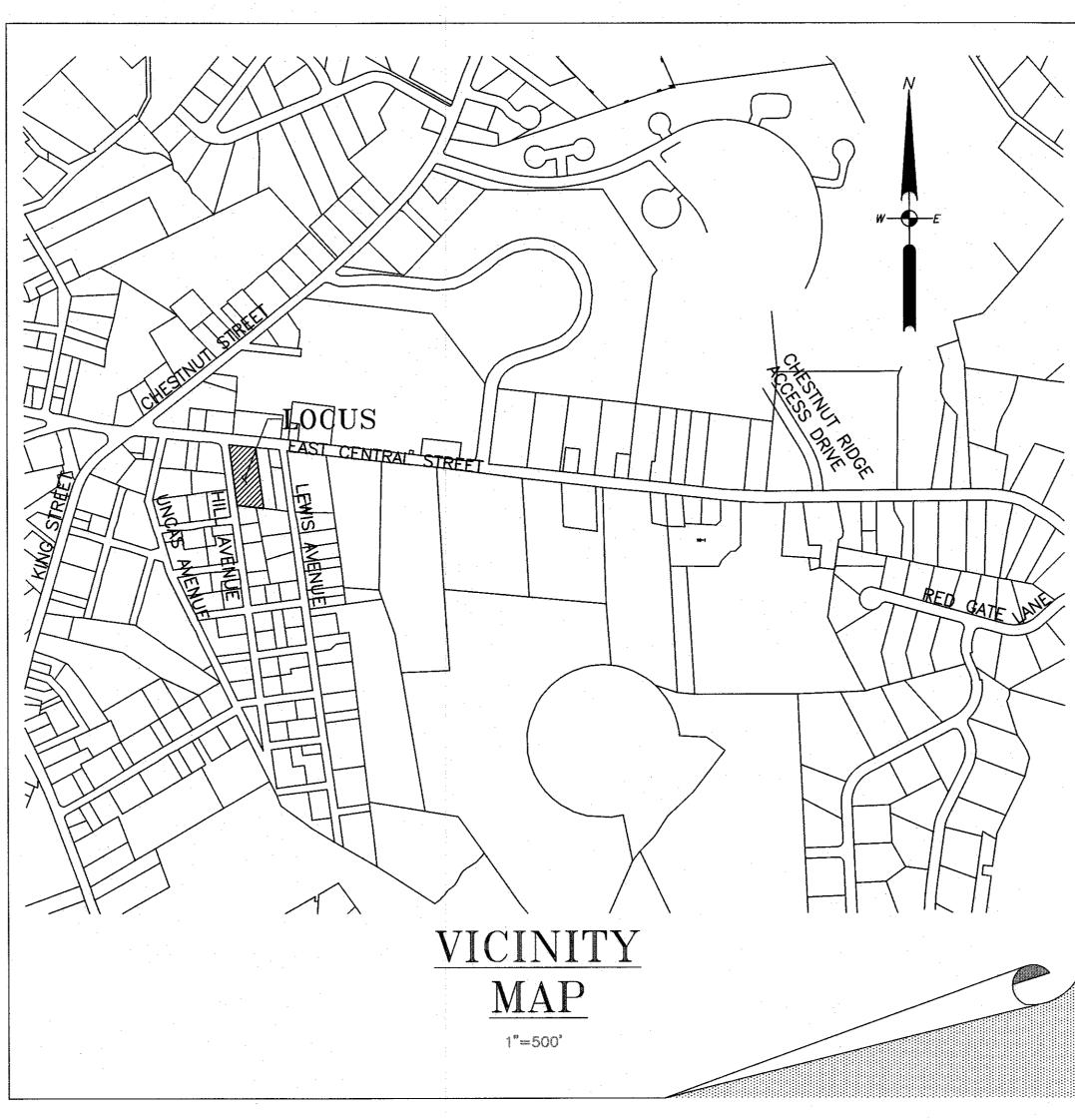
TAI ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN, MASSACHUSETTS

INDEX

- COVER SHEET
- EXISTING CONDITIONS PLAN
- DEMOLITION & EROSION CONTROL PLAN
- 4. SITE PLAN
- GRADING PLAN
- UTILITY PLAN
- LANDSCAPING PLAN
- CONSTRUCTION DETAILS

PHOTOMETRIC PLAN

- CONSTRUCTION DETAILS
- CONSTRUCTION DETAILS
- 12. CONSTRUCTION DETAILS



PURPOSE OF PLAN

CONSTRUCT A MULTIFAMILY BUILDING WITH IN THE COMMERCIAL I ZONING DISTRICT.

APPROVED DATE: FRANKLIN PLANNING BOARD BEING A MAJORITY LEGAL NOTES

UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EXIDENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE ACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. ADDITIONAL UTILITIES, NOT PHYSICAL EVIDENCE MAY EXIST CONTRACTORS (IN 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORÉ EXCAVATING AND DRILLING AND

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS, RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 06\$

APPLICANT

TAJ ESTATES OF FRANKLIN II, LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

COVER SHEET

NOVEMBER 11, 2021

-20 V Vall 8 -100	anti din Edita dilambi dila di alta di alta gi E 1960 (1960 silita)
DATE	REVISION DESCRIPTION
01/17/22	TOWN COMMENTS - REV1
01/28/22	TOWN COMMENTS - REV2
02/17/22	TOWN COMMENTS - REV3
04/12/22	ADDED RET. WALL - REV4
05/31/22	TOWN COMMENTS - REV5



55 WEST CENTRAL ST. PH. (508) 528-3221

FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

JOB NO. F4478 1 OF 12

- 1. THIS LAND IS ZONED COMMERCIAL I.
- 2. THIS SITE IS NOT LOCATED FLOOD HAZARD ZONE PER FEMA FLOOD MAP 25021C0309E, EFFECTIVE DATE 7/17/2012.
- 3. NO WETLANDS HAVE BEEN IDENTIFIED.
- 4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES IN THE FIELD. ANY DISCREPANCY WITH THE PLANS SHOULD BE REPORTED TO THE DESIGN ENGINEER UPON DISCOVERY.
- 5. REFER TO FRANKLIN ASSESSORS MAP 285 PARCELS 69.
- 6. THIS SITE IS LOCATED IN A WATER RESOURCE DISTRICT.
- 7. ALL REFERENCED DEEDS ARE ON RECORD AT THE NORFOLK COUNTY REGISTRY OF
- 8. THIS SITE IS NOT LOCATED WITHIN A NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM AREA.

LEGEND

CIALI'		H	CATCH BASIN		\$	LIGHT POLE
LAW SECTION 185		0	DRAIN MANHOLE		ى	UTILITY POLE
AST AMENDED ENDMENT 19-831		©_	ELECTRIC MANHOLE		-0	GUY WIRE
5,000 SF 50'		S	SEWER MANHOLE		-	SIGN
50'		0.	MANHOLE		•	WETFLAG
3 STORIES/40 ^{,15}		GV ⊠	GAS VALVE		G	UTILITY POLE
20' 1		GM	GAS METER		Þ	PROP. STREET LIGHTING
10' ¹⁴ 15'		స్త	GAS SHUT OFF VALVE	Ξ	x 000.0	SPOT ELEVATION
ERED BY:		₩V	WATER VALVE			RIPRAP
80 NG 90**		*	WATER SHUT OFF VA	LVE		
ES SHALL BE A DEEPER YARD		*	FIRE HYDRANT			
N THAT PARCEL S AMENDMENT.				EXISTING (CONTOUR	
HIGES MILET ODGEDVE						

COMMER FRANKLIN ZONING BYL

ATTACHMENT 9; LA 03-13-2019 BY AME MINIMUM LOT AREA MINIMUM LOT FRONTAGE MINIMUM LOT DEPTH MINIMUM LOT WIDTH BLDG HEIGHT

MINIMUM YARDS FRONT SIDE REAR

% OF LOT UPLAND COVE STRUCTURES STRUCTURES+PAVIN

BUT NO NEW STRUCTURE REQUIRED TO PROVIDE A THAN THAT EXISTING ON UPON ADOPTION OF THIS PERMITTED RESIDENTIAL USES MUST OBSERVE REQUIREMENTS OF THE GENERAL RESIDENTIAL V DISTRICT FOR RESIDENTIAL USE BUILDINGS ONLY. MIXED USE BUILDINGS ARE EXEMPT FROM THIS REQUIREMENT.

THE 10 FT SIDE SETBACK IS ONLY REQUIRED ON ONE SIDE OF LOT: IF LOT ABUTS A RESIDENTIAL DISTRICT A 20 FT SETBACK IS REQUIRED ON THE ABUTTING SIDE.

REGARDLESS OF THE NUMBER OF STORIES. MAY BE PERMITTED BY SPECIAL PERMIT FROM THE PLANNING BOARD.

^BBUILDINGS UP TO 50 FEET IN HEIGHT,

**NON-RESIDENTIAL IMPERVIOUS COVERAGE SHALL NOT EXCEED 80% IN A WATER RESOURCE DISTRICT

<u>PLAN REFERENCES:</u>

1. PLAN NO. 393-1997, PL. BK. 448

2. SEE ANR PLAN ENTITLED "PLAN OF LAND 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS," DATED APRIL 30, 2018, PREPARED BY GUERRIERE & HALNON, INC. PLANNING BOARD ENDORSED MAY 7, 2018 ON WHICH THE INTERIOR DEED LINE IS DEPICTED AS "TO BE REMOVED."

		<u> 1110</u>	11111		
	Ш	CATCH BASIN		\$	LIGHT POLE
-	0	DRAIN MANHOLE		و	UTILITY POLE
	(E)	ELECTRIC MANHOLE		-0	GUY WIRE
	<u>S</u>	SEWER MANHOLE		-	SIGN
	0	MANHOLE			WETFLAG
•	GV ⊠	GAS VALVE		വ	UTILITY POLE
	GM	GAS METER		₽	PROP. STREET LIGHTING
	స్త	GAS SHUT OFF VALVE		x 000.0	
	w× X	WATER VALVE			RIPRAP
	*	WATER SHUT OFF VA	LVE		·
	¥	FIRE HYDRANT			
			EXISTING	CONTOUR	
		D	EXISTING I	DRAIN LIN	E
		w	EXISTING WATER LINE		
	<u> </u>	G	EXISTING GAS LINE		
		— s ———	EXISTING SEWER LINE		

DEEP TESTS TAKEN 11/14/17 BY DN PERC. TESTS TAKEN 11/14/17 BY DN

SOIL EVALUATOR DON NIELSEN SOIL EVALUATOR DON NIELSEN	AS+BUILT) (S)
	A Sept of the sept
285.3 DTH#1 285.2 DTH#2 284.6 DTH#3 283.9 DTH#4 285.8 DTH#5 283.6 DTH#6 286.8 DTH#7	183'18'04"W
AP 0"-12" AP 0"-24" AP 0"-18" AP 0"-18" AP 0"-18" AP 0"-10" AP 0"-12" AP 0"-12"	SINGLE FAMILY IV 140.26
284.3 Bw Bw Bw 283.1 282.4 285.0 285.0 286.0 APPROXIMA	SEWER EASEMENT - SHED SHED SHED
S 12"_36" S 24"_42" BW 18"_32" BW 18"_30" BW 10"_32" BW 12" 24" BW 12" 24" BW 12" 24"	TAKING
282.3 7.5Y5/4 12 30 281.7 7.5Y5/4 27 42 L.S. 10 32 L.S. 10 32 L.S. 10 32 281.6 L.S. 10 32 2	IRWIN RECORD MARCHAND
C1 M.S. 36"-60" F.S. 42"-84" C1 S.L. 32"-84" C1 S.L. 30"-42" C1 L.S. 32"-48" C1 L.S. 24"-48" C1 L.S. 32"-42"	USE: RESIDENTIAL FROM TOWN USE: RESIDENTIAL USE: RESIDENTIAL DWELLING DWELLING
280.3 10 11 279.6 277.6 280.4 281.8 279.6 283.3	APPROXIMATE #29
M.S. 60"-96" M.S. 84"-156" M./F.S. 84"-144" F.S. 42"-60" F./M.S. 48"-60" F./M.S. 48"-120" F./M.S. 42"-84"	HILL AVE.
277.5 1 272.2 1 272.0 1 278.9 200.6 273.6 1 279.8 1	
NO G.W. MOTTLES 32"-54" M./C.S. M.S. M.S. M.S. M.S. M.S. M.S.	
F.S. SOME SOME SOME	
	LEDGE STREET
NO G.W. NO MOTTLES	

(COUNTY LAYOUT DATED JUNE 7, 1955)

(COUNTY LAYOUT DATED NOVEMBER 24, 1914)

(PLAN BK. 74 PLAN NO. 3584).

R**=**283.9

REMNANTS

PAVED

DRIVEWAY

SHED

12"RCP-/

PORCH

EXIST. SINGLE

FAMILY

WOOD FRAME HOUSE

(PLAN BK. 197 PLAN NO. 849)

E AST CENTRAL STREET

114.09

LOT\1A

PLAN REFERENCE 2

AREA=43,756±SF_

 $(1.005 \pm AC)$

SEE PLAN REFERENCE 2

R=2/84.28

COMMERCIAL

APPROX

EXIST.

DRIVE

x285.0

6' WOOD

STOCKADE FENCE

7 G N84'26'51"W

_____284 _____

x283.3

x283.3

Edge of Woods

with

Undergrowth

PLAN REFERENCE 1

 $(0.7\pm AC)$

LOT 2 PLAN REFERENCE 1

(0.3±AC)

DEED LINE (SEE Z

SMH R=285.17

COUNTY TAKING+ A=150±SF

3382-112

APPROX.

EXIST. **PAVEMENT**

UNCAS AVENUE

CONDOMINIUM

USE: RESIDENTIAL

DWELLING

SINGLE FAMILY

TAÝAL

USE: RESIDENTIAL DWELLING

R=293.28 I=283.60 (RECORD FROM

LAWRÉNCE & DOOLEY

USE: RESIDENTIAL DWELLING

R=285,17-

R=20.00 L=36.13'

T=25.37'

Δ=103'30'1/7"

APPROVED DATE: FRANKLIN PLANNING BOARD BEING A MAJORITY LEGAL NOTES

(F)SBDH

(F)SBDH

APPROXIMATE #240

ROVANI

DWELLING

USE: RESIDENTIAL

283.4

R=284.14

UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EXBENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST, CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORÉ EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE\7233\.

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OWNER

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

APPLICANT

TAJ ESTATES OF FRANKLIN II. LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

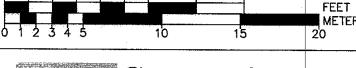
TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

EXISTING CONDITIONS

NOVE	EMBER 11, 2021	
DATE	REVISION DESCRIPTION	
01/17/22	TOWN COMMENTS - REV1	
01/28/22	TOWN COMMENTS - REV2	
)2/17/22	TOWN COMMENTS - REV3	
	TOWA COMMENTS - IVEAN	

05/31/22 TOWN COMMENTS - REV5 GRAPHIC SCALE: 1"=20'

ADDED RET. WALL - REV4

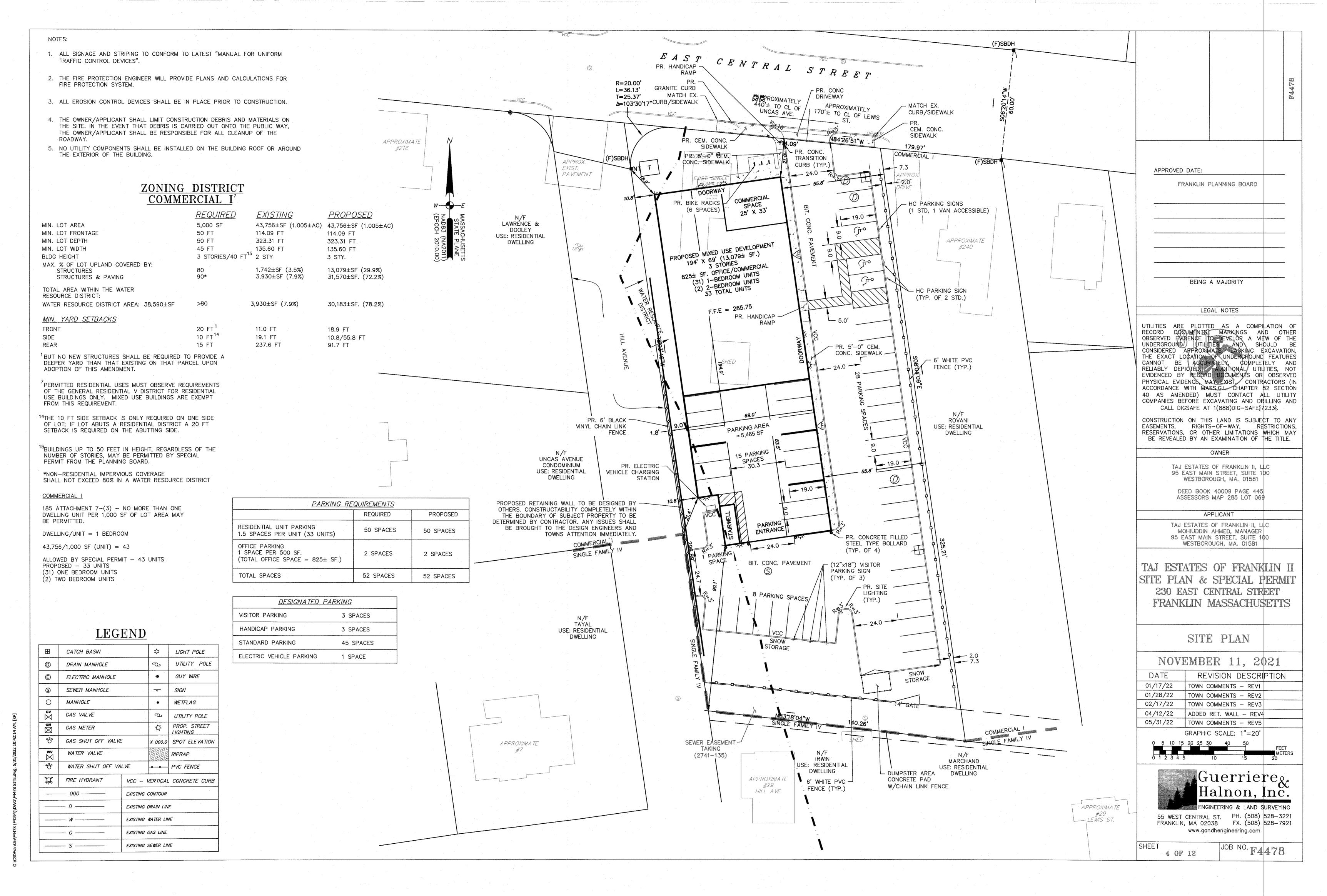




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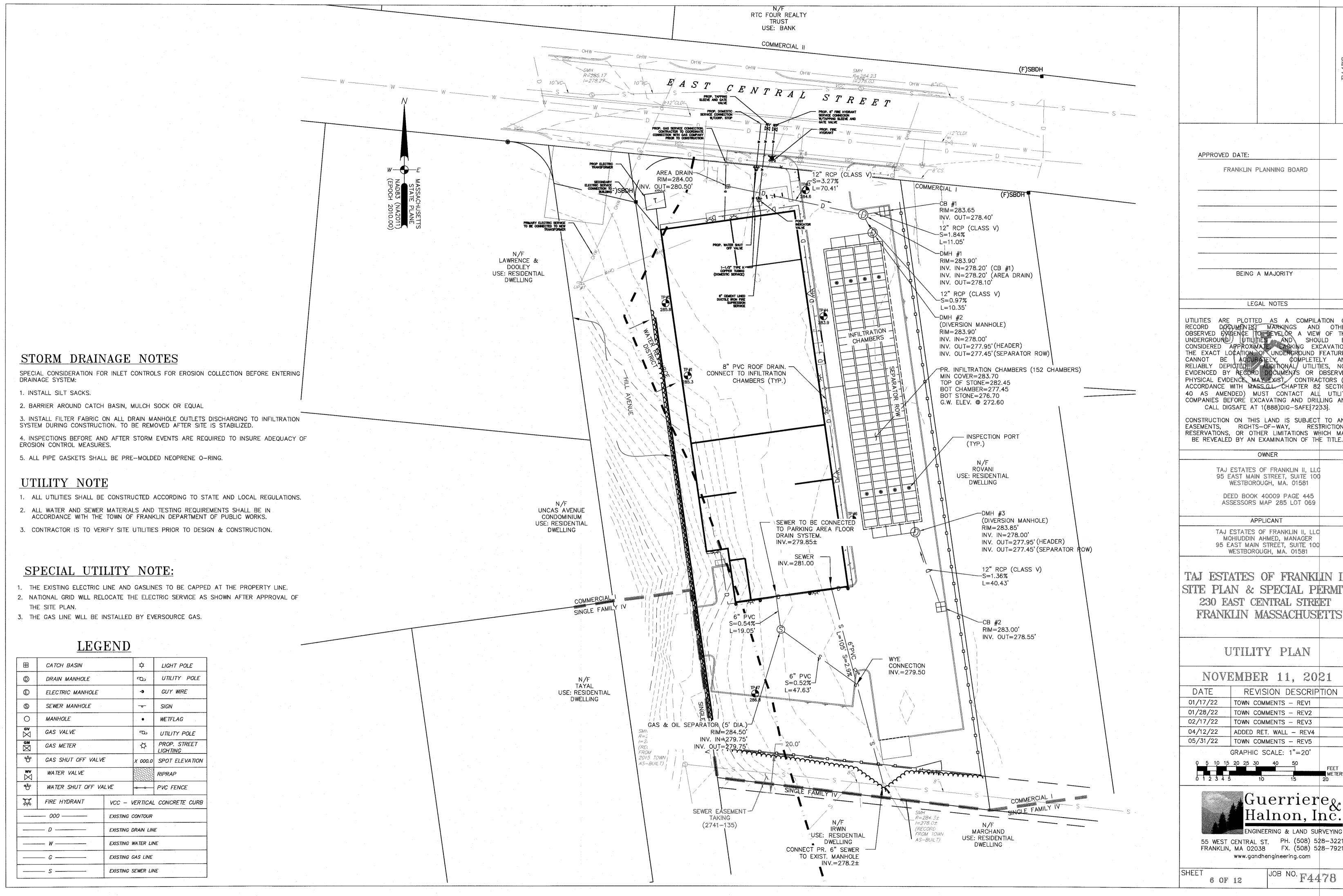
SHEET JOB NO. F4478 2 OF 12

3DFranklin/E4478 (F4194)\DWG\F4478 STTE.dwg. 5/31/2022 10:38:38 AM. [KP]





\C3DFranklin\F4478 (F4194)\DWG\F4478 SITE.dwg, 5/31/2022 10:48:42 AM



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> TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

ASSESSORS MAP 285 LOT 069

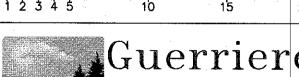
TAJ ESTATES OF FRANKLIN II, LLC MOHIUDDIN AHMED, MANAGER 95 EAST MAIN STREET, SUITE 100

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

UTILITY PLAN

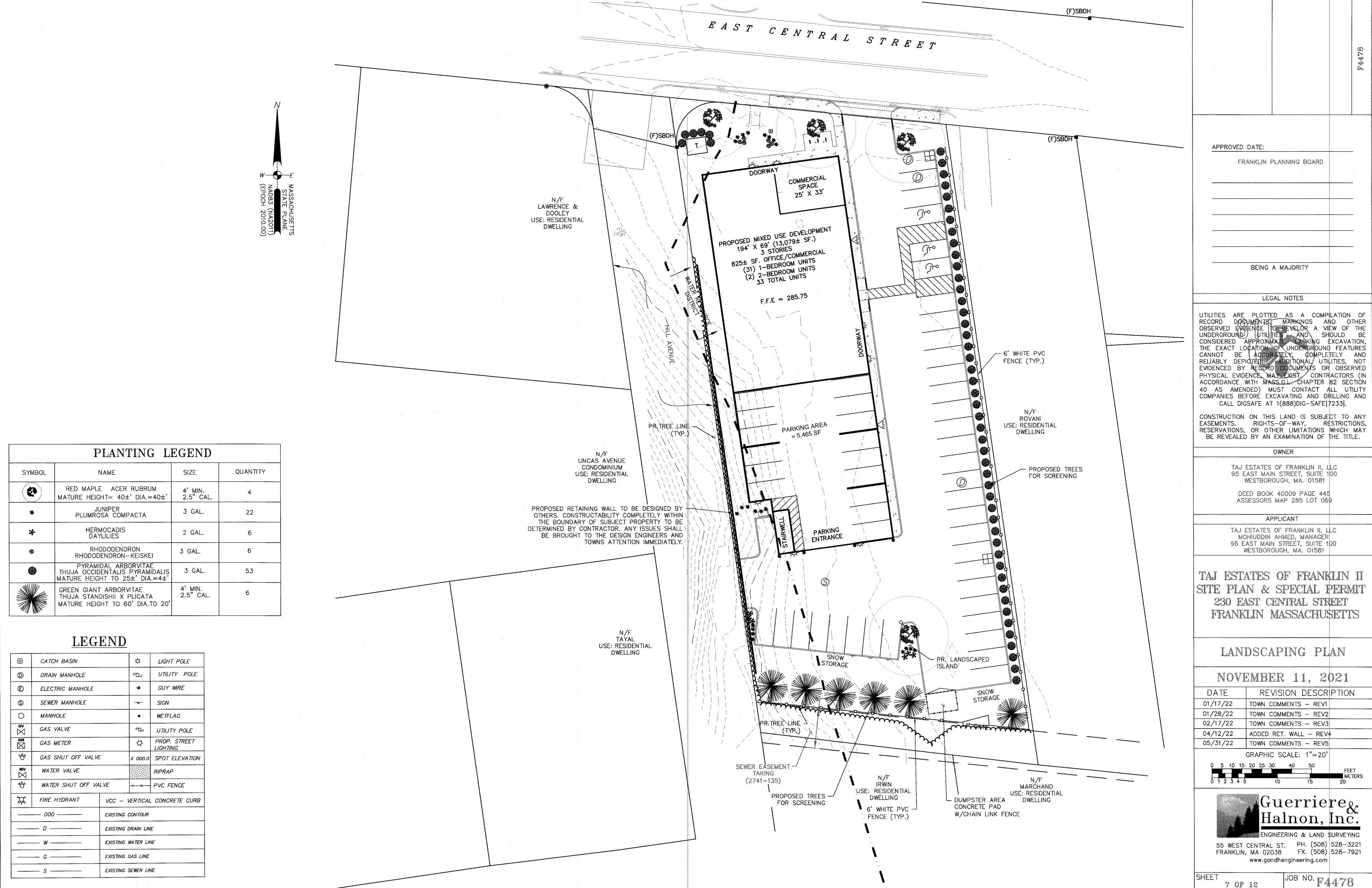
NOVEMBER 11, 2021

DAIL	REVISION DESCRIPTION	
01/17/22	TOWN COMMENTS - REV1	
01/28/22	TOWN COMMENTS - REV2	
02/17/22	TOWN COMMENTS - REV3	
04/12/22	ADDED RET. WALL - REV4	
05/31/22	TOWN COMMENTS - REV5	





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www.gandhengineering.com

JOB NO. F4478

TOWN COMMENTS - REV1 TOWN COMMENTS - REV2 TOWN COMMENTS - REV3 ADDED RET. WALL - REV4

GRAPHIC SCALE: 1"=20'

55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921

THIS PHOTOMETRIC PLAN IS BASED SOLELY UPON PROPRIETARY INFORMATION SUPPLIED BY THE LUMINAIRE MANUFACTURER AND CLIENT RECOMMENDATION.

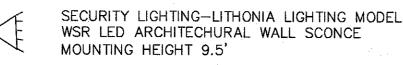
LUMINAIRE LOCATIONS, LIGHTING PATTERNS, AND ILLUMINATION LEVELS WERE PREPARED UTILIZING INFORMATION SUPPLIED BY THE LUMINAIRE MANUFACTURER AND THE SOFTWARE PACKAGE SIMPLY OUTDOOR. IT'S VALUES SHOULD BE CONSIDERED APPROXIMATE IN NATURE AND SHALL BE VERIFIED BY THE LUMIN MANUFACTURER PRIOR TO INSTALLATION.

ACTUAL PERFORMANCE OF LIGHTING PATTERNS AND/OR ILLUMINANCE VALUES MAY VARY DUE TO VARIATIONS IN LIGHT HEIGHT, ELECTRICAL VOLTAGE, LAMP WATTAGE, AND OTHER VARIABLE FIELD CONDITIONS, OR USING A LUMINAIRE OTHER THAN SPECIFICALLY NOTED HEREON.

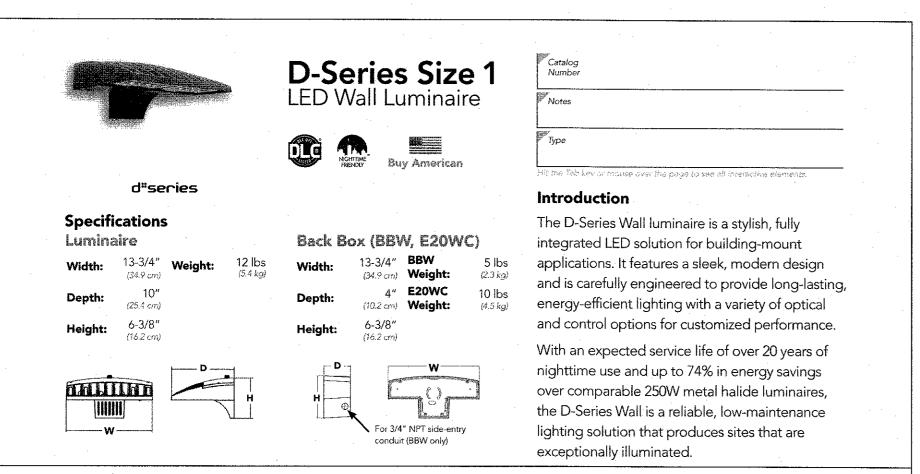
GUERRIERE & HALNON, INC ASSUMES NO RESPONSIBILITY FOR ANY SAFETY AND/OR SECURITY RISKS DUE TO INADEQUATE LIGHT LEVELS WHICH MAY OCCUR AFTER INSTALLATION.



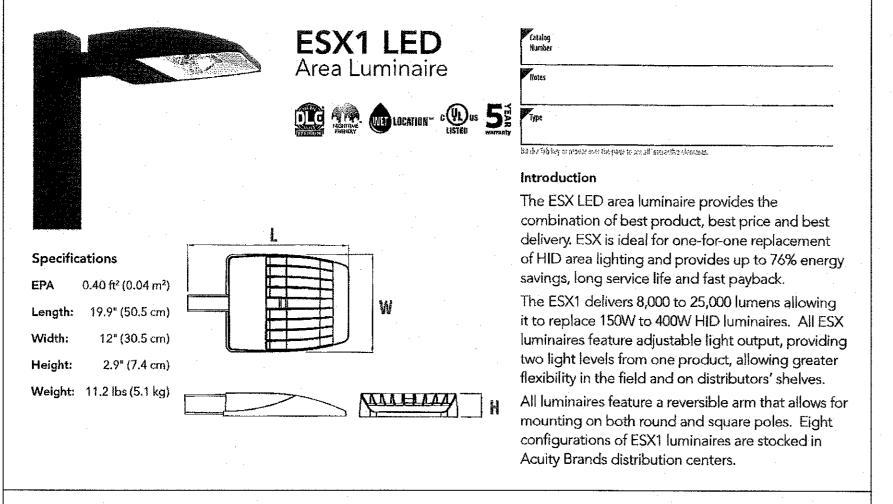
PEDESTRIAN LIGHTING- LITHONIA LIGHTING MODEL OLLWD- LED WALL CYLINDER LIGHT MOUNTING HEIGHT 6.5'



PARKING LIGHTING LITHONIA LIGHTING MODEL ESX1 LED AREA LUMINAIRE MOUNTING HEIGHT 20'

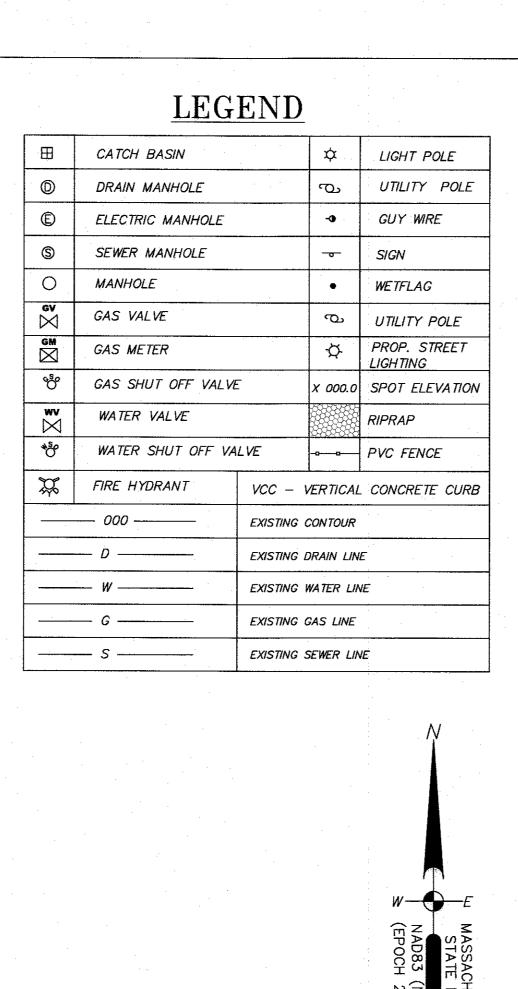


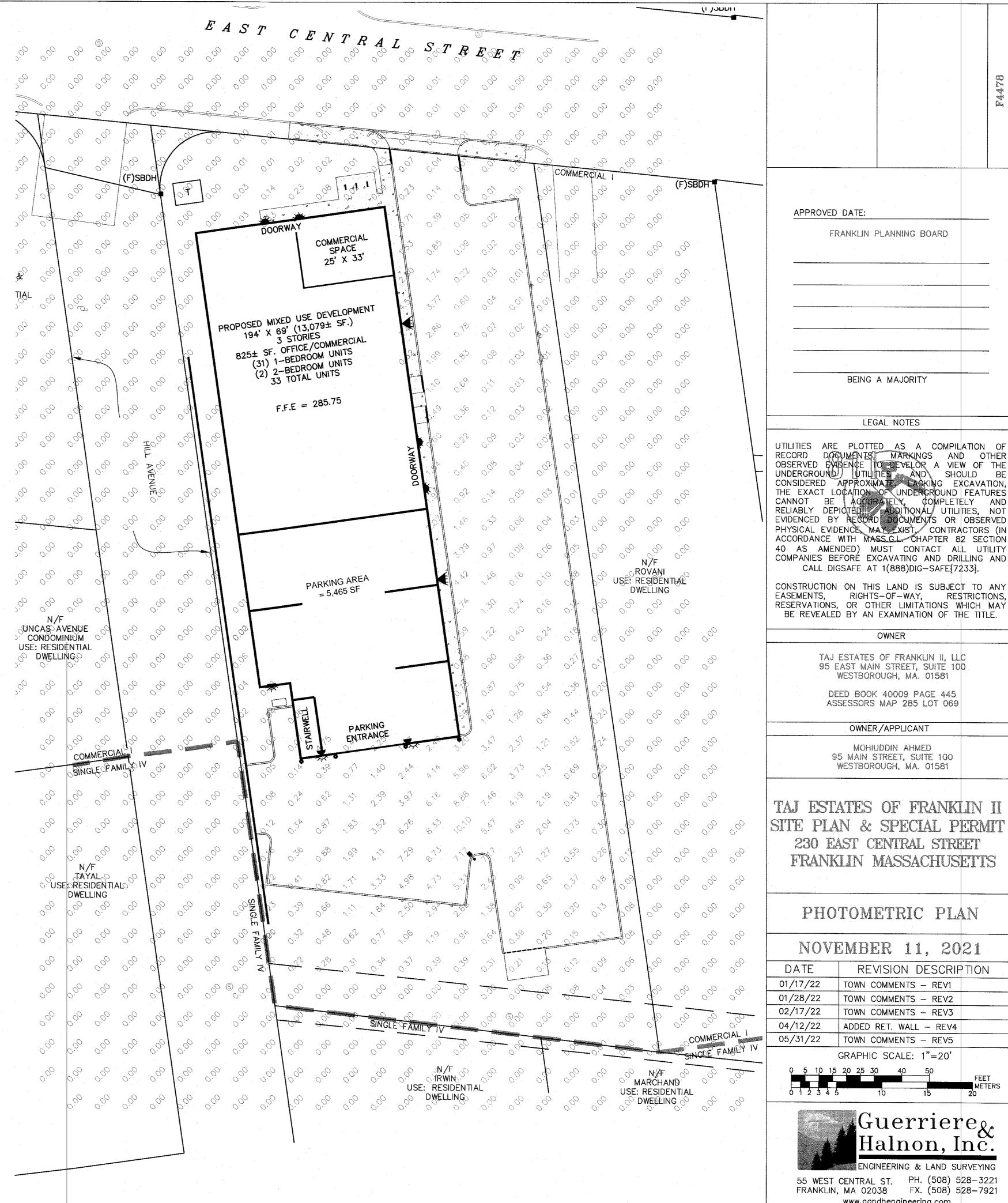
SECURITY LIGHTING



PARKING LIGHTING







APPROVED DATE:

FRANKLIN PLANNING BOARD

BEING A MAJORITY

LEGAL NOTES

RECORD DOCUMENTS MARKINGS AND OTHER OBSERVED EXPENCE TO DEVELOR A VIEW OF THE OBSERVED EVIDENCE TO DEVELOR A VIEW OF THE UNDERGROUND UTILITIES AND SHOULD BE CONSIDERED APPROXIMATE ACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES RELIABLY DEPICTED! ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD PHYSICAL EVIDENCE, MAY EXIST / CONTRACTORS (IN ACCORDANCE WITH MASS.G.L. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS. RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY

OWNER

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

OWNER/APPLICANT

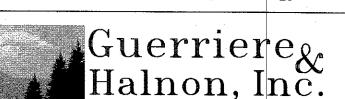
MOHIUDDIN AHMED 95 MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

PHOTOMETRIC PLAN

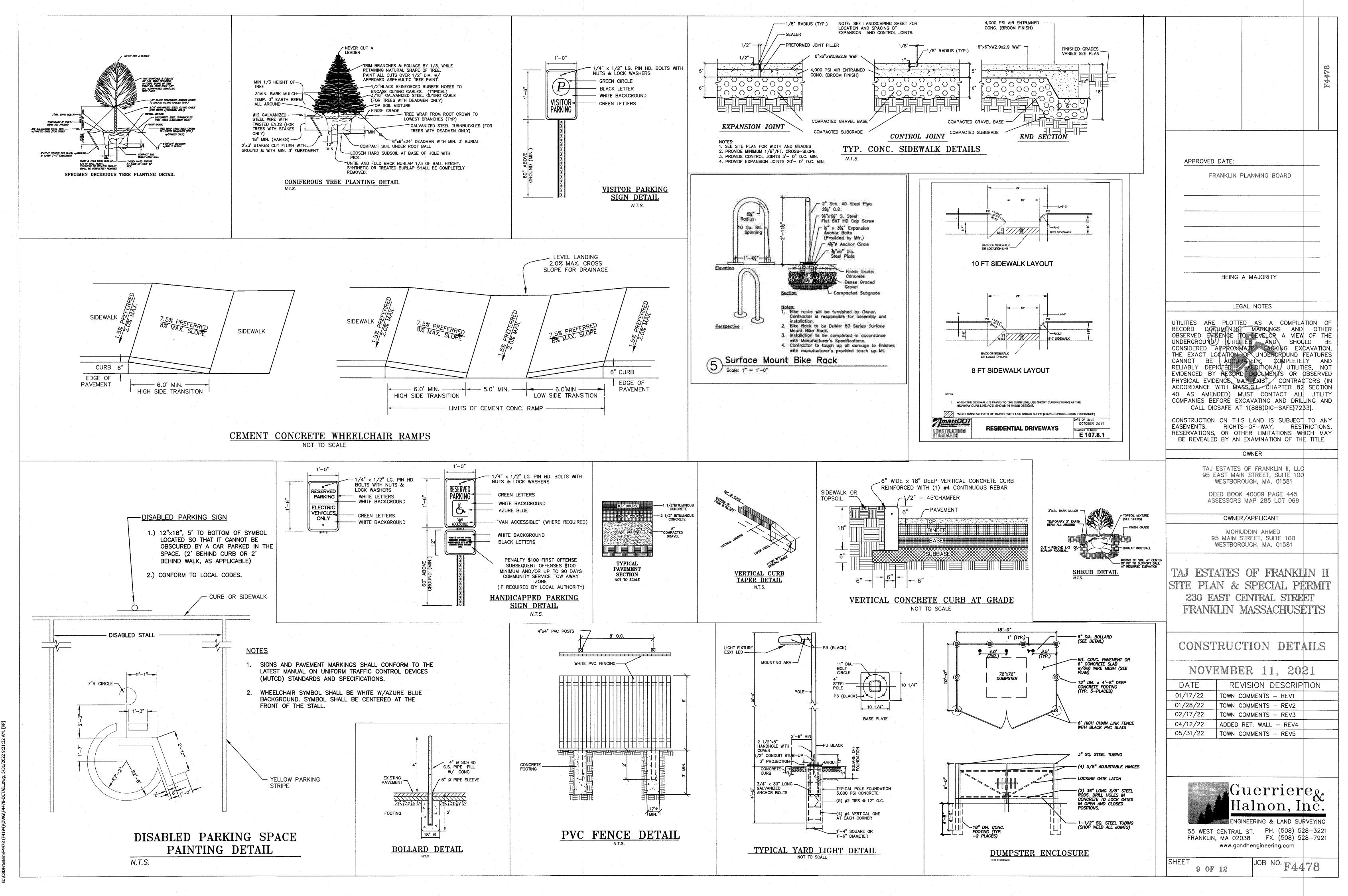
NOVEMBER 11, 2021

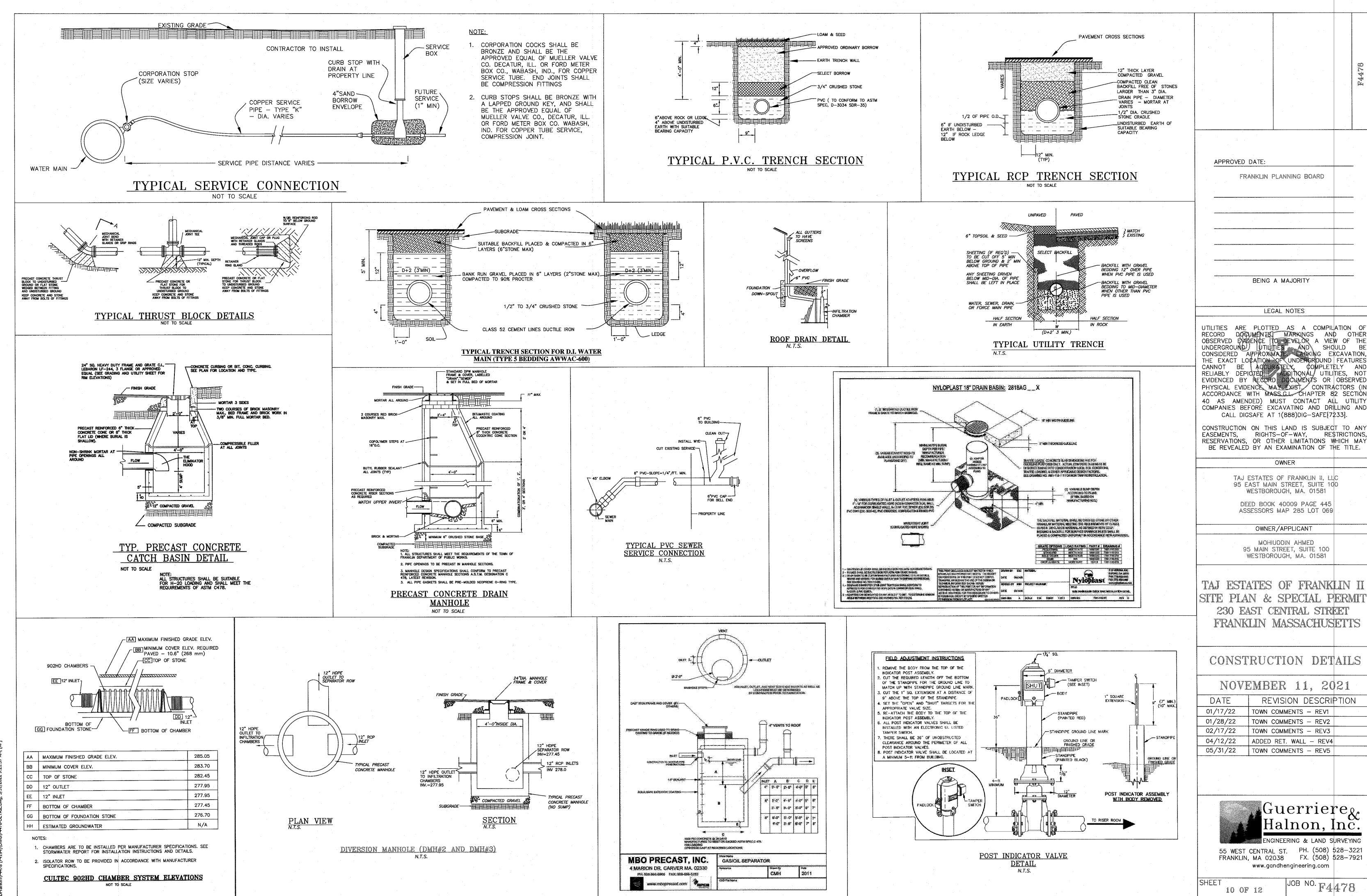
	DATE	REVISION DESCRIPTION	
	01/17/22	TOWN COMMENTS - REV1	
	01/28/22	TOWN COMMENTS - REV2	
	02/17/22	TOWN COMMENTS - REV3	
1	04/12/22	ADDED RET. WALL — REV4	
IV	05/31/22	TOWN COMMENTS - REV5	•
10		GRAPHIC SCALE: 1"=20'	
	0 E 40 44	F 00 0F 70 40 F0	



NGINEERING & LAND SURVEYING 55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

SHEET 8 OF 12 JOB NO. F4478





C. COCKETALLIEN FRANCO FEASON PRINCIPATION DETAIL ALLA E124 (2002 0.21.E7 AM IVDI

CHAMBER PARAMETERS

1. THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).

2.THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE: A. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER

B. MAXIMUM PERMANENT (50-YEAR) COVER LOAD C. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD

3.THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER **COLLECTION CHAMBERS"**

4.THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE

A. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430 B. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75

C. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95 5. THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH

MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE. 6.THE CHAMBER SHALL BE ARCHED IN SHAPE.

7.THE CHAMBER SHALL BE OPEN-BOTTOMED. 8.THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE

COUPLINGS. 9.THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER ® 902HD SHALL BE 48 INCHES (1219 MM) TALL, 78 INCHES (1981 MM) WIDE AND 4.25 FEET (1.30 M) LONG. THE

INSTALLED LENGTH OF A JOINED RECHARGER 902HD SHALL BE 3.67 FEET (1.12 M). 10. MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER ® 902HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 30 INCHES (750 MM) HDPE OR 36 INCHES (900 MM) PVC

11. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN

THE SIDE PORTAL IS 10 INCHES (250 MM) HDPE AND 12 INCHES (300 MM) PVC. 12. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 MM) TALL, 16 INCHES (406 MM) WIDE AND 49 INCHES (1245

13. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 902HD CHAMBER SHALL BE 17.31 FT³/FT (1.61 M ³/M) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 902HD SHALL BE 63.47 FT 3 / UNIT (1.80 M 3 / UNIT) - WITHOUT STONE. 14. THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913

 FT^3/FT (0.085 M $^3/M$) - WITHOUT STONE. 15. THE RECHARGER 902HD CHAMBER SHALL HAVE 5 CORRUGATIONS. 16. THE CHAMBER SHALL BE CAPABLE OF ACCEPTING A 6 INCH (150 MM) INSPECTION PORT

OPENING AT THE TOP CENTER OF EACH CHAMBER, CENTERED ON THE CORRUGATION

17. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.

18. MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 8.3 FEET (2.53

1. THE CULTEC RECHARGER® 902HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT (CULTEC.COM, 203-775-4416).

2.THE END CAP SHALL BE TWIN-SHEET THERMOFORMED OF VIRGIN HIGH MOLECULAR WEIGHT POLYETHYLENE. 3. THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS

USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS. 4.THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 48.5 INCHES (1231 MM) TALL, 78 INCHES (1982 MM) WIDE AND 9.7 INCHES (246 MM) LONG, WHEN JOINED WITH A

RECHARGER 902HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 6.2

5. THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.34 FT $^{-3}$ / FT (0.50 M $^{-3}$ / M) -WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL

BE 2.76 FT 3 / UNIT (0.08 M 3 / UNIT) - WITHOUT STONE. 6.MAXIMUM INLET OPENING ON THE END CAP IS 30 INCHES (750 MM) HDPE OR 36 INCHES

7.THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 902HD STORMWATER CHAMBERS

FEED CONNECTOR PARAMETERS 1. THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT.

(203-775-4416 OR 1-800-428-5832) 2. THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR

WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE). 3. THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.

4. THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED. 5. THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 NCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.

6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT $^{\circ}/$ FT (0.085 m³/m) - WITHOUT STONE.

7. THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.

8. THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT HALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.

9. THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.

10. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE CULTEC NO. 410™ NON -WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL

GEOTEXTILE PARAMETERS

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT (203-775-4416 OR 1-800-428-5832)

2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.

3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M). 4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.

5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.

6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.

7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.

8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD. 9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM

10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U .S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.

11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD. 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500

L/MIN/SM) PER ASTM D4491 TESTING METHOD. 13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM

CULTEC NO. 4800™ WOVEN GEOTEXTILE

CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR

D4355 TESTING METHOD.

1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT

(203-775-4416 OR 1-800-428-5832) 2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.

3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD.

4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 \times 20% PER ASTM D4632 TESTING METHOD

5. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5.070 LBS/FT (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.

6. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1.096 LBS/FT (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD

THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2, 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING

8. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING

9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560

N) PER ASTM D6241 TESTING METHOD. 10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.

11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE

(0.425 MM) PER ASTM D4751 TESTING METHOD. 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM

D4491 TESTING METHOD. 13. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470

D4355 TESTING METHOD.

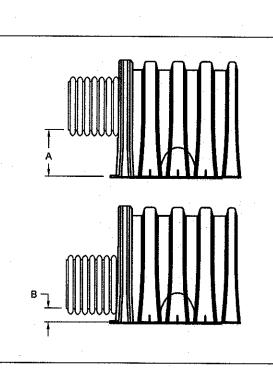
LPM/M2) PER ASTM D4491 TESTING METHOD. 14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM

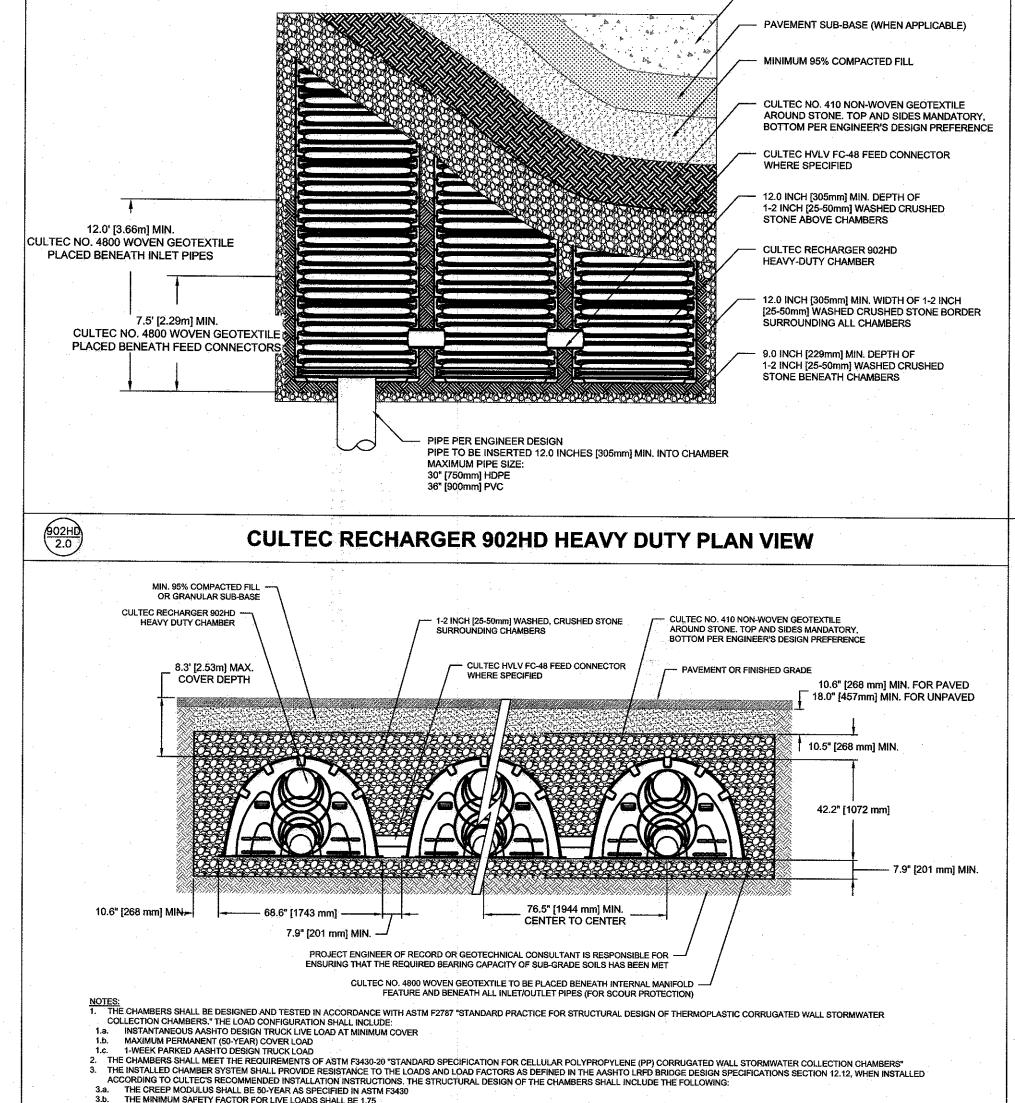
GENERAL NOTES

CULTEC RECHARGER 902HD TYPICAL PIPE INVERTS

PIPE	Α	В
6" [150 mm]	N/A	N/A
8" [200 mm]	N/A	N/A
10" [250 mm]	N/A	N/A
12" [300 mm]	29.50" [749 mm]	2.25" [57 mm]
15" [375 mm]	26.50" [673 mm]	2.25" [57 mm]
18" [450 mm]	23.50" [597 mm]	2.50" [64 mm]
24" [600 mm]	16.50" [420 mm]	3.00" [76 mm]

*THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 4" (100mm) FROM THE EDGE OF THE HEAVY DUTY END CAP





CULTEC RECHARGER 902HD HEAVY DUTY CROSS SECTION

PAVEMENT

OR FINISHED GRADE

8.0" [203mm] MIN.

FIELD PLACED CLASS "C" CONCRETE

21.1" [536 mm] MIN.

15.0"

[381mm]

FIELD PLACED CLASS "C" CONCRETE

MIN. 95% COMPACTED

OR FINISHED GRADE

GRANULAR FILL

(OPTION 1) 1.50" [40mm] BELOW PAVEMENT

AASHTO HS-25 RATED CAST IRON

12" X 6" [300mm x 150mm] CULTEC INLINE - DRAIN / CLEAN-OUT BASIN w/ GASKETED

6" [150mm] SDR-35 RISER (LENGTH VARIES)

FRAME AND SOLID COVER

6" [150mm] PVC SCREW IN CAR

SDR-35 CONNECTION

6" [150mm] SDR-35 BELL END.

CULTEC INSPECTION PORT - ZOOM DETAIL

CUT FOR 6" [152mm] OF INSERTED PIPE

6.25" [160mm] HOLE TO BE CUT w/ HOLE SAW CENTERED ON CORRUGATION CREST

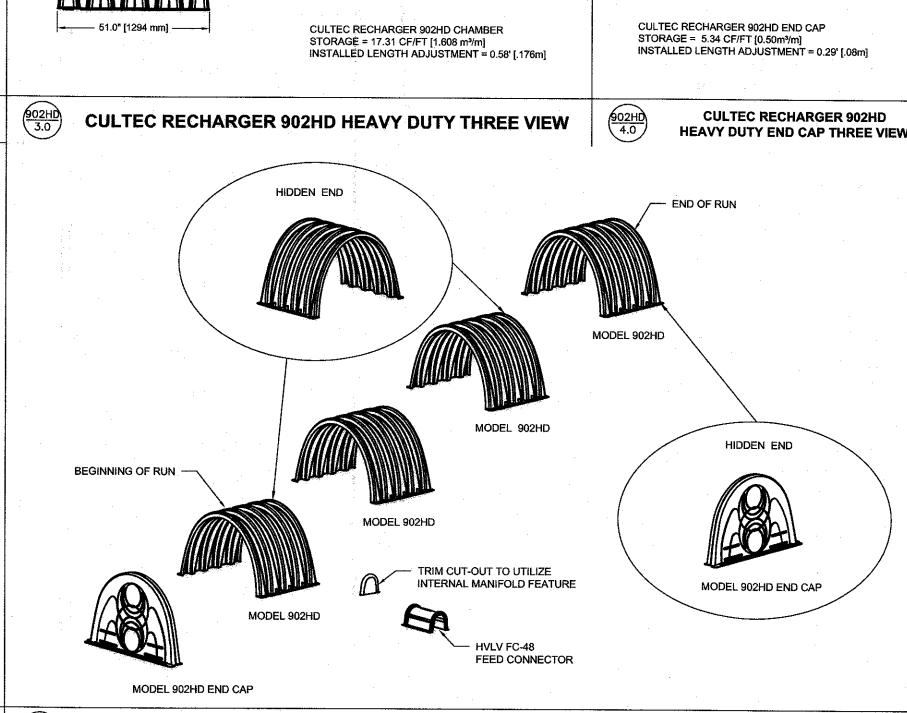
THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

— 49.0" [1243 mm] —

CULTEC HVLV FC-48

FEED CONNECTOR THREE VIEW

- PAVEMENT OR FINISHED GRADE



78.0" [1981 mm]

6" [150mm] DIA. INSPECTION PORT TRIM LOCATION -

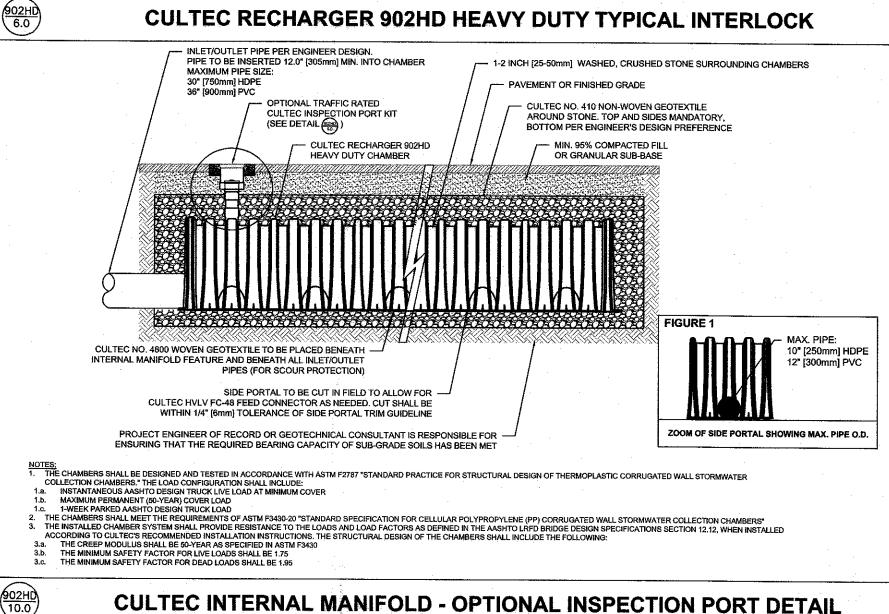
44.0" [1118 mm]

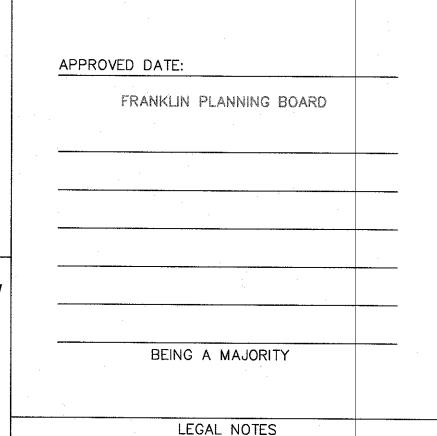
INSTALLED LENGTH

48.0" [1219 mm]

SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD

(ACCOMMODATES CULTEC HVLV FC-48 FEED CONNECTOR OR STORM PIPE)





- MAXIMUM PIPE SIZE IN END CAP:

30" [750 mm] HDPI

- 6.2" [157mm] INSTALLED

-- 9.7" [246mm]

UTILITIES ARE PLOTTED AS A COMPILATION OF RECORD DOCUMENTS, MARKINGS AND OTHER OBSERVED EXIBENCE TO DEVELOR A VIEW OF THE UNDERGROUND! CONSIDERED APPROXIMATE ACKING EXCAVATION THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, RELIABLY DEPICTED ADDIT RELIABLY DEPICTED! ADDITIONAL UTILITIES, NOT EVIDENCED BY RECORD DOCUMENTS OR OBSERVED PHYSICAL EVIDENCE, MAY EXIST, CONTRACTORS (IN ACCORDANCE WITH MASS GL. CHAPTER 82 SECTION 40 AS AMENDED) MUST CONTACT ALL UTILITY COMPANIES BEFORÉ EXCAVATING AND DRILLING AND CALL DIGSAFE AT 1(888)DIG-SAFE{7233}.

CONSTRUCTION ON THIS LAND IS SUBJECT TO ANY EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS. RESERVATIONS, OR OTHER LIMITATIONS WHICH MAY BE REVEALED BY AN EXAMINATION OF THE TITLE.

TAJ ESTATES OF FRANKLIN II, LLC 95 EAST MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

DEED BOOK 40009 PAGE 445 ASSESSORS MAP 285 LOT 069

OWNER/APPLICANT

MOHIUDDIN AHMED 95 MAIN STREET, SUITE 100 WESTBOROUGH, MA. 01581

TAJ ESTATES OF FRANKLIN II SITE PLAN & SPECIAL PERMIT 230 EAST CENTRAL STREET FRANKLIN MASSACHUSETTS

CONSTRUCTION DETAILS

NOVEMBER 11, 2021

	DATE	REVISION DESCRIPTION
	01/17/22	TOWN COMMENTS - REV1
	01/28/22	TOWN COMMENTS - REV2
	02/17/22	TOWN COMMENTS - REV3
	04/12/22	ADDED RET. WALL - REV4
_	05/31/22	TOWN COMMENTS - REV5



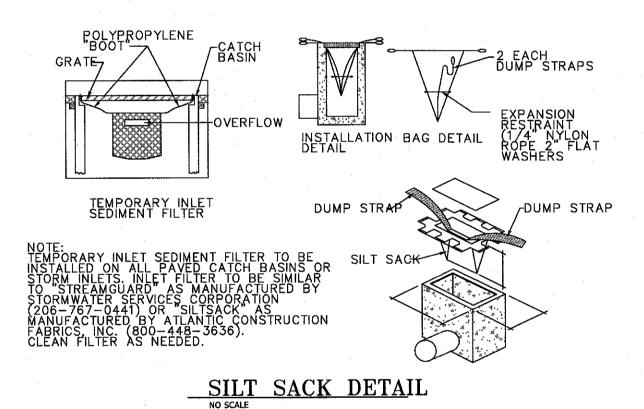
55 WEST CENTRAL ST. PH. (508) 528-3221 FRANKLIN, MA 02038 FX. (508) 528-7921 www.gandhengineering.com

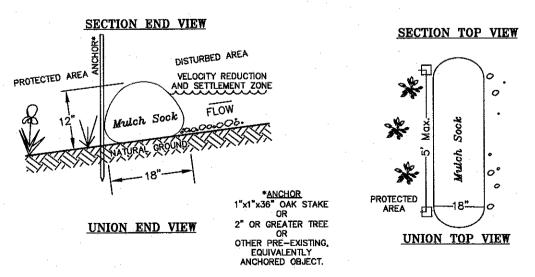
SHEET 11 OF 12

JOB NO. F4478

EROSION CONTROL NOTES:

- 1. TAKE EVERY PRECAUTION TO MINIMIZE AND CONTROL EROSION WITHIN THE PROJECT AREA.
- 2. STOCKPILES OF EXCAVATED MATERIALS AND EXPOSED CUT AND FILL SLOPES SHALL BE KEPT TO MINIMUM GRADIENTS WHENEVER POSSIBLE. THESE AREAS SHALL BE PROTECTED WITH HAY, MULCH, GRASS SEED OR COMBINATION OF THE ABOVE TO SLOW DOWN THE RATE OF SURFACE RUN—OFF AND TO REDUCE THE VOLUME OF SUSPENDED SOLIDS IN THE RUN OFF WATER.
- 3. SILTATION BARRIERS SHALL BE STAKED IN PLACE DOWN GRADIENT FROM ALL EXPOSED AREAS OR MATERIAL STORAGE AREAS IN ORDER TO REDUCE THE AMOUNT OF SUSPENDED SOLIDS IN RUNOFF WATER. THE EXACT LOCATION OF THE SILTATION BARRIERS MAY VARY FROM THAT SHOWN ON THE PLANS AND MAY BE ADJUSTMENT IN THE FIELD AS WORK PROGRESSES. SEDIMENTATION BUILDUP OVER SIX INCHES IN DEPTH THAT ACCUMULATES BEHIND THE SILTATION BARRIERS SHALL BE REMOVED. BARRIERS SHALL BE CHECKED AFTER EVERY STORM AND AT REGULAR WEEKLY INTERVALS.
- 4. SILTATION BARRIER SHALL BE INSTALLED WITH WOODEN STAKES IN ACCORDANCE WITH MANUFACTURER DIRECTIONS.
 BOTTOM 6 INCHES OF FABRIC SHALL BE TOED IN OR BACKFILLED SO THAT TOP OF FABRIC SHALL BE 2 FEET 6
 INCHES ABOVE FINISH GRADE.
- 5. ALL AREAS DISTURBED BY CONSTRUCTION ARE TO BE LOAMED (4" MIN.) AND SEEDED IN ORDER TO MINIMIZE DUST AND EROSION.
- 6. FILTER FABRIC IS TO BE PLACED UNDER ALL RIP-RAP AREAS SHOWN ON DESIGN PLANS.
- 7. EROSION CONTROL BARRIERS ARE TO BE PLACED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
- 8. THE PROPOSED STORMWATER BASIN IS TO BE UTILIZED AS A SEDIMENTATION POND DURING CONSTRUCTION. IT IS TO BE CONSTRUCTED FIRST IN ORDER TO CONTROL/ PREVENT SILTATION FROM DISCHARGING FROM THE SITE AND/OR DISTURBING WETLAND AREAS.
- 9. ALL TEMPORARY SEDIMENT POND(S) AND SUMPS ARE TO BE MAINTAINED THROUGHOUT CONSTRUCTION, INSPECTED PRIOR TO AND AFTER STORM EVENTS AND CLEANED AS NEEDED.
- 10. TEMPORARY BERM SHALL BE PLACED ALONG THE ENTIRE EDGE OF ROADWAY WITH THE BINDER COURSE AND SHALL REMAIN IN PLACE UNTIL FINISH COURSE IS PLACED.



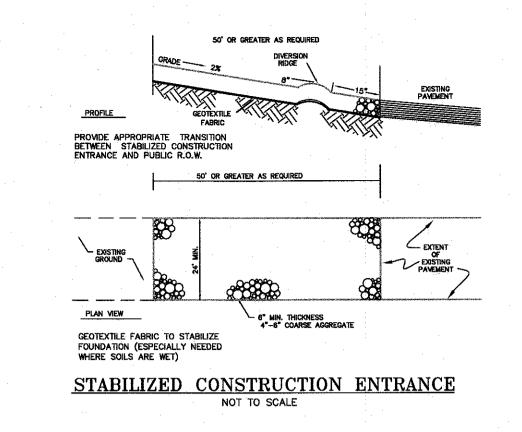


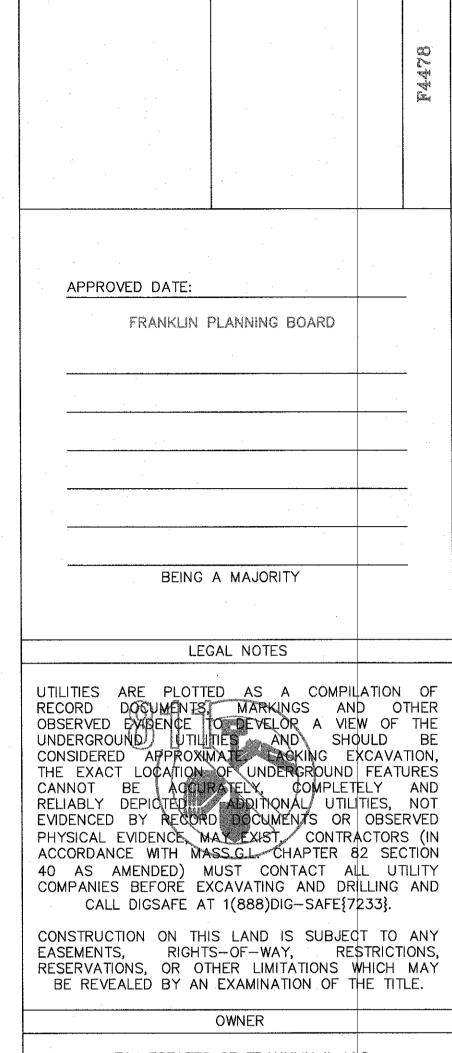
 WHERE SECTION ENDS MEET, THERE SHALL BE AN OVERLAP OF 6" OR GREATER. BOTH SIDES SHALL BE ANCHORED (OAK STAKES, TREES, ETC.) TO STABILIZE THE UNION.
 NO ADDITIONAL ANCHORS ARE REQUIRED ON SLOPES LESS THAT

 ADDITIONAL ANCHORS ARE REQUIRED AT 5' INTERVALS (MAX.) ON THE DOWNSLOPE OR PROTECTED SIDE ON SLOPES GREATER THAN 2:1 TO PREVENT MOVEMENT.

EROSION CONTROL BARRIER
NOT TO SCALE

Mulch Sock COMPONENTS:
OUTSIDE CASING: 100% organic hessian.
FILLER INGREDIENT: FiberRoot Mulch
A blend of coarse and fine compost and shredded wood.
Particle sizes: 100% passing a 3" screen; 90-100% passing a 1" screen; 70-100% passing a 0.75" screen; 30-75% passing a 0.25" screen.
Weight: Approx. 850 lbs./cu.yd. (Ave. 30 lbs./l.f.)





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	WEST	BORG)UGI	H, MA.	01581	

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SHEET 12 OF 12

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