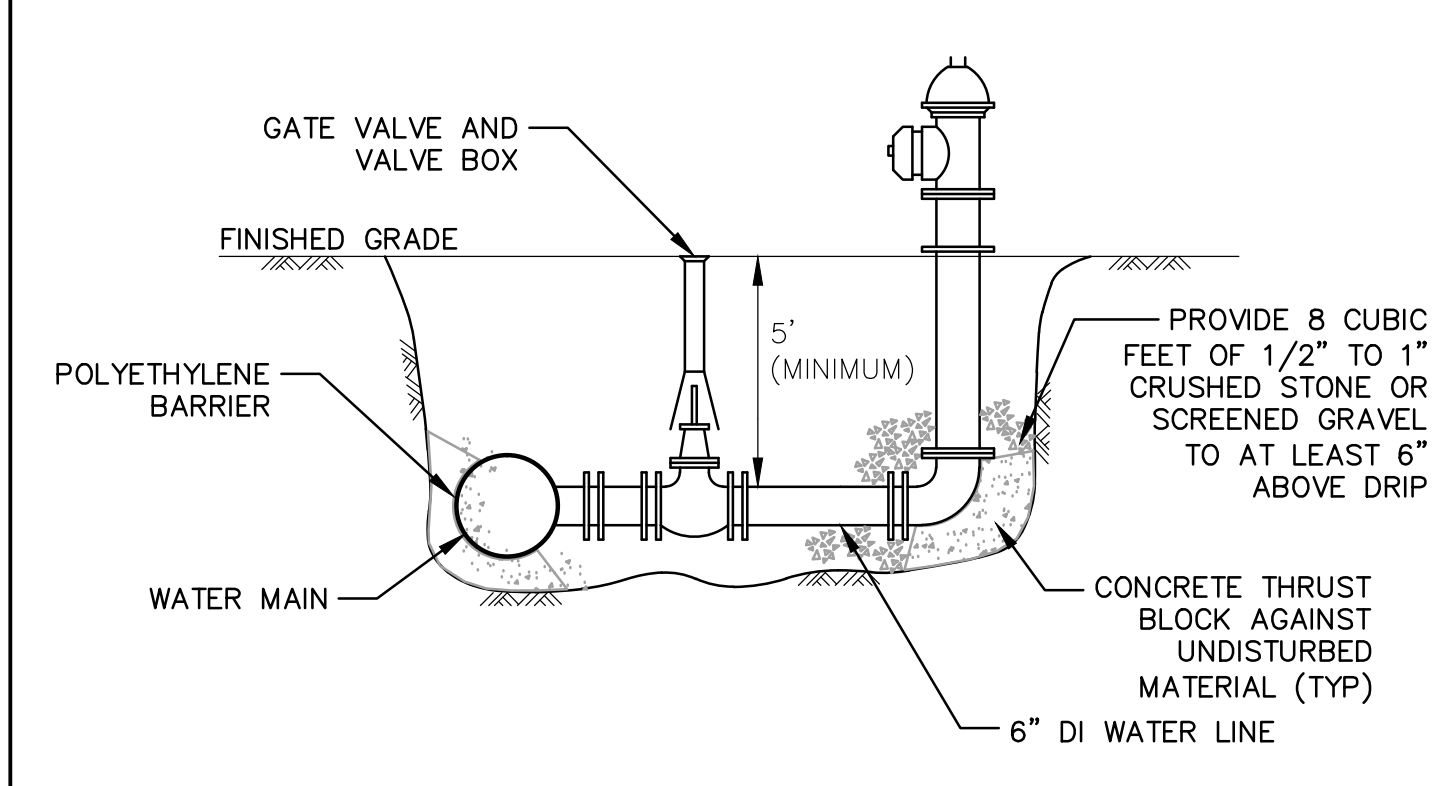
**TEMPORARY OIL & SEDIMENT CATCH BASIN PROTECTION:**  
 NOT TO SCALE



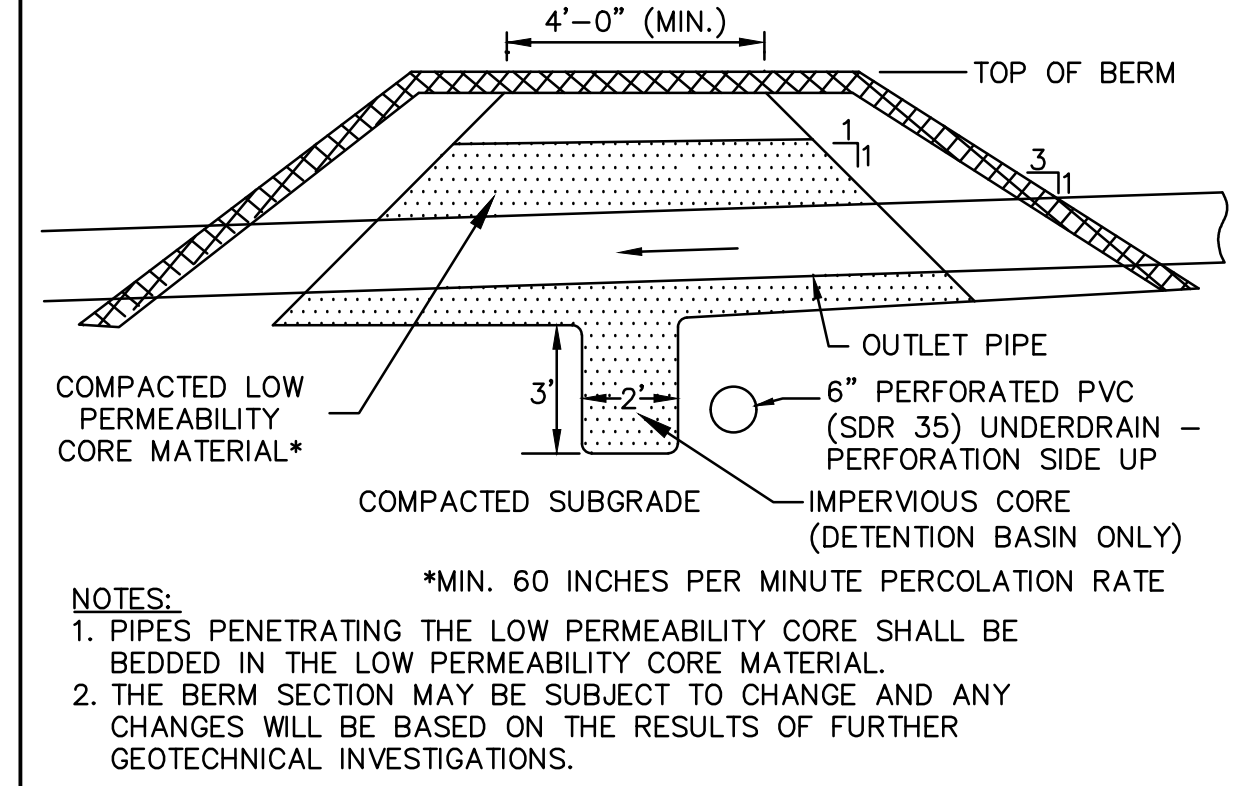
**BITUMINOUS CONCRETE PAVEMENT FOR ROADWAYS/DRIVEWAYS**  
 NOT TO SCALE



**TYPICAL TEMPORARY SEDIMENT BASIN**  
 NTS

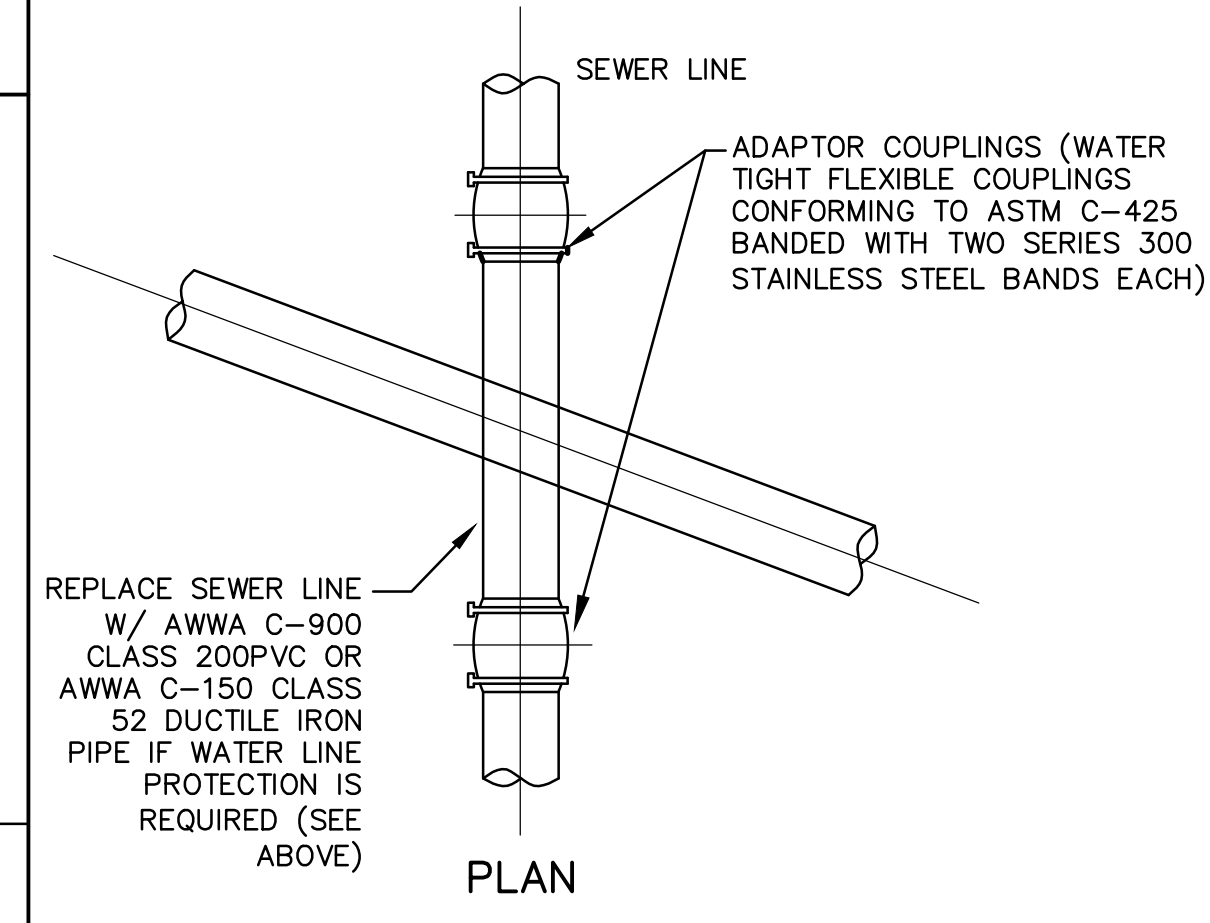
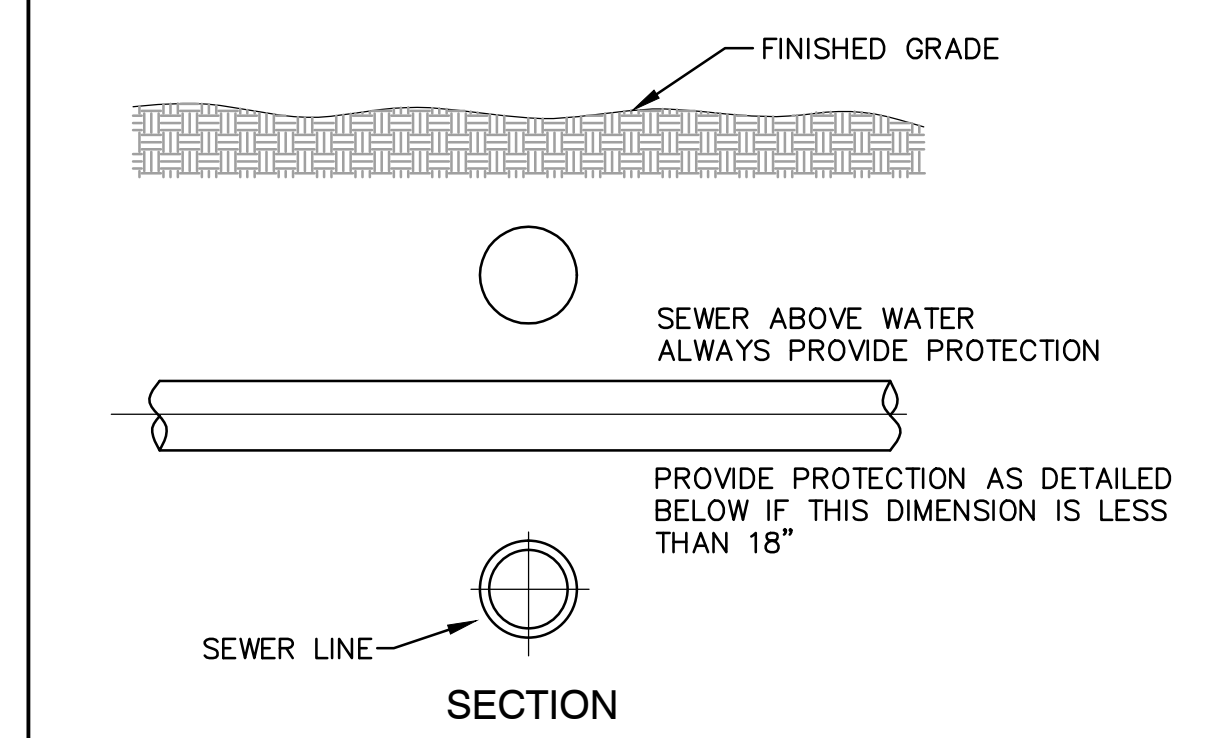
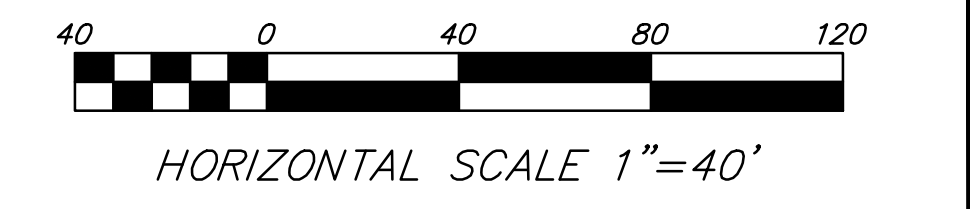


**TYPICAL HYDRANT**  
 NTS

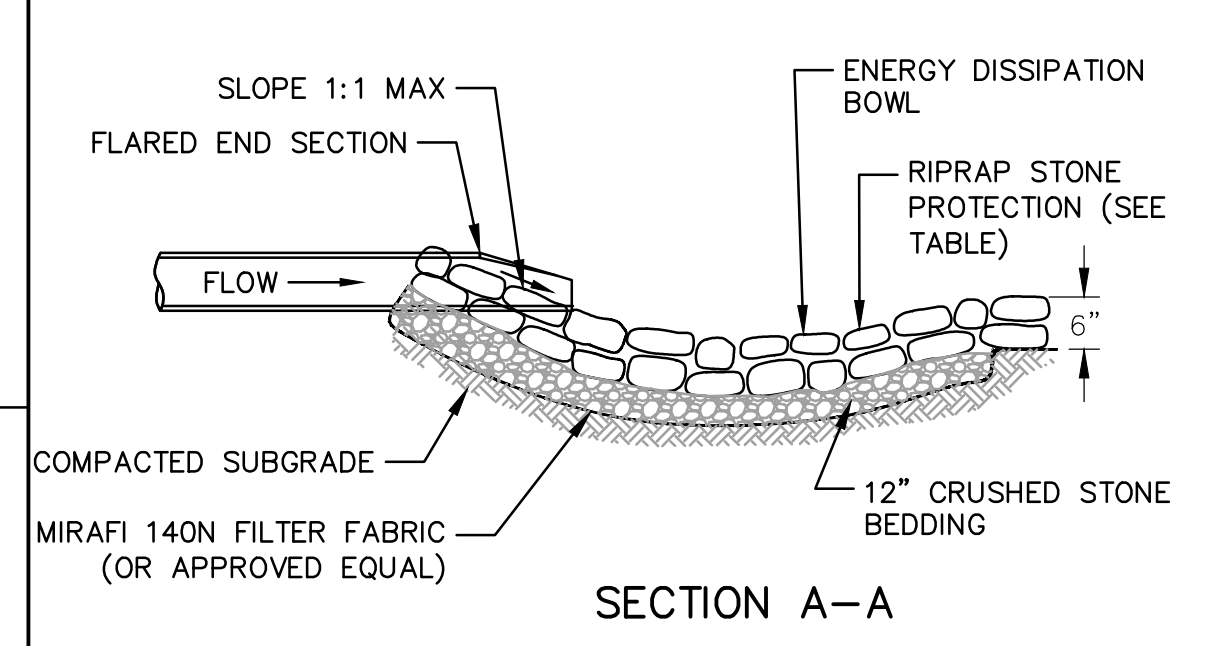
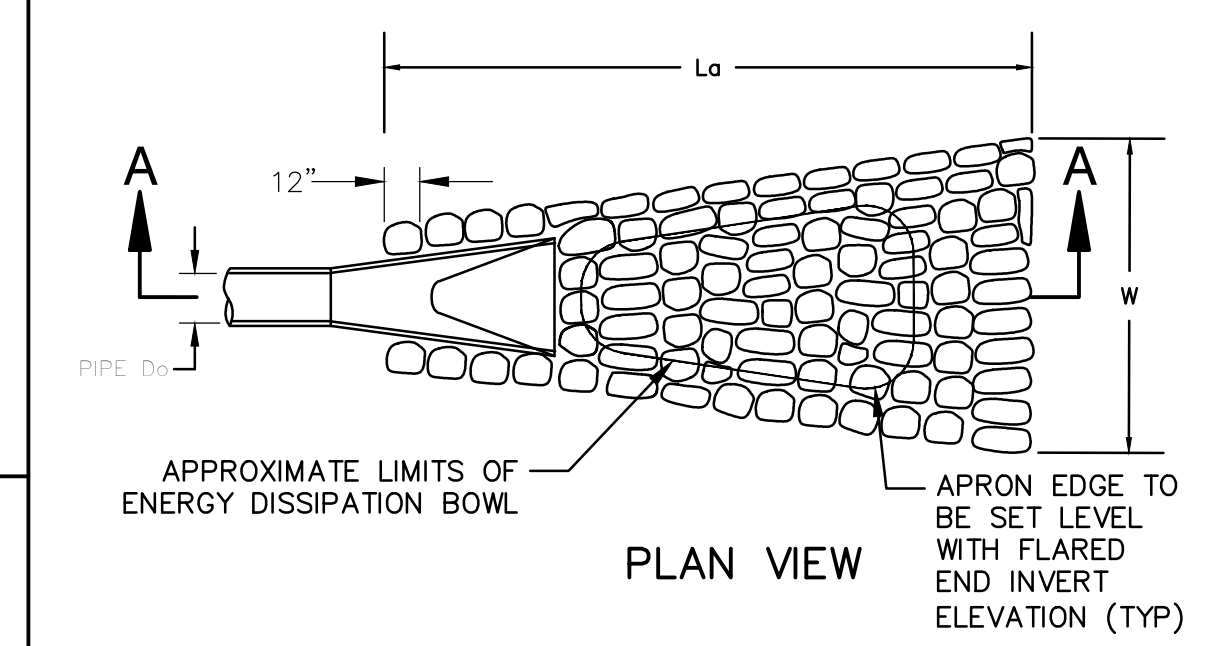


**DETENTION BASIN BERM SECTION**  
 N.T.S.

NOTE:  
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**SEWER CROSSING DETAIL**  
 NTS



FES-1 GIVEN: Do= 2.0 FT  
 Q=0.2 cfs  
 Tw=98FT (Tw=49% OF Do)  
 Lo = 16.1 FT  
 W= 22.1 FT

FES-2 GIVEN: Do= 2.0 FT  
 Q=1.4 cfs  
 Tw=98FT (Tw=49% OF Do)  
 Lo = 16.8 FT  
 W= 22.8 FT

**FLARED END SECTION PROTECTION**  
 NTS

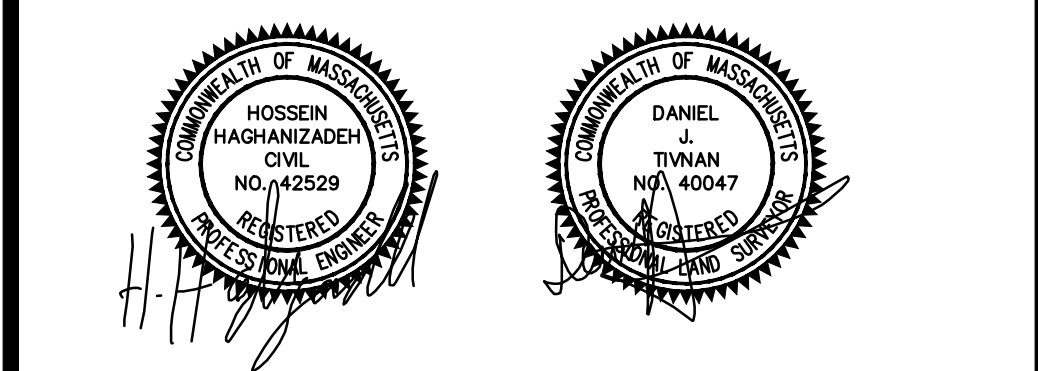
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WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



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 WORCESTER, MASSACHUSETTS 01610-1723  
 PHONE: (508) 757-4944 FAX: (508) 752-8895  
 EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION AMENDMENT DETAIL SHEET**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 11/1/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER 27 OF 37	
DWG NUMBER: 5004		

**WETLAND REPLICATION CONSTRUCTION PROTOCOL:**

**Introduction:**  
The following descriptions and protocol were prepared by Arthur Allen (Certified Professional Soil & Wetland Scientist) of EcoTec, Inc. This information is based on an evaluation of the proposed impact and replication areas performed on March 20, 2019. The descriptions and protocol are based on the Massachusetts Inland Wetland Replication Guidelines (issued March, 2002 by the MA Dept. of Environmental Protection), are in accordance with the General Performance Standards of the Massachusetts Wetlands Protection Act Regulations at 310 CMR 10.55(4)(b) and serve to protect the interests of the Wetlands Protection Act.

**Descriptions:**  
The wetland areas proposed to be altered (vicinity wetland flag 9B) consists of a narrow finger that appears to be associated with runoff from Whipporwill Drive. The wetland finger is in a mowed and historically disturbed condition. The proposed culvert crossing will fully span the Banks of the stream. No Bordering Vegetated Wetland (BWV) exists at the proposed culvert crossing. The upland area(s) proposed for replication consists of a raised mound between the area to be altered and the existing stream. It is located as close as possible to the area proposed to be altered. The proposed replication area is in the same reach of the wetland system and at approximately the same elevation as the area to be altered. The area is presently vegetated with small aspen (*Populus tremuloides*) saplings and hayscented fern (*Demissaedia punctilobula*). Little or no tree cutting is required to access and excavate the replication area. Soil conditions and hydrology within the proposed replication area were established in a test pit as described in the attached Soil Suitability Assessment Form 11. These descriptions are indicative of a seasonal high-water table at approximately 18 inches. No restrictive layers were noted to at least 30 inches below ground surface.

Table no. 1 below summarizes the interests of the Wetlands Protection Act which the wetland to be altered is presently serving and predicts the value of the proposed replication area to those interests.

Table 1. Public Interests:	Value of Area To Be Altered:	Value of Replication Area:
Public and Private Water Supply, Groundwater Supply	YES: Recharges groundwater through infiltration. Seasonally recharges surface water through overland flow. Overland flow will be maintained through culverts.	YES: Will also recharge groundwater through infiltration into friable subsoil and substrate.
Flood control and Storm Damage Prevention	YES: Some storage of runoff in seasonally saturated soils.	YES: Seasonally saturated soils will store greater volumes of runoff.
Prevention of Pollution	YES: Contaminants and excess nutrients retained in, and degraded by, mineral and organic components of hydric soils.	YES: Contaminants and excess nutrients will also be retained in, and degraded by, mineral and organic components of replicated hydric soils.
Fisheries	N/A. No perennial waterway or waterbody.	N/A. No perennial waterway or waterbody.
Wildlife Habitat	NO: Existing wetland to be altered in a disturbed condition.	YES: Replicated soil structure and plantings will provide opportunities for wildlife shelter and forage.

**Wetland Replication Construction Protocol:**

1. The following protocol conforms to the general performance standards in the MA Wetlands Protection Act Regulations at 310 CMR 10.55(4)(b) as summarized in Table 2 below.

Table no. 2	Performance Standard:	Standards Met Within Replication Area:
Equal surface areas (60 s.f. altered)	YES: Slightly greater surface area (347 s.f. replicated).	
Similar groundwater and surface elevations	YES: Similar elevations.	
Location relative to Bank	YES: Closer to bordering stream bank.	
Unrestricted hydraulic connection.	YES: Unrestricted connection to same bordering wetland.	
Same general location.	YES: As close as possible to impacted wetland.	
Minimum 75% cover of native wetland plants within two growing seasons and prevention of soil erosion.	YES: To be insured by following construction and planting protocol combined with annual monitoring and re-planting and/or modifications as necessary. Plantings designed to replicate lost area(s) in-kind. Erosion prevented with siltation barriers, 3:1 side slopes and mulch. Invasive species will be monitored and removed as necessary.	

2. The wetland boundaries (i.e., downgradient edges of the wetland replication area) will be marked in the field.

3. Prior to the start of earth-moving activities in the replication area, an erosion control barrier of properly installed siltation fence (i.e., the bottom few inches of the siltation fence installed in a narrow, trench and the trench filled with soil around the siltation fence) will be installed along the wetland boundaries between the wetland and the wetland replication area. The project Wetland Scientist will evaluate the replication area prior to clearing and determine if any existing trees can be saved. The wetland replication area will then be cleared and grubbed, with the exception of any trees that have been marked to be saved.

4. The proposed final grade for the replication area should approximate the elevation of the adjacent wetland areas, as noted on the site plans. The replication area will be excavated to the level of the existing, buried topsoil (Ab layer). The excavation and planting work will be closely supervised by a qualified Wetland Scientist. Modifications to the proposed grading may be made in the field by the Wetland Scientist in response to observed subsurface hydrologic conditions. All excavated material will be disposed of away from all wetland resource areas and protected from erosion.

5. Topsoil in the replication area will be supplemented with a 1:1 mixture of high quality, loamy topsoil and leaf mold compost, as necessary, to approximate at least 6 inches in thickness throughout the replication area. The substrate will be roughly graded to provide an appropriate microtopography. A minimum of 4 inches of loamy topsoil will be applied to the side-slopes of the wetland replication area. The side slopes should be stabilized as necessary to prevent erosion.

6. An erosion control barrier comprising only toed-in siltation fence will be properly installed between the completed replication area and the adjacent upland sideslopes.

7. Planting will be done only during the beginning (April 15 through June 1) or end (September 15 to November 1) of the growing season. Planting in the mid-growing season is only acceptable if irrigation is provided. The native plant species identified in the table below will be planted in the replication area either by transplant or from nursery stock. The saplings will be distributed throughout the area. The shrubs will be planted randomly throughout the area in clumps of two to three with the average spacing between shrub clumps approximately 5 feet on-center. The woody vegetation should not be planted in rows. The herbaceous species will be planted between the shrubs and saplings.

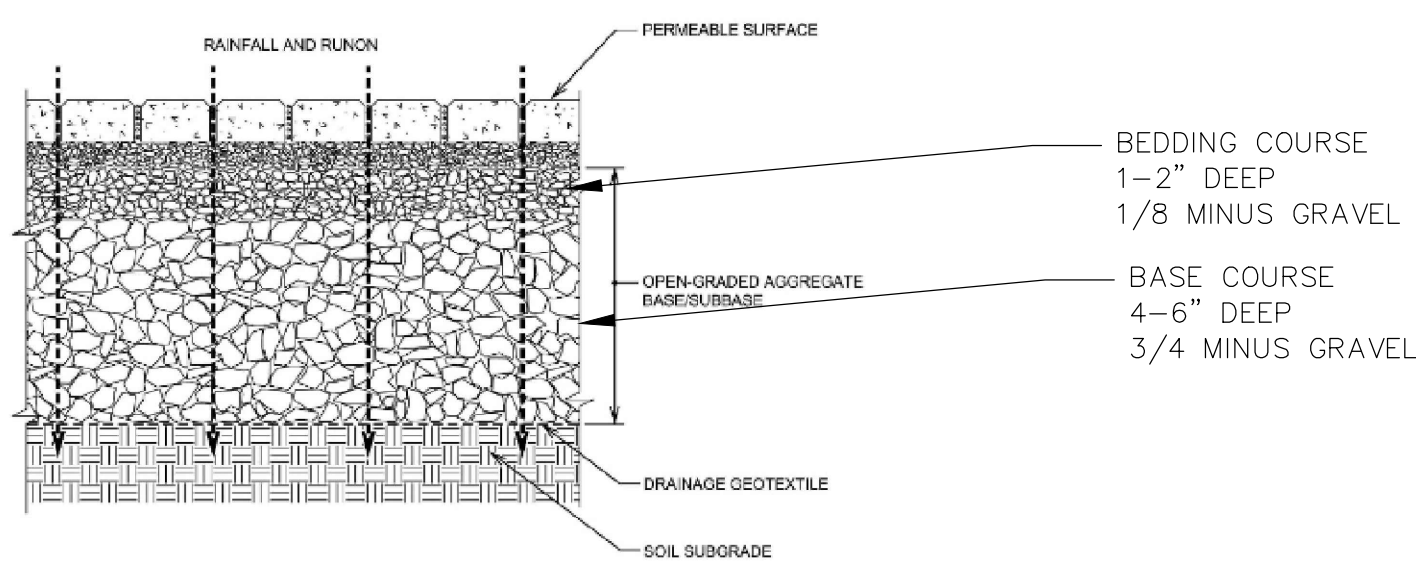
Planting Plan for 347 S.F. Wetland Replication Area		
SPECIES, SIZE, SPACING	NUMBER	
Saplings, 6 to 8' height, container or balled, burlapped, 15' on-center avg.		
Red Maple ( <i>Acer rubrum</i> )	1	
Yellow Birch ( <i>Betula alleghaniensis</i> )	1	
Shrubs, 2.5 to 3' in height, container, 5' on-center average spacing		
Highbush Blueberry ( <i>Vaccinium corymbosum</i> )	8	
Winterberry ( <i>Ilex verticillata</i> )	8	
Herbaceous, containerized, 5' on-center average spacing		
Cinnamon fern ( <i>Osmunda cinnamomica</i> )	12	

8. The planted replication area will be mulched with 1 to 2 inches of shredded leaves or weed-free straw to simulate a forest floor and to provide for temporary erosion control and moisture retention.

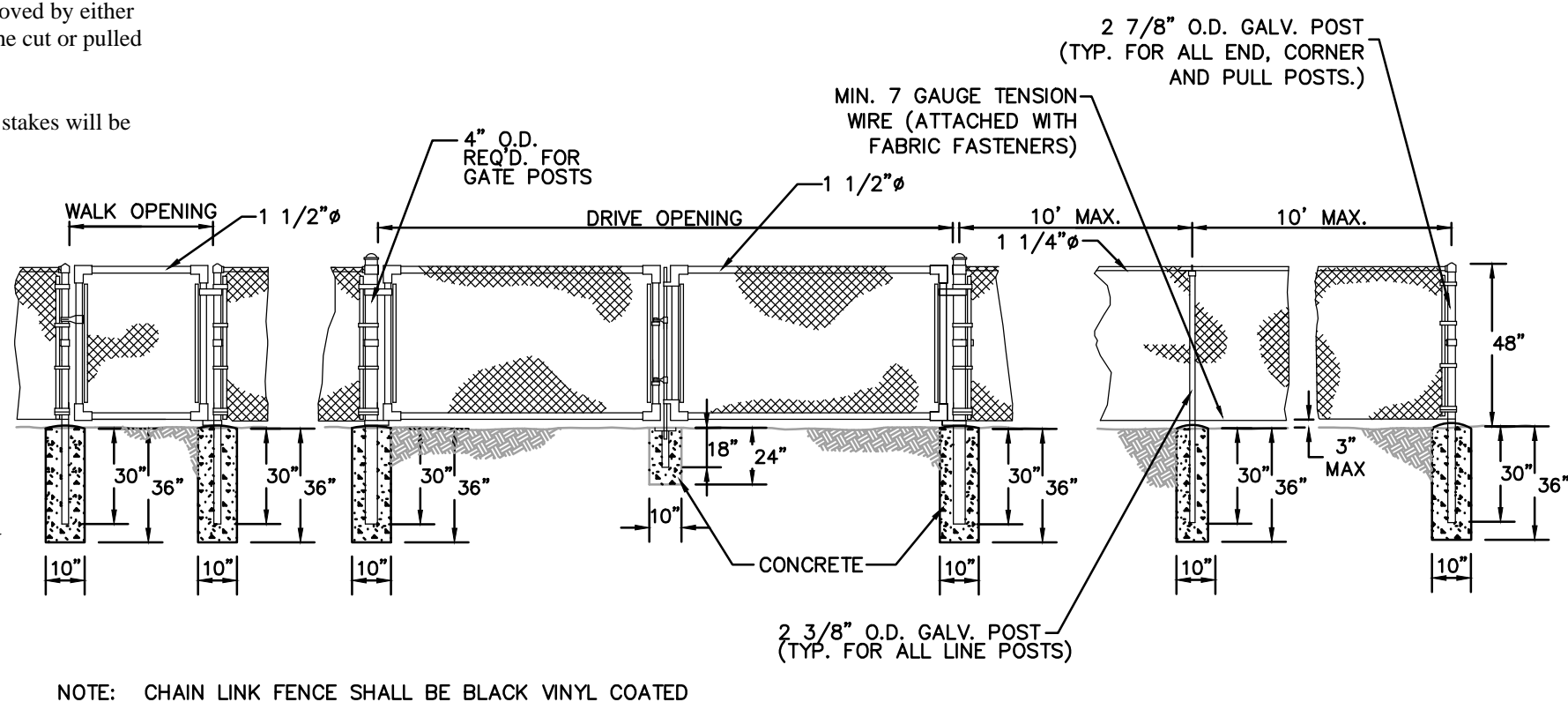
9. The side-slopes of the wetland replication area will be seeded with a grass/wildflower mixture designed to provide permanent cover. After seeding, the side-slopes will be mulched with a thin layer of weed-free straw to provide for temporary erosion control.

10. The replication area will be inspected, by a qualified Wetland Scientist, at the end of each growing season for a minimum of two years or until such time as the required 75% of vegetative cover with wetland species has been established. If invasive species are noted (e.g., knotweed, phragmites, etc.) these species will be removed by either hand-pulling the entire plant out by the roots or by cutting the above-ground portion and applying glyphosate herbicide to the stem with a drip applicator. The cut or pulled plants will be properly disposed of outside the wetlands and buffer zones and care will be taken not to distribute any seeds or berries that may be present.

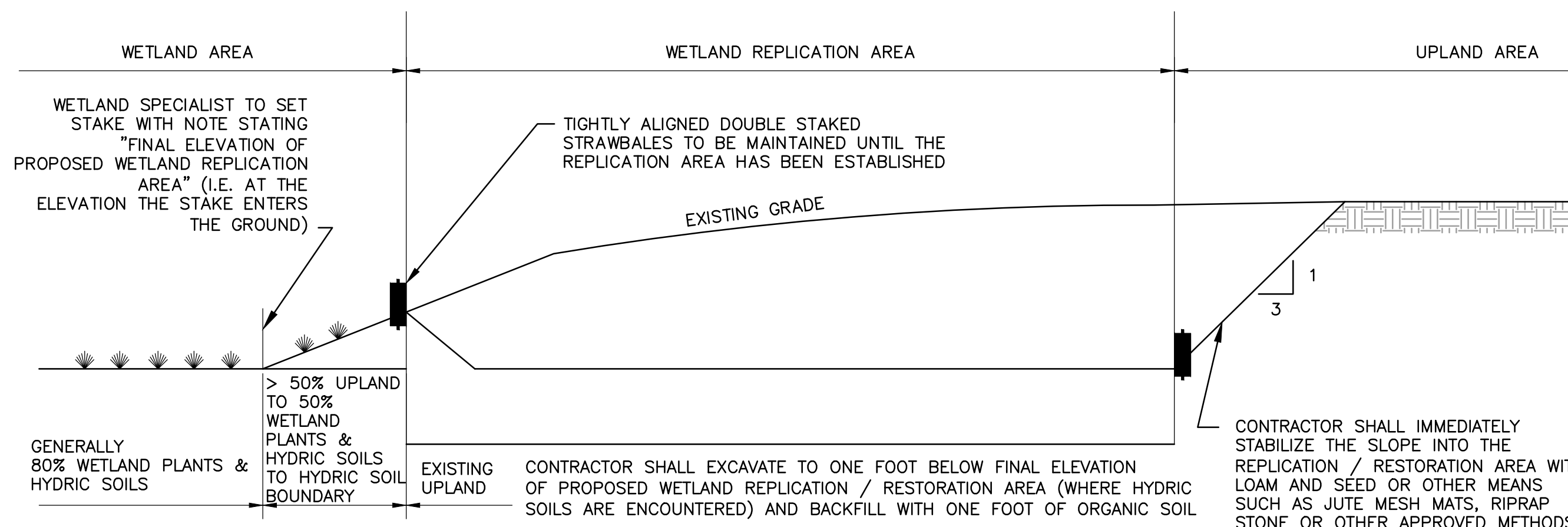
11. After the wetland replication area has become vegetatively stabilized, and following approval of the issuing authority, the siltation fence and all wooden stakes will be removed and disposed of properly.



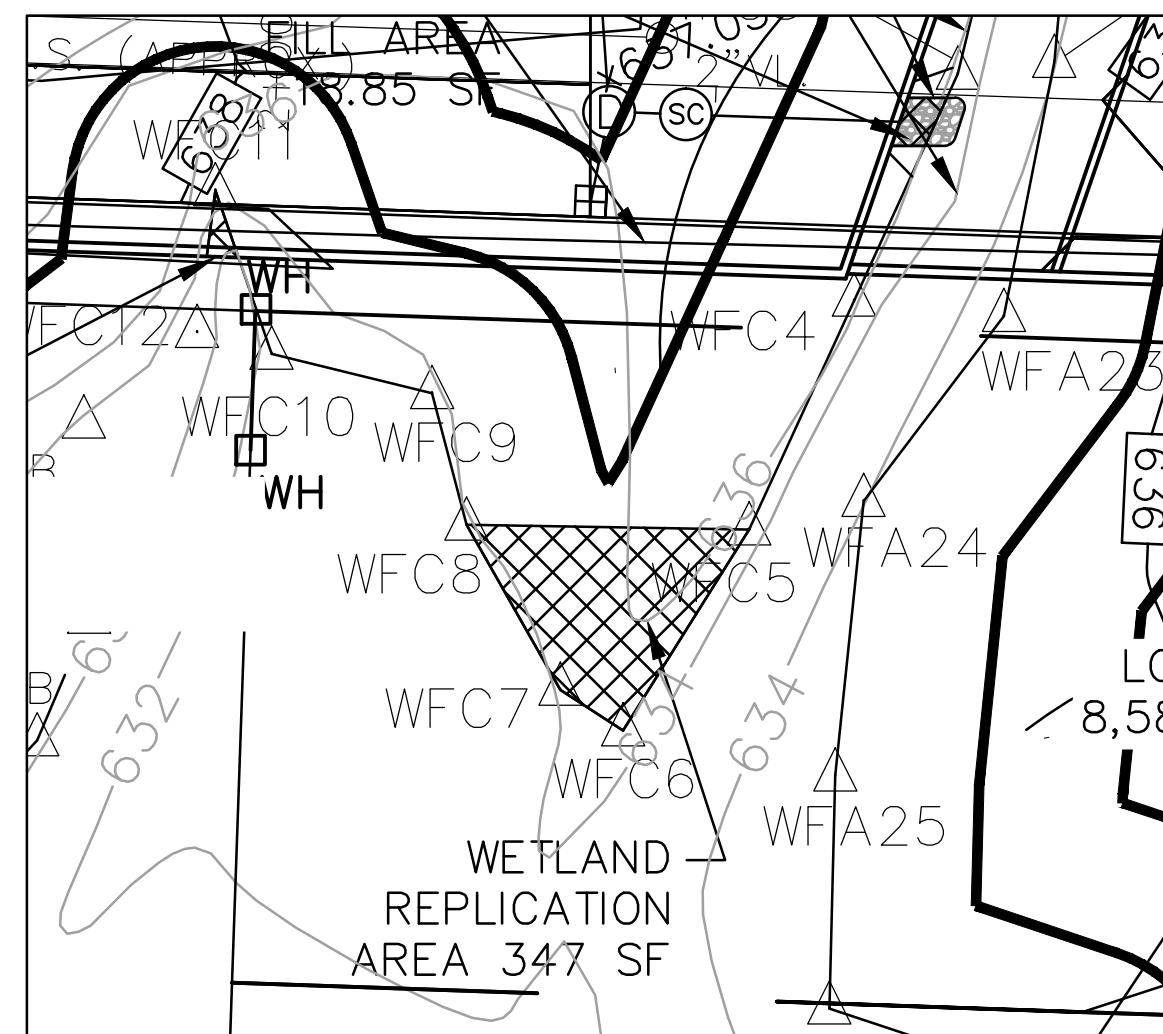
**PERVIOUS PAVERS FOR PATIOS**  
NTS



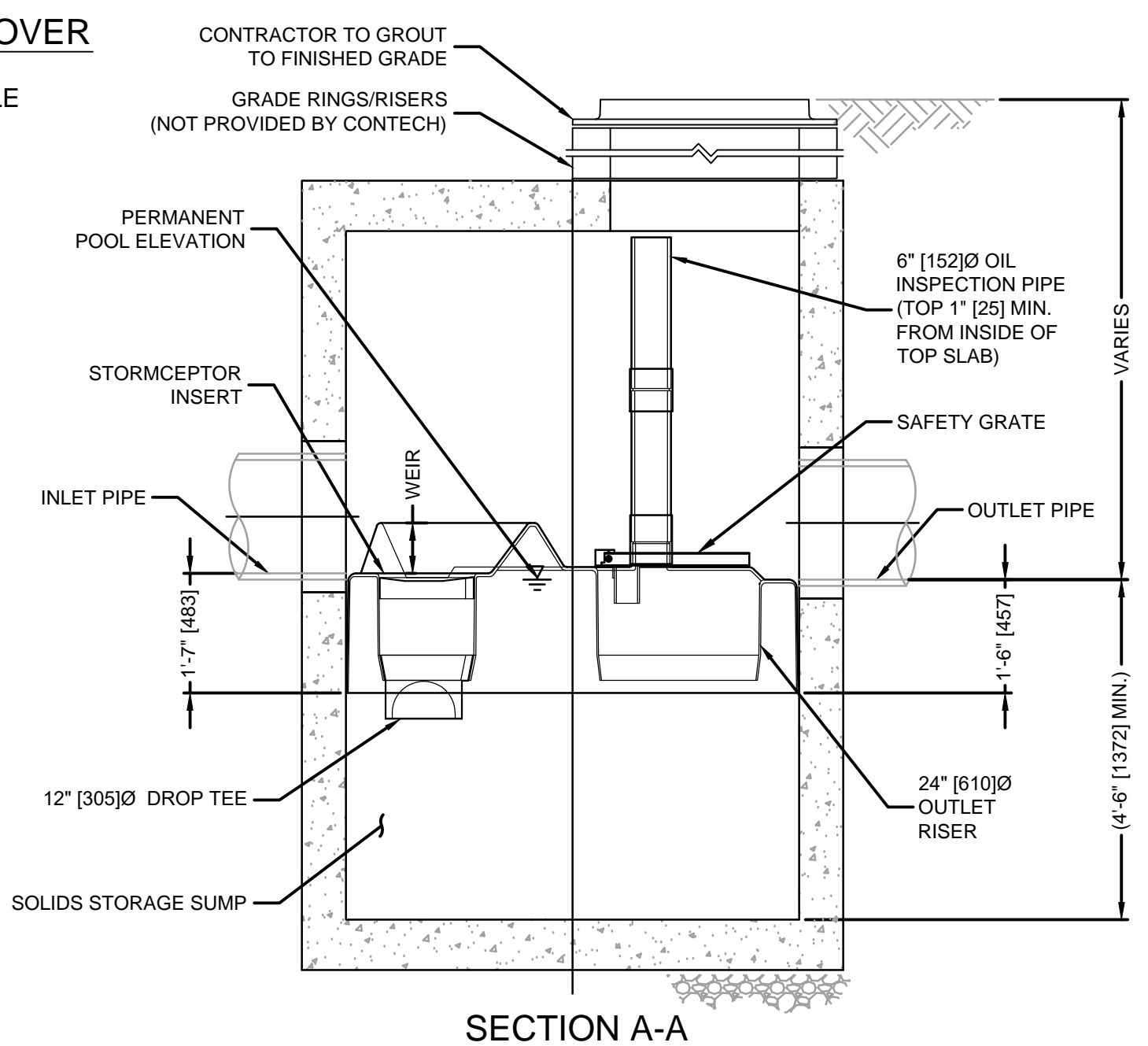
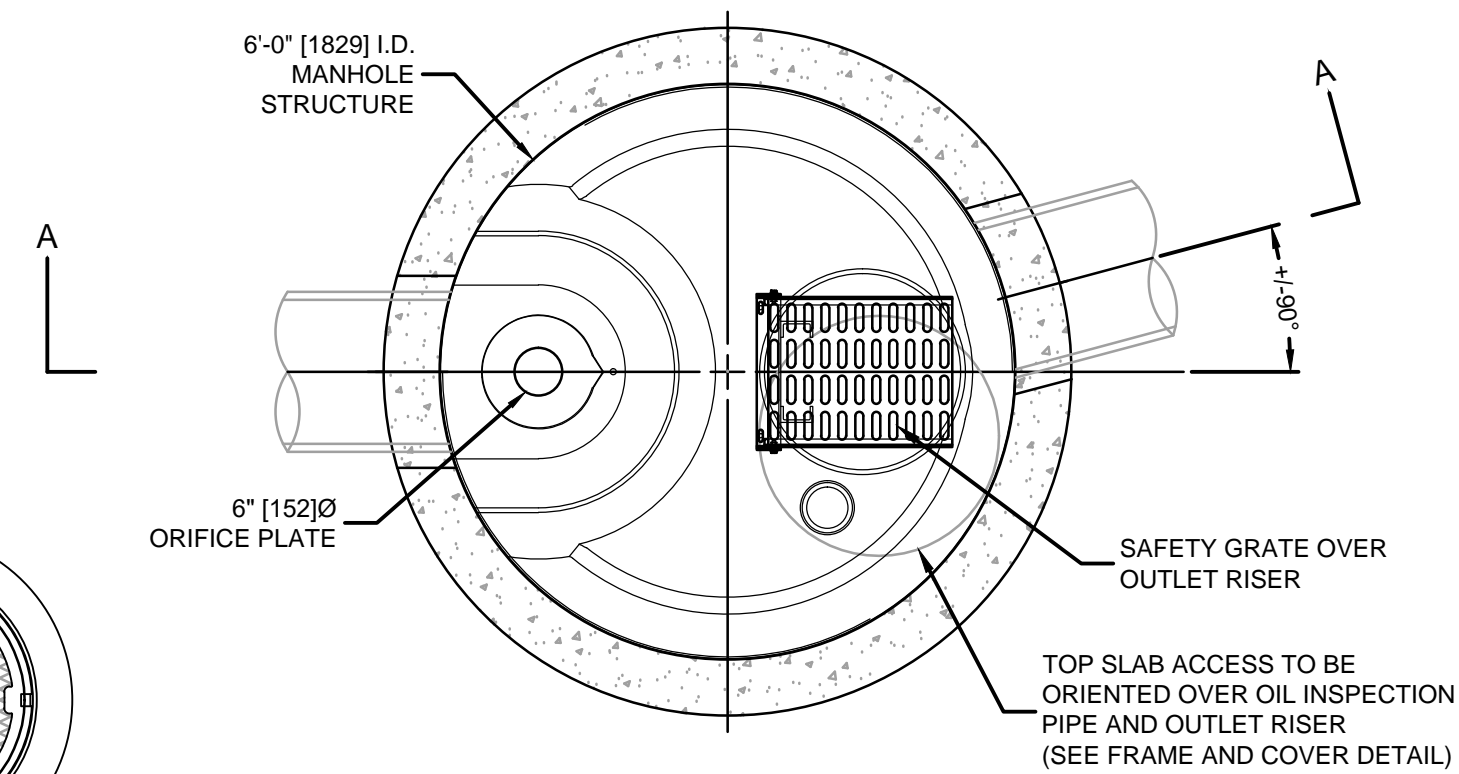
**CHAIN LINK FENCE DETAIL**  
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**WETLAND REPLICATION DETAIL**  
NTS



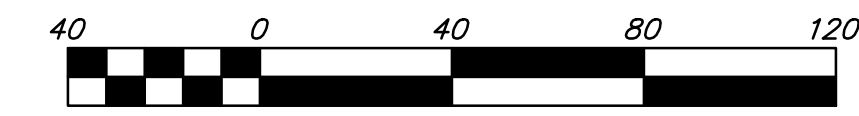
**WETLAND REPLICATION PLAN VIEW**  
NTS



- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.conteches.com](http://www.conteches.com)
  - STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
  - STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
  - STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
  - ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

- INSTALLATION NOTES**
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
  - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
  - CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
  - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
  - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

**STORMCEPTOR 900**  
NTS



**HORIZONTAL SCALE 1"=40'**

**NOTE:**  
ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STANDARDS.

THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.

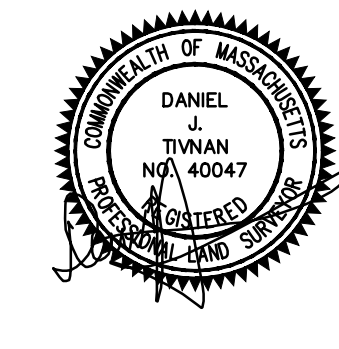
**PLAN REVISIONS:**

NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
11	11/12/2020	ORDER OF CONDITIONS	LLW
10	9/17/2020	CITY COMMENTS	LLW
9	8/17/2020	CITY COMMENTS	LLW
8	7/13/2020	CITY COMMENTS	LLW
7	6/16/2020	CITY COMMENTS	LLW
6	3/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB

**WORCESTER PLANNING BOARD APPROVED:**

NO.	DATE	DESCRIPTION	BY

ENDORSED APPROVED DATE: \_\_\_\_\_



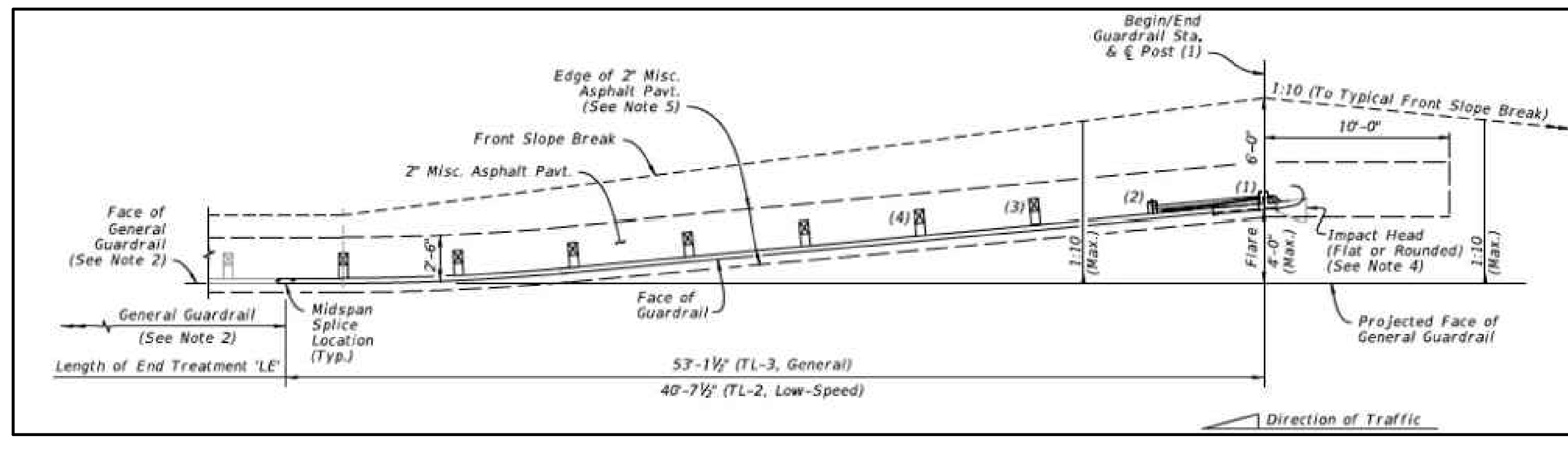
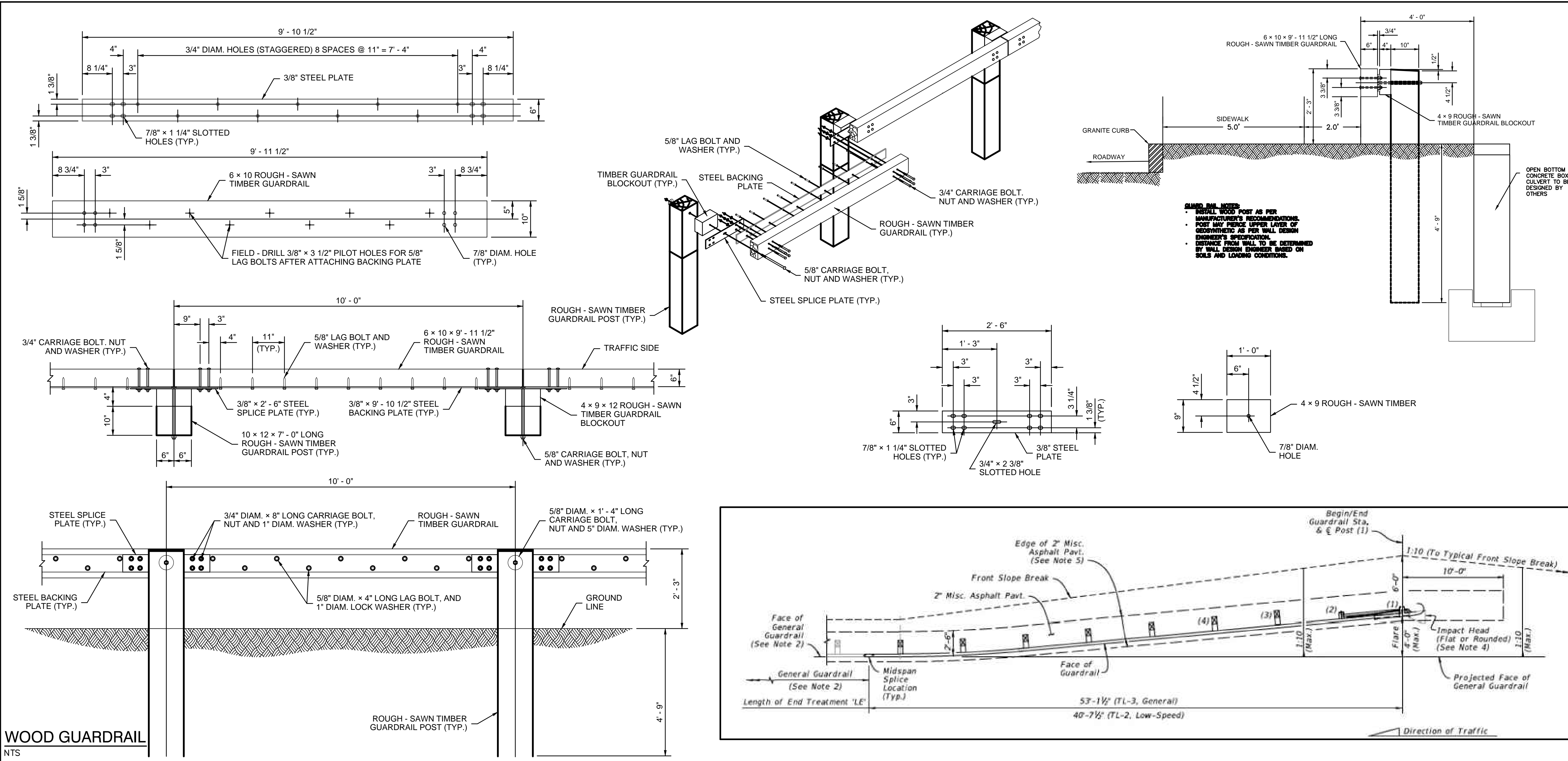
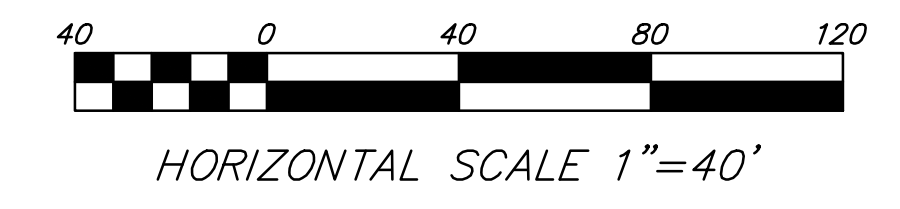
**H. S. & T. GROUP, INC.**  
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: [INFO@HSTGROUP.NET](mailto:INFO@HSTGROUP.NET) [WWW.HSTGROUP.NET](http://WWW.HSTGROUP.NET)

**MALDEN WOODS SUBDIVISION  
AMENDMENT  
DETAIL SHEET/WETLAND REPLICATION**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 11/1/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND

JOB NUMBER: 5956	SHEET NUMBER: 28 OF 37
DWG NUMBER: 5004	



NOTE:  
ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STANDARDS.

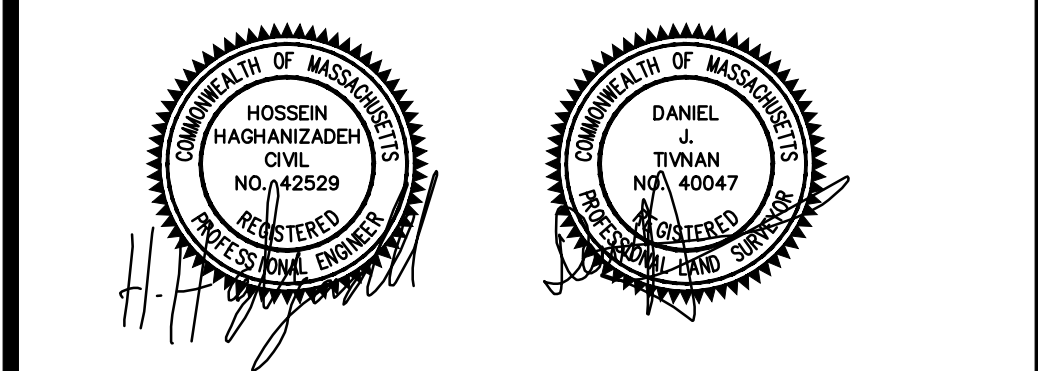
THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.

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6	3/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:

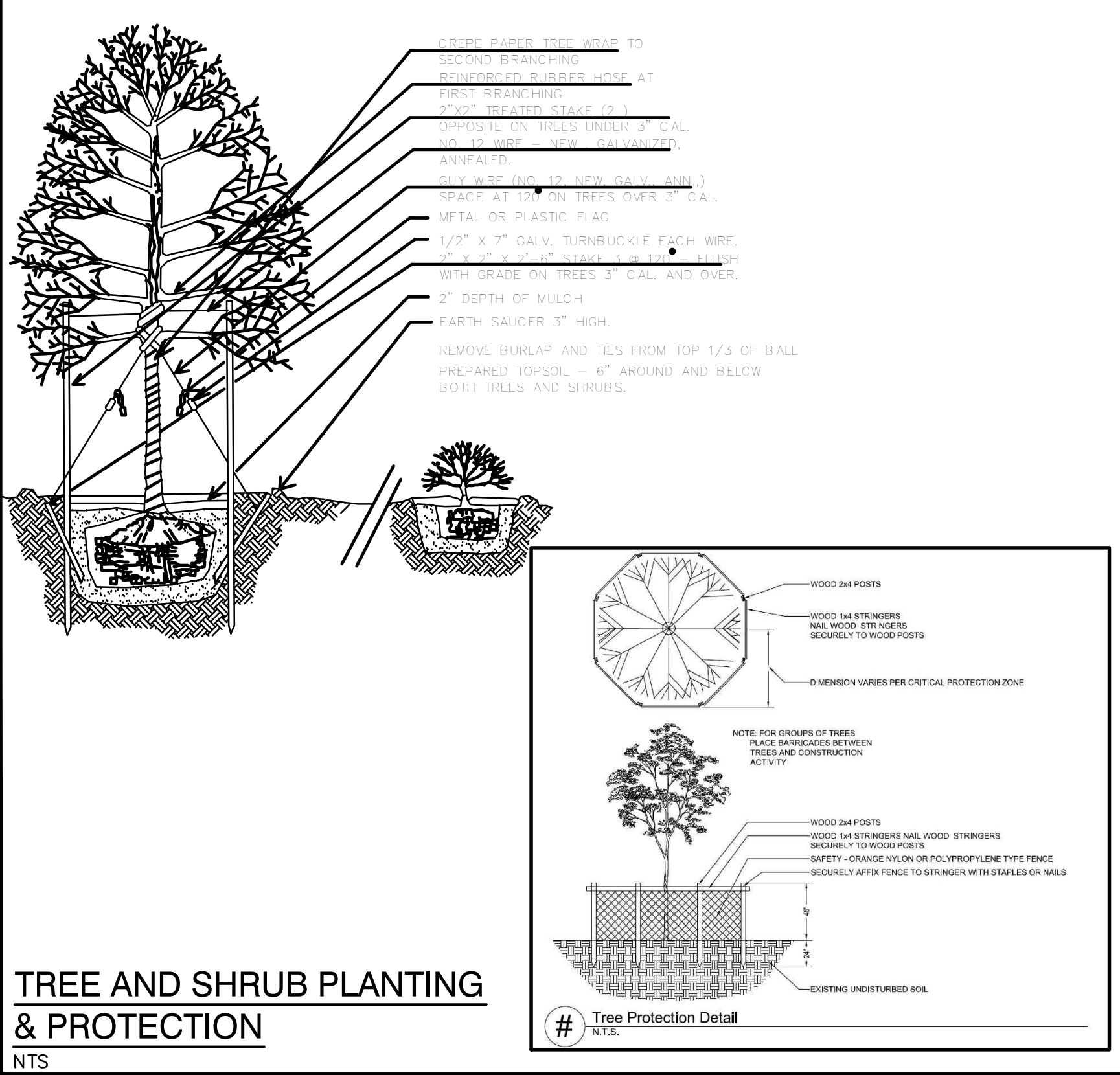


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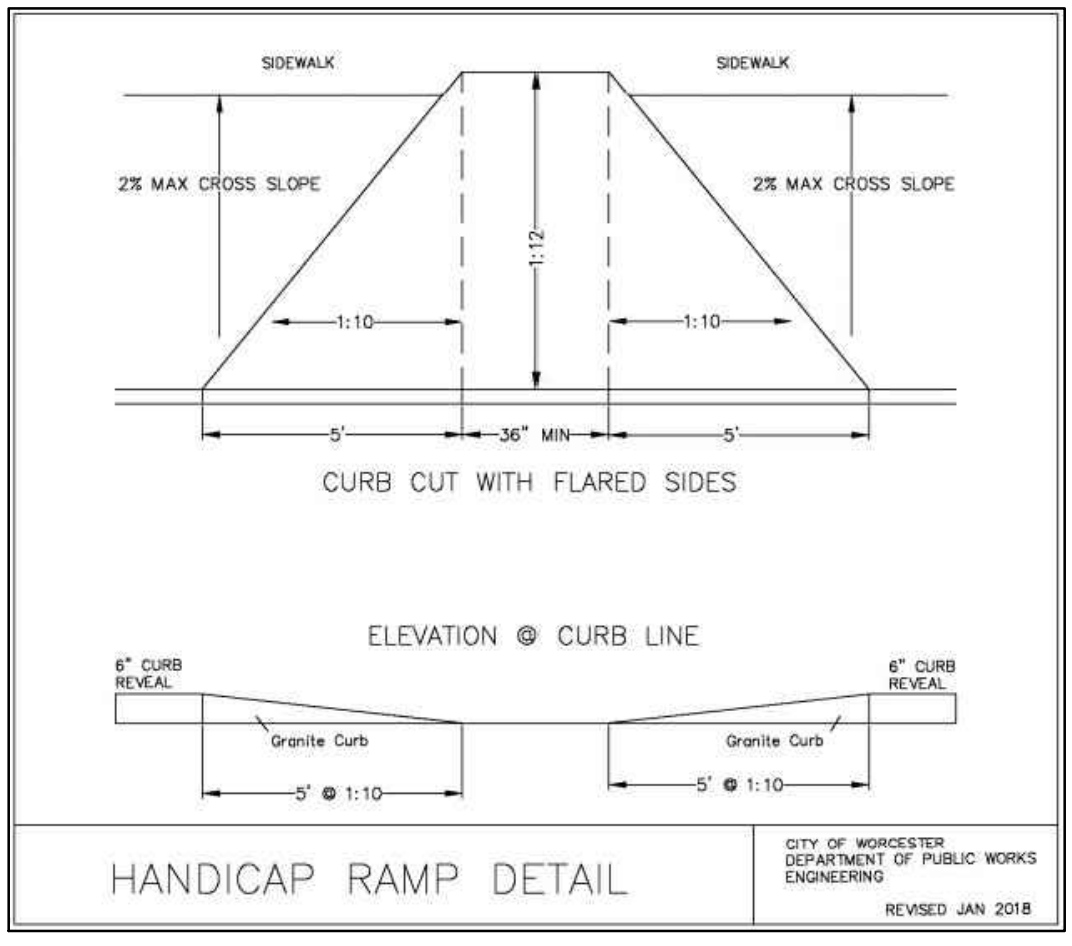
**MALDEN WOODS SUBDIVISION  
AMENDMENT  
DETAIL SHEET/GUARDRAIL**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

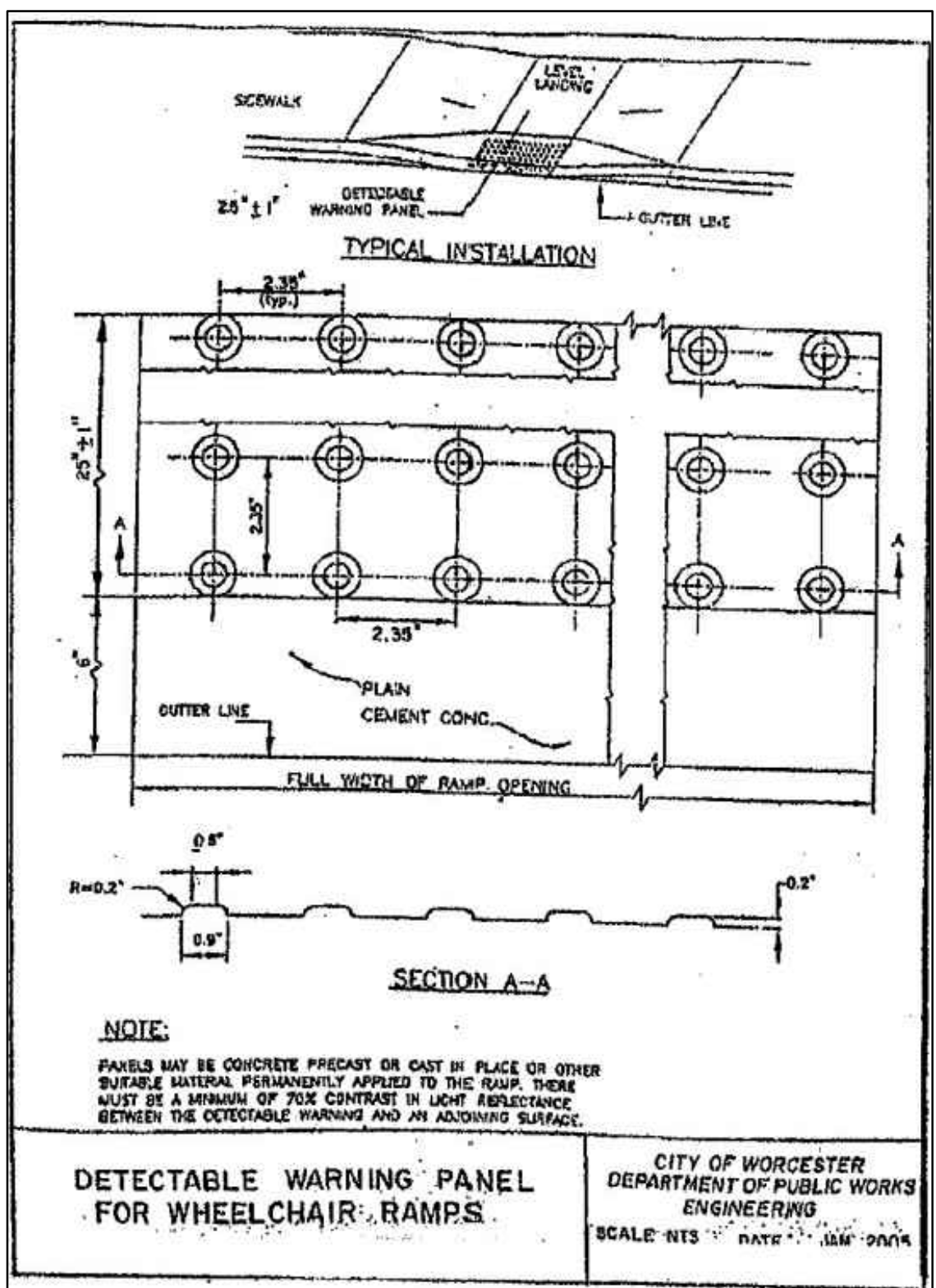
DATE: 11/1/2018	COMP'D: DJT	FIELD: PS
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ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER <b>29</b> OF <b>37</b>	
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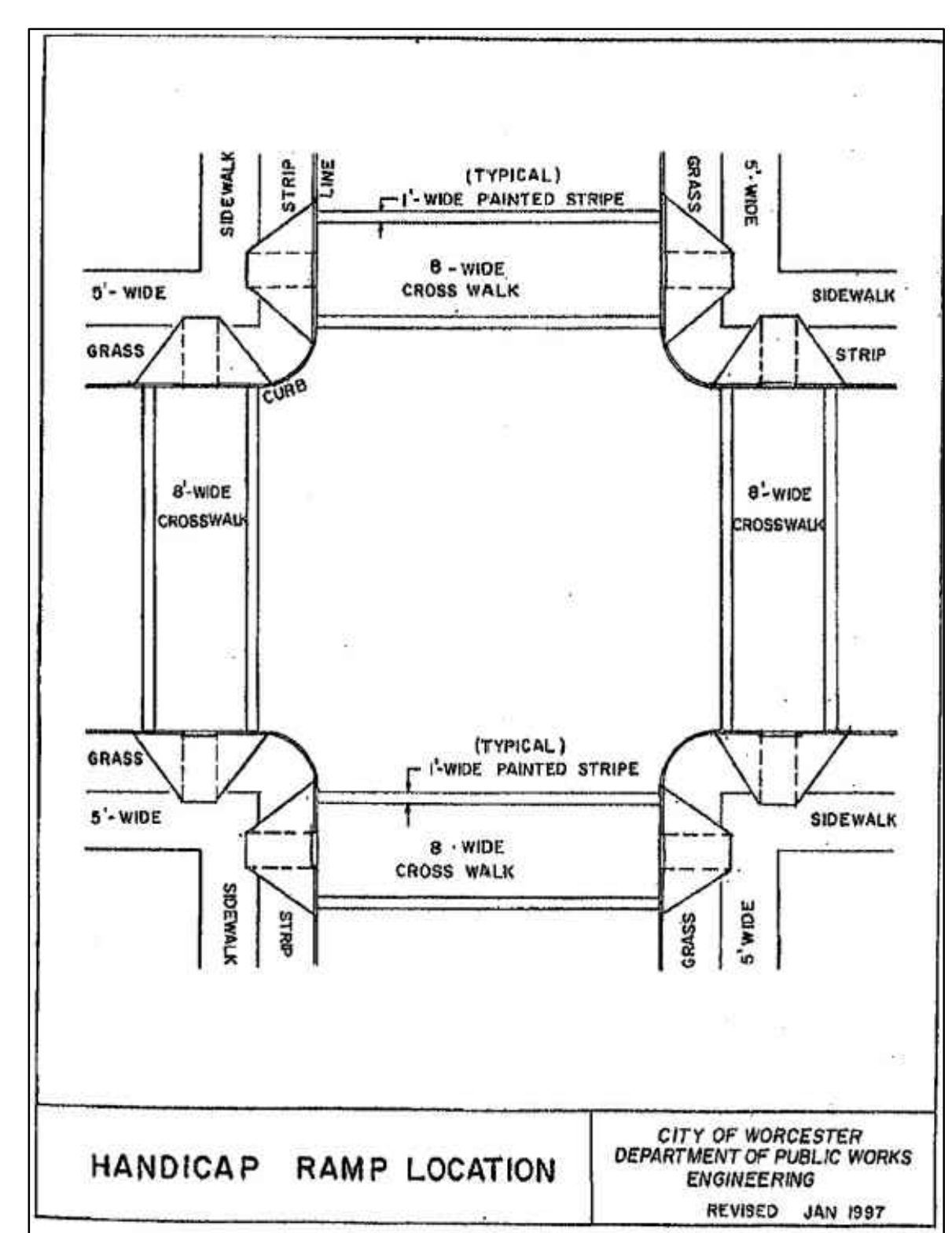
**TREE AND SHRUB PLANTING & PROTECTION**  
NTS



**HANDICAP RAMP DETAILS**  
NTS



**DETECTABLE WARNING PANEL FOR WHEELCHAIR RAMPS**  
CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS ENGINEERING  
SCALE: NTS DATE: 11/1/2018



**HANDICAP RAMP LOCATION**  
CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS ENGINEERING  
REVISED JAN 1997

**PHASE 1: UTILITIES AND ROADWAY CONSTRUCTION:**

PHASE 1 WORK INCLUDES ROADWAY CONSTRUCTION ON DANIELLE'S WAY STA 0+00 TO 6+00, ASSOCIATED UTILITIES AND DRAINAGE INFRASTRUCTURE. ACCESS WILL BE FROM CASTINE STREET.

1. CONTRACTOR SHALL FOLLOW THE CONSTRUCTION SEQUENCE. THE SEQUENCE SHALL BE REVIEWED PRIOR TO THE CONSTRUCTION COMMENCEMENT.
2. OWNER OR CONTRACTOR SHALL OBTAIN APPLICABLE PERMITS AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF WORCESTER.
3. DURING PHASES 1&2 CONSTRUCTION VEHICLES SHALL ACCESS THE SITE VIA CASTINE STREET AND SHALL NOT USE WHIPPOORWILL DRIVE.
4. INSTALL PHASE 1 EROSION CONTROL, STAKE OR FLAG EXISTING WETLANDS AND BUFFER ZONES AS REQUIRED, STAKE OR FLAG LIMIT OF WORK LINE.
5. BEGIN TREE CUTTING, CLEARING AND GRUBBING. NO STUMPING TO OCCUR UNTIL INDIVIDUAL BUILDING UNITS BEGIN CONSTRUCTION.
6. ROUGH GRADE SITE AND DETENTION BASIN. STOCKPILE SOIL.
7. DEMOLISH AND REMOVE EXISTING PAVED AREAS FROM SITE.
8. INSTALL SUBSURFACE UTILITY MAINS, SERVICE STUBS TO BUILDINGS AND DRAINAGE.
9. COMPACT ROADWAY AND SIDEWALK SUBGRADE, INSTALL GRAVEL BASE AND BINDER COURSE.
10. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
11. NO STOCKPILING SHOULD OCCUR WITHIN THE 100 FOOT BUFFER ZONE.

**GENERAL SITE CONSTRUCTION:**

1. COMPLETE DETENTION BASIN CONSTRUCTION.
2. INSTALL FRAMES, GRATES AND COVERS ON UTILITIES.
3. INSTALL SIDEWALK, CURBS, DRIVEWAYS AND STREET LIGHTING.
4. INSTALL ROADWAY TOP COURSE.
5. PLANT STREET TREES AND ESTABLISH OTHER VEGETATION.
6. REMOVE TEMPORARY SEDIMENT BASINS AND SILT FENCE AND HAYBALES.
7. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.

**INDIVIDUAL LOT CONSTRUCTION:**

1. INSTALL SILT FENCE AND HAYBALES AT LOTS PRIOR TO COMMENCING CONSTRUCTION ON THE LOT.
2. MOVE TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSION SWALES AS NECESSARY DURING CONSTRUCTION OF INDIVIDUAL LOTS.
3. ROUGH GRADE INDIVIDUAL LOTS.
4. EXCAVATE AND POUR FOUNDATIONS.
5. CONNECT SERVICE UTILITIES, BEGIN FRAMING HOMES.
6. FINISH GRADE LOTS AND LOAM AND SEED.
7. REMOVE TEMPORARY EROSION CONTROL ONCE SITE IS STABILIZED.

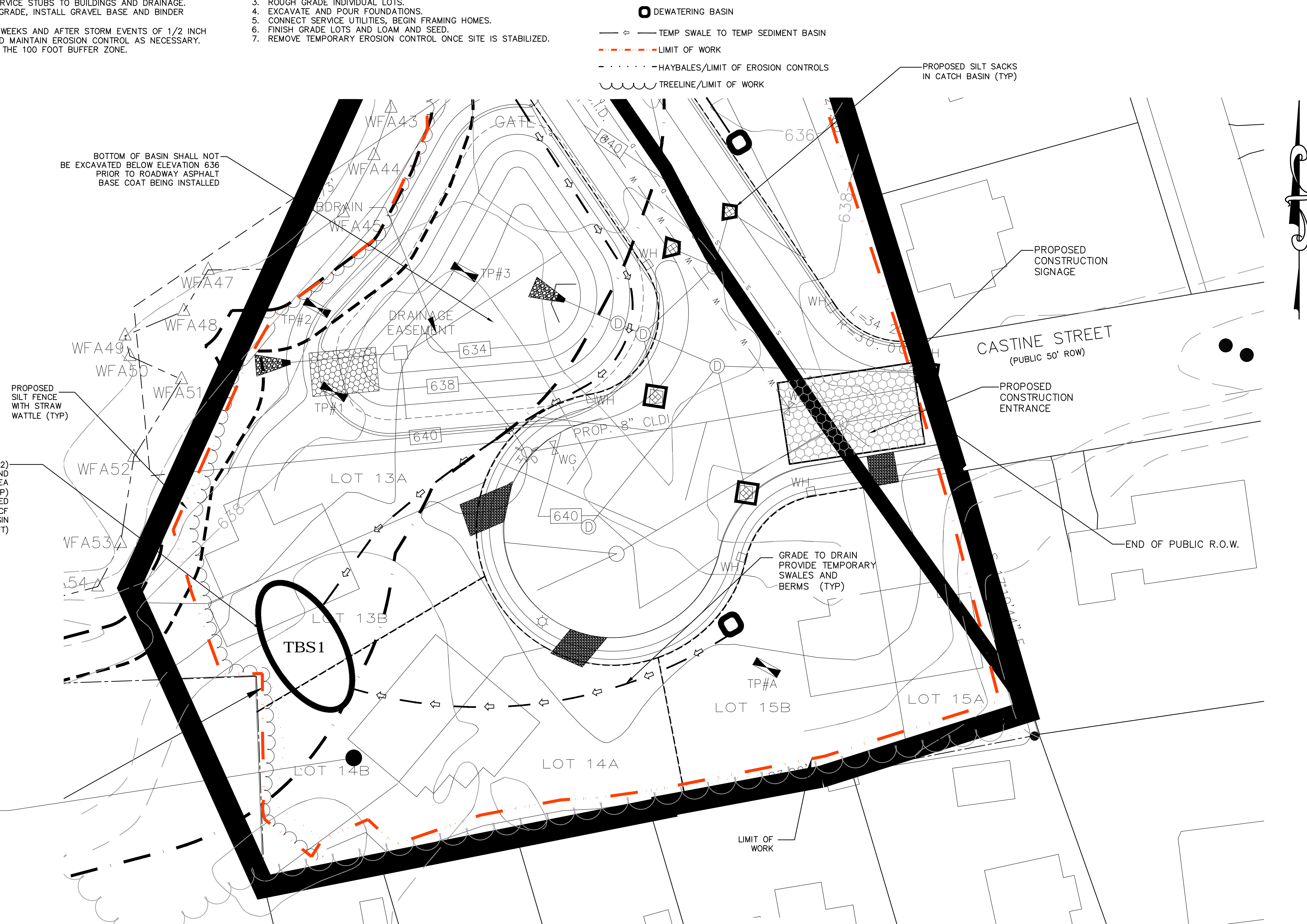
**CONSTRUCTION SEQUENCE-EXTENDED SHUT DOWN  
-ENTIRE LOT AND INDIVIDUAL LOTS**

THE FOLLOWING SHOULD BE PERFORMED PRIOR TO AND DURING EXTENDED PERIOD WHERE CONSTRUCTION IS NOT UNDERWAY DUE TO WEATHER, ECONOMIC CONDITIONS OR OTHER FACTORS.

1. INSPECT AND REPAIR PERIMETER HAYBALE AND SILT FENCE EROSION CONTROL AND EROSION CONTROL BLANKETS.
2. PROVIDE LOAM AND SEED OR OTHER VEGETATIVE COVER OVER EXPOSED SOIL AREAS.
3. PROVIDE VEGETATIVE COVER OR TARPS OVER STOCKPILED SOILS AND ERODABLE MATERIALS.
4. PROVIDE COVER OVER DUMPSTER.
5. INSPECT SITE ONCE PER WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS TO CONFIRM SEDIMENT AND EROSION CONTROL MEASURES ARE PERFORMING AS DESIGNED.

**EROSION AND SEDIMENTATION CONTROL NOTES**

1. THE METHODS AND MATERIALS SHOWN ON THESE DRAWINGS ARE MINIMUM REQUIREMENTS FOR EROSION AND SEDIMENTATION CONTROL. ACTUAL SITE CONDITIONS, SEASONAL OR CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS AS DIRECTED BY THE ENGINEER OR CITY OF WORCESTER AGENT.
2. AFTER EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE AND INSPECTED BY THE CITY, THE CONTRACTOR MAY STRIP SOILS AS REQUIRED. ALL STOCKPILED MATERIAL SHALL BE SUBJECT TO EROSION CONTROL DEVICES THAT SHALL INCLUDE A MINIMUM OF A SILT FENCE WITH HAYBALE SUPPORT. OTHER METHODS MAY INCLUDE STOCKPILE COVERS, MULCHING OR OTHER METHODS THAT PREVENT EROSION CONDITIONS.
3. ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
4. ALL PROPOSED SLOPES (EXCLUDING ANY RIPRAP SLOPES) STEEPER THAN 3:1 SHALL BE STABILIZED WITH A CURLEX EROSION CONTROL MATTING BY AMERICAN EXCELSIOR COMPANY (OR ENGINEER APPROVED EQUAL) AND PROTECTED FROM EROSION. ADDITIONALLY, THESE AREAS ARE TO BE HYDROSEEDING.
5. DURING BUILDING AND ROADWAY CONSTRUCTION, ALL SITE RUNOFF SHALL BE DIRECTED TOWARD TEMPORARY SEDIMENT BASINS BY MEANS OF TEMPORARY SWALES, DITCHES AND/OR WATER BARS, AS NECESSARY. NO RUNOFF SHALL BE ALLOWED TO EXIT THE SITE PRIOR TO TREATMENT FOR SEDIMENT REMOVAL.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE.
7. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL ALL DISTURBED SURFACES HAVE BEEN FULLY STABILIZED WITH VEGETATION.
8. THE CONSTRUCTION ENTRANCE SHALL BE LOCATED AS SHOWN ON THE PLANS, OR AS FIELD DIRECTED BY THE ENGINEER.
9. CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES.
10. THE CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON-SITE FOR REUSE. SOIL STOCKPILES SHALL BE NO HIGHER THAN 8 FEET. STOCKPILES SHALL BE ENCLOSED BY HAYBALES AND SILT FENCE TO PREVENT TRAVEL OF SEDIMENT.
11. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.



TEMPORARY SEDIMENT BASIN (TBS1&2)  
BASIN TO DISCHARGE OVERLAND  
TOWARD PROPOSED DETENTION AREA  
OR WETLANDS (TYP)  
SIZED TO ACCOMMODATE DISTURBED  
AREA OF 74,380 SF \* 1"=6,174 CF  
VOLUME OF BASIN  
= 7,175 CF (AREA OF 2,050 SF\*3.5FT)

PROPOSED SILT FENCE  
WITH STRAW  
WATTLE (TYP)

BOTTOM OF BASIN SHALL NOT  
BE EXCAVATED BELOW ELEVATION 636  
PRIOR TO ROADWAY ASPHALT  
BASE COAT BEING INSTALLED

PROPOSED SILT SACKS  
IN CATCH BASIN (TYP)

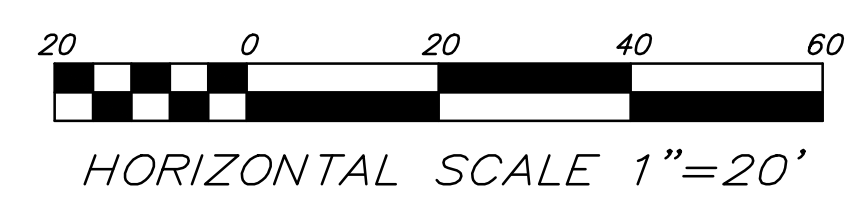
PROPOSED  
CONSTRUCTION  
SIGNAGE

PROPOSED  
CONSTRUCTION  
ENTRANCE

END OF PUBLIC R.O.W.

**PHASE 1**

**H. S. & T. GROUP, INC.**  
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET



NOTE:  
THE APPLICANT WILL PROVIDE AT NO COST  
TO THE CITY ALL FACILITIES SHOWN ON THE  
PLAN INCLUDING BUT NOT LIMITED TO  
ROADWAYS, CURBS, BOUNDS, DRAINAGE  
SYSTEMS, SANITARY SEWER SYSTEMS,  
UTILITIES, STREET LIGHTS AND EARTHWORKS,  
EXCEPT AS OTHERWISE NOTED.

MALDEN WOODS SUBDIVISION AMENDMENT MALDEN WOODS PHASE 1	
OWNER: WHIPPOOR, LLC 10 UNION STREET, SUITE 3B, NATICK, MA 01760	APPLICANT: WHIPPOOR, LLC 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 08/08/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=20'	CAD: PUB	FLD. BK: 639-124
ZONE: RESIDENCE A	REV'D: DJT/HH	DWG: MALDENWOODS NOI REV1
JOB NUMBER: 59596	SHEET NUMBER <b>30a</b> of <b>37</b>	
DWG NUMBER: 5004		

**PHASE 1: UTILITIES AND ROADWAY CONSTRUCTION:**

PHASE 1 WORK INCLUDES ROADWAY CONSTRUCTION ON DANIELLE'S WAY STA 0+00 TO 6+00, ASSOCIATED UTILITIES AND DRAINAGE INFRASTRUCTURE. ACCESS WILL BE FROM CASTINE STREET.

1. CONTRACTOR SHALL FOLLOW THE CONSTRUCTION SEQUENCE. THE SEQUENCE SHALL BE REVIEWED PRIOR TO THE CONSTRUCTION COMMENCEMENT.
2. OWNER OR CONTRACTOR SHALL OBTAIN APPLICABLE PERMITS AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF WORCESTER.
3. DURING PHASES 1&2 CONSTRUCTION VEHICLES SHALL ACCESS THE SITE VIA CASTINE STREET AND SHALL NOT USE WHIPPOORWILL DRIVE.
4. INSTALL PHASE 1 EROSION CONTROL, STAKE OR FLAG EXISTING WETLANDS AND BUFFER ZONES AS REQUIRED, STAKE OR FLAG LIMIT OF WORK LINE.
5. BEGIN TREE CUTTING, CLEARING AND GRUBBING. NO STUMPING TO OCCUR UNTIL INDIVIDUAL BUILDING UNITS BEGIN CONSTRUCTION.
6. ROUGH GRADE SITE AND DETENTION BASIN. STOCKPILE SOIL.
7. DEMOLISH AND REMOVE EXISTING PAVED AREAS FROM SITE.
8. INSTALL SUBSURFACE UTILITY MAINS, SERVICE STUBS TO BUILDINGS AND DRAINAGE.
9. COMPACT ROADWAY AND SIDEWALK SUBGRADE, INSTALL GRAVEL BASE AND BINDER COURSE.
10. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
11. NO STOCKPILING SHOULD OCCUR WITHIN THE 100 FOOT BUFFER ZONE.

**GENERAL SITE CONSTRUCTION:**

1. COMPLETE DETENTION BASIN CONSTRUCTION.
2. INSTALL FRAMES, GRATES AND COVERS ON UTILITIES.
3. INSTALL SIDEWALK, CURBS, DRIVEWAYS AND STREET LIGHTING.
4. INSTALL ROADWAY TOP COURSE.
5. PLANT STREET TREES AND ESTABLISH OTHER VEGETATION.
6. REMOVE TEMPORARY SEDIMENT BASINS AND SILT FENCE AND HAYBALES.
7. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.

**INDIVIDUAL LOT CONSTRUCTION:**

1. INSTALL SILT FENCE AND HAYBALES AT LOTS PRIOR TO COMMENCING CONSTRUCTION ON THE LOT.
2. MOVE TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSION SWALES AS NECESSARY DURING CONSTRUCTION OF INDIVIDUAL LOTS.
3. ROUGH GRADE INDIVIDUAL LOTS.
4. EXCAVATE AND POUR FOUNDATIONS.
5. CONNECT SERVICE UTILITIES, BEGIN FRAMING HOMES.
6. FINISH GRADE LOTS AND LOAM AND SEED.
7. REMOVE TEMPORARY EROSION CONTROL ONCE SITE IS STABILIZED.

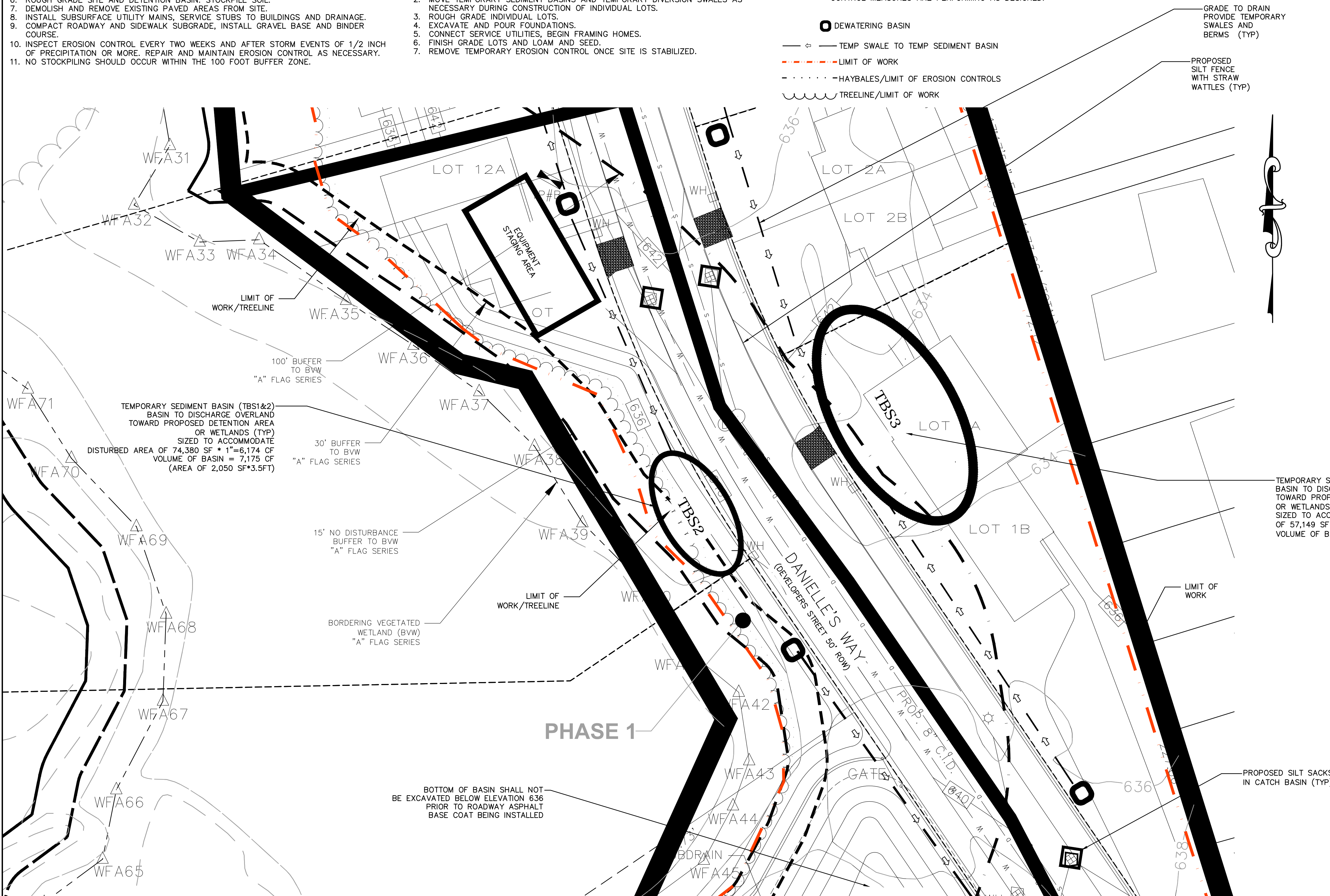
**CONSTRUCTION SEQUENCE-EXTENDED SHUT DOWN  
-ENTIRE LOT AND INDIVIDUAL LOTS**

THE FOLLOWING SHOULD BE PERFORMED PRIOR TO AND DURING EXTENDED PERIOD WHERE CONSTRUCTION IS NOT UNDERWAY DUE TO WEATHER, ECONOMIC CONDITIONS OR OTHER FACTORS.

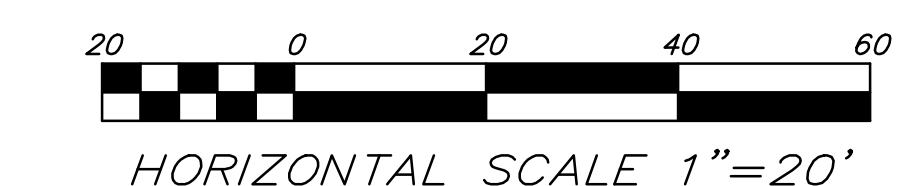
1. INSPECT AND REPAIR PERIMETER HAYBALE AND SILT FENCE EROSION CONTROL AND EROSION CONTROL BLANKETS.
2. PROVIDE LOAM AND SEED OR OTHER VEGETATIVE COVER OVER EXPOSED SOIL AREAS.
3. PROVIDE VEGETATIVE COVER OR TARPS OVER STOCKPILED SOILS AND ERODABLE MATERIALS.
4. PROVIDE COVER OVER DUMPSTER.
5. INSPECT SITE ONCE PER WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS TO CONFIRM SEDIMENT AND EROSION CONTROL MEASURES ARE PERFORMING AS DESIGNED.

**EROSION AND SEDIMENTATION CONTROL NOTES**

1. THE METHODS AND MATERIALS SHOWN ON THESE DRAWINGS ARE MINIMUM REQUIREMENTS FOR EROSION AND SEDIMENTATION CONTROL. ACTUAL SITE CONDITIONS, SEASONAL OR CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS AS DIRECTED BY THE ENGINEER OR CITY OF WORCESTER AGENT.
2. AFTER EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE AND INSPECTED BY THE CITY, THE CONTRACTOR MAY STRIP SOILS AS REQUIRED. ALL STOCKPILED MATERIAL SHALL BE SUBJECT TO EROSION CONTROL DEVICES THAT SHALL INCLUDE A MINIMUM OF A SILT FENCE WITH HAYBALE SUPPORT. OTHER METHODS MAY INCLUDE STOCKPILE COVERS, MULCHING OR OTHER METHODS THAT PREVENT EROSION CONDITIONS.
3. ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
4. ALL PROPOSED SLOPES (EXCLUDING ANY RIPRAP SLOPES) STEEPER THAN 3:1 SHALL BE STABILIZED WITH A CURLEX EROSION CONTROL MATTING BY AMERICAN EXCELSIOR COMPANY (OR ENGINEER APPROVED EQUAL) AND PROTECTED FROM EROSION. ADDITIONALLY, THESE AREAS ARE TO BE HYDROSEEDED.
5. DURING BUILDING AND ROADWAY CONSTRUCTION, ALL SITE RUNOFF SHALL BE DIRECTED TOWARD TEMPORARY SEDIMENT BASINS BY MEANS OF TEMPORARY SWALES, DITCHES AND/OR WATER BARS, AS NECESSARY. NO RUNOFF SHALL BE ALLOWED TO EXIT THE SITE PRIOR TO TREATMENT FOR SEDIMENT REMOVAL.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ONSITE AT ALL TIMES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE.
7. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL ALL DISTURBED SURFACES HAVE BEEN FULLY STABILIZED WITH VEGETATION.
8. THE CONSTRUCTION ENTRANCE SHALL BE LOCATED AS SHOWN ON THE PLANS, OR AS FIELD DIRECTED BY THE ENGINEER.
9. CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES.
10. THE CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON-SITE FOR REUSE. SOIL STOCKPILES SHALL BE NO HIGHER THAN 8 FEET. STOCKPILES SHALL BE ENCLOSED BY HAYBALES AND SILT FENCE TO PREVENT TRAVEL OF SEDIMENT.
11. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.



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NOTE:  
 THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.

MALDEN WOODS SUBDIVISION AMENDMENT	
MALDEN WOODS PHASE 1	
OWNER:	WHIPPOOR, LLC
10 UNION STREET, SUITE 3B, NATICK, MA 01760	
APPLICANT:	WHIPPOOR, LLC
10 UNION STREET, SUITE 3B, NATICK, MA 01760	

DATE:	08/08/2018	COMP'D:	DJT	FIELD:	PS
SCALE:	1"=20'	CAD:	PUB	FLD. BK:	639-124
ZONE:	RESIDENCE A	REV'D:	DJT/HH	DWG: MALDENWOODS NOI REV1	
JOB NUMBER:	59596	SHEET NUMBER			
DWG NUMBER:	5004	30b of 37			

**PHASE 1: UTILITIES AND ROADWAY CONSTRUCTION:**

PHASE 1 WORK INCLUDES ROADWAY CONSTRUCTION ON DANIELLE'S WAY STA 0+00 TO 6+00, ASSOCIATED UTILITIES AND DRAINAGE INFRASTRUCTURE. ACCESS WILL BE FROM CASTINE STREET.

1. CONTRACTOR SHALL FOLLOW THE CONSTRUCTION SEQUENCE. THE SEQUENCE SHALL BE REVIEWED PRIOR TO THE CONSTRUCTION COMMENCEMENT.
2. OWNER OR CONTRACTOR SHALL OBTAIN APPLICABLE PERMITS AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF WORCESTER.
3. DURING PHASES 1&2 CONSTRUCTION VEHICLES SHALL ACCESS THE SITE VIA CASTINE STREET AND SHALL NOT USE WHIPPOORWILL DRIVE.
4. INSTALL PHASE 1 EROSION CONTROL, STAKE OR FLAG EXISTING WETLANDS AND BUFFER ZONES AS REQUIRED, STAKE OR FLAG LIMIT OF WORK LINE.
5. BEGIN TREE CUTTING, CLEARING AND GRUBBING. NO STUMPING TO OCCUR UNTIL INDIVIDUAL BUILDING UNITS BEGIN CONSTRUCTION.
6. COMPOST FILTER TUBE TO BE USED WITH WETLAND AREA FOR EROSION CONTROL.
7. EXCAVATE FOOTINGS, REMOVE FILL, PREPARE SUBGRADE FOR CULVERT FOOTING INSTALLATION. STABILIZE DURING DRY PERIOD.
8. POUR CONCRETE FOR FOOTINGS.
9. STABILIZE AREA UNTIL BOX CULVERT CAN BE INSTALLED IN PHASE 3.
10. ROUGH GRADE SITE AND DETENTION BASIN. STOCKPILE SOIL.
11. DEMOLISH AND REMOVE EXISTING PAVED AREAS FROM SITE.
12. INSTALL SUBSURFACE UTILITY MAINS, SERVICE STUBS TO BUILDINGS AND DRAINAGE.
13. COMPACT ROADWAY AND SIDEWALK SUBGRADE, INSTALL GRAVEL BASE AND BINDER COURSE.
14. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
15. NO STOCKPILING SHOULD OCCUR WITHIN THE 100 FOOT BUFFER ZONE.

**GENERAL SITE CONSTRUCTION:**

1. COMPLETE DETENTION BASIN CONSTRUCTION.
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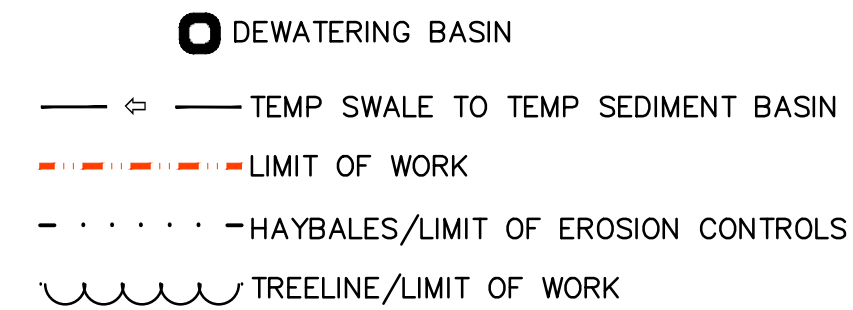
**INDIVIDUAL LOT CONSTRUCTION:**

1. INSTALL SILT FENCE AND HAYBALES AT LOTS PRIOR TO COMMENCING CONSTRUCTION ON THE LOT.
2. MOVE TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSION SWALES AS NECESSARY DURING CONSTRUCTION OF INDIVIDUAL LOTS.
3. ROUGH GRADE INDIVIDUAL LOTS.
4. EXCAVATE AND POUR FOUNDATIONS.
5. CONNECT SERVICE UTILITIES, BEGIN FRAMING HOMES.
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**CONSTRUCTION SEQUENCE-EXTENDED SHUT DOWN -ENTIRE LOT AND INDIVIDUAL LOTS**

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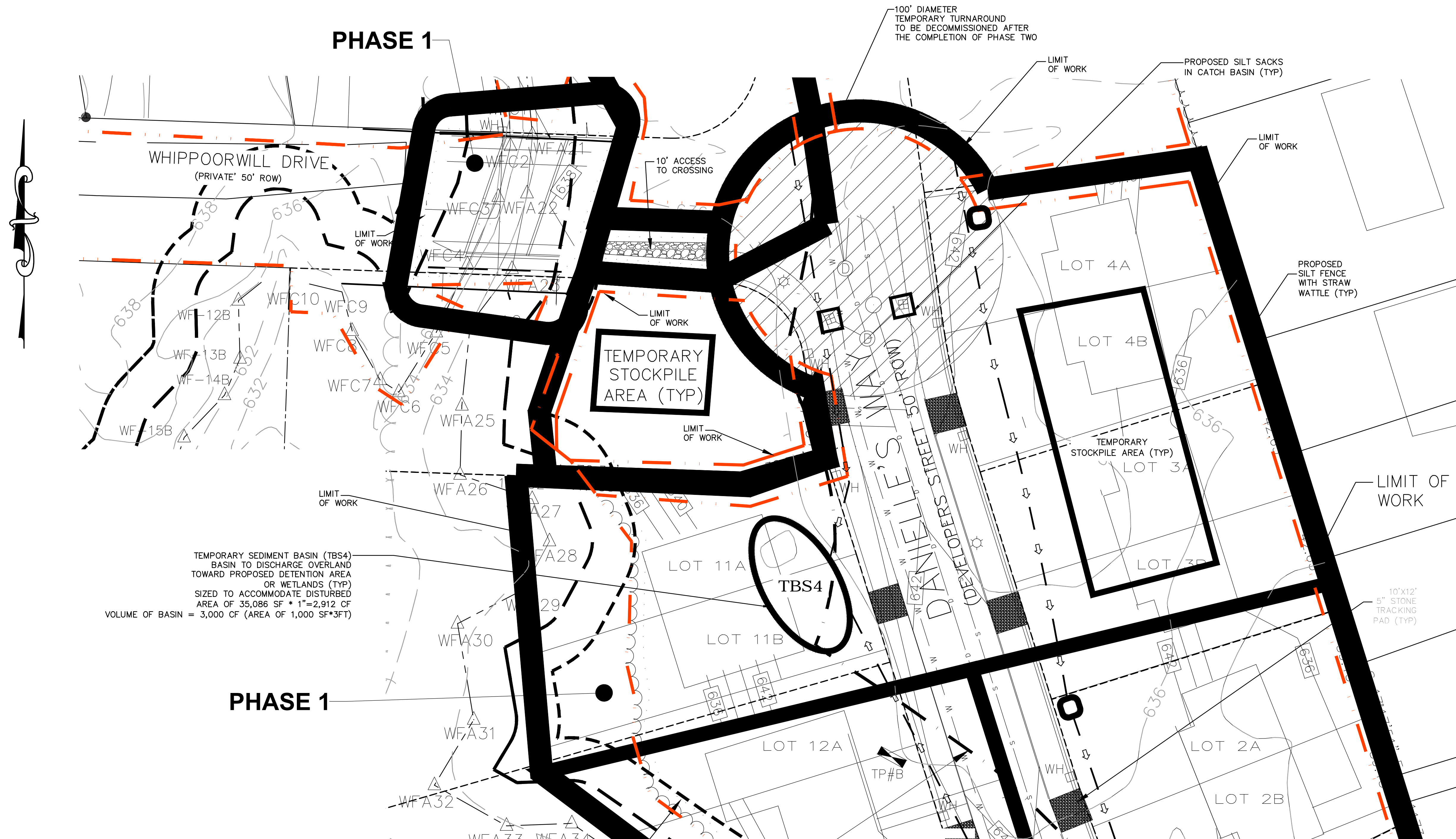
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3. PROVIDE VEGETATIVE COVER OR TARPS OVER STOCKPILED SOILS AND ERODIBLE MATERIALS.
4. PROVIDE COVER OVER DUMPSTER.
5. INSPECT SITE ONCE PER WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS TO CONFIRM SEDIMENT AND EROSION CONTROL MEASURES ARE PERFORMING AS DESIGNED.



**EROSION AND SEDIMENTATION CONTROL NOTES**

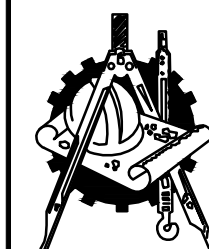
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3. ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
4. ALL PROPOSED SLOPES (EXCLUDING ANY RIPRAP SLOPES) STEEPER THAN 3:1 SHALL BE STABILIZED WITH A CURLEX EROSION CONTROL MATTING BY AMERICAN EXCELSIOR COMPANY (OR ENGINEER APPROVED EQUAL) AND PROTECTED FROM EROSION. ADDITIONALLY, THESE AREAS ARE TO BE HYDROSEEDED.
5. DURING BUILDING AND ROADWAY CONSTRUCTION, ALL SITE RUNOFF SHALL BE DIRECTED TOWARD TEMPORARY SEDIMENT BASINS BY MEANS OF TEMPORARY SWALES, DITCHES AND/OR WATER BARS, AS NECESSARY. NO RUNOFF SHALL BE ALLOWED TO EXIT THE SITE PRIOR TO TREATMENT FOR SEDIMENT REMOVAL.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ONSITE AT ALL TIMES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE.
7. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL ALL DISTURBED SURFACES HAVE BEEN FULLY STABILIZED WITH VEGETATION.
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9. CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES.
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**PHASE 1**

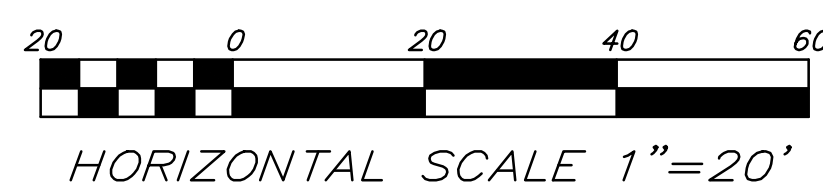


TEMPORARY SEDIMENT BASIN (TBS4)  
BASIN TO DISCHARGE OVERLAND  
TOWARD PROPOSED DETENTION AREA  
OR WETLANDS (TYP)  
SIZED TO ACCOMMODATE DISTURBED  
AREA OF 35,086 SF \* 1"=2,912 CF  
VOLUME OF BASIN = 3,000 CF (AREA OF 1,000 SF\*3FT)

**PHASE 1**



**H. S. & T. GROUP, INC.**  
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MALDEN WOODS SUBDIVISION AMENDMENT  
MALDEN WOODS  
PHASE 1

OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760  
APPLICANT:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 08/08/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=20'	CAD: PUB	FLD. BK: 639-124
ZONE: RESIDENCE A	REV'D: DJT/HH	DWG: MALDENWOODS NOI REV1
JOB NUMBER: 59596	SHEET NUMBER	
DWG NUMBER: 5004	30c of 37	



**PHASE 2: BUILDING, LANDSCAPING AND ROADWAY FINISH CONSTRUCTION:**

PHASE 2 WORK INCLUDES ROADWAY CONSTRUCTION ON CASTINE STREET, DANIELLE'S WAY STA 6+00 TO END, ASSOCIATED UTILITIES AND DRAINAGE INFRASTRUCTURE CONTINUED FROM PHASE 1 AND DWELLING CONSTRUCTION ON CASTINE STREET AND DANIELLE'S WAY. A MAXIMUM OF 4 BUILDINGS TO BE CONSTRUCTED AT ONCE. ADDITIONAL SITES TO BE OPENED ONLY ONCE THE STABILIZATION IS ESTABLISHED IN THE PRIOR UNITS. ACCESS WILL BE FROM CASTINE STREET AND DOWN THE NEWLY CONSTRUCTED PORTION OF DANIELLE'S WAY.

**GENERAL SITE CONSTRUCTION:**

1. COMPLETE DETENTION BASIN CONSTRUCTION.
2. INSTALL FRAMES, GRATES AND COVERS ON UTILITIES.
3. INSTALL SIDEWALK, CURBS, DRIVEWAYS AND STREET LIGHTING.
4. INSTALL ROADWAY TOP COURSE.
5. PLANT STREET TREES AND ESTABLISH OTHER VEGETATION.
6. REMOVE TEMPORARY SEDIMENT BASINS AND SILT FENCE AND HAYBALES.
7. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
8. DURING PHASES 1&2 CONSTRUCTION VEHICLES SHALL ACCESS THE SITE VIA CASTINE STREET AND SHALL NOT USE WHIPPOORWILL DRIVE.

**INDIVIDUAL LOT CONSTRUCTION:**

1. INSTALL SILT FENCE AND HAYBALES AT LOTS PRIOR TO COMMENCING CONSTRUCTION ON THE LOT.
2. MOVE TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSION SWALES AS NECESSARY DURING CONSTRUCTION OF INDIVIDUAL LOTS.
3. ROUGH GRADE INDIVIDUAL LOTS.
4. EXCAVATE AND POUR FOUNDATIONS.
5. CONNECT SERVICE UTILITIES, BEGIN FRAMING HOMES.
6. FINISH GRADE LOTS AND LOAM AND SEED.
7. REMOVE TEMPORARY EROSION CONTROL ONCE SITE IS STABILIZED.

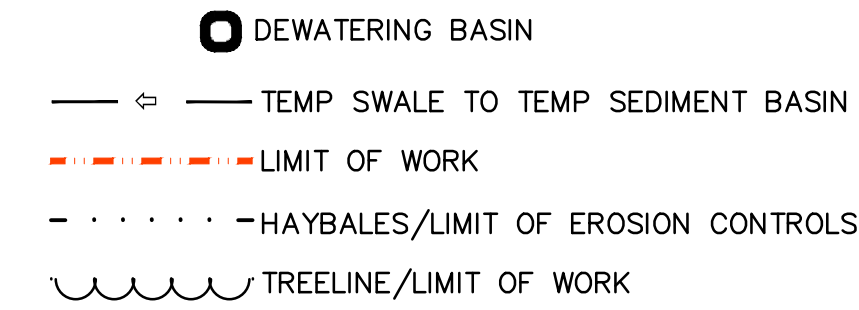
**UTILITIES AND ROADWAY CONSTRUCTION:**

1. OWNER OR CONTRACTOR SHALL OBTAIN APPLICABLE PERMITS AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF WORCESTER.
2. INSTALL PHASE 1 EROSION CONTROL, STAKE OR FLAG EXISTING WETLANDS AND BUFFER ZONES AS REQUIRED, STAKE OR FLAG LIMIT OF WORK LINE.
3. BEGIN TREE CUTTING, CLEARING AND GRUBBING. NO STUMPING TO OCCUR UNTIL INDIVIDUAL BUILDING UNITS BEGIN CONSTRUCTION.
4. ROUGH GRADE SITE AND DETENTION BASIN. STOCKPILE SOIL.
5. DEMOLISH AND REMOVE EXISTING PAVED AREAS FROM SITE.
6. INSTALL SUBSURFACE UTILITY MAINS, SERVICE STUBS TO BUILDINGS AND DRAINAGE.
7. COMPACT ROADWAY AND SIDEWALK SUBGRADE, INSTALL GRAVEL BASE AND BINDER COURSE.
8. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY. NO STOCKPILING SHOULD OCCUR WITHIN THE 100 FOOT BUFFER ZONE.

**CONSTRUCTION SEQUENCE-EXSTENDED SHUT DOWN ENTIRE LOT AND INDIVIDUAL LOTS**

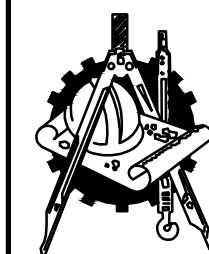
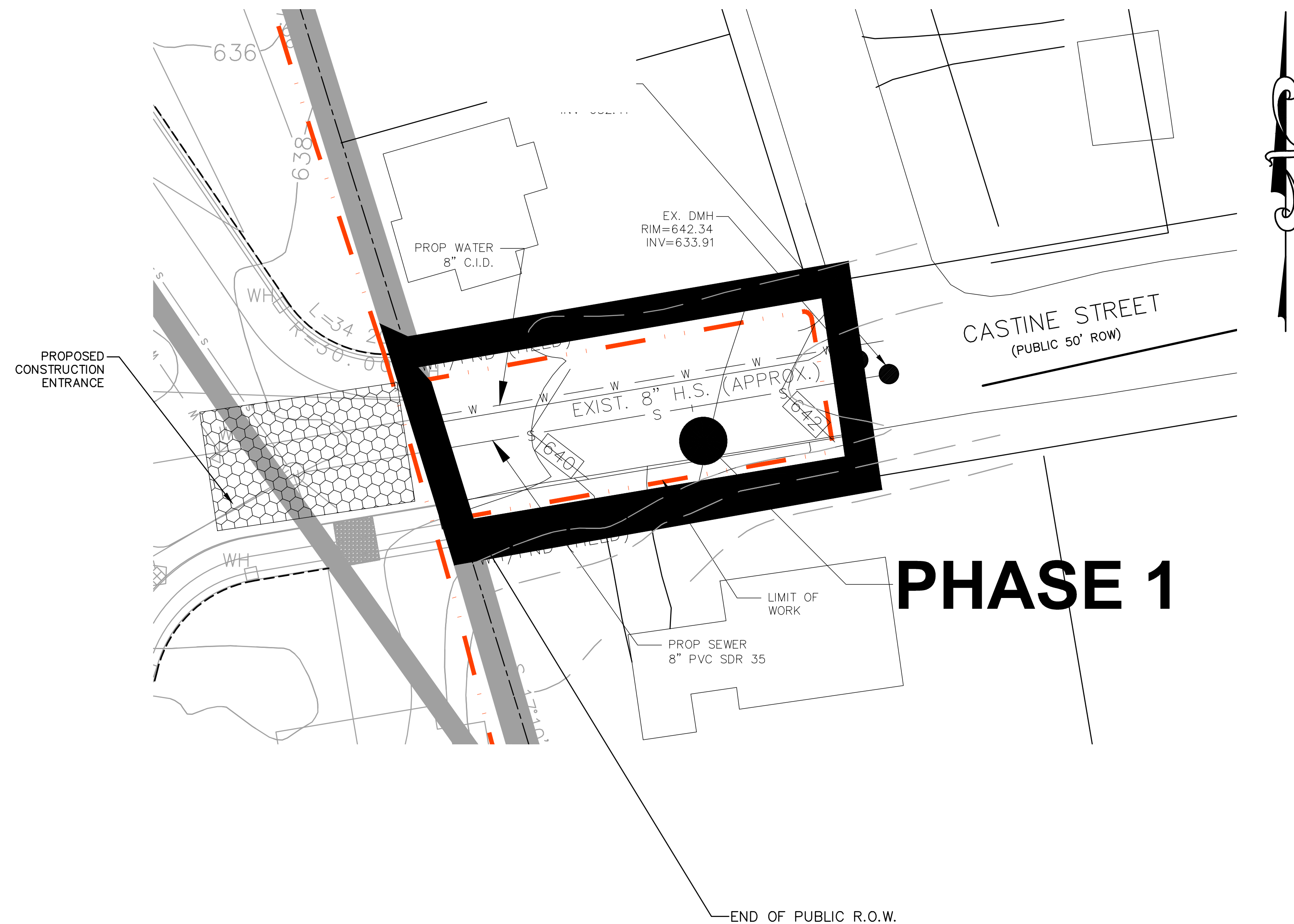
THE FOLLOWING SHOULD BE PERFORMED PRIOR TO AND DURING EXTENDED PERIOD WHERE CONSTRUCTION IS NOT UNDERWAY DUE TO WEATHER, ECONOMIC CONDITIONS OR OTHER FACTORS.

1. INSPECT AND REPAIR PERIMETER HAYBALE AND SILT FENCE EROSION CONTROL AND EROSION CONTROL BLANKETS.
2. PROVIDE LOAM AND SEED OR OTHER VEGETATIVE COVER OVER EXPOSED SOIL AREAS.
3. PROVIDE VEGETATIVE COVER OR TARPS OVER STOCKPILED SOILS AND ERODABLE MATERIALS.
4. PROVIDE COVER OVER DUMPSTER
5. INSPECT SITE ONCE PER WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS TO CONFIRM SEDIMENT AND EROSION CONTROL MEASURES ARE PERFORMING AS DESIGNED.



**EROSION AND SEDIMENTATION CONTROL NOTES**

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3. ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
4. ALL PROPOSED SLOPES (EXCLUDING ANY RIPRAP SLOPES) STEEPER THAN 3:1 SHALL BE STABILIZED WITH A CURLEX EROSION CONTROL MATTING BY AMERICAN EXCELSIOR COMPANY (OR ENGINEER APPROVED EQUAL) AND PROTECTED FROM EROSION. ADDITIONALLY, THESE AREAS ARE TO BE HYDROSEED.
5. DURING BUILDING AND ROADWAY CONSTRUCTION, ALL SITE RUNOFF SHALL BE DIRECTED TOWARD TEMPORARY SEDIMENT BASINS BY MEANS OF TEMPORARY SWALES, DITCHES AND/OR WATER BARS, AS NECESSARY. NO RUNOFF SHALL BE ALLOWED TO EXIT THE SITE PRIOR TO TREATMENT FOR SEDIMENT REMOVAL.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ONSITE AT ALL TIMES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE.
7. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL ALL DISTURBED SURFACES HAVE BEEN FULLY STABILIZED WITH VEGETATION.
8. THE CONSTRUCTION ENTRANCE SHALL BE LOCATED AS SHOWN ON THE PLANS, OR AS FIELD DIRECTED BY THE ENGINEER.
9. CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES.
10. THE CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON-SITE FOR REUSE. SOIL STOCKPILES SHALL BE NO HIGHER THAN 8 FEET. STOCKPILES SHALL BE ENCLOSED BY HAYBALES AND SILT FENCE TO PREVENT TRAVEL OF SEDIMENT.
11. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.



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MALDEN WOODS  
PHASE 2  
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APPLICANT:  
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DATE: 08/08/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=20'	CAD: PUB	FLD. BK: 639-124
ZONE: RESIDENCE A	REV'D: DJT/HH	DWG: MALDENWOODS NOI REV1
JOB NUMBER:	SHEET NUMBER <b>31a</b> OF <b>37</b>	
DWG NUMBER:		

**PHASE 2: BUILDING, LANDSCAPING AND ROADWAY FINISH CONSTRUCTION:**

PHASE 2 WORK INCLUDES ROADWAY CONSTRUCTION ON CASTINE STREET, DANIELLE'S WAY STA 6+00 TO END, ASSOCIATED UTILITIES AND DRAINAGE INFRASTRUCTURE CONTINUED FROM PHASE 1 AND DWELLING CONSTRUCTION ON CASTINE STREET AND DANIELLE'S WAY. A MAXIMUM OF 4 BUILDINGS TO BE CONSTRUCTED AT ONCE. ADDITIONAL SITES TO BE OPENED ONLY ONCE THE STABILIZATION IS ESTABLISHED IN THE PRIOR UNITS. ACCESS WILL BE FROM CASTINE STREET AND DOWN THE NEWLY CONSTRUCTED PORTION OF DANIELLE'S WAY.

**GENERAL SITE CONSTRUCTION:**

1. COMPLETE DETENTION BASIN CONSTRUCTION.
2. INSTALL FRAMES, GRATES AND COVERS ON UTILITIES.
3. INSTALL SIDEWALK, CURBS, DRIVEWAYS AND STREET LIGHTING.
4. INSTALL ROADWAY TOP COURSE.
5. PLANT STREET TREES AND ESTABLISH OTHER VEGETATION.
6. REMOVE TEMPORARY SEDIMENT BASINS AND SILT FENCE AND HAYBALES.
7. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
8. DURING PHASES 1&2 CONSTRUCTION VEHICLES SHALL ACCESS THE SITE VIA CASTINE STREET AND SHALL NOT USE WHIPPOORWILL DRIVE.

**INDIVIDUAL LOT CONSTRUCTION:**

1. INSTALL SILT FENCE AND HAYBALES AT LOTS PRIOR TO COMMENCING CONSTRUCTION ON THE LOT.
2. MOVE TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSION SWALES AS NECESSARY DURING CONSTRUCTION OF INDIVIDUAL LOTS.
3. ROUGH GRADE INDIVIDUAL LOTS.
4. EXCAVATE AND POUR FOUNDATIONS.
5. CONNECT SERVICE UTILITIES. BEGIN FRAMING HOMES.
6. FINISH GRADE LOTS AND LOAM AND SEED.
7. REMOVE TEMPORARY EROSION CONTROL ONCE SITE IS STABILIZED.

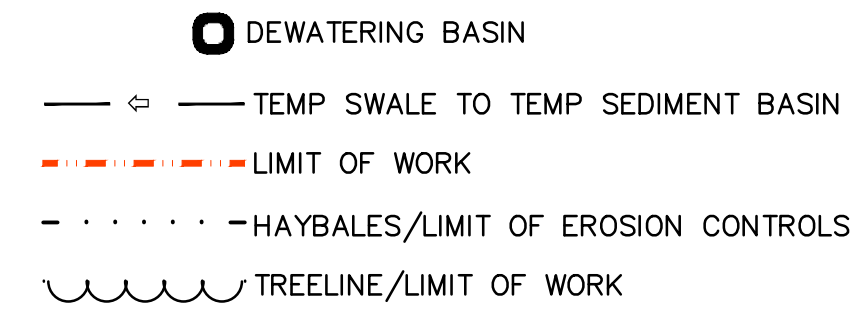
**UTILITIES AND ROADWAY CONSTRUCTION:**

1. OWNER OR CONTRACTOR SHALL OBTAIN APPLICABLE PERMITS AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF WORCESTER.
2. INSTALL PHASE 1 EROSION CONTROL, STAKE OR FLAG EXISTING WETLANDS AND BUFFER ZONES AS REQUIRED, STAKE OR FLAG LIMIT OF WORK LINE.
3. BEGIN TREE CUTTING, CLEARING AND GRUBBING. NO STUMPING TO OCCUR UNTIL INDIVIDUAL BUILDING UNITS BEGIN CONSTRUCTION.
4. ROUGH GRADE SITE AND DETENTION BASIN. STOCKPILE SOIL.
5. DEMOLISH AND REMOVE EXISTING PAVED AREAS FROM SITE.
6. INSTALL SUBSURFACE UTILITY MAINS, SERVICE STUBS TO BUILDINGS AND DRAINAGE.
7. COMPACT ROADWAY AND SIDEWALK SUBGRADE, INSTALL GRAVEL BASE AND BINDER COURSE.
8. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
9. NO STOCKPILING SHOULD OCCUR WITHIN THE 100 FOOT BUFFER ZONE.

**CONSTRUCTION SEQUENCE-EXTENDED SHUT DOWN ENTIRE LOT AND INDIVIDUAL LOTS**

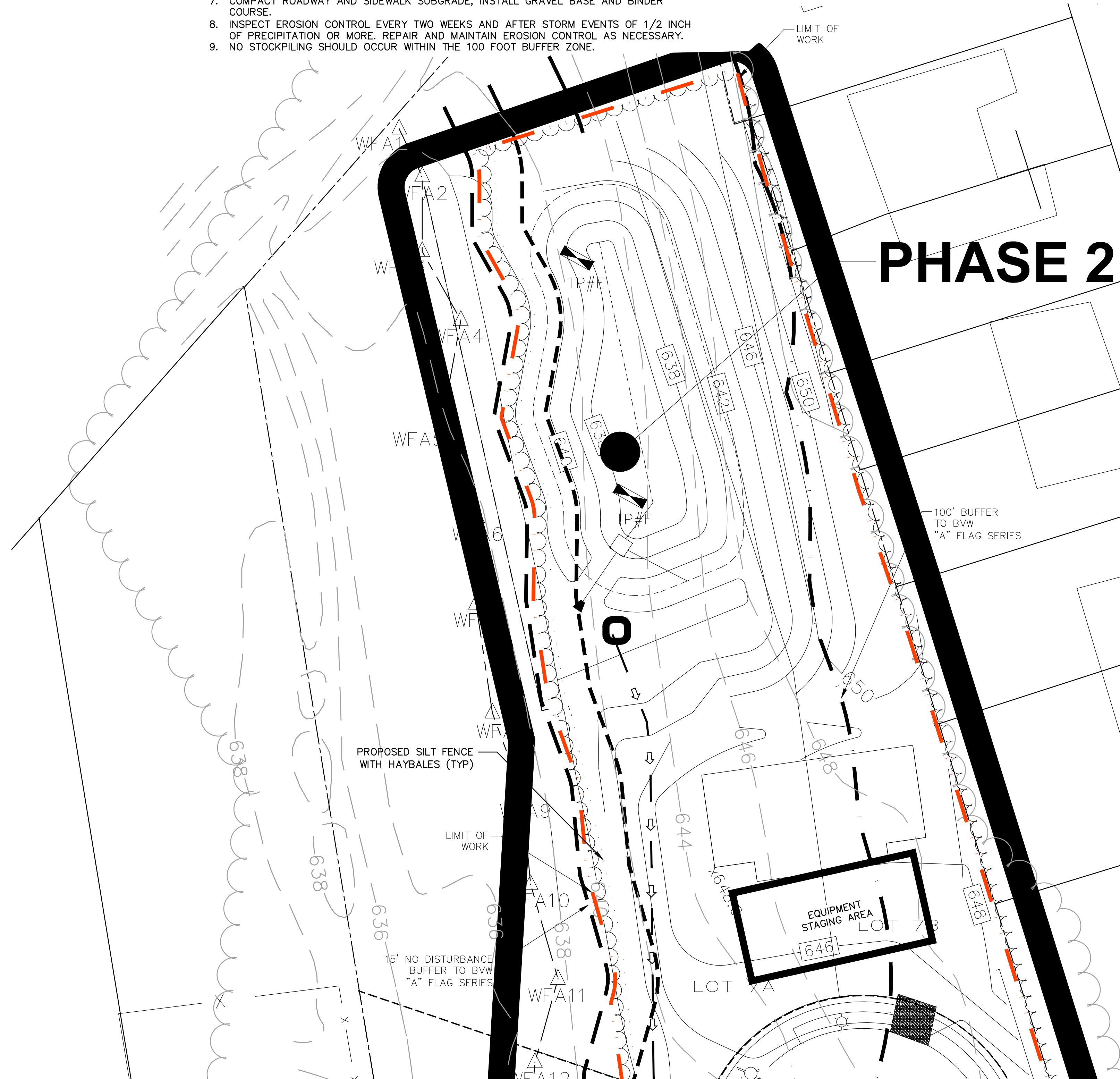
THE FOLLOWING SHOULD BE PERFORMED PRIOR TO AND DURING EXTENDED PERIOD WHERE CONSTRUCTION IS NOT UNDERWAY DUE TO WEATHER, ECONOMIC CONDITIONS OR OTHER FACTORS.

1. INSPECT AND REPAIR PERIMETER HAYBALE AND SILT FENCE EROSION CONTROL AND EROSION CONTROL BLANKETS.
2. PROVIDE LOAM AND SEED OR OTHER VEGETATIVE COVER OVER EXPOSED SOIL AREAS.
3. PROVIDE VEGETATIVE COVER OR TARPS OVER STOCKPILED SOILS AND ERODABLE MATERIALS.
4. PROVIDE COVER OVER DUMPSTER
5. INSPECT SITE ONCE PER WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS TO CONFIRM SEDIMENT AND EROSION CONTROL MEASURES ARE PERFORMING AS DESIGNED.

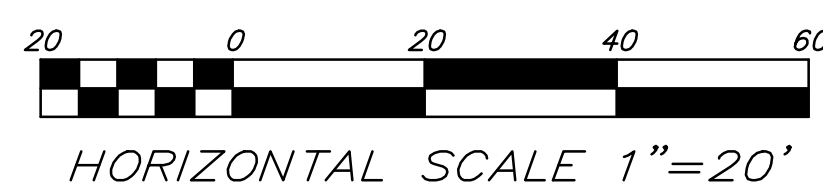


**EROSION AND SEDIMENTATION CONTROL NOTES**

1. THE METHODS AND MATERIALS SHOWN ON THESE DRAWINGS ARE MINIMUM REQUIREMENTS FOR EROSION AND SEDIMENTATION CONTROL. ACTUAL SITE CONDITIONS, SEASONAL OR CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS AS DIRECTED BY THE ENGINEER OR CITY OF WORCESTER AGENT.
2. AFTER EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE AND INSPECTED BY THE CITY, THE CONTRACTOR MAY STRIP SOILS AS REQUIRED. ALL STOCKPILED MATERIAL SHALL BE SUBJECT TO EROSION CONTROL DEVICES THAT SHALL INCLUDE A MINIMUM OF A SILT FENCE WITH HAYBALE SUPPORT. OTHER METHODS MAY INCLUDE STOCKPILE COVERS, MULCHING OR OTHER METHODS THAT PREVENT EROSION CONDITIONS.
3. ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
4. ALL PROPOSED SLOPES (EXCLUDING ANY RIPRAP SLOPES) STEEPER THAN 3:1 SHALL BE STABILIZED WITH A CURLEX EROSION CONTROL MATTING BY AMERICAN EXCELSIOR COMPANY (OR ENGINEER APPROVED EQUAL) AND PROTECTED FROM EROSION. ADDITIONALLY, THESE AREAS ARE TO BE HYDROSEED.
5. DURING BUILDING AND ROADWAY CONSTRUCTION, ALL SITE RUNOFF SHALL BE DIRECTED TOWARD TEMPORARY SEDIMENT BASINS BY MEANS OF TEMPORARY SWALES, DITCHES AND/OR WATER BARS, AS NECESSARY. NO RUNOFF SHALL BE ALLOWED TO EXIT THE SITE PRIOR TO TREATMENT FOR SEDIMENT REMOVAL.
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**PHASE 2: BUILDING, LANDSCAPING AND ROADWAY FINISH CONSTRUCTION:**

PHASE 2 WORK INCLUDES ROADWAY CONSTRUCTION ON CASTINE STREET, DANIELLE'S WAY STA 6+00 TO END, ASSOCIATED UTILITIES AND DRAINAGE INFRASTRUCTURE CONTINUED FROM PHASE 1 AND DWELLING CONSTRUCTION ON CASTINE STREET AND DANIELLE'S WAY. A MAXIMUM OF 4 BUILDINGS TO BE CONSTRUCTED AT ONCE. ADDITIONAL SITES TO BE OPENED ONLY ONCE THE STABILIZATION IS ESTABLISHED IN THE PRIOR UNITS. ACCESS WILL BE FROM CASTINE STREET AND DOWN THE NEWLY CONSTRUCTED PORTION OF DANIELLE'S WAY.

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5. PLANT STREET TREES AND ESTABLISH OTHER VEGETATION.
6. REMOVE TEMPORARY SEDIMENT BASINS AND SILT FENCE AND HAYBALES.
7. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
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**INDIVIDUAL LOT CONSTRUCTION:**

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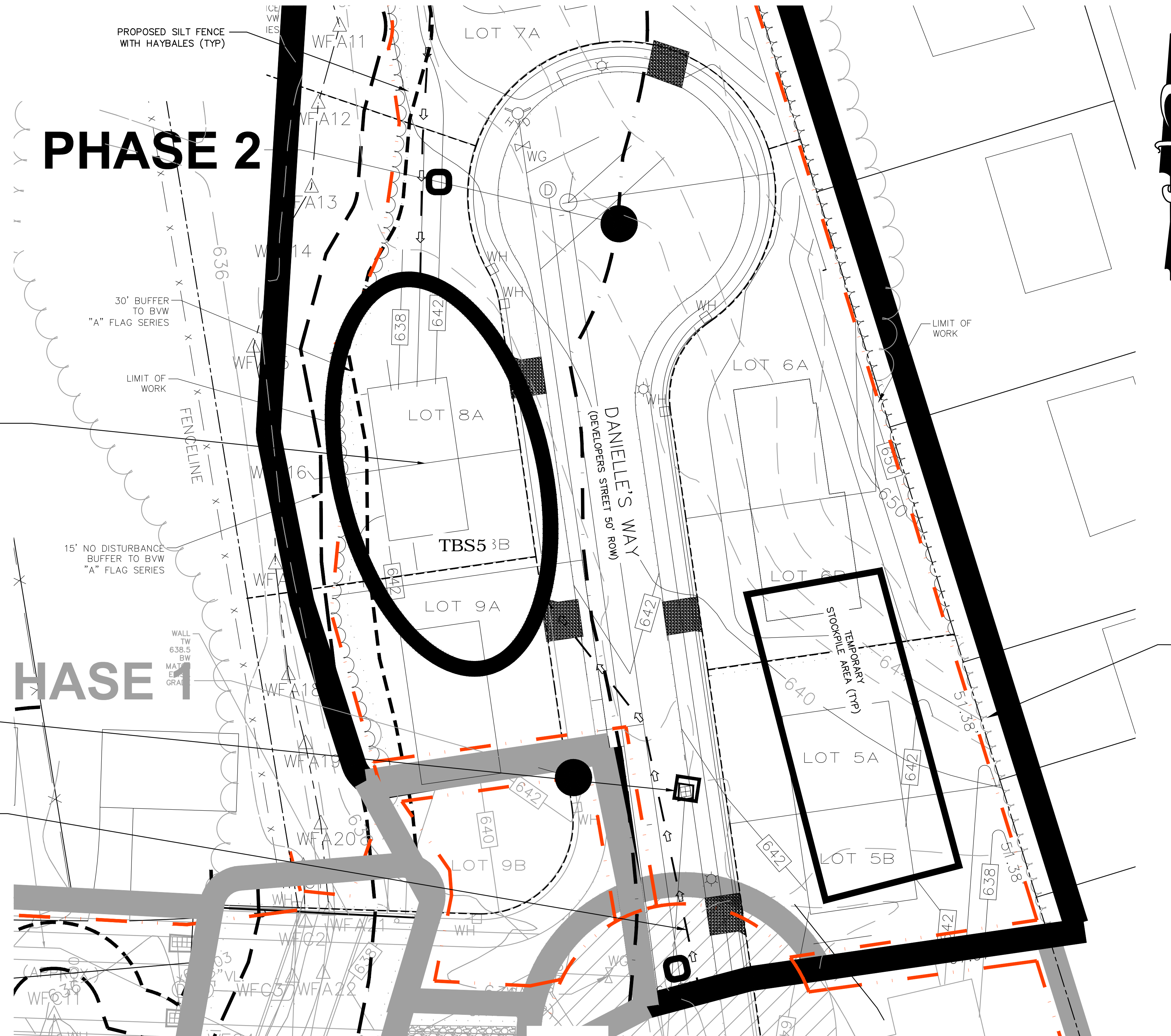
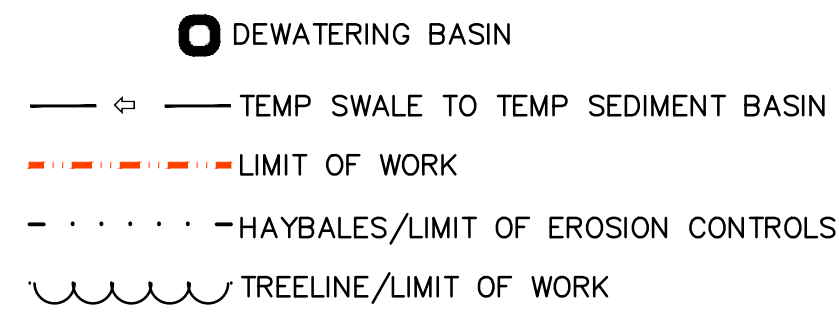
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**CONSTRUCTION SEQUENCE-EXTENDED SHUT DOWN -ENTIRE LOT AND INDIVIDUAL LOTS**

THE FOLLOWING SHOULD BE PERFORMED PRIOR TO AND DURING EXTENDED PERIOD WHERE CONSTRUCTION IS NOT UNDERWAY DUE TO WEATHER, ECONOMIC CONDITIONS OR OTHER FACTORS.

1. INSPECT AND REPAIR PERIMETER HAYBALE AND SILT FENCE EROSION CONTROL AND EROSION CONTROL BLANKETS.
2. PROVIDE LOAM AND SEED OR OTHER VEGETATIVE COVER OVER EXPOSED SOIL AREAS.
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4. PROVIDE COVER OVER DUMPSTER.
5. INSPECT SITE ONCE PER WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS TO CONFIRM SEDIMENT AND EROSION CONTROL MEASURES ARE PERFORMING AS DESIGNED.



**EROSION AND SEDIMENTATION CONTROL NOTES**

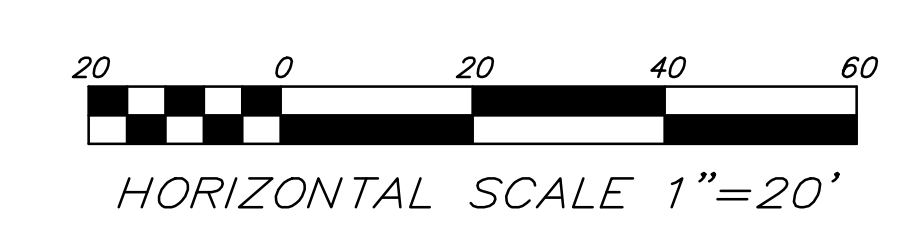
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3. ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
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11. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

TEMPORARY SEDIMENT BASIN (TBS5) BASIN TO DISCHARGE OVERLAND TOWARD PROPOSED DETENTION AREA OR WETLANDS (TYP) SIZED TO ACCOMMODATE DISTURBED AREA OF 87,946 SF \* 1"=7,300 CF VOLUME OF BASIN = 7,500 CF (AREA OF 2,500 SF\*3FT)

PROPOSED SILT SACKS IN CATCH BASIN (TYP)

GRADE TO DRAIN PROVIDE TEMPORARY SWALES AND BERMS (TYP)

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DWG NUMBER:	31c of 37	

**PHASE 3: CULVERT INSTALLATIONS**

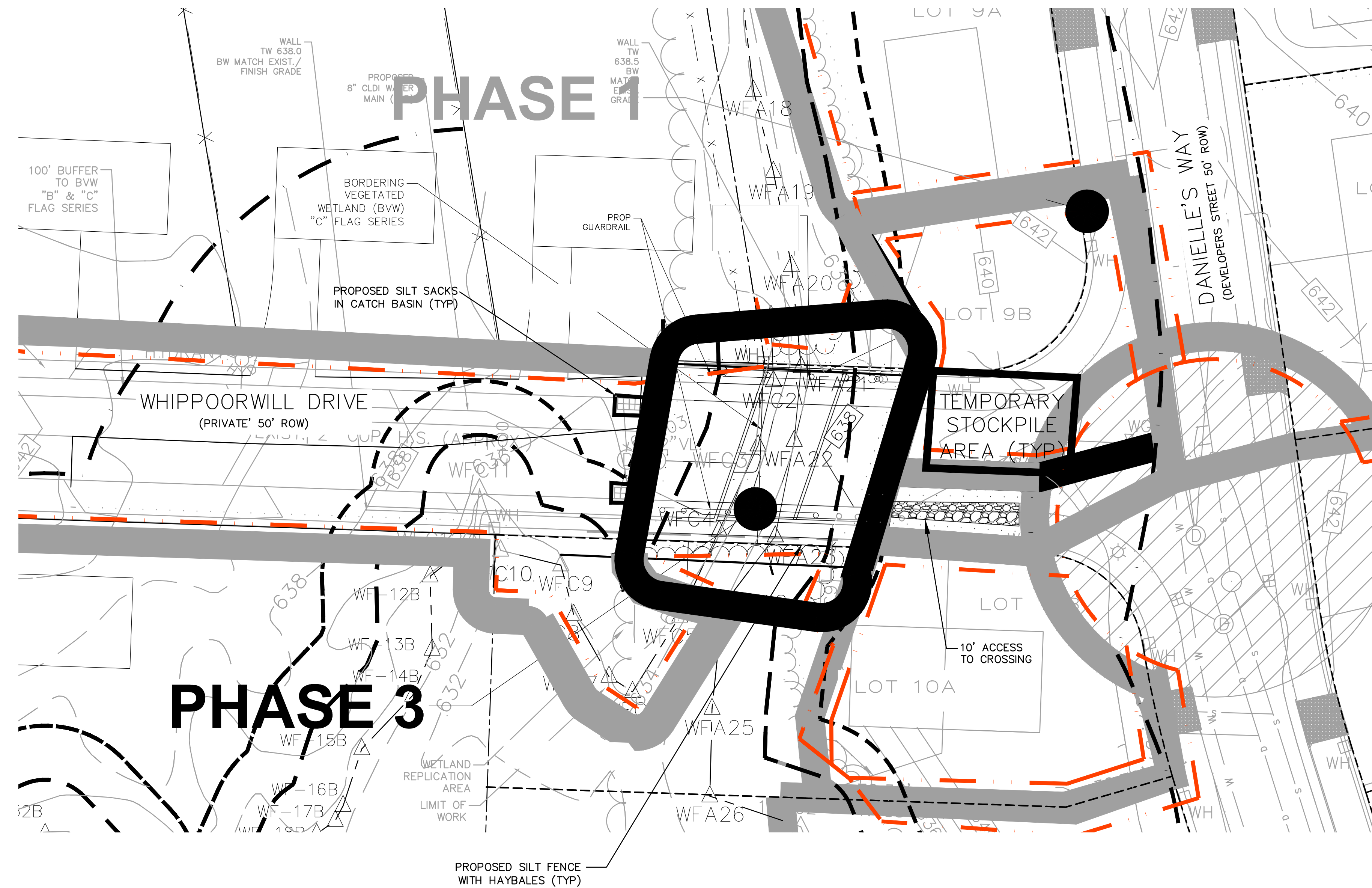
PHASE 3 WORK INCLUDES INSTALLATION OF THE CULVERT. THE CONSTRUCTION OF THE CULVERT WILL BE ACCESSED MAINLY FROM THE DANIELLE'S WAY SIDE OF THE STREAM WITH ROAD PLATES. ACCESS WILL BE FROM CASTINE STREET AND DOWN THE NEWLY CONSTRUCTED PORTION OF DANIELLE'S WAY.

**PHASE 3 CULVERT INSTALLATION PROCEDURE:**

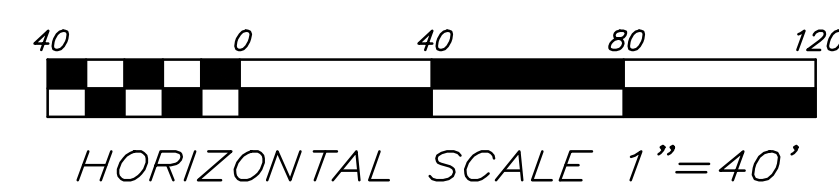
1. OWNER OR CONTRACTOR SHALL OBTAIN APPLICABLE PERMITS AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF WORCESTER.
2. INSTALL EROSION CONTROL BARRIERS & STAKE CROSSING. INSTALL HAYBALES OR SILTFENCE WITH STRAWBALES.
3. THE BOX CULVERT WILL THEN BE INSTALLED ON TOP OF CONCRETE FOOTINGS THAT WERE INSTALLED IN PHASE 1.
4. PLACE CULVERT SECTIONS WITH CRANE OR OTHER EQUIPMENT LOCATED IN UPLAND AREA.
5. INSTALL WATER LINE AT CULVERT.
6. INSTALL DRAINAGE PIPES AND STRUCTURES.
7. PLACE PAVEMENT AT CULVERT COORDINATE WITH PAVING ON WHIPPOORWILL DRIVE AND DANIELLE'S WAY.
8. LOAM AND SEED DISTURBED AREAS.
9. INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
10. REMOVE TEMPORARY EROSION CONTROL ONCE SITE IS STABILIZED.

**EROSION AND SEDIMENTATION CONTROL NOTES**

1. THE METHODS AND MATERIALS SHOWN ON THESE DRAWINGS ARE MINIMUM REQUIREMENTS FOR EROSION AND SEDIMENTATION CONTROL. ACTUAL SITE CONDITIONS, SEASONAL OR CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS AS DIRECTED BY THE ENGINEER OR CITY OF WORCESTER AGENT.
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3. ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
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9. CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES.
10. THE CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON-SITE FOR REUSE. SOIL STOCKPILES SHALL BE NO HIGHER THAN 8 FEET. STOCKPILES SHALL BE ENCLOSED BY HAYBALES AND SILT FENCE TO PREVENT TRAVEL OF SEDIMENT.
11. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.



PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
 75 HAMMOND STREET - 2ND FLOOR  
 WORCESTER, MASSACHUSETTS 01610-1723  
 PHONE: (508) 757-4944 FAX: (508) 752-8895  
 EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET



NOTE:  
 THE APPLICANT WILL PROVIDE AT NO COST TO THE CITY ALL FACILITIES SHOWN ON THE PLAN INCLUDING BUT NOT LIMITED TO ROADWAYS, CURBS, BOUNDS, DRAINAGE SYSTEMS, SANITARY SEWER SYSTEMS, UTILITIES, STREET LIGHTS AND EARTHWORKS, EXCEPT AS OTHERWISE NOTED.

MALDEN WOODS SUBDIVISION AMENDMENT  
 MALDEN WOODS  
 PHASE 3

OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760  
 APPLICANT:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 08/08/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: PUB	FLD. BK: 639-124
ZONE: RESIDENCE A	REV'D: DJT/HH	DWG: MALDENWOODS NOI REV1
JOB NUMBER:	SHEET NUMBER <b>32 of 37</b>	
DWG NUMBER:		

**PHASE 4: IMPROVEMENTS TO WHIPPOORWILL DRIVE**

PHASE 4 WORK INCLUDES ROADWAY RECONSTRUCTION ON WHIPPOORWILL DRIVE AND ASSOCIATED UTILITIES AND DRAINAGE INFRASTRUCTURE. CONSTRUCTION OF DWELLING UNITS NUMBER 9 & 10. ACCESS WILL BE FROM MALDEN STREET ONTO WHIPPOORWILL DRIVE.

- OWNER OR CONTRACTOR SHALL OBTAIN APPLICABLE PERMITS AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE CITY OF WORCESTER.
- INSTALL PHASE 3 EROSION CONTROL, STAKE OR FLAG EXISTING WETLANDS AND BUFFER ZONES AS REQUIRED, STAKE OR FLAG LIMIT OF WORK LINE.
- DEMOLISH AND REMOVE EXISTING PAVED AREAS FROM SITE AS NECESSARY.
- BEGIN ROADWAY PREPARATION FOR RECONSTRUCTION.
- ROUGH GRADE ROADWAY. STOCKPILE SOIL.
- INSTALL SUBSURFACE UTILITIES AND DRAINAGE STRUCTURES.
- COMPACT ROADWAY SUBGRADE, INSTALL GRAVEL BASE.
- RECONSTRUCT DRIVEWAY ENTRANCES IMPACTED BY CONSTRUCTION.
- INSTALL BINDER COURSE.
- INSTALL TOP COAT AND SIDEWALKS COORDINATE WITH PHASE 4 CULVERT INSTALLATION.
- LOAM AND SEED DISTURBED AREAS.
- INSPECT EROSION CONTROL EVERY TWO WEEKS AND AFTER STORM EVENTS OF 1/2 INCH OF PRECIPITATION OR MORE. REPAIR AND MAINTAIN EROSION CONTROL AS NECESSARY.
- REMOVE TEMPORARY EROSION CONTROL ONCE SITE IS STABILIZED.

**INDIVIDUAL LOT CONSTRUCTION:**

- INSTALL SILT FENCE AND HAYBALES AT LOTS PRIOR TO COMMENCING CONSTRUCTION ON THE LOT.
- MOVE TEMPORARY SEDIMENT BASINS AND TEMPORARY DIVERSION SWALES AS NECESSARY DURING CONSTRUCTION OF INDIVIDUAL LOTS.
- ROUGH GRADE INDIVIDUAL LOTS.
- EXCAVATE AND POUR FOUNDATIONS.
- CONNECT SERVICE UTILITIES, BEGIN FRAMING HOMES.
- FINISH GRADE LOTS AND LOAM AND SEED.
- REMOVE TEMPORARY EROSION CONTROL ONCE SITE IS STABILIZED.

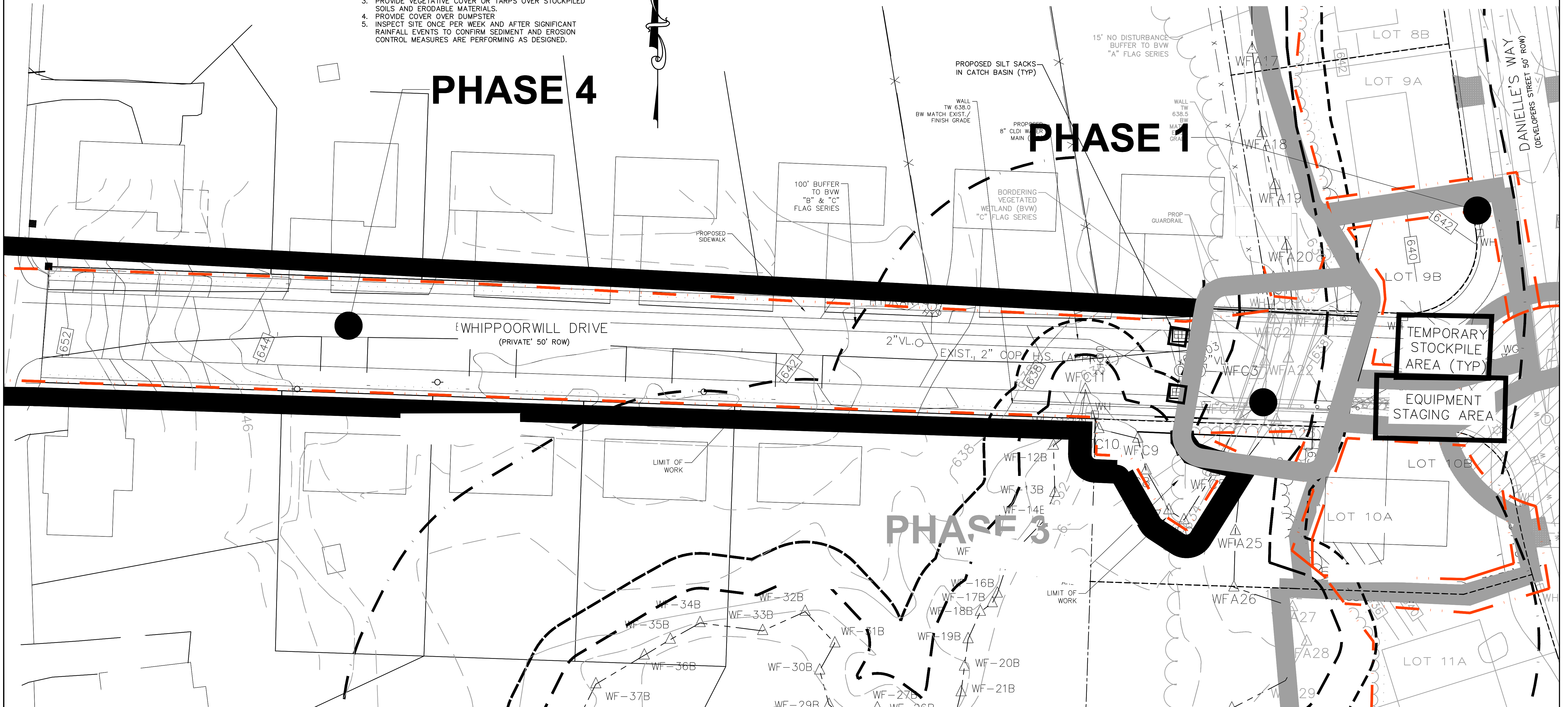
**CONSTRUCTION SEQUENCE-EXSTENDED SHUT DOWN ENTIRE LOT AND INDIVIDUAL LOTS**

THE FOLLOWING SHOULD BE PERFORMED PRIOR TO AND DURING EXTENDED PERIOD WHERE CONSTRUCTION IS NOT UNDERWAY DUE TO WEATHER, ECONOMIC CONDITIONS OR OTHER FACTORS.

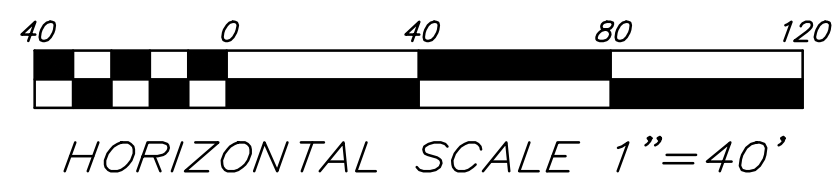
- INSPECT AND REPAIR PERIMETER HAYBALE AND SILT FENCE EROSION CONTROL AND EROSION CONTROL BLANKETS.
- PROVIDE LOAM AND SEED OR OTHER VEGETATIVE COVER OVER EXPOSED SOIL AREAS.
- PROVIDE VEGETATIVE COVER OR TARPS OVER STOCKPILED SOILS AND ERODABLE MATERIALS.
- PROVIDE COVER OVER DUMPSTER.
- INSPECT SITE ONCE PER WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS TO CONFIRM SEDIMENT AND EROSION CONTROL MEASURES ARE PERFORMING AS DESIGNED.

**EROSION AND SEDIMENTATION CONTROL NOTES**

- THE METHODS AND MATERIALS SHOWN ON THESE DRAWINGS ARE MINIMUM REQUIREMENTS FOR EROSION AND SEDIMENTATION CONTROL. ACTUAL SITE CONDITIONS, SEASONAL OR CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS AS DIRECTED BY THE ENGINEER OR CITY OF WORCESTER AGENT.
- AFTER EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE AND INSPECTED BY THE CITY, THE CONTRACTOR MAY STRIP SOILS AS REQUIRED. ALL STOCKPILED MATERIAL SHALL BE SUBJECT TO EROSION CONTROL DEVICES THAT SHALL INCLUDE A MINIMUM OF A SILT FENCE WITH HAYBALE SUPPORT. OTHER METHODS MAY INCLUDE STOCKPILE COVERS, MULCHING OR OTHER METHODS THAT PREVENT EROSION CONDITIONS.
- ALL DISTURBED SOILS NOT SUBJECT TO CONSTRUCTION SHALL BE IMMEDIATELY STABILIZED BY MULCHING OR TEMPORARY SEEDING.
- ALL PROPOSED SLOPES (EXCLUDING ANY RIPRAP SLOPES) STEEPER THAN 3:1 SHALL BE STABILIZED WITH A CURLEX EROSION CONTROL MATTING BY AMERICAN EXCELSIOR COMPANY (OR ENGINEER APPROVED EQUAL) AND PROTECTED FROM EROSION. ADDITIONALLY, THESE AREAS ARE TO BE HYDROSEEDED.
- DURING BUILDING AND ROADWAY CONSTRUCTION, ALL SITE RUNOFF SHALL BE DIRECTED TOWARD TEMPORARY SEDIMENT BASINS BY MEANS OF TEMPORARY SWALES, DITCHES AND/OR WATER BARS, AS NECESSARY. NO RUNOFF SHALL BE ALLOWED TO EXIT THE SITE PRIOR TO TREATMENT FOR SEDIMENT REMOVAL.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ONSITE AT ALL TIMES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE.
- ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL ALL DISTURBED SURFACES HAVE BEEN FULLY STABILIZED WITH VEGETATION.
- THE CONSTRUCTION ENTRANCE SHALL BE LOCATED AS SHOWN ON THE PLANS, OR AS FIELD DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES.
- THE CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON-SITE FOR REUSE. SOIL STOCKPILES SHALL BE NO HIGHER THAN 8 FEET. STOCKPILES SHALL BE ENCLOSED BY HAYBALES AND SILT FENCE TO PREVENT TRAVEL OF SEDIMENT.
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NOTE:  
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MALDEN WOODS SUBDIVISION AMENDMENT  
 MALDEN WOODS  
 PHASE 4  
 OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760  
 APPLICANT:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 08/08/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: PUB	FLD. BK: 639-124
ZONE: RESIDENCE A	REV'D: DJT/HH	DWG: MALDENWOODS NOI REV1
JOB NUMBER:	SHEET NUMBER <b>33</b> of <b>37</b>	
DWG NUMBER:		



HORIZONTAL SCALE 1"=40'

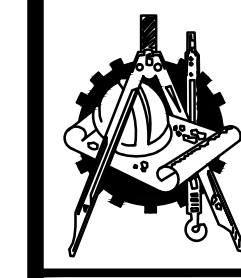
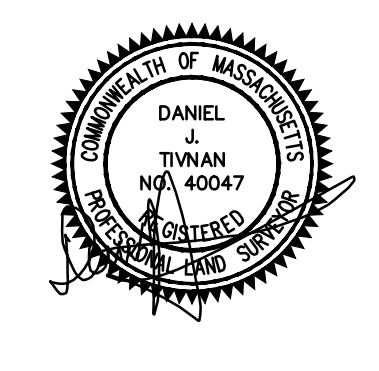
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PLAN REVISIONS:

NO.	DATE	DESCRIPTION	BY
12	06/11/2021	FINAL REVISIONS	ZC
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10	09/17/2020	CITY COMMENTS	LLW
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8	07/13/2020	CITY COMMENTS	LLW
7	06/16/2020	CITY COMMENTS	LLW
6	03/27/2020	CITY COMMENTS	LLW
5	11/17/19	CITY COMMENTS	LLW
4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	08/8/18	CITY COMMENTS	PJB

WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



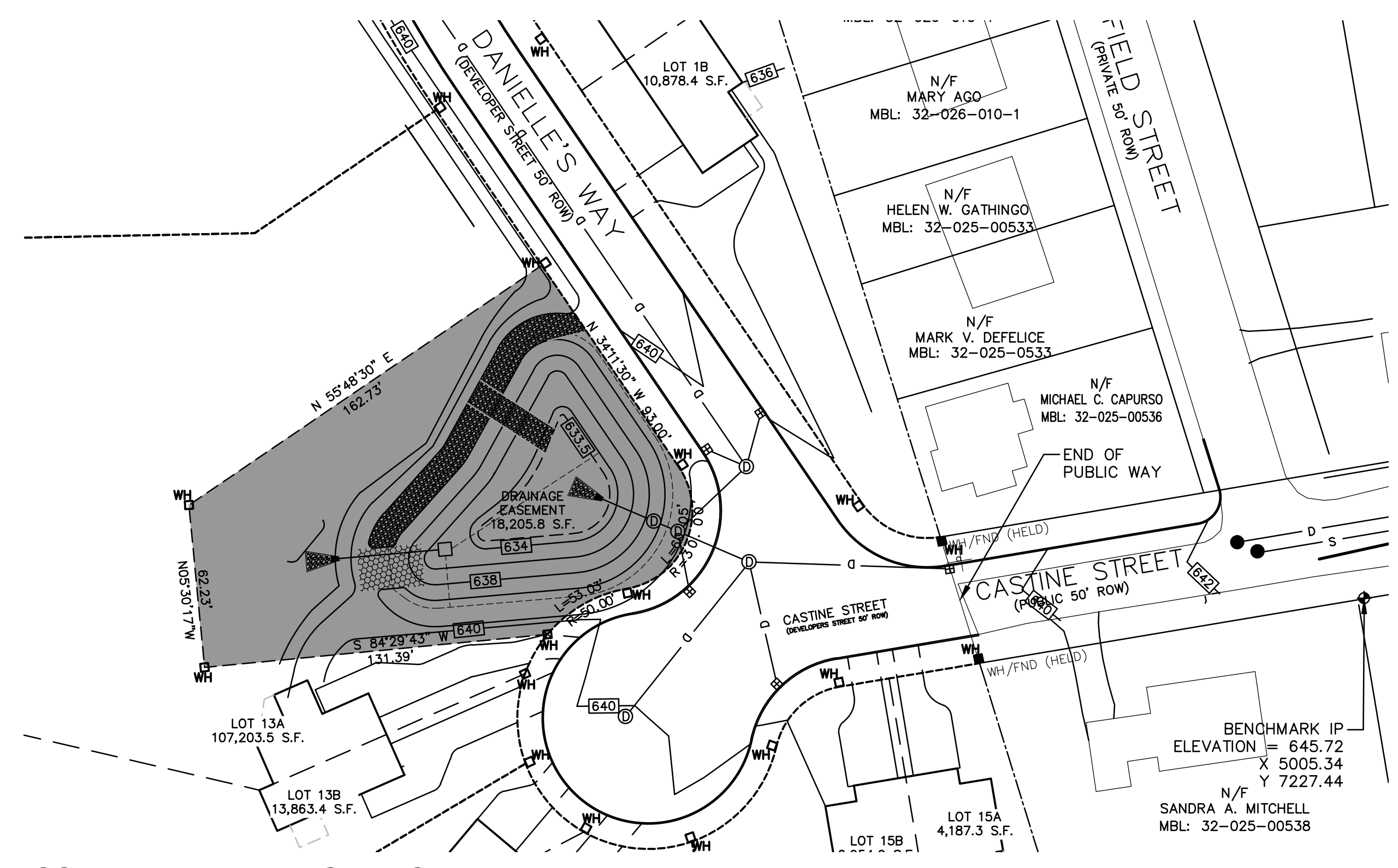
**H. S. & T. GROUP, INC.**  
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
WORCESTER, MASSACHUSETTS 01610-1723  
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**EASEMENT PLAN**

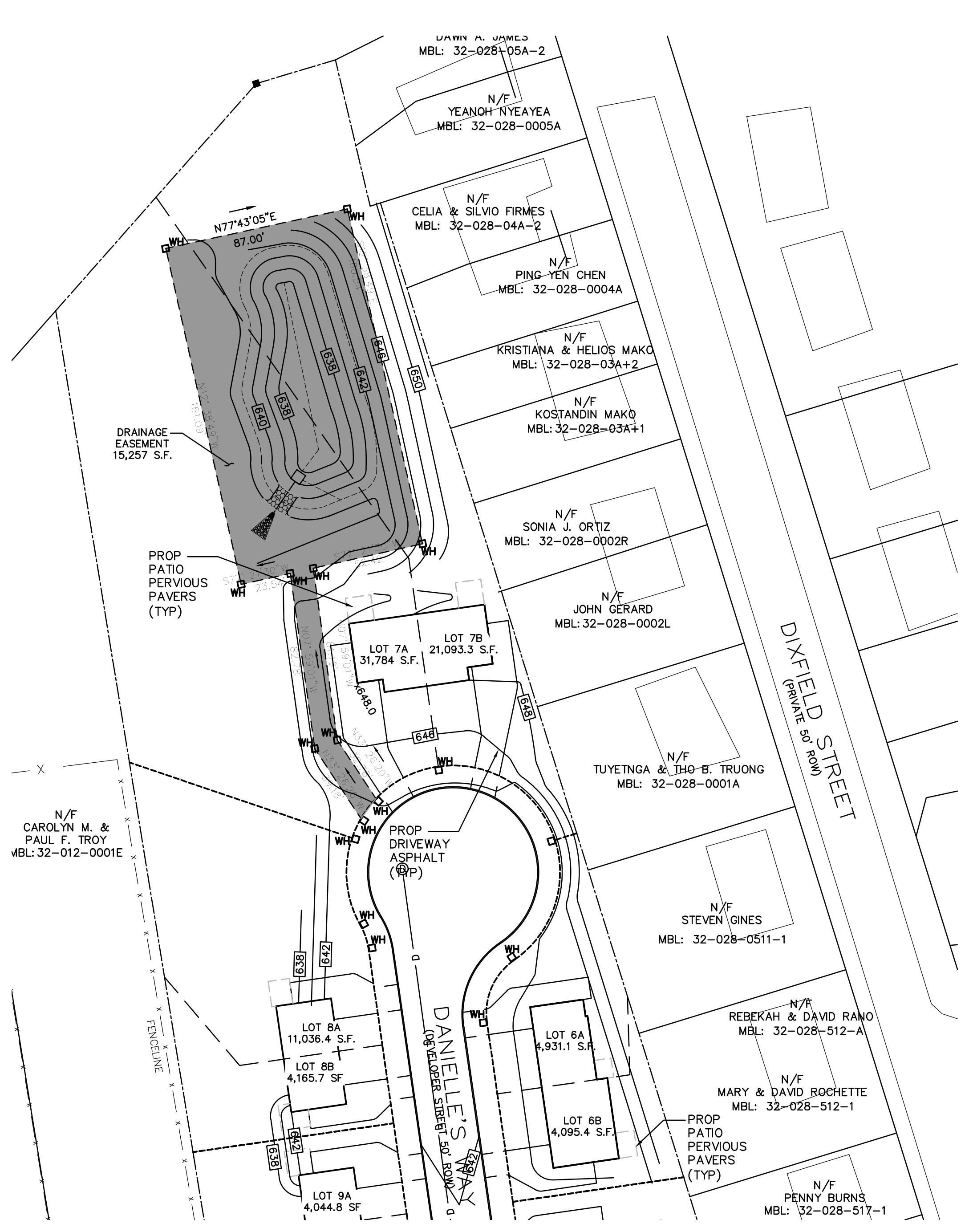
APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND	

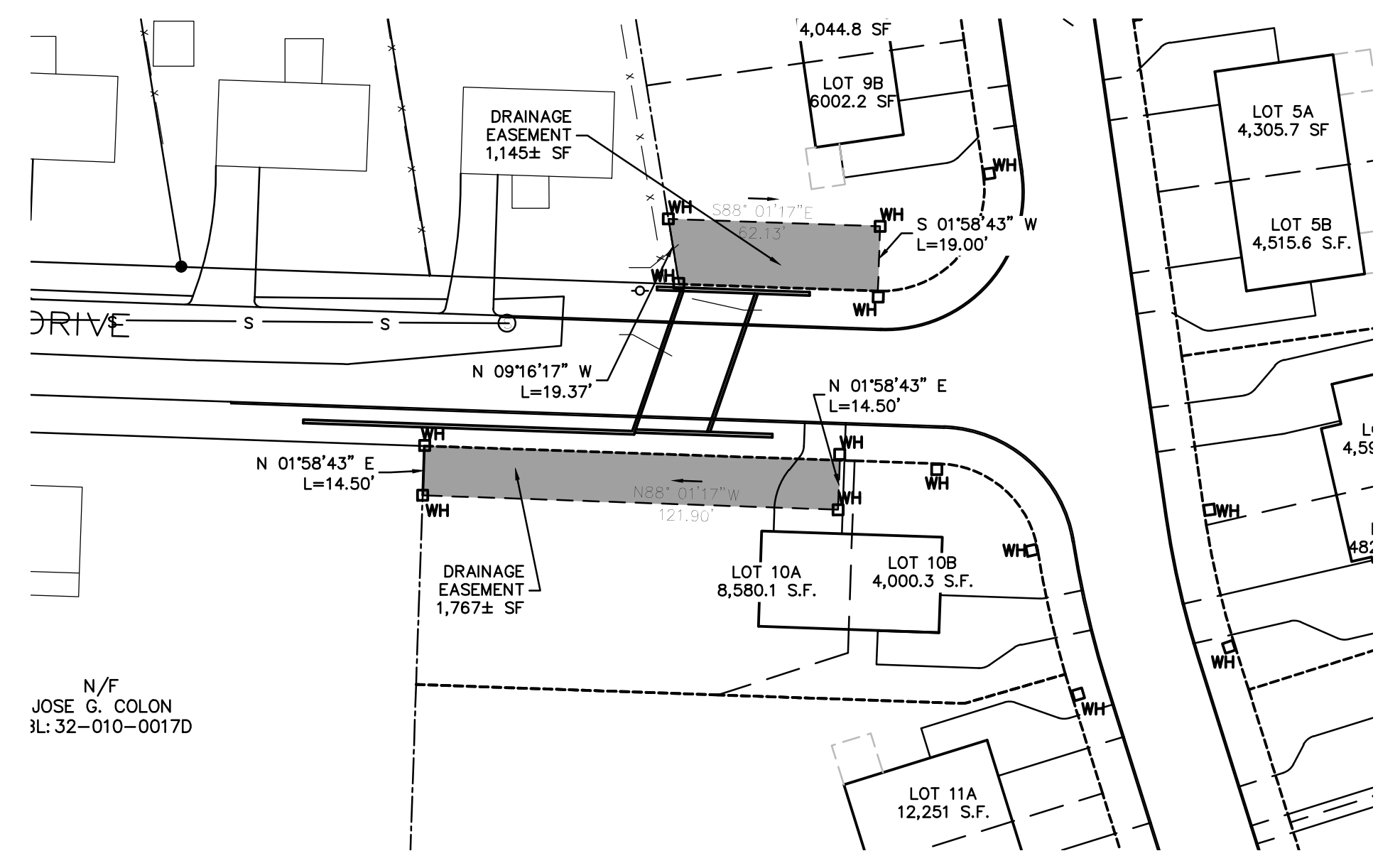
JOB NUMBER:	5956	SHEET NUMBER	34 OF 37
DWG NUMBER:	5004		



**SOUTHERN DETENTION BASIN**  
SCALE 1"=40'



**NORTHERN DETENTION BASIN**  
SCALE 1"=40'



**WETLAND CROSSING**  
SCALE 1"=40'



HORIZONTAL SCALE 1"=40'

NOTE:  
ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STANDARDS.

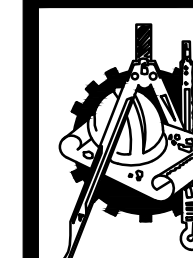
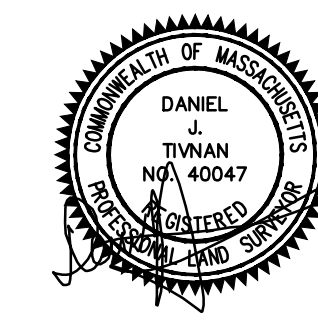
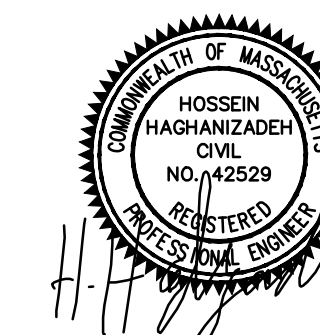
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9	8/17/2020	CITY COMMENTS	LLW
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4	04/18/18	CITY COMMENTS	LLW
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WORCESTER PLANNING BOARD APPROVED:

ENDORSED APPROVED DATE:



**H. S. & T. GROUP, INC.**  
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
75 HAMMOND STREET - 2ND FLOOR  
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PHONE: (508) 757-4944 FAX: (508) 752-8895  
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION  
AMENDMENT LIGHTING SHEET**

APPLICANT/OWNER:  
WHIPPOOR, LLC  
10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE:	11/1/2018	COMP'D:	DJT	FIELD:	PS
SCALE:	1"=80'	CAD:	STF	FLD. BK:	639-124
ZONE:	RL-7	REV'D:	HH	DWG:	MALDENWOODSUBAMEND
JOB NUMBER:	5956	SHEET NUMBER		35 OF 37	
DWG NUMBER:	5004				

Submitted by illuminate **illuminatE** Job Name: MALDEN WOODS Engineer: HSAT (Worcester) Catalog Number: ASL-24L-3K-210-2 Type: A

---

**AIRO LED SERIES** AREA/SITE/ROAD LIGHTER

**PRODUCT IMAGE(S)**

**DESCRIPTION**

• 2-pin ANSI C136A-0211 photocell receptacle option available for level lock photocells or wireless control modules (control accessories sold separately)

• 0-10V dimming leads available for use with control devices provided by others, must specify lead length

• In addition, AIRO can be specified with Sidelight™ wireless control system for reduction in energy and maintenance cost while improving light quality 24/7. See website information or visit www.hubbellighting.com/resources for more details.

**INSTALLATION**

• Tool-less entry to wiring/grease compartment

• Universal mounting back works with #2 drill pattern (See page 4 illustration)

• Fixture ships with drilled mounting back to accommodate wide range of drill patterns for easy retrofit opportunities (See page 4 illustration for dimensions)

• Must use filter accessory or option available for 2-3" LED brackets

**FINISH**

• TBC thermoplastic powder paint finish applied at minimum 2.5 mil thickness

**WARRANTY**

• Five year limited warranty (for more information visit: [www.hubbellighting.com/resources/warranty/](http://www.hubbellighting.com/resources/warranty/))

**LISTINGS**

• Listed to UL1598 and CSA C22.2#249.50-24 for wet locations and 40°C ambient temperature

• 30 rated for ANSI C136.31 high vibration applications

• P10 optical assembly

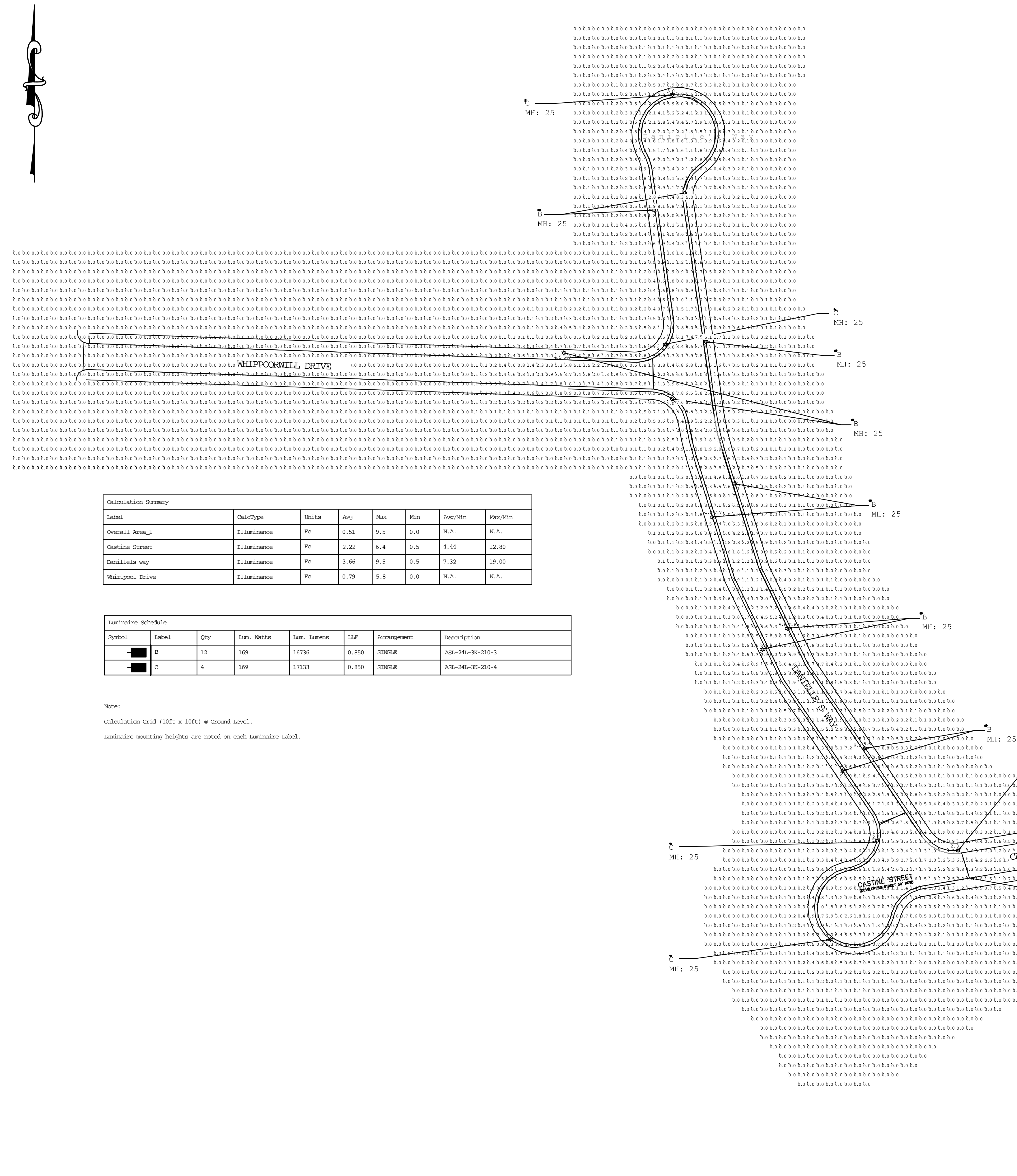
• DA approved

**CERTIFICATIONS/LISTINGS**

• ETL

**CONFIGURABLE ORDERING INFORMATION NEXT PAGE**

**Hubbell Outdoor Lighting**



Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Overall Area_1	Illuminance	Fc	0.51	9.5	0.0	N.A.	N.A.
Castine Street	Illuminance	Fc	2.22	6.4	0.5	4.44	12.80
Daniells way	Illuminance	Fc	3.66	9.5	0.5	7.32	19.00
Whirpool Drive	Illuminance	Fc	0.79	5.8	0.0	N.A.	N.A.

Luminaire Schedule

Symbol	Label	Qty	Lum. Watts	Lum. Lumens	LEF	Arrangement	Description
■	B	12	169	16736	0.850	SINGLE	ASL-24L-3K-210-3
■	C	4	169	17133	0.850	SINGLE	ASL-24L-3K-210-4

Note:  
Calculation Grid (10ft x 10ft) @ Ground Level.  
Luminaire mounting heights are noted on each Luminaire Label.

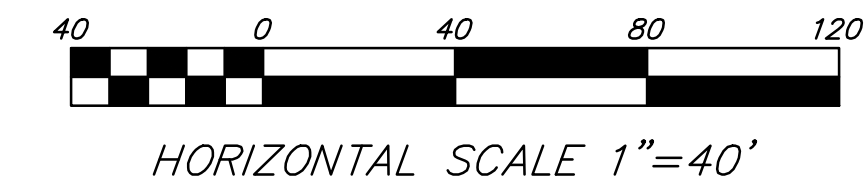
PLANTING TABLE				
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
	9	QUERCUS RUBRA	RED OAK	3" CALIPER
	10	PYRUS CALLERYANA	CLEVELAND PEAR	3" CALIPER
	13	QUERCUS PALUSTRIS	PIN OAK	3" CALIPER
	13	GLEDITSIA TRIACANTHOS	HONEY LOCUST	3" CALIPER
	6	PICEA ABIES	NORWAY SPRUCE	3" CALIPER

GRASS MIX    CAUVICHIO SEED MIX (RYE, PERENNIAL, & BLUEGRASS)    DROP SEED

PLANT LIST (FRONT BED PLANTINGS FROM THIS LIST) INKBERRY, SPIREA, PJM RHODODENDRON, JUNIPER SEA GREEN, AZALEA, HYDRANGEA

NOTE:  
 1. ALL LANDSCAPING MATERIALS TO BE PLANTED ON SITE SHALL BE ASIAN LONGHORNED BEETLE AND EMERALD ASH BORER RESISTANT SPECIES.  
 2. AS MUCH EXISTING VEGETATION SHALL BE MAINTAINED BETWEEN PROPOSED BUILDINGS AS POSSIBLE

- EXISTING TREELINE
- PROPOSED TREELINE
- WOODED AREA



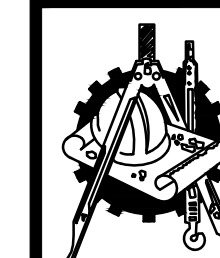
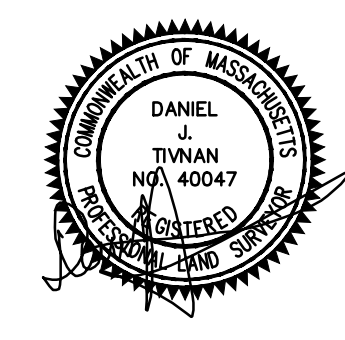
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4	04/18/19	CITY COMMENTS	LLW
3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	08/8/18	CITY COMMENTS	PJB
NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

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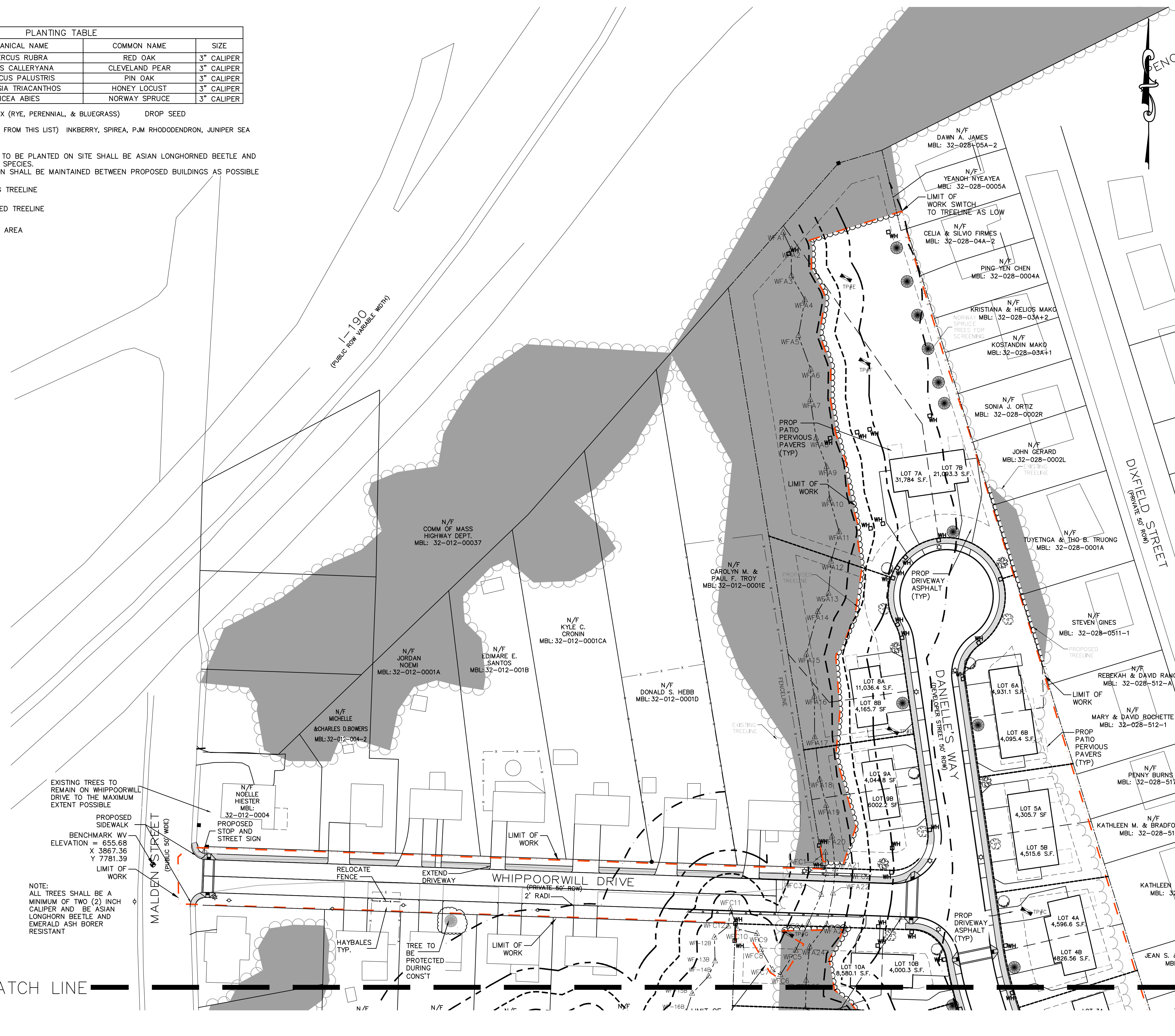


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**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 LANDSCAPE PLAN SHEET 1**

APPLICANT/OWNER:  
 WHIPPOORWILL, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD: PS
SCALE: 1"=40'	CAD: STF	FLD. BK: 639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND
JOB NUMBER: 5956	SHEET NUMBER 36 OF 37	
DWG NUMBER: 5004		



EXISTING TREES TO REMAIN ON WHIPPOORWILL DRIVE TO THE MAXIMUM EXTENT POSSIBLE

PROPOSED SIDEWALK  
 BENCHMARK WY  
 ELEVATION = 655.68  
 X 3867.36  
 Y 7781.39  
 LIMIT OF WORK

NOTE:  
 ALL TREES SHALL BE A MINIMUM OF TWO (2) INCH CALIPER AND BE ASIAN LONGHORN BEETLE AND EMERALD ASH BORER RESISTANT

MATCH LINE



PLANTING TABLE				
SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
	9	QUERCUS RUBRA	RED OAK	3" CALIPER
	10	PYRUS CALLERYANA	CLEVELAND PEAR	3" CALIPER
	13	QUERCUS PALUSTRIS	PIN OAK	3" CALIPER
	13	GLEDTISIA TRIACANTHOS	HONEY LOCUST	3" CALIPER
	6	PICEA ABIES	NORWAY SPRUCE	3" CALIPER

GRASS MIX CAVVICHIO SEED MIX (RYE, PERENNIAL, & BLUEGRASS) DROP SEED

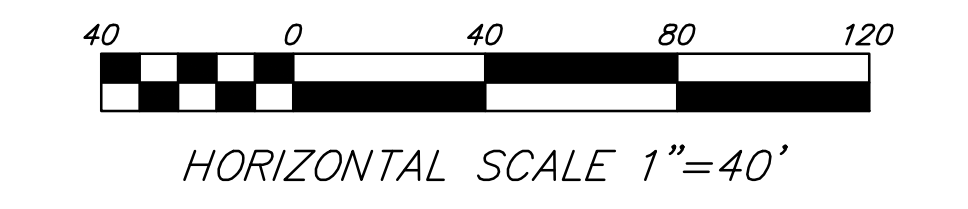
PLANT LIST (FRONT BED PLANTINGS FROM THIS LIST) INKBERRY, SPIREA, PJM RHODODENDRON, JUNIPER SEA GREEN, AZALEA, HYDRANGEA

NOTE:  
 1. ALL LANDSCAPING MATERIALS TO BE PLANTED ON SITE SHALL BE ASIAN LONGHORNED BEETLE AND EMERALD ASH BORER RESISTANT SPECIES.  
 2. AS MUCH EXISTING VEGETATION SHALL BE MAINTAINED BETWEEN PROPOSED BUILDINGS AS POSSIBLE.

EXISTING TREELINE

PROPOSED TREELINE

WOODED AREA



NOTE:  
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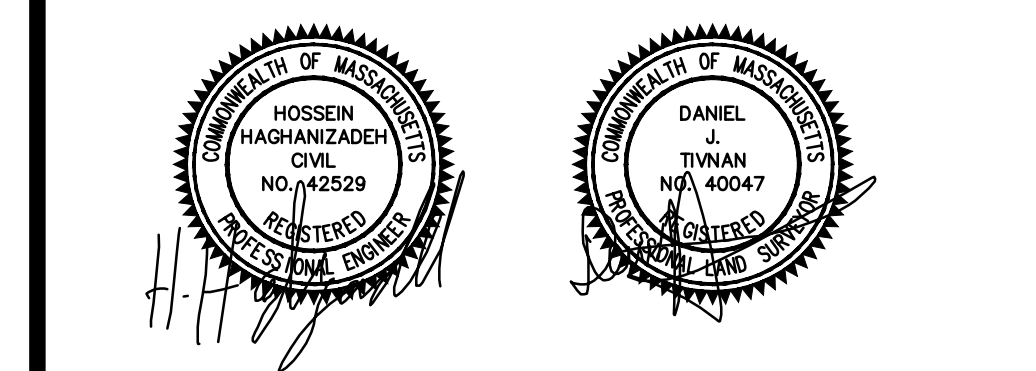
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3	11/1/18	CITY COMMENTS/NOI SUBMISSION	LLW
2	8/8/18	CITY COMMENTS	PJB
NO.	DATE	DESCRIPTION	BY

WORCESTER PLANNING BOARD APPROVED:

\_\_\_\_\_  
 \_\_\_\_\_  
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ENDORSED APPROVED DATE: \_\_\_\_\_



**H. S. & T. GROUP, INC.**  
 PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS  
 75 HAMMOND STREET - 2ND FLOOR  
 WORCESTER, MASSACHUSETTS 01610-1723  
 PHONE: (508) 757-4944 FAX: (508) 752-8895  
 EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

**MALDEN WOODS SUBDIVISION  
 AMENDMENT  
 LANDSCAPE PLAN SHEET 2**

APPLICANT/OWNER:  
 WHIPPOOR, LLC  
 10 UNION STREET, SUITE 3B, NATICK, MA 01760

DATE: 04/19/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: STF	FLD. BK:	639-124
ZONE: RL-7	REV'D: HH	DWG: MALDENWOODSUBAMEND	
JOB NUMBER: 5956	SHEET NUMBER 37 OF 37		
DWG NUMBER: 5004			