

LOCUS MAP  
(NOT TO SCALE)

# CIVIL SITE PLANS FOR: 40B MULTI-FAMILY SITE DEVELOPMENT 444 EAST CENTRAL STREET FRANKLIN, MA

**OWNER:**  
TAG CENTRAL LLC  
275 REGATTA DRIVE  
JUPITER, FL 33477  
(561) 685-5336

**BUILDING ARCHITECT:**  
CUBE 3 ARCHITECTS  
160 STATE ST, FLOOR 6  
BOSTON, MA 02109  
(978) 989-2800

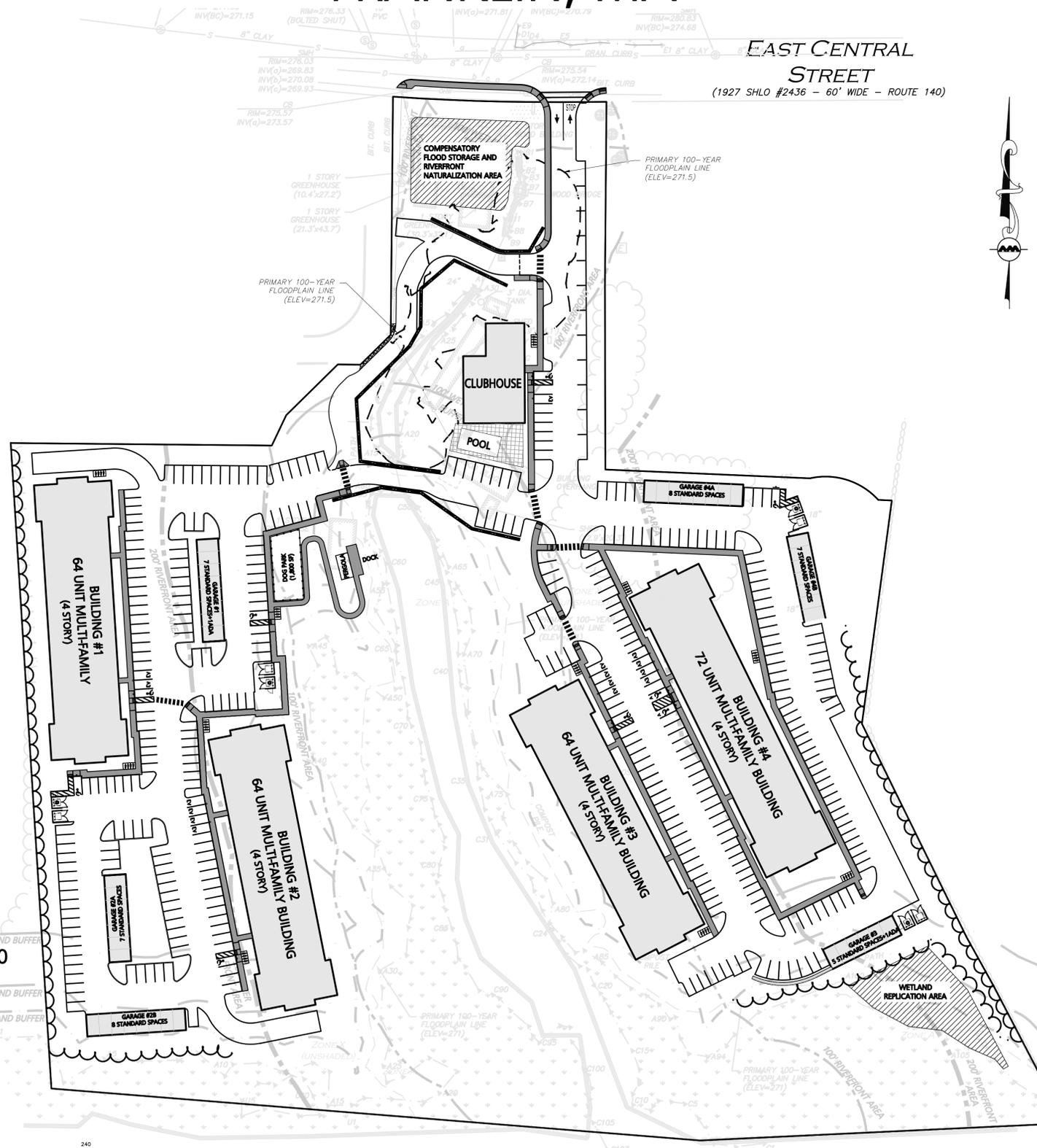
**SITE CIVIL ENGINEER:**  
ALLEN & MAJOR ASSOCIATES, INC.  
100 COMMERCE WAY SUITE 5  
WOBURN, MA 01801  
(781) 935-6889

**LANDSCAPE ARCHITECT:**  
KYLE ZICK LANDSCAPE ARCHITECTURE, INC.  
4228 WASHINGTON STREET  
BOSTON, MA 02108  
(617) 451-1018

**LAND SURVEYOR:**  
ALLEN & MAJOR ASSOCIATES, INC.  
100 COMMERCE WAY SUITE 5  
WOBURN, MA 01801  
(781) 935-6889

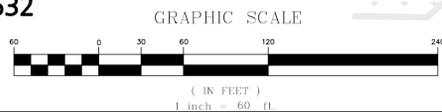
**TRAFFIC CONSULTANT:**  
VANASSE & ASSOCIATES, INC.  
35 NEW ENGLAND BUSINESS CENTER DRIVE SUITE 140  
ANDOVER, MA 01810  
(978) 474-8800

**WETLANDS SPECIALIST:**  
GODDARD CONSULTING, LLC  
291 MAIN STREET, SUITE 8  
NORTHBOROUGH, MA 01532  
(508) 393-3784



LIST OF DESIGN DRAWINGS			
DRAWING TITLE	SHEET NO.	ISSUED	REVISED
EXISTING CONDITIONS	I	02-10-2025	09-18-2025
ABBREVIATIONS & NOTES	C-001	02-11-2025	09-18-2025
ABBREVIATIONS & NOTES	C-002	02-11-2025	09-18-2025
EROSION CONTROL & SITE PREP PLAN	C-101A	02-11-2025	09-18-2025
EROSION CONTROL & SITE PREP PLAN	C-101B	02-11-2025	09-18-2025
LAYOUT & MATERIALS PLAN	C-102A	02-11-2025	09-18-2025
LAYOUT & MATERIALS PLAN	C-102B	02-11-2025	09-18-2025
GRADING & DRAINAGE PLAN	C-103A	02-11-2025	09-18-2025
GRADING & DRAINAGE PLAN	C-103B	02-11-2025	09-18-2025
UTILITIES PLAN	C-104A	02-11-2025	09-18-2025
UTILITIES PLAN	C-104B	02-11-2025	09-18-2025
SNOW STORAGE PLAN	C-105A	02-11-2025	09-18-2025
SNOW STORAGE PLAN	C-105B	02-11-2025	09-18-2025
FIRE TRUCK TURNING PLAN	C-106A	02-11-2025	09-18-2025
FIRE TRUCK TURNING PLAN	C-106B	02-11-2025	09-18-2025
SU-30 TRUCK TURNING PLAN	C-107A	06-11-2025	09-18-2025
SU-30 TRUCK TURNING PLAN	C-107B	06-11-2025	09-18-2025
CIVIL DETAILS	C-501	02-11-2025	09-18-2025
CIVIL DETAILS	C-502	02-11-2025	09-18-2025
CIVIL DETAILS	C-503	02-11-2025	09-18-2025
CIVIL DETAILS	C-504	02-11-2025	09-18-2025
CIVIL DETAILS	C-505	02-11-2025	09-18-2025
CIVIL DETAILS	C-506	02-11-2025	09-18-2025
CIVIL DETAILS	C-507	02-11-2025	09-18-2025
CIVIL DETAILS	C-508	07-21-2025	09-18-2025
TEST PIT EXHIBIT	EXH-1	07-21-2025	09-18-2025
BMP EXHIBIT	EXH-2	07-21-2025	09-18-2025
CATCHBASIN WATERSHED EXHIBIT	EXH-3	07-21-2025	09-18-2025
EXISTING DRAIN CROSS SECTION	EXH-4	07-21-2025	09-18-2025
RESOURCE AREA IMPACT EXHIBIT	EXH-5	07-21-2025	09-18-2025
INVASIVE SPECIES MANAGEMENT COORDINATION PLAN	L0	02-11-2025	07-21-2025
LAYOUT & MATERIAL PLAN	L1	02-11-2025	07-21-2025
LAYOUT & MATERIAL PLAN	L1.1	02-11-2025	07-21-2025
KEY PLAN PLANTING	L2	02-11-2025	07-21-2025
LAYOUT & PLANTING PLAN	L2.1	02-11-2025	07-21-2025
PLANTING ENLARGEMENT PLAN	L2.2	02-11-2025	07-21-2025
PLANTING ENLARGEMENT PLAN	L2.3	02-11-2025	07-21-2025
LIGHTING PLAN	L3	02-11-2025	07-21-2025
LIGHTING PLAN	L3.1	02-11-2025	07-21-2025
LIGHTING PLAN	L3.2	02-11-2025	07-21-2025
DETAILS	LD1	02-11-2025	07-21-2025
DETAILS	LD2	02-11-2025	07-21-2025

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PREPARED BY:

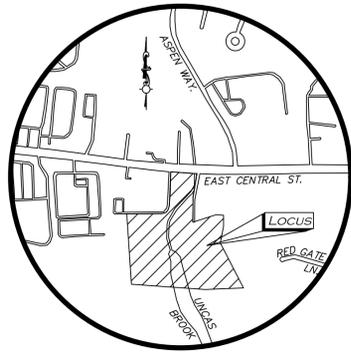
**ALLEN & MAJOR ASSOCIATES, INC.**  
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*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

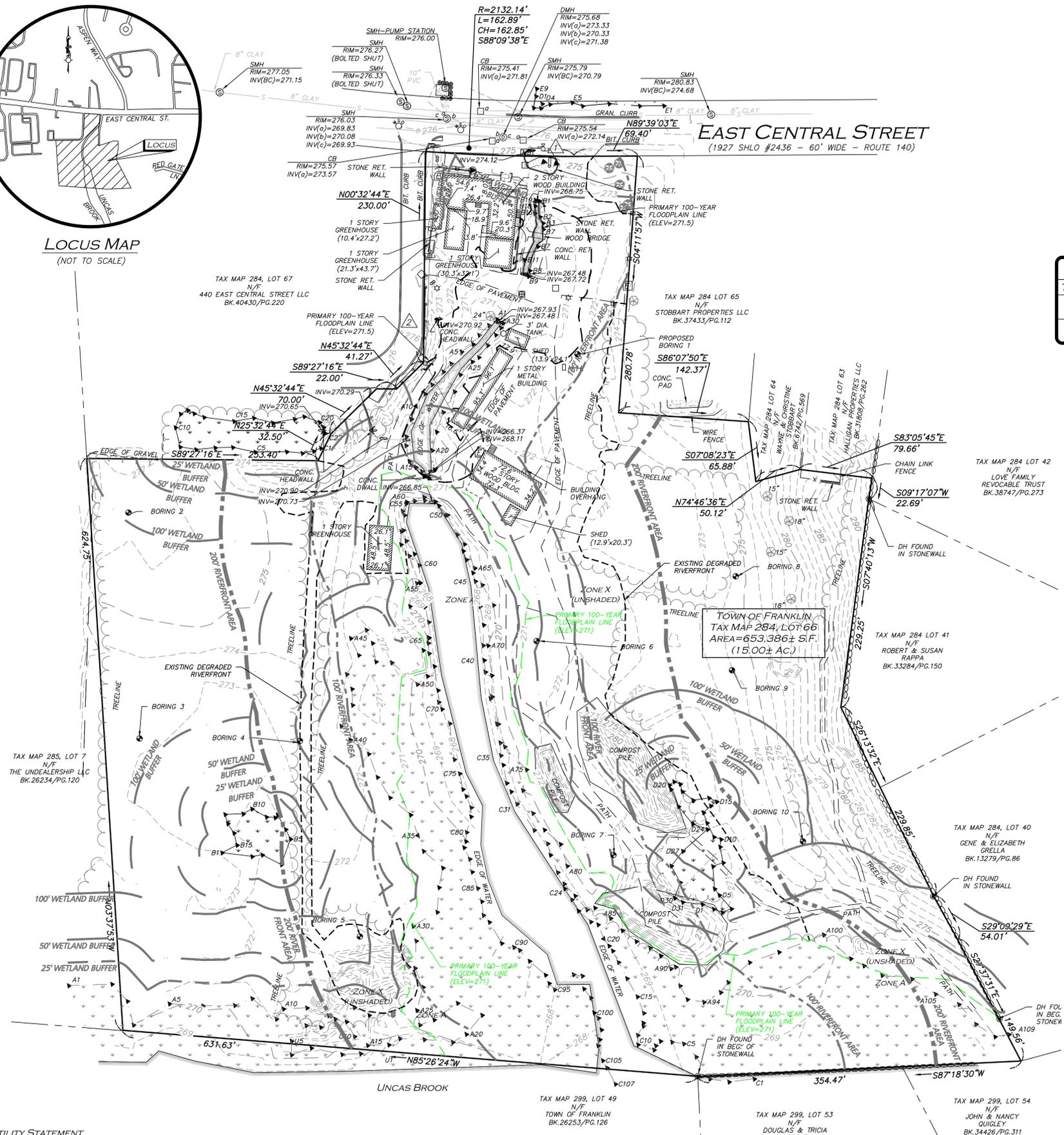
ISSUED FOR COMPREHENSIVE PERMIT: FEBRUARY 11, 2025  
REVISED FOR COMPREHENSIVE PERMIT: JUNE 11, 2025  
REVISED PER NOI PEER REVIEW: JUNE 21, 2025  
**REVISED PER NOI PEER REVIEW: SEPTEMBER 18, 2025**



**LOCUS MAP**  
(NOT TO SCALE)

TAX MAP 284, LOT 67  
N/F  
440 EAST CENTRAL STREET LLC  
BK.40430/PG.220

**EAST CENTRAL STREET**  
(1927 SHLO #2436 - 60' WIDE - ROUTE 140)



**BENCHMARK SUMMARY**

TBM #	DESCRIPTION	ELEV.
1	SPIKE SET IN PAVEMENT	276.77
2	MAG NAIL SET IN PAVEMENT	275.92

**LEGEND**

DRILL HOLE (DH)	⊙
DRAIN MANHOLE (DMH)	⊕
SEWER MANHOLE (SMH)	⊗
CATCH BASIN (CB)	⊠
ROUND CATCH BASIN (RCB)	⊡
UTILITY POLE	⊕
UTILITY POLE W/LIGHT	⊕
GUY WIRE	—
WATER GATE	⊕
INVERT (INV)	⊕
LIGHT	⊕
FLOODLIGHT	⊕
TREE	⊕
BUSH / SHRUB	⊕
SIGN	⊕
MAILBOX	⊕
HAND HOLE	⊕
ELECTRIC BOX	⊕
FLAG POLE	⊕
ELECTRIC METER	⊕
CONCRETE (CONC.)	⊕
LANDSCAPED AREA (LSA)	⊕
FLAGSTONE	⊕
WETLAND AREA	⊕
BRICK	⊕
BUILDING	⊕
BUILDING OVERHANG	⊕
1' CONTOUR	⊕
5' CONTOUR	⊕
PROPERTY LINE	⊕
ABUTTERS LINE	⊕
STONE WALL	⊕
CONCRETE RETAINING WALL	⊕
STONE RETAINING WALL	⊕
TREE LINE	⊕
EDGE OF PAVEMENT	⊕
EDGE OF BRICK	⊕
EDGE OF WATER	⊕
CURB	⊕
CHAIN LINK FENCE	⊕
WIRE FENCE	⊕
GUARDRAIL	⊕
DRAIN LINE	⊕
SEWER LINE	⊕
OVERHEAD WIRES	⊕
FINISHED FLOOR ELEVATION	⊕
BUILDING HEIGHT	⊕
BITUMINOUS	⊕
GRANITE	⊕
REINFORCED CONCRETE PIPE	⊕
CORRUGATED METAL PIPE	⊕
CAST IRON PIPE	⊕
DUCTILE IRON PIPE	⊕
HIGH DENSITY POLYETHYLENE PIPE	⊕
FOUND	⊕
NOW OR FORMERLY	⊕
BOOK	⊕
PAGE	⊕

**LOCUS REFERENCES**  
 -TOWN OF FRANKLIN ASSESSORS PARCEL 284-66  
 -DEED BOOK 37502, PAGE 50  
 -RECORD OWNER: STOBART PROPERTIES LLC

**PLAN REFERENCES**  
 -PLAN 243 OF 1998  
 -PLAN 687 OF 1995  
 -PLAN 988 OF 1961  
 -PLAN 1091 OF 1988  
 -PLAN 971 OF 1985  
 -PLAN 148 OF 2002  
 -STATE HIGHWAY LAYOUT 1384  
 -STATE HIGHWAY LAYOUT 2436

- NOTES**
- NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
  - BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM NORFOLK REGISTRY OF DEEDS IN DEDHAM, MA.
  - VERTICAL DATUM IS NAVD 88, ESTABLISHED USING RTK GPS OBSERVATION.
  - CONTOUR INTERVAL IS ONE FOOT (1').
  - ALL DRAIN LINES SHOWN IN EAST CENTRAL STREET ARE 12".



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**UTILITY STATEMENT**  
 THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

WE HEREBY CERTIFY THAT THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN DECEMBER 22, 2023 AND SEPTEMBER 5, 2025.

Digitally signed by  
 Andrew J. Ruggles  
 Date: 2025.09.10  
 09:29:17-04'00'  
 PROFESSIONAL LAND SURVEYOR FOR  
 ALLEN & MAJOR ASSOCIATES, INC.



REV	DATE	DESCRIPTION
2.	09/08/25	DRAIN & SEWER INVERTS ADDED
1.	10/25/24	WETLAND FLAGS

APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
 275 REGATTA DRIVE  
 JUPITER, FL 33477

PROJECT:  
**444 EAST CENTRAL STREET**  
 FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	10/10/24
SCALE:	1" = 60'	DWG. NUMBER:	NAMB317-01-EC
DRAFTED BY:	KMT/COB	CHECKED BY:	AJR

PREPARED BY:

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DRAWING TITLE:	SHEET No.
EXISTING CONDITIONS	1

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# NOTES

## GENERAL NOTES:

- TOPOGRAPHIC INFORMATION AND EXISTING SITE FEATURES WERE OBTAINED FROM AN ACTUAL FIELD SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES, INC. 100 COMMERCE WAY, WOBURN, MASSACHUSETTS.
- ZONING DISTRICT IS COMMERCIAL 2 ZONING DISTRICT. ZONE 2 WATER RESOURCE DISTRICT, COMMERCIAL AND BUSINESS CORRIDOR SIGN DISTRICT, SENIOR VILLAGE OVERLAY DISTRICT, & FLOOD HAZARD OVERLAY DISTRICT.
- OVERALL LOT SIZE: 14.58± ACRES
- DURING CONSTRUCTION, ALL VEHICLES MUST BE PARKED ON SITE.
- DURING CONSTRUCTION, ALL STAGING AND DELIVERIES WILL OCCUR ON SITE.
- THIS PROJECT WILL BE SERVED BY PUBLIC WATER AND SEWER AND PRIVATE, NATURAL GAS, TELEPHONE, CABLE AND ELECTRIC. ALL UTILITY LINES WILL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS AT NO ADDITIONAL COST.
- ALL PROPOSED MAIN BUILDING ENTRANCES AND WALKS SHALL BE HANDICAP ACCESSIBLE PER FEDERAL ADA & MA AAB REGULATIONS.
- ALL SITE WORK DONE FOR THIS PROJECT SHALL BE IN STRICT ACCORDANCE WITH THE SITE PLANS AND SITE WORK SPECIFICATIONS FOR CONSTRUCTION.
- ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTIES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
- ALL PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED AND RESTORED BY A SURVEYOR REGISTERED IN THE STATE OF MASSACHUSETTS AT THE CONTRACTOR'S EXPENSE.
- ALL APPLICABLE PERMITS AND AN APPROVED SET OF PLANS SHALL BE AVAILABLE AT THE CONSTRUCTION SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE CITY DEPARTMENTS, THE APPROPRIATE UTILITY COMPANIES, THE OWNER AND OWNER'S REPRESENTATIVE. THE MEETING SHALL TAKE PLACE PRIOR TO THE START OF CONSTRUCTION AND THE CONTRACTOR MUST PROVIDE 48 HOURS NOTICE TO ALL ATTENDEES PRIOR TO THE START OF THE MEETING.
- APPROPRIATE WARNING SIGNS, MARKERS, BARRICADES AND/OR FLAG MEN SHALL BE PROVIDED TO REGULATE TRAFFIC. CONSTRUCTION TRAFFIC CONTROLS SHALL BE IMPLEMENTED AND OPERATED ACCORDING TO THE MASS DEPARTMENT OF TRANSPORTATION, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE LOCAL AUTHORITY.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ADDITIONAL BENCHMARK INFORMATION IF REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING BENCHMARKS. IF IT IS NECESSARY TO RELOCATE A BENCHMARK, IT SHALL BE RELOCATED BY A MASSACHUSETTS PROFESSIONAL LAND SURVEYOR AND DONE SO AT THE CONTRACTOR'S EXPENSE.
- ALL BUILDING DIMENSIONS ARE MEASURED TO THE OUTSIDE FACE OF THE BUILDING.
- ALL RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
- ALL PARKING LOT AND AISLE DIMENSIONS ARE TAKEN FROM THE FACE OF CURB AND INDICATE EDGE OF PAVEMENT.
- CONSTRUCTION DURING WET WEATHER OR WINTER CONDITIONS IS TO BE ANTICIPATED AND PROVISIONS TO ADEQUATELY ADDRESS THESE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO CARRY OUT THE WORK INCLUDING BUT NOT LIMITED TO DEMOLITION.
- DISPOSAL OF ALL DEMOLISHED MATERIALS INCLUDING EXISTING MISC. CONSTRUCTION DEBRIS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS AT NO ADDITIONAL COST.
- ALL DISTURBED AREAS NOT NOTED TO RECEIVE OTHER TREATMENT ARE TO RECEIVE SIX INCHES (6") MINIMUM OF TOPSOIL & SEED, AND BE MAINTAINED UNTIL ESTABLISHED & ACCEPTED.
- EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE PROTECTED, ABANDONED, REMOVED OR RELOCATED AS NECESSARY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH THE LOCAL MUNICIPALITY'S GOVERNING AUTHORITY'S SPECIFICATIONS AND SHALL BE APPROVED BY SAME.
- THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO DETERMINE EXACT POINT OF SERVICE CONNECTION AND DISCONNECTION AT EXISTING UTILITY.
- ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARKS SHOWN ON THE EXISTING CONDITIONS SITE PLAN AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR AT GROUNDBREAKING.
- CONTRACTOR IS RESPONSIBLE FOR DIGGING TEST HOLES AND VERIFYING ANY EXISTING UTILITY OR STRUCTURE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY THAT BASED ON EXACT LOCATION OF EXISTING UTILITIES, THERE ARE NO CONFLICTS BETWEEN THE EXISTING AND THE

## PROPOSED UTILITIES/DRAINAGE STRUCTURES.

- THE CONTRACTOR SHALL ADHERE TO ALL PERMIT CONDITIONS PROVIDED BY ALL GOVERNING AGENCIES AT NO ADDITIONAL COSTS. THIS INCLUDES BUT IS NOT LIMITED TO BUILDING PERMITS, DEMOLITION PERMITS, PLUMBING, GAS, AND ELECTRICAL PERMITS. PERMITS FROM THE PLANNING BOARD OR CITY COUNCIL.
- DURING EXCAVATION, ANY EXISTING EARTH CUT MATERIALS THAT DO NOT MEET THE "ORDINARY FILL" SPECIFICATIONS OR "LOAM" SPECIFICATIONS AND CANNOT BE REUSED SHALL BE REMOVED OFFSITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNERS. MATERIAL WHICH DOES NOT MEET THE SPECIFICATION INCLUDES ALL BOULDERS, ROCKS, CONSTRUCTION DEBRIS, AND MISC. MATERIAL. PRIOR TO REUSE, CONTRACTOR TO PROVIDE TESTING REPORT OF SIEVE ANALYSIS TO ENGINEER FOR APPROVAL. CONTRACTOR CAN AMEND MATERIALS AND CONTINUE TO RETEST AS NECESSARY AT NO ADDITIONAL COST TO OWNER. AFTER AMENDING, IF MATERIAL STILL DOES NOT MEET THE SPECIFICATIONS, IT IS TO BE REMOVED FROM SITE AT NO ADDITIONAL COST TO THE OWNER AND IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
- ANY PROPOSED SIGNAGE SHALL BE APPROVED BY SEPARATE APPLICATION TO THE APPROPRIATE MUNICIPAL AUTHORITY INCLUDING BUT NOT LIMITED TO THE ZONING BOARD OF APPEALS AND CITY COUNCIL. ALL PROPOSED SIGNAGE MUST MEET THE REQUIREMENTS OF THE LOCAL ZONING CODE.
- AN ORDER OF RESOURCE AREA DELINEATION (ORAD), DEP FILE# #159-1306, WAS ISSUED FOR THIS SITE ON APRIL 1, 2025.

## GRADING & DRAINAGE NOTES:

- EXISTING PAVEMENT SHALL BE SAW-CUT AND PAVEMENT JOINT SHALL BE INSTALLED WHERE NECESSARY TO ENSURE A SMOOTH CONTINUOUS GRADE.
- PITCH EVENLY BETWEEN SPOT GRADES. 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 ENGINEER PRIOR TO CONTINUING WORK.
- ALL GRADING OPERATIONS SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES.
- IN LANDSCAPED AREAS THE TOP ELEVATION OF MANHOLES SHALL MATCH THE FINISH GRADE OF THE TOPSOIL. IN PAVED AREAS THE TOP ELEVATIONS OF MANHOLES SHALL MATCH FINISH GRADE.
- ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED AS SOON AS POSSIBLE UPON COMPLETION OF CONSTRUCTION WORK IN THE AREA.
- TEMPORARY TUBULAR BARRIER PROTECTION AND/OR SILT SACKS SHALL BE INSTALLED AND MAINTAINED AT EXISTING DRAINAGE STRUCTURES DURING CONSTRUCTION, TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE DRAINAGE SYSTEM.
- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE PER DEMOLITION PLAN.
- ALL CATCH BASINS, MANHOLES, INFILTRATION SYSTEMS, AND WATER QUALITY STRUCTURES ARE TO BE CLEANED TO REMOVE ALL CONSTRUCTION SILT AND DEBRIS PRIOR TO FINAL APPROVAL.
- IF ANY EXISTING UTILITY STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER AT NO ADDITIONAL COST.
- ALL STORM PIPES ENTERING STRUCTURES SHALL BE GROUTED TO ENSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- ALL STORM DRAIN MANHOLES SHALL HAVE TRAFFIC BEARING RING & COVERS & SHALL BE LABELED "DRAIN".
- THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES STEEPER THAN 3H:1V.
- ALL DRAINAGE SYSTEM COMPONENTS SHALL CONFORM TO LOCAL REQUIREMENTS.
- UNDERGROUND INFILTRATION SYSTEMS SHALL NOT BE INSTALLED ABOVE FILL. CONTRACTOR MUST OVER EXCAVATE UNSUITABLE MATERIAL, BACKFILL AND COMPACT WITH SUITABLE MATERIAL TO BE APPROVED BY ENGINEER AND GEOTECH PRIOR TO CONSTRUCTION.

## UTILITY NOTES:

- THE LATEST STANDARDS OF THE LOCAL MUNICIPALITY SHALL BE FOLLOWED WHEN INSTALLING ANY STORM DRAIN WORK. STORM DRAIN WORK WILL BE INSPECTED BY THE LOCAL GOVERNING AUTHORITY PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION.
- ABANDONED EXISTING UTILITIES AND UTILITIES TO BE ABANDONED SHALL EITHER BE ABANDONED IN PLACE AS NOTED OR SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED. ALL UTILITIES SCHEDULED FOR ABANDONMENT OR REMOVAL AND DISPOSAL MUST BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY OWNER. WHEN ABANDONED UTILITIES ARE TO BE LEFT IN PLACE, PLUG OR CAP THE ENDS OF THE CONDUITS AND PIPES. REMOVE ABANDONED UTILITY MANHOLES, JUNCTION BOXES AND SIMILAR STRUCTURES TO A MINIMUM DEPTH OF 4 FEET BELOW FINISHED GRADE AND PUNCTURE OR BREAK THE BOTTOM SLABS OF MANHOLES AND SIMILAR STRUCTURE TO ALLOW DRAINAGE. BACKFILL AND COMPACT EXCAVATIONS RESULTING FROM REMOVAL OF UTILITY FACILITIES, AS REQUIRED TO RESTORE THE ORIGINAL GRADE.
- THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENTS OF NATURAL GAS, ELECTRIC, TELEPHONE AND ANY OTHER UTILITY BY THE UTILITY OWNER.
- THE CONTRACTOR SHALL USE THE FOLLOWING PIPE MATERIALS:
  - DRAIN - HDPE (HIGH DENSITY CORRUGATED POLYETHYLENE PIPE WITH

SMOOTH INNER WALL), ASTM D2321 (UNLESS OTHERWISE SPECIFIED ON PLAN)

- BEFORE UTILITY WORK BEGINS, THE CONTRACTOR WILL COORDINATE WITH THE LOCAL MUNICIPALITY FOR THE APPROPRIATE PERMIT AND INSPECTION FEES.
- A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER MAINS AND/OR STORM DRAINS. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER MAIN, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE DIFFERENCE IN ELEVATION BETWEEN THE WATER MAIN AND THE SEWER MAIN SHALL BE AT LEAST 18 INCHES.
- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY'S INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 5'-0" COVER AND A MAXIMUM OF 8'-0" COVER ON ALL WATERLINES.
- IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING, THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE BETWEEN THE PIPES. WHERE THE WATERLINE IS LESS THAN THE 18" VERTICAL CLEARANCE AND MEETING 10" HORIZONTAL CLEARANCE CANNOT BE MET, THE WATER MUST BE ENCASED IN CONCRETE.
- ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER, SEWER, GAS AND ELECTRICAL AND TELECOMMUNICATIONS LINES.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
- DRAWINGS DO NOT NECESSARILY SHOW ALL EXISTING UTILITIES.

# ABBREVIATIONS

ABAN	ABANDON	L	LENGTH
ADJ	ADJUST	LB	LEACHING BASIN
		LP	LIGHT POLE
B	BORING	MAT	MATERIAL
BC	BOTTOM OF CURB	MAX	MAXIMUM
BIT	BITUMINOUS	MH	MANHOLE
BCB	BITUMINOUS CONCRETE BERM	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BM	BENCH MARK	MTD	MOUNTED
BOS	BOTTOM OF SLOPE	MW	MONITORING WELL
BOW	BOTTOM OF WALL		
BRK	BRICK	N	NORTH
BV&B	BUTTERFLY VALVE & BOX	NIC	NOT IN CONTRACT
BVV	BORDERING VEGETATED WETLAND	NO	NUMBER
		NTS	NOT TO SCALE
CATV	CABLE TELEVISION	OC	ON CENTER
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CF	CUBIC FEET	OHW	OVERHEAD WIRE
CFS	CUBIC FEET PER SECOND	OWHD	OVERHEAD
CI	CAST IRON (PIPE)	OW	OBSERVATION WELL
CL	CENTERLINE		
CLDI	CEMENT LINED DUCTILE IRON (PIPE)	PC	POINT OF CURVATURE
CM	CONSTRUCTION MANAGER	PCC	PRECAST CONCRETE CURB
CMP	CORRUGATED METAL PIPE	PI	POINT OF INTERSECTION
CO	CLEAN OUT	PKG	PARKING
CONC	CONCRETE	PL	PROPERTY LINE
CONC	CONSTRUCTION	PLMB	PLUMBING
CONC	CONTRACTOR	POC	POINT ON CURVATURE
CRD	COORDINATE	POT	POINT ON TANGENT
CPP	CORRUGATED POLYETHYLENE PIPE	PRC	POINT OF REVERSE CURVATURE
CUL	CULVERT	PROP, P	PROPOSED
CY	CUBIC YARD	PT	POINT (OR POINT OF TANGENT)
		PVC	POLYVINYL CHLORIDE (PIPE)
DB	DISTRIBUTION BOX		
DBL	DOUBLE	R&R	REMOVE & RESET/REPLACE
DEM	DEMOLISH	R&S	REMOVE & STACK
DET	DETENTION	ROP	REINFORCED CONCRETE PIPE
DI	DUCTILE IRON (PIPE)	RD	ROAD (OR ROOF DRAIN)
DIA	DIAMETER	RED	REDUCER
DIM	DIMENSION	RELOC	RELOCATE
DMH	DRAIN MANHOLE	REM	REMOVE
DW	DOMESTIC WATER (OR DRY WELL)	RET	RETAIN, RETAINING OR RETENTION
DWG	DRAWING	ROW	RIGHT OF WAY
DYCL	DOUBLE YELLOW CENTERLINE	RR	RAILROAD
		RWL	RAIN WATER LEADER
		RWY	ROADWAY
EHH	ELECTRIC HANDHOLE	SD	SUBDRAIN
EL	ELEVATION	SF	SQUARE FEET
ELEC	ELECTRIC	SFC	SLOPED GRANITE CURB
EMH	ELECTRIC MANHOLE	SMH	SEWER MANHOLE
EOP	EDGE OF PAVEMENT	SP	STANDPIPE
EOR	EDGE OF ROAD	SPEC	SPECIFICATION
EOW	EDGE OF WETLANDS	STA	STATION
ETC	ELECTRIC, TELEPHONE, CABLE	STC	STORMCEPTOR
EXIST	EXISTING	STD	STANDARD
EXT	EXTERIOR	STRTL	STRUCTURAL
		SWEL	SOLID WHITE EDGE LINE
FA	FIRE ALARM	SW	SIDEWALK
FCC	FLUSH CONCRETE CURB	SWLL	SOLID WHITE LANE LINE
FES	FLARED END SECTION	SYCL	SOLID YELLOW CENTERLINE
FFE	FINISH FLOOR ELEVATION		
FLMP	FIRE LANE NO PARKING	TB	TEST BORING
FPS	FEET PER SECOND	TC	TOP OF CURB
FS	FIRE SERVICE	TD	TRENCH DRAIN
FT	FOOT/FEET	TEL	TELEPHONE
		TMH	TELEPHONE MANHOLE
GC	GENERAL CONTRACTOR	TOS	TOP OF SLOPE
GEN	GENERAL	TOW	TOP OF WALL
GG	GAS GATE	TP	TEST PIT
GR	GUIDE RAIL	TS&V	TAPPING SLEEVE & VALVE
GRAN	GRANITE	TYP	TYPICAL
GV	GATE VALVE	UD	UNDERDRAIN
GV&B	GATE VALVE & BOX	UL	UNDERWRITERS LABORATORY
GW	GROUND WATER	UP	UTILITY POLE
		VCP	VITRIFIED CLAY PIPE
HCR	HANDICAP RAMP	VERT	VERTICAL
HOR	HORIZONTAL	VGC	VERTICAL GRANITE CURB
HT	HEIGHT		
HW	HEADWALL	WD	WOOD
HWY	HIGHWAY	WG	WATER GATE
HYD	HYDRANT	WM	WATER MAIN
		WMH	WATER MANHOLE
ID	INSIDE DIAMETER	WSO	WATER SHUTOFF
IN	INCHES		
INCL	INCLUDE		
INST	INSTALLED		
INV, I.E.	INVERT, INVERT ELEVATION		



PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
C	9/18/25	REVISED PER NOI PEER REVIEW
B	7/21/25	REVISED PER NOI PEER REVIEW
A	6/11/25	REVISED PER TOWN COMMENTS

## APPLICANT/OWNER:

**TAG CENTRAL LLC**  
275 REGATTA DRIVE  
JUPITER, FL 33477

## PROJECT:

**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO. 3317-01 DATE: 02-11-2025

SCALE: NONE DWG. NAME: C-3317-01

DESIGNED BY: MTB CHECKED BY: CMQ

## PREPARED BY:

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# EROSION CONTROL NOTES

## EROSION & SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS TO SILT CONTROLS SHOWN ON THE APPROVED PLANS AS A RESULT OF ACTUAL FIELD CONDITIONS OR CONSTRUCTION PRACTICES SHALL BE INSTALLED IN ACCORDANCE WITH B.M.P. (BEST MANAGEMENT PRACTICES) PER THE E.P.A. 2017 "CONSTRUCTION GENERAL PERMIT" MANUAL, AND MASSACHUSETTS 2003 EROSION & SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, ANY SUCH MODIFICATIONS FROM THE ABOVE MANUALS SHALL BE INSTALLED AS APPROVED BY THE ENGINEER OR THE LOCAL MUNICIPALITY.
2. AREAS OF EXPOSED SOIL UNDERGOING CONSTRUCTION THAT WILL NOT BE COVERED AND OR FINISHED GRADED SHALL BE STABILIZED AS SOON AS PRACTICABLE BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY (UNLESS MUNICIPALITY HAS STRICTER REQUIREMENTS WHICH SHALL BE FOLLOWED) IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY EROSION CONTROL MEASURES SHALL INCLUDE: EROSION CONTROL MESH, NETTING OR MULCH AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND SHOWN ON THE DESIGN PLANS. IF MULCH IS USED, STRAW MULCH SHALL BE APPLIED AT THE RATE OF 4 BALES PER 1,000 SQUARE FEET. APPLICATION AREA SHALL BE SUFFICIENTLY COVERED WITH MULCH TO AVOID ANY VISIBLE SOIL EXPOSURE. MULCH SHALL BE KEPT MOIST TO AVOID LOSS DUE TO WIND. MULCH AND NETTING SHALL BE APPLIED IN THE BASE OF ALL GRASSED WATERWAYS, IN VEGETATIVE SLOPES WHICH EXCEED 15% AND DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS.
3. IF DISTURBED AREAS DO NOT RECEIVE FINAL SEEDING BY OCTOBER 1ST OF THE CONSTRUCTION YEAR, THEN ALL DISTURBED AREAS SHALL BE SEEDING WITH A WINTER COVER CROP AT THE RATE OF 3 LBS PER 1,000 SQUARE FEET. WINTER SEEDING SHALL BE COVERED WITH EROSION CONTROL MESH (MULCH AND NETTING). HEAVY GRADE MATS SHALL BE USED IN THE BASE OF ALL GRASSED WATERWAYS ON VEGETATED SLOPES IN EXCESS OF 15%, AND ANY DISTURBED AREAS WITHIN 100 FEET OF WETLANDS OR STREAMS. MULCH AND NETTING SHALL ALSO BE PROVIDED FOR ADDITIONAL WINTER PROTECTION.
4. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDING WITH RYE AT 3LBS PER 1,000 SQUARE FOOT AND MULCHED, AND REUSED AS REQUIRED. TUBULAR BARRIERS SHALL BE PLACED DOWN GRADIENT FROM STOCKPILED LOAM. LOAM SHALL BE STOCKPILED AT LOCATIONS DESIGNATED BY THE OWNER AND ENGINEER.
5. ALL TUBULAR BARRIERS, SILT SACKS, AND EROSION CONTROL BERMS SHALL BE INSTALLED ACCORDING TO THE SITE PREPARATION PLAN. THESE SHALL BE MAINTAINED DURING DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER. ALL THE FILTER BARRIERS AND EROSION CONTROL BERMS SHALL BE INSPECTED AFTER ANY RAINFALL OR RUNOFF EVENT, MAINTAINED AND CLEANED UNTIL ALL AREAS HAVE AT LEAST 85-90% VIGOROUS PERENNIAL COVER OF GRASSES.
6. ADJACENT ROADS SHALL BE PERIODICALLY SWEEPED OR WASHED TO AVOID TRACKING MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA AS OFTEN AS NECESSARY (WHICH COULD BE ON A DAILY BASIS) TO REMOVE ANY SOIL OR SEDIMENTS AT NO ADDITIONAL COST TO THE OWNER. A WATERING TRUCK WILL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AT NO ADDITIONAL COST TO THE OWNER.
7. THE CONTRACTOR SHALL USE EXTREME CAUTION TO AVOID ALLOWING SEDIMENTS TO ENTER THE STORM DRAIN SYSTEM DURING CONSTRUCTION. BOTH EXISTING AND PROPOSED CATCH BASIN INLETS SHALL BE PROTECTED DURING CONSTRUCTION BY THE USE SILT SACKS AND/OR TUBULAR BARRIERS AROUND EACH INLET AS NOTED ON THE PLANS. INLET PROTECTION MAY BE REMOVED ONLY AFTER FINISHED AREAS ARE PAVED AND THE VEGETATED SLOPES ARE ESTABLISHED WITH AT LEAST 85-90% OF VIGOROUS PERENNIAL GROWTH.
8. AS APPLICABLE, EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISHED SEEDING AREAS AS SPECIFIED ON THE DESIGN PLANS.
9. AT A MINIMUM, ALL TUBULAR BARRIERS AND FILTER FABRIC SHALL REMAIN IN PLACE UNTIL SEEDINGS OR PLANTINGS HAVE BECOME 85-90% ESTABLISHED. THE LOCAL CONSERVATION COMMISSION MUST APPROVE THE REMOVAL OR RELOCATION OF ANY OF THE TUBULAR BARRIERS AND FILTER FABRIC. ONCE THE TUBULAR BARRIERS ARE REMOVED THE AREAS ARE TO BE LOAMED AND SEEDING TO ACHIEVE FULL STABILIZATION.
10. AT THE OWNER'S DISCRETION ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED TO MAINTAIN STABILITY OF EARTHWORKS AND FINISHED GRADED AREAS. THE CONTRACTOR, AT HIS EXPENSE, WILL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY ADDITIONAL MEASURES AS SPECIFIED BY THE OWNER. THIS INCLUDES BUT IS NOT LIMITED TO REQUESTS BY MA DEP, THE ENGINEER AND THE LOCAL MUNICIPALITY, AS AUTHORIZED BY THE OWNER. FAILURE TO COMPLY WITH THE OWNER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.
11. INSPECTIONS AND MONITORING MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. WEEKLY INSPECTIONS SHALL BE HELD THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITY. WEEKLY INSPECTION REPORTS SHALL BE MAINTAINED BY THE CONTRACTOR AND LOCATED IN THE CONTRACTORS FIELD OFFICE ONSITE. IN ADDITION TO THE NORMAL WEEKLY INSPECTIONS, THE CONTRACTOR SHALL PERFORM AN INSPECTION OF ALL EROSION CONTROL MEASURES AFTER EACH RAINFALL OR RUNOFF EVENT, AND PERFORM THE NECESSARY REPAIRS. THE INSPECTIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE SITE'S DOWN STREAM DISCHARGE POINTS.
12. IF ANY EVIDENCE OF SEDIMENTATION IS OBSERVED AT THE STORMWATER MANAGEMENT AREA INLETS, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE A PLAN TO THE ENGINEER TO REMOVE ANY ACCUMULATED SEDIMENT IN THESE AREAS. THE CONTRACTOR SHALL ALSO IMMEDIATELY PROVIDE ADDITIONAL ON SITE EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT FURTHER DEGRADATION OF THE AREA.
13. FOLLOWING THE TEMPORARY OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMI-MONTHLY TO ENSURE THE AREAS HAVE A MINIMUM OF 85-90% VEGETATED VIGOROUS GROWTH. RE-SEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.
14. CONTRACTOR & ALL SITE SUBCONTRACTORS SHALL BE FAMILIAR WITH & FOLLOW ALL APPROVED PERMITS AND CONDITIONS. CONTRACTOR SHALL MAINTAIN A COPY OF ALL APPROVED PERMITS ONSITE. ALL CONDITIONS & RECOMMENDATIONS WITHIN THE APPROVED PERMITS SHALL BE COMPLETED.
15. ALL EROSION MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE ADEQUATE TO MAINTAIN SEDIMENT ON SITE. ANY MODIFICATIONS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR THE LOCAL MUNICIPALITY.
16. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.
17. TOP OF STOCKPILES SHALL BE COVERED IN SUCH MANNER THAT STORMWATER DOES NOT INFILTRATE THE MATERIALS AND THEREBY RENDER THE SAME UNSUITABLE FOR FILL USE.
18. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH OR SEEDING FOR TEMPORARY VEGETATIVE COVER. NO AREA, SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSTABILIZED FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK OR SIX MONTHS AFTER SOIL HAS BEEN DISTURBED WHICHEVER IS LESS.
19. CULVERT/PIPE INLETS AND OUTFALLS SHALL BE PROTECTED BY TUBULAR BARRIER FILTERS AND STONE CHECK DAMS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
20. TUBULAR BARRIER DIKES SHALL BE CONSTRUCTED AT ALL EXISTING & PROPOSED CATCH BASINS. NO SEDIMENTATION SHALL ENTER THE ON-SITE OR OFF-SITE DRAINAGE SYSTEMS AT ANY TIME.
21. ALL EROSION CONTROL MEASURES SHALL BE ROUTINELY INSPECTED, CLEANED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION. IN ADDITION, INSPECTIONS SHALL TAKE PLACE WEEKLY AND BEFORE AND AFTER EACH RAINFALL EVENT.
22. ALL PROPOSED SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH JUTE MESH AND PROTECTED FROM EROSION UNTIL WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.
23. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES ADDITIONAL TUBULAR BARRIERS FOR INSTALLATION AT THE DIRECTION OF THE ENGINEER OR THE TOWN ENGINEER TO MITIGATE ANY EMERGENCY CONDITION.
24. AS CONSTRUCTION DISTURBANCE IS GREATER THAN 1 ACRE, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT NOI, AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL NEED TO BE SUBMITTED TO THE EPA. THE NPDES PERMIT FOR STORM WATER DISCHARGE, & CONSTRUCTION GENERAL PERMIT NOI WILL BE REQUIRED TO BE SUBMITTED AT LEAST 14 DAYS PRIOR TO COMMENCING CONSTRUCTION BY THE CONTRACTOR.

25. OWNER AND CONTRACTOR ARE RESPONSIBLE FOR COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT NOI. WEEKLY SWPPP INSPECTION REPORTS TO BE PERFORMED BY CONTRACTOR. COPIES OF ALL SWPPP INSPECTION REPORTS SHALL BE PROVIDED TO THE LOCAL MUNICIPALITY, EPA, DEP, OR ANY OTHER AUTHORITY REQUESTING WITHIN 3 DAYS OF EACH INSPECTION.
26. APPLICABLE WORK AND MATERIALS SHALL COMPLY WITH ALL LOCAL, MA DEP, EPA CONSTRUCTION GENERAL PERMIT STANDARDS. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE SITE PLAN REGULATIONS FROM THE LOCAL AND USDA SOIL CONSERVATION SERVICE VEGETATIVE PRACTICES IN SITE DEVELOPMENT.
27. A WATERING TRUCK SHALL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AND AS REQUIRED.
28. IF DEWATERING IS NECESSARY IT SHALL ONLY BE COMPLETED AS FOLLOWS: THE DISCHARGE SHALL BE STOPPED IMMEDIATELY IF THE RECEIVING AREA SHOWS ANY SIGN OF INSTABILITY OR EROSION. ALL CHANNELS, SWALES, AND DITCHES DUG FOR DISCHARGING WATER FROM THE EXCAVATED AREA SHALL BE STABLE PRIOR TO DIRECTING DISCHARGE TO THEM. IF A CONSTRUCTION EQUIPMENT BUCKET IS USED, IT SHALL EMPTY THE MATERIAL TO A STABLE AREA. NO DEWATERING SHALL OCCUR DURING PERIODS OF INTENSE, HEAVY RAIN. FLOW TO THE SEDIMENT REMOVAL STRUCTURE SHALL NOT EXCEED THE STRUCTURE'S CAPACITY TO SETTLE AND FILTER FLOW OR ITS VOLUME CAPACITY. WHENEVER POSSIBLE, THE DISCHARGE FROM THE SEDIMENT REMOVAL STRUCTURE SHALL DRAIN TO A WELL-VEGETATED BUFFER BY SHEET FLOW WHILE MAXIMIZING THE DISTANCE TO THE NEAREST WATER RESOURCE AND MINIMIZING THE SLOPE OF THE BUFFER AREA. THERE SHALL BE NO DIRECT DISCHARGE TO EXISTING WETLANDS OR STREAMS. ALL DISCHARGE SHALL BE IN COMPLIANCE WITH STATE, LOCAL, AND FEDERAL REQUIREMENTS.
29. INITIATE STABILIZATION OF EXPOSED AREAS IMMEDIATELY IF CONSTRUCTION WORK TEMPORARILY OR PERMANENTLY CEASES.
30. ALL DISCHARGES FROM POLLUTION SOURCES ARE PROHIBITED ONSITE SUCH AS FUELS, WASTEWATER FROM WASH OUT OF CONCRETE, WASTEWATER FROM CLEAN OUT OF PAINTS, FORM RELEASE OILS, SOLVENTS, ADHESIVES, CURING COMPOUNDS, POLLUTANTS USED FOR MAINTENANCE OF VEHICLES AND EQUIPMENT, SOAPS & SOLVENTS, TOXIC OR HAZARDOUS SUBSTANCES, CHEMICALS AND OILS. IF A POLLUTANT IS DISCHARGED IT NEEDS TO BE IMMEDIATELY CLEANED UP BY REMOVING THE CHEMICAL AND AFFECTED SOIL OR AREA OF SPILL FROM THE SITE IN ACCORDANCE WITH BOTH THE MANUFACTURER RECOMMENDATIONS, FEDERAL, STATE, AND LOCAL REQUIREMENTS. DO NOT HOSE DOWN AND SPREAD SPILLED ITEM. ALL CHEMICALS USED ON THE SITE SHALL BE IN LEAK-PROOF CONTAINERS STORED AWAY FROM WETLANDS, SURFACE WATERS, STORMWATER INLETS, AND DRAINAGE MEASURES. SPILL KITS SHALL BE AVAILABLE ONSITE FOR EMERGENCY USE. THERE SHALL BE A SECONDARY CONTAINMENT MEASURE OF ALL CHEMICALS IN ADDITION TO SPILL-PROOF CONTAINERS.
31. PRIOR TO COMMENCEMENT OF CONSTRUCTION, APPLICABLE CONTRACTOR PERSONNEL MUST HAVE AN UNDERSTANDING OF THE EPA CONSTRUCTION GENERAL PERMIT REQUIREMENTS AND THEIR SPECIFIC RESPONSIBILITIES UNDER THE PERMIT. AT A MINIMUM, PERSONNEL MUST BE TRAINED AND UNDERSTAND THE FOLLOWING: LOCATION OF ALL STORMWATER CONTROLS AND HOW TO MAINTAIN THEM, PROCEDURES FOR COMPLYING WITH THE POLLUTION PREVENTION REQUIREMENTS. PROCEDURES FOR CONDUCTING INSPECTIONS, RECORDING FINDINGS, AND TAKING CORRECTIVE ACTION.
32. ALL SEDIMENT TRACKED ONTO ROADWAYS MUST BE REMOVED AT END OF EACH WORK DAY.
33. ALL USE OF CATIONIC TREATMENT CHEMICALS (EXAMPLES INCLUDE POLYMERS, CHITOSAN, CATIONIC PAM, FLOCCULANTS OR OTHER CHEMICAL UTILIZED FOR STABILIZATION) ARE PROHIBITED. IF ALL OTHER AVAILABLE STABILIZATION MEASURES ARE NOT POSSIBLE AND USE OF CATIONIC CHEMICALS IS ABSOLUTELY NECESSARY THE CONTRACTOR WILL NEED TO CONTACT THE EPA NEW ENGLAND OFFICE IN WRITING FOR APPROVAL AND SPECIFIC REQUIREMENTS (MAXIMUM DOSAGE RATE, RESIDUAL TESTING, SPECIFIC LIMITATIONS, ETC) PRIOR TO USE.
34. IF USING NON-VEGETATIVE STABILIZATION MEASURES, IT MUST BE COMPLETED NO LATER THAN 14 DAYS AFTER INITIATING STABILIZATION. ALL AREAS OF EXPOSED SOILS MUST BE COVERED.
35. INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE AT LEAST ONCE EVERY 7 DAYS BY THE CONTRACTOR. AT A MINIMUM INSPECTIONS SHALL INCLUDE ALL DISTURBED AREAS, ALL STORMWATER CONTROLS AND POLLUTION PREVENTION MEASURES, ALL LOCATIONS WHERE STABILIZATION MEASURES HAVE BEEN IMPLEMENTED, EQUIPMENT AND MATERIAL STORAGE AREAS, ALL AREAS WHERE STORMWATER FLOWS AND ALL POINTS OF DISCHARGE. WHEN CORRECTIVE ACTIONS ARE REQUIRED, THE CONTRACTOR MUST IMMEDIATELY TAKE ALL STEPS TO PREVENT POLLUTANT DISCHARGES UNTIL A PERMANENT SOLUTION IS IMPLEMENTED. AS NECESSARY NEW OR MODIFIED CONTROLS MUST BE INSTALLED AND OPERATIONAL. THE REPAIR MUST BE COMPLETED WITHIN 7 DAYS FROM THE TIME OF DISCOVERY. WITHIN 24 HOURS OF A TRIGGERING CONDITION OCCURRING THAT REQUIRES A CORRECTIVE ACTION, A CORRECTIVE ACTION REPORT MUST BE COMPLETED.

## MAINTENANCE:

1. ALL MEASURES STATED ON THE STORMWATER POLLUTION PREVENTION PLANS, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION BY CONTRACTOR UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
  - INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
  - ALL SEEDING AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A HEALTHY STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDING AS NEEDED.
  - ALL SEDIMENT CONTROLS SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE TUBULAR SEDIMENT CONTROLS WHEN IT REACHES HALF THE HEIGHT OF THE CONTROL MEASURE OR AS REQUESTED BY THE OWNER OR ENGINEER.
  - THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
  - THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
  - OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

## CONSTRUCTION GENERAL PERMIT NOTES AND NARRATIVE:

1. NARRATIVE: THE STORMWATER POLLUTION PREVENTION PLANS CONSIST OF THE SITE PREPARATION PLAN TOGETHER WITH AN EXISTING CONDITIONS PLANS, GRADING PLANS, ABBREVIATIONS AND NOTES SHEETS, AND DETAIL SHEETS.
2. THE EROSION CONTROL PLAN WILL BE IMPLEMENTED TO:
3. TREAT EROSION AS SOON AS POSSIBLE AFTER DISTURBANCE.
4. PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA AND ENTERING THE RECEIVING WATERS.
5. CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED TO MINIMIZE EROSION.
6. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.

## ESTIMATED CONSTRUCTION SEQUENCING PLAN:

THE FOLLOWING IS AN ESTIMATED CONSTRUCTION SEQUENCING. SOME ACTIVITIES MAY OCCUR AT THE SAME TIME, RATHER THAN AT SEPARATE TIMES OR OUT OF SEQUENCE DUE TO ACTUAL FIELD CONDITIONS OR OTHER FACTORS. ACTUAL SCHEDULING WILL BE COMPLETED BY THE SITE CONTRACTOR.

- INSTALL ALL EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO TEMPORARY STRAW BALE FILTERS, SILT SACKS, CONSTRUCTION ENTRANCES, AND STRAWBALES AND SILT FENCE.
- SETUP STAGING AND MATERIAL STORAGE / STOCKPILE AREAS.
- IF REQUIRED, CONSTRUCT TEMPORARY SILT / DEWATERING BASINS.
- PROTECT AND MARK ALL EXISTING ITEMS NOTED TO REMAIN.
- PERFORM DEMOLITION WORK. SURVEY AND IDENTIFY LIMITS OF SITE CLEARING. CONDUCT SITE CLEARING.
- PULVERIZE EXISTING PAVEMENT AND DEMO EXISTING MATERIALS AS NOTED.
- REMOVE EXISTING LOAM AND SUBSOIL AND STOCKPILE FOR REUSE.
- PERFORM ROUGH GRADING AND CONSTRUCT BUILDING FOUNDATIONS.
- INSTALL UNDERGROUND UTILITIES.
- PERFORM FINE GRADING; PLACE BINDER PAVEMENT COURSE.
- PLACE PAVEMENT TOP COURSE; CONSTRUCT SIDEWALKS AND ALL OTHER SITE IMPROVEMENTS.
- INSTALL PAVEMENT MARKING, SITE SIGNAGE & COMPLETE LANDSCAPING.
- REMOVE TEMPORARY SILT CONTROLS AFTER ONCE GIVEN APPROVAL BY TOWN OF FRANKLIN OR THE ENGINEER AND SITE IS STABILIZED.
- EFFORTS TO BE MADE TO LIMIT THE TOTAL AREA OF DISTURBANCE AT THE SITE AT ANY TIME DURING SITE WORK.
- TEMPORARILY STABILIZE PREVIOUS PHASES OF CUT AND FILL AREAS AS APPROPRIATE AND PRACTICAL BEFORE FURTHER ADVANCING FURTHER SITE WORK.



*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
C	9/18/25	REVISED PER NOI PEER REVIEW
B	7/21/25	REVISED PER NOI PEER REVIEW
A	6/11/25	REVISED PER TOWN COMMENTS

APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
275 REGATTA DRIVE  
JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	NONE	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

PREPARED BY:

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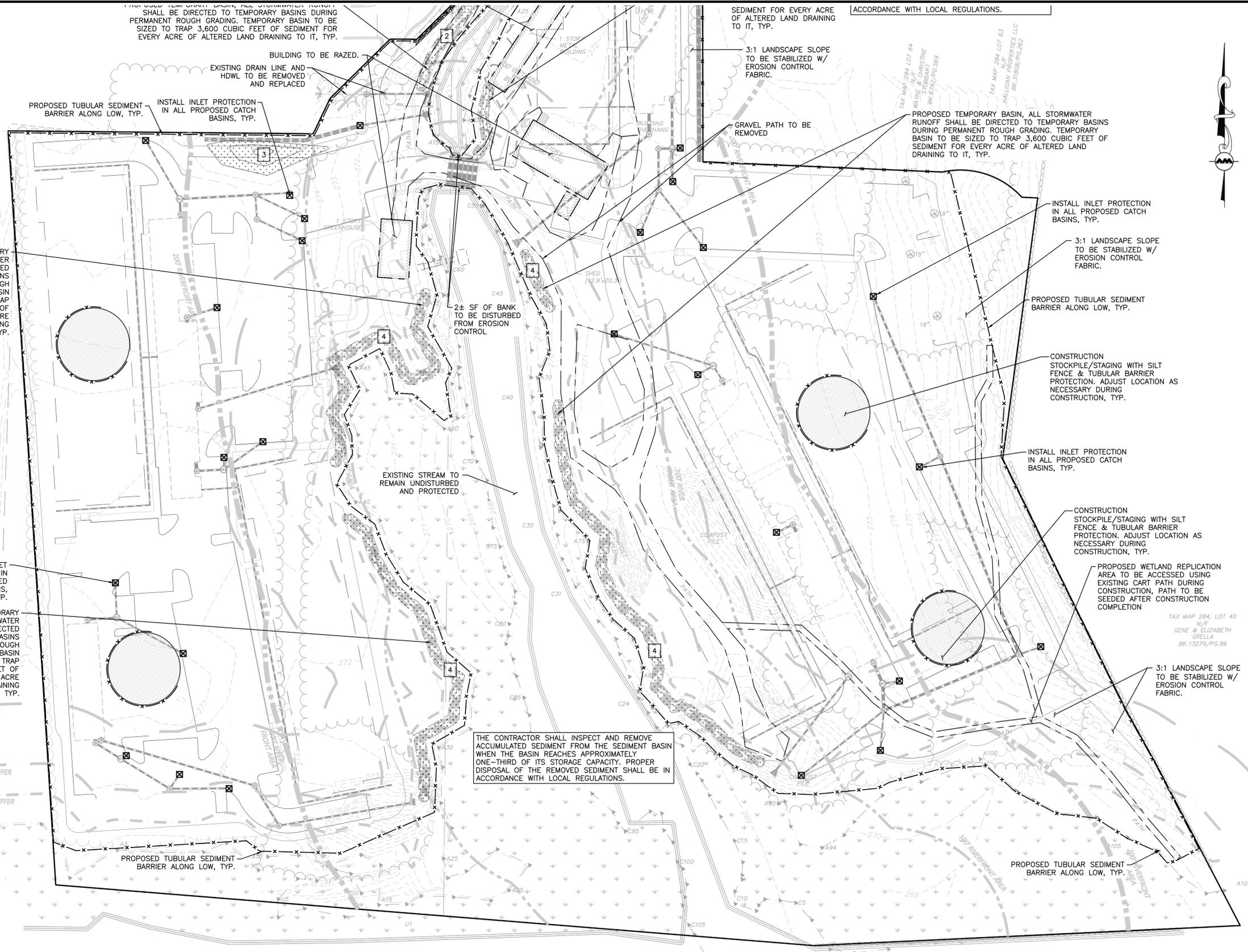
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DRAWING TITLE:	SHEET No.
ABBREVIATIONS & NOTES	C-002

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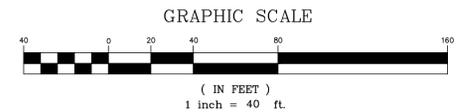


N:\PROJECTS\3317-01\CIVIL\DRAWINGS\CURRENT\3317-01 SITE PREP & EROSION CONTROL.DWG



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SEDIMENT BASIN CALC			
BASIN NUMBER	REQ. VOLUME (CF)	PROVIDED VOLUME (CF)	DISTURBED LAND (AC.)
1	2,416	4,437	0.67
2	3,240	3,252	0.90
3	1,404	3,637	0.40
4	19,800	20,012	5.50



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 PROFESSIONAL ENGINEER FOR  
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**TAG CENTRAL LLC**  
 275 REGATTA DRIVE  
 JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
 444 EAST CENTRAL STREET  
 FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 40'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

PREPARED BY:

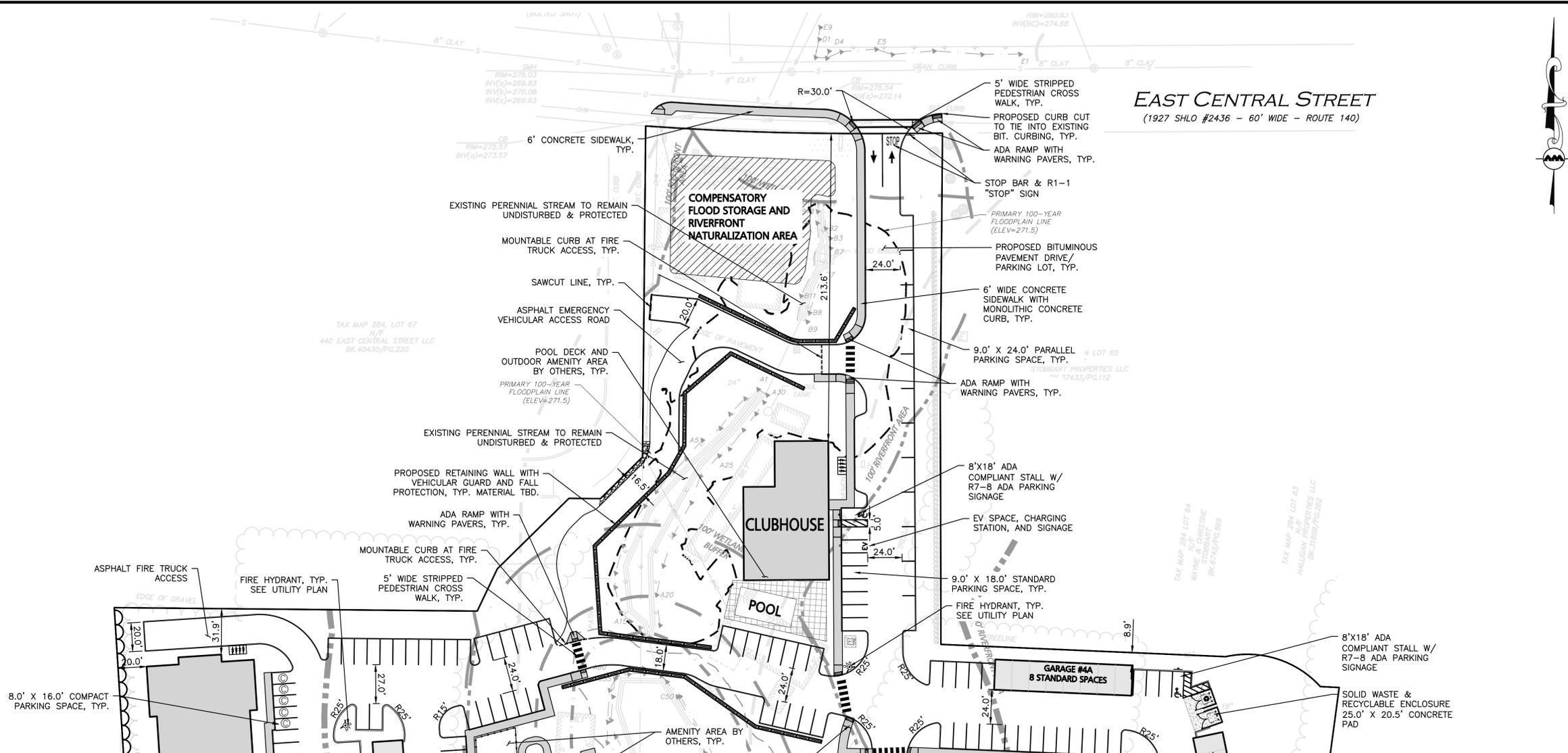
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DRAWING TITLE: **EROSION CONTROL & SITE PREP PLAN** SHEET No. **C-101B**  
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**ZONING SUMMARY TABLE**  
**COMMERCIAL 2 ZONING DISTRICT**  
ZONE 2 WATER RESOURCE DISTRICT  
COMMERCIAL AND BUSINESS CORRIDOR SIGN DISTRICT  
SENIOR VILLAGE OVERLAY DISTRICT  
FLOOD HAZARD OVERLAY DISTRICT

ITEM	COMMERCIAL 2 <sup>(a)</sup> ZONING DISTRICT REQUIRED/ALLOWED	PROPOSED <sup>(b)</sup>
MINIMUM LOT AREA	40,000 SF	635,135 SF
MINIMUM LOT CONTINUOUS FRONTAGE	175.0 FT	207.29 FT
MINIMUM LOT DEPTH	200.0 FT	983.7 FT
MINIMUM LOT WIDTH CIRCLE DIAMETER	157.5 FT	207.0 FT
MINIMUM FRONT YARD	40.0 FT	213.6 FT
MINIMUM SIDE YARD	30.0 FT	8.9 FT <sup>(c)</sup>
MINIMUM REAR YARD	30.0 FT	53.0 FT
MAXIMUM HEIGHT OF BUILDING	40 FT (3 STORIES)	4 STORIES <sup>(d)</sup>
MAX. IMPERV. COVERAGE OF EX. UPLAND (STRUCTURES)	70% STRUCTURES	12.7% STRUCTURES
MAX. IMPERV. COVERAGE OF EX. UPLAND (PAVING)	-	24.6% PAVING
MAX. IMPERV. COVERAGE OF EX. UPLAND (TOTAL)	80%	37.3% IMPERVIOUS

**NOTES:**

1.) TABLE NOTES VALUES OF CURRENT ILLUSTRATED LOT LAYOUT. MODIFICATIONS OF VALUES LISTED MAY BE REQUIRED THROUGH THE ENTITLEMENT PROCESS.

2.) SECTION 185-7 ATTACHMENT 7- USE REGULATIONS SCHEDULE: MULTIFAMILY USE IS NOT ALLOWED IN THE COMMERCIAL II ZONING DISTRICT.

1.1. WAIVER GRANTED TO ALLOW MULTIFAMILY USE. MULTIFAMILY USE IS NOT ALLOWED IN THE COMMERCIAL II ZONING DISTRICT. THIS IS A CUSTOMARY WAIVER REQUEST FOR A 40B PROCEEDING. AS THE REGULATIONS MANDATE, THE ZONING BOARD IS REQUIRED TO ACT IN PLACE OF ALL LOCAL PERMIT GRANTING AUTHORITIES AS PART OF THE ISSUANCE OF THE COMPREHENSIVE PERMIT.

3.) SECTION 185-13 ATTACHMENT 9 - SCHEDULE OF LOT, AREA, FRONTAGE, YARD AND HEIGHT REQUIREMENTS: MINIMUM SIDE YARD DIMENSIONS SHALL BE NO LESS THAN 30 FEET.

1.1. WAIVER GRANTED TO ALLOW SIDE YARD TO BE LESS THAN 30 FEET. A FINAL ANRAD WILL BE NEEDED TO VERIFY IF THE WAIVER WILL BE REQUIRED.

4.) SECTION 185-13 ATTACHMENT 9 - SCHEDULE OF LOT, AREA, FRONTAGE, YARD AND HEIGHT REQUIREMENTS: MAXIMUM HEIGHT OF BUILDING SHALL BE 3 STORIES AND/OR 40 FEET.

1.1. WAIVER GRANTED TO ALLOW HEIGHT OF BUILDING TO BE GREATER THAN 3 STORIES AND 40 FEET. A FINAL ANRAD WILL BE NEEDED TO VERIFY IF THE WAIVER WILL BE REQUIRED.

185-11 - NUMBER OF BUILDINGS ON A LOT: NOT MORE THAN ONE SINGLE-FAMILY OR TWO-FAMILY DWELLING SHALL BE ERRECTED ON A LOT. MORE THAN ONE PRINCIPAL BUILDING OTHER THAN A SINGLE-FAMILY OR TWO-FAMILY DWELLING MAY BE ERRECTED ON A LOT, PROVIDED THAT ACCESS, DRAINAGE AND UTILITIES SERVING EACH STRUCTURE ARE FUNCTIONALLY EQUIVALENT TO THAT REQUIRED FOR SEPARATE LOTS BY THE PLANNING BOARD RULES AND REGULATIONS, AS CERTIFIED TO THE COMMISSIONER OF BUILDINGS BY THE DEPARTMENT OF PUBLIC WORKS REGARDING ACCESS AND DRAINAGE AND BY THE WATER DEPARTMENT AND FIRE DEPARTMENT REGARDING WATER; AND FURTHER PROVIDED THAT LOT AREA REQUIREMENTS ARE MET FOR EACH BUILDING AND USE WITHOUT COUNTING ANY LOT AREA TWICE.

1.1. WAIVER GRANTED TO ALLOW MORE THAN ONE PRINCIPAL BUILDING REGARDLESS OF IF THE LOT AREA REQUIREMENTS ARE MET FOR EACH BUILDING AND USE WITHOUT COUNTING ANY LOT AREA TWICE. THE FINAL DESIGN WILL BE NEEDED TO VERIFY IF THE WAIVER WILL BE REQUIRED.

**OFF-STREET PARKING SUMMARY**

LAND USAGE - MULTI-FAMILY RESIDENTIAL DWELLING UNITS:  
2.0 SPACES PER RESIDENTIAL UNIT

PROPOSED RESIDENTIAL USE:  
(264 UNITS)\*(2.0 PER UNIT) = 528 SPACES

TOTAL PARKING SPACES REQUIRED = 528 SPACES

ADA REQUIRED STANDARD HANDICAPPED & VAN ACCESSIBLE SPACES  
401 to 500 PROPOSED PARKING SPACES = 9 TOTAL ADA SPACES REQUIRED, 2 VAN ACCESSIBLE

SURFACE			GARAGE		TOTAL PROPOSED
STANDARD (9'X18')	ACCESSIBLE (9'X18')	COMPACT (8'X16')	STANDARD GARAGE (12'X21')	ACCESSIBLE GARAGE (15'X21')	
294 <sup>2</sup>	9	81	42	2	428 (1.62 <sup>(b)</sup> STALL/UNIT)

**NOTES:**

1. SECTION 185-21.8.3.A.I - PARKING SCHEDULE: EACH DWELLING UNIT, REGARDLESS OF NUMBER OF BEDROOMS REQUIRES 2 PARKING STALLS.

1.1. WAIVER GRANTED TO PROVIDE LESS THAN 2 PARKING STALLS PER DWELLING UNIT. PROJECT PROPOSES 1.62 PARKING STALLS PER UNIT.

2. 294 STANDARD SPACES INCLUDE 15 EV SPACES WITH CHARGING STATIONS.

**LEGEND**

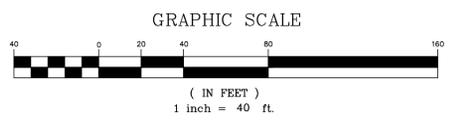
PROP. PROPERTY LINE	---
SIGN	T
BOLLARD	•
BUILDING	[Symbol]
BUILDING ARCHITECTURE	[Symbol]
BUILDING INTERIOR WALLS	[Symbol]
CURB	[Symbol]
RETAINING WALL	[Symbol]
PARKING STRIPING	[Symbol]
ROADWAY STRIPING	[Symbol]
TRAFFIC ARROWS	[Symbol]
SIDEWALK	[Symbol]
ADA ACCESSIBLE RAMP	[Symbol]
ADA DET. WARNING SURFACE	[Symbol]
GRAVEL ACCESS	[Symbol]
SETBACK LINE	[Symbol]
PARKING COUNT	[Symbol]
TREE LINE	[Symbol]
TRANSFORMER	[Symbol]

**GENERAL NOTES:**

1. THE EXISTING CONDITIONS USED IN THIS DRAWING IS FROM AN EXISTING CONDITIONS PLAN PREPARED BY ALLEN & MAJOR ASSOCIATES, INC.

2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

3. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.



*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR  
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APPLICANT/OWNER:  
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275 REGATTA DRIVE  
JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 40'	DWG. NAME:	C-3317-01
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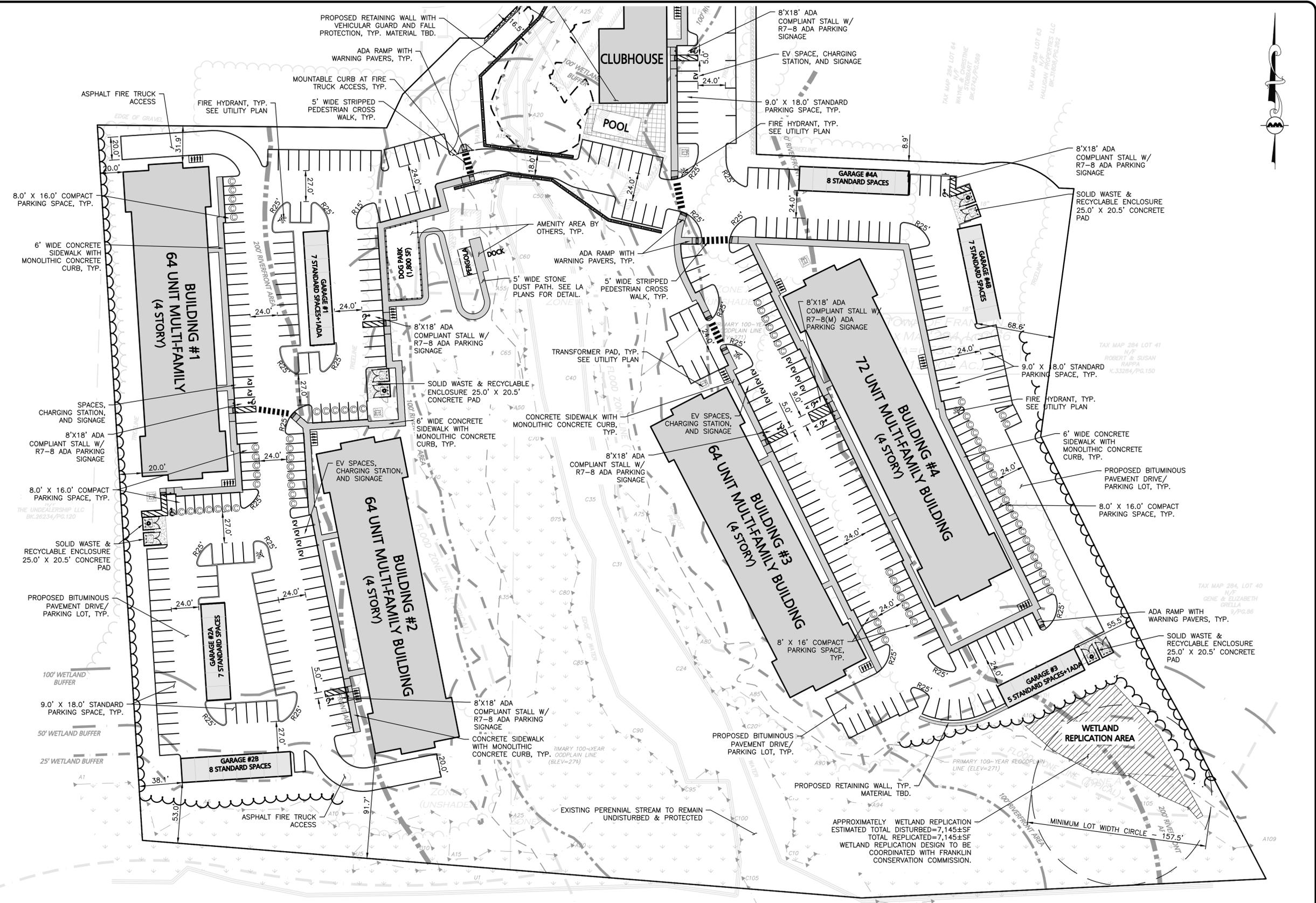
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DRAWING TITLE: **LAYOUT & MATERIALS PLAN** SHEET No. **C-102A**

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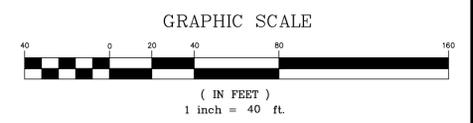
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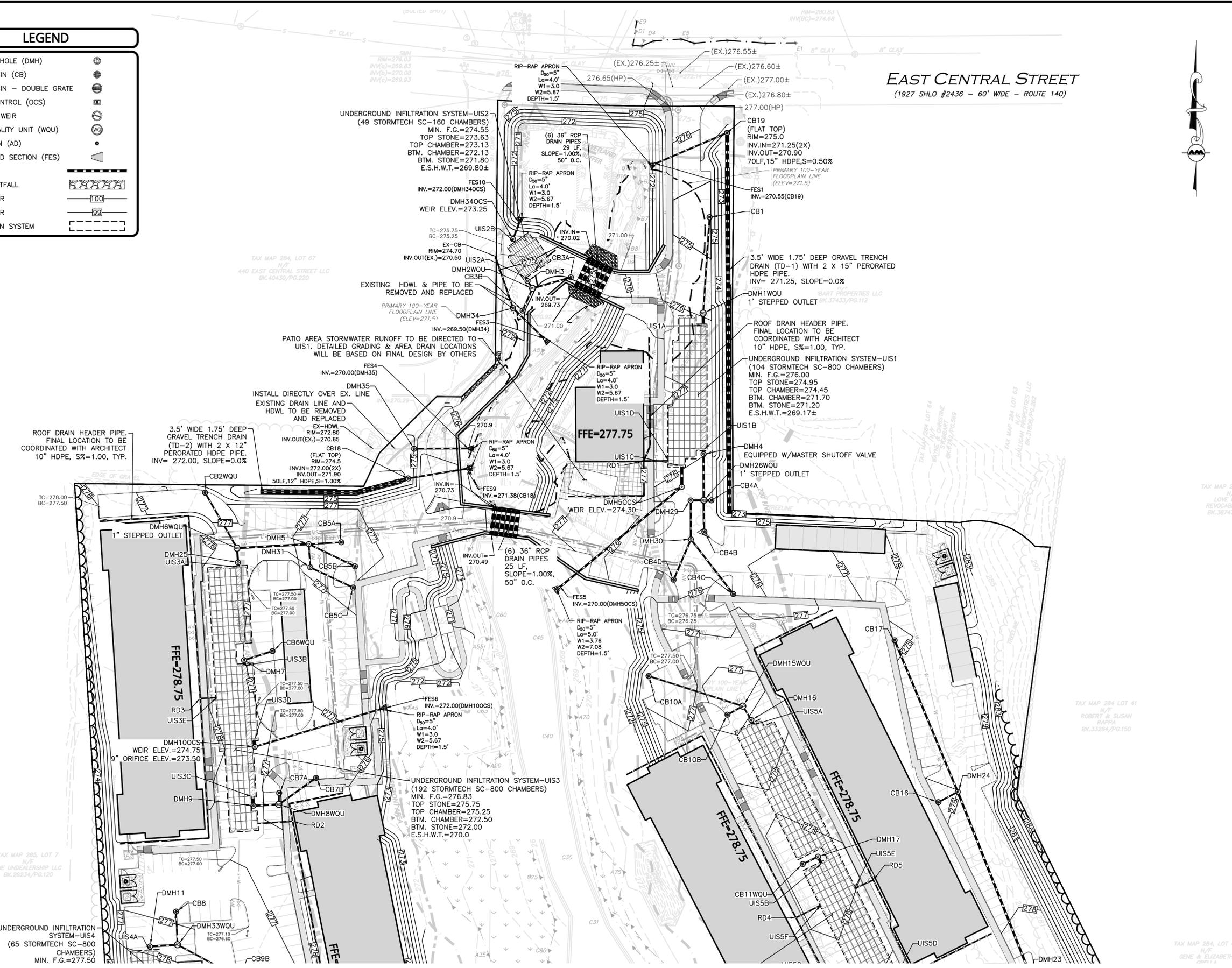
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**LEGEND**

DRAIN MANHOLE (DMH)	
CATCH BASIN (CB)	
CATCH BASIN - DOUBLE GRATE	
OUTLET CONTROL (OCS)	
DIVERSION WEIR	
WATER QUALITY UNIT (WQU)	
AREA DRAIN (AD)	
FLARED END SECTION (FES)	
DRAIN LINE	
RIPRAP OUTFALL	
5' CONTOUR	
1' CONTOUR	
INFILTRATION SYSTEM	

**EAST CENTRAL STREET**  
(1927 SHLO #2436 - 60' WIDE - ROUTE 140)



*Carlton M. Quinn*  
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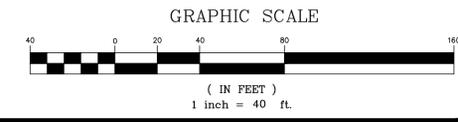
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DRAWING TITLE: **GRADING & DRAINAGE PLAN** SHEET No. **C-103A**



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TAX MAP 285, LOT 7  
N/F  
THE UNDERSHIP LLC  
BK 26234/PG 120

TAX MAP 284, LOT 41  
N/F  
ROBERT & SUSAN  
84794  
BK 33284/PG 150

TAX MAP 284, LOT 40  
N/F  
GENE & ELIZABETH  
GRILLA  
BK 33279/PG 86

UNDERGROUND INFILTRATION SYSTEM-UIS4 (65 STORMTECH SC-800 CHAMBERS)  
MIN. F.G.=277.50  
TOP STONE=276.25  
TOP CHAMBER=275.75  
BTM. CHAMBER=273.00  
E.S.H.W.T.=270.50

UNDERGROUND INFILTRATION SYSTEM-UIS3 (192 STORMTECH SC-800 CHAMBERS)  
MIN. F.G.=276.83  
TOP STONE=275.75  
TOP CHAMBER=275.25  
BTM. CHAMBER=272.50  
E.S.H.W.T.=270.0

UNDERGROUND INFILTRATION SYSTEM-UIS5 (240 STORMTECH SC-800 CHAMBERS)  
MIN. F.G.=274.63  
TOP STONE=273.55  
TOP CHAMBER=273.05  
BTM. CHAMBER=270.30  
E.S.H.W.T.=267.80

DMH140CS WEIR ELEV.=276.00  
9" ORIFICE ELEV.=274.25  
BUFFER  
DMH11  
DMH33WQU  
DMH32  
DMH27  
DMH28

RIP-RAP APRON  
D<sub>50</sub>=5"  
L<sub>0</sub>=4.0'  
W<sub>1</sub>=3.0  
W<sub>2</sub>=5.67  
DEPTH=1.5'



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DRAWING TITLE: **GRADING & DRAINAGE PLAN**  
SHEET No. **C-103B**  
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STRUCTURE	STRUCTURE DETAILS
CB1	RIM = 274.6 INV IN = 271.54 (DMH1WQU)
CB2WQU	RIM = 276.5 INV OUT = 272.18 (DMH6WQU)
CB3A	RIM = 274.8 INV OUT = 271.66 (DMH2WQU)
CB3B	RIM = 274.8 INV OUT = 271.52 (DMH2WQU)
CB4A	RIM = 275.5 INV OUT = 271.17 (DMH26WQU)
CB4B	RIM = 275.0 INV OUT = 271.38 (DMH26WQU)
CB4C	RIM = 275.6 INV OUT = 272.36 (DMH30)
CB4D	RIM = 275.7 INV OUT = 272.14 (DMH30)
CB5A	RIM = 276.5 INV OUT = 272.64 (DMH5)
CB5B	RIM = 276.8 INV OUT = 272.80 (DMH5)
CB5C	RIM = 276.8 INV OUT = 273.07 (DMH31)
CB6WQU	RIM = 276.5 INV OUT = 272.76 (DMH7)
CB7A	RIM = 276.5 INV OUT = 272.92 (DMH8WQU)
CB7B	RIM = 276.0 INV OUT = 273.22 (DMH8WQU)

STRUCTURE	STRUCTURE DETAILS
CB8	RIM = 276.6 INV OUT = 273.63 (DMH33WQU)
CB9A	RIM = 276.2 INV OUT = 273.00 (DMH32)
CB9B	RIM = 276.4 INV OUT = 273.97 (DMH33WQU)
CB9C	RIM = 276.8 INV OUT = 272.33 (DMH12WQU)
CB9D	RIM = 276.1 INV OUT = 273.35 (DMH32)
CB10A	RIM = 276.0 INV OUT = 271.41 (DMH15WQU)
CB10B	RIM = 277.0 INV OUT = 270.70 (DMH15WQU)
CB11WQU	RIM = 277.0 INV OUT = 270.55 (DMH17)
CB12	RIM = 277.0 INV OUT = 270.74 (DMH21WQU)
CB13	RIM = 275.8 INV OUT = 271.79 (DMH22)
CB14	RIM = 276.8 INV OUT = 271.25 (DMH22)
CB15	RIM = 277.0 INV OUT = 272.42 (DMH23)
CB16	RIM = 277.8 INV OUT = 274.29 (DMH24)
CB17	RIM = 277.8 INV OUT = 274.97 (DMH24)

STRUCTURE	STRUCTURE DETAILS
CB18	RIM = 275.5 INV IN = 271.90 (FES9)
CB19	RIM = 275.0 INV OUT = 270.90 (FES1)
DMH1WQU	RIM = 276.0 INV IN = 270.70 (CB1) INV OUT = 271.70 (UIS1A)
DMH2WQU	RIM = 274.8 INV IN = 271.31 (CB3B) INV IN = 271.31 (CB3A) INV OUT = 272.31 (DMH3)
DMH3	RIM = 274.8 INV IN = 272.23 (DMH2WQU) INV OUT = 272.13 (UIS2A)
DMH4	RIM = 276.0 INV IN = 271.70 (DMH26WQU) INV OUT = 271.70 (UIS1B)
DMH5	RIM = 276.8 INV IN = 272.35 (CB5A) INV IN = 272.35 (CB5B) INV IN = 272.35 (DMH31) INV OUT = 272.25 (DMH6WQU)
DMH5OCS	RIM = 275.6 INV IN = 271.70 (UIS1C) INV OUT = 271.70 (FES5)
DMH6WQU	RIM = 277.8 INV IN = 271.62 (DMH5) INV IN = 271.62 (CB2WQU) INV OUT = 272.63 (DMH25)
DMH7	RIM = 277.0 INV IN = 272.50 (CB6WQU) INV OUT = 272.50 (UIS3B)
DMH8WQU	RIM = 276.6 INV IN = 272.82 (CB7A) INV IN = 272.82 (CB7B) INV OUT = 272.72 (DMH9)
DMH9	RIM = 277.2 INV IN = 272.50 (DMH8WQU) INV OUT = 272.50 (UIS3C)
DMH10OCS	RIM = 277.3 INV IN = 272.50 (UIS3D) INV OUT = 273.16 (FES6)
DMH11	RIM = 277.8 INV IN = 273.00 (DMH33WQU) INV OUT = 273.00 (UIS4A)

STRUCTURE	STRUCTURE DETAILS
DMH12WQU	RIM = 276.8 INV IN = 272.28 (CB9C) INV IN = 272.28 (DMH32) INV OUT = 273.28 (DMH13)
DMH13	RIM = 277.5 INV IN = 273.00 (DMH12WQU) INV OUT = 273.00 (UIS4C)
DMH14OCS	RIM = 276.3 INV IN = 273.00 (UIS4B) INV OUT = 274.03 (DMH27)
DMH15WQU	RIM = 276.8 INV IN = 270.54 (CB10A) INV IN = 270.54 (CB10B) INV OUT = 270.44 (DMH16)
DMH16	RIM = 277.1 INV IN = 270.30 (DMH15WQU) INV OUT = 271.70 (UIS1B)
DMH17	RIM = 277.4 INV IN = 270.40 (CB11WQU) INV OUT = 270.30 (UIS5B)
DMH18OCS	RIM = 278.0 INV IN = 270.30 (UIS5C) INV OUT = 272.98 (FES8)
DMH20	RIM = 277.6 INV IN = 270.30 (DMH21WQU) INV OUT = 270.30 (UIS5D)
DMH21WQU	RIM = 277.3 INV IN = 270.60 (CB12) INV IN = 270.60 (DMH22) INV OUT = 270.50 (DMH20)
DMH22	RIM = 277.4 INV IN = 270.92 (CB14) INV IN = 270.92 (CB13) INV IN = 270.92 (DMH23) INV OUT = 270.82 (DMH21WQU)
DMH23	RIM = 277.5 INV IN = 272.23 (DMH24) INV IN = 272.23 (CB15) INV OUT = 272.13 (DMH22)
DMH24	RIM = 278.0 INV IN = 274.10 (CB16) INV IN = 274.10 (CB17) INV OUT = 274.00 (DMH23)
DMH25	RIM = 277.5 INV IN = 272.50 (DMH6WQU) INV OUT = 272.50 (UIS3A)
DMH26WQU	RIM = 275.6 INV IN = 271.10 (CB4A) INV IN = 271.10 (DMH29) INV IN = 271.10 (CB4B) INV OUT = 272.10 (DMH4)

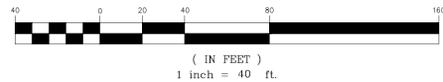
STRUCTURE	STRUCTURE DETAILS
DMH27	RIM = 276.5 INV IN = 272.69 (DMH14OCS) INV OUT = 272.59 (DMH28)
DMH28	RIM = 276.8 INV IN = 272.20 (DMH27) INV OUT = 272.10 (FES7)
DMH29	RIM = 275.3 INV IN = 271.32 (DMH30) INV OUT = 271.22 (DMH26WQU)
DMH30	RIM = 275.4 INV IN = 271.76 (CB4C) INV IN = 271.76 (CB4D) INV OUT = 271.66 (DMH29)
DMH31	RIM = 276.8 INV IN = 272.66 (CB5C) INV IN = 272.66 (CB5A) INV OUT = 272.56 (DMH5)
DMH32	RIM = 276.8 INV IN = 272.85 (CB9D) INV IN = 272.85 (CB9A) INV OUT = 272.75 (DMH12WQU)
DMH33WQU	RIM = 277.5 INV IN = 273.34 (CB8) INV IN = 273.34 (CB9E) INV OUT = 273.24 (DMH11)
DMH34	RIM = 274.8 INV IN = 269.99 (EX-CB) INV OUT = 269.89 (FES3 )
DMH34OCS	RIM = 275.2 INV IN = 272.13 (UIS2B) INV OUT = 272.15 (FES10)
DMH35	RIM = 275.0 INV IN = 270.40 (EX-HDWL) INV OUT = 270.33 (FES4)

PIPE SEGMENT	SIZE	LENGTH	SLOPE	MATERIAL
CB1 - DMH1WQU	12"	84'	1.00%	HDPE
CB2WQU - DMH6WQU	12"	56'	1.00%	HDPE
CB3A - DMH2WQU	12"	35'	1.00%	HDPE
CB3B - DMH2WQU	12"	21'	1.00%	HDPE
CB4A - DMH26WQU	12"	7'	1.00%	HDPE
CB4B - DMH26WQU	12"	27'	1.00%	HDPE
CB4C - DMH30	12"	61'	1.00%	HDPE
CB4D - DMH30	12"	38'	1.00%	HDPE
CB5A - DMH5	12"	29'	1.00%	HDPE
CB5B - DMH5	12"	45'	1.00%	HDPE
CB5C - DMH31	12"	41'	1.00%	HDPE
CB6WQU - DMH7	12"	26'	1.00%	HDPE
CB7A - DMH8WQU	12"	10'	1.00%	HDPE
CB7B - DMH8WQU	12"	40'	1.00%	HDPE
CB8 - DMH33WQU	12"	29'	1.00%	HDPE
CB9A - DMH32	12"	14'	1.00%	HDPE
CB9B - DMH33WQU	12"	63'	1.00%	HDPE
CB9C - DMH12WQU	12"	6'	1.00%	HDPE
CB9D - DMH32	12"	49'	1.00%	HDPE
CB10A - DMH15WQU	12"	87'	1.00%	HDPE
CB10B - DMH15WQU	12"	15'	1.00%	HDPE
CB11WQU - DMH17	12"	15'	1.00%	HDPE
CB12 - DMH21WQU	12"	14'	1.00%	HDPE
CB13 - DMH22	12"	87'	1.00%	HDPE
CB14 - DMH22	12"	33'	1.00%	HDPE

PIPE SEGMENT	SIZE	LENGTH	SLOPE	MATERIAL
CB15 - DMH23	12"	19'	1.00%	HDPE
CB16 - DMH24	12"	19'	1.00%	HDPE
CB17 - DMH24	15"	143'	0.61%	HDPE
CB18 - FES9	12"	52'	1.00%	HDPE
CB19 - FES1	12"	68'	0.51%	HDPE
DMH1WQU - UIS1A	24"	10'	0.00%	HDPE
DMH2WQU - DMH3	12"	8'	1.00%	HDPE
DMH4 - UIS1B	24"	4'	0.00%	HDPE
DMH5 - DMH6WQU	15"	63'	1.00%	HDPE
DMH5OCS - FES5	15"	138'	1.24%	HDPE
DMH6WQU - DMH25	15"	13'	1.00%	HDPE
DMH7 - UIS3B	24"	5'	0.00%	HDPE
DMH8WQU - DMH9	15"	22'	1.00%	HDPE
DMH9 - UIS3C	24"	8'	0.00%	HDPE
DMH10OCS - FES6	12"	116'	1.00%	HDPE
DMH11 - UIS4A	24"	4'	0.00%	HDPE
DMH12WQU - DMH13	15"	25'	1.12%	HDPE
DMH13 - UIS4C	24"	4'	0.00%	HDPE
DMH14OCS - DMH27	15"	133'	1.01%	HDPE
DMH15WQU - DMH16	12"	14'	1.00%	HDPE
DMH16 - UIS5A	24"	5'	0.00%	HDPE
DMH17 - UIS5B	24"	7'	0.00%	HDPE
DMH18OCS - FES8	12"	98'	1.00%	HDPE
DMH20 - UIS5D	24"	4'	0.00%	HDPE
DMH21WQU - DMH20	24"	19'	1.05%	HDPE

PIPE SEGMENT	SIZE	LENGTH	SLOPE	MATERIAL
DMH22 - DMH21WQU	24"	22'	1.00%	HDPE
DMH23 - DMH22	18"	121'	1.00%	HDPE
DMH24 - DMH23	18"	176'	1.00%	HDPE
DMH26WQU - DMH4	18"	40'	1.00%	HDPE
DMH27 - DMH28	15"	39'	1.00%	HDPE
DMH28 - FES7	12"	110'	1.00%	HDPE
DMH29 - DMH26WQU	15"	11'	1.00%	HDPE
DMH30 - DMH29	15"	34'	1.00%	HDPE
DMH31 - DMH5	12"	20'	1.00%	HDPE
DMH32 - DMH12WQU	12"	48'	1.00%	HDPE
DMH33WQU - DMH11	15"	24'	1.00%	HDPE
DMH34 - FES3	12"	38'	1.04%	HDPE
DMH35 - FES4	12"	47'	0.70%	HDPE
EX-CB - DMH34	12"	48'	1.04%	HDPE
RD1 - UIS1D	10"	22'	1.00%	HDPE
RD2 - UIS3F	10"	32'	1.00%	HDPE
RD3 - UIS3E	10"	15'	1.00%	HDPE
RD4 - UIS5F	10"	25'	1.00%	HDPE
RD5 - UIS5E	10"	18'	1.00%	HDPE
UIS1C - DMH5OCS	24"	18'	0.00%	HDPE
UIS3D - DMH10OCS	24"	6'	0.00%	HDPE
UIS4B - DMH14OCS	24"	3'	0.00%	HDPE
UIS5C - DMH18OCS	24"	4'	0.00%	HDPE

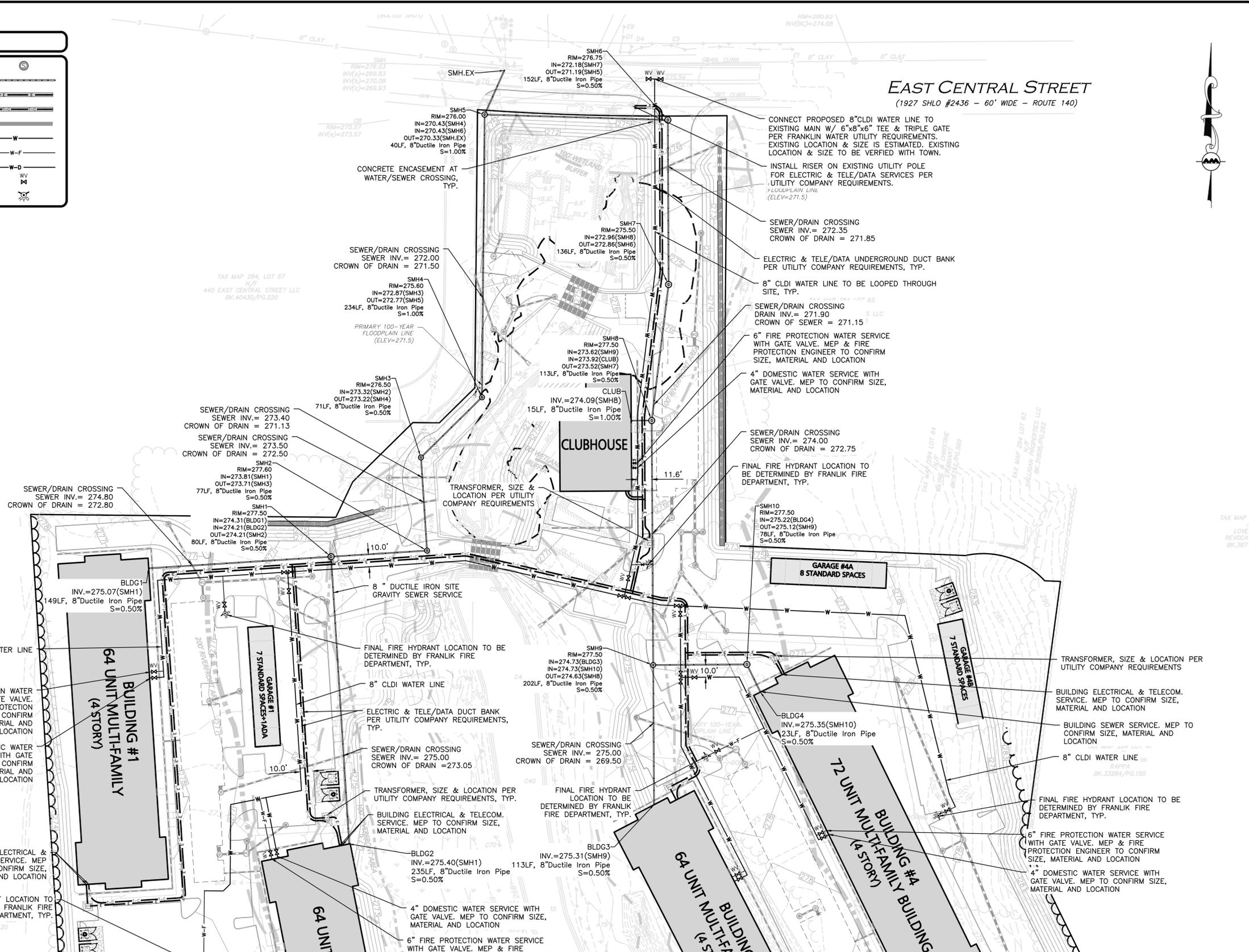
GRAPHIC SCALE



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SEWER MANHOLE	
SEWER LINE	
ELECTRICAL CONDUIT	
TELE/CABLE CONDUIT	
CONCRETE PIPE ENCASUREMENT	
WATER LINE	
WATER (FIRE SERVICE)	
WATER (DOMESTIC SERVICE)	
WATER VALVE	
HYDRANT	



**EAST CENTRAL STREET**  
(1927 SHLO #2436 - 60' WIDE - ROUTE 140)



*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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B	7/21/25	REVISED PER NOI PEER REVIEW
A	6/11/25	REVISED PER TOWN COMMENTS

APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
275 REGATTA DRIVE  
JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 40'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

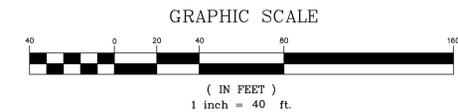
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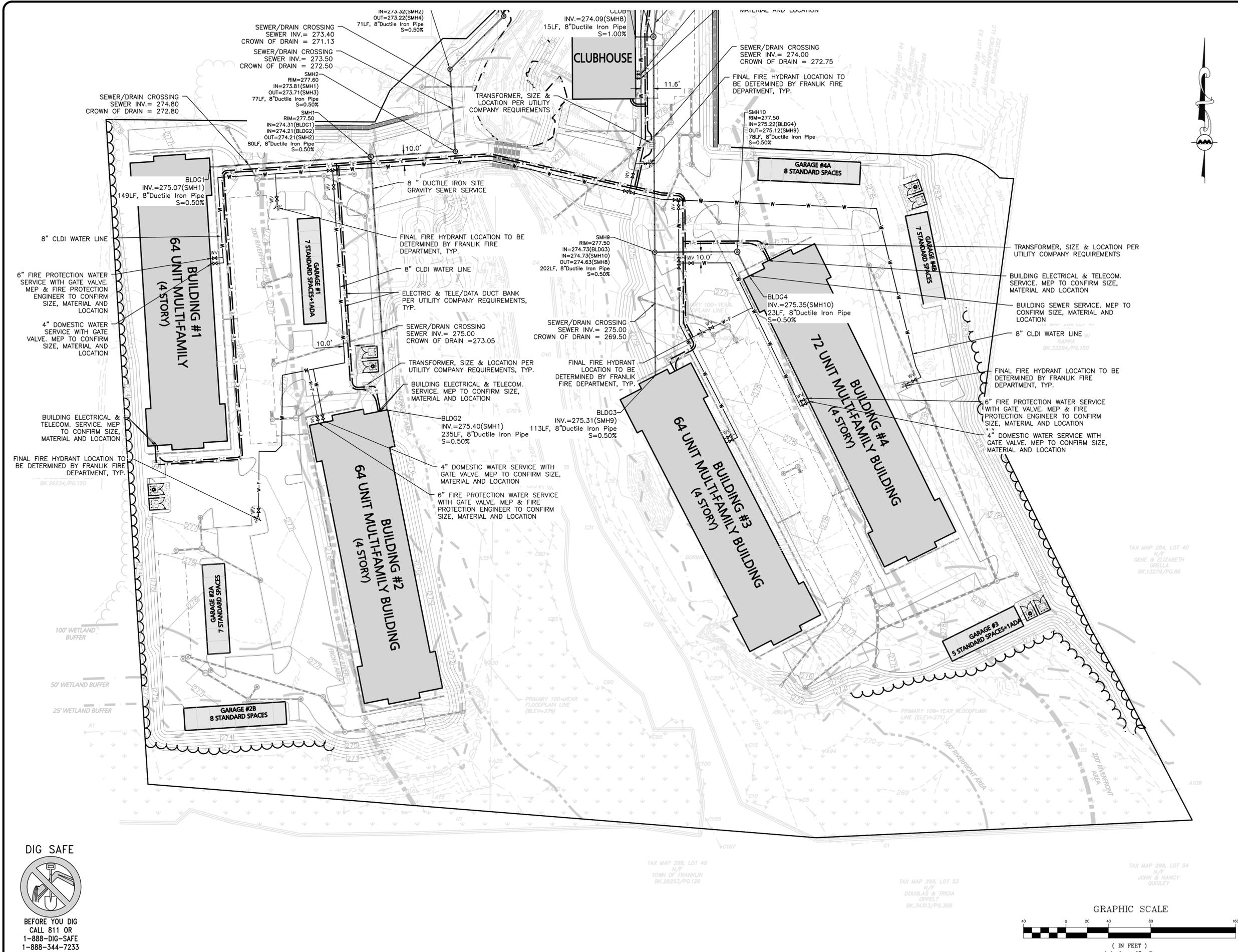


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 TAG CENTRAL LLC  
 275 REGATTA DRIVE  
 JUPITER, FL 33477

PROJECT:  
 40B MULTIFAMILY  
 444 EAST CENTRAL STREET  
 FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 40'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

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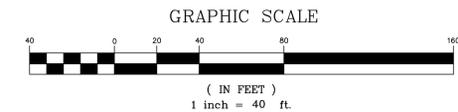
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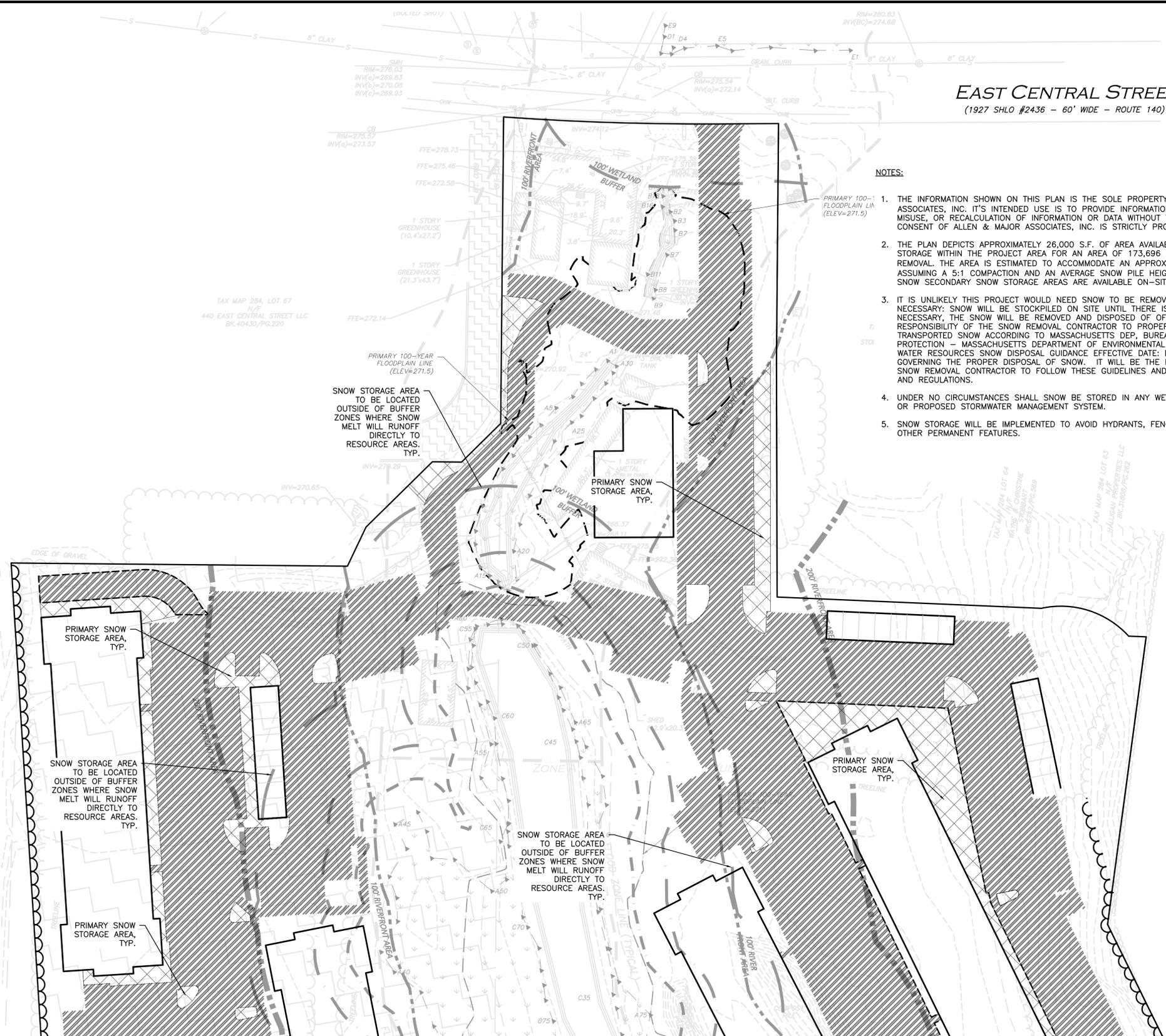


**EAST CENTRAL STREET**  
(1927 SHLO #2436 - 60' WIDE - ROUTE 140)



**NOTES:**

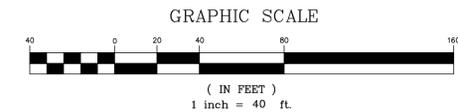
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3. IT IS UNLIKELY THIS PROJECT WOULD NEED SNOW TO BE REMOVED OFF-SITE, BUT IF NECESSARY: SNOW WILL BE STOCKPILED ON SITE UNTIL THERE IS NOT ENOUGH SPACE. AS NECESSARY, THE SNOW WILL BE REMOVED AND DISPOSED OF OFF-SITE. IT WILL BE THE RESPONSIBILITY OF THE SNOW REMOVAL CONTRACTOR TO PROPERLY DISPOSE OF TRANSPORTED SNOW ACCORDING TO MASSACHUSETTS DEP, BUREAU OF RESOURCE PROTECTION - MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER RESOURCES SNOW DISPOSAL GUIDANCE EFFECTIVE DATE: DECEMBER 23, 2019, GOVERNING THE PROPER DISPOSAL OF SNOW. IT WILL BE THE RESPONSIBILITY OF THE SNOW REMOVAL CONTRACTOR TO FOLLOW THESE GUIDELINES AND ALL APPLICABLE LAWS AND REGULATIONS.
4. UNDER NO CIRCUMSTANCES SHALL SNOW BE STORED IN ANY WETLAND RESOURCE AREA OR PROPOSED STORMWATER MANAGEMENT SYSTEM.
5. SNOW STORAGE WILL BE IMPLEMENTED TO AVOID HYDRANTS, FENCES LANDSCAPING AND OTHER PERMANENT FEATURES.



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AREAS REQUIRING SNOW REMOVAL	
PRIMARY SNOW STORAGE AREAS	



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APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
275 REGATTA DRIVE  
JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 40'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

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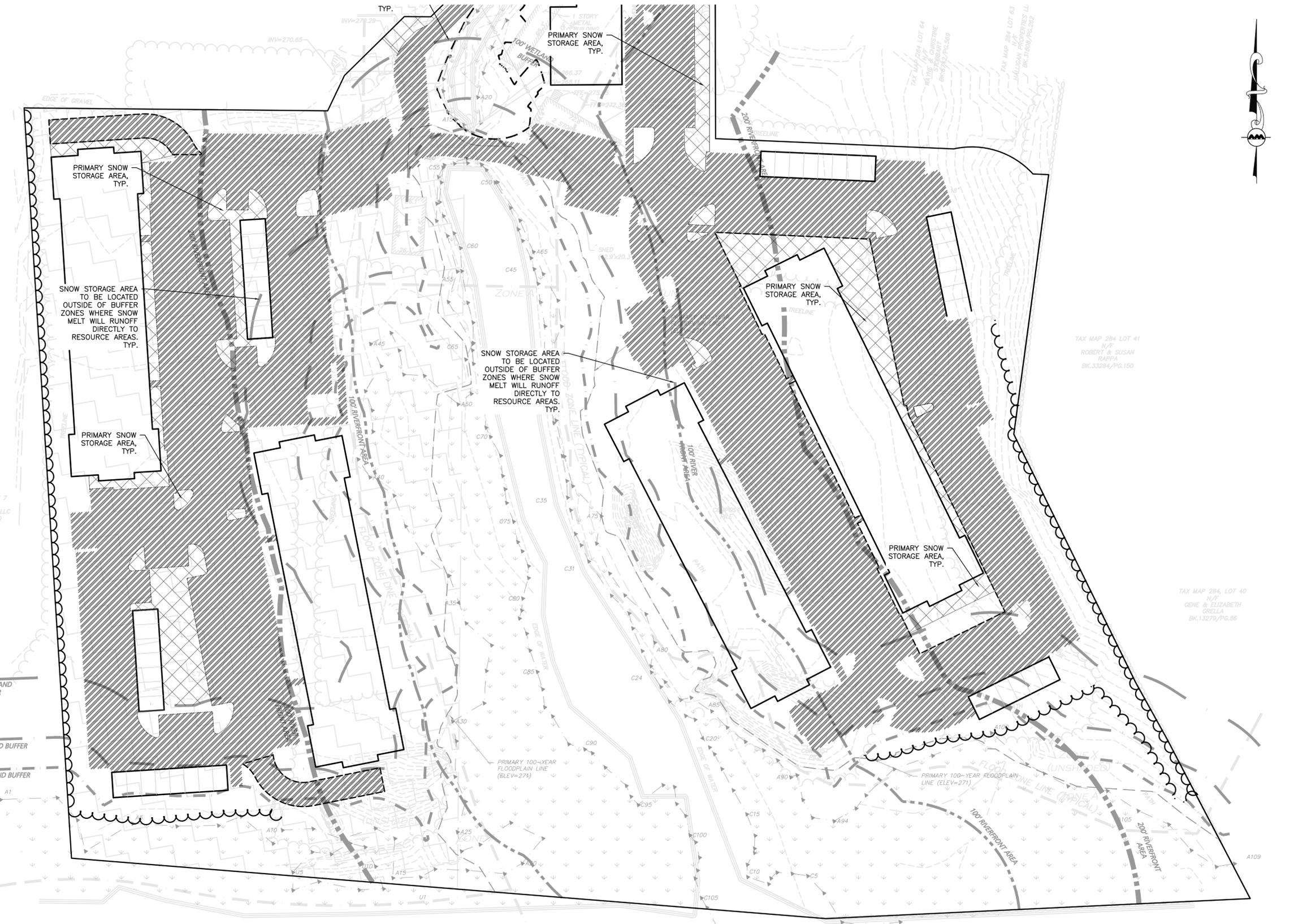
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PROJECT NO.	3317-01	DATE:	02-11-2025
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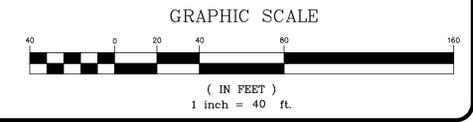
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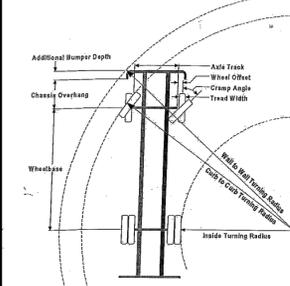


### Turning Performance Analysis

2/12/2007

Job Number: Franklin Fire Department  
Department: 9958

Chassis: Quantum, Bright Finish, S Chassis, PAF Body  
Axial, Platform 100', No Pump, SB Body



**Parameters:**

Inside Cramp Angle:	45°
Axle Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	17.70 in.
Chassis Overhang:	82.44 in.
Additional Bumper Depth:	26.00 in.
Front Overhang:	161.35 in.
Wheelbase:	256.25 in.

**Calculated Turning Radii:**

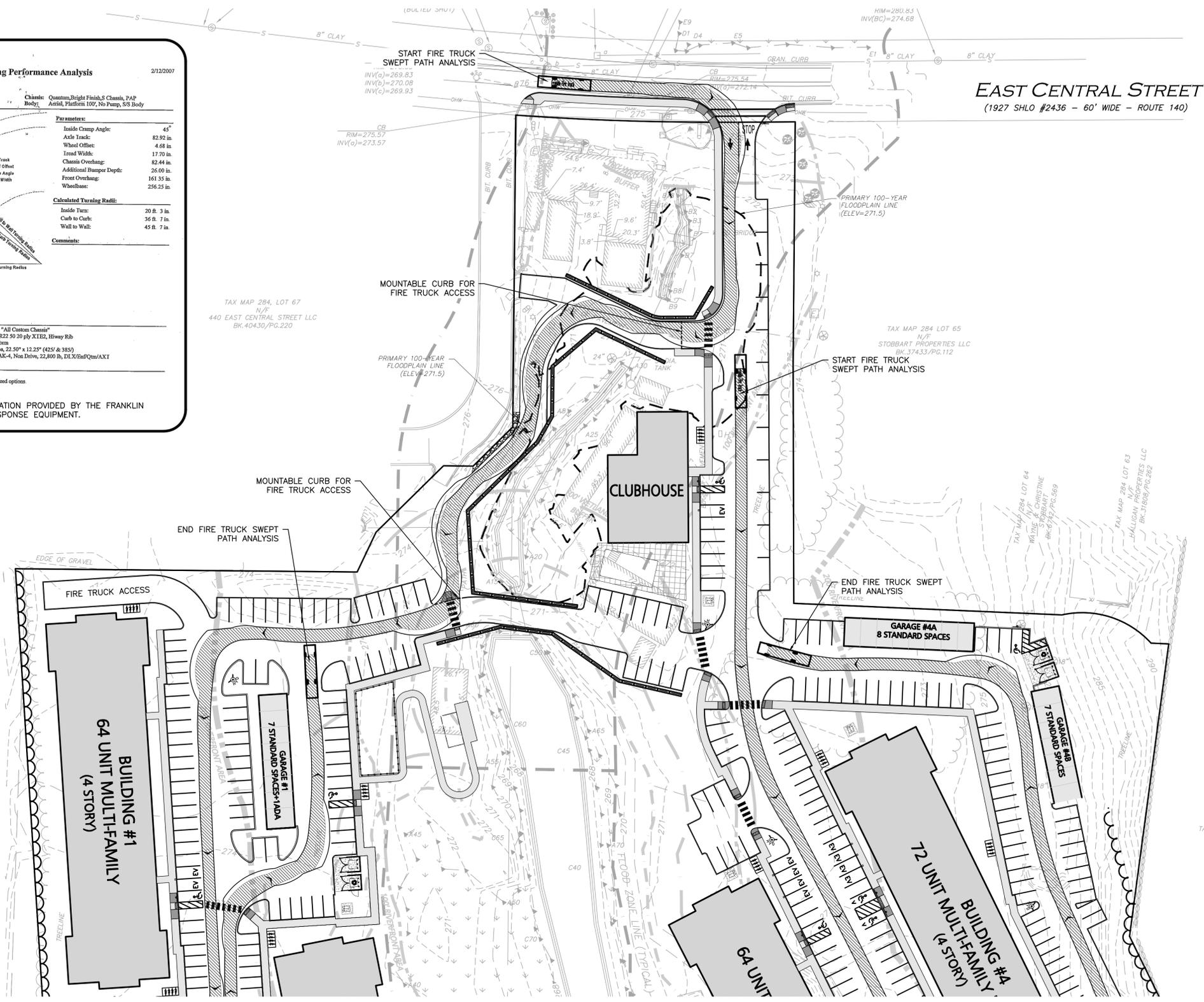
Inside Turn:	20 ft. 3 in.
Clear to Curb:	36 ft. 7 in.
Wall to Wall:	45 ft. 7 in.

**Comments:**

**Components:**

FRIDGE #	Description
0022248	Bumper, 26" extended - "All Custom Chassis"
0001647	Tires, Michelin, 42556R22 50 20 ply X1E2, Hwy Rbf
0022160	Axial, 100' Pierce Platform
0019011	Wheels, Fst, Alum, 22.50" x 12.25" (425 & 385)
0018453	Axle, Front, Oshkosh 1AX-4, Non Drive, 22,800 lb, DLX/End/Qtz/AXT

Notes:  
Actual Inside Cramp Angle may be less due to highly specialized options.  
Curb to Curb turning radius calculated for a 9.00 inch curb.  
FIRE TRUCK CIRCULATION INFORMATION PROVIDED BY THE FRANKLIN FIRE DEPARTMENT FOR FIRST RESPONSE EQUIPMENT.



*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

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A	6/11/25	REVISED PER TOWN COMMENTS

APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
275 REGATTA DRIVE  
JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 40'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

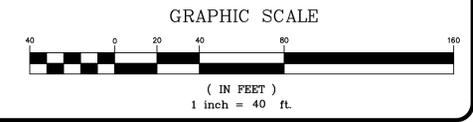
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<b>FIRE TRUCK TURNING PLAN</b>	<b>C-106A</b>

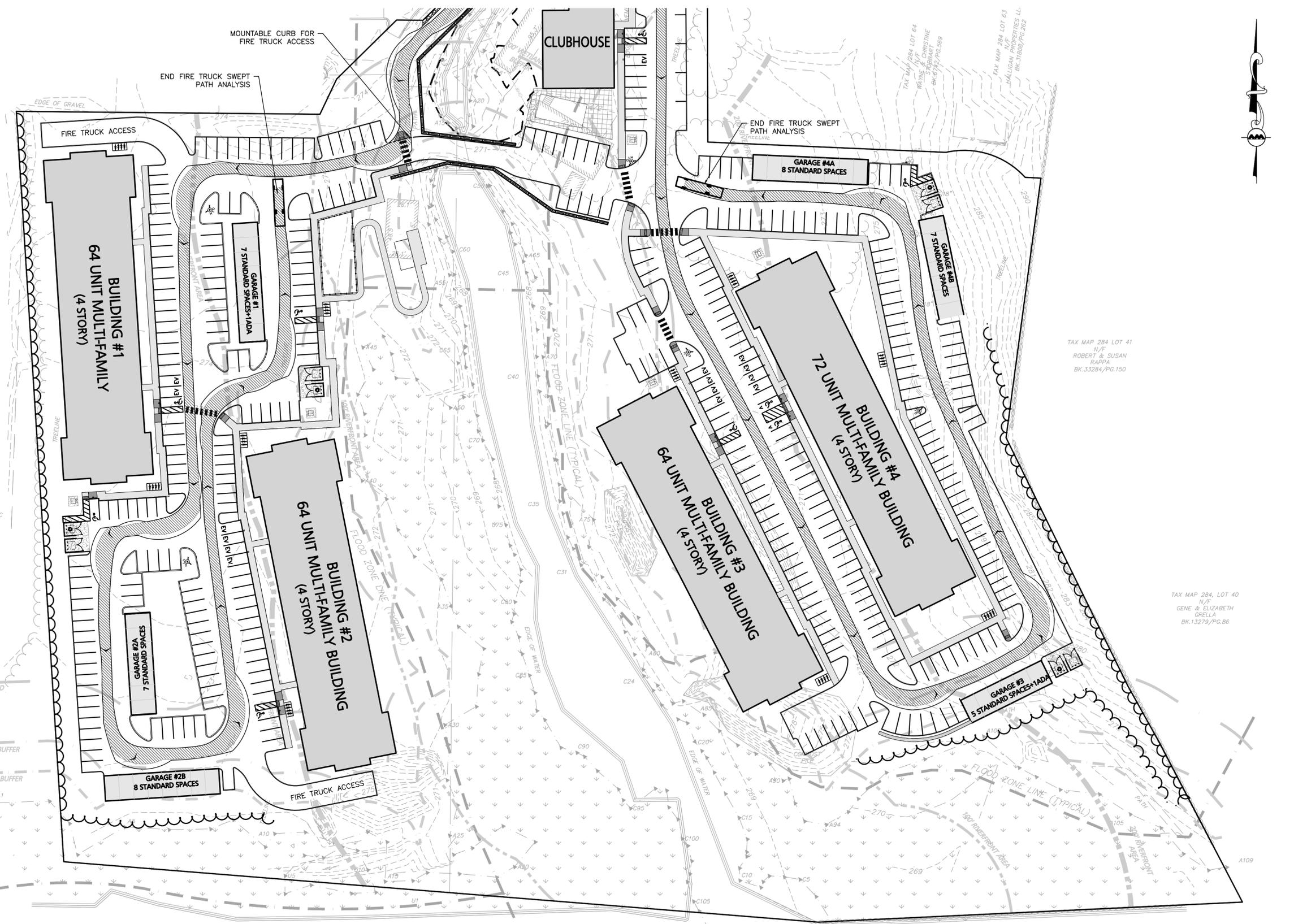


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TAX MAP 285, LOT 7  
N/F  
THE UNDEALERSHIP LLC  
BK.26234/PG.120

100' WETLAND BUFFER  
50' WETLAND BUFFER  
25' WETLAND BUFFER

TAX MAP 284 LOT 41  
N/F  
ROBERT & SUSAN RAPPA  
BK.33284/PG.150

TAX MAP 284, LOT 40  
N/F  
GENE & ELIZABETH GRELLA  
BK.13279/PG.86

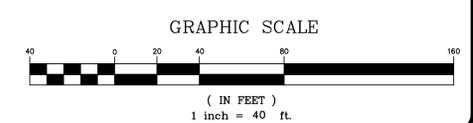
TAX MAP 299, LOT 49  
N/F  
TOWN OF FRANKLIN  
BK.26253/PG.126

TAX MAP 299, LOT 53  
N/F  
DOUGLAS & TRICIA OPPELT  
BK.34313/PG.308

TAX MAP 299, LOT 54  
N/F  
JOHN & NANCY QUIGLEY

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*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR  
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275 REGATTA DRIVE  
JUPITER, FL 33477

PROJECT:  
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FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
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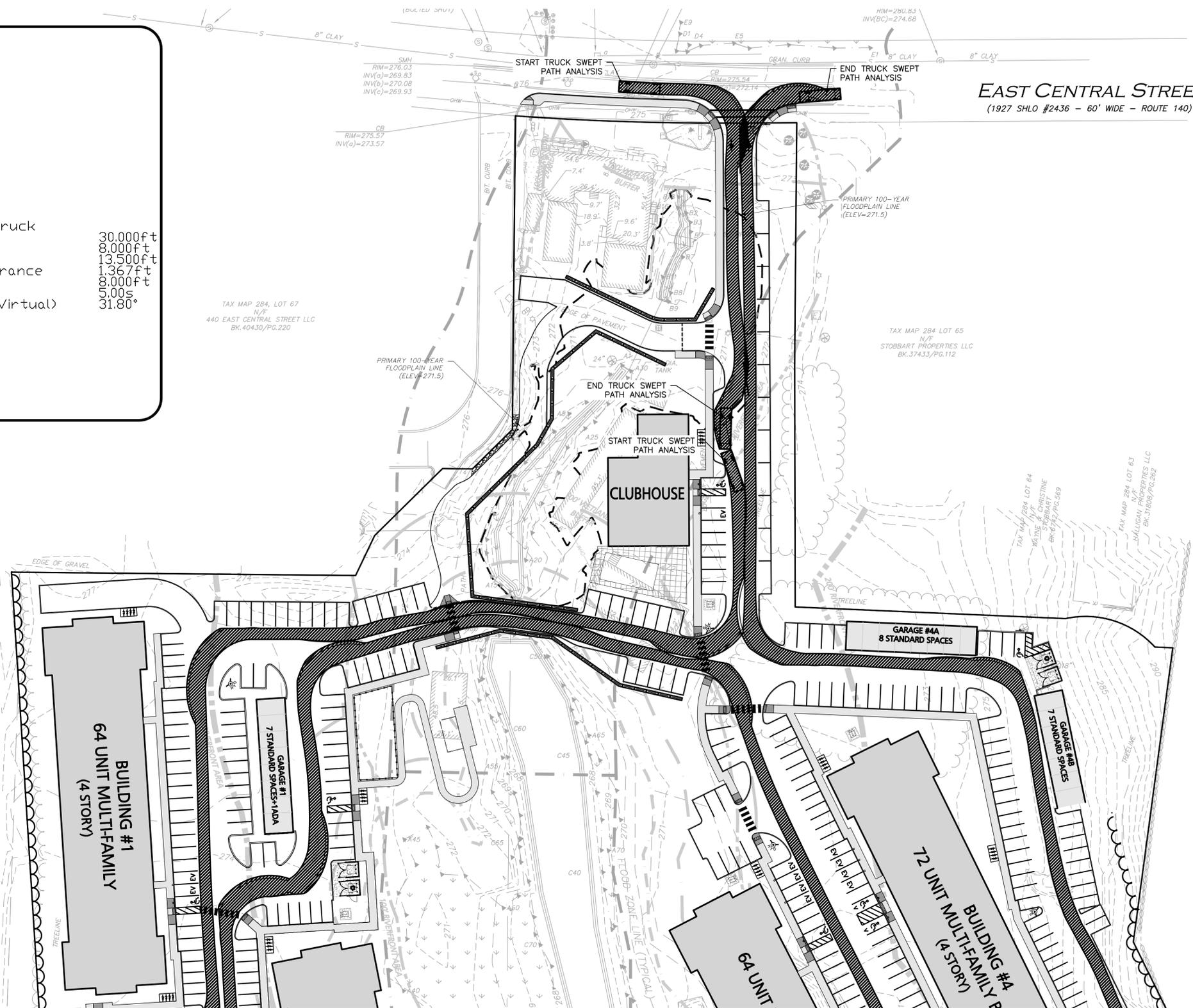
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DRAWING TITLE: FIRE TRUCK TURNING PLAN  
SHEET No. C-106B

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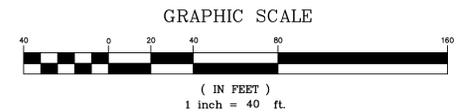
SU-30 - Single Unit Truck  
 Overall Length 30.000ft  
 Overall Width 8.000ft  
 Overall Body Height 13.500ft  
 Min Body Ground Clearance 1.367ft  
 Track Width 5.000ft  
 Lock-to-lock time 5.00s  
 Max Steering Angle (Virtual) 31.80°



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 275 REGATTA DRIVE  
 JUPITER, FL 33477

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 444 EAST CENTRAL STREET  
 FRANKLIN, MA

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SCALE:	1" = 40'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

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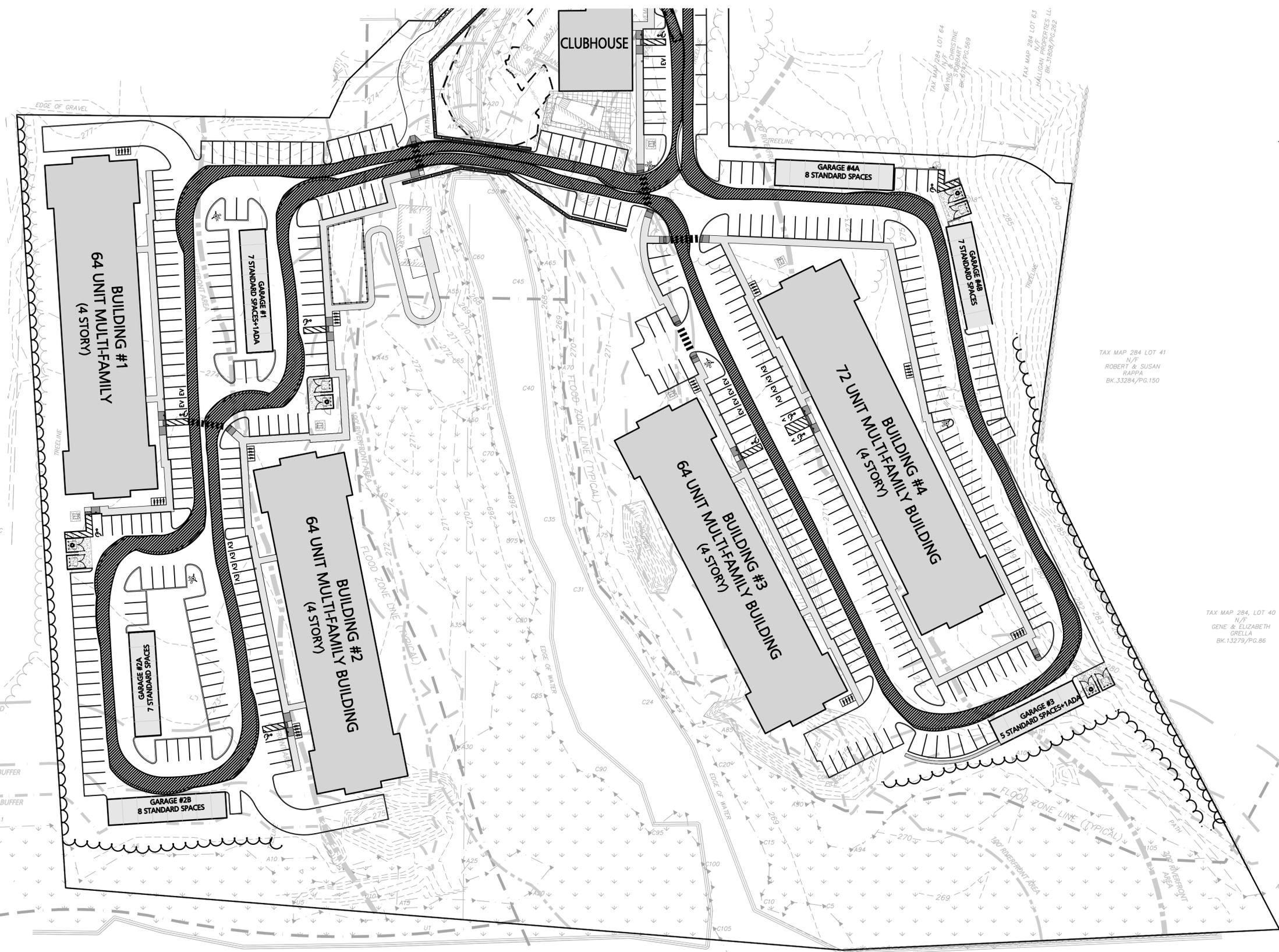
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DRAWING TITLE: **SU-30 TRUCK TURNING PLAN** SHEET No. **C-107A**

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TAX MAP 285, LOT 7  
N/F  
THE UNDEALERSHIP LLC  
BK.26234/PG.120

TAX MAP 284 LOT 41  
N/F  
ROBERT & SUSAN  
RAPPA  
BK.33284/PG.150

TAX MAP 284, LOT 40  
N/F  
GENE & ELIZABETH  
GRELLA  
BK.13279/PG.86

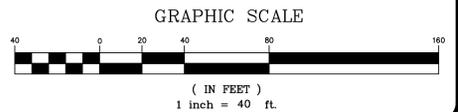
TAX MAP 289, LOT 49  
N/F  
TOWN OF FRANKLIN  
BK.26253/PG.126

TAX MAP 289, LOT 53  
N/F  
DOUGLAS & TRICIA  
OPPELT  
BK.34315/PG.308

TAX MAP 289, LOT 54  
N/F  
JOHN & NANCY  
QUIGLEY

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275 REGATTA DRIVE  
JUPITER, FL 33477

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444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 40'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

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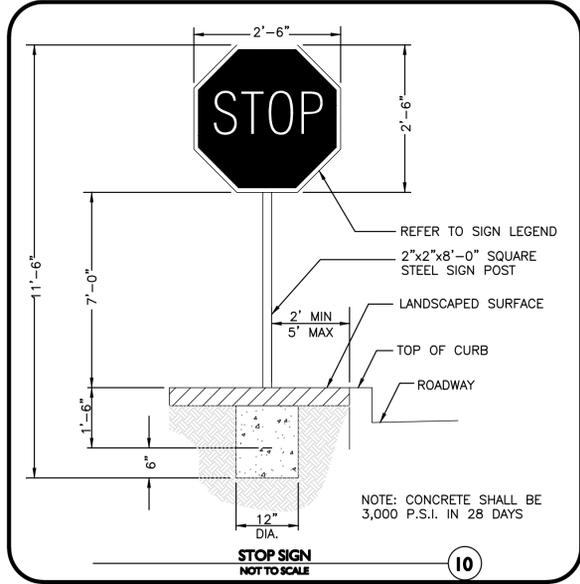
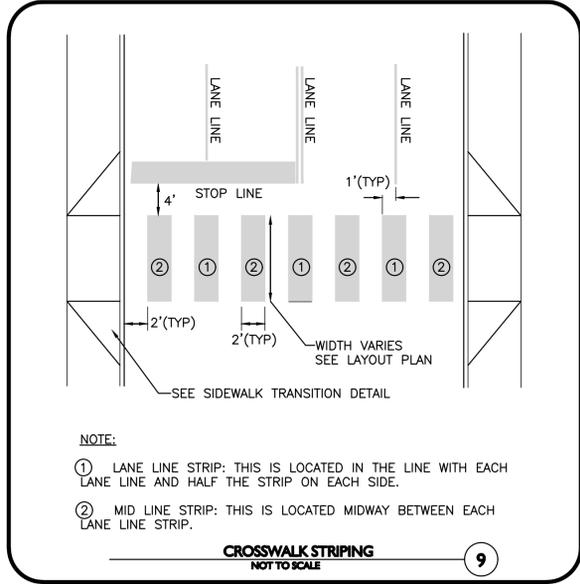
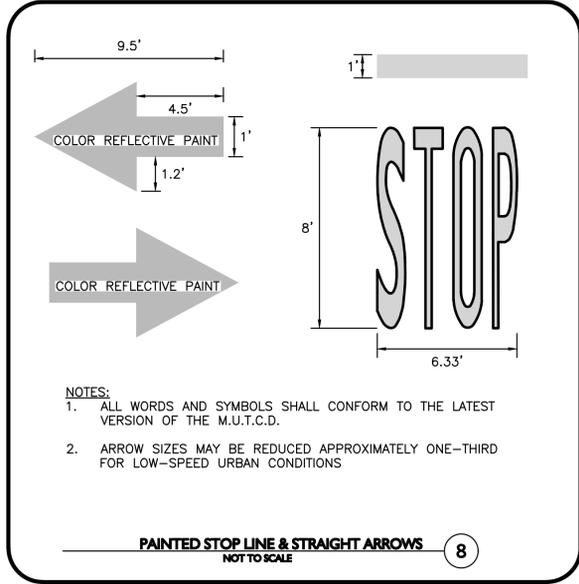
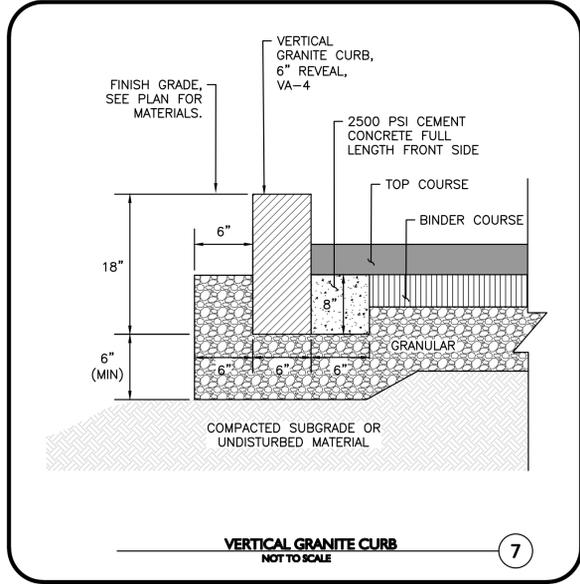
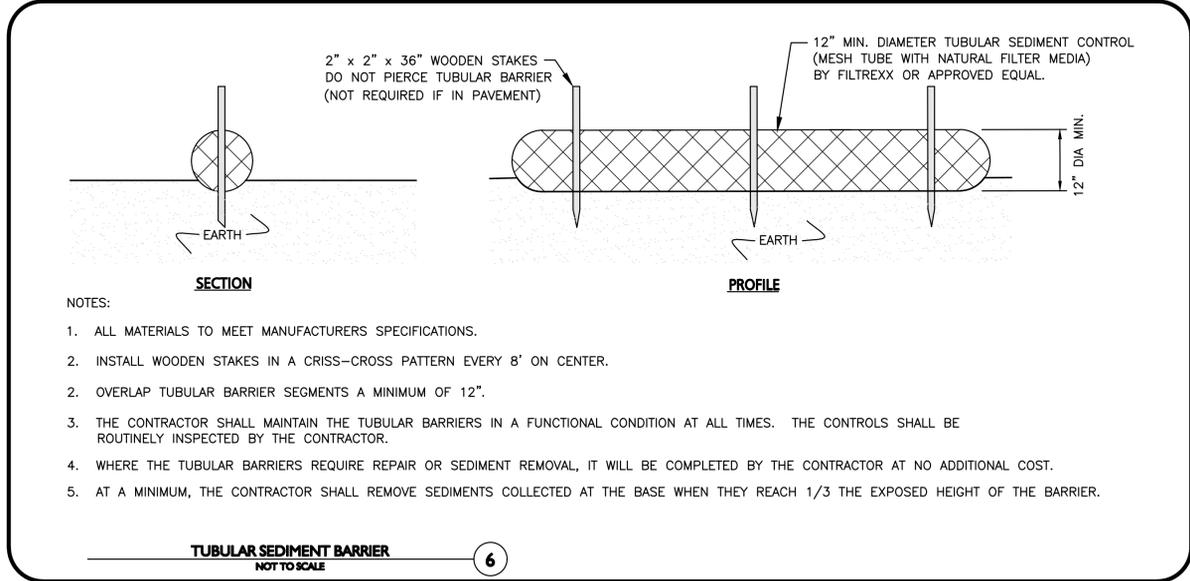
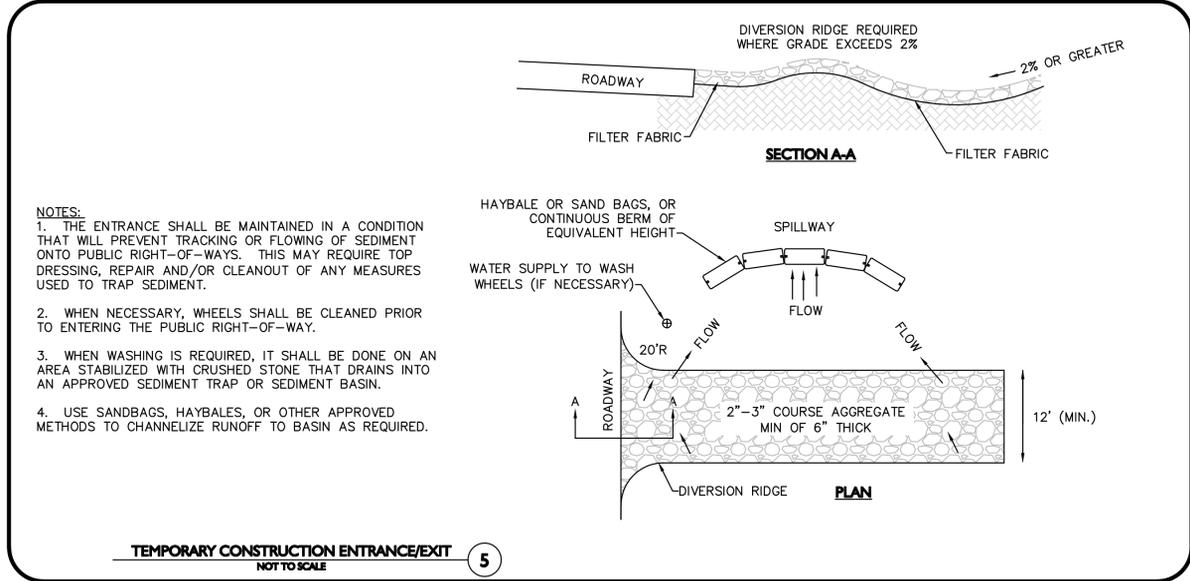
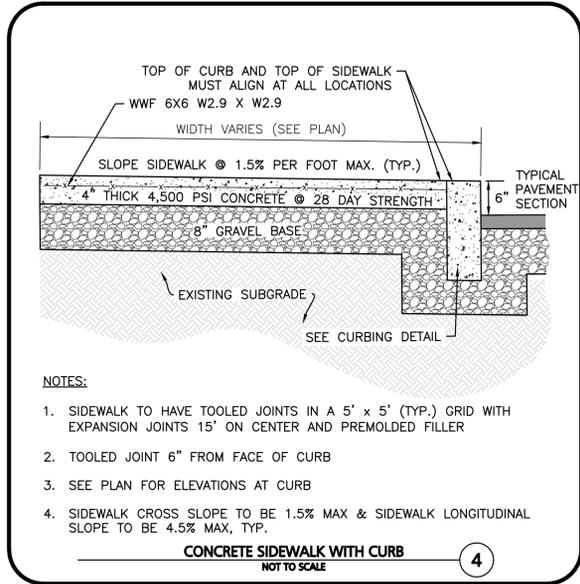
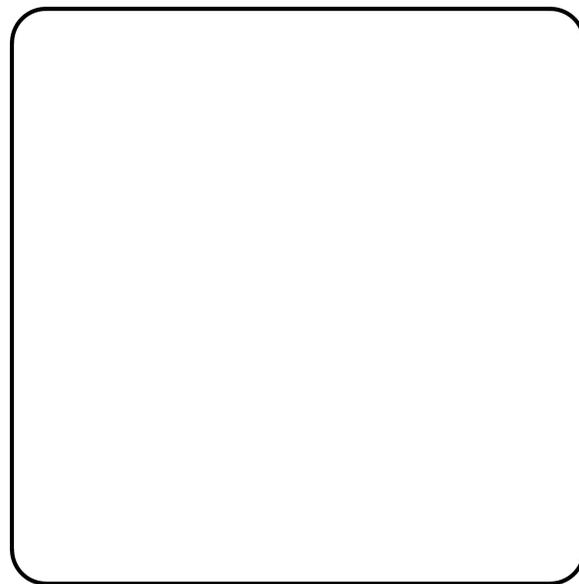
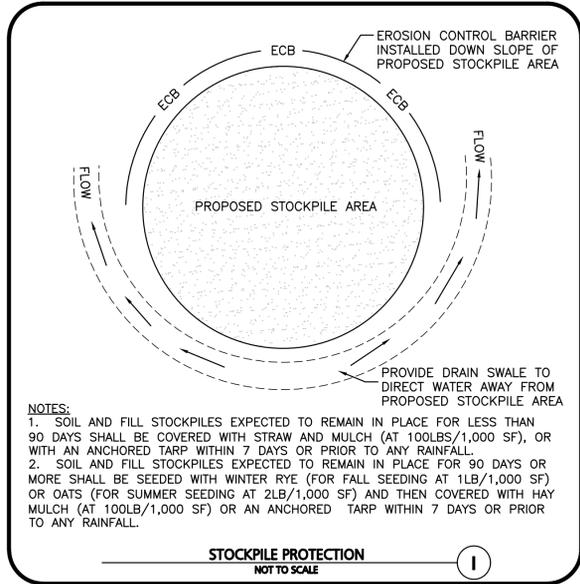
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DRAWING TITLE: SU-30 TRUCK TURNING PLAN  
SHEET No. C-107B

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APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
275 REGATTA DRIVE  
JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

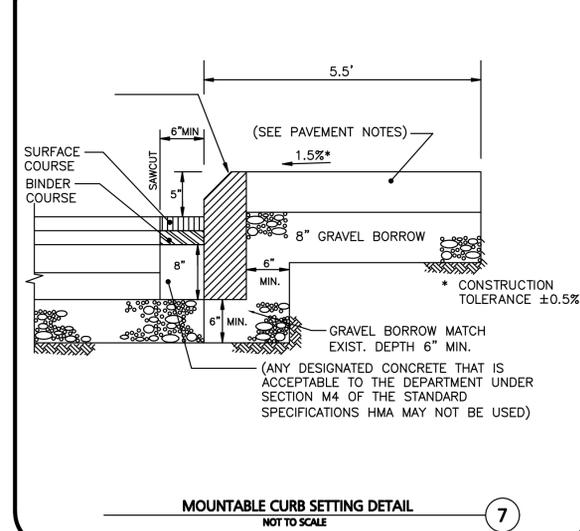
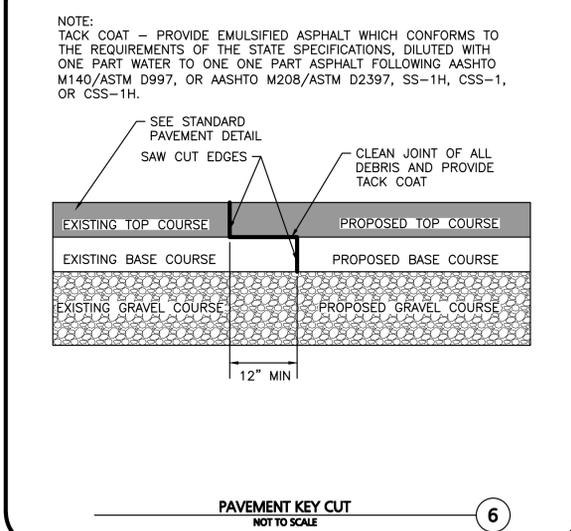
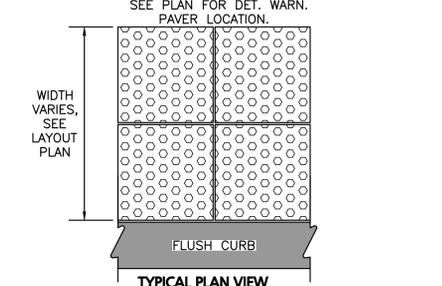
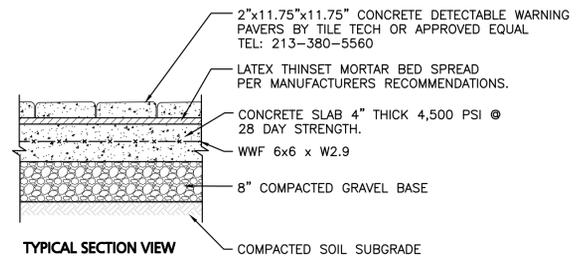
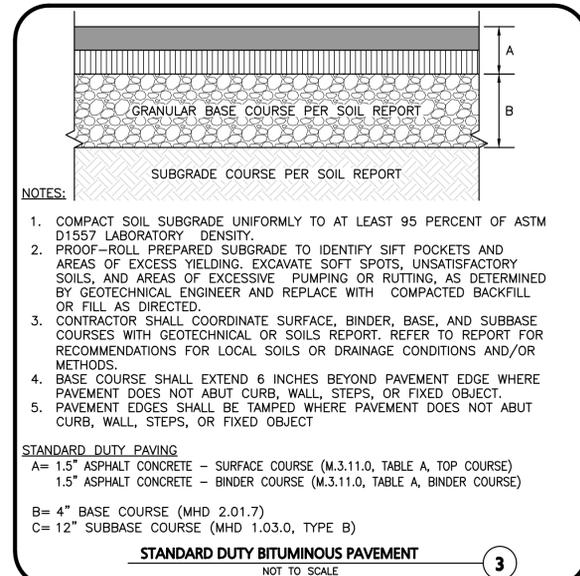
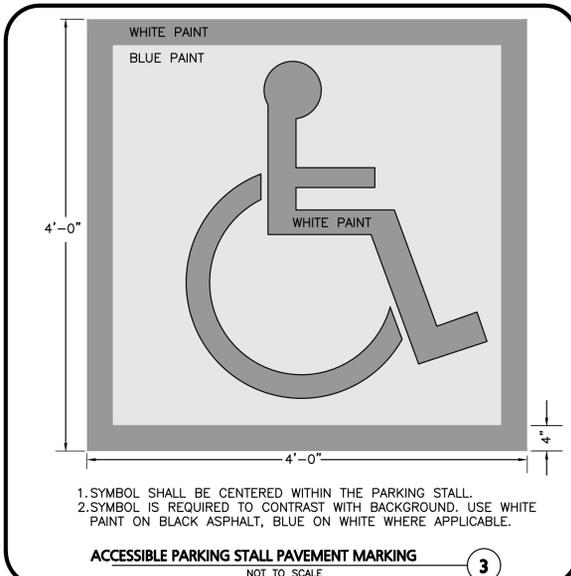
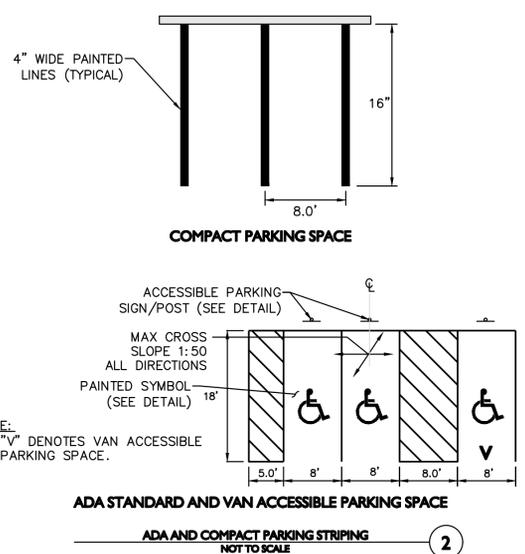
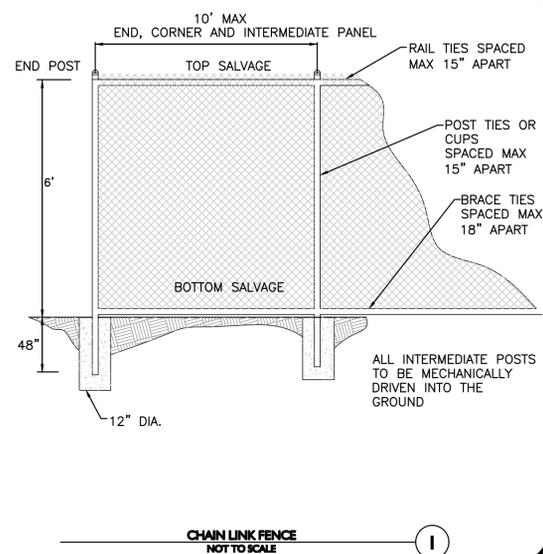
PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	AS SHOWN	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

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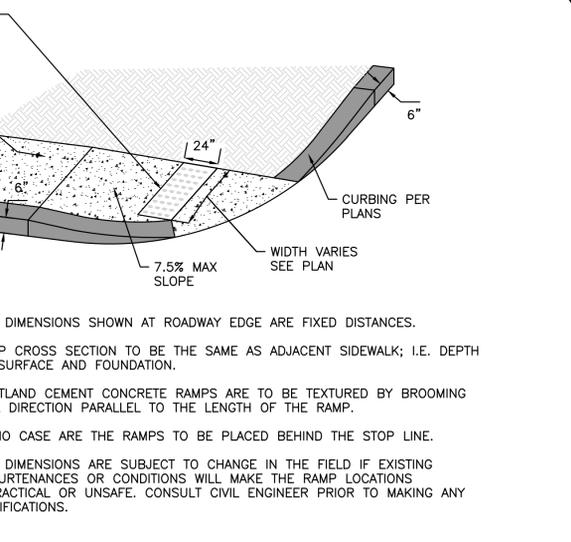
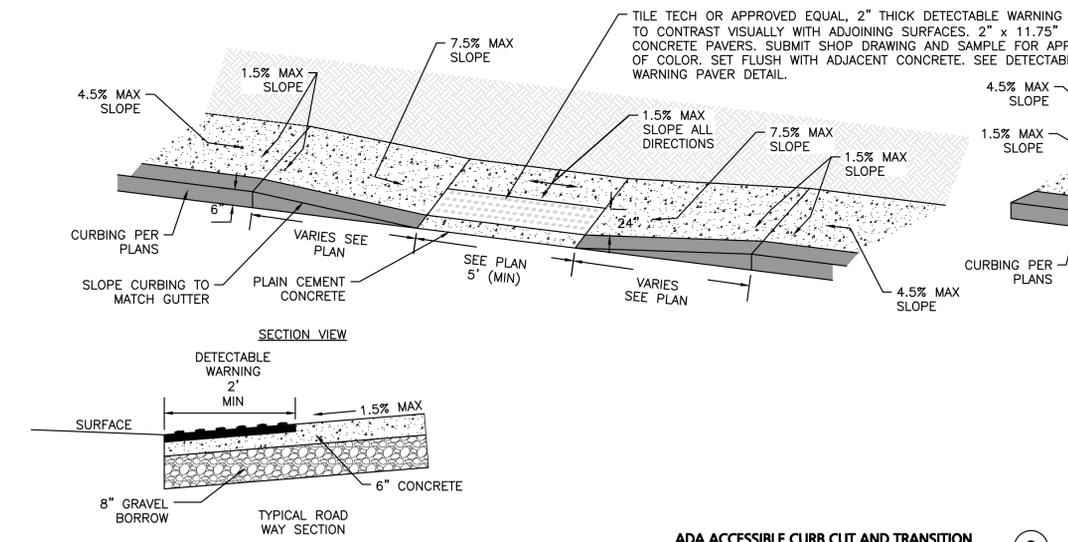
**NOTES:**

- CONCRETE SLAB SHALL BE SLOPED 1.5% CROSS PITCH MAX TO PROVIDE COMPLETE SURFACE DRAINAGE. SEE GRADING PLAN & HANDICAP CURB CUT / CURB TRANSITION DETAIL.
- SLAB TO HAVE STEEL TROWEL AND FINE BROOM FINISH. DO NOT USE CURING COMPOUNDS. CONTRACTOR TO ADD EXPANSION JOINTS AND PREMOLDED FILLER AT EDGE OF TILES AND ADJACENT MATERIAL.
- SET TILES FLUSH WITH ADJACENT MATERIALS.
- SUBMIT SHOP DRAWINGS OF TILES AND SAMPLE FOR APPROVAL OF COLOR TO OWNER / ARCH.
- INSTALL DETECTABLE WARNING PAVERS PER MANUFACTURER'S RECOMMENDATIONS OR DESIGN ENGINEER.
- ALL DET. WARN. PAVERS SHALL COMPLY WITH ADA REGULATIONS.

**DETECTABLE WARNING PAVERS**  
NOT TO SCALE

**PAVEMENT KEY CUT**  
NOT TO SCALE

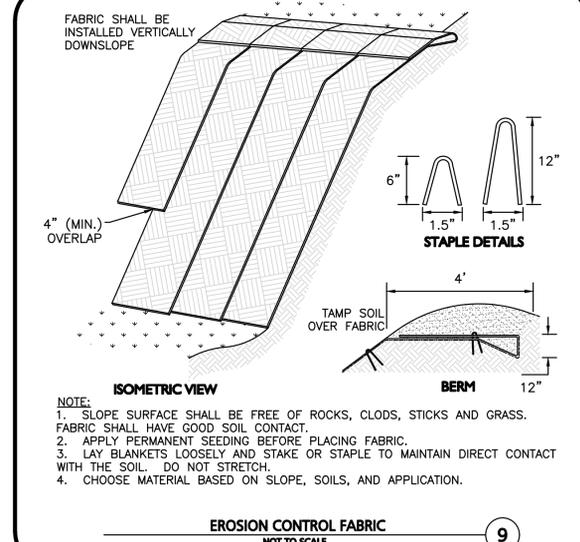
**MOUNTABLE CURB SETTING DETAIL**  
NOT TO SCALE



**NOTES:**

- THE DIMENSIONS SHOWN AT ROADWAY EDGE ARE FIXED DISTANCES.
- RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK; I.E. DEPTH OF SURFACE AND FOUNDATION.
- PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
- IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
- THE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IF EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE. CONSULT CIVIL ENGINEER PRIOR TO MAKING ANY MODIFICATIONS.

**ADA ACCESSIBLE CURB CUT AND TRANSITION**  
NOT TO SCALE



**NOTES:**

- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS AND GRASS. FABRIC SHALL HAVE GOOD SOIL CONTACT.
- APPLY PERMANENT SEEDING BEFORE PLACING FABRIC.
- LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
- CHOOSE MATERIAL BASED ON SLOPE, SOILS, AND APPLICATION.

**EROSION CONTROL FABRIC**  
NOT TO SCALE



*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR  
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FRANKLIN, MA

PROJECT NO. 3317-01 DATE: 02-11-2025

SCALE: AS SHOWN DWG. NAME: C-3317-01

DESIGNED BY: MTB CHECKED BY: CMQ

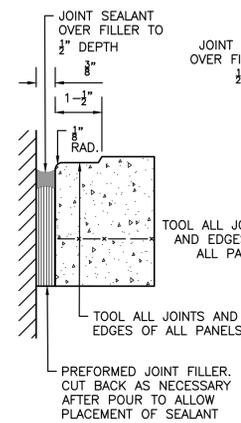
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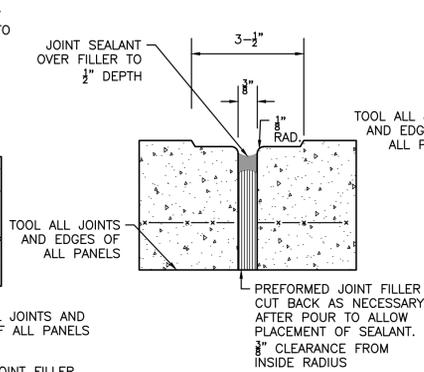
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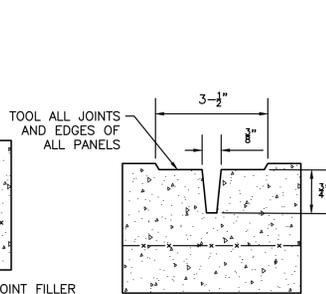
**EXPANSION JOINT AT FIXED OBJECTS DETAIL**



**EXPANSION JOINT DETAIL**



**CONTROL JOINT DETAIL**

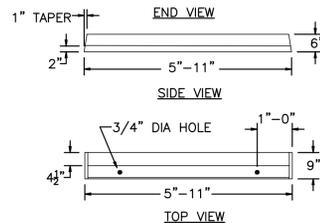


**NOTES:**

1. PROVIDE EXPANSION JOINTS AT MIN. 15' O.C. MIN.
2. PROVIDE CONTROL JOINTS AT 5' O.C. UNLESS SHOWN OTHERWISE.
3. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO DIRECTION OF TRAVEL.
4. CEMENT CONCRETE SHALL BE 4,500 PSI AIR ENTRAINED.
5. REFER TO LANDSCAPING PLANS FOR ADDITIONAL JOINTS.
6. JOINT FILLERS SHALL BE RESILIENT PREMOLDED BITUMINOUS IMPREGNATED FIBERBOARD. SUBMIT SHOP DRAWINGS.
7. JOINT SEALANTS SHALL BE NON-PRIMING POURABLE SELF-LEVELING TYPE. SUBMIT SHOP DRAWINGS.

**CONCRETE SIDEWALK JOINTS**  
NOT TO SCALE

1

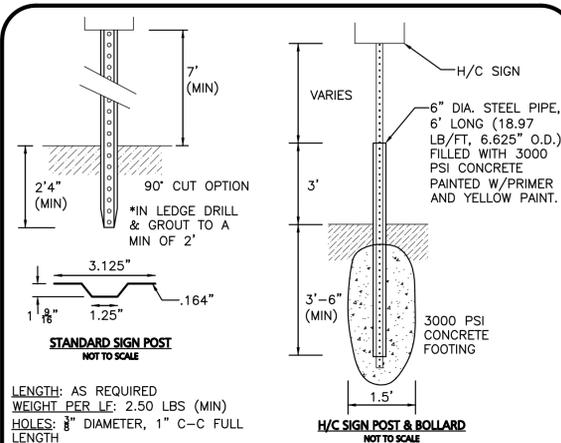


**NOTES:**

1. CONCRETE: 4,500 PSI MINIMUM AFTER 28 DAYS.
2. PINS AVAILABLE.
3. APPROXIMATE WEIGHT: 265 LBS.

**BUMPER CURBING SINGLE FACE**  
NOT TO SCALE

2



**STANDARD SIGN POST**  
NOT TO SCALE

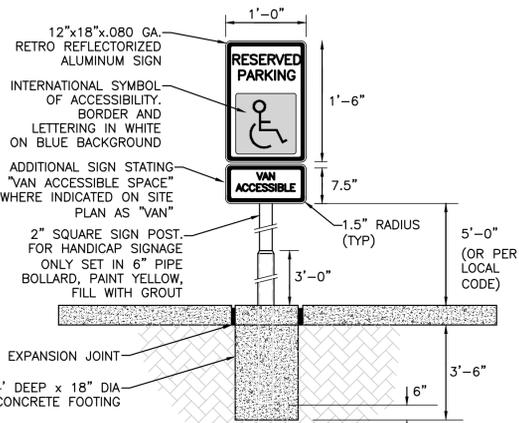
**H/C SIGN POST & BOLLARD**  
NOT TO SCALE

LENGTH: AS REQUIRED  
WEIGHT PER LF: 2.50 LBS (MIN)  
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH  
STEEL: SHALL CONFORM TO ASTM A-499 OR ASTM A-576  
FINISH: SHALL BE PAINTED WITH 2 COATS OF AN APPROVED MEDIUM GREEN, BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY.

- NOTE:**
1. STEEL PIPE BOLLARD & CONCRETE FOOTING TO BE USED ON POST MOUNTED SIGNS IN PAVED AREAS.

**SIGN POST DETAILS**  
NOT TO SCALE

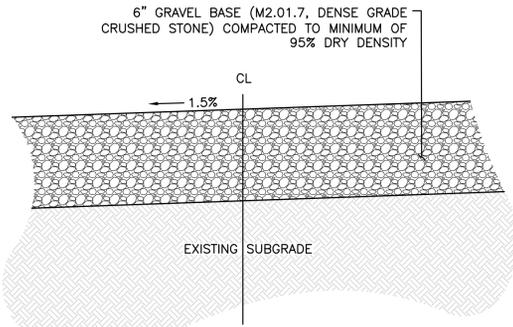
3



- NOTES:**
1. SPECIFIC CODE SHALL BE REFERENCED FOR LOCAL AND STATE REQUIREMENTS.
  2. PROVIDE (1) SIGN PER HANDICAP SPACE. SEE SITE PLAN FOR EXACT LOCATION.
  3. EXPANSION JOINT MATERIAL NOT REQUIRED WITH FLEXIBLE PAVEMENT.

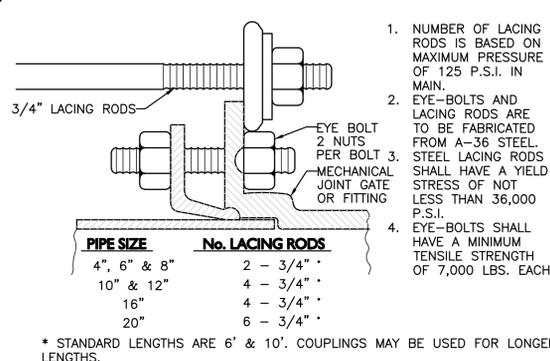
**ADA ACCESSIBLE PARKING / TRAFFIC CONTROL SIGNAGE**  
NOT TO SCALE

4



**GRAVEL DRIVEWAY**  
NOT TO SCALE

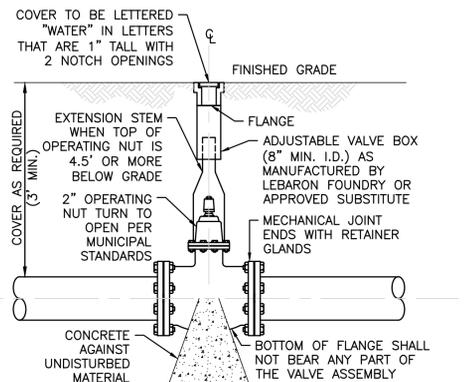
5



\* STANDARD LENGTHS ARE 6' & 10'. COUPLINGS MAY BE USED FOR LONGER LENGTHS.

**MECHANICAL JOINT LACING DETAIL**  
NOT TO SCALE

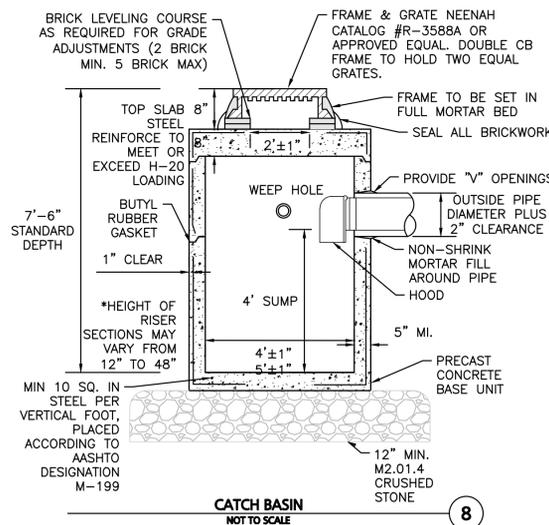
6



- NOTE:**
1. CONTRACTOR MAY USE ANCHOR TEES AT HIS OPTION.
  2. HYDRANTS AND VALVES TO OPERATE PER MUNICIPAL STANDARDS

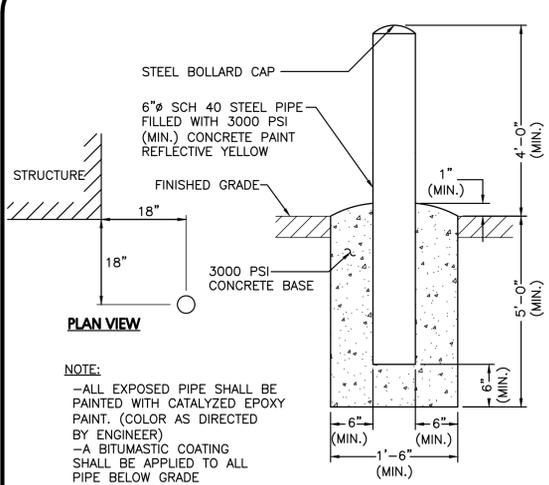
**GATE VALVE**  
NOT TO SCALE

7



**CATCH BASIN**  
NOT TO SCALE

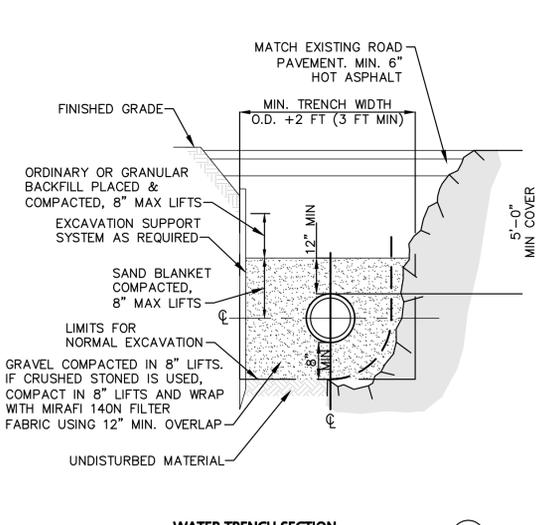
8



- NOTE:**
- ALL EXPOSED PIPE SHALL BE PAINTED WITH CATALYZED EPOXY PAINT. (COLOR AS DIRECTED BY ENGINEER)
  - A BITUMASTIC COATING SHALL BE APPLIED TO ALL PIPE BELOW GRADE

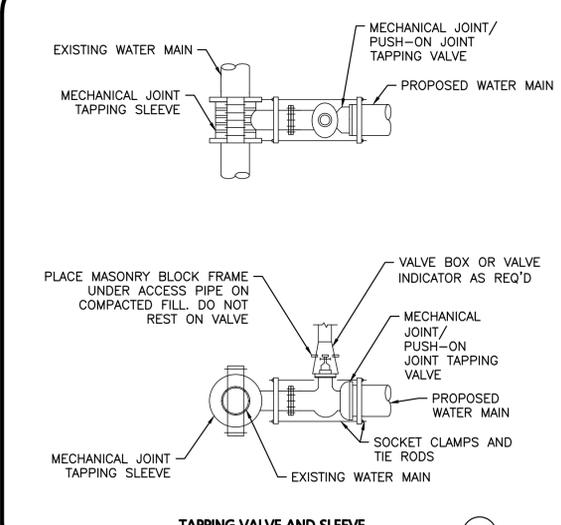
**FIXED BOLLARD**  
NOT TO SCALE

9



**WATER TRENCH SECTION**  
NOT TO SCALE

10



**TAPPING VALVE AND SLEEVE**  
NOT TO SCALE

11



*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
C	9/18/25	REVISED PER NOI PEER REVIEW
B	7/21/25	REVISED PER NOI PEER REVIEW
A	6/11/25	REVISED PER TOWN COMMENTS

**APPLICANT/OWNER:**  
TAG CENTRAL LLC  
275 REGATTA DRIVE  
JUPITER, FL 33477

**PROJECT:**  
40B MULTIFAMILY  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO. 3317-01 DATE: 02-11-2025

SCALE: AS SHOWN DWG. NAME: C-3317-01

DESIGNED BY: MTB CHECKED BY: CMQ

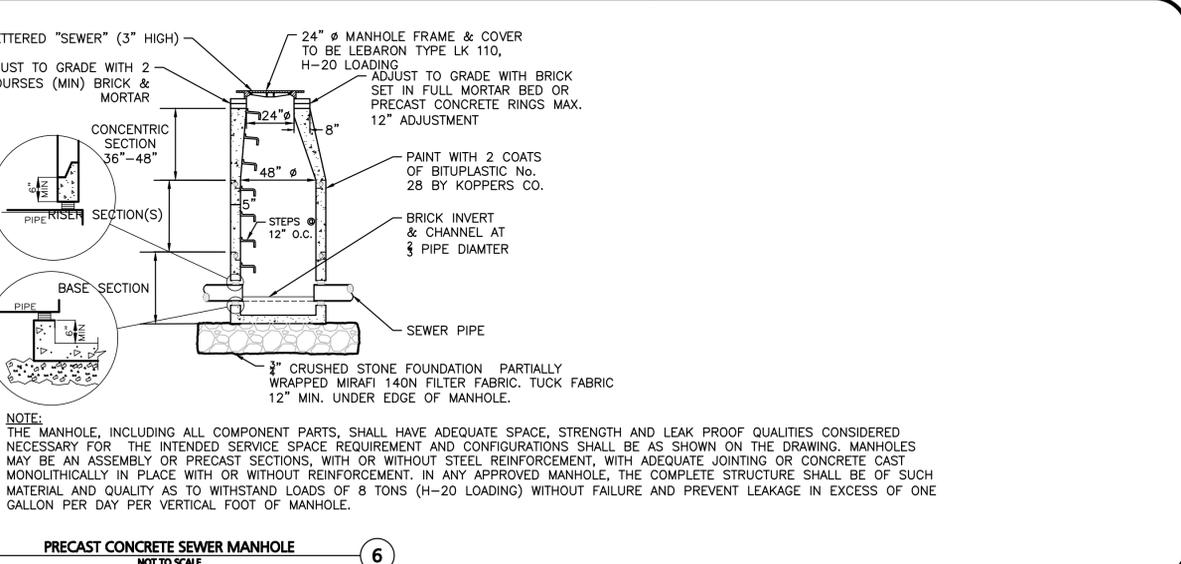
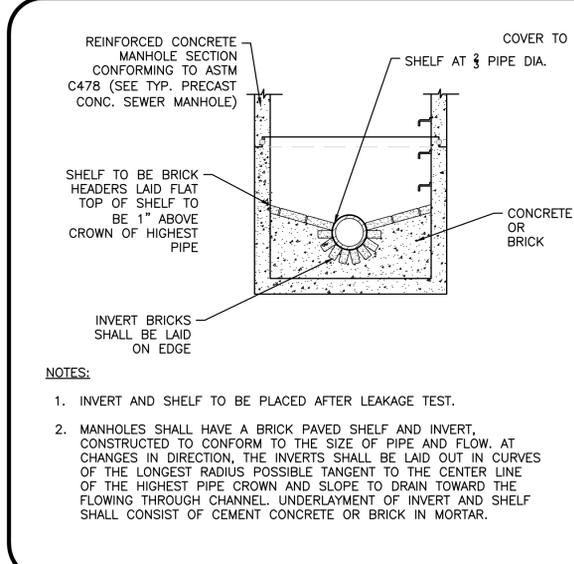
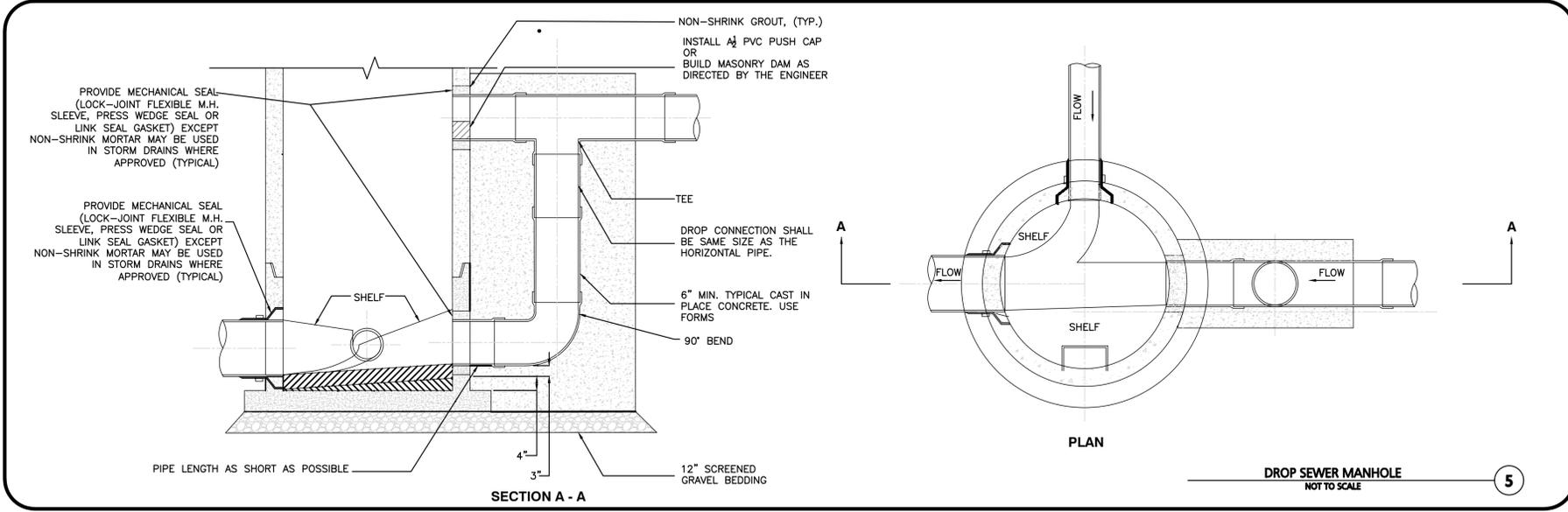
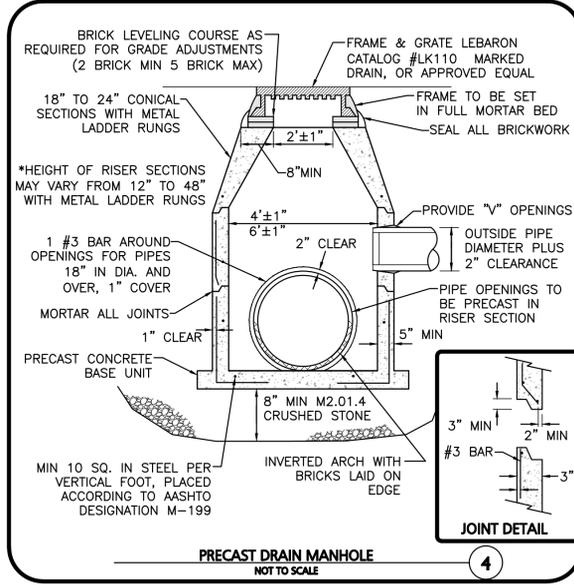
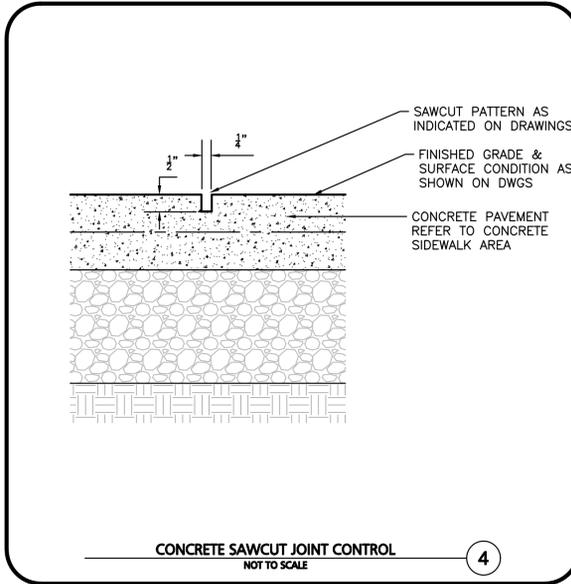
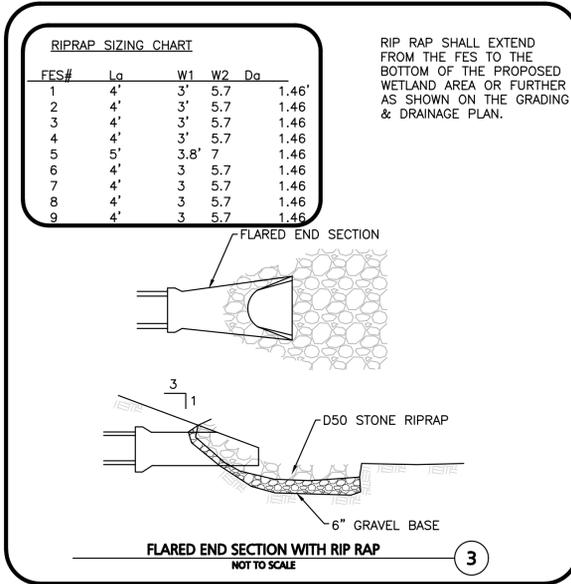
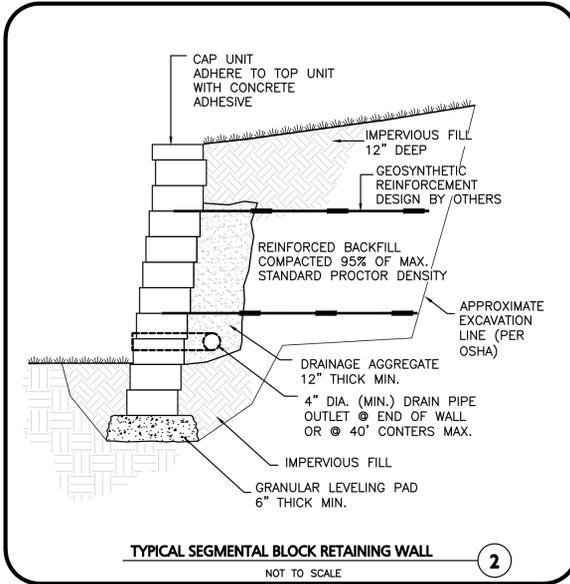
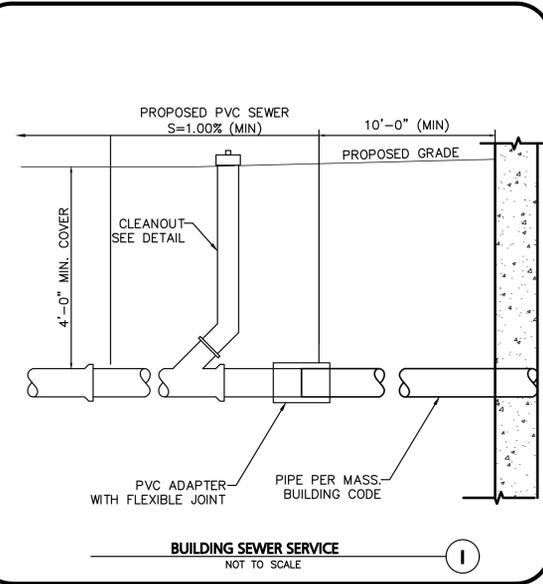
PREPARED BY:

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DRAWING TITLE: DETAILS SHEET No. C-503

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PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

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B	7/21/25	REVISED PER NOI PEER REVIEW
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PREPARED BY:



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DRAWING TITLE: SHEET No.

DETAILS C-504



**SC-800 STORMTECH CHAMBER SPECIFICATIONS**

- CHAMBERS SHALL BE STORMTECH SC-800.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- 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 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT<sup>2</sup>. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. 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.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

**IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-800 SYSTEM**

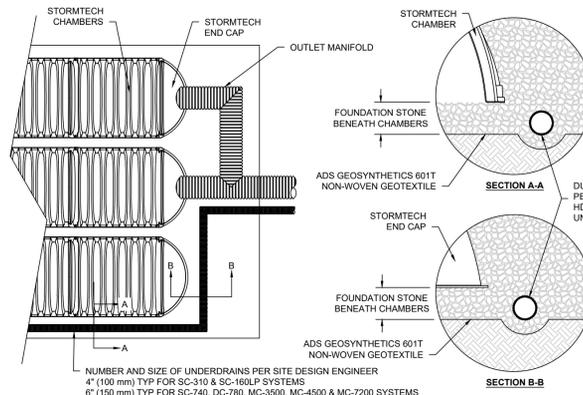
- STORMTECH SC-800 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONESHOOTER LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4"-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

**NOTES FOR CONSTRUCTION EQUIPMENT**

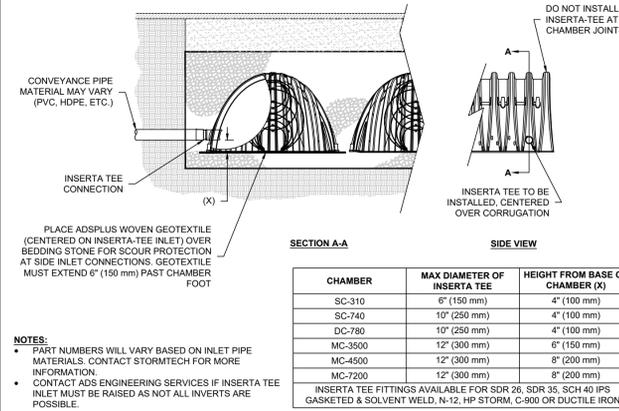
- STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-800 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- FULL 35" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



**1 UNDERDRAIN DETAIL**



**NOTES:**

- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
- CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

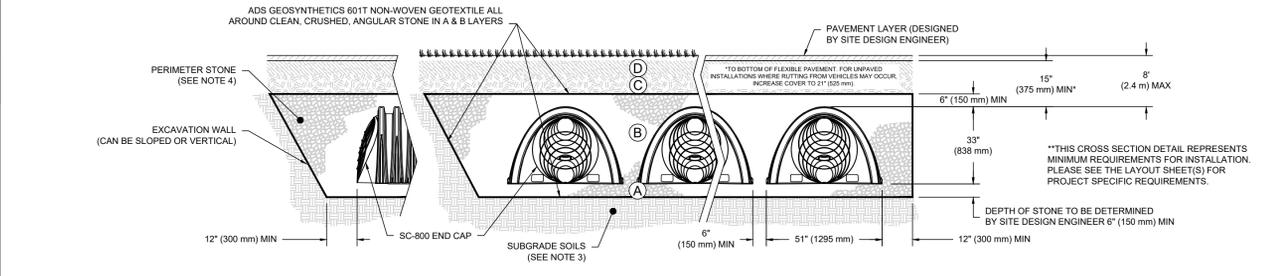
**2 INSERTA-TEE SIDE INLET DETAIL**

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 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. OR AASHTO M43 <sup>1</sup> 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	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

**PLEASE NOTE:**

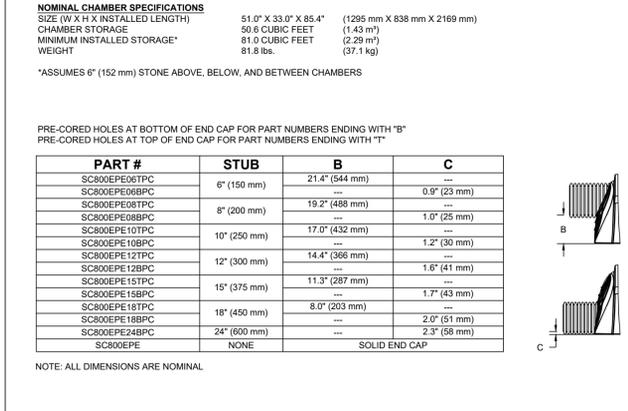
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 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 EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- 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.
- WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



**NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- STORMTECH CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 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.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 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/FT<sup>2</sup>. 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.

**6 SC-800 CROSS SECTION DETAIL**



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	51.0" X 33.0" X 88.4" (1295 mm X 838 mm X 2169 mm)
CHAMBER STORAGE	50.6 CUBIC FEET (1.43 m <sup>3</sup> )
MINIMUM INSTALLED STORAGE*	81.0 CUBIC FEET (2.29 m <sup>3</sup> )
WEIGHT	81.8 lbs. (37.1 kg)

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

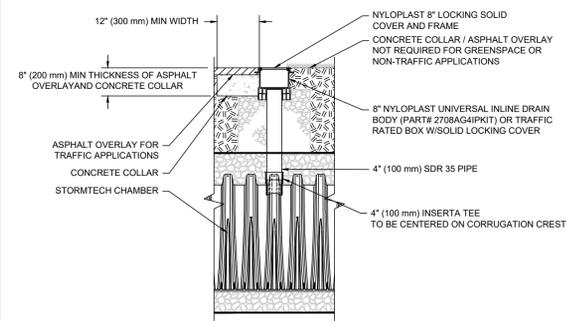
PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	B	C
SC800PE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800PE08BPC	---	---	0.9" (23 mm)
SC800PE08TPC	8" (200 mm)	19.2" (488 mm)	---
SC800PE10TPC	10" (250 mm)	17.0" (432 mm)	---
SC800PE10BPC	---	---	1.2" (30 mm)
SC800PE12TPC	12" (300 mm)	14.4" (366 mm)	---
SC800PE12BPC	---	---	1.6" (41 mm)
SC800PE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800PE15BPC	---	---	1.7" (43 mm)
SC800PE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800PE18BPC	---	---	2.0" (51 mm)
SC800PE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800EPE	NONE	---	SOLID END CAP

NOTE: ALL DIMENSIONS ARE NOMINAL

**4 SC-800 ISOLATOR ROW PLUS DETAIL**



**INSPECTION & MAINTENANCE**

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

**NOTES**

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

**5 4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)**



Professional Engineer for  
ALLEN & MAJOR ASSOCIATES, INC.

PROJECT: TAG CENTRAL LLC  
275 REGATTA DRIVE  
JUPITER, FL 33477

REV	DATE	DESCRIPTION
C	9/18/25	REVISED PER NOI PEER REVIEW
B	7/21/25	REVISED PER NOI PEER REVIEW
A	6/11/25	REVISED PER TOWN COMMENTS

PROJECT: 40B MULTIFAMILY  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO. 3317-01 DATE: 02-11-2025

SCALE: AS SHOWN DWG. NAME: C-3317-01

DESIGNED BY: MTB CHECKED BY: CMQ

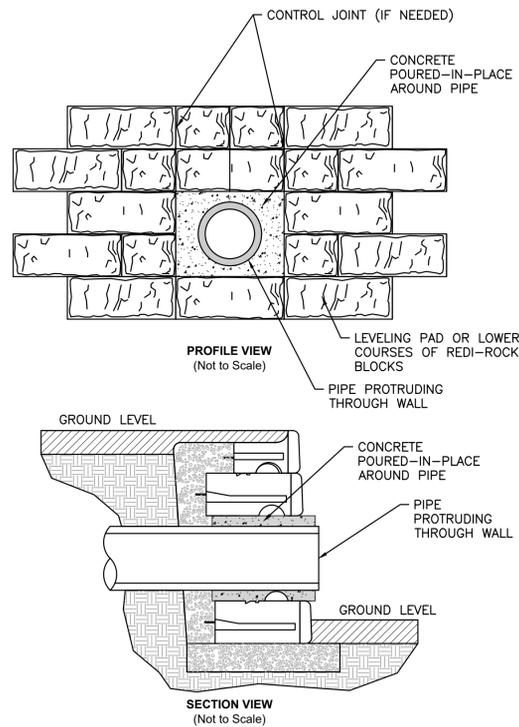
PREPARED BY:

WOBURN, MA • LAKEVILLE, MA • MANCHESTER, NH

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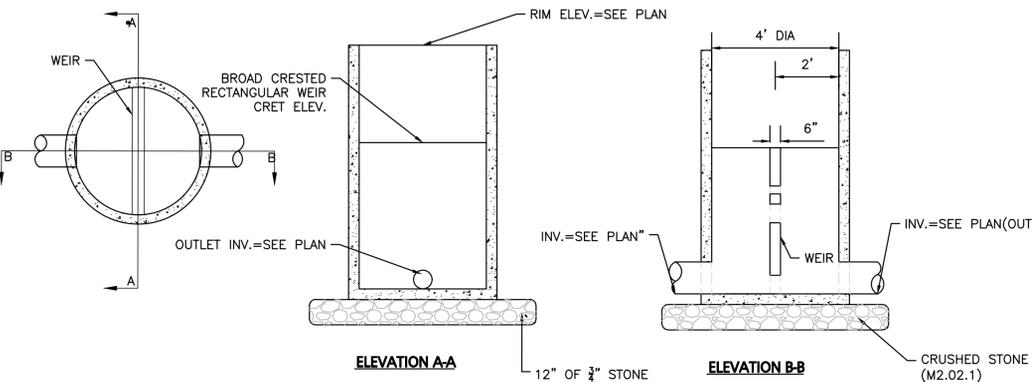
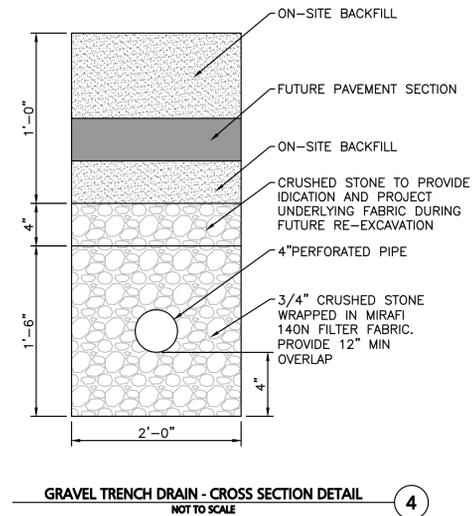
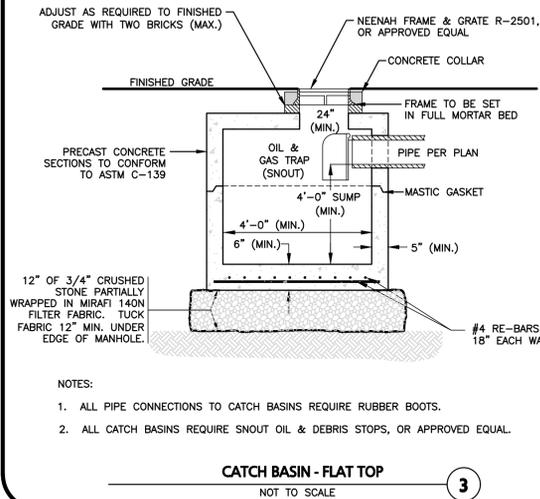
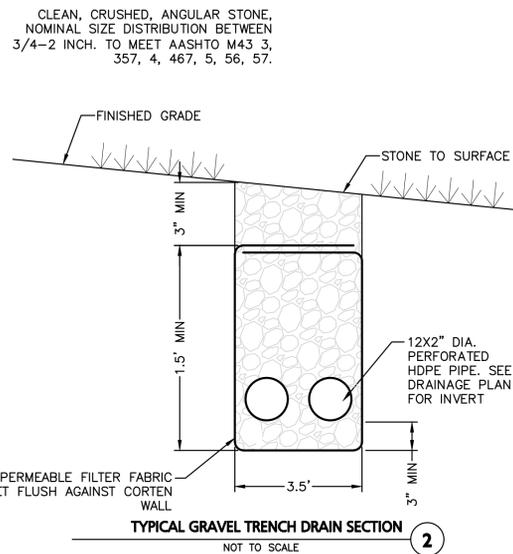
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**BASE LEVELING PAD NOTES:**

1. THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2000 PSI UNREINFORCED CONCRETE
2. THE BASE FOUNDATION IS TO BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.

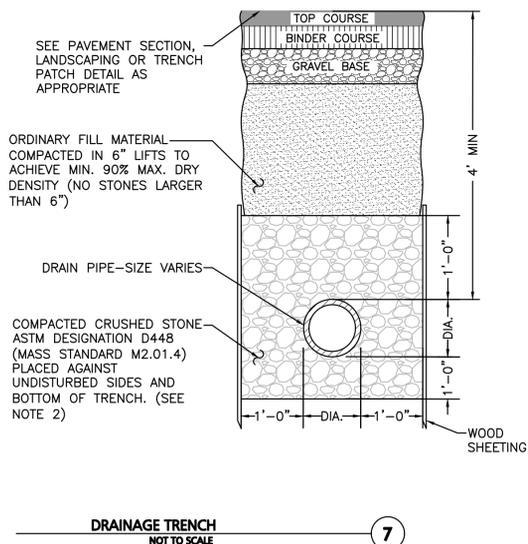
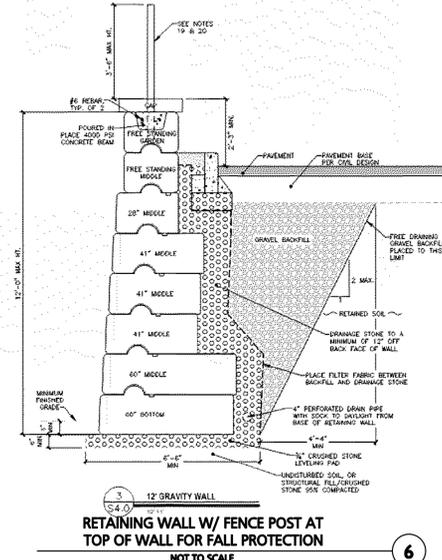
**PIPE THROUGH HEADWALL**  
NOT TO SCALE



**NOTES:**

1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. ALL REINFORCEMENT PER ASTM C1227-93.
3. TONGUE & GROOVE JOINT SEALED WITH BUTYLE RESIN OR MASTIC.
4. WALLS ARE TO BE 6" THICK & BOTTOM TO BE 8" THICK.
5. PROVIDE 4' SUMP

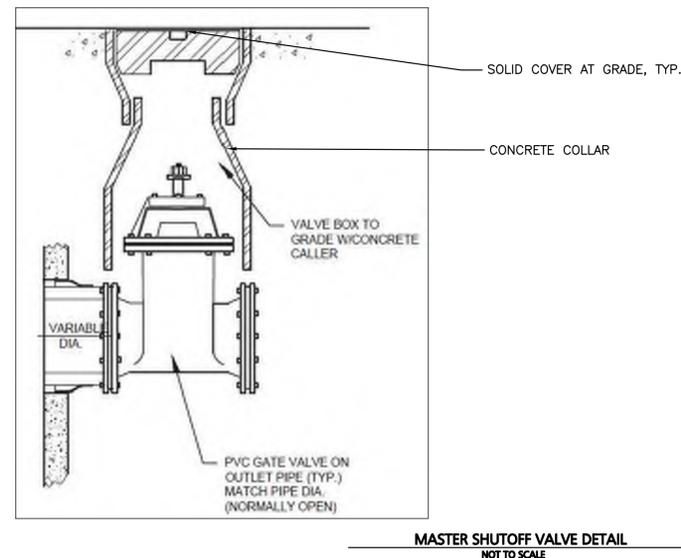
**4' DIAMETER OUTLET CONTROL STRUCTURE**  
NOT TO SCALE



**NOTES:**

1. SHEETING, WHEN REQUIRED, TO BE CUT OFF AT LEAST 5' BELOW STREET AND A MINIMUM OF 1' ABOVE TOP OF PIPE. WOOD SHEETING DRIVEN BELOW MID-DIAMETER OF THE PIPE SHALL BE LEFT IN PLACE. STEEL SHEETING DRIVEN BELOW MID-DIAMETER MAY BE WITHDRAWN IF APPROVED IN WRITING BY THE ENGINEER. FOR PVC PIPE ALL SHEETING DRIVEN BELOW MID-DIAMETER SHALL BE LEFT IN PLACE.
2. WHEN APPROVED BY THE ENGINEER FOR PIPES OTHER THAN PVC, SELECTED GRAVEL FILL MATERIAL MAY BE USED FROM MID-DIAMETER OF PIPE TO 12" ABOVE TOP OF PIPE. NO STONES LARGER THAN 2" IN ANY DIMENSION WILL BE PERMITTED IN THIS AREA - MASSDOT MATERIAL STANDARD M1.03.0 TYPE C.
3. PROVIDE AT LEAST ONE IMPERVIOUS DAM IN GRAVEL BEDDING BETWEEN EACH MANHOLE WHERE DIRECTED, OR EVERY 300 FT, WHICHEVER IS LESS.
4. BEDDING MATERIAL FOR PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D2321 CLASS I OR CLASS II EMBEDMENT MATERIALS.

**MASTER SHUTOFF VALVE DETAIL**  
NOT TO SCALE



**NOTES:**

- 1.) RIM OF SHUTOFF VALVE BOX SHALL BE FLUSH TO GRADE.
- 2.) VALVE LOCATED UNDER REMOVABLE COVER. USE KEY TO OPEN/CLOSE VALVE.
- 3.) SHUTOFF VALVE SHALL BE LOCATED IMMEDIATELY DOWNSTREAM OF WATER QUALITY UNIT OUTLET, AGAINST STRUCTURE FACE.



CARLTON M. QUINN  
CIVIL  
No. 49923  
REGISTERED  
PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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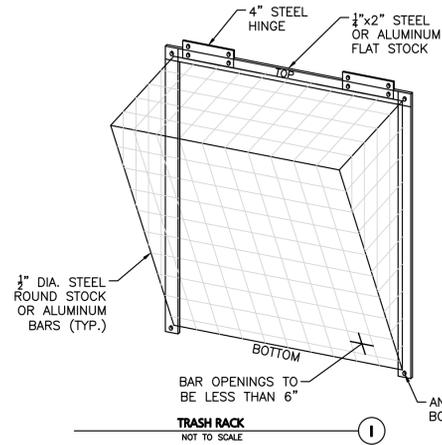
**ALLEN & MAJOR ASSOCIATES, INC.**  
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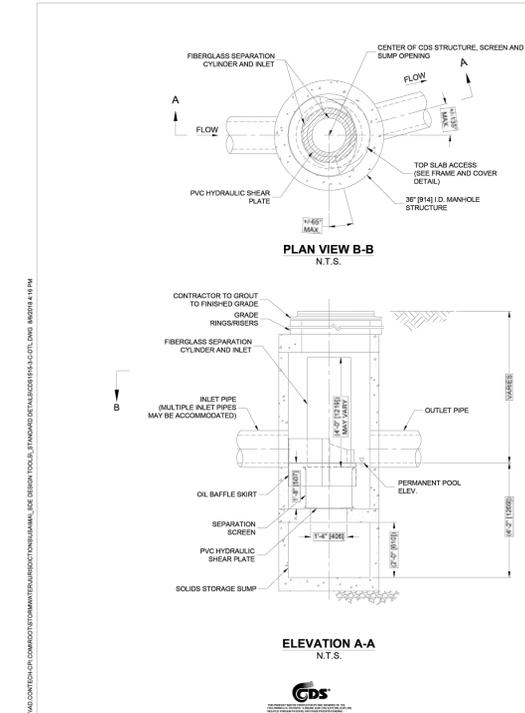
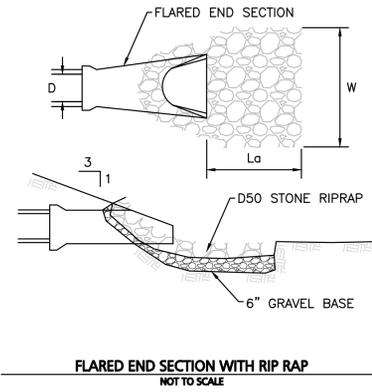
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DRAWING TITLE: DETAILS SHEET No. C-506

- NOTES:
- HINGE MECHANISM TO BE PROVIDED.
  - TRASH RACK SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
  - ALL MATERIALS TO BE NON-CORROSIVE.
  - SMALL CONCRETE PAD TO BE INSTALLED UNDERNEATH ORIFICE.



RIP RAP SHALL EXTEND FROM THE FES TO THE BOTTOM OF THE PROPOSED WETLAND AREA OR FURTHER AS SHOWN ON THE GRADING & DRAINAGE PLAN.



**CDS1515-3-C DESIGN NOTES**

CDS1515-3-C RATED TREATMENT CAPACITY IS 1.0 CFS, OR PER LOCAL REGULATIONS. THE STANDARD CDS1515-3-C CONFIGURATION IS SHOWN.

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	WATER QUALITY FLOW RATE (CFS OR L/S)	PEAK FLOW RATE (CFS OR L/S)	RETURN PERIOD OF PEAK FLOW (YRS)	SCREEN APERTURE (2400 OR 4700)
PIPE DATA:	I.E.	MATERIAL	DIAMETER	
INLET PIPE 1	*	*	*	*
INLET PIPE 2	*	*	*	*
OUTLET PIPE	*	*	*	*
RIM ELEVATION	*			
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT		

NOTES/SPECIAL REQUIREMENTS:  
\* PER ENGINEER OF RECORD

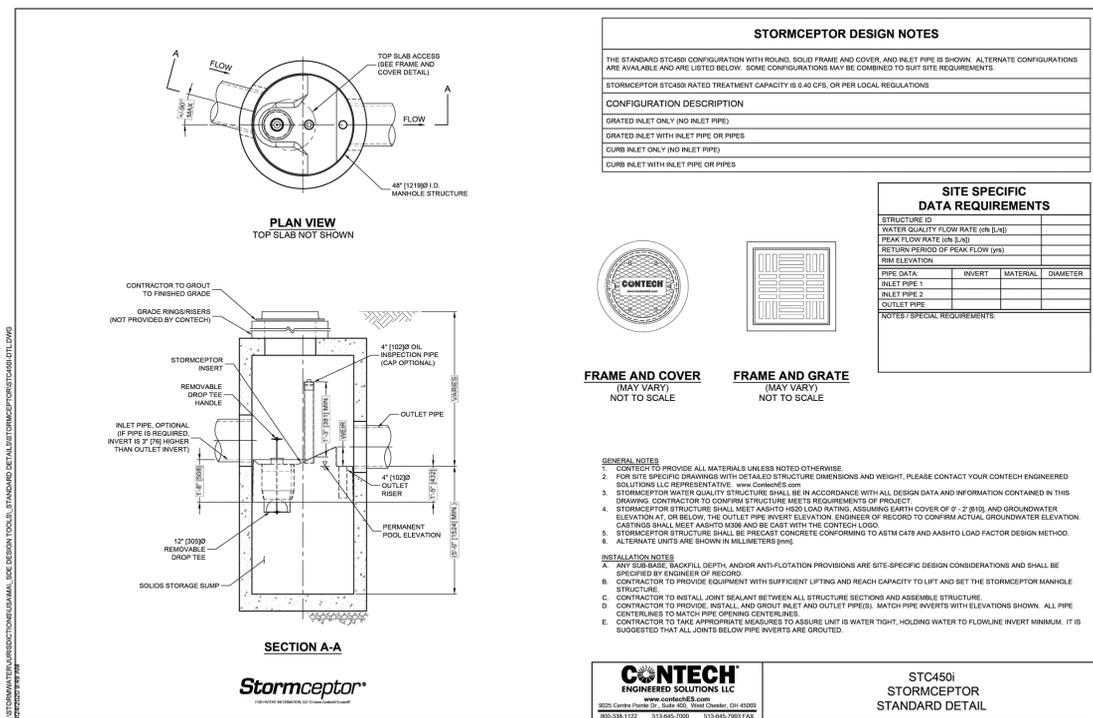
- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.contechES.com](http://www.contechES.com)
  - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
  - STRUCTURE SHALL MEET ASHITO H2SO4 LOAD RATING, ASSUMING EARTH COVER OF 2'-2" AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET ASHITO M306 AND BE CAST WITH THE CONTECH LOGO.
  - IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
  - CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND ASHITO LOAD FACTOR DESIGN METHOD.
- INSTALLATION NOTES**
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
  - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
  - CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY STRUCTURE.
  - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
  - 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.

**CDS1515-3-C ONLINE CDS STANDARD DETAIL**

**CONTECH ENGINEERED SOLUTIONS LLC**  
 9205 Centre Pointe Dr., Suite 800, West Chester, OH 45399  
 800-338-1122 513-645-7000 513-645-7993 FAX

**CDS 1515-3-C**  
NOT TO SCALE

4



**STORMCEPTOR DESIGN NOTES**

THE STANDARD STC450i CONFIGURATION WITH ROUND, SOLID FRAME AND COVER, AND INLET PIPE IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

STORMCEPTOR STC450i RATED TREATMENT CAPACITY IS 0.40 CFS, OR PER LOCAL REGULATIONS.

**CONFIGURATION DESCRIPTION**

GRADED INLET ONLY (NO INLET PIPE)	
GRADED INLET WITH INLET PIPE OR PIPES	
CURB INLET ONLY (NO INLET PIPE)	
CURB INLET WITH INLET PIPE OR PIPES	

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	WATER QUALITY FLOW RATE (CFS OR L/S)	PEAK FLOW RATE (CFS OR L/S)	RETURN PERIOD OF PEAK FLOW (YRS)	SCREEN APERTURE (2400 OR 4700)
PIPE DATA:	I.E.	MATERIAL	DIAMETER	
INLET PIPE 1	*	*	*	*
INLET PIPE 2	*	*	*	*
OUTLET PIPE	*	*	*	*
RIM ELEVATION	*			
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT		

NOTES/SPECIAL REQUIREMENTS:  
\* PER ENGINEER OF RECORD

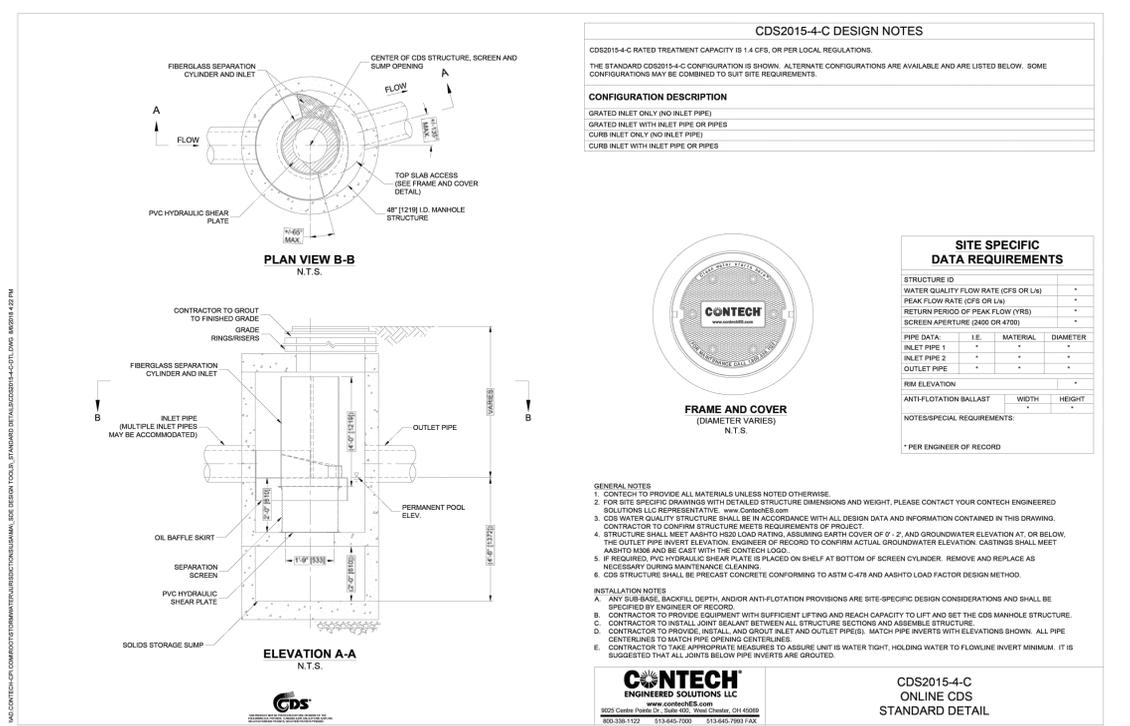
- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.contechES.com](http://www.contechES.com)
  - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
  - STRUCTURE SHALL MEET ASHITO H2SO4 LOAD RATING, ASSUMING EARTH COVER OF 2'-2" AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET ASHITO M306 AND BE CAST WITH THE CONTECH LOGO.
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  - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE.
  - CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY STRUCTURE.
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 9205 Centre Pointe Dr., Suite 800, West Chester, OH 45399  
 800-338-1122 513-645-7000 513-645-7993 FAX

**STC450i**  
STORMCEPTOR STANDARD DETAIL

**STC 450 I**  
NOT TO SCALE

3



**CDS2015-4-C DESIGN NOTES**

CDS2015-4-C RATED TREATMENT CAPACITY IS 1.4 CFS, OR PER LOCAL REGULATIONS. 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**

GRADED INLET ONLY (NO INLET PIPE)	
GRADED INLET WITH INLET PIPE OR PIPES	
CURB INLET ONLY (NO INLET PIPE)	
CURB INLET WITH INLET PIPE OR PIPES	

**SITE SPECIFIC DATA REQUIREMENTS**

STRUCTURE ID	WATER QUALITY FLOW RATE (CFS OR L/S)	PEAK FLOW RATE (CFS OR L/S)	RETURN PERIOD OF PEAK FLOW (YRS)	SCREEN APERTURE (2400 OR 4700)
PIPE DATA:	I.E.	MATERIAL	DIAMETER	
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INLET PIPE 2	*	*	*	*
OUTLET PIPE	*	*	*	*
RIM ELEVATION	*			
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT		

NOTES/SPECIAL REQUIREMENTS:  
\* PER ENGINEER OF RECORD

- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.contechES.com](http://www.contechES.com)
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**CDS2015-4-C**  
ONLINE CDS STANDARD DETAIL

**CDS2016-4-C**  
NOT TO SCALE

5



*Carlton M. Quinn*  
 PROFESSIONAL ENGINEER FOR  
 ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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 275 REGATTA DRIVE  
 JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
 444 EAST CENTRAL STREET  
 FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	AS SHOWN	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

PREPARED BY:  
  
**ALLEN & MAJOR ASSOCIATES, INC.**  
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DRAWING TITLE:	SHEET No.
DETAILS	C-507



### SC-160LP STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-160LP.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER; 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- 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 1.5".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 325 LBS/FT<sup>3</sup>. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. 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.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.85 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM 2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

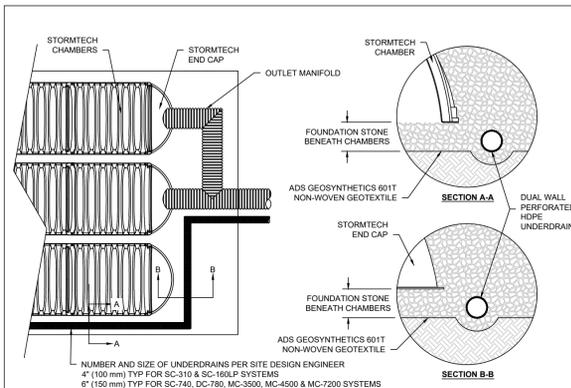
### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-160LP SYSTEM

- STORMTECH SC-160LP CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-160LP CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE 'STORMTECH INSTALLATION GUIDE SC-160LP'.
- FOUNDATION STONE AND EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE: AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- THE DEPTH OF FOUNDATION STONE SHALL BE DETERMINED BASED ON THE SUBGRADE BEARING CAPACITY PROVIDED BY THE SITE DESIGN ENGINEER.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES CONCERNING CHAMBER FOUNDATION DESIGN AND SUBGRADE BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- CHAMBERS SHALL BE INSTALLED "TOE TO TOE" NO ADDITIONAL SPACING BETWEEN ROWS IS REQUIRED.
- STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONESHOOTER LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

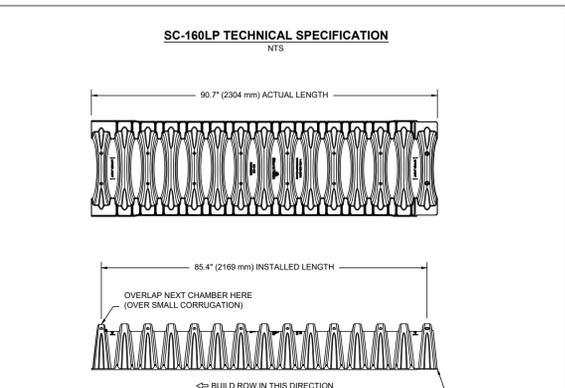
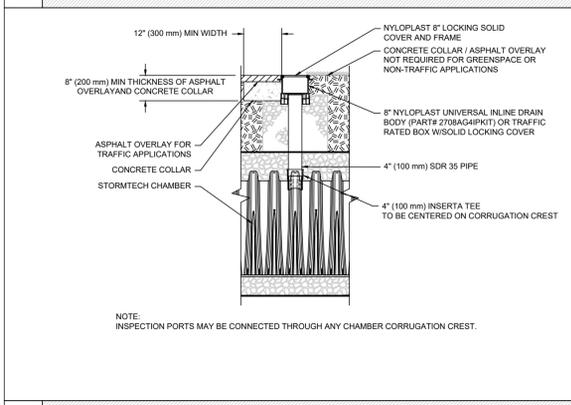
### NOTES FOR CONSTRUCTION EQUIPMENT

- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-160LP CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE 'STORMTECH INSTALLATION GUIDE SC-160LP'.
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE 'STORMTECH INSTALLATION GUIDE SC-160LP'.
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



### 5 UNDERDRAIN DETAIL



### SC-160LP TECHNICAL SPECIFICATIONS

PART #	STUB	A
SC160EPP	6" (150 mm)	0.56" (16 mm)
SC160EPP08	8" (200 mm)	0.80" (20 mm)

NOMINAL CHAMBER SPECIFICATIONS  
 SIZE (W X H X INSTALLED LENGTH) 25.0" X 12.0" X 85.4" (635 mm X 305 mm X 2169 mm)  
 CHAMBER STORAGE 6.85 CUBIC FEET (0.19 m<sup>3</sup>)  
 MINIMUM INSTALLED STORAGE\* 16.0 CUBIC FEET (0.45 m<sup>3</sup>)  
 WEIGHT 24.0 lbs. (10.9 kg)

\*ASSUMES 6" (152 mm) ABOVE, 6" (152 mm) BELOW, AND STONE BETWEEN CHAMBERS WITH 40% STONE POROSITY.

CARLTON M. QUINN  
No. 49923  
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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 275 REGATTA DRIVE  
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PROJECT:  
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 FRANKLIN, MA

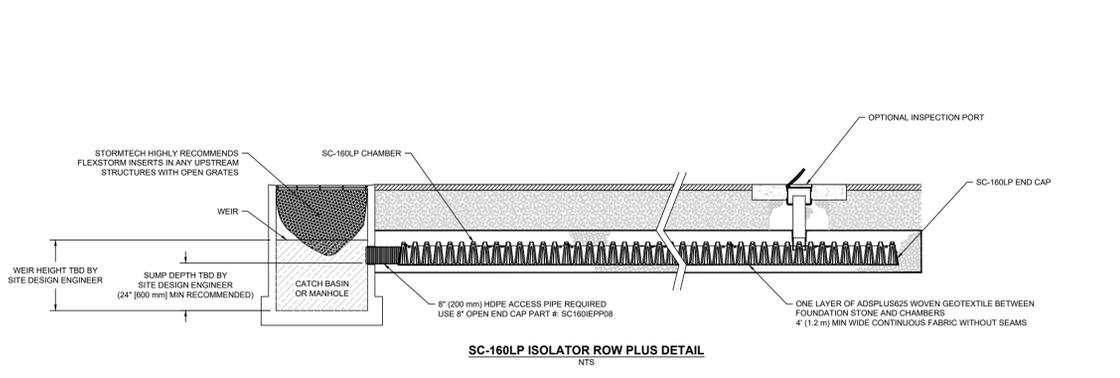
PROJECT NO. 3317-01 DATE: 02-11-2025  
 SCALE: AS SHOWN DWG. NAME: C-3317-01  
 DESIGNED BY: MTB CHECKED BY: CMQ  
 PREPARED BY:

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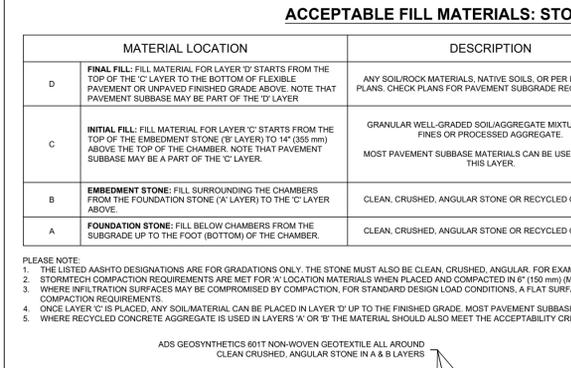
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### 3 SC-160LP ISOLATOR ROW PLUS DETAIL

### 4 4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)



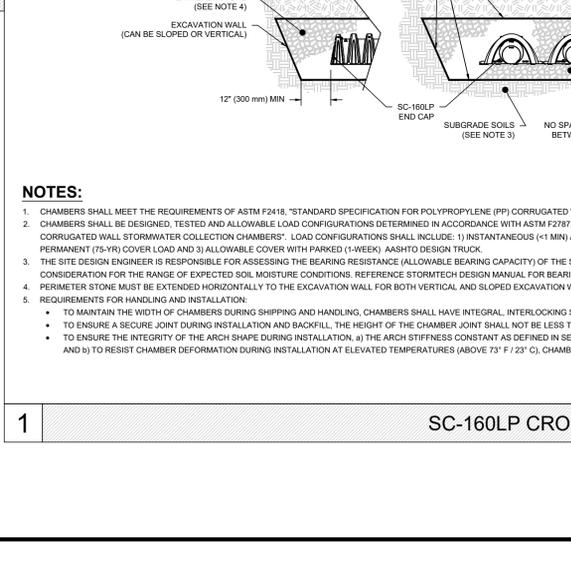
### 2 SC-160LP TECHNICAL SPECIFICATIONS

#### ACCEPTABLE FILL MATERIALS: STORMTECH SC-160LP 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 14" (355 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. OR MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2.4, A-3 OR AASHTO M43 <sup>2</sup> 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 OR RECYCLED CONCRETE <sup>3</sup>	AASHTO M43 <sup>2</sup> 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 OR RECYCLED CONCRETE <sup>3</sup>	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

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) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.  
 3. WHERE FILTRATION 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.  
 5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".

### 1 SC-160LP CROSS SECTION DETAIL



### 1 SC-160LP CROSS SECTION DETAIL

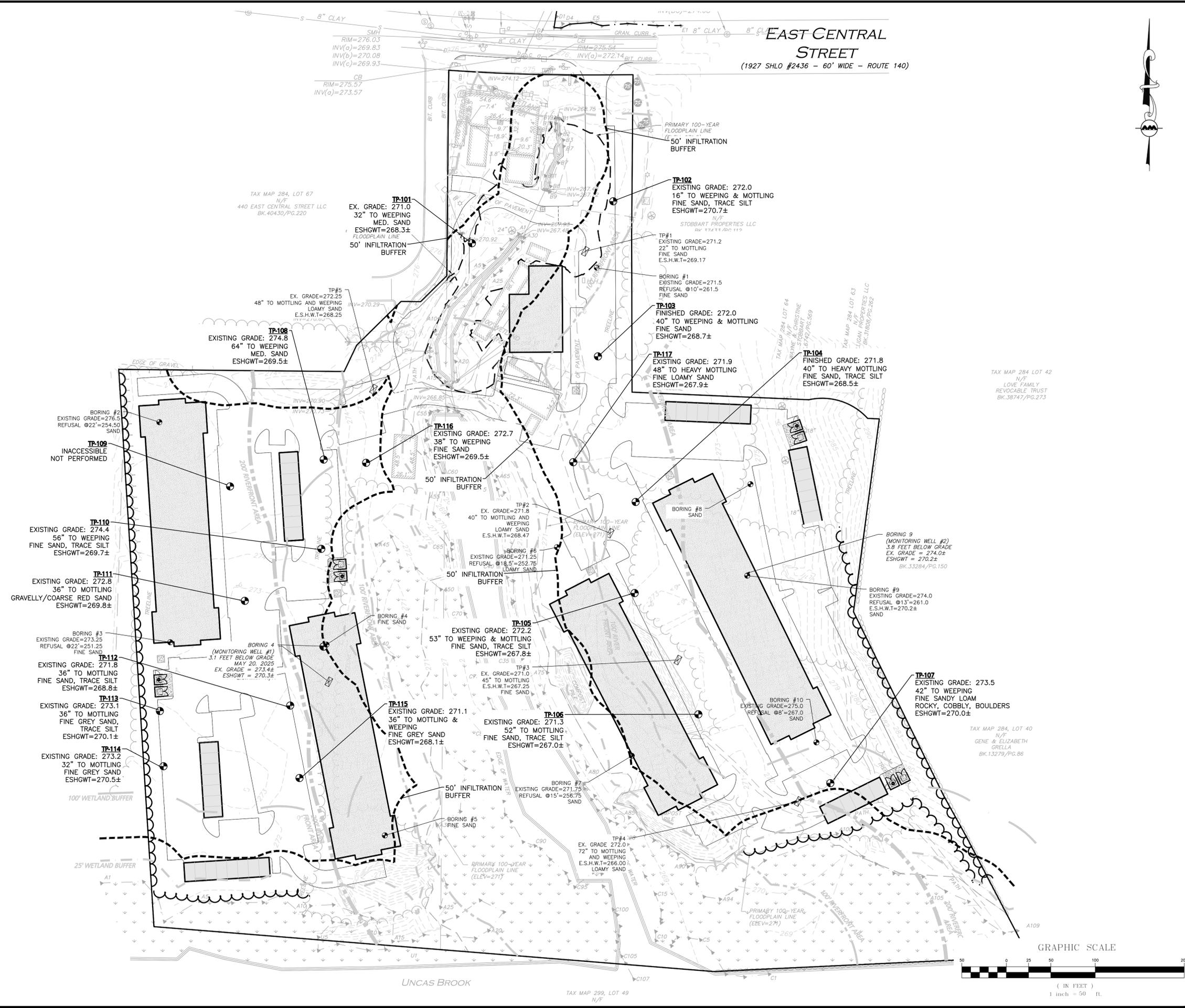
- #### INSPECTION & MAINTENANCE
- ##### STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
    - REMOVE OPEN ID ON NYLOPLAST INLINE DRAIN
    - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
    - USING A FLASHLIGHT AND STADIUM ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
    - LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
    - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
  - ALL ISOLATOR PLUS ROWS
    - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
    - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
    - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- ##### STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A FIXED QUIVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
  - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - VACUUM STRUCTURE SUMP AS REQUIRED
- ##### STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS. RECORD OBSERVATIONS AND ACTIONS.
- ##### STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.
- #### NOTES
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
  - CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

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# EAST CENTRAL STREET

(1927 SHLO #2436 - 60' WIDE - ROUTE 140)



*Carlton M. Quinn*  
 PROFESSIONAL ENGINEER FOR  
 ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
C	9/18/25	REVISED PER NOI PEER REVIEW
B	7/21/25	REVISED PER NOI PEER REVIEW
A	6/11/25	REVISED PER TOWN COMMENTS

APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
 275 REGATTA DRIVE  
 JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
 444 EAST CENTRAL STREET  
 FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 50'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

PREPARED BY:

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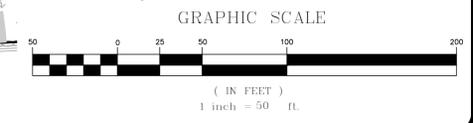
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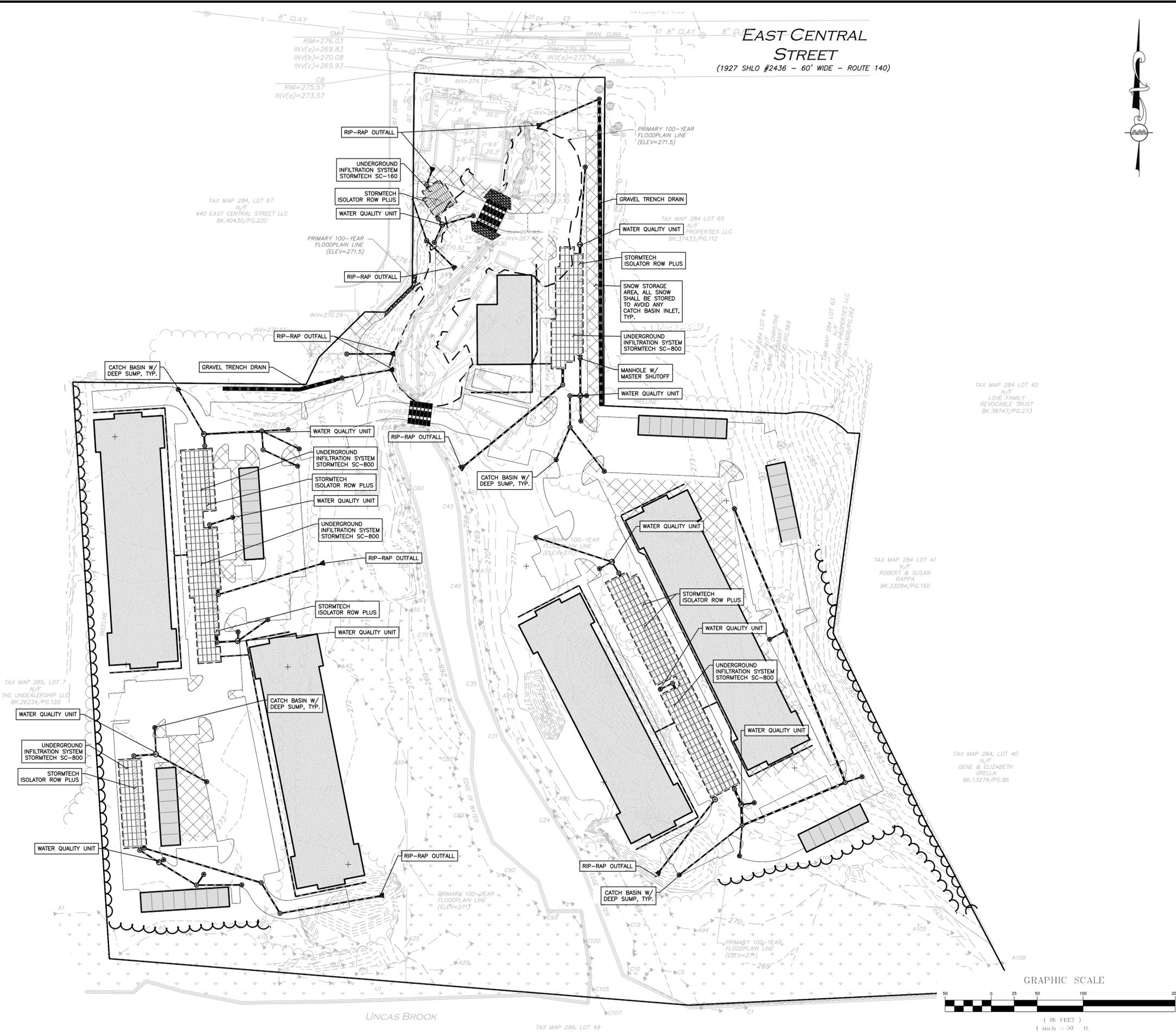
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**EAST CENTRAL STREET**  
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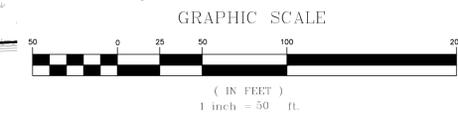
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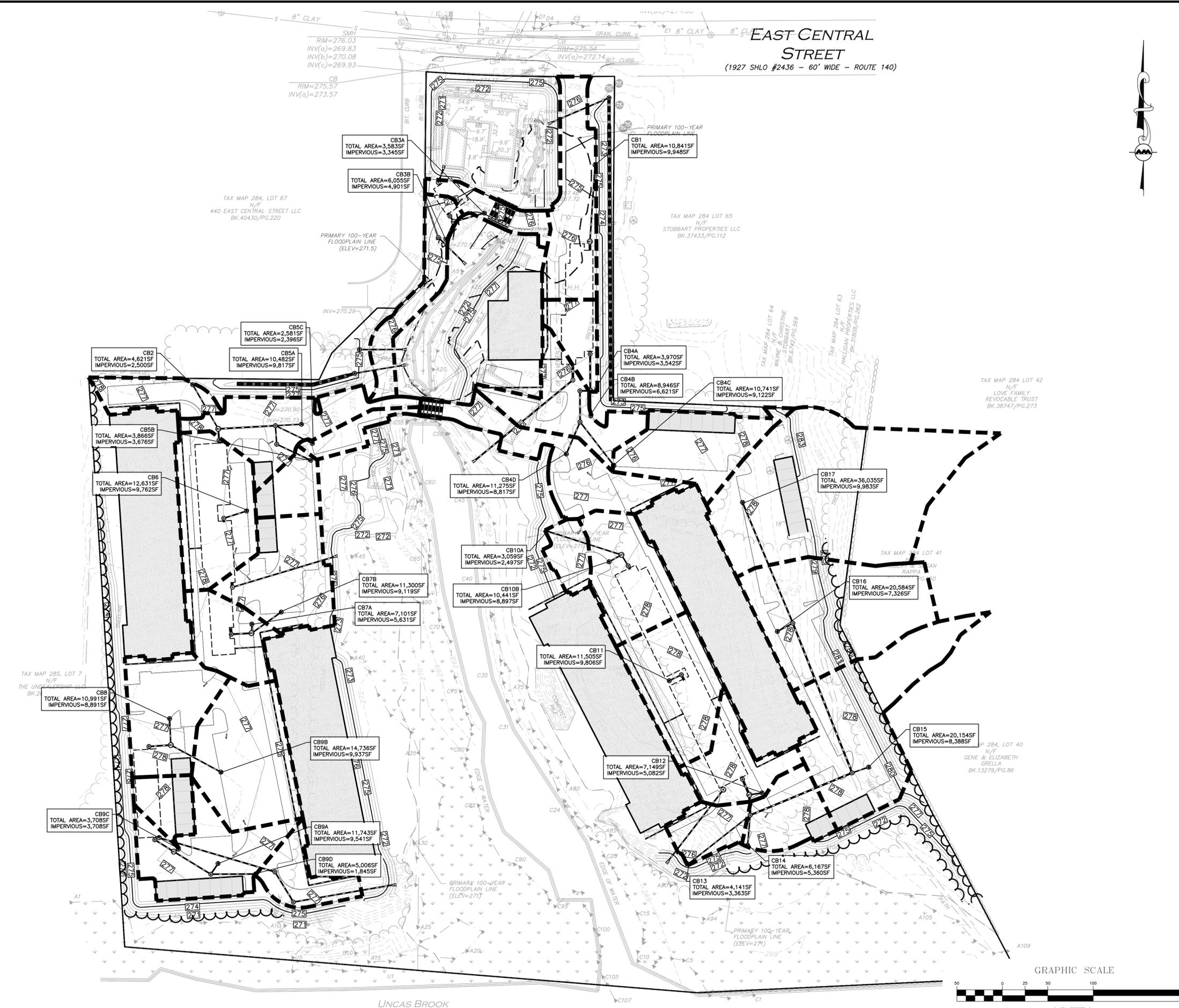
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# EAST CENTRAL STREET

(1927 SHLO #2436 - 60' WIDE - ROUTE 140)



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 275 REGATTA DRIVE  
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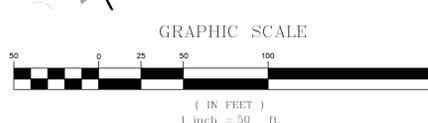
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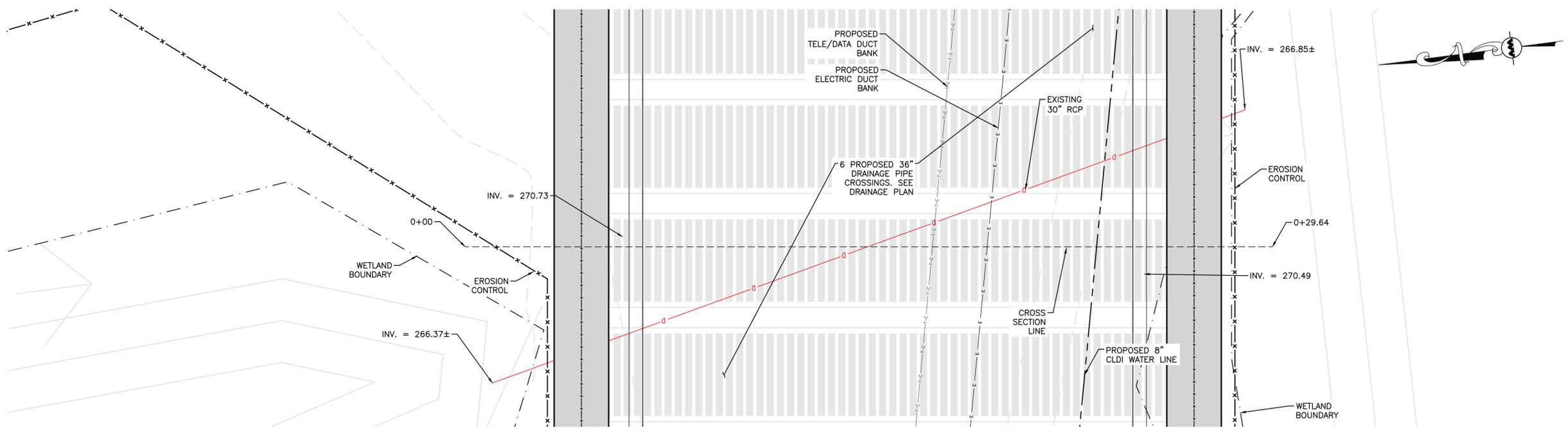
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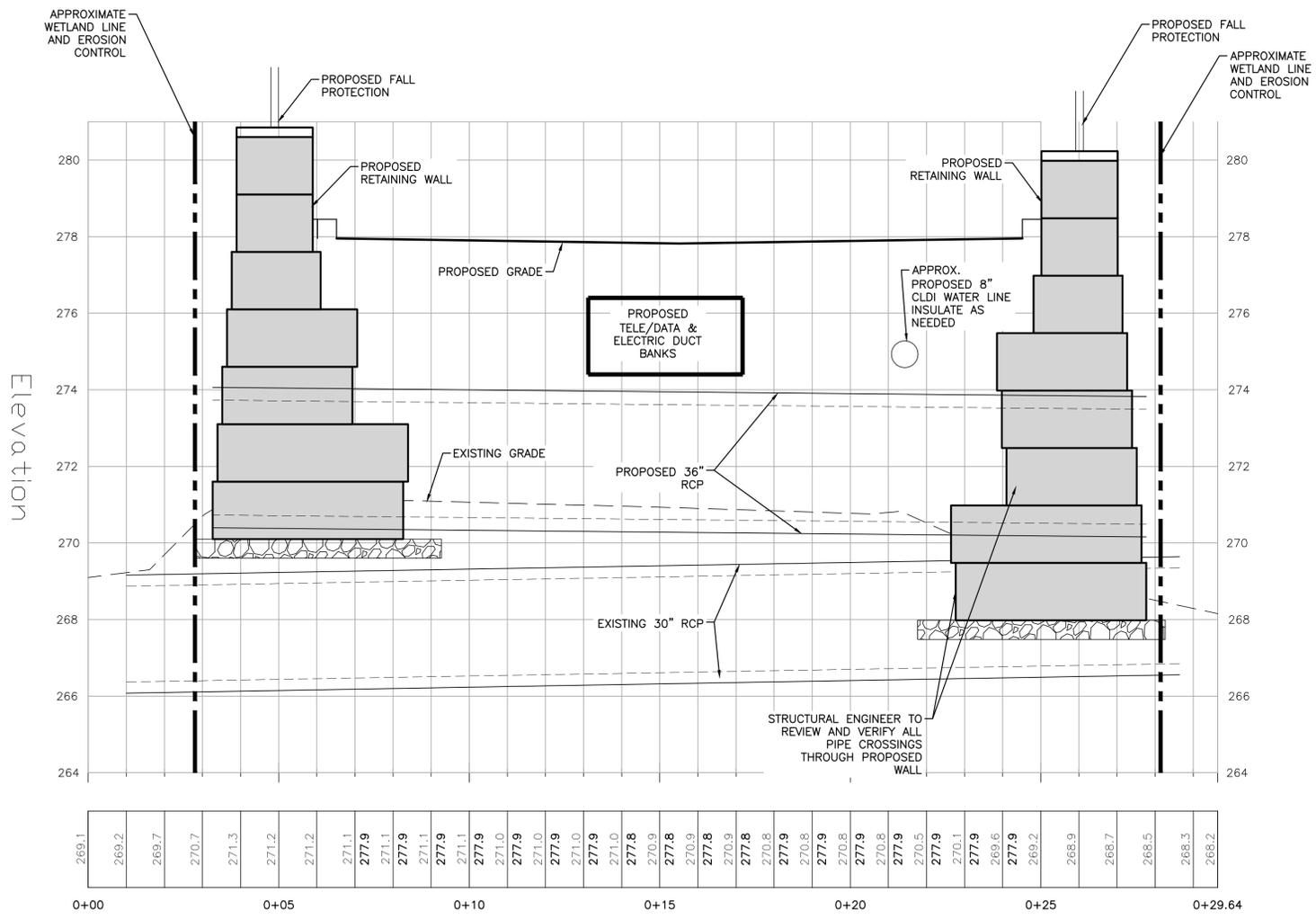
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**PLAN VIEW SOUTHERN STREAM CROSSING**

SCALE: 1"=2'



**CROSS SECTION SOUTHERN STREAM CROSSING**

SCALE: 1"=2'



*Carlton M. Quinn*  
 PROFESSIONAL ENGINEER FOR  
 ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
C	9/18/25	REVISED PER NOI PEER REVIEW
B	7/21/25	REVISED PER NOI PEER REVIEW
A	6/11/25	REVISED PER TOWN COMMENTS

APPLICANT/OWNER:  
**TAG CENTRAL LLC**  
 275 REGATTA DRIVE  
 JUPITER, FL 33477

PROJECT:  
**40B MULTIFAMILY**  
 444 EAST CENTRAL STREET  
 FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 2'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

PREPARED BY:

**ALLEN & MAJOR ASSOCIATES, INC.**  
 civil engineering • land surveying  
 environmental consulting • landscape architecture  
 www.allenmajor.com  
 100 COMMERCE WAY, SUITE 5  
 WOBURN MA 01801  
 TEL: (781) 935-6889  
 FAX: (781) 935-2896

WOBURN, MA • LAKEVILLE, MA • MANCHESTER, NH

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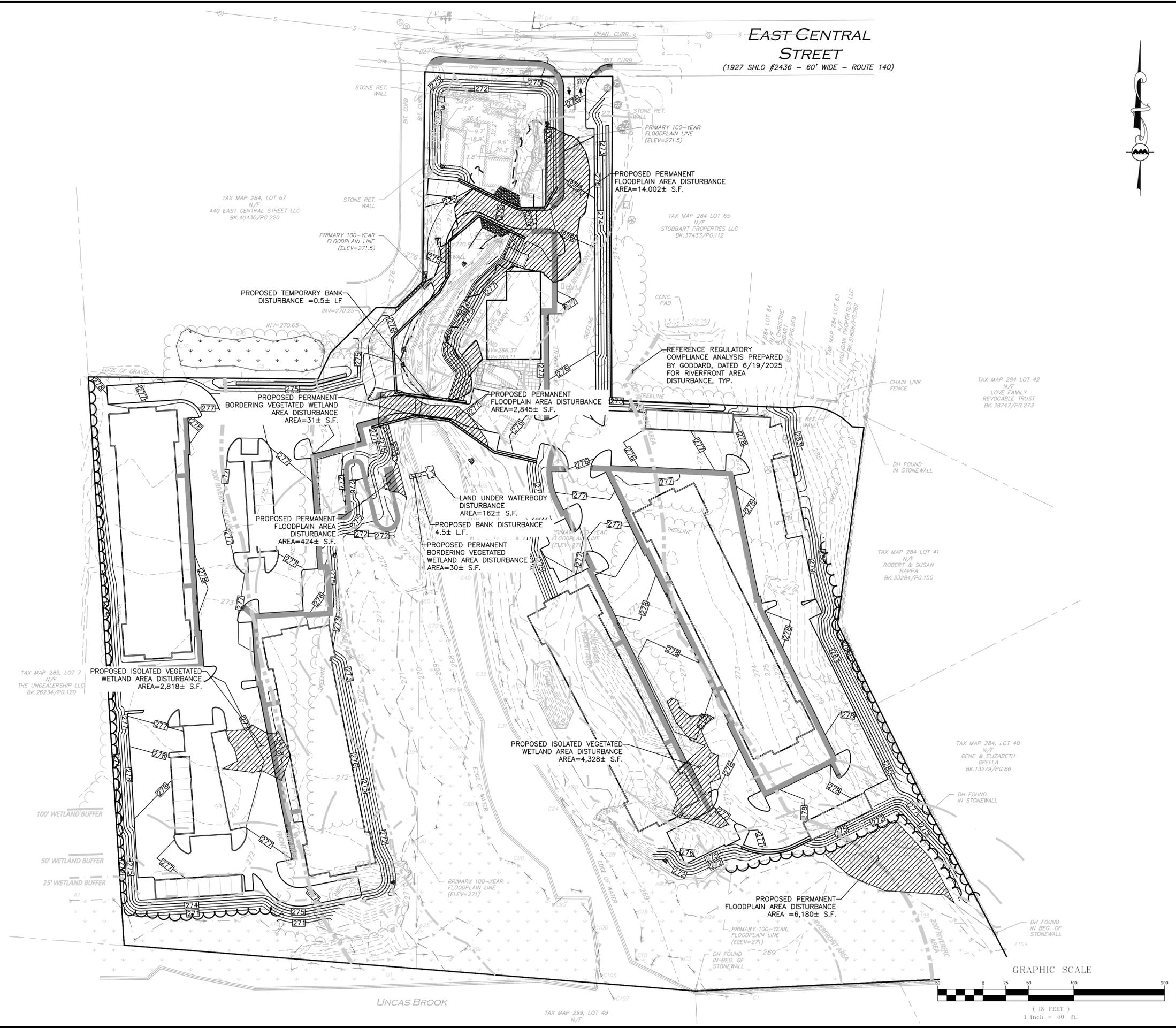
DRAWING TITLE:	SHEET No.
EXISTING CULVERT CROSS SECTION	EXH-4

N:\PROJECTS\3317-01\CIVIL\DRAWINGS\CURRENT\C-3317-01\_CROSS\_SECTION.DWG

**DIG SAFE**

BEFORE YOU DIG  
 CALL 811 OR  
 1-888-DIG-SAFE  
 1-888-344-7233

**EAST CENTRAL STREET**  
(1927 SHLO #2436 - 60' WIDE - ROUTE 140)



*Carlton M. Quinn*  
PROFESSIONAL ENGINEER FOR  
ALLEN & MAJOR ASSOCIATES, INC.

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JUPITER, FL 33477

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**40B MULTIFAMILY**  
444 EAST CENTRAL STREET  
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	02-11-2025
SCALE:	1" = 50'	DWG. NAME:	C-3317-01
DESIGNED BY:	MTB	CHECKED BY:	CMQ

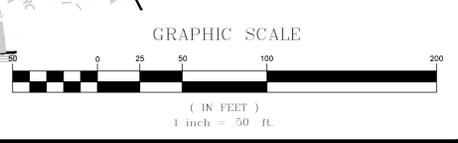
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DRAWING TITLE:	SHEET No.
<b>RESOURCE AREA IMPACT EXHIBIT</b>	<b>EXH-5</b>



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