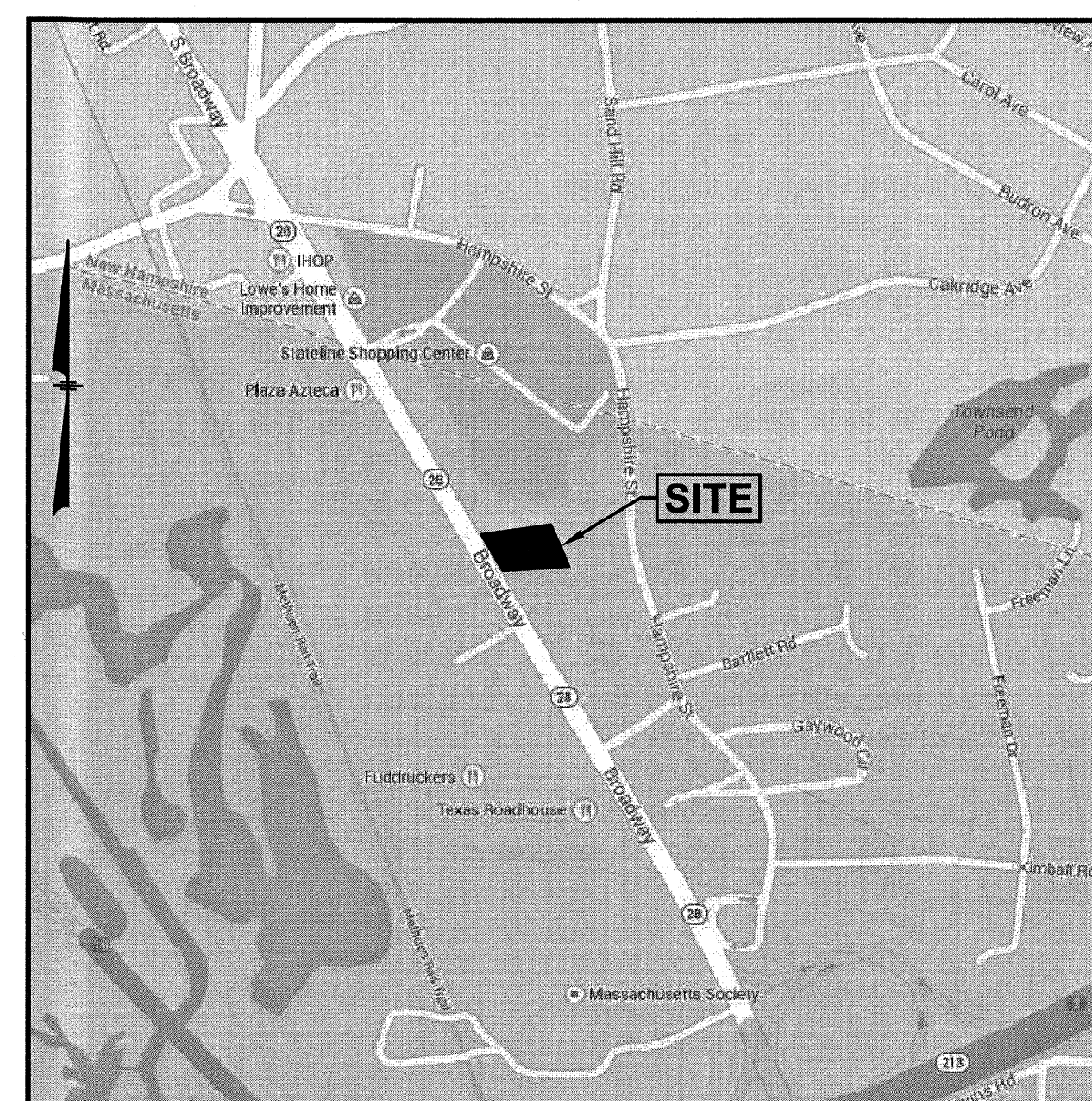


PROPOSED DUNKIN' DONUTS SITE RE-DEVELOPMENT PLANS

for
ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS

Prepared for:
CAFUA MANAGEMENT COMPANY, LLC
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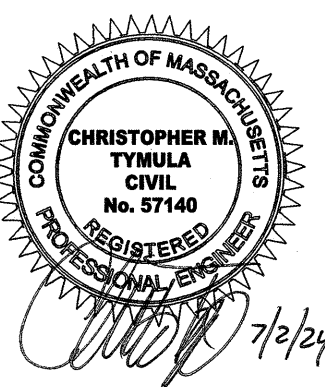


LOCATION MAP
(NOT TO SCALE)

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ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS



REVISIONS

NO.	REVISION	DATE
2	REV. SHTS 5-10, 14, TTs	7/2/24
1	REV. SHTS 1, 2, 5-11, 13, TT, LO, ADD TT(F), SLP	5/30/24

MARCH 6, 2024

DRAWN/DESIGN BY SUB/CMT	CHECKED BY CMT
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TITLE SHEET

SCALE: AS NOTED

PROJECT NO.
NEX-2021347

1 OF 14

LEGEND	
	SLOPED GRANITE CURB
	VERTICAL GRANITE CURB
	SLOPED CONCRETE CURB
	VERTICAL CONCRETE CURB
	CAPE COD BERM
	DOUBLE SOLID LINE YELLOW
	DOUBLE DASHED LINE YELLOW
	SINGLE DASHED LINE YELLOW
	SINGLE SOLID LINE YELLOW
	SINGLE SOLID LINE WHITE
	SINGLE DASHED LINE WHITE
	GAS LINE
	UNDERGROUND TELEPHONE
	WATER LINE
	UNDERGROUND ELECTRIC
	WOOD GUARDRAIL
	METAL GUARDRAIL
	CHAIN LINK FENCE
	STOCKADE FENCE
	POST & RAIL FENCE
	WIRE FENCE
	CONTOUR ELEVATION
	TREE
	UTILITY POLE
	GUY WIRE
	OVERHEAD WIRE
	TREELINE
	PULL BOX
	SIGN
	SPOT ELEVATION
	DRAIN MANHOLE
	CATCH BASIN
	ROOF DRAIN
	CLEANOUT
	VENT
	SEWER MANHOLE
	TELEPHONE MANHOLE
	ELECTRIC MANHOLE
	WATER MANHOLE
	MANHOLE
	GAS VALVE
	GAS SHUT OFF
	WATER VALVE
	WATER SHUT OFF
	FIRE HYDRANT
	BOLLARD
	GAS METER
	ELECTRIC METER
	MONITORING WELL
	LIGHT POLE
	BORING
	WETLAND LINE
	WATER FEATURE
	UNDERGROUND COMM
	DITCH LINE
	EASEMENT LINE
	PROPERTY LINE
	ABUTTER PROPERTY LINE
	BUILDING SETBACK
	SOIL TYPE LINE
	ZONE LINE
	FLOOD ZONE LINE
	TO BE REMOVED
	TO BE REMOVED
	NUMBER OF PARKING SPACES
	TIP DOWN CURB
	PROP. BIT. CONCRETE CURB (BOC)
	PROP. VERTICAL GRANITE CURB (VGC)
	PROP. XXXX CURB (XXX)
	PROP. XXXX CURB (XXX)
	PROP. CLEANOUT
	PROP. CATCH BASIN
	PROP. DRAIN MANHOLE
	MEET EXISTING GRADE
	PROP. SPOT ELEVATION
	PROP. CONTOUR ELEVATION
	TOP OF WALL ELEV.
	BOTTOM OF WALL ELEV.
	GRADE BREAK
	TEST PIT
	PROP. GATE VALVE
	PROP. SEDIMENT CONTROL FENCE

GENERAL NOTES:

- 1) ZONE: HIGHWAY BUSINESS (BH)
- 2) SETBACKS: FRONT: 25'
SIDE 30'
REAR 30'
* ADDITIONAL BUFFER ZONE OF 30' IS ADDED TO SETBACK AREA WHEN ADJACENT TO RESIDENTIAL.
- 3) LOT AREA = 43,119 SF (COMBINED LOTS 4 & 5)
- 4) **EXISTING USE:** FORMERLY TWO 2-STORY RESIDENTIAL HOMES WITH DETACHED GARAGES.
PROPOSED USE: 2,100 SF DONUT SHOP WITH DRIVE THRU.
- 5) ALL BUILDINGS AND SITE CONSTRUCTION SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AS REVISED IN 2010, OR LATEST REVISION.
- 6) THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.
- 7) WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.
- 8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 PRIOR TO ANY EXCAVATION.
- 9) ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF METHUEN AND THE COMMONWEALTH OF MASSACHUSETTS.
- 10) THE SITE IS NOT WITHIN THE 100 YEAR FLOOD BOUNDARY HAZARD ZONE. (SEE SHEET 3 OF 14, NOTE 6)
- 11) ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND THE STANDARD CONSTRUCTION DRAWINGS AS SUPPLIED BY THE DEVELOPER.
- 12) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY GREENMAN-PEDERSEN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR AND/OR ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
- 13) ALL SNOW SHALL BE STORED IN THE AREA(S) DEPICTED ON THIS PLAN AS SNOW STORAGE AREAS. IN THE EVENT THAT THE AREA(S) APPROVED FOR SNOW STORAGE BECOME FULL, THE OWNER SHALL REASONABLY REMOVE EXCESS SNOW FROM THE SITE, AND SHALL NOT ALLOW SNOW TO BE STORED WITHIN PARKING LOTS OR TRAVEL AISLES.
- 14) REFER TO DETAIL SHEETS FOR ALL SITE DEVELOPMENT DETAILS AND INFORMATION.
- 15) A SIGN PERMIT SHALL BE OBTAINED PRIOR TO INSTALLATION.
- 16) EXISTING IMPERVIOUS COVERAGE = 8,655 SF (20%)
PROPOSED IMPERVIOUS COVERAGE = 21,447 SF (50%)
- 17) HOURS OF OPERATION:
SUNDAY-SATURDAY 5:30AM - 11PM
PATIO AREA TO BE CLOSED AT 8PM
- 18) ALL LOADING/DELIVERIES AND TRASH/RECYCLING WILL BE MANAGED DURING OFF-HOURS.
- 19) ALL SIGNS AND PAVEMENT MARKINGS TO BE INSTALLED WITHIN THE PROJECT SITE SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- 20) A SPECIAL PERMIT WAS GRANTED BY THE METHUEN ZONING BOARD OF APPEALS ON APRIL 24, 2024 TO ALLOW A RESTAURANT USE WITHIN THE HIGHWAY BUSINESS ZONE.

DEMOLITION:

- 1) A DEMOLITION PERMIT MUST BE OBTAINED FROM THE CITY OF METHUEN PRIOR TO COMMENCEMENT OF WORK. ALL EXISTING UTILITY DISCONNECTIONS MUST BE COORDINATED WITH RESPECTIVE UTILITY COMPANIES.
- 2) ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN STRICT ADHERENCE TO ALL FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR TO INSTALL EROSION CONTROL DEVICES IN ACCORDANCE WITH EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING DEMOLITION ACTIVITIES.
- 3) PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER, FROM THE TOP OF THE STRUCTURE(S) TO THE GROUND.
- 4) DEMOLISH CONCRETE IN ALL SECTIONS.
- 5) BREAK UP CONCRETE SLABS-ON-GRADE, UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
- 6) CONDUCT ALL DEMOLITION OPERATIONS IN A MANNER THAT WILL PREVENT INJURY, DAMAGE TO STRUCTURES, ADJACENT BUILDINGS AND ALL PERSONS.
- 7) REFRAIN FROM USING EXPLOSIVES WITHOUT PRIOR WRITTEN CONSENT OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES.
- 8) CONDUCT DEMOLITION SERVICES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT PRIOR WRITTEN PERMISSION OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES. PROVIDE ALTERNATIVE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY APPLICABLE GOVERNMENTAL REGULATIONS.
- 9) USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURE AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO THE CONDITIONS EXISTING PRIOR TO THE START OF WORK.
- 10) ACCOMPLISH AND PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
- 11) COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS WITH SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. STONES USED WILL NOT BE LARGER THAN 6 INCHES IN DIMENSION. MATERIAL FROM DEMOLITION MAY NOT BE USED AS FILL. PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO INSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROZEN DEBRIS. PLACE FILL MATERIALS LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH AND COMPACT EACH LAYER AT PLACEMENT TO 95% OPTIMUM DENSITY. GRADE SURFACE TO MEET ADJACENT CONTOURS AND TO PROVIDE SURFACE DRAINAGE.
- 12) REMOVE FROM THE DESIGNATED SITE, AT THE EARLIEST POSSIBLE TIME, ALL DEBRIS RUBBISH, SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE SERVICES. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURES AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND DEPARTMENTS.
- 13) DISCONNECT, SHUT OFF AND SEAL ALL UTILITIES SERVING THE STRUCTURE(S) TO BE DEMOLISHED BEFORE THE COMMENCEMENT OF THE DESIGNATED DEMOLITION. MARK FOR POSITION ALL UTILITY DRAINAGE AND SANITARY LINES AND PROTECT ALL ACTIVE LINES. CLEARLY IDENTIFY BEFORE THE COMMENCEMENT OF DEMOLITION SERVICES THE REQUIRED INTERRUPTION OF ACTIVE SYSTEMS THAT MAY AFFECT OTHER PARTIES, AND NOTIFY ALL APPLICABLE UTILITY COMPANIES TO INSURE THE CONTINUATION OF SERVICE.
- 14) PROTECT EXISTING DRAINAGE SYSTEM(S) AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING DURING CONSTRUCTION. SEE DETAIL SHEETS FOR EROSION CONTROL DEVICES.
- 15) ALL WORK WITHIN ROADWAY RIGHT-OF-WAYS TO CONFORM TO CITY STANDARDS.
- 16) THE LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING.
- 17) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY DIG SAFE (DIAL 811) 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER DEPARTMENT TO MARK OUT THEIR UTILITIES.
- 18) NOTES ON THIS PLAN THAT READ "TBR" REPRESENT FEATURES TO BE REMOVED. ANY FEATURES NOT LABELED "TBR" OR "TO BE REMOVED" SHALL BE CONSIDERED EXISTING TO REMAIN.
- 19) SEE LANDSCAPE PLAN FOR LIMITS OF CLEARING AND GRUBBING. AFTER CLEARING, STRIP AND STOCKPILE TOP SOIL PER LANDSCAPE PLAN, IF APPLICABLE.

GRADING & DRAINAGE:

- 1) ALL SITE DRAINAGE PIPE SHALL BE UTILITIES HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL-WALL, SMOOTH INTERIOR, AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN. THE UNDERGROUND DETENTION SYSTEM SHALL HAVE SOIL TIGHT (ST) JOINTS MEETING ASTM F477 SPECIFICATIONS.
 - 2) ALL ROOF AND CANOPY DRAIN PIPE SHALL BE 6" PVC (SDR-35), EXCEPT WITHIN 10' OF A BUILDING FOUNDATION WHERE CAST IRON PIPE SHALL BE USED. MIN. SLOPE=2%.
 - 3) ELEVATIONS ARE BASED ON NAVD88 DATUM.
 - 4) ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.
 - 5) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.
 - 6) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - 7) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
 - 8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE 811 PRIOR TO COMMENCING ANY EXCAVATION.
 - 9) THIS SITE WILL NOTE REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE DOES NOT EXCEED ONE ACRE (ACTUAL DISTURBANCE = 36,500 SF±).
 - 10) ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL DPW.
 - 11) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO MASSDOT AND THE CITY DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
 - 12) ALL ADA ACCESSIBLE WALKWAYS CANNOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE. RAMP CANNOT EXCEED 8.33% RUNNING SLOPE AND 2% CROSS SLOPE, AND ACCESSIBLE PARKING STALLS AND ACCESS AISLES CANNOT EXCEED 2% SLOPE IN ANY DIRECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - 13) SEE UTILITY PLAN FOR DETAILED UTILITY LAYOUT.
 - 14) ALL PROPOSED CATCH BASINS SHALL HAVE 4" SUMPS AND OUTLETS EQUIPPED WITH "ELIMINATOR" OIL HOODS OR APPROVED EQUAL.
 - 15) ALL PIPE DATA IS CALCULATED TO CENTER OF STRUCTURE, TYP.
 - 16) CONTRACTOR TO REFER TO THE OPERATION & MAINTENANCE PLAN FOR STORMWATER MANAGEMENT SYSTEMS (O&M) FOR SITE MAINTENANCE DURING AND AFTER CONSTRUCTION.
 - 17) CONTRACTOR TO INSTALL RISER STRUCTURES AT EACH CORNER OF UNDERGROUND DETENTION SYSTEMS AND CLEANOUTS AT EACH END OF EACH ROW TO PROVIDE ACCESS POINTS FOR CLEANING AND MAINTENANCE.
 - TOTAL RISERS PROPOSED = 4
 - TOTAL CLEANOUTS PROPOSED = 5
- ## UTILITIES:
- 1) ALL SANITARY SEWER PIPE SHALL BE PVC (SDR-35), UNLESS OTHERWISE NOTED.
 - 2) ALL WATER PIPE SHALL BE COPPER (TYPE K), UNLESS OTHERWISE NOTED.
 - 3) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.
 - 4) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES.
 - 5) ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.
 - 6) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 811 PRIOR TO ANY EXCAVATION.
 - 7) ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.
 - 8) THIS SITE IS SERVED BY MUNICIPAL SEWER AND WATER.
 - 9) ALL ELECTRIC, TELEPHONE AND CABLE TV LINES ARE TO BE UNDERGROUND AND INSTALLED IN CONFORMANCE WITH APPLICABLE UTILITY CO. SPECIFICATIONS.
 - 10) ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL DPW.
 - 11) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO MASSDOT AND CITY DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
 - 12) REFER TO DETAIL SHEETS FOR ALL UTILITY DETAILS AND ADDITIONAL INFORMATION.

TEMPORARY EROSION CONTROL MEASURES:

- 1) SEDIMENT TRAPS SHALL BE INSTALLED AS REQUIRED. BARRIERS AND TRAPS ARE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
- 2) MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT HAY SHALL BE USED.
- 3) FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
- 4) STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SEDIMENT CONTROL FENCE AND SEEDED TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
- 5) ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED. A MINIMUM OF 6 INCHES OF LOAM SHALL BE INSTALLED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA.
- 6) SEED MIX SHALL BE EQUAL PARTS OF RED FESCUE (CREEPING), KENTUCKY BLUEGRASS, REDTOP, PERENNIAL RYEGRASS.
- 7) AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.
- 8) PAVED ROADWAYS AND PARKING LOTS MUST BE KEPT CLEAN AT ALL TIMES. PROVIDE SWEEPING ON A DAILY BASIS OR AS DIRECTED BY THE TOWN.
- 9) ALL CATCH BASIN INLETS WILL BE PROTECTED WITH INLET PROTECTION - SEE DETAIL.
- 10) ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA.

CONSTRUCTION SEQUENCE:

- 1) INSTALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AS REQUIRED.
- 2) CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
- 3) REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDED TO PREVENT EROSION.
- 4) CONSTRUCT CLOSED DRAINAGE SYSTEM. PROTECT CULVERT INLETS AND CATCH BASINS WITH SEDIMENTATION BARRIERS.
- 5) PERFORM SITE GRADING, PLACING SEDIMENT CONTROL FENCES AS REQUIRED TO CONTROL SOIL EROSION.
- 6) INSTALL UNDERGROUND UTILITIES.
- 7) BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED OR MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
- 8) DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SEDIMENT CONTROL FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING. REFER TO OPERATION AND MAINTENANCE PLAN FOR ADDITIONAL REQUIREMENTS AND INFORMATION. COPIES OF ALL INSPECTION REPORTS ARE TO BE PROVIDED TO THE CONSERVATION COMMISSION DURING CONSTRUCTION AND AVAILABLE UPON REQUEST AFTER CONSTRUCTION IS COMPLETED.
- 9) BEGIN EXCAVATION FOR AND CONSTRUCTION OF BUILDINGS.
- 10) FINISH PAVING ALL DRIVES AND PARKING AREAS.
- 11) COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 12) AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

OPERATIONS/MAINTENANCE PLAN FOR STORMWATER SYSTEM:

CONSTRUCTION PHASE:

THE BMP'S ASSOCIATED WITH THIS PROJECT WILL BE OWNED BY CAFUA MANAGEMENT COMPANY, LLC WHO WILL BE RESPONSIBLE FOR INSPECTION, OPERATION AND MAINTENANCE.

- 1) THE CONTRACTOR IS TO INSTALL AND MAINTAIN DRAINAGE FACILITIES AS SHOWN ON THE SITE PLANS BY GREENMAN-PEDERSEN, INC.
- 2) PRIOR TO CONSTRUCTION, ALL EROSION/SEDIMENT CONTROL DEVICES SHOWN ON ABOVE PLAN ARE TO BE INSTALLED. TO PREVENT SEDIMENT CONTROL INTRUSION INTO SURROUNDING AREAS DURING CONSTRUCTION, THE CONTRACTOR IS TO SET SEDIMENT CONTROL FENCING AT ALL SLOPES WHICH MAY ERODE IN THE DIRECTION OF ANY OPEN DRAINAGE FACILITIES OR ABUTTING PROPERTY. SUCH PREVENTIVE MEASURES ARE TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
- 3) ALL CONSTRUCTION OF DRAINAGE FACILITIES IS TO BE INSPECTED BY INSPECTORS FROM THE CITY OF METHUEN AND BY AN AUTHORIZED AGENT TO VERIFY CONFORMANCE TO THE DESIGN PLAN.
 - A) CLEAR, GRUB, EXCAVATE AREAS FOR DETENTION SYSTEMS.
 - B) INSTALL CATCH BASINS, PIPES AND MANHOLES.
- 5) EROSION CONTROLS ARE TO BE INSPECTED AND MAINTAINED ON A DAILY BASIS. UPON DISCOVERY OF SEDIMENT CONTROL BUILD-UP IN ANY CATCH BASIN SUMP OR ANY OTHER STRUCTURE, CLEANING SHALL BE PERFORMED WITHIN 24 HOURS.
- 6) ALL EXPOSED SOILS SHALL BE IMMEDIATELY STABILIZED WITH A LAYER OF MULCH HAY.
- 7) UPON INSTALLATION OF CATCH BASINS, INLET PROTECTION - AS DESCRIBED ON AFOREMENTIONED PLAN - SHALL BE INSTALLED AND MAINTAINED UNTIL READY FOR PAVING.
- 8) PRIOR TO CONSTRUCTION OF IMPERVIOUS AREAS, ALL DRAINAGE STRUCTURES AND PIPES SHALL BE INSTALLED AND INSPECTED FOR PROPER FUNCTION. DURING CONSTRUCTION OF OTHER SITE FEATURES, ALL DRAINAGE FACILITIES SHALL BE INSPECTED ON A DAILY BASIS AND CLEANED/REPAIRED IMMEDIATELY UPON DISCOVERY OF SEDIMENT BUILD-UP OR DAMAGE.
- 9) AFTER PAVING IS INSTALLED, IT SHALL BE SWEEP CLEAN ON A MONTHLY BASIS.
- 10) INSPECTIONS ARE TO BE PERFORMED AND INSPECTION LOGS FILLED OUT ON A WEEKLY BASIS FROM THE START OF CONSTRUCTION THROUGH FINAL STABILIZATION. THE START OF CONSTRUCTION MEANS THE INITIAL DISTURBANCE OF SOILS ASSOCIATED WITH CONSTRUCTION. FINAL STABILIZATION MEANS 70% VEGETATIVE GROWTH FOR UNPAVED AREAS.

POST CONSTRUCTION PHASE:

THE OWNER IS TO BE RESPONSIBLE FOR CONTINUED MAINTENANCE OF ALL ONSITE DRAINAGE STRUCTURES & SYSTEMS. THE FUTURE OWNER IS EXPECTED TO BE CAFUA MANAGEMENT COMPANY, LLC WHO WILL ULTIMATELY BE RESPONSIBLE FOR COMPLIANCE WITH THE O&M PLAN.

LANDSCAPE PLAN:

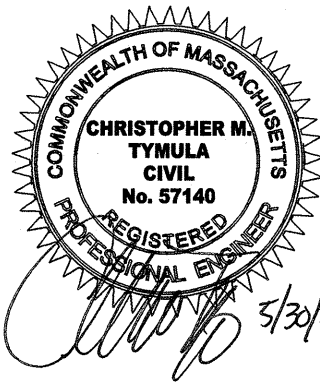
- 1) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 - NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.).
- 2) A 4" DIA. TREE RING WITH 3" AGED PINE BARK MULCH TO BE INSTALLED AT BASE OF ALL TREES IN LAWN AREAS.
- 3) 3" AGED PINE BARK MULCH SHALL BE APPLIED TO ALL SHRUB AND GROUNDCOVER BEDS.
- 4) LANDSCAPE STONE SHALL BE TAN RIVERBED STONE. STONE SHALL BE (1½) INCHES IN DIAMETER AND APPLIED AT A THICKNESS OF (4) INCHES DEEP. ALL FINES SHALL BE SCREENED FROM THE AGGREGATE. THE MATERIAL SHALL BE FREE OF ORGANIC AND INORGANIC DEBRIS AND TRASH. SUBMIT SAMPLE IN A 5-GALLON BUCKET TO THE DEVELOPER FOR APPROVAL.
- 5) A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUNDCOVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.
- 6) THE CONTRACTOR SHALL PROVIDE TESTING OF SOILS IN PLANTING LOCATIONS. THE CONTRACTOR SHALL PROVIDE TEST RESULTS AND RECOMMENDATIONS AS NECESSARY FOR SOIL AMENDMENT TO THE ENGINEER FOR THEIR APPROVAL. BACKFILL SHALL BE A BLEND OF ONE-PART LOAM BORROW, ONE PART ORGANIC MATERIAL AND TWO-PARTS EXISTING SUBSOIL.
- 7) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED AS INDICATED ON PLANS.
- 8) ALL SOD, SEED, SHRUB AND TREE AREAS SHALL RECEIVE 6" PH CORRECTED TOPSOIL. AFTER TOPSOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELTERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.
- 9) APPLICATION OF GRASS SEED, FERTILIZERS AND STRAW MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

LIMESTONE:	100 LBS./1,000 SQUARE FEET
FERTILIZER:	500 LBS./ACRE OF 10-20-20 OR 1000 LBS./ACRE OF 5-10-10.
STRAW MULCH:	APPROXIMATELY 3 TONS/ACRE
NEW ENGLAND NATIVE WARM SEASON GRASS MIX:	23 LBS/ACRE
SEED MIX (SLOPES LESS THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	15
PERENNIAL RYEGRASS	5
REDTOP	2
SLOPE MIX (SLOPES GREATER THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	20
BIRDSFOOT TREEFOIL	8
	48
- 10) SEE ABOVE FOR TEMPORARY EROSION CONTROL NOTES.
- 11) NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE STRAW MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.
- 12) ANY CHANGES IN PLANT LOCATIONS OR TYPES SHALL BE APPROVED BY THE DEVELOPER, LANDOWNER AND CITY PRIOR TO INSTALLATION.
- 13) CLEAR AND GRUB (TO LIMITS REQUIRED ON GRADING PLAN) TO REMOVE VEGETATION, TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, STRIP AND STOCKPILE ALL ON-SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.
- 14) FOR SEED AREAS USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN. ALL LOAM OR TOPSOIL IMPORTED OR RE-UTILIZED FROM ON SITE SHALL BE TESTED AND AMENDED AS DIRECTED BY DEVELOPER TO MEET MINIMUM REQUIREMENTS.
- 15) PLANTINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR AFTER WRITTEN ACCEPTANCE BY THE DEVELOPER.
- 16) THE CONTRACTOR SHALL DIG ROOT BALLS FOR TRANSPLANTED ITEMS TO THE DIMENSIONS OUTLINED IN THE NURSERY STOCK SPECIFICATIONS MANUAL (SEE NOTE #1).
- 17) THE CONTRACTOR SHALL TAKE EXTREME CAUTION TO MINIMIZE DAMAGE TO ROOT SYSTEMS DURING DIGGING AND TRANSPLANTING. ROOT BALLS OF TRANSPLANTS SHALL BE WRAPPED IN BURLAP (WHICH SHALL BE REMOVED UPON RE-PLANTING) AND KEPT MOIST.
- 18) EXPOSED SOILS SHALL BE SEEDED OR STRAW MULCHED WITHIN 72 HOURS OF FINAL GRADING.
- 19) ALL WORK SHALL BE COORDINATED WITH APPLICABLE EPA NPDES/SWPPP PERMIT WORK AS REQUIRED.
- 20) THE CONTRACTOR SHALL INSTALL AN IRRIGATION SYSTEM TO PROVIDE COMPLETE COVERAGE OF ALL SEED AREAS AND SHRUB BEDS WITHIN THE LEASE AREA. THE SYSTEM SHALL INCLUDE A TIMER AND SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES.



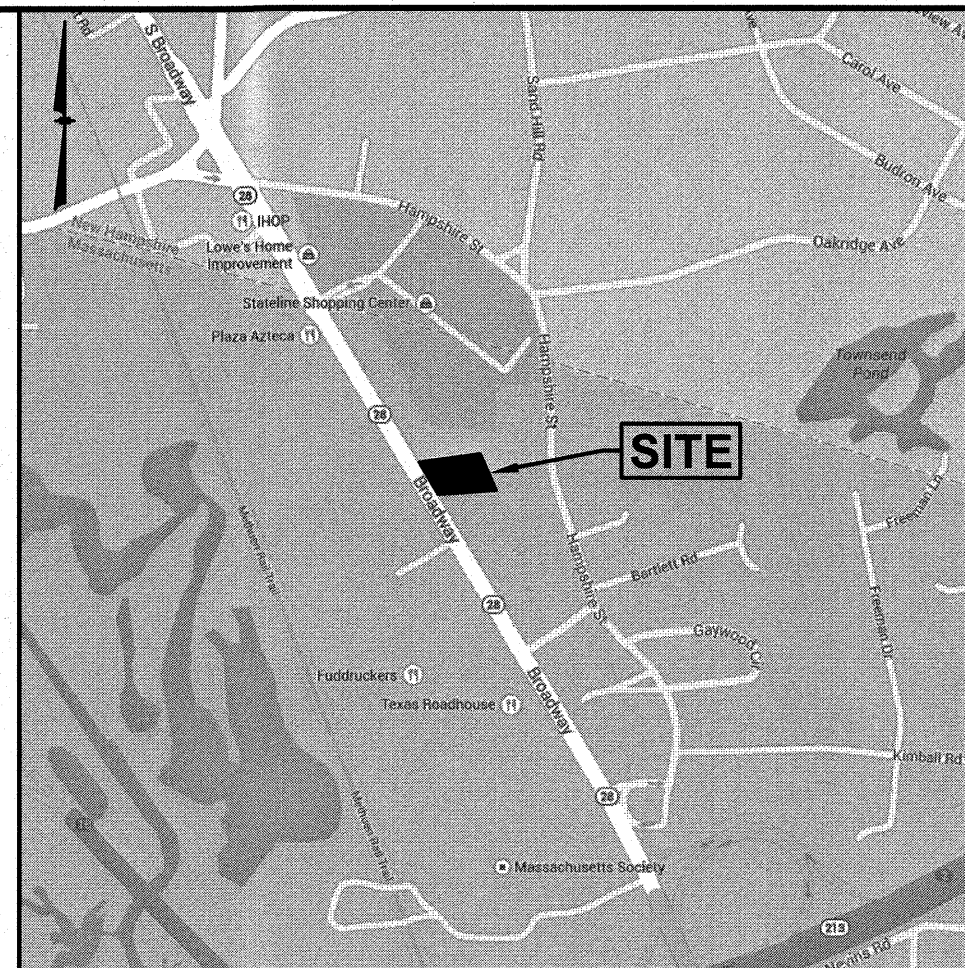
PREPARED FOR
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COMPANY, LLC
280 MERRIMACK STREET
METHUEN, MA 01844

ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS



REVISIONS		
1	MISC. REVISIONS	5/30/24
NO.	REVISION	DATE

MARCH 6, 2024	
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SJB/CMT	CMT
GENERAL NOTES	
SCALE: AS NOTED	
PROJECT NO. NEX-2021347	
2 OF 14	



NOTES:

- 1) ZONE: BUSINESS HIGHWAY DISTRICT (BH)
MIN. LOT SIZE: 10,000 Sq.Ft.
MIN. LOT FRONTAGE: 100 Ft.
SETBACKS:
FRONT 25 Ft.
SIDE 30 Ft.
REAR 60 Ft.*
- *(ADDITIONAL 30 Ft. BUFFER ADDED WHEN ADJACENT TO RESIDENTIAL ZONE)
- REFER TO THE CITY OF METHUEN ZONING ORDINANCE FOR VERIFICATION, ADDITIONAL RESTRICTIONS AND PERMITTED USES. THE ZONING INFORMATION SHOWN HEREON IS BASED ON A REVIEW OF THE METHUEN ZONING ORDINANCE.
- 2) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE BETWEEN MAY 2001 AND FEBRUARY 24, 2022.
- 3) BEARINGS SHOWN HEREON ARE BASED ON NAD83 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON FEBRUARY 24, 2022.
- 4) ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 PER GPS OBSERVATIONS PERFORMED BY THIS OFFICE ON FEBRUARY 24, 2022.
- 5) LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY. ADDITIONAL UNDERGROUND UTILITIES OTHER THAN THOSE SHOWN MAY BE CONSIDERED. INVERTS ARE LISTED IN A CLOCKWISE DIRECTION ENDING WITH THE INVERT OUT (UNLESS OTHERWISE NOTED).
- 6) THE SURVEY TRACT IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA (100 YEAR FLOOD) PER FLOOD INSURANCE RATE MAP NUMBER 25009C0202F, WITH AN EFFECTIVE DATE OF JULY 3, 2012.
- 7) NO CLEARLY IDENTIFIABLE PARKING SPACES WERE OBSERVED IN CONDUCTING THIS SURVEY.

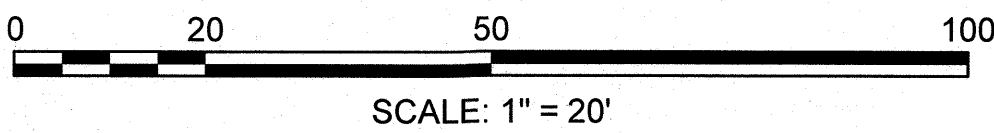
PLAN REFERENCES:

- 1) PLAN OF LAND IN METHUEN, MA OWNED BY THOMAS PARKIN:
DATE: SEPTEMBER 1941 BY FRED C. STOWERS, C.E. NORTH
ESSEX REGISTRY OF DEEDS (N.E.R.D.) PLAN #1335.
- 2) 1947 STATE HIGHWAY LAYOUT FOR BROADWAY. N.E.R.D. PLAN
#1759.
- 3) EASEMENT PLAN OF LAND IN METHUEN, MASS. PREPARED FOR
THE TOWN OF METHUEN; SCALE: "1"=20'; DATE: NOV. 1094 BY
STOWERS ASSOCIATES, INC. N.E.R.D. PLAN #9901.
- 4) PLAN OF LAND IN METHUEN, MASS. SURVEYED FOR KENNETH
DAHER; SCALE: "1"=40'; DATE: NOVEMBER 1995 BY STOWERS
ASSOCIATES, INC. N.E.R.D. PLAN #12809.

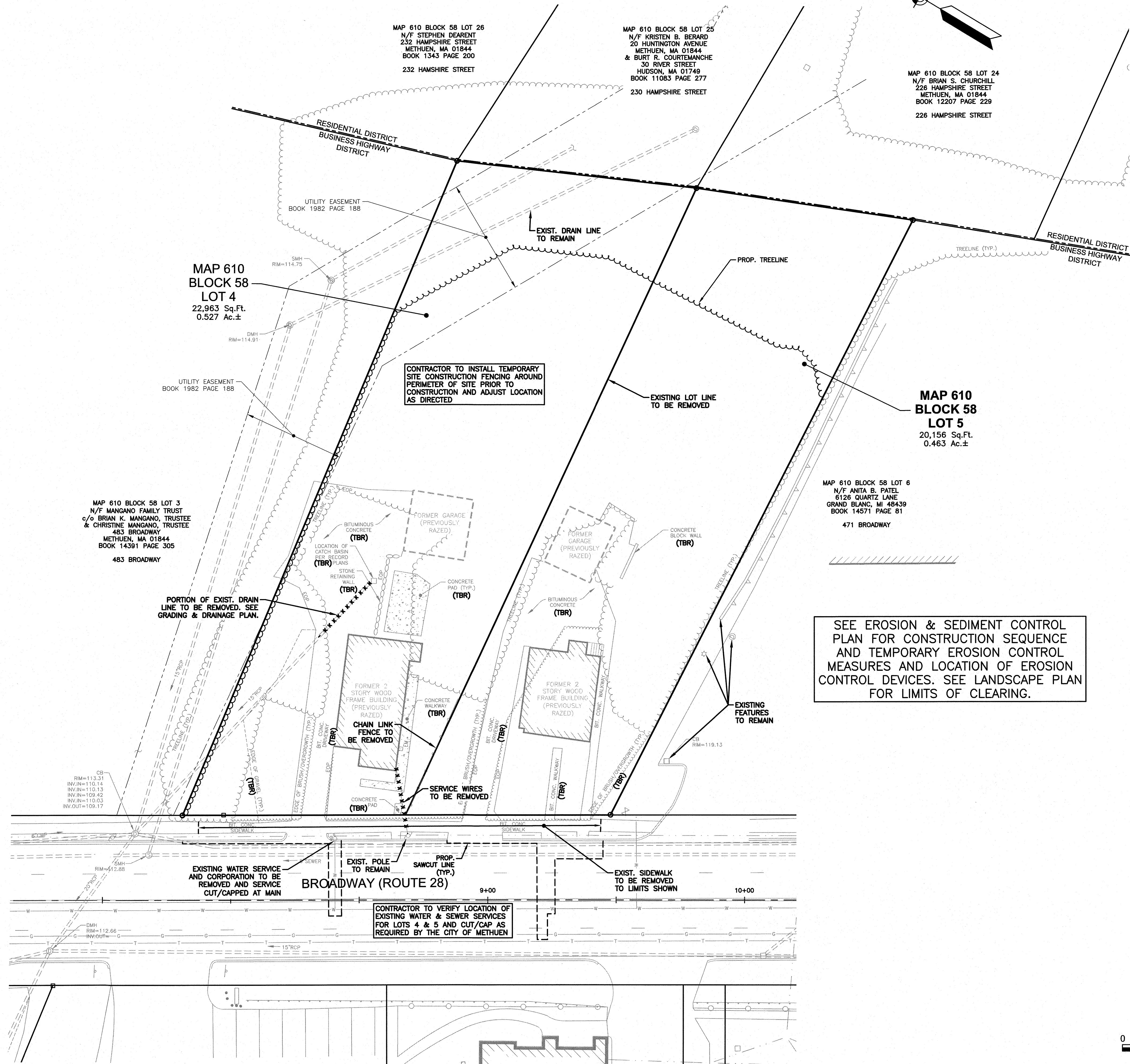
OWNER OF RECORD:

MAP 610 BLOCK 58 LOT 4
CAFUA REALTY TRUST XXV LLC
280 MERRIMACK STREET
METHUEN, MA 01844
BOOK 13846 PAGE 311

MAP 610 BLOCK 58 LOT 5
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280 MERRIMACK STREET
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BOOK 13846 PAGE 296



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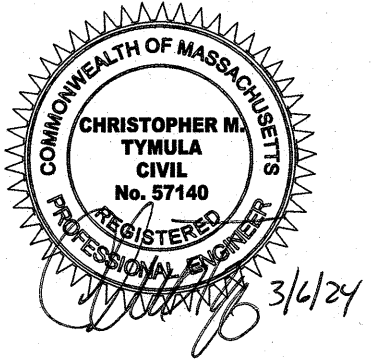
NOTES:

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NO.	REVISION	DATE

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CHECKED BY: CMT

DEMOLITION PLAN

SCALE: 1"=20'

PROJECT NO.
NEX-2021347

4 OF 14

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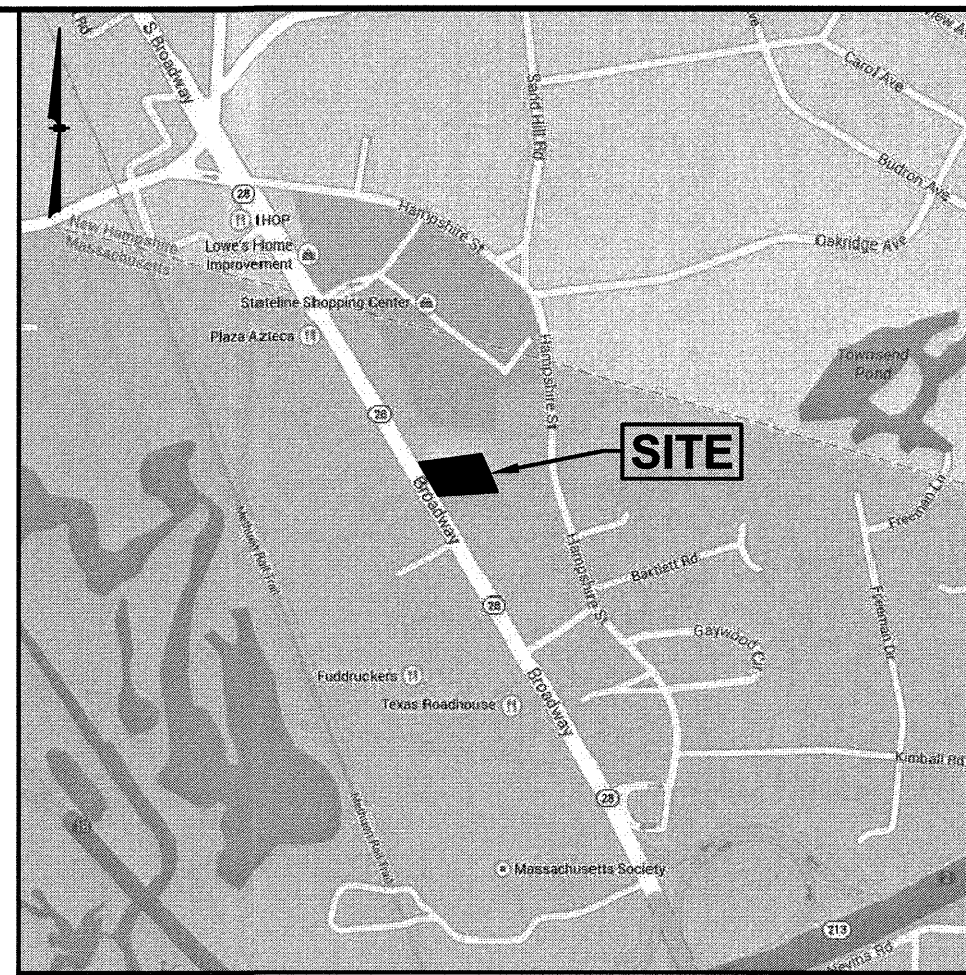
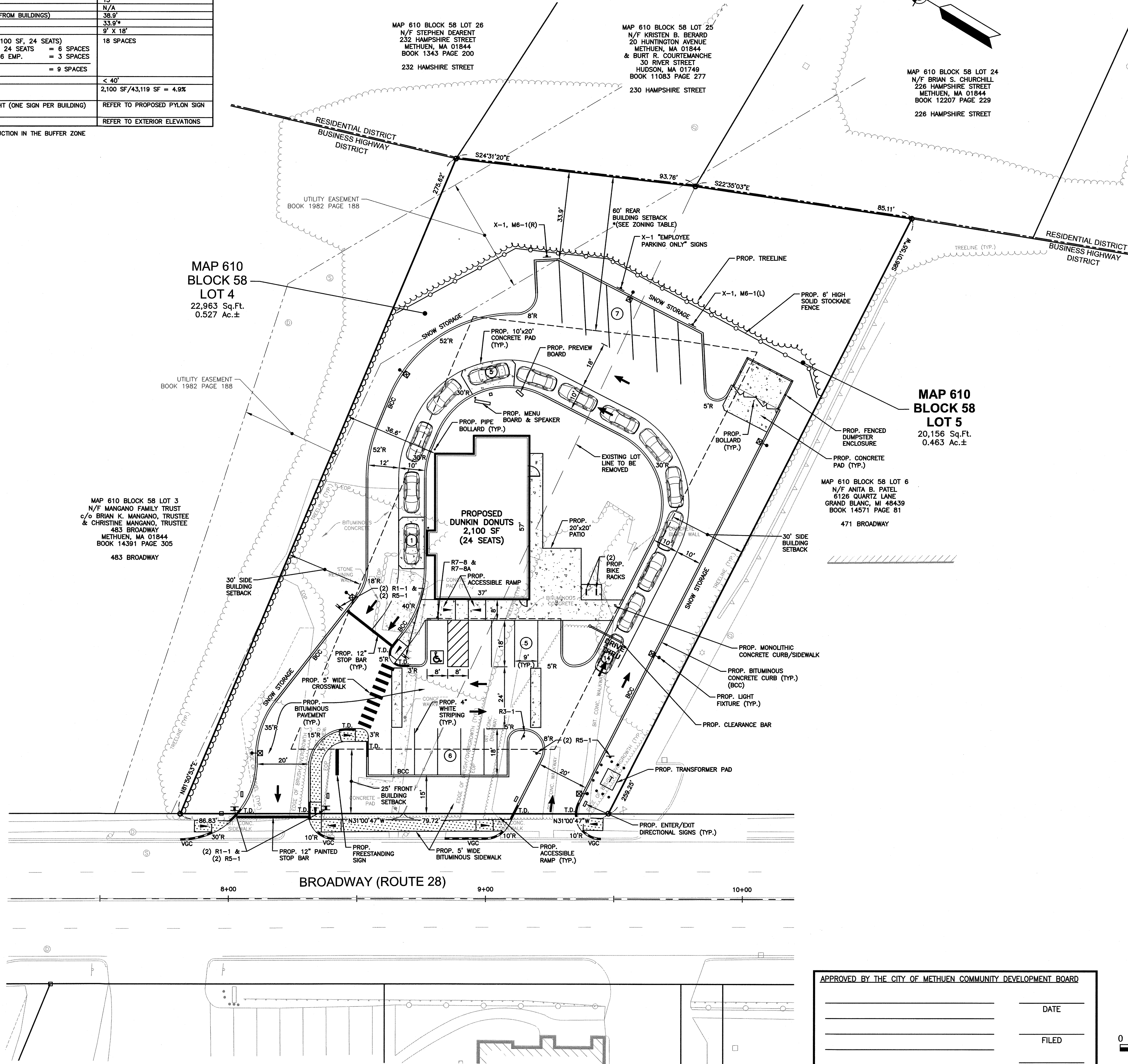
TABLE OF ZONING REGULATIONS

ZONE: HIGHWAY BUSINESS (BH)		
DESCRIPTION	REQUIRED	PROVIDED
MINIMUM LOT AREA Sq. Ft.	10,000 SF	43,119 SF
MINIMUM LOT FRONTAGE	100'	165'
MINIMUM FRONT YARD BUILDING SETBACK	25'	83'
MINIMUM REAR YARD BUILDING SETBACK	60' (ABUTTING RESIDENTIAL ZONE)*	103.3'
MINIMUM SIDE YARD BUILDING SETBACK	30'	36.6'
MINIMUM FRONT YARD PARKING SETBACK	15'	15'
MINIMUM REAR YARD PARKING SETBACK	7.5'	N/A
MINIMUM SIDE YARD PARKING SETBACK	7.5' (ALSO 7.5' FROM BUILDINGS)	38.9'
MINIMUM BUFFER FROM RESIDENTIAL	30'	33.9'
PARKING SPACE DIMENSIONS	9' X 18'	9' X 18'
MINIMUM NUMBER PARKING SPACES	DONUT SHOP (2,100 SF, 24 SEATS) 1 SP/4 SEATS x 24 SEATS = 6 SPACES 1 SP/2 EMP. x 6 EMP. = 3 SPACES TOTAL REQUIRED = 9 SPACES	18 SPACES
MAXIMUM BUILDING HEIGHT	40' (3 STORIES)	< 40'
MAXIMUM BUILDING COVERAGE	35%	2,100 SF/43,119 SF = 4.9%
MAXIMUM FREESTANDING SIGN AREA, HEIGHT AND SETBACK	60 SF, 20' HEIGHT (ONE SIGN PER BUILDING)	REFER TO PROPOSED PYLON SIGN
MAXIMUM WALL SIGN AREA	33% OF WALL	REFER TO EXTERIOR ELEVATIONS

* WAIVER REQUIRED FROM SECTION V-B(12) TO ALLOW A REDUCTION IN THE BUFFER ZONE BETWEEN RESIDENTIAL AND BUSINESS ZONING DISTRICTS.

SIGN KEY

SIGN I.D. NUMBER	TEXT/COLOR	SIZE/REMARKS
R1-1	R/W	30" x 30" NEW SIGN WITH POST
R7-8	G/B/W	12" x 18" NEW SIGN WITH POST
R7-8A	G/W	6" x 12"
R5-1	R/W	30" x 30" NEW SIGN WITH POST
R3-1	B/W/R	24" x 24" NEW SIGN WITH POST
X-1	B/W	12" x 18" NEW SIGN WITH POST
M6-1	B/W	21" x 15" NEW SIGN WITH POST



LOCATION MAP
(NOT TO SCALE)

NOTES:

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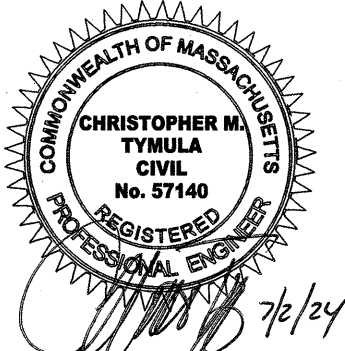
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ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
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METHUEN, MASSACHUSETTS



REVISIONS

NO.	REVISION	DATE
2	MISC. REVISIONS	7/2/24
1	MISC. REVISIONS	5/30/24

MARCH 6, 2024

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SUB/CMT	CMT

SITE PLAN

SCALE: 1"=20'

PROJECT NO.
NEX-2021347

5 OF 14

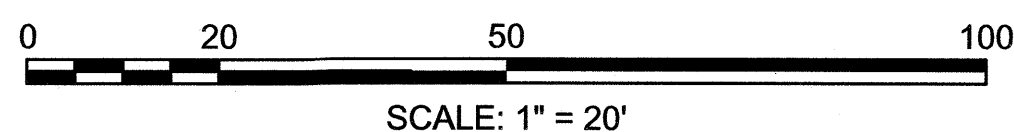
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METHUEN, MA 01844
BOOK 13846 PAGE 311

MAP 610 BLOCK 58 LOT 5
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280 MERRIMACK STREET
METHUEN, MA 01844
BOOK 13846 PAGE 296

APPROVED BY THE CITY OF METHUEN COMMUNITY DEVELOPMENT BOARD

_____	DATE
_____	FILED
_____	HEARING



DRAINAGE PIPE SCHEDULE					
FROM: STRUCTURE NUMBER	PIPE SIZE (INCHES)	TYPE OF PIPE	APPROX. PIPE LENGTH (FEET)	SLOPE OF PIPE (FT./FT.)	TO: STRUCTURE NUMBER
CB-1	12	HDPE	96	0.007	DMH-1
CB-2(FD)	12	HDPE	34	0.006	DET IN2
CB-3(FD)	12	HDPE	38	0.005	DET IN1
CB-4	12	HDPE	12	0.033	DMH-1
CB-5	12	HDPE	22	0.009	DET-IN3
DET OUT	24	HDPE	24	0.000	INF IN
DMH-1	12	HDPE	14	0.018	DMH-2
OCS-1	12	HDPE	17	0.059	DMH-3
SD-1	8	HDPE	35	0.006	CB-5
YD-1	12	HDPE	14	0.007	DMH-3

DRAINAGE STRUCTURES

CB-1
RM=116.10
INV.OUT=113.10

*CB-2(FD)
RM=115.15
INV.OUT=112.20

*CB-3(FD)
RM=114.85
INV.OUT=112.20

CB-4
RM=116.00
INV.OUT=113.00

CB-5(W/ DMH COVER)
RM=116.40
INV.IN=112.30(SD-1)
INV.OUT=112.20

DMH-1
RM=116.45
INV.IN=112.45(CB-1)
INV.IN=112.60(CB-4)
INV.OUT=112.35

* DENOTES LOW PROFILE FRAME & GRATE

(FD) DENOTES FIRST DEFENSE
FD-4HC HYDRODYNAMIC SEPARATOR
BY HYDRO INTERNATIONAL OR
APPROVED EQUAL

(ST) DENOTES SLOTLIGHT PIPE JOINTS

DMH-2
RM=116.75
INV.IN=112.10(DMH-1)
INV.IN=113.75(RD)
INV.OUT=112.10(12"LOW)
INV.OUT=113.04(12"MANIFOLD)

DMH-3
RM=116.00
INV.IN=112.10(OCS-1)
INV.IN=110.75(YD-1)
INV.OUT=110.65(EX.)

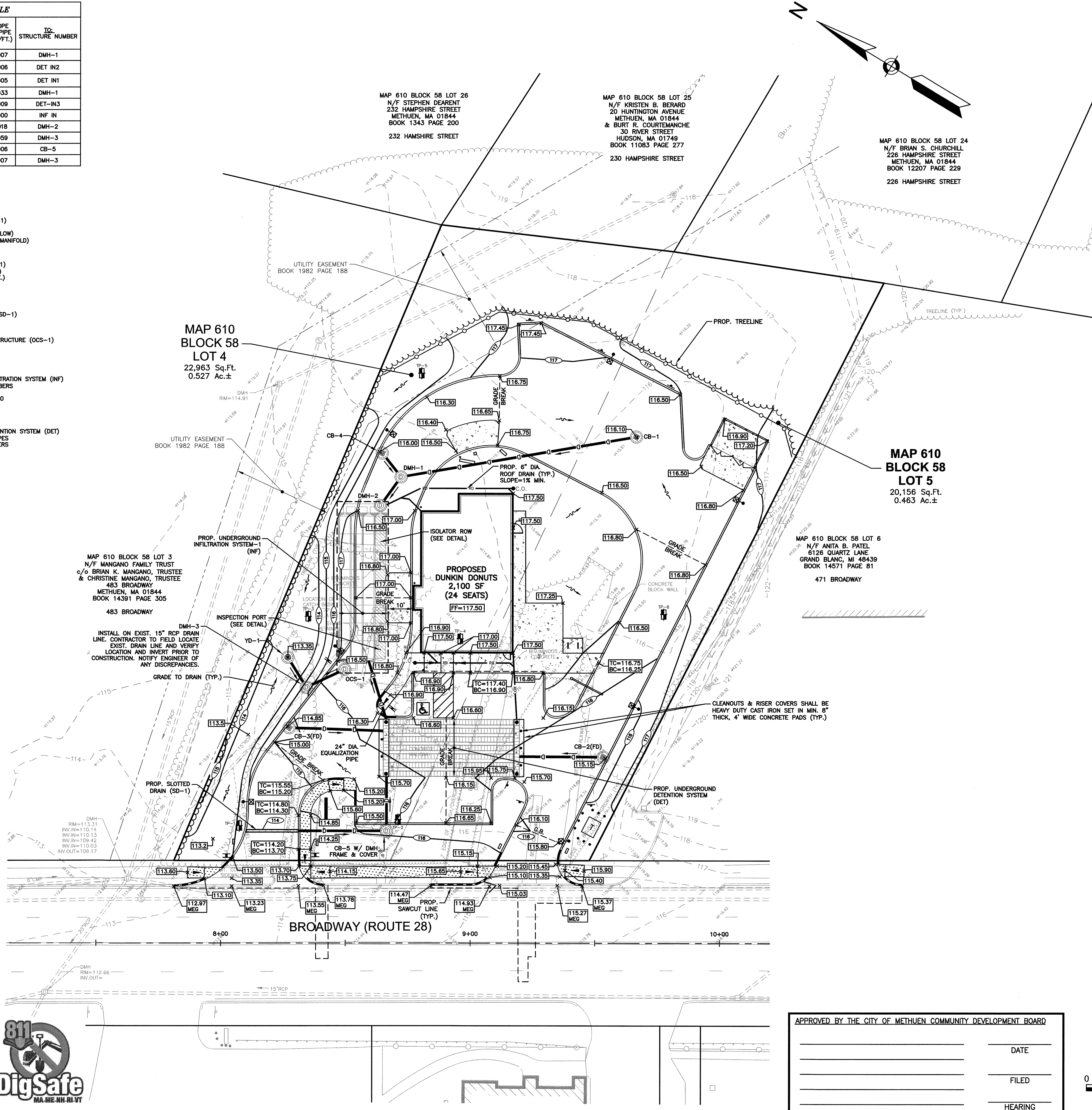
*YD-1
RM=113.35
INV.OUT=110.85

SLOTTED DRAIN-1 (SD-1)
TOP GRATE=114.00
INV.OUT=112.50

OUTLET CONTROL STRUCTURE (OCS-1)
RM=116.40
INV.IN=113.04
INV.OUT=113.10
(SEE DETAIL)

UNDERGROUND INFILTRATION SYSTEM (INF)
(32) SC-740 CHAMBERS
INV.IN=112.08
BOT.CHAMBER=112.00
BOT.STONE=111.50
MIN.FG=116.33
(SEE DETAIL)

UNDERGROUND DETENTION SYSTEM (DET)
24" SOLID (ST) PIPES
7 ROWS + 2 HEADERS
23.0'W x 54.7'L
S=0.000 FT/FT
INV.PIPE=112.00
INV.S.IN=112.00
INV.OUT=112.00
MIN.FG=115.66
(SEE DETAIL)



NOTES:
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280 MERRIMACK STREET
METHUEN, MA 01844

ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS

COMMONWEALTH OF MASSACHUSETTS
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER M. TYMULA
No. 57140
7/2/24

REVISIONS		
NO.	REVISION	DATE
2	MISC. REVISIONS	7/2/24
1	MISC. REVISIONS	5/30/24

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GRADING & DRAINAGE PLAN

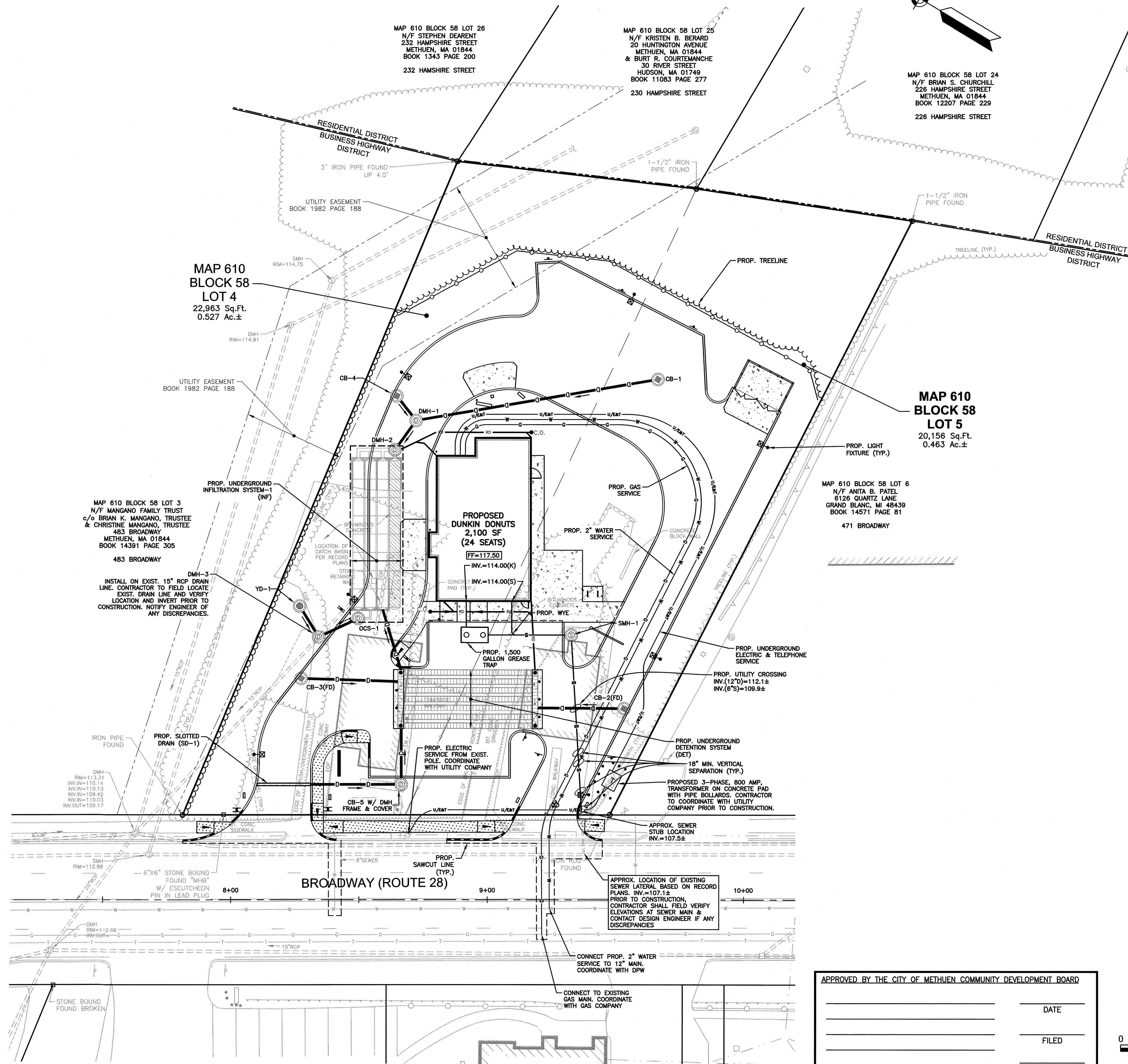
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PROJECT NO. NEX-2021347
6 OF 14

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NOTES:
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SEWER PIPE SCHEDULE					
FROM STRUCTURE NUMBER	PIPE SIZE (Inches)	TYPE OF PIPE	APPROX. PIPE LENGTH (feet)	SLOPE OF PIPE (ft./ft.)	TO STRUCTURE NUMBER
BLDG.	4	PVC	10	0.020	GR. TRAP #1
GR. TRAP #1	4	PVC	33	0.050	SMH-1
BLDG.	6	PVC	13	0.073	WYE
SMH-1	6	PVC	68	0.063	STUB

SEWER STRUCTURES

1,500 GAL. GREASE TRAP #1
RIM=116.80
INV.IN=113.80
INV.OUT=113.55

SMH-1
RIM=116.80
INV.IN=111.90
INV.OUT=111.80

GPI

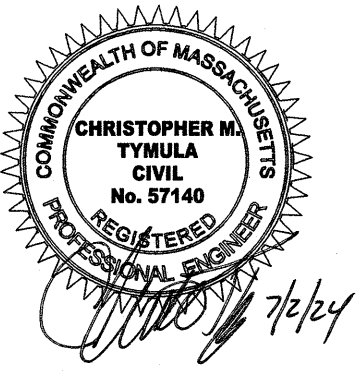
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UTILITY PLAN

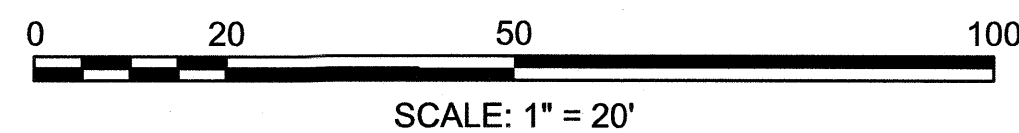
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PROJECT NO.
NEX-2021347

7 OF 14

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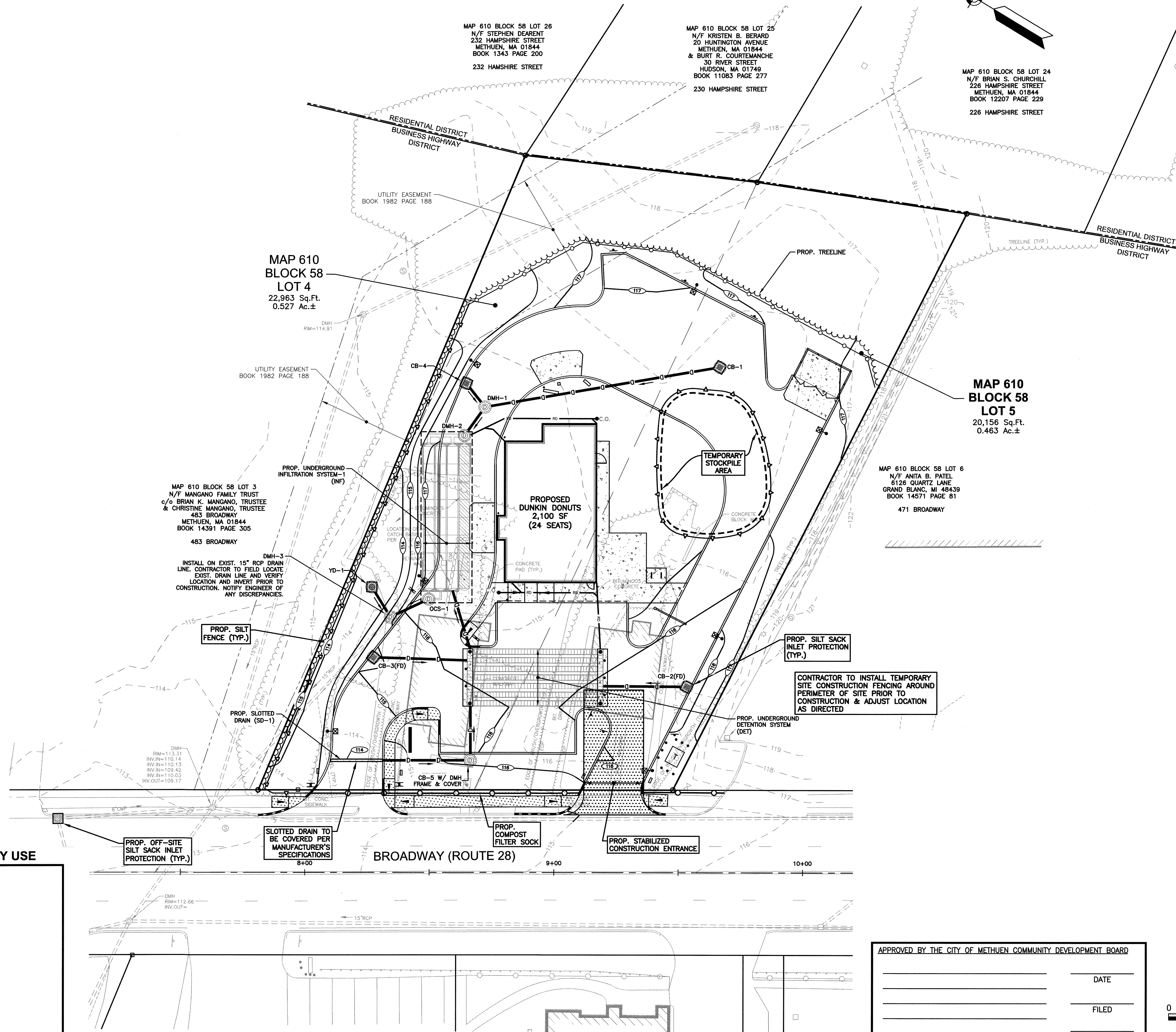
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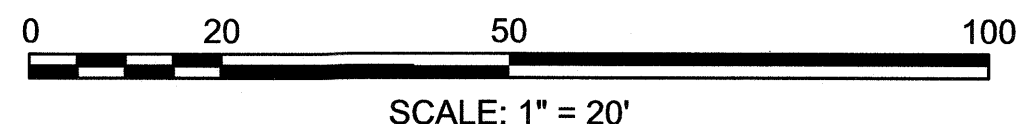
EROSION & SEDIMENT CONTROL PLAN

SCALE: 1"=20'

PROJECT NO. NEX-2021347

8 OF 14

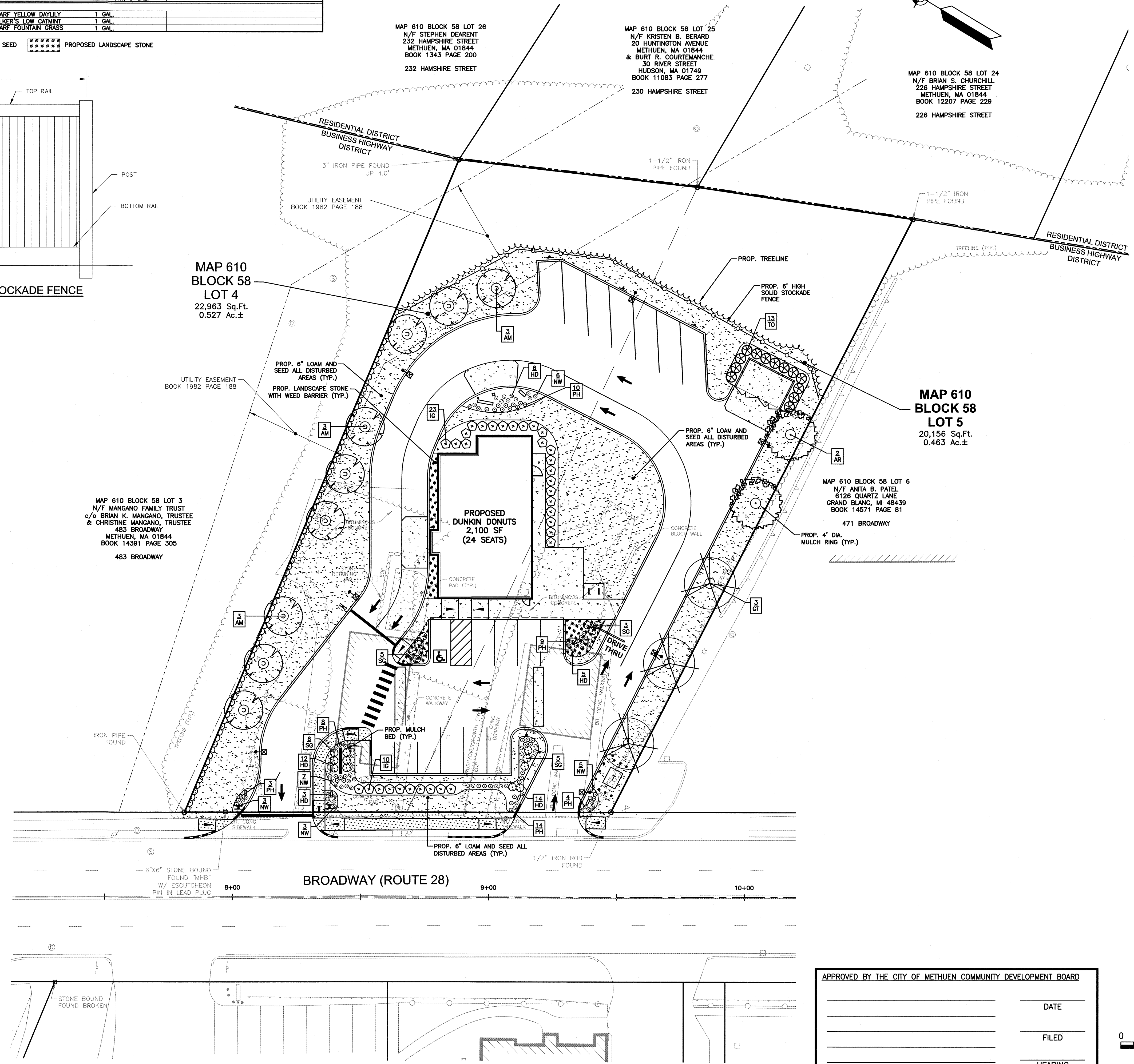
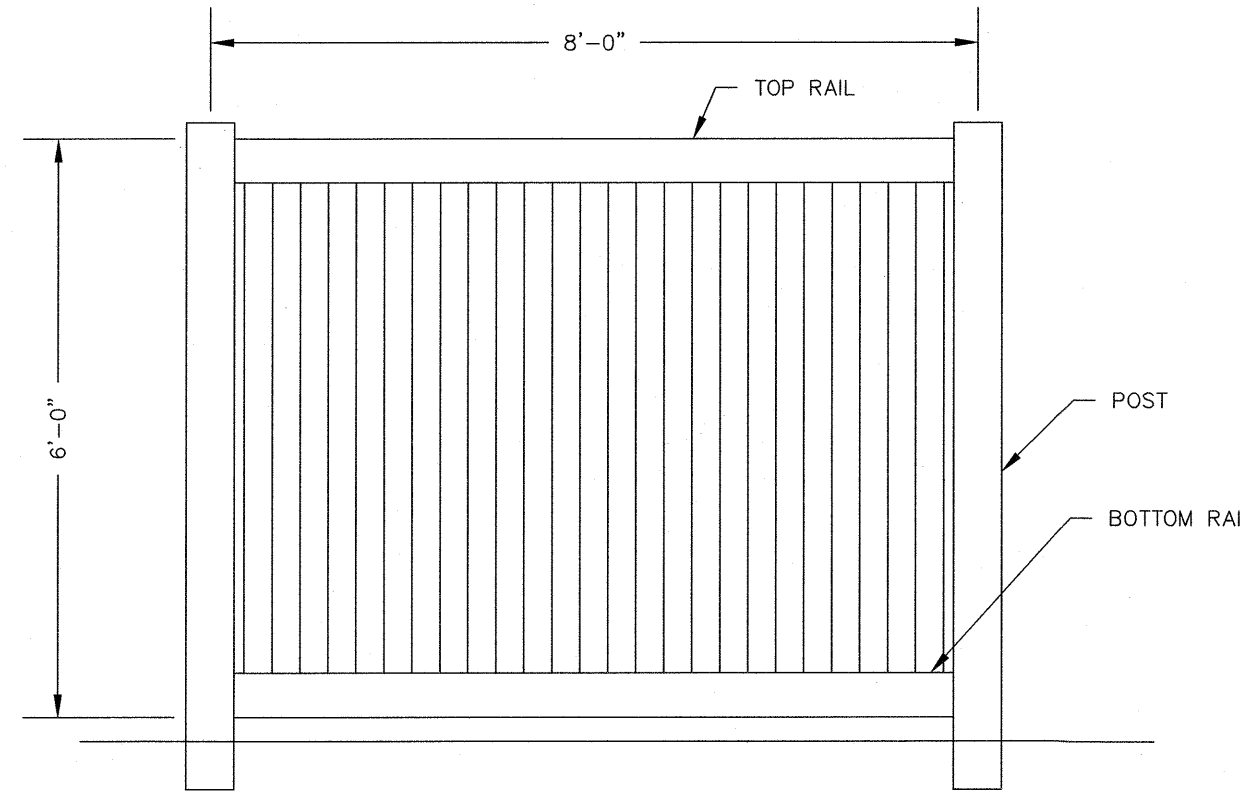
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PLANTING SCHEDULE				
PLANT	QNTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALL. SIZE
TREES				
AR	2	ACER RUBRUM 'KARPICK'	KARPICK RED MAPLE	2'-2 1/2" CAL., B&B
AM	9	AMELANGIER CANADENSIS	SERVICEBERRY	6'-7" HT., B&B
GT	3	GLEDITSIA TRIACANTHOS 'STREET KEEPER'	STREET KEEPER HONEY LOCUST	2'-2 1/2" CAL., B&B
SHRUBS				
IG	33	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	2'-3' HT., 3 GAL.
TO	13	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBORVITAE	5'-6" HT., B&B
SG	19	SPIREA BUMALDA 'GOLDFLAME'	GOLDFLAME SPIREA	2'-3' HT., 3 GAL.
PERENNIALS & GRASSES				
HD	40	HEMEROCALLIS 'STELLA DE ORO'	DWARF YELLOW DAYLILY	1 GAL.
NW	24	NEPETA 'WALKER'S LOW'	WALKER'S LOW CATMINT	1 GAL.
PH	48	PENNISETUM ALOPECUROIDES 'HAIRY'	DWARF FOUNTAIN GRASS	1 GAL.

1 XX	PLANT QUANTITY	PROPOSED LOAM AND SEED	PROPOSED LANDSCAPE STONE
XX	PLANT DESIGNATION		



NOTES:
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LANDSCAPE
PLAN

SCALE: 1"=20'

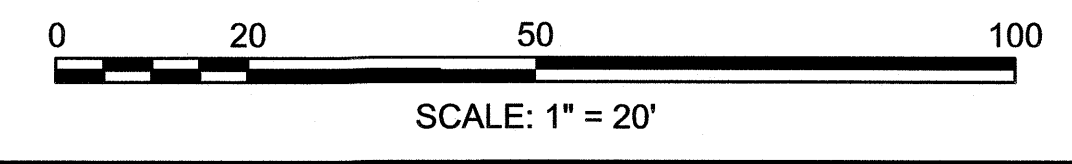
PROJECT NO.
NEX-2021347

9 OF 14

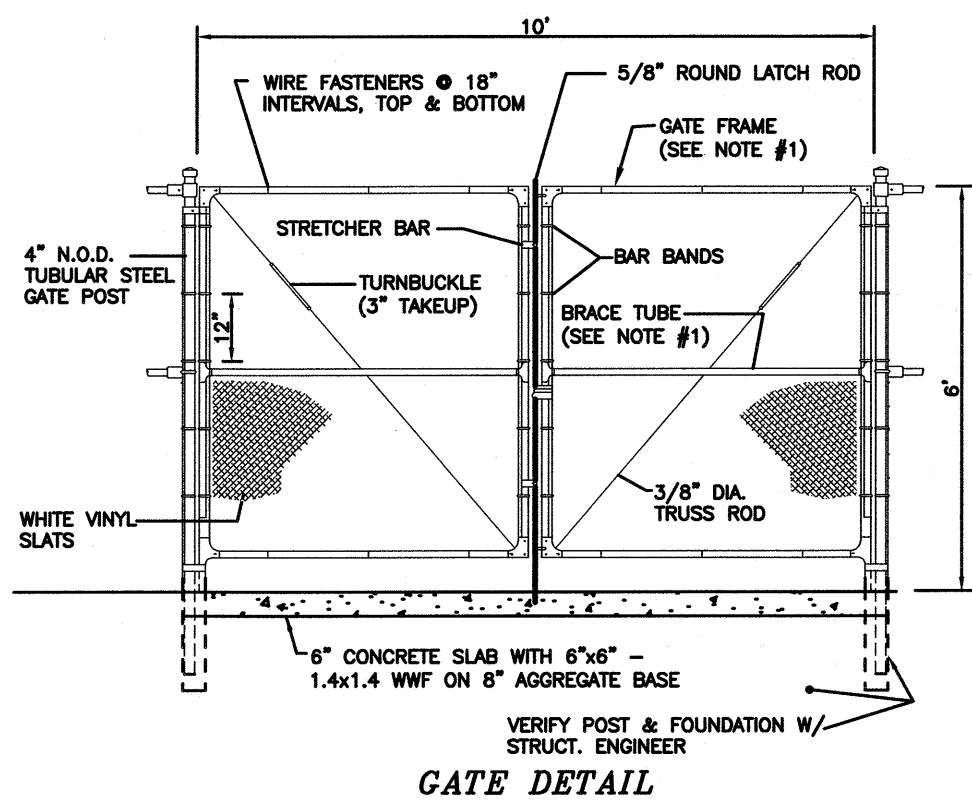
811
DigSafe
MA-ME-NH-NY-VT

FOR REGISTRY USE

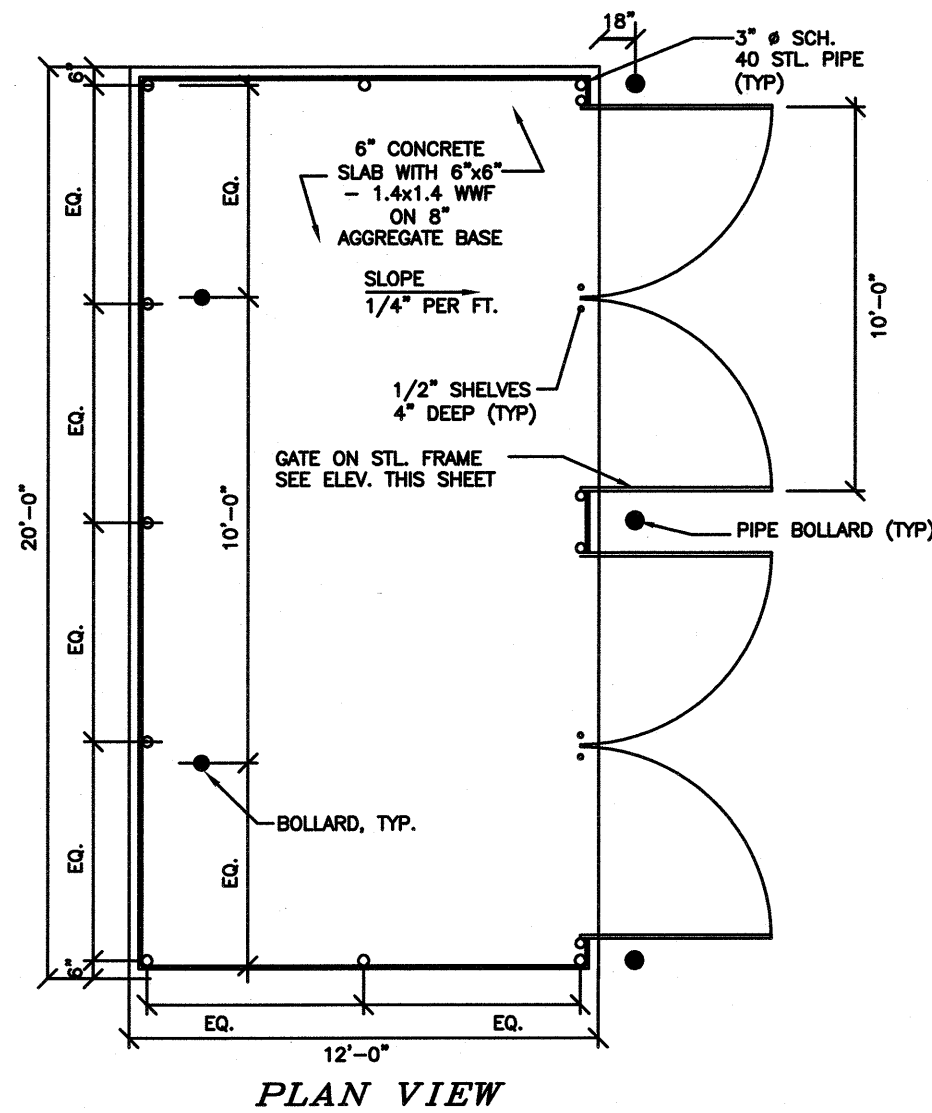
APPROVED BY THE CITY OF METHUEN COMMUNITY DEVELOPMENT BOARD	
	DATE
	FILED
	HEARING



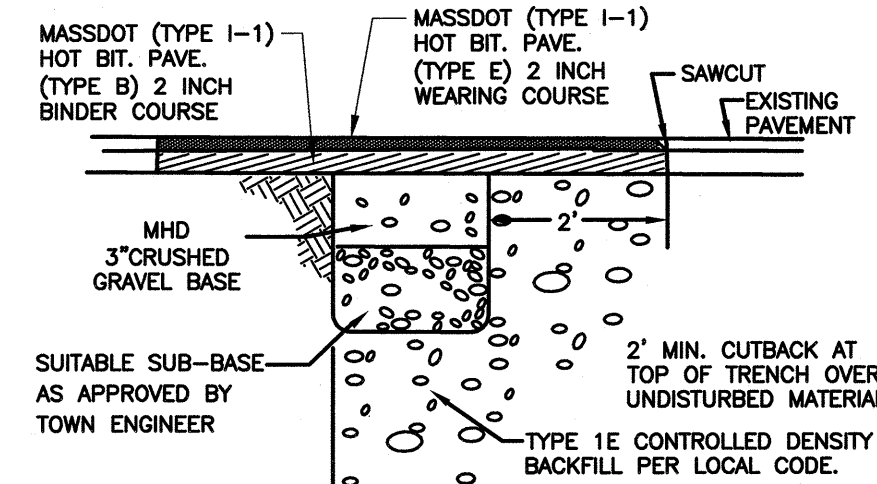
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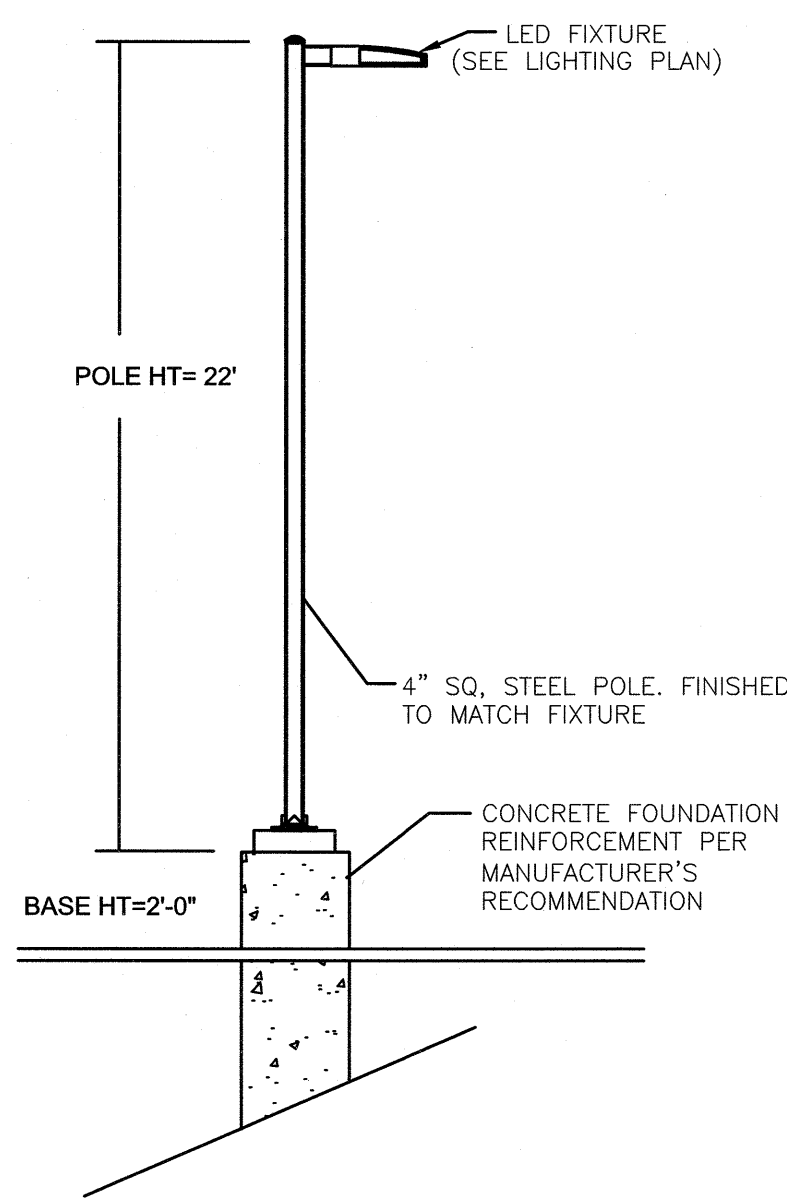
NOTE:
1) NOMINAL OUTSIDE DIAMETER (N.O.D.) OF GATE FRAME AND BRACE TUBE TO BE 1.66\"/>



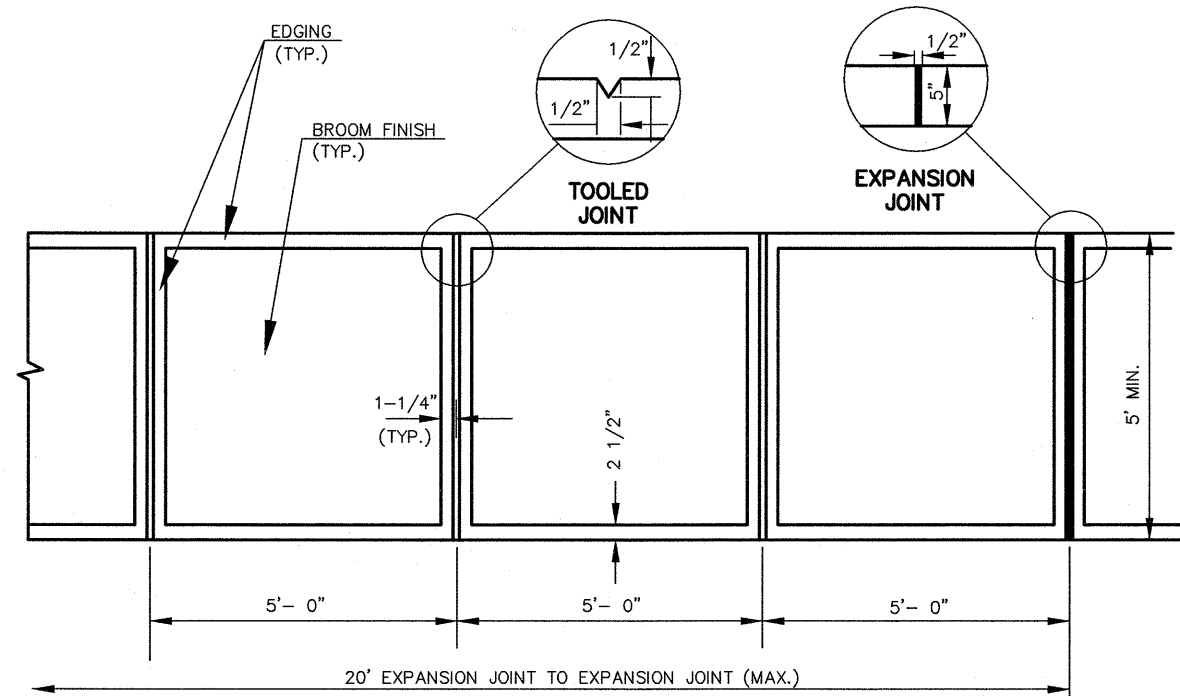
TRASH ENCLOSURE DETAIL
NOT TO SCALE



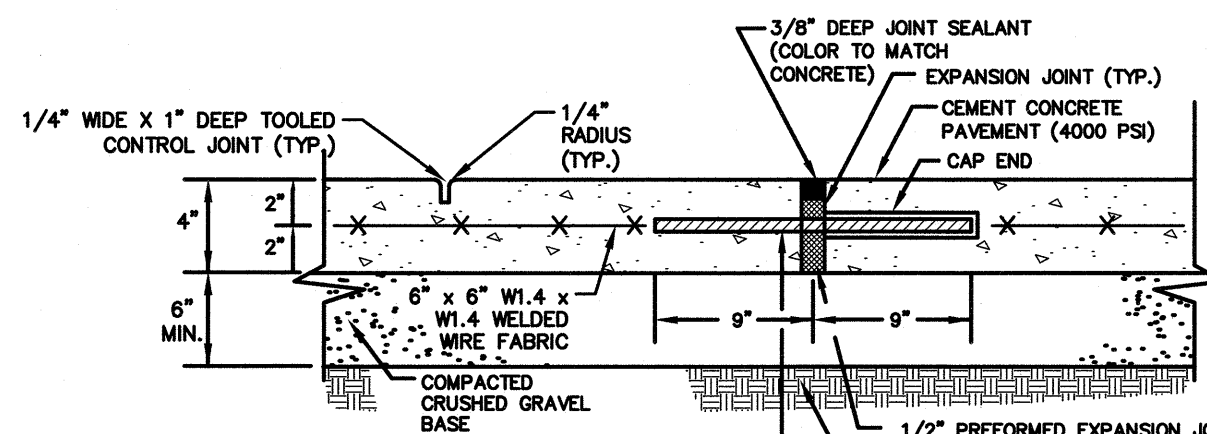
PAVEMENT REPAIR IN STREET R.O.W.
NOT TO SCALE



LIGHT FIXTURE DETAIL
NOT TO SCALE



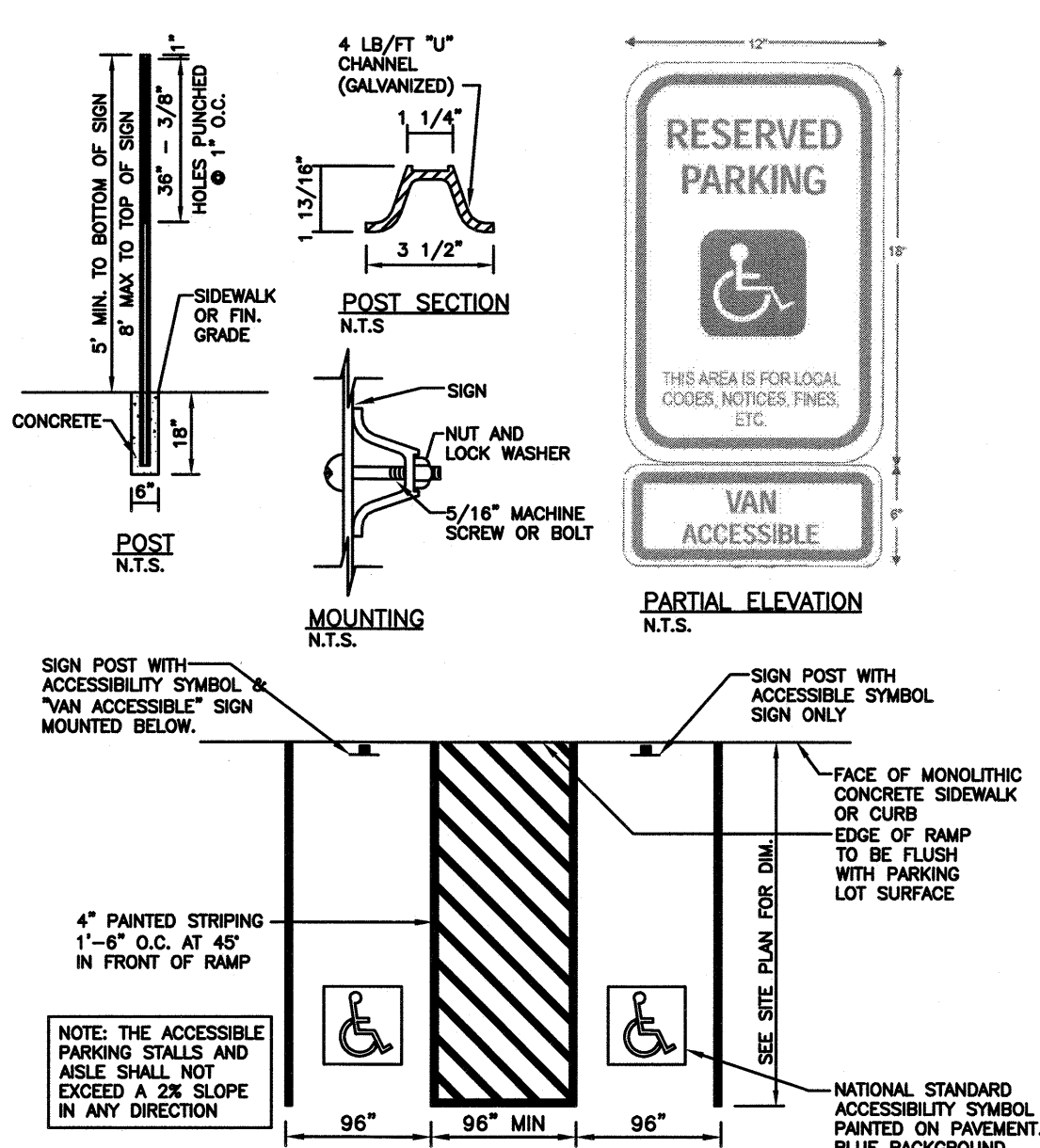
CONCRETE SIDEWALK JOINTING AND EDGING
NOT TO SCALE



NOTES:
1. MAINTAIN 2\"/>

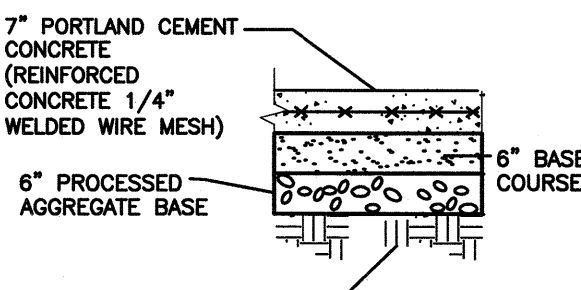
CEMENT CONCRETE SIDEWALK SECTION AND JOINT DETAILS

NOT TO SCALE

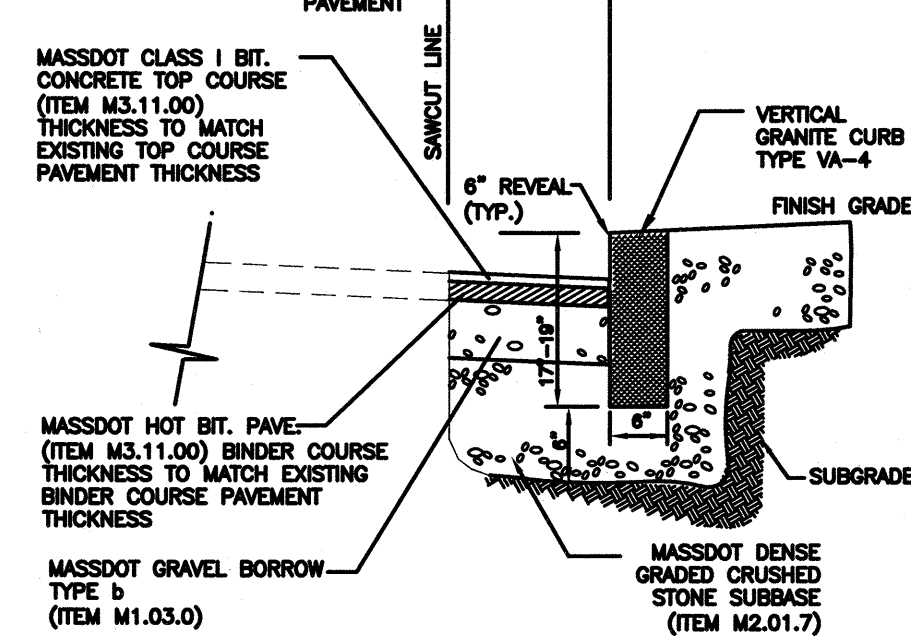


ACCESSIBLE PARKING STALLS
NOT TO SCALE

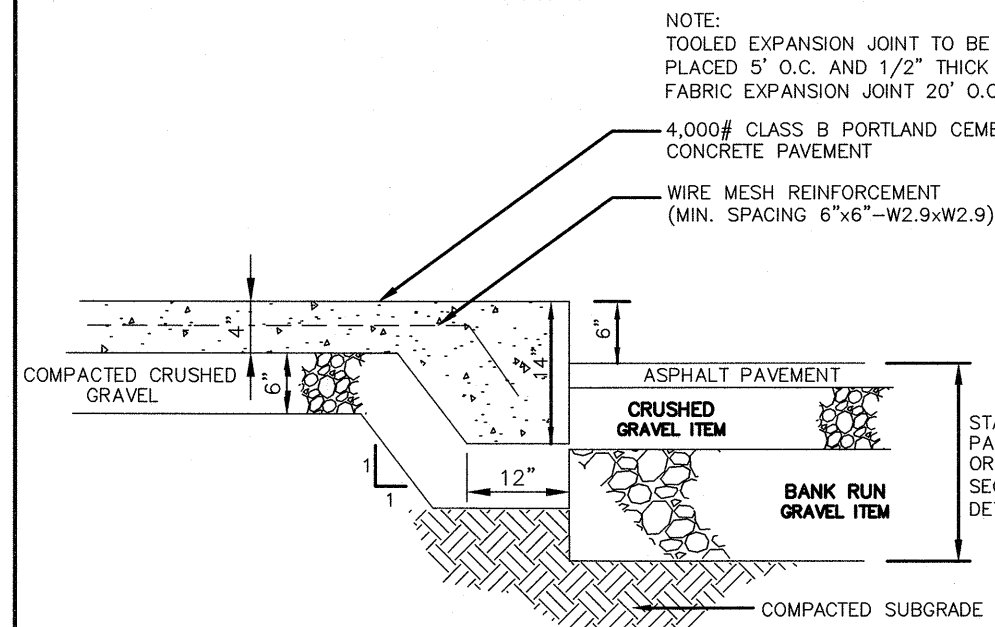
NOTE: REFER TO GEOTECHNICAL REPORT FOR PAVEMENT RECOMMENDATIONS.



ON-SITE RIGID CONCRETE PAVEMENT
NOT TO SCALE

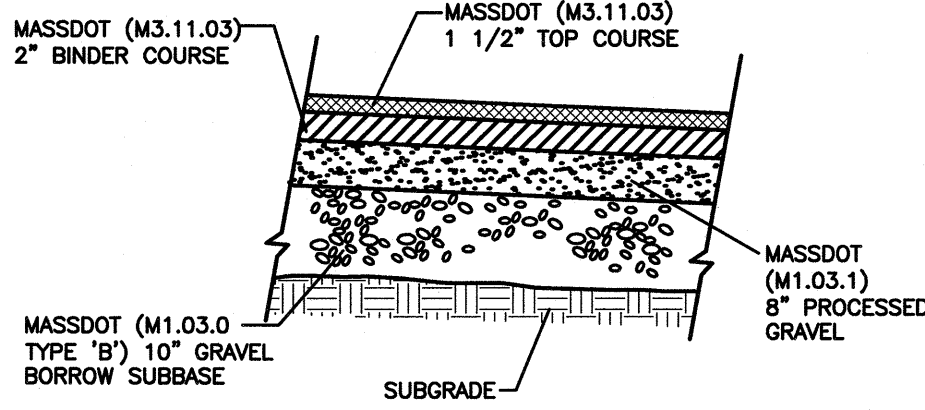


VERTICAL GRANITE CURB IN R.O.W.
NOT TO SCALE



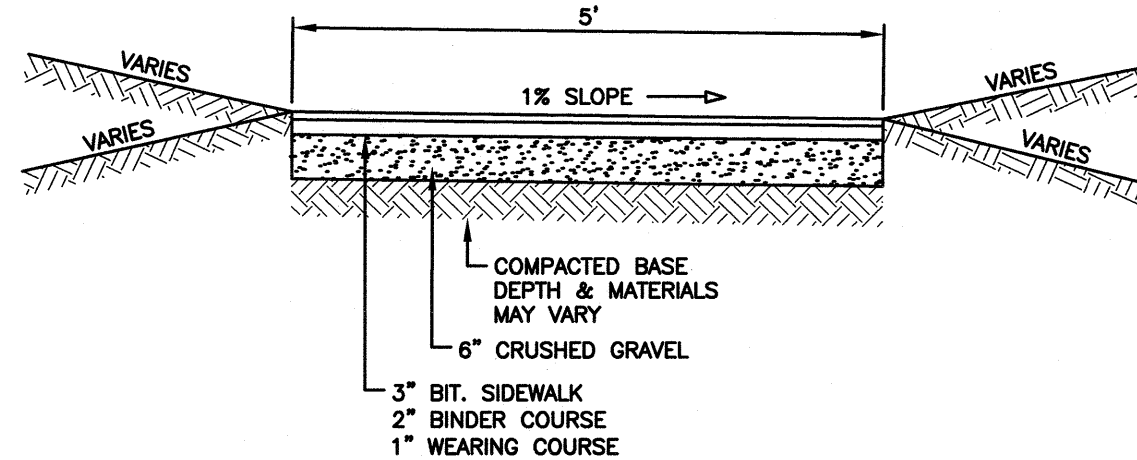
MONOLITHIC CURB/SIDEWALK
NOT TO SCALE

NOTE: REFER TO GEOTECHNICAL REPORT FOR PAVEMENT RECOMMENDATIONS.

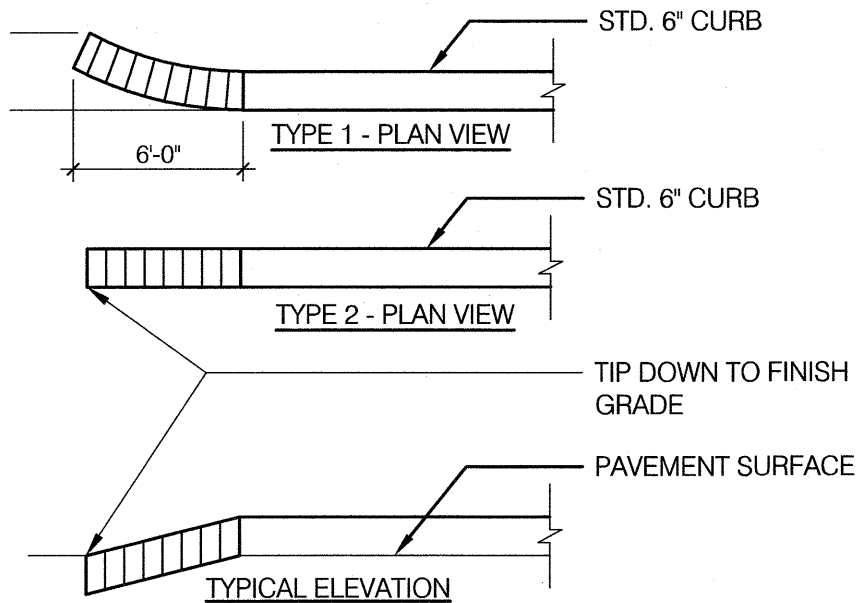


ON-SITE STANDARD-DUTY PAVEMENT
NOT TO SCALE

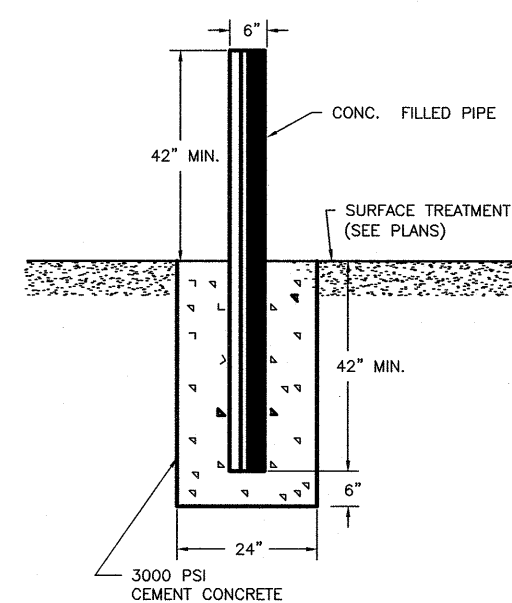
NOTE: WHERE BITUMINOUS PAVEMENT SECTIONS ARE TRANSITIONED TO CONCRETE SECTIONS, THE BITUMINOUS PAVEMENT SHOULD BE THICKENED BY 2 IN. (BINDER COURSE) TO MITIGATE THE CHANCES OF DIFFERENTIAL SETTLEMENT AND CRACKING BETWEEN THE TWO SECTIONS. THE LATERAL EXTENT OF THE THICKENED SECTION SHOULD BE 6 IN. AND SHOULD TRANSITION BACK TO THE RECOMMENDED FLEXIBLE PAVEMENT SECTION ON A 2H:1V SLOPE.



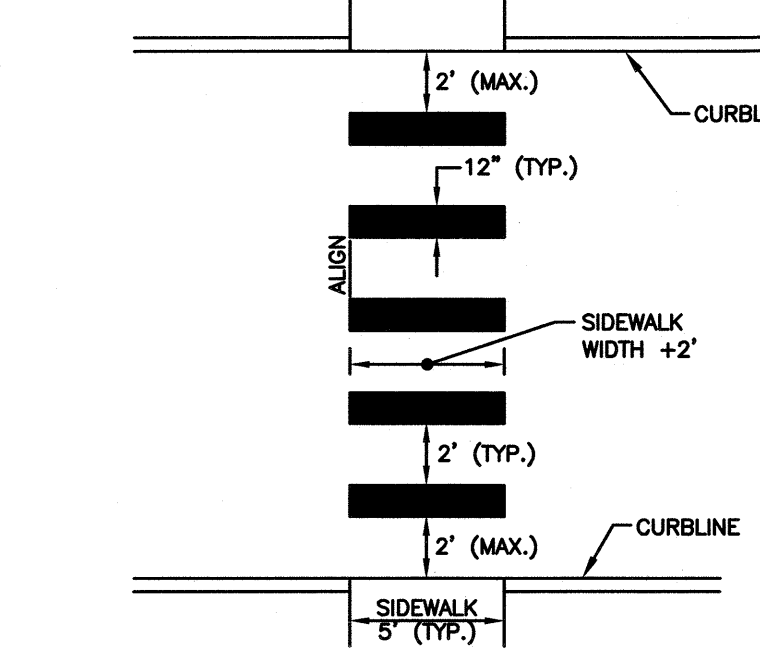
BITUMINOUS CONCRETE SIDEWALK
NOT TO SCALE



TYPICAL TIP DOWN CURB ELEVATION
NOT TO SCALE



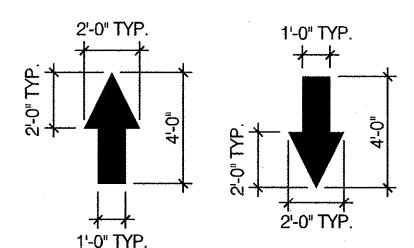
BOLLARD DETAIL
NOT TO SCALE



NOTES:
1. TWELVE INCH (12\") LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6 INCH LINES) WILL BE ACCEPTED.
2. LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.
3. ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.

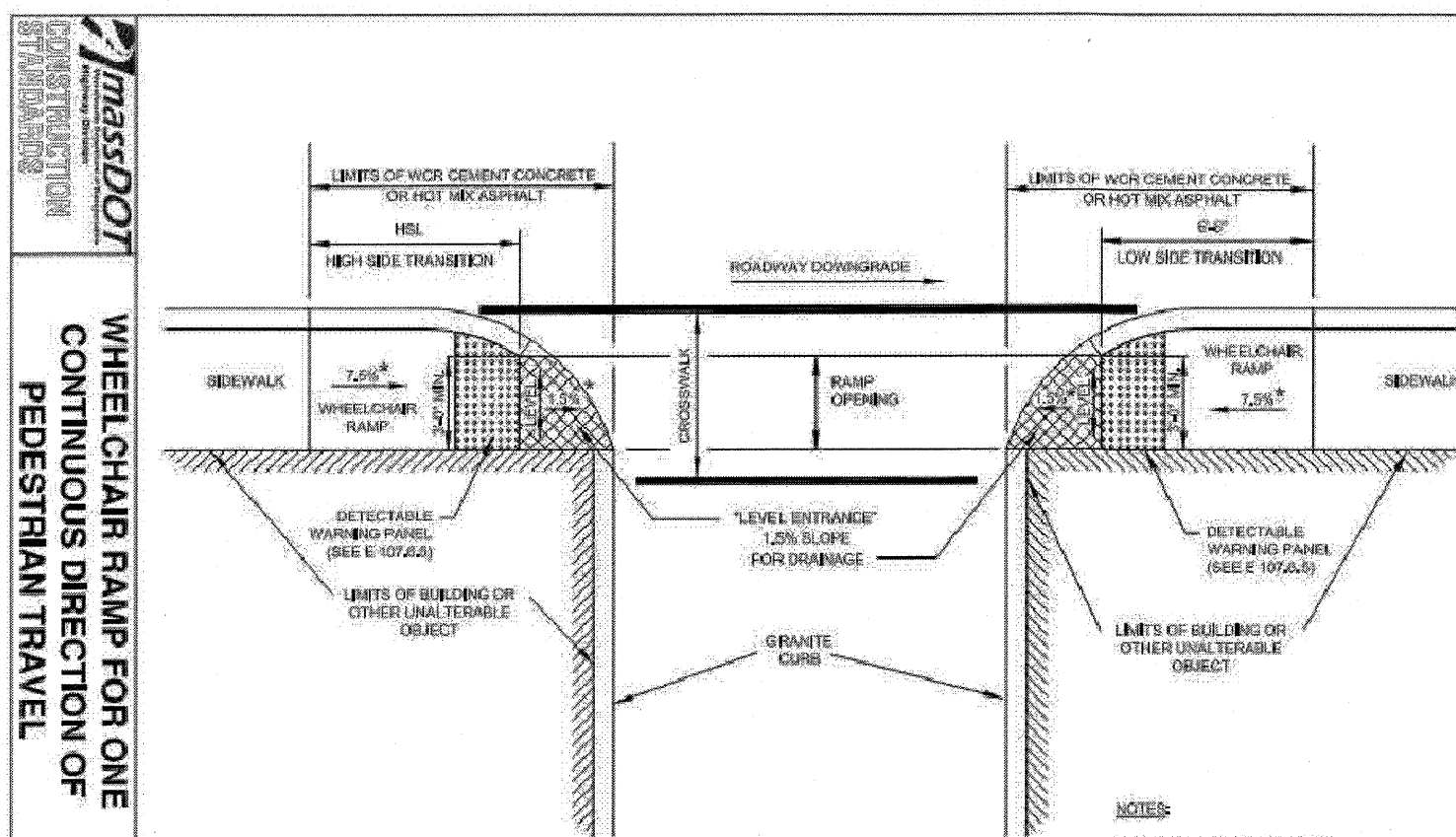
CROSSWALK

NOT TO SCALE



ALL PAVEMENT MARKINGS TO BE WHITE PAVEMENT PAINT, UNLESS STATED OTHERWISE.

ON-SITE PAVEMENT MARKING DETAILS
NOT TO SCALE



MASSDOT
CONSTRUCTION
PROGRAM
WHEELCHAIR RAMP FOR ONE
CONTINUOUS DIRECTION OF
PEDESTRIAN TRAVEL
DATE OF ISSUE: 2/17
REVISION: 2/17
E 107.6.0

PREPARED FOR
CAFUA MANAGEMENT
COMPANY, LLC
280 MERRIMACK STREET
METHUEN, MA 01844

ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS



REVISIONS

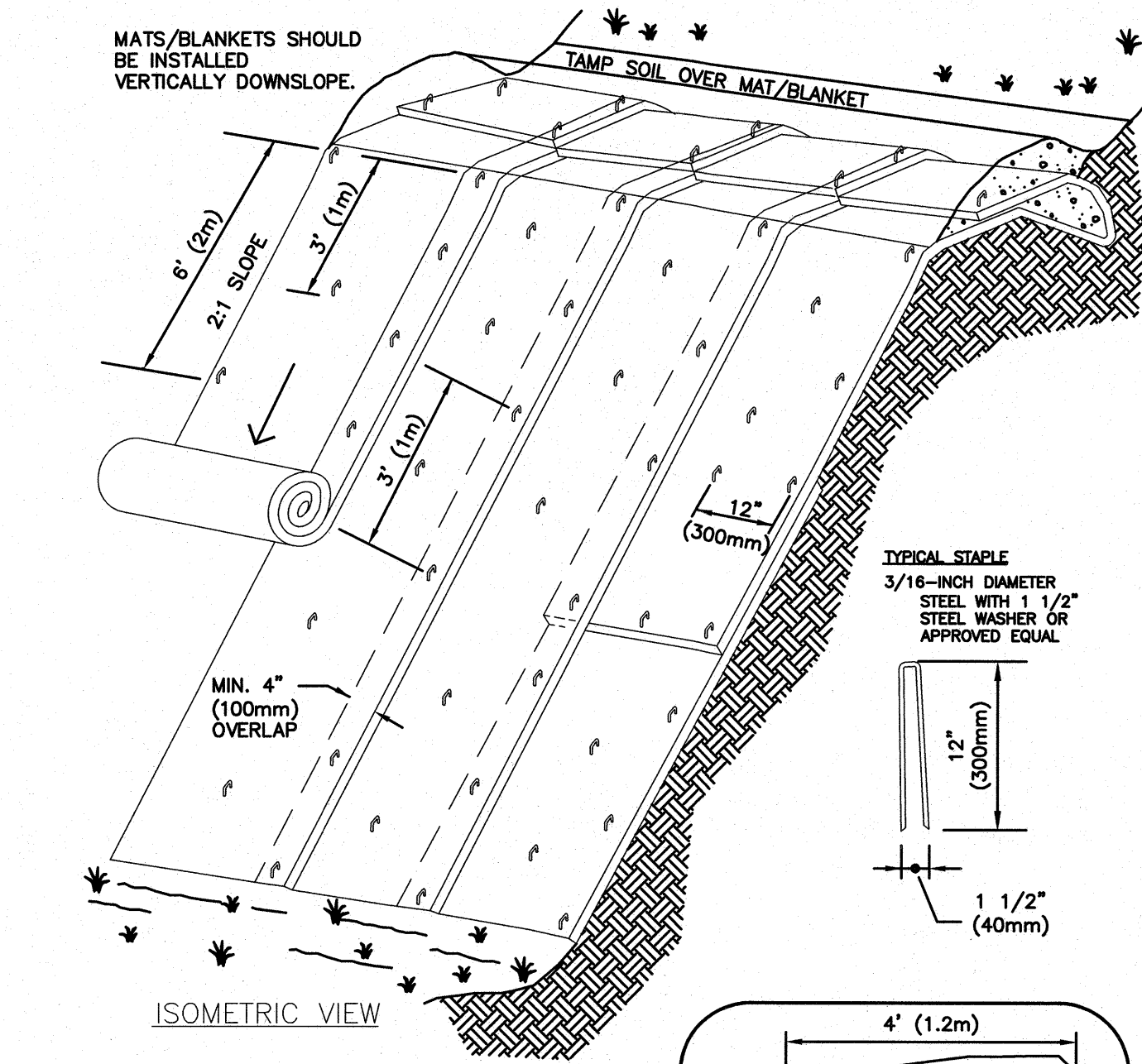
NO.	REVISION	DATE
2	REVISE CURB RAMP DETAIL	7/2/24
1	REVISE CURB RAMP DETAIL	5/30/24

MARCH 6, 2024

DRAWN/DESIGN BY: SJB/CMT
CHECKED BY: CMT

DETAIL SHEET

SCALE: NOT TO SCALE
PROJECT NO. NEX-2021347



- NOTES:**
- BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH, BACKFILL AND COMPACT TRENCH AFTER STAPLING.
 - ROLL THE BLANKET DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW. LAY BLANKETS LOOSELY & MAINTAIN DIRECT CONTACT WITH SOIL - DO NOT STRETCH.
 - THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
 - WHEN BLANKETS MUST BE SPIZED DOWN THE SLOPE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
 - BLANKETS SHALL BE STAPLED ENOUGH TO ANCHOR BLANKET WHILE MAINTAINING CONTACT WITH SOIL. STAPLES SHALL BE PLACED DOWN THE CENTER & STAGGERED WITH THE STAPLES PLACED ALONG EDGES. PATTERN & AMOUNT OF STAPLES VARIES BY MANUFACTURER, SO FOLLOW MANUFACTURER'S RECOMMENDATIONS.
 - BLANKET SHALL BE NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL.
- MAINTENANCE & MATS:**
- BLANKETS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION & AFTER A RAINFALL IN EXCESS OF 1/2" IN A 24-HOUR PERIOD.
 - FAILURES SHALL BE REPAIRED IMMEDIATELY. IF ANY OF THE FOLLOWING OCCUR: SLOPE WASHOUT, MAT DISPLACEMENT, DAMAGE TO MAT, THE AFFECTED AREA SHALL BE REPAIRED & RESEEDED & MAT SHALL BE REPLACED OR RE-INSTALLED.

BLANKET SLOPE PROTECTION FOR EROSION CONTROL

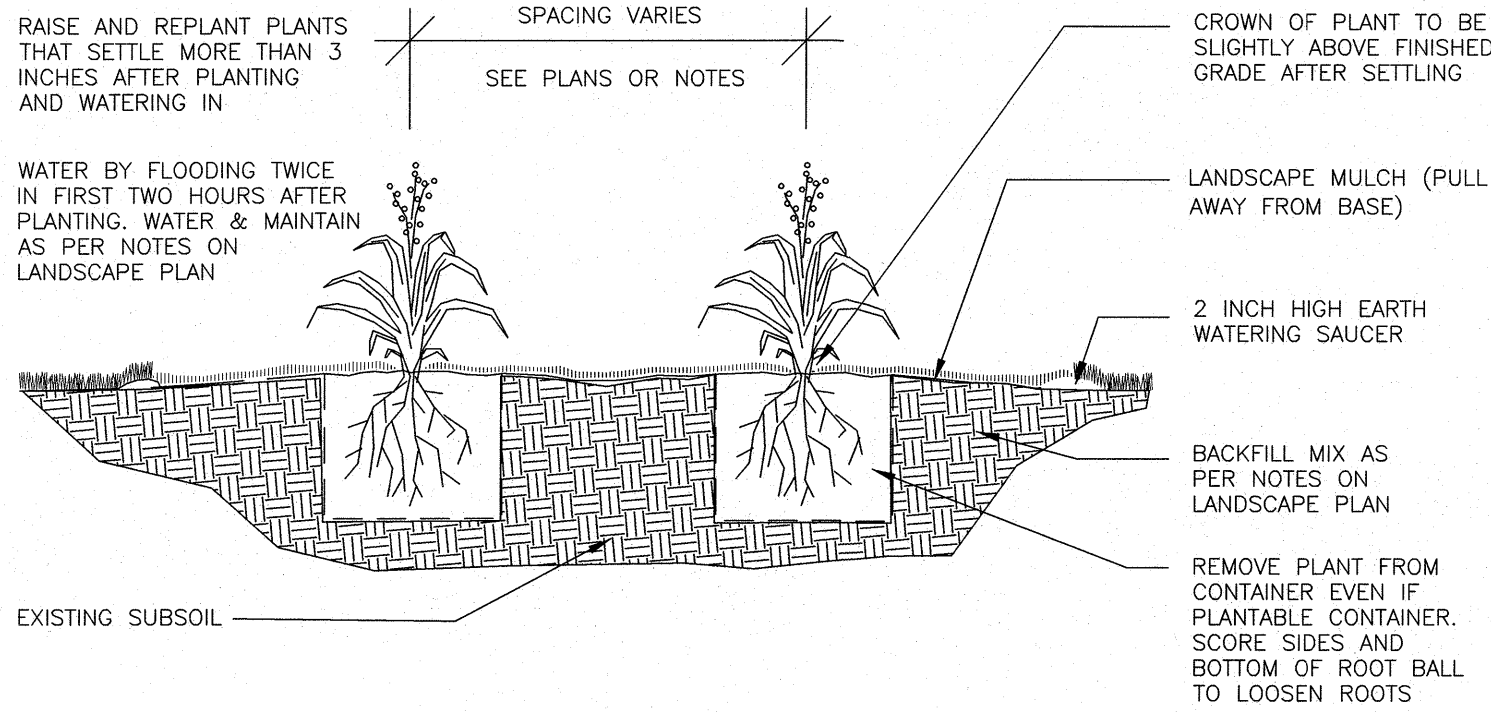
NOT TO SCALE

PERENNIAL PLANTING NOTES:

EXCAVATE TO REQUIRED DEPTH AND BACKFILL WITH PLANTING MIX

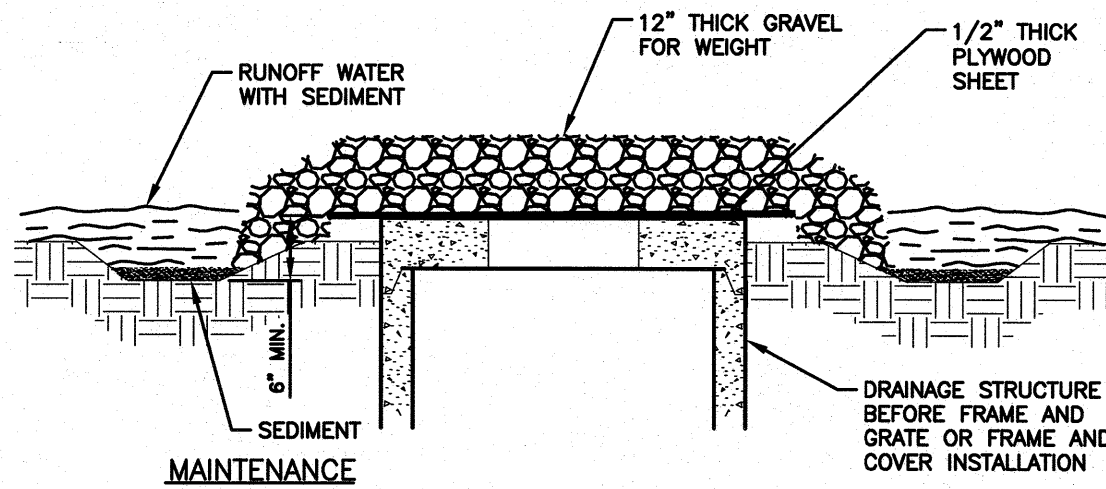
RAISE AND REPLANT PLANTS THAT SETTLE MORE THAN 3 INCHES AFTER PLANTING AND WATERING IN

WATER BY FLOODING TWICE IN FIRST TWO HOURS AFTER PLANTING. WATER & MAINTAIN AS PER NOTES ON LANDSCAPE PLAN



TYPICAL PERENNIAL PLANTING

NOT TO SCALE

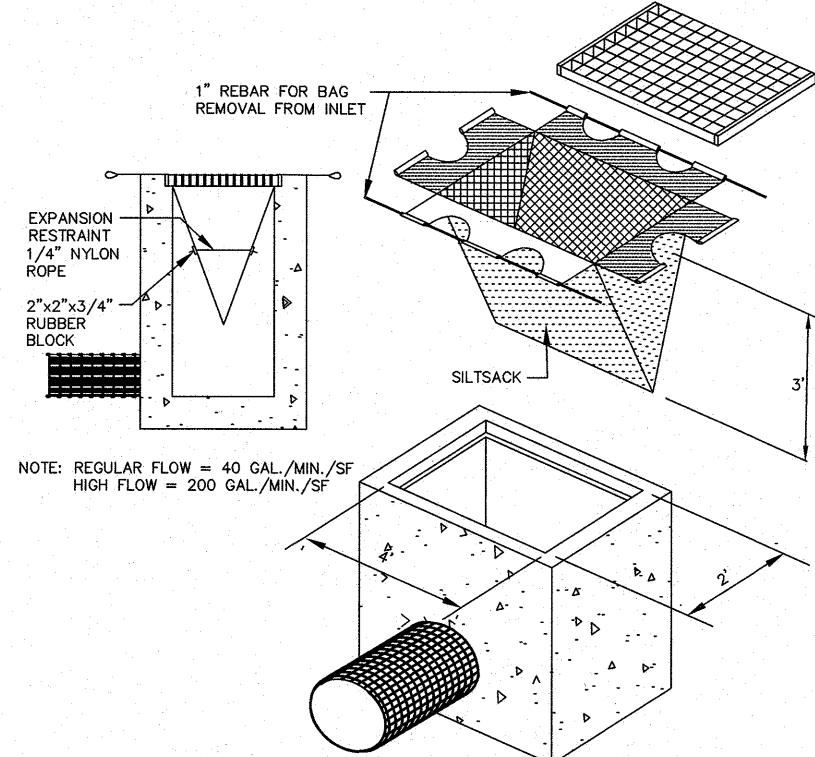


MAINTENANCE

- ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY.
- SEDIMENT SHOULD BE REMOVED FROM THE TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF OF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURAL OR VEGETATIVE MEANS.
- THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.
- ALL STRUCTURES WITH INLET PROTECTION MUST BE CLEANED AT THE END OF CONSTRUCTION AND WHEN THE SITE IS FULLY STABILIZED.

INLET PROTECTION DETAIL

NOT TO SCALE

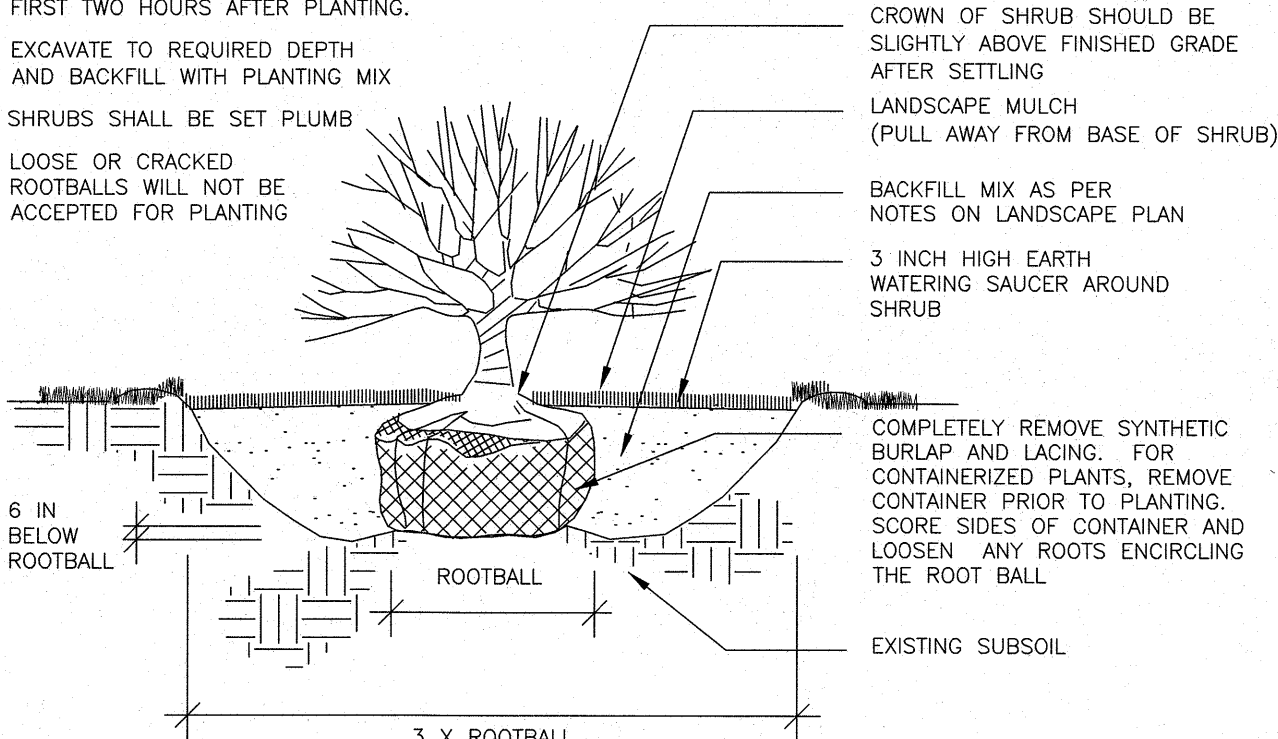


SILTSACK DETAIL-ON OR OFF SITE

NOT TO SCALE

SHRUB PLANTING NOTES:

- WATER BY FLOODING TWICE IN FIRST TWO HOURS AFTER PLANTING.
- EXCAVATE TO REQUIRED DEPTH AND BACKFILL WITH PLANTING MIX
- SHRUBS SHALL BE SET PLUMB
- LOOSE OR CRACKED ROOTBALLS WILL NOT BE ACCEPTED FOR PLANTING
- CROWN OF SHRUB SHOULD BE SLIGHTLY ABOVE FINISHED GRADE AFTER SETTLING
- LANDSCAPE MULCH (PULL AWAY FROM BASE OF SHRUB)
- BACKFILL MIX AS PER NOTES ON LANDSCAPE PLAN
- 3 INCH HIGH EARTH WATERING SAUCER AROUND SHRUB

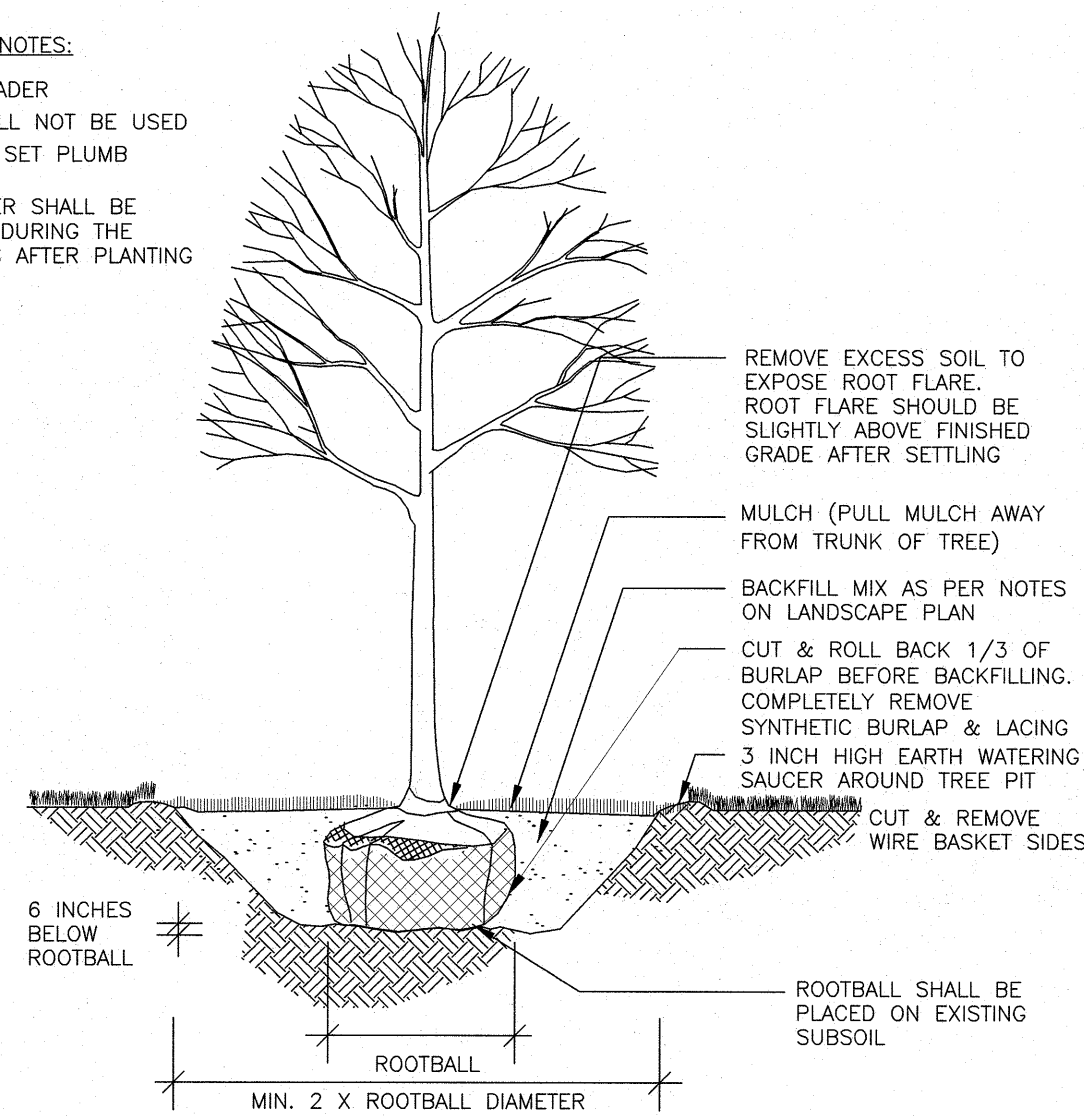


TYPICAL SHRUB PLANTING

NOT TO SCALE

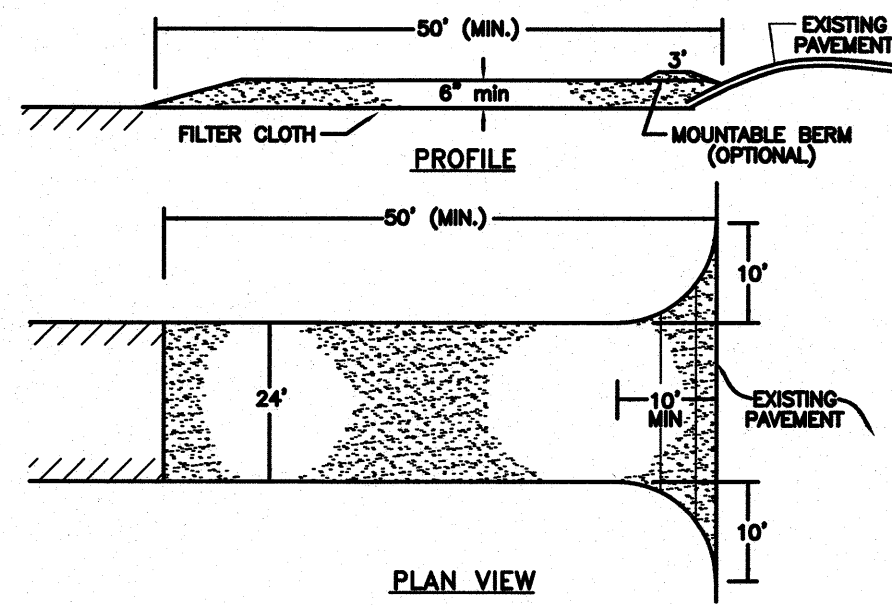
TREE PLANTING NOTES:

- DO NOT CUT LEADER
- TREE WRAP SHALL NOT BE USED
- TREE SHALL BE SET PLUMB
- WATERING SAUCER SHALL BE FLOODED TWICE DURING THE FIRST 24 HOURS AFTER PLANTING
- REMOVE EXCESS SOIL TO EXPOSE ROOT FLARE. ROOT FLARE SHOULD BE SLIGHTLY ABOVE FINISHED GRADE AFTER SETTLING
- MULCH (PULL MULCH AWAY FROM TRUNK OF TREE)
- BACKFILL MIX AS PER NOTES ON LANDSCAPE PLAN
- CUT & ROLL BACK 1/3 OF BURLAP BEFORE BACKFILLING. COMPLETELY REMOVE SYNTHETIC BURLAP & LACING
- 3 INCH HIGH EARTH WATERING SAUCER AROUND TREE PIT
- CUT & REMOVE WIRE BASKET SIDES
- ROOTBALL SHALL BE PLACED ON EXISTING SUBSOIL



TYPICAL TREE PLANTING

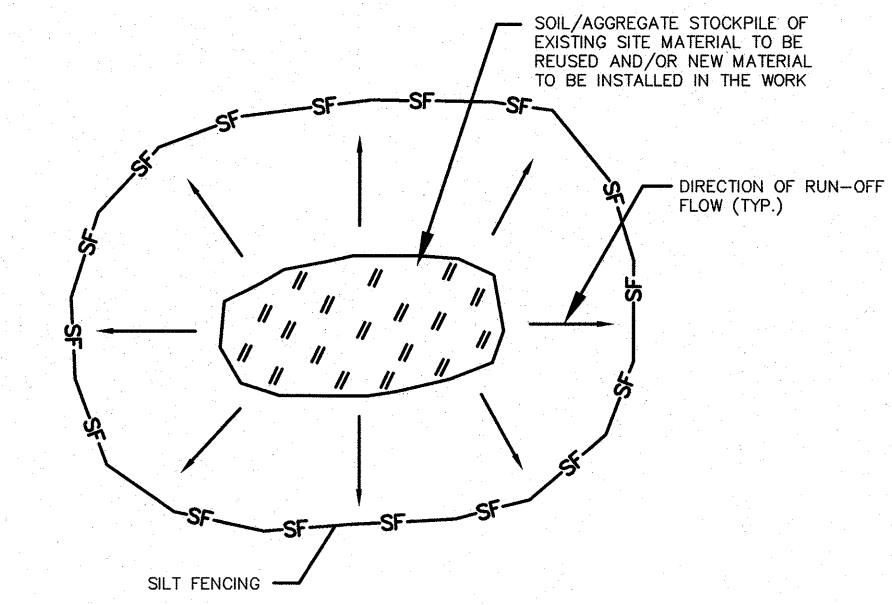
NOT TO SCALE



- STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
- THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM WOULD APPLY.
- THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
- THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
- GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 2:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
- WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

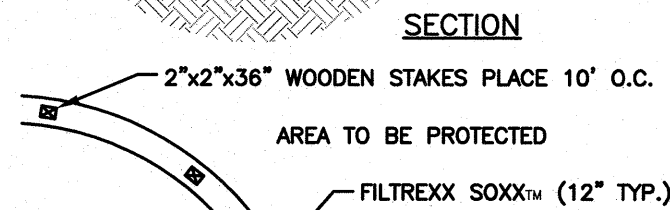
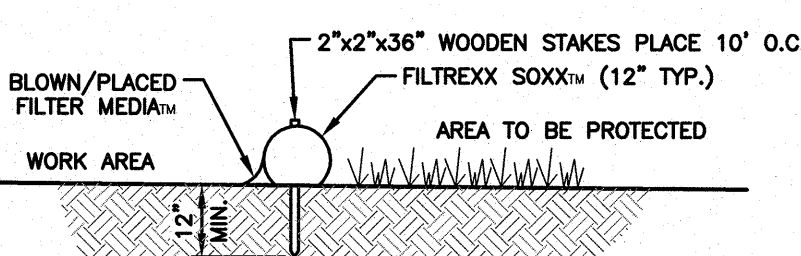
NOT TO SCALE



- NOTES:**
- ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
 - SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
 - RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
 - STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

MATERIALS STOCKPILE DETAIL

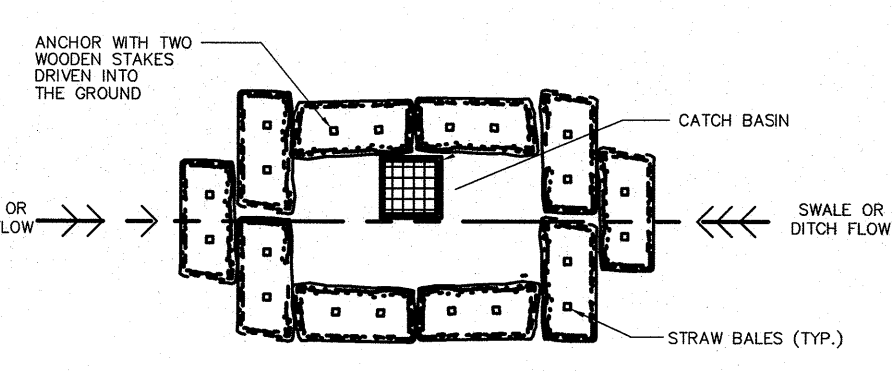
NOT TO SCALE



- NOTES:**
- ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS
 - FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
 - COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
 - IN THE EVENT THAT STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

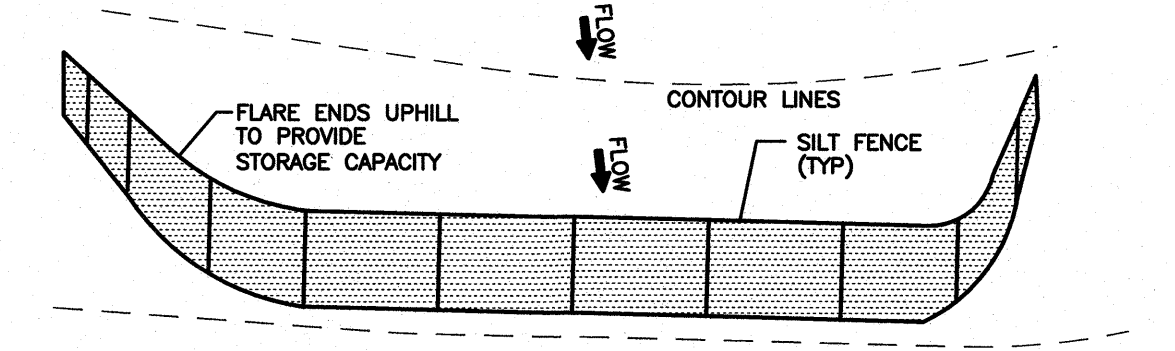
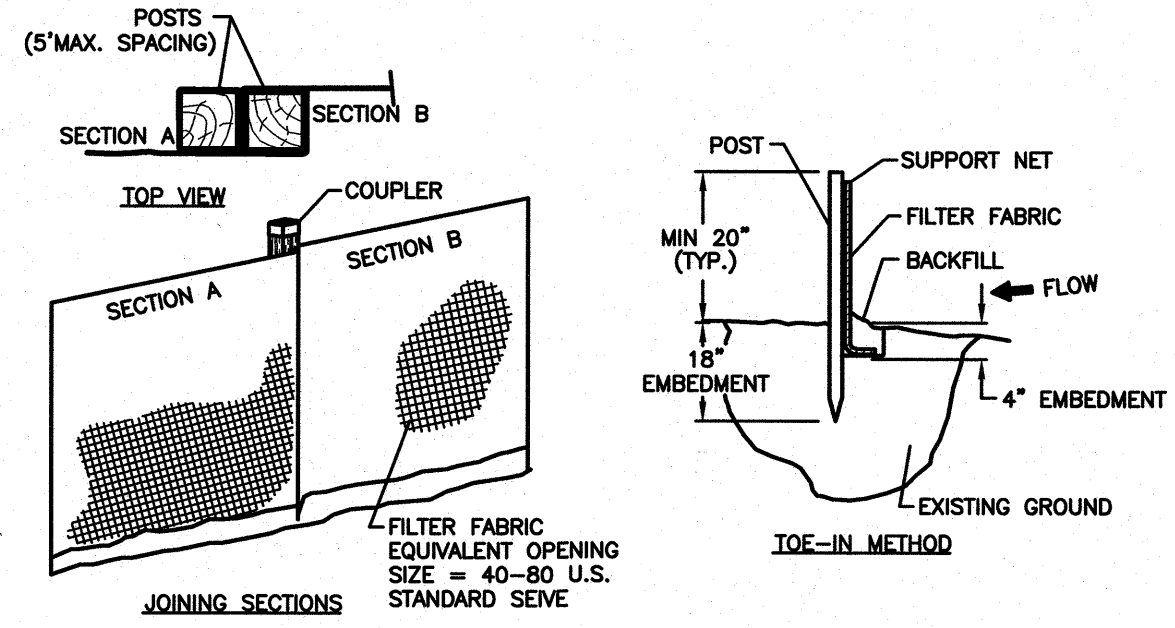
COMPOST FILTER SOCK

NOT TO SCALE



LOW POINT SEDIMENTATION CONTROL BARRIER

NOT TO SCALE



- CRITERIA FOR SILT FENCES:**
- SILT FENCE FILTER CLOTH: THE FABRIC FOR THE SILT FENCE SHALL MEET THE FOLLOWING SPECIFICATIONS:

FABRIC PROPERTIES:	MINIMUM ACCEPTABLE VALUES	TEST METHOD
GRAB TENSILE STRENGTH (lbs)	90	ASTM D1682
ELONGATION AT FAILURE (%)	50	ASTM D1682
MULLER BURST STRENGTH (PSI)	100	ASTM D3786
PUNCTURE STRENGTH (lbs)	40	ASTM D751
EQUIVALENT OPENING SIZE	40-80	US STD SIEVE

- FENCE POSTS (FOR FABRICATED UNITS) - THE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG. WOOD POSTS WILL BE OF SOUND QUALITY HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES. STEEL POSTS WILL BE STANDARD T OR U SECTIONS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT. MAXIMUM SPACING SHALL BE 6 LINEAR FEET.
- WIRE FENCE (FOR FABRICATED UNITS) - WIRE FENCING SHALL BE A MINIMUM 14.5 GAUGE WITH A MAXIMUM 6 INCH MESH OPENING.
- PREFABRICATED UNITS - PREFABRICATED UNITS MAY BE USED IN LIEU OF THE ABOVE METHOD PROVIDING: (1) THE FILTER CLOTH AND FENCE POSTS MEET THE ABOVE CRITERIA; AND (2) THE UNIT IS INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

- MAINTENANCE:**
- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
 - IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
 - SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 - SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

- CONSTRUCTION SPECIFICATIONS:**
- THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
 - THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND (4" DEEP & 4" WIDE) AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
 - WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION AND BOTTOM.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES (24" IS PREFERRED), FOLDED, AND STAPLED.
 - POSTS TO BE SPACED AT A MAXIMUM OF 6' ON CENTER.

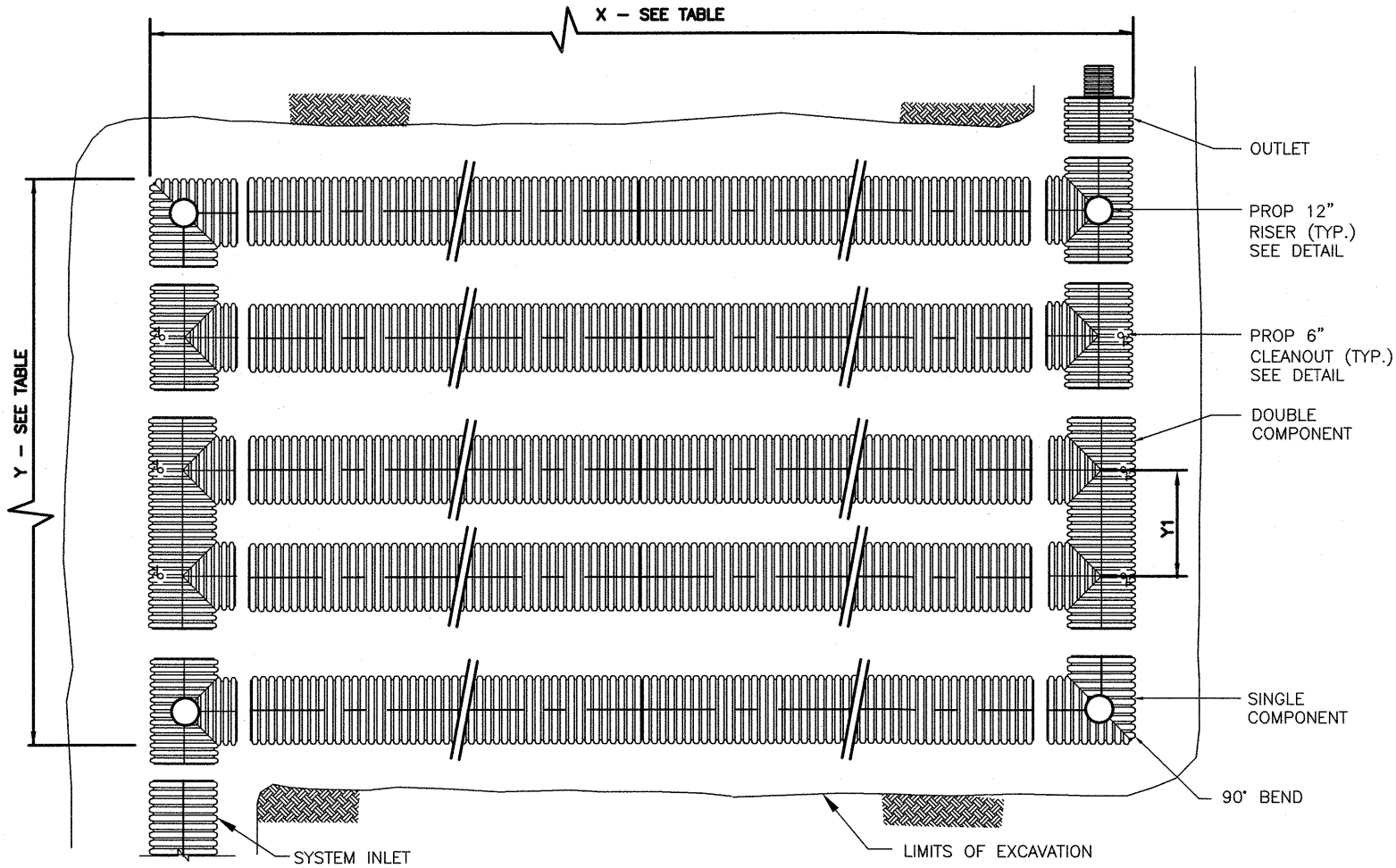
SILT FENCE DETAIL

NOT TO SCALE

REVISIONS		
NO.	REVISION	DATE
MARCH 6, 2024		
DRAWN/DESIGN BY	CHECKED BY	
SJB/CMT	CMT	

DETENTION SYSTEM NOTES:

- ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE, DUAL WALL, SMOOTH INTERIOR AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN.
- CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER. SUBSTITUTIONS AND SHOP DRAWINGS SHOULD BE APPROVED BY THE ENGINEER.
- PARTS SPECIFICATIONS SHOWN ARE AS PROVIDED BY ADS, INC., OR APPROVED EQUAL. ANY CHANGES TO THESE SPECIFICATIONS SHOULD BE APPROVED BY DESIGN ENGINEER FOR PERFORMANCE.



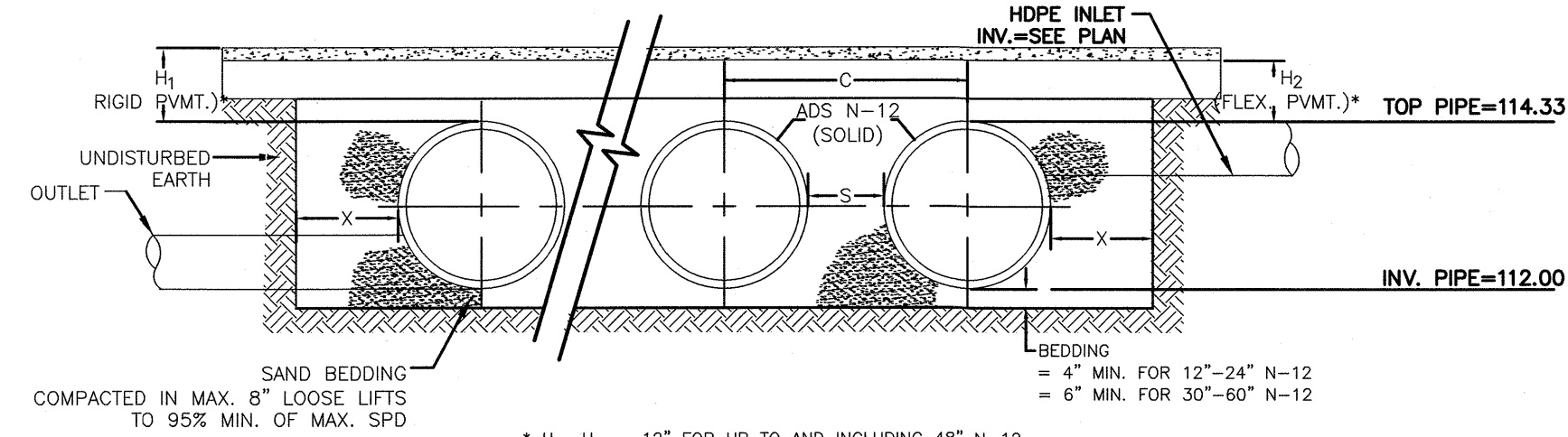
NOTE: FOR ADDITIONAL DETAILS, SEE ADS STD-702 & STD-703.

UNDERGROUND STORMWATER DETENTION SYSTEM TABLE						
UG DETENTION SYSTEM	LENGTH (X)	WIDTH (Y)	*SPACING (Y1) (O.C. TYP.)	PIPE SIZE (INCHES) SOLID	INV. PIPE ELEV. (A)	# PIPE ROWS
DET-1	54.7'	23.0'	63"	24"SOLID(ST)	112.10	7

* SEE TYPICAL CROSS SECTIONS BELOW
ST = SOIL TIGHT JOINTS

TYPICAL UNDERGROUND DETENTION SYSTEM LAYOUT

NOT TO SCALE

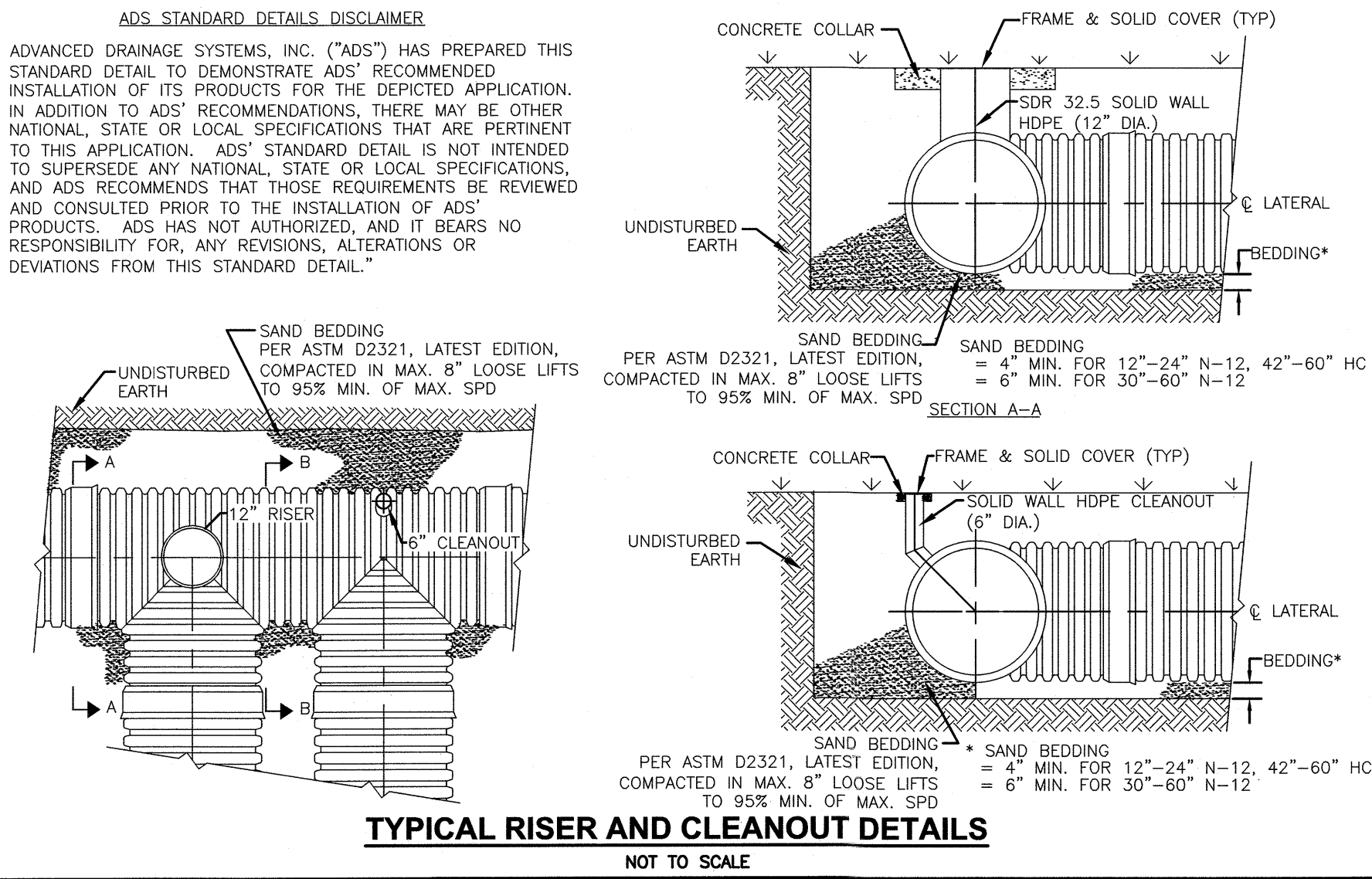


NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING "S"	TYPICAL SPACING "C"	TYPICAL SIDE WALL "X"
12"	14.5"	11"	25.4"	8"
15"	18"	12"	28.9"	8"
18"	21"	13"	33.9"	9"
24"	28"	13.4"	41.4"	10"
30"	36"	17.1"	53.1"	18"
36"	42"	22"	63"	18"
42"	48"	24"	71.9"	18"

- NOTES
- ALL DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
 - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 - SEE GRADING & DRAINAGE PLAN FOR INVERT DATA.
 - EXISTING TOPSOIL, BRUSH, TREES, BOULDER, FILL AND DEBRIS TO BE REMOVED FOR 5' ALL AROUND UNDERGROUND DETENTION SYSTEM DOWN TO NATIVE MATERIAL. BACKFILL WITH STONE BEDDING MATERIAL (CLASS 1).

TYPICAL UNDERGROUND DETENTION SYSTEM CROSS SECTION

NOT TO SCALE

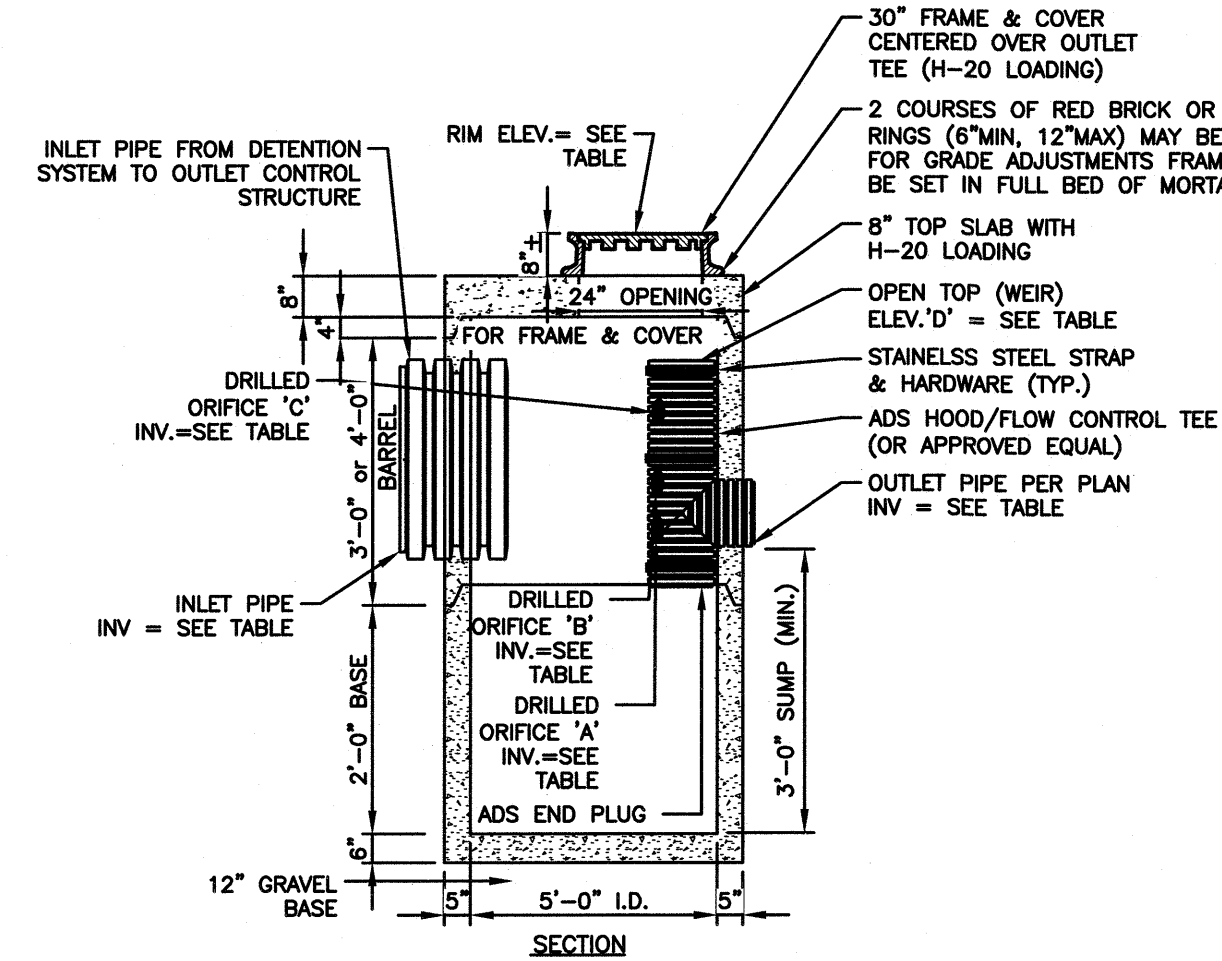


TYPICAL RISER AND CLEANOUT DETAILS

NOT TO SCALE

Classes of Embedment and Backfill Materials

ASTM D2321		ASTM D2487		ASTM Soil Groups			
Class	Description	Major Divisions	Notation	Description	(ASTM M145)	Visual Descriptions	
	Crushed rock, angular (fractured) face; 3/4-inch to 1 1/2 inches in size; 100% passing, 10-inch sieve: <= 15% passing #4 sieve, <=25% passing #10-inch sieve and <= 12% passing #200 sieve.	-	NA	Angular crushed stone or rock, crushed gravel, crushed shell or large rocks with little or no fines			



NOTES:

1. PRECAST CONCRETE MAN HOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.
3. REINFORCING: H-20 LOADING, 4 X 4/4 X 4 W.W.M. SLAB TOP -NO. 5'S @ 8" O.C.
4. SHUPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
6. LENGTH AND DIAMETER OF TEE VARIES WITH PIPE.

OUTLET CONTROL STRUCTURE TABLE							
OCS	RIM	ORIFICE	SIZE (IN.)	ELEV.	INV.IN (SIZE)	INV.IN (ELEV)	INV.OUT (SIZE) INV.OUT (ELEV)
#1	116.50	A	3" DIA. X 4	113.10	12"	113.04	12" 113.10
		B	4" DIA. X 2	113.60			
		C	-	-			
		D	12" DIA.	114.75			

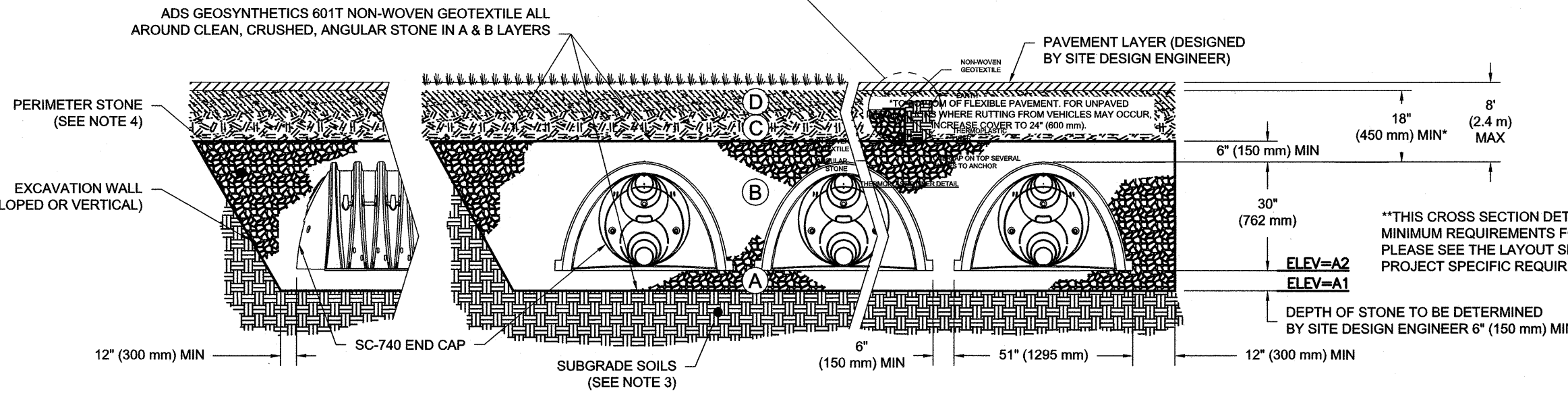
CONCRETE OUTLET CONTROL STRUCTURE (OCS)
NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN), DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

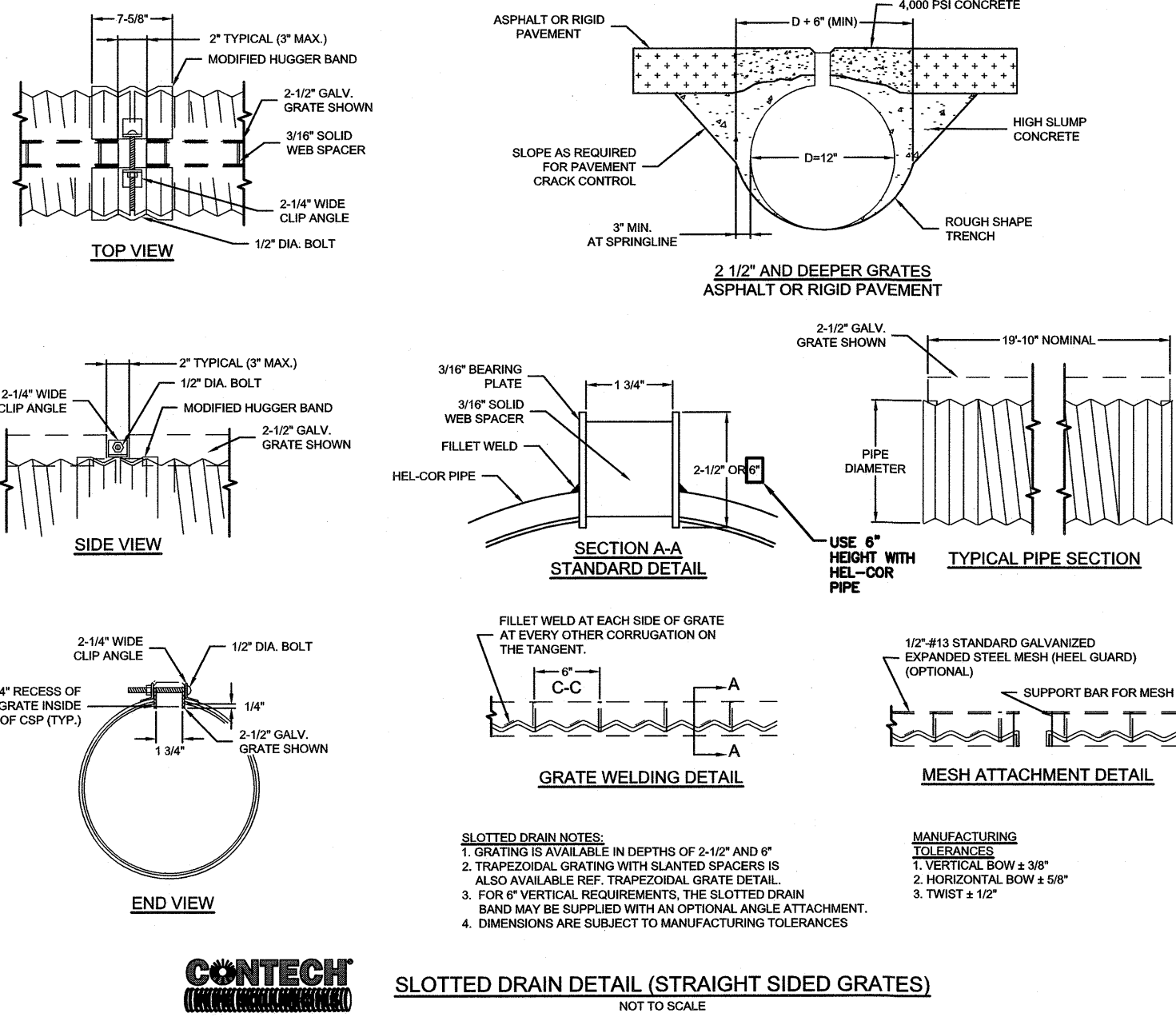
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND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



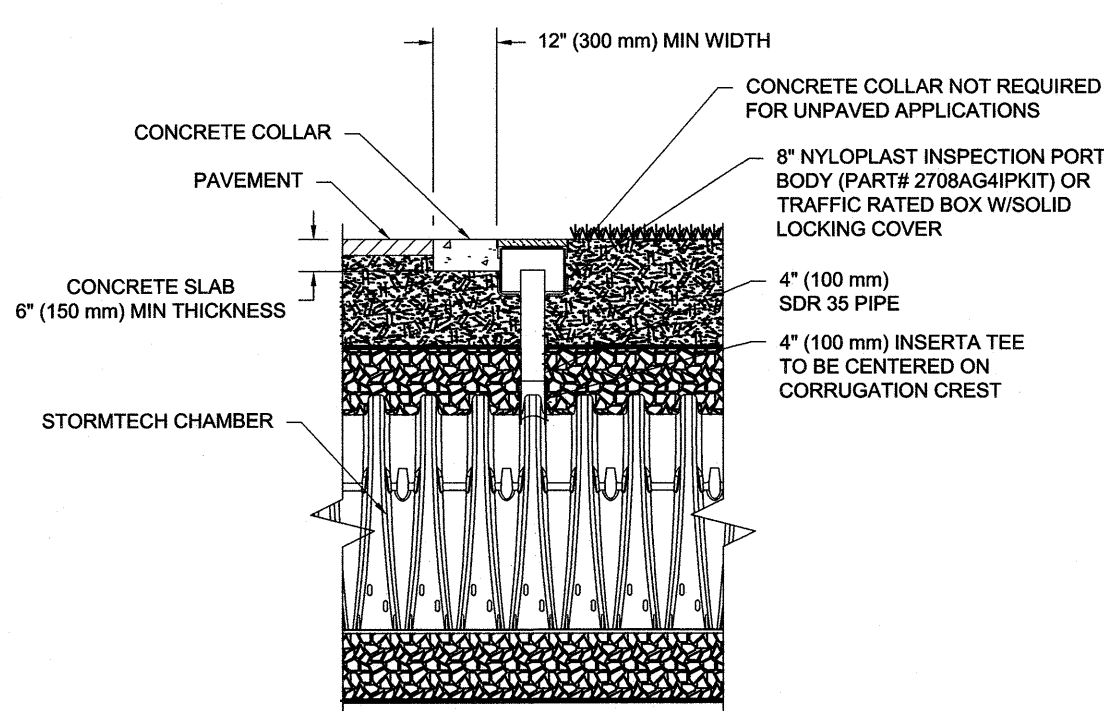
NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. 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.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT², AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SC-740 CROSS SECTION DETAIL



SC-740 ISOLATOR ROW PLUS DETAIL



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

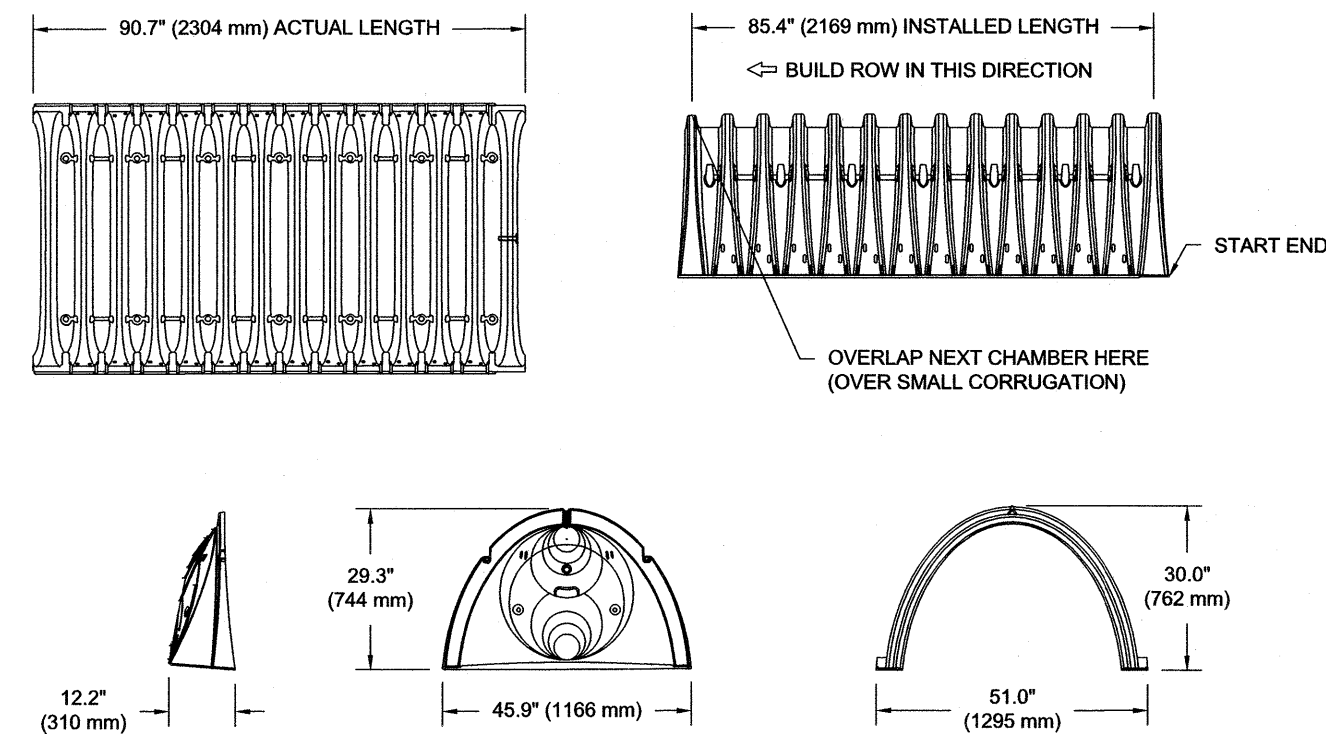
4\"/>

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
- A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
- A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
- i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
- ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE PUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

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



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4" (1.30 m)	(1295 mm X 762 mm X 2168 mm)
CHAMBER STORAGE	45.9 CUBIC FEET (1.30 m ³)	
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET (2.12 m ³)	
WEIGHT	75.0 lbs. (33.6 kg)	

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "C"

PART #	STUB	A	B	C
SC740EP001 / SC740EP06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EP008 / SC740EP06BPC	---	---	---	0.5" (13 mm)
SC740EP008T / SC740EP08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EP008B / SC740EP08BPC	---	---	---	0.6" (15 mm)
SC740EP101T / SC740EP10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.7" (18 mm)
SC740EP108 / SC740EP10BPC	---	---	---	---
SC740EP121T / SC740EP12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EP128 / SC740EP12BPC	---	---	---	1.2" (30 mm)
SC740EP151T / SC740EP15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EP158 / SC740EP15BPC	---	---	---	1.3" (33 mm)
SC740EP181T / SC740EP18TPC	---	---	5.0" (127 mm)	---
SC740EP188 / SC740EP18BPC	18" (450 mm)	19.7" (500 mm)	---	1.6" (41 mm)
SC740EP24B	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)
SC740EP24BR*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EP24B/SC740EP24BR 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 1-888-892-2894.

* FOR THE SC740EP24B/SC740EP24BR THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

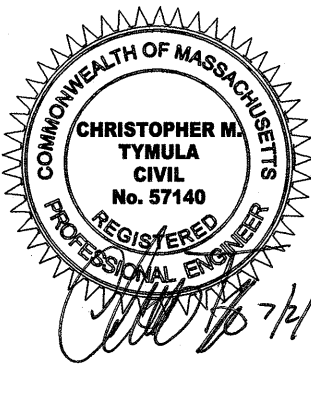
SC-740 TECHNICAL SPECIFICATIONS

UNDERGROUND INFILTRATION SYSTEM NOTES:

- 1) EXISTING TOPSOIL, BRUSH, TREES, BOULDERS, FILL, DEBRIS AND OTHER UNSUITABLES TO BE REMOVED FOR 5' ALL AROUND UNDERGROUND INFILTRATION SYSTEM DOWN TO NATIVE MATERIAL. BACKFILL WITH STONE BEDDING MATERIAL.
- 2) DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
- 3) AFTER EXCAVATION TO THE FINAL DESIGN ELEVATION, THE FLOOR SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
- 4) DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- 5) CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER. SUBSTITUTIONS AND SHOP DRAWINGS SHOULD BE APPROVED BY THE ENGINEER.
- 6) PARTS SPECIFICATIONS SHOWN ARE AS PROVIDED BY ADS INC., OR APPROVED EQUAL. ANY CHANGES TO THESE SPECIFICATIONS SHOULD BE APPROVED BY DESIGN ENGINEER FOR PERFORMANCE.

CONSTRUCTION NOTES:

1. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
2. AFTER THE INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
3. DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
4. STORMTECH CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH CONSTRUCTION GUIDE".
5. THE USE OF EQUIPMENT OVER CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIERED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH CONSTRUCTION GUIDE".
6. WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH CONSTRUCTION GUIDE".
7. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
8. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
9. CONTACT STORMTECH AT 1-888-892-2894 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



REVISIONS

NO.	REVISION	DATE
1	ADD SLOTTED DRAIN DETAIL	7/2/24

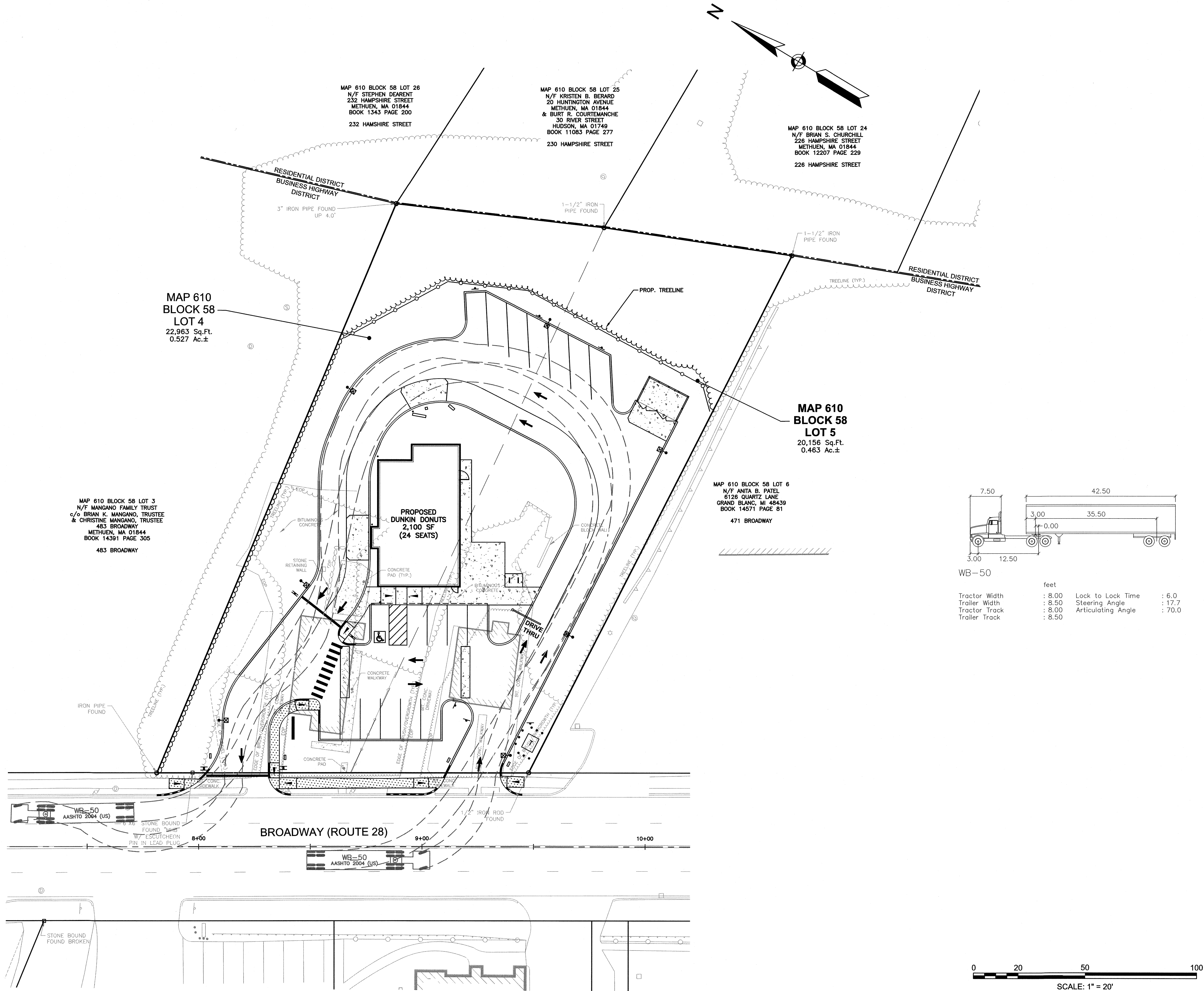
MARCH 6, 2024

DRAWN/DESIGN BY	CHECKED BY
SJB/CMT	CMT

DETAIL SHEET

SCALE:
NOT TO SCALE
PROJECT NO.
NEX-2021347

F:\Projects\NEX-2021347 - Cafua Management (Old 351314)\CAD Files\21347_SP.dwg TT 7/02/24 1:37pm abonfanti



GPI Engineering
Design
Planning
Construction Management
603.883.0720
Greenman-Pedersen, Inc.
44 Stiles Road, Suite One
Salem, NH 03079
GPI.NET.COM

PREPARED FOR
CAFUA MANAGEMENT
COMPANY, LLC
280 MERRIMACK STREET
METHUEN, MA 01844

ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS

7/2/24

REVISIONS		
NO.	REVISION	DATE
2	MISC. REVISIONS	7/2/24
1	MISC. REVISIONS	5/30/24

MARCH 6, 2024
DRAWN/DESIGN BY: SJB/CMT
CHECKED BY: CMT

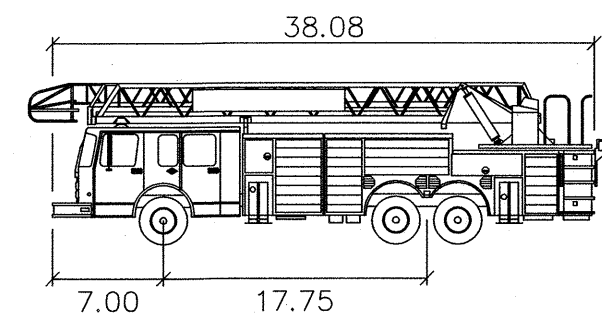
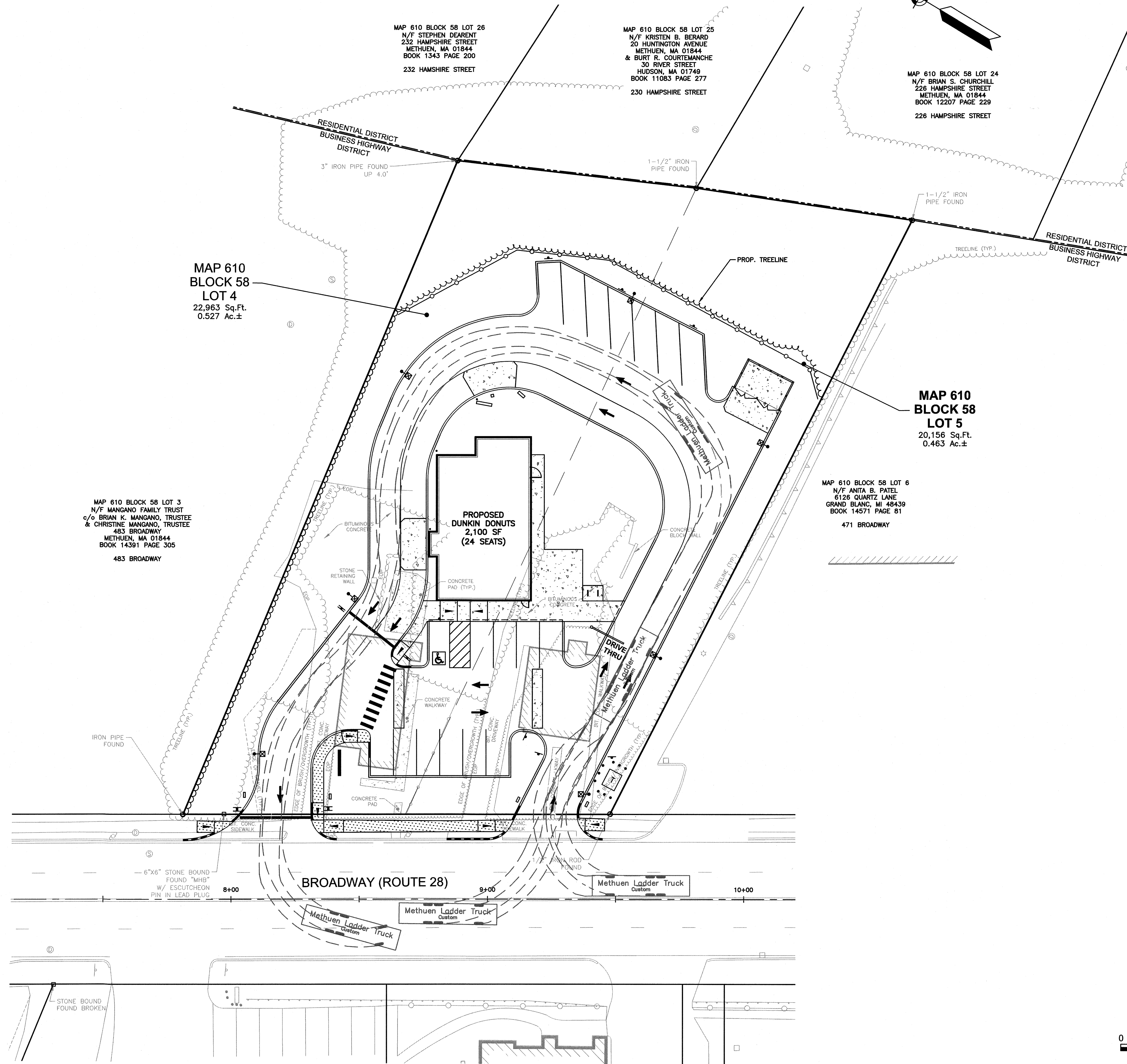
TRUCK TURN
PLAN
(WB-50)

SCALE: 1"=20'

PROJECT NO.
NEX-2021347

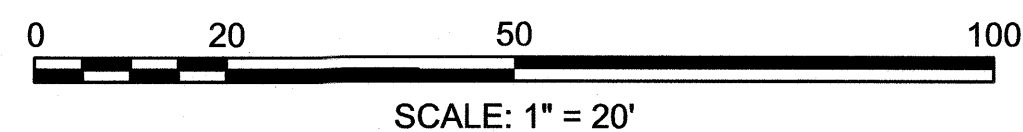
1 OF 1

F:\Projects\NEX-2021347 - Methuen, MA - Cafua Management (Old 351314)\CAD Files\21347_SP.dwg TT (FIRE) 7/02/24 1:37pm sbontanti



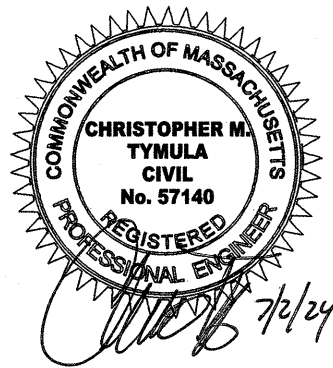
Methuen Ladder Truck

Width	: 8.00
Track	: 7.83
Lock to Lock Time	: 6.0
Steering Angle	: 33.7



PREPARED FOR
CAFUA MANAGEMENT
COMPANY, LLC
280 MERRIMACK STREET
METHUEN, MA 01844

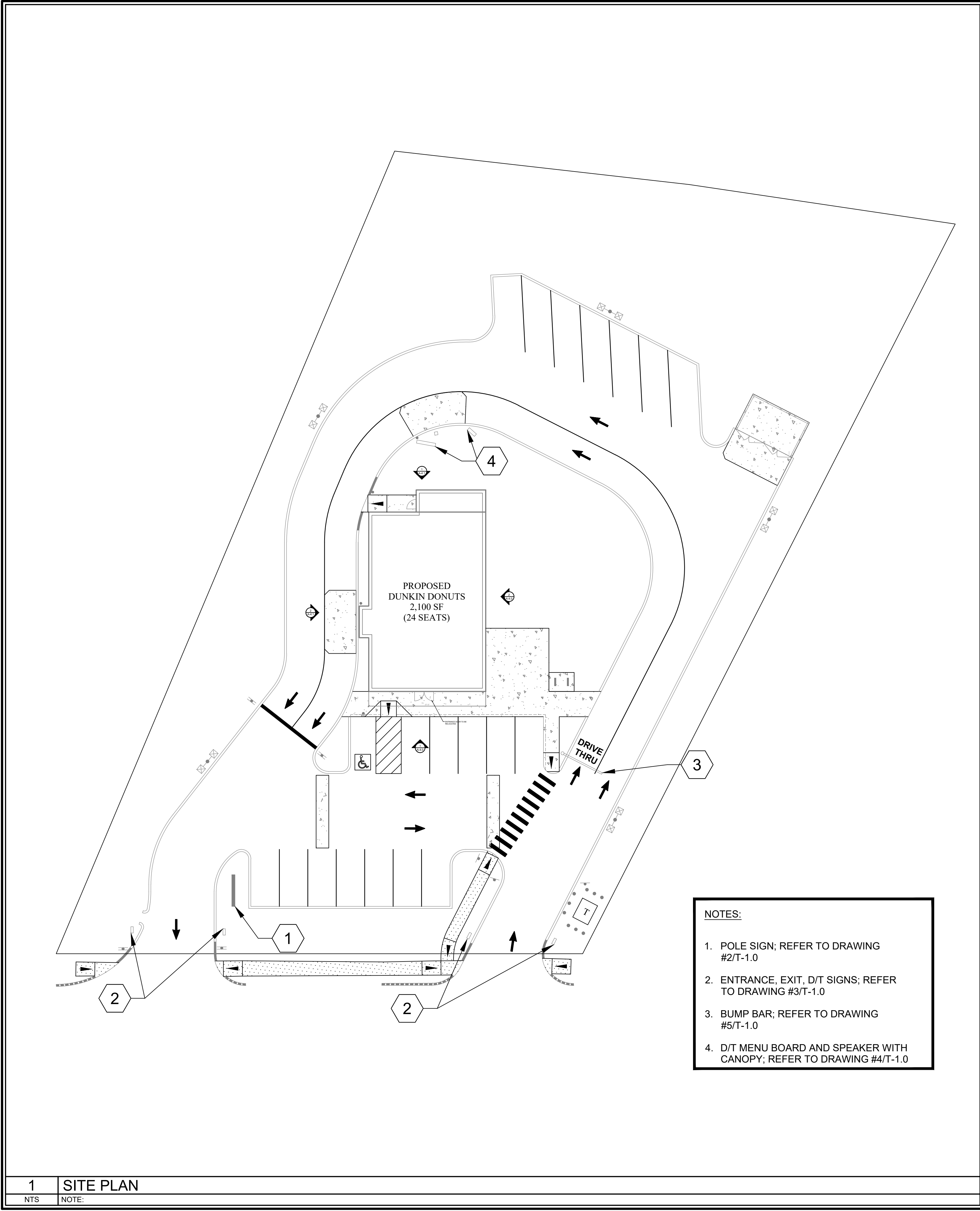
ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS



REVISIONS		
1	MISC. REVISIONS	7/2/24
NO.	REVISION	DATE
MAY 30, 2024		
DRAWN/DESIGN BY		CHECKED BY
SJB/CMT		CMT

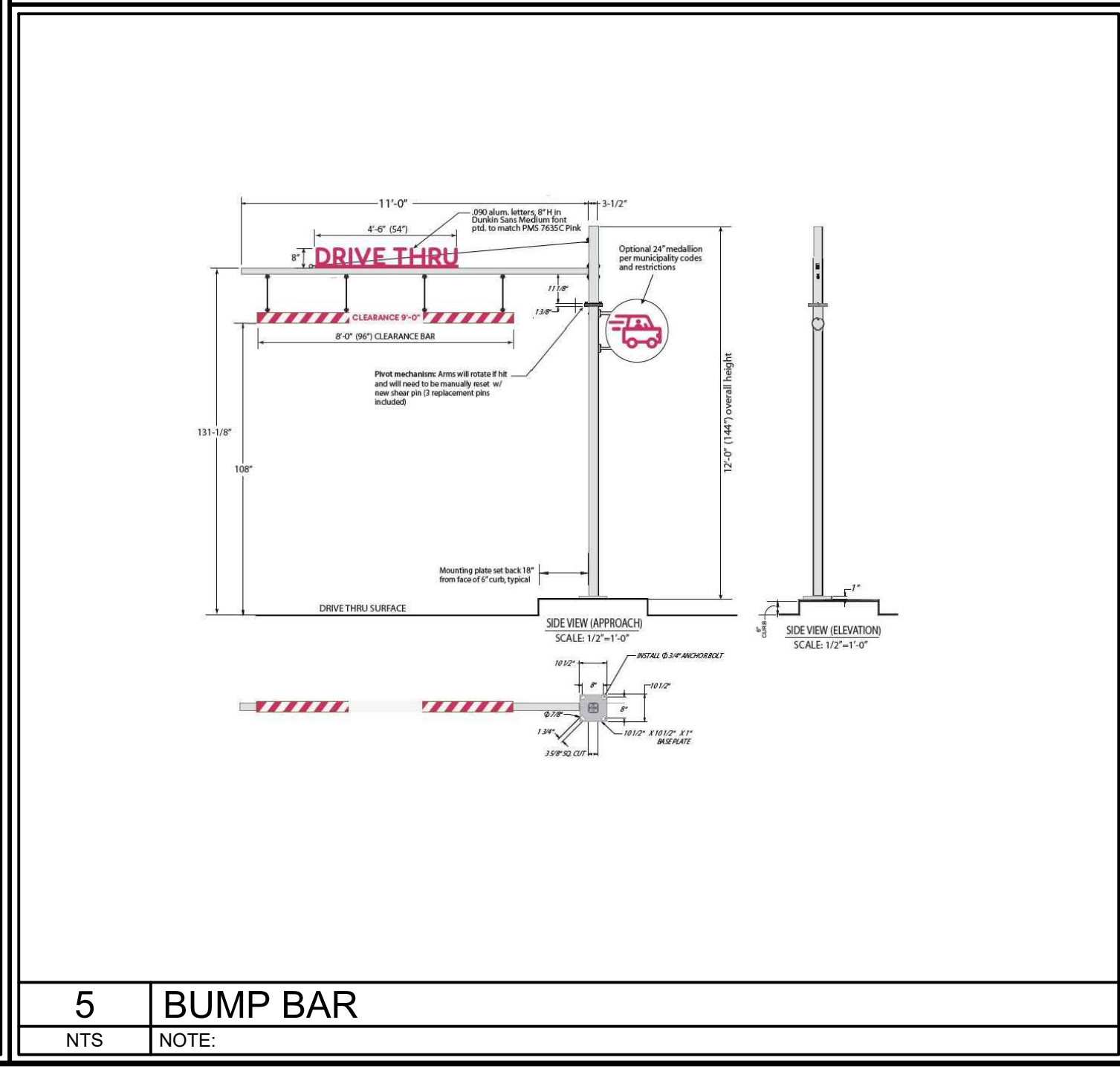
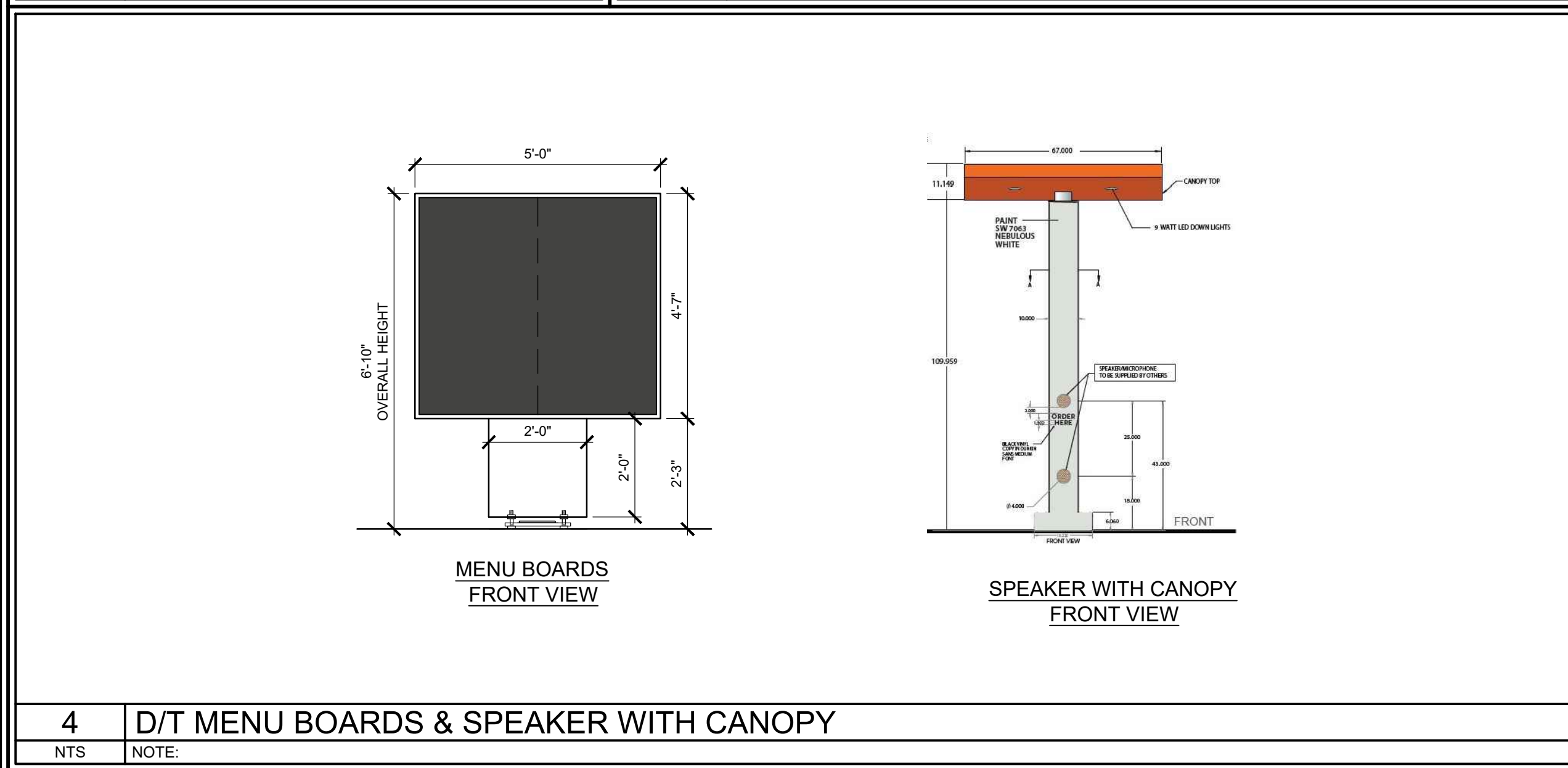
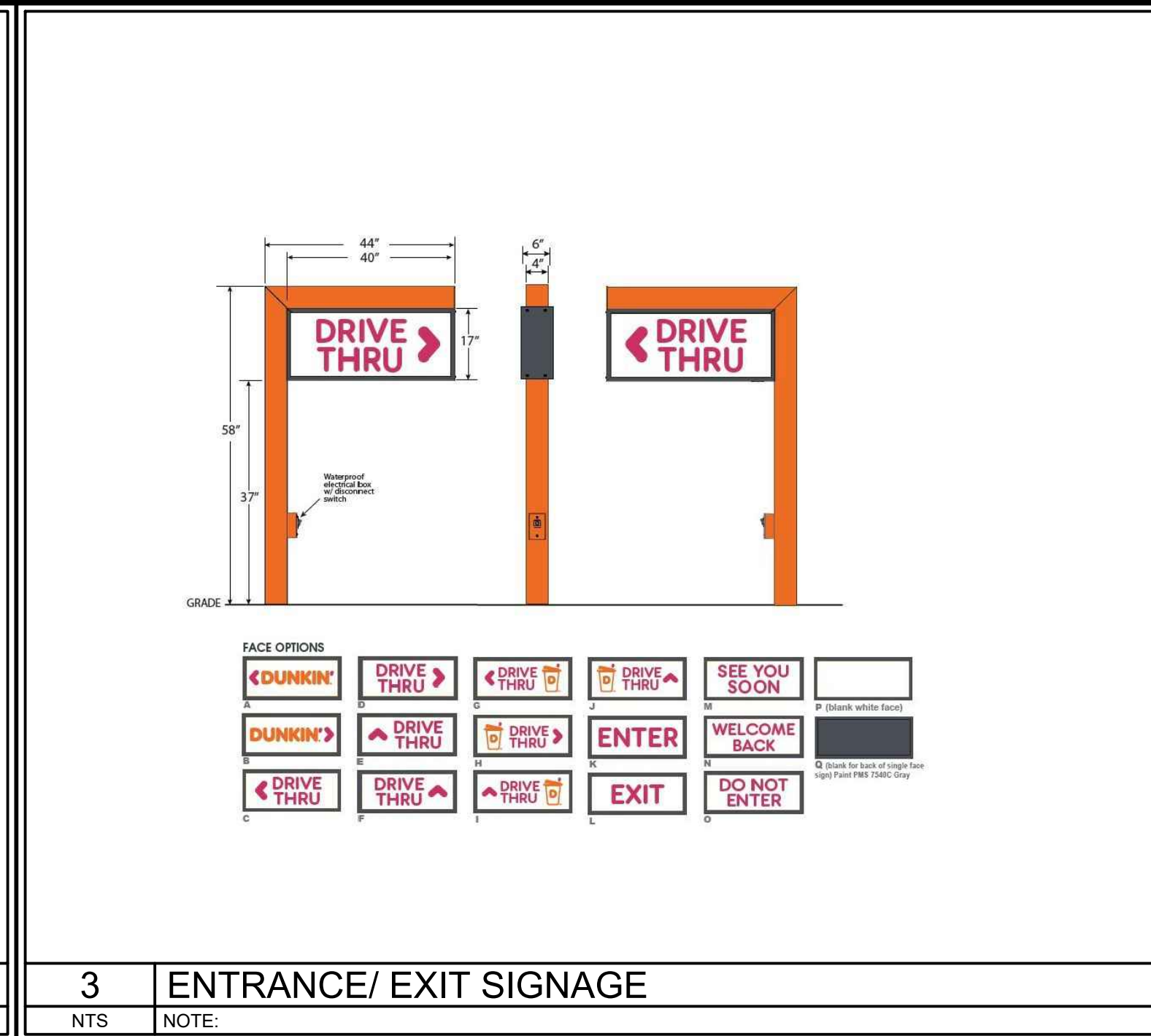
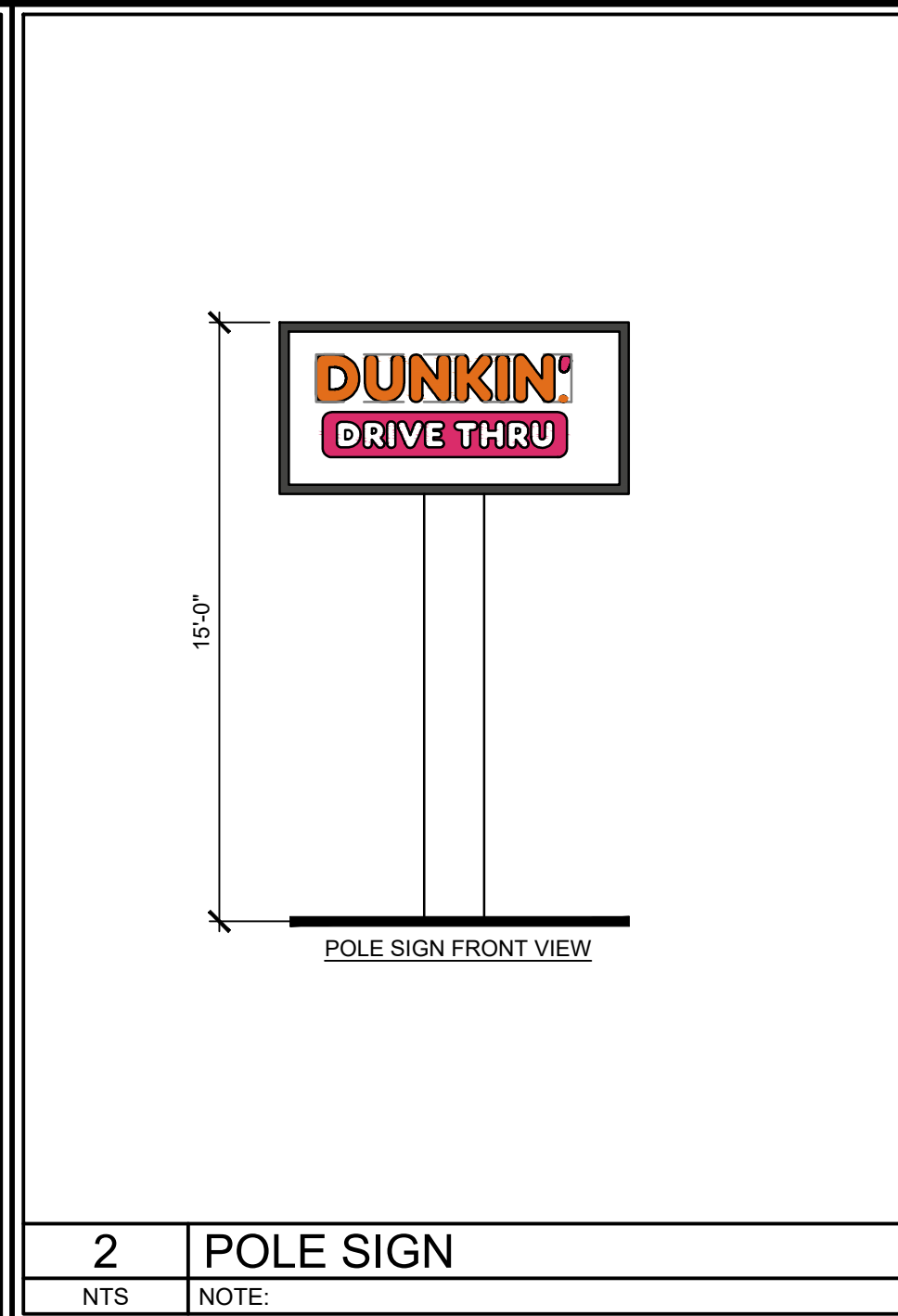
TRUCK TURN
PLAN
(FIRE)

SCALE: 1"=20'
PROJECT NO.
NEX-2021347



NOTES:

1. POLE SIGN; REFER TO DRAWING #2/T-1.0
2. ENTRANCE, EXIT, D/T SIGNS; REFER TO DRAWING #3/T-1.0
3. BUMP BAR; REFER TO DRAWING #5/T-1.0
4. D/T MENU BOARD AND SPEAKER WITH CANOPY; REFER TO DRAWING #4/T-1.0



1 SITE PLAN
NTS NOTE:

5 BUMP BAR
NTS NOTE:



Interior Designer



DATE	02/12/24
SCALE	As Noted
DRAWN	LJ
CKD	
APPD	

REVISIONS		
NO	DESCRIPTION	DATE
1	INITIAL ISSUE	xx

Project:

Address:
447 Broadway,
Methuen, MA 01844

Drawing Title:

SITE SIGNAGE

T-1.0

PREPARED FOR
CAFUA MANAGEMENT
COMPANY, LLC
280 MERRIMACK STREET
METHUEN, MA 01844

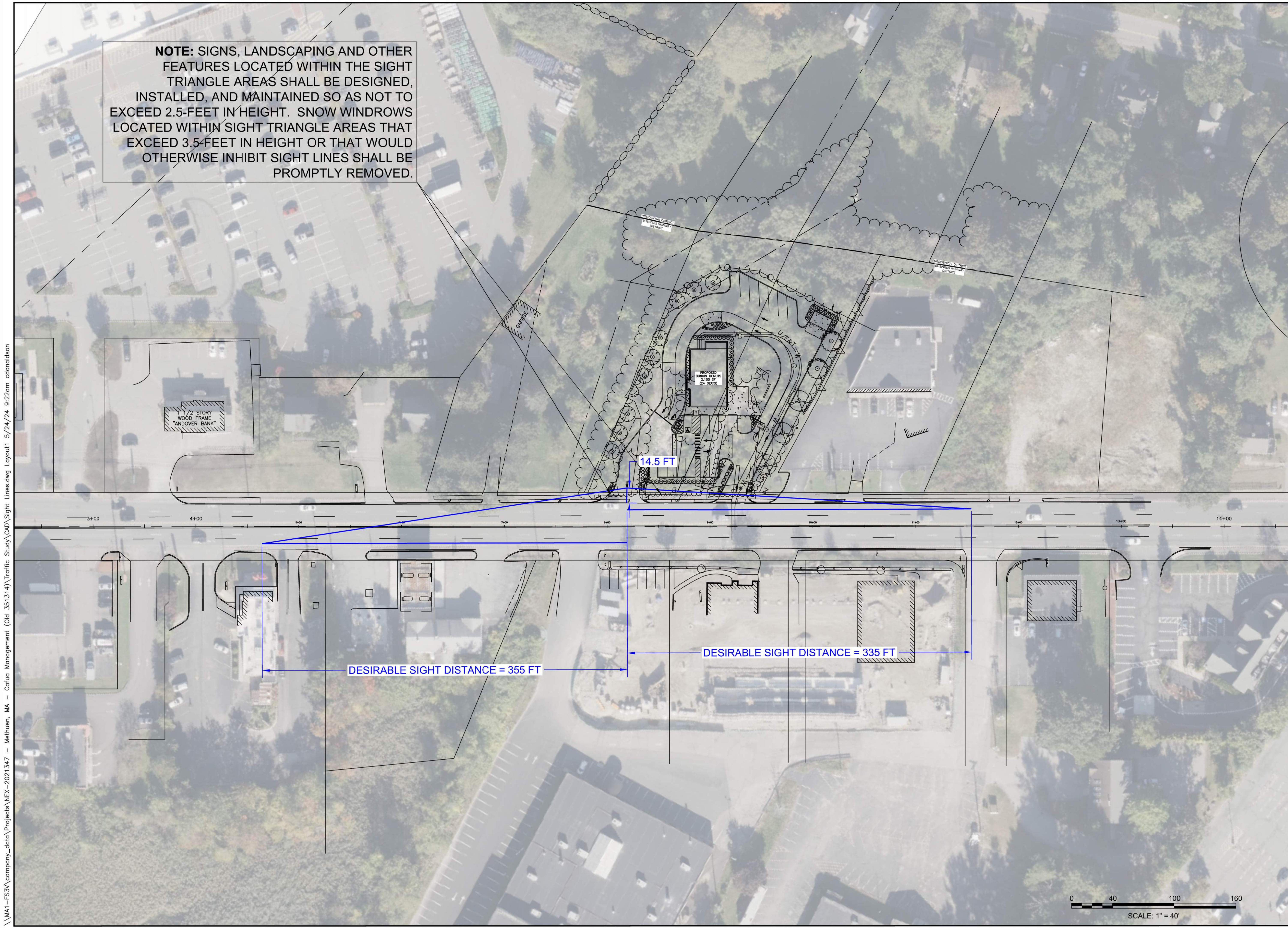
SIGHT LINE PLAN
477 & 479 BROADWAY
METHUEN, MASSACHUSETTS

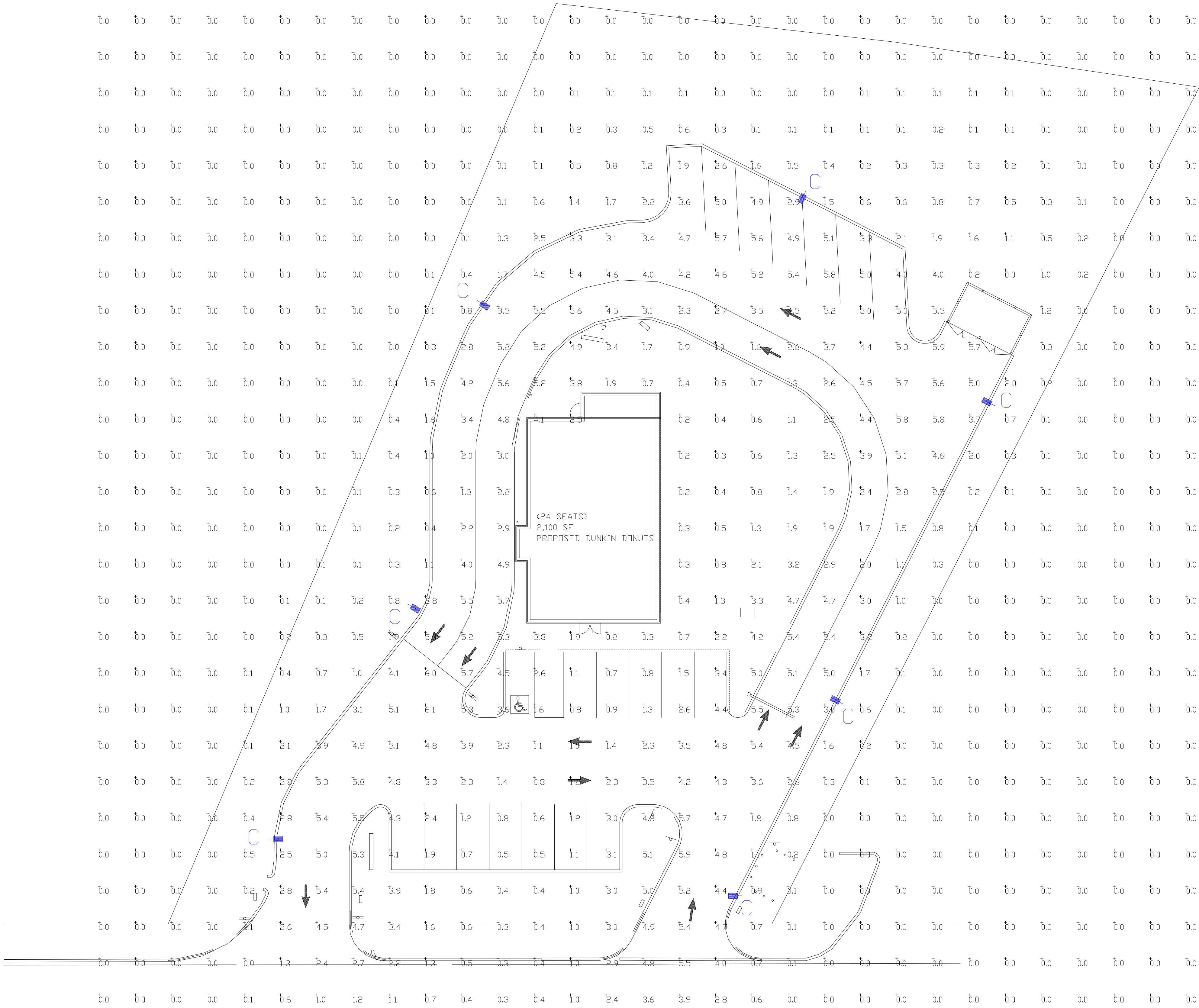
REVISIONS		
NO.	REVISION	DATE

MAY 24, 2024	
DRAWN/DESIGN BY CJD	CHECKED BY SET

SIGHT LINE PLAN

SCALE: 1"=40'
PROJECT NO. NEX-2021347
1 OF 1





Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CALCS @ GRADE	Illuminance	Fc	1.12	6.1	0.0	N.A.	N.A.
INSIDE CURB	Illuminance	Fc	3.69	6.1	0.5	7.38	12.20

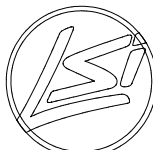
Luminaire Schedule										
Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF	Arr. Lum. Lumens	Arr. Watts	
	7	C	Single	MRS-LED-24L-SIL-FT-50-70CRI-SINGLE	22' POLE+2' BASE	1.000	1.000	14615	196	

PHOTOMETRIC EVALUATION
NOT FOR CONSTRUCTION

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted. Fixture nomenclature noted does not include mounting hardware or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final document for ordering product.

Total Project Watts
Total Watts = 1372



100% ALLOWANCE FOR CONSTRUCTION OF WORK USA
TEL: 781-380-8800 FAX: 781-380-8801

LIGHTING PROPOSAL LD-156127-2

DUNKIN DONUTS
477 & 479 BROADWAY
METHUEN, MA

BY: MVE DATE: 6/21/22 REV: 05-17-24 SHEET 1 OF 1

SCALE: 1"=16'

0 16

- 01 GRAY
- 02 CHARCOAL
- 03 WOOD PATTERN
- 04 OFF WHITE FINISH
- 09 CHARCOAL
- 12 PINK
- 13 ORANGE

- 21'-10" A.F.F.
TOP OF MONOLITH

17'-3" A.F.F.
TOP OF PARAPET

12'-9" A.F.F.
TOP OF TRIM

10'-8" A.F.F.
BOTTOM OF ORANGE ACCENT BEAM/
DT WINDOW CANOPY

10'-2" A.F.F.
TOP OF STOREFRONT

0'-0" A.F.F.
TOP OF SLAB
-
- 1 FRONT ELEVATION
- 1/4" = 1'-0" NOTE:
- 21'-10" A.F.F.
TOP OF MONOLITH

10'-8" A.F.F.
BOTTOM OF ORANGE ACCENT BEAM

10'-2" A.F.F.
TOP OF STOREFRONT

0'-0" A.F.F.
TOP OF SLAB

2 RIGHT ELEVATION

1/4" = 1'-0" NOTE:

Stamp:

Consulting Architect

Interior Designer

DATE	02/12/24
SCALE	As Noted
DRAWN	LJ
CKD	
APPD	

REVISIONS		
NO	DESCRIPTION	DATE
1	INITIAL ISSUE	xx

Project:

Address:

447 Broadway,
Methuen, MA 01844

Drawing Title:

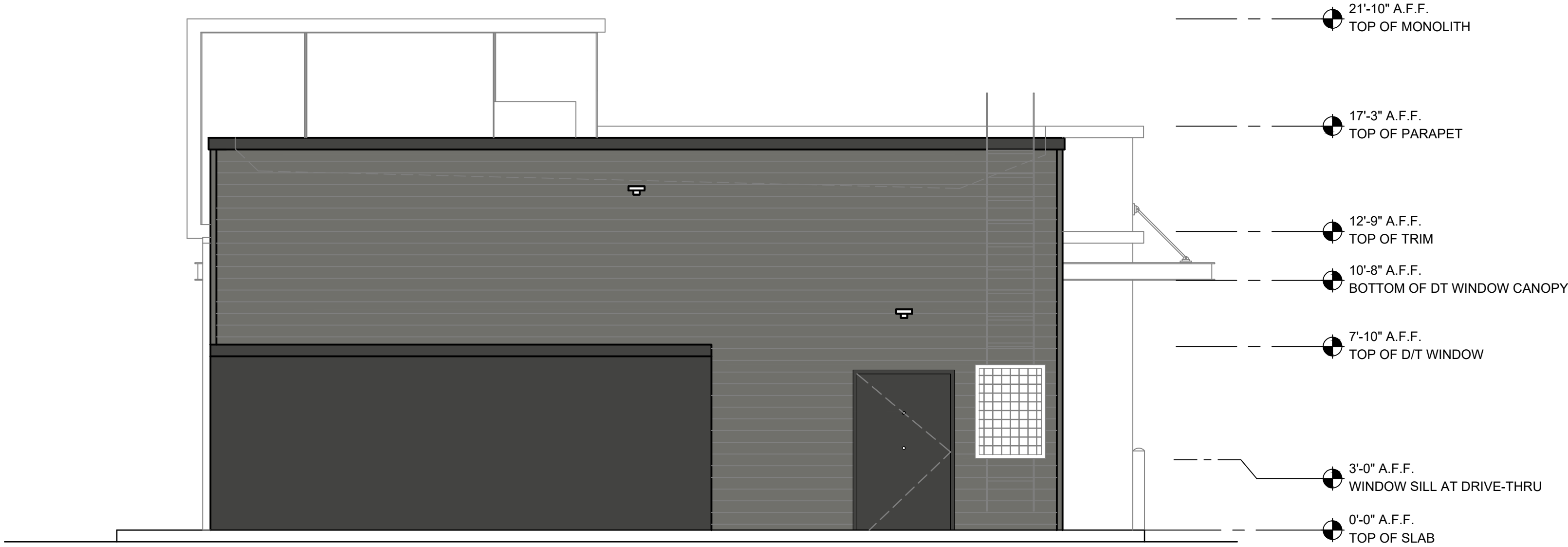
EXTERIOR
ELEVATIONS

A-4.0

NOTE: DRAWINGS ARE NOT TO SCALE IF SHEET IS PLOTTED ON 11" x 17"

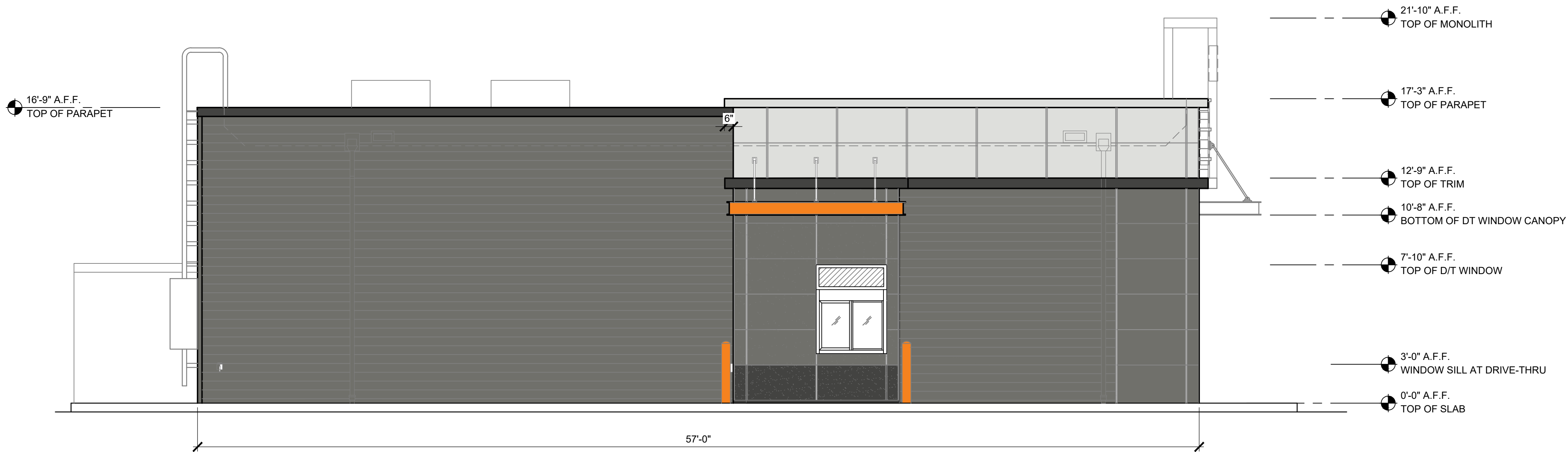
THESE PLANS ARE CONFIDENTIAL PROPERTY OF DUNKIN' BRANDS, INC., UNDER RESTRICTED ACCESS.

- 01 GRAY
- 02 CHARCOAL
- 03 WOOD PATTERN
- 04 OFF WHITE FINISH
- 09 CHARCOAL
- 12 PINK
- 13 ORANGE



1 REAR ELEVATION

1/4" = 1'-0" NOTE:



2 LEFT ELEVATION

1/4" = 1'-0" NOTE:



Stamp:

Consulting Architect

Interior Designer



DATE	02/12/24
SCALE	As Noted
DRAWN	LJ
CKD	
APPD	

REVISIONS		
NO	DESCRIPTION	DATE
1	INITIAL ISSUE	xx

Project:

Address:

447 Broadway,
Methuen, MA 01844

Drawing Title:

PROPOSED
EXTERIOR
ELEVATIONS

A-4.1

NOTE: DRAWINGS ARE NOT TO SCALE IF SHEET IS PLOTTED ON 11" x 17"

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