



**GENERAL CONSTRUCTION NOTES**

- THE MATERIALS AND CONSTRUCTION OF ALL PROPOSED UTILITIES SHALL CONFORM TO THE LOCAL D.P.W. STANDARDS AND SPECIFICATIONS AS WELL AS ALL APPLICABLE MASSDOT STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- ALL CONSTRUCTION METHODS AND MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHALL RECEIVE THE WRITTEN APPROVAL OF THE LOCAL D.P.W., AND THE PROJECT ENGINEER PRIOR TO FABRICATION AND INSTALLATION.
- THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATION AND THE BEST AVAILABLE RECORD INFORMATION AND ARE NOT WARRANTED TO BE EXACT. NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF ALL EXISTING LINES.
- THE CONTRACTOR SHALL CONTACT "BIG SAFE" AT 811, 72 HOURS PRIOR TO ANY EXCAVATION AND/OR SUBSURFACE TESTING TO INFORM THE UTILITY COMPANIES OF ANY EXCAVATION.
- WHENEVER EXISTING STRUCTURES ARE ENCOUNTERED, THE CONTRACTOR SHALL REPAIR ANY DAMAGED STRUCTURES OR REPLACE ANY REMOVED STRUCTURES, AND MAKE ANY IMPROVEMENTS ABOVE OR BELOW GRADE TO A CONDITION BETTER THAN OR EQUAL TO PRE-EXISTING CONDITIONS.
- ALL EXCAVATED MATERIAL DESIGNATED FOR REUSE SHALL BE STOCKPILED ON SITE NO HIGHER THAN 8 FEET AND SHALL BE ENCLOSED BY TEMPORARY SILT FENCES TO PREVENT TRAVEL OF SEDIMENT TO ADJACENT PROPERTIES OR DRAINAGE WAYS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL WASTE MATERIAL AT AN APPROVED LOCATION. BURNING OF WASTE MATERIAL ON SITE WILL NOT BE PERMITTED.
- EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND MAINTAINED IN GOOD CONDITION UNTIL SURFACE RESTORATION IS COMPLETE AND ALL AREAS DISTURBED BY THE CONTRACTORS OPERATIONS ARE STABILIZED.
- THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES FROM ON SITE CONSTRUCTION ACTIVITIES AND REMOVE ANY SEDIMENT OR DEBRIS DERIVED THEREON IMMEDIATELY.
- DRAINAGE GENERATED AS A RESULT OF TRENCH DEWATERING SHALL BE DISCHARGED TO EXISTING DRAINAGE COURSES WITH PROPER EROSION CONTROL AND DEWATERING MEASURES SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. DIRECT DISCHARGE ONTO PAVEMENT, WETLANDS OR PRIVATE PROPERTY SHALL NOT BE ALLOWED WITHOUT CONSENT OF THE PROJECT ENGINEER AND THE CONSERVATION COMMISSION.
- THE LOCAL D.P.W. AND THE PROJECT ENGINEER SHALL APPROVE ALL FIELD CHANGES IN THE WORK PRIOR TO IMPLEMENTATION. NO FIELD CHANGES SHALL BE MADE IN ANY SPECIFIED SITE WORK OR ANY MATERIALS FOR WHICH SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED WITHOUT PRIOR CONSULTATION OF THE OWNER AND THE PROJECT ENGINEER. ANY CHANGES SO MADE WITHOUT THE CONSENT OF THE OWNER AND THE PROJECT ENGINEER SHALL BE DEEMED UNACCEPTABLE BY EITHER PARTY, BE PROMPTLY REMOVED FROM THE WORK AT NO EXPENSE TO THE OWNER OF THE PROJECT.
- ANY WORK OR MATERIALS NOT MEETING THE APPROVED STANDARDS AND SPECIFICATIONS OF THE LOCAL D.P.W. SHALL BE IMMEDIATELY REMOVED AND REPLACED AT THE FULL RESPONSIBILITY AND COST/EXPENSE TO THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SITE PREPARATION, THE COORDINATION AND INSTALLATION OF ALL UTILITY CONNECTIONS, AND RELATED WORK INCLUDING BUT NOT LIMITED TO ALL NECESSARY SHORING, BRACING AND TRENCH DEWATERING FOR THE COMPLETE INSTALLATION OF THE PROJECT FACILITIES DURING CONSTRUCTION.
- SEE CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.
- ALL OPEN EXCAVATIONS SHALL BE ADEQUATELY SAFEGUARDED IN STRICT ACCORDANCE WITH OSHA GUIDELINES AND TO THE SATISFACTION OF THE LOCAL POLICE DEPARTMENT. PROVISIONS FOR TEMPORARY BARRIERS, CAUTION SIGNS, LIGHTS AND OTHER MEANS TO PREVENT ACCIDENTS AND DAMAGE TO PROPERTY ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE SUITABLE AND OTHER CROSSINGS FOR ACCOMMODATING TRAVEL BY PEDESTRIANS AND WORKMEN. NO EXCAVATIONS SHALL REMAIN OPEN OVERNIGHT.
- NO TRENCH EXCAVATION WILL BE ALLOWED WITHOUT PROPER LOCAL PERMITS.
- UNLESS OTHERWISE SHOWN ON THESE PLANS, ANY AREAS DISTURBED BY THE CONTRACTORS SHALL BE RESTORED TO ITS PRE-EXISTING CONDITION.
- EXCEPT AS NOTED ON THESE PLANS, THERE SHALL BE NO CLEARING OF VEGETATION BEYOND THE SPECIFIED LIMIT OF WORK LINES.

**STORMWATER FACILITY OPERATION AND MAINTENANCE PLAN**

**NAME AND ADDRESS OF THE APPLICANT**

DAVID ANDRADE  
P.O. BOX 255  
19 OLD ONSET ROAD  
ONSET, MA 02558

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF ALL STORMWATER FACILITIES UNTIL SUCH TIME AS THE STORMWATER MANAGEMENT SYSTEM IS ACCEPTED BY THE OWNER. THEREAFTER THE OWNER SHALL BE RESPONSIBLE FOR THE PROPER INSPECTION AND MAINTENANCE OF THE STORMWATER FACILITIES IN ACCORDANCE WITH THIS OPERATION AND MAINTENANCE PLAN AS WELL AS THE CONTINUING CONDITIONS OF THE CERTIFICATE OF COMPLIANCE ON THE PROPERTY.
- ALL STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) INCLUDING THE CATCH BASINS, AND SUBSURFACE INFILTRATION SYSTEMS SHOULD BE INSPECTED AFTER EVERY MAJOR RAINFALL EVENT EXCEEDING 1.0-INCH IN THE FIRST 6 MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND CONSTRUCTION.
- THEREAFTER, REGULAR BMP INSPECTIONS SHOULD BE CONDUCTED ACCORDING TO THE FOLLOWING SCHEDULE:

BMP STRUCTURE	INSPECTIONS PER YEAR
DEEP SLUMP CATCH BASIN	2
OIL WATER SEPARATOR MANHOLES	4
LEACHING PITS	2
INFILTRATION BASIN	2
PROPRIETARY WATER QUALITY INLET	PER MANUFACTURER'S SPECIFICATIONS

- THE OWNER SHALL MAINTAIN AND SUBMIT TO THE CONSERVATION COMMISSION UPON REQUEST A BMP INSPECTION REPORT FOLLOWING EACH SITE INSPECTION AS RECOMMENDED ABOVE. THE BMP INSPECTION REPORT SHALL IDENTIFY THE DATE OF INSPECTION, THE NAME AND CONTACT NUMBER OF THE RESPONSIBLE PARTY, SPECIFIC STRUCTURES INSPECTED, SPECIFIC MAINTENANCE REQUIRED AND OBSERVATIONS AT A MINIMUM. INSPECTION REPORTS SHOULD ADDRESS THE FOLLOWING CONDITIONS WHERE APPLICABLE:

- EMBANKMENT SUBSIDENCE
- EROSION
- CRACKING OF CONTAINMENT BERM
- INLET/OUTLET CONDITIONS
- SEDIMENT ACCUMULATIONS
- SLOPE STABILITY

- ACCUMULATED SILT AND SEDIMENT SHOULD BE REMOVED AT LEAST ONCE A YEAR FOR DEEP SLUMP CATCH BASINS OR MORE FREQUENTLY IF ACCUMULATED DEPTH OF SEDIMENT EXCEEDS SIX INCHES.
- ALL REMOVED SEDIMENTS ARE TO BE PROPERLY DISPOSED OF AT A LOCATION TO BE APPROVED BY THE BOARD OF HEALTH, TRANSPORTATION AND DISPOSAL OF SEDIMENTS SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

- THE DRIVEWAY AND PARKING AREAS SHALL BE SWEEP AT LEAST TWICE PER YEAR.
- THE INFILTRATION BASIN AND ALL LANDSCAPED AREAS SHOULD BE INSPECTED FOR TRASH ON A MONTHLY BASIS. ANY ACCUMULATED TRASH, LITTER AND DISCARDED MATERIALS SHALL BE REMOVED.
- SNOW WILL BE STOCKPILED WITHIN AND AROUND AREAS WHICH DRAIN INTO THE STORMWATER MANAGEMENT SYSTEM WHEREVER PRACTICABLE. CATCH BASIN GRATES WILL BE CLEANED OF SNOW AND ICE AFTER ALL SNOWFALL EVENTS. THE DISCHARGE OF SNOW DIRECTLY INTO THE WETLAND RESOURCE AREAS WILL BE PROHIBITED.
- NO DISPOSAL OF MATERIALS WILL BE PERMITTED WITHIN THE ANY OF THE STORMWATER MANAGEMENT SYSTEM BMP'S. THIS PROHIBITION APPLIES TO TRASH, FILL MATERIAL, CONSTRUCTION DEBRIS, GRASS CLIPPINGS, COLLECTED LEAVES, AND CUT BRANCHES.

- THE EMBANKMENT, SIDE SLOPES, AND BOTTOM AREAS OF THE INFILTRATION BASIN SHALL BE MOWED AT LEAST TWICE ANNUALLY TO FACILITATE MAINTENANCE OF THE BASIN.
- AN OPERATION AND MAINTENANCE INSPECTION FORM SHALL BE DEVELOPED AND COPIES OF THE COMPLETED FORMS SHALL BE COMPILED BY THE OWNER. THESE FORMS SHALL BE AVAILABLE FOR REVIEW BY THE CONSERVATION COMMISSION UPON REQUEST.

- THE OWNER SHALL CONTRACT WITH A MAINTENANCE COMPANY ON AN ANNUAL BASIS THAT WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM. THE CONTACT INFORMATION FOR THIS COMPANY SHALL BE PROVIDED TO THE CONSERVATION COMMISSION FOR THEIR FILES.
- THE STORM WATER BMP'S WILL BE INSPECTED ANNUALLY DURING REGULARLY SCHEDULED MID-SUMMER LANDSCAPING AND WEEDING OPERATIONS FOR INVASIVE OR UNWANTED PLANTS. IF INVASIVE SPECIES ARE FOUND, THEY WILL BE PHYSICALLY UPROOTED AND REMOVED FROM THE AREA.

**INVASIVE SPECIES CONTROL PLAN (ISCP)**

THE OWNER WILL MONITOR THE EXTENDED DETENTION/INFILTRATION BASINS AND SEDIMENT FOREBAYS PURSUANT TO THE RECOMMENDATIONS OUTLINED IN THE USAGE DOCUMENT TITLED "NEW ENGLAND DISTRICT COMPELLATORY MITIGATION GUIDANCE DOCUMENT, PAGES 24-26 SECTION 4.F. INVASIVE SPECIES. DUE TO THE PROXIMITY OF THE EXTENDED DETENTION/INFILTRATION SYSTEM TO THE EXISTING BORDERING VEGETATED WETLAND, THE APPLICANT HAS CHOSEN A MECHANICAL CONTROL METHOD OF REMOVAL. INVASIVE SPECIES WILL BE REMOVED BY HAND (PULLING, MOWING OR EXCAVATING ON-SITE). NO CHEMICAL CONTROL WILL BE UTILIZED.

SPECIAL ATTENTION WILL BE GIVEN TO ASSURE THAT NONE OF THE FOLLOWING INVASIVE SPECIES POPULATE THE STORM WATER BMP'S: COMMON REED (PHRAGMITES AUSTRALIS), PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), SMOOTH AND COMMON BUCKTHORN (FRANGULA ALNUS, RHAMNUS CARTHAGINICA), RUSSIAN AND AUTUMN GLOVES (ELAEAGNUS ANGLUSTROJA AND E. UMBELLATA), MULTIFLORA ROSE (ROSA MULTIFLORA), REED CANARY-GRASS (PHALARIS ARUNDINACEA), AND JAPANESE KNOTWEED (FALLOPIA JAPONICA).

**EROSION & SEDIMENTATION CONTROL PROGRAM**

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL APPROVING AUTHORITY AND AS DIRECTED BY THE PROJECT ENGINEER.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL IF THE DISTURBANCE IS WITHIN 100 FEET OF A WETLAND RESOURCE AREA. THE DISTURBED AREAS SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY FORECASTED STORM EVENT.
- SEDIMENT BARRIERS (SILT FENCE, HAY BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE UPGRADIENT CONTRIBUTING DRAINAGE AREA. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8.0% AFTER OCTOBER 1ST.
- INSTALL SILT FENCE AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL IN EXCESS OF 1.0 INCH. SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT AND WHEN THE DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN THREE TO ONE (3 TO 1) UNLESS NOTED OTHERWISE.
- IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH OR DORMANT SEEDING TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUINOUS PROBLEMS.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
  - THE TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL BE PLACED TO A DEPTH OF FOUR (4) INCHES ON ALL LOAM AND SEED AREAS OR AS SPECIFIED ON THE DRAWINGS.
  - APPLY FERTILIZER AT A RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF. APPLY GRADED LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE OR 135 LB PER 1,000 SF.
  - THE DESIGN MIX FOR SEEDING SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE. THE SEED MIX SHALL BE INOCULATED WITHIN TWENTY-FOUR (24) HOURS, BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULUM FOR EACH VARIETY.

**LOAM AND SEED AREAS - MASSDOT SPEC M6.03.0**

TYPICAL	% BY WEIGHT
RED FESQUE	50
AMERICAN BLUEGRASS	30
DOMESTIC RYE	10
RED TOP LADINO	5
CLOVER	5
APPLICATION RATE	4.0 LBS./1000 SF.

- HAY OR STRAW MULCH SHALL BE LOOSELY SPREAD TO A UNIFORM DEPTH AT THE RATE OF 4.5 TONS PER ACRE EXCEPT OVER CERTAIN SELECTED SEEDED AREAS WHERE 2 TONS PER ACRE SHALL BE USED AS DIRECTED BY THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON HAY MULCH FOR WIND CONTROL.

- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED TO THE SATISFACTION OF THE LOCAL APPROVING AUTHORITY AND THE PROJECT ENGINEER.
- ADJACENT PROPERTIES WILL BE PROTECTED WITH HAY BALES AND/OR SILT FENCING INSTALLED AS SHOWN ON THE DRAWINGS. ADDITIONAL HAY BALES OR SAND BAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY.
- TEMPORARY HAY BALE EROSION CHECKS OR FILTER FABRIC GRATE INSERTS SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURE INLETS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION AND SATISFACTORY STABILIZATION OF DISTURBED AREAS, THE CONTRACTOR SHALL CLEAN ALL CATCH BASIN SUMPS AND DRAIN INVERTS.
- THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE OWNER OR APPLICANT.
- THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE APRIL 1ST THROUGH JUNE 15TH AND AUGUST 15TH THROUGH OCTOBER 31ST.
- STOCKPILES OF TOP SOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 1:1.

**MULCH AND MULCH ANCHORING**

MULCH LOCATION	MULCH	RATE (1,000 SF.)
MILD SLOPES LESS THAN 3:1	STRAW OR HAY	200 POUNDS
HIGH WIND VELOCITY AREAS	SHREDDED OR CHOPPED CORNSTALKS	200-275 POUNDS
MODERATE TO HIGH VELOCITY AREAS	ANCHORED STRAW OR HAY (1)	200 POUNDS
STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELISIOR MAT	AS REQUIRED
	JUTE MESH OR EXCELISIOR MAT	AS REQUIRED

(1) A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON HAY MULCH FOR WIND CONTROL.

**MULCH ANCHORING**

MULCH ANCHORING MAY BE ACCOMPLISHED WITH PEG AND TWINE (1 SQ. YD./BLOCK), MULCH NETTING (PER MANUFACTURERS SPECIFICATIONS), WOOD CELLULOSE FIBER (750 LBS./ACRE), OR CHEMICAL TACK (PER MANUFACTURERS SPECIFICATIONS).

**EROSION CONTROL NOTES DURING CONSTRUCTION**

- CONSTRUCTION ACTIVITY EXECUTED DURING THE WINTER CONSTRUCTION PERIOD BETWEEN NOVEMBER 1 THROUGH APRIL 1ST SHALL BE SUBJECT TO THE FOLLOWING ADDITIONAL REQUIREMENTS.
- WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY NOW EVENT.
- CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO AREA IN EXCESS OF ONE ACRE IS WITHOUT EROSION CONTROL PROTECTION.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
- BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE PERMITTED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDING AT A RATE OF 200 TO 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER.
- UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF HAY BALE/SAND BAG CHECK DAMS.
- BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, TRACK OR WOOD CELLULOSE FIBER. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS, AND FOR ALL OTHER SLOPES GREATER THAN 8%.
- MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
- ALL EROSION MITIGATION MEASURES SHALL BE IN PLACE PRIOR TO MAJOR CONSTRUCTION OR SOIL DISTURBANCE COMMENCING ON THE SITE.

**TRAFFIC MANAGEMENT NOTES**

- THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS OF ANY ROAD OPENING PERMIT TO ACCESS A PUBLIC WAY PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
- AS A SPECIAL CONDITION TO ANY ROAD OPENING PERMIT THE CONTRACTOR SHALL:
  - FURNISH ADEQUATE NOTICE TO LOCAL DPW, POLICE AND FIRE DEPARTMENTS, PUBLIC TRANSPORTATION AUTHORITIES, AND SCHOOL DISTRICTS OF ANY PROPOSED TRAFFIC MANAGEMENT PLAN INCLUDING, BUT NOT LIMITED TO, DETOURS, LANE CLOSURES, AND ALTERNATE ROUTES.
  - FURNISH, ERECT AND MAINTAIN TRAFFIC CONTROL DEVICES, AS REQUIRED BY THE LOCAL AUTHORITIES. THESE DEVICES SHALL INCLUDE: TRAFFIC CONTROL DEVICES INCLUDING LIGHTS, MARKINGS, BARRICADES, WARNING SIGNS, AND ALL OTHER SAFETY PRECAUTIONS NECESSARY TO PROTECT STREETS, SIDEWALKS, ACCESS TO ADJOINING PROPERTY, AND THE TRAVELING PUBLIC WITHIN THE AREA OF THE CONSTRUCTION.

**WATER MAIN CONSTRUCTION NOTES**

- THE EXACT LOCATION OF ALL PROPOSED PIPES, VALVES, FITTINGS, HYDRANTS, SERVICES, ETC. IS TO BE DETERMINED BY THE WAREHAM WATER DEPT. IN THE FIELD.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM VERTICAL CLEARANCE BETWEEN THE NEW WATER MAIN AND OTHER EXISTING UTILITIES OF AT LEAST (12) TWELVE INCHES OR AS DETERMINED BY THE WAREHAM WATER DEPT. IN THE FIELD.
- UNLESS SPECIFIED OTHERWISE, ALL WATER PIPES ARE TO BE LAID WITH A MINIMUM OF 5'-0" COVER.
- BENDS, TEES, AND HYDRANTS ARE TO BE BACKED WITH CONCRETE THRUST BLOCKS AND FITTED WITH METALGAL JOINT RESTRAINTS OR AS DIRECTED BY THE WAREHAM WATER DEPT.
- UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER THE NEW WATER MAINS SHALL PASS UNDER EXISTING UTILITIES AND DRAIN LINES.
- THE MATERIALS AND CONSTRUCTION OF ALL PROPOSED WATER MAINS & APPURTENANCES SHALL CONFORM TO ANS/AWWA SPECIFICATIONS AS WELL AS THE TOWN OF WAREHAM WATER DEPARTMENT RULES AND REGULATIONS LATEST EDITION, AND ALL APPLICABLE MASSDOT STANDARDS AND SPECIFICATIONS, LATEST EDITION.
- ALL CONSTRUCTION METHODS AND MATERIALS, AS WELL AS ALL MATERIAL SHOP DRAWINGS AND MANUFACTURERS DATA SHALL RECEIVE APPROVAL OF THE TOWN OF WAREHAM WATER DEPARTMENT PRIOR TO FABRICATION AND INSTALLATION.
- ALL COMPLETED SECTIONS OF THE PROPOSED SYSTEM SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH THE TOWN OF WAREHAM WATER DEPT. SPECIFICATIONS, AWWA C501, AND AWWA C800. ANY PORTION OF THE WORK NOT MEETING THE REQUIRED TESTING STANDARDS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- SAMPLING AND CHLORINATION TAPS SHALL BE A CORPORATION COCK INSTALLED IN THE MAIN WITH A COPPER TUBE AND CURB STOP ASSEMBLY AT 1000 FOOT INTERVALS. NO HOSE OR FIRE HYDRANT SHALL BE USED IN THE CALIBRATION OR COLLECTION OF SAMPLES. SAMPLING AND CHLORINATION POINTS MUST BE REVIEWED AND APPROVED BY THE WATER DEPARTMENT ENGINEER PRIOR TO DISINFECTIONS.
- THE WATER DEPARTMENT AND THE PROJECT ENGINEER SHALL APPROVE ALL FIELD CHANGES IN THE WORK PRIOR TO IMPLEMENTATION. NO FIELD CHANGES SHALL BE MADE IN ANY SPECIFIED SITE WORK OR ANY MATERIALS FOR WHICH SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED WITHOUT PRIOR CONSULTATION OF THE WATER DEPARTMENT AND THE PROJECT ENGINEER. ANY CHANGES SO MADE WITHOUT THE CONSENT OF THE WATER DEPARTMENT AND THE PROJECT ENGINEER SHALL BE DEEMED UNACCEPTABLE BY EITHER PARTY, BE PROMPTLY REMOVED FROM THE WORK AT NO EXPENSE TO THE OWNER OF THE PROJECT.
- ANY WORK OR MATERIALS NOT MEETING THE APPROVED STANDARDS AND SPECIFICATIONS OF THE WAREHAM WATER DEPARTMENT SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SITE PREPARATION, THE COORDINATION AND INSTALLATION OF ALL UTILITY CONNECTIONS, AND RELATED WORK INCLUDING BUT NOT LIMITED TO ALL NECESSARY SHORING, BRACING AND TRENCH DEWATERING FOR THE COMPLETE INSTALLATION OF THE PROJECT FACILITIES DURING CONSTRUCTION.
- PRIOR TO FINAL ACCEPTANCE OF THE WORK BY THE TOWN OF WAREHAM WATER DEPARTMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS AND/OR MODIFICATIONS DONE TO THE NEW SYSTEM FOR A PERIOD OF ONE YEAR AFTER THE WATER HAS BEEN PERMANENTLY TURNED ON.
- THE CONTRACTOR SHALL CONTACT THE TOWN OF WAREHAM WATER DEPARTMENT 24 HOURS PRIOR TO ANY EXCAVATION AND/OR SUBSURFACE TESTING.
- THE MAXIMUM JOINT DEFLECTION FOR DUCTILE IRON PIPE SHALL NOT EXCEED 5 DEGREES.

**TOWN OF WAREHAM WATER/FIRE DISTRICT GENERAL SPECIFICATIONS**

- WATER MAIN PIPING SHALL BE PVC PIPE PER C-900 INTEGRAL BELL GASKET JOINT CONFORMING TO ANS/AWWA SPECIFICATIONS LATEST EDITION AND THE TOWN OF WAREHAM WATER DEPARTMENT SPECIFICATIONS.
- FITTINGS SHALL BE DOUBLE CEMENT LINED, BUTYREN COATED COMPACT MECHANICAL JOINT DUCTILE IRON CONFORMING TO ANS A21.53/AWWA C153.
- TAPPING SLEEVES SHALL BE A FULL DIAMETER DUCTILE IRON MECHANICAL JOINT SLEEVE, AS MANUFACTURED BY AMERICAN FLOW CONTROL SERIES 2800 OR MUELLER H-815 OR APPROVED EQUAL.
- TAPPING VALVES SHALL CONFORM TO AWWA C-515, OPEN LEFT, AND IN ADDITION SHALL HAVE ONE SIDE FLANGED AND ONE SIDE MECHANICAL JOINT, AS MANUFACTURED BY AMERICAN FLOW CONTROL, OR MUELLER OR APPROVED EQUAL.
- HYDRANTS SHALL CONFORM TO AWWA C-502, OPEN LEFT, AND SHALL BE FROM ONE OF THE FOLLOWING ACCEPTABLE MANUFACTURERS:
  - MUELLER SUPER CENTURION 250
- HYDRANTS SHALL BE DRY BARREL CONSTRUCTION, WITH A HYDRANT VALVE OPENING OF 7-INCHES. HYDRANT INLET CONNECTIONS SHALL HAVE 5-1/2 FOOT DEPTH OF BURY WITH MECHANICAL JOINTS FOR 6-INCH CAST IRON PIPE. THE HYDRANTS SHALL BE DESIGNED SO THAT ANY INCREASE IN DEPTH OF BURY CAN BE ACCOMPLISHED BY INSERTING THE NECESSARY EXTENSION ACCESSORIES AT THE GROUND LINE FLANGE. NOZZLE THREADS SHALL BE NATIONAL STANDARD.
- UNLESS OTHERWISE SPECIFIED THE MINIMUM SERVICE PIPE DIAMETER SHALL BE 1-INCH.
- WATER SERVICE TUBING SHALL BE CTS POLYETHYLENE (HDPE) W.P. 200. P.S.I. MINIMUM CONFORMING TO AWWA C901.
- THE WATER SERVICE MUST BE INSPECTED BY THE TOWN OF WAREHAM WATER DEPARTMENT PRIOR TO BACKFILLING.
- CURB STOPS SHALL BE MUELLER STYLE WITH COMPRESSION CONNECTIONS, OPEN LEFT.
- EACH CURB STOP SHALL BE ACCOMPANIED BY A CURB BOX, NORTH AMERICAN BUFFALO STYLE WITH 36-INCH ROD, ADJUSTABLE TYPE, 2 PIECE, HEAVY PATTERN CONSTRUCTED OF CAST IRON AND PROVIDED WITH A CAST IRON COVER. THE CURB BOX COVER SHALL HAVE 2 HOLES, AND HAVE THE WORD "WATER" CAST IN THE TOP.
- CORPORATION STOPS SHALL OPEN LEFT AND SHALL BE MUELLER STYLE WITH TAPERED CC THREAD AND COMPRESSION PACK JOINT FOR CTS TUBING CONFORMING TO AWWA C800.
- RESTRAINED JOINTS MAY BE USED FOR THRUST RESTRAINT WITH THE THRUST BLOCKS. MECHANICAL JOINT RESTRAINT SHALL BE MEG-A-LUG TYPE AS MANUFACTURED BY EBAA IRON, SERIES 2100.
- RESILIENT SEAT GATE VALVES SHALL BE MECHANICAL JOINT, O-RING STEM SEALS, OPEN LEFT, AND SHALL MEET LATEST REVISIONS AWWA STANDARD C509.
- ALL WATER WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF WAREHAM SPECIFICATIONS AND REQUIREMENTS FOR WATER SYSTEM WORK IN THE EVENT OF A CONFLICT BETWEEN THESE PLANS AND THE TOWN SPECIFICATIONS, THE TOWN SPECIFICATIONS SHALL GOVERN.

**STORM DRAIN NOTES**

- UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPING SHALL BE ADS-N-12 SMOOTH WALL INTERIOR HDPE PIPE AS MANUFACTURED BY ADS, INC.
- ROOF DRAIN PIPING WITHIN 10 FEET OF BUILDING FOUNDATIONS AND SLABS SHALL BE CAST IRON PIPE (C.I.P.). REFER TO PLUMBING DRAWINGS BY C.A. CROWLEY FOR MATERIAL SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE PLUMBING CONTRACTOR AND PROVIDE ALL NECESSARY COUPLINGS, ADAPTER, ETC. TO CONNECT THE C.I.P. TO HDPE PIPE SECTIONS.
- SEDIMENT FOREBAYS MAY BE USED FOR CONTROL OF WATER DURING CONSTRUCTION WITH PROPER SILTATION CONTROLS TO ENSURE NO UNTREATED STORMWATER IS RELEASED INTO ANY WETLAND RESOURCE AREA OR WITHIN THE DETENTION/INFILTRATION STAGES OF THE STORMWATER BASINS.
- PRIOR TO FINAL ACCEPTANCE OF THE WORK BY THE TOWN, ALL DRAINAGE STRUCTURES AND SEDIMENT FOREBAYS SHALL BE CLEANED OF ALL SEDIMENTS AND DEBRIS.

**GENERAL ABBREVIATIONS**

ABAN.	ABANDON
ACOMP.	ASPHALT COATED CORRUGATED METAL PIPE
ADJ.	ADJACENT
APPROX.	APPROXIMATE
BD	BOTTOM OF CURB
BO	BOUND
BO CONC.	BOTTOM OF CONCRETE
BY	BY OTHERS
BM	BENCH MARK
BTM	BOTTOM OF WALL
CEM. CONC.	CEMENT CONCRETE
CCB	CAPE COO BERM CURB INLET
CI	CAST IRON PIPE
CH	CHANGE IN TYPE
CLR	CLEARANCE
CLF	CHAIN LINK FENCE
CLD	CEMENT LINED DUCTILE IRON
CMP	CORRUGATED METAL PIPE
CP	CORRUGATED PLASTIC PIPE
COND.	CONDUIT
CONV.	DUCTILE IRON PIPE
CR	DRIVEWAY
ELV. OR EL.	ELEVATION
EOP	EDGE OF PAVEMENT
ELE	EDGE OF TRAVELED WAY
EXST.	EXISTING
FL	FLARED END
F & C	FRAME AND COVER
F & G	FOUNDATION
FIN.	FOUND
FINO	FILLED WITH DEBRIS
FR	FRAMING
GRAN.	GRANITE
H.C.	HANDICAP
HH	HAND HOLE
HMA	HOT MIX ASPHALT
INDV.	HORIZONTAL
INVT	INVERT
LAB	LEAD BORROW
LAYOUT	LAYOUT
LO	LO
MAX.	MAXIMUM
MIN.	MINIMUM
MON.	MONUMENT
NC	NOT IN CONTRACT
NAD	NATIONAL GEODETIC VERTICAL DATUM
N/F	NOW OR FORMERLY
O.C.	ON CENTER
OH	OVERHEAD WIRE
PGL	PROPYLENE GRADE LINE
PROP.	PROPOSED
PVC	POLYVINYLCHLORIDE PIPE
PWMT	PAVEMENT
RELOC.	RELOCATED
R & D	REMOVE AND DISPOSE
R & R	REMOVE AND RESET
R & S	REMOVE AND STACK
REB.	REMODEL
REMO.	REMODEL
RET.	RETAIN
ROW	RIGHT OF WAY
SB	STONE BOUND/DRILL HOLE
SHLD.	SHOULDER
SIC	SLOPED GRANITE CURB
STATION	STATION
STL	STEEL
TEMP.	TEMPORARY BENCH MARK
TC	TOP OF CURB
TOS	TOP OF SLOPE
TSV & B	TAPPING SLEEVE, VALVE AND BOX
TY	TYPICAL
UC	UNDER CONSTRUCTION
USGS	U.S. GEOLOGICAL SURVEY
VCF	VERTICAL CURB
VERT.	VERTICAL
VOC	VERTICAL GRANITE CURB
WCR	WHEELCHAIR RAMP

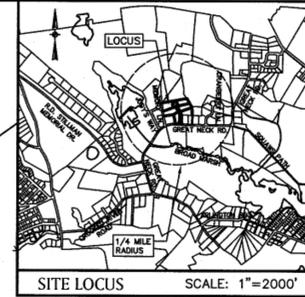
**EXISTING LEGEND**

---	PROPERTY LINE
---	TOPOGRAPHIC CONTOUR
CB/DH	CONCRETE BOUND/DRILL HOLE
CLF	CHAIN-LINK FENCE
WG	WATER GATE
DMH	DRAIN MANHOLE
CB	CATCH BASIN
DI	DROP INLET
HD	HYDRANT
SMH	SEWER MANHOLE
CMH	CATV MANHOLE
CHH	CATV HAND HOLE
TH	TELEPHONE HAND HOLE
EMH	ELECTRIC MANHOLE
EH	ELECTRIC HAND HOLE
LP	LIGHT POLE
TRMS	TRANSFORMER
FOB	FIBER OPTIC BOX
SB	SWITCH BOX
+	SOIL BORING LOCATION
+	TEST PIT LOCATION

**PROPOSED LEGEND**

---	PROPOSED INDEX CONTOUR
---	PROPOSED INTERMEDIATE CONTOUR
98.8	PROPOSED SPOT GRADE
---	PROPOSED PROPERTY LINE
■	PROPOSED MONUMENT
////	PROPOSED BUILDING
---	PROPOSED EDGE OF PAVEMENT
CURB TYPE	PROPOSED CURB
SIDEWALK TYPE	PROPOSED SIDEWALK
---	PROPOSED EDGE GRAVEL DRIVES
---	PROPOSED LIMIT OF CLEARING
---	PROPOSED FENCE LINE
---	PROPOSED WALL
---	PROPOSED SETBACK LINE
---	PROPOSED EASEMENT LINE
---	PROPOSED ZONING BOUNDARY
---	PROPOSED RIP RAP
---	PROPOSED SIGN POST
---	PROPOSED LIGHT POLE
---	PROPOSED UTILITY POLE
---	PROPOSED GUY POLE
CB	PROPOSED CATCH BASIN
DMH	PROPOSED DRAIN MANHOLE
SMH	PROPOSED SEWER MANHOLE
WMH	PROPOSED WATER MANHOLE
+	PROPOSED HYDRANT
+	PROPOSED WATER GATE VALVE
+	PRO





SITE LOCUS SCALE: 1"=2000' FOR REGISTRY USE ONLY

**GENERAL NOTES**

1. THE LOCUS AREA IS SHOWN ON THE TOWN OF WAREHAM ASSESSORS MAP AS PARCEL 1019 MAP 41. LOCUS DEED IS RECORDED IN THE PLYMOUTH COUNTY REGISTRY OF DEEDS IN BOOK 55547 PAGE 162.
2. LOTS 1 AND 2 ARE SUBJECT TO UTILITY/ACCESS EASEMENTS TO BE CONVEYED TO THE TOWN OF WAREHAM UPON THE ACCEPTANCE OF THE PROPOSED SUBDIVISION.
3. PROPERTY LINE INFORMATION HAS BEEN COMPILED FROM RECORD PLANS, DEEDS OF RECORD AND FROM AN ACTUAL ON THE GROUND SURVEY PERFORMED BY MADDIGAN LAND SURVEYING, LLC. IN SEPTEMBER 2021.
4. THIS PLAN AND THE ACCOMPANYING CERTIFICATIONS DO NOT CONSTITUTE A CERTIFICATION OF THE TITLE TO THE PROPERTY SHOWN HEREON. THE OWNER OF THE LOCUS AND ABUTTING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.
5. THE SUBJECT PARCEL IS LOCATED WITHIN A RESIDENCE 30 (R-30) ZONING DISTRICT AS DETERMINED BY THE OFFICIAL ZONING MAP OF THE TOWN OF WAREHAM, DATED 5/14/07.
6. A PORTION OF THE SUBJECT PARCEL IS LOCATED WITH A 100 YEAR FLOOD HAZARD ZONE AE (EL. 14.0) U.S.G.S. 1988 DATUM, AS DETERMINED BY FEMA MAP NO. 2502300493K DATED 7/6/2021 AND MAP NO. 2502300581K DATED 2/4/2014.
7. THE BOUNDARY OF THE WETLAND RESOURCE AREAS SHOWN HEREON HAS BEEN OBTAINED FROM RECORD MASSGIS MAPPING AND SHALL BE CONSIDERED APPROXIMATE FOR BUFFER ZONE PURPOSES ONLY. THERE ARE NO WETLAND RESOURCE AREAS ON THE SUBJECT PARCEL.
8. NO DWELLING WILL BE CONSTRUCTED ON ANY LOT WITHOUT FIRST SECURING FROM THE BOARD OF HEALTH THE DISPOSAL WORKS CONSTRUCTION PERMIT REQUIRED BY TITLE V OF THE STATE ENVIRONMENTAL CODE.
9. LOTS 1-6 SHOWN HEREON WILL BE SERVICED BY TOWN WATER AND INDIVIDUAL ON-SITE SUBSURFACE SEWAGE DISPOSAL SYSTEMS.
10. BASED ON THE TOWN OF WAREHAM ARCGIS UTILITY MAPPING, THERE IS NO TOWN SEWER WITHIN 1,500 FEET OF THE SUBJECT PARCEL.

**R-30 DISTRICT DIMENSIONAL REQUIREMENTS**

**LOT DIMENSION TABLE**

MINIMUM AREA	30,000 SQUARE FEET
MINIMUM FRONTAGE	150 FEET
MINIMUM FRONT YARD SETBACK	20 FEET
MINIMUM SIDE YARD SETBACK	10 FEET
MINIMUM REAR YARD SETBACK	10 FEET
MAXIMUM LOT COVERAGE	25%

**NAME AND ADDRESS OF OWNER/APPLICANT**

DAVID ANDRADE  
P.O. BOX 255  
19 OLD ONSET ROAD  
ONSET, MA 02558

**PLAN REFERENCES:**

- BOOK 2575 PAGE 221
- PLAN BOOK 42 PAGE 712
- PLAN BOOK 29 PAGE 144
- PLAN BOOK 48 PAGE 489
- PLAN BOOK 51 PAGE 78
- PLAN BOOK 49 PAGE 985
- PLAN BOOK 49 PAGE 986
- PLAN BOOK 65 PAGE 55
- COUNTY COMMISSIONERS PLAN BOOK 7 PAGE 533

PLANS SUBJECT TO COVENANTS, CONDITIONS AND RESTRICTION SET FORTH IN A COVENANTS(S) DATED TO BE RECORDED HERewith. DECLARATION OF RESERVED EASEMENTS TO BE RECORDED HERewith.

I HEREBY CERTIFY THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

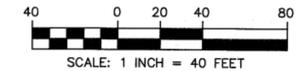
*David Andrade* 10-07-21  
PROFESSIONAL LAND SURVEYOR DATE

WAREHAM PLANNING BOARD  
APPROVAL UNDER SUBDIVISION CONTROL LAW IS REQUIRED

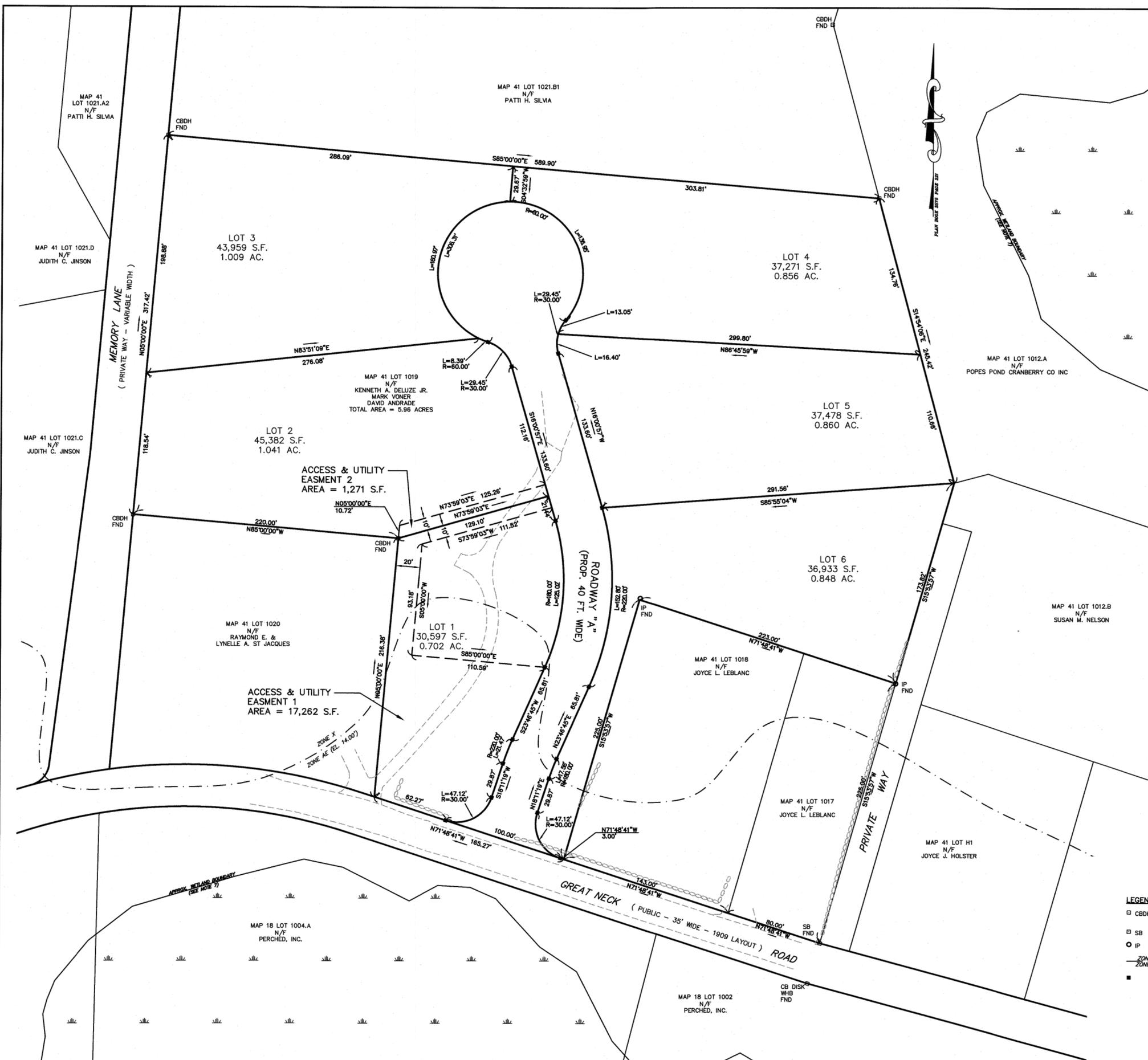
DATE APPROVED: \_\_\_\_\_  
DATE ENDORSED: \_\_\_\_\_

I HEREBY CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE THE NOTICE OF APPROVAL FROM THE PLANNING BOARD WAS RECEIVED AND RECORDED AND NO NOTICE OF APPEAL HAS BEEN FILED IN THIS OFFICE.

TOWN CLERK, WAREHAM, MA DATE



- LEGEND**
- CBDH CONCRETE BOUND WITH DRILL HOLE FOUND
  - SB STONE BOUND FOUND
  - IP IRON PIPE FOUND
  - ZONE X ZONE AE 100 YEAR FLOOD BOUNDARY (SEE NOTE 5)
  - CONCRETE BOUND TO BE SET



Revisions

No.	Description	Date	Appr.

Date 10/7/2021

Scale 1"=40'

Drawn By RMS Designed By KJM Checked By RMF

Issued For PERMITTING

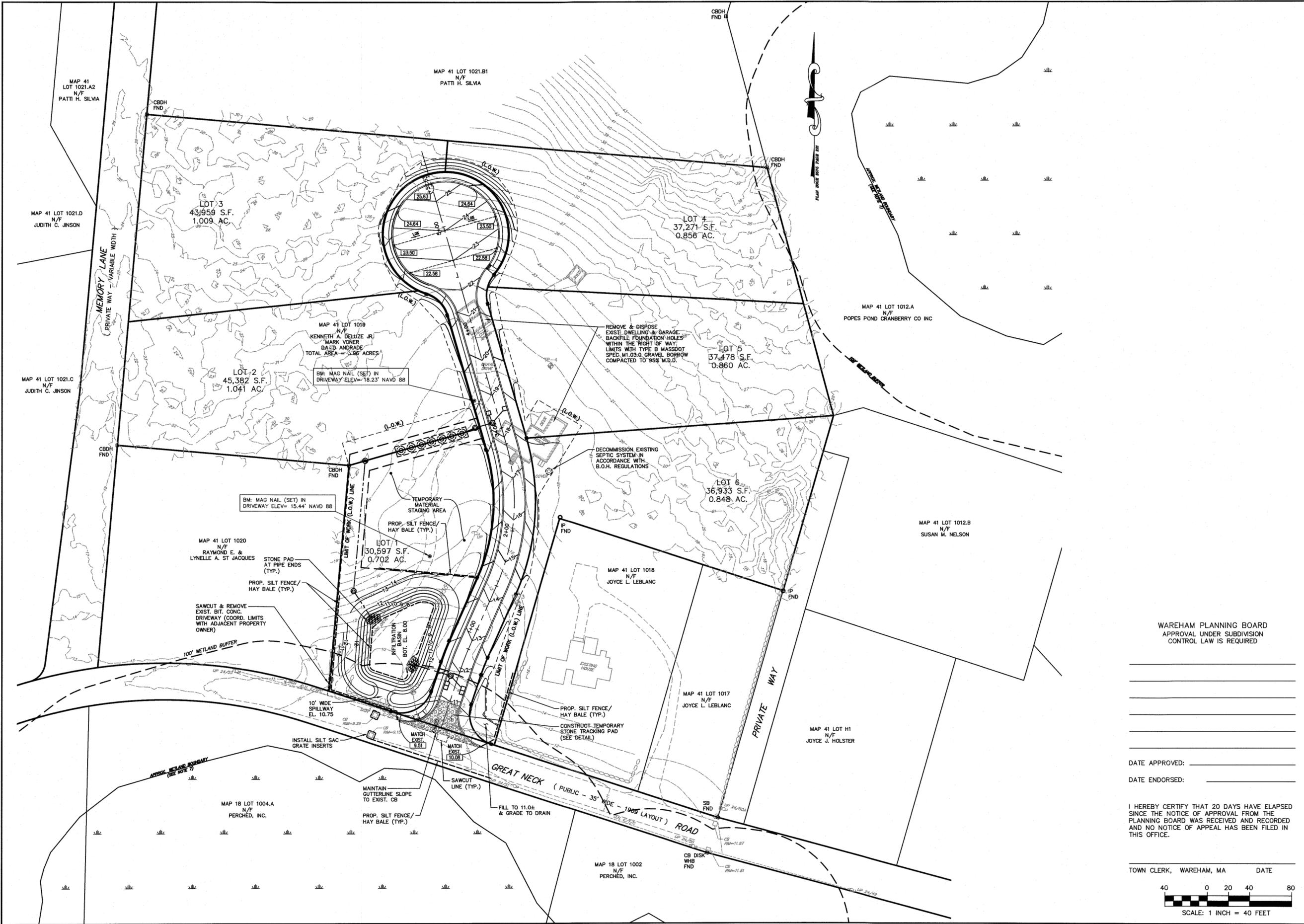


DEFINITIVE SUBDIVISION PLAN OF LAND  
SHELL POINT PLACE  
DAVID ANDRADE  
69 GREAT NECK ROAD  
WAREHAM, MASSACHUSETTS

Drawing Title  
**LOTING PLAN**

Project No. 2443 Sheet 4 OF 8

Sheet No. **L-1**



**FIELD ENGINEERING CO., INC.**  
CONSULTING ENGINEERS

11D INDUSTRIAL DRIVE  
P.O. BOX 1178  
MATTAPAN, MA 02739  
TEL: (508) 758-2749  
FAX: (508) 758-2849

No.	Description	Date	Appr'd

Date: 10/7/2021

Scale: 1"=40'

Drawn By: RMS  
Designed By: KJM  
Checked By: RMF

Issued For: **PERMITTING**

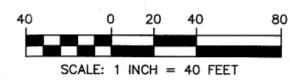


WAREHAM PLANNING BOARD  
APPROVAL UNDER SUBDIVISION  
CONTROL LAW IS REQUIRED

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

I HEREBY CERTIFY THAT 20 DAYS HAVE ELAPSED  
SINCE THE NOTICE OF APPROVAL FROM THE  
PLANNING BOARD WAS RECEIVED AND RECORDED  
AND NO NOTICE OF APPEAL HAS BEEN FILED IN  
THIS OFFICE.

TOWN CLERK, WAREHAM, MA DATE



**DEFINITIVE SUBDIVISION PLAN OF LAND**  
**SHELL POINT PLACE**  
**DAVID ANDRADE**  
 69 GREAT NECK ROAD  
 WAREHAM, MASSACHUSETTS

Drawing Title:  
**GRADING AND DRAINAGE**

Project No. 2443 Sheet 5 OF 8

Sheet No. **GD-1**



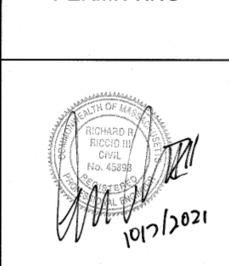
No.	Description	Date	Appr'd

Date: 10/7/2021

Scale: AS NOTED

Drawn By: RMS  
Designed By: KJM  
Checked By: RMF

Issued For: PERMITTING



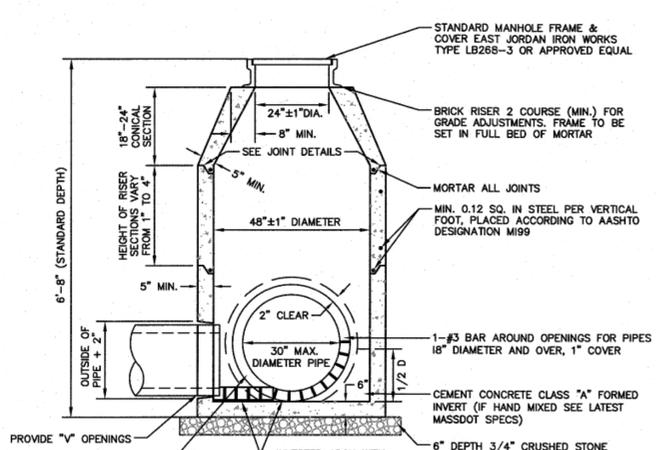
DEFINITIVE SUBDIVISION PLAN OF LAND  
SHELL POINT PLACE  
DAVID ANDRADE  
69 GREAT NECK ROAD  
WAREHAM, MASSACHUSETTS

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

I HEREBY CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE THE NOTICE OF APPROVAL FROM THE PLANNING BOARD WAS RECEIVED AND RECORDED AND NO NOTICE OF APPEAL HAS BEEN FILED IN THIS OFFICE.

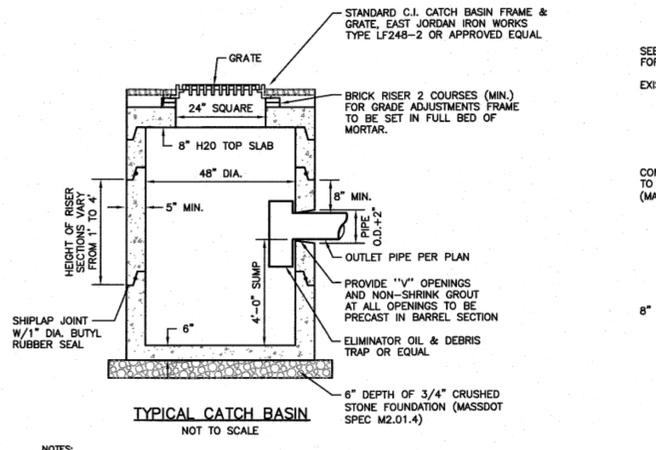
TOWN CLERK, WAREHAM, MA      DATE \_\_\_\_\_

Drawing Title: DETAIL SHEET  
Project No. 2443      Sheet 7 OF 8  
Sheet No. **D-1**



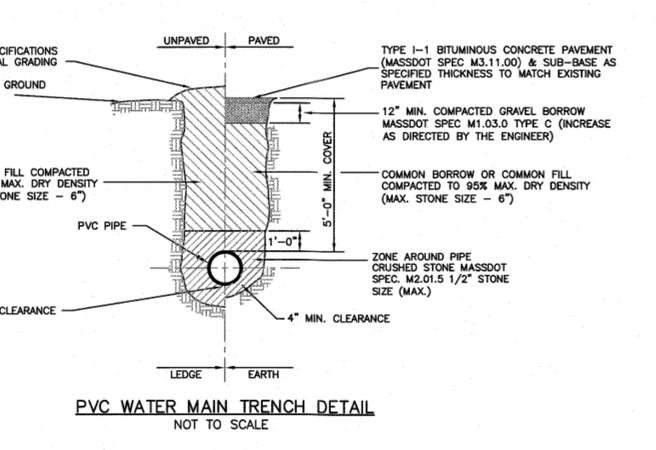
**TYPICAL DRAIN MANHOLE 30" DIA. PIPE MAXIMUM**  
NOT TO SCALE

- NOTES:
- MANHOLE DESIGN TO CONFORM TO ASTM C478 LATEST REVISION.
  - CONCRETE SHALL BE WET CAST 4000 P.S.I. @ 28 DAYS.
  - USE FLAT TOP SLAB WHERE FINISHED GRADE ELEVATIONS PROHIBIT THE USE OF A CONE SECTION.
  - FILL OUTSIDE FACE OF ALL MANHOLE JOINTS WITH NON-SHRINK MORTAR.
  - WHERE DRAIN MANHOLES OF GREATER DIAMETER ARE SPECIFIED ON THE PLANS, THEIR CONSTRUCTION SHALL MEET THE TYPICAL DRAIN MANHOLE SPECIFICATIONS.

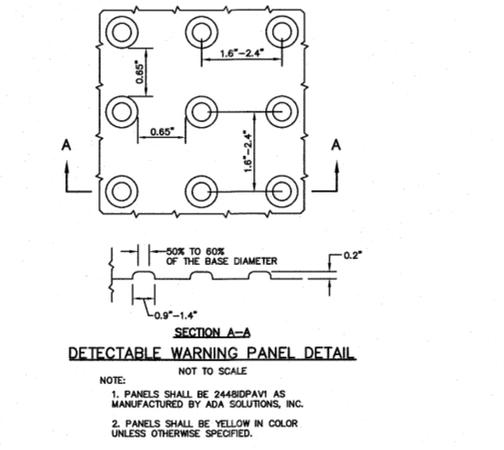


**TYPICAL CATCH BASIN**  
NOT TO SCALE

- NOTES:
- CATCH DESIGN TO CONFORM TO ASTM C478 LATEST REVISION.
  - CONCRETE SHALL BE WET CAST 4000 P.S.I. @ 28 DAYS.
  - FILL OUTSIDE FACE OF ALL MANHOLE JOINTS WITH NON-SHRINK MORTAR.
  - BASE SECTION TO BE MONOLITHIC.
  - WHERE CATCH BASIN OF GREATER DIAMETER ARE SPECIFIED ON THE PLANS, THEIR CONSTRUCTION SHALL MEET THE TYPICAL CATCH BASIN SPECIFICATIONS.

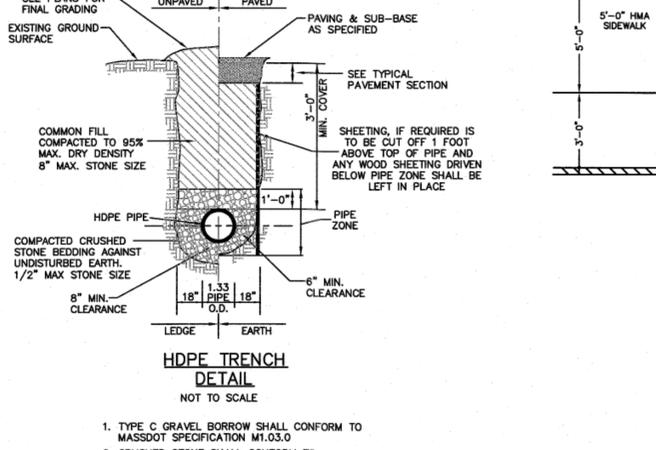


**PVC WATER MAIN TRENCH DETAIL**  
NOT TO SCALE



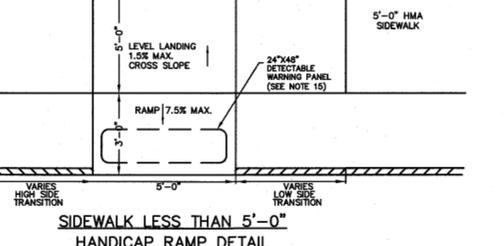
**DETECTABLE WARNING PANEL DETAIL**  
NOT TO SCALE

- NOTES:
- PANELS SHALL BE 2448DPAV1 AS MANUFACTURED BY ADA SOLUTIONS, INC.
  - PANELS SHALL BE YELLOW IN COLOR UNLESS OTHERWISE SPECIFIED.



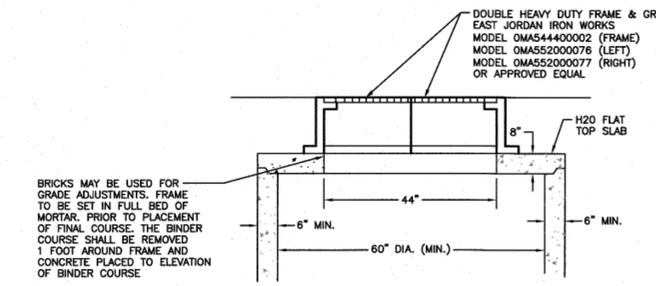
**HDPE TRENCH DETAIL**  
NOT TO SCALE

- NOTES:
- TYPE C GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION M1.03.0
  - CRUSHED STONE SHALL CONFORM TO MASSDOT SPECIFICATION M2.01.5



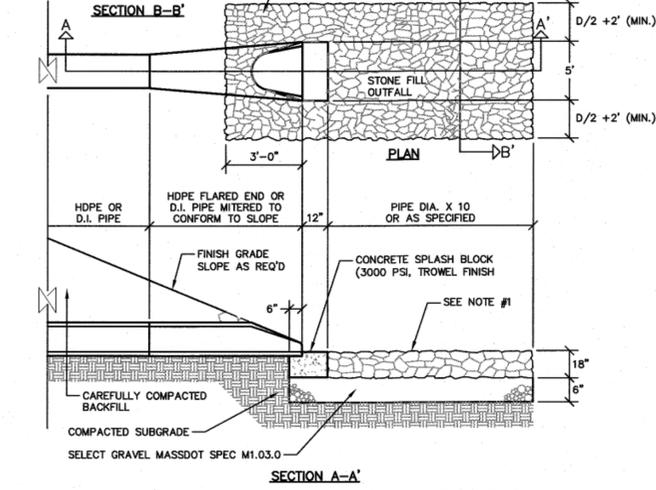
**SIDEWALK LESS THAN 5'-0\"/>**

- NOT TO SCALE
- THE SIDEWALK CROSS SLOPE MUST NOT EXCEED 1.5% FOR CEMENT CONCRETE (REFER TO STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, SECTION 700.)
  - AN UNSTRUCTURED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 36\"/>



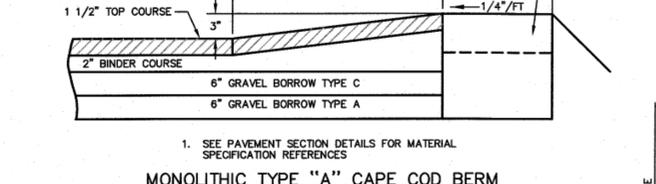
**DOUBLE GRATE CATCH BASIN**  
NOT TO SCALE

- NOTES:
- CATCH BASIN DESIGN TO CONFORM TO ASTM C478 LATEST REVISION.
  - CONCRETE SHALL BE WET CAST 4000 P.S.I. @ 28 DAYS. FILL.
  - OUTSIDE FACE OF ALL MANHOLE JOINTS WITH NON-SHRINK MORTAR.
  - BASE SECTION TO BE MONOLITHIC.
  - REFER TO TYPICAL CATCH BASIN DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.



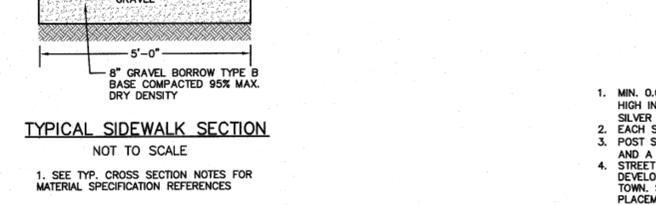
**FLARED END AND STONE FILL AT ALL PIPE ENDS**  
NOT TO SCALE

- NOTES:
- STONE FILL SHALL CONFORM TO MASSDOT SPECIFICATIONS M2.02.3 STONE FOR PIPE ENDS



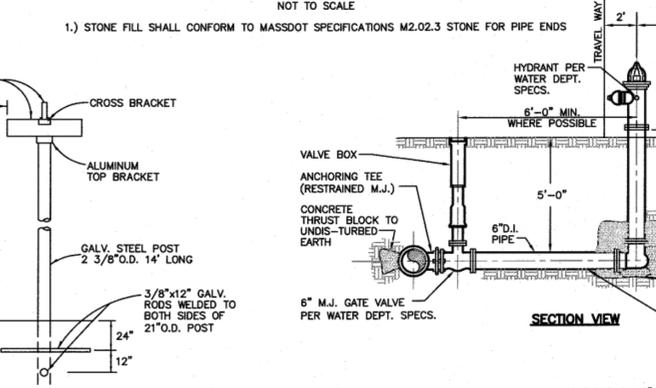
**MONOLITHIC TYPE \"/>**

- NOTES:
- SEE PAVEMENT SECTION DETAILS FOR MATERIAL SPECIFICATION REFERENCES



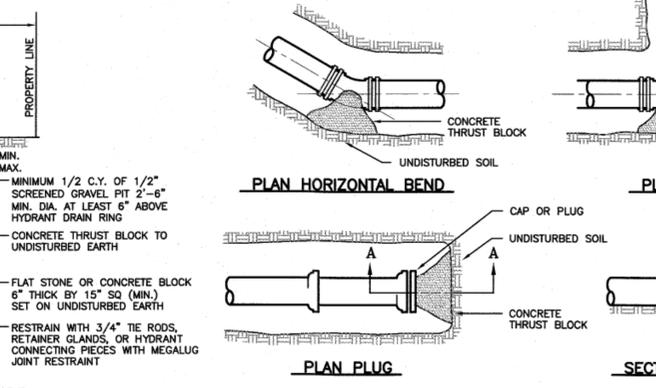
**TYPICAL SIDEWALK SECTION**  
NOT TO SCALE

- NOTES:
- SEE TYP. CROSS SECTION NOTES FOR MATERIAL SPECIFICATION REFERENCES



**STREET SIGN DETAIL**  
NOT TO SCALE

- NOTES:
- MIN. 0.091 GA. EXTRUDED ALUMINUM SIGN BLADE W/ HIGH INTENSITY SHEETING (GREEN BACKGROUND AND SILVER COPY)
  - EACH SIGN SHALL HAVE LEGEND ON BOTH SIDES
  - POST SHALL HAVE A MINIMUM 0.64\"/>



**THRUST BLOCK DETAILS**  
NOT TO SCALE

- NOTES:
- CONCRETE SHALL BE CLASS \"C\" WITH A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
  - THE THRUST BLOCKS SHALL BEAR ON UNDISTURBED EARTH.
  - CEMENT MIX SHALL NOT BE ALLOWED TO RUN INTO PIPE JOINTS.
  - COVER MECHANICAL JOINTS WITH POLYETHYLENE TO PROTECT BOLTS FROM CONCRETE THRUST BLOCK

CONCRETE ANCHOR REQUIREMENTS	
BASED ON TEST PRESSURE = 180 SOIL BEARING CAPACITY = 2000 P.S.F.	
FITTING	MIN. BEARING AREA
8\"/>	

