

TAX or ASSESSORS MAP

SCALE: 1" = 500'
SOURCE: TOWN OF SUTTON ASSESSOR'S MAP

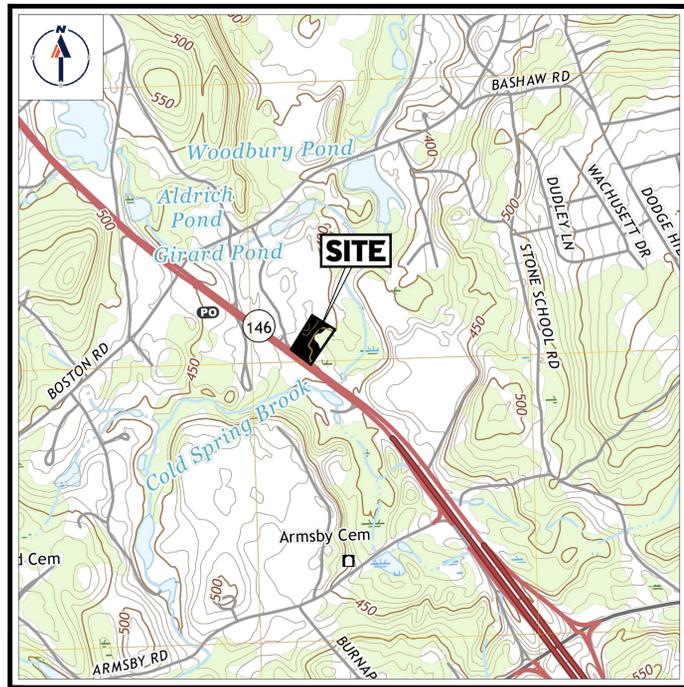
ABUTTERS LIST

PARCEL ID	OWNER	STREET ADDRESS
1	TOWN OF SUTTON	29 PLEASANT VALLEY RD
8	TURNPIKE DEVELOPMENT LLC	176 WORC-PROV TPKE
9	GALAXY PASS LLC	17 GALAXY PASS
36	GALAXY PASS LLC	1 GALAXY PASS
66	ROUTE 146 SUTTON LLC	30 PLEASANT VALLEY RD
74	ROUTE 146 SUTTON LLC	160 WORC-PROV TPKE
89	DRAKE PETROLEUM CO INC	157 WORC-PROV TPKE
90	SBOA LLC	139 BOSTON RD
151	GALAXY PASS LLC	10 GALAXY PASS
171	STANLEY FAMILY REALTY TRUST	12 PLEASANT VALLEY RD

PROPOSED SITE PLANS

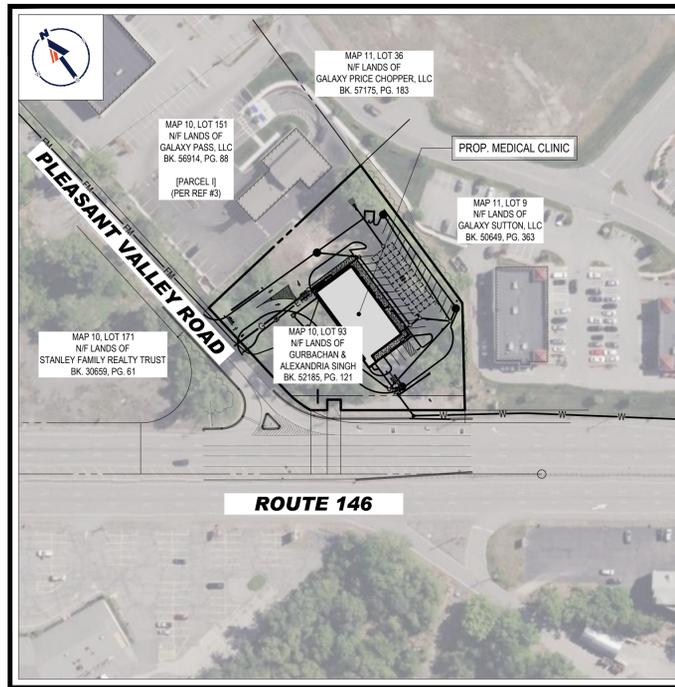
FOR TORRINGTON PROPERTIES INC. PROPOSED MEDICAL CLINIC DEVELOPMENT

LOCATION OF SITE:
15 PLEASANT VALLEY ROAD, TOWN OF SUTTON
WORCESTER COUNTY, MASSACHUSETTS
MAP #10, LOT #93



USGS MAP

SCALE: 1" = 1,000'
SOURCE: USGS GRAFTON QUADRANGLE



SITE MAP

SCALE: 1" = 100'
SOURCE: BOHLER SITE PLAN

DRAWING SHEET INDEX

SHEET TITLE	SHEET NUMBER
COVER SHEET	C-101
GENERAL NOTES SHEET	C-102
DEMOLITION PLAN	C-201
SITE LAYOUT PLAN	C-301
GRADING PLAN	C-401
DRAINAGE & UTILITY PLAN	C-501
EROSION AND SEDIMENT CONTROL PLAN	C-601
EROSION AND SEDIMENT CONTROL NOTES & DETAILS	C-602
LANDSCAPE PLAN	C-701
LANDSCAPE NOTES & DETAILS	C-702
LIGHTING PLAN	C-703
DETAIL SHEET	C-801
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DETAIL SHEET	C-803
DETAIL SHEET	C-804

APPROVAL BLOCK

TOWN OF SUTTON BOARD APPROVAL
APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.

PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE

OWNER CERTIFICATION

I CERTIFY THAT I AM THE OWNER OF MAP 10 LOT 93 AND CONSENT TO THE FILING OF THE APPLICATION.

SIGNATURE _____ DATE _____



REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	01/31/2023	CLIENT COMMENTS	EVD	GD/JAK
2	03/20/2023	TOWN COMMENTS		



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PROJECT No.: W221017
DRAWN BY: EVD
CHECKED BY: GB/JAK
DATE: 10/27/2022
CAD ID: W221017-SPPD-2A

PROJECT:

PROPOSED MEDICAL CLINIC

FOR
TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT
MAP: #10 LOT: #93
15 PLEASANT VALLEY ROAD,
TOWN OF SUTTON,
WORCESTER COUNTY,
MASSACHUSETTS



352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

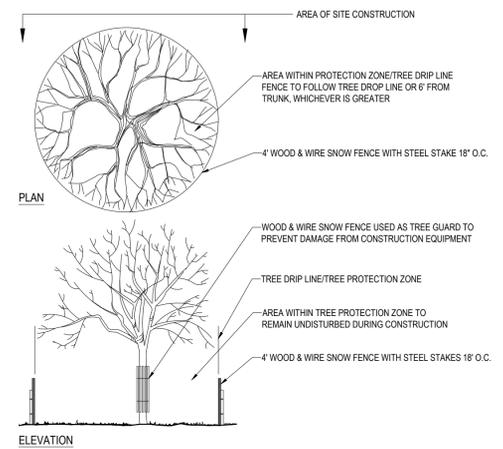
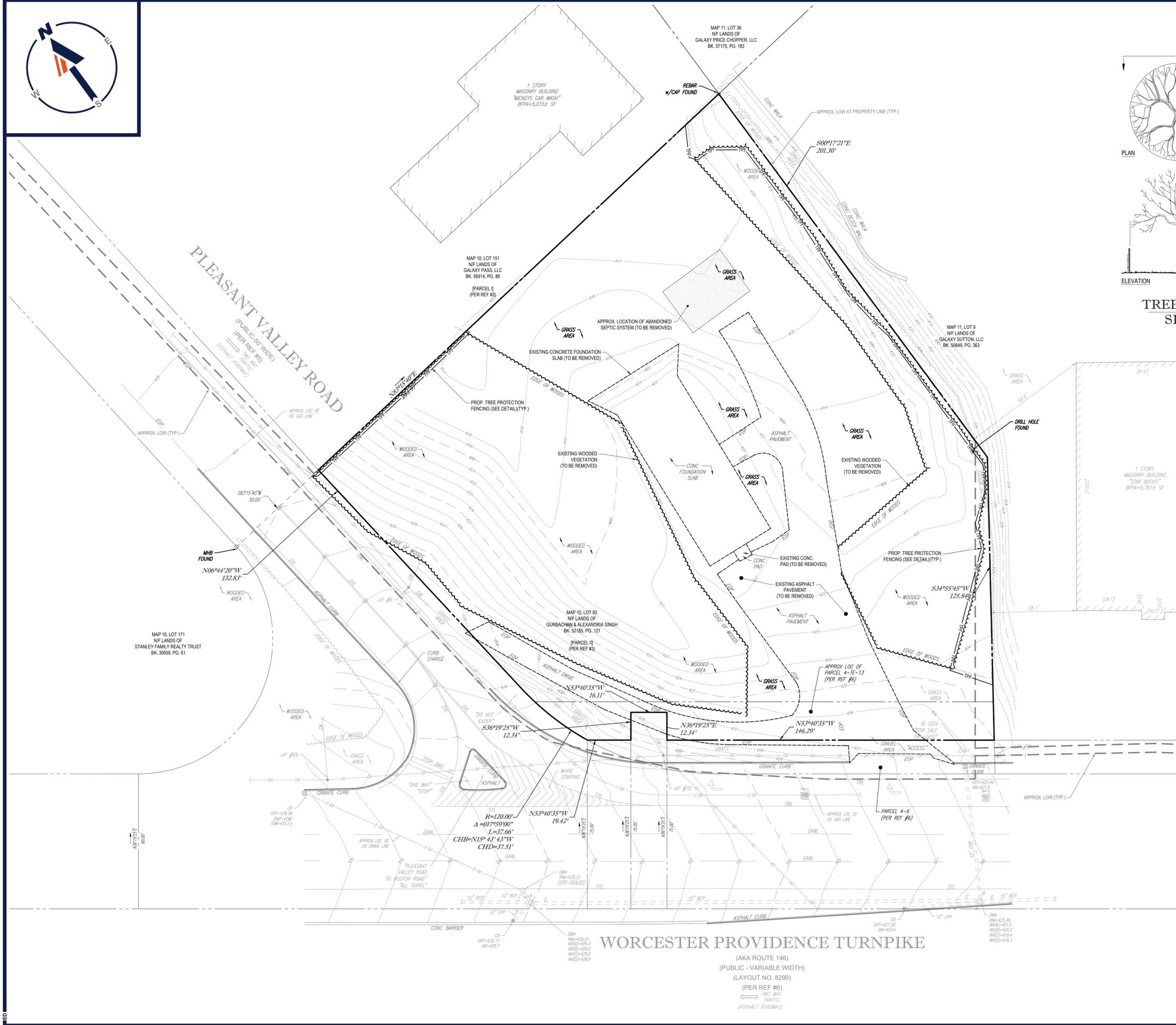


SHEET TITLE:

COVER SHEET

SHEET NUMBER:
C-101

PREPARED BY



TREE PROTECTION DURING SITE CONSTRUCTION

BOHLER
 SITE CIVIL AND CONSULTING ENGINEERING
 PROGRAM MANAGEMENT
 LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

REVISIONS

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PROJECT No.: W221017
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 CAD ID: W221017-SPFD-2A

PROPOSED MEDICAL CLINIC

FOR

TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT

MAP: #10 LOT: #93
 15 PLEASANT VALLEY ROAD,
 TOWN OF SUTTON,
 WORCESTER COUNTY,
 MASSACHUSETTS

BOHLER

352 TURNPIKE ROAD
 SOUTHBOROUGH, MA 01772
 Phone: (508) 480-9900
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REFER TO GENERAL NOTES SHEET FOR DEMOLITION NOTES

THIS PLAN TO BE UTILIZED FOR DEMOLITION/REMOVAL PURPOSES ONLY

APPROVAL BLOCK

TOWN OF SUTTON BOARD APPROVAL
 APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.

PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE

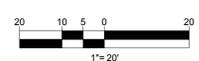
SHEET TITLE:

DEMOLITION PLAN

SHEET NUMBER:

C-201

REVISION 2 - 03/20/2023



BOHLER ENGINEERING, INC. PROJECT: 202202210221017-SPFD-2A - LA DUTY: C-201-DEMOLITION



GENERAL CONTRACTOR TO PROVIDE A SITE SPECIFIC WALL DESIGN AND CALCULATIONS THROUGH THE GENERAL CONTRACTOR'S SELECTED WALL MANUFACTURER'S LICENSED PROFESSIONAL STRUCTURAL ENGINEER.

MAINTENANCE OF A CLEAR SIGHT LINE IS THE RESPONSIBILITY OF THE PROPERTY OWNER

SITE INFORMATION

- APPLICANT: TORRINGTON PROPERTIES, INC
60 K STREET, SUITE 302
BOSTON, MA 02127
- OWNER: TORRINGTON PROPERTIES, INC
60 K STREET, SUITE 302
BOSTON, MA 02127
- PARCEL: MAP 10 BLOCK 93
15 PLEASANT VALLEY ROAD
WORCESTER, MASSACHUSETTS

ZONING ANALYSIS TABLE

ZONING DISTRICT	BUSINESS - HIGHWAY (B2)		
	REQUIRED PERMIT	REQUIRED	EXISTING
OVERLAY DISTRICT	GROUNDWATER/AQUIFER PROTECTION / ROUTE 146 OVERLAY		
MIN. LOT AREA	40,000 SF	54,485 SF	NO CHANGE
MIN. LOT WIDTH	200 FEET	232 FEET	NO CHANGE
MAX. BLDG COVERAGE	50% OF TOTAL LOT AREA	5.5%	9.5%
MIN. FRONT SETBACK	50 FEET	62.9 FEET	50.0 FEET
MIN. SIDE SETBACK	20 FEET	59.8 FEET	63.7 FEET
MAX. EMPLOYEE COUNT	N/A	N/A	13
MIN. LOT FRONTAGE	200 FEET	181.82 (E) HORIZONTAL DISTANCE 206.50 TOTAL LENGTH	181.82 (W)(12) HORIZONTAL DISTANCE 206.50 TOTAL LENGTH
MAX. BUILDING HEIGHT	45 FEET	-	45 FEET
MAX. IMPER. COVERAGE	65% OF TOTAL LOT AREA	19.4%	49.2%
PARKING SPACES	22	-	30
ACCESS. PARKING SPACES	1	-	2
MIN. OPEN SPACE	35% OF TOTAL LOT AREA (1)	35.0% (19,063 SF)	12.33% (6,716 SF) (W)(4)
PARKING STALL CRITERIA STANDARD: 9 FT x 18 FT	USE/CATEGORY: MEDICAL CLINIC USE REQUIRED PARKING: 1 SPACE PER 250 SF OF BUILDING CALCULATION: 5253 SF / 250 SF/SPACE = 22 SPACES		
ACCESSIBLE PARKING CRITERIA STANDARD:	1-25 SPACES = 2 MIN. ACCESSIBLE SPACES 26-50 SPACES = 3 MIN. ACCESSIBLE SPACES 51-75 SPACES = 4 MIN. ACCESSIBLE SPACES 76-100 SPACES = 5 MIN. ACCESSIBLE SPACES 101-150 SPACES = 6 MIN. ACCESSIBLE SPACES 151-200 SPACES = 7 MIN. ACCESSIBLE SPACES 201-300 SPACES = 8 MIN. ACCESSIBLE SPACES 301-400 SPACES = 9 MIN. ACCESSIBLE SPACES	401-500 SPACES = 9 MIN. ACCESSIBLE SPACES 501-1,000 SPACES = MIN. 2% OF TOTAL 1001+ SPACES = MIN. 20 + 1 FOR EACH 100 SPACES OVER 1,000	N/A - NOT APPLICABLE N/S - NOT SPECIFIED (V) - VARIANCE REQUESTED (W) - WAIVER REQUESTED (E) - EXIST. NON-COMFORMANCE
VAN:	8 FT x 18 FT STALL (MIN.) 8 FT x 18 FT AISLE (MIN.)	1 ACCESSIBLE VAN SPACE PER 6 STANDARD ACCESSIBLE SPACES (MIN.)	N/A - NOT APPLICABLE N/S - NOT SPECIFIED (V) - VARIANCE REQUESTED (W) - WAIVER REQUESTED (E) - EXIST. NON-COMFORMANCE

PARKING SETBACKS

ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
MIN. FRONT SETBACK	50 FEET	59.2 FEET	20 FEET (W)(2)
MIN. SIDE SETBACK	20 FEET	77.1 FEET	5.2 FEET (W)(2)

- OPEN SPACE SHALL NOT INCLUDE LAND UNDER RIGHT-OF-WAYS FOR UTILITIES AND REQUIRED YARD SETBACK AREAS.
- A WAIVER WILL BE REQUESTED FROM SECTION IV.B(1) TO ALLOW FOR PROPOSED PARKING & MANEUVERING AISLES TO BE LOCATED WITHIN THE YARD SETBACKS.
- A WAIVER WILL BE REQUESTED FROM SECTION V.D(4)(A) FOR DISTURBANCE TO OCCUR ON EXISTING SLOPES 15% OR GREATER.
- A WAIVER WILL BE REQUESTED FROM SECTION V.D(4)(B) FOR REQUIRED OPEN SPACE WITHIN YARD SETBACKS.
- A WAIVER WILL BE REQUESTED FROM SECTION V.D(4)(C) FOR REQUIRED PEDESTRIAN PATH PATHS LINKING MAJOR BUILDINGS TO OPEN SPACE.
- A WAIVER WILL BE REQUESTED FROM SECTION V.D(4)(C) FOR REQUIRED COMMON GATHERING AREA.
- A WAIVER WILL BE REQUESTED FROM SECTION V.D(4)(C) FOR REQUIRED SHELTERS FOR PUBLIC TRANSPORT.
- A WAIVER WILL BE REQUESTED FROM SECTION IV.B(5)(A) FOR REQUIRED TREES ALONG THE VEGETATED BUFFER FROM A PUBLIC STREET.
- A WAIVER WILL BE REQUESTED FROM SECTION IV.B(5)(B) FOR THE REQUIRED TEN FOOT WIDE BUFFER FROM ADJACENT CONTIGUOUS PROPERTIES.
- A WAIVER WILL BE REQUESTED FROM SECTION IV.B(5)(C) FOR INTERIOR LANDSCAPE AREAS TO BE DISPERSED SO AS TO DEFINE AISLES AND LIMIT UNBROKEN ROWS OF PARKING TO A MAXIMUM OF ONE HUNDRED FEET.
- A VARIANCE WILL BE REQUESTED FROM SECTION IV.A(4)(C) FOR WALL SIGNS NOT EXCEEDING AN AREA OF ONE (1) SQUARE FOOT FOR EACH LINEAL FOOT OF THAT WALL FOR EXTERNALLY ILLUMINATED SIGNS.
- A VARIANCE WILL BE REQUESTED FOR A 74.5' SF INTERNALLY ILLUMINATED PYLON SIGN, WHERE 50 SF IS PERMITTED BY CODE.
- A WAIVER WILL BE REQUESTED FOR LOT FRONTAGE REQUIREMENTS AS THE EXISTING HORIZONTAL MEASUREMENT IS 181.82', WITH THE TOTAL FRONTAGE LENGTH OF 206.50. THESE MEASUREMENTS WILL REMAIN IN THE PROPOSED CONDITION.

REVISIONS

REV	DATE	COMMENT	CHECKED BY
1	01/31/2023	CLIENT COMMENTS	EVD
2	03/20/2023	TOWN COMMENTS	GD/JAK

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PROJECT No.: W221017
DRAWN BY: EVD
CHECKED BY: GD/JAK
DATE: 10/27/2022
CAD ID: W221017-SFPD-2A

PROPOSED MEDICAL CLINIC

FOR
TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT
MAP: #10 LOT: #93
15 PLEASANT VALLEY ROAD,
TOWN OF SUTTON,
WORCESTER COUNTY,
MASSACHUSETTS

BOHLER

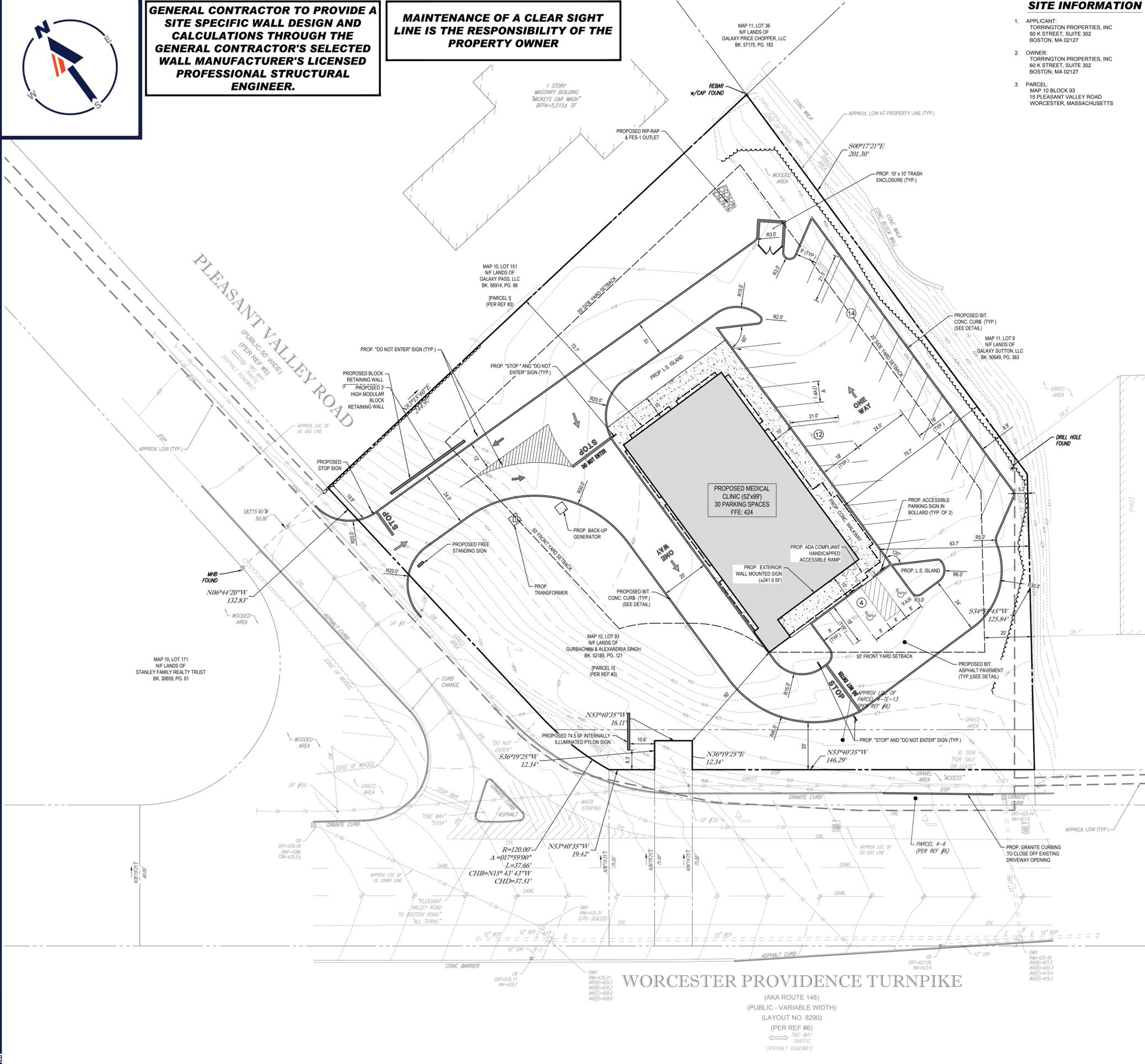
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com



SHEET TITLE:
SITE LAYOUT PLAN

SHEET NUMBER:
C-301

REVISION 2 - 03/20/2023

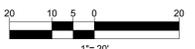


THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL NOTES

APPROVAL BLOCK

TOWN OF SUTTON BOARD APPROVAL
APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.

PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE



I:\BOHLER\NET\SHARES\MA\PROJECTS\2022\02\101\CAD\DRAWINGS\PLAN SET\CVL\W221017-SFPD-2A-LAYOUT.C-301-SITE



THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL GRADING & UTILITY NOTES

BOHLER
 SITE CIVIL AND CONSULTING ENGINEERING
 PROGRAM MANAGEMENT
 LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

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PROPOSED MEDICAL CLINIC

FOR

TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT

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 15 PLEASANT VALLEY ROAD,
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 MASSACHUSETTS

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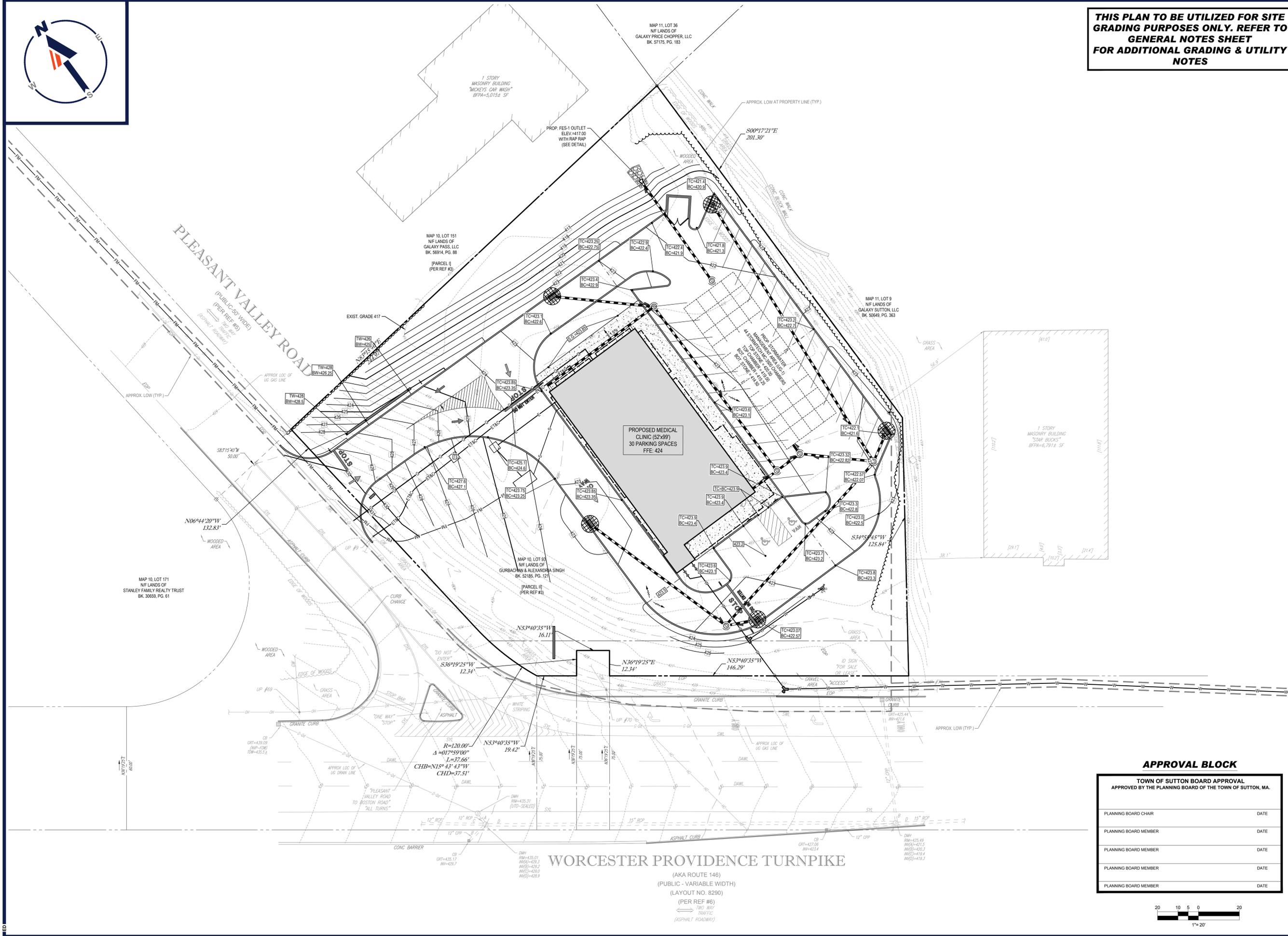
352 TURNPIKE ROAD
 SOUTHBOROUGH, MA 01772
 Phone: (508) 480-9900
 www.BohlerEngineering.com

Professional Engineer Seal for John A. Bohler, No. 41530, State of Massachusetts.

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C-401

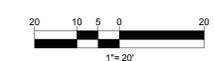
REVISION 2 - 03/20/2023



APPROVAL BLOCK

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PLANNING BOARD MEMBER	DATE



BOHLER ENGINEERING, INC. PROJECT: 20220221021017 CAD DRAWING: PLAN SET/CIVIL SITE PLAN/SW221017-SFPD-2A - LAYOUT: C-401-GRAD

EROSION AND SEDIMENT CONTROL NOTES

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. AT A MINIMUM, AREAS SHALL BE PERMANENTLY STABILIZED ACCORDING TO THE CURRENT EDITION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), OR IN THE ABSENCE OF A SWPPP, THEY SHALL BE PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
- SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8%.
- INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED. FOR SEDIMENT CONTROL DEVICES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE DEVICES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1) UNLESS OTHERWISE INDICATED ON THE PLANS. SLOPE PROTECTION FOR SLOPES GREATER THAN 2:1 SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER.
- IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL STANDARDS.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
 - SIX INCHES, OR DEPTH SPECIFIED ON THE LANDSCAPE PLAN, OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
 - APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (188 LB PER 1,000 SF).
 - FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN. QUALITY SOIL MAY BE SUBSTITUTED FOR SEED WHERE SLOPES DO NOT EXCEED 2:1. SOIL ON SLOPES STEEPER THAN 3:1 SHOULD BE PEGGED.
 - STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER WILL BE USED ON STRAW MULCH FOR WIND CONTROL.

- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS 70% STABILIZED. FOR EROSION CONTROL MEASURES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE MEASURES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
- WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, COMPOST TUBES, SILT FENCE OR A COMBINATION THEREOF.
- ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
- ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED.

LOCATION PROTECTED AREA	MULCH STRAW	MULCH RATE (1000 SF)
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS STRAW (ANCHORED)	185-275 POUNDS 100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED
GREATER THAN 3:1	(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)	

* A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER SHALL BE USED TO ADDITIONAL WIND CONTROL.

* MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DICK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

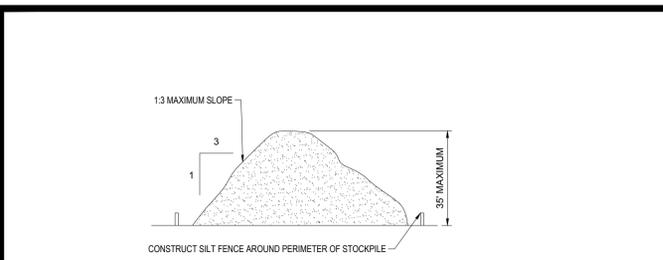
- PROPOSED LOCATIONS OF SURFACE STORMWATER MANAGEMENT BASINS CAN BE UTILIZED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION. SEDIMENT TRAPS SHALL BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
 - TEMPORARY SEDIMENT TRAPS SHALL BE SIZED PER THE CURRENT EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AND PROVIDE A MINIMUM OF 1,800 CF PER ACRE OF TRIBUTARY AREA WITH A MAXIMUM TRIBUTARY AREA OF 5 ACRES. MAINTAIN A 2:1 LENGTH TO WIDTH RATIO, AND NOT EXCEED 5 FT IN HEIGHT. UPON SITE STABILIZATION, ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE TEMPORARY SEDIMENT TRAP EXCAVATED TO 1 FOOT BELOW THE TRAP. THE AREA SHALL THEN BE SCARIFIED TO PREVENT COMPACTION AND PROMOTE INFILTRATION, AND GRADED AND STABILIZED IN ACCORDANCE WITH THE GRADING AND LANDSCAPE PLANS.
- STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
- EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.
- THE CONTRACTOR MUST PERFORM DEWATERING (IF REQUIRED), IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE PERMITS ASSOCIATED WITH SAME.
- THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. THE CONTRACTOR MUST MAINTAIN SPILL PREVENTION AND RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY THE CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION AND RESPONSE PROCEDURES.

- EROSION CONTROL NOTES DURING WINTER CONSTRUCTION
- WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
- WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOFF.
- CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDING, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
- FOR AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD EXCEEDING 14 DAYS BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH, LOAM OR SEED WILL NOT BE REQUIRED. THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDING. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDING AT A RATE OF 200-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED AS APPLICABLE. SLOPES SHALL NOT BE LEFT UNSTABILIZED OVER THE WINTER OR IN AREAS WHERE WOOD HAS CEASED FOR MORE THAN 14 DAYS UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF SEDIMENT BARRIERS OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.

- MULCHING REQUIREMENTS:
 - BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
 - MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
 - MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
- ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.
- DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

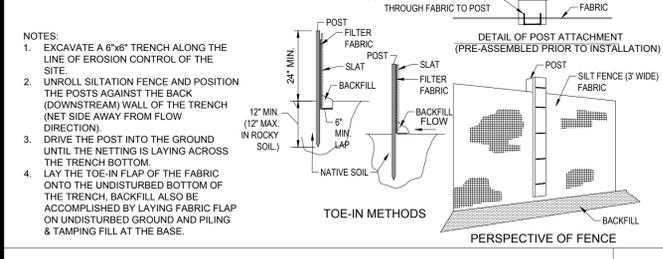
GENERAL EROSION AND SEDIMENT CONTROL NOTES

- THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY, THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
- EROSION CONTROL MEASURES MUST CONFORM TO THE STATE, LOCAL, AND FEDERAL GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL. UNLESS OTHERWISE NOTED, OR UNLESS ENGINEER CLEARLY AND SPECIFICALLY, IN WRITING, DIRECTS OTHERWISE, INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES.
- THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY XX,XXX ACRES.
- THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE:
 - STABILIZED CONSTRUCTION ENTRANCE/EXIT - A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT IS TO BE INSTALLED AT THE DESIGNATED LOCATION SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE.
 - SEDIMENT FENCE - INSTALL SILT FENCE(S) AND/OR SILT SOCK AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL STOCKPILES.
 - INSTALL FILTER FABRIC DROP INLET PROTECTION AROUND EACH DRAINAGE INLET AS DRAINAGE STRUCTURES ARE INSTALLED TO REDUCE THE QUANTITY OF SEDIMENT. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS OF DISTURBED AREA.
- INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN 6" OR HALF THE HEIGHT OF THE EROSION CONTROL BARRIER HEIGHT COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DROP INLET PROTECTION.
- THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MULCH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND VEGETATED WITHIN 7 DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
- THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF ENGINEER SO REQUIRES, TO PREVENT ANY, INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
- THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURFLANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
- THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
- THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES. MEASURES AND STRUCTURES, ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND/OR TO PREVENT ANY, INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
- THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE (AND/OR DEMOLITION PLANS) FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.
- THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
- SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.
- THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND ANY OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.



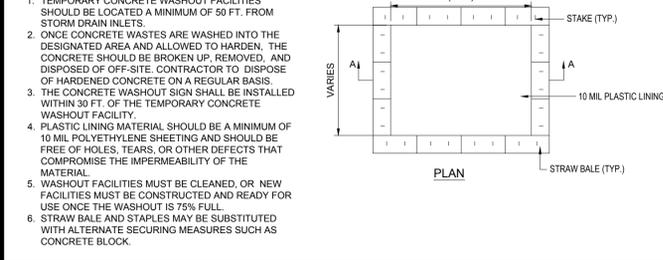
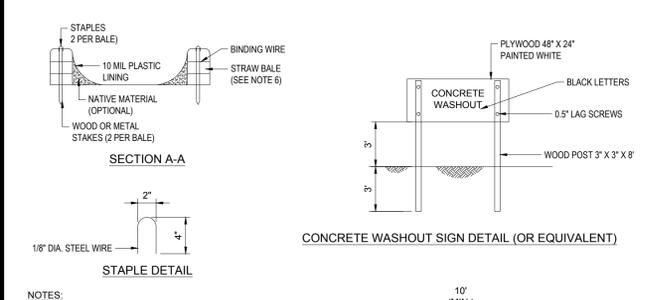
TEMPORARY STOCKPILE

N.T.S.



TYP. SILTATION FENCE

N.T.S.



CONCRETE WASTE MANAGEMENT AREA

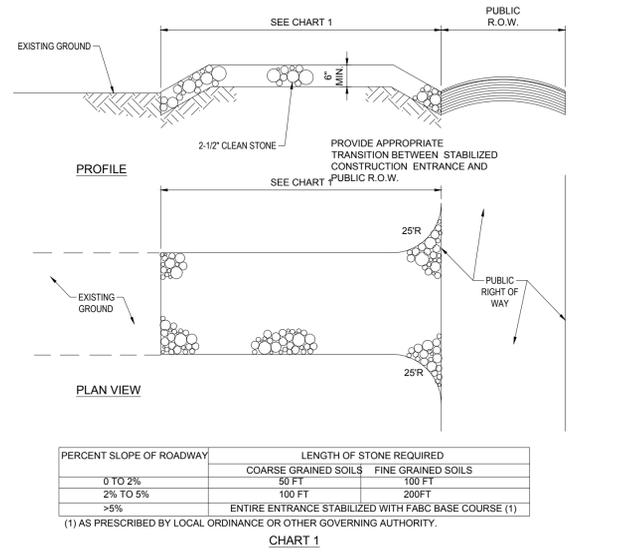
N.T.S.

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
- INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN)
- INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
- DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)
- DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN)
- CLEARING AND GRUBBING
- INSTALLATION OF TEMPORARY SWALES AND SEDIMENT BASINS
- EARTHWORK AND EXCAVATION/FILLING AS NECESSARY
- CONSTRUCTION OF UTILITIES
- STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING
- INSTALLATION OF INLET PROTECTION OF ON-SITE UTILITIES (AS SHOWN)
- CONSTRUCTION OF BUILDINGS
- CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS
- SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH
- FINAL GRADING OF ALL SLOPED AREAS
- PLACE 6\"/>

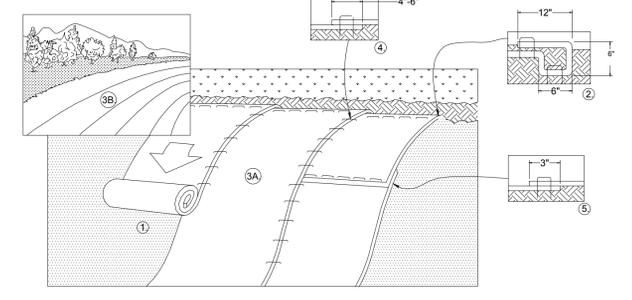
RECOMMENDED CONSTRUCTION SEQUENCE

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

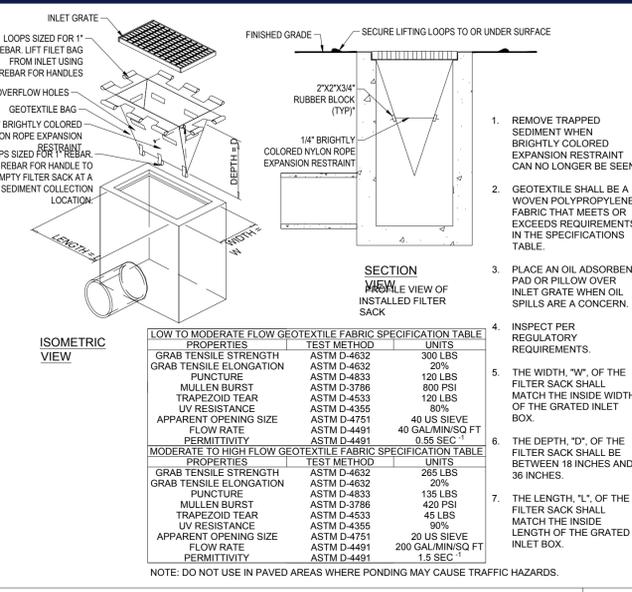
N.T.S.



- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIM, FERTILIZER, AND SEED.
- BEAR AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6\"/>

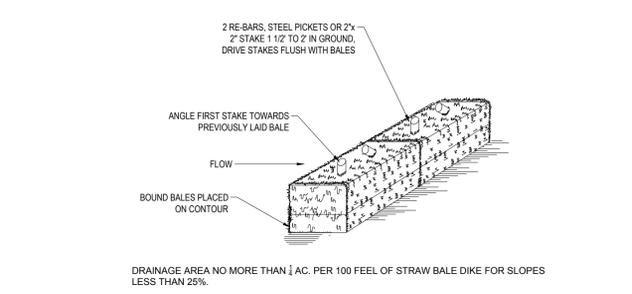
EROSION CONTROL BLANKET 2:1 SLOPES (SLOPE INSTALLATION)

N.T.S.



FILTER SACS (GRADED INLETS)

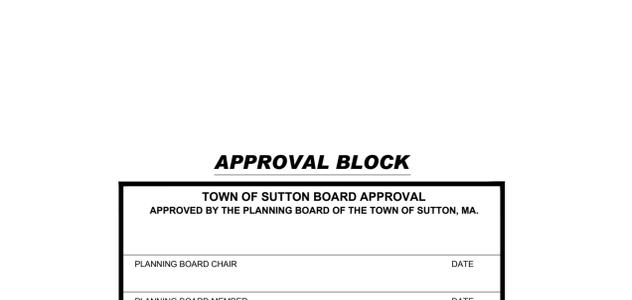
N.T.S.



- BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE

N.T.S.



TOWN OF SUTTON BOARD APPROVAL	
APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.	
PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE

APPROVAL BLOCK

N.T.S.

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	CLIENT COMMENTS	CHKD BY
1	01/31/2023			EVD
2	03/20/2023			GDUJAK

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PROJECT No.:	W221017
CHECKED BY:	GB/JAK
DATE:	10/27/2022
CAD ID:	W221017-SFPD-2A

PROPOSED MEDICAL CLINIC

FOR

PROPOSED DEVELOPMENT
MAP: #10 LOT: #93
15 PLEASANT VALLEY ROAD,
TOWN OF SUTTON,
WORCESTER COUNTY,
MASSACHUSETTS

BOHLER
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

JOHN A. BOHLER
REGISTERED PROFESSIONAL ENGINEER
No. 41530

SOIL EROSION & SEDIMENT CONTROL NOTES

SHEET NUMBER:
C-602

REVISION 2 - 03/20/2023

I:\BOHLER\NET\SHARES\MAP\PROJECTS\2022\02\01\TCA\DRAWINGS\PLAN SET\BOHLER SITE PLANS\W221017-SFPD-2A.dwg - LAYOUT - C-602-ENOTE



SEED MIX KEY	
	PROPOSED HYDROSEED
	PROPOSED CONSERVATION/WILDLIFE SEED MIX

TOWN OF SUTTON, MASSACHUSETTS LANDSCAPE REQUIREMENTS		
SECTION	REQUIREMENTS	CALCULATIONS/PROPOSED
SECTION I: LANDSCAPING PROVISIONS	B. OFF-STREET PARKING, LOADING AND LANDSCAPE REGULATIONS	
	B. LANDSCAPING ADJACENT TO CONTIGUOUS PROPERTIES WITHIN THE REQUIRED YARD SETBACKS. A LANDSCAPED AREA CONSISTING OF EXISTING AND/OR NEW VEGETATION IN ADDITION TO GRASS, SHALL BE PROVIDED BETWEEN PARKING AREAS AND CONTIGUOUS PROPERTIES AS FOLLOWS:	PROVIDED
	1. A LANDSCAPED AREA AT LEAST TEN (10) FEET WIDE.	PROVIDED
SECTION II: LANDSCAPING IN INTERIOR AREAS	C. LANDSCAPING IN INTERIOR AREAS. LANDSCAPING AREAS SHALL BE PROVIDED FOR INTERIOR PARKING AREAS SO AS TO PROVIDE VISUAL AND CLIMATIC RELIEF FROM BROAD EXPANSIONS OF PAVEMENT AND TO CHANNELIZE AND DEFINE LOGICAL AREAS FOR PEDESTRIAN AND VEHICLE CIRCULATION.	PROVIDED
	2. AT LEAST FIVE PERCENT (5%) OF THE GROSS PARKING AREA SHALL BE LANDSCAPED. THESE LANDSCAPED AREAS SHALL INCLUDE TREES SUFFICIENT TO PROVIDE SOME SHADING OF PARKING AREAS.	REQUIRED: 8,849 SF X 5% = 443 SF LSA PROVIDED: 655 SF LSA
	D. TREES. TREES REQUIRED BY THE PROVISIONS OF THIS SECTION SHALL BE AT LEAST TWO (2) INCHES IN DIAMETER (MEASURED AT ONE (1) FOOT ABOVE GROUND LEVEL) AND A HEIGHT OF FIVE (5) FEET AT THE TIME OF PLANTING. TREES SHALL BE OF A SPECIES CHARACTERIZED BY RAPID GROWTH AND BY SUITABILITY AND HARDNESS FOR LOCATION IN A PARKING LOT. TO THE EXTENT PRACTICAL, EXISTING TREES SHALL BE RETAINED AND USED TO SATISFY THE PROVISIONS OF THIS SECTION.	PROVIDED
SECTION III: COMMON REGULATIONS	E. INTERSECTION VISIBILITY. NO LANDSCAPING, TREE, FENCE, WALL, OR SIMILAR SCREENING SHALL BE MAINTAINED IN THE VICINITY OF ANY CORNER, STREET INTERSECTION, OR ACCESS-WAY INTERSECTING A PUBLIC RIGHT-OF-WAY THAT IS DETERMINED TO BE AN OBSTRUCTION TO VISIBILITY.	PROVIDED
	D. ROUTE 146 OVERLAY DISTRICT BYLAW	
	C. SITE DESIGN STANDARDS	
SECTION IV: OVERLAY DISTRICTS	1. LANDSCAPING	PROVIDED
	B. ACCESS WAYS INTO THE SITE AND THOROUGHFARES WITHIN THE DEVELOPMENT SHALL BE PROVIDED WITH DECIDUOUS TREES AT INTERVALS OF APPROXIMATELY FIFTY FEET (50') ON BOTH SIDES OF THE ROAD TO PROVIDE AN OVERHANGING CANOPY AT MATURITY. SUCH TREES SHALL BE A MINIMUM OF TWO-INCH (2") CALIPER AT BREAST HEIGHT WHEN PLANTED AND SHALL NORMALLY ATTAIN A HEIGHT OF AT LEAST FIFTY FEET (50') AT MATURITY.	REQUIRED: 8,849 SF X 5% = 443 SF LSA PROVIDED: 655 SF LSA
	E. ANY PARKING LOT OF MORE THAN TWENTY (20) SPACES SHALL BE PROVIDED WITH INTERIOR LANDSCAPING COVERING NOT LESS THAN FIVE PERCENT (5%) OF THE TOTAL AREA OF THE LOT. LANDSCAPING SHALL ALSO BE PROVIDED AROUND THE PERIMETER OF THE LOT FOR A WIDTH OF TEN FEET (10') AND PLANTED WITH TREES AND SHRUBS.	REQUIRED: 30 SPACES / 10 = 3 PROVIDED: 3 TREES
IN TOTAL, THERE SHALL BE PROVIDED ONE SHADE TREE FOR EVERY TEN (10) SPACES AND COMPLEMENTED BY SHRUBS AND OTHER PLANTING MATERIAL SUCH THAT AT LEAST TWO (2) INCHES IN TRUNK DIAMETER AT THE TIME OF PLANTING, AND SHALL BE LOCATED IN PLANTING BEDS AT LEAST SIX FEET (6') IN WIDTH OR DIAMETER. IN CASE IT CAN BE SHOWN TO THE PLANNING BOARD THAT THE PLANTING OF TREES IS IMPRACTICAL, THE PLANNING BOARD MAY AUTHORIZE PLANTINGS AND SHRUBBERY INSTEAD OF TREES.		

LANDSCAPE SCHEDULE					
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONT.
SHADE TREES					
AROG	4	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2-3" CAL	B-8
GTKD	3	GLEDITSIA TRIACANTHOS 'INERMIS DRIVES'	STREET KEEPER HONEYLOCUST	2 1/2-3" CAL	B-8
QR	4	QUERCUS RUBRA	RED OAK	2 1/2-3" CAL	B-8
SUBTOTAL: 11					
DECIDUOUS SHRUBS					
CSA	8	CORNUS STOLONIFERA 'ARCTIC FIRE'	COMPACT RED TWIG DOGWOOD	18-24"	B-8
FBG	12	FOTHERGILLA GARGENI 'BLUE SHADOW'	DWARF FOTHERGILLA	18-24"	CONTAINER
IVX	10	ILEX X VERTICILLATA 'HARVEST RED'	HARVEST RED WINTERBERRY	30-30"	CONTAINER
PFG	10	POTENTILLA FRUTICOSA 'GOLDFINGER'	GOLDFINGER BUSH CINQUEFOIL	18-24"	CONTAINER
RK	10	ROSA 'RADRAZZ' KNOCK OUT	KNOCK OUT ROSE	24-30"	CONTAINER
SUBTOTAL: 50					
EVERGREEN SHRUBS					
IGS	16	ILEX GLABRA 'SHAMROCK'	SHAMROCK HINDBERRY HOLLY	24-30"	B-8
KLE	11	KALMA LATIFOLIA 'ELF'	ELF MOUNTAIN LAUREL	18-24"	CONTAINER
RPG	26	RHOODOENDRON 'PURPLE GEM'	PURPLE GEM RHOODOENDRON	24-30"	CONTAINER
SUBTOTAL: 53					
GROUND COVERS					
JHB	5	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	15-18" SPRD.	CONTAINER
SUBTOTAL: 5					
ORNAMENTAL GRASSES					
PVS	13	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	2 GAL.	CONTAINER
SUBTOTAL: 13					

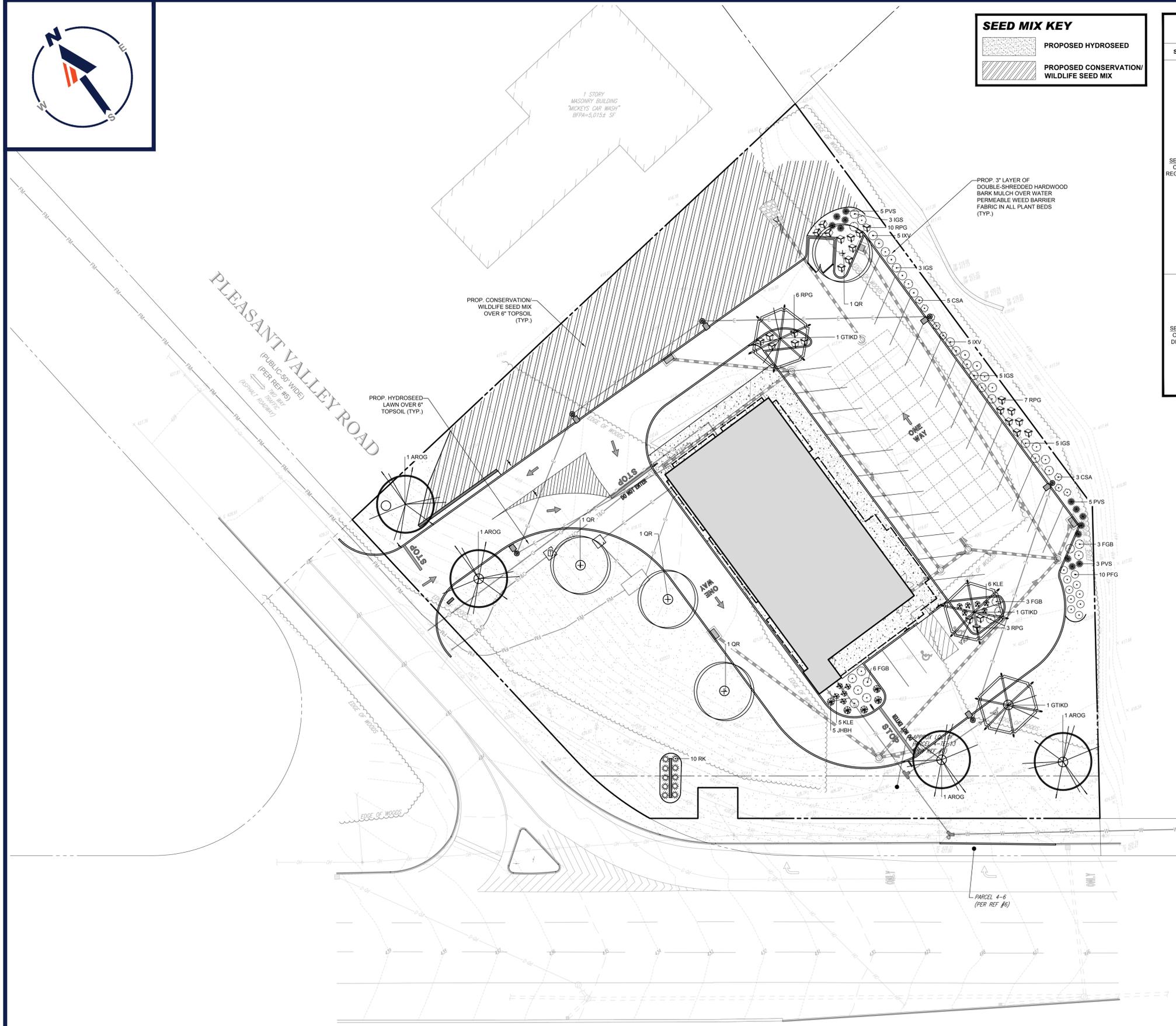
OWNER MAINTENANCE RESPONSIBILITIES

UPON OWNER'S (OR OWNER CONTRACTOR'S) COMPLETION OF LANDSCAPING WORK, THE OWNER IS FULLY RESPONSIBLE FOR ALL FUTURE MAINTENANCE, CARE, WATERING, AND TRIMMING OF ALL INSTALLED VEGETATION, PLANTS, TREES, SHRUBS, GRASSES, ORNAMENTAL PLANTS AND FLOWERS, FLOWERS, GROUND COVER, AND LANDSCAPING, INCLUDING ALL LANDSCAPE ISLANDS AND AREAS ADJACENT OR PART OF THE LANDSCAPED AREAS. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- TREES ADJACENT TO WALKWAYS AND AREAS OF PEDESTRIAN TRAFFIC MUST BE MAINTAINED TO ASSURE THAT ANY BRANCHES MUST BE LIMBED UP TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PEDESTRIAN SURFACES) OR PRUNED BACK TO AVOID ANY INTERFERENCE WITH THE TYPICAL PATH OF TRAVEL.
- TREES WITHIN VEHICULAR SIGHT LINES, AS ILLUSTRATED ON THE LANDSCAPE PLAN, ARE TO BE TRIMMED TO A CLEARANCE HEIGHT OF 7 FT. FROM ALL PAVED, TRAVELED SURFACES, OR AS OTHERWISE INDICATED ON THE PLANS.
- VEGETATIVE GROUND COVER, SHRUBS AND ORNAMENTAL PLANTS AND GRASSES MUST BE TRIMMED SO THAT NO PORTION OF THE PLANT EXCEEDS 30 INCHES ABOVE GRADE (OF ALL PAVED, TRAVELED SURFACES) ALONG AND WITHIN THE SIGHT LINES OF PARKING LOTS AND ACCESS-EGRESS WAYS.
- FALLEN PLANT FLOWERS, FRUIT, SEEDS AND DEBRIS DROPPINGS ARE TO BE REMOVED IMMEDIATELY FROM VEHICULAR AND PEDESTRIAN TRAFFIC AREAS TO PREVENT TRIPPING, SLIPPING OR ANY OTHER HAZARDS.

THESE REQUIREMENTS DO NOT AFFECT THE PLANT LIFE GUARANTEE. THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE.

APPROVAL BLOCK	
TOWN OF SUTTON BOARD APPROVAL APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.	
PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE



WORCESTER PROVIDENCE TURNPIKE
(AKA ROUTE 146)
(PUBLIC - VARIABLE WIDTH)
(LAYOUT NO. 8290)
(PER REF #6)
TRUCK
(ASPHALT ROADWAY)

**THIS PLAN TO BE UTILIZED FOR
LANDSCAPE PURPOSES ONLY**

**REFER LANDSCAPE NOTES &
DETAILS SHEET FOR LANDSCAPE
NOTES AND DETAILS**

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	DRAWN BY	CHECKED BY
1	01/31/2023	CLIENT COMMENTS	EVD	GD/JAK
2	03/20/2023	TOWN COMMENTS		

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PROJECT No.: W221017
DRAWN BY: EVD
CHECKED BY: GB/JAK
DATE: 10/27/2022
CAD ID: W221017-LSCP-2A

**PROPOSED
MEDICAL CLINIC**

FOR

**TORRINGTON
PROPERTIES INC.**

PROPOSED
DEVELOPMENT

MAP: #10 LOT: #93
15 PLEASANT VALLEY ROAD,
TOWN OF SUTTON,
WORCESTER COUNTY,
MASSACHUSETTS

BOHLER

352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com



SHEET TITLE:
**LANDSCAPE
PLAN**

SHEET NUMBER:
C-701

REVISION 2 - 03/20/2023

P:\2022\W221017\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\W221017-LSCP-2A.dwg - LAYOUT: C-701.LAND

LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK:
- 1.1. THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS & EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.
2. MATERIALS
- 2.1. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
 - 2.2. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
 - 2.3. LAWN - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN.
 - 2.3.1. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
 - 2.3.2. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE-FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
 - 2.4. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES/DETAILS.
 - 2.5. FERTILIZER
 - 2.5.1. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
 - 2.5.2. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.
 - 2.6. PLANT MATERIAL
 - 2.6.1. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).
 - 2.6.2. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
 - 2.6.3. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
 - 2.6.4. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURING OR FRESH CUTS OF LIMBS OVER 1/2", WHICH HAVE NOT BEEN COMPLETELY CALLEDUS, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
 - 2.6.5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
 - 2.6.6. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
 - 2.6.7. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
 - 2.6.8. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

3. GENERAL WORK PROCEDURES
- 3.1. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.
 - 3.2. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
4. SITE PREPARATIONS
- 4.1. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
 - 4.2. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
 - 4.3. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.
5. TREE PROTECTION
- 5.1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
 - 5.2. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY "VISI-FENCE", OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
 - 5.3. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
 - 5.4. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

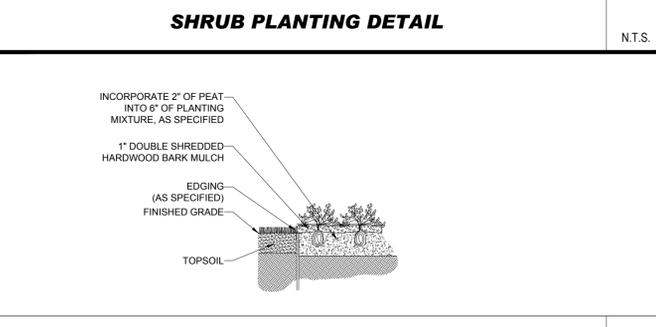
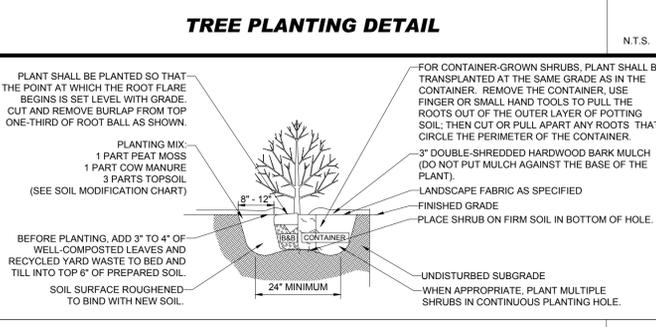
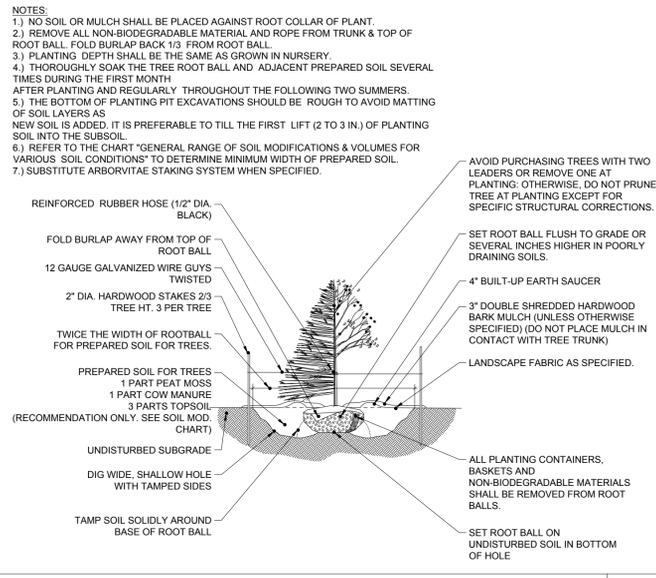
6. SOIL MODIFICATIONS
- 6.1. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.
 - 6.2. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.
 - 6.3. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
 - 6.3.1. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
 - 6.3.2. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
 - 6.3.3. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
7. FINISHED GRADING
- 7.1. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.
 - 7.2. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1").
 - 7.3. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.
 - 7.4. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.
8. TOPSOILING
- 8.1. CONTRACTOR SHALL PROVIDE A 6" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.
 - 8.2. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.
 - 8.3. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGHOUT SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.
 - 8.4. ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE FILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 6.A.]):
 - 8.4.1. 20 POUNDS 'GRO-POWER' OR APPROVED SOIL CONDITIONER/FERTILIZER
 - 8.4.2. 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER
 - 8.5. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

9. PLANTING
- 9.1. INsofar THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
 - 9.2. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.

APPROVAL BLOCK

TOWN OF SUTTON BOARD APPROVAL
APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.

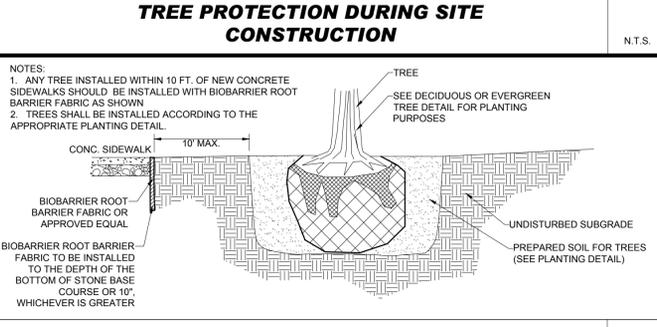
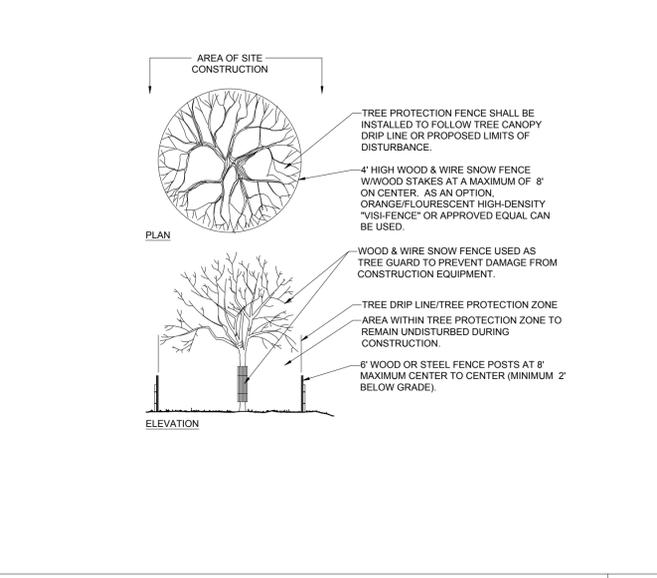
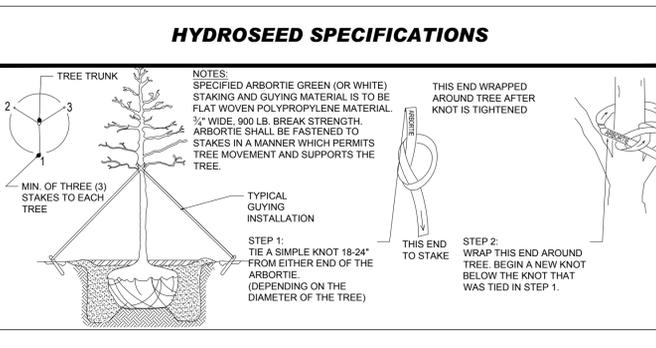
PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE
PLANNING BOARD MEMBER	DATE
PLANNING BOARD MEMBER	DATE



HYDROSEED SPECIFICATIONS

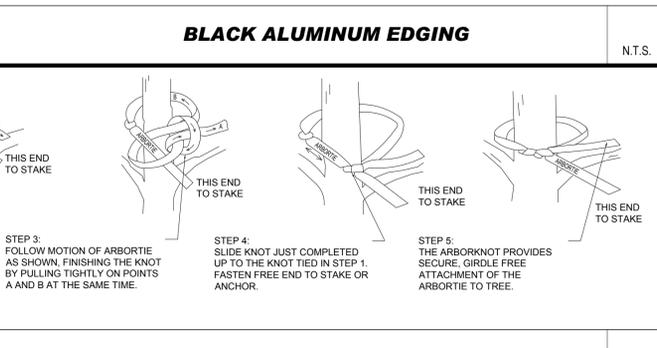
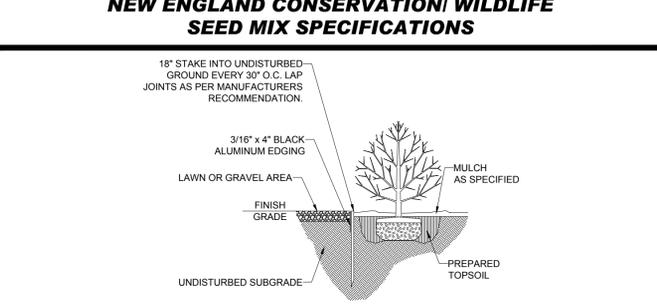
1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
2. PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
3. SEEDING RATES:

• PERENNIAL RYEGRASS	1/2 LB/1000 SQ FT
• KENTUCKY BLUEGRASS	1 LB/1000 SQ FT
• RED FESCUE	1/2 LB/1000 SQ FT
• SPREADING FESCUE	1/2 LB/1000 SQ FT
• FERTILIZER (16.32.16)	2 LB/1000 SQ FT
• LIQUID LIME	1 GAL/800 GAL
• TANK TACKIFIER	35 LB/800 GAL
• TANK FIBER MULCH	30 LB/1000 SQ FT
4. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDING AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.



NEW ENGLAND CONSERVATION WILDLIFE SEED MIX SPECIFICATIONS

*NEW ENGLAND CONSERVATION WILDLIFE SEED MIX AS PREPARED BY: NEW ENGLAND WETLAND PLANTS, INC 820 WEST STREET, AMHERST, MA 01002 PHONE: 413-548-8000 EMAIL: INFO@NEWP.COM WEBSITE: WWW.NEWP.COM	APPLICATION RATE: 25 LBS/ACRE 1750 SQ FT/LB MINIMUM ORDER: 2 LBS. SPECIES: VIRGINIA WILD RYE (ELYMUS VIRGINICUS), LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), BIG BLUESTEM (ANDROPOGON GERARDII), RED FESCUE (FESTUCA RUBRA), SWITCH GRASS (PANICUM VIRGATUM), PARTRIDGE PEA (CHAMAECRISTA FASCICULATA), PANICLELEAF TICK TREFOLI (DESMODIUM PANICULATUM), INDIAN GRASS (SORGHASTRUM NUTANS), BLUE VERVAIN (VERVAINA HASTATA), BUTTERNUT MILKWEEED (ASCLEPIAS TUBEROSA), BLACK EYED SUSAN (RUDBECKIA HIRTA), COMMON SNEEZEWEED (HELENIUM AUTUNALE), HEATH ASTER (ASTERILOPUS/SYMPHYOTRICHUM PILOSUM), EARLY GOLDENROD (SOLIDAGO JUNCEA), UPLAND BENTGRASS (AGROSTIS PERENNANS).
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BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
 PROGRAM MANAGEMENT
 LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY
1	01/31/2023	CLIENT COMMENTS	EVD/GDUJAK
2	03/20/2023	TOWN COMMENTS	

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PROJECT No.:	W221017
DRAWN BY:	GB/JAK
CHECKED BY:	10/27/2022
DATE:	W221017-LSCP-2A
CAD ID:	

PROPOSED MEDICAL CLINIC

FOR

TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT
 MAP: #10 LOT: #93
 15 PLEASANT VALLEY ROAD,
 TOWN OF SUTTON,
 WORCESTER COUNTY,
 MASSACHUSETTS

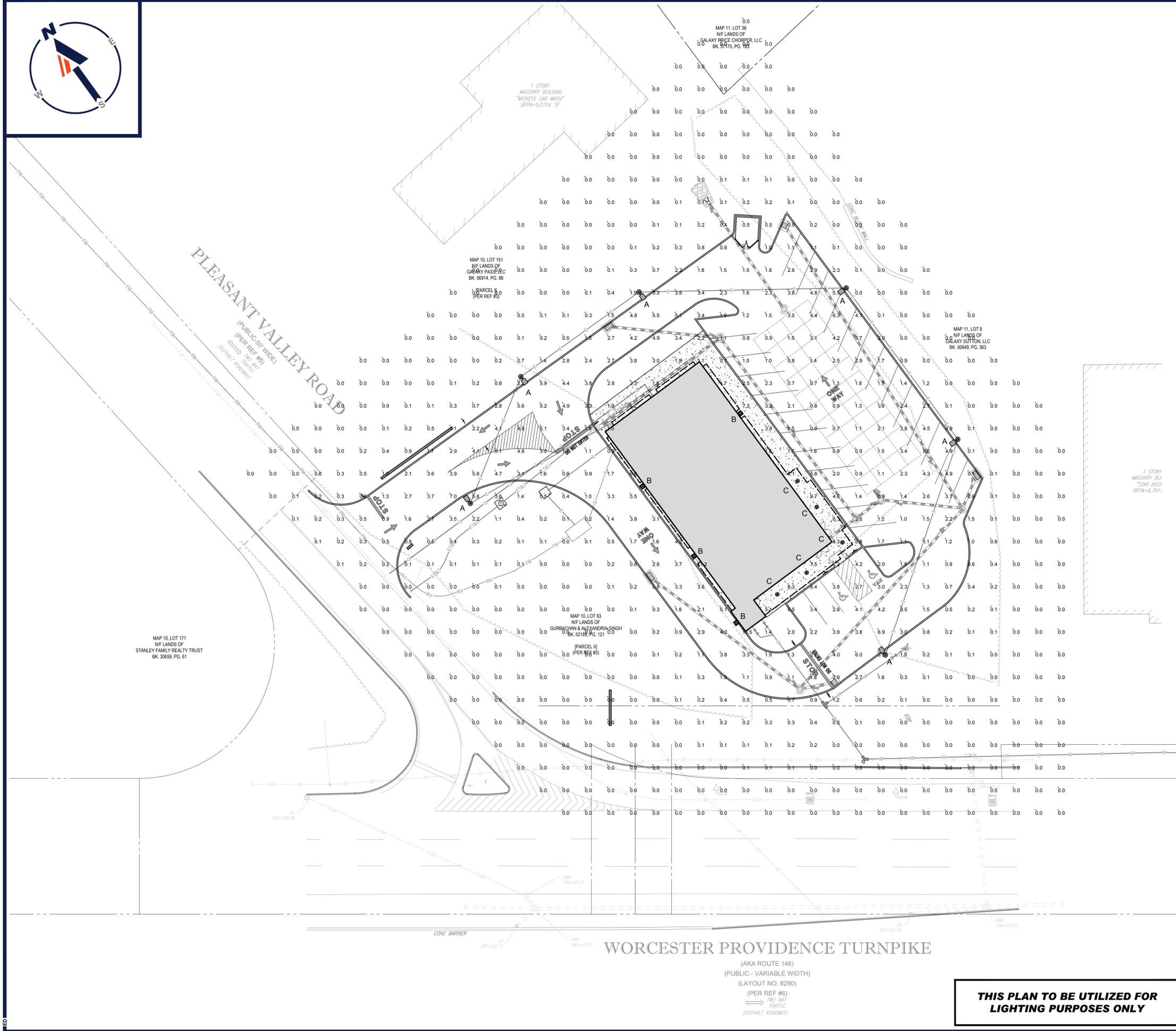
BOHLER

352 TURNPIKE ROAD
 SOUTHBOROUGH, MA 01772
 Phone: (508) 480-9900
 www.BohlerEngineering.com

MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER
 LICENSE NO. 1455
 LANDSCAPE ARCHITECTURE

SHEET TITLE:
LANDSCAPE NOTES & DETAILS
 SHEET NUMBER:
C-702
 REVISION 2 - 03/20/2023

P:\2022\1017\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\W221017-LSCP-2A.dwg - LAYOUT - C-702.dwg



LIGHTING NOTES

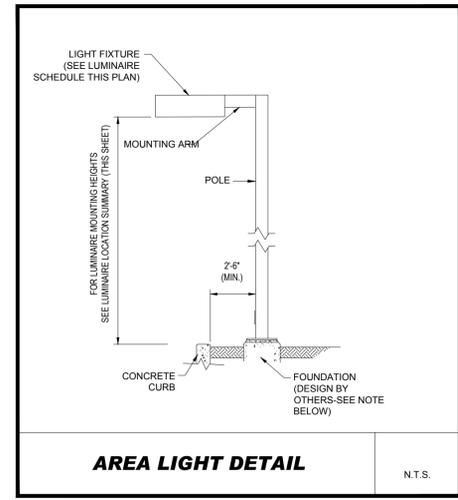
- THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURERS. ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
- THE LIGHT LOSS FACTORS USED IN THESE LIGHTING CALCULATIONS ARE 0.90 FOR ALL LED LUMINAIRES, 0.80 FOR ALL HIGH PRESSURE SODIUM LUMINAIRES OR 0.72 FOR ALL METAL HALIDE LUMINAIRES UNLESS OTHERWISE SPECIFIED. THESE FACTORS ARE INDICATIVE OF TYPICAL LIGHTING INDUSTRY MODELING STANDARDS.
- THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOTCANDELS.
- THE LUMINAIRE, LAMP AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND RELAMPING (IF NECESSARY) AT LEAST ONCE EVERY SIX (6) MONTHS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINAIRE, LAMP AND LENSES TO FAIL PROPERLY TO FUNCTION.
- WHERE APPLICABLE, THE EXISTING CONDITION LIGHT LEVELS ILLUSTRATED ARE REPRESENTATIVE OF AN APPROXIMATION UTILITIES LABORATORY DATA FOR SIMILAR FIXTURES. UNLESS ACTUAL FIELD MEASUREMENTS ARE TAKEN WITH A LIGHT METER AND ARE, CONSEQUENTLY, APPROXIMATIONS ONLY. DUE TO FACTORS SUCH AS FIXTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC. ACTUAL LIGHT LEVELS MAY DIFFER. EXISTING LIGHT LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE.
- THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRE, ONLY. POWER SYSTEM, CONDUITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. LIGHT POLE BASES ARE THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
- CONTRACTOR MUST BRING TO DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
- IT IS THE LIGHTING CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROJECT ARCHITECT OR OWNER REGARDING THE POWER SOURCE(S) FROM WITHIN THE BUILDING, AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT.
- THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
- THE CONTRACTOR MUST VERIFY THAT INSTALLATION OF LIGHTING FIXTURES COMPLIES WITH THE REQUIREMENTS FOR SEPARATION FROM OVERHEAD ELECTRICAL WIRES PER STATE REGULATIONS.
- UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.

NUMERIC SUMMARY

LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVGRMIN	MAXMIN
AREA SUMMARY	ILLUMINANCE	FC	2.88	11.2	0.1	28.80	112.00

LUMINAIRE SCHEDULE

SYMBOL	QTY	ARRANGEMENT	LUMENS	LLF	DESCRIPTION
⊙ A	6	SINGLE	16394	0.90	LSI LIGHTING TYPE 3 LED AREA LIGHT WITH SHIELD MOUNTED @ 20' XGBM 3-LED-SS-NW-SS
⊙ B	4	BUILDING	4553	0.90	LSI LIGHTING FORWARD THROW LED WALL SCONCE MOUNTED @ 10' XGBWMS-FT-LED-48-350-NW-UE
⊙ C	5	CANOPY	3816	0.90	LSI LIGHTING LED CANOPY LIGHT MOUNTED @ 13' XSPS-3-LED-SS-NW-DFL



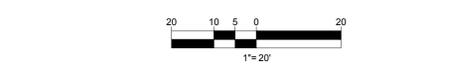
NOTE: THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A FOUNDATION DESIGN PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS AND SITE SPECIFIC SOIL PARAMETERS.

- SOME SITE CONDITIONS AND/OR LOCATIONS MAY REQUIRE VIBRATION DAMPENING MEASURES AS DETERMINED BY A STRUCTURAL ENGINEER.
- THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING TO THE POLE, ASIDE FROM THE LIGHT FIXTURES, INCLUDING BUT NOT LIMITED TO CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC. AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.

APPROVAL BLOCK

TOWN OF SUTTON BOARD APPROVAL
APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.

PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE



BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	01/31/2023	CLIENT COMMENTS	EVD	GD/JAK
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PROJECT No.: W221017
DRAWN BY: EVD
CHECKED BY: GB/JAK
DATE: 10/27/2022
CAD ID: W221017-LSCP-2A

PROPOSED MEDICAL CLINIC

FOR

TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT

MAP: #10 LOT: #93
15 PLEASANT VALLEY ROAD,
TOWN OF SUTTON,
WORCESTER COUNTY,
MASSACHUSETTS

BOHLER

352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
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SHEET TITLE:
LIGHTING PLAN

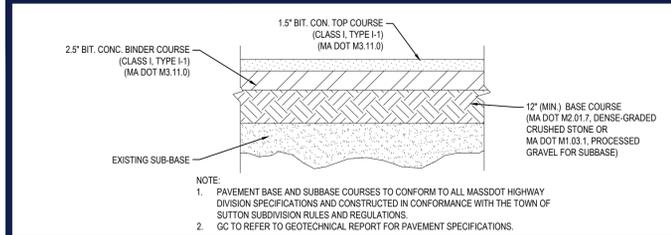
SHEET NUMBER:
C-703

REVISION 2 - 03/20/2023

WORCESTER PROVIDENCE TURNPIKE
(AKA ROUTE 146)
(PUBLIC - VARIABLE WIDTH)
(LAYOUT NO. 8290)
(PER REF #6)
THIRD WAY
TRAFFIC
(ASPHALT ROADWAY)

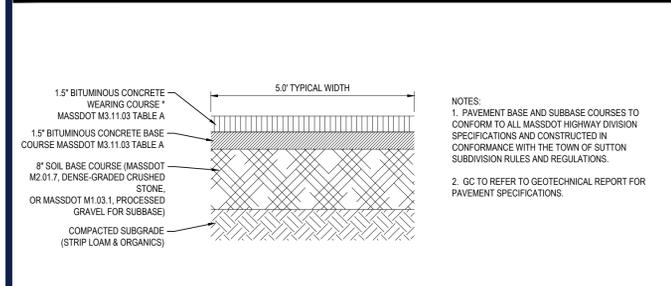
THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

P:\2022\21017\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\W221017-LSCP-2A\---LAYOUT: C-703\LIGHT

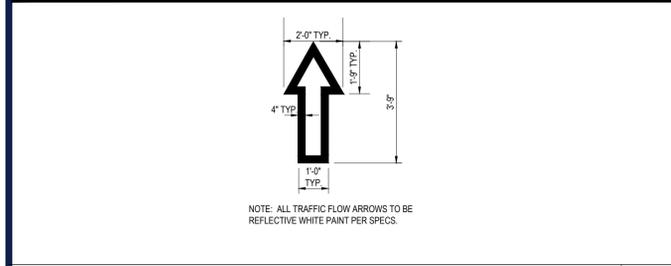


TYPICAL STANDARD DUTY PAVEMENT SECTION

N.T.S.

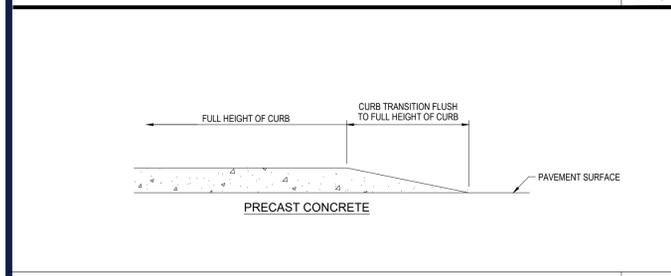


BITUMINOUS CONCRETE SIDEWALK PAVEMENT SECTION



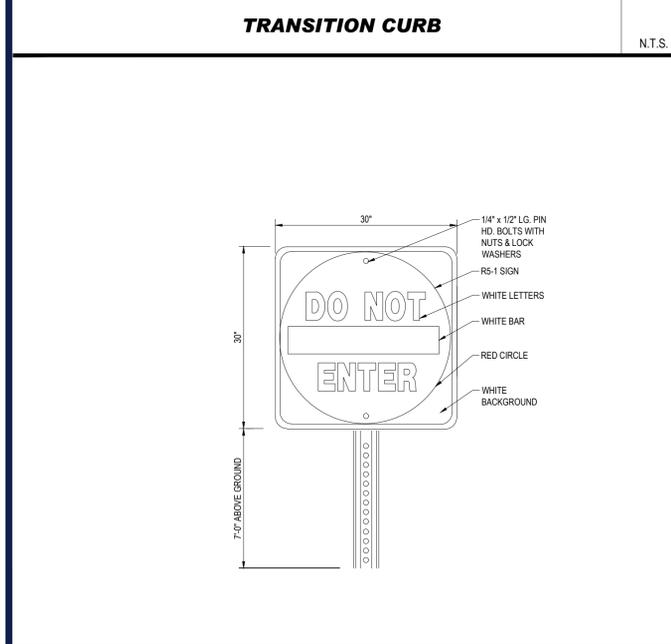
TRAFFIC FLOW ARROW

N.T.S.



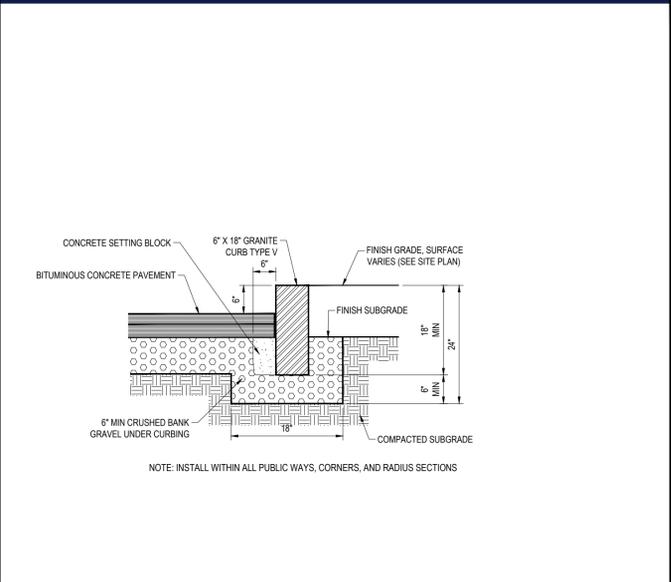
TRANSITION CURB

N.T.S.



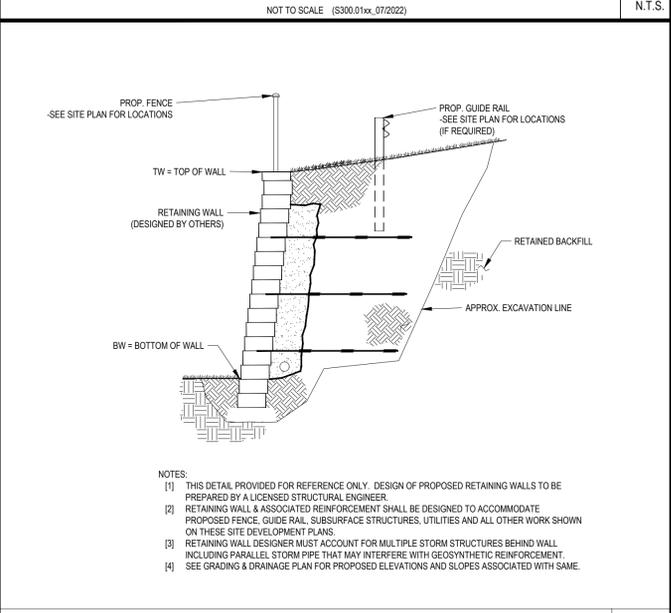
"DO NOT ENTER" SIGN

N.T.S.



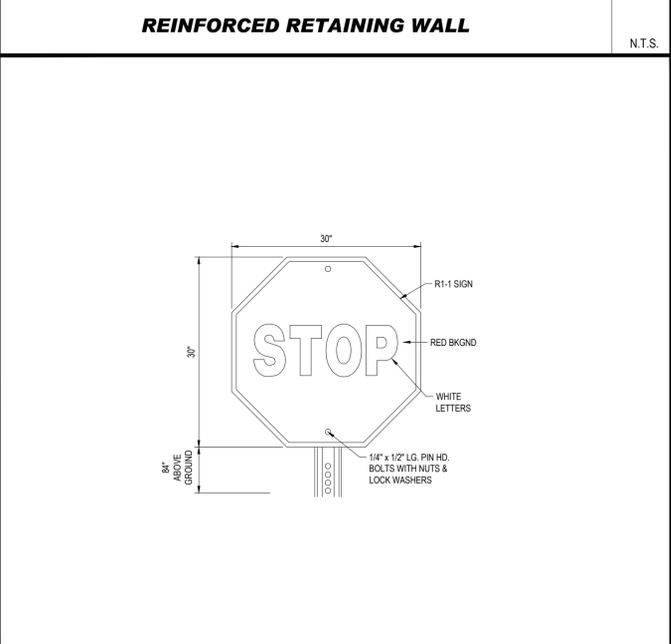
VERTICAL GRANITE CURB

N.T.S.



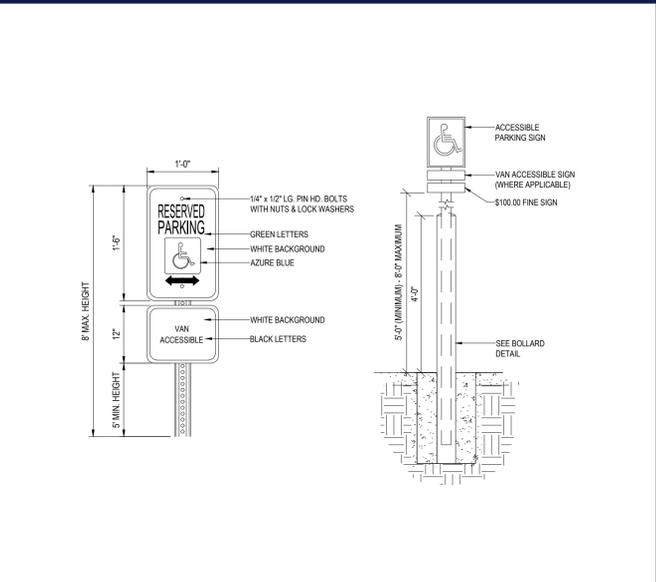
REINFORCED RETAINING WALL

N.T.S.



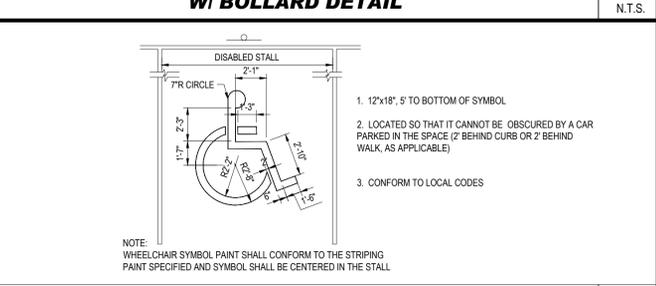
STOP SIGN

N.T.S.



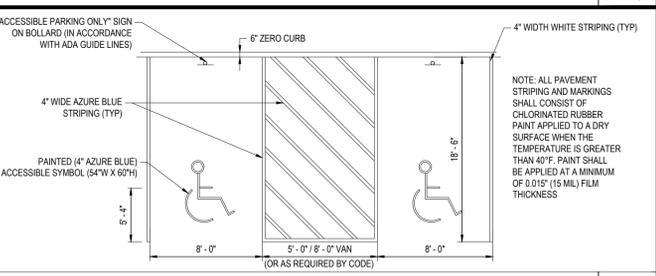
ACCESSIBLE PARKING SIGN WI BOLLARD DETAIL

N.T.S.



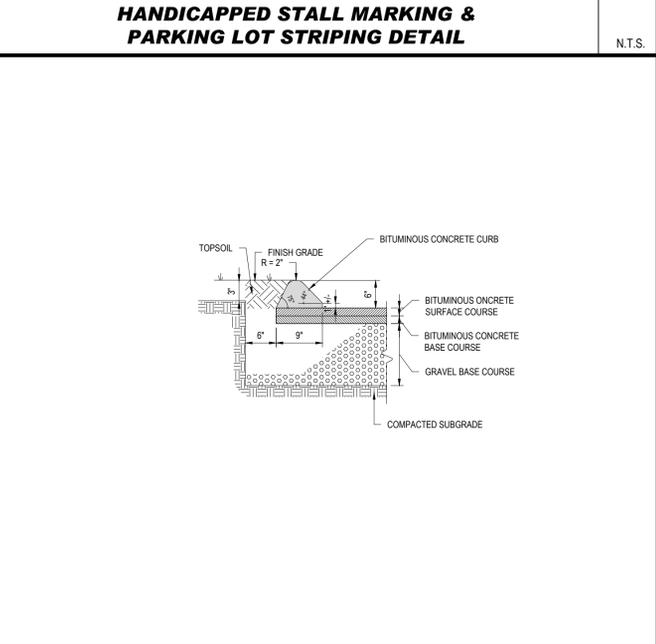
ACCESSIBLE PARKING SPACE PAINTING DETAIL

N.T.S.



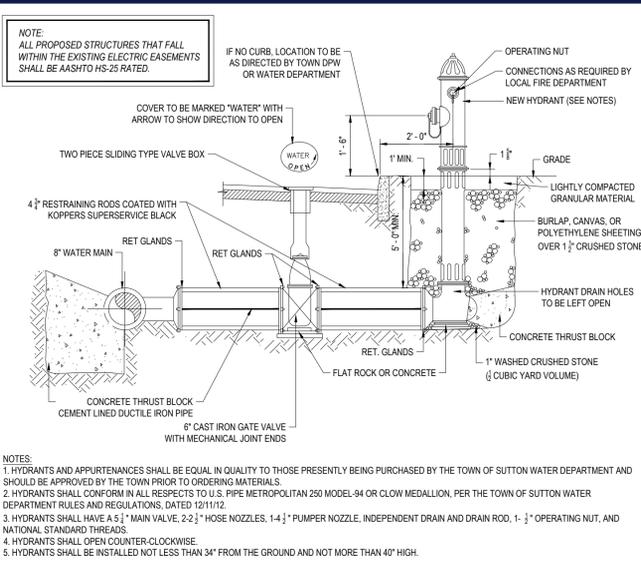
HANDICAPPED STALL MARKING & PARKING LOT STRIPING DETAIL

N.T.S.



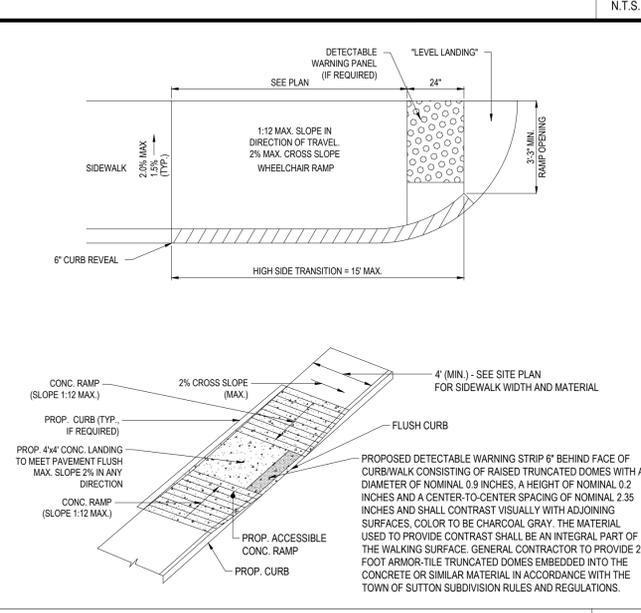
BITUMINOUS CONCRETE CURB

N.T.S.



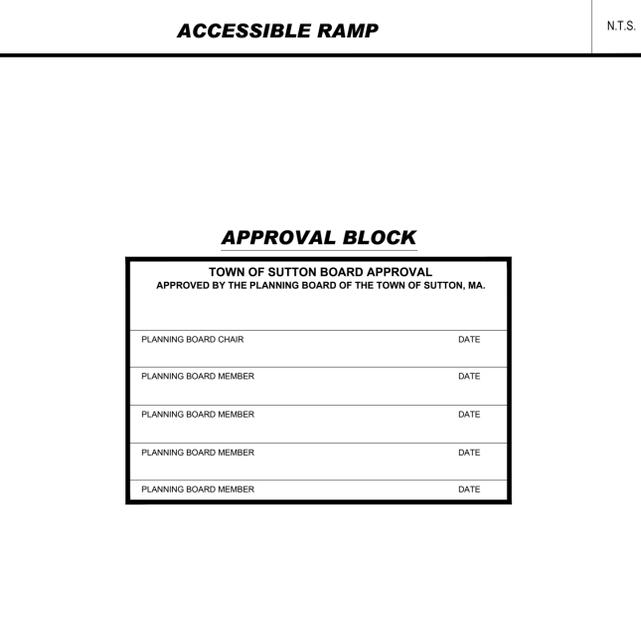
HYDRANT & VALVE INSTALLATION

N.T.S.



ACCESSIBLE RAMP

N.T.S.



APPROVAL BLOCK

TOWN OF SUTTON BOARD APPROVAL	
APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.	
PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE

BOHLER
 SITE CIVIL AND CONSULTING ENGINEERING
 PROGRAM MANAGEMENT
 LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY
1	01/31/2023	CLIENT COMMENTS	EVD	GD/JAK
2	03/20/2023	TOWN COMMENTS		

811
 Know what's below.
 Call before you dig.
 ALWAYS CALL 811
 It's fast. It's free. It's the law.

PERMIT SET

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: W221017
 DRAWN BY: EVD
 CHECKED BY: GB/JAK
 DATE: 10/27/2022
 CAD ID: W221017-DETL-2A

PROPOSED MEDICAL CLINIC

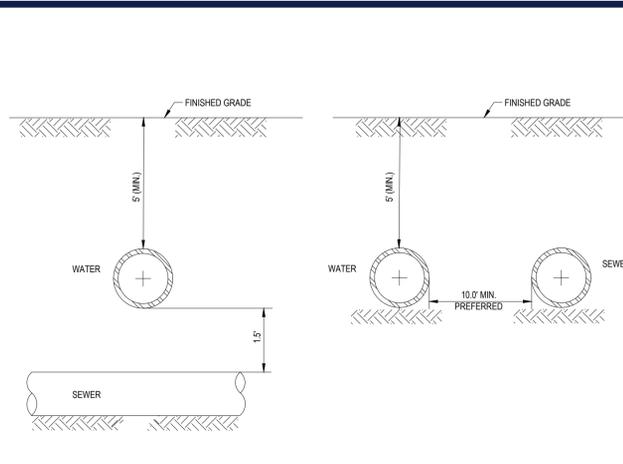
FOR
TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT
 MAP: #10 LOT: #93
 15 PLEASANT VALLEY ROAD,
 TOWN OF SUTTON,
 WORCESTER COUNTY,
 MASSACHUSETTS

BOHLER
 352 TURNPIKE ROAD
 SOUTHBOROUGH, MA 01772
 Phone: (508) 480-9900
 www.BohlerEngineering.com

DETAIL SHEET
 SHEET NUMBER:
C-801
 REVISION 2 - 03/20/2023

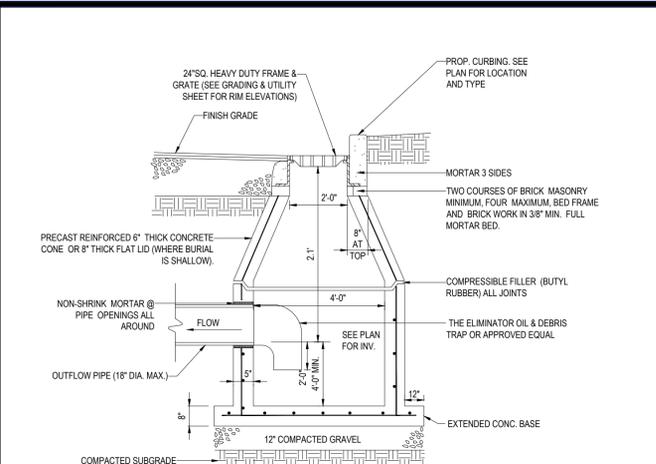
P:\2022\W221017\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\W221017-DETL-2A.dwg - LAYOUT: C-801



NOTE: 10' HORIZONTAL SEPARATION AND 1.5' VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER AND SEWER AS DEPICTED IN THIS DETAIL. OR SEWER SHALL BE ENCASED IN CONCRETE (SEE "CONCRETE ENCASEMENT DETAIL AT UTILITY CROSSING" DETAIL SHEET) IN SECTIONS WHERE SEPARATIONS SHALL NOT BE ACHIEVED.

WATER/SEWER CROSSING DETAIL

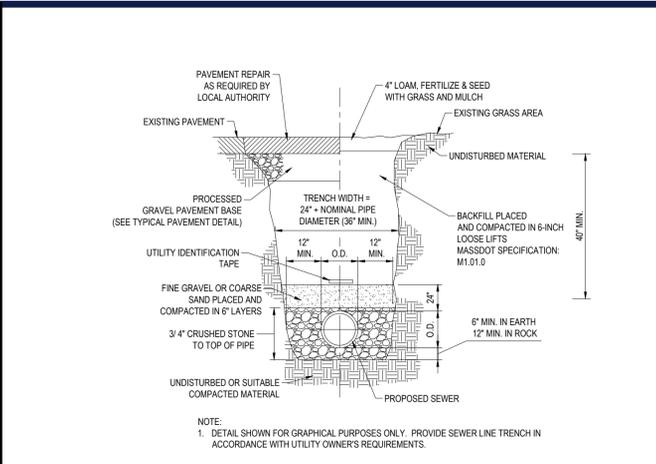
N.T.S.



NOTES:
 1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
 2. USE PRECAST FLAT SLAB TOP FOR SHALLOW INVERT APPLICATIONS.
 3. USE VERTICAL GRANITE CURB INLET AT ALL CATCH BASIN LOCATIONS.
 4. GRATES FOR CATCH BASINS CR200-CR210 AND CR300-CR311 SHALL BE INSCRIBED WITH "DO NOT DUMP - DRAINS TO WATERWAYS" OR APPROVED EQUAL.

PRECAST CONCRETE DEEP SUMP CATCH BASIN DETAIL

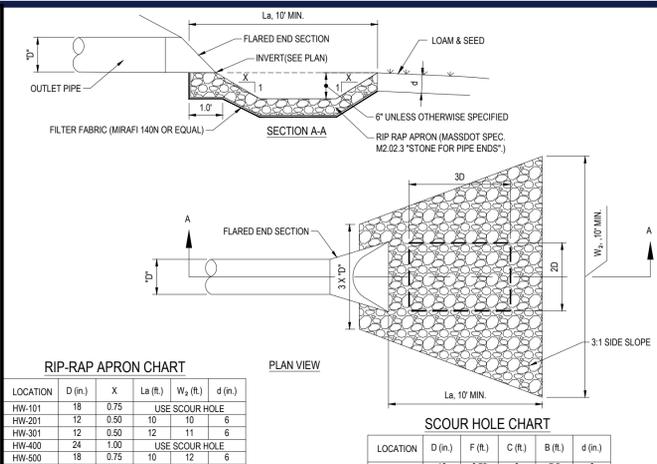
N.T.S.



NOTE: THE CONTRACTOR IS DIRECTED AND RESPONSIBLE TO SLOPE AND/OR SHIELD THE TRENCH EXCAVATION IN ACCORDANCE WITH ALL APPLICABLE OSHA REGULATIONS.

SEWER TRENCH DETAIL

N.T.S.



RIP-RAP APRON CHART

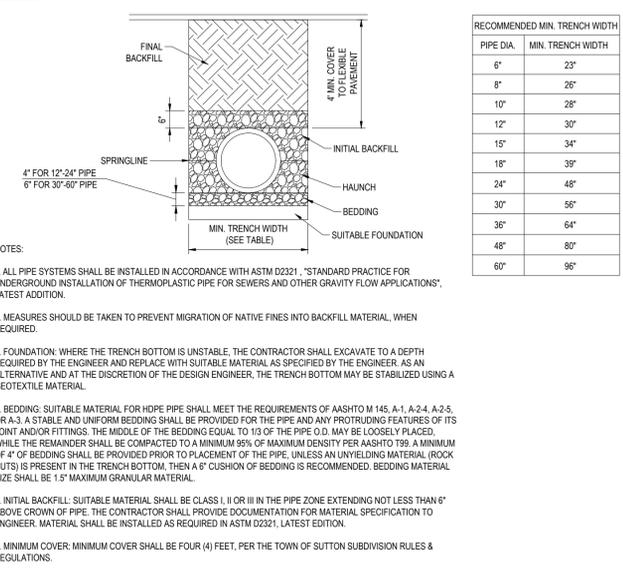
LOCATION	D (in.)	X	La (ft.)	Wa (ft.)	d (in.)
HW-101	18	0.75			USE SCOUR HOLE
HW-201	12	0.50	10	10	6
HW-301	12	0.50	12	11	6
HW-400	24	1.00			USE SCOUR HOLE
HW-500	18	0.75	10	12	6
FES-100	36	1.50			USE SCOUR HOLE
FES-200	18	0.75			USE SCOUR HOLE
FES-300	36	1.50			USE SCOUR HOLE
FES-600	42	1.75			USE SCOUR HOLE
FES-700	24	1.00	14	16	12
FES-701	30	1.25			USE SCOUR HOLE
HW-7B	18	0.75	13	14	12
HW-8B	36	1.50			USE SCOUR HOLE
HW-10B	36	1.50			USE SCOUR HOLE
HW-8B	36	1.50			USE SCOUR HOLE

SCOUR HOLE CHART

LOCATION	D (in.)	F (ft.)	C (ft.)	B (ft.)	d (in.)
HW-101	18	0.75	9	7.5	6
HW-400	24	1.00	9	7.5	12
FES-100	36	1.50	18	15	12
FES-200	18	0.75	9	7.5	6
FES-300	36	1.50	18	15	12
FES-600	42	1.75	21	17.5	18
FES-701	30	1.25	15	12.5	12
HW-5B	36	1.50	18	15	12
HW-10B	36	1.50	18	15	12
HW-8B	36	1.50	18	15	12

FLARED END SECTION WITH RIP RAP APRON

N.T.S.



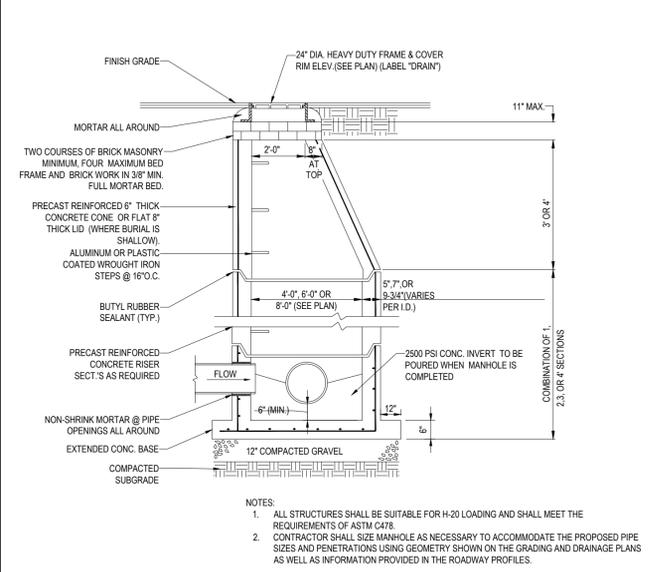
RECOMMENDED MIN. TRENCH WIDTH

PIPE DIA.	MIN. TRENCH WIDTH
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
48"	80"
60"	96"

NOTES:
 1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
 2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL, AS SPECIFIED BY THE ENGINEER, AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
 4. BEDDING: SUITABLE MATERIAL FOR HDPE PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M 145, A-1, A-2.4, A-2.5, OR A-3. A STABLE AND UNIFORM BEDDING SHALL BE PROVIDED FOR THE PIPE AND ANY PROTRUDING FEATURES OF ITS JOINT AND FITTINGS. THE MIDDLE OF THE BEDDING EQUAL TO 1/3 OF THE PIPE O.D. MAY BE LOOSELY PLACED. WHILE THE REMAINDER SHALL BE COMPACTED TO A MINIMUM 95% OF MAXIMUM DENSITY PER AASHTO T99. A MINIMUM OF 4" OF BEDDING SHALL BE PROVIDED PRIOR TO PLACEMENT OF THE PIPE, UNLESS AN UNYIELDING MATERIAL (ROCK CUTS) IS PRESENT IN THE TRENCH BOTTOM, THEN A 6" CUSHION OF BEDDING IS RECOMMENDED. BEDDING MATERIAL SIZE SHALL BE 1.5" MAXIMUM GRANULAR MATERIAL.
 5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 6. MINIMUM COVER: MINIMUM COVER SHALL BE FOUR (4) FEET, PER THE TOWN OF SUTTON SUBDIVISION RULES & REGULATIONS.

HDPE STORM DRAINAGE TRENCH

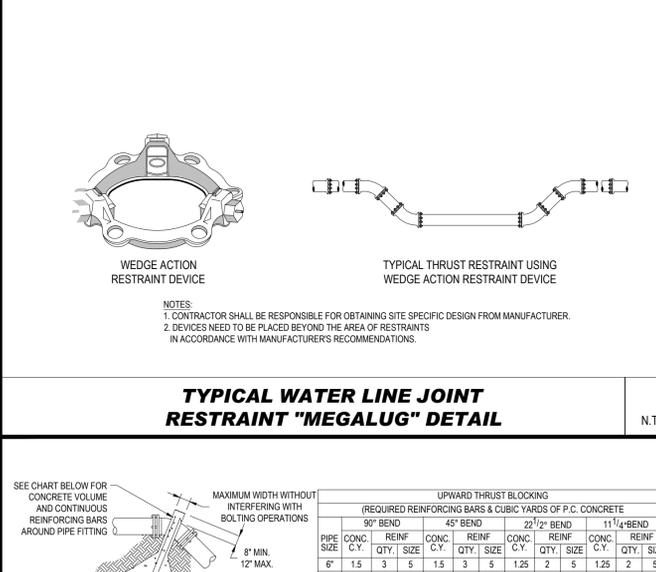
N.T.S.



NOTES:
 1. ALL STRUCTURES SHALL BE SUITABLE FOR H-20 LOADING AND SHALL MEET THE REQUIREMENTS OF ASTM C478.
 2. CONTRACTOR SHALL SIZE MANHOLE AS NECESSARY TO ACCOMMODATE THE PROPOSED PIPE SIZES AND PENETRATIONS USING GEOMETRY SHOWN ON THE GRADING AND DRAINAGE PLANS AS WELL AS INFORMATION PROVIDED IN THE ROADWAY PROFILES.

TYP. PRECAST CONCRETE MANHOLE STORM DRAIN

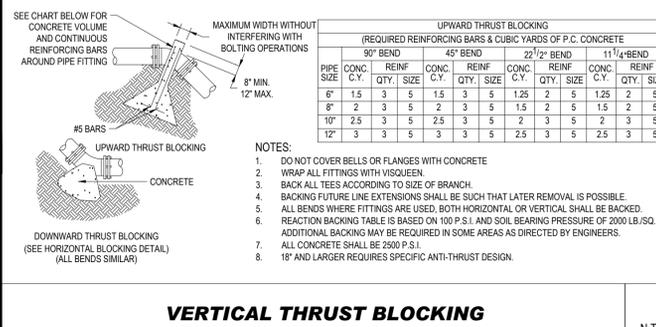
N.T.S.



NOTES:
 1. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SITE SPECIFIC DESIGN FROM MANUFACTURER.
 2. DEVICES NEED TO BE PLACED BEYOND THE AREA OF RESTRAINTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

TYPICAL WATER LINE JOINT RESTRAINT "MEGALUG" DETAIL

N.T.S.



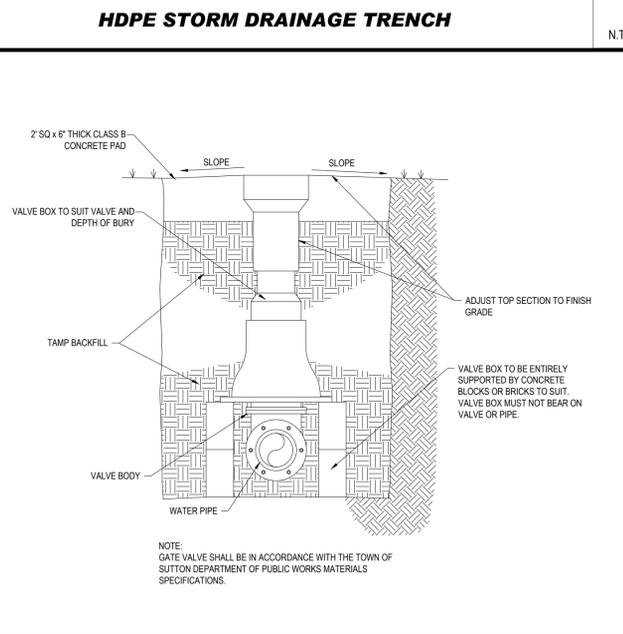
UPWARD THRUST BLOCKING

PIPE SIZE	90° BEND			45° BEND			22 1/2° BEND			11 1/4° BEND		
	CONC. C.Y.	REIN. QTY.	SIZE	CONC. C.Y.	REIN. QTY.	SIZE	CONC. C.Y.	REIN. QTY.	SIZE	CONC. C.Y.	REIN. QTY.	SIZE
6"	1.5	3	5	1.5	3	5	1.25	2	5	1.25	2	5
8"	2	3	5	2	3	5	1.5	2	5	1.5	2	5
10"	2.5	3	5	2.5	3	5	2	3	5	2	3	5
12"	3	3	5	3	3	5	2.5	3	5	2.5	3	5

NOTES:
 1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
 2. WRAP ALL FITTINGS WITH VISQUEEN.
 3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
 4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
 5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL, SHALL BE BACKED.
 6. REACTION BACKING TABLE IS BASED ON 100 P.S.I. AND SOIL BEARING PRESSURE OF 2000 LB./SQ.FT. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS DIRECTED BY ENGINEERS.
 7. ALL CONCRETE SHALL BE 2500 P.S.I.
 8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

VERTICAL THRUST BLOCKING

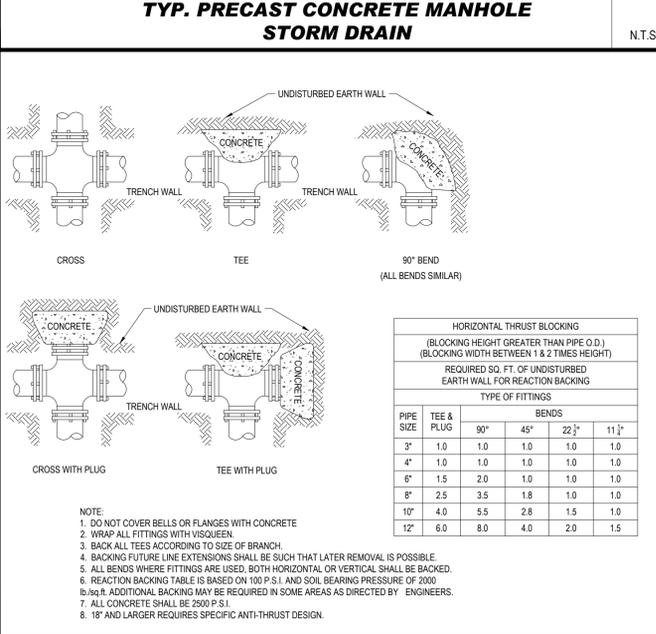
N.T.S.



NOTE: GATE VALVE SHALL BE IN ACCORDANCE WITH THE TOWN OF SUTTON DEPARTMENT OF PUBLIC WORKS MATERIALS SPECIFICATIONS.

GATE VALVE

N.T.S.



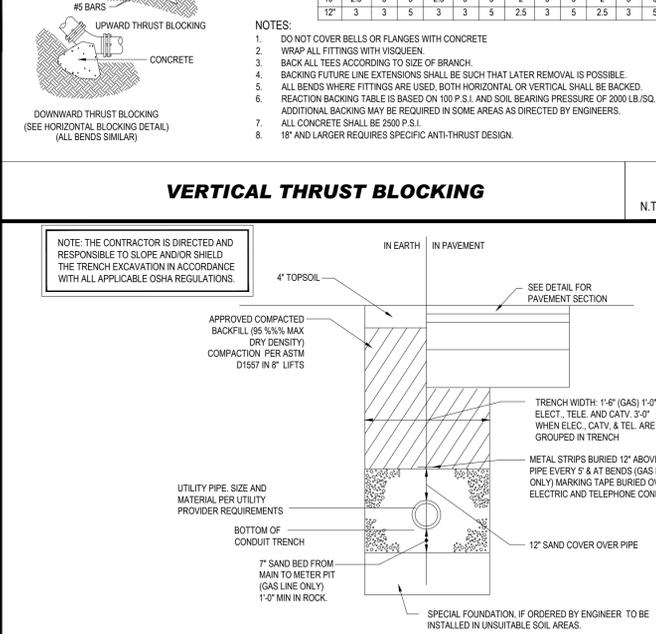
HORIZONTAL THRUST BLOCKING

PIPE SIZE	TYPE OF FITTINGS			
	TEE & PLUG	90°	45°	22 1/2°
3"	1.0	1.0	1.0	1.0
4"	1.0	1.0	1.0	1.0
6"	1.5	2.0	1.0	1.0
8"	2.5	3.5	1.8	1.0
10"	4.0	5.5	2.8	1.5
12"	6.0	8.0	4.0	2.0

NOTE:
 1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
 2. WRAP ALL FITTINGS WITH VISQUEEN.
 3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
 4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
 5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL, SHALL BE BACKED.
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 7. ALL CONCRETE SHALL BE 2500 P.S.I.
 8. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

HORIZONTAL THRUST BLOCKING

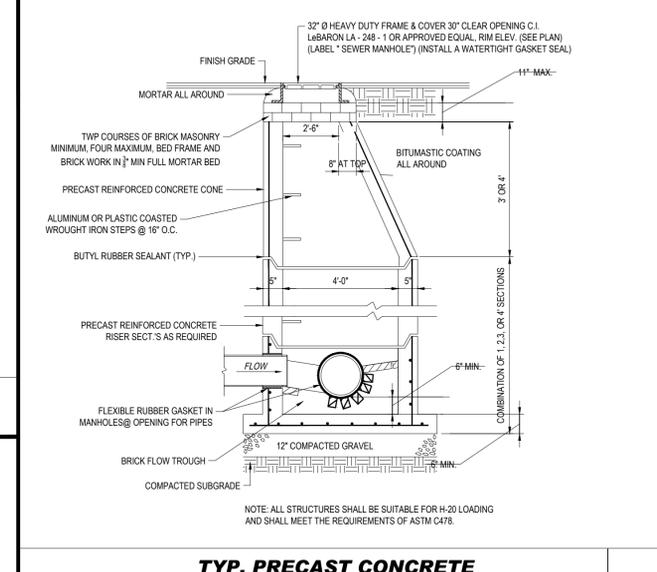
N.T.S.



NOTE: THE CONTRACTOR IS DIRECTED AND RESPONSIBLE TO SLOPE AND/OR SHIELD THE TRENCH EXCAVATION IN ACCORDANCE WITH ALL APPLICABLE OSHA REGULATIONS.

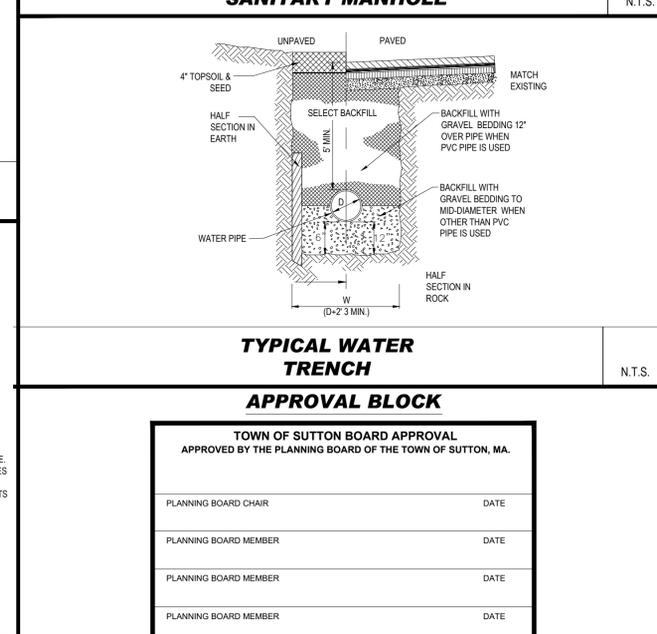
ELECTRICAL, TELEPHONE AND GAS TRENCH DETAIL

N.T.S.



TYP. PRECAST CONCRETE SANITARY MANHOLE

N.T.S.



TYPICAL WATER TRENCH APPROVAL BLOCK

N.T.S.

TOWN OF SUTTON BOARD APPROVAL
 APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.

PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE
PLANNING BOARD MEMBER	DATE
PLANNING BOARD MEMBER	DATE
PLANNING BOARD MEMBER	DATE

BOHLER
 SITE CIVIL AND CONSULTING ENGINEERING
 PROGRAM MANAGEMENT
 LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	01/31/2023	CLIENT COMMENTS	EVD	GDU/JAK
2	03/20/2023	TOWN COMMENTS		

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 PROJECT No.: W221017
 DRAWN BY: EVD
 CHECKED BY: GDU/JAK
 DATE: 10/22/2022
 CAD ID: W221017-DET-2A

PROPOSED MEDICAL CLINIC
 FOR
TORRINGTON PROPERTIES INC.
 PROPOSED DEVELOPMENT
 MAP: #10 LOT: #93
 15 PLEASANT VALLEY ROAD,
 TOWN OF SUTTON,
 WORCESTER COUNTY,
 MASSACHUSETTS

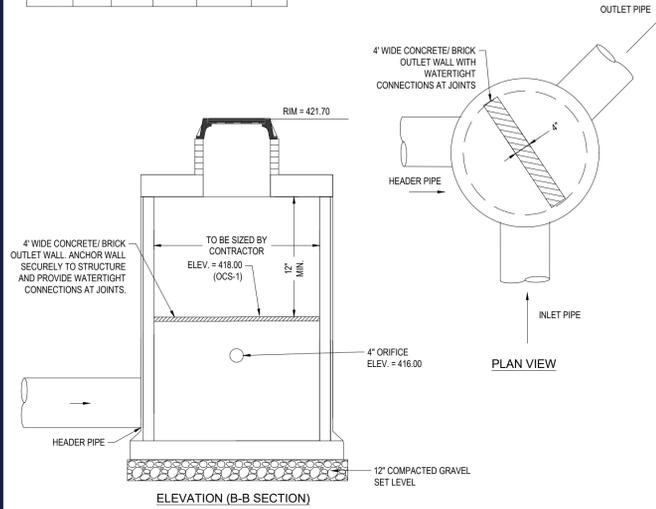
BOHLER
 352 TURNPIKE ROAD
 SOUTHBOROUGH, MA 01772
 Phone: (508) 480-9900
 www.BohlerEngineering.com

Professional Engineer
 No. 41530
 Registered Professional Engineer

DETAIL SHEET
 SHEET NUMBER:
C-802
 REVISION 2 - 03/20/2023

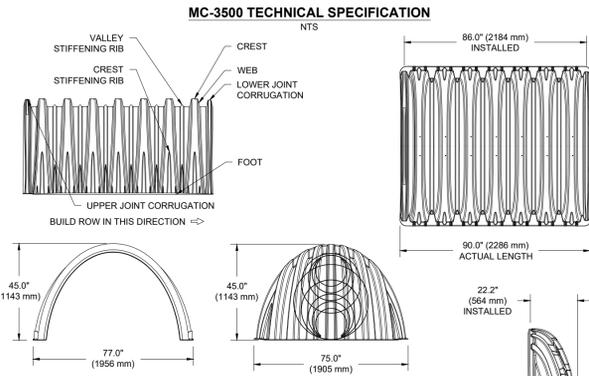
P:\0222\W221017\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\W221017-DET-2A.dwg - LAYOUT: C-802

BASIN #	OCS #	RM	WEIR ELEV.	OUTLET PIPE INV.	OUTLET SIZE (IN.)
UG 1	1	421.70	418.00	12	417.50



SUBSURFACE SYSTEM OUTLET CONTROL STRUCTURE DETAIL

N.T.S.



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0' X 45.0' X 86.0'	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE* WEIGHT	178.9 CUBIC FEET	(5.06 m³)
	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	75.0' X 45.0' X 22.2'	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE* WEIGHT	46.0 CUBIC FEET	(1.30 m³)
	49 lbs.	(22.2 kg)

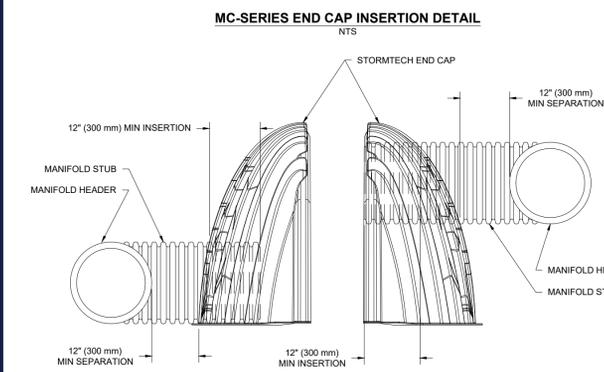
*ASSUMES 12" (305 mm) STONE ABOVE, 6" (152 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T" END CAPS WITH A WELDED CROWN PLATE END WITH "C" END CAPS WITH A PRE-FABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500EPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500EPP06B	---	---	0.66" (17 mm)
MC3500EPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500EPP08B	---	---	0.81" (21 mm)
MC3500EPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500EPP10B	---	---	0.93" (24 mm)
MC3500EPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500EPP12B	---	---	1.35" (34 mm)
MC3500EPP15T	15" (375 mm)	23.38" (594 mm)	---
MC3500EPP15B	---	---	1.50" (38 mm)
MC3500EPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500EPP18TB	---	---	1.77" (45 mm)
MC3500EPP18BW	---	---	---
MC3500EPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500EPP24TB	---	---	2.06" (52 mm)
MC3500EPP24BW	---	---	---
MC3500EPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL.

CUSTOM PRE-CORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-18" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

STORMTECH MC-3500 MC-SERIES END CAP INSERTION DETAIL

N.T.S.

STORMTECH MC-3500 TECHNICAL SPECIFICATION

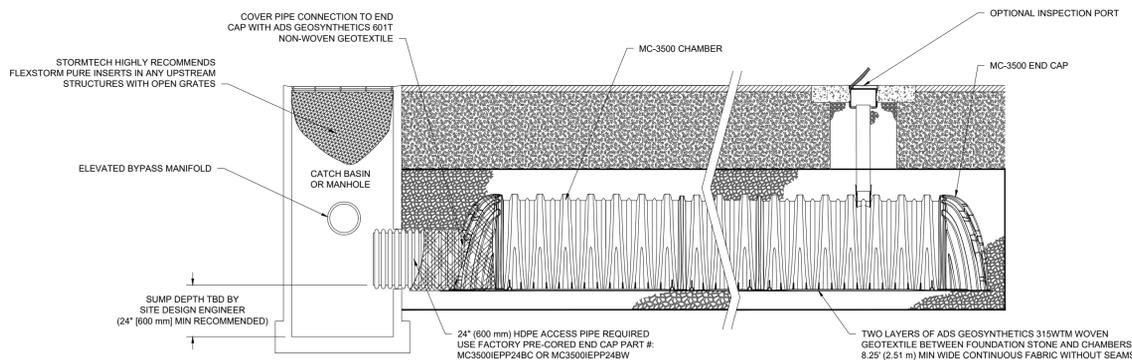
N.T.S.

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



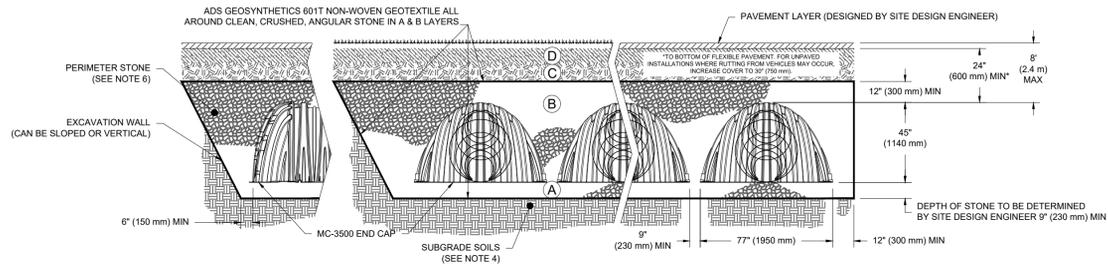
STORMTECH MC-3500 ISOLATOR ROW DETAIL

N.T.S.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

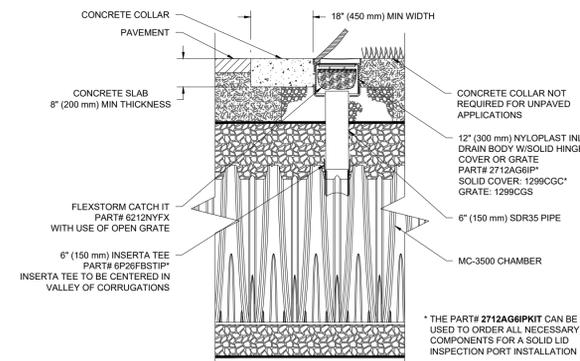


NOTES:

- MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

STORMTECH MC-3500 STANDARD CROSS SECTION

N.T.S.



STORMTECH MC-3500 6" INSPECTION PORT DETAIL

N.T.S.

APPROVAL BLOCK

TOWN OF SUTTON BOARD APPROVAL
APPROVED BY THE PLANNING BOARD OF THE TOWN OF SUTTON, MA.

PLANNING BOARD CHAIR	DATE
PLANNING BOARD MEMBER	DATE

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	01/31/2023	CLIENT COMMENTS	EVD	GD/JAK
2	03/20/2023	TOWN COMMENTS		

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PROJECT No.: W221017
DRAWN BY: EVD
CHECKED BY: GB/JAK
DATE: 10/27/2022
CAD LID: W221017-DETL-2A

PROJECT:

PROPOSED MEDICAL CLINIC

FOR
TORRINGTON PROPERTIES INC.

PROPOSED DEVELOPMENT

MAP: #10 LOT: #93
15 PLEASANT VALLEY ROAD,
TOWN OF SUTTON,
WORCESTER COUNTY,
MASSACHUSETTS

BOHLER
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

STATE OF MASSACHUSETTS
OHYA
CIVIL
No. 41530
REGISTERED PROFESSIONAL ENGINEER

SHEET TITLE:

DETAIL SHEET

SHEET NUMBER:

C-803

REVISION 2 - 03/20/2023

