Proposed Site Development Plans

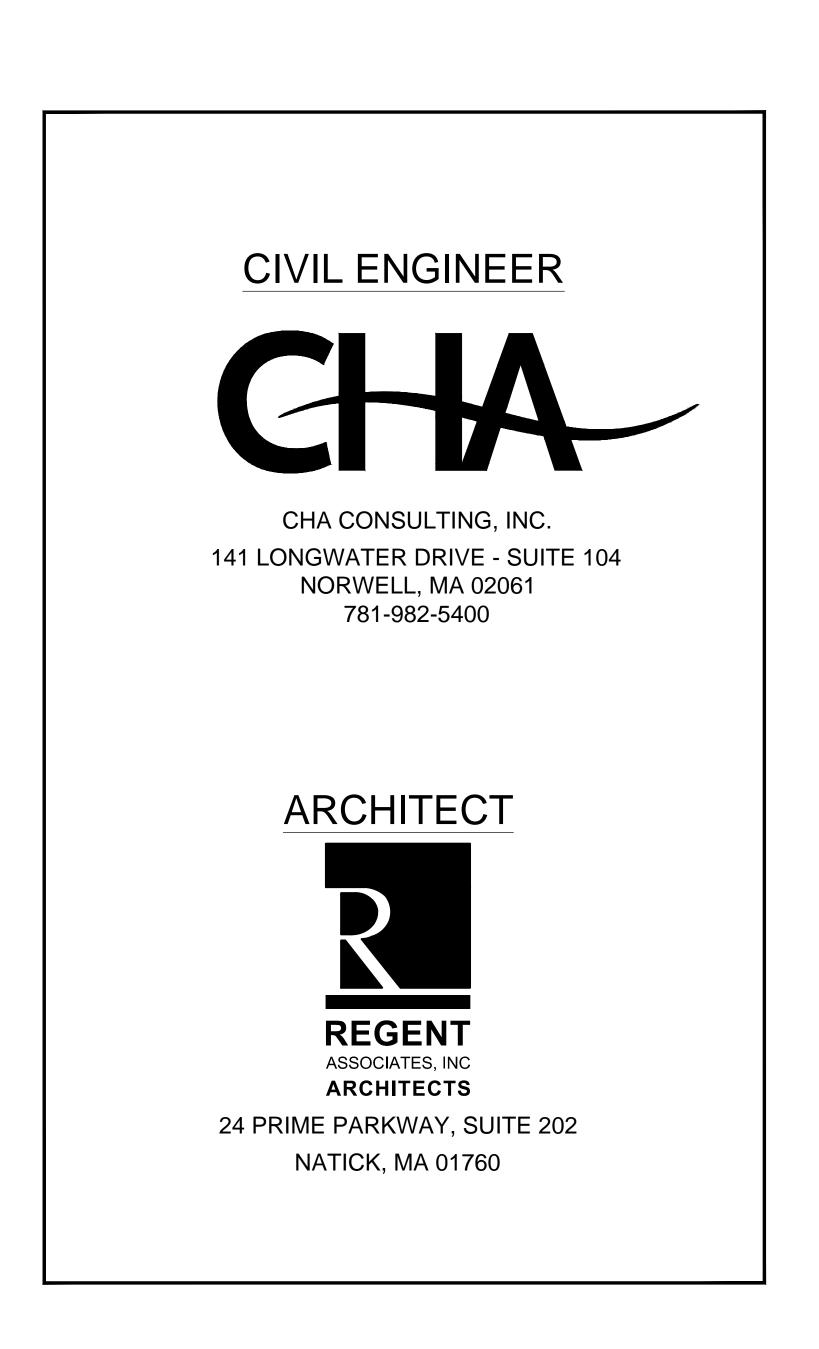
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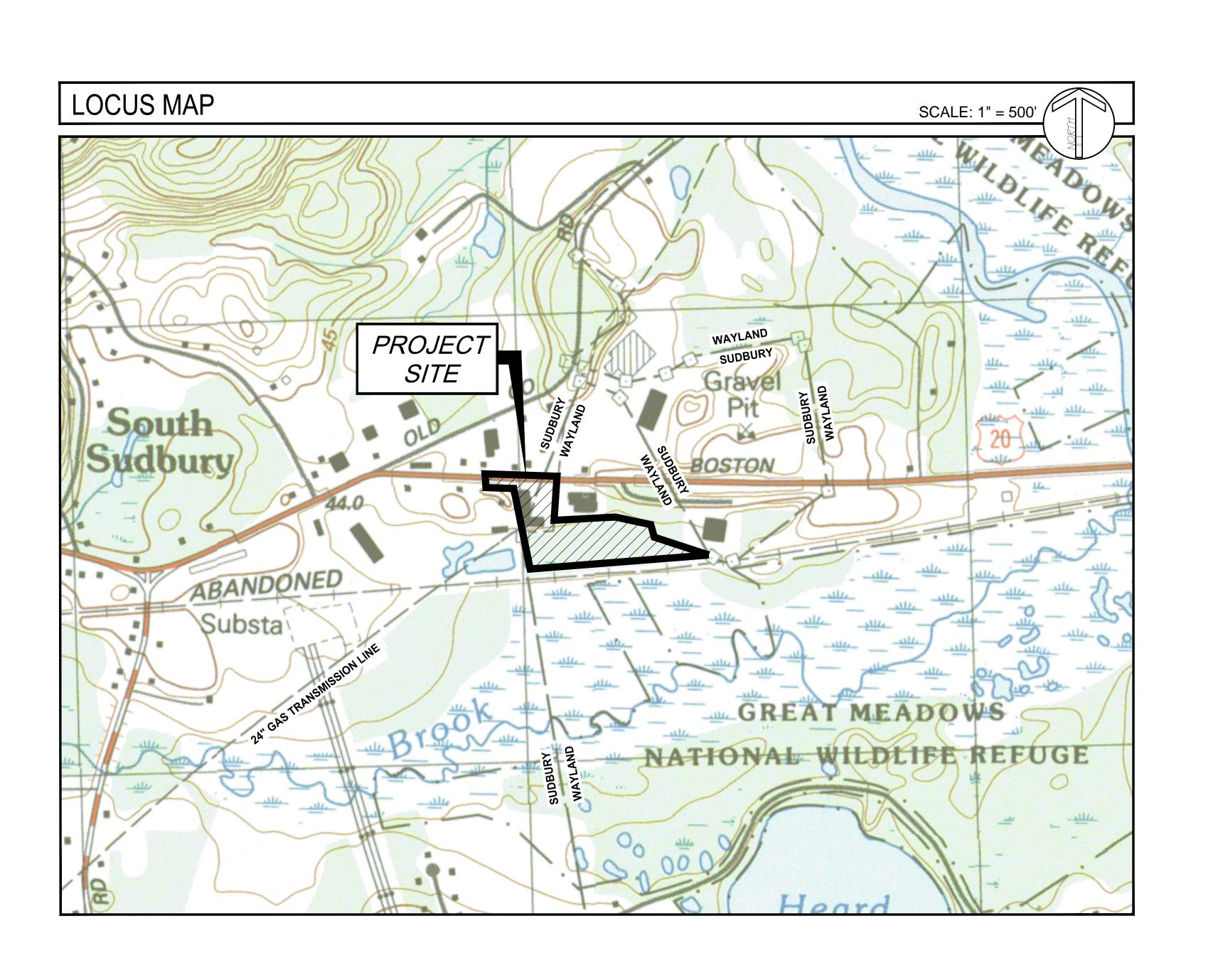
Herb Chambers Jaguar / Land Rover of Sudbury

83 Boston Post Road, Sudbury, MA

APPLICANT

Herb Chambers 83 Boston Post Road, LLC





C-001	TITLE SHEET
C-002	GENERAL NOTES & LEGEND
C-101	EXISTING CONDITIONS PLAN
C-102	DEMOLITION & EROSION CONTROL PLAN
C-103	SITE LAYOUT PLAN
C-201	GRADING & DRAINAGE PLAN
C-301	UTILITY PLAN
C-501	LANDSCAPE PLAN
C-601	DETAILS-1
C-602	DETAILS-2
C-603	DETAILS-3
C-604	DETAILS-4
C-605	DETAILS-5
C-606	DETAILS-6
SUPPL	EMENTAL INDEX
	Sheet Title
Sheet #	
Sheet # EX-001	ZONING PLAN - SUDBURY, MA
	ZONING PLAN - SUDBURY, MA LIGHTING PLAN
EX-001	

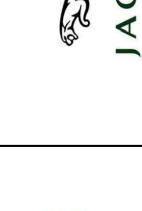
DRAWING INDEX

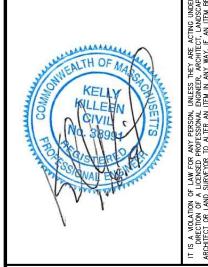
SUBMISSION DATE: DECEMBER 2018



HERB CHAMBERS







HERB CHAMBERS
/ LAND ROVER of SUDBURY
STON POST ROAD - ROUTE 20

e / DPW / Concom Comments KK SFA 01/18/19
udbury Site Plan Approval KK SFA 12/18/18

ZBA Submittal KK SFA 12/18/18

TITLE SHEET

Designed By: Drawn By: Checked E KK

Issue Date: Project No: Scale: 12/19/18 31554 AS SHOW

B. PROTECT IMPROVEMENTS ON ADJOINING PROPERTIES AND ON OWNER'S PROPERTY.

C. RESTORE DAMAGED IMPROVEMENTS TO ORIGINAL CONDITION AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.

D. CONDUCT OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH OPERATIONS, STREETS, WALKS, AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION. STREETS AND ROADWAYS SHALL BE KEPT CLEAN AND FREE OF DIRT AND DEBRIS AT

2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MASSDOT SPECIFICATIONS FOR HIGHWAYS AND BRIDGES AND/OR THE APPROPRIATE LOCAL AUTHORITIES.

3. ALL SLOPES, UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION AS SOON AS POSSIBLE TO PREVENT EROSION INTO WETLAND RESOURCE AREAS, ABUTTING PROPERTIES, OR PUBLIC WAYS. EROSION CONTROL BLANKETS OR TURF REINFORCEMENT MATS ARE REQUIRED FOR ALL 2H:1V SLOPES WHERE RIP-RAP IS NOT PROPOSED. SLOPES MAY NOT EXCEED 2H:1V.

4. ANY DEVIATIONS, I.E. "FIELD CHANGES" FROM THE DESIGN PLAN(S) MUST BE APPROVED BY THE DESIGN ENGINEER. CONTRACTOR SHOULD BE AWARE THAT LOCAL AND STATE AUTHORITIES HAVE JURISDICTION AND APPROVALS MUST BE OBTAINED FROM THE APPROPRIATE AUTHORITY PRIOR TO THE IMPLEMENTATION OF THE "FIELD CHANGE." CHA ASSUMES NO LIABILITY OR RESPONSIBILITY FOR WORK ASSOCIATED WITH FIELD CHANGES COMPLETED WITHOUT REGARD TO THE "FIELD CHANGE" PROCEDURE.

5. REFER TO THE SURVEY GENERAL NOTES ON EXISTING CONDITIONS PLAN OF THIS SET FOR EXISTING CONDITIONS NOTES AND

6. RELOCATION OF ANY UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.

7. * * * DIG SAFE NOTE * * *

SURVEY RELATED REFERENCES.

IN ACCORDANCE WITH MGL. CH. 82, SEC. 40 INCLUDING AMENDMENTS, ALL CONTRACTORS SHALL NOTIFY UTILITY COMPANIES AND GOVERNMENT AGENCIES, IN WRITING, OF THE INTENT TO EXCAVATE, BLAST, DEMOLISH, BORE, OR PERFORM OTHER EARTH MOVING OPERATIONS NO LESS THAN 72 HOURS AND NO MORE THAN 30 DAYS PRIOR TO THE COMMENCEMENT OF SUCH WORK (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS) OR CALL "DIG SAFE" AT 1-888-DIG-SAFE.

8. LOCATION OF UNDERGROUND UTILITIES ON THESE PLANS ARE APPROXIMATE ONLY AND ARE BASED ON ACTUAL FIELD LOCATIONS OF VISIBLE STRUCTURES AND PLAN COMPILATIONS. EXISTING UTILITY LOCATIONS AND ELEVATIONS SHOWN SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. TEST PITS SHALL BE PERFORMED BY CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO THE START OF ANY CONSTRUCTION.

9. <u>USE OF EXPLOSIVES:</u>

A. COMPLY WITH ALL LAWS, RULES AND REGULATIONS OF FEDERAL, STATE, AND LOCAL AUTHORITIES AND INSURERS WHICH GOVERN STORAGE, USE, MANUFACTURE, SALE, HANDLING, TRANSPORTATION, LICENSING, OR OTHER DISPOSITION OF EXPLOSIVES. UTILIZE SPECIAL PRECAUTIONS FOR PROPER USE OF EXPLOSIVES TO PREVENT HARM TO HUMAN LIFE AND DAMAGE TO SURFACE STRUCTURES, ALL UTILITY LINES OR OTHER SUBSURFACE STRUCTURES. DO NOT CONDUCT BLASTING OPERATIONS UNTIL PERSONS IN VICINITY HAVE HAD AMPLE NOTICE AND HAVE REACHED POSITIONS OF SAFETY.

B. BLASTING OF ANY ROCK SHALL REQUIRE APPROPRIATE APPROVALS FROM THE LOCAL FIRE DEPARTMENT, BUILDING INSPECTOR AND OTHER PERTINENT AGENCIES, PRIOR TO COMMENCEMENT OF WORK. ALL BLASTED ROCK OR OTHER EXCESS MATERIALS MUST BE REMOVED FROM THE SITE AND DISPOSED OF AT THE EXPENSE OF THE CONTRACTOR.

10. ADDITIONAL BENCHMARKS TO BE SET BY CONTRACTOR PRIOR TO CONSTRUCTION TO ENSURE QUALITY WORKMANSHIP.

11. THE PLANS CONTAINED HEREIN SHALL SUPERSEDE ANY AND ALL PREVIOUS DESIGN PREPARED FOR THE SUBJECT SITE. THE CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS OR DISCREPANCIES IN THE WORK. FAILURE TO DO SO DURING CONTRACT DOCUMENT REVIEW PERIOD WILL NEGATE ANY CLAIM DURING CONSTRUCTION FOR EXTRA TIME TO COMPLETE THE WORK.

12. ANY STILLING AND/OR DETENTION BASINS SHOULD RECEIVE PERIODIC MAINTENANCE DURING CONSTRUCTION TO REMOVE DEPOSITED SILTS AND DEBRIS TO ENSURE PROPERTY DRAINAGE AND SETTLING OF PARTICULATE MATTER.

13. ALL MANHOLE COVERS FOR CROSS-COUNTRY LOCATIONS OR IN PUBLIC GATHERING SHALL BE FITTED WITH BOLT LOCKS OR EQUIVALENT.

14. UNLESS OTHERWISE LABELED, ALL REINFORCED CONCRETE PIPE, RCP, SHALL BE CLASS III; ALL DUCTILE IRON PIPE SHALL BE CEMENT LINED CLASS 52; ALL PVC SEWER SHALL BE SDR 35; ALL CORRUGATED PLASTIC PIPE SHALL BE DOUBLE WALLED N-12 AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS OR APPROVED EQUAL.

SEQUENCE OF CONSTRUCTION

SEE SHEET C-102

1 CALITION - NOTICE TO CONTRACTO

1. CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS) PRIOR TO ANY EXCAVATION BLASTING, DEMOLITION, BORING, OR OTHER EARTH MOVING OPERATIONS TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS.

2. FILL MATERIAL

A. ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH, AND DEBRIS PRIOR TO FILL PLACEMENT.

B. PLACE APPROPRIATE FILL MATERIAL AS DESIGNATED BY THE GEOTECHNICAL ENGINEER IN HORIZONTAL LAYERS NOT EXCEEDING EIGHT INCHES (8") IN LOOSE DEPTH AND COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO DENSITY EQUAL TO ORIGINAL ADJACENT GROUND, UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

3. FINISH GRADING

A. GRADE ALL AREAS WHERE FINISH GRADE ELEVATIONS ARE INDICATED ON DRAWINGS, OTHER THAN PAVED AREAS AND BUILDINGS, INCLUDING EXCAVATED AREAS, FILLED AND TRANSITION AREAS, AND LANDSCAPED AREAS. GRADED AREAS SHALL BE UNIFORM AND SMOOTH, FREE FROM DEBRIS, OR IRREGULAR SURFACE CHANGES. FINISHED SUBGRADE SURFACE SHALL NOT BE MORE THAN 0.10 FEET ABOVE OR BELOW ESTABLISHED SUBGRADE ELEVATIONS, AND ALL GROUND SURFACES SHALL VARY UNIFORMLY BETWEEN INDICATED ELEVATIONS. FINISH DITCHES SHALL BE GRADED TO ALLOW FOR PROPER DRAINAGE WITHOUT PONDING AND IN A MANNER THAT WILL MINIMIZE EROSION POTENTIAL

B. GRADE SURFACE TO MATCH ADJACENT GRADES AND TO PROVIDE FLOW TO SURFACE DRAINAGE STRUCTURES, OR GRADE AS DESIGNATED ON THE PLANS AFTER FILL PLACEMENT AND COMPACTION.

4. THE CONTRACTOR IS RESPONSIBLE FOR GENERAL CLEANUP OF THE PROJECT ON A DAILY BASIS AND AT THE COMPLETION OF THE PROJECT. OPEN TRENCHES, DITCHES, EXCAVATIONS, ETC. SHALL NOT BE PERMITTED TO BE LEFT OPEN OVERNIGHT. CONTRACTOR WILL BACKFILL OR UTILIZE SUITABLE STEEL PLATES FOR THE SECURING OF THE PROJECT SITE PRIOR TO CEASING WORK EACH DAY.

5. APPROPRIATE TRAFFIC CONTROL, I.E. SIGNAGE, BARRICADES, AND OTHER MEANS, WILL BE SUPPLIED BY THE CONTRACTOR IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL AGENCIES.

6. UNDER NO CIRCUMSTANCES MAY ANY UTILITY, STRUCTURE, AND/OR REPAIR BE BACKFILLED UNLESS INSPECTED AND APPROVED BY THE CITY / MUNICIPALITY OFFICIALS AND/OR REPRESENTATIVE. RECEIPT OF APPROVAL TO BACKFILL WILL NOT RELEASE THE CONTRACTOR FROM ANY RESPONSIBILITY OR LIABILITY FOR PERFORMANCE TESTS REQUIRED AS PART OF THIS PROJECT.

7. PROPER SHORING AND TRENCH BOXES SHALL BE UTILIZED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES TO PROVIDE A SAFE WORKING ENVIRONMENT. SHORING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS WITH EXPERIENCE IN SHORING DESIGN.

8. ALL UTILITIES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

9 WATER:

A. ALL WATER PIPING, VALVES, HYDRANTS, AND FITTINGS ETC. TO CONFORM TO LOCAL GUIDELINES OR AS DIRECTED BY THE WATER DEPARTMENT. CONSTRUCTION OF WATER LINE TO CONFORM TO ALL LOCAL AND STATE AGENCIES HAVING JURISDICTION.

B. ALL WATER PIPE SHALL BE THICKNESS CLASS 52 DUCTILE IRON. ALL PIPES AND FITTINGS SHALL HAVE A CEMENT LINING TWICE THE THICKNESS SPECIFIED IN AWWA C104 AND SHALL HAVE A BITUMINOUS SEAL COAT APPLIES INSIDE AND OUTSIDE CONFORMING TO AWWA C104, "TYTON" OR MECHANICAL JOINTS ARE PERMITTED UNLESS OTHERWISE DIRECTED.

C. REFER TO PLUMBING PLANS FOR WATER SERVICE, FIRE PROTECTION, AND SANITARY SEWER CONNECTIONS UNLESS OTHERWISE NOTED.

UTILITY NOTES

1. THESE NOTES ARE INTENDED TO SUPPLEMENT THE LOCAL REQUIREMENTS FOR MATERIALS AND WORKMANSHIP.

2. WATER AND SEWER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST LOCAL AND STATE CODES INCLUDING THE RECOMMENDATIONS OF THE AMERICAN WATER WORKS ASSOCIATION AND THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION TECHNICAL REPORT 16. CONSTRUCTION SHALL PROCEED IN A WORKMANLIKE MANNER WITH STATE-OF-THE-ART CONSTRUCTION TECHNIQUES.

3. THE CONTRACTOR SHALL INSULATE WATER AND SEWER MAINS AS INDICATED ON THE PLANS OR WHEN DESIGN OR CONSTRUCTION ENCUMBRANCES DICTATE ALIGNMENT TO OCCUR ABOVE THE FROST LINE (5' BELOW FINISH GRADE OR SHALLOWER). PROCUREMENT AND INSTALLATION OF PIPE INSULATION SHALL CONFORM TO THE REQUIREMENTS LISTED IN THE LATEST MASSDOT SPECIFICATIONS FOR SECTION 301.60P AND MATERIAL SPECIFICATION M9.11.1. THE PIPE INSULATION SHALL BE PRE-MOLDED TYPE CELLULAR GLASS INSULATION WITH ALUMINUM JACKET CONFORMING TO THE LATEST REQUIREMENTS OF ASTM-522 OR APPROVED EQUAL.

4. THE CONTRACTOR SHALL FOLLOW ALTERNATE CONSTRUCTION PROCEDURES WHEN DESIGN OR CONSTRUCTION ENCUMBRANCES PREVENT HORIZONTAL SEPARATION OF 10 FEET OR THE ALTERNATE OF 18 INCHES OF VERTICAL SEPARATION BETWEEN WATER AND SEWER MAINS. IN AREAS WHERE THE ABOVE OFFSETS CANNOT BE MAINTAINED, THE WATER MAIN SHALL BE CONSTRUCTED WITH MEGA-LUG MECHANICAL TYPE FITTINGS OR APPROVED EQUAL FOR A DISTANCE OF 10-FEET ON EITHER SIDE OF THE CROSSING OR LATERAL ENCROACHMENT AND SHALL STRADDLE A FULL LENGTH OF CLASS 52 CEMENTED LINED DUCTILE IRON WATER PIPE.

5. THE DEFLECTION IN ALL GRAVITY SEWER PIPE SHALL BE TESTED USING A GO, NO-GO MANDREL TEST TO ENSURE THAT PROPER INSTALLATION HAS OCCURRED. TEST SHALL CONFORM WITH PIPE MANUFACTURER'S RECOMMENDATIONS AND SHALL NOT INDICATE MORE THAN 7.5% DEFLECTION, U.O.N.

6. EACH SEGMENT OF THE SEWER MAIN INCLUDING MANHOLES SHALL BE LEAK TESTED AND OBSERVED BY A REPRESENTATIVE OF THE ENGINEER IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

CONCRETE AND REINFORCING STEEL NOTES:

THIS SECTION PERTAINS ONLY TO SITE RELATED CONCRETE WORK THAT IS NOT OTHERWISE COVERED IN THE ARCHITECTURAL AND STRUCTURAL PLANS PREPARED BY REGENT ASSOCIATES.

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ALL SAFETY REGULATIONS ARE TO BE STRICTLY FOLLOWED. METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS IS THE CONTRACTOR'S RESPONSIBILITY.

 THE CONTRACTOR IS RESPONSIBLE FOR DISSEMINATION OF ALL REVISIONS AND REQUIREMENTS TO THE SUBCONTRACTORS.

REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF ALL DRAWINGS AND SPECIFICATIONS. HOWEVER
THE ENGINEER DOES NOT GUARANTEE AGAINST HUMAN ERROR AND FOR THAT REASON IT IS IMPERATIVE THAT THE
CONTRACTOR SHALL CHECK ALL DIMENSIONS AND DETAILS AND MUST VERIFY ALL CONDITIONS AND DIMENSIONS
AT THE SITE. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING.

PRESUMED ALLOWABLE SOIL BEARING CAPACITY IS 4000 PSF. VERIFY IN THE FIELD PRIOR TO THE START OF CONSTRUCTION.

2. MATERIALS

• <u>CONCRETE</u>: APPROVED, READY MIXED CONCRETE HAVING AN MINIMUM COMPRESSIVE STRENGTH (f'c) OF 4000 PSI AT 28 DAYS WITH 3/4"AGGREGATE MAX., SLUMP 1-3 INCHES UNLESS OTHERWISE NOTED. PROVIDE AIR-ENTRAINMENT ADMIXTURE TO AID THE FREEZE/THAW RESISTANCE OF ALL EXPOSED CONCRETE

REINFORCING STEEL: ASTM A615 GRADE 60 DEFORMED BARS. ASTM A185 WELDED WIRE FABRIC

• <u>FORM WORK</u>: SMOOTH PLYWOOD FORMS FOR EXPOSED SLABS OR VERTICAL SURFACES. BOARD FORMS FOR FOOTINGS OR UNEXPOSED CONCRETE SURFACES. NO EARTH FORMS PERMITTED.

GROUT: NONMETALLIC, NON-SHRINK GROUT UNDER BASE PLATES OR BEARING PLATES

3. EXECUTION

• <u>CONCRETE</u>: PLACE CONCRETE ACCORDING TO THE APPROVED METHODS OF ACI 301.89. STRENGTH (f'c) OF 4000 PSI AT 28 DAYS, SLUMP 1-3 INCHES UNLESS OTHERWISE NOTED WITH MAXIMUM 3/4 INCH AGGREGATE AND MAXIMUM 6% AIR ENTERTAINMENT FOR EXTERIOR CONCRETE EXPOSED TO MOISTURE.

• <u>REINFORCING STEEL</u>: PLACE REINFORCING USING STANDARD BAR SUPPORTS TO PROVIDE PROPER CLEARANCE AND PREVENT DISPLACEMENT DURING CONCRETE OPERATIONS. LAP CONTINUOUS BARS 40 DIAMETERS. PROVIDE THE FOLLOWING MINIMUM CONCRETE COVERAGE:

- 3" CONCRETE PLACED AGAINST EARTH

- 2" FRAMED SLABS (EXPOSED TO WEATHER)

- 2" FORMED CONCRETE EXPOSED TO EARTH, WEATHER, OR WATER - 2" SLABS ON GRADE (MINIMUM FROM TOP)

- 2" SLABS ON GRADE (MINIMUM FROM TOP) - 2" FRAMED SLABS (NOT EXPOSED TO WEATHER)

•• PLACE DEFORMED BARS IN ACCORDANCE WITH THE LATEST EDITION OF CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS." ALL WELDED WIRE MESH SHALL CONFORM TO ASTM A185. LAP TWO SQUARES AT ALL JOINTS AND AND TIE AT 3'-0" ON CENTER. PROVIDE (2) #5 BARS EACH SIDE OF ALL OPENINGS IN WALLS AND SLABS. BARS TO EXTEND 24" BEYOND EDGE OF OPENINGS. (FOR SIZE AND LOCATION OF OPENINGS REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS).

•• NO HORIZONTAL CONSTRUCTION JOINTS ARE ALLOWED UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS OR ALLOWED IN WRITING BY THE ENGINEER.

•• ALL GROUT FOR BASE PLATES SHALL BE NON-SHRINK AND NON-METALLIC WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.

•• REINFORCING BAR EMBEDMENT LENGTH STANDARD HOOK

#4 12" 12"

#5 10"

FORM WORK: PROPERLY BRACE AND SHORE FORM WORK TO MAINTAIN ALIGNMENT AND TOLERANCES IN ACCORDANCE TO ACI 347. (DETAILS NOT SHOWN IN DRAWINGS SHALL BE IN ACCORDANCE WITH ACI DETAILING MANUAL (ACI 315))

4. QUALITY CONTROL

CONTRACTOR SHALL MAKE PROVISIONS TO HAVE FOUR CYLINDERS CAST FOR EACH (50) CUBIC FEET OF CONCRETE POURED OR FOR ANY ONE DAY OPERATION.

TESTING LABORATORY SHALL BE RESPONSIBLE FOR MAKING AND CURING SPECIMENS IN CONFORMANCE TO ASTM C31 AND TESTING SPECIMENS IN ACCORDANCE TO ASTM C39.

5. EXCAVATION & COMPACTED FILL

COMPACTED FILL SHALL BE PLACED IN LEVEL, UNIFORM LIFTS NOT EXCEEDING 8 INCHES IN UNCOMPACTED THICKNESS AND BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.

FILL TO CONFORM TO THE PROJECT SPECIFICATIONS FOR STRUCTURAL FILL OR AS DIRECTED BY THE ENGINEER.
BACKFILL AND EXCAVATION TO BE COMPLETED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE
GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER.

6. EXPANSION, CONTRACTION, AND CONSTRUCTION JOINTS

CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS IN WALLS AND SLABS NOT TO EXCEED 20' (OR EQUALLY SPACED) AND EXPANSION JOINTS NOT TO EXCEED 90' (IF APPLICABLE)

ALL CONSTRUCTION JOINTS SHALL HAVE ROUGHENED, KEYED, AND/OR BONDING AGENT APPLIED TO THE
 CONCRETE LAYING SURFACES AS DIRECTED BY THE ENGINEER OR TO THE MOST STRINGENT AC1 318 STANDARDS

7. CONCRETE FINISHING

• ALL EXPOSED CONCRETE SHALL BE FINISHED TO PROJECT ARCHITECTURAL STANDARDS OR AS DIRECTED BY THE ENGINEER. ALL EXPOSED CORNERS SHALL BE CHAMFERED.

ALL VOIDS, POCKETS, AND DEFORMATIONS IN THE EXPOSED FACE OF WALL SHALL BE CORRECTED TO A SMOOTH,
 UNIFORM FINISH OR AS DIRECTED BY THE ENGINEER.

SEWER TESTING NOTES

1. EXFILTRATION TEST:

A. PREPARATION OF TEST. AFTER THE MANHOLE HAD BEEN ASSEMBLED IN PLACE, ALL LIFTING HOLES AND THOSE EXTERIOR JOINTS WITHIN SIX FEET OF THE GROUND SURFACE SHALL BE FILLED AND POINTED WITH AN APPROVED NON-SHRINKING MORTAR. THE TEST SHALL BE MADE PRIOR TO PLACING THE SHELF AND INVERT AND BEFORE FILLING AND POINTING THE HORIZONTAL JOINTS BELOW THE 6- FOOT DEPTH LINE. IF THE GROUNDWATER TABLE HAS BEEN ALLOWED TO RISE ABOVE THE BOTTOM OF THE MANHOLE, IT SHALL BE LOWERED FOR THE DURATION OF THE TEST. ALL PIPES AND OTHER OPENINGS INTO THE MANHOLE SHALL BE SUITABLE PLUGGED AND PLUGS BRACED TO PREVENT BLOW OUT.

B. TEST PROCEDURE. THE MANHOLE SHALL THEN BE FILLED WITH WATER TO THE TOP OF THE CONE SECTION. IF THE EXCAVATION HAS NOT BEEN BACKFILLED AND OBSERVATION INDICATED NO VISIBLE LEAKAGE, THAT IS, NO WATER VISIBLY MOVING DOWN THE SURFACE OF THE MANHOLE, THE MANHOLE MAY BE CONSIDERED TO BE SATISFACTORILY WATERTIGHT. IF THE TEST AS DESCRIBED ABOVE IS UNSATISFACTORY AS DETERMINED BY THE ENGINEER OR IF THE MANHOLE EXCAVATION HAS BEEN BACKFILLED THE TEST SHALL BE CONTINUED. A PERIOD OF TIME MAY BE PERMITTED, IF THE CONTRACTOR WISHES, TO ALLOW FOR ABSORPTION.

C. AT THE END OF THIS PERIOD, THE MANHOLE SHALL BE REFILLED TO THE TOP OF THE CONE, IF NECESSARY, AND THE MEASURING TIME OF AT LEAST EIGHT HOURS BEGUN. AT THE END OF THE TEST PERIOD, THE MANHOLE SHALL BE REFILLED TO THE TOP OF THE CONE, MEASURING THE VOLUME OF WATER ADDED. THIS AMOUNT SHALL BE EXTRAPOLATED TO A 24-HOUR RATE AND THE LEAKAGE DETERMINED ON THE BASIS OF DEPTH. THE LEAKAGE FOR EACH MANHOLE SHALL NOT EXCEED ONE GALLON PER VERTICAL FOOT FOR A 24-HOUR PERIOD. IF THE TEST FAILS THIS REQUIREMENTS, BY THE LEAKAGE DOES NOT EXCEED THREE GALLONS PER VERTICAL FOOT PER DAY, REPAIRS BY APPROVED METHODS MAY BE MADE AS DIRECTED BY THE ENGINEER TO BRING THE LEAKAGE WITHIN THE ALLOWABLE RATE ON ONE GALLON PER VERTICAL FOOT PER DAY. LEAKAGE DUE TO A DEFECTIVE SECTION OR JOINT OF EXCEEDING THE THREE-GALLON PER VERTICAL FOOT PER DAY RATE, SHALL BE CAUSE FOR THE REJECTION OF THE MANHOLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UNCOVER, DISASSEMBLE, RECONSTRUCT OR REPLACE THE MANHOLE AS DIRECTED BY THE ENGINEER. THE MANHOLE SHALL THEN BE RE-TESTED AND, IF SATISFACTORY, INTERIOR JOINTS SHALL BE FILLED AND POINTED.

D. BACKFILLING. THE TEST MAY BE CONDUCTED EITHER BEFORE OR AFTER BACKFILLING AROUND THE MANHOLE. HOWEVER, IF THE CONTRACTOR ELECTS TO BACKFILL PRIOR TO TESTING, IT SHALL BE AT HIS OWN RISK AND IT SHALL BE INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE REASON FOR ANY FAILURE OF THE TEST. NO ADJUSTMENT IN THE LEAKAGE ALLOWANCE WILL BE MADE FOR UNKNOWN CAUSES SUCH AS LEAKING PLUGS, ABSORPTION, ETC., I.E., IT WILL BE ASSUMED THAT ALL LOSS OF WATER DURING THE TEST IS A RESULT OF LEAKS THROUGH THE JOINTS OF THROUGH THE CONCRETE. FURTHERMORE, THE CONTRACTOR SHALL TAKE ANY STEPS NECESSARY TO ASSURE THE ENGINEER THAT THE WATER TABLE IS BELOW THE BOTTOM OF THE MANHOLE THROUGHOUT THE TEST.

2. VACUUM TEST:

A. THE VACUUM TESTING SYSTEM SHALL BE SUPPLIED BY NPC SYSTEMS, INC. OR EQUIVALENT AS APPROVED BY THE ENGINEER. THE TESTING SHALL BE DONE IMMEDIATELY AFTER ASSEMBLY OF THE MANHOLE AND BEFORE BACKFILLING. A 60 LB-FT. TORQUE WRENCH SHALL BE USED TO TIGHTEN EXTERNAL CLAMPS THAT SECURE THE TEST COVER TO THE TOP OF THE MANHOLE. ALL LIFT HOLES SHALL BE PLUGGED WITH A NON-SHRINKING MORTAR. THE CONTRACTOR SHALL PLUG THE PIPE OPENINGS, TAKING CARE TO SECURELY BRACE THE PLUGS AND THE PIPE TO PREVENT THE PLUGS FROM BEING DRAWN INTO THE MANHOLE.

B. A VACUUM OF 10 INCHES OF MERCURY, HG (4.9 PSI), SHALL BE DRAWN AND THE VACUUM PUMP SHUT OFF. THE MANHOLE PASSES THE TEST IF THE VACUUM REMAINS GREATER THAN OR EQUAL TO 9 INCHES HG (4.4 PSI) FOR A PERIOD GREATER THAN ONE MINUTE FOR MANHOLES UP TO 10 FEET DEEP; ONE MINUTE FIFTEEN SECONDS FOR MANHOLES 10-15 FEET DEEP; AND ONE MINUTE THIRTY SECONDS FOR MANHOLES 15-25 FEET DEEP.

C. IF THE MANHOLE FAILS THE INITIAL TEST, THE CONTRACTOR SHALL LOCATE THE LEAKS AND MAKE PROPER REPAIRS. LEAKS MAY BE FILLED WITH A WET SLURRY OF ACCEPTED QUICK SETTING MATERIAL. IF THE MANHOLE FAILS THE VACUUM TEST AGAIN, ADDITIONAL REPAIRS MUST BE MADE, AND THE MANHOLE MUST BE TESTED BY EXFILTRATION AS OUTLINED IN PARAGRAPH 3.03 (A). FIELD QUALITY CONTROL

3. LEAKAGE TEST

A. THE PIPELINES SHALL BE MADE AS NEARLY WATERTIGHT AS PRACTICABLE, AND LEAKAGE TESTS AND MEASUREMENTS SHALL BE MADE AFTER THE PIPELINE HAS BEEN BACKFILLED

B. WHERE THE GROUNDWATER LEVEL IS MORE THAN 1 FT ABOVE THE TOP OF THE PIPE AT ITS UPPER END, THE CONTRACTOR SHALL CONDUCT EITHER INFILTRATION TESTS OR LOW PRESSURE AIR TESTS.

C. AT THE TIME OF THE TEST, THE CONTRACTOR SHALL DETERMINE THE GROUNDWATER ELEVATION FROM OBSERVATION WELLS, EXCAVATIONS OR OTHER MEANS, ALL SUBJECT TO REVIEW BY THE ENGINEER.

D. FOR MAKING THE LOW PRESSURE AIR TESTS, THE CONTRACTOR SHALL USE EQUIPMENT SPECIFICALLY DESIGNED AND MANUFACTURED FOR THE PURPOSE OF TESTING SEWER PIPELINES USING LOW PRESSURE AIR. THE EQUIPMENT SHALL BE PROVIDED WITH AN AIR REGULATORY VALVE OR AIR SAFETY SO SET THAT THE INTERNAL AIR PRESSURE IN THE PIPELINE CANNOT EXCEED 8 PSIG.

E. THE LEAKAGE TEST USING LOW PRESSURE AIR SHALL BE MADE ON EACH MANHOLE-TO-MANHOLE SECTION OF PIPELINE AFTER PLACEMENT OF THE BACKFILL.

F. PNEUMATIC PLUGS SHALL HAVE A SEALING LENGTH EQUAL TO OR GREATER THAN THE DIAMETER OF THE PIPE TO BE TESTED. PNEUMATIC PLUGS SHALL RESIST INTERNAL TEST PRESSURES WITHOUT REQUIRING EXTERNAL BRACING OR BLOCKING.

G. ALL AIR USED SHALL PASS THROUGH A SINGLE CONTROL PANEL

H. LOW PRESSURE AIR SHALL BE INTRODUCED INTO THE SEALED LINE UNTIL THE INTERNAL AIR PRESSURE REACHES 4 PSIG. GREATER THAN THE MAXIMUM PRESSURE EXERTED BY THE GROUNDWATER THAT MAY BE ABOVE THE INVERT OF THE PIPE AT THE TIME OF THE TEST. HOWEVER, THE INTERNAL AIR PRESSURE IN THE SEALED LINE SHALL NOT BE ALLOWED TO EXCEED 8 PSIG. WHEN THE MAXIMUM PRESSURE EXERTED BY THE GROUNDWATER IS GREATER THAN 4 PSIG., THE CONTRACTOR SHALL CONDUCT ONLY AN INFILTRATION TEST.

I. AT LEAST TWO MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE IN THE SECTION UNDER TEST. AFTER THE STABILIZATION PERIOD, THE LOW PRESSURE AIR SUPPLY HOSE SHALL BE QUICKLY DISCONNECTED FROM THE CONTROL PANEL. THE TIME REQUIRED IN MINUTES FOR THE PRESSURE IN THE SECTION UNDER TEST TO DECREASE FROM 3.5 TO 2.5 PSIG (GREATER THAN THE MAXIMUM PRESSURE EXERTED BY GROUNDWATER THAT MAY BE ABOVE THE INVERT OF THE PIPE) SHALL NOT BE LESS THAN THAT SHOWN IN THE FOLLOWING TABLE:

PIPE DIAMETER IN INCHES VS. MINUTES

6" 5.0 MIN. 40 SEC. 8" 7.0 MIN. 34 SEC. 10" 9.0 MIN. 26 SEC.

10" 9.0 MIN. 26 SEC. 12" 11.0 MIN. 20 SEC. 15" 14.0 MIN. 10 SEC.

18" 17.0 MIN. 10 SEC. 21" 19.0 MIN. 50 SEC.

24" 22.0 MIN. 40 SEC.

27" 25.0 MIN. 30 SEC.
 J. FOR MAKING THE INFILTRATION AND EXFILTRATION TESTS, THE CONTRACTOR SHALL FURNISH SUITABLE TEST PLUGS, WATER PUMPS, AND APPURTENANCES, AND ALL LABOR REQUIRED TO PROPERLY CONDUCT THE TESTS ON SECTIONS OF ACCEPTABLE LENGTH.

K. FOR MAKING THE INFILTRATION TESTS, UNDERDRAINS, IF USED, SHALL BE PLUGGED AND OTHER GROUNDWATER DRAINAGE SHALL BE STOPPED TO PERMIT THE GROUNDWATER TO RETURN TO ITS NORMAL LEVEL INSOFAR AS PRACTICABLE

L. UPON COMPLETION OF A SECTION OF THE SEWER, THE CONTRACTOR SHALL DEWATER IT AND CONDUCT A SATISFACTORY TEST TO MEASURE THE INFILTRATION FOR AT LEAST 24 HOURS. THE AMOUNT OF INFILTRATION, INCLUDING MANHOLES, TEES, AND CONNECTIONS, SHALL NOT EXCEED 200 GAL. PER INCH DIAMETER PER MILE OF SEWER PER 24 HOURS.

M. FOR MAKING THE EXFILTRATION TESTS, THE SEWERS SHALL BE SUBJECTED TO AN INTERNAL PRESSURE BY PLUGGING THE PIPE AT THE LOWER END AND THEN FILLING THE PIPELINES AND MANHOLES WITH CLEAN WATER TO A HEIGHT OF 2 FT. ABOVE THE TOP OF THE SEWER AT ITS UPPER END. WHERE CONDITIONS BETWEEN MANHOLES, MAY RESULT IN TEST PRESSURES WHICH WOULD CAUSE LEAKAGE AT THE STOPPERS IN BRANCHES, PROVISIONS SHALL BE MADE BY SUITABLE TIES, BRACES, AND WEDGES TO SECURE THE STOPPERS AGAINST LEAKAGE RESULTING FROM THE TEST PRESSURE.

N. THE RATE OF LEAKAGE FROM THE SEWERS SHALL BE DETERMINED BY MEASURING THE AMOUNT OF WATER REQUIRED TO MAINTAIN THE LEVEL 2 FT. ABOVE THE TOP OF THE PIPE.

O. LEAKAGE FROM THE SEWERS UNDER TEST SHALL NOT EXCEED THE REQUIREMENTS FOR LEAKAGE INTO SEWERS AS HEREIN BEFORE SPECIFIED.

P. THE SEWERS SHALL BE TESTED BEFORE ANY CONNECTIONS ARE MADE TO BUILDINGS.

Q. THE CONTRACTOR SHALL CONSTRUCT WEIRS OR OTHER MEANS OF MEASUREMENTS AS MAY BE REQUIRED.

R. SUITABLE BULKHEADS SHALL BE INSTALLED, AS REQUIRED, TO PERMIT THE TEST OF THE SEWER.

S. SHOULD THE SECTIONS UNDER TEST FAIL TO MEET THE REQUIREMENTS, THE CONTRACTOR SHALL DO ALL WORK OF LOCATING AND REPAIRING LEAKS AND RETESTING AS THE ENGINEER MAY REQUIRE WITHOUT ADDITIONAL COMPENSATION.

T. IF, IN THE JUDGMENT OF THE ENGINEER, IT IS IMPRACTICABLE TO FOLLOW THE FOREGOING PROCEDURES FOR ANY REASON, ACCEPTABLE MODIFICATIONS IN THE PROCEDURES SHALL BE MADE AS REQUIRED, BUT IN ANY EVENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ULTIMATE TIGHTNESS OF THE LINE WITHIN THE ABOVE TEST REQUIREMENTS.

GRADING NOTES

1. THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER OR HIS REPRESENTATIVE.

2. 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

3. PITCH EVENLY BETWEEN SPOT GRADES. GRADE ALL AREAS TO DRAIN. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM OF 1/8" PER FOOT UNLESS OTHERWISE SPECIFIED. ANY DISCREPANCIES NOT ALLOWING THIS MINIMUM PITCH SHALL BE REPORTED TO THE

OWNER OR HIS REPRESENTATIVE PRIOR TO CONTINUING WORK.

4. ALL SITEWORK SHALL CONFORM TO THE CONTRACT DOCUMENTS AND SHALL COMPLY WITH APPLICABLE CODES AND REGULATIONS, AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THE PROJECT.

5. DURING THE PROGRESS OF THE WORK, THE CONTRACTOR MAY BE REQUIRED TO EXCAVATE ADDITIONAL TEST PITS FOR THE PURPOSE OF LOCATING UNDERGROUND UTILITIES OR STRUCTURES AS AN AID IN ESTABLISHING THE PRECISE LOCATION OF NEW WORK. THIS WORK IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. TEST PITS SHALL BE BACKFILLED, AS SOON AS THE DESIRED INFORMATION HAS BEEN OBTAINED.

 PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY CONTRACTOR OPERATIONS.

7. 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.

8. FILL DEPRESSIONS CAUSED BY TEST PITS AND CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS

9. THE CONTRACTOR SHALL PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS OR EARTHWORK AREAS WHICH WOULD CAUSE FLOODING OF THE PROJECT SITE AND SURROUNDING AREA, OR SOFTENING OR LOOSENING OF THE SOIL AT EXCAVATION OR EARTHWORK SUB-GRADES.

10. THE CONTRACTOR SHALL PROVIDE, INSTALL, OPERATE, MAINTAIN AND REMOVE ADEQUATE AND SATISFACTORY DEWATERING SYSTEMS AND DRAINAGE OF EXCAVATIONS TO PERMIT CONSTRUCTION TO PROCEED "IN THE DRY". THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE ADEQUACY OF THE METHODS, MATERIALS AND EQUIPMENT EMPLOYED. THE CONTRACTOR SHALL BEAR THE FULL COST OF PROVIDING ALL NECESSARY DEWATERING.

11.THE CONTRACTOR SHALL PROHIBIT SEEPAGE, GROUNDWATER FLOW OR SURFACE INFILTRATION AND RUNOFF FROM UNDERMINING OR OTHERWISE DAMAGING ADJACENT STRUCTURES AND UTILITIES.

12. ANY WATER PUMPED FROM EXCAVATIONS WILL BE CONVEYED BY HOSE TO AN UPLAND AREA AND DISCHARGED INTO TEMPORARY SEDIMENT BASINS WITH CONTROLLED DISCHARGE. DEFER TO THE "SITE WORK & PREPERATION PLAN" AND "EROSION & SEDIMENTATION CONTROL PLAN" HEREIN.

EXCAVATION AND CONSTRUCTION WORK WHICH MIGHT INJURE THEM HAS BEEN

ACCEPTANCE.

14. PAVEMENT OR BASE MATERIALS SHALL NOT BE PLACED ON A MUDDY OR FROZEN SUBGRADE.

15.ESTABLISHMENT OF GRADES, GRADE CONTROL, AND CONFORMANCE TO REQUIRED GRADE TOLERANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

16.PROTECT GRADED, FINISHED OR PAVED AREAS FROM DAMAGE AND KEEP THEM FREE OF TRASH AND DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS. REPAIR AND RE-ESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS.

17.PAVEMENT EXCAVATED DURING UTILITY CONSTRUCTION, WHETHER ON THE SITE OR

ADJACENT PROPERTIES, SHALL BE RESTORED AND MATCHED WITH EXACTLY THE SAME

13. PAVING, CONCRETE WORK AND BASE COURSE PREPARATION SHALL BE DONE ONLY AFTER

COMPLETED. DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPAIRED BEFORE

MATERIALS AND TOLERANCES AS PRIOR TO DISRUPTION, AT NO ADDITIONAL COST TO THE OWNER, OR ADJACENT PROPERTY OWNERS.

18. STONE USED FOR MACHINE PLACED RIP-RAP SHALL BE REASONABLY WELL GRADED, HARD, DURABLE, ANGULAR IN SHAPE, RESISTANT TO WEATHERING AND FREE FROM ORGANIC MATERIAL. ROUNDED STONES OR BOULDERS ARE NOT ACCEPTABLE. THE MINIMUM WEIGHT OF THE STONE SHALL BE 155 POUNDS PER CUBIC FOOT. STONE SHALL BE PLACED

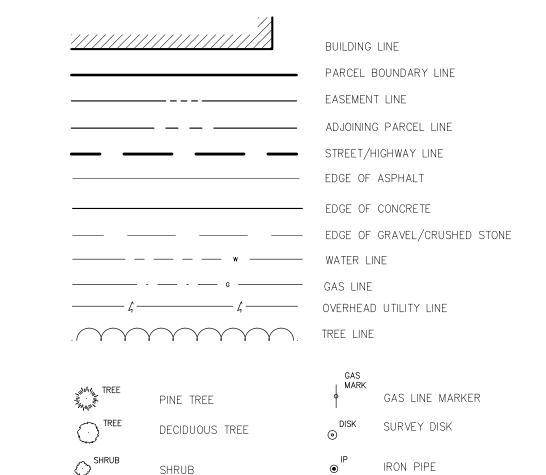
IN CONFORMANCE WITH THE LINES, GRADES AND THICKNESSES SHOWN ON THE DRAWINGS.

19. AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT, CURBS AND EARTHWORK SMOOTHLY INTO EXISTING BY

20.ALL RIP RAP STONE SHALL BE HAND CHINKED AND SHALL CONFORM TO MASSACHUSETTS HIGHWAY DEPARTMENT STANDARDS.

LEGEND:

MATCHING LINES, GRADES AND JOINTS.



ROUND CATCH BASIN

SEWER MANHOLE

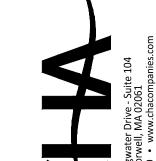
WATER SHUT OFF

SINGLE POST SIGN

MONITORING WELL

O CLEAN OUT

RRS RAILROAD SPIKE



. RD, LLC

ERB CHAMBERS
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HERB CHAMBERS

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 Fire / DPW / Concom Comments
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 01/18/19

 Sudbury Site Plan Approval
 KK
 SFA
 12/18/18

 Wayland Site Plan Approval
 KK
 SFA
 12/18/18

 ZBA Submittal
 KK
 SFA
 12/12/18

GENERAL NOTES & LEGEND

Designed By: Drawn By: Checked By: KK

Issue Date: Project No: Scale: AS SHOWN

141 Longwater Drive - Suite 104 Norwell, MA 02061

N POST RD, LLC

HERB (83 BO





UAR / LAND ROVER of SUDBUR

Sudbury Site Plan Approval KK SFA 01/18/18

Wayland Site Plan Approval KK SFA 12/18/18

EXISTING CONDITIONS PLAN

Designed By:
SA

Drawn By:
JM / SA

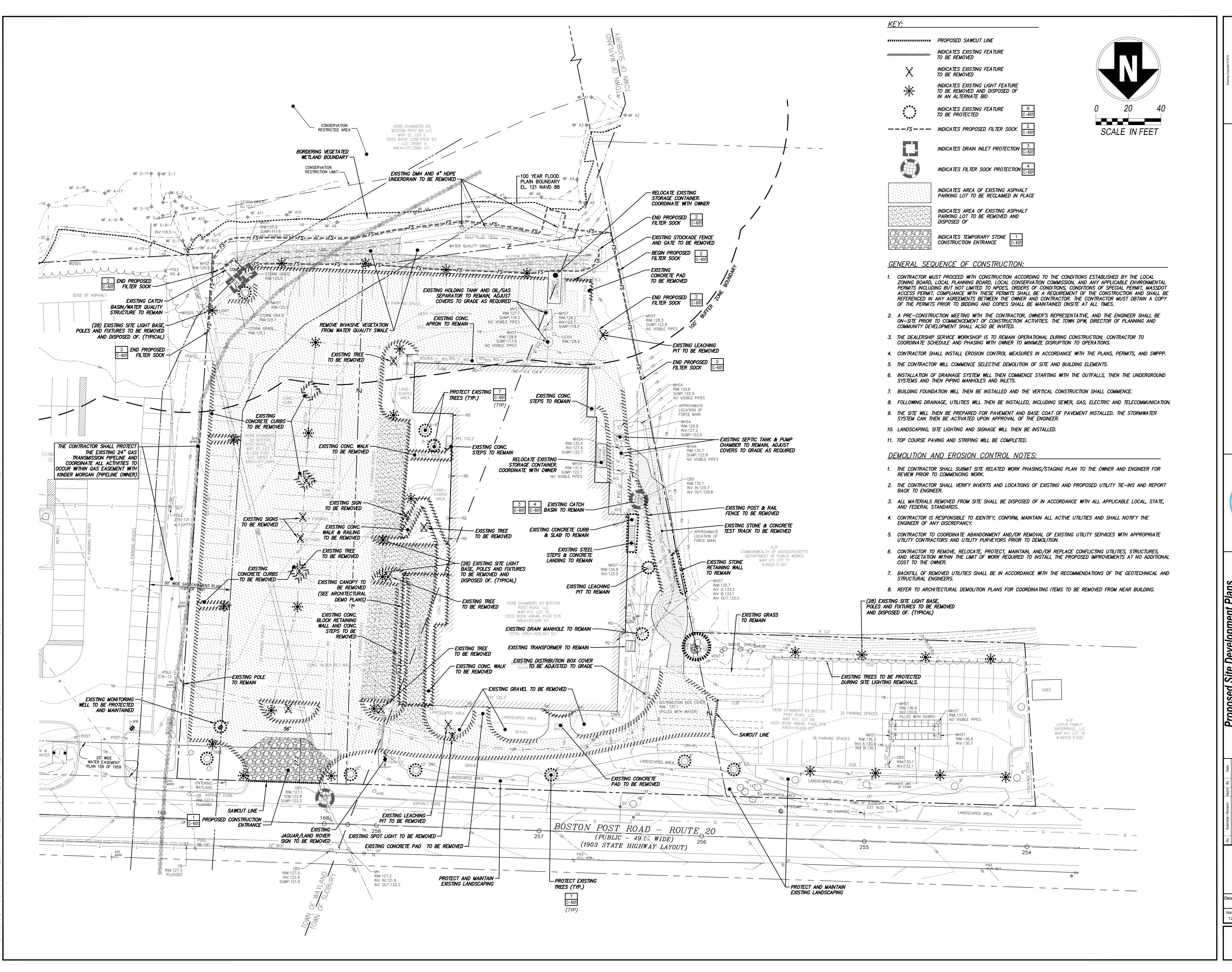
KK

Issue Date:
12/19/18

Drawn By:
Sheet Checked By:
KK

Scale:
AS SHOWN

C-101



141 Longwater Drive - Suite 104
Norwell, MA 02061

POST RD, LLC

HERB CHAMB 83 BOSTON F



ACATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE CITION OF A LICENSED PROFESSIONAL, ENGINEER, ARCHITECT, LANDSCAPE

HERB CHAMBERS

LAND ROVER of SUDBURY

KK SFA 12/18/18

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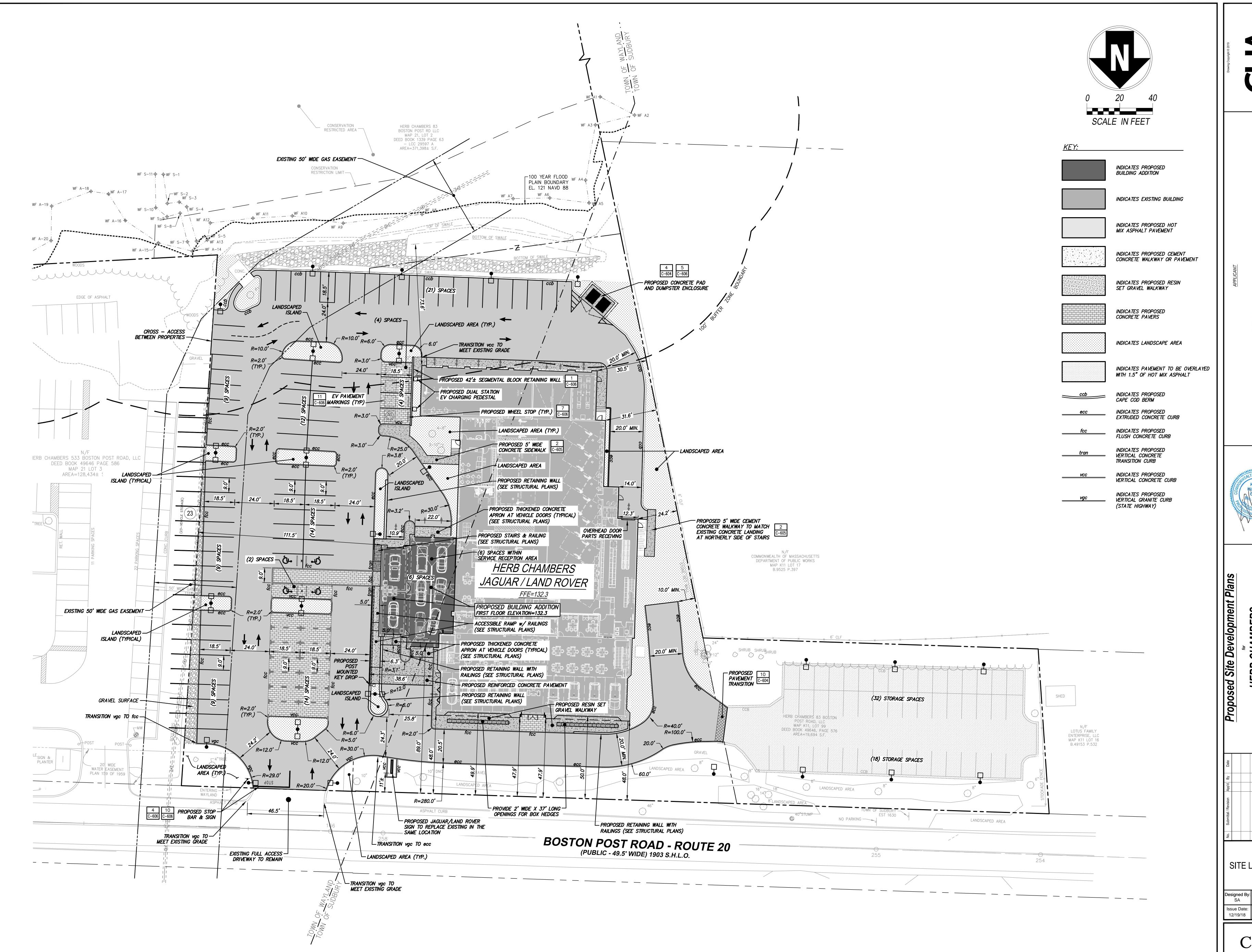
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DEMOLITION & EROSION CONTROL PLAN

Designed By: JM / SA Checked By: KK

Issue Date: Project No: Scale: AS SHOWN

C-102





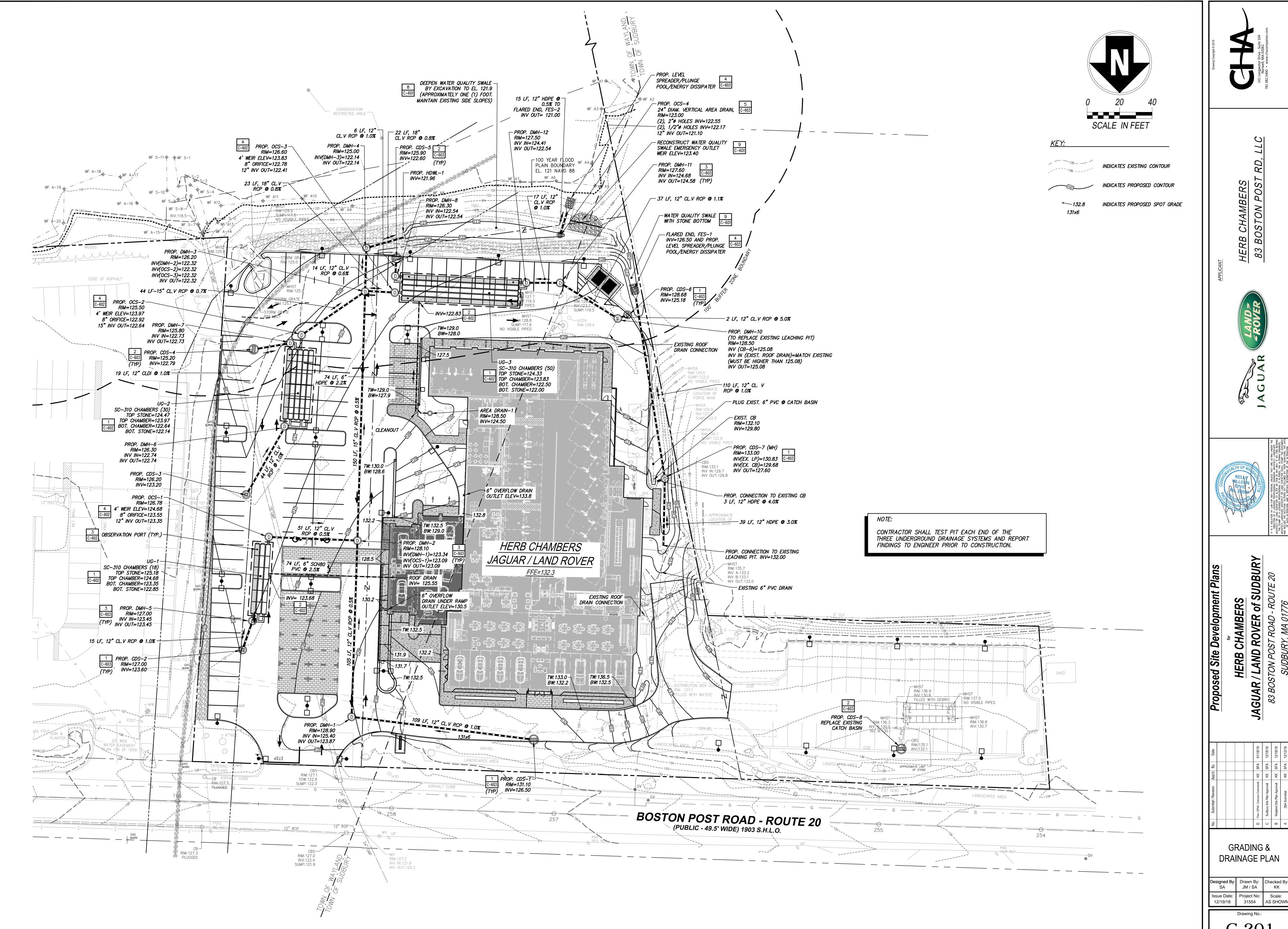


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ပ	Sudbury Site Plan Approval	X	SFA	12/18/18
В	Wayland Site Plan Approval	KK	KK SFA	12/18/18
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SITE LAYOUT PLAN

Designed By: Drawn By: Checked By JM / SA KK Issue Date: Project No: Scale: 31554 AS SHOWN

C-103





RD,

Drawing No.: C-201

31554 AS SHOWN

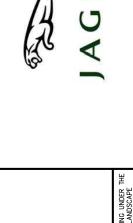
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POST RD, LLC

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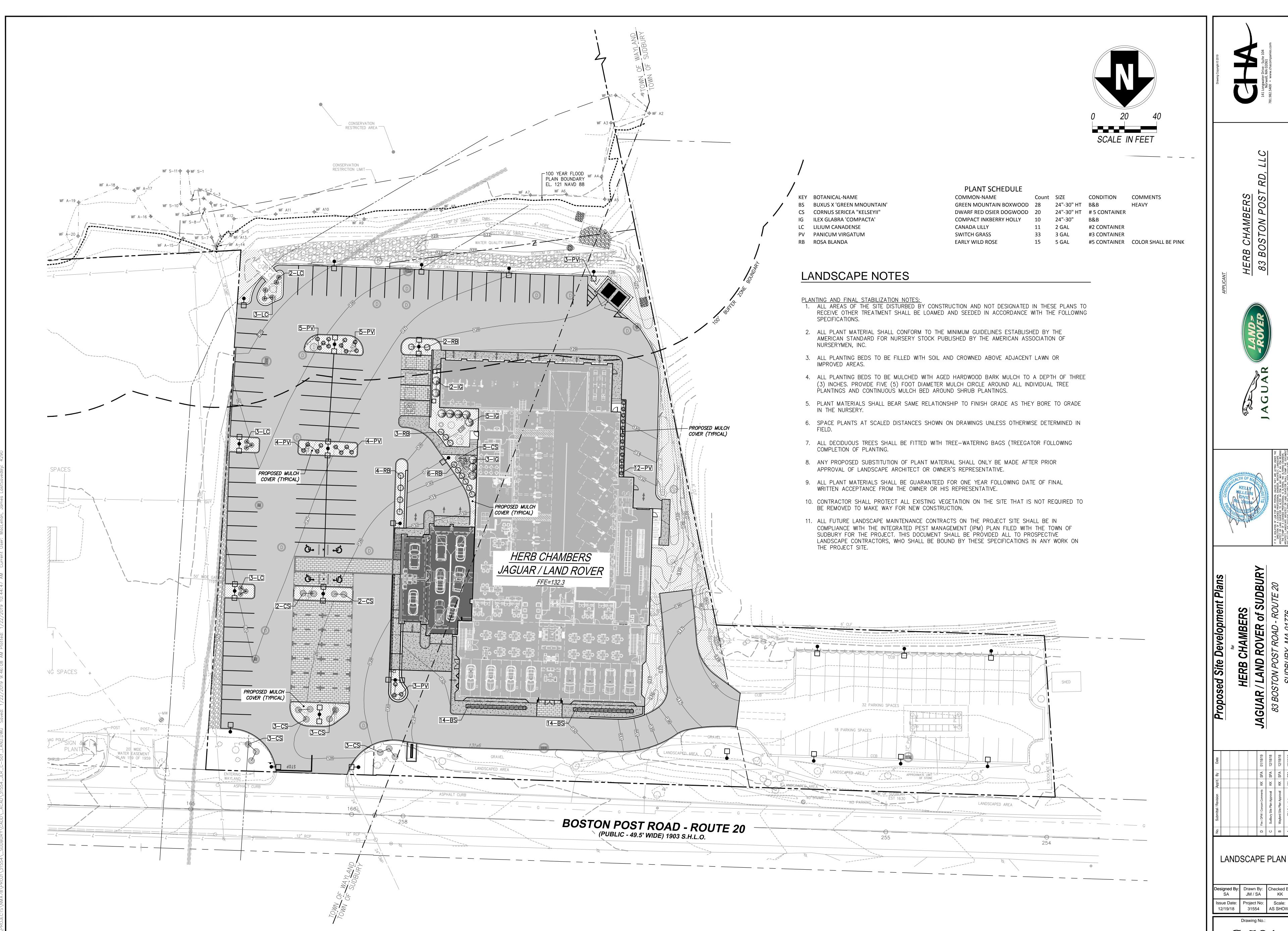
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UTILITY PLAN

Designed By:	Drawn By:	Checked By
SA	JM / SA	KK
Issue Date:	Project No:	Scale:
12/19/18	31554	AS SHOW





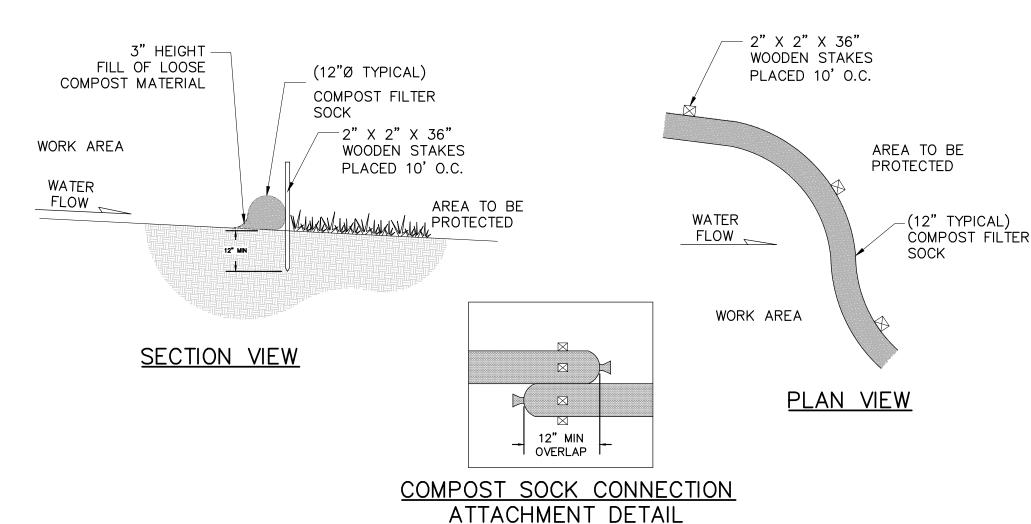


LANDSCAPE PLAN

SECTION CONSTRUCTION SPECIFICATIONS:

- SEE SHEET C-102 DEMOLITION & EROSION CONTROL PLAN FOR SHAPE CONFIGURATION.
- 2. STONE SIZE: USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- 3. LENGTH: RECOMMEND GREATER THAN OR EQUAL TO 30 FEET WHERE SOILS ARE SANDS AND GRAVELS AND 100 FEET IN SILTS AND CLAYS.
- 4. THICKNESS: NOT LESS THAN SIX (6) INCHES.
- 5. WIDTH: FIFTEEN (15) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OF EGRESS OCCURS.
- 6. FILTER CLOTH: SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- 7. SURFACE WATER: ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHALL BE INSTALLED.
- 8. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OF FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY AND ON AN ON GOING BASIS
- 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

STABILIZED CONSTRUCTION ENTRANCE



NOTES: 1. PREFABRICATED COMPOST SOCK SHALL BE FILTREXX SOXX OR APPROVED EQUAL

2. MATERIAL FOR SOCKS SHALL CONSIST OF SANITIZED MATURE COMPOST, FREE OF VIABLE WEED SEEDS AND FOREIGN DEBRIS SUCH AS GLASS AND PLASTIC. COMPOST SHALL BE IN SHREDDED OR GRANULAR FORM AND FREE FROM HARD LUMPS. IN ADDITION, NO KILN-DRIED WOOD OR CONSTRUCTION DEBRIS SHALL BE ALLOWED. CONTRACTOR SHALL REFER TO MASSDOT SPECIFICATIONS M1.06.0 FOR MATERIAL SPECIFICATIONS.

3. SOCK SHALL CONSIST OF JUTE MESH OR OTHER APPROVED BIODEGRADABLE MATERIAL PRACTICE: COMPOST FILTER SOCK:

UPSLOPE, TO PREVENT STORMWATER FROM RUNNING AROUND THE END OF THE TUBE.

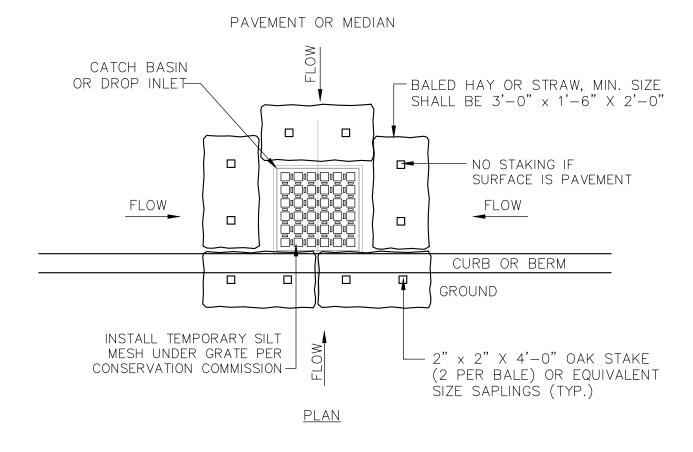
A COMPOST FILTER SOCK IS A TYPE OF CONTAINED COMPOST FILTER BERM CONSISTING OF A MESH TUBE FILLED WITH COMPOST MATERIAL THAT IS PLACED PERPENDICULAR TO SHEET FLOW RUNOFF TO RETAIN SEDIMENT FROM DISTURBED AREAS. THE COMPOST FILTER SOCK ACTS AS A FILTER TO RETAIN SEDIMENT AND OTHER POLLUTANTS (E.G., SUSPENDED SOLIDS, NUTRIENTS) WHILE ALLOWING THE WATER TO FLOW THROUGH IT. COMPOST QUALITY MUST MEET AASHTO 2010 SPECIFICATIONS.

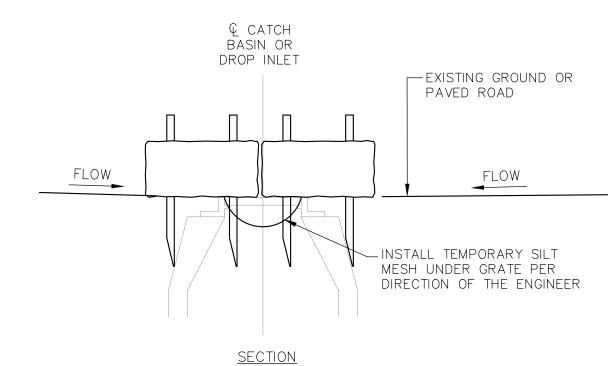
INSTALLATIONS REQUIREMENTS: ONCE THE FILTER SOCK IS FILLED AND PUT IN PLACE, IT SHOULD BE ANCHORED TO THE SLOPE BY STAKES ALONG THE DOWNHILL SIDE OF THE SOCK AT 10' SPACING ON CENTER (O.C.)O THE ENDS OF THE FILTER SOCK SHOULD BE DIRECTED

SOCK MUST BE INSPECTED FOR SEDIMENT ACCUMULATION. IF THERE IS EXCESSIVE PONDING BEHIND THE FILTER SOCK OR ACCUMULATED SEDIMENT REACHES THE TOP OF THE SOCK, AN ADDITIONAL SOCK SHOULD BE ADDED ON TOP OR INFRONT OF THE EXISTING SOCK IN THESE AREAS. AN ADEQUATE RESERVE OF SOCKS MUST BE KEPT ON SITE AT ALL TIMES FOR EMERGENCY AND/OR ROUTINE REPLACEMENT. SOCKS SHALL BE REMOVED ONLY AFTER EXPOSED SOILS IN THE CONTRIBUTING DRAINAGE AREA ACHIEVE FINAL STABILIZATION. SEDIMENT ACCUMULATION MUST BE REMOVED ONCE IT HAS REACHED 1/2 OF THE EXPOSED HEIGHT OF THE SOCK.

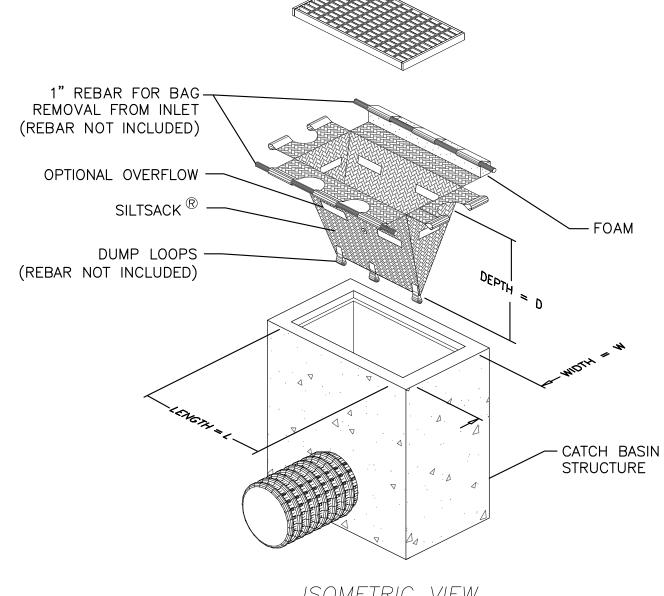
2-INCH COMPOST FILTER SOCK

MAINTENANCE REQUIREMENTS:





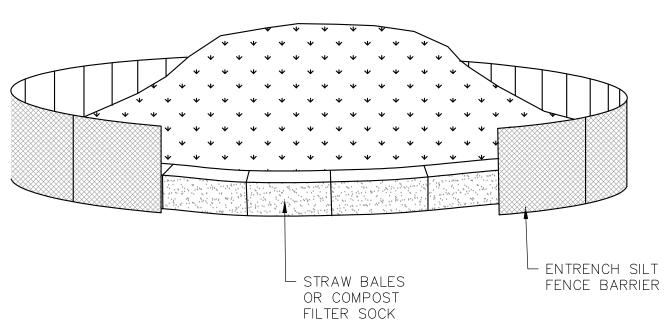
DRAIN INLET PROTECTION SCALE: NO SCALE



ISOMETRIC VIEW

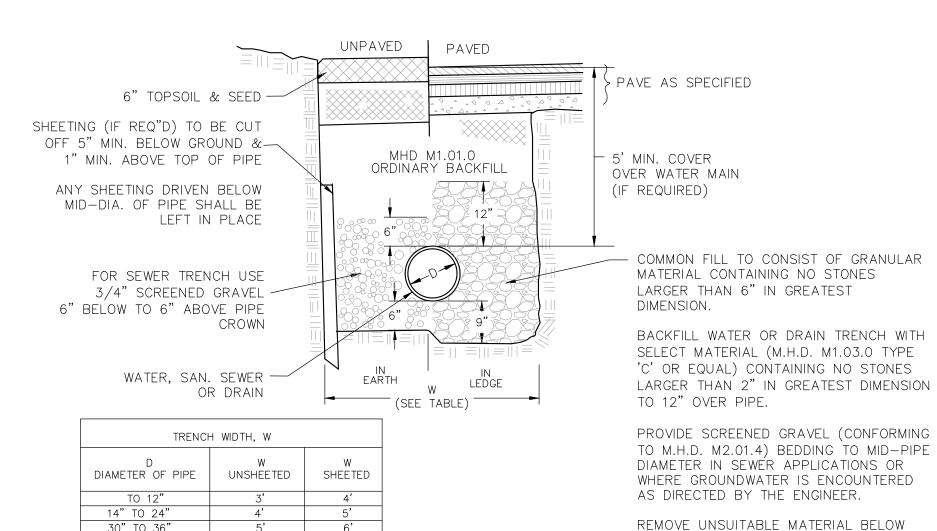
- 1. REMOVE ACCUMULATED SEDIMENT WHEN CAPACITY IS REDUCED BY HALF OR PER MANUFACTURER'S RECOMMENDATIONS.
- 2. CATCH BASIN INSERT TO BE SILTSACK BY ACF ENVIRONMENTAL, PHONE: 1-800-448-3636, acfenvironmental.com OR EQUIVALENT.
- 3. INSTALL ON ALL EXISTING CATCH BASINS WITHIN MAIN STREET AND ON SITE. INSTALL ON ALL PROPOSED CATCH BASINS AFTER STRUCTURE INSTALLATION.

<u>TILTER SACK CATCH BASIN INSERT DETAIL</u>



INSTALLATION NOTES:

- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- 2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
- 3. UPON COMPLETION OF STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH STRAW BALES, THEN STABILIZED WITH VEGETATION, OR COVERED.
- 4. SEE SPECIFICATIONS FOR INSTALLATION OF STRAW BALES.



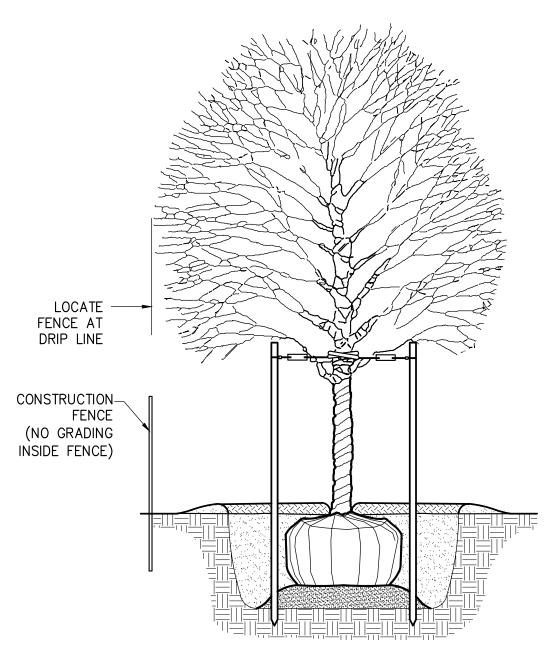
<u>NOTES:</u>

GRADE, IF ENCOUNTERED, TO SUITABLE

REPLACE WITH CLEAN GRANULAR FILL.

DEPTHS AS DIRECTED BY ENGINEER AND

- 1. ALL TRENCH CONSTRUCTION TO CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- 2. COMPACT FILL AND TAMP PIPE TO 95% MAX. DRY DENSITY IN 6" LIFTS UNLESS OTHERWISE SPECIFIED.
- 3. INSTALL DUCTILE IRON WATER PIPE IN ACCORDANCE WITH ANSI A21.51 (AWWA C151) LAYING CONDITION TYPE 2. BACKFILL TO CONFORM TO MHD M1.03.0 GRAVEL BURROW TYPE 'C' (2" MINUS) TO 12" ABOVE PIPE CROWN OR AS DIRECTED BY MANUFACTURER OR ENGINEER.
- 4. MATERIALS FOR SEWER BEDDING, HAUNCHING, AND BACKFILL TO CONFORM TO CLASSES I, II, OR III AS DESCRIBED IN ASTM D 2321 AND TR-16 GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT
- PROVIDE SCREENED GRAVEL (CONFORMING 5. BACKFILL RCP CLASS V ADS N-12 HDPE, AND/OR PVC DRAIN PIPE WITH MHD M1.03.0 GRAVEL BURROW TYPE 'C' TO 12" ABOVE PIPE CROWN OR AS DIRECTED BY MANUFACTURER OR ENGINEER.
 - 6. PROVIDE MINIMUM 5 FT. COVER OVER WATER MAIN AS MEASURED FROM BOTTOM OF CURB LINE. INSULATE WATERMAIN IN ACCORDANCE WITH M.H.D. SECTION 301 WATER SYSTEMS IN AREAS PRONE TO FROST ACTION AND/OR LESS THAN 5' MIN. COVER.



FENCE NOTES:

- 1. CONTRACTOR TO MAINTAIN INTEGRITY OF CONSTRUCTION FENCE FOR DURATION OF
- 2. FOR EVERGREEN TREES LOCATE CONSTRUCTION FENCE 5' CLEAR OF BASE
- BRANCHES. 3. IF ROCK IS ENCOUNTERED BEFORE DRIVEN
- DEPTH SHOWN, SECURE POST IN 12"
- DIAMETER CONCRETE FOOTING. 4. REMOVE FENCE AND RESTORE LAWN AT
- COMPLETION OF CONTRACT.
- 5. ALL TIES TO BE 9 GAUGE.
- 6. ALL COMPONENTS TO BE GALVANIZED STEEL. 7. INSTALL BRACE RAIL ASSEMBLIES IN EACH
- DIRECTION FROM CORNER POSTS AND AT ALL 8. BRACE / TENSION BANDS TO BE $\frac{1}{8}$ " x 1" AND
- FASTENED WITH $\frac{3}{6}$ " x 1 $\frac{1}{2}$ " CARRIAGE BOLTS.

9. IF LANDSCAPE PLANS CONTAIN TREE PROTECTION DETAIL, THAT DETAIL SHALL GOVERN OVER THIS DETAIL.

<u>TREE PROTECTION DETAIL</u>

SCALE: NO SCALE

EL. 123.40

SEE PLANS FOR ELEVATION EMERGENCY OVERFLOW CARRY SPILLWAY 2'-0" BEYOND DIKE CREST REINFORCED CONCRETE OR GRANITE SILL

75% OF RIP-RAP STONE SHALL BE 70 TO 100 LBS. AND SHALL BE HAND CHINKED TO LEAVE A SMOOTH SURFACE ALONG THE TOP OF THE DIKE AND A ROUGH SURFACE ALONG DOWNSTREAM SURFACE AND TOE OF THE DIKE. ALL SILL JOINTS TO BE MORTARED TO PREVENT SEEPAGE.

- SPILLWAY CREST EL. 123.40

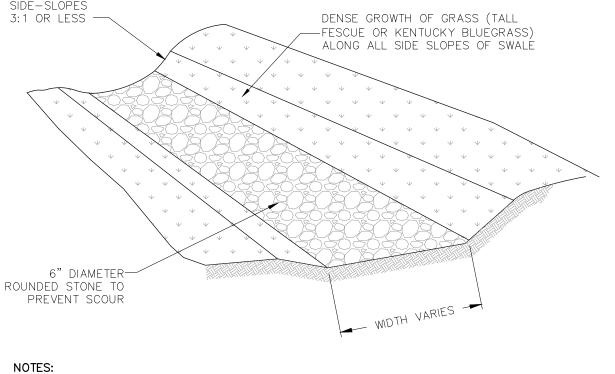
- RIP RAP STONE (SEE NOTE)

REINFORCED CONCRETE—

OR GRANITE SILL

TOP OF DIKE EL. 124.5±

6" OF 1-1/2" STONE-



1. INSTALL ROUNDED BOTTOM STONE TO GIVE A NATURAL STREAM APPEARANCE. 2. JUTE NETTING WILL BE REQUIRED TO PREVENT EROSION OF GRASSED SIDE SLOPES.

WATER QUALITY SWALE WITH STONE BOTTOM DETAIL

STORMWATER POLLUTION PREVENTION NOTES

CONSTRUCTION PHASE NOTICE REQUIREMENTS.

ROADS SHALL BE PAID BY THE CONTRACTOR.

- 1. ALL CONSTRUCTION SHALL COMPLY WITH THE ALL CONSTRUCTION SHALL COMPLY WITH THE TOWN OF WAYLAND STORMWATER AND LAND DISTURBANCE BYLAW, CHAPTER 193, AND THE TOWN OF SUDBURY STORMWATER MANAGEMENT BYLAW ARTICLE V (F). 2. A SWPPP IS REQUIRED FOR THE PROJECT. CONTRACTOR TO ABIDE BY PROVISIONS OF EPA NOI NPDES STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND BY STORMWATER MANAGEMENT OPERATION AND MAINTENANCE PLAN. CONTRACTOR SHALL ABIDE BY NPDES
- 3. EROSION CONTROL MEASURES SHALL BE INCORPORATED IN THE SEQUENCE OF CONSTRUCTION TO PREVENT SEDIMENT—LADEN WATER FROM LEAVING THE SITE. THESE MEASURES MAY INCLUDE STAKED STRAW BALES, FILTER SOCK, POLYPROPYLENE SILT FENCING AND VARIOUS COMBINATIONS OF THE THREE. THE LOCATION FOR THE INSTALLATION OF THESE MATERIALS ON THE PROJECT SITE ARE INDICATED ON THE PROJECT PLANS AND APPROPRIATE CONSTRUCTION DETAILS ARE INCLUDED ON THE PROJECT DETAIL SHEETS.
- 4. NATURAL VEGETATION SHALL BE RETAINED WHENEVER FEASIBLE UP TO THE SCHEDULED START OF CONSTRUCTION ACTIVITY. 5. AREAS SUBJECT TO EROSION SHALL BE MINIMIZED IN TERMS OF TIME AND AREA.
- 6. IN GENERAL, WORK REQUIRING EROSION CONTROL INCLUDES EXCAVATIONS, FILLS, DRAINAGE SWALES, ROUGH AND FINISHED GRADING, AND STOCKPILING OF EARTH.
- 7. ALL TEMPORARY STOCKPILE AREAS SHALL HAVE EROSION CONTROLS (STRAW AND SILT FENCE) AROUND THE PERIMETER.
- 8. DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE PROPOSED LIMIT OF GRADING. 9. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SEDIMENTATION
- AND EROSION CONTROL MEASURES SHALL BE IN PLACE AND OBSERVED PRIOR TO ANY WORK STARTING ON THE PROJECT. 10. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON A PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE TO A PUBLIC ROADWAY. IT SHALL BE DONE ON AN AREA

STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL FINES IMPOSED FOR TRACKING ONTO PUBLIC

- 11. TEMPORARY SEEDING OR OTHER METHOD OF STABILIZATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE, UNLESS ADDITIONAL CONSTRUCTION OF THE AREAS IS EXPECTED WITHIN 14 DAYS OF THE LAST DISTURBANCE.
- 12. INSTALL AND MAINTAIN CATCH BASIN INSERTS IN ALL EXISTING CATCH BASINS WITHIN WORK ZONE (NOT REMOVED) AND PROPOSED CATCH
- STRUCTURE TO PREVENT SEDIMENTATION FROM ENTERING THE CATCH BASIN. 14. UPON COMPLETION OF FINE GRADING, ALL AREAS NOT OTHERWISE PERMANENTLY STABILIZED SHALL BE SEEDED AND MAINTAINED UNTIL A UNIFORM COVERAGE OF 75%± MINIMUM DENSITY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, IS ACHIEVED.

13. UPON COMPLETION OF CATCH BASINS AND AREA DRAINS, STRAWBALES OR INSERTS (SILT SACKS OR SIMILAR) WILL BE PLACED AT EACH

15. MAINTENANCE — EROSION AND SEDIMENT CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEEMS NECESSARY OR AS DIRECTED BY THE ENGINEER OR ARCHITECT. ACCUMULATED SILT AT ANY EROSION AND SEDIMENT CONTROL DEVICE SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6", AND SHALL BE DISTRIBUTED ON—SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION.

- 16. CONTRACTOR IS RESPONSIBLE FOR REESTABLISHING ANY EROSION CONTROL DEVICE WHICH HE DISTURBS. EACH CONTRACTOR SHALL NOTIFY THE ENGINEER/ARCHITECT OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES WHICH MAY LEAD TO UNAUTHORIZED DISCHARGE OR STORM WATER POLLUTION, SEDIMENTATION OR OTHER POLLUTANTS. UNAUTHORIZED POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO, EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASE, FUEL, AND LUBE OIL, PESTICIDES, ANY SOLID
- 17. ALL SIDE SLOPES SHALL BE SEEDED WITH GRASS OR INSTALL JUTE NETTING TO PREVENT EROSION. SIDE SLOPES ALONG THE PERIMETER OF THE DEVELOPED AREA SHALL BE STABILIZED IMMEDIATELY FOLLOWING CONSTRUCTION.
- 18. INSPECTIONS: INSPECTIONS ARE TO BE PERFORMED BY QUALIFIED PERSONNEL. DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, MUST BE INSPECTED ONCE EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM EVENT OF 0.25 INCHES OR GREATER. STABILIZED AREAS ARE TO BE INSPECTED ONCE PER MONTH DISTURBED AREAS AND STORAGE AREAS EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM. CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THEY ARE WORKING PROPERLY. DISCHARGE LOCATIONS AND POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER CONTROLS ARE PREVENTING SIGNIFICANT IMPACT. BASED ON THE RESULTS OF THE ABOVE INSPECTIONS, ANY NECESSARY CHANGES TO THE PLAN WILL BE MADE WITHIN 7 DAYS OF THE INSPECTION. THE CHANGES MUST BE IMPLEMENTED IN THE FIELD BEFORE THE NEXT STORM EVEN IF PRACTICABLE, OTHERWISE WITHIN 7 DAYS PER GENERAL CONSTRUCTION PERMIT.
- 19. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SILT FROM BEHIND SILTATION BARRIERS PAVEMENT AREAS, AND CATCH BASIN SUMPS. DISPOSE OF SILT IN ACCORDANCE WITH THE SWPPP DOCUMENTS
- 20. PROVIDE TEMPORARY SEDIMENTATION BASINS, BALES, ETC. AS NECESSARY.
- 21. STOCKPILES ARE TO BE AT LEAST 100 FEET FROM WETLAND AREAS. STOCKPILES NOT TO BE REUSED WITHIN 14 DAYS ARE TO BE
- STABILIZED WITH SEED OR MULCH. 22. POTENTIAL STOCK PILE AREA TO BE PROTECTED WITH EROSION AND SEDIMENT CONTROL MEASURES.
- 23. THE CONTRACTOR SHALL HAVE A WATER TRUCK ON-SITE AT ALL TIMES AND SHALL PROVIDE TEMPORARY PLANTINGS OR OTHER COVERINGS SUCH AS WOOD CHIPS TO MINIMIZE THE AMOUNT OF DUST LEAVING THE PREMISES.
- 24. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY STORMWATER MANAGEMENT MEASURES FOR THE DURATION OF CONSTRUCTION. 25. CONTRACTOR TO PROVIDE AND MAINTAIN TEMPORARY DEWATERING MEASURES TO ALLOW FOR EXCAVATION AND INSTALLATION OF UNDERGROUND UTILITIES AND STRUCTURES. CONVEY WATER TO TEMPORARY SEDIMENT CONTROL/DEWATERING AREAS. NO
- UNTREATED WATER SHALL BE DISCHARGED DIRECTLY TO THE STORMWATER DRAINAGE SYSTEM OR TOWARDS RESOURCE AREAS. 26. CONTRACTOR IS REQUIRED TO JET CLEAN ENTIRE DRAINAGE SYSTEM UPON COMPLETION OF WORK AND CLEAN OUT ALL SUMPS WITH VACUUM TRUCK.
- 27. CONTRACTOR IS REQUIRED TO PROVIDE STREET SWEEPING TO CONTINUALLY MAINTAIN BOSTON POST ROAD FREE OF DIRT, DEBRIS, TRASH,

<u>SERS</u> POST ROST

1ER 83 E







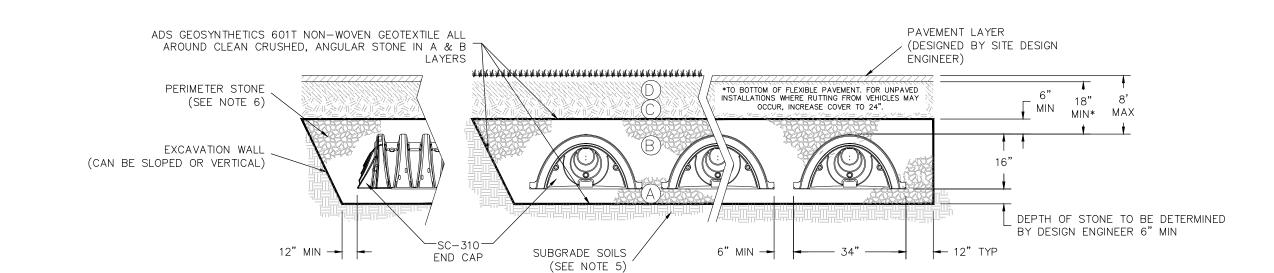
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DETAILS-1

esigned By: Drawn By: Checked By JM / SA ssue Date: Project No: 12/19/18 31554 | AS SHOWN

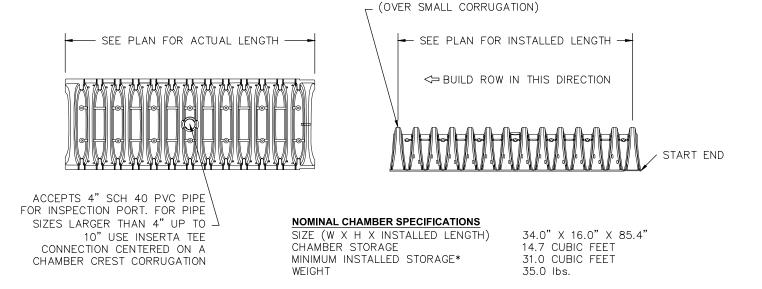
PLEASE NOTE:

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE". . STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION



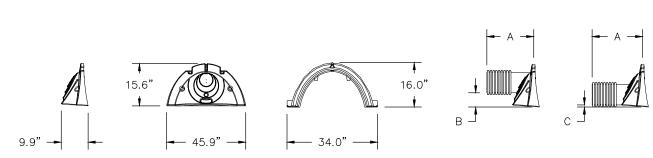
- 1. SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 2. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION
- 3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS. 4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
- 5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH
- CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- 6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
- 8. STORMTECH SC-310 & SC-740 UNITS TO BE H20 RATED FOR VEHICLE LOADS.

EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



OVERLAP NEXT CHAMBER HERE

*ASSUMES 6" ABOVE, BELOW, AND BETWEEN CHAMBERS

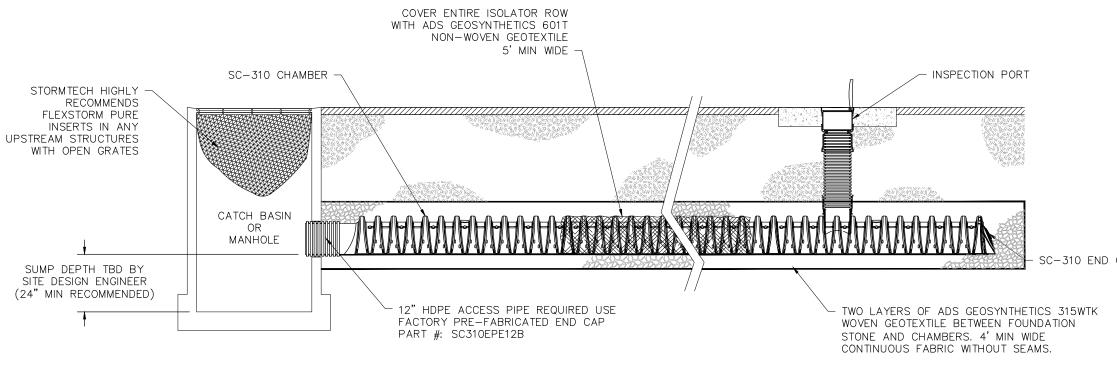


SC-310 TECHNICAL SPECIFICATION

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	Α	В	С
SC310EPE06T / SC310EPE06TPC		0.0"	5.8"	
SC310EPE06B / SC310EPE06BPC	6" 9.6"			0.5"
SC310EPE08T / SC310EPE08TPC	0"	11.0"	3.5"	
SC310EPE08B / SC310EPE08BPC	8"	11.9"		0.6"
SC310EPE10T / SC310EPE10TPC	40"	40.7"	1.4"	
SC310EPE10B / SC310EPE10BPC	10" 12.7"			0.7"
SC310FPF12B	12"	13.5"		0.9"

ALL STUBS, EXCEPT FOR THE SC310EPE12B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694. * FOR THE SC310EPE12B THE 12" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL. NOTE: ALL DIMENSIONS ARE NOMINAL



SC-310 ISOLATOR ROW DETAIL

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT

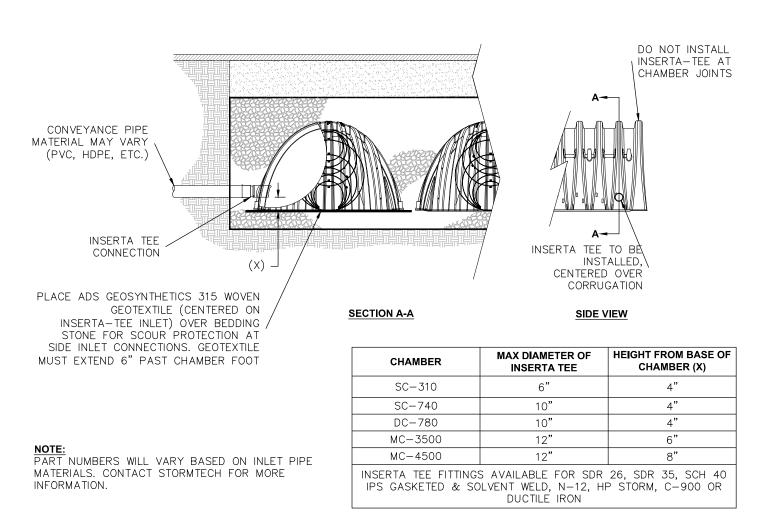
- A. INSPECTION PORTS REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED 5. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG 4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

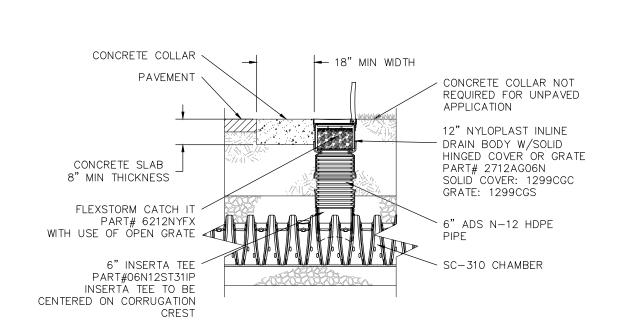
- 5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. B. ALL ISOLATOR ROWS REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
- . USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE 2.1. MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY 2.2.FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS I. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- . APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN $\check{}$ 3. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

STORMTECH SC-310 CHAMBER UNIT SYSTEM SCALE: NO SCALE



STORMTECH INSERTA TEE DETAIL SCALE: NO SCALE

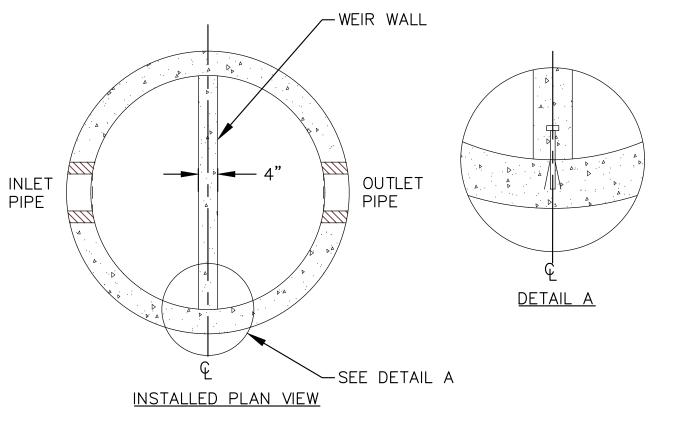


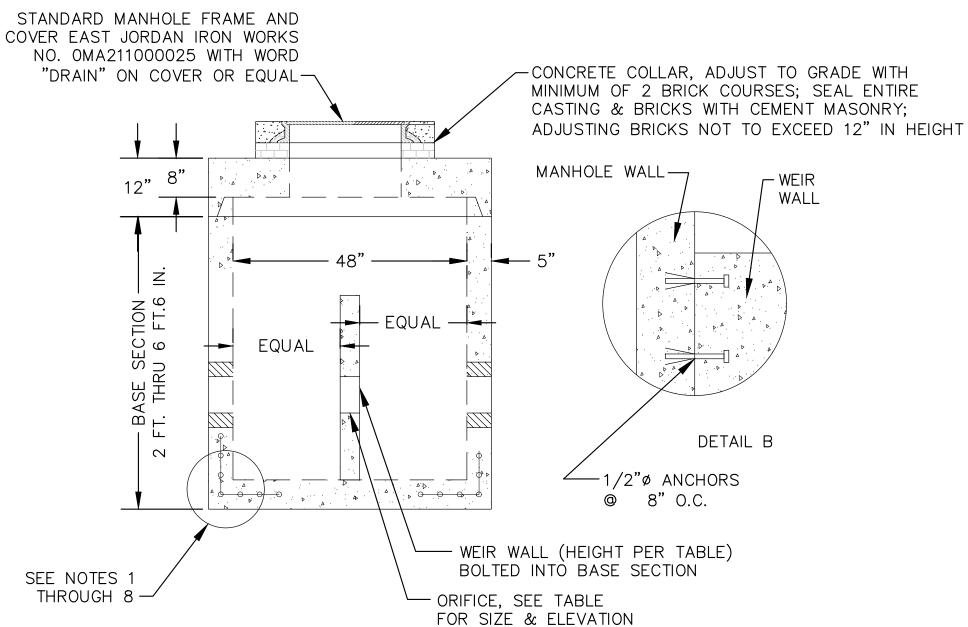
SC-310 6" INSPECTION PORT DETAIL NOTES

AND HIGH WATER ELEVATIONS.

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

STORMTECH INSPECTION PORT DETAIL SCALE: NO SCALE





OUTLET CONTROL STRUCTURE ELEVATIONS AND INVERTS						
STRUCTURE	RIM	INLET	TOP OF WALL	ORIFICE	OUTLET	
0CS-1	126.78	12" @ 123.35	124.68	8" @ 123.55	12" @ 123.34	
0CS-2	125.50	12" @ 122.64	123.97	8" @ 122.92	15" @ 122.64	
OCS-3	126.60	12" @ 122.41	123.83	8" @ 122.78	12" @ 122.41	

- 1. SEE PLAN FOR INDIVIDUAL STRUCTURE PIPE ORIENTATION.
- SUBMITTED TO CHA. CALCULATIONS SHALL ASSUME THE HIGHER OF FEMA FLOODPLAIN ELEVATION OR SEASONAL HIGH GROUNDWATER ELEVATION FOR FOR GROUNDWATER DEPTH AT EACH STRUCTURE.
- IN SHOP DRAWING PHASE. STRUCTURES SHALL CONFORM TO PROVIDED DETAILS, OR APPROVED EQUAL.
- 4. STEEL REINFORCEMENT SHALL CONFORM TO LATEST ASTM SPECIFICATION:
- ASTM A-185 WELDED WIRE FABRIC

- 7. HS-20 DESIGN LOADING SHALL CONFORM TO LATEST SPECIFICATIONS ASTM C478, AASHTO M199 PRECAST REINFORCED CONCRETE MANHOLE SECTIONS.
- 8. ONE POUR MONOLITHIC BASE SECTION

2. CONTRACTOR SHALL PROVIDE SIGNED & SEALED BUOYANCY CALCULATIONS FOR ALL PRECAST STRUCTURES WITH SHOP DRAWINGS

3. SHOP DRAWINGS SHOULD BE PROVIDED AND APPROVED BEFORE ANY STRUCTURES ARE ORDERED. CONTRACTOR TO CONFIRM ALL SIZES

ASTM A-615, GRADE 60 BLACK DEFORMED BARS

0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN.(BOTH WAYS) BASE BOTTOM

5. CONCRETE: FC = 4,000 PSI @ 28 DAYS MINIMUM, TYPE III CEMENT

- 6. BUTYL RUBBER JOINT SEALANT PROVIDED SHALL CONFORM TO ASTM C-990 AND FEDERAL SPEC SS-S-210A.

OUTLET CONTROL STRUCTURE WITH CENTERED WEIR WALL

CHAME STON



SUDBUR

DETAILS-2

esigned By: Drawn By: Checked By JM / SA Issue Date: Project No: Scale: 31554 AS SHOWN 12/19/18

DETAILS-3

JM / SA Issue Date: Project No: 31554 12/19/18

C-603

CDS2015-4-C DESIGN NOTES DS2015-4-C RATED TREATMENT CAPACITY IS 0.7 CFS [19.8 L/s], OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 10.0 CFS [283 L/s]. IF THE SITE CONDITIONS EXCEED 10.0 [283 L/s] CFS, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED. THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS. CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPI GRATED INLET WITH INLET PIPE OR PIPES CURB INLET ONLY (NO INLET PIPE) CURB INLET WITH INLET PIPE OR PIPES SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION

EDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS

CENTER OF CDS STRUCTURE, SCREEN AND

— TOP SLAB ACCESS

PERMANENT POOL

TOP SLAB ACCESS

- (SEE FRAME AND COVER DETAIL)

48" I.D. MANHOLE

STRUCTURE

SUMP OPENING

FIBERGLASS SEPARATION

PVC HYDRAULIC SHEAR

FIBERGLASS SEPARATION

INLET PIPE

MULTIPLE INLET PIPES MAY

BE ACCOMMODATED -

(SEE PLAN VIEW)

OIL BAFFLE SKIRT

SEPARATION

PVC HYDRAULIC

SOLIDS STORAGE SUMP —

SHEAR PLATE

FIBERGLASS SEPARATION

HDPE HYDRAULIC SHEAR PLATE

CONTRACTOR TO GROUT TO FINISHED GRADE

FIBERGLASS SEPARATION

CYLINDER AND INLET

INLET PIPE

SEPARATION

HDPE HYDRAULIC _

SHEAR PLATE

SOLIDS STORAGE SUMP —

SCREEN

(MULTIPLE INLET PIPES MAY — BE ACCOMMODATED)

CYLINDER AND INLET

SCREEN

CYLINDER AND INLET

CONTRACTOR TO GROUT

TO FINISHED GRADE

CYLINDER AND INLET

(1) 24" SQ. x 4" FRAME AND GRATE EJIW PROD NO. 45667002 (1) Ø 12" SQ. x 4" FRAME AND COVER (VENTED) 60" O.D. MANHOLE STRUCTURE 48" I.D. MANHOLE STRUCTURE

FRAME AND COVER

SINGLE GRATE CATCH BASIN

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE. 2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com 3. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. 4. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS SHALL MEET SECTION 5 OFTHE WEYMOUTH SUBDIVISION RULES AND REGULATIONS. B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED). CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

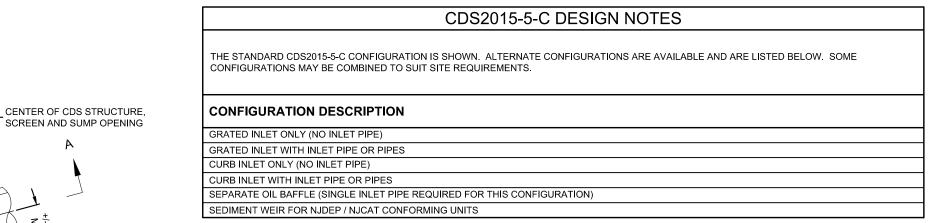
CONTECH

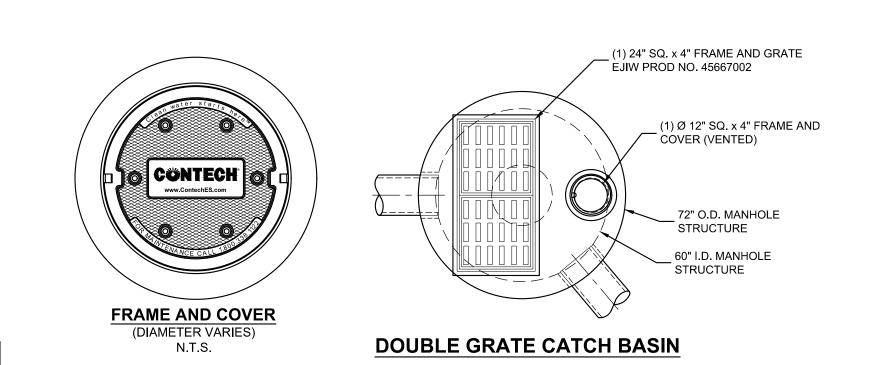
INSTALLATION NOTES

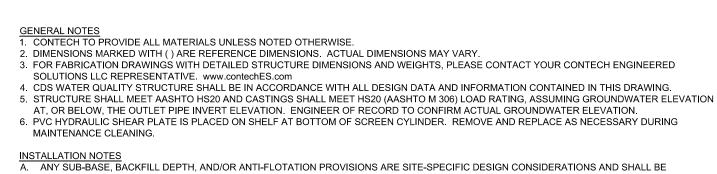
1 CDS2015-4-C WATER QUALITY UNIT DETAIL SCALE: NO SCALE

ELEVATION A-A

PLAN VIEW B-B







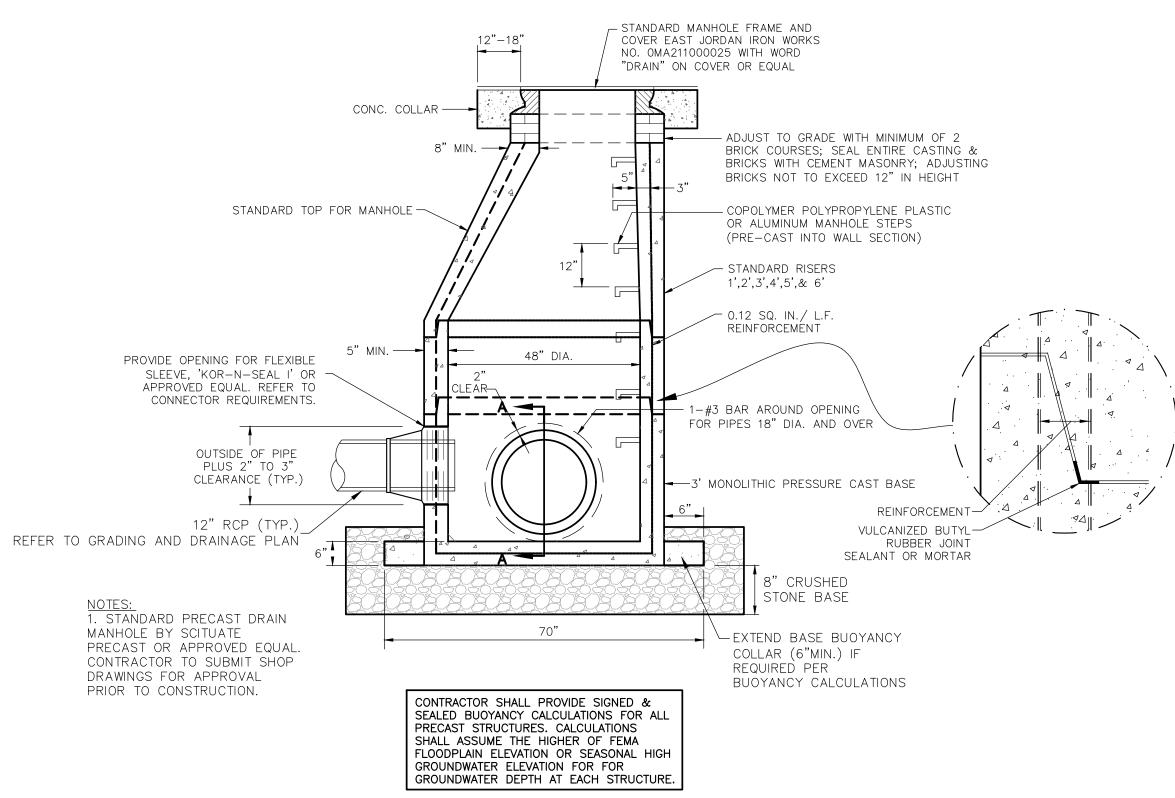
SPECIFIED BY ENGINEER OF RECORD. B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED). CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.

CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS

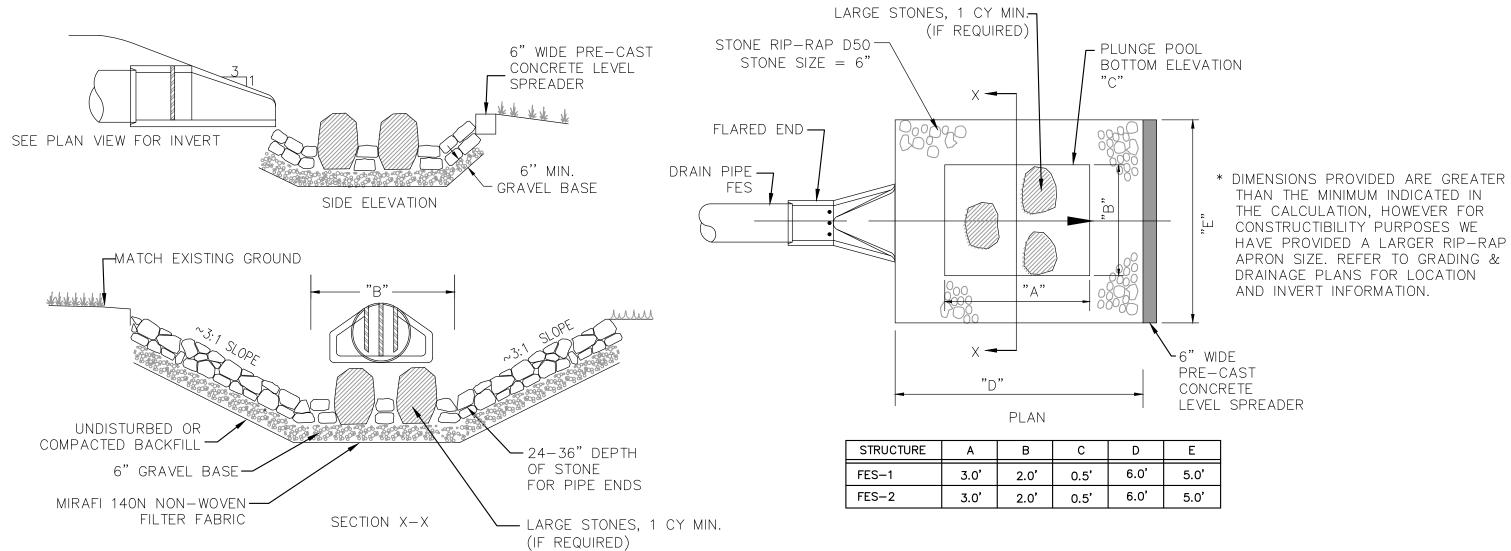
CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN

SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

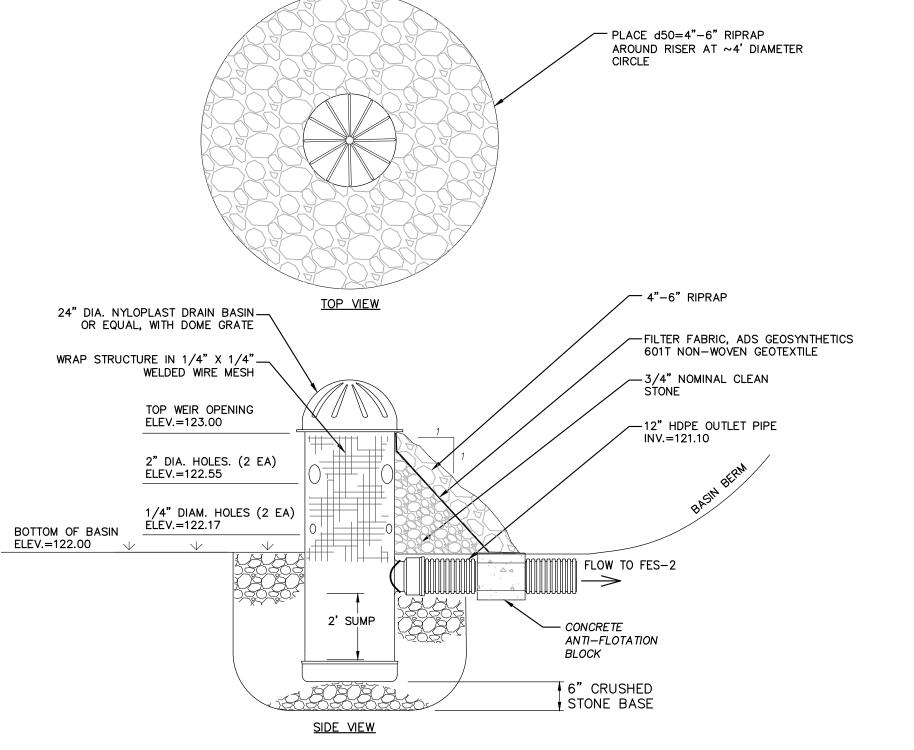
2 CDS2015-5-C WATER QUALITY UNIT DETAIL
SCALE: NO SCALE



<u>STANDARD PRE-CAST DRAIN MANHOLE</u>



4 LEVEL SPREADER/PLUNGE POOL/ENERGY DISSIPATER



5 OUTLET CONTROL STRUCTURE NO.4 (OCS-4)
SCALE: NO SCALE

PROPOSED DOWNSPOUT (REFER TO ARCHITECTURAL PLANS) DOWNSPOUT ADAPTER INSERTED IN RISER PIPE. ADS OR APPROVED EQUAL. CONTRACTOR TO FINISHED GRADE COORDINATE SIZE WITH DOWNSPOUTS ON ARCHITECTURAL PLANS. 6" HDPE PIPE > (TYP) 8"x6" BELL REDUCER, 90° BEND GASKETED CONNECTION 6" HDPE PIPE WYE FITTING IN 8" HDPE ROOF (TYP) DIRECTION OF FLOW DRAIN HEADER NOTE:
1. ALL JOINTS TO BE WATERTIGHT (WT) ROOF DRAIN CONNECTION

SCALE: NO SCALE

BOLT CIRCLE AND --- POLE FIXTURE. TO MATCH ANCHOR BOLTS PER LIGHT WITH BOLT COVERS. POLE MANUFACTURER LEAVE 2'-0" COIL RECOMMENDATIONS. — OF GROUND WIRE - 1"X45° CHAMFER ON TOP OF CONCRETE COPPER CABLE BASE (TYPICAL). CONNECTION TO 8'-0" GROUND FINISH GRADE ROD (TYPICAL). CONDUITS (TYPICAL). 1)-2" CONDUIT $(1)-1 \ 1/4$ " CONDUIT 72" MIN. - REBAR #6 VERT. WITH #3" HORIZ. AT 10" O.C. 3,000 PSI CONCRETE — 3" MINIMUM COVER MIXTURE 6" OF COMPACT GRAVEL ON BOTTOM OF CONCRETE BASE (TYPICAL).

- 1. TOTAL LENGTH OF SONOTUBE IS A 3-1 RATIO WITH RESPECT TO THE TOTAL HEIGHT OF POLE INCLUDING EXTENSION ABOVE FINISHED GRADE.
- 2. LIGHTING NOTE: CONTRACTOR IS RESPONSIBLE FOR PLANNING / ORIENTATING THE BASE PLATE MOUNTING PATTERN TO FIT THE SELECTED POLE AND ACCOUNT FOR THE ORIENTATION OF THE FIXTURE HEADS.
- 3. CONTRACTOR TO SUBMIT SHOP DRAWING FOR APPROVAL, PRIOR TO CONSTRUCTION.
- 3 PRE-CAST POLE BASE DETAIL
 SCALE: NO SCALE

BROOM FINISH < ALL EDGES ROUND 4,000 PSI CONCRETE DENSE GRADED — CRUSHED STONE COMPACTED COMPACTED SUBGRADE -REINFORCING #4 BARS ON 16" CENTER EACH NOTES:

1. INSTALL CONTROL JOINTS @ 20FT CENTER BOTH WAY. . INSTALL 1" DOWELS IN DOWEL BASKETS AT CONTROL JOINTS ON 12" CENTER

REINFORCED CONCRETE SECTION FOR DUMPSTER/COMPACTOR PAD

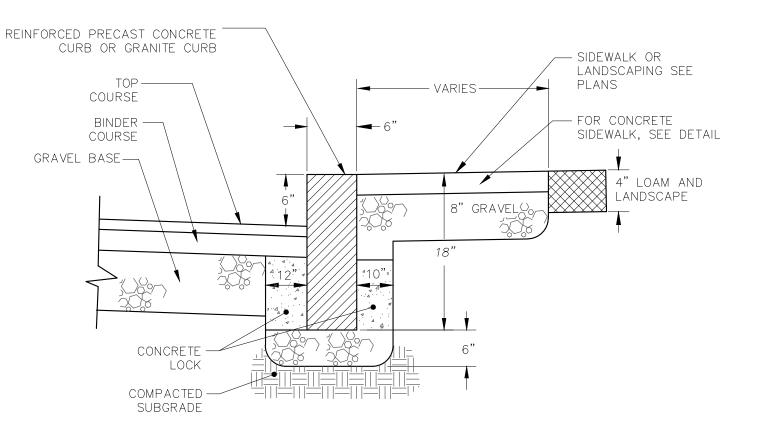
3. PROTECT FROM FREEZING AND RAIN DURING THE FIRST 72 HOURS.

2.5" HMA _1.5" HMA TOP COURSE -BINDER COURSE LSUBBASE 12" COMPACTED -RECLAIMED PAVEMENT (MASSDOT M1.09.0)

NOTE:

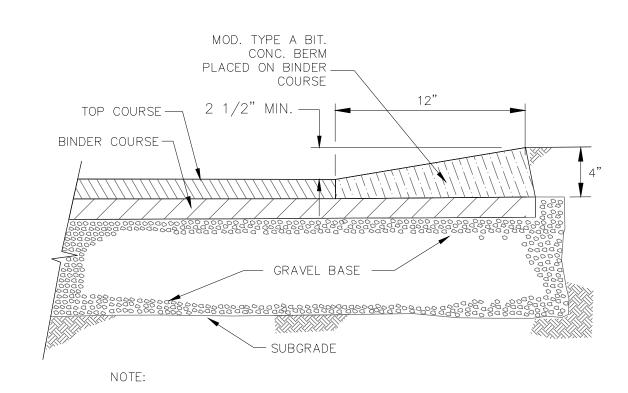
- 1. CONTRACTOR WILL PULVERIZE AND MIX IN PLACE THE EXISTING PAVEMENT AND SUBGRADE WITH A RECLAMATION MACHINE TO A MAXIMUM DEPTH OF 12". 2. WHERE PROPOSE FINISH GRADE CLOSELY MATCHES EXISTING GRADE THE CONTRACTOR WILL FINE GRADE AND COMPACT THE AREA AND REMOVE EXCESS
- MATERIAL IF NECESSARY BEFORE INSTALLING PAVEMENT. 3. IN THE AREAS WHERE EXCAVATION IS REQUIRED TO LOWER THE GRADE, THE CONTRACTOR WOULD STRIP AND STOCKPILE RECLAIM MATERIAL WHILE OVER EXCAVATION OF THE SUBGRADE TO THE SPECIFIED DEPTH IS PERFORMED.
- 4. SPREAD, GRADE, AND COMPACT RECLAIMED PAVEMENT MATERIAL FROM STOCKPILE OVER EXISTING SUBGRADE.

BITUMINOUS PAVEMENT SECTION
SCALE: NO SCALE



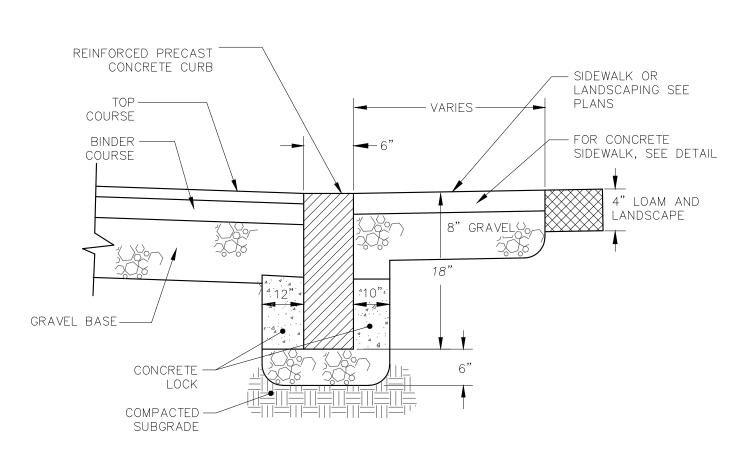
NOTE: EXISTING SOIL OR ORDINARY FILL COMPACT GRAVEL AND FILL BEHIND CURB TO 95% DRY DENSITY

6 VERTICAL CONCRETE / GRANITE CURB
SCALE: NO SCALE



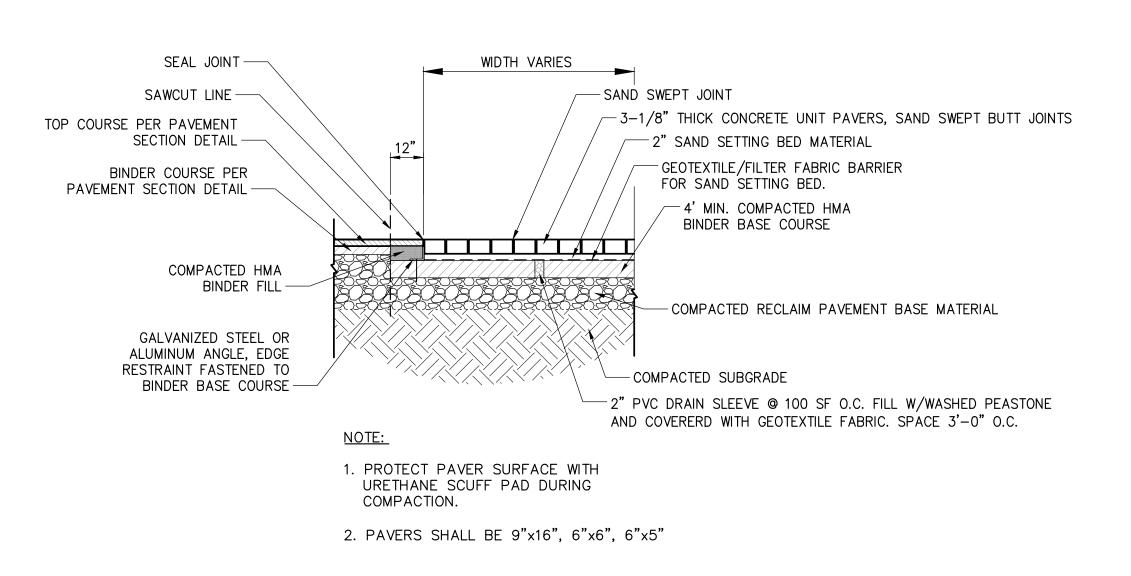
1. <u>Section 5, k3</u>: all hot mix asphalt must meet the massdot requirements for each mix, as SUBMITTED AND APPROVED. 2. <u>M3.12.0 BITUMINOUS CONCRETE CURB</u>: THE BITUMINOUS CONCRETE FOR CURBING SHALL BE CLASS I CONFORMING TO THE APPLICABLE REQUIREMENTS FOR DENSE MIX (SEE TABLE A, M3.11.03).

CAPE COD BERM (12") SCALE: NO SCALE

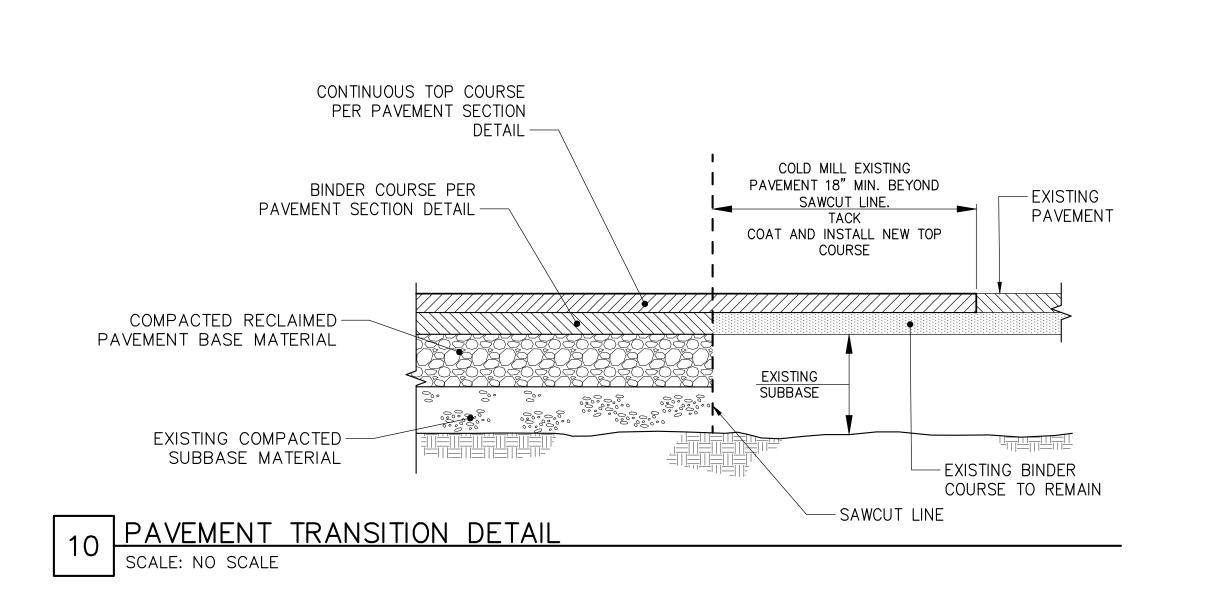


NOTE: EXISTING SOIL OR ORDINARY FILL COMPACT GRAVEL AND FILL BEHIND CURB TO 95% DRY DENSITY

FLUSH CONCRETE / GRANITE CURB
SCALE: NO SCALE



9 CONCRETE UNIT PAVERS SECTION
SCALE: NO SCALE





DETAILS-4

Designed By: Drawn By: Checked By JM / SA Issue Date: Project No: Scale: 12/19/18 31554 AS SHOWN

C-604

APPLICABLE.

SEE PLANS

PROPOSED

PAVEMENT

2. THE CONCRETE SHALL BE DESIGNED TO INCLUDE APPROXIMATELY 75% CONCRETE SAND AND 25% 3/8" ROCK. THE CONCRETE SHALL CONTAIN A MINIMUM OF 620 POUNDS OF CEMENT (6.5 SACKS) PER CUBIC YARD, YIELDING A CONCRETE THAT WILL EXCEED 4,000 P.S.I. IN 28 DAYS. THE CONCRETE SHALL BE PRODUCED ACCORDING TO ASTM C94 READY MIX CONCRETE OR ASTM C685 CONCRETE PRODUCED BY VOLUMETRIC CONTINUOUS MIXING.

3. THE GRADING LIMIT SHALL BE FURTHER MODIFIED, IF NECESSARY, TO PRODUCE CONCRETE THAT, AFTER EXTRUSION, HAS WELL DEFINED WEB MARKS OF WATER ON THE SURFACE AND IS FREE OF SURFACE PITS LARGER THAN 3/16" DIAMETER. THE CONCRETE SHALL BE OF SUCH CONSISTENCY THAT, AFTER EXTRUSION, IT WILL MAINTAIN THE SHAPE OF THE CURB SECTION WITHOUT SUPPORT OR SLUMPING. IT SHALL CONTAIN THE MAXIMUM AMOUNT OF WATER THAT WILL PERMIT THIS RESULT.

4. THE CONCRETE SHALL CONTAIN A MINIMUM OF ONE (1) POUND OF FIBER REINFORCEMENT PER CUBIC YARD.

5. IN ADVANCE OF PLACING THE CURB ON THE PAVEMENT, THE SURFACE OF THE PAVEMENT SHALL BE THOROUGHLY CLEANED AND THE ADHESIVE SHALL BE APPLIED. THE PAVEMENT SHALL BE CLEANED IF NECESSARY, BY ABRADING AND/OR HIGH PRESSURE WATER WASHING, SO AS TO ASSURE REMOVAL OF ALL DUST, LOOSE MATERIAL AND/OR OIL.

6. THE EXTRUDED CURB SHALL BE BONDED TO THE EXISTING PAVEMENT BY USING AN APPROVED CONCRETE TO ASPHALT ADHESIVE OR A TWO-COMPONENT EPOXY, DESIGNED TO BOND FRESH CONCRETE TO EXISTING PAVEMENT. THE MANUFACTURER'S INSTRUCTIONS MUST BE FOLLOWED.

7. THE TOP OF THE FINISH CURB MUST BE TRUE TO LINE. THE CURB WILL FOLLOW THE CONTOUR OF THE PAVEMENT. THE CURB MUST BE FREE OF HUMPS AND SAGS. CONTROL JOINTS SHALL BE CUT, AS SOON AS POSSIBLE, THROUGH ONE-THIRD OF THE CROSS SECTION OF THE FRESH CONCRETE. THE JOINT SHALL BE TOOLED AND FINISHED TO A NEAT AND UNIFORM APPEARANCE. THE CONTROL JOINT SHALL BE INSTALLED AT NINE (9) FOOT

INTERVALS AND MOVE MORE OFTEN ON RADII, SO AS TO MINIMIZE SHRINKAGE CRACKING. 8. THE FINISH CURB WILL BE COATED WITH A CURING COMPOUND, WHICH HAS BEEN DESIGNED TO SEAL THE SURFACE AND FORM A WATERPROOFING MEMBRANE TO RETARD THE LOSS OF WATER FROM THE FRESH CONCRETE. THE MANUFACTURER'S INSTRUCTIONS MUST BE FOLLOWED.

EXTRUDED CONCRETE CURB

NOTES: INSTALL CURB PRIOR TO PAVEMENT OF SURFACE COURSE.

BINDER COURSE STANDARD MOLD 7-1/2"

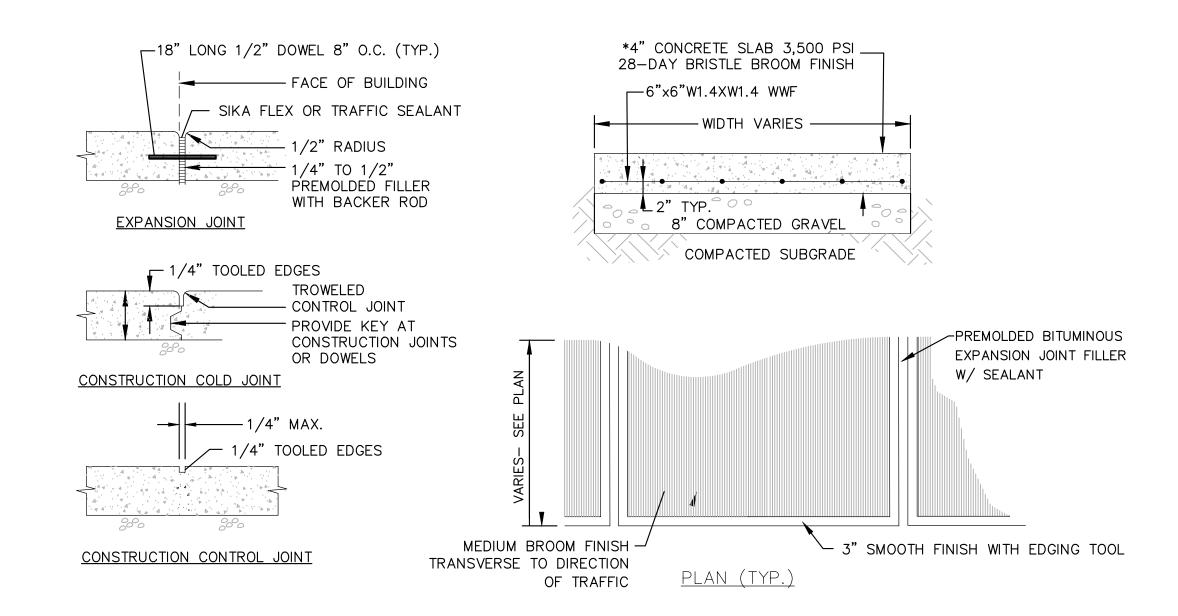
FACE OF

COURSE __ ADHESIVE __

ASPHALT

BINDER

SURFACE



NOTES:

* 4" TYPICAL SIDEWALK THICKNESS. INCREASE THICKNESS TO 6" ACROSS DRIVEWAYS.

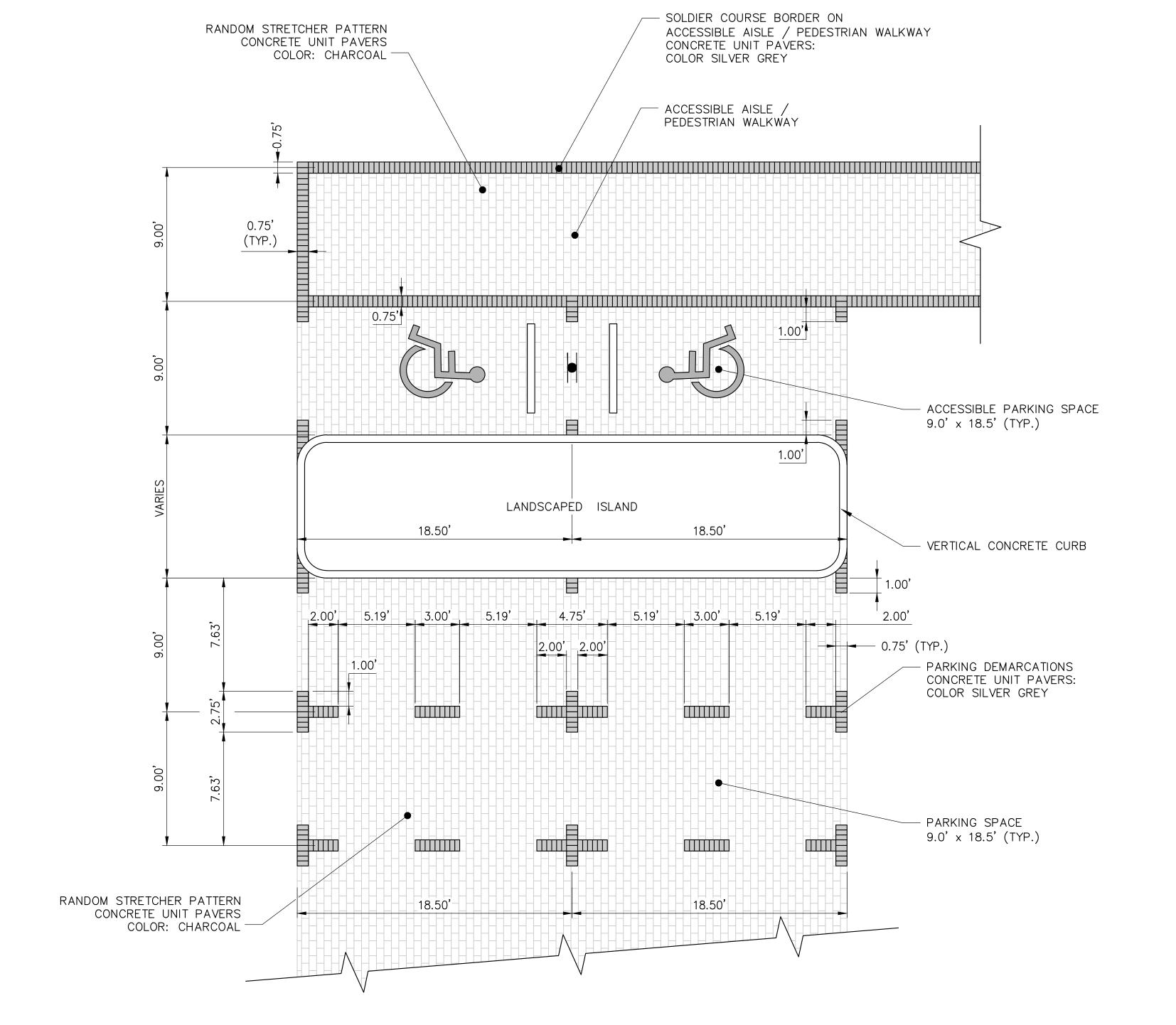
1. PROVIDE CONSTRUCTION CONTROL JOINT EVERY 5' OR AS NOTED ON SCORING PLAN.

2. PROVIDE EXPANSION JOINT EVERY 25' OF 400 SQUARE FEET OR AS NOTED ON SCORING PLAN.

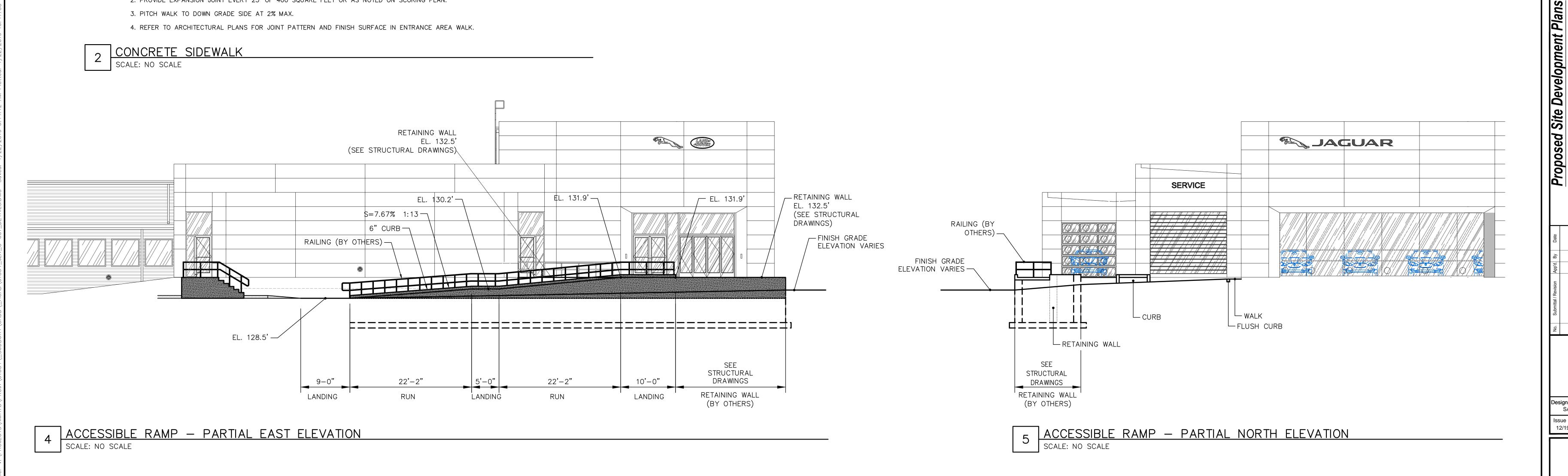
3. PITCH WALK TO DOWN GRADE SIDE AT 2% MAX.

4. REFER TO ARCHITECTURAL PLANS FOR JOINT PATTERN AND FINISH SURFACE IN ENTRANCE AREA WALK.

CONCRETE SIDEWALK SCALE: NO SCALE



CONCRETE UNIT PAVERS LAYOUT DETAIL SCALE: NO SCALE



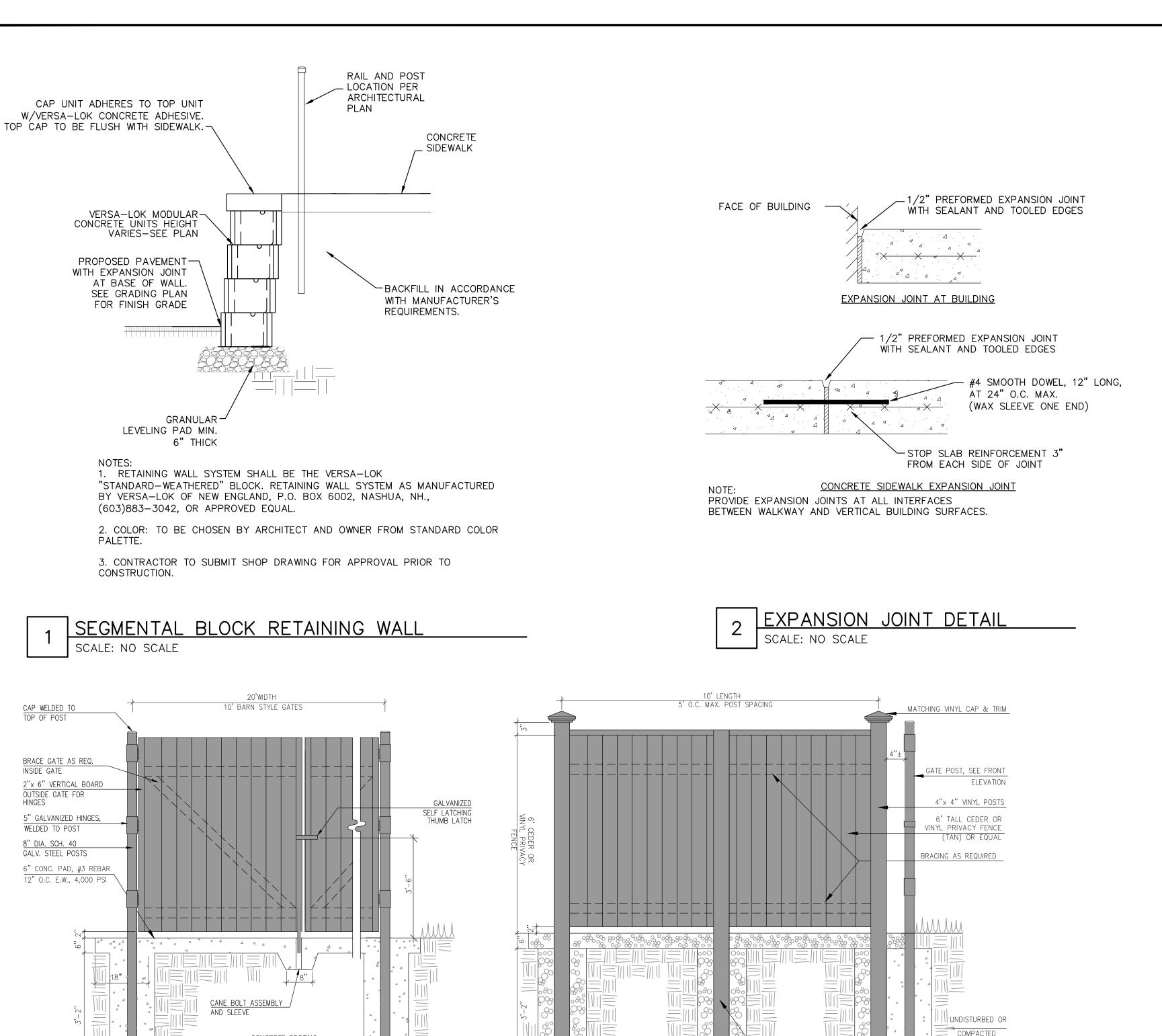


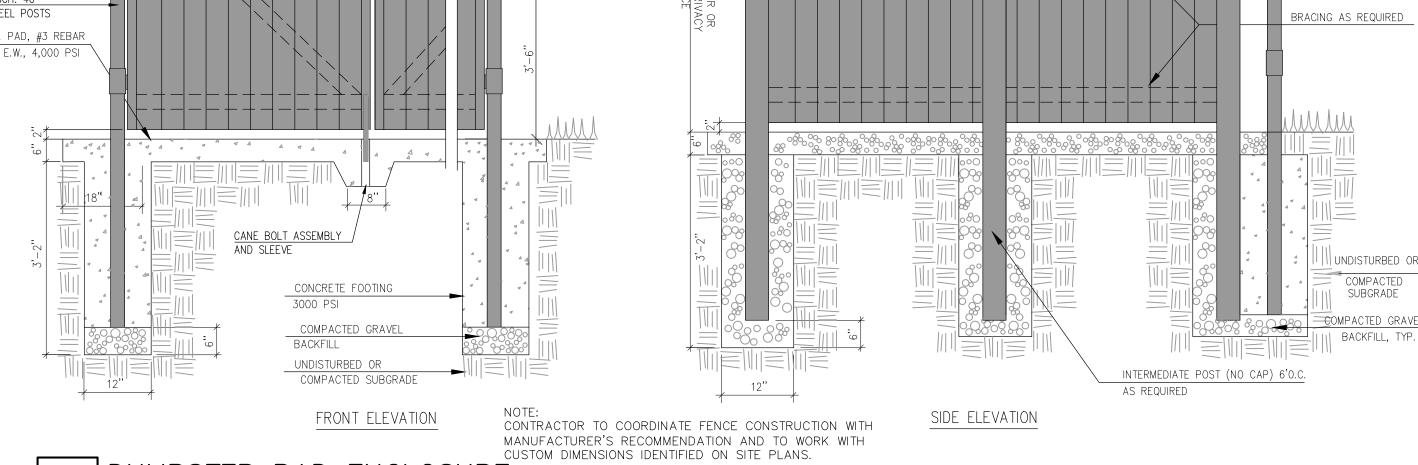




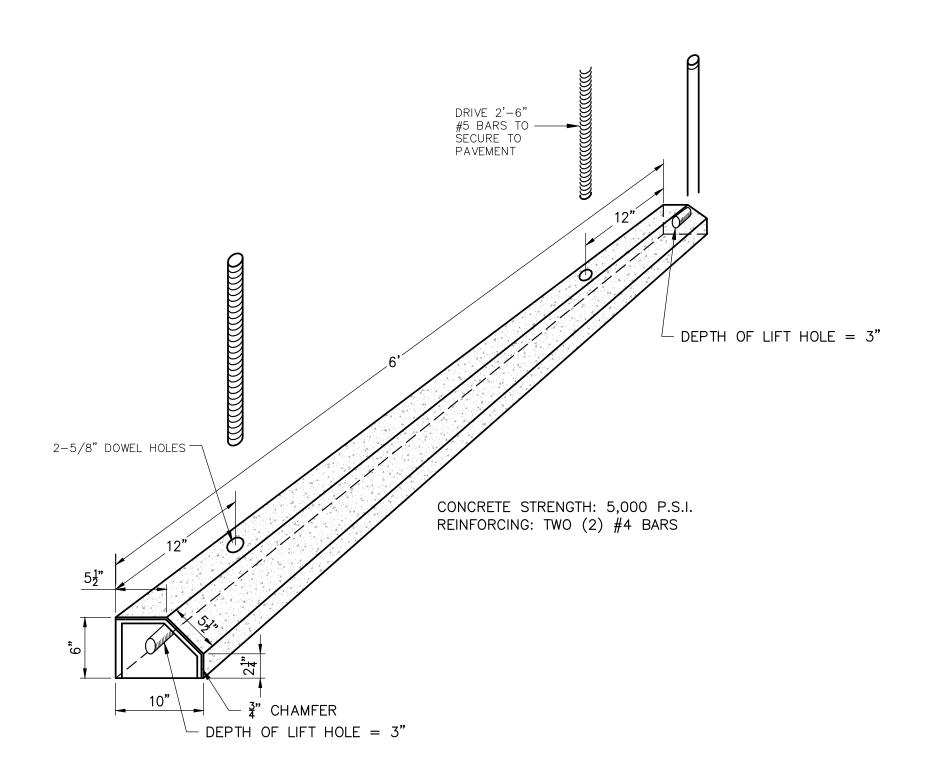
DETAILS-5

JM / SA Issue Date: Project No: Scale: 12/19/18 31554 AS SHOWN



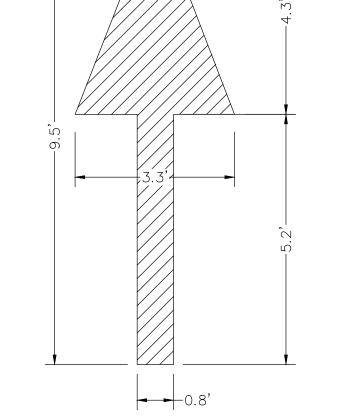


DUMPSTER PAD ENCLOSURE



- PROP. CURB OR EDGE OF PAVEMENT —4" WIDE WHITE THERMOPLASTIC PAINTED STRIPE STALL 18.5' SEE SITE PLAN

8 PARKING STALL STRIPING DETAIL
SCALE: NO SCALE



24" WIDE —

NOTES:

1. ALL PAINT TO BE THERMOPLASTIC.

10 STOP BAR
SCALE: NO SCALE

PAINTING OF WORDS SHALL BE AT THE DISCRETION OF THE OWNER. CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION.

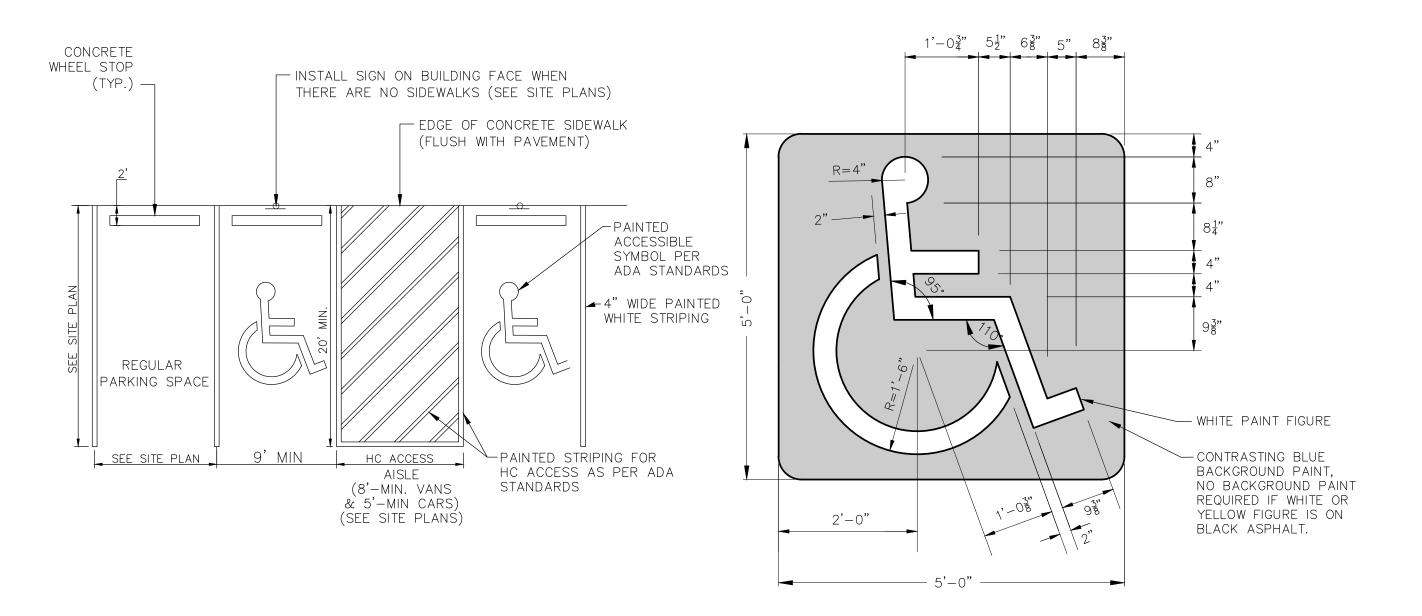
PAINTD TRAFFIC ARROW SCALE: NO SCALE

NOTE: INSTALL SIGN ON BUILDING FACE WHEN THERE ARE NO SIDEWALKS (SEE SITE PLANS) ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED BY A STANDARD ALUMINUM SIGN SHOWING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. — ATTACH SIGNS WITH $\frac{1}{4}$ "Ø BOLT NUT AND WASHER (TOP AND BOTTOM) VAN ACCESSIBLE SPACES SHALL INCLUDE VAN ACCESSIBLE AN ADDITIONAL 6"X12" "VAN ACCESSIBLE SIGN" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY 2½" ANODIZED BLACK ALUMINUM POST

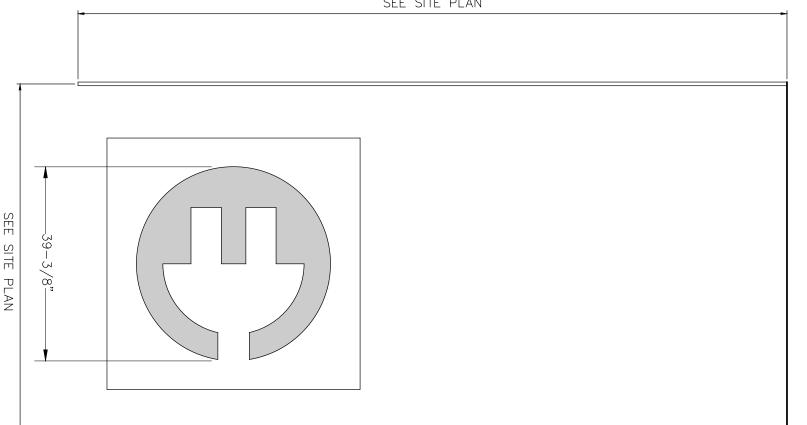
NOTE: PROVIDE SIGN IN ACCORDANCE WITH MUTCD SPECIFICATIONS AND LOCAL AUTHORITIES HAVING JURISDICTION. - METAL SIGN POST TOPSOIL - FINISHED GRADE - BACKFILL CONCRETE BASE - POST TO BE SET IN CONCRETE 18" DIA. TUBE

ACCESSIBLE PARKING SIGN SCALE: NO SCALE

STOP SIGN (R1-1) DETAIL SCALE: NO SCALE



ACCESSIBLE PARKING LOT STRIPING & STALLS SCALE: NO SCALE



11 EV PARKING STALL PAVEMENT MARKING DETAIL
SCALE: NO SCALE

SEE SITE PLAN

RD,

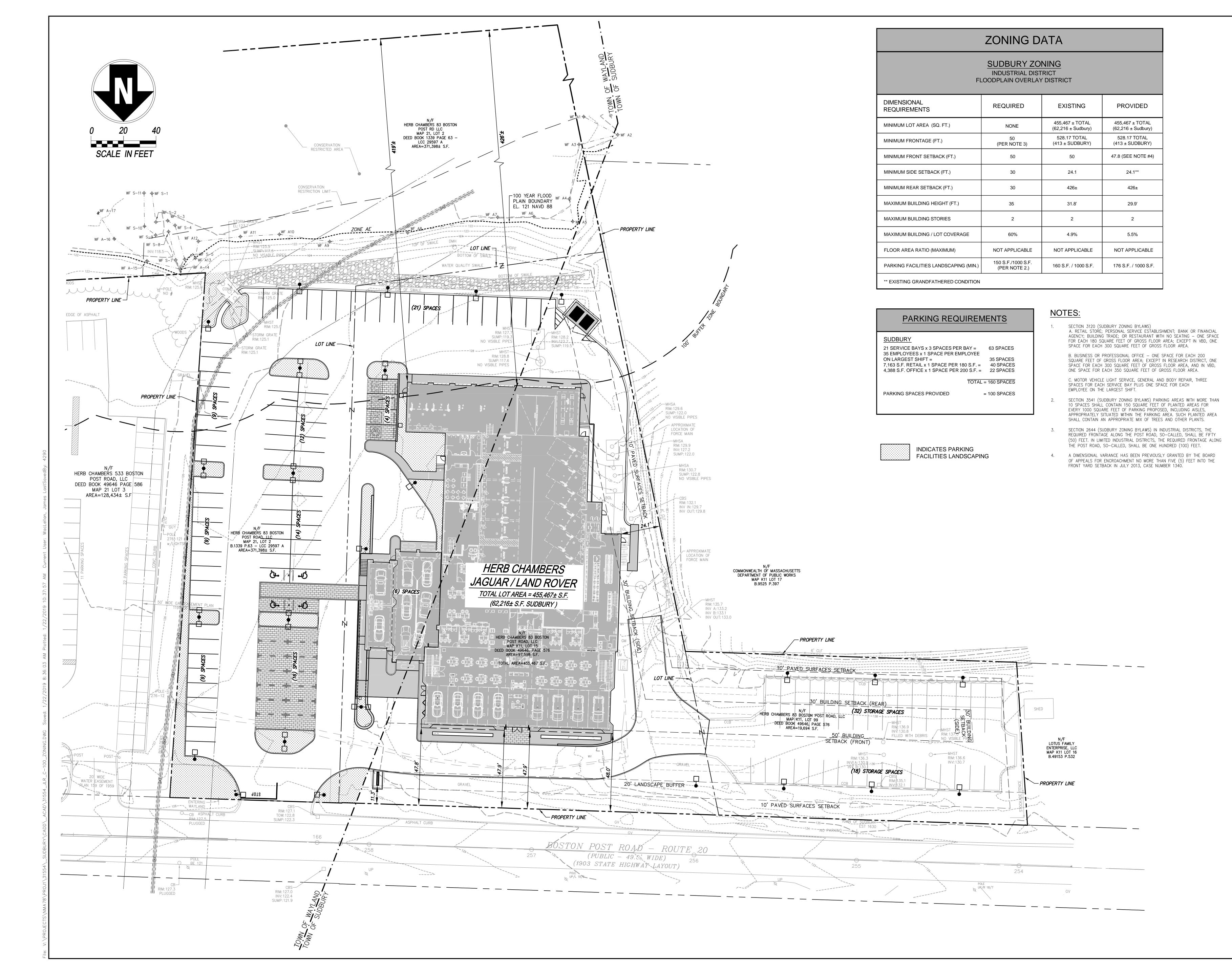


DETAILS-6

JM / SA Issue Date: Project No: Scale: 12/19/18 31554 AS SHOWN Drawing No.:

C-606

CONCRETE WHEEL STOP DETAIL
SCALE: NO SCALE



141 Longwater Drive - Suite 104
Norwell, MA 02061
.982.5400 · www.chacompanies.com

RE CHAMBERS
BOSTON POST RD, 1

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S THEY ARE ACTING UNDER THE FER, ARCHITECT, LANDSCAPE



LAND ROVER of SUDBURY
TON POST ROAD - ROUTE 20

Proposed Site Development Plans

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JAGUAR / L,

A 12/18/18

A 12/18/18

B3 BOSTO

D Fire / DPW / Concom Comments KK SFA 01/18/19
C Sudbury Site Plan Approval KK SFA 12/18/18
B Wayland Site Plan Approval KK SFA 12/18/18

ZONING PLAN -SUDBURY, MA

Designed By:
SA

Drawn By:
JM / SA

KK

Issue Date:
12/19/18

Project No:
31554

Checked By:
KK

Scale:
AS SHOWN

EX-001

LE SIGN & PLANTER

CONSERVATION RESTRICTED AREA

BOSTON POST RD LLC

DEED BOOK 1339 PAGE 63

13.4 20.1 19.3

JAGUAR / LAND ROVER

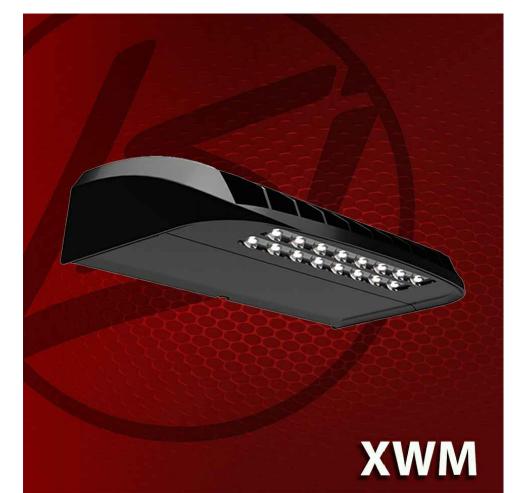
14.6 11.1 \$.8

38.1 34.8 20.3 15.6 5,7 29,6 35,5 25,8 13.3 5.2

Lumina	ire Sc	hedule						
Label	Qty	Arrangement	Description	LLD	UDF	LLF	Arr. Lum.	Arr. Watts
А	16	SINGLE	SLM-LED-36L-SIL-FT-50-70CRI-SINGLE-18' MH	1.000	1.000	1.000	37815	317.8
В	2	D180°	SLM-LED-36L-SIL-FT-50-70CRI-D180-18' MH	1.000	1.000	1.000	75630	635.6
С	6	D180°	SLM-LED-36L-SIL-5W-50-70CRI-D180-18' MH	1.000	1.000	1.000	71568	635.6
D	1	SINGLE	SLM-LED-36L-SIL-5W-50-70CRI-SINGLE-18' MH	1.000	1.000	1.000	35784	317.8
W12	4	SINGLE	XWM-FT-LED-08-50-12' MH	1.000	1.000	1.000	8654	76

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/I
CALCS @ 4' AFG- 10' X 10'	Illuminance	Fc	4.67	47.1	0.0	N.A.	N.A.
EAST-SIDE LOT	Illuminance	Fc	15.38	26.5	8.8	1.75	3.01
INTERIOR ROW DISPLAY	Illuminance	Fc	17.66	37.0	4.7	3.76	7.87
MAIN LOT	Illuminance	Fc	16.45	47.1	2.3	7.15	20.48







14.1 12.0 12.0 18.9 26.5 17.6 11.8 11.4 12.5 25.2 24.8 11.5 6.8 11.8 0.4 0.2 0.1 0.1 0.0



	com Comments KK SFA 01/18/19 JAGU	KK SFA 12/18/18	KK SFA 12/18/18	12/12/18
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	om Comments	Plan Approval	lan Approval	bmittal

Fire / DPW / Concom Comments KK SFA 01/18/19	Sudbury Site Plan Approval KK SFA 12/18/18	Wayland Site Plan Approval KK SFA 12/18/18	ZBA Submittal KK SFA 12/12/18
		Wayland Site I	ZBA Su
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LIGHTING PLAN

Designed By:	Drawn By:	Checked B
SA	JM / SA	KK
Issue Date:	Project No:	Scale:
12/19/18	31554	AS SHOW

Drawing No.:

LT-101

14.7 4.7 1.8 8 5.3 5.1 5.1 5.0 5.0 5.0

 13.8
 3.1

 5.3
 5.1

 5.0
 5.0

 5.0
 5.0

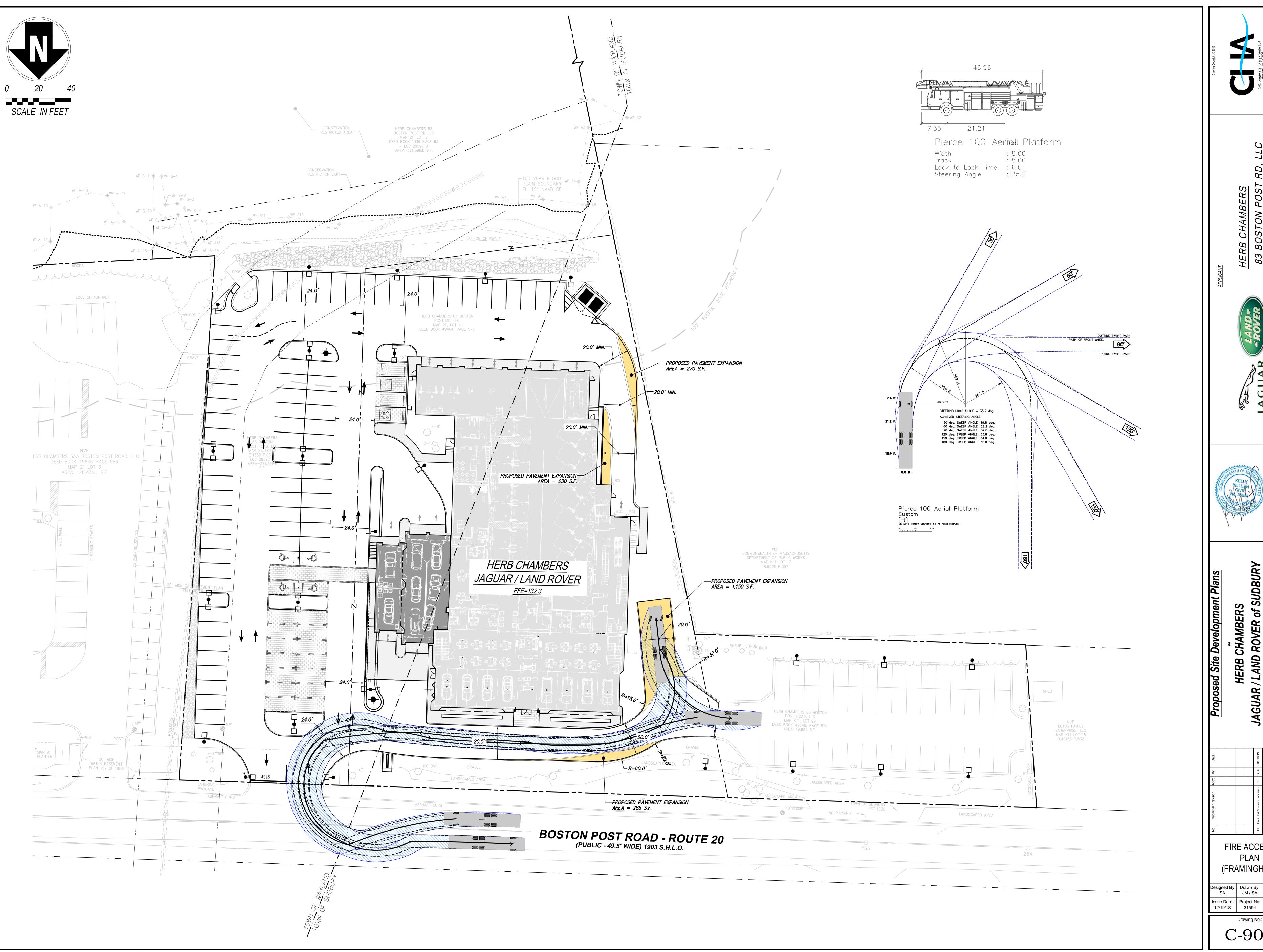
5.8 2.2 5.7 to.3 to.1 to.0 to.0 to.0 to.0

MAP K11 LOT 17

5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.1 8.95551 P.3975.1 5.1 5.1 5.1 5.1 5.1 5.1

6 5 12.8 2.7 5.9 5.3 5.1 5.0 5.0 5.0 5.0

5.3 b.1 b.0 b.0 b.0

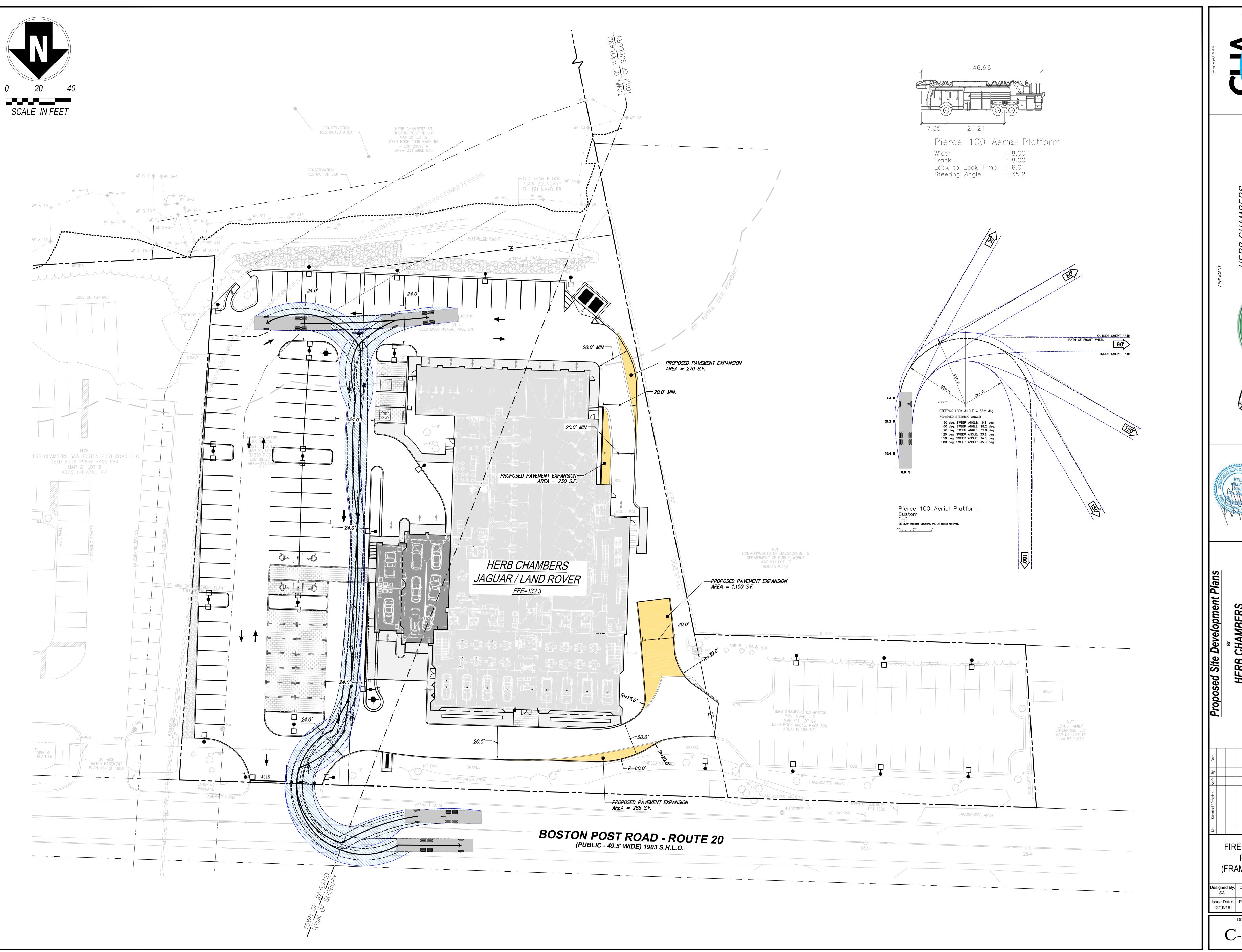




D	Fire / DPW / Concom Comments	KK	KK SFA	01/18/19
C	Sudbury Site Plan Approval	KK	KK SFA	12/18/18
В	Wayland Site Plan Approval	KK	KK SFA	12/18/18
Α	ZBA Submittal	K	KK SFA	12/12/18

FIRE ACCESS PLAN (FRAMINGHAM)

Designed By: Drawn By: Checked By JM / SA KK Issue Date: Project No: Scale: 31554 AS SHOWN





		01/18/19	12/18/18	12/18/18	12/12/18
		KK SFA	KK SFA	KK SFA	KK SFA
		KK	KK	KK	KK
		Fire / DPW / Concom Comments	Sudbury Site Plan Approval	Wayland Site Plan Approval	ZBA Submittal
		Q	0	В	٧

FIRE ACCESS PLAN (FRAMINGHAM)

31554 AS SHOWN