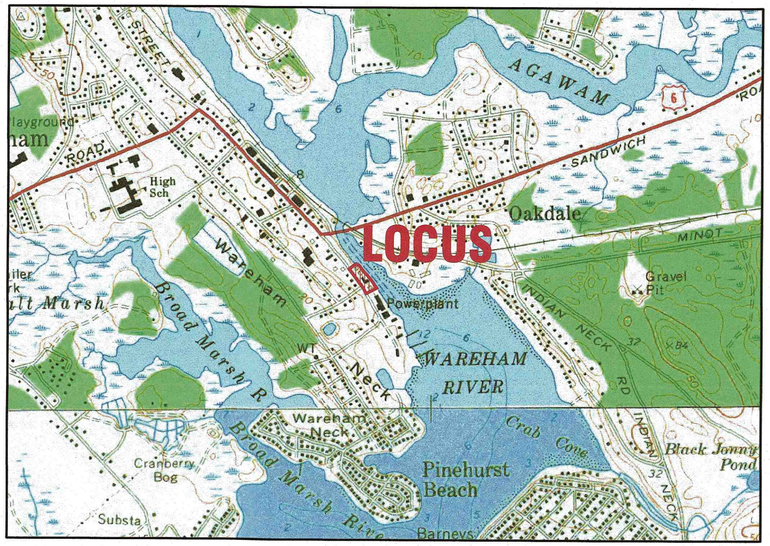
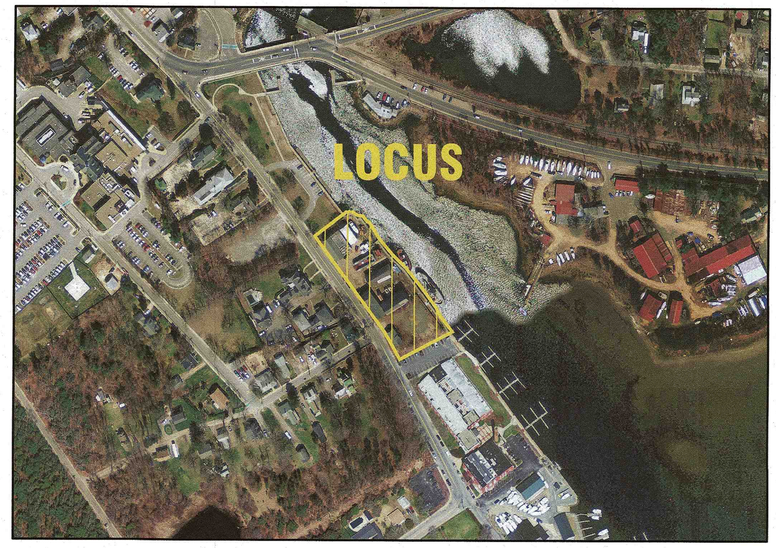
SITE DEVELOPMENT PLAN
59 MAIN STREET
WAREHAM, MASSACHUSETTS

OWNER: WARREN QOZB, LLC
P.O. BOX 1206
CARVER, MA 02330

APPLICANT: WARREN QOZB, LLC
P.O. BOX 1206
CARVER, MA 02330



– U.S.G.S. LOCUS PLAN –
SCALE: 1"=1000'



– AERIAL OVERVIEW –
SCALE: 1"=200'

ZONING DATA:

ZONE: WAREHAM VILLAGE 1 (WV1)

SETBACKS:
MINIMUM LOT AREA: 5,000 S.F.
MINIMUM FRONTAGE: 75'
MINIMUM FRONT SETBACK: *
MINIMUM SIDE SETBACK: 10'
MINIMUM REAR SETBACK: 10'
MAXIMUM BUILDING HEIGHT: 40'
MAXIMUM BUILDING COVERAGE: 30%
MAXIMUM IMPERVIOUS SURFACE: 70%
LANDSCAPE BUFFER: AS SHOWN ON PLANS

*THE FRONT SETBACKS IN VILLAGE DISTRICTS SHALL BE THE AVERAGE SETBACKS OF FIVE (5) RESIDENTIAL STRUCTURES ON EITHER SIDE OF THE SUBJECT PROPERTY.

ZONING DATA TABLE:

ZONING TABLE	ALLOWED	PROVIDED
LOT AREA:	5,000 S.F.	61,187± S.F.
*FRONT SETBACK:	*	53.5'
SIDE SETBACK:	10'	19.5'
REAR SETBACK:	10'	15'±
BUILDING COVERAGE:	30%	18.2%±
IMPERVIOUS SURFACE:	70%	62.4%±

PARKING DATA:

REQUIRED:
(BUSINESS, RETAIL >1000 S.F.):1 SPACE PER 300 S.F. G.F.A.
1200 S.F./300 S.F.=4 SPACES

MARINA: 0.5 SPACE PER SLIP
24 SLIPSx0.5 SPACE=12 SPACES

RESTURANT: 1 SPACE PER 5 SEATS
150 SEATS/ 1 PER 5 SEATS=30 SPACES

TOTAL NUMBER OF PARKING SPACES REQUIRED: 46

TOTAL PROVIDED: 46 SPACES

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET, WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: info@gafenginc.com

NOVEMBER 22, 2021

PLAN INDEX:

SHEET NO.:	DESCRIPTION:
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	EX. CONDITIONS & DEMOLITION
4	LAYOUT PLAN
5	UTILITIES PLAN
6	GRADING & DRAINAGE PLAN
7	LANDSCAPING PLAN
8	EROSION CONTROL PLAN
9	DETAIL SHEET 1
10	DETAIL SHEET 2
11	DETAIL SHEET 3

FLOOD ZONE DATA:

THE PROJECT IS LOCATED IN FLOOD ZONE AE-16 AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP NUMBER 25023C0489L, DATED JULY 6, 2021. THE PROJECT IS ALSO WITHIN THE LIMIT OF MODERATE WAVE ACTION (LiMWA) AREA.

PERMIT SET
(NOT FOR CONSTRUCTION)

REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	REV. ZONING DATA TABLE
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	REV. BLDG. & IMPERV. SURFACE COVERAGES

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: AS NOTED

APPROVED BY:

APPROVED BY: 4/6/22
WILLIAM F. MARSDEN CIVIL NO. 53863 COMMONWEALTH OF MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER
William F. Marsden

G.A.F. ENGINEERING, INC.
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SITE DEVELOPMENT PLAN
COVER SHEET
59 MAIN STREET WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 CARVER, MA

JOB NO.: 20-9438
DWG. 1 OF 11

H:\GAF DRAWINGS\2020 DRAWINGS\20-9438 (DANNY WARREN)\9438\dwg\9438_SITE PLAN_2021_ALT-1_REV-3.dwg

GENERAL NOTES:

1. ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS AND IN PART FROM FIELD SURVEY AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD. BEFORE EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION, OR REPAIRING, ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE MGL CHAPTER 370, ACTS OF 1963. CONTRACTORS MUST CALL DIG-SAFE AT (1-888-DIG-SAFE OR 811) G.A.F. ENGINEERING, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
2. EXISTING CONDITIONS INFORMATION IS BASED ON ACTUAL FIELD SURVEY, PRIVATE UTILITY PLANS, AND OTHER AVAILABLE SOURCES. FIELD SURVEY WAS PERFORMED BY G.A.F. ENGINEERING, INC., ON VARIOUS DATES AND MOST RECENTLY IN SEPTEMBER OF 2019.
3. THE CONTRACTOR SHALL COORDINATE AND OBTAIN ALL REQUIRED PERMITS, GIVE ALL NOTICES, COMPLY WITH ALL LAWS AND REGULATIONS, AND PAY ALL FEES ASSOCIATED WITH THE INSTALLATION OF THIS WORK.
4. THE CONTRACTOR SHALL FIELD VERIFY, PRIOR TO CONSTRUCTION ALL EXISTING UNDERGROUND UTILITY LOCATIONS AND POINTS OF INTERCONNECTION.
5. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, SUPERVISION, TOOLS, EQUIPMENT, FUEL, POWER, SANITARY FACILITIES AND INCIDENTALS NECESSARY FOR THE FURNISHING, PERFORMANCE, TESTING, START-UP AND COMPLETION OF THIS WORK.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER OF ANY CONFLICTS DISCOVERED IN THE FIELD.
7. ANY CHANGES TO THESE SITE PLANS THAT ARE MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE CONTRACTOR ON RECORD DOCUMENTS AND REPORTED TO THE OWNER AND ENGINEER.
8. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN EXCAVATION AND TRENCH PERMIT PURSUANT TO 520 CMR 14.00 AS APPLICABLE PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION NOTES:

1. IN GENERAL, THE PLANS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EVERY FITTING, CHANGE IN DIRECTION OR DETAIL OF CONSTRUCTION.
2. THE LOCATION OF UTILITIES WERE OBTAINED FROM VARIOUS SOURCES OF INFORMATION. THE EXACT LOCATION AND COMPLETENESS IS NOT GUARANTEED. THE CONTRACTOR MUST NOTIFY DIG SAFE PRIOR TO THE START OF CONSTRUCTION (1-888-DIG-SAFE OR 811). G.A.F. ENGINEERING, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
3. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF PERSONNEL AND PROTECTION OF PROPERTY AT THE SITE OR ADJACENT THERETO INCLUDING TREES, SHRUBS, LAWNS, PAVEMENTS, ROADWAYS, STRUCTURES AND UNDERGROUND UTILITIES NOT DESIGNED FOR REMOVAL, RELOCATION, OR REPLACEMENT.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION REQUIRED FOR THE INSTALLATION OF THIS WORK.
5. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND OF GOOD QUALITY.
6. THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL AND OTHER DEBRIS RESULTING FROM THIS WORK.
7. ALL PAVEMENT MARKINGS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AS PART OF THIS WORK.
8. THE CONTRACTOR SHALL INSTITUTE ALL SAFETY MEASURES NECESSARY TO PROTECT THE PUBLIC SAFETY. THIS SHALL INCLUDE, BUT NOT LIMITED TO, BARRICADES, SIGNS, LIGHTING, FENCES, POLICE DETAILS, AND ANY OTHER MEANS AS DIRECTED. NO TRENCHES ARE TO REMAIN OPEN OVERNIGHT.
9. ELEVATIONS ARE IN FEET AND TENTHS AND ARE BASED ON THE DATUM OF NAVD-88.
10. SIDE SLOPE GRADING SHALL BE AS NOTED ON THE SITE PLANS.
11. ALL SIDE SLOPES SHALL BE DRESSED WITH 4 INCHES OF TOPSOIL. WHERE SIDE SLOPES EXCEED 3:1, PROVIDE AN EROSION CONTROL BLANKET OVER THE PLANTED SEED BED. SEE PLAN FOR LOCATIONS.
12. PERMANENT SEEDING (BEFORE SEPTEMBER 15) LIME TO PH OF 6.5 ACCORDING TO SOIL TEST OR APPLY AT THE RATE OF 100 TO 150 LBS. PER 1,000 SQUARE FEET. APPLY 10-20-20 FERTILIZER AT 1,000 LBS. PER ACRE. INCORPORATE LIME AND FERTILIZER IN TOP 4 INCHES OF SOIL. SEED 100 LBS. PER ACRE OF THE FOLLOWING SEED MIX.

PURE PERCENT	SEED
30-35%	CREEPING RED FESCUE
30-35%	PERENNIAL RYEGRASS
20-25%	KENTUCKY BLUEGRASS
10-15%	ANNUAL RYEGRASS

HYDRO SEEDING IS AN ALTERNATIVE FOR THIS APPLICATION. A MIXTURE OF SEED WATER AND MULCH IS SPRAYED ON THE SEED BED COMBINING THREE (3) SEPARATE ACTIONS INTO ONE (1) OPERATION

13. ALL SEWER AND PLUMBING WORK SHALL CONFORM WITH 248 CMR 10.00 UNIFORM STATE PLUMBING CODE AND THE TOWN OF WAREHAM SEWER DEPARTMENTS SPECIFICATIONS.
14. ALL METHODS AND MATERIALS SHALL CONFORM WITH MassDOT STANDARDS AND SPECIFICATIONS, AND THE REQUIREMENTS OF THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.
15. ALL UTILITY INSTALLATIONS SHALL BE IN CONFORMANCE WITH ALL APPLICABLE TOWN, STATE AND FEDERAL REQUIREMENTS & REGULATIONS.
16. DEWATERING IF REQUIRED SHALL BE DIRECTED TO A 10' MIN. SQUARE OF HAYBALES OR A DIRTBAG. CONTRACTOR SHALL SIZE, PROVIDE AND MAINTAIN DEWATERING EQUIPMENT FOR THE CONTROL, COLLECTION AND DISPOSAL OF GROUND AND SURFACE WATER WHERE NECESSARY TO COMPLETE THE WORK.

EROSION CONTROL NOTES:

1. THE SITE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SUITABLE EROSION AND SEDIMENTATION CONTROL DEVICES ON SITE DURING CONSTRUCTION AS REQUIRED TO PREVENT SILT FROM LEAVING THE SITE. SILT WILL NOT BE ALLOWED BEYOND CONSTRUCTION LIMITS. ADDITIONAL PROTECTION: ON-SITE PROTECTION MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
2. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE SUFFICIENT EROSION AND SEDIMENT CONTROL, ADDITIONAL CONTROL MEASURES SHALL BE IMPLEMENTED. CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING EROSION CONTROL DEVICES WHICH BECOME INEFFECTIVE.
3. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ALL GRADING AND OTHER LAND DISTURBING ACTIVITIES PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANUP AND REMOVAL OF ANY BUILDUP OF SEDIMENT WHICH ESCAPES FROM THE SITE.
5. CONTRACTOR IS RESPONSIBLE FOR CLEANING SILT AND DEBRIS OUT OF ALL STORM DRAINAGE STRUCTURES UPON THE COMPLETION OF CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL MEASURES AFTER CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY FINES LEVIED AGAINST THE SITE FOR VIOLATIONS OF EROSION CONTROL REGULATIONS.
8. CONTRACTOR SHALL PROVIDE TEMPORARY GROUND COVER FOR ALL AREAS WITH EXPOSED SOIL WHICH WILL NOT BE DISTURBED BY GRADING OPERATIONS FOR A PERIOD OF THIRTY DAYS OR MORE.
9. IF WORK ON THIS PROJECT IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROL FACILITIES IN GOOD CONDITION DURING THE SUSPENSION OF WORK.
10. SPRINKLE OR APPLY DUST SUPPRESSERS TO MINIMIZE DUST AT THE CONSTRUCTION SITE. MAINTAIN DUST CONTROL MEASURES UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
11. THE CONTRACTOR WILL ALSO NEED TO COMPLY TO ANY ORDER OF CONDITIONS THAT MAY BE ISSUED BY THE TOWN OF WAREHAM CONSERVATION COMMISSION.

DRAINAGE OPERATION AND MAINTENANCE SCHEDULE:

THE OPERATION AND MAINTENANCE (O&M) SCHEDULE DURING THE CONSTRUCTION PERIOD IS THE RESPONSIBILITY OF THE CONTRACTOR. THE OUTLINE BELOW SHALL BE FOLLOWED TO ENSURE THE PROPER CONSTRUCTION AND FUNCTION OF THE DRAINAGE FACILITIES.

1. IN CONJUNCTION WITH THE SITE CONSTRUCTION, ALL DRAINAGE STRUCTURES SHALL BE INSTALLED AND THE AFFECTED AREAS STABILIZED (LOAM AND SEED, HYDROSEED, PLANTED, RIP-RAP, ETC.). PERMANENT STABILIZATION OF THESE AREAS SHALL BE STARTED AS SOON AS POSSIBLE.
2. EROSION CONTROL SHALL BE PLACED ALONG THE LIMITS OF WORK WHERE SHOWN ON THE PLAN.
3. ALL EXISTING CATCH BASINS SHALL HAVE A TEMPORARY SILT SACK INSTALLED IN THEM PRIOR TO CONSTRUCTION. ALL PROPOSED CATCH BASINS AND WATER QUALITY CATCH BASINS SHALL HAVE TEMPORARY SILT SACK INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THEM AT THE COMPLETION OF CONSTRUCTION. ALL EXISTINTG AND PROPOSED CATCH BASINS AND WATER QUAILTY CATCH BASINS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION. IF THERE IS ANY SEDIMENT BUILDUP, THE AFFECTED STRUCTURES SHALL BE CLEANED IMMEDIATELY, AND ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
4. RIVER & PEA STONE FILLED TRENCHES SHALL BE COVERED WITH AN ADDITIONAL TEMPORARY LAYER OF FILTER FABRIC UNTIL THE ABOVE GRADIENT SLOPE IS STABILIZED. IF THERE IS ANY EVIDENCE OF SEDIMENT ENTERING THE TRENCHES, THE AFFECTED AREA OF THE TRENCH SHALL BE FULLY RECONSTRUCTED INCLUDING THE FILTER FABRIC TO THE SPECIFICATIONS OF THE DETAIL SHOWN ON THESE PLANS.
4. THE LEACHING CHAMBERS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION. IF THERE IS ANY SEDIMENT BUILDUP, THE AFFECTED STRUCTURES SHALL BE CLEANED IMMEDIATELY, AND ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
5. ALL AREAS SHALL BE INSPECTED WEEKLY, AND AFTER LARGE STORMS. IF THERE IS EVIDENCE OF EROSION, THE ERODED AREA SHALL BE RE-STABILIZED, AND MEASURES SHALL BE TAKEN TO PREVENT REOCCURRENCE. THIS SCHEDULE MUST BE ADHERED TO BY THE CONTRACTOR UNTIL THE PROJECT IS ACCEPTED BY THE OWNER.

POST-CONSTRUCTION OPERATION AND MAINTENANCE PLAN:

UPON THE COMPLETION OF CONSTRUCTION, MAINTENANCE SHALL BE CONDUCTED BY THE OWNER OR OWNER'S AGENT ON THE SITE. THE FOLLOWING SHALL BE CARRIED OUT BY THE RESPONSIBLE PARTY AND SHALL BE ADHERED TO ENSURE THE PROPER OPERATION OF THE DRAINAGE FACILITIES.

1. PARKING LOT SWEEPING IS AN EFFECTIVE NONSTRUCTURAL SOURCE CONTROL THAT WILL REMOVE SEDIMENT FROM PAVED SURFACES. PARKING LOT SWEEPING SHOULD BE DONE BY THE USE OF A HIGH EFFICIENCY VACUUM SWEEPER OR REGENERATIVE AIR SWEEPER. PARKING LOT SWEEPING SHALL BE DONE TWICE PER YEAR. ONCE REMOVED FROM PAVED SURFACES, THE SWEEPINGS MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS APPROVED BY MASSDEP (SEE POLICY # BAW-18-001: REUSE & DISPOSAL OF STREET SWEEPINGS).
2. RIVER & PEA STONE FILLED TRENCHES SHALL BE INSPECTED DURING AND 24 HOURS AFTER ALL MAJOR STORM EVENTS TO LOOK FOR PONDED WATER. IF THERE IS EVIDENCE OF PONDED WATER AT THE SURFACE OF THE TRENCH, IT IS LIKELY THAT THE TRENCH IS CLOGGED. REMOVE AND REPLACE THE FIRST LAYER OF STONE AGGREGATE AND FILTER FABRIC. IF WATER IS PONDED INSIDE THE TRENCH THEN THE TRENCH HAS FAILED. IN THIS CASE REMOVE ALL ACCUMULATED SEDIMENT, STONE AND FILTER FABRIC, THE BOTTOM OF THE TRENCH MUST BE SCARIFIED AND TILLED TO INDUCE INFILTRATION AND REPLACE WITH NEW RIVER & PEA STONE AND FILTER FABRIC TO THE SPECIFICATIONS OF THE DETAIL SHOWN ON THESE PLANS. INSPECT RIVER STONE TRENCHES EVERY 6 MONTHS AND ROUTINELY REMOVE DEBRIS, TRASH, LEAVES, AND ANY SEDIMENT FROM THE SURFACE OF THE TRENCH, ADD RIVER STONE IF NECESSARY.
3. LEACHING CHAMBERS SHALL BE INSPECTED AFTER EVERY MAJOR STORM EVENT IN THE FIRST FEW MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND FUNCTION. THEREAFTER, THE LEACHING CHAMBERS SHALL BE INSPECTED AT LEAST ONCE PER YEAR. WATER DEPTH IN THE LEACHING CHAMBERS SHOULD BE OBSERVED AND MEASURED AT 0, 24, AND 48-HOUR INTERVAL'S AFTER A MAJOR STORM EVENT AT LEAST ONCE PER YEAR. EXFILTRATION RATES ARE CALCULATED BY DIVIDING THE DROP IN THE WATER LEVEL (INCHES) BY THE ELAPSED TIME (HOUR). A COMPARISON OF EXFILTRATION RATE MEASUREMENTS TAKEN OVER THE YEARS PROVIDE A USEFUL TOOL TRACKING ANY CLOGGING PROBLEMS WITH THE UNDERGROUND INFILTRATION SYSTEM.
4. INSPECT POP-UP DRAINAGE EMITTERS DURING AND 24 HOURS AFTER ALL MAJOR STORM EVENTS. KEEP POP-UP DRAINAGE EMITTERS FREE AND CLEAR FROM BUILD UP OF DEBRIS ON THE LID. REMOVE SNOW WHEN REQUIRED. INSPECT THE POP-UP DRAINAGE EMITTER LID MONTHLY. REPAIR OR REPLACE AS NEEDED.

DRAINAGE INSTALLATION NOTES:

1. ALL DRAINAGE PIPES, UNLESS OTHERWISE NOTED, ARE TO BE ADS N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. REFER TO PLAN FOR LOCATION, SIZES AND SLOPES.
2. ALL ROOF DRAIN PIPES, UNLESS OTHERWISE NOTED, ARE TO BE 4" ADS N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. MINIMUM SLOPE TO BE 1.00%. REFER TO PLAN FOR LOCATION.
3. MINIMUM COVER ON PIPES SHALL NOT BE LESS THAN 1.5 FEET, UNLESS OTHERWISE NOTED ON THE PLAN.
4. WHERE REQUIRED ALL PIPE PERFORATIONS SHALL BE AASHTO CLASS II.
5 ALL WORK AND MATERIAL SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.
6. WHERE REQUIRED CONTRACTOR TO REMOVE ALL UNSUITABLE SOILS AND REPLACE WITH CLEAN SAND AND GRAVEL APPROVED BY DESIGN ENGINEER.

WATER INSTALLATION NOTES:

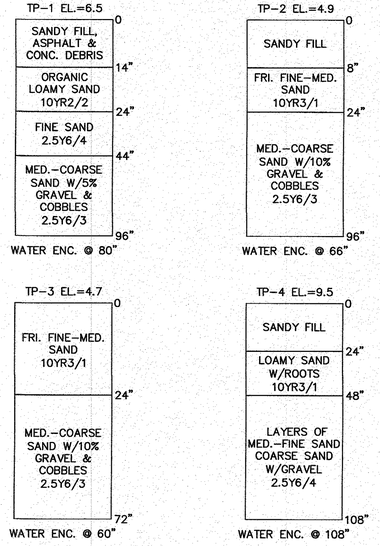
1. ALL WATER MAINS, SERVICES, GATE VALVES/GATE BOX, CURB STOPS, HYDRANTS, FITTINGS, ETC. & METHOD OF INSTALLATION SHALL CONFORM TO THE TOWN OF WAREHAM FIRE DISTRICT RULES & REGULATIONS.
2. WATER MAIN SHALL BE FLUSHED, TESTED & DISINFECTED IN ACCORDANCE WITH THE TOWN OF WAREHAM FIRE DISTRICT REQUIREMENTS.
3. CONTRACTOR TO COORDINATE WITH THE TOWN OF WAREHAM FIRE DISTRICT FOR THE INSPECTIONS OF THE WATER MAIN INSTALLATION.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE THE INSTALLATION OF THE WATER SERVICE.
5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE REGULATIONS FROM THE TOWN OF WAREHAM FIRE DISTRICT BEFORE PROCEEDING WITH THE INSTALLATION OF THE WATER SERVICE.
6. WATER MAIN/SERVICE SHALL BE INSTALLED A MINIMUM OF 1' BELOW ALL PROPOSED DRAINAGE LINES.

DEMOLITION NOTES:

1. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE HIS/HER OWN DETERMINATION OF SUBSURFACE CONDITIONS, INCLUDING THE LOCATION OF ROCK AND THE ACTUAL LOCATION OF UTILITIES OR OTHER FEATURES WHICH MAY AFFECT HIS/HER WORK. ANY UNSUITABLE MATERIAL ENCOUNTERED DURING CONSTRUCTION WILL BE REPORTED TO THE ENGINEER OF RECORD FOR RESOLUTION AND CONSTRUCTION METHOD.
2. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND APPARATUS NECESSARY AND SHALL DO ALL WORK REQUIRED TO COMPLETE THE DEMOLITION, REMOVAL, AND ALTERATIONS OF EXISTING FACILITIES, INCLUDING PIPING SYSTEMS AND APPURTENANCES, DRAINAGE, PAVEMENT, LANDSCAPE AND SITE FEATURES ENCOUNTERED DURING THE INSTALLATION AS INDICATED ON THE DRAWINGS, AS HEREIN SPECIFIED, AND/OR AS DIRECTED BY THE DESIGN ENGINEER.
3. ALL EQUIPMENT, PIPING, AND OTHER MATERIALS THAT ARE NOT TO BE RELOCATED OR TO BE RETURNED TO THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM, AWAY FROM THE SITE OF THE WORK AND AT HIS OWN EXPENSE.
4. ALL DEMOLITION OR REMOVAL OF EXISTING STRUCTURES, PAVEMENT, UTILITIES, EQUIPMENT, AND APPURTENANCES, LANDSCAPE AND SITE FEATURES SHALL BE ACCOMPLISHED WITHOUT DAMAGING THE INTEGRITY OF EXISTING STRUCTURES, EQUIPMENT, PAVEMENT, APPURTENANCES, AND TREES TO REMAIN.
5. SUCH ITEMS THAT ARE DAMAGED SHALL BE EITHER REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED PRIOR TO THE START OF HIS WORK TO THE SATISFACTION OF THE DESIGN ENGINEER AND/OR THE OWNER.
6. ENSURE THE SAFE PASSAGE OF PERSONS AROUND THE AREA OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT INJURY TO ADJACENT BUILDINGS, STRUCTURES, OTHER FACILITIES AND PERSONS.
7. THE CONTRACTOR SHALL PROMPTLY REPAIR DAMAGES CAUSED BY DEMOLITION OPERATIONS TO ADJACENT FACILITIES AT NO COST TO THE OWNER.
8. ANY DAMAGE TO PUBLIC WAYS DURING DEMOLITION AND/OR CONSTRUCTION OF THE PROJECT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S AND/OR APPLICANTS EXPENSE TO THE SATISFACTION OF THE TOWN OF WAREHAM DIRECTOR OF MUNICIPAL MAINTENANCE.

TEST PIT DATA

DATE OF TESTING: NOVEMBER 30, 2021
PERFORMED BY: BRIAN GRADY, G.A.F. ENGINEERING, INC.
REFER TO EXISTING CONDITIONS & DEMOLITION PLAN FOR TEST PIT LOCATIONS



NOTE:
WHERE REQUIRED THE CONTRACTOR TO REMOVE ALL UNSUITABLE SOILS AND REPLACE WITH CLEAN SAND AND GRAVEL APPROVED BY DESIGN ENGINEER. SEE PLANS FOR DEPTHS AND LOCATIONS.

ABBREVIATIONS

AC	ASBESTIC CONCRETE
ADS	ADVANCED DRAINAGE SYSTEM
APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BIT. CONC.	BITUMINOUS CONCRETE
BLDRS	BOULDERS
BW	BOTTOM OF WALL
BVW	BORDERING VEGETATED WETLANDS
CB	CATCH BASIN
CB/DH	CONCRETE BOUND/DRILL HOLE
CCB	CAPE COD BERM
CEM.	CEMENT
C.I.	CAST IRON
CONC.	CONCRETE
C.O.	CLEANOUT
C.L.D.I.	CEMENT LINED DUCTILE IRON
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
C.T.B.	CONCRETE THRUST BLOCK
DIA	DIAMETER
DMH	DRAIN MANHOLE
D.I.	DUCTILE IRON
DCS	DRAINAGE CONTROL STRUCTURE
E	ELECTRIC
ELEV.,EL.	ELEVATION
EOP	EDGE OF PAVEMENT
EX.	EXISTING
F.D.C.	FIRE DEPARTMENT CONNECTION
F.E.S.	FLARED END SECTION
F.F.E.	FINISHED FLOOR ELEVATION
FND.	FOUND
FP	FIRE PROTECTION
G	GAS
GG,GV	GAS GATE, GAS VALVE
H.C.	HANDICAP PARKING
H.D.P.E.	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
INV.	INVERT
MAX	MAXIMUM
MED	MEDIUM
MIN.	MINIMUM
N.T.S.	NOT TO SCALE
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
PCC	PRECAST CONCRETE CURBING
PVC	POLYVINYL CHLORIDE PIPE
PROP.	PROPOSED
RAP	RECYCLED ASPHALT PRODUCT
RCP	REINFORCED CONCRETE PIPING
R	RADIUS
R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCK
SB/DH	STONE BOUND/DRILL HOLE
S	SEWER
SGC	SLOPED GRANITE CURBING
SMH	SEWER MANHOLE
STA	STATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
T/O/F	TOP OF FOUNDATION
UP	UTILITY POLE
UE	UNDERGROUND ELECTIC
VGC	VERTICAL GRANITE CURB
W	WATER
WG,WV	WATER GATE, WATER VALVE
WQS	WATER QUALITY STRUCTURE

LEGEND

EXISTING	DESC.	PROPOSED
55	CONTOURS	55
53x5	SPOT GRADES	52x5 52x5
	WETLANDS	
	TOP OF RIVER BANK	
	100' BUFFER ZONE	
	200' RIVERFRONT AREA	
	F.E.M.A. FLOOD ZONE	
-D-	DRAIN LINE	-D-
-RD-	ROOF DRAIN LINE	-RD-
	CATCH BASIN (CB)	
(D)	DRAIN MANHOLE (DMH)	(D)
(E)	ELECTRIC MANHOLE (EMH)	(E)
-UE-	UNDERGROUND UTILITIES	-UE-
-OHW-	OVERHEAD WIRES	-OHW-
	UTILITY POLE	
	GUY POLE	
WV	WATER GATE VALVE	WV
	WATER SHUTOFF/CURB STOP	
	HYDRANT	
	POST INDICATOR VALVE	
-W-	WATER LINE	-W-
-FP-	FIRE PROTECTION LINE	-FP-
(S)	SEWER MANHOLE (SMH)	(S)
-S-	SEWER LINE	-S-
	TREE/BRUSH LINE	
	LIGHT POST	
-G-	GAS LINE	-G-
GV	GAS GATE/VALVE	GV
	GAS SHUTOFF	
	GAS METER	
	SIGN	
	FENCE	
	BOUND	
PT TP	TEST PIT/PERC TEST	
	SILT FENCE	
	GUARD RAIL	
	FLARED END SECTION	
	STONE WALL	

REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	MISC. NOTES
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	ADDED TEST PIT DATA

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: AS NOTED

APPROVED BY:

APPROVED BY: 1/5/22
COMMONWEALTH OF MASSACHUSETTS — WILLIAM F. WALDEN — CIVIL — NO. 38861 — REGISTERED PROFESSIONAL ENGINEER

G.A.F. ENGINEERING, INC.
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E-MAIL: info@gafengInc.com

SITE DEVELOPMENT PLAN
GENERAL NOTES & LEGEND
59 MAIN STREET — WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 — CARVER, MA

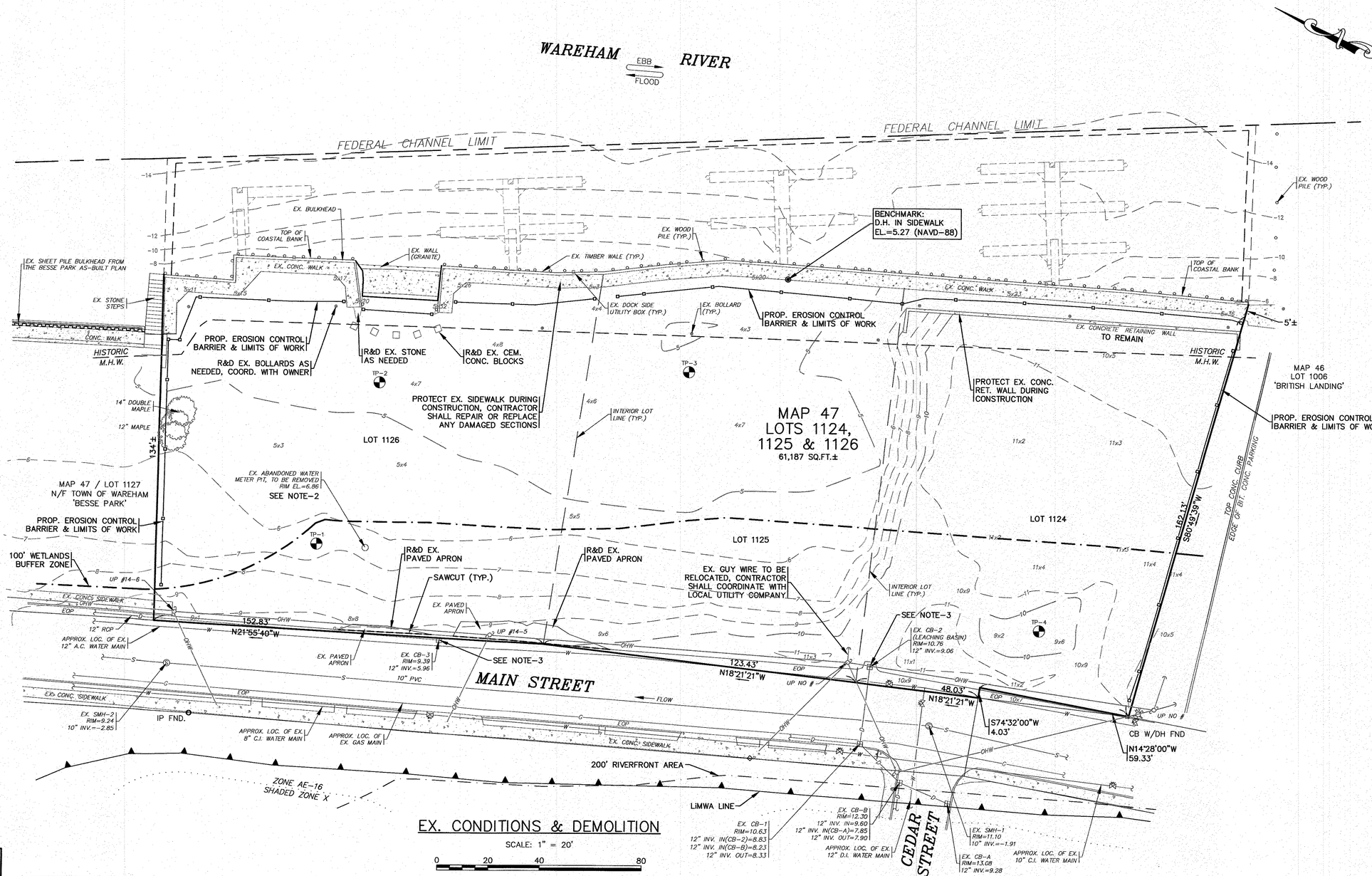
JOB NO.: 20-9438

DWG.
2 OF 11

H:\GAF DRAWINGS\2020 DRAWINGS\20-9438 (QUARRY MANAGEMENT)\9438\dwg\9438_SITE PLAN_2021_ALT.-1_REV.-3.dwg

NOTES:

1. CONTRACTOR SHALL PROVIDE AND MAINTAIN DOUBLE STAKED HAY BALES WITH SILT FENCE EROSION CONTROL BARRIER AS SHOWN ON THE PLANS. EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL VEGETATION IS ESTABLISHED.
2. EXISTING ABANDONED WATER METER PIT AND ANY ASSOCIATED PIPING SHALL BE REMOVED AND DISPOSED OF OFF SITE. CONTRACTOR SHALL COORDINATE WITH LOCAL WATER DEPARTMENT PRIOR TO CONSTRUCTION.
3. EXISTING CATCH BASINS SHALL HAVE A TEMPORARY SILT SACK OR AN APPROVED EQUAL INSTALLED WITHIN PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SILT SACKS AT THE COMPLETION OF CONSTRUCTION.
4. CONTRACTOR SHALL CONFIRM THE LOCATIONS OF ALL EXISTING ABOVE OR UNDERGROUND UTILITIES, INCLUDING WATER, SEWER, GAS AND ELECTRIC. ALL EXISTING UTILITIES SHALL BE DISCONNECTED AND REMOVED FROM THE SITE. CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO CONSTRUCTION.
5. ALL DEBRIS FROM DEMOLITION SHALL BE REMOVED FROM THE SITE AND NOT STOCKPILED.
6. ANY EXCAVATION/REMOVAL OF EXISTING FEATURES BELOW ADJACENT GRADE SHALL BE REFILLED WITH STRUCTURAL FILL AND COMPACTED.



EX. CONDITIONS & DEMOLITION

SCALE: 1" = 20'

0 20 40 80

PERMIT SET
(NOT FOR CONSTRUCTION)

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REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	NO CHANGE THIS SHEET
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	ADDED TEST PIT LOCATIONS

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: 1" = 20'

APPROVED BY:

APPROVED BY:

COMMONWEALTH OF MASSACHUSETTS WILLIAM F. MADDEN JR. NO. 39163 REGISTERED PROFESSIONAL ENGINEER

G.A.F. ENGINEERING, INC.
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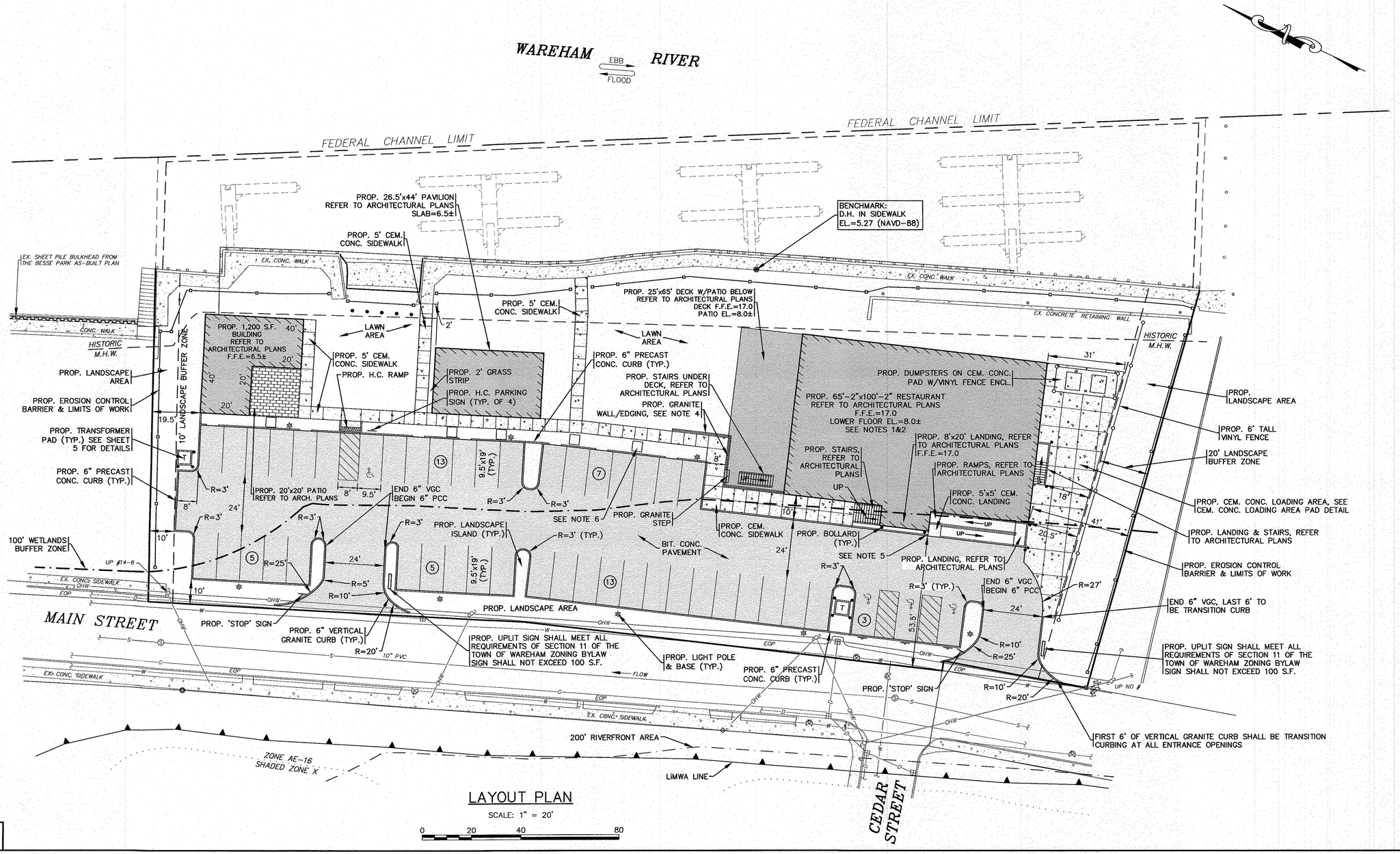
SITE DEVELOPMENT PLAN
EX. CONDITIONS & DEMOLITION
59 MAIN STREET WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 CARVER, MA

JOB NO.: 20-9438
DWG. 3 OF 11

NOTES:

1. REFER TO ARCHITECTURAL PLANS BY OTHERS FOR COMPLETE DIMENSIONS, CONSTRUCTION SPECIFICATIONS AND DETAILS OF THE PROPOSED BUILDINGS AND PAVILION. CONTRACTOR SHALL CONFIRM FINISHED FLOOR ELEVATION WITH OWNER AND ARCHITECT PRIOR TO CONSTRUCTION. ALL CONSTRUCTION SHALL COMPLY WITH ALL ASCE 24, MASSACHUSETTS AND INTERNATIONAL BUILDING CODE REQUIREMENTS, AS APPLICABLE FOR CONSTRUCTION IN FLOOD ZONES. REFER TO ARCHITECTURAL & STRUCTURAL PLANS BY OTHERS.
2. REFER TO ARCHITECTURAL PLANS BY OTHERS FOR ALL PROPOSED HANDICAP RAMPS & LANDINGS DIMENSIONS, CONSTRUCTION SPECIFICATIONS AND DETAILS. ALL PROPOSED RAMPS & LANDINGS SHALL BE PROVIDED WITH HANDRAILS PER A.D.A. AND BUILDING CODE REGULATIONS. ALL PROPOSED HANDICAP RAMPS & LANDINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ALL A.D.A. REGULATIONS,
3. THE PROPOSED PAVILION AND THE PROPOSED 1,200 S.F. BUILDING WILL BE CONSTRUCTED IN PHASE 2 OF THE PROJECT.
4. SITE CONTRACTOR SHALL COORDINATE WITH OWNER FOR FINAL DESIGN OF THE PROPOSED GRANITE WALL/EDGING AND GRANITE STEP. PROVIDE HANDRAILS ALONG THE ENTIRE LENGTH OF THE PROPOSED WALL. HANDRAILS SHALL BE DESIGNED IN ACCORDANCE WITH ALL LOCAL AND STATE BUILDING CODES.
5. THE LAST 6' OF CURBING SHALL BE TRANSITION CURBING.
6. PROVIDE 4'x4'x2" THICK GRANITE SLABS AS SHOWN, FINAL LOCATIONS WILL BE DETERMINED IN THE FIELD AT TIME OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH OWNER. GRANITE SLABS SHALL BE SET FLUSH WITH TOP OF RIVER STONE.
7. FOR THE COMPLETE LIGHTING DESIGN REFER TO LIGHTING DESIGN PLANS BY RAB.



LAYOUT PLAN

SCALE: 1" = 20'

0 20 40 80

PERMIT SET
(NOT FOR CONSTRUCTION)

REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	INCREASED NW DRIVEWAY TO 24' WIDE
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	PER REV. BLDG. PLANS/TOWN COMMENTS

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: 1" = 20'

APPROVED BY:

APPROVED BY:
COMMONWEALTH OF MASSACHUSETTS
WILLIAM F. MADDEN
CIVIL
NO. 39063
REGISTERED PROFESSIONAL ENGINEER

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SITE DEVELOPMENT PLAN
LAYOUT PLAN
59 MAIN STREET WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 CARVER, MA

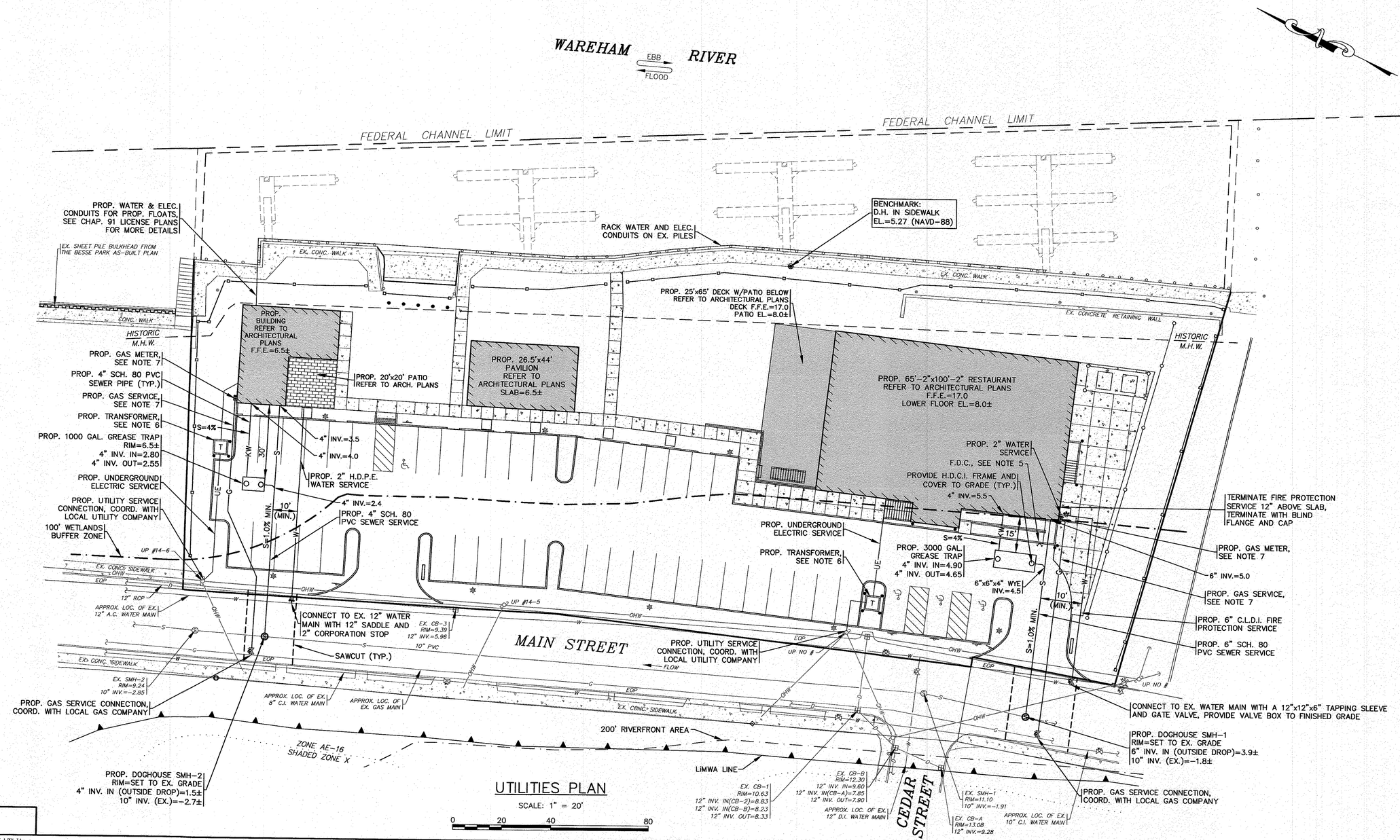
JOB NO.: 20-9438

DWG.
4 OF 11

I:\GAF DRAWINGS\2020 DRAWINGS\20-9438 (DANNY WARREN)\9438\dwg\9438_SITE PLAN_2021_ALT-1_REV-3.dwg

NOTES:

1. ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER COMMISSIONERS RULES AND REGULATIONS.
2. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY PRIOR TO CONNECTION.
3. REFER TO PAVEMENT SAWCUT/TRENCH REPAIR DETAIL ON SHEET 9.
4. CONTRACTOR SHALL CONFIRM EXISTING SEWER ELEVATIONS PRIOR TO CONSTRUCTION.
5. CONTRACTOR TO COORDINATE WITH THE FIRE PROTECTION CONTRACTOR FOR ALL DETAILS ON THE PROPOSED BUILDING FIRE PROTECTION SYSTEM AND THE FIRE DEPARTMENT CONNECTION (F.D.C.).
6. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR FINAL LOCATION, SIZE AND CONFIGURATION OF TRANSFORMERS. PROTECT TRANSFORMERS WITH BOLLARDS AS SHOWN. TRANSFORMERS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ALL FLOOD ZONE SPECIFICATIONS AND REGULATIONS, COORDINATE WITH LOCAL UTILITY COMPANY.
7. THE FINAL LOCATIONS, DEPTH'S AND CONSTRUCTION DETAILS OF THE PROPOSED GAS SERVICE AND GAS METERS SHALL BE DETERMINED BY THE LOCAL GAS COMPANY. CONTRACTOR SHALL COORDINATE WITH LOCAL GAS COMPANY PRIOR TO CONSTRUCTION.
8. AT THE WATER AND SEWER LINE CROSSING ONE FULL LENGTH OF SEWER PIPE SHALL BE 200 PSI PRESSURE RATED PIPE CENTERED OVER WATER LINE MEETING LATEST AWWA STANDARDS AND SHALL BE PRESSURE TESTED TO ENSURE WATER TIGHTNESS. WATER AND SEWER LINES SHALL HAVE A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN PIPES.
9. ALL PROPOSED GREASE TRAPS SHALL BE PROVIDED WITH (2) HEAVY DUTY CAST IRON (H.D.C.I.) FRAMES AND COVERS TO GRADE AS SHOWN.
10. CONTRACTOR SHALL CONFIRM ALL PROPOSED SEWER INVERTS WITH PLUMBING CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS IN THE FIELD. ALL INTERIOR PLUMBING SHALL BE DESIGNED BY OTHERS.



UTILITIES PLAN

SCALE: 1" = 20'

PERMIT SET
(NOT FOR CONSTRUCTION)

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REV.	DATE	BY	APP'D	DESCRIPTION
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1	1/4/22	JMP	WFM	PER REV. BLDG. PLANS/TOWN COMMENTS

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: 1" = 20'

APPROVED BY:

COMMONWEALTH OF MASSACHUSETTS — WILLIAM F. HAGEN NO. 33863 — REGISTERED PROFESSIONAL ENGINEER

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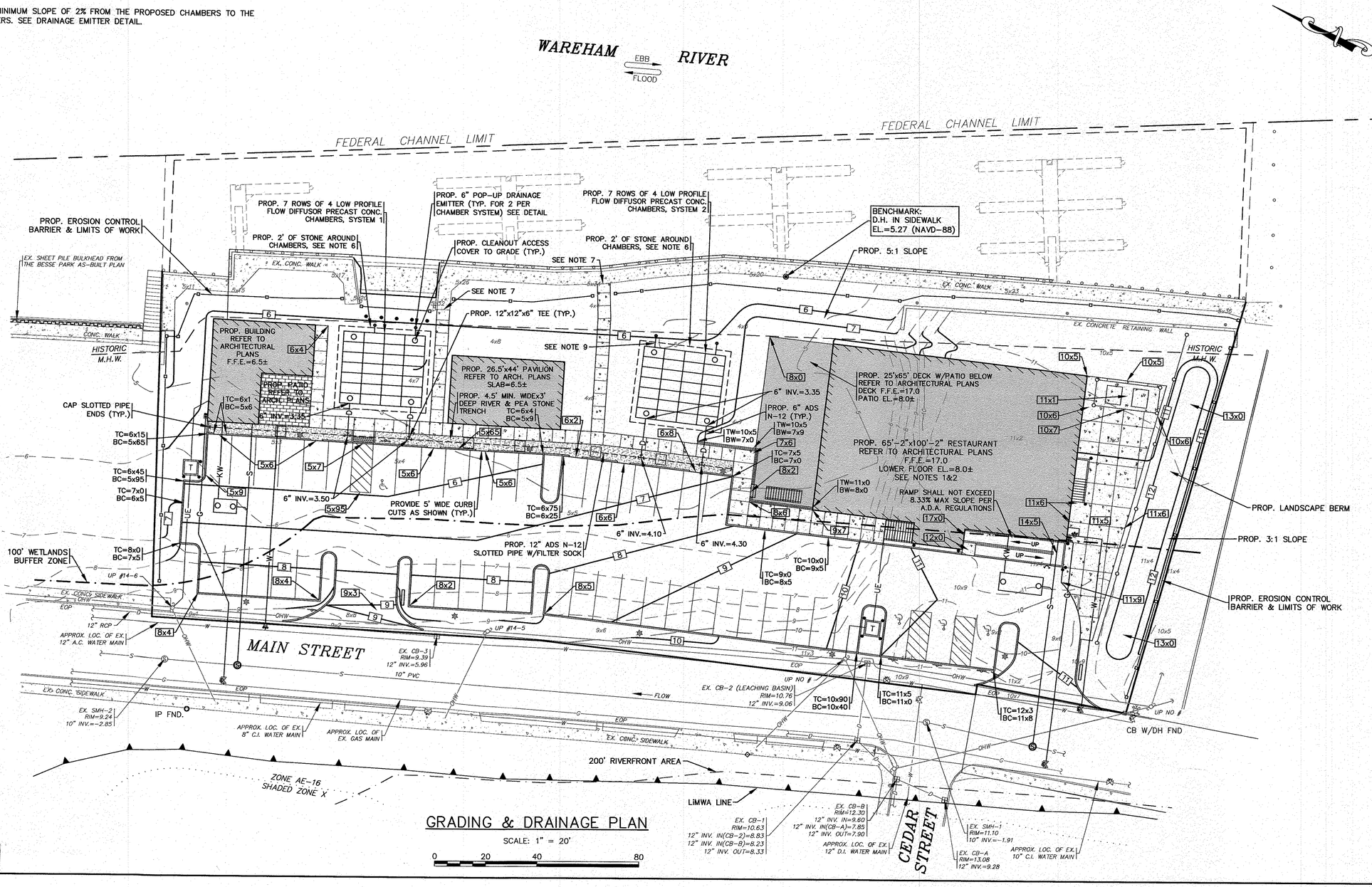
SITE DEVELOPMENT PLAN
UTILITIES PLAN
59 MAIN STREET — WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 — CARVER, MA

JOB NO.: 20-9438
DWG. 5 OF 11

NOTES:

1. REFER TO ARCHITECTURAL PLANS BY OTHERS FOR COMPLETE DIMENSIONS, CONSTRUCTION SPECIFICATIONS AND DETAILS OF THE PROPOSED BUILDINGS AND PAVILION. CONTRACTOR SHALL CONFIRM FINISHED FLOOR ELEVATION WITH OWNER AND ARCHITECT PRIOR TO CONSTRUCTION. ALL CONSTRUCTION SHALL COMPLY WITH ALL ASCE 24, MASSACHUSETTS AND INTERNATIONAL BUILDING CODE REQUIREMENTS, AS APPLICABLE FOR CONSTRUCTION IN FLOOD ZONES. REFER TO ARCHITECTURAL & STRUCTURAL PLANS BY OTHERS.
2. REFER TO ARCHITECTURAL PLANS BY OTHERS FOR ALL PROPOSED HANDICAP RAMPS & LANDINGS DIMENSIONS, CONSTRUCTION SPECIFICATIONS AND DETAILS. ALL PROPOSED RAMPS & LANDINGS SHALL BE PROVIDED WITH HANDRAILS PER A.D.A. AND BUILDING CODE REGULATIONS. ALL PROPOSED HANDICAP RAMPS & LANDINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ALL A.D.A. REGULATIONS,
3. RIVER & PEA STONE FILLED TRENCHES SHALL BE COVERED WITH AN ADDITIONAL TEMPORARY LAYER OF FILTER FABRIC UNTIL THE COMPLETION OF CONSTRUCTION. IF THERE IS ANY EVIDENCE OF SEDIMENT ENTERING THE TRENCHES, THE AFFECTED AREA OF THE TRENCH SHALL BE FULLY RECONSTRUCTED INCLUDING THE FILTER FABRIC TO THE SPECIFICATIONS OF THE DETAIL SHOWN ON THESE PLANS.
4. WATER MAIN/SERVICES SHALL BE INSTALLED A MINIMUM OF 18" BELOW ALL PROPOSED DRAINAGE LINES.
5. DOWNPOUTS ON FRONT & BACK OF THE PROPOSED RESTAURANT SHALL BE PIPED TO THE INFILTRATION SYSTEM #2. DOWNSPOUTS FOR THE PROPOSED 1,200 S.F. BUILDING SHALL BE PIPED TO THE INFILTRATION SYSTEM #1. REFER TO ARCHITECTURAL PLANS FOR ALL DOWNSPOUT LOCATIONS AND SIZES.
6. ALL STONE AROUND PRECAST CEMENT CONCRETE LEACHING CHAMBERS SHALL BE 1.5"–2" DOUBLE WASHED CRUSHED STONE.
7. MATCH PROPOSED SIDEWALK INTO EXISTING SIDEWALK LINE AND GRADE.
8. FOR COMPLETE DRAINAGE OPERATION AND MAINTENANCE NOTES SEE SHEET 2.
9. PROVIDE A 6" ADS N–12 PIPE WITH A MINIMUM SLOPE OF 2% FROM THE PROPOSED CHAMBERS TO THE PROPOSED 6" POP–UP DRAINAGE EMITTERS. SEE DRAINAGE EMITTER DETAIL.



GRADING & DRAINAGE PLAN

SCALE: 1" = 20'

0 20 40 80

PERMIT SET
(NOT FOR CONSTRUCTION)

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REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	INCREASED NW DRIVEWAY TO 24' WIDE
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	PER REV. BLDG. PLANS/TOWN COMMENTS

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20–9438
SCALE: 1" = 20'

APPROVED BY:

COMMONWEALTH OF MASSACHUSETTS WILLIAM F. MADEN CIVIL No. 39880 REGISTERED PROFESSIONAL ENGINEER

G.A.F. ENGINEERING, INC.
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E–MAIL: info@gafengineering.com

SITE DEVELOPMENT PLAN
GRADING & DRAINAGE PLAN
59 MAIN STREET WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 CARVER, MA

JOB NO.: 20–9438

DWG.
6 OF 11

PLANTING STANDARDS:

1. THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP, AND TRANSPLANT ALL PLANT MATERIALS LISTED ON THE PLANT SCHEDULE. BARE-ROOT IS TYPICALLY NOT PERMITTED FOR ANY TREE.
2. PLANT MATERIALS SHALL CONFORM TO THE REQUIREMENTS DESCRIBED IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANTS SHALL BE NURSERY GROWN.
3. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE.
   A) CALIPER MEASUREMENTS SHALL BE TAKEN SIX (6) INCHES ABOVE GRADE FOR TREES UNDER FOUR (4) INCHES IN DIAMETER AND TWELVE (12) INCHES ABOVE GRADE FOR TREES FOUR (4) INCHES IN DIAMETER AND LARGER.
   B) MINIMUM BRANCHING HEIGHT FOR ALL SHADE TREES SHALL BE SIX (6) FEET.
   C) MINIMUM SIZE FOR SHADE TREES SHALL BE TWO AND ONE HALF (2.5) INCHES IN DIAMETER AND TWELVE (12) FEET IN HEIGHT.
   D) MINIMUM SIZE FOR EVERGREEN TREES SHALL BE BETWEEN SIX (6) AND EIGHT (8) FEET IN HEIGHT
   E) MINIMUM SIZE FOR SHRUBS SHALL BE THREE (3) FEET IN HEIGHT
4. A PROFESSIONAL HORTICULTURIST/NURSERYMAN SHALL BE CONSULTED TO DETERMINE THE PROPER TIME TO MOVE AND INSTALL PLANT MATERIAL SO THAT DISTRESS TO THE PLANT IS MINIMIZED. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING WINTER MONTHS PROVIDED THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL PLANTING MIXTURES ARE USED.
5. A LANDSCAPE CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES, AND SHRUB BEDS AS FOLLOWS:
   A) ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, WITH VERTICAL SIDES. THE TREE PIT SHALL BE DEEP ENOUGH TO ALLOW ONE-EIGHTH (1/8) OF THE BALL TO BE ABOVE THE EXISTING GRADE. PLANTS SHALL REST ON UNDISTURBED EXISTING SOIL OR WELL COMPACTED BACKFILL ON EVERY SIDE, THE TREE PITS MUST BE A MINIMUM OF 2 TIMES THE ROOT BALL DIAMETER.
   B) IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE CULTIVATED TO AT LEAST EIGHTEEN (18) INCHES IN DEPTH. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE CULTIVATED TO AT LEAST TWELVE (12) INCHES IN DEPTH.
6. EACH TREE, SHRUB, OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE.
7. ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT. SOD THAT HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGE OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.
8. AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A LAYER BETWEEN TWO (2) AND THREE (3) INCHES DEEP OF HEMLOCK / SPRUCE MULCH OVER THE ENTIRE AREA OF THE BED OR SAUCER.
9. A TWO (2) YEAR GUARANTEE SHALL BE PROVIDED ON ALL NEW PLANT MATERIAL. IF ANY TREE OR SHRUB DIES WITHIN THIS PERIOD OF TIME, IT SHALL BE REPLACED.
10. ALL AREAS THAT ARE NOT LANDSCAPED SHALL BE LOAMED AND SEEDED.

PLANT LIST

KEY		QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS	REMARKS
SHRUBS							
	HAA	9	HYDRANGEA ARBORESCENS 'ANNBELLE'	ANNBAELLE WHITE HYDRANGEA	24'–30' HT.	5 GAL. NATIVE SPECIES	PLANT 5' O.C.
	HQ	8	HYDRANGEA QUERCIFOLIA	OAK LEAF HYDRANGEA	24'–30' HT.	5 GAL. NATIVE SPECIES	PLANT 5' O.C.
	JHB	21	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR GROUND JUNIPER	18"–24" SPR.	3 GAL. NATIVE SPECIES	PLANT 4' O.C.
	JV-1	7	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	7'–8' HT.	B & B NATIVE SPECIES	PLANT 6' O.C.
	JV-2	15	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	8'–10' HT.	B & B NATIVE SPECIES	PLANT 8' O.C.
	RKO	31	ROSA HYBRID-'KNOCK OUT'	HYBRID SHRUB ROSE 5 WHITE & 10 RED	18"–24" HT.	3 GAL. NON-INVASIVE	PLANT 3' O.C.
	SJNF	20	SPIRAEA JAPONICA 'NEON FLASH'	NEON FLASH SPIREA	18"–24" HT.	3 GAL. NON-INVASIVE	PLANT 3' O.C.
SHADE & ORNAMENTAL TREES							
	ARO	6	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3" CAL.	B & B NATIVE SPECIES	PLANT AS SHOWN
	ARB	4	ACER RUBRUM 'BOWHALL'	BOWHALL COLUMNAR SWAMP RED MAPLE	3" CAL.	B & B NATIVE SPECIES	PLANT AS SHOWN
	NS	4	NYSSA SYLVATICA	BLACK GUM	3" CAL.	B & B NATIVE SPECIES	PLANT AS SHOWN
	ZSG	11	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	3" CAL.	B & B	PLANT AS SHOWN
ORNAMENTAL GRASSES & PERENNIALS							
	CAK	15	CALAMAGROSTIS ACUTIFLORA "KARL FOERSTER"	FEATHER REED GRASS	1 GAL.	36" HT. NON-INVASIVE	18" O.C.
	HHR	135	HEMEROCALIS 'HAPPY RETURNS'	HAPPY RETURNS DWARF YELLOW DAYLILY	1 GAL.	18" HT. NON-INVASIVE	12" O.C.

NOTES:

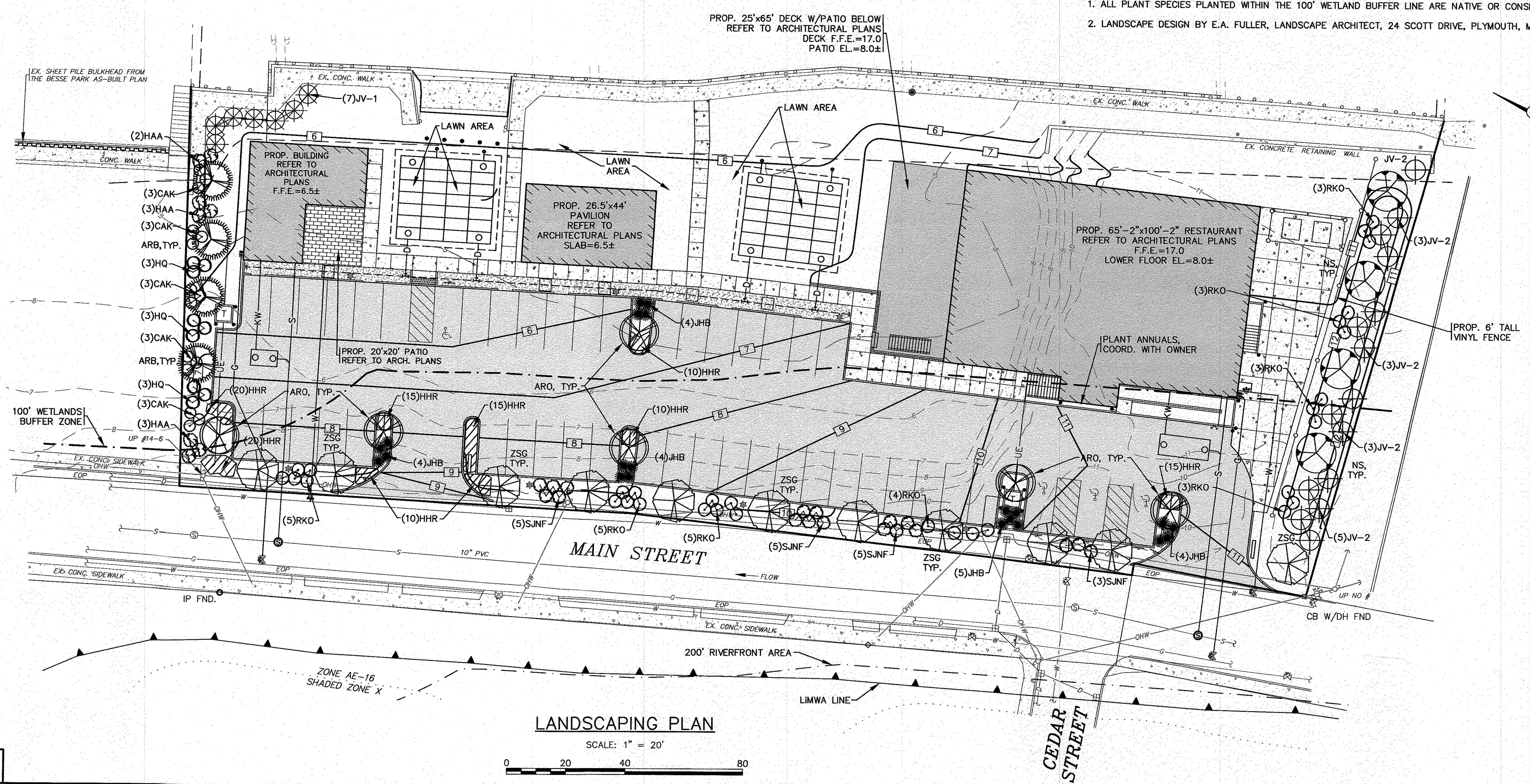
1. ALL PLANT SPECIES PLANTED WITHIN THE 100' WETLAND BUFFER LINE ARE NATIVE OR CONSIDERED NON-INVASIVE SPECIES.
2. LANDSCAPE DESIGN BY E.A. FULLER, LANDSCAPE ARCHITECT, 24 SCOTT DRIVE, PLYMOUTH, MA, 02360.

REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	INCREASED NW DRIVEWAY TO 24' WIDE
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	PER REV. BLDG. PLANS/TOWN COMMENTS

DATE: NOV. 22, 2021
DRAWN BY: JMP/JH
CHECKED BY: EAF
JOB NO.: 20-9438
SCALE: 1" = 20'

APPROVED BY: (MASSACHUSETTS REGISTERED LANDSCAPE ARCHITECT, EDWARD A. FULLER, NO. 616)

APPROVED BY: (COMMONWEALTH OF MASSACHUSETTS, WILLIAM F. MADDEN, CIVIL, NO. 32863, REGISTERED PROFESSIONAL ENGINEER)



LANDSCAPING PLAN

SCALE: 1" = 20'

0 20 40 80

PERMIT SET
(NOT FOR CONSTRUCTION)

G.A.F. ENGINEERING, INC.
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TEL: (508) 295-6600 FAX: (508) 295-6634
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SITE DEVELOPMENT PLAN
LANDSCAPING PLAN

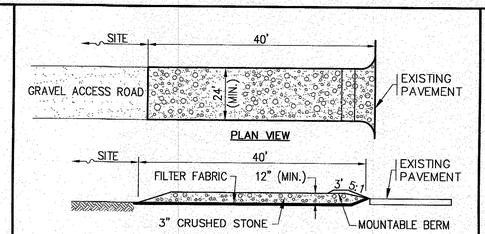
59 MAIN STREET WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 CARVER, MA

JOB NO.: 20-9438

NOTES:

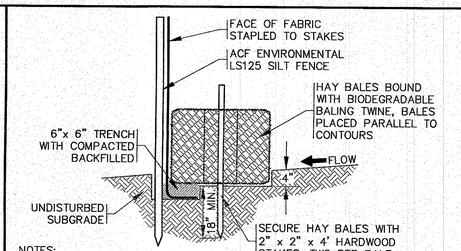
1. A CONSTRUCTION ENTRANCE WILL NEED TO BE INSTALLED BEFORE ANY CONSTRUCTION ACTIVITY OCCURRING ON-SITE.
2. CONTRACTOR SHALL PROVIDE AND MAINTAIN DOUBLE STAKED HAY BALES WITH SILT FENCE EROSION CONTROL BARRIER AS SHOWN ON THE PLANS. EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL VEGETATION IS ESTABLISHED.
3. EXISTING CATCH BASINS SHALL HAVE A TEMPORARY SILT SACK OR AN APPROVED EQUAL INSTALLED WITHIN PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SILT SACKS AT THE COMPLETION OF CONSTRUCTION.
4. RIVER & PEA STONE FILLED TRENCHES SHALL BE COVERED WITH AN ADDITIONAL TEMPORARY LAYER OF FILTER FABRIC UNTIL THE COMPLETION OF CONSTRUCTION. IF THERE IS ANY EVIDENCE OF SEDIMENT ENTERING THE TRENCHES, THE AFFECTED AREA OF THE TRENCH SHALL BE FULLY RECONSTRUCTED INCLUDING THE FILTER FABRIC TO THE SPECIFICATIONS OF THE DETAIL SHOWN ON THESE PLANS.
5. CONTRACTOR SHALL SIZE, PROVIDE AND MAINTAIN DEWATERING EQUIPMENT FOR THE CONTROL, COLLECTION AND DISPOSAL OF GROUND AND SURFACE WATER WHERE NECESSARY TO COMPLETE THE WORK. DEWATERING IF REQUIRED SHALL BE DIRECTED TO A DEWATERING BASIN OR A DIRTBAG. FINAL SIZE AND LOCATION OF DEWATERING EQUIPMENT SHALL BE DETERMINED BY THE CONTRACTOR AT TIME OF CONSTRUCTION.
6. CEMENT CONCRETE WASHOUT AREA SHALL BE A RING OF DOUBLE STAKED HAY BALES WITH SILTATION FENCE AND LINED WITH A 40 MIL. POLYETHYLENE BARRIER. SEE DETAIL. FINAL WASHOUT SIZE AND LOCATION SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AT TIME OF CONSTRUCTION.
7. THE FINAL LOCATION OF CONTRACTORS STAGING AREA SHALL BE DETERMINED BY THE CONTRACTOR AT TIME OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH OWNER.
8. PROTECT THE POP-UP DRAINAGE EMITTER DURING CONSTRUCTION WITH A 12" PERFORATED PIPE PLACE AROUND THE UNIT DURING CONSTRUCTION.



NOTES:

1. ENTRANCE WIDTH SHALL BE 24 FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.

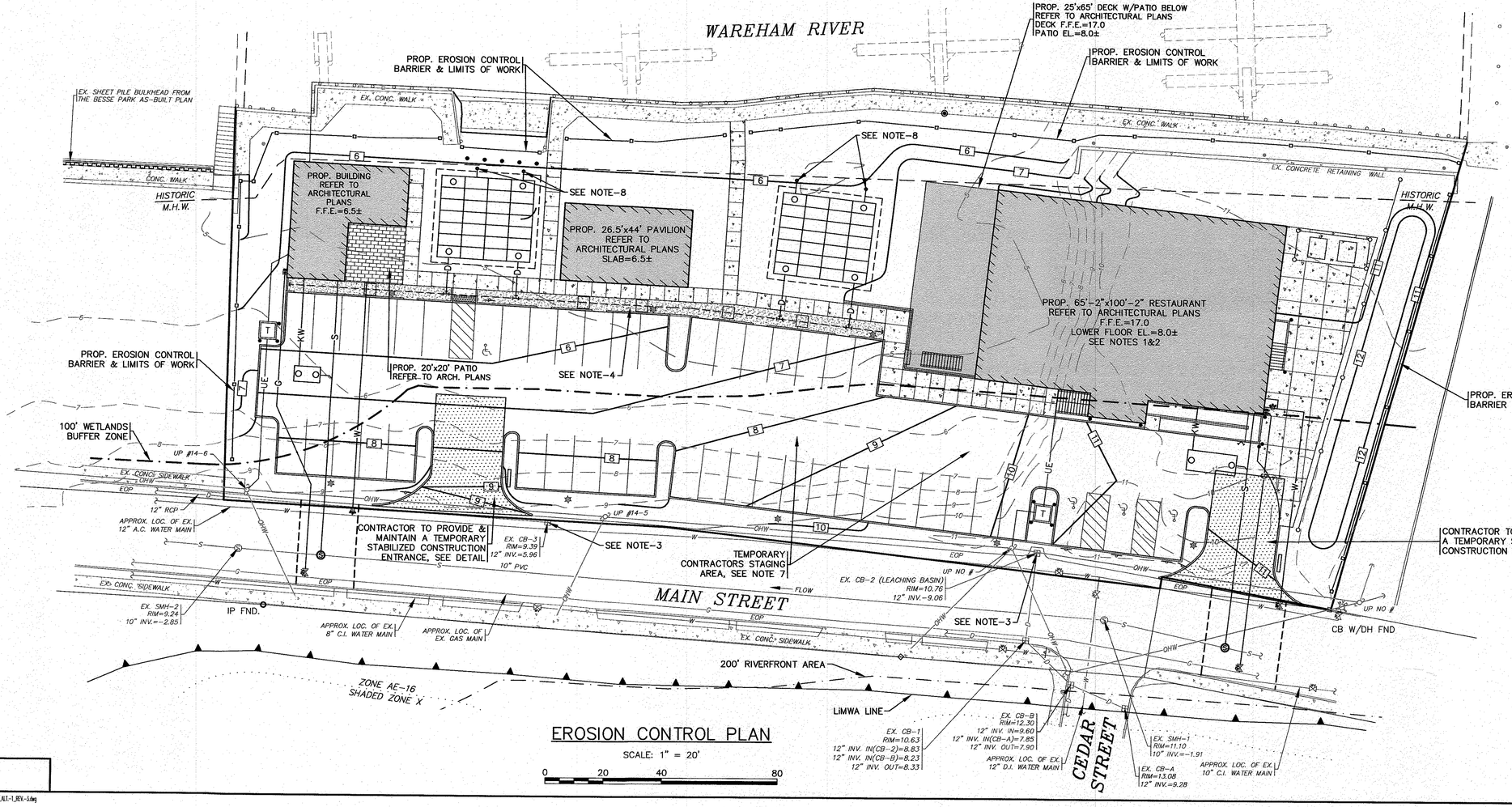
TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



NOTES:

1. THE SILTATION FENCE SHALL BE ACF ENVIRONMENTAL, MODEL LS125.
2. SILTATION FENCING SHALL BE INSTALLED DOWNSLOPE OF ALL PROPOSED AND EXISTING DISTURBED AREAS, OR AS SHOWN ON THE PLANS.
3. THE EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL A VEGETATIVE COVER HAS BEEN FIRMLY ESTABLISHED.
4. EROSION CONTROL MEASURES SHALL FOLLOW THE PERFORMANCE STANDARDS OF THE USDA SOIL CONSERVATION SERVICE, AND ANY APPLICABLE STATE AND/OR LOCAL CONSERVATION AUTHORITY.

HAY BALE / SILTATION FENCE BARRIER
N.T.S.



EROSION CONTROL PLAN

SCALE: 1" = 20'

0 20 40 80

PERMIT SET
(NOT FOR CONSTRUCTION)

H:\GAF DRAWINGS\2020 DRAWINGS\20-9438 (DANNY WARREN)\9438\dwg\9438_SITE PLAN_2021_ALT-1_REV-5.dwg

REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	INCREASED NW DRIVEWAY TO 24' WIDE
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	PER REV. BLDG. PLANS/TOWN COMMENTS

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: 1" = 20'

APPROVED BY:

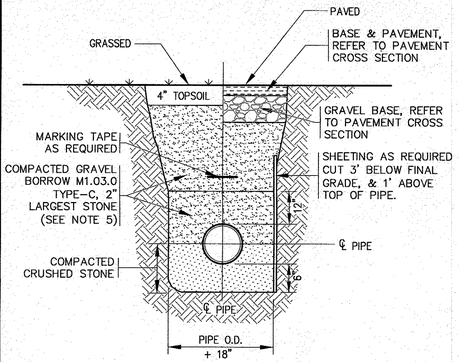
COMMONWEALTH OF MASSACHUSETTS WILLIAM F. MADDEN NO. 33883 REGISTERED PROFESSIONAL ENGINEER

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634

SITE DEVELOPMENT PLAN
EROSION CONTROL PLAN
59 MAIN STREET WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 CARVER, MA

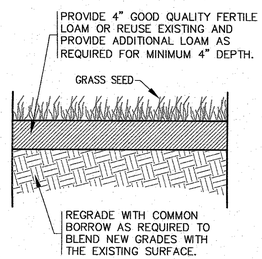
JOB NO.: 20-9438
DWG. 8 OF 11



NOTES:

1. PIPE BEDDING SHALL BE COMPACTED BEFORE PIPE INSTALLATION.
2. COMPACTION AROUND PIPE SHALL BE BY TAMPER AT 6" MAX. LIFTS.
3. MIN. COVER OVER PIPE = 1'-6"
4. MIN. COVER OVER WATER SERVICES/MAINS = 5'-0".
5. FOR ALL WORK IN MAIN STREET USE FLOWABLE FILL AS REQUIRED BY THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.

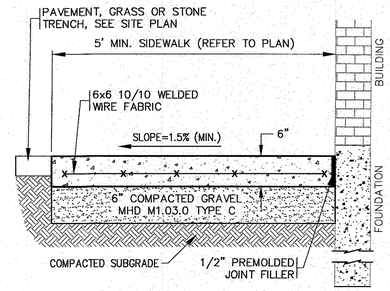
TYPICAL PIPE TRENCH
N.T.S.



NOTES:

1. MATERIALS AND CONSTRUCTION METHODS FOR LOAM BORROW AND TOPSOIL SHALL CONFORM TO THE RELEVANT PROVISIONS OF SECTION 751 OF THE MassDOT STANDARD SPECIFICATIONS AND WITH THE PROCEDURES DESCRIBED HEREIN.
2. MATERIALS AND CONSTRUCTION FOR SEEDING SHALL CONFORM TO THE RELEVANT PROVISIONS OF SECTION 765 OF THE MassDOT STANDARD SPECIFICATIONS.
3. SEED FOR GRASS STRIPS SHALL CONFORM TO MassDOT MATERIAL SPEC. M6.03.0, GRASSPLOTS AND ISLANDS.
4. GRASS SHALL BE MAINTAINED A MINIMUN OF 4" HIGH WITHIN THE DRAINAGE AREAS.
5. LOAM AND SEED ALL DISTURBED AREAS.

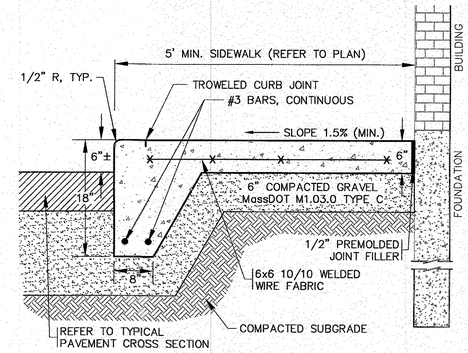
LOAM AND SEED DETAIL
N.T.S.



NOTES:

1. REFER TO SITE PLAN FOR LINE AND GRADE OF SIDEWALKS.
2. ALL CONCRETE SHALL BE 5000 PSI MIN.
3. CONSTRUCTION SHALL CONFORM TO MassDOT STD. SPEC. SECTION 701 UNLESS OTHERWISE NOTED.
4. SUBGRADE & BASE SHALL BE COMPACTED TO MINIMUM 95% MAXIMUM DRY DENSITY.
5. SURFACE TO BE BROOM TYPE FINISH.

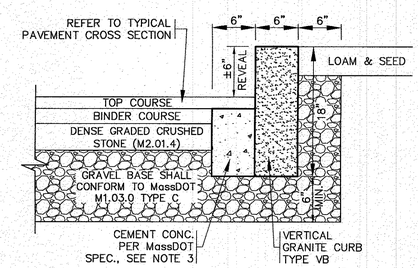
CEMENT CONCRETE SIDEWALK
N.T.S.



NOTES:

1. REFER TO SITE PLAN FOR LINE AND GRADE OF SIDEWALKS.
2. ALL CEM. CONC. FOR SIDEWALK AND CURB SHALL BE 5000 PSI MIN.
3. CONSTRUCTION SHALL CONFORM TO MassDOT STD. SPEC. SECTION 701 UNLESS OTHERWISE NOTED.
4. SUBGRADE & BASE SHALL BE COMPACTED TO MINIMUM 95% MAXIMUM DRY DENSITY.
5. SURFACE TO BE BROOM TYPE FINISH.

INTEGRAL CONCRETE CURB AND SIDEWALK
N.T.S.



NOTES:

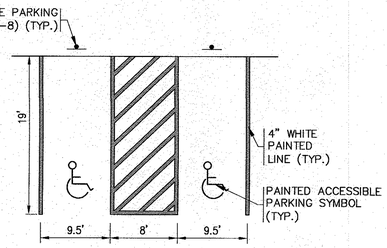
1. EXISTING PAVEMENT APPLICATION ONLY: SAWCUT LINE 6" FROM PROPOSED CURB LINE AND REMOVE BINDER, BASE AND STONE, REPLACE WITH CEMENT CONCRETE.
2. CEMENT CONCRETE SHALL CONFORM TO SECTION M4 OF THE LATEST REVISION OF MassDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. BIT. CONC. NOT ACCEPTABLE.
3. 4000 PSI CEMENT CONCRETE WILL BE CONTINUOUS FOR ENTIRE LENGTH OF CURB.

VERTICAL GRANITE CURB
N.T.S.

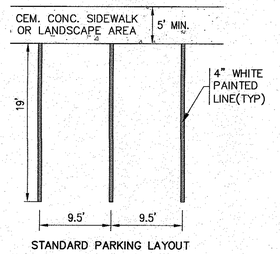
REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	NO CHANGE THIS SHEET
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	NO CHANGE THIS SHEET

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: N.T.S.

APPROVED BY:

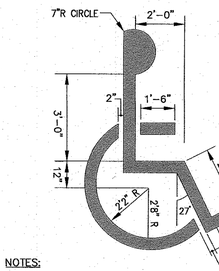


ACCESSIBLE PARKING LAYOUT



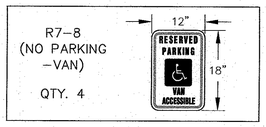
STANDARD PARKING LAYOUT

ACCESSIBLE PARKING AND STANDARD PARKING LAYOUTS
N.T.S.

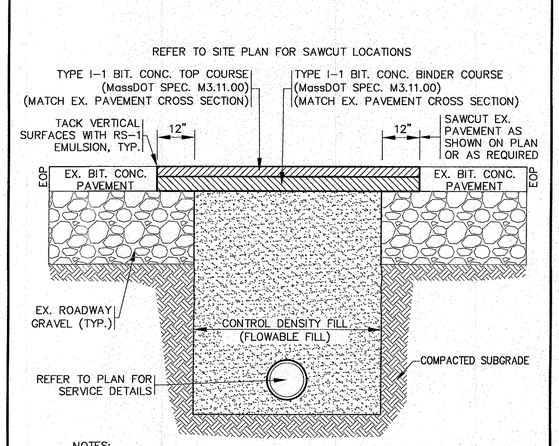


NOTES:

1. ACCESSIBLE SYMBOL PAINT SHALL CONFORM TO STRIPING PAINT AS SPECIFIED. (SYMBOL SHALL BE CENTERED IN STALL).
2. SIGNAGE TO CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OF STREETS AND HIGHWAYS OR APPROVED EQUAL.
3. PARKING AREA PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.



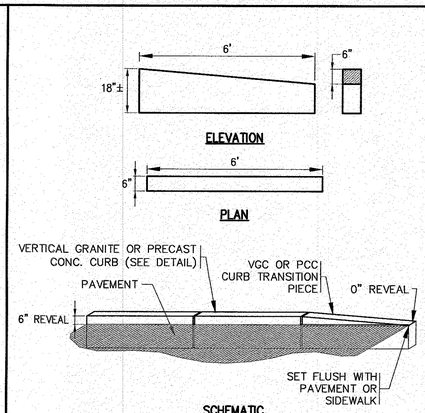
ACCESSIBLE PARKING PAINT SYMBOL AND SIGN
N.T.S.



NOTES:

1. ALL PAVEMENT SHALL BE IN ACCORDANCE WITH MassDOT SECTION 460 & 401, UNLESS OTHERWISE NOTED.
2. SUBGRADE & BASE SHALL BE COMPACTED TO MINIMUM 95% MAXIMUM DRY DENSITY.
3. CONTROL DENSITY FILL (FLOWABLE FILL) SHALL CONFORM TO MassDOT M4.08.0 TYPE 1E OR TYPE 2E.

PAVEMENT SAWCUT / TRENCH REPAIR DETAIL
N.T.S.

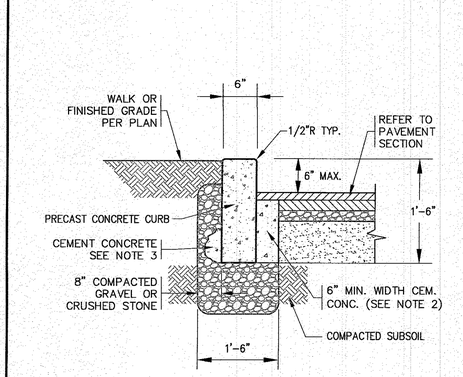


SCHEMATIC

NOTES:

1. REFER TO PLAN FOR MATERIAL & LOCATIONS.
2. PROVIDE RADIAL TRANSITION CURBING WHERE REQUIRED. REFER TO MANUFACTURES INSTALLATION DETAILS.
3. ALL WORK SHALL CONFORM TO MassDOT SPECIFICATIONS AND DETAILS. REFER TO THE LATEST REVISIONS OF THE MassDOT STANDARD SPECIFICATIONS AND DETAILS FOR HIGHWAY AND BRIDGES.
4. SEE PRECAST CONCRETE CURB AND VERTICAL GRANITE CURB DETAIL FOR CURBING INSTALLATION.

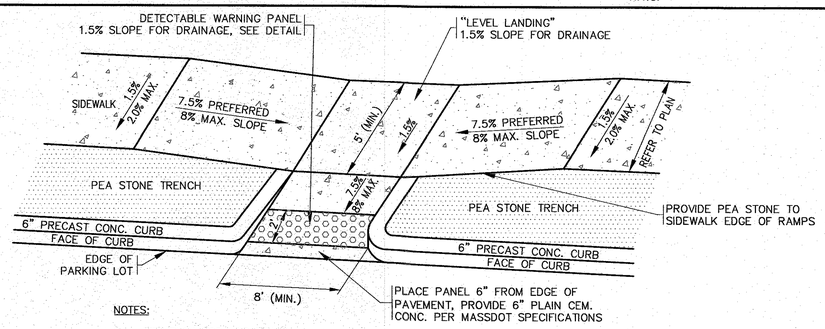
TRANSITION CURB DETAIL
N.T.S.



NOTES:

1. CEMENT CONCRETE SHALL CONFORM TO SECTION M4 OF THE LATEST REVISION OF MassDOT STANDARD SPECIFICATIONS. BIT. CONC. NOT ACCEPTABLE.
2. 4000 PSI CEMENT CONCRETE WILL BE CONTINUOUS FOR ENTIRE LENGTH OF CURB.
3. 1 CU.YD. OF 4000 PSI CEMENT CONCRETE WILL BE PLACED WITHIN 12" OF ALL JOINTS AT BACK OF CURBING. AS SHOWN.

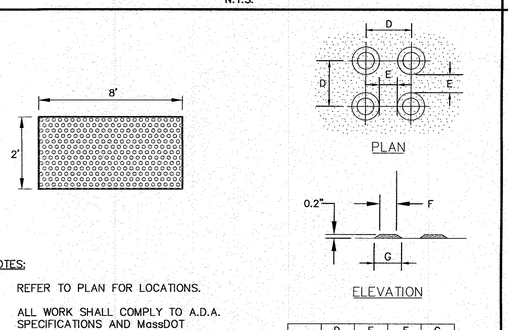
PRECAST CONCRETE CURB
N.T.S.



NOTES:

1. SEE PLAN FOR LOCATIONS.
2. ALL METHODS AND MATERIALS OF CONSTRUCTION SHALL COMPLY WITH THE LATEST REVISION OF MassDOT STANDARD SPECIFICATIONS AND A.D.A. REGULATIONS.

HANDICAP RAMP
N.T.S.

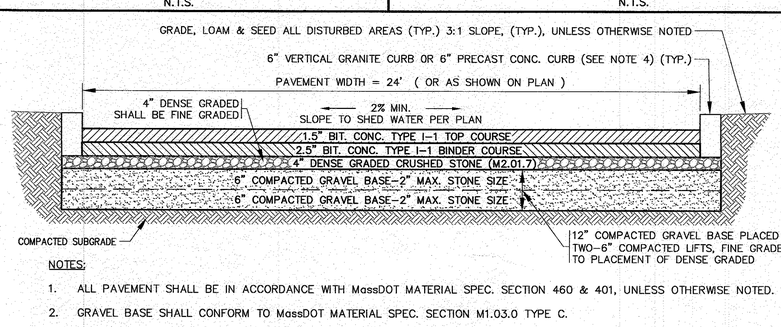


	D	E	F	G
MIN.	1.60"	.65"	.45"	.90"
MAX.	2.40"	1.50"	.80"	1.40"

NOTES:

1. REFER TO PLAN FOR LOCATIONS.
2. ALL WORK SHALL COMPLY TO A.D.A. SPECIFICATIONS AND MassDOT CONSTRUCTION STANDARD DETAILS.

DETECTABLE WARNING PANEL
N.T.S.



NOTES:

1. ALL PAVEMENT SHALL BE IN ACCORDANCE WITH MassDOT MATERIAL SPEC. SECTION 460 & 401, UNLESS OTHERWISE NOTED.
2. GRAVEL BASE SHALL CONFORM TO MassDOT MATERIAL SPEC. SECTION M1.03.0 TYPE C.
3. SUBGRADE & BASE SHALL BE COMPACTED TO MINIMUM 95% MAXIMUM DRY DENSITY.
4. SEE PLAN FOR LOCATIONS, REFER TO THE VERTICAL GRANITE CURB DETAIL AND THE PRECAST CONCRETE CURB DETAILS FOR INSTALLATION DETAILS AND SPECIFICATIONS.

TYPICAL BITUMINOUS PAVING SECTION
N.T.S.

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: info@gafenginc.com

SITE DEVELOPMENT PLAN
DETAIL SHEET 1
59 MAIN STREET WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 CARVER, MA

JOB NO.: 20-9438

PERMIT SET
(NOT FOR CONSTRUCTION)

DWG.
9 OF 11

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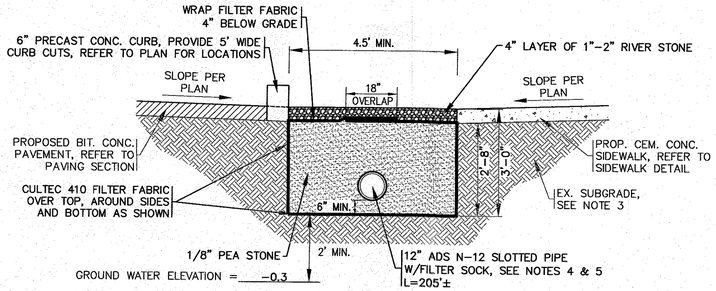
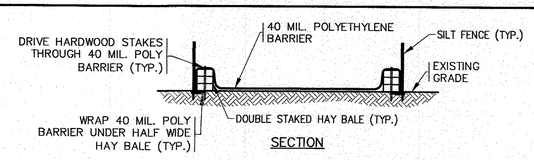


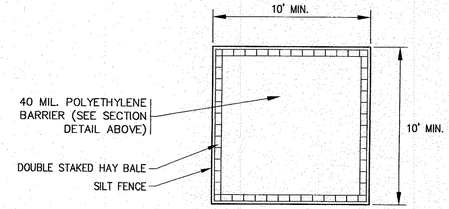
NOTES:

1. REFER TO PLAN FOR LOCATIONS.
2. COVER RIVER & PEA STONE TRENCHES WITH AN ADDITIONAL TEMPORARY LAYER OF FILTER FABRIC UNTIL THE COMPLETION OF CONSTRUCTION.
3. REMOVE UNSUITABLE SOIL 2' MINIMUM BENEATH AND AROUND ALL SIDES OF THE PROPOSED RIVER STONE TRENCH. THIS INCLUDES ORGANICS, TOPSOIL, ROOTS AND OTHER UNSUITABLE SOILS REPLACE WITH CLEAN SAND AND GRAVEL APPROVED BY DESIGN ENGINEER.
4. ALL PIPES SHALL HAVE SOIL TIGHT JOINTS AND FITTINGS.
5. PIPE PERFORATION PATTERN SHALL BE AASHTO CLASS II.

RIVER & PEA STONE TRENCH
N.T.S.



SECTION

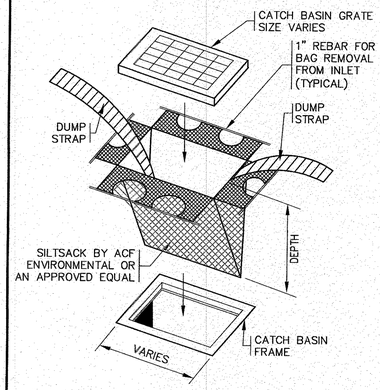


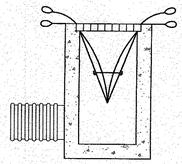
PLAN

NOTES:

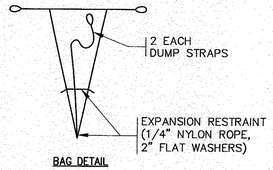
1. CONTRACTOR SHALL PROVIDE AND MAINTAIN CONCRETE WASHOUT AREA WHERE NECESSARY TO COMPLETE THE WORK.
2. FINAL SIZE AND LOCATION OF CONCRETE WASHOUT SHALL BE FIELD DETERMINED BY THE CONTRACTOR AT TIME OF CONSTRUCTION.
3. CONTRACTOR SHALL REPAIR OR REPLACE 40 MIL. POLY BARRIER OR STAKED HAY BALES AS REQUIRED.

CONCRETE WASHOUT DETAIL
N.T.S.



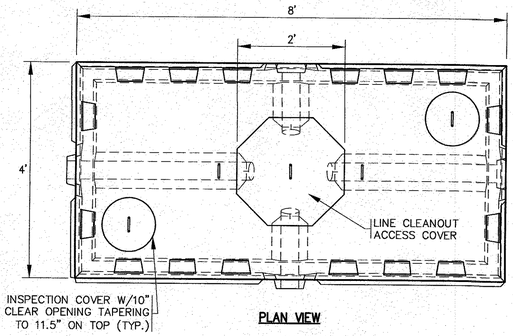


INSTALLATION DETAIL

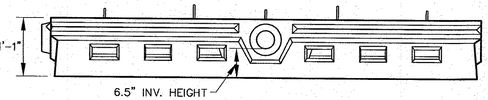


BAG DETAIL

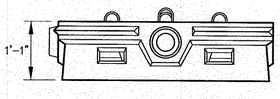
SILT SACK DETAIL
N.T.S.



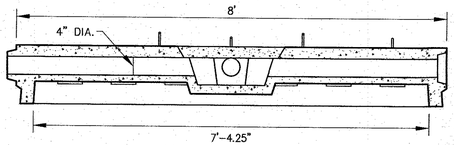
PLAN VIEW



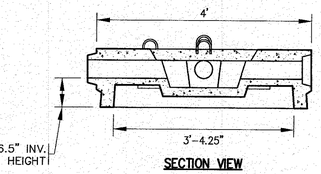
SIDE VIEW



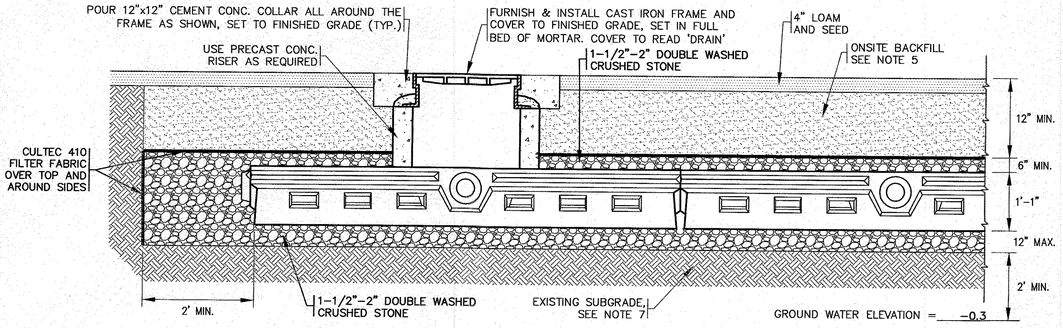
FRONT VIEW



SECTION VIEW



SECTION VIEW



CROSS SECTION

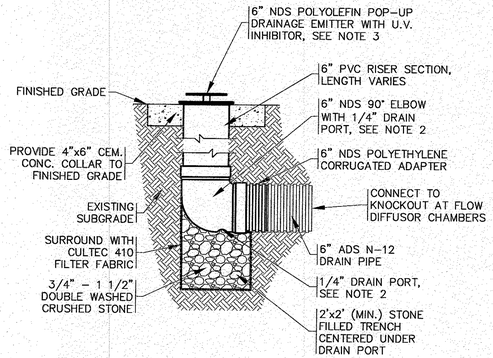
SYSTEM ELEVATIONS:

DESC./EL.	BOTTOM OF STONE	BOTTOM OF CHAMBER	TOP OF CHAMBER	TOP OF STONE	6" INVERT
SYSTEM 1	1.8	2.8	3.9	4.4	3.35
SYSTEM 2	1.8	2.8	3.9	4.4	3.35

LOW PROFILE FLOW DIFFUSOR NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGNED FOR HS-20 LOADING.
3. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER FOR INSTALLATION OF INSPECTION AND ACCESS COVERS.
4. REFER TO GRADING AND DRAINAGE SHEET FOR FLOW DIFFUSOR INVERT LOCATIONS.
5. USE ON SITE BACKFILL OVER CONC. FLOW DIFFUSORS WHERE FLOW DIFFUSORS ARE NOT UNDER PAVEMENT. WHEN FLOW DIFFUSOR CHAMBERS ARE UNDER PAVEMENT REFER TO PAVEMENT CROSS SECTION.
6. FILL ANY GAPS BETWEEN FLOW DIFFUSOR CHAMBERS WITH 1-1/2"-2" DOUBLE WASHED CRUSHED STONE.
7. REMOVE ALL UNSUITABLE SOIL 2' MINIMUM BENEATH AND AROUND ALL SIDES OF THE PROPOSED CHAMBERS. THIS INCLUDES ORGANICS, TOPSOIL, ROOTS AND OTHER UNSUITABLE SOILS REPLACE WITH CLEAN SAND AND GRAVEL APPROVED BY DESIGN ENGINEER.

LOW PROFILE FLOW DIFFUSOR CHAMBERS
N.T.S.



NOTES:

1. REFER TO SITE PLAN FOR LOCATION.
2. INCREASE THE 1/4" DRAIN PORT TO 1" DIA.
3. PROTECT THE POP-UP DRAINAGE EMITTER DURING CONSTRUCTION WITH A 12" PERFORATED PIPE PLACE AROUND THE UNIT.
4. FOR COMPLETE DETAILS AND INSTALLATION GUIDELINES REFER TO THE MANUFACTURER'S SPECIFICATIONS.

DRAINAGE EMITTER
N.T.S.

REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	PER PEER REVIEW COMMENTS
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/4/22	JMP	WFM	NO CHANGE THIS SHEET

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: N.T.S.

APPROVED BY:

G.A.F. ENGINEERING, INC.
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SITE DEVELOPMENT PLAN
DETAIL SHEET 2

59 MAIN STREET — WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 — CARVER, MA

JOB NO.: 20-9438

PERMIT SET
(NOT FOR CONSTRUCTION)

DWG.
10 OF 11

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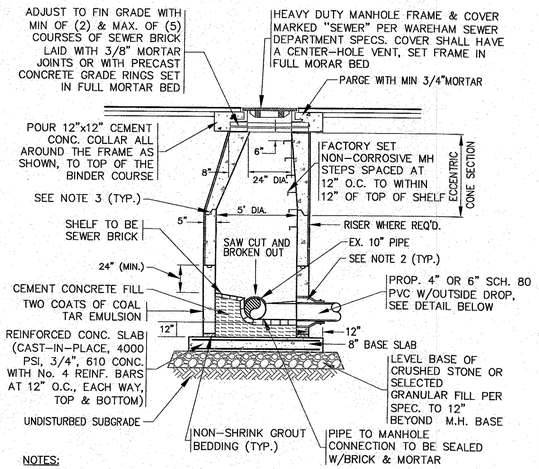
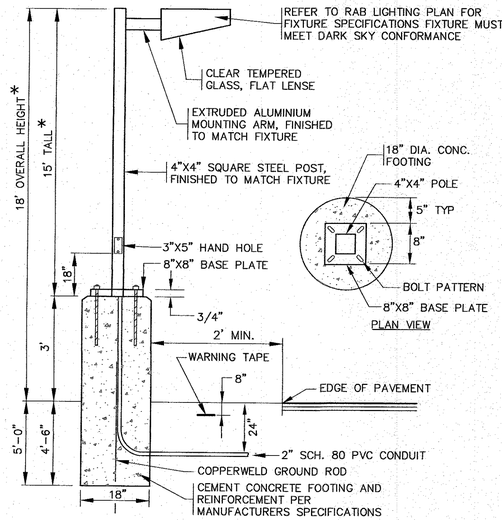


NOTES:

1. ALL STRUCTURES SHALL BE PRECAST CONCRETE AND BE DESIGNED FOR HS-20 LOADING. SECTION HEIGHTS VARY.
2. USE WATERTIGHT PENETRATION NON-SHRINK MORTAR OR RESILIENT EPDM RUBBER BOOT WITH INTERNAL EXTERNAL STAINLESS STEEL CLAMPS & EXPANDERS.
3. ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. REFER TO PLANS FOR PIPE SIZES, INVERTS, RIMS AND LOCATIONS.

DOGHOUSE SEWER MANHOLE
N.T.S.

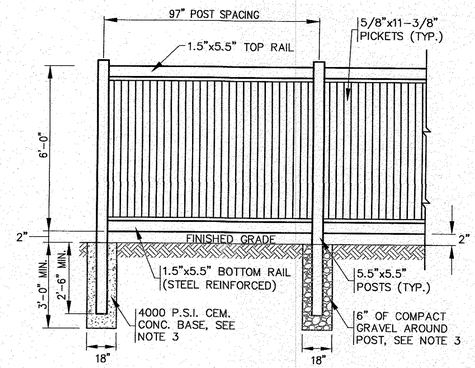


NOTES:

1. CIRCUIT CONDUCTORS TO BE PULLED AND TERMINATED BY ELECTRIC CONTRACTOR TO COORDINATE.
2. CONTRACTOR TO COORDINATE WITH OWNER ON FINAL LIGHT FIXTURE SPECIFICATIONS.
3. ALL MOUNTING HARDWARE AND INSTALLATION SHALL BE PER MANUFACTURER SPECIFICATIONS.
4. ALL LIGHTING LAYOUT & FIXTURES SHALL COMPLY WITH SECTION 1240 (LIGHTING) OF THE TOWN OF WAREHAM ZONING BYLAW.

*REFER TO LIGHTING DESIGN PLAN FOR FINAL POLE HEIGHTS

STANDARD LIGHT POLE W/BASE
N.T.S.

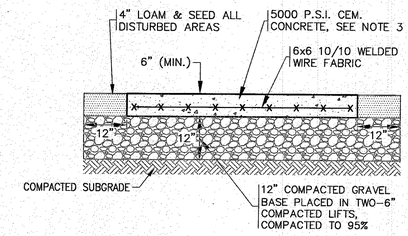


NOTES:

1. REFER TO MANUFACTURERS SPECIFICATIONS FOR COMPLETE DETAILS AND INSTALLATION GUIDELINES.
2. REFER TO PLAN FOR LOCATIONS.
3. CEMENT CONCRETE BASE SHALL BE USED AT ALL ENDS, ANGLE POINTS AND GATE POSTS. POSTS SHALL BE INSTALLED TO A DEPTH OF 2'-6" MIN. OR TO A DEPTH AS REQUIRED FOR FROST ADEQUATE PROTECTION.

VINYL FENCE DETAIL
N.T.S.

PERMIT SET
(NOT FOR CONSTRUCTION)



NOTES:

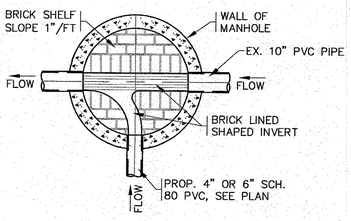
1. CEMENT CONCRETE PAD SHALL BE 6" THICK.
2. CONSTRUCTION JOINTS TO BE SET AT INTERVALS OF 1/4 OF LENGTH.
3. STRENGTH OF THE CEMENT CONCRETE SHALL BE 5000 P.S.I. @ 28 DAYS.
4. SUBGRADE & BASE SHALL BE COMPACTED TO MINIMUM 95% MAXIMUM DRY DENSITY.
5. SEE GRADING & DRAINAGE PLAN FOR ELEVATIONS.

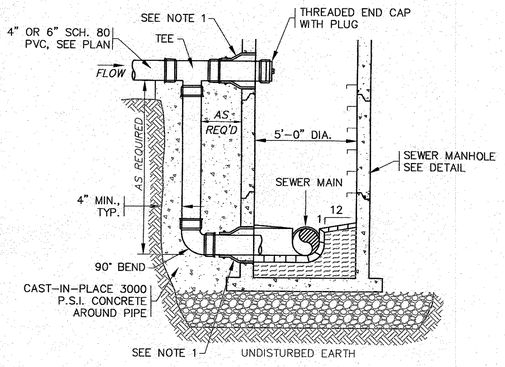
CEMENT CONCRETE LOADING AREA PAD
N.T.S.

REV.	DATE	BY	APP'D	DESCRIPTION
3	2/15/22	JMP	WFM	ADDED CEM. CONC. LOADING AREA DETAIL
2	1/18/22	JMP	WFM	PER PEER REVIEW COMMENTS
1	1/14/22	JMP	WFM	NO CHANGE THIS SHEET

DATE: NOV. 22, 2021
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 20-9438
SCALE: N.T.S.

APPROVED BY:

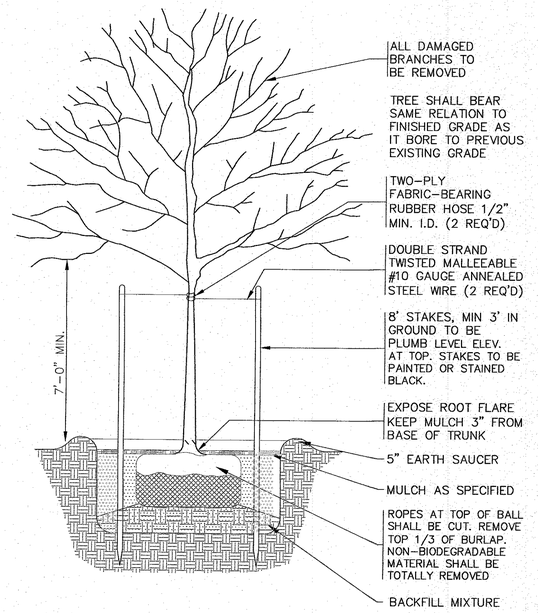




NOTES:

1. USE WATERTIGHT PENETRATION NON-SHRINK MORTAR OR RESILIENT EPDM RUBBER BOOT WITH INTERNAL EXTERNAL STAINLESS STEEL CLAMPS & EXPANDERS.
2. ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT.
3. REFER TO PLANS FOR PIPE SIZES, INVERTS, RIMS AND LOCATIONS.

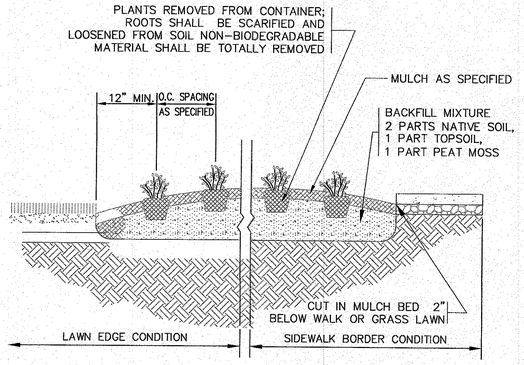
OUTSIDE DROP - SEWER MANHOLE
N.T.S.



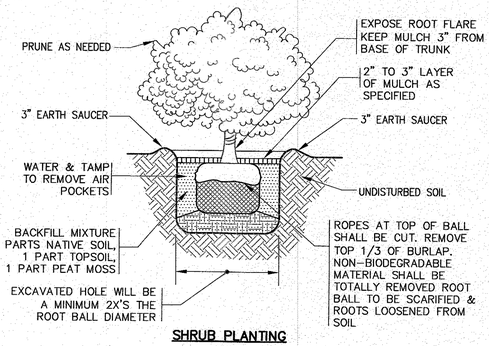
NOTES:

1. REFER TO LANDSCAPING PLAN FOR PLANTING LOCATIONS.

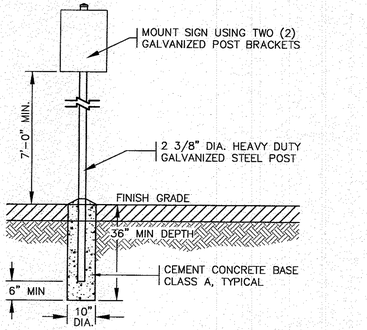
SHADE TREE PLANTING DETAIL
N.T.S.



GROUNDCOVER PLANTING DETAIL
N.T.S.



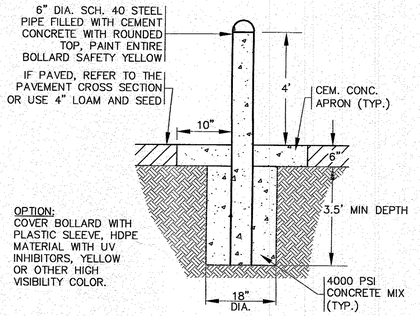
SHRUB PLANTING
N.T.S.



NOTES:

1. ALL SIGNS, MARKINGS AND DIMENSIONS SHALL BE IN CONFORMANCE WITH THE MOST RECENT EDITIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), MassDOT AND TOWN OF WAREHAM STANDARDS AND SPECIFICATIONS.
2. ALL HARDWARE USED SHALL BE CADMIUM OR ZINC PLATED.

TYPICAL SIGN POST
N.T.S.



NOTES:

1. SEE PLAN FOR LOCATIONS.

TYPICAL BOLLARD DETAIL
N.T.S.

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SITE DEVELOPMENT PLAN
DETAIL SHEET 3
59 MAIN STREET — WAREHAM, MA

PREPARED FOR:
WARREN QOZB, LLC
P.O. BOX 1206 — CARVER, MA

JOB NO.: 20-9438
DWG. 11 OF 11

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