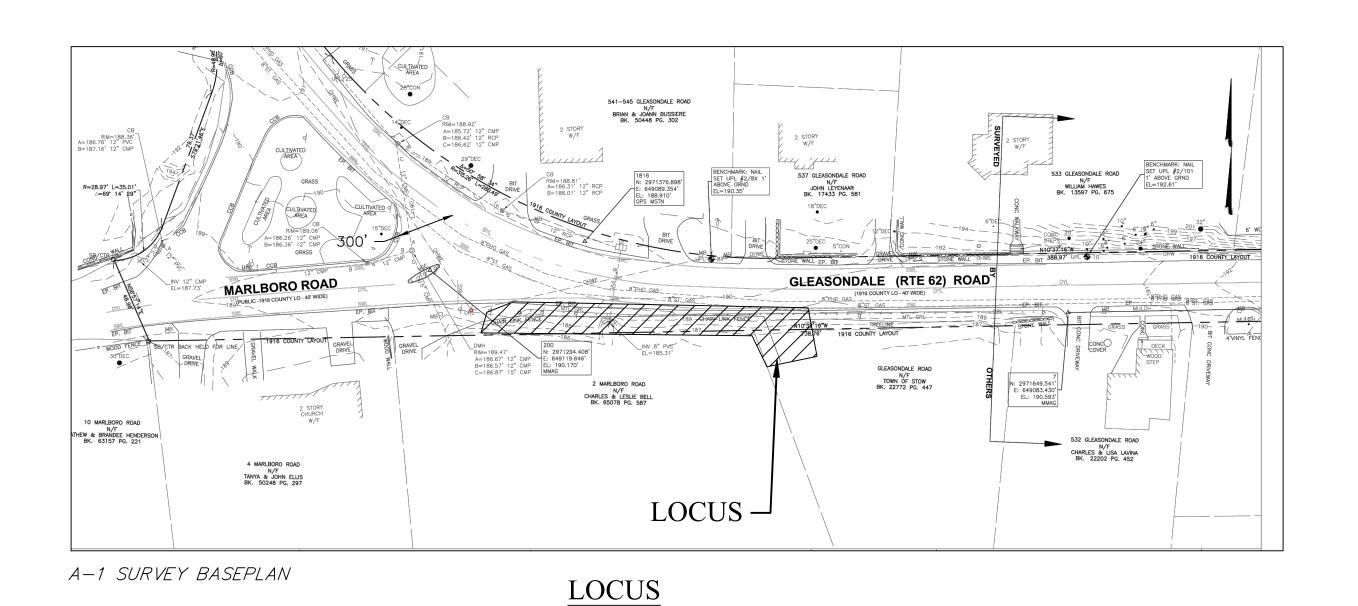
BID DOCUMENTS *FOR* TOWN OF STOW OFF GLEASONDALE ROAD-KANE PROPERTY ACCESS PATH

OWNER:

Stow Town Hall 380 Great Road Stow, MA 01775

PLANNERS, LANDSCAPE ARCHITECT, CIVIL ENGINEER & SURVEYOR: Places Associates, Inc. 256 Great Road, Suite 4 Littleton, MA 01460



SCALE: 1" = 500'

SHEET INDEX

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PROGRESS PRINT 10-13-2022

KANE PROPERTY ACCESS PATH

OCATION: OFF GLEASONDALE ROAD TOWN: STOW, MASSACHUSETTS

PREPARED FOR: TOWN OF STOW

DATE: OCTOBER 2022

PLACES Associates, Inc.



PLAN No.: COVER

GENERAL NOTES:

- PRIOR TO THE PREPARATION OF BIDS AND/OR THE INITIATION OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN AND CAREFULLY EXAMINE THIS PLAN SET, RELATED CONSTRUCTION PLAN SETS FROM OTHER PROFESSIONAL DISCIPLINES. CONSTRUCTION SPECIFICATIONS, MANUFACTURERS INFORMATION AND ANY APPLICABLE PERMIT REQUIREMENTS/CONDITIONS OF APPROVAL FOR THE PROJECT.
- THE EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. DIG SAFE AND THE APPROPRIATE UTILITY COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE INITIATION
- NOT ALL UTILITIES WERE ABLE TO BE LOCATED BY RECORD INFORMATION, SITE SURVEYS OR UTILITY LOCATOR SERVICES. THE DESIGN ENGINEER AND BASE PLAN SURVEYOR DO NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OR SUBSURFACE STRUCTURES WHICH ARE OMITTED OR INACCURATELY SHOWN. PRIOR TO THE INITIATION OF WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION/ELEVATION OF EXISTING UTILITIES SHOWN ON THE PLAN.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY DISCREPANCY BETWEEN THE LOCATION/ELEVATION OF ANY EXISTING UTILITIES SHOWN ON THE PLANS AND THAT WHICH IS FOUND IN THE FIELD.
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL LAND SURVEYOR TO PROVIDE LAYOUT & CONTROL FOR THE DEVELOPMENT OF THE SITE.
- ALL CONSTRUCTION UNDER AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONSTRUCTED TO WITHSTAND A DIRECT H20 DESIGN LOAD. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL UTILITY/SITE IMPROVEMENT AREAS UNDER LANDSCAPED/NON-TRAFFIC BEARING AREAS FROM TEMPORARY CONSTRUCTION LOADS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ADJACENT PROPERTY FROM DAMAGE. ALL DAMAGES BY THE CONTRACTOR OR SUBCONTRACTORS SHALL BE REPAIRED AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING SURVEY MONUMENTS (BOUNDS, PINS, PIPES, DRILL HOLES, ETC.) THROUGHOUT ALL PHASES OF CONSTRUCTION. ANY DISTURBED MONUMENTS SHALL BE REPLACED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY CONTRADICTORY, INCOMPLETE OR MISLABELED INFORMATION SHOWN ON THE PLANS OR PLANS PREPARED BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR ADEQUATE TIME FOR THE ENGINEER TO RESPOND/PROVIDE DIRECTION FOR THE PLAN DISCREPANCY.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS OF PRODUCTS/MATERIALS TO THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY AS REQUIRED IN THE CONSTRUCTION DOCUMENTS OR IF REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OVER THE PRODUCT. ADEQUATE TIME SHALL BE ALLOWED FOR THE SHOP DRAWINGS TO BE REVIEWED AND RETURNED TO THE CONTRACTOR PRIOR TO ORDERING THE SPECIFIED PRODUCTS/MATERIALS.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
- UNLESS OTHERWISE SPECIFIED OR SHOWN, ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM THE THE STANDARDS DESCRIBED IN THE REQUIREMENTS OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MDOT, FORMERLY MASS HIGHWAY) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST VERSION.

SITE WORK NOTES:

- THE LIMITS OF WORK SHALL BE FIELD ESTABLISHED PRIOR TO INITIATION OF ANY CONSTRUCTION, SITE EXPLORATIONS OR EARTHEN DISTURBANCE.
- EROSION CONTROLS SHALL BE IMPLEMENTED PRIOR TO SITE CLEARING OR DISTURBANCE. SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- EXCEPT FOR THE SETUP FOR ENTRY TO THE SITE, NO CONSTRUCTION OR CONTRACTOR'S VEHICLES SHALL BE PARKED ON ADJACENT STREETS IN SUCH A WAY AS TO BLOCK OR OBSTRUCT TRAFFIC OR SIGHT LINES. UNLESS COORDINATED WITH ADJACENT PROPERTY OWNERS, ALL CONSTRUCTION STAGING, AND STOCKPILE AREAS SHALL BE ONSITE.
- LOAM SHALL BE STOCKPILED FOR RE-USE ON THE SITE TO THE EXTENT PRACTICAL, SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS. THE SITE SHALL BE KEPT IN A NEAT AND ORDERLY FASHION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TRENCH OPERATIONS PERMIT PURSUANT TO THE REQUIREMENTS OF THE TOWN OF STOW AND 520 CMR 14.00 (AKA "JACKIE'S LAW").

MATERIAL DEFINITIONS:

BITUMINOUS CONCRETE PAVEMENT

A. ASPHALTIC CONCRETE SHALL BE A STANDARD PLANT-MIXED, HOT-LAID PAVING MATERIAL FOR ROAD WORK, CONSISTING OF CLEAN, CRUSHED ROCK AGGREGATE, MINERAL FILLER, AND ASPHALT CONFORMING TO MDPW

SPECIFICATIONS, SECTION M3.11.03, TABLE A. 1. BINDER OR BOTTOM COURSE PAVING MEET THE SPECIFICATIONS FOR MHA BASE COURSE, SHALL HAVE MAXIMUM AGGREGATE SIZE PASSING 2" IN. SIEVE, AND BITUMEN

 $CONTENT = 4.4 TO 4.6\% \pm 1/2\% BY WEIGHT$ 2.TOP OR WEARING COURSE PAVING FOR SHALL BE "HMA SURFACE" STANDARD TOP COURSE" HAVING MAXIMUM AGGREGATE SIZE PASSING 5/8 IN. SIEVE, AND BITUMEN CONTENT = $5.9\%\pm 1/2\%$ BY WEIGHT.

3.TOP OR WEARING COURSE FOR CAPE COD BERM PAVING FOR SHALL BE "HMA DENSE MIX" HAVING MAXIMUM AGGREGATE SIZE PASSING 1/2 IN. SIEVE, AND BITUMEN CONTENT = $7.4-7.6\%\pm 1/2\%$

4. ASPHALT SHALL BE PLACED TO A MINIMUM OF 90% COMPACTION

IF RECLAIMED ASPHALT PAVEMENT (RAP) IS USED IN THE MIXTURE, THE PROPORTION OF RAP TO VIRGIN AGGREGATE SHALL BE LIMITED TO A MAXIMUM OF 40% FOR DRUM MIX PLANTS AND 20% FOR MODIFIED BATCH PLANTS.

CAST IN PLACE ALL SITE CAST IN PLACE CONCRETE AND RELATED REINFORCING SHALL MEET CONCRETE THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE, THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE AMERICAN SOCIETY OF TESTING

AND MATERIALS (ASTM) FOR PRODUCT MATERIALS, FORM WORK, PLACEMENT AND CURING. ALL SITE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS OTHERWISE REQUIRED IN THE CONSTRUCTION DOCUMENTS.

STONE DUST SHALL MEET THE LATEST VERSION OF MA DOT SCREENING STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, M2.05.0 STONE SCREENINGS, STONE SCREENINGS SHALL BE THE (STONE DUST) PRODUCT FROM A STONE CRUSHER THAT COMPLETELY PASSES A NO. 4 SIEVE AND NOT LESS THAN 40% PASSES A NO. 8. SIEVE

> SIMILAR STONE. A. CDF IS TO BE BATCHED AT A READY MIX PLANT AND IS TO BE USED AT A HIGH OF "VERY HIGH SLUMP FROM 10" TO 12". IT SHALL BE FLOWABLE AND REQUIRE NO VIBRATION AFTER IT HAS BEEN PLACED.

PARENT STONE SHALL BE FROM A DURABLE, HARD GRANITE OR

B. CDF SHALL BE A MIXTURE OF PORTLAND CEMENT, FLYASH, SAND AND WATER DESIGNED TO MEET THE CDF REQUIREMENTS. HIGH AIR ENTRAINMENT MAY BE SUBSTITUTED FOR FLYASH WITH AN ADMIXTURES (25%) ADJUSTMENT IN SAND CONTENT.

C. CDF MUST MEET THE FOLLOWING STRENGTH REQUIREMENTS: -28 DAY COMPRESSIVE STRENGTH: 30-80 PSI -90 DAY COMPRESSIVE STRENGTH: 100 PSI MAX

CRUSHED STONE SHALL BE THE SIZE AS INDICATED ON THE PLANS. THE STONE SHALL BE FROM A STONE QUARRY THAT PRODUCES HARD, ANGULAR DURABLE WASHED STONE FREE FROM DEBRIS AND ORGANIC MATERIALS. THE

STONE SHALL MEET THE REQUIREMENTS OF SSHB M2.01.0

DENSE GRADED DENSE GRADED CRUSHED STONE SHALL CONSIST OF THE COMBINATION OF CRUSHED STONE CRUSHER-RUN COARSE AGGREGATES (MEETING SSHB M2.01.0) AND FINE AGGREGATES OF NATURAL SAND OR STONE SCREENING UNIFÓRMLY PREMISED WITH A PREDETERMINED QUANTITY OF WATER. COARSE AGGREGATE SHALL CONSIST OF HARD. DURABLE PARTICLES OF FRAGMENTS OF STONE. MATERIALS THAT BREAK UP WHEN ALTERNATELY FROZEN AND THAWED OR WETTED AND DRIED SHALL NOT BE USED. FINE AGGREGATE SHALL CONSIST OF NATURAL OR CRUSHED SAND. THE GRADATION/MATERIAL SHALL COMPLY WITH

> GRAVEL BORROW SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COURSE SAND, FREE FROM CLAY, SURFACE COATINGS, ORGANIC AND DELETERIOUS MATERIAL. ALL GRAVEL BORROW SHALL MEET THE

REQUIREMENTS OF SSHB M1.03.0. MAXIMUM STONE SIZE SHALL BE AS

TYPE A: 6" LARGEST DIMENSION TYPE B: 3" LARGEST DIMENSION TYPE C: 2" LARGEST DIMENSION

FOLLOWS:

THE SPECIFICATIONS OF SSHB M2.01.7

LOAM SHALL CONSIST OF NATURAL TOPSOIL, FREE FROM SUB-SOIL, OBTAINED LOAM (BORROW) FROM AN AREA WHICH HAS NEVER BEEN STRIPPED. LOAM SHALL BE OF UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, HARDPAN, SOD, PARTIALLY DISINTEGRATED STONE, LIME, CEMENT, ASHES, SLAG, CONCRETE, TAR RESIDUE, TARRED PAPER, BOARDS, CHIPS OR ANY OTHER UNDESIRABLE

> LOAM SHALL CONTAIN BETWEEN 5.5 AND 7.5 PERCENT ORGANIC MATTER AS DETERMINED BY LOSS ON IGNITION OF A MOISTURE-FREE SAMPLE DRIED IN ACCORDANCE WITH THE CURRENT METHOD OF THE ASSOCIATION OF OFFICIAL

AGRICULTURAL CHEMISTS. THE ACIDITY RANGE OF THE LOAM SHALL BE PH 6.5 TO PH 7.5 INCLUSIVE.

THE MECHANICAL ANALYSIS OF THE SOIL SHALL BE AS FOLLOWS:

U.S. SIEVE SIZE & PERCENT PASSING NUMBER MAXIMUM MINIMUM 1 INCH 100% 97% NO. 100 (SAND) 49% 60% NO. 100 (SILT & CLAY)

ORDINARY BORROW ORDINARY BORROW SHALL CONSIST OF MATERIAL NOT SPECIFIED AS ANY OTHER EARTHEN MATERIAL. ORDINARY BORROW SHALL BE WELL GRADED.

NATURAL. INORGANIC MATERIAL ACCEPTABLE TO THE ENGINEER FOR THE GENERAL FILLING TO THE SPECIFIED SUB-GRADE. THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:

A. IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIAL, OF FROZEN MATERIALS AND OF STONES LARGER THAN 6 INCHES IN MAXIMUM DIMENSION.

B. IT SHALL BE OF SUCH NATURE & CHARACTER THAT IT CAN BE COMPACTED TO THE SPECIFIED DENSITIES IN A REASONABLE AMOUNT OF

IT SHALL BE FREE OF HIGHLY PLASTIC CLAYS, OF ALL MATERIALS SUBJECT TO DECAY, DECOMPOSITION, AND OF CINDERS OR OTHER MATERIALS WHICH WILL CORRODE PIPING OR OTHER BURIED MATERIALS. D. IT SHALL HAVE A MAXIMUM DRY DENSITY OF NOT LESS THAN 100

POUNDS PER CUBIC FOOT AND LESS THAN 40 % OF THE MATERIAL SHALL PASS THE NUMBER 200 SIEVE. EXCAVATED ROCK & BOULDERS SMALLER THAN ONE CUBIC YARD IN SIZE MAY BE USED IN FILL AREAS UNDER LAWNS ONLY. PROVIDED THEY

ARE A MINIMUM OF 24 INCHES BELOW THE SUBGRADE, PLACED AND

COMPACTED IN LAYERS WITH NO VOIDS AND ALL INTERSTICES FILLED.

RIP RAP RIP-RAP STONE SHALL BE SOUND, DURABLE ROCK, ANGULAR IN SHAPE. RIP RAP SHALL BE FREE FROM DEBRIS, ORGANIC OR DELETERIOUS MATERIAL. ROUNDED STONES, BOULDERS, SANDSTONE OR SIMILAR SOFT STONE OR RELATIVELY THIN SLABS WILL NOT BE PERMITTED UNLESS SPECIFICALLY PERMITTED BY THE DESIGN ENGINEER. ALL RIP RAP MATERIALS SHALL MEET

THE REQUIREMENTS OF SSHB M2.02.0.

SAND BORROW SHALL CONSIST OF CLEAN INERT, HARD, DURABLE GRAINS OF QUARTZ OR OTHER HARD DURABLE ROCK, FREE FROM LOAM OR CLAY, SURFACE COATINGS AND DELETERIOUS MATERIALS. THE ALLOWABLE AMOUNT OF MATERIAL PASSING A #200 SIEVE AS DETERMINED BY AASHTO T 11 SHALL % MASS. ALL SAND BORROW SHALL MEET THE REQUIREMENTS NOT EXCEED 10 OF SSHB M1.04.0. MAXIMUM STONE SIZE SHALL BE AS DEPICTED IN THE

MATERIAL DEFINITIONS (CONT.):

COMPACTION TESTING

ALL EARTHEN MATERIALS SHALL BE COMPACTED TO THE DRY DENSITY INDICATED IN THE CONSTRUCTION DOCUMENTS AND/OR AS IS REQUIRED BY CODE OR REGULATION. MAXIMUM DRY DENSITY SHALL BE DETERMINED FROM A SAMPLE OF THE MATERIAL TO BE USED AND TESTED IN ACCORDANCE WITH THE MODIFIED PROCTOR DRY DENSITY TEST AS DEFINED IN ASTM D1557, METHOD C. ARFAS THAT WERE TESTED AND FOUND TO BE INSUFFICIENTLY COMPACTED SHALL BE RE-TESTED AFTER THE ADDITIONAL COMPACTION HAS BEEN

ABBREVIATIONS

STV

VGCTS

ABBREVIATION DEFINITION AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS ABBRF VIA TION AR-1ACCESSIBLE RAMP - TYPE ACCESSIBLE RAMP - TYPE 2 AR-2AR-3ACCESSIBLE RAMP - TYPE ASTM AMERICAN SOCIETY FOR TESTING AND **MATERIALS** BALL & BURLAP BOTTOM CURB ELEVATION BITUMINOUS CONCRETE BLDGRUII DING RENCHMARK BOTTOM RAMP ELEVATION CALCALIPER CONCRETE BOUND CAST IRON PIPE CORRUGATED METAL PIPE CONC. CTB CONCRETE CATCH BASIN CUBIC YARD DRILL HOLE DUCTILE IRON PIPE DUCTILE IRON CEMENT LINED PIPE DIAMETER DRAIN MANHOLE ELEV ELE VA TION ELECTRIC MANHOLE EMH EX. FXISTING **EXTERIOR** FOUNDA TION FES FLARED END SECTION FINISH FLOOR ELEVATION FINISH GRADE FIELD STONE BOUND FSB FEET - LINEAR MEASURE GALGALLON GPMGALLONS PER MINUTE HDPE HIGH DENSITY POLYETHYLENE PIPE HIGH POINT I. PIN IRON PIN I. PIPE IRON PIPF INSIDE DIAMETER PIPE INVERT ELEVATION IN V. LOW POINT MAXMAXIMUM MASS HIGHWAY BOUND MINIMUM MUTCD MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ON CENTER OUTSIDE DIAMETER OSHA OCCUPATIONAL SAFETY AND HEALTH **ADMINISTRATION** P&P PLUG & PIN POUNDS PER SQUARE INCH POLYVINYL CHLORIDE PIPE ROUND CONCRETE PIPE R & S REMOVE & STOCKPILE ITEM REQUIRED STONE BOUND SMH SEWER MANHOLE STANDARD SPECIFICATIONS OF HIGHWAYS & BRIDGES. THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC

SLOPED TO VERTICAL CURB TRANSITION

TOP OF CONCRETE FOUNDATION ELEVATION

VERTICAL GRANITE CURB TRANSITION SEGMENT

TEMPORARY BENCH MARK

TOP OF CURB ELEVATION

TOP OF RAMP FLEVATION

TYPICAL FOR ALL ITEMS SHOWN

TELEPHONE MANHOLE

SEGMENT

UTILITY POLF

LEGEND

-100 — **— 100** — INDEX CONTOUR INTERMEDIATE CONTOUR SPOT GRADE × 100.00 X 100.52 STONE WALL EDGE OF WOODS EDGE OF WATER BODY 100 YEAR FLOOD LINE FDGE OF WETLAND 25' BUFFER 50' BUFFER 75' BUFFER 100' BUFFER **—** · · · **—** · · · **—** WETLAND WF#OA WETLAND FLAG RIVERFRONT 100' RIVER BUFFER 200' RIVER BUFFER SILTATION BARRIER BUILDING SETBACK LINE WELL TREE FLAGPOLE BOUND DRILL HOLE IRON PIN BENCHMARK PERC TEST 99-A 🗶 TEST PIT 99-12 SOIL BORING EDGE OF GRAVEL - - - - - - **- - - - - -**EDGE OF WALK -----EXPANSION JOINT CONSTRUCTION JOINT EDGE OF PAVEMENT -----CAPE COD BERM ______ CONCRETE CURB _ _ _ _ _ _ _ VERT. GRANITE CURB _____ SLOPED GRANITE CURB STOCKADE FENCE CHAIN LINK FENCE \rightarrow \rightarrow \rightarrow \rightarrow FENCE - OTHER ____x____x____ FENCE GATE GUARD RAIL WOOD GUIDE RAIL ROOT BARRIER ------- RB ------SIGN POST FOUNDATION DRAIN ——FD—— **FD—** ROOF DRAIN DRAIN LINE DRAIN MANHOLE *CATCHBASIN* FLARED END IN/OUT CLEANOUT IRRIGATION LINE WATER LINE WATER VALVE FIRE HYDRANT WATER SHUTOFF OVERHEAD WIRES ———ОН*W*— UNDERGROUND WIRES _____*CTF*____ GUY POLE UTILITY POLE Q GUY ANCHOR $\overline{}$ UTILITY BOX STREETLIGHT LAMP POST ELECTRIC MANHOLE TELEPHONE MANHOLE SEWER LINE SEWER FORCE MAIN LOW PRESSURE SEWER SEWER MANHOLE GAS LINE GAS VALVE

PROPOSED

PLAN NOTES AND **LEGENDS**

LOCATION: OFF GLEASONDALE ROAD CITY/TOWN:STWO, MASSACHUSETTS

PREPARED FOR:

TOWN OF STOW

SCALE: AS NOTED

DATE: OCTOBER 202

PLACES Associates, Inc.

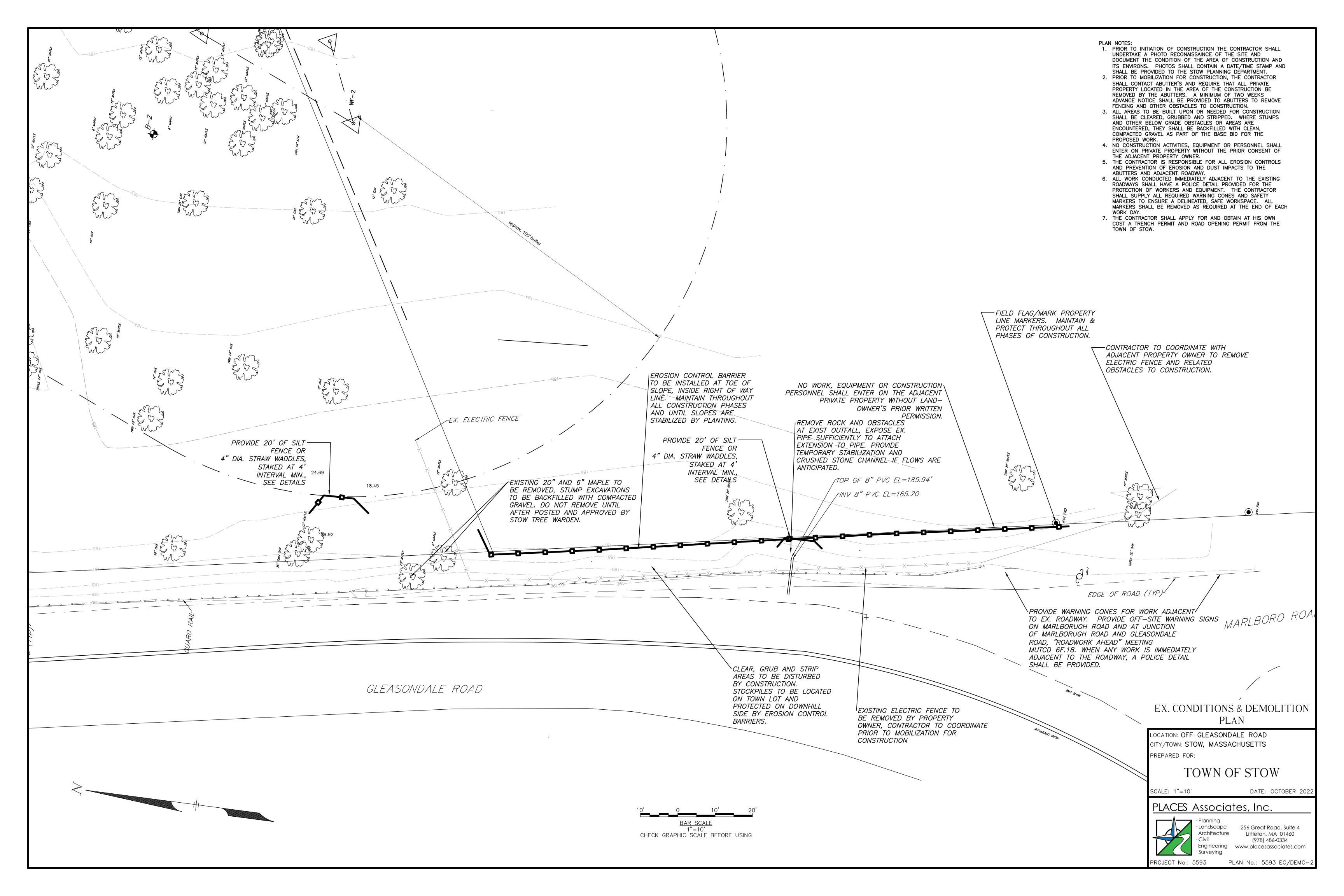


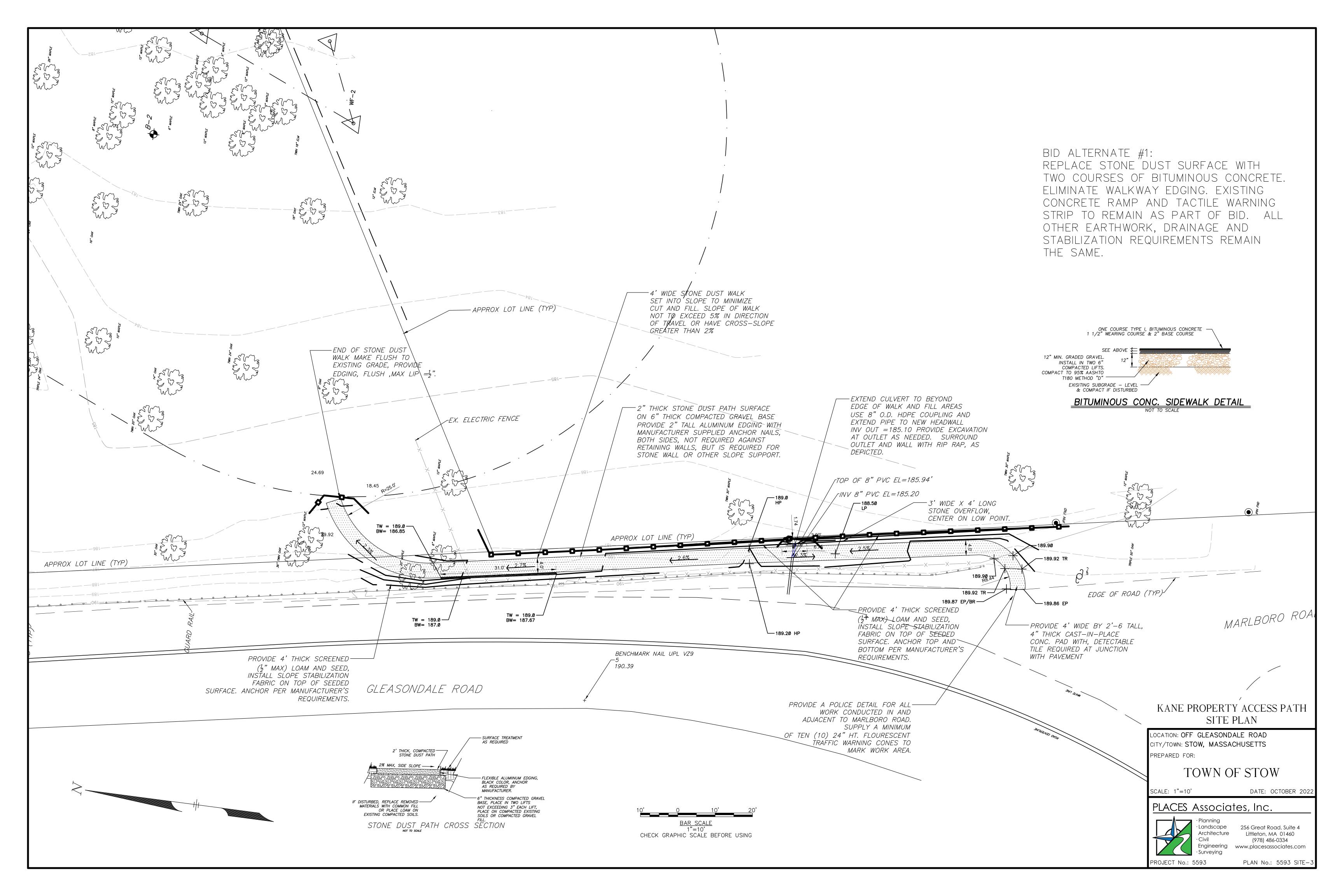
Landscape Architecture Engineering

256 Great Road, Suite 4 Littleton, MA 01460 (978) 486-0334 www.placesassociates.com

PROJECT No.: 5593

PLAN No.: 5593 NOTES-





GENERAL NOTES:

- 1. LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REMOVAL HEREON. DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
- ANY INTENDED REVISION OF THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO IMPLEMENTATION.
- RIM ELEVATIONS SHOWN FOR NEW STRUCTURES ARE APPROXIMATE AND ARE PROVIDED TO ASSIST CONTRACTOR WITH MATERIAL TAKEOFFS. FINISH RIM ELEVATIONS SHOULD MATCH PAVEMENT, GRADING OR LANDSCAPING, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- 6. THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCH MARKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.
- 7. SILT FENCE SHOWN HEREON SHALL BE INSTALLED BEFORE EARTH DISTURBANCE OCCURS WITHIN THE BUFFER ZONE, AND SHALL SERVE AS THE LIMIT OF WORK

PIPE HEADWALL SECTION

REGULATORY NOTES:

- 1. CONTRACTOR SHALL CONTACT DIG-SAFE FOR UNDERGROUND UTILITY MARKING AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY
- CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS, AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.

GRADING & DRAINAGE:

- SEE SHEET C-1 FOR LEGEND AND ADDITIONAL NOTES AND INFORMATION.
- 2. SEE SHEET C-2 FOR BASIC SITE INFORMATION.
- 3. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED. EXISTING PIPES AND STRUCTURES, INCLUDING BUT NOT LIMITED TO CATCH BASINS, TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- 4. IF ANY STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- 5. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED OR SEALED AS IS REQUIRED HEREIN TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- PRIOR TO THE INITIATION OF ANY SITE EXPLORATION, GRADING OR CONSTRUCTION THAT MAY CREATE UNSTABLE SURFACES, AN EROSION CONTROL BARRIER SHALL BE ERECTED IN THE LOCATIONS DEPICTED IN THIS PLAN SET.
- 7. ALL PIPE LENGTHS ARE MEASURED FROM CENTER TO CENTER OF STRUCTURES.
- SPOT GRADES ARE TO BE BLENDED IN A UNIFORM MANNER TO THE ADJACENT SPOT GRADE OR CONTOUR.
- 9. ALL DISTURBED SURFACES ARE TO BE STABILIZED BY THE CONSTRUCTION OF A HARD DURABLE SURFACE (STONE DUST), BY LOAM AND SEED, OR AS OTHERWISE SHOWN.
- 10. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- 11. ALL AREAS INDICATED AS PADS SHALL BE CONCRETE, SEE DETAIL.
- 12. ALL SLOPES OF 3:1 (HORZ. TO VERT.) OR STEEPER ARE TO BE CONSIDERED "STABILIZED SLOPES" AND SHALL HAVE FROSION CONTROL NETTING INSTALLED. SEE SPECIFICATION SECTION, SLOPE STABILIZATION FABRIC.
- 13. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM PROPOSED PATH FOR ALL NATURAL AND PAVED AREAS.
- 14. ACCESSIBLE ROUTES SHALL HAVE NO CROSS SLOPE GREATER THAN 2% IN ANY DIRECTION AND NO GREATER THAN 5% ALONG THE PATH OF TRAVEL. MEASUREMENTS SHALL BE MADE WITH A TWO FEET LONG "SMART LEVEL" AFTER CONSTRUCTION. SEE REQUIREMENTS OF MASS. ARCHITECTURAL ACCESS BOARD (521 CMR)

SITE NOTES:

- 1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL TOWN REGULATIONS, CODES AND O.S.H.A STANDARDS.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO CARRY OUT THE WORK INCLUDING BUT NOT LIMITED TO DEMOLITION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PROTECT ALL EXISTING UTILITY SERVICES DESIGNATED ON THESE DRAWINGS.
- 5. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL AS DETERMINED BY THE ENGINEER OR OWNER'S REPRESENTATIVE.
- 6. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES (4") MINIMUM OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE TOWN'S GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SUCH.
- ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARKS AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR AT GROUND BREAK.
- 9. FINISH WALK AND CURB ELEVATIONS VARY FROM FLUSH TO A MAXIMUM OF 6" ABOVE FINISH GRADE.

FXISTING CONDITIONS & DEMO:

- 1. UTILITIES SHOWN ARE IN APPROXIMATE LOCATIONS ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATION OF SITE RELATED ACTIVITIES. DIG-SAFE SHALL BE NOTIFIED AS REQUIRED BY LAW.
- 2. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF ALL OBSTACLES THAT EXIST IN THE AREA OF CONSTRUCTION AND FOR THE MAINTENANCE OF THE EXISTING GUARD RAIL SYSTEM ADJACENT TO GLEASONDALE ROAD.
- 3. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.
- 4. PLAN SHOWS ONLY THE FEATURES THAT WERE VISUALLY APPARENT ON THE DATE OF TOPOGRAPHY. THE ABSENCE OF SUBSURFACE SURFACE STRUCTURES, UTILITIES, ETC., IS NOT IMPLIED OR INTENDED.
- ALL EXISTING RUBBLE, BRUSH, TIRES, SCRAP METAL, BUILDING MATERIALS, SPILL PILES, AND OTHER DEBRIS SHALL BE REMOVED BY THE SITE CONTRACTOR IN AN APPROPRIATE FASHION.
- UTILITIES SHOWN ARE IN BASED ON THE BEST AVAILABLE RECORD DATA AND/OR ACTUAL FIELD LOCATIONS. UNDERGROUND LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY.
- DURING ALL CONSTRUCTION PHASES, THE CONTRACTOR SHALL MAINTAIN A TEMPORARY VEHICULAR ACCESS AND LIMIT ACCESS ELSEWHERE.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TRENCH PERMITS PER 520 CMR14.

LAYOUT AND MATERIALS:

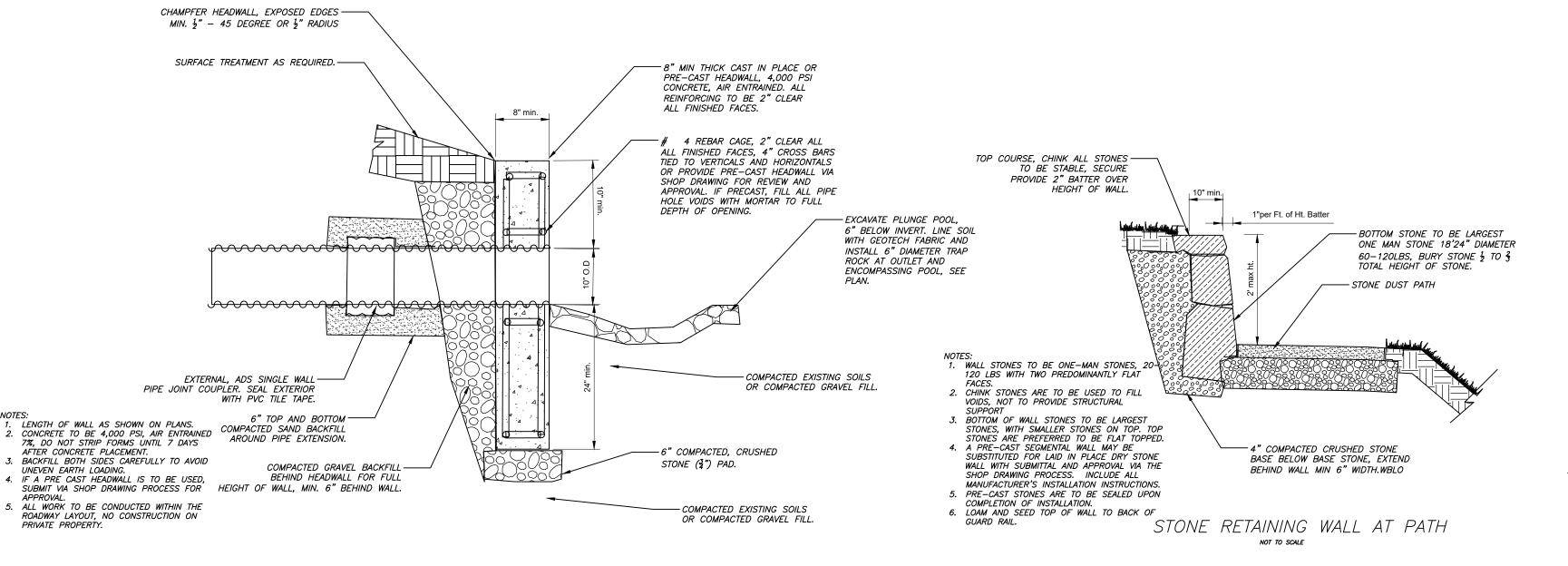
- 1. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF PLACES ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF PLACES ASSOCIATES, INC. IS STRICTLY PROHIBITED.
- 2. THE CONTRACTOR SHALL CONTACT "DIGSAFE" AND THE TOWN DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST THE LOCATION OF THE EXISTING UTILITIES.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE OWNER OR ENGINEER. ALL AREAS DISTURBED DURING CONSTRUCTION NOT COVERED WITH WALKS, HARDSCAPE OR PAVEMENTS SHALL RECEIVE FOUR (4") NCHES OF LOAM AND SEED, UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR OWNER.
- CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES PRIOR TO FARTHWORK OPERATION AND MAINTAIN ALL EROSION CONTROL MEASURES AND SEEDED EMBANKMENTS DURING CONSTRUCTION. EROSION CONTROL SHALL BE REMOVED ONLY UPON THE ESTABLISHMENT OF ALL LANDSCAPED AREAS AND WHEN AUTHORIZED BY THE OWNER.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. ALL CONSTRUCTION ACTIVITY SHALL BE IN ACCORDANCE WITH O.S.H.A. REGULATIONS AND STATE AND LOCAL REQUIREMENTS.

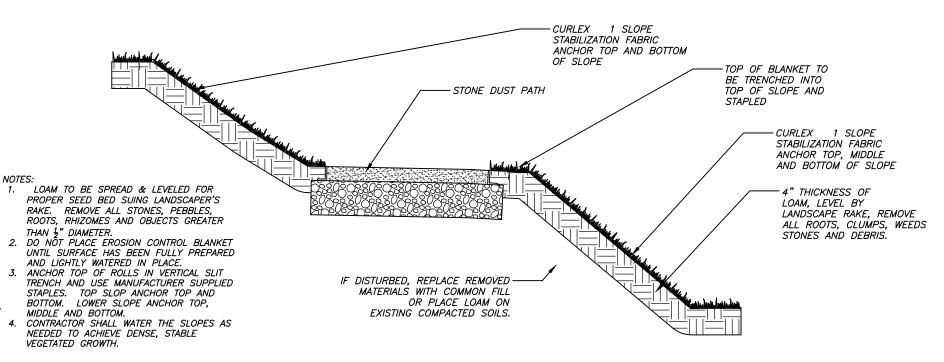
LANDSCAPE:

- 1. THE SPECIES AND VARIETIES LISTED SHALL BE ADHERED TO IN ALL CASES. WHERE A SUBSTITUTION IS PROPOSED. THE CONTRACTOR SHALL PROVIDE THE OWNER A LISTING OF FACE DIFFERENTIALS AND ALL SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
- 2. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA,
- 3. ALL PLANTS AND PLANTING METHODS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF "RECOMMENDED STANDARD SPECIFICATION FOR PLANTINGS" AS COMPILED AND ISSUED BY THE ASSOCIATED LANDSCAPE CONTRACTORS OF MASSACHUSETTS. ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 4" OF PINE BARK MULCH. GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION OF ADEQUATE WATER SUPPLIES TO THE PLANT MATERIALS UNTIL ACCEPTANCE OF THE LANDSCAPE BY THE LANDSCAPE ARCHITECT HAS OCCURRED.
- PLANTING SEASONS:
 - SPRING SEASON FOR ALL PLANTING IS FROM APRIL 1ST TO JULY 15TH FALL SEASON:
 - FOR ALL DECIDUOUS TREES, SHRUBS AND GROUND COVERS IS FROM AUGUST 15TH TO OCTOBER 12TH.
- 6. FERTILIZER USE & APPLICATION SHALL CONFORM TO 330 CMR 31.00 FOR NON-AGRICULTURAL APPLICATION OF NITROGEN FERTILIZERS. SOIL SAMPLES, TESTS, AND SHOP DRAWINGS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT OR THE OWNER
- 7. CONTRACTOR RESPONSIBLE FOR WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.

FOR APPROVAL PRIOR TO CONSTRUCTION.

8. ALL SLOPES IN EXCESS OF 3:1 (HORIZONTAL TO VERTICAL) SHALL BE STABILIZED SLOPES, SEE THE PROVISIONS OF SPECIFICATION SECTION-EROSION AND SEDIMENTATION CONTROL AND RELATED SECTIONS.





SLOPE STABILIZATION BLANKET DETAIL

KANE PROPERTY ACCESS PATH NOTES & DETAILS

LOCATION: OFF GLEASONDALE ROAD CITY/TOWN: STOW, MASSACHUSETTS PREPARED FOR:

TOWN OF STOW

SCALE: AS NOTED

DATE: AUG. 202

PLACES Associates, Inc.



Landscape Architecture Engineering

256 Great Road, Suite 4 Littleton, MA 01460 (978) 486-0334 www.placesassociates.com

PLAN No.: 5593 DETAILS -

PROJECT No.: 5593

DRAINAGE SYSTEM OPERATIONS

STORM WATER COLLECTION SYSTEM:

THE STORMWATER COLLECTION SYSTEM SERVING THIS SITE IS INTENDED TO BOTH COLLECT STORM WATER RUNOFF AND TO PROVIDE TREATMENT OF THE STORMWATER PRIOR TO ITS DISCHARGE. THIS SYSTEM COLLECTS RUNOFF GENERATED FROM THE SITE THROUGH THE USE OF STORMWATER BEST MANAGEMENT PRACTICES (BMP'S). WHEN THESE BASIC CONTROL MECHANISMS ARE FUNCTIONING PROPERLY THEY PROVIDE FOR A REDUCTION OF CONTAMINANTS AND DEBRIS ENTERING THE STORMWATER COLLECTION SYSTEMS, AND THEREFORE DOWNSTREAM RECEIVING WATERS/WETLANDS.

STORMWATER SYSTEMS RELY UPON PROPER MONITORING, OPERATIONS AND MAINTENANCE TO FUNCTION AS DESIGNED AND INTENDED. A PROGRAM OF MONITORING, OPERATIONS AND MAINTENANCE MUST BE ONGOING THROUGHOUT THE LIFE AND USE OF THE SITE, AND IS THE OWNER'S RESPONSIBILITY SOLELY. THESE ACTIVITIES, AS DESCRIBED BELOW, ARE TO BE INITIATED AFTER COMPLETION OF THE PROJECT AND ARE NOT RELATED TO THE CONSTRUCTION OF THE SITE, EXCEPT AS SPECIFICALLY PROVIDED. THIS PLAN IS SPECIFICALLY FOR SITE—RELATED ACTIVITIES, NOT ACTIVITIES WHICH ARE INTERIOR TO BUILDINGS, THOUGH THERE ARE NECESSARY IMPLICATIONS AND CORRELATION'S BETWEEN THE TWO.

MONITORINI

THE DRAINAGE SYSTEMS ARE REQUIRED TO BE MONITORED BY THE DESIGNATED SYSTEM MANAGER. THE NAME, ADDRESS AND DAY AND NIGHT (OR EMERGENCY) TELEPHONE NUMBER OF THIS PERSON OR ENTITY SHALL BE PROVIDED TO THE CITY/TOWN PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE OF CONSTRUCTION. THIS INDIVIDUAL SHALL BE REQUIRED TO KEEP A LOG OF ALL REQUIRED INSPECTIONS, OBSERVATIONS AND MAINTENANCE ACTIVITIES DRAINAGE SYSTEM COMPONENTS SHALL BE REFERRED TO BY SPECIFIC LOCATION OR THE DESIGN PLAN DESIGNATION, (E.G. CTB # 10) TO AVOID CONFUSION OR MISIDENTIFICATION THE LOG SHALL BE MADE AVAILABLE TO ANY MUNICIPAL OR STATE AGENCY HAVING JURISDICTION WITHIN TEN (10) DAYS OF A WRITTEN REQUEST BY THAT AGENCY.

MONITORING FOR THIS SITE SHALL CONSIST OF THE FOLLOWING:

- 1. ALL CATCHBASINS SHALL BE INSPECTED TO ENSURE THEY ARE WATER—TIGHT (HOLDING WATER), HAVE ADEQUATE SUMP CAPACITY, ALL OIL/GAS TRAPS ARE IN—PLACE, ALL GRATES AND FRAMES ARE FREE FROM STRUCTURAL DAMAGE, AND ARE DRAINING FREELY. THIS MONITORING SHALL OCCUR AT A MINIMUM OF FOUR (4) MONTH INTERVALS (QUARTERLY).
- 2. ALL DRAINAGE MANHOLES SHALL BE INSPECTED TO ENSURE THAT THEY ARE WATER— TIGHT, ALL LIDS AND FRAMES ARE FREE FROM STRUCTURAL DAMAGE, ARE DRAINING FREELY AND ARE NOT PONDING WATER. THIS MONITORING SHALL OCCUR A MINIMUM OF ONCE PER YEAR.
- 3. OTHER DRAINAGE SYSTEMS SHALL BE INSPECTED TO ENSURE THAT NO EROSION IS OCCURRING AT OUTLETS, ALL OUTLETS ARE FREE—FLOWING AND NO DAMAGE HAS OCCURRED AS PART OF SITE MAINTENANCE OR ACTIVITIES.
- 4. PROVIDE MAINTENANCE AND MONITORING OF THESE AND OTHER COMPONENTS AS SPECIFIED IN THE OPERATION AND MAINTENANCE MANUAL (0&M).

OPERATIONS:

- 1. GOOD HOUSE KEEPING AND MATERIAL MANAGEMENT REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF. A POLLUTION PREVENTION PLAN SHALL BE DEVELOPED WHICH SHALL INCLUDE THE FOLLOWING AT A MINIMUM:
- 1.1. ALL MATERIALS STORED ON—SITE WILL BE STORED IN A NEAT, ORDERLY MANNER
 IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER
 ENCLOSURE.
- 1.2. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
- 1.3. SUBSTANCES SHOULD NOT BE MIXED WITH ONE ANOTHER, UNLESS RECOMMENDED BY THE MANUFACTURER. 1.4. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING
- OF A CONTAINER. 1.5. THE SYSTEM'S MANAGER SHALL INSPECT THE SITE DAILY TO ENSURE PROPER USE
- AND DISPOSAL OF MATERIALS ONSITE, DURING ALL CONSTRUCTION PHASES.

 1.6. ORIGINAL MATERIALS LABELS AND MATERIAL SAFETY DATA SHEETS SHALL BE
 KEPT; THEY RETAIN IMPORTANT INFORMATION.
- 1.7. ALL ONSITE VEHICLES AND PARKING AREAS SHALL BE REGULARLY MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO PREVENT
- LEAKAGE. 1.8. PETROLEUM PRODUCTS SHALL BE STORED UNDER COVER AND SHALL BE IN
- TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

 1.9. FERTILIZERS SHALL ONLY BE USED IN THE MINIMUM AMOUNTS AS RECOMMENDED
- BY THE MANUFACTURER. 1.10. THE CONTENTS OF ANY UNUSED FERTILIZER SHALL BE TRANSFERRED TO A
- CLEARLY LABELED, SEALABLE PLASTIC BIN, TO AVOID SPILLAGE.
- 1.11. ALL PAINTS AND SOLVENTS SHALL BE STORED IN ORIGINAL MANUFACTURER'S

 CONTAINERS IN A COVERED LOCATION.
- 1.12. THE USE OF PAINTS AND SOLVENTS SHALL, WHENEVER POSSIBLE, BE LIMITED TO SERVICE OR STORAGE BAYS AND NOT IN PARKING OR ACCESS WAYS THAT ARE TRIBUTARY TO THE DRAINAGE SYSTEM.
- 2. SPILL CONTROL PRACTICES:

 2.1. MANUFACTURER'S RECOMMENDED METHODS SHALL BE CLEARLY POSTED FOR SPILL

 CLEANUP AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND
- THE LOCATIONS OF CLEANUP INFORMATION AND SUPPLIES.

 2.2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT
 ON—SITE IN A DESIGNATED MATERIAL STORAGE AREA. EQUIPMENT WILL INCLUDE,
 BUT NOT BE LIMITED TO, BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES,
 ABSORBENT MATERIALS, SAND, SAWDUST AND PLASTIC & METAL TRASH
- CONTAINERS SPECIFICALLY KEPT AND LABELED FOR THIS PURPOSE.

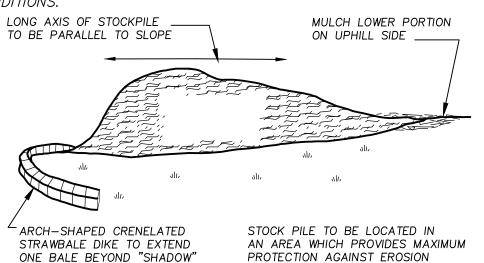
 2.3. ALL SPILLS WILL BE CLEANED—UP IMMEDIATELY AFTER DISCOVERY.
- 2.4. SPILLS OF TOXIC OR HAZARDOUS MATERIAL OR NATURE WILL BE REPORTED TO THE APPROPRIATE STATE, LOCAL OR FEDERAL AGENCY, AS REQUIRED BY—LAW.
 2.5. THE SPILL PREVENTION PLAN WILL INCLUDE PROVISIONS TO ADAPT THE PLAN TO ENSURE THAT SPILLS WILL NOT REOCCUR, AND HOW TO CLEANUP THE SPILL IF
- THERE IS ANOTHER ONE.

 3. SITE OPERATIONS AND DAILY USE SHALL CONSIDER THE ULTIMATE DISPOSITION OF STORMWATER AND OTHER SITE—GENERATED FORMS OF RUNOFF. THE WASHING OF VEHICLES SHALL BE LIMITED AREAS WITHIN THE BUILDING, AS THEY ARE SERVED BY THE FLOOR DRAIN SYSTEM. WASH WATER WITH ITS COMBINATION OF SOLVENTS, DETERGENTS AND OIL/GREASES SHOULD NOT BE ALLOWED TO ENTER ANY PART OF
- THE ON-SITE DRAINAGE SYSTEM.

 4. SNOW PLOWING SNOW PLOWING OPERATIONS SHALL STOCKPILE SNOW, ICE AND ACCUMULATED MATERIALS IN AREAS WHERE SNOW MELT WILL FLOW INTO THE ON-SITE DRAINAGE SYSTEMS.

 NO PLOWING OR STORAGE OF SNOW INTO WETLANDS.
- DRAINAGE SYSTEMS. NO PLOWING OR STORAGE OF SNOW INTO WETLANDS.

 5. SALT USE SITE—WIDE SHALL BE APPLIED TO THE MINIMUM EXTENT POSSIBLE TO MAINTAIN SAFE CONDITIONS, AND ONLY IF NOT SPECIFICALLY EXCLUDED BY ANY SPECIAL CONDITIONS.



TOWARD SENSITIVE AREAS.

TEMPORARY STOCKPILE NOT TO SCALE

' & N

MAINTENANCE PLAN EROSION &

<u>MAINTENANCE:</u>

- . ROAD AND ACCESS WAYS AND GUTTERS SHALL BE SWEPT CLEAN OF DEBRIS AND ACCUMULATION ON A REGULAR BASIS. AT A MINIMUM, A SPRING AND FALL CLEANING SCHEDULE IS RECOMMENDED.
- 2. ALL CATCHBASINS SHALL HAVE THE SUMPS CLEANED AT ANY TIME OF THE YEAR WHEN 2' OR LESS SPACE EXISTS BELOW THE OUTLET INVERT, OR A MINIMUM OF ONCE PER YEAR, REGARDLESS OF SUMP ACCUMULATION. ALL DEBRIS FROM THE CLEANING SHALL BE DISPOSED OF OFF—SITE AND IN A MANNER AS PROSCRIBED BY LAW.
- 3. ALL BROKEN, LEAKING OR OTHERWISE DAMAGED STRUCTURES SHALL BE REPAIRED PROMPTLY UPON DISCOVERY. CATCHBASIN GRATES OR MANHOLE LIDS SHALL BE REPLACED WITH SIMILAR WEIGHT AND LOADING CHARACTERISTIC REPLACEMENT PARTS.
- 4. ALL EROSION SHALL BE REPAIRED.

AND MAINTENANCE MANUAL (O&M).

5. THE REPLACEMENT OF ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.4. PROVIDE MAINTENANCE AND MONITORING AS SPECIFIED IN THE OPERATION

NPDES GENERAL NOTES:

1. NPDES IS NOT APPLICABLE TO THIS PROJECT.

-DISTURBED SURFACE

CONTINUOUS LINE

EROSION CONTROL BARRIER

NOT TO SCALE

-25' RADIUS FLARED END

1. REPLACE STONE & ACCUMULATED DEBRIS, MUD & ENTRAPPED

MATERIALS AS IS NECESSARY TO PREVENT TRACKING ON

DISPOSE OF STONE & ENTRAPPED MATERIALS IN A NON

CONSTRUCTION ENTRANCE TO REMOVE MUD FROM TIRES

TEMPORARY

CONSTRUCTION ENTRANCE

NOT TO SCALE

5. ALL TRAFFIC ENTERING / EXISTING SITE TO CROSS TEMPORARY

REPLACE MONTHLY AS A MINIMUM REQUIREMENT

4. DO NOT REUSE STONE FOR SAME PURPOSE

-CRUSHED STONE

STRAW WATTLES.

PUBLIC ROADWAYS.

SENSITIVE AREA ON-SITE

ACCUMULATED SILT

AND DEBRIS REGULARLY

CONTINUOUS

SILT FENCE

-PROTECTED AREA

<u>GENERAL:</u>

1. THIS PLAN IS PART OF A SET OF DOCUMENTS THAT ARE TO BE VIEWED AND REVIEWED IN THEIR ENTIRETY, SUCH DOCUMENTS INCLUDE THE CONSTRUCTION SPECIFICATIONS, CONSTRUCTION PLANS AND ANY PERMITS ISSUED BY THE CITY/TOWN OR OTHER REGULATORY AGENCIES.

SEDIMENTA TION

2. THIS IS A PERFORMANCE SPECIFICATION WHICH THE CONTRACTOR SHALL APPLY APPROPRIATE MEANS AND METHODS TO ACHIEVE.

EROSION CONTROL MEASURES:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EROSION AND SEDIMENTATION ARE CONTROLLED. THIS PLAN SHALL BE ADAPTED TO FIT THE CONTRACTOR'S EQUIPMENT, WEATHER CONDITIONS, AND ANY ORDERS OF CONDITIONS ISSUED BY THE CITY/TOWN OR ANY OTHER REGULATORY AGENCY.
- 2. THE MOST IMPORTANT ASPECTS OF CONTROLLING EROSION AND SEDIMENTATION ARE LIMITING THE EXTENT OF DISTURBANCE AND STABILIZING SURFACES AS SOON AS POSSIBLE. OF SECONDARY IMPORTANCE IN EROSION CONTROL IS THE LIMITING THE SIZE AND LENGTH OF THE TRIBUTARY DRAINAGE AREA WITHIN THE WORK SITE AND DRAINAGE STRUCTURES. THESE FUNDAMENTAL PRINCIPLES SHALL BE THE KEY FACTOR IN THE CONTRACTOR'S CONTROL OF EROSION ON THE SITE.
- 3. THE EXISTING SOIL CONDITIONS PROVIDE THE POTENTIAL OF RUNOFF TO OFF—SITE AREAS WITH EROSION POTENTIAL.
- 4. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DIVERSION SWALES AND SETTLING BASINS IN AREAS OF FUTURE CONSTRUCTION. CONSTRUCTION IS PERMITTED BEYOND THE LIMIT OF DISTURBANCE ONLY WHEN ADDITIONAL DRAINAGE MEASURES OR STABILIZATION MEASURES ARE NEEDED, AND SHALL BE SUBJECT TO APPROVAL BY THE CITY/TOWN. PRIOR TO WORK OUTSIDE OF DESIGNATED LIMIT OF DISTURBANCE LINE. THE LIMIT OF DISTURBANCE LINE SHALL BE THE EROSION CONTROL BARRIER.
- 5. ALL DISTURBED SURFACES SHALL BE STABILIZED A MINIMUM OF 14 DAYS AFTER CONSTRUCTION IN ANY PORTION OF THE SITE HAS CEASED OR IS TEMPORARILY HALTED UNLESS ADDITIONAL CONSTRUCTION IS INTENDED TO BE INITIATED WITHIN 21
- 6. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL EROSION CONTROL DEVICES ON—SITE. ALL EROSION CONTROL DEVICES SHALL BE REGULARLY INSPECTED. ANY SEDIMENTS REMOVED FROM THE CONTROL DEVICES SHALL
- BE DISPOSED OF OUTSIDE OF THE 100' WETLANDS BUFFER ZONE.

 7. AT NO TIME SHALL SILT-LADEN WATER BE ALLOWED TO ENTER SENSITIVE AREAS

 (WETLANDS, OFF-SITE AREAS AND DRAINAGE SYSTEMS). ANY RUNOFF FROM

 DISTURBED SURFACES SHALL BE DIRECTED THROUGH SETTLING BASINS AND EROSION

 CONTROL BARRIERS PRIOR TO ENTERING ANY SENSITIVE AREAS.

PRELIMINARY SITE WORK:

1. MATERIAL REMOVED SHOULD BE STOCKPILED, SEPARATING THE TOPSOIL FOR FUTURE USE ON THE SITE. EROSION CONTROLS SHALL BE UTILIZED ALONG THE DOWNSLOPE SIDE OF THE PILES IF THE PILES ARE TO REMAIN MORE THAN THREE WEEKS OR SUBJECT TO EROSIVE CONDITIONS SUCH AS INTENSE RAIN, WIND OR OTHER EXPOSURE.

2. STOCKPILES SHALL BE LOCATED AS SPECIFIED HEREIN AND AS REQUIRED. SHOULD

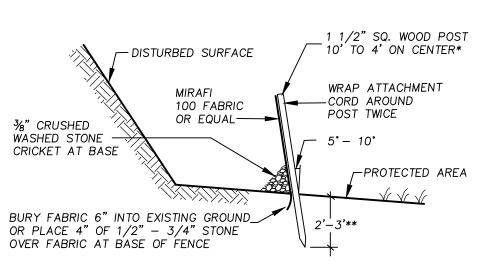
- ADDITIONAL AREAS BE NEEDED THEY SHALL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE, IN AREAS OF MINIMAL IMPACT. IF A STOCKPILE IS LOCATED ON A SLOPE, THE RUNOFF SHALL BE DIRECTED AWAY FROM THE PILE.
- 3. IF INTENSE RAINFALL IS ANTICIPATED, THE INSTALLATION OF SUPPLEMENTAL STRAW
 BALE DIKES, SILT FENCES, OR ARMORED DIKES SHALL BE UTILIZED.
- 4. IF THE SITE CONSTRUCTION OCCURS AT ANY TIME OTHER THAN THE MAY —
 NOVEMBER CONSTRUCTION SEASON, THE SITE DRAINAGE SYSTEM SHALL BE
 INSTALLED, MAINTAINING HYDRAULIC CAPACITY, PRIOR TO ANY ROUGH GRADING IN
 THE BUFFER ZONE.
- 5. INLET SEDIMENT CONTROL DEVICES SHALL BE INSTALLED ON ALL CATCHBASINS ADJACENT TO THE LIMIT OF WORK, EVEN IF OUTSIDE THE DELINEATED LIMIT OF WORK. THE GENERAL CONTRACTOR SHALL MONITOR AND EMPTY AND/OR REPLACE ON AN AS NEEDED BASIS.

DRAINAGE SYSTEM:

- THE DRAINAGE SYSTEM SHALL BE INSTALLED FROM THE DOWNSTREAM END UP.
 A SILT FENCE SHALL BE INSTALLED AT THE OUTFALL OF ALL TEMPORARY BASINS AND SWALES. IT SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY AREAS ARE STABILIZED.
- 3. WATER SHALL NOT BE ALLOWED TO ENTER PIPES FROM UN-STABILIZED SURFACES.
 SILT FENCE SHALL BE MONITORED, CLEANED & REPLACED AS NEEDED ON A REGULAR BASIS. .
- 4. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY PIPE INSTALLATION. ALL TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE. THE ENDS OF PIPES SHALL BE CLOSED NIGHTLY WITH PLYWOOD AND BACKER BOARD.

NOTE: LINES OF WATTLES TO BE PERPENDICULAR TO RUNOFF FLOW DIRECTION STRAW WATTLE STAKES 12' DIAMETER PLAN SECTION 1"x1"x24" STAKE STRAW WATTLE STAKE DEPTH 1' MIN.

STRAW WATTLES



* STEEL POST MAY BE SUBSTITUTED. DISTANCE BETWEEN POSTS TO VARY AS REQUIRED BY TRIBUTARY AREA: 10' FOR 100 SF/LF FENCE 6' FOR 500 SF/LF FENCE

** DEPTH TO VARY WITH TRIBUTARY AREA: 2' FOR 100 SF ETC.
IF POST IS TO BE SET IN PEAT OR UNSTABLE SOILS, THEN 3' OR DEPTH
NECESSARY TO PROVIDE A STABLE POST FOR LOADED FENCE CONDITIONS

SILT FENCE DETAIL

NOT TO SCALE

CONTROL PLAN

- 1. CARE SHALL BE TAKEN TO ASSURE THAT THE UTILITY TRENCHES DO NOT CHANNELIZE
- RUNOFF TOWARDS EXISTING STREETS OR OTHER OFF—SITE AREAS.

 2. THE INSTALLATION OF SUBSURFACE UTILITIES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
- 3. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY UTILITY INSTALLATION. ALL TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE

LANDSCAPING:

- 4. LANDSCAPING SHALL OCCUR AS SOON AS POSSIBLE TO PROVIDE PERMANENT STABILIZATION OF DISTURBED SURFACES.
- 5. CONTRACTOR SHALL UTILIZE A VARIETY OF SLOPE STABILIZATION METHODS AND MATERIALS WHICH SHALL BE ADJUSTED TO THE SITE CONDITIONS. EROSION CONTROL BLANKETS OR MIRAFI MIRAMAT (OR SIMILAR PRODUCTS) SHALL BE AVAILABLE ON
- 6. IF THE SEASON OR ADVERSE WEATHER CONDITIONS DO NOT ALLOW THE ESTABLISHMENT OF VEGETATION, TEMPORARY MULCHING WITH STRAW, TACKIFIED WOOD
- CHIPS OR OTHER METHODS SHALL BE PROVIDED.
 7. A MINIMUM OF 4 TOPSOIL SHALL BE PLACED AND ITS SURFACE SMOOTHED TO THE
- 8. SEED APPLICATIONS SHALL BE IN ACCORDANCE WITH THE GRASS AND SLOPE COVER SPECIFICATIONS.

PRE-CONSTRUCTION:

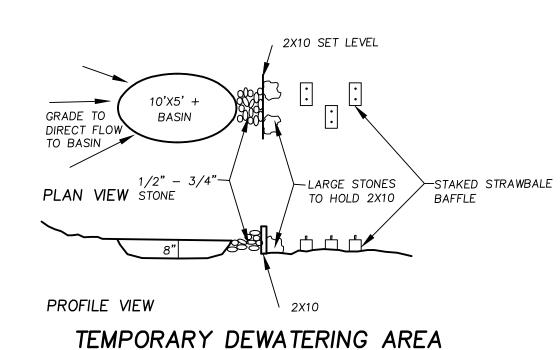
SPECIFIED GRADES.

- 1. AN EROSION CONTROL BARRIER SHALL BE INSTALLED AS DEPICTED ON THE SITE PLAN, BETWEEN THE AREAS TO BE DISTURBED AND OFFSITE AREAS. THIS BARRIER SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY SURFACES HAVE BEEN FULLY STABILIZED. THE EROSION CONTROL BARRIERS AS SHOWN ON THE SITE PLAN ARE THE MINIMUM REQUIRED TO PROTECT THE ON & OFF SITE DRAINAGE SYSTEMS.
- 2. PHOTOGRAPHS AND/OR VIDEO IMAGES OF THE PRE—CONSTRUCTION CONDITION OF THE SITE AND SURROUNDING AREAS, ESPECIALLY THE ADJACENT STREETS SHALL BE TAKEN, DEVELOPED AND DATED. A COPY OF THESE MATERIALS SHALL BE SUBMITTED TO THE PERMIT GRANTING AUTHORITY AND OWNER FOR THEIR FILES. THESE PICTURES AND IMAGES SHALL REFERENCE EXISTING SITE CONDITIONS AND PERMANENT REFERENCE MARKS TO ENABLE RECOGNITION OF THE AREA BEING PHOTOGRAPHED, AND SHALL REPRESENT A COMPREHENSIVE VIEW OF THE SITE PRIOR
- 3. THE CONTRACTOR SHALL ESTABLISH A STAGING AREA ON A PORTION OF THE AREA TO BE DISTURBED FOR THE OVERNIGHT STORAGE OF EQUIPMENT AND STOCKPILING OF MATERIALS. THE STAGING AREA SHALL BE OUTSIDE OF THE 100' WETLANDS BUFFER
- 4. IN THE STAGING AREA, THE CONTRACTOR SHALL HAVE A STOCKPILE OF MATERIALS REQUIRED TO CONTROL EROSION ON—SITE TO BE USED TO SUPPLEMENT OR REPAIR EROSION CONTROL DEVICES. THESE MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO: STRAWBALES, SILT FENCE AND CRUSHED STONE.
- 5. A TEMPORARY STONE CONSTRUCTION ENTRANCE IS REQUIRED TO PREVENT TRACKING OF SILT, MUD, ETC. ONTO EXISTING ROADS. THE STONE SHALL BE REPLACED REGULARLY AS WELL AS WHEN THE STONE IS SILT LADEN OR EQUIPMENT IS OBSERVED TO BE TRACKING SOIL ONTO THE ROADWAYS.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL ON SITE AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE MEASURES ARE SPECIFIED HEREIN, ON THE PLAN OR IN ANY ORDER OF CONDITIONS.

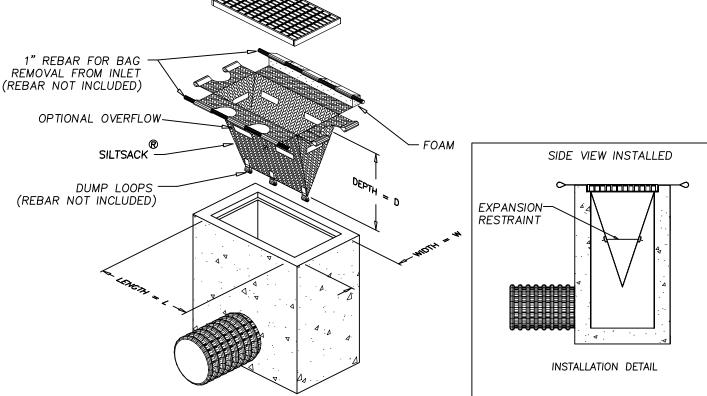
GENERAL CONSTRUCTION REQUIREMENTS:

- 1. ANY REFUELING OF CONSTRUCTION VEHICLES AND EQUIPMENT SHALL TAKE PLACE OUTSIDE OF THE 100 FOOT BUFFER ZONE, AWAY FROM THE ENTRANCE TO THE DRAINAGE SYSTEM AND SHALL NOT BE CONDUCTED IN PROXIMITY TO SEDIMENTATION BASINS OR DIVERSION SWALES, AND SHALL BE PERFORMED OFF—SITE IF POSSIBLE.
- 2. NO ON—SITE DISPOSAL OF SOLID WASTE, INCLUDING BUILDING MATERIALS IS ALLOWED.
 THE BURIAL OF STUMPS, CONSTRUCTION DEBRIS OR OTHER MATERIALS SHALL NOT
- BE ALLOWED ANYWHERE ON—SITE.

 3. NO MATERIALS SHALL BE DISPOSED OF INTO THE WETLANDS OR EXISTING OR
- PROPOSED DRAINAGE SYSTEMS.
 4. CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL WHICH SHALL INCLUDE STREET
 SWEEPING OF ALL PAVED SURFACES WITHIN THE SITE AND OFF—SITE AREAS THAT ARE
- IMPACTED BY SITE CONSTRUCTION ON A REGULAR BASIS, AS NEEDED.
 5. ALL SUBCONTRACTORS SHALL BE NOTIFIED THAT CLEANING OF EQUIPMENT WITHIN THE 100' WETLAND BUFFER IS NOT PERMITTED. INCLUDING, BUT NOT LIMITED TO, CONCRETE TRUCKS, PAINTERS, PLASTERERS, ETC.



NOT TO SCALE



INLET SEDIMENT CONTROL DEVICE

LOCATION: OFF GLEASONDALE ROAD CITY/TOWN: MASSACHUSETTS
PREPARED FOR:

TOWN OF STOW

PLACES Associates, Inc.

· Planning · Landscape Architecture

· Landscape 25
Architecture
· Civil
Engineering www

256 Great Road, Suite 4 re Littleton, MA 01460 (978) 486-0334 g www.placesassociates.com

PROJECT No.: 5593

PLAN No.: 5593-