

SUMMARY OF REQUIRED PERMITS & ZONING RELIEF REQUESTED

ZO SECTION	SPGA	REQUIREMENT	REQUEST
§IX-7	PLANNING BOARD	SITE PARKING REQUIREMENTS	ALLOWABLE REDUCTI THE COMMERCIAL CO
§IX-4.C.1	ZONING BOARD OF APPEALS	PERMITTED USE REGULATION	ALLOW FOR RELOCAT
§IV-7	ZONING BOARD OF APPEALS	LOADING REQUIREMENTS	WAIVER OF THE REQU SPACES FOR THE PRO

CIVIL ENGINEER:

ARCHITECT:

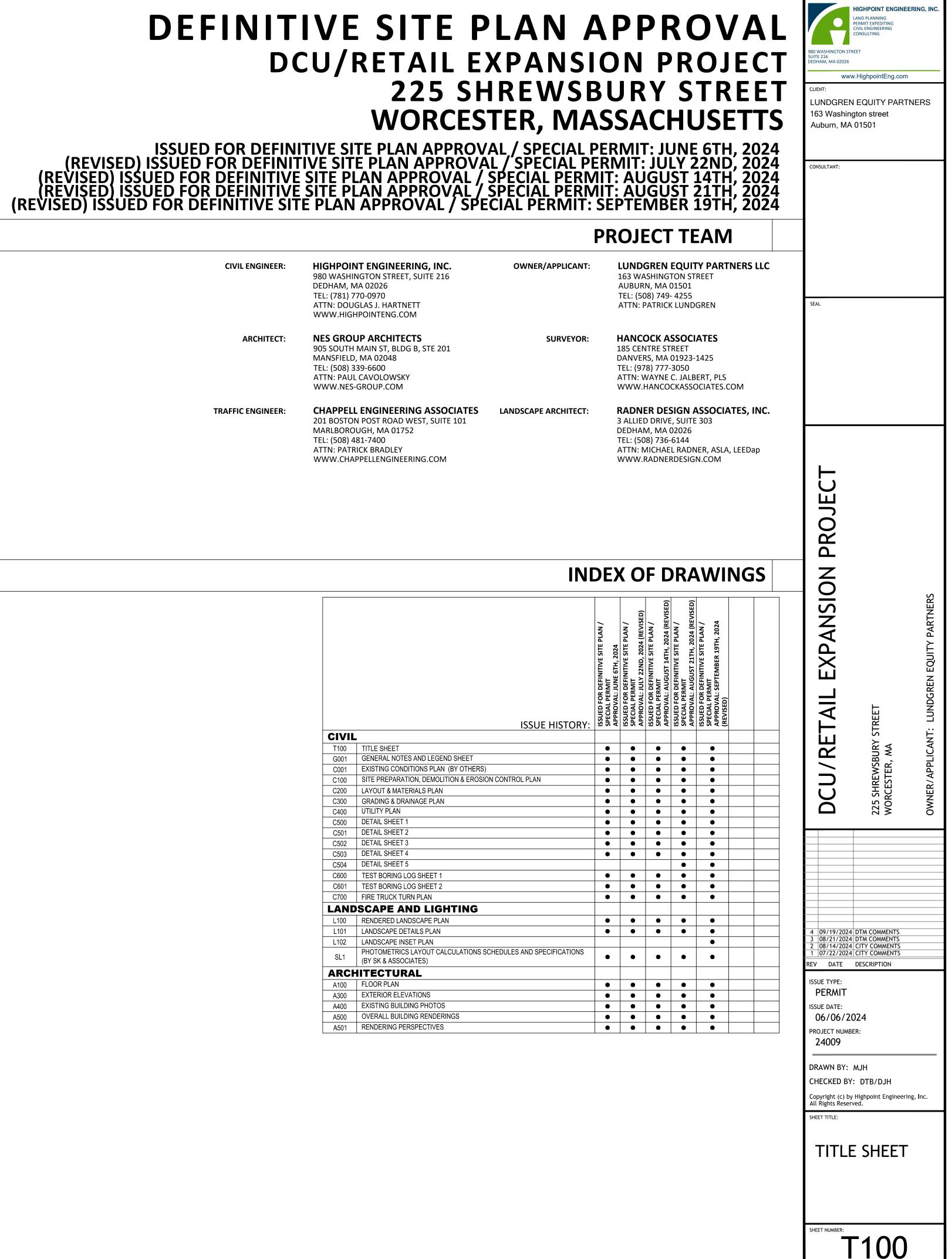
TRAFFIC ENGINEER:

LOCATION PLAN SCALE:1"=200'

TION OF SITE PARKING REQUIREMENTS IN ORRIDOR OVERLAY DISTRICT BY 41%

ATION OF EXISTING DRIVE-THRU

QUIREMENT TO PROVIDE ONE (1) LOADING ROPOSED BUILDING



GENERAL NOTES

- THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGNIFICANT VARIATIONS IN FXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLANS. ANY PROPOSED REVISIONS TO THE WORK, IF REQUIRED BY THESE SITE CONDITIONS, SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.
- 2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE ANY AND ALL SAFETY MEASURES NECESSARY TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION. THESE SHALL INCLUDE SIGNS BARRICADES FENCES POLICE OFFICERS FTC AS IS NECESSARY OR AS DIRECTED BY THE PUBLIC AUTHORITIES AND THE OWNER. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- THE EXISTING SITE CONDITIONS SHOWN ON THESE PLANS WERE DETERMINED BY A FIELD SURVEY AND COMPILATION OF PLANS OF RECORD. ANY VARIATIONS FROM THE CONDITIONS SHOWN ON THESE PLANS SHOULD BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE PROPOSED WORK.
- UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SPECIFICATIONS ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 EDITION OR THE LATEST EDITION.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INCLUDING (BUT NOT LIMITED TO) DEMOLITION PERMIT, UTILITY CONNECTIONS PERMIT, GENERAL PERMIT, ETC. 6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION
- MEANS AND METHODS.
- 7. LIMIT OF WORK SHALL BE DELINEATED BY LOW LINE.
- 8. CONTRACTOR TO VERIFY UTILITY STUB LOCATIONS AND ELEVATIONS IN THE FIELD PRIOR TO COMMENCING WORK.
- 9. ANY ALTERATION TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL NOT BE PERFORMED WITHOUT WRITTEN CONSENT FROM ENGINEER. CONTRACTOR SHALL KEEP A RECORD OF ALL CHANGES MADE DURING OCNSTRUCTION.
- 10. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
- 11. ALL WORK TO BE DONE WITHIN PUBLIC RIGHT-OF-WAYS SHALL CONFORM TO CITY OF WORCESTER LOCAL STANDARD CONSTRUCTION REQUIREMENTS FOR THE INSTALLATION OF AND/OR REPAIR OF UNDERGROUND FACILITIES. EXCAVATIONS AND PAVING IN THE PUBLIC WAY
- 12. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL. OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL AND SHALL NOTIFY THE OWNER/ENGINEER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
- 13. WRITTEN NOTICE OF FINAL DISPOSITION OF MATERIALS SHALL BE PROVIDED TO THE WORCESTER PLANNING BOARD.
- 14. ALL WORK SHALL CONFORM TO THE CITY OF WORCESTER'S ZONING ORDINANCE, PLANNING BOARD DECISION AND CONDITIONS OF APPROVAL, AND TO THE STANDARDS CONTAINED IN THE CITY OF WORCESTER, DEPARTMENT OF PUBLIC WORKS & PARKS, ENGINEERING DIVISION, CONSTRUCTION MANAGEMENT SECTION STANDARD SPECIFICATIONS & DETAILS MOST RECENT EDITION

E	KISTING SYMBOL LEGEND
Ŀ,	ACCESSIBLE PARKING PAVEMENT MARKING
	SIGN
CW	CONCRETE WALL
CC	CONCRETE CURB
ССВ	CAPE COD BERM
VGC	VERTICAL GRANITE CURB
	REINFORCED CONCRETE SIDEWALK
	PEASTONE
	VARIOUS TREES
99	MINOR CONTOUR
	MAJOR CONTOUR
	PROPERTY LINE
	RIGHT OF WAY
	EASEMENT
	TREELINE
SD	STORM DRAIN LINE
UGE	UNDER GROUND ELECTRIC
W	WATER LINE
GAS	GAS LINE
— т —	TELEPHONE LINE
SS	SEWER LINE
))))))))	STONE WALL
]	CONCRETE WALL
HANDRAIL	HANDRAIL
\$\$\$\$ 0-□	SITE LIGHTING
	DRAIN MANHOLE
	CATCH BASIN
	FLARED END SECTION
CHOIN	FLARED END SECTION w/ RIP RAP
CLEANOUT O	CLEANOUT
• CO	
©	
Ē	
FLECT HH	
	HAND HOLE
MML GLSPL	VARIOUS LIGHTING
M	MANHOLE
(S)	SEWER MANHOLE
□	IRRIGATION CONTROL VALVE
WG	WATER GATE
₩S°	WATER SHUT OFF
	HYDRANT
PIV PIV	POST INDICATOR VALVE

P:\Lundgren Equity Partners\24009 (225 Shrewsbury St DCU-Retail Expansion)\04_Design\Dwg\03_DD\Rev-1\21026_G001.dwg

SEDIMENTATION/EROSION CONTROL NOTES

- UNLESS DIRECTED OTHERWISE, ALL EXISTING TURF OR VEGETATED AREAS WITHIN THE PROPOSED LIMITS OF WORK FOR EXCAVATION, GRADING, OR IMPROVEMENT SHALL BE CLEARED AND GRUBBED. WITHIN THE CLEARING AND GRUBBING AREA REMOVE ALL TREES SHRUBS AND ROOTS UNLESS DESIGNATED OTHERWISE. CLEARING SHALL INCLUDE THE FELLING, CUTTING AND OFF-SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS AND VEGETATIVE DEBRIS PRODUCED THROUGH THE CLEARING OPERATIONS.
- 2. UNLESS OTHERWISE STATED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), THE FOLLOWING EROSION CONTROL SPECIFICATIONS SHOWN ON SHEET C100 SHALL BE INSTITUTED.
- THE LOCATION OF EROSION CONTROL BARRIERS SHOWN ON DRAWINGS ARE INTENDED TO BE MINIMUM REQUIREMENTS AND A GUIDE FOR THE PLACEMENT OF THESE BARRIERS. OTHER MEASURES MAY BE WARRANTED BASED UPON EXPERIENCE AT THE SITE WHEN NO SEDIMENTATION CONTROL SYSTEM IS SHOWN ON THE DRAWING, THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH A SYSTEM TO PREVENT SILTATION OR POLLUTION OF ADJACENT PROPERTY. THE SYSTEMS SHOWN SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PLACING ADDITIONAL BARRIERS OR REPLACING BARRIERS AS REQUIRED BY SITE CONDITIONS THE IMPLEMENTATION MAINTENANCE, REPLACEMENT AND ADDITIONS TO THESE SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AS CONSTRUCTION PROGRESSES AND SEASONAL CONDITIONS DICTATE MORE SILTATION CONTROL FACILITIES MAY BE REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS NEW CONDITIONS THAT MAY BE CREATED.
- THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE AND DISPOSED AT A LEGAL DUMP SITE. ALL TRUCKS LEAVING THE SITE SHALL BE COVERED.
- 5. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
- 6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DOES NOT OCCUR. MEASURES SHALL INCLUDE HAY BALE DIKES AROUND DRAINAGE INLETS, MULCHING, AND PLANTING OF DISTURBED AREAS.
- AN EROSION CONTROL BARRIER IS TO BE INSTALLED AT THE PROPOSED DOWN GRADIENT TOE OF SLOPE AT ALL LOCATIONS WHERE EARTHWORK IS PROPOSED.
- DURING CONSTRUCTION THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/4" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY, TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
- ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS. ANY SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY.
- 10. EXPOSED SLOPES GREATER THAN 50' IN LENGTH ARE TO HAVE CHECK DAMS. TERRACES AND/OR MULCHING INSTALLED IN ORDER TO REDUCE EROSION AND TO ENHANCE SURFACE STABILIZATION. IF CHECK DAMS ARE USED, THEY SHOULD BE PLACED APPROXIMATELY 50' O/C PARALLEL WITH THE FACE OF THE SLOPE.
- UNTIL DRIVEWAYS ARE PAVED, TEMPORARY DIKES ARE TO BE STAKED ACROSS DRIVEWAYS AS REQUIRED TO DIRECT RUNOFF WATER TO CATCH BASINS. SILT SCREENS ARE TO BE INSTALLED AT CATCH BASIN GRATES (SEE DETAIL) AND SUMPS OF BASINS ARE TO BE CLEANED AS NECESSARY TO PREVENT SILT FROM ENTERING THE SUBSURFACE DRAINAGE SYSTEM.
- 12. FILTER FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL
- 13. CONTRACTOR SHALL PREVENT DUST. SEDIMENT. AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ANY DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- 14. ANY WATER PUMPED FROM EXCAVATIONS WILL BE CONVEYED BY HOSE TO AN UPLAND AREA AND DISCHARGED INTO HAYBALE CORRALS OR SEDIMENTATION BAGS 15. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT SPECIFIED FOR PAVEMENT OR NOT LEFT IN
- A NATURAL CONDITION SHALL RECEIVE SIX (6) INCHES OF LOAM AND SEED. 16. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. CARE SHALL BE TAKEN TO
- PRESERVE EXISTING TREES. GROUND COVER AND OTHER NATURAL FEATURES WHENEVER POSSIBLE.
- 17. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL STATE AT THE CONTRACTOR'S EXPENSE.
- 18. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER
- 19. ALL STOCKPILE AREAS SHALL BE LOCATED WITHIN LIMIT OF WORK LINE AND STABILIZED TO PREVENT EROSION. REFER TO STORMWATER POLLUTION PREVENTION PLAN FOR STABILIZATION REQUIREMENTS
- 20. ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFF-SITE.
- 21. SITE ELEMENTS TO REMAIN MUST BE PROTECTED FOR DURATION OF PROJECT. 22. ALL TOPSOIL ENCOUNTERED WITHIN WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND STOCKPILED FOR REUSE. EXCESS TOPSOIL SHALL BE DISPOSED OF ON-SITE AS DIRECTED BY OWNER. TOPSOIL PILES SHALL REMAIN SEGREGATED FROM EXCAVATED SUBSURFACE SOIL MATERIALS
- 23. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE.
- 24. EXTREME CARE SHALL BE EXERCISED SO AS TO PREVENT ANY UNSUITABLE MATERIAL FROM ENTERING ENVIRONMENTALLY SENSITIVE OR JURISDICTIONAL RESOURCE AREAS.
- 25. ALL DISTURBED SLOPES EITHER NEWLY CREATED OR EXPOSED PRIOR TO OCTOBER 15 SHALL BE SEEDED OR PROTECTED BY THAT DATE.
- 26. LOAMING AND SEEDING OR MULCHING OF NON-PAVEMENT AREAS SHALL TAKE PLACE AS SOON AS PRACTICABLE.
- 27. ALL SLOPES WITH SURFACE GRADES STEEPER THAN 3:1 AND PRESERVED EXISTING GRADES STEEPER THAN 15% SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS.
- 28. STRAW WATTLES, HAYBALES, SILT FENCE OR OTHER SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
- 29. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED FROM THE SITE. THE CONTRACTOR SHALL NOT REMOVE ANY SILTATION CONTROLS UNTIL AUTHORIZED (IN WRITING) BY THE OWNER OR OWNER'S REPRESENTATIVE.
- 30. AT THE END OF CONSTRUCTION ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS. EROSION CONTROL BARRIERS ARE TO BE REMOVED AND DISPOSED OF IN ACCORDANCE TO LOCAL REQUIREMENTS
- 31. ALL TREE AND STUMP REMOVAL SHALL BE IN ACCORDANCE WITH THE ASIAN LONGHORNED BEETLE PROGRAM REQUIREMENTS AND ALL NEW TREE AND SHRUB PLANTINGS SHALL BE OF AN ASIAN LONGHORNED BEETLE AND EMERALD ASH BORER RESISTANT SPECIES.

SITE LAYOUT AND MATERIALS NOTES 1. CONTRACTOR SHALL REPORT SIGNIFICANT CONFLICTS TO THE OWNER OR OWNER'S REPRESENTATIVE FOR RESOLUTION 2. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT). 3. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. 4. CROSSWALKS SHALL BE STRIPED WITH 12" WIDE LINES OF WHITE THERMO PLASTIC SPACED 2' ON CENTER. STOP LINES SHALL BE STRIPED WITH 12" WIDE LINES OF WHITE THERMO PLASTIC. ALL OTHER STRIPING SHALL BE 4" WIDE LINES OF THERMO PLASTIC IN COLORS INDICATED HEREON. NEW CURBS SHALL BE PRECAST CONCRETE CURB, CAPE COD BERM, OR VERTICAL CONCRETE CURB AS SHOWN ON SHEET C200 OR UNLESS OTHERWISE NOTED. 6. EXISTING CURBS TO REMAIN AS SHOWN HEREON ARE ASSUMED TO BE IN SATISFACTORY CONDITION BUT ARE TO BE PARGED OR REPLACED IN KIND IN LOCATIONS OF DAMAGE. 7. INSTALL EXPANSION AND CONTROL JOINTS IN SIDEWALKS AT INTERVALS OF 5 FEET AND 25 FEET, RESPECTIVELY. PROVIDE BROOM FINISH IN TRANSVERSE DIRECTION ON ALL WALKS. 8. SIDEWALK WIDTHS INDICATED HEREON ARE MEASURED FROM BACK OF CURB TO BACK OF SIDEWALK. 6" WIDTH OF CURBS NOT INCLUDED. 9. ALL CURB RADIUS DIMENSIONS SHOWN HEREON ARE MEASURED ALONG FACE OF CURB. 10. ALL WORK CONDUCTED WITHIN PUBLIC RIGHT-OF-WAYS SHALL CONFORM TO THE LOCAL REQUIREMENTS AND SPECIFICATIONS. 11. THE FOLLOWING LAYOUT CRITERIA SHALL CONTROL UNLESS OTHERWISE NOTED ON THE PLAN: DIMENSIONS FROM BUILDING ARE FROM FACE OF BUILDING. DIMENSIONS ARE TO FACE OF CURB AT GUTTER LINE. DIMENSIONS ARE TO THE CENTER OF PAVEMENT MARKINGS. 13. ALL LINES AND DIMENSIONS AND TIES TO PROPERTY LINES ARE PERPENDICULAR TO THE PROPERTY LINE UNLESS OTHERWISE NOTED. 14. COORDINATE THE LOCATION OF ALL SITE LIGHT STANDARDS WITH IMPROVEMENTS SHOWN ON THESE DRAWINGS. 15. CONTRACTOR SHALL FURNISH AND SET ALL LINES AND GRADES REQUIRED AND PROTECT ALL PERMANENT BENCHMARKS OR MONUMENTS. DAMAGED MONUMENTS SHALL BE REPLACED BY A LICENSED SURVEYOR AT NO COST TO THE OWNER. 16. ALL BITUMINOUS CONCRETE PAVING SHALL COMPLY WITH THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 2020 EDITION AS AMENDED. THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA DEMONSTRATING COMPLIANCE WITH THESE SPECIFICATIONS. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH A CERTIFICATE OF COMPLIANCE SUPPLIED BY THE PAVING CONTRACTOR. 17. BITUMINOUS CONCRETE PAVEMENT: CLASS I, TYPE I-1 CONFORMING TO THE STANDARD SPECIFICATIONS, SECTIONS 420 AND 460, AND M3.11.03 FOR BINDER COURSE AND TOP COURSE JOB MIX FORMULAS. 18. ALL CONCRETE WORK SHALL COMPLY WITH ACI301, "SPECIFICATION FOR STRUCTURAL CONCRETE," AND ACI 316R, UNLESS MODIFIED BY THE CONTRACT DOCUMENTS. COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING. PLACING. AND SUPPORTING REINFORCEMENT. COMPLY WITH ACI 306.1 FOR COLD WEATHER PROTECTION. AND FOLLOW RECOMMENDATIONS IN ACI 350R FOR HOT WEATHER PROTECTION DURING CURING. COMPLY WITH ACI 304 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE." 19. SAW-CUT EXISTING PAVEMENT WHERE NEW BITUMINOUS CONCRETE PAVEMENT IS TO COME IN CONTACT. PRIME COAT THE CUT EDGE PRIOR TO PLACEMENT.

- 20. CONTRACTOR(S) SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.
- 21. OUT OF FUNCTION OR SCREENED IMAGES REPRESENT EXISTING CONDITIONS. WHERE EXISTING CONDITIONS LIE UNDER OR ARE IMPACTED BY PROPOSED BUILDINGS AND/OR SITE ELEMENTS, THE EXISTING CONDITION WILL BE REMOVED, ABANDONED AND/OR CAPPED OR DEMOLISHED AS REQUIRED.
- 22. PAVEMENT OR BASE MATERIALS SHALL NOT BE PLACED ON A MUDDY OR FROZEN SUBGRADE.

GRADING NOTES

- 1. THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DIS IMMEDIATELY TO THE OWNER OR HIS REPRESENTATIVE
- 2. ALL STUMPS, PEAT, CONSTRUCTION DEBRIS AND OTHER DELETERIOUS MATERIALS ON THE TIME OF CONSTRUCTION ARE TO BE REMOVED FROM THE SITE TO AN APPROVED LA SUCH MATERIALS ARE TO BE BURIED OR OTHERWISE DISPOSED OF ON THE SITE. MA BACKFILL SHALL NOT INCLUDE UNSUITABLE MATERIAL SUCH AS PEAT, TRASH, STUMPS HAZARDOUS WASTE.
- 3. FILL MATERIAL SHALL BE AS SPECIFIED BY THE ARCHITECT/ENGINEER AND SELECTED FF EXCAVATION MATERIAL WHERE POSSIBLE
- AT ALL LOCATIONS WHERE EXISTING CURB OR PAVEMENT ABUTS NEW CONSTRUCTION. THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. PAVEMENT, CURBS AND EARTHWORK SMOOTHLY INTO EXISTING BY MATCHING LINES, C JOINTS. PITCH EVENLY BETWEEN SPOT GRADES. GRADE ALL AREAS TO DRAIN.
- 5. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FO STRUCTURES AND PLANTING BEDS.
- THE CONTRACTOR SHALL SCHEDULE HIS WORK TO ALLOW THE FINISHED SUBGRADE ELE DRAIN PROPERLY WITHOUT PUDDLING, SPECIFICALLY, ALLOW WATER TO ESCAPE WHER CURB MAY RETAIN RUNOFF PRIOR TO APPLICATION OF THE FINISH SUBGRADE AND/C PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE AS REQUIRED.
- 7. PITCH EVENLY BETWEEN SPOT GRADES. GRADE ALL AREAS TO DRAIN. ALL PAVED PITCH TO DRAIN AT A MINIMUM OF 1/8" PER FOOT UNLESS OTHERWISE SPECIFIED (1/16 MAY BE ALLOWED AT SPECIFICALLY DEFINED DRAINAGE GUTTER LINES) ANY DISCREE ALLOWING THIS MINIMUM PITCH SHALL BE REPORTED TO THE OWNER OR HIS REPR PRIOR TO CONTINUING WORK.
- ACCESSIBLE CURB RAMPS, RAMP, LANDINGS, WALKWAYS, CROSSWALKS, PATIOS/F PARKING AREAS SHALL BE PER THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY REQUIREMENTS WA CROSSWALK ALONG ACCESSIBLE ROUTE(S) SHALL HAVE 5% MAX. LONGITUDINAL SLOPE CROSS SLOPE. LANDINGS, PATIOS/PLAZAS, AND ACCESSIBLE PARKING SPACES SHALL B ALL DIRECTIONS. RAMPS SHALL BE 1:12 MAXIMUM.
- 9. A GEOTECHNICAL ENGINEER MAY BE RETAINED BY THE OWNER TO OBSERVE PERFC WORK. FOR CONFORMANCE WITH THESE CONTRACT DOCUMENTS. IN CONNE EXCAVATING, TRENCHING, FILLING, BACKFILLING AND GRADING, AND TO PERFORM ASSOC
- 10. DURING THE PROGRESS OF THE WORK, THE CONTRACTOR MAY BE REQUIRED TO ADDITIONAL TEST PITS FOR THE PURPOSE OF LOCATING UNDERGROUND UTILITIES OR S AS AN AID IN ESTABLISHING THE PRECISE LOCATION OF NEW WORK. THIS WOR PERFORMED AT NO ADDITIONAL COST TO THE OWNER. TEST PITS SHALL BE BACKFILLED, THE DESIRED INFORMATION HAS BEEN OBTAINED.
- . PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES FRO CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHE CREATED BY CONTRACTOR OPERATIONS.
- 12. EXISTING TREES AND SHRUBS OUTSIDE THE LIMITS OF GRADING SHALL BE REMOVED PRIOR APPROVAL OF THE OWNER.
- 13. FILL DEPRESSIONS CAUSED BY TEST PITS AND CLEARING AND GRUBBING OPERA SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICA 14. THE CONTRACTOR SHALL PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDW
- FLOWING INTO EXCAVATIONS OR EARTHWORK AREAS WHICH WOULD CAUSE FLOOD PROJECT SITE AND SURROUNDING AREA, OR SOFTENING OR LOOSENING OF TH EXCAVATION OR EARTHWORK SUB-GRADES.
- 15. THE CONTRACTOR SHALL PROVIDE, INSTALL, OPERATE, MAINTAIN AND REMOVE ADE SATISFACTORY DEWATERING SYSTEMS AND DRAINAGE OF EXCAVATIONS TO PERMIT CO TO PROCEED "IN THE DRY". THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILI" ADEQUACY OF THE METHODS, MATERIALS AND EQUIPMENT EMPLOYED. THE CONTRA BEAR THE FULL COST OF PROVIDING ALL NECESSARY DEWATERING.
- 16. THE CONTRACTOR SHALL PROHIBIT SEEPAGE, GROUNDWATER FLOW OR SURFACE INFILT RUNOFF FROM UNDERMINING OR OTHERWISE DAMAGING ADJACENT STRUCTURES AND U
- 17. ESTABLISHMENT OF GRADES, GRADE CONTROL, AND CONFORMANCE TO REQUI TOLERANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 18. PROTECT GRADED, FINISHED OR PAVED AREAS FROM DAMAGE AND KEEP THEM FREE OF DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS. REPAIR AND RE-ESTABLISH SETTLED. ERODED AND RUTTED AREAS.
- 19. PAVEMENT, LAWN OR PLANTING AREAS EXCAVATED DURING UTILITY CONSTRUCTION, V THE SITE OR ADJACENT PROPERTIES, SHALL BE RESTORED AND MATCHED WITH EXACTL MATERIALS AND TOLERANCES AS PRIOR TO DISRUPTION, AT NO ADDITIONAL COST TO OR ADJACENT PROPERTY OWNERS.

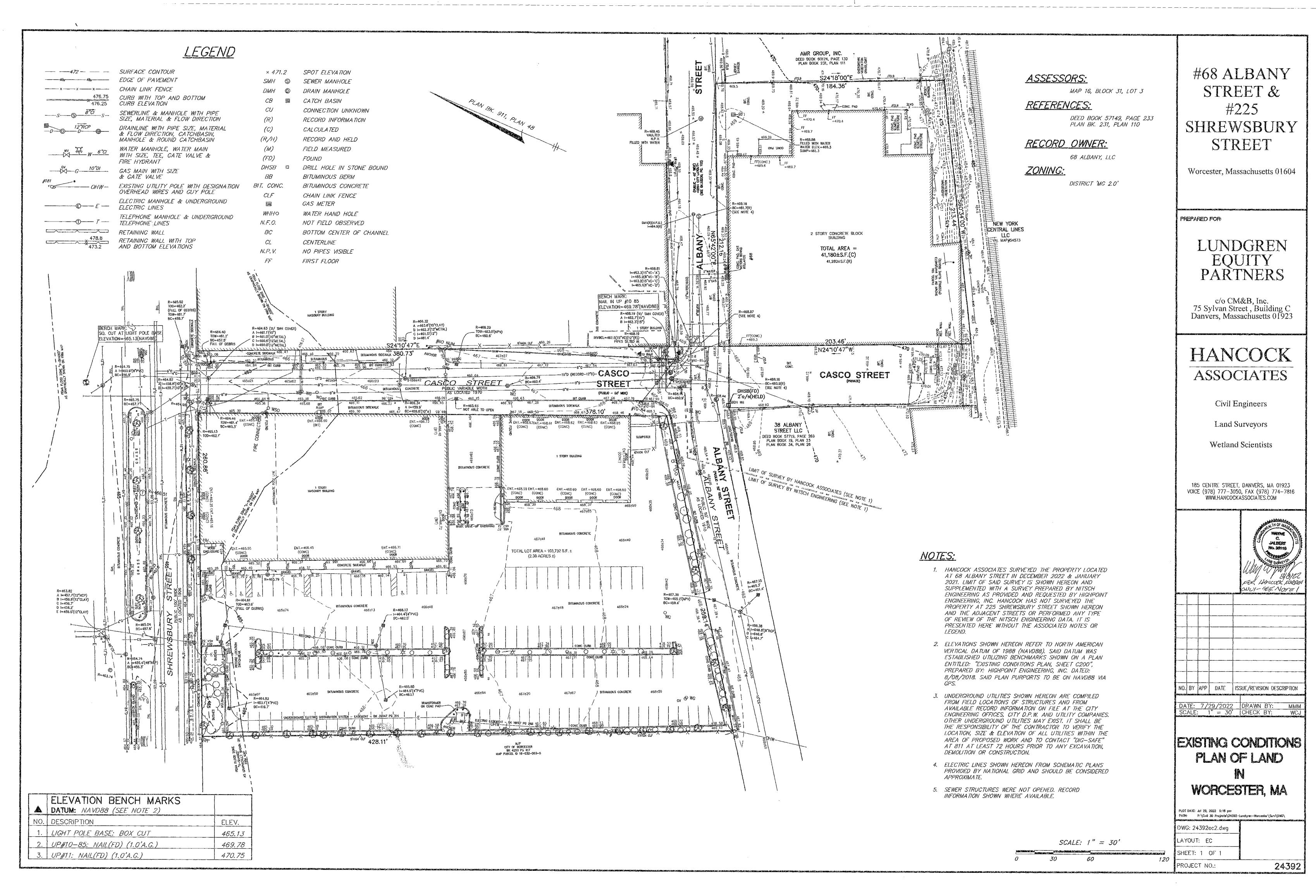
CONSTRUCTION NOTES

- 1. THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGN VARIATIONS IN EXISTING SITE CONDITIONS FROM THOSE SHOWN ON THESE PLAN PROPOSED REVISIONS TO THE WORK. IF REQUIRED BY THESE SITE CONDITIONS. SHALL UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND THE ENGINEER.
- 2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, WORCESTER DPW AND/OR CONSER COMMISSION AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
- 3. IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRAC RESPONSIBLE FOR INSTALLING AND MAINTAINING AT ALL TIMES ALL NECESSARY DEVICES AND PERSONNEL, WARNING LIGHTS, BARRICADES, AND POLICE OFFICERS WORK IN AND NEAR SHREWSBURY ST, CASCO ST, AND ALBANY ST.
- 4. THE CONTRACTOR SHALL REGULARLY INSPECT THE PERIMETER OF THE PROPERTY TO UP AND REMOVE LOOSE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE.
- 5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION C MEASURES ON AN AS NECESSARY BASIS, SUCH THAT EXCESSIVE SOIL EROSION DO OCCUR. MEASURES SHALL INCLUDE FILTER SOCK MEMBRANE BARRIERS ALO PERIMETER OF CUTS AND FILLS, MULCHING, AND PLANTING OF DISTURBED AREAS. I CONTROL FEATURES SHALL BE REGULARLY INSPECTED AND ADJUSTED IF NECESSARY.
- 6. AT THE END OF CONSTRUCTION THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION AND SURPLUS MATERIALS FROM THE SITE A THOROUGH INSPECTION OF THE WORK PEE IS TO BE MADE AND ALL DISCARDED MATERIALS AND BLOWN OR WATER CARRIED SHALL BE COLLECTED AND REMOVED FROM THE SITE. FILTER SOCK BARRIERS ARE REMOVED
- 7. AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZE CONTRACTOR SHALL CLEAN THE SUMPS OF ALL CATCH BASINS AND THE INVERTS OF ALL MANHOLES.
- 8. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS UPON PLANS AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPAN MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSI BY WAY OF DESIGN AND/OR AS-BUILT PLANS OF RECORD. NO WARRANTY IS MADE AS ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHO CONTRACTOR IS TO CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE ST CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-800-322-4844.
- 9. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFL EXISTING UTILITIES, THE ENGINEER IS TO BE NOTIFIED PRIOR TO THE CONTI CONTINUING.
- 10. HDPE (HIGH DENSITY POLYETHYLENE) PIPE SHALL BE ADS N-12 OR APPROVED EQUI SEWER PIPE SHALL SDR 35 WITH RUBBER RING JOINTS.
- 11. NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS SHALL BE LEFT WITHIN 6" WATER AND SEWER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR TH 12" ABOVE THE PIPES.
- 12. HYDRANTS AND MINIMUM SIZING OF WATER PIPES SHALL BE SUBJECT TO THE APPRO THE WORCESTER FIRE CHIEF.
- 13. MATERIAL FOR BACKFILL SHALL NOT INCLUDE UNSUITABLE MATERIAL SUCH AS PEAT, STUMPS, DEBRIS OR HAZARDOUS WASTE.
- 14 ALL MATERIALS FOR INSTALLATION OF WATER SEWER DRAIN GAS DATA/TELECO ELECTRICITY SHALL BE IN ACCORDANCE WITH LOCAL STATE AND UTILITY CO STANDARDS AND REGULATIONS AS THEY APPLY.
- 15. CITY OF WORCESTER WATER AND FIRE DEPARTMENTS SHALL BE NOTIFIED PRIOR START OF ANY WORK ON THE WATER SYSTEM.
- 16. CITY OF WORCESTER DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED PRIOR START OF ANY WORK ON THE SANITARY SEWER SYSTEM.
- 17. ALL STUMPS, PEAT, CONSTRUCTION DEBRIS AND OTHER DELETERIOUS MATERIALS ON THE SITE AT THE TIME OF CONSTRUCTION ARE TO BE REMOVED FROM THE SITE TO AN APPROVED LANDFILL. NO SUCH MATERIALS ARE TO BE BURIED OR OTHERWISE DISPOSED OF ON THE SITE.

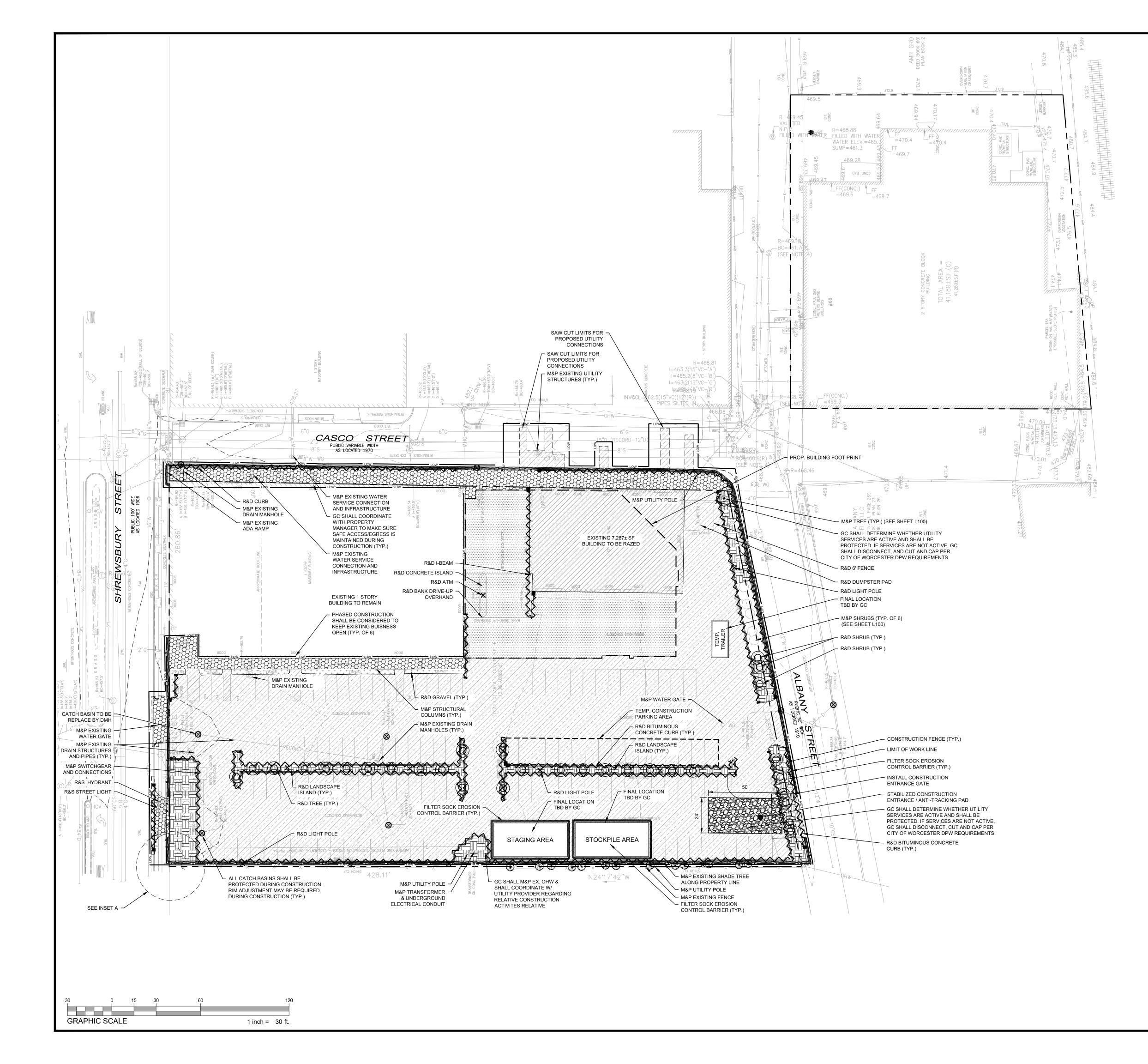
	<u>U</u>	TILITY NOTES		LAND PLANNING PERMIT EXPEDITING	
CREPANCIES THE SITE AT ANDFILL. NO ATERIAL FOR DEBRIS OR	1.	THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON EXISTING CONDITIONS PLANS AND POTENTIALLY INFORMATION PROVIDED BY THE LOCAL MUNICIPALITIES. ADDITIONAL INFORMATION MAY BE SUPPLEMENTED BY FIELD INVESTIGATIONS WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. DIG SAFE TELEPHONE NUMBER IS 1-888-DIG-SAVE.	980 WASHINGTON S SUITE 216 DEDHAM, MA 02020	CIVIL ENGINEERING CONSULTING TREET	
ROM ON-SITE	2.	UNDERGROUND UTILITIES WERE COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE AND ASSUMED.		N EQUITY PARTI	
THE EDGE OF	3.	ALL PVC SANITARY SEWER PIPE SHALL BE SDR 35 WITH RUBBER RING JOINTS UNLESS OTHERWISE NOTED.		ngton street	LING
BLEND NEW GRADES AND	4.	REFER TO PLUMBING PLANS FOR EXACT SIZE AND LOCATION OF SANITARY CONNECTIONS.	Auburn, W		
OUNDATIONS,	5.	THE LOCAL MUNICIPAL WATER AND FIRE DEPARTMENTS SHALL BE NOTIFIED PRIOR TO THE START OF ANY WORK ON THE WATER SYSTEM.	CONSULTANT:		
EVATIONS TO	6.	THE PROPOSED WATER MAINS ARE TO BE CL 52 CLDI. ALL FITTINGS, HYDRANTS, VALVES, ETC., USED ON THE SITE ARE TO BE IN ACCORDANCE WITH THE LOCAL MUNICIPAL WATER DEPARTMENT SPECIFICATIONS.			
OR SURFACE AREAS MUST	7.	HYDRANTS AND MINIMUM SIZING OF WATER PIPES SHALL BE SUBJECT TO THE APPROVAL OF THE CITY OF WORCESTER FIRE CHIEF. HYDRANTS ARE TO CONFORM TO THE CITY OF WORCESTER STANDARD SPECIFICATIONS.			
6" PER FOOT PANCIES NOT RESENTATIVE	8.	THE CONTRACTOR SHALL NOTIFY THE LOCAL MUNICIPAL DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.			
PLAZAS AND	9.	UNDERGROUND INFRASTRUCTURE LOCATED IN THE PUBLIC WAY SHALL BE SUBJECT TO THE APPROVAL OF THE LOCAL MUNICIPAL DEPARTMENT OF PUBLIC WORKS.			
(MAAB) AND LKWAY AND AND 2% MAX E 2% MAX IN	10.	NO LEDGE, BOULDERS, OR OTHER UNYIELDING MATERIALS SHALL BE LEFT WITHIN 6" OF THE WATER AND SEWER IN THE TRENCH, NOR ARE THEY TO BE USED FOR BACKFILL FOR THE FIRST 12" ABOVE THE PIPES.			
ORMANCE OF CTION WITH CIATED FIELD	11.	THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXTENDING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER IS TO BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.	SEAL		
D EXCAVATE		. EXCAVATION SHALL BE TO THE LINES AND ELEVATIONS AS SHOWN ON THE PLANS. . ALL MATERIALS FOR INSTALLATION OF WATER, SEWER, DRAIN, GAS, DATA/TELECOM. AND			
STRUCTURES K IS TO BE AS SOON AS		ELECTRICITY SHALL BE IN ACCORDANCE WITH LOCAL STATE AND UTILITY COMPANY STANDARDS AND REGULATIONS AS THEY APPLY.			
OM DAMAGE		ALL BENDS, TEES, VALVES, AND HYDRANTS ARE TO BE SECURED BY MEANS OF THREADED THE RODS.			
ER HAZARDS ONLY UPON	15.	UNLESS OTHERWISE NOTED, ALL UTILITY TRENCHES ARE TO BE BACKFILLED WITH BANK RUN GRAVEL. NO STONES GREATER THAN 3" IN DIAMETER ARE TO BE USED WITHIN 12" OF THE PIPES. THE TRENCHES, WHEN UNDER PROPOSED PAVED AREAS, ARE TO BE MECHANICALLY COMPACTED IN 12" LIFTS.			
TIONS WITH	16.	THE SITE CONTRACTOR IS TO INSTALL A GAS SERVICE IN THE APPROXIMATE LOCATION SHOWN ON THE MEP PLANS. THE SIZE AND EXACT LOCATION OF THE SERVICE IS TO BE DETERMINED AND COORDINATED WITH THE PLUMBING PLANS.			
VATER FROM NING OF THE HE SOIL AT EQUATE AND	17.	THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES, AS REQUIRED. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER AND ARCHITECT FOR RESOLUTION.	IECT		
NSTRUCTION TY FOR THE CTOR SHALL	18.	ALL UTILITY COVERS, GRATES, ETC. SHALL BE ADJUSTED TO BE FLUSH WITH THE PAVEMENT FINISH GRADE UNLESS OTHERWISE NOTED. RIM ELEVATIONS OF DRAINAGE STRUCTURES AND MANHOLES ARE APPROXIMATE.			
TRATION AND TILITIES. RED GRADE	19.	CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER AND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS WILL BE RESTORED TO ORIGINAL CONDITION AT NO COST TO OWNER. NO EXCAVATION SHALL BE DONE UNTIL UTILITY COMPANIES	N PR		
TRASH AND GRADES IN	20	ARE PROPERLY NOTIFIED IN ADVANCE. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.	SIO		NERS
VHETHER ON _Y THE SAME THE OWNER,	21	. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE.	(PAN)		'Y PARTNERS
	22	. PROVIDE UNDERGROUND ELECTRIC CONDUIT FOR SITE LIGHTS AS APPROPRIATE. REFER TO MEP PLANS.	Ι×		EQUITY
	23	. ENSURE ALL EXISTING (TO REMAIN) AND PROPOSED MANHOLE COVERS PROPERLY IDENTIFY UTILITY SERVED.	Ι W.		
IIFICANT	24	UNLESS OTHERWISE INDICATED, ABANDONED EXISTING UTILITY LINES SHALL BE CAPPED AND ABANDONED IN PLACE UNLESS THEY CONFLICT WITH PROPOSED IMPROVEMENTS. CAP REMAINING PORTIONS WHERE PARTIALLY REMOVED.	AIL	EET	UNDGREN
NS. ANY NOT BE		REFER TO ELECTRICAL DRAWINGS FOR ALL SITE ELECTRICAL WORK.		' STREI	\T: I
RVATION	26	. THE CONTRACTOR SHALL COLLECT AND DISPOSE OF WATER FROM ALL SYSTEMS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS AND OBTAIN ALL NECESSARY PERMITS.	/RI	SHREWSBURY RCESTER, MA	OWNER/APPLICANT:
CTOR IS SAFETY FOR ALL			CU	225 SHREWSBU WORCESTER, <i>I</i>	NER/AI
O CLEAN	DF	RAINAGE NOTES	Ď	225 WOI	IMO
ONTROL DES NOT	1.	ALL STORM DRAIN SHALL HIGH DENSITY POLYETHYLENE (HDPE) PIPE UNLESS OTHERWISE NOTED. INSTALLATION OF ALL DRAINAGE STRUCTURES SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION.			
NG THE EROSION	2.	MANHOLES SHALL BE 48-INCH DIAMETER (UNLESS OTHERWISE SPECIFIED). CAST-IN-PLACE BASES SHALL BE USED WHERE MANHOLES ARE CONSTRUCTED OVER EXISTING PIPES.			
I DEBRIS RIMETER	3.	FRAMES AND COVERS FOR DRAINAGE STRUCTURES SHALL PROVIDE 24-INCH MINIMUM DRAINAGE STRUCTURE COVERS SHALL HAVE THE WORD "DRAIN" CENTERED ON THE COVERS IN 3-INCH HIGH LETTERS.			
DEBRIS, E TO BE	4.	SINGLE AND DOUBLE CATCH BASIN FRAMES AND GRATES SHALL BE BY EAST JORDAN IRON WORKS AND SHALL CONFORM TO THE STANDARDS OF THE CITY OF WORCESTER DPW.			
ED, THE L DRAIN	5.	FRAMES, GRATES AND COVERS SHALL BE SET FIRM AND TRUE TO GRADE, ADJUST FOR GRADE WITH BRICK MASONRY.	3 08/21/202	4 DTM COMMENTS 4 DTM COMMENTS	
BASED	6.	PRE-CAST CONCRETE STRUCTURES INCLUDING TANKS, BARREL SECTIONS, CATCH BASINS AND BASES SHALL CONFORM TO ASTM C478 AND AASHTO HS20-44. PLACEMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. ALL PRE-CAST STRUCTURES INCLUDING		4 CITY COMMENTS 4 CITY COMMENTS DESCRIPTION	
IBLE, OR TO THE WN. THE	7.	ACCORDANCE WITH MANUFACTORER INSTRUCTIONS. ALL PRE-CAST STRUCTORES INCLUDING JOINTS, SEALS, OPENINGS, ETC. MUST BE WATERTIGHT. AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE	ISSUE TYPE: PERMIT		
ART OF S PRIOR	8.	CONTRACTOR SHALL CLEAN THE SUMPS OF ALL CATCH BASINS AND THE INVERTS OF ALL DRAIN MANHOLES. ALL DRAIN LINES SHOWN SHALL BE MINIMUM 12" DIAMETER (EXCEPT TRENCH DRAINS) UNLESS	ISSUE DATE: 06/06/2	2024	
CT WITH RACTOR		OTHERWISE REQUIRED BY THE WORCESTER ENGINEERING DEPARTMENT.	PROJECT NUM 24009	BER:	
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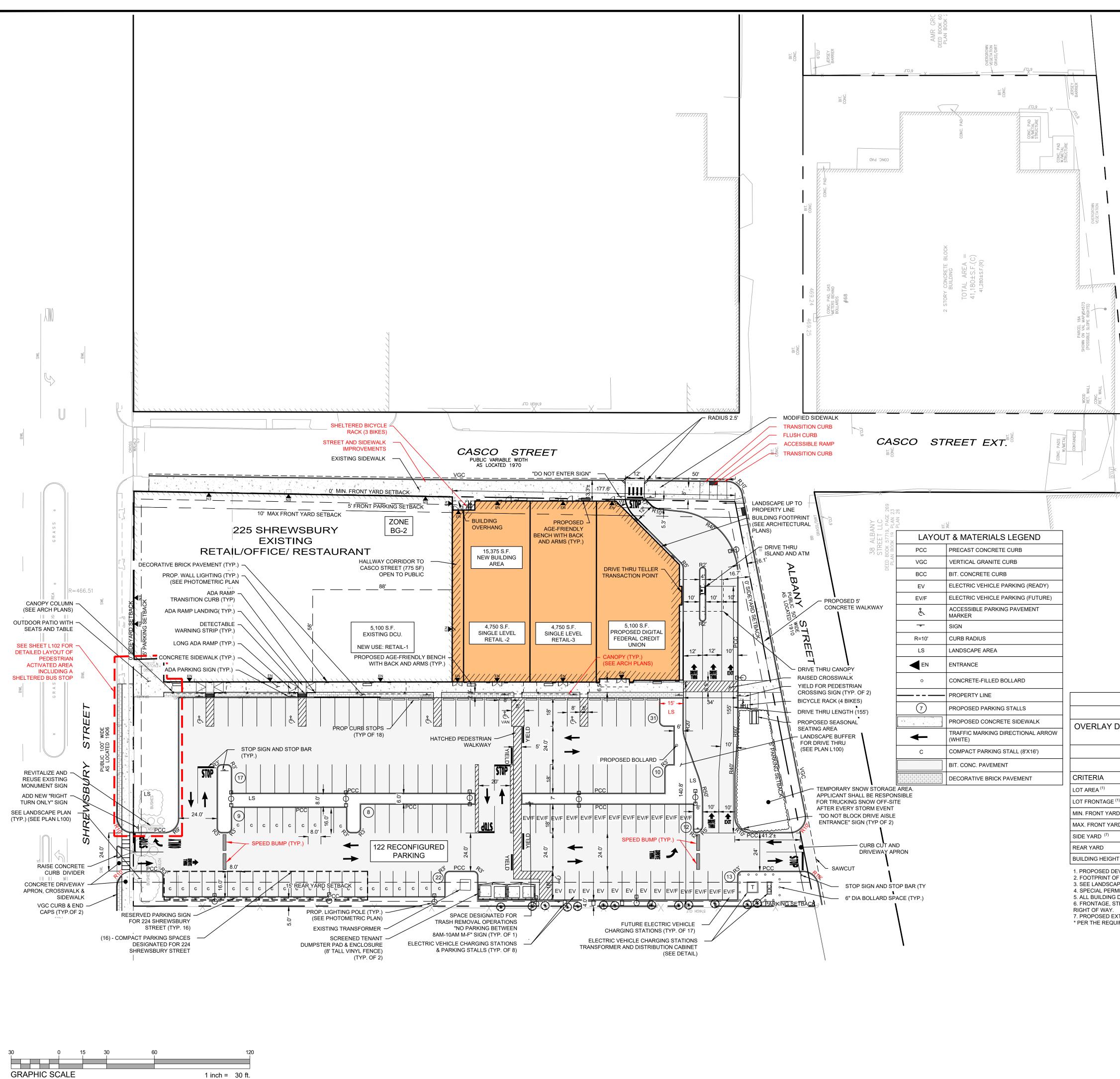
		980 WASHINGTON STR SUITE 216 DEDHAM, MA 02026 WWW CLIENT:	v.HighpointEng.com I EQUITY PART gton street	
	ITION & EROSION CONTROL LEGEND			
R&D				
M&P	MAINTAIN AND PROTECT			
R/S	REMOVE AND STOCKPILE			
	DEMOLISH AND REMOVE PAVEMENT TO FULL BASE DEPTH IN PREPARATION FOR BUILDING	SEAL		
	DEMOLISH AND REMOVE PAVEMENT / BINDER COURSE			
	DEMOLISH AND REMOVE SIDEWALK			
	REMOVE TOPSOIL AND ALL VEGETATION AND SURFACE FEATURES; OVER-EXCAVATE AS NECESSARY			
\sim	DEMOLISH AND REMOVE CURB OR BERM			
X				
<u>⊗</u>	SILTSACK INLET PROTECTION DEVICE			
xx	TEMPORARY CONSTRUCTION FENCE			
LOW	LIMIT OF WORK			
	SAW CUT LINE	—		
++++++++++++++++++++++++++++++++++++++	REMOVE GRAVEL AREA	С Е		
	DEMOLISH AND REMOVE EXISTING BUILDING	ſO		
	STABILIZED CONSTRUCTION ENTRANCE	PR		
\bigcirc	TREE TO BE REMOVED	Z		
	INSET A	DCU/RETAIL EXPANSION PROJEC	225 SHREWSBURY STREET WORCESTER, MA	OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS
	1" = 10'			

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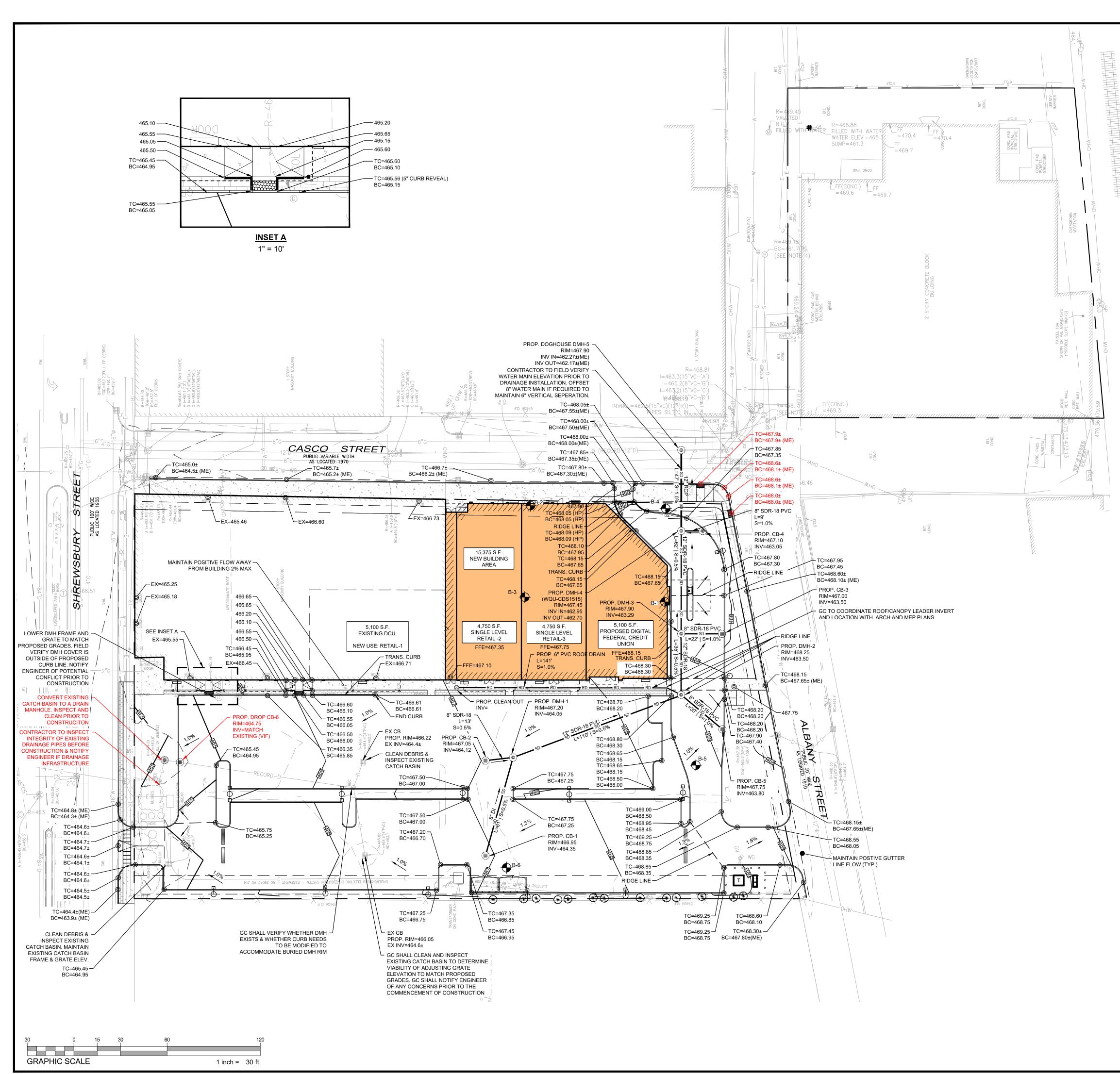
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 REV DATE DESCRIPTION ISSUE TYPE: PERMIT ISSUE DATE: 06/06/2024 PROJECT NUMBER: 24009 DRAWN BY: MJH CHECKED BY: DTB/DJH Copyright (c) by Highpoint Engineering, Inc. All Rights Reserved. SHEET TITLE: SITE PREPARATION, DEMOLITION, & EROSION CONTROL PLAN SHEET NUMBER: C100



								CLIENT:	w.HighpointEng.com N EQUITY PARTN ngton street	
USE/TENAI	NT	OFF STREET P/ CCOD-S MINIMUM PARKING REQUIREME		CCOD-S PAF CALCU	AND SUMM MINIMUM RKING JLATION		PARKING REQUIREMENT	-		
PROPOSED R (CURRENTLY		1/500 SF			00 SF		11 SPACES	SEAL		
PROPOSED F	RETAIL-2	1/500 SF		4,7	50 SF		10 SPACES			
PROPOSED R	RETAIL-3	1/500 SF		4,7	50 SF		10 SPACES			
PROPOSED D	DCU BANK	1/400 SF & 0.75/1 TELLE STATION	R	7 TELLEF	00 SF STATIONS ATMS		22 SPACES			
FOOD SERVIC COFFEE)	CE (IN-HOUSE	EXIS	STING USES	2 TOTAL 25 S 7 EMP	IAIN OCCUPANTS BEATS LOYEES CUPANTS		8 SPACES			
FOOD SERVIO		1/4 OCCUPANTS		238 20 EMF 123 OC	SEATS PLOYEES CUPANTS		65 SPACES			
CLINIC (DENT))	1/4 OCCUPANTS		13 EMF	SEATS PLOYEES OOMS		31 SPACES 33 SPACES	│┃ ┝─ 、		
		01 H.L		rking re	EQUIREMENT=		190 SPACES			
		BASE PARKING REQUIREN			KING CREDIT=		(-) 3 SPACES 187 SPACES	PROJE		
		TOTAL PAF PARKING LEASED (SPA			VSBURY LOT =		122 SPACES (-) 16 SPACES	I Ř		
7	TOTAL PA	RKING AVAILABLE FOR 225 S			,		107 SPACES			
	MIXED US	PARKING RELIEF REQU					81 SPACES 43%	PANSION		S
**BICYCLE PA	RKING CREDIT O	F 3 SPACES BY ADMINISTRAT								PARTNERS
		CLE PARKING STAL ED= 25 SPACES)	LS	PRC		FF-STR BREAKI	EET PARKING TYPE DOWN	A I		
7% EV READ	Y (EV):	8 SPACES 17 SPACES			RKING CT PARKING RD PARKING		6 SPACES 31 SPACES (25%) 91 SPACES	EXP		en equity
COMPACT SI PERCENT (25 UPON GRAN INCREASED T FEET IN WIDT SECTION 7 – 1 PARKING LO REQUIREMEN CIRCULATION OF THE BUILT	Paces – in paf 5%) of the requ t of a special to not more th th and sixteen (<u>off-street acc</u> ts with up to ts for parking n as defined by ding commissio	STREET ACCESSORY PARKI RKING LOTS CONTAINING M JIRED PARKING MAY BE SET PERMIT, THE PERCENTAGE IAN FIFTY PERCENT (50%). 16) FEET IN LENGTH. ESSORY PARKING & LOADIN 0 16 SPACES SHALL NOT 3 SPACES AND AISLE WIDTH 7 PROFESSIONAL TRAFFIC E ONER OR ZONING ENFORCEM E DIMENSIONAL SU ZONING DIS	MORE THA T ASIDE FC E OF PARK EACH COM IG REQUIR BE REQUI IS, BUT ML IS, BUT ML IS	N TEN (DR COMP (ING SPA MPACT SP RED TO JST PROV NG STAN CER. Y - 225	10) SPACES, U ACT CARS AS A CES FOR COMP PACE SHALL BE (CCCOC) CONFORM TO /IDE SAFE VEHI DARDS AND TO	A MATTER PACT CAR NOT LES THE DIN CULAR AC THE SAT	OF RIGHT. S MAY BE S THAN (8) IENSIONAL CESS AND ISFACTION	DCU/RETAIL	225 SHREWSBURY STREET WORCESTER, MA	OWNER/APPLICANT: LUNDGREN
		IAL CORRIDOR OVE N VIEW CORRIDOR					RY STREET (CCOD-S),			
		USE: BU						-		
		DIMENSIONAL R								
	BG-2.0 5,000 SF	CCOD-S*	EXIST 2.38 a		PROPOSE 2.38 ac.	<u>-</u> D	ZONING COMPLIANCE YES			
ו) ס	40.0' N/A	40.0' 0'	178': 0'±		178' 1'±		YES	3 08/21/2024	4 DTM COMMENTS 4 DTM COMMENTS 4 CITY COMMENTS	
RD	N/A N/A	10.0'	0'±		1'±		YES		4 CITY COMMENTS 4 CITY COMMENTS DESCRIPTION	
	N/A 15.0'	-	0'± 141':		16.7'± 141'±		YES	ISSUE TYPE:		
Т	50.0'	-	<50		-		-	- PERMIT		
F EXISTING SHO PE AND ARCHITI /IT NEEDED FRC DIMENSIONS SH TREET - A CONTI	PPING PLAZA BUI ECTURAL PLANS DM PLANNING BO IOWN ARE APPRO INOUS PORTION (RD SETBACKS SHOWN ARE LDING IS NOT CHANGING. FOR MORE INFORMATION. ARD TO RELOCATE EXISTING DXIMATE AND SHOULD BE VE DF A LOT ABUTTING ONE (1) BASED UPON ALBANY STREE	G DRIVE TH RIFIED BY STREET ME	RU TO AO LICENSE EASURED	CCOMMODATE N D LAND SURVEY ALONG THE FR	YOR.	3ANK. LINE DIVIDING THE LOT FROM TH	HE DRAWN BY:	BER:	
		CITY OF WORCESTER ZONI						CHECKED BY	1: DJH/DTB y Highpoint Engineering	g, Inc.
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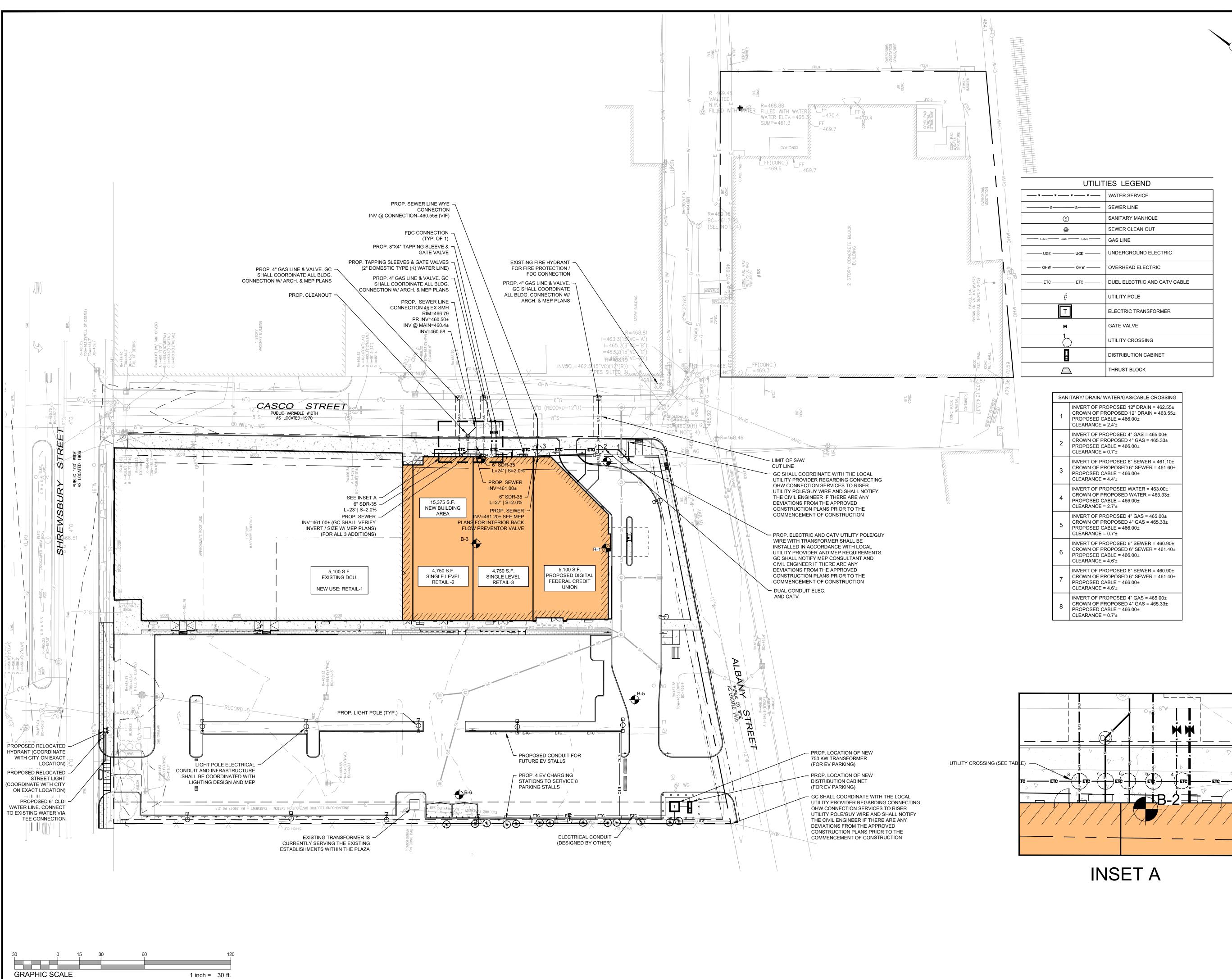


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GRADING & UTILITIES LEGEND				
468	ELEVATION CONTOUR			
467x25	SPOT ELEVATION			
TC=468.50 BC=468.00	TOP AND BOTTOM OF CURB			
	CATCH BASIN			
	DOUBLE CATCH BASIN			
	DRAIN MANHOLE			
60	CLEANOUT			
SD	STORM DRAIN PIPE			
● ● ■ - 1	TEST BORINGS LOCATION			
HP / LP	HIGH POINT / LOW POINT			
RD	ROOF DRAIN			
-	FLOW ARROW			
RCP	REINFORCED CONCRETE PIPE			
HDPE	HIGH-DENSITY POLYETHYLENE			
PVC	POLYVINYL CHLORIDE			
DI	DUCTILE IRON			
ME	MATCHING EXISTING			
● B-5	BORING HOLE			

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225 SHREWSBURY STREET WORCESTER, MA	OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS
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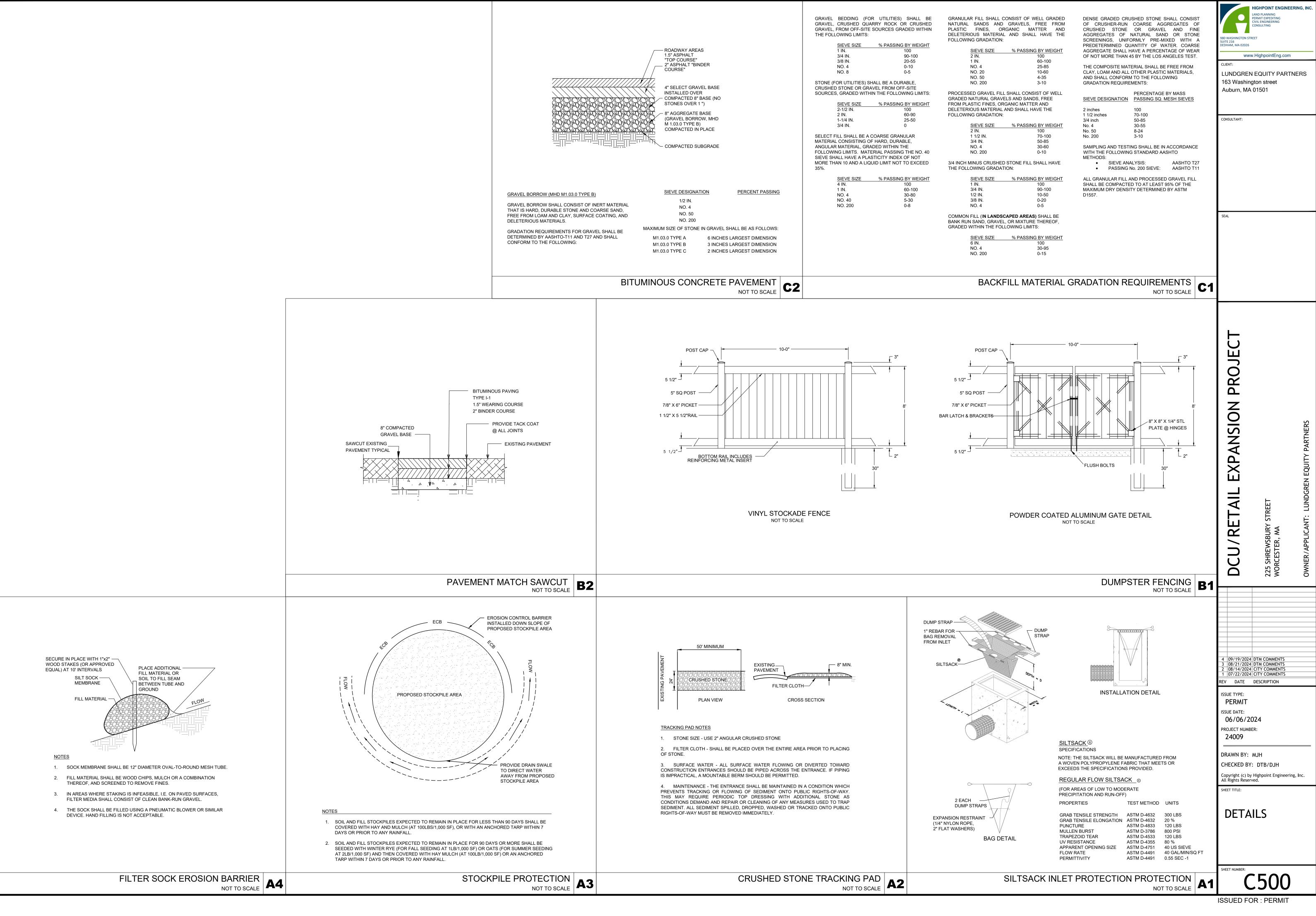
UTILIT	IES LEGEND
· * * *	WATER SERVICE
ss	SEWER LINE
S	SANITARY MANHOLE
6	SEWER CLEAN OUT
GAS GAS GAS GAS GAS	GAS LINE
UGE UGE	UNDERGROUND ELECTRIC
онw онw	OVERHEAD ELECTRIC
ETC ETC	DUEL ELECTRIC AND CATV CABLE
ę	UTILITY POLE
T	ELECTRIC TRANSFORMER
м	GATE VALVE
	UTILITY CROSSING
	DISTRIBUTION CABINET
	THRUST BLOCK

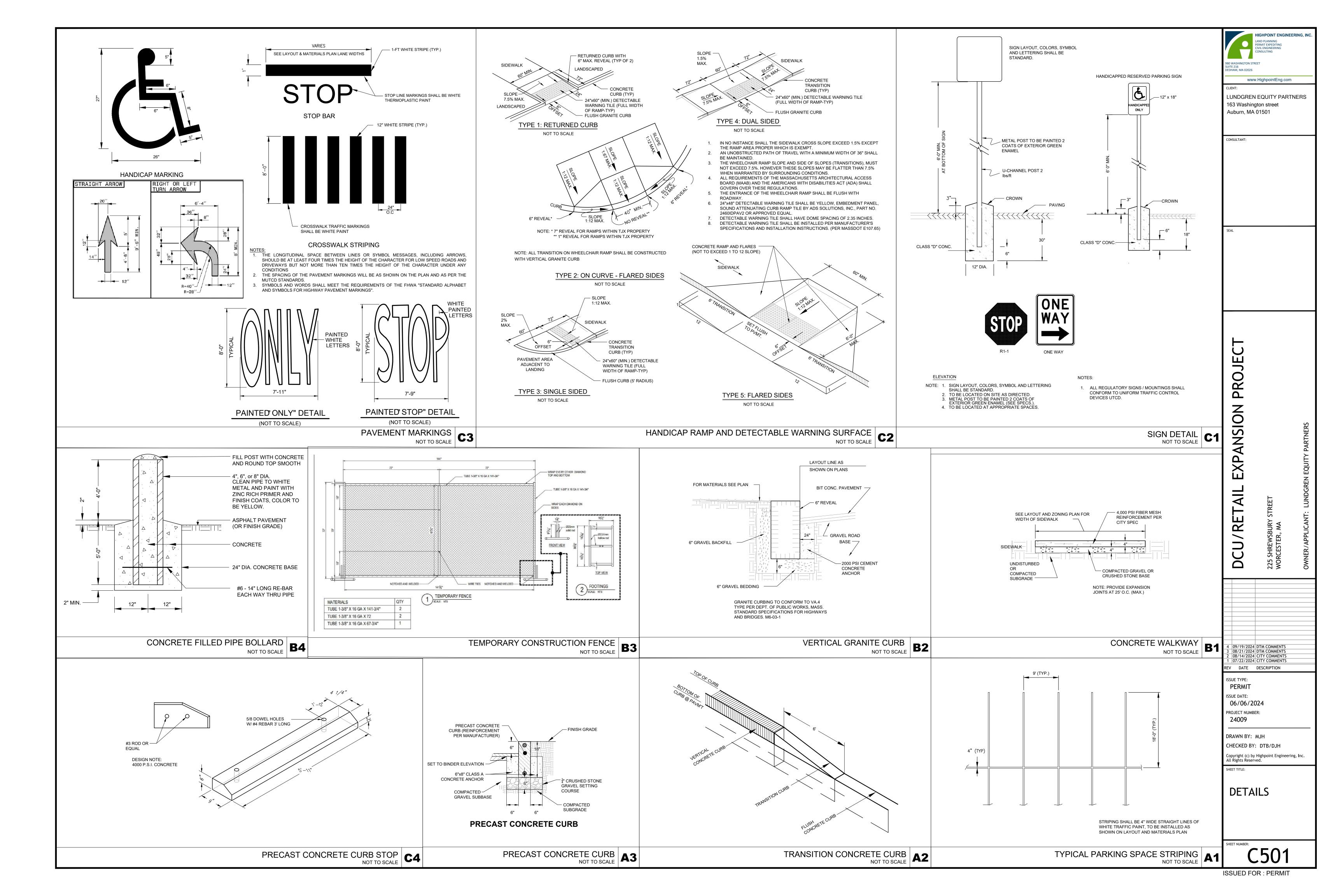
SANI	TARY/ DRAIN/ WATER/GAS/CABLE CROSSING
1	INVERT OF PROPOSED 12" DRAIN = 462.55± CROWN OF PROPOSED 12" DRAIN = 463.55± PROPOSED CABLE = 466.00± CLEARANCE = 2.4'±
2	INVERT OF PROPOSED 4" GAS = 465.00± CROWN OF PROPOSED 4" GAS = 465.33± PROPOSED CABLE = 466.00± CLEARANCE = 0.7'±
3	INVERT OF PROPOSED 6" SEWER = 461.10± CROWN OF PROPOSED 6" SEWER = 461.60± PROPOSED CABLE = 466.00± CLEARANCE = 4.4'±
4	INVERT OF PROPOSED WATER = 463.00± CROWN OF PROPOSED WATER = 463.33± PROPOSED CABLE = 466.00± CLEARANCE = 2.7'±
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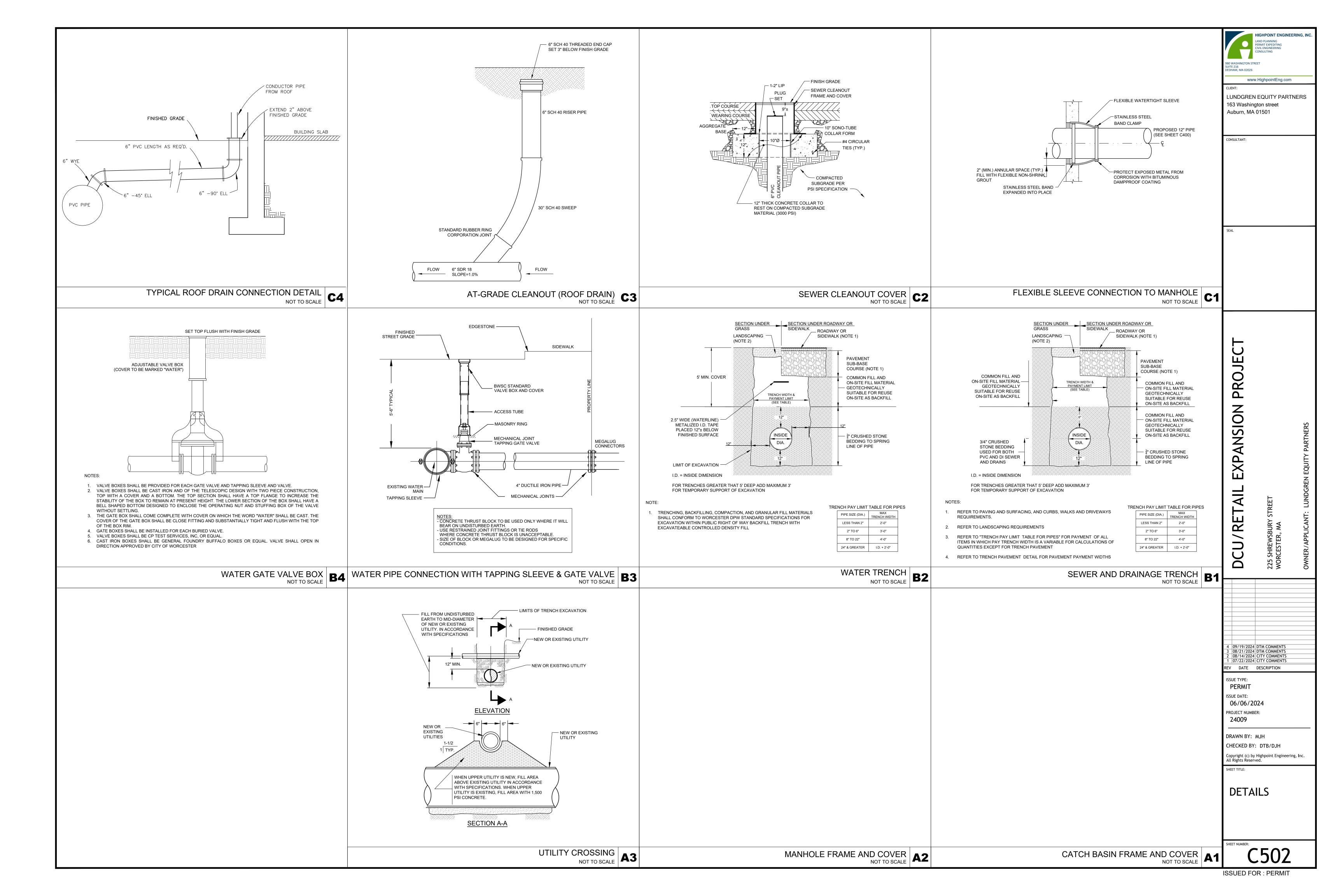
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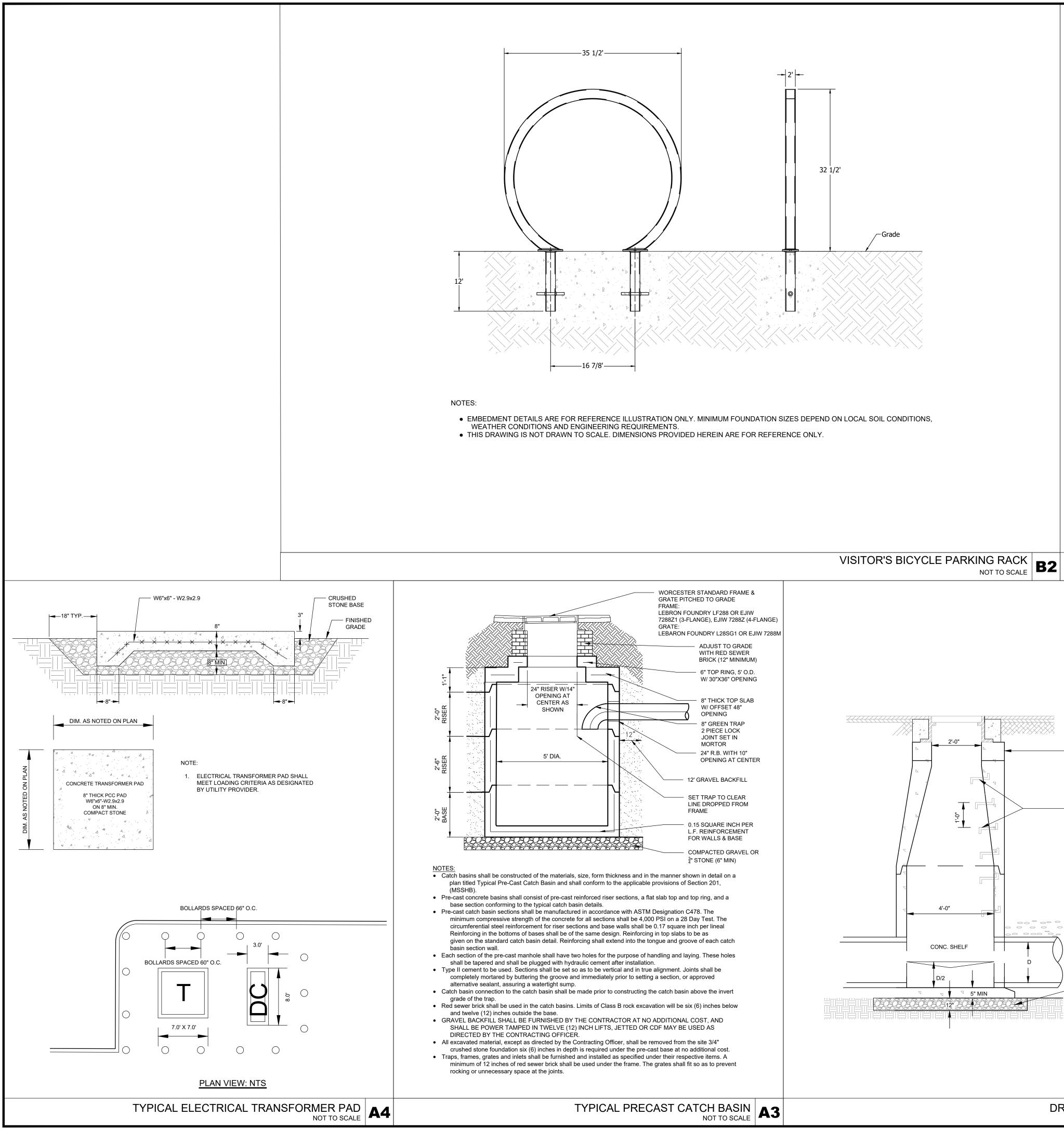
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		GRATE PITCH FRAME: LEBRON FOUI 7288Z1 (3-FLA GRATE:	STANDARD FRAME & ED TO GRADE NDRY LF288 OR EJIW NGE), EJIW 7288Z (4-FL/ JNDRY L28SG1 OR EJIW
			ADJUST TO GRADE WITH RED SEWER BRICK (12" MINIMUM)
R W/14"			6" TOP RING, 5' O.D. W/ 30"X36" OPENING
NG AT R AS WN			8" THICK TOP SLAB W/ OFFSET 48" OPENING
	1 2"		8" GREEN TRAP 2 PIECE LOCK JOINT SET IN MORTOR
IA.			24" R.B. WITH 10" OPENING AT CENTER
		12'	GRAVEL BACKFILL
		LIN	T TRAP TO CLEAR E DROPPED FROM AME
		L.F	5 SQUARE INCH PER . REINFORCEMENT R WALLS & BASE
			MPACTED GRAVEL OR STONE (6" MIN)
aterials, size, form t	hickness and in th	e manner show	n in detail on a

	MA
	- ST PO INS RE
4'-0"	
CONC. SHELF	C N
5" MIN	l

MANHOLE FRAME AND COVER MARKED "DRAIN". EAST JORDAN RON WORKS OR EQUAL

MASSACHUSETTS STANDARD

- ADJUST TO GRADE WITH REINFORCED CONCRETE LEVELING RING, OR RED BRICK MASONRY 2" MIN. TO 12" MAX.

STEEL REINFORCED COPOLYMER OLYPROPYLENE STEPS ISTALL PER MANUFACTURERS ECOMMENDATIONS

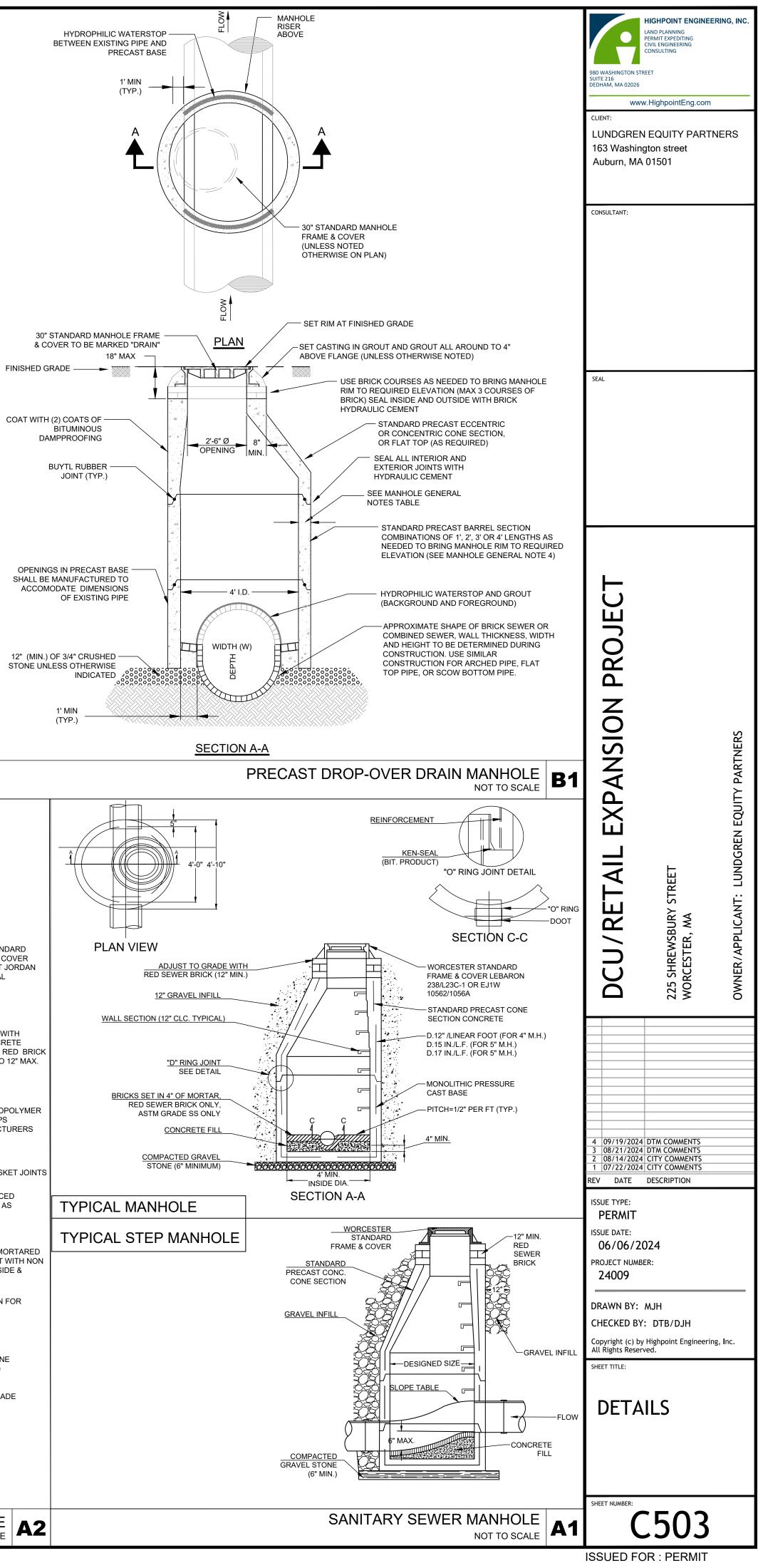
BUTYL RUBBER GASKET JOINTS

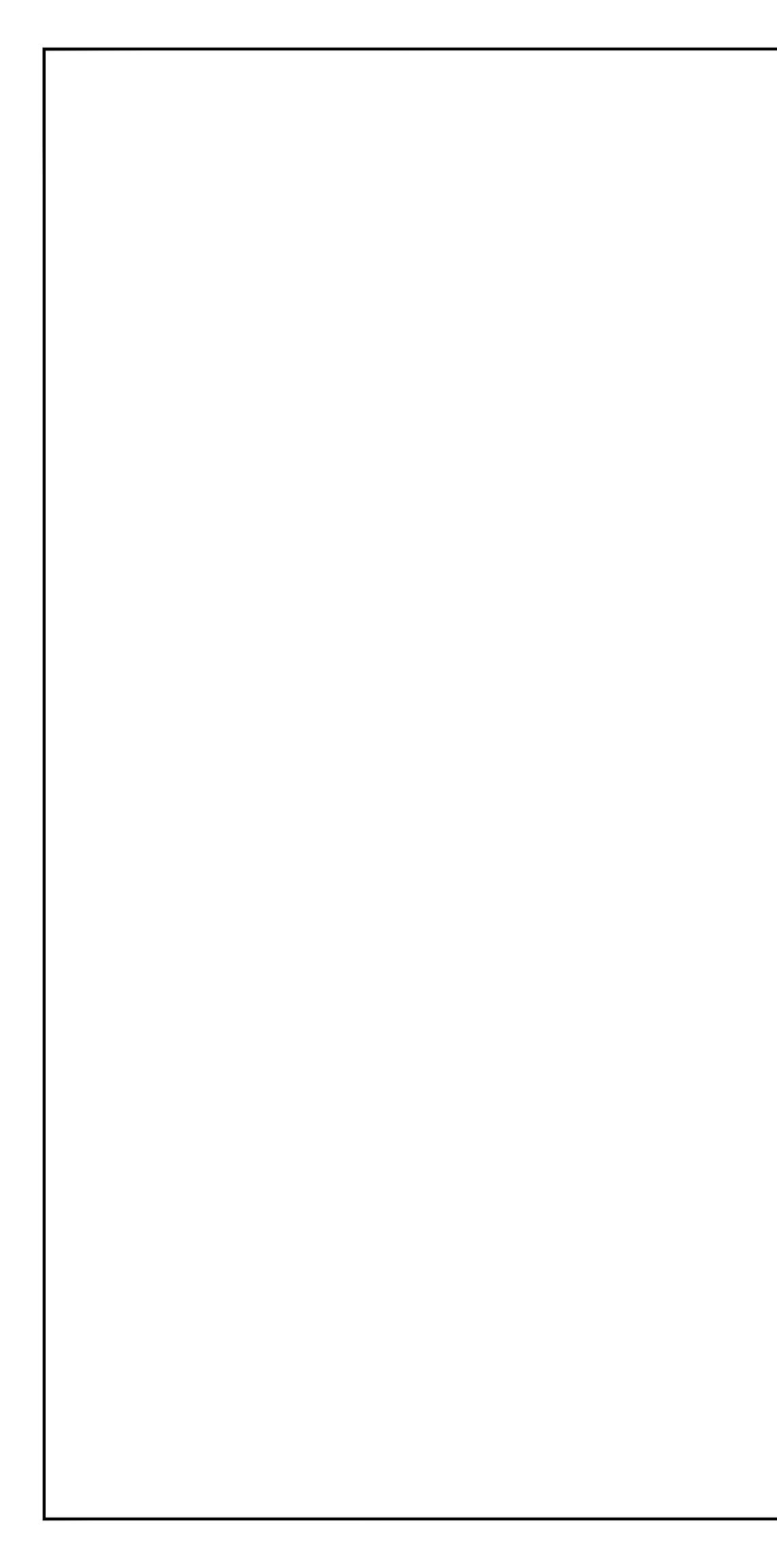
PRECAST REINFORCED CONCRETE RISERS AS REQUIRED

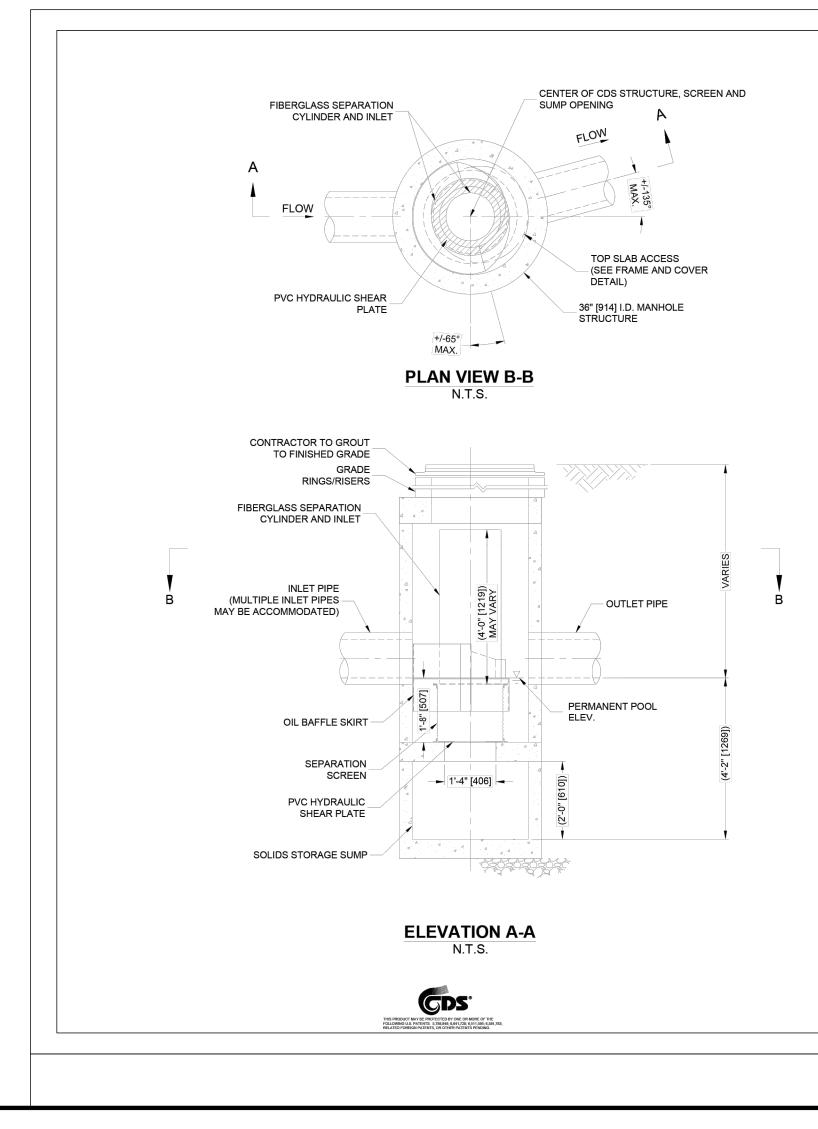
ALL JOINTS TO BE MORTARED SMOOTH AND TIGHT WITH NON SHRINK GROUT (INSIDE & OUTSIDE)

DRAIN PIPE SEE PLAN FOR MATERIAL

-3/4" CRUSHED STONE (MASSDOT M2.01.4) UNDISTURBED OR COMPACTED SUBGRADE





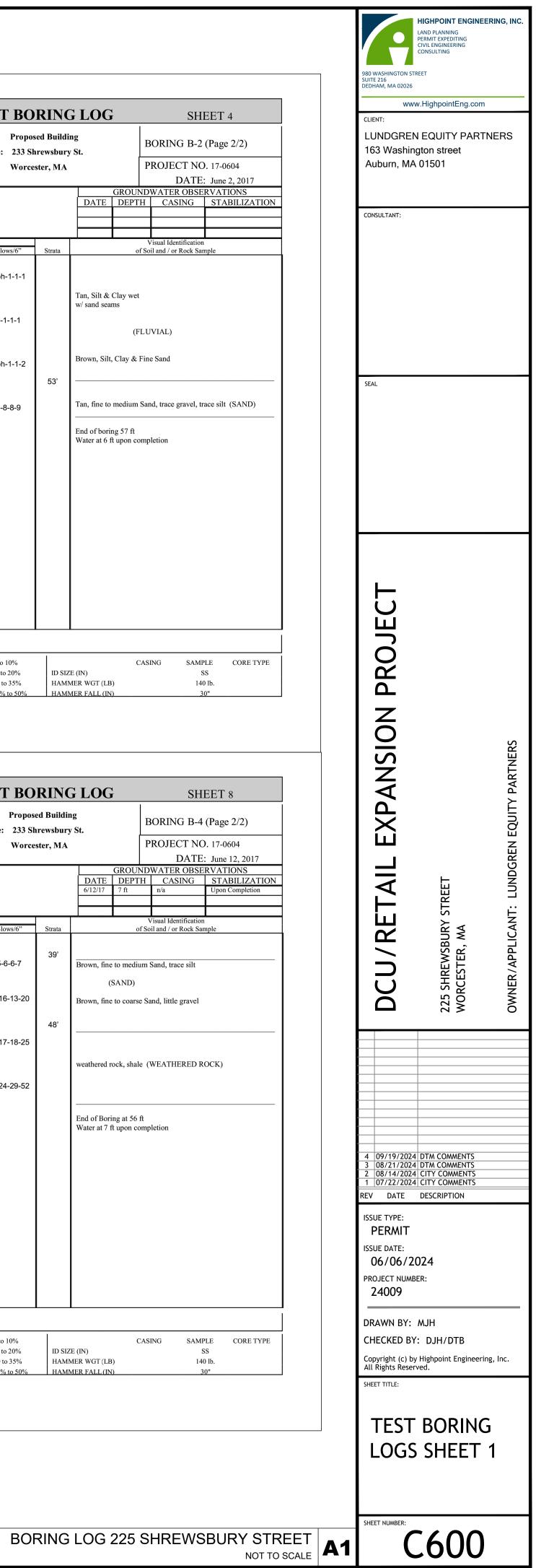


		980 WASHINGTON STI SUITE 216 DEDHAM, MA 02026 WWW CLIENT:	v.HighpointEng.com I EQUITY PARTN gton street	
CDS1515-3-C DESIGN NO CDS1515-3-C RATED TREATMENT CAPACITY IS 1.0 CFS, OR PER LOCAL REGULATIONS. THE STANDARD CDS1515-3-C CONFIGURATION IS SHOWN.		DCU/RETAIL EXPANSION PROJECT	225 SHREWSBURY STREET WORCESTER, MA	OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS
ENGINEERED SOLUTIONS LLC www.contechES.com 9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069 800-338-1122 513-645-7000 513-645-7993 FAX	D INFORMATION CONTAINED IN THIS DRAWING. P, AND GROUNDWATER ELEVATION AT, OR BELOW, JNDWATER ELEVATION. CASTINGS SHALL MEET EN CYLINDER. REMOVE AND REPLACE AS HTO LOAD FACTOR DESIGN METHOD. SIFIC DESIGN CONSIDERATIONS AND SHALL BE Y TO LIFT AND SET THE CDS MANHOLE STRUCTURE. SSEMBLE STRUCTURE. IPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE	3 08/21/2024 2 08/14/2024 1 07/22/2024 REV DATE ISSUE TYPE: PERMIT ISSUE DATE: 06/06/20 PROJECT NUMB 24009 DRAWN BY: CHECKED BY COpyright (c) by All Rights Reser SHEET TITLE: DETTA	DTM COMMENTS DTM COMMENTS DTM COMMENTS CITY COMMENTS CITY COMMENTS CITY COMMENTS DESCRIPTION 024 ER: MJH : DTB/DJH Highpoint Engineering ved.	

	TEST BORING LOO	G SHEET 1		r	FEST BORING LO	DG SHEET 2			J	TEST BO	RINC	G LOG SHEET 3
Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well	Proposed Building Site: 233 Shrewsbury St.	BORING B-1 (Page 1/2)	Ge	Exploration Corp. otechnical Drilling Idwater Monitor Well	Proposed Building Site: 233 Shrewsbury St.	BORING B-1 (Page 2/2)		Soil Exploration Geotechnical I Groundwater Mo	rilling	Propos Site: 233 Shi	sed Buildin	BORING B-2 (Page 1)
148 Pioneer Drive Leominster, MA 01453	Worcester, MA	PROJECT NO. 17-0604 DATE: June 2, 2017	1 Leo	48 Pioneer Drive minster, MA 01453 978 840-0391	Worcester, MA	PROJECT NO. 17-0604 DATE: June 2, 2017		148 Pioneer 1 Leominster, MA 978 840-02	Drive 01453		ester, MA	PROJECT NO. 17-0604 DATE: June 2,
978 840-0391 Fround Elevation: Date Started: June 2, 201		GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION	Ground I	Elevation: e Started: June 2, 2017		GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION	Gro	ound Elevation: Date Started:	June 2, 2017			GROUNDWATER OBSERVATIO
Date Finished: June 2, 201 Driller: PG gineer/Geologist:	7 6/2/17	7 ft n/a Upon Completion	Date Soil Engineer/0	Finished: June 2, 2017 Driller: PG	6/2/	17 7 ft n/a Upon Completion		Date Finished: Driller: ineer/Geologist:	June 2, 2017 PG			6/2/17 5 ft n/a Upon Con
Casing Samp bl/ft No. Pen/Rec Depth	e Blows/6" Strata Asphalt	Visual Identification of Soil and / or Rock Sample	Depth Casing	No. Pen/Rec Depth	Blows/6" Strata	Visual Identification of Soil and / or Rock Sample	Depth Ca		Sample Rec Depth	Blows/6"	Strata 5"	Visual Identification of Soil and / or Rock Sample Asphalt
1 12" 0'0"-2'	3"	ne to medium Sand, some gravel, little silt (FILL)	40	12 18" 40'0"-42'0"	13-18-21-26 Grey,	coarse Sand & Gravel, little silt	1	1 1	5" 0'0"-2'0"	3-4-4-3		Sand, silt, gravel, ash, cinders
2 9" 2'0"-4')" 2-1-1-1 Sand, grav	vel, ash, cinders (FILL)				f boring 42 ft at 7 ft upon completion		2 6	2040	2-1-1-2		(URBAN FILL)
3 15" 5'0"-7' 4 15" 7'0"-9'	Sune, ua	ce brick (URBAN FILL)	45				5	3 9		2-1-1-1 1-1-2-2		Same, trace brick, rubble, wet
5 18" 10'0"-12	10'	·	50				10	5 1	5" 10'0"-12'0"	1-1-1-1	10'	
6 24" 12'0"-14	'0" 1-1-1-1 Black, Org	ganic silty-fibrous Peat, wet (ORGANIC)						6 1	B" 12'0"-14'0"	1-1-1-2		Black, Organic, silty-fibrous Peat (ORGANIC)
7 21" 15'0"-1	'0" 3-4-3-2 15' Grey, Silt,	, Clay & Fine Sand (FLUVIAL)	55				15	7 2		woh-1-1-2		Dark Brown, Organic Silt w/ fibers, wet (ORGAN
								8 2		2-1-1-1	20'	
8 21" 20'0"-2	'0" 2-2-2-3 Grey, Silt	w/ clay, wet	60				20	9 2	1" 20'0"-22'0"	1-1-1-2		Grey, Silt, Clay & Fine Sand, wet (FLUVIAL)
9 24" 25'0"-2'	'0" woh-1-1-1 Brown, Si	ilt & Clay, wet	65				25	10 2	1" 25'0"-27'0"	woh-1-1-1		
	w/ sand se											
10 21" 30'0"-32	'0" woh-1-1-1 Brown, Fi	ine Sand w/ silt and clay (FLUVIAL)	70				30	11 2	1" 30'0"-32'0"	woh-1-1-2		Brown, Silt & Clay w/ fine sand, wet
	34'											
11 18" 35'0"-3	'0" 3-4-4-5 Tan, fine t	to medium Sand, trace gravel, trace silt, wet	75				35	12 2	4" 35'0"-37'0"	1-2-2-1		Tan, Silt, wet (FLUVIAL) (Continue
	(Continue	d)	79									
0 -2 V Soft, 2 -4 Soft, 4 -8 M	Little 10 to 20% ID SIZE (IN) Some 20 to 35% HAMMER WGT (I And 35% to 50% HAMMER FALL ()	,	Cohesive: 0 -2 V	Soft, 2 -4 Soft, 4 -8 M So	ttle 10 to 20% ID SIZE (IN) me 20 to 35% HAMMER WG nd 35% to 50% HAMMER FAI) -2 V Soft, 2 -4 S 15 -30 V. Stiff, 3		ne 20 to 35% d 35% to 50%		MER WGT (LB) 140 lb. MER FALL (IN) 30"
Dense, 30 -50 Dense, 50+ V 0 -2 V Soft, 2 -4 Soft, 4 -8 M 5. 15 -30 V. Stiff, 30 + Hard.	Some 20 to 35% HAMMER WGT (L And 35% to 50% HAMMER FALL ()	.B) 140 lb. (N) 30"	Cohesive: 0 -2 V	Soft, 2 -4 Soft, 4 -8 M So V. Stiff, 30 + Hard. Av	me 20 to 35% HAMMER WG	T (LB) 140 lb. L (IN) 30"	Cohesive: 0) + Hard. An		HAMN	MER FALL (IN) 30"
0 -2 V Soft, 2 -4 Soft, 4 -8 M <u>5 -30 V. Stiff, 30 + Hard.</u> Soil Exploration Corp. Geotechnical Drilling	Some 20 to 35% HAMMER WGT (L And 35% to 50% HAMMER FALL () TEST BORING LOO Proposed Building	_B) 140 lb. [N] 30"	Cohesive: 0 -2 V : 8 -15 Stiff. 15 -30 Soil F Ge	Soft, 2 -4 Soft, 4 -8 M So V. Stiff, 30 + Hard. Av Cxploration Corp. otechnical Drilling	me 20 to 35% HAMMER WG hd 35% to 50% HAMMER FAI	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2)	Cohesive: 0 8 -15 Stiff.	<u>15-30 V. Stiff.</u> 3 Soil Explorati Geotechnical J) + Hard. An An On Corp. Drilling	1 35% to 50%	HAMN DRINC sed Buidin	G LOG SHEET g BORING B-4 (Page
0 -2 V Soft, 2 -4 Soft, 4 -8 M <u>5 15 -30 V. Stiff, 30 + Hard.</u> Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453	Some 20 to 35% HAMMER WGT (L And 35% to 50% HAMMER FALL () TEST BORING LOC	B) 140 lb. 30" G SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604	Cohesive: 0 -2 V : 8 -15 Stiff. 15 -30 Soil H Ge Groun 1	Soft, 2 -4 Soft, 4 -8 M So V. Stiff, 30 + Hard. Av Cxploration Corp.	me 20 to 35% HAMMER WG nd 35% to 50% HAMMER FAI	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604	Cohesive: 0 8 -15 Stiff.	15 -30 V. Stiff. 3 Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M.) + Hard. An An Drilling hitor Well Drive A 01453	TEST BO Propos Site: 233 Shi	HAMN DRINC sed Buidin	G LOG SHEET g st. BORING B-4 (Page PROJECT NO. 17-0
0 -2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff, 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 Ground Elevation:	Some 20 to 35% And 35% to 50% HAMMER WGT (L HAMMER FALL () TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA	B) 140 lb. N) 30" G SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS	Cohesive: 0 -2 V : 8 -15 Stiff. 15 -30 Soil F Ge Groun 1 Leo Ground :	Soft, 2 -4 Soft, 4 -8 M So V. Stiff, 30 + Hard. Av Exploration Corp. otechnical Drilling adwater Monitor Well 48 Pioneer Drive minster, MA 01453 978 840-0391 Elevation:	me 20 to 35% HAMMER WG hd 35% to 50% HAMMER FAI	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS	Cohesive: 0 8 -15 Stiff.	15 -30 V. Stiff, 3 Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation:) + Hard. An An Drilling hitor Well Drive A 01453 191	TEST BO Propos Site: 233 Shi	DRINC sed Buidin rewsbury	G LOG SHEET g BORING B-4 (Page st. PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT
0 -2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff, 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 Fround Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Driller: TF	Some 20 to 35% And 35% to 50% HAMMER WGT (L HAMMER FALL () Proposed Building Site: 233 Shrewsbury St. Worcester, MA	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION	Cohesive: 0 -2 V : 8-15 Stiff. 15 -30 Soil F Ge Groun 1 Leo Ground 1 Da Date	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft And Soft Soft, 2 -4 Soft, 4 -8 M Soft And Soft Soft Soft Soft, 2 -4 Soft, 4 -8 M Soft And Soft Soft Soft Soft Soft Soft Soft Soft	me 20 to 35% HAMMER WG hd 35% to 50% HAMMER FAI	T (LB) 140 lb. 200 SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION	Cohesive: 0 8-15 Stiff.	Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Driller:	D + Hard. An An An An An An An An An An	TEST BO Propos Site: 233 Shi	DRINC sed Buidin rewsbury	G LOG SHEET g BORING B-4 (Pag st. PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT DATE DEPTH CASING STA
0 -2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff. 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 round Elevation: Date Started: June 6, 201 Date Finished: June 6, 201	Some 20 to 35% And 35% to 50% HAMMER WGT (L HAMMER FALL () TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 Blows/6" Strata	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION	Cohesive: 0 -2 V : 8 -15 Stiff. 15 -30 Soil F Ge Groun 1 Leo Ground 1 Da	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft And Soft Soft Soft Soft Soft Soft Soft Soft	me 20 to 35% HAMMER WG Id 35% to 50% HAMMER FAI FEST BORING LC Proposed Building Site: 233 Shrewsbury Street Worcester, MA	T (LB) 140 lb. 200 SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION	Cohesive: 0 8-15 Stiff.	Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Driller: ineer/Geologist:	D + Hard. An An An An An An An An An An	TEST BO Propos Site: 233 Shi	DRINC sed Buidin rewsbury	G LOG SHEET g st. BORING B-4 (Page PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT DATE DEPTH CASING STA 6/12/17 7 ft n/a Upon Visual Identification of Soil and / or Rock Sample
0-2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff, 30 + Hard, Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 ound Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Driller: TF neer/Geologist: Samp	Some 20 to 35% And 35% to 50% HAMMER WGT (L HAMMER FALL () HAMMER FALL () Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS C DEPTH CASING STABILIZATION 6 ft n/a Visual Identification	Cohesive: 0 -2 V : 8 -15 Stiff. 15 -30 Soil I Ge Ground 1 Leo Ground 1 Da Date Soil Engineer/ Depth Casing Ft. bl/ft	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft And Soft Soft Soft Soft Soft Soft Soft Soft	me 20 to 35% HAMMER WG HAMMER FAI FEST BORING L(Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ Blows/6" Strata	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 17 6 ft N Visual Identification of Soil and / or Rock Sample	Cohesive: 0 8-15 Stiff.	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Started: Date Finished: Date Finished: Date Finished: No. Pe	D + Hard. An An An An An An An An An An	TEST BO Propos Site: 233 Shi Worce	DRINC sed Buidin rewsbury ester, MA	G LOG SHEET g BORING B-4 (Page st. PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT DATE DEPTH CASING STA 6/12/17 7 ft n/a Upon Visual Identification
-2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff, 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 Dound Elevation: Date Started: June 6, 201 Driller: TF neer/Geologist: sing Sampr/ft 1 1'0"-3' 2 3'0"-5'	Some 20 to 35% And 35% to 50% HAMMER WGT (L HAMMER FALL () HAMMER FALL () TEST BORING LOC Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 DATE 6/6/17 DATE 6/6/17 DATE 9" 7-6-7-5 3" Asphalt Dark Brow 9" 5-4-6-6 3' Brown, Sa	B) 140 lb. N) 30" G SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS C DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample	Cohesive: 0 -2 V : 8 -15 Stiff. 15 -30 Soil I Ge Ground 1 Leo Ground 1 Da Date Soil Engineer/ Depth Casing Ft. bl/ft	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft V. Stiff, 30 + Hard. Au Soft	me 20 to 35% HAMMER WG HAMMER FAI FEST BORING L(Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ Blows/6" Strata	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 17 6 ft Na Visual Identification of Soil and / or Rock Sample	Cohesive: 0 8-15 Stiff.	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Started: Date Started: Date Finished: Driller: ineer/Geologist: sing 1 4 2 0	D + Hard.AnD + Hard.AnD - Hard.<	TEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6	DRINC sed Buidin rewsbury ester, MA	g BORING B-4 (Page g BORING B-4 (Page st. PROJECT NO. 17-0 DATE DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT DATE DATE DEPTH CASING STA 6/12/17 7 ft Na Upon Visual Identification Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL)
-2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff, 30 + Hard. oil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 und Elevation: Date Started: June 6, 201 Date Started: June 6, 201 Date Finished: June 6, 201 Driller: TF neer/Geologist: ing Samp ft No. Pen/Rec Depti	Some 20 to 35% And 35% to 50% HAMMER WGT (L HAMMER FALL () HAMMER FALL () TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 e Blows/6" Strata Blows/6" Strata 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample	Cohesive: 0 -2 V : 8 -15 Stiff. 15 -30 Soil F Ge Groun 1 Leo Ground 1 Da Date Soil Engineer/ Depth Casing Ft. bl/ft 40	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 4 -8 M Soft V. Stiff, 30 + Hard. Au Soft	me 20 to 35% HAMMER WG HAMMER FAI FEST BORING LC Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ Blows/6" Strata 1-1-1-1 Brown w/ sar 44'	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 17 6 ft N Visual Identification of Soil and / or Rock Sample	Cohesive: 0 8-15 Stiff.	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Date Finished: Sing Vft No. Per 1 4 2 4 3 4	D + Hard.AnD + Hard.AnD - Hard.AnJune 12, 2017AnJune 12, 2017TFAn - Hard.AnAn - Hard.AnAn - Hard.AnJune 12, 2017TFAn - Hard.AnAn - Hard.AnAn - Hard.AnJune 12, 2017TFT - Hard.AnAn -	TEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5	DRINC sed Buidin rewsbury ester, MA	g 30" g BORING B-4 (Page B
2 V Soft, 2 -4 Soft, 4 -8 M 5 -30 V. Stiff, 30 + Hard. bil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 und Elevation: Date Started: June 6, 201 Date Started: June 6, 201 Date Finished: June 6, 201 Driller: TF eer/Geologist: Terrer/Geologist: 1 1'0"-3' 2 3'0"-5' 3 5'0"-7'	Some 20 to 35% HAMMER WGT (L And 35% to 50% HAMMER FALL () TEST BORING LOC Proposed Building Site: 233 Shrewsbury St. Worcester, MA 0 DATE 6/6/17 6/6/17 0 7 7 DATE 7 Strata 9" 7-6-7-5 3" Asphalt 0" 5-4-6-6 3' 9" 4-5-5-6 Sand, silt, 9" 3-3-3-4 9'	B) 140 lb. N) 30" SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample wn, loamy, silty Sand w/ gravel (FILL) and, ash, gravel, cinders (URBAN FILL) clay w/ trace wood, brick, organic gravel w/ trace wood, brick, glass (FILL)	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bi/ft 40 45	Soft, 2 -4 Soft, 4 -8 M So V. Stiff, 30 + Hard. Ar Soft, 2 -4 Soft, 4 -8 M Soft V. Stiff, 30 + Hard. Ar Soft	me 20 to 35% HAMMER WG HAMMER FAI	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 17 6 ft Nisual Identification Of Soil and / or Rock Sample	Cohesive: 0 8-15 Stiff.	Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Started: Date Finished: Date Finished: Driller: ineer/Geologist: issing V/ft No. Pe 1 4 2 4 3 4	D + Hard. An D + Hard. An D - Hard. An June 12, 2017 June 12, 2017 June 12, 2017 TF Sample Depth An An June 12, 2017 TF Sample An An An An An June 12, 2017 TF Sample An An An June 12, 2017 TF Sample An June 12, 30" An <	35% to 50% FEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2	DRINC sed Buidin rewsbury ester, MA	g BORING B-4 (Page g BORING B-4 (Page st. PROJECT NO. 17-0 DATE DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT STA 6/12/17 7 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN I Sand, gravel, trace ash (FILL) Sand, gravel, trace ash (FILL)
2 V Soft, 2 -4 Soft, 4 -8 M 5 -30 V. Stiff. 30 + Hard. oil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 und Elevation: Date Started: June 6, 201 Date Started: June 6, 201 Driller: TF reer/Geologist: Te ng Sampat 1 1'0"-3' 2 3'0"-5' 3 5'0"-7' 4 7'0"-9'	Some 20 to 35% HAMMER WGT (L) And 35% to 50% HAMMER FALL (I) TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 1 3" DATE 6/6/17 1 3" DATE 6/6/17 1 3" DATE 6/6/17 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3" 1 3"	B) 140 lb. N) 30" SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample wn, loamy, silty Sand w/ gravel (FILL) and, ash, gravel, cinders (URBAN FILL) clay w/ trace wood, brick, organic gravel w/ trace wood, brick, glass (FILL)	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bi/ft 40 45	Soft, 2 -4 Soft, 4 -8 M So V. Stiff, 30 + Hard. Ar Soft, 2 -4 Soft, 4 -8 M Soft V. Stiff, 30 + Hard. Ar Soft	me 20 to 35% HAMMER WG HAMMER FAI	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 17 6 ft n/a Visual Identification of Soil and / or Rock Sample a, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet	Cohesive: 0 8-15 Stiff. Soil Engi Depth Ca Ft. b 1 5	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Started: Date Started: Date Finished: Driller: ineer/Geologist: sing 1 4 2 0 3 4 4 4 5 1	An D+ Hard. An Drilling nitor Well Drive An An June 12, 2017 June 12, 2017 June 12, 2017 TF Sample An An An An	EST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2	BRINC sed Buidin rewsbury ester, MA	g 30" g BORING B-4 (Page B-4 (Page BORING B-4 (Page B-4 (PageB
2 V Soft, 2 -4 Soft, 4 -8 M 5 -30 V. Stiff. 30 + Hard. 1 - 10 - 30 - 30 - 30 - 30 - 30 - 30 - 3	Some 20 to 35% HAMMER WGT (L) And 35% to 50% HAMMER FALL (I) TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 6/6/17 0" 7-6-7-5 3" 0" 5-4-6-6 3' Brown, Sa 0" 3-3-3-4 9' Sand, silt, 0" 1-2-1-2 Black, Org Black, Org	B) 140 lb. 30" SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample vn, loamy, silty Sand w/ gravel (FILL) and, ash, gravel, cinders (URBAN FILL) clay w/ trace wood, brick, organic gravel w/ trace wood, brick, glass (FILL) ganic Silt	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bl/ft 40 45 50	Soft, 2 -4 Soft, 4 -8 M So V. Stiff, 30 + Hard. Ar Soft, 2 -4 Soft, 4 -8 M Soft V. Stiff, 30 + Hard. Ar Soft	TEST BORING LO Proposed Building Site: 233 Shrewsbury Street Worcester, MA Blows/6" Strata 1-1-1-1 Brown w/ sar 44' G/6 Brown w/ sar 9-10-11-9 Brown	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 17 6 ft n/a Visual Identification of Soil and / or Rock Sample a, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet	Cohesive: 0 8-15 Stiff. Soil Engi Depth Ca Ft. b 1 5	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Date Finished: Date Finished: 1 a 2 a 3 a 4 a 5 1 6 1	An An <td>Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2</td> <td>BRINC sed Buidin rewsbury ester, MA</td> <td>ARER FALL (IN) 30" G LOG SHEET g BORING B-4 (Page st. PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT OATE: June Visual Identification of Soil and / or Rock Sample Visual Identification Asphalt Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC)</td>	Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2	BRINC sed Buidin rewsbury ester, MA	ARER FALL (IN) 30" G LOG SHEET g BORING B-4 (Page st. PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT DATE: June GROUNDWATER OBSERVAT OATE: June Visual Identification of Soil and / or Rock Sample Visual Identification Asphalt Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC)
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2 V Soft, 2 -4 Soft, 4 -8 M 5 -30 V. Stiff, 30 + Hard. bil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 und Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Date Finished: June 6, 201 Driller: TF eer/Geologist: TF eer/Geologist: 1 1'0"-3' 2 3'0"-5' 3 5'0"-7' 4 7'0"-9' 5 10'0"-12'	Some 20 to 35% HAMMER WGT (L) And 35% to 50% HAMMER FALLO TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA proposed Blows/6" Strata Asphalt OATE of 1 OATE O'' O'' O'' O'' O''	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS C DEPTH CASING STABILIZATION 6 ft n/a USUBSERVATIONS C DEPTH CASING STABILIZATION C DEPTH CASING STABILIZATION 6 ft n/a USUBSERVATIONS C DEPTH CASING STABILIZATION C DEPTH C DEPTH CASING STABILIZATION C DEPTH C DEPTH	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bl/ft 40 45 50 55	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 30 + Hard. Aries $(Y, Stiff, 30 + Hard.)$	me 20 to 35% HAMMER WG a 35% to 50% HAMMER FAI FEST BORING LC Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ 1-1-1-1 Brown 9-10-11-9 Brown 10-10-13-14 Brown	T(LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION Yisual Identification Of Soil and / or Rock Sample A, Silt & Clay, wet (FLUVIAL) a, fine to coarse Sand, little gravel, trace silt, wet	Cohesive: 0 8-15 Stiff. Soil Engi Depth Ca Ft. b 1 1 5 10	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Started: Date Started: Date Finished: Driller: ineer/Geologist: sing 1 & 2 & 0 3 & 4 4 & 2 5 & 1 6 & 1 7 & 2	D+ Hard. An D+ Hard. An Drilling nitor Well Drive A 01453 Drive An June 12, 2017 June 12, 2017 June 12, 2017 June 12, 2017 TF Sample Rec Depth 3" 1'0"-3'0" 3" 5'0"-5'0" 3" 5'0"-7'0" 4" 15'0"-17'0"	Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2 2-1-2-1	PRINC sed Buidin rewsbury ester, MA	AMER FALL (IN) 30" G LOG SHEET g BORING B-4 (Page St. PROJECT NO. 17-0 DATE DATE: June GROUNDWATER OBSERVAT DATE DEPTH CASING STA 6/12/17 7 ft Na Upon Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat
2 V Soft, 2 -4 Soft, 4 -8 M 5 -30 V. Stiff, 30 + Hard. bil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 und Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Date Finished: June 6, 201 Date Started: June 6, 201 D	Some 20 to 35% HAMMER WGT (L) And 35% to 50% HAMMER FALLO TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA proposed Blows/6" Strata Asphalt OATE of the form of	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS C DEPTH CASING STABILIZATION 6 ft n/a USUBSERVATIONS C DEPTH CASING STABILIZATION C DEPTH CASING STABILIZATION 6 ft n/a USUBSERVATIONS C DEPTH CASING STABILIZATION C DEPTH C DEPTH CASING STABILIZATION C DEPTH C DEPTH	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bl/ft 40 45 50 55	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 3 -4 Hard. An Exploration Corp. otechnical Drilling otechnical Drilling otechnical Drilling otechnical Drive minster, MA 01453 978 840-0391 Elevation: testarted: June 6, 2017 Driller: TF Geologist: Sample Soft, 2 -4 N 39'0"-41'0" 12 24" 39'0"-41'0" 13 13 20" 44'0"-46'0" 14 14 14" 49'0"-51'0" 15 15 14" 54'0"-56'0"	me 20 to 35% HAMMER WG a 35% to 50% HAMMER FAI FEST BORING LO Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ 1-1-1-1 Brown 9-10-11-9 Brown 10-10-13-14 Brown 9-12-13-12 Brown	T(LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 7 6 ft 1 1/a Visual Identification of Soil and / or Rock Sample A, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet a, fine to medium Sand, little silt (SAND) a, fine to medium Sand, trace/little silt	Cohesive: 0 8-15 Stiff. Soil Engi Depth Ca Ft. b 1 1 5 10 15	Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Started: Date Finished: Driller: ineer/Geologist: using 1 a 2 d 3 a 4 4 5 1 6 1 7 2 8 1	D+ Hard. An D+ Hard. An Drilling nitor Well Drive A 01453 Drive An June 12, 2017 June 12, 2017 June 12, 2017 June 12, 2017 TF Sample Rec Depth 3" 1'0"-3'0" 3" 5'0"-5'0" 3" 5'0"-7'0" 4" 15'0"-17'0"	Image: Site state	PRINC sed Buidin rewsbury ester, MA	AMER FALL (IN) 30" G LOG SHEET g BORING B-4 (Page St. PROJECT NO. 17-0 DATE DATE: June GROUNDWATER OBSERVAT DATE DEPTH CASING STA 6/12/17 7 ft Na Upon Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat
2 V Soft, 2 -4 Soft, 4 -8 M 5 -30 V. Stiff. $30 + Hard.$ Sil Exploration Corp. Geotechnical Drilling iroundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 und Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Date Finished: June 6, 201 Date Finished: June 6, 201 Date Started: June 6, 201 Date Started: June 6, 201 Date Started: June 6, 201 1 1'0"-3' 2 3'0"-5' 3 5'0"-7' 4 7'0"-9' 5 10'0"-1' 6 12'0"-1' 8 20'0"-2' 9 24'0"-2'	Some 20 to 35% HAMMER WGT (L) And 35% to 50% HAMMER FALLO TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 6/6/17 p* 7 DATE 7 DATE 6/6/17 5 e Blows/6** Strata 9* 7-6-7-5 3* Dark Brow 9* 5-4-6-6 3' Brown, Sa 9* 3-3-3-4 9' Black, Org 10* 1-1-2-2 Black, Org Black, Org 10* 1-1-1-2 Grey, Silt '0* 1-1-2-2 (FLUV)	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification (IRBAN FILL) clay w/ trace wood, brick, organic ganic Silt ganic Silt, trace fibers, wet (ORGANIC) & Clay w/ fine sand (FLUVIAL) //IAL)	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bl/ft 40 45 50 55	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 3 -4 Hard. An Exploration Corp. otechnical Drilling otechnical Drilling otechnical Drive minster, MA 01453 978 840-0391 Elevation: testarted: June 6, 2017 Driller: TF Geologist: No. Pen/Rec Depth 12 24" 39'0"-41'0" 11 20" 44'0"-46'0" 14 14" 49'0"-51'0" 115 14" 54'0"-56'0" 54'0"-56'0"	me 20 to 35% HAMMER WG a 35% to 50% HAMMER FAI FEST BORING LO Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ 1-1-1-1 Brown 9-10-11-9 Brown 10-10-13-14 Brown 9-12-13-12 Brown	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 7 6 ft N'a 1 Visual Identification of Soil and / or Rock Sample A, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet a, fine to medium Sand, trace/little silt a, fine to coarse Sand, some gravel, trace silt a, fine to coarse Sand, some gravel, trace silt	Cohesive: 0 8-15 Stiff. Soil Engi Depth Ca Ft. b 1 5 10 15 20	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Date Finished: Date Finished: Jate Finished: 1 & 2 & 1 & 3 & 4 & 5 & 1 6 & 1 7 & 2 8 & 1 9 & 2	D + Hard. An D + Hard. An D + Hard. An D - Hard. June 12, 2017 June 12, 2017 TF Sample Depth Rec Depth B'' 1'0"-3'0" B'' 10'0"-12'0" G'' 12'0"-14'0" 4'' 15'0"-17'0" 8'' 19'0"-21'0" 4'' 24'0"-26'0"	Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2 1-1-1-2 2-1-2-1 2-1-2-1 1-1-1-2 2-1-2-1 1-1-1-2 1-1-1-1	PRINC sed Buidin rewsbury ester, MA	AMER FALL (IN) 30" G LOG SHEET g BORING B-4 (Page St. PROJECT NO. 17-00 DATE DEPTH CASING STA 6/12/17 7 ft n/a Upon Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat
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> 2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff, 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 ound Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Date Started: June 6, 201 Date Finished: June 6, 201 Date Started: June 6, 201 Date Started: June 6, 201 Date Timished: June 6, 201 Sing Sampt 4 1'0''-3' 2 3'0''-5' 3 5'0''-7' 4 7'0''-9' 5 10'0''-1' 6 12'0''-1' 8 20'0''-2' 9 24'0''-2' <	Some 20 to 35% HAMMER WGT (I And 35% to 50% HAMMER FALL (I TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA 7 DATE 6/6/17 6/6/17 9" 7-6-7-5 3" 9" 5-4-6-6 3' Brown, Sa 9" 5-4-6-6 3' Brown, Sa 9" 3-3-3-4 9' Black, Org '0" 1-2-1-2 Black, Org Black, Org '0" 1-1-2-3 (FLUV) '0" 1-1-2-3 Grey, Silt '0" 1-1-2-3 Grey, Silt	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample wn, loamy, silty Sand w/ gravel (FILL) and, ash, gravel, cinders (URBAN FILL) clay w/ trace wood, brick, glass (FILL) ganic Silt ganic Silt ganic Silt, trace fibers, wet (ORGANIC) & Clay w/ fine sand (FLUVIAL) TAL) FALD CLAY	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Date Soil Engineer/ Depth Casing Ft. bl/ft 40 45 50 55 60	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 3 -4 Hard. An Exploration Corp. otechnical Drilling otechnical Drilling otechnical Drive minster, MA 01453 978 840-0391 Elevation: testarted: June 6, 2017 Driller: TF Geologist: No. Pen/Rec Depth 12 24" 39'0"-41'0" 11 20" 44'0"-46'0" 14 14" 49'0"-51'0" 115 14" 54'0"-56'0" 54'0"-56'0"	me 20 to 35% HAMMER WG a 35% to 50% HAMMER FAI FEST BORING LO Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ 1-1-1-1 Brown 9-10-11-9 Brown 10-10-13-14 Brown 9-12-13-12 Brown	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 7 6 ft N'a 1 Visual Identification of Soil and / or Rock Sample A, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet a, fine to medium Sand, trace/little silt a, fine to coarse Sand, some gravel, trace silt a, fine to coarse Sand, some gravel, trace silt	Cohesive: 0 8-15 Stiff. 8-15 Stiff. 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Date Finished: Date Finished: Joate Finished: 1 & 2 & 0 3 & 4 4 & 2 5 & 1 6 & 1 7 & 2 8 & 1 9 & 2 10 & 2	D + Hard. An D + Hard. An D + Hard. An D - Hard. June 12, 2017 June 12, 2017 TF Sample Depth Rec Depth B'' 1'0"-3'0" B'' 10'0"-12'0" G'' 12'0"-14'0" 4'' 15'0"-17'0" 8'' 19'0"-21'0" 4'' 24'0"-26'0"	35% to 50% FEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2 1-1-1-2 2-1-2-1 2-1-2-1 1-1-1-2 2-1-1-1 1-1-1-1 1-1-1-1	PRINC sed Buidin rewsbury ester, MA	MER FALL (IN) 30" G LOG SHEET g BORING B-4 (Page St. PROJECT NO. 17-00 DATE Depth GROUNDWATER OBSERVAT 0 DATE: June GROUNDWATER OBSERVAT 0 OT 6/12/17 7 ft n/a Visual Identification of Soil and / or Rock Sample 0 OT Asphalt Visual Identification 0 OT Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat Clay & Silt w/ fine sand seams Clay & Silt w/ fine sand seams
D - 2 V Soft, 2 - 4 Soft, 4 - 8 M 15 - 30 V. Stiff, 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 ound Elevation: Date Started: June 6, 201 Driller: TF ineer/Geologist: sing Samp V/h No. Pen/Rec Depti 1 1'0"-3' 2 3'0"-5' 3 5'0"-7' 4 7'0"-9' 5 10'0"-1' 6 12'0"-1-1' 6 12'0"-1-1' 7 15'0"-1' 8 20'0"-2' 9 24'0"-2' 10 29'0"-3'	Some 20 to 35% HAMMER WGT (I And 35% to 50% HAMMER FALL (I TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA DATE 6/6/17 6/6/17 0" 7-6-7-5 3" 7 DATE 6/6/17 6/6/17 0" 7-6-7-5 3" 0" 7-6-7-5 3" 0" 5-4-6-6 3' Brown, Sa 0" 4-5-5-6 Sand, silt, 0" 1-2-1-2 Black, Org '0" 1-1-1-2 Black, Org '0" 1-1-2-3 (FLUV) '0" 1-1-2-3 (FLUV) '0" 1-1-2-3 Grey, Find	B) 140 lb. N) 30" SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample vn, loamy, silty Sand w/ gravel (FILL) and, ash, gravel, cinders (URBAN FILL) clay w/ trace wood, brick, organic gravel w/ trace wood, brick, glass (FILL) ganic Silt ganic Silt, trace fibers, wet (ORGANIC) & Clay w/ fine sand (FLUVIAL) //AL) & Sand w/ silt, wet (FLUVIAL) & Clay silt wet (FLUVIAL)	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Date Soil Engineer// Depth Casing Ft. bl/ft 40 45 50 55 60 65	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 3 -4 Hard. An Exploration Corp. otechnical Drilling otechnical Drilling otechnical Drive minster, MA 01453 978 840-0391 Elevation: testarted: June 6, 2017 Driller: TF Geologist: No. Pen/Rec Depth 12 24" 39'0"-41'0" 11 20" 44'0"-46'0" 14 14" 49'0"-51'0" 115 14" 54'0"-56'0" 54'0"-56'0"	me 20 to 35% HAMMER WG a 35% to 50% HAMMER FAI FEST BORING LO Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ 1-1-1-1 Brown 9-10-11-9 Brown 10-10-13-14 Brown 9-12-13-12 Brown	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 7 6 ft N'a 1 Visual Identification of Soil and / or Rock Sample A, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet a, fine to medium Sand, trace/little silt a, fine to coarse Sand, some gravel, trace silt a, fine to coarse Sand, some gravel, trace silt	Cohesive: 0 8-15 Stiff. Soil Engi Depth Ca Ft. b 1 1 10 15 20 25	Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Date Finished: Date Finished: Joate Finished: 1 & 2 & 0 3 & 4 4 & 2 5 & 1 6 & 1 7 & 2 8 & 1 9 & 2 10 & 2	p + Hard. An $p + Hard.$	35% to 50% FEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2 1-1-1-2 2-1-2-1 2-1-2-1 1-1-1-2 2-1-1-1 1-1-1-1 1-1-1-1	PRINC sed Buidin rewsbury ester, MA	MER FALL (IN) 30" G LOG SHEET g BORING B-4 (Page St. PROJECT NO. 17-00 DATE Depth GROUNDWATER OBSERVAT 0 DATE: June GROUNDWATER OBSERVAT 0 OT 6/12/17 7 ft n/a Visual Identification of Soil and / or Rock Sample 0 OT Asphalt Visual Identification 0 OT Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat Clay & Silt w/ fine sand seams Clay & Silt w/ fine sand seams
0 - 2 V Soft, 2 - 4 Soft, 4 - 8 M 15 - 30 V. Stiff. 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 round Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Driller: TF gineer/Geologist: asing 2 30°-5' 3 50°-7' 4 70°-9' 5 10'0°-1' 6 12'0°-1' 6 12'0°-1' 6 12'0°-1' 8 20'0°-2' 9 24'0°-2' 10 29'0°-3	Some 20 to 35% HAMMER WGT (I And 35% to 50% HAMMER FALL (I TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA 7 DATE 6/6/17 6/6/17 9" 7-6-7-5 3" 9" 5-4-6-6 3' Brown, Sa 9" 5-4-6-6 3' Brown, Sa 9" 3-3-3-4 9' Black, Org '0" 1-2-1-2 Black, Org Black, Org '0" 1-1-2-3 (FLUV) '0" 1-1-2-3 Grey, Silt '0" 1-1-2-3 Grey, Silt	B) 140 lb. N) 30" C SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample wn, loamy, silty Sand w/ gravel (FILL) and, ash, gravel, cinders (URBAN FILL) clay w/ trace wood, brick, glass (FILL) ganic Silt ganic Silt ganic Silt, trace fibers, wet (ORGANIC) & Clay w/ fine sand (FLUVIAL) TAL) FALD CLAY	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bl/ft 40 45 50 55 50 55 60 60 65 70	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 3 -4 Hard. An Exploration Corp. otechnical Drilling otechnical Drilling otechnical Drive minster, MA 01453 978 840-0391 Elevation: testarted: June 6, 2017 Driller: TF Geologist: No. Pen/Rec Depth 12 24" 39'0"-41'0" 11 20" 44'0"-46'0" 14 14" 49'0"-51'0" 115 14" 54'0"-56'0" 54'0"-56'0"	me 20 to 35% HAMMER WG a 35% to 50% HAMMER FAI FEST BORING LO Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ 1-1-1-1 Brown 9-10-11-9 Brown 10-10-13-14 Brown 9-12-13-12 Brown	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 7 6 ft N'a 1 Visual Identification of Soil and / or Rock Sample A, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet a, fine to medium Sand, trace/little silt a, fine to coarse Sand, some gravel, trace silt a, fine to coarse Sand, some gravel, trace silt	Cohesive: 0 8-15 Stiff. 8-15 Stiff. 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Soil Explorati Geotechnical J Groundwater Mo 148 Pioneer Leominster, M. 978 840-0 ound Elevation: Date Started: Date Finished: Date Finished: Date Finished: Joate Finished: 1 & 2 & 0 3 & 4 4 & 2 5 & 1 6 & 1 7 & 2 8 & 1 9 & 2 10 & 2	p + Hard. An $p + Hard.$	35% to 50% FEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2 1-1-1-2 2-1-2-1 2-1-2-1 1-1-1-2 2-1-1-1 1-1-1-1 1-1-1-1	PRINC sed Buidin rewsbury ester, MA 4" 9' 9' 15'	MER FALL (IN) 30" g BORING B-4 (Page g PROJECT NO. 17-00 DATE PROJECT NO. 17-00 DATE DEPTH CASING STA 6/12/17 7 ft N/a Upon Visual Identification of Soil and / or Rock Sample Asphalt Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat Clay & Silt w/ fine sand seams
0 -2 V Soft, 2 -4 Soft, 4 -8 M 15 -30 V. Stiff. 30 + Hard. Soil Exploration Corp. Geotechnical Drilling Groundwater Monitor Well 148 Pioneer Drive Leominster, MA 01453 978 840-0391 round Elevation: Date Started: June 6, 201 Date Finished: June 6, 201 Date Finished: June 6, 201 Driller: TF rimeer/Geologist: asing 2 30"-5' 3 5'0"-7' 4 7'0"-9' 5 10'0"-1' 6 12'0"-1. 6 12'0"-1. 7 15'0"-1' 8 20'0"-2. 9 24'0"-2. 10 29'0"-3	Some 20 to 35% HAMMER WGT (I And 35% to 50% HAMMER FALL (I TEST BORING LOO Proposed Building Site: 233 Shrewsbury St. Worcester, MA 7 DATE 6/6/17 6/6/17 9" 7-6-7-5 3" 9" 5-4-6-6 3' Brown, Sa 9" 5-4-6-6 3' Brown, Sa 9" 3-3-3-4 9' Black, Org '0" 1-2-1-2 Black, Org Black, Org '0" 1-1-2-3 (FLUV) '0" 1-1-2-3 Grey, Silt '0" 1-1-2-3 Grey, Silt	B) 140 lb. N) 30" SHEET 5 BORING B-3 (Page 1/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS DEPTH CASING STABILIZATION 6 ft n/a Visual Identification of Soil and / or Rock Sample Visual Identification of Soil and / or Rock Sample vn, loamy, silty Sand w/ gravel (FILL) and, ash, gravel, cinders (URBAN FILL) clay w/ trace wood, brick, organic gravel w/ trace wood, brick, glass (FILL) ganic Silt ganic Silt, trace fibers, wet (ORGANIC) & Clay w/ fine sand (FLUVIAL) //AL) & Sand w/ silt, wet (FLUVIAL) & Clay silt wet (FLUVIAL)	Cohesive: 0 -2 V : 8-15 Stiff. 15 - 30 Soil F Ge Ground 1 Leo Ground 1 Date Soil Engineer/ Depth Casing Ft. bl/ft 40 45 50 55 50 55 60 60 65 70	Soft, 2 -4 Soft, 4 -8 M Soft, 2 -4 Soft, 3 -4 Soft, 3 -4 Soft, 3 -8 M Soft	me 20 to 35% HAMMER WG a 35% to 50% HAMMER FAI FEST BORING LO Proposed Building Site: 233 Shrewsbury Street Worcester, MA DA 6/6/ 1-1-1-1 Brown 9-10-11-9 Brown 10-10-13-14 Brown 9-12-13-12 Brown	T (LB) 140 lb. L(IN) 30" DG SHEET 6 BORING B-3 (Page 2/2) PROJECT NO. 17-0604 DATE: June 6, 2017 GROUNDWATER OBSERVATIONS TE DEPTH CASING STABILIZATION 7 6 ft N'a 1 Visual Identification of Soil and / or Rock Sample A, Silt & Clay, wet (FLUVIAL) d lenses a, fine to coarse Sand, little gravel, trace silt, wet a, fine to medium Sand, trace/little silt a, fine to coarse Sand, some gravel, trace silt a, fine to coarse Sand, some gravel, trace silt	Cohesive: 0 8-15 Stiff. 8-15 Stiff. 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Soil Explorati Geotechnical I Groundwater Mo 148 Pioneer Leominster, M. 978 840-00 ound Elevation: Date Started: Date Finished: Date Finished: Date Finished: 1 & 2 & 0 3 & 4 & 2 3 & 4 & 2 5 & 1 6 & 1 7 & 2 8 & 1 6 & 1 7 & 2 8 & 1 9 & 2 10 & 2 11 & 2	An An <td>35% to 50% FEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2 1-1-1-2 2-1-2-1 2-1-2-1 1-1-1-2 2-1-1-1 1-1-1-1 1-1-1-1</td> <td>PRINC sed Buidin rewsbury ester, MA 4" 9' 9' 15'</td> <td>MER FALL (IN) 30" G LOOG SHEET g BORING B-4 (Page g PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT DATE: June Marking GROUNDWATER OBSERVAT DATE DEPTH CASING STA 6/12/17 7 ft n/a Upon Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat Clay & Silt w/ fine sand seams Brown, Silt & Clay w/ sand seams</td>	35% to 50% FEST BO Propos Site: 233 Shi Worce Blows/6" 7-5-6-5 5-4-5-6 4-4-3-2 1-2-1-2 1-1-2-2 1-1-1-2 2-1-2-1 2-1-2-1 1-1-1-2 2-1-1-1 1-1-1-1 1-1-1-1	PRINC sed Buidin rewsbury ester, MA 4" 9' 9' 15'	MER FALL (IN) 30" G LOOG SHEET g BORING B-4 (Page g PROJECT NO. 17-0 DATE: June GROUNDWATER OBSERVAT DATE: June Marking GROUNDWATER OBSERVAT DATE DEPTH CASING STA 6/12/17 7 ft n/a Upon Visual Identification of Soil and / or Rock Sample Asphalt Sand, cinders, ash, gravel Same w/ rubble, dry (FILL) Brown Sand, ash, gravel, brick, glass (URBAN F Sand, gravel, trace ash (FILL) Black, Organic Silt w/ fibers, wet (ORGANIC) Black, Organic, silty-fibrous Peat Clay & Silt w/ fine sand seams Brown, Silt & Clay w/ sand seams

				Т	EST BO	RINC	G LOG	ſ		SHI	EET	4
			ation C		Propo	sed Buildi	ng		DODD			2 (2)
			cal Drillin Monitor		Site: 233 S	hrewsbury	st.		BORIN	G B-2	(Page	e 2/2)
			neer Drive			ester, MA		ſ	PROJE	CT NO	. 17-0	604
	L¢		, MA 014 40-0391	100						DATE:		
	Ground			Luna 2, 2017					IDWATE			
		ate Star e Finish		June 2, 2017 June 2, 2017			DATE	DEPTI		SING	51 <i>P</i>	BILIZATION
a 11		Dril		PG								
Soil . Depth	Engineer Casing	/Geolog		Sample					Visual Ide	entification		
Ft.	bl/ft	No.	Pen/Rec	Depth	Blows/6"	Strata		of	Soil and / o	r Rock San	nple	
40		13	21"	40'0"-42'0"	woh-1-1-1							
40		13	21	400-420	WOII-1-1-1							
							Tan, Silt & w/ sand sea					
45		14	24"	45'0"-47'0"	1-1-1-1							
10			24	400 470				(FI	LUVIAL)			
50		15	18"	50'0"-52'0"	woh-1-1-2		Brown, Silt	, Clay & F	ine Sand			
						53'						
						55						
55		16	21"	55'0"-57'0"	6-8-8-9		Tan, fine to	medium S	Sand, trace	gravel, tra	ace silt	(SAND)
							End of bori Water at 6 f		mpletion			
60												
65												
70												
7E												
75												
79												
Notes:	Hollow	Stem 4	uger Siz	ze - 4 1/4"		-	-					
			-									
	onless: 0 M Dense,			10 Loose, Trac + V Little		ID SIZ	E (IN)	C.	ASING	SAMP S		CORE TYPE
	ve: 0 -2 V						AER WGT (LB	6)		140		

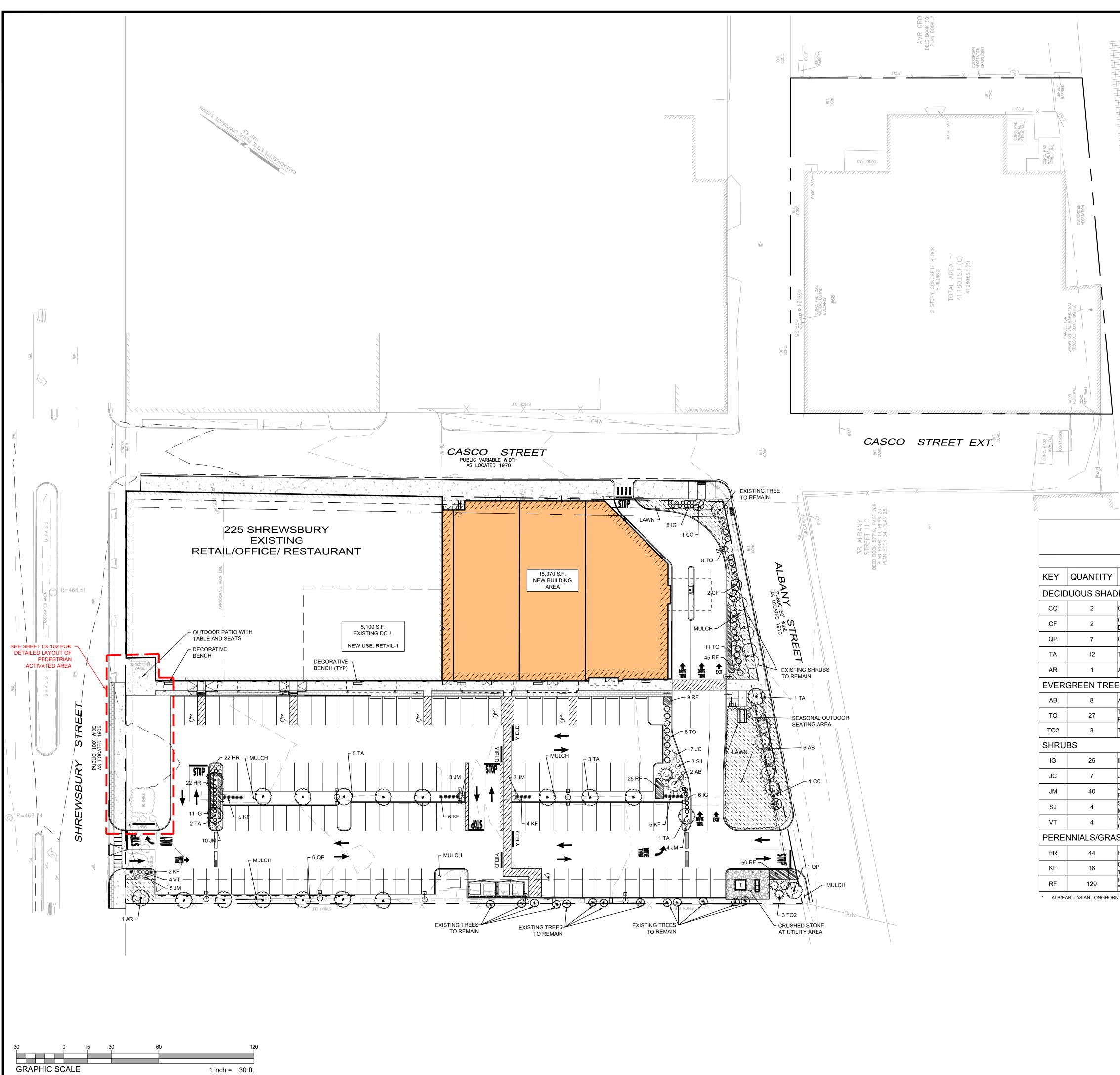
Date Finisher: If you completion Gill 17 n/a Upon Completion Date Finisher: Update Visual Identification Vis					Т	EST BO	RING	LOG	ſ	SH	EET 8
Date Starter June 12, 2017 DATE DEPTH CASIG STARIG STARIG <thstar< td=""><td></td><td>G Grou</td><td>eotechni indwater 148 Pior ominster</td><td>ical Drillin Monitor neer Drive r, MA 014</td><td>ng Well</td><td>Site: 233 SI</td><td>nrewsbury</td><td>-</td><td>Ļ</td><td>PROJECT NO</td><td>D. 17-0604</td></thstar<>		G Grou	eotechni indwater 148 Pior ominster	ical Drillin Monitor neer Drive r, MA 014	ng Well	Site: 233 SI	nrewsbury	-	Ļ	PROJECT NO	D. 17-0604
Oppin Casing bit No. Parking Oppin Blows/6" Strata O'isial identification of Soil and / or Rock Sample 40 12 12 39°-41° 5-6-6-7 39' Brown, fine to medium Sand, trace silt (SAND) 45 13 12" 44'0°-46'0° 12-16-13-20 48' Brown, fine to coarse Sand, little gravel 50 14 12" 49'0°-51'0° 14-17-18-25 48' meathered rock, shale (WEATHERED ROCK) 55 15 15 10" 54'0°-56'0° 19-24-29-52 End of Boring at 56 ft 66 I	Soil	Da Dat	ate Star e Finisł Dril	ted: ned: ller:	June 12, 2017			DATE	DEPTH	CASING	STABILIZATION
10 12 <th< td=""><td>Depth</td><td>Casing</td><td></td><td></td><td></td><td>Plows/6"</td><td>Strata</td><td></td><td>ef S</td><td></td><td></td></th<>	Depth	Casing				Plows/6"	Strata		ef S		
14 12* 49'0*-51'0* 14-17-18-25 48'	40		12	12"	39'0"-41'0"	5-6-6-7		(5	to medium SAND)	Sand, trace silt	
55			14	12"	49'0"-51'0"	14-17-18-25	48'	weathered n	ock, shale	(WEATHERED R	COCK)
60 60 <td< td=""><td>55</td><td></td><td>15</td><td>10"</td><td>54'0"-56'0"</td><td>19-24-29-52</td><td></td><td></td><td></td><td>pletion</td><td></td></td<>	55		15	10"	54'0"-56'0"	19-24-29-52				pletion	
75 Image: Constraint of the second secon										•	
Notes: NW Casing Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, Trace 0 to 10% CASING SAMPLE CORE TYPE	70										
Cohesionless: 0 - 4 V. Loose, 4 - 10 Loose, Trace 0 to 10% CASING SAMPLE CORE TYPE	75										
10 -50 M Dense, 50 -50 Dense, 50 + Y Linue 10 10 20/0 ID SIZE (IIV) 55	Cohesic	onless: 0	- 4 V. Lo				ID SIZE	E (IN)	CA		PLE CORE TYPE SS
Cohesive: 0 -2 V Soft, 2 -4 Soft, 4 -8 M Some 20 to 35% HAMMER WGT (LB) 140 lb. 8 -15 Stiff. 15 -30 V. Stiff. 30 + Hard. And 35% to 50% HAMMER FALL (IN) 30"											



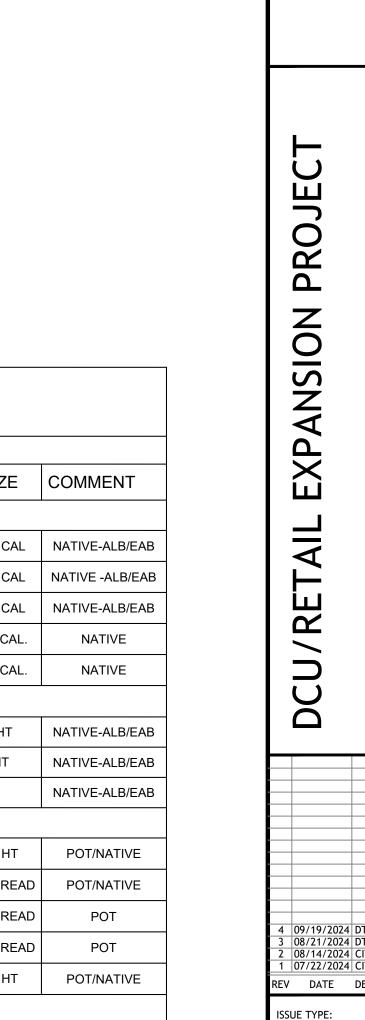
	G Grou	eotechni indwater 148 Pior ominster	ration C ical Drillin Monitor neer Drive r, MA 014 40-0391	ng Well	Propose Site: 233 Shr Worces	-	Street			D. 17-0647 E: June 30, 2017
Soil I	Dat Engineer	ate Star e Finisł Dril	ted: ned: ller:	June 29, 2017 June 29, 2017 TF			DATE 6/29/17	GROUN DEPTH 7 ft	n/a	STABILIZATI
Depth Ft.	Casing bl/ft	No.	Pen/Rec	Sample Depth	Blows/6"	Strata		of	Visual Identificatio Soil and / or Rock Sa	
1		1	12"	1'0" – 3'0"	4-5-7-6	4"	Asphalt ————————————————————————————————————	n, fine to		ittle gravel, little tr
5		2	6"	5'0" – 7'0"	4-4-6-6		Sand & Grav	vel w/ silt,	rubble, ash, wet	(FILL)
10		3	10"	10'0" – 12'0"	4-4-6-7		Brown, fine	to coarse	Sand, trace rubble,	wet (FILL)
		4	12"	12'0" – 14'0"	1-1-1-1	12'			Silt, wood fibers (
15		5	12"	15'0"- 17'0"	9-8-4-3	15'	Grey, Clay ا	& Silt, littl	e fine sand (FLU	VIAL)
20		6	21"	20'0" – 22'0"	WOH-1-1-1	23'				
25		7	18"	25'0" – 27'0"	4-5-7-8		Brown, med	lium to coa	arse Sand, little gra	wel, minor silt, wet
30							End of Borin Water at 7 ft		due to "Running S npletion	Sand"
35	11-11	G4		- 4.1/4"						
			-	e - 4 1/4"						
10 -30 N Cohesiv	1 Dense, e: 0 -2 V	30 -50 I 7 Soft, 2	Dose, 4 - 1 Dense, 50 -4 Soft, - <u>ff, 30 + H</u>	+ V Little 4 -8 M Some	10 to 20%		Æ (IN) MER WGT (LB) MER FALL (IN))	14	PLE CORE TYF SS 10 lb. 30"

	G Grou	eotechni undwater	cation C cal Drillin Monitor neer Drive	C orp. ng Well	Propose Site: 233 Shr	ed Buildin	g	BORING B-	
		ominster	, MA 014		Worcest	er, MA		PROJECT N	O. 17-0647 E: June 30, 2017
	Ground		40-0391 on:				GROU	JNDWATER OBS	
		ate Start e Finish Dril	ned:	June 29, 2017 June 29, 2017 TF			DATE DEP 6/29/17 8 ft		STABILIZATION
Soil H	Engineer			11					
Depth Ft.	Casing bl/ft	No.	Pen/Rec	Sample	Blows/6"	Strata	-	Visual Identification of Soil and / or Rock S	
гι.	01/11	INO.	Tenvice	Depth	Blows/0		Asphalt	of Soft and / of Rock S	ampie
						4"			
1		1	10"	1'0" – 3'0"	5-7-8-6		Brown, fine to med	lium Sand, little grav	el, little silt
5		2	6"	5'0" – 7'0"	4-5-9-7		Brick, rubble (FII Trace cinders, conc		
10		3	12"	10'0" – 12'0"	5-5-6-7		f-c Sand, little grav	rel, wet (FILL)	
15		4	12"	15'0"- 17'0"	2-2-2-3	14' 18'	Organic Silt, fibers	(ORGANIC)	
20		5	24"	20'0" – 22'0"	WOH-1-1				
25		6	24"	25'0" – 27'0"	1-1-1-1			d seams and fine sand	d layers
30		7	24"	30'0"-32'0"	WOH-1-1-1				
35		8	24"	35'0" – 37'0"	1-1-1-1			Continued	
Jotes:	Hollow	y Stem A	Auger Siz	e - 4 1/4"					
			Dose, 4 - 1 Dense, 50	,		ID SIZ	E (IN)	CASING SAM	APLE CORE TYPE SS

						_ ~							1		HIGHPOINT ENGINE LAND PLANNING PERMIT EXPEDITING CIVIL ENGINEERING	ERING, INC.
	Soil]	Exploi	ration (Corp.	<u> </u>	EST BO			ř 	S	SHEET	3			CONSULTING	
	G Grou	eotechni indwater	cal Drilli Monitor	ng Well		Propose Site: 233 Shr	d Building ewsbury S			BORING B	3- 6 (pag	e 2/2)		980 WASHINGTON S SUITE 216 DEDHAM, MA 0202		
		ominster	neer Drive ;, MA 014 40-0391			Worcest	ter, MA			PROJECT N DAT		0647 e 30, 2017		CLIENT:	ww.HighpointEng.com	ı
	Ground Da		ion: ted:	June 29, 2				DATE	DEPT	NDWATER OB	BSERVA	TIONS ABILIZATION	-		N EQUITY PART	INERS
G-il	Date Engineer/	e Finish Dril	ler:	June 29, 2 TF	2017			6/29/17	8 ft	n/a			_	163 Washi Auburn, M	ngton street A 01501	
Depth Ft.		No.	Pen/Rec	Sam Dep		Blows/6"	Strata		of	Visual Identifica f Soil and / or Rock			-			
40														CONSULTANT:		
45		9	24"	45'0" –	47'0"	1-1-2-2										
								Clay & Silt little fine sa	ind seams	and fine sand lay	yers					
50		10	24"	50'0" –	· 52'0"	1-1-2-3			(FLUVIA	AL)						
55		11	12"	55'0" –	- 57'0"	11-16-17-22	54'									
								Grey, fine t		Sand, some grav	vel, some s	silt, cobble				
60		12	10"	60'0" –	62'0"	17-25-29-43		weathered 1	(G ock at bot	LACIAL) ttom				SEAL		
								End of Bor Water at 8	ing at 62 f	it mpletion						
65																
70																
70																
75																
			G	4.1/4]			
	onless: 0 -		-	ze - 4 1/4" 10 Loose,	Trace	e 0 to 10%			C	ASING SA	AMPLE	CORE TYPE				
Cohesiv	M Dense, /e: 0 -2 V	Soft, 2	-4 Soft,	4 -8 M	Little	e 20 to 35%	HAM	ZE (IN) MER WGT (LE			SS 140 lb.					
<u>8 -15 St</u>	tiff, 15-3	30 V. Sti	<u>ff, 30 + I</u>	Hard.	And	35% to 50%	HAM	<u>MER FALL (IN</u>	[)		30"					
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SITE PLANT LIST	

BOTANICAL NAME	COMMON NAME	MIN. SIZE	COMMENT
E TREES / FLOWERING TR	EES		
CERCIS CANADENSIS	EASTERN REDBUD	3.0"-3.5" CAL	NATIVE-ALB/EAB
CORNUS FLORIDA "CHEROKEE DAYBREAK	CHEROKEE DAYBREAK FLOWERING DOGWOOD	3.0"-3.5" CAL	NATIVE -ALB/EAB
QUERCUS PALUSTRIS	PIN OAK	3.0"-3.5" CAL	NATIVE-ALB/EAB
TILIA AMERICANA	AMERICAN LINDEN/BASWOOD	3.0"-3.5" CAL.	NATIVE
ACER RUBRUM	ARMSTRONG MAPLE	3.0"-3.5" CAL.	NATIVE
ËS			
ABIES CONCOLOR	WHITE FIR	8'-10' HT	NATIVE-ALB/EAB
THUJA OCCIDENTALIS "AMERICAN PILLAR"	AMERICAN PILLAR ARBORVITAE	6'-8' HT	NATIVE-ALB/EAB
THUJA OCCIDENTALIS "SMARAGD"	EMERALD GREEN ARBORVITAE	6'-8'	NATIVE-ALB/EAB
ILEX GLABRA 'SHAMROCK'	INKBERRY	24"-30" HT	POT/NATIVE
JUNIPERUS COMMUNIS "SMNJCB"	TORTUGA JUNIPER	18"-24" SPREAD	POT/NATIVE
JUNIPERUS X MEDIA "DAUB'S FROSTED"	DAUB'S FROSTED JUNIPER	18"-24" SPREAD	POT
SPIRAEA JAPONICA "FLAMING MOUND"	FLAMING MOUND SPIRAEA	18"-24" SPREAD	POT
VIBURNUM TRILOBUM "BAILEY COMPACT"	BAILEY COMPACT HIGHBUSH CRANBERRY	30"-36" HT	POT/NATIVE
SSES			
HEMEROCALLIS "ROSY RETURNS"	ROSY RETURN DAYLILLY	#2	STAGGERED
CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#3	AS SHOWN
RUDBECKIA FULGIDA "GOLDSTRUM"	GOLDSTRUM CONEFLOWER	#2	NATIVE
N BEETLE AND EMERALD BORER RESISTANT SP	ECIES		

* ALB/EAB = ASIAN LONGHORN BEETLE AND EMERALD BORER RESISTANT SPECIES



HIGHPOINT ENGINEERING

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LUNDGREN EQUITY PARTNERS

1, MA 02026

163 Washington street

Auburn, MA 01501

LOAM AND SEEDING NOTES:

CONTRACTOR SHALL SEED ALL DISTURBED AREAS NOT NOTED TO RECEIVE OTHER MATERIALS, AND AT AREAS SHOWN ON THE PLAN PER SPECIFICATIONS BELOW

SCIENTIFIC NAME	COMMON NAME	PROPORTION BY WEIGHT	PERCENT PURITY	PERCENTGERMINATION
FESTUCA RUBRA "RUBRA"	CREEPING RED FESCUE	37%	95%	90%
PAO PRAENTENSIS "BARON"	BARON KENTUCKY BLUEGRASS	40%	85%	90%
LOLIUM PERENNE "PALMER"	PALMER PERENNIAL RYEGRASS	15%	95%	90%
FESTUCA RUBRA COMMUTATA WILMA	WILMA CHEWINGS	8%	95%	80%

1.SEED TO BE SPREAD AT MINIMUM RATE OF 5 LBS. PER 1000 SQ. FT.

2. SEEDING TO BE COMPLETED "IN SEASON" BETWEEN APRIL 1 TO JUNE 15 OR AUGUST 15 TO OCTOBER 1, EXCEPT FOR RESEEDING OF BARE SPOTS. IF UNABLE TO SEED WITHIN THESE TIMEFRAMES, CONTRACTOR TO INSTALL EROSION CONTRO MATS ON ALL SLOPES 3:1 AND OVER, HYDROSEED ALL EXPOSED AREAS, ADD SOIL STABILIZER "FLUX TERRA HP-FGM SOIL STABILIZER" AS MANUFACTURED BY "PROFILE" TO HYDROSEED (AT RATE OF 3,000 LBS PER ACRE), AT NO ADDITIONAL COST THE OWNER. CONTRACTOR TO COMPLETE ALL ABOVE "OUT OF SEASON" REQUIREMENTS AND THEN ALSO BE RESPONSIBLE FOR RE-GRADING AND RE-SEEDING ALL DISTURBED, ERODED, OR BARE SPOTS WITHIN NEXT CLOSEST PLANTING SEASON IN FALL OR SPRING AT NO ADDITIONAL COST TO OWNER. CONTRACTOR RESPONSIBLE FOR ALL MAINTENANCE UNTIL FINAL ACCEPTANCE OF LAWN AREAS INCLUDING: WATERING, ADDING FERTILIZERS AND LIME AND MOWING AT NO ADDITIONAL CO TO OWNER.

3.COMMERCIAL FERTILIZER SHALL BE APPLIED AT THE RATE OF 25 POUNDS PER 1000 SQ. FT. OR AS RECOMMENDED BY THE TESTING AGENCY. LIME TO BE SPREAD AT THE RATE OF 100 POUNDS PER 1000 SQ. FT OR AS RECOMMENDED BY THE TESTI AGENCY. COMMERCIAL FERTILIZER SHALL BE A COMPLETE FERTILIZER CONTAINING AT LEAST 50% OF THE NITROGEN OF WHICH IS DERIVED FROM NATURAL ORGANIZE SOURCES OF UREAFORM. IT SHALL CONTAIN THE FOLLOWING PERCENTAGE BY WEIGHT: NITROGEN (N) 10%, PHOSPHORUS (P) 6%, POTASH (K) 4%. LIME SHALL BE AN APPROVED AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 85% OF TOTAL CARBONATES. LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT 50% WILL PASS A 100 MESH SIEVE AND 90% WILL PASS THROUGH A 20 MESH SIEVE.

4. LAWN AREAS TO BE SEEDED BY SOWING EVENLY WITH AN APPROVED MECHANICAL SEEDER AT THE RATE OF TEN POUNDS PER 1000 SQUARE FEET.

5.CONTRACTOR RESPONSIBLE FOR WATERING, MOWING, AND RESEEDING OF LAWN BARE SPOTS UNTIL A UNIFORM, HEALTHY STAND OF GRASS IS ESTABLISHED AND ACCEPTED.

	NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA, ANY TREES NOTED AS "SEAL OR SELECTED SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.	
	ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.	
	CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON PLANS SHALL GOVERN OVER PLANT LIST.	
	ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.	
	ALL PLANT MATERIALS INSTALLED SHALL MEET THE GUIDELINES ESTABLISHED BY THE STANDARDS FOR	
	NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE.	
	ALL DISTURBED AREAS NOT OTHERWISE NOTED SHALL RECEIVE 6" OF SUITABLE LOAM & SEED LAWNS WITH 3:1 OR GREATER SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET.	
	ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR FALL PLANTING.	
	TREES SHALL HAVE A MINIMUM CALIPER AS INDICATED ON THE PLANTING SCHEDULE TAKEN ONE FOOT	
	ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 3" OF PINE BARK MULCH. GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH	
	ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.	
	ALL TREE STAKES SHALL BE STAINED DARK BROWN.	ARBORKNO APPROVEL
	CONTRACTOR RESPONSIBLE FOR WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.	
	ALL LANDSCAPE AREAS WITH SHRUBS, TREES AND PERENNIALS TO HAVE 18" MINIMUM DEPTH OF TOPSOIL. THE 18" OF TOPSOIL AROUND TREES AND SHRUBS DOES NOT INCLUDE AMENDED PLANTING SOIL WITHIN TREE/SHRUB PIT FOR FULL DEPTH OF ROOTBALLS. SEE PLANTING DETAILS FOR PLANTING DEPTH AT SHRUB AND TREES. ALL AREAS OF LOAM AND SEED TO HAVE A MINIMUM OF 6" DEPTH OF TOPSOIL. TOPSOIL TO BE TESTED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO	3" BARK M
	PURCHASE AND OR PLACEMENT. GENERAL CONTRACTOR, DEMOLITION CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE PROPER DEPTH OF EXISTING MATERIAL REMOVAL ACROSS THE SITE SO THAT 18" MINIMUM AND 6" MINIMUM DEPTHS OF PROPOSED TOPSOIL NOTED ABOVE ARE MET AT NO	WARNING
	ADDITIONAL COST TO THE OWNER. SEE TOPSOIL DETAIL.	GRADE
		SET ANGL
	SEED. SEE	- STEEL E
	LANDSCAPE PLAN FOR TYPE	
		PLANTING SETTLE W
	TOPSOIL (NO STONES	- 3 X DIA. OF ROOTBALL WITH SLOPED
	6" MIN. @ LAWNS THAN 3/8")	SIDES CUT AND
	18" @ PLANT BED	
	COMPACTED SUBGRADE SOILS.	
THE	TEXTURE CLASS <u>% OF TOTAL WEIGHT</u>	AND THE AND
	SAND 45% - 65% SILT 15% - 35% CLAY 5% - 20%	
		(2) MIN. 2" X 2" X 8' WOOD POSTS FOR TREES UNDER 3"
		CALIPER
	SIEVE % PASSING 3/8" 100	
	NO. 4 85-100 NO. 40 60-85 NO. 100 38-60	10'-0" FOR TREES > 3" CAL. 8'0" FOR TREES 3" CAL. AND UNDER
	NO. 200 10-35 20 um LESS THAN 5%	6" MIN. TOPSOIL, NEW
		OR EXISTING
ROL	NOTES: 1. TOP OF LOAM (TOPSOIL) IS FINISH GRADE.	PLANTING MIX 3'0" MIN.
T TO _E	2. ALL TOPSOIL (BOTH ONSITE AND OFFSITE SOURCES) SHALL BE COMPOSED OF A NATURAL,	BACK FILL SEE NOTE 2 &3.
IN DST	FERTILE, FRIABLE SOIL TYPICAL OF CULTIVATED TOPSOILS OF THE LOCALITY. OFFSITE SOIL SHALL BE SUITABLE FOR THE GERMINATION OF SEEDS AND SUPPORT OF VEGETATIVE GROWTH, WITH ADDITIVES, IF REQUIRED, TO ACHIEVE PARTICLE DISTRIBUTION AND ORGANIC CONTENT BELOW.	UNDISTURBED SOIL 3 X DIA. OF ROOTBALL
	TOPSOIL SHALL BE TAKEN FROM A WELL-DRAINED, ARIABLE SITE, FREE OF SUBSOIL, LARGE STONES, EARTH CLODS, STICKS, STUMPS, CLAY LUMPS, ROOTS, OTHER OBJECTIONABLE,	ROOTBALL WITH SLOPED SIDES
ГING	EXTRANEOUS MATTER OR DEBRIS NOR CONTAIN TOXIC SUBSTANCES. 3. THE CONTRACTOR SHALL PROVIDE THE OWNER / LANDSCAPE ARCHITECT WITH TOPSOIL TEST	
ES	RESULTS (RECOMMEND UMASS AMHERST SOIL TESTING LAB) FOR APPROVAL PRIOR TO OBTAINING AND PLACING THE SOIL. IF ANY TOPSOIL IS PURCHASED OR PLACED PRIOR TO APPROVAL BY	
5	OWNER / LANDSCAPE ARCHITECT, IT IS AT CONTRACTORS RISK, AND IT CAN BE REMOVED AT NO ADDITIONAL COST TO THE OWNER. IF THE PLANTING SOIL (BOTH ONSITE AND OFFSITE SOURCES) DOES NOT FALL WITHIN THE REQUIRED SIEVE ANALYSIS. TEXTURAL CLASS. ORGANIC CONTENT. OR	2.5 X ROOTBALL
3	PH RANGE, IT SHALL BE ADJUSTED TO MEET THE SPECIFICATIONS THROUGH THE ADDITION OF SAND, COMPOST, LIMESTONE, OR ALUMINUM SULFATE TO BRING IT WITHIN THE SPECIFIED LIMITS	
Y	AT NO ADDITIONAL COST TO THE OWNER. 4. TOPSOIL SHALL HAVE A PH VALUE BETWEEN 5.5 AND 6.5. TOPSOIL SHALL CONTAIN 8% ORGANIC	
	4. TOPSOIL SHALL HAVE A PH VALUE BETWEEN 5.5 AND 6.5. TOPSOIL SHALL CONTAIN 5% ORGANIC MATTER OF TOTAL DRY WEIGHT AND SHALL CONFORM TO THE FOLLOWING GRADATION AND TEXTURE CLASS ABOVE.	ROOTBALL WITH SLOPED SIDES
	TOP SOIL FOR LAWN, TREES, SHRUBS & PERENNIALS A2	

LANDSCAPE NOTES

LANDSCAPE ARCHITECT IN THE FIELD.

IN WRITING

ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF WORCESTER, MA.

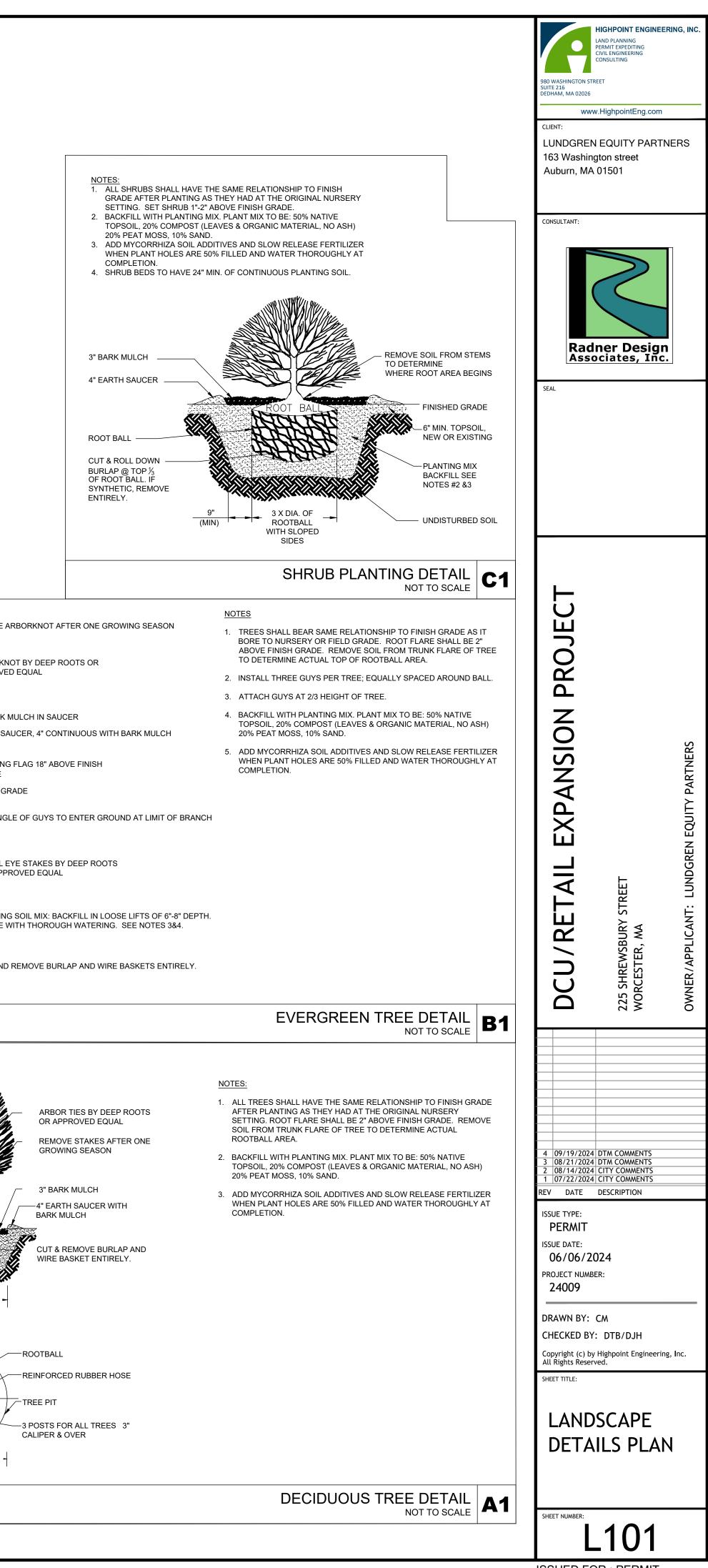
PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES, ANY PERMITTING

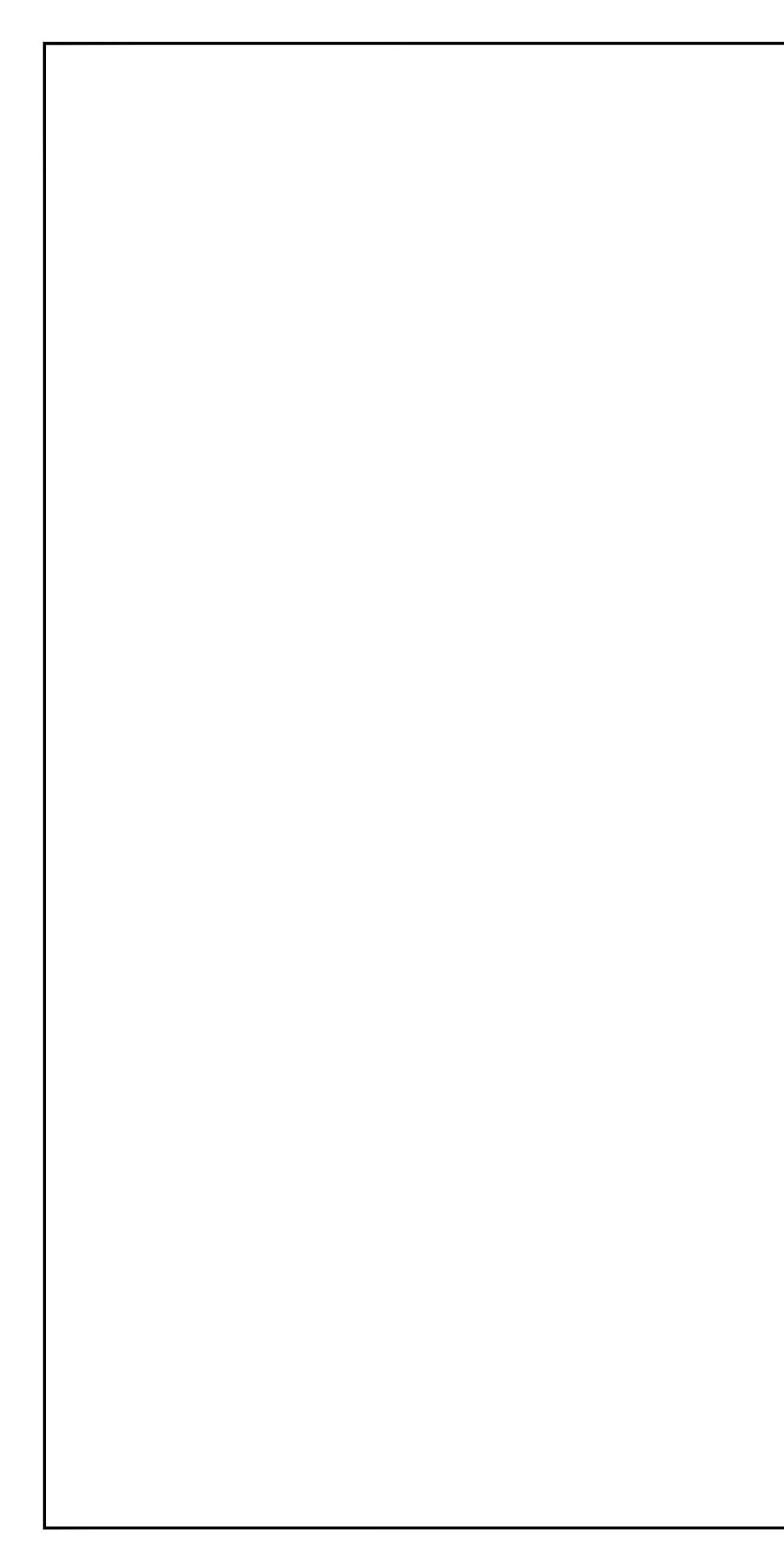
AGENCIES, AND "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS IN ADVANCE OF ANY WORK THAT WILL

REQUIRE EXCAVATION. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF NAY CONFLICTS

ALL PLANTING SHALL COME FROM THE BEST DEVELOPMENT PRACTICES GUIDEBOOK.



ISSUED FOR : PERMIT



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DCU/RETAIL EXPANSION PROJECT	225 SHREWSBURY STREET WORCESTER, MA	OWNER/APPLICANT: LUNDGREN EQUITY PARTNERS	
3 08/21/2024 2 08/14/2024 1 07/22/2024 REV DATE ISSUE TYPE: PERMIT ISSUE DATE: 06/06/20 PROJECT NUMBI 24009 DRAWN BY: CHECKED BY Copyright (c) by All Rights Reserv SHEET TITLE: LAND	ER: CM : DTB/DJH Highpoint Engineering,	Inc.	
SHEET NUMBER: L102			

