

# **KEY MAP**

SCALE:  $I'' = 1000' \pm$ 

# SITE PLAN

**FOR** 



# PROPOSED BANK WITH DRIVE-THRU ATM

MAP: 14 LOT 13 165 NEWBURYPORT TURNPIKE (US ROUTE I) TOWN OF ROWLEY, ESSEX COUNTY, MASSACHUSETTS

# **APPLICANT**

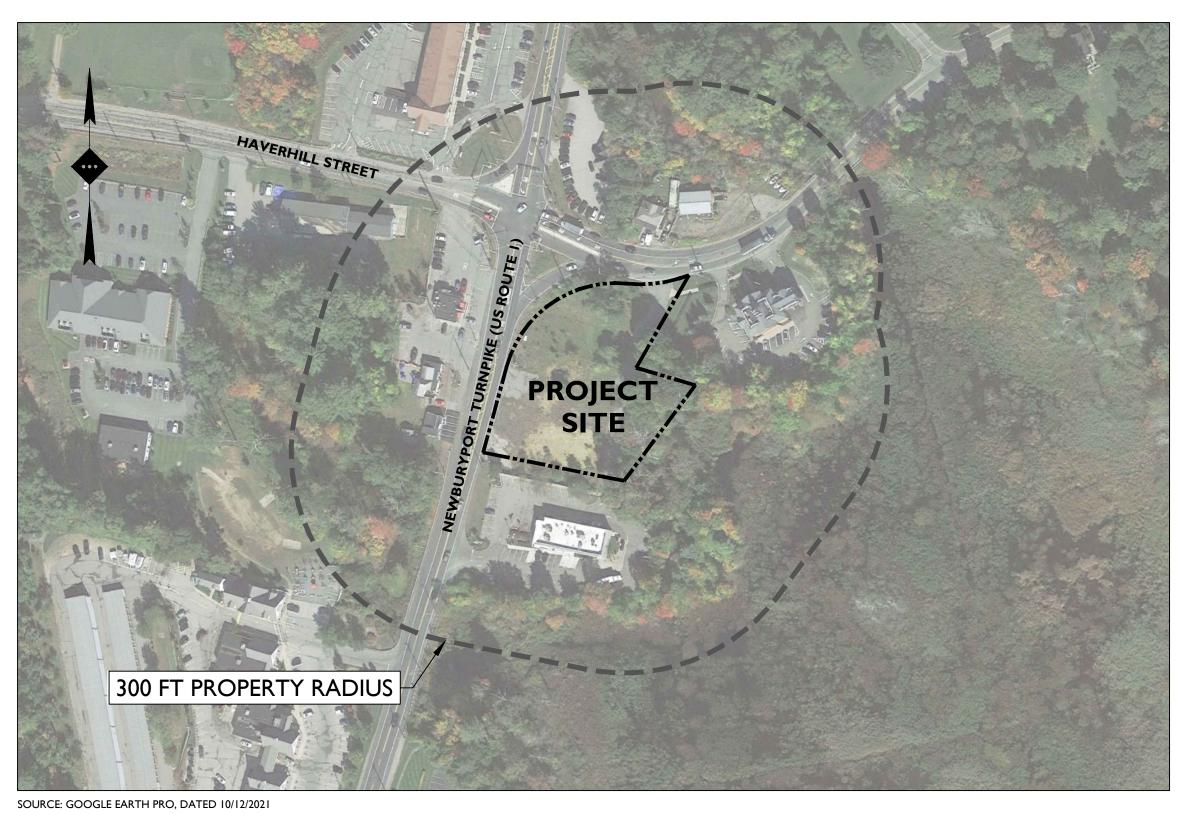
**CORE STATES GROUP C/O STONEFIELD ENGINEERING & DESIGN** 120 WASHINGTON STREET, SUITE 201 JKLINE@STONEFIELDENG.COM

# **OWNER**

TRS ROUTE I REALTY TRUST **415 WEST STREET** W BRIDGEWATER, MA 02379

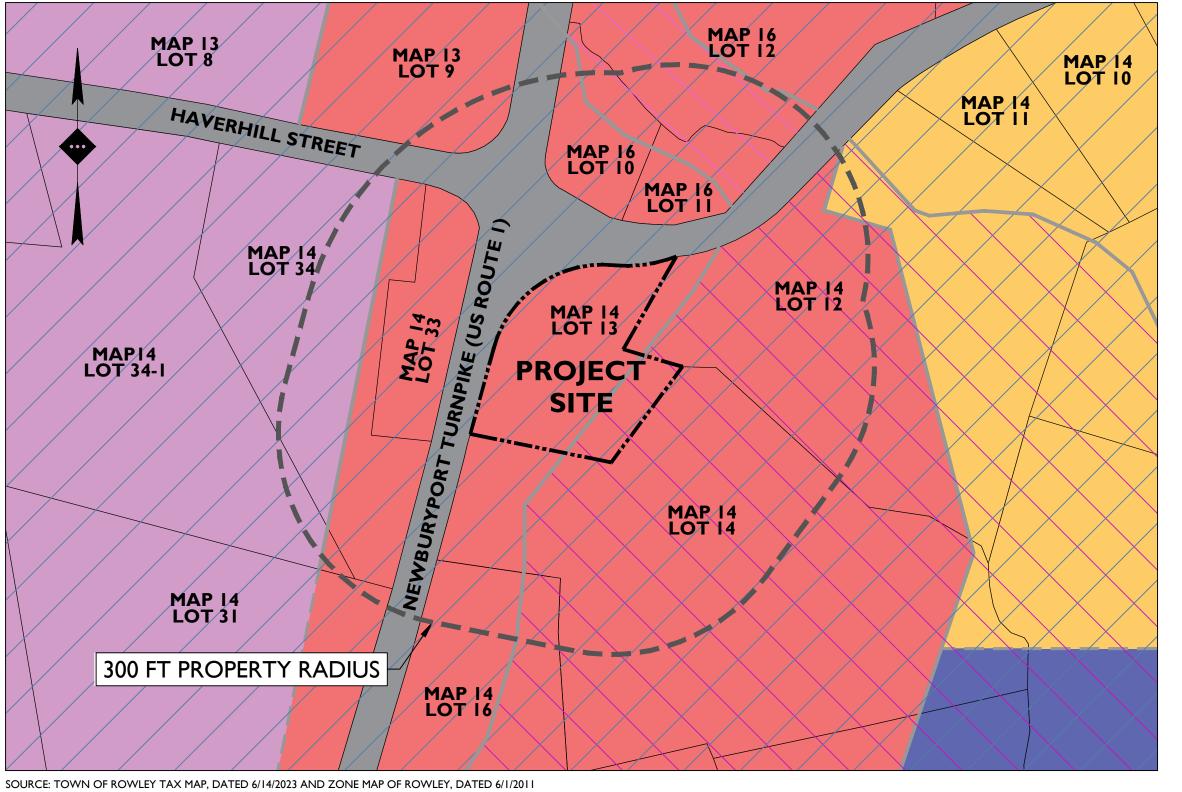






# **AERIAL MAP**

SCALE: I" = 150'±



# TAX / ZONING MAP

SCALE: I" = 150'±

# PLANS PREPARED BY:

# **PLAN REFERENCE MATERIALS:**

- I. THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
  - BOUNDARY, TOPOGRAPHIC & UTILITY SURVEY BY CONTROL POINT ASSOCIATES, INC. DATED 02/19/2024 FEMA MAP OBTAINED FROM FLOOD INSURANCE RATE MAP, ESSEX COUNTY, MASSACHUSETTS, 25009C0258G DATED 02/20/2023
  - AERIAL MAP OBTAINED FROM GOOGLE EARTH PRO, DATED 10/12/21 KEY MAP OBTAINED FROM USGS QUADRANGLE MAP 7.5 MINUTE SERIES, GEORGETOWN, MA, DATED 2021
  - TAX MAP OBTAINED FROM TOWN OF ROWLEY, DATED 06/14/2023 ZONING MAP OBTAINED FROM ZONE MAP OF ROWLEY, DATED 06/1/2011
  - **ROWLEY PROTECTIVE ZONING BYLAW, DATED 05/02/2022**
  - **ROWLEY PLANNING BOARD RULES AND REGULATIONS, DATED APRIL 2005** REPORT OF GEOTECHNICAL INVESTIGATION BY WHITESTONE ASSOCIATES, INC. DATED 11/16/2023
  - ARCHITECTURAL PLAN BY CORE STATES GROUP, DATED 01/15/2024

SKETCH PLAN OF LAND PREPARED BY MERIDIAN ASSOCIATES DATED 10/28/2009

- WETLAND REPORT BY DEROSA ENVIRONMENTAL CONSULTING INC. DATED 02/08/2024 IMMEDIATE RESPONSE ACTION COMPLETION SITE PLAN PREPARED BY FUSS & O'NEILL DATED 03/28/2013
- 2. ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.



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120 Washington Street, Suite 201, Salem, MA 01970 Phone 617.203.2076

# **ZONING LEGEND:**



OUTLYING DISTRICT

DRAWING TITLE	SHEET#
COVER SHEET	C-I
EXISTING CONDITIONS PLAN	C-2
DEMOLITION PLAN	C-3
SITE PLAN	C-4
GRADING PLAN	C-5
DRAINAGE AND UTILITY PLAN	C-6
LIGHTING PLAN	C-7 & C-7.1
SOIL EROSION & SEDIMENT CONTROL PLAN	C-8
LANDSCAPING PLAN	C-9 & C-10
CONSTRUCTION DETAILS	C-11 - C-15

**SHEET INDEX** 

				FOR MUNICIPAL REVIEW	DESCRIPTION
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				02/23/2024	DATE
				10	ISSUE

NOT APPROVED FOR CONSTRUCTION





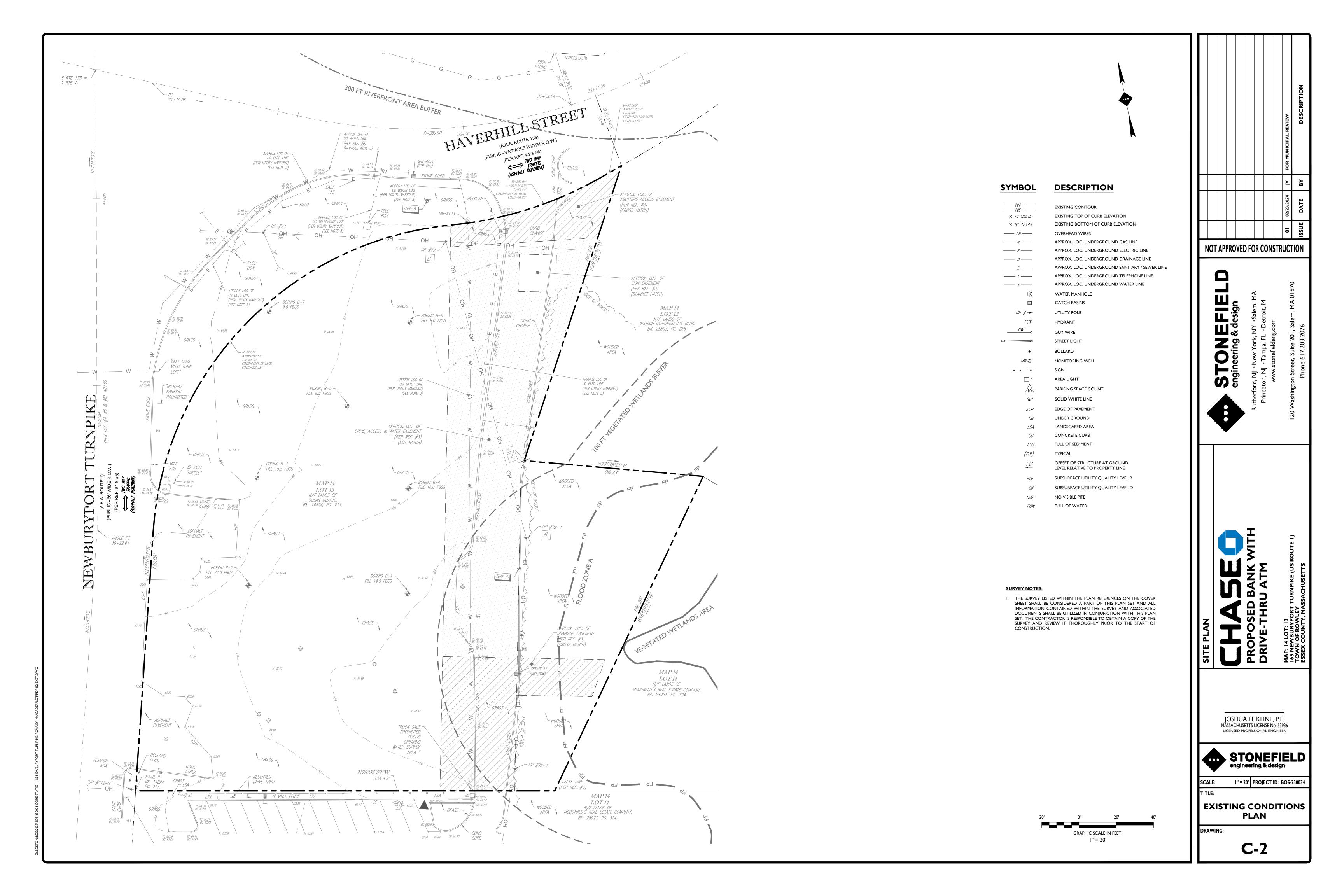
JOSHUA H. KLINE, P.E. 1ASSACHUSETTS LICENSE No. 53936

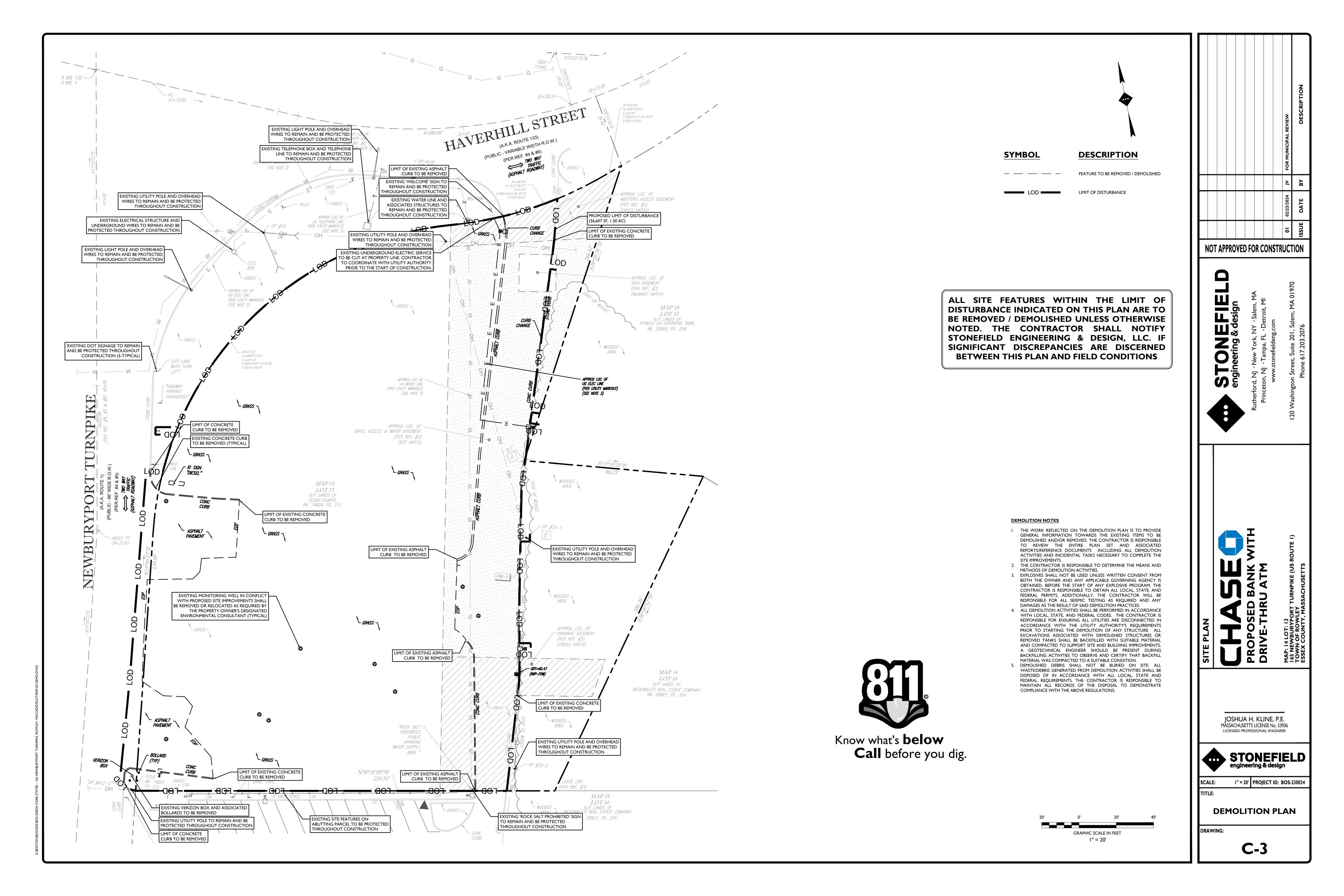


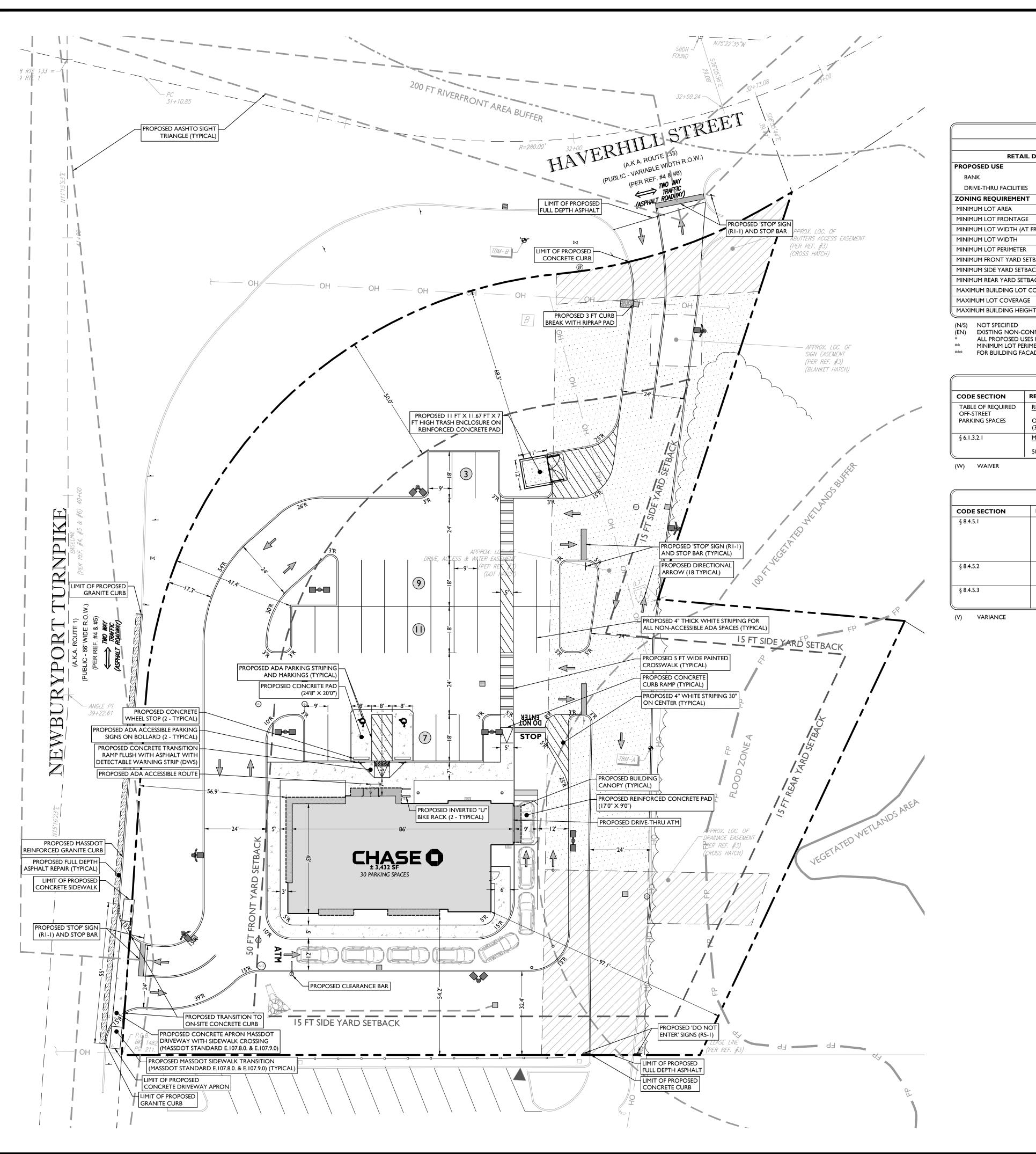
SCALE: AS SHOWN PROJECT ID: BOS-230034

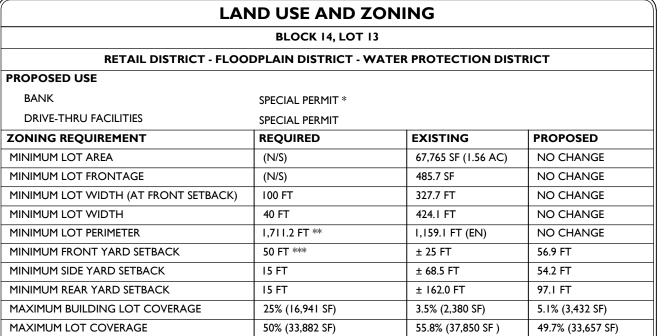
**COVER SHEET** 

DRAWING:









I STORY

21.5 FT

(EN) EXISTING NON-CONFORMITY ALL PROPOSED USES IN FLOODPLAIN DISTRICT MUST BE GRANTED SPECIAL PERMIT APPROVAL

MINIMUM LOT PERIMETER CALCULATED AS FOLLOWS: I FT LOT PERIMETER PER 39.6 SF OF LOT AREA FOR BUILDING FACADES 150 FT AND LESS IN LENGTH, FRONT SETBACK = 50 FT

PARKING REQUIREMENTS							
CODE SECTION	REQUIRED	PROPOSED					
TABLE OF REQUIRED OFF-STREET PARKING SPACES	REQUIRED PARKING SPACES (SERVICE ESTABLISHMENT):  ONE SPACE PER 200 SF OF FLOOR AREA (3.342 SF / 200 SF) = 16 SPACES	30 SPACES					
§ 6.1.3.2.1	MINIMUM SETBACK AREA REQUIREMENTS:  50 FT FROM PUBLIC AREAS	DRIVE-AISLE: 17.3 FT (W) PARKING: 47.4 FT (W)					

SIGNAGE REQUIREMENTS						
CODE SECTION	PROPOSED					
§ 8.4.5.1	RETAIL DISTRICT SIGN REQUIREMENTS:					
	MAXIMUM WALL SIGN AREA: 10 SF MAXIMUM FREESTANDING SIGN AREA: 80 SF MAXIMUM TOTAL SIGN AREA: 5% OF VERTICAL WALL AREA (0.05 * 21.5 FT * 86 FT) = 92.5 SF	73.8 SF (V) 57.7 SF 131.5 SF (V)				
§ 8.4.5.2	SIGN SIZING REQUIREMENTS:					
	MAXIMUM VERTICAL & HORIZONTAL LENGTH: 15 FT	17 FT (V)				
§ 8.4.5.3	MAXIMUM SIGN MOUNTING HEIGHT :					
	20 FT	18 FT				

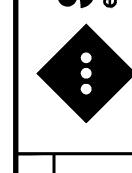


# **SYMBOL DESCRIPTION** PROPERTY LINE SETBACK LINE SAWCUT LINE PROPOSED CURB PROPOSED FLUSH OPENING PROPOSED SIGNS

PROPOSED BUILDING

PROPOSED CONCRETE

PROPOSED AREA LIGHT PROPOSED BUILDING DOORS



NOT APPROVED FOR CONSTRUCTION

DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING

4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN,

5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND

METHODS OF CONSTRUCTION. DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE

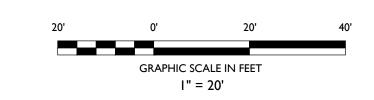
7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTORS EXPENSE. DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS

THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.

DEVICES, LATEST EDITION.

PROCUREMENT OF STREET OPENING PERMITS. II. THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.

12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC. BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.



# **GENERAL NOTES**

I. THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. PRIOR TO THE START OF CONSTRUCTION.

2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.

3. ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC. AND IT'S SUB-CONSULTANTS FROM AND AGAINST ANY OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.

6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE

8. CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC. WILL REVIEW

9. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL

10. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE



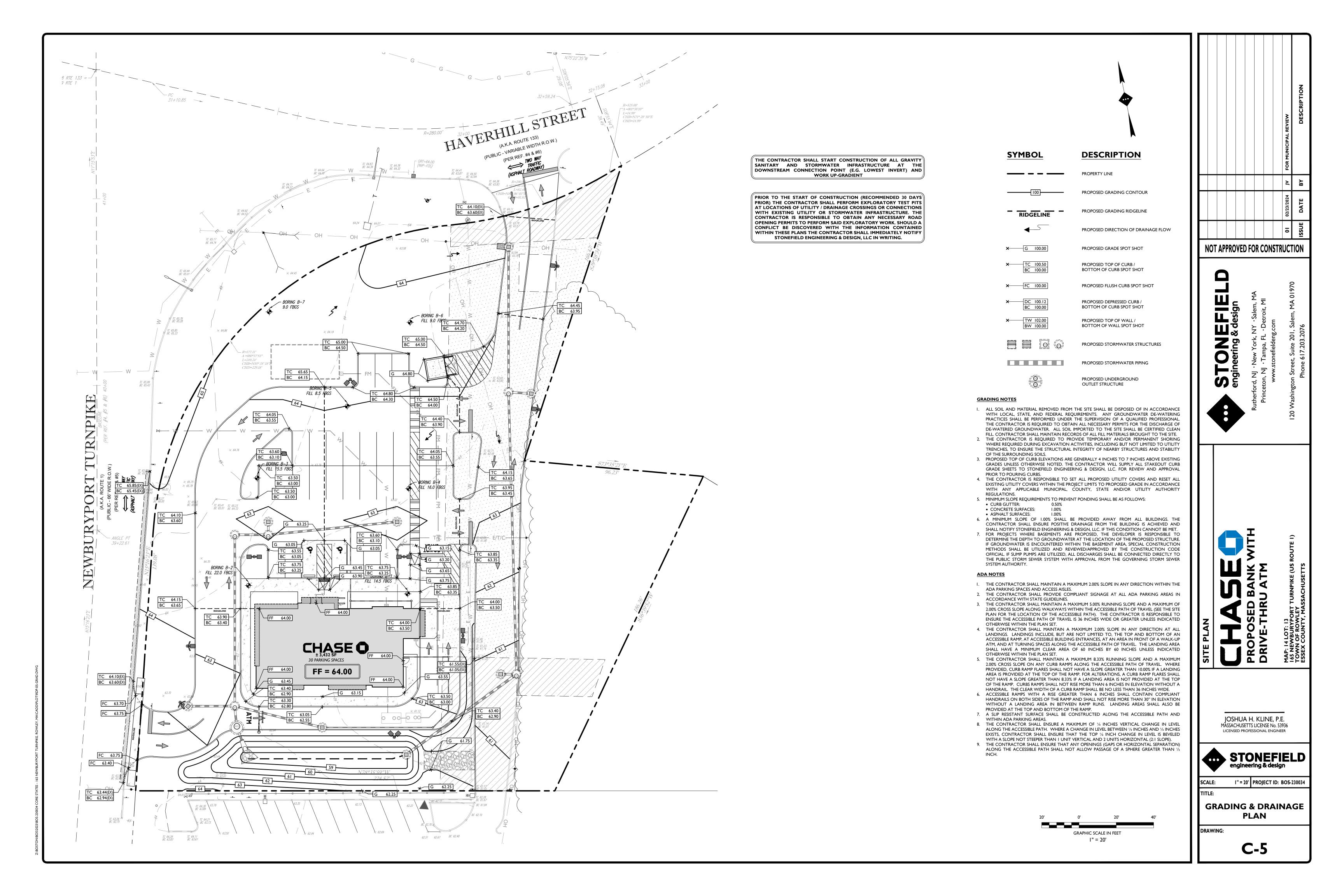
JOSHUA H. KLINE, P.E. MÁSSACHUSETTS LICENSE No. 53936 LICENSED PROFESSIONAL ENGINEER

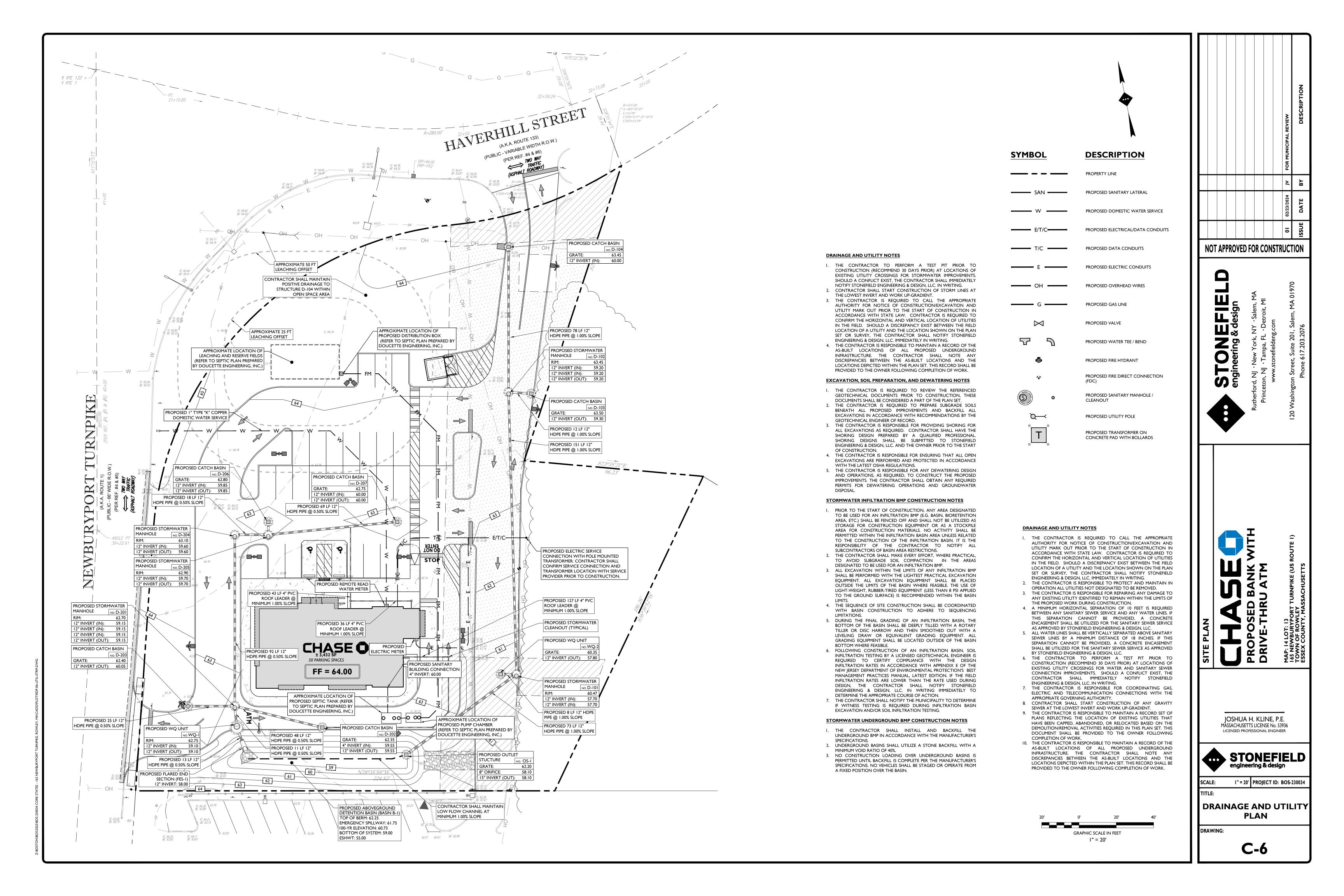


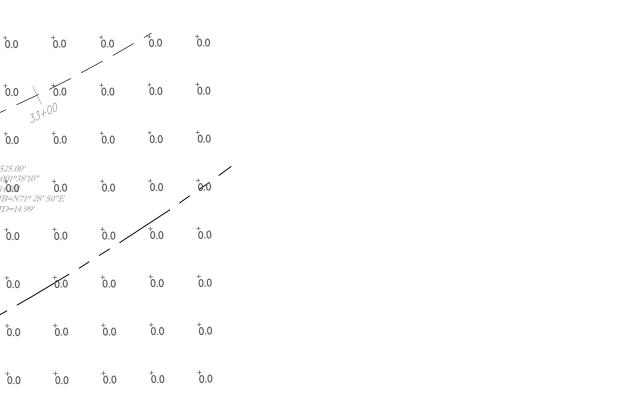
I" = 20' PROJECT ID: BOS-230034

**SITE PLAN** 

**DRAWING:** 







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D (10')

(3-TYPICAL)

F (10')

D (10')

<sup>+</sup>4.2 <sup>+</sup>5.4 <sup>+</sup>5.6 <sup>†</sup>0.9 <sup>†</sup>9.6 <sup>†</sup>5.4 <sup>†</sup>5.7 <sup>†</sup>3.9 <sup>†</sup>2.5

(3-TYPICAL)

(2-TYPICAL)

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†.**9**≥

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<sup>†</sup>2.9 <sup>†</sup>4.6 <sup>†</sup>5.3 <sup>†</sup>7.9 <sup>†</sup>7.7 <sup>†</sup>8.3 <sup>†</sup>12.4 <sup>†</sup>7.2 <sup>†</sup>5.5

E (10')

(3-TYPICAL)

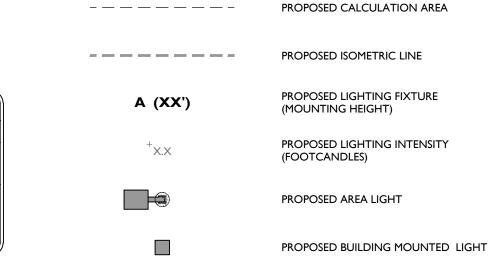
30 PARKING SPACES

D (10')

(PER REF. #4 & #6)

<sup>†</sup>7.4

LIGHTING REQUIREMENTS							
CODE SECTION	REQUIRED	PROPOSED					
§ 8.6.4.3	POLE LIGHT REQUIREMENTS:						
	MAXIMUM MOUNTING HEIGHT: 30 FT	21 FT					
§ 8.6.4.5	AVERAGE ILLUMINATION REQUIREMENTS:						
	THE AVERAGE ILLUMINATION LEVEL SHALL NOT EXCEED THE ILLUMINATION LEVEL PUBLISHED FOR SUCH ACTIVITY						
	BY THE IESNA HANDBOOK.	COMPLIES					



DESCRIPTION

SYMBOL

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PROPOSED LUMINAIRE SCHEDULE								
SYMBOL	LABEL	QUANTITY	LUMINAIRE	DISTRIBUTION	LLF	MANUFACTURER	IES FILE	
	Α	4	EVOLVE COMPACT (EACL) AREA LIGHT WITH SHIELD 122 WATTS, 4K	TYPE III	0.90	GE CURRENT	EACL01_F3AW740ELS-EAC -ABL-BLCK.IES	
	В	4	EVOLVE COMPACT (EACL) AREA LIGHT 122 WATTS, 4K	TYPE IV	0.90	GE CURRENT	EACL01_F4AF740IES	
	С	2	EVOLVE COMPACT (EACL) AREA LIGHT 122 WATTS, 4K	TYPE IV	0.90	GE CURRENT	EACL01_F4AF740IES	
9	D	8	LANTERRA 9004 LED, WALL MOUNTED CYLINDER	DOWNLIGHT	0.90	COOPER LIGHTING	9004-WI-(RW, RI)-LED4080-W-WT- LI-UNV (I).IES	
0	E	5	BULLET OUTDOOR RECESSED FIXED DOWNLIGHT IP66	CANOPY	CANOPY 0.90 ILLUMINATION		5811-ISAT20L8040W.IES	
	F	I	LUMARK CROSSTOUR MAXX LED WALL PACK	FORWARD	0.90	EATON	XTOR6B-W.IES	





#### AREA LIGHT FIXTURE 'A' - 'C' **AREA LIGHT FIXTURE 'D'**



**AREA LIGHT FIXTURE 'E'** 



**AREA LIGHT FIXTURE 'F'** 

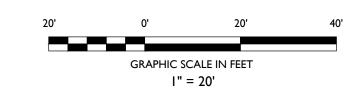
### **GENERAL LIGHTING NOTES**

- I. THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER, ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH ARE WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
- . WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR LIGHTING FIXTURE MODEL.
- 3. UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS: LIGHT EMITTING DIODES (LED): 0.90 HIGH PRESSURE SODIUM:
- METAL HALIDE: 4. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING/ PROPOSED
- DRAINAGE, UTILITY, OR OTHER IMPROVEMENTS. 5. THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD ENGINEERING & DESIGN,

# ATM LIGHTING NOTES:

- THE CONTRACTOR SHALL REPLACE LAMP COVERS, RE-LAMP AND RE-BALLAST EXISTING LIGHT FIXTURES AS INDICATED WITHIN THE PLAN SET. THE EXISTING FIXTURE HEIGHT SHALL BE MAINTAINED UNLESS INDICATED OTHERWISE.
- 2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING IF THE EXISTING LIGHT FIXTURES ARE NOT THE MINIMUM WATTAGE SPECIFIED WITHIN THE PLAN SET.
- 3. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY EXISTING LIGHT POLES IDENTIFIED FOR REUSE WITH A PROPOSED LIGHT FIXTURE(S) SHALL BE IN ACCEPTABLE WORKING CONDITION AND HAVE THE CAPACITY TO SUPPORT THE PROPOSED LIGHT FIXTURE(S). ANY MOUNTING EQUIPMENT REQUIRED TO ATTACH THE PROPOSED LIGHTING FIXTURE TO THE EXISTING LIGHT POLE SHALL BE PROVIDED BY THE CONTRACTOR.
- 4. THE CONTRACTOR SHALL CONFIRM THAT THE LOCATION OF ANY PROPOSED BUILDING MOUNTED LIGHTING FIXTURE WILL NOT CONFLICT WITH ANY EXISTING OR PROPOSED STRUCTURAL ELEMENT (E.G. CANOPY SUPPORT BEAMS). THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING OF ANY FIXTURE CONFLICT PRIOR TO THE START OF CONSTRUCTION.
- 5. ALL EXISTING TREE LIMBS WITHIN THE 60 FOOT ATM RADIUS SHOWN IN THE PLAN SET SHALL BE TRIMMED TO A MINIMUM OF 6 FEET ABOVE GRADE. ALL SHRUBS WITHIN THE 60 FOOT ATM RADIUS SHALL BE TRIMMED TO A MINIMUM OF 36 INCHES ABOVE GRADE. ALL BRUSH SHALL BE REMOVED. THE CONTRACTOR SHALL CONSIDER ALL FUTURE GROWTH AND FULL BLOOM WHEN TRIMMING LANDSCAPING. EXISTING TREE LIMBS ADJACENT TO LIGHTING FIXTURES SHALL BE TRIMMED AS REQUIRED TO PREVENT LIGHT INTERFERENCE.
- 6. PRIOR TO BID, CONTRACTOR SHALL VERIFY EXISTING EXTERIOR LIGHTING CONDITIONS AFTER DUSK AND NOTIFY THE DEVELOPER/OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC. OF DAMAGED OR INOPERABLE LIGHTS. THE CONTRACTOR SHALL REPAIR ALL INOPERABLE LIGHTS UNLESS OTHERWISE NOTED WITHIN THIS PLAN SET.
- THE ILLUMINATION LEVELS DEPICTED WITHIN THE PLAN SET ARE BASED ON REGULATORY STATE STANDARDS FOR SAFETY LIGHTING AND ON CLIENT STANDARDS.
- 8. ALL LIGHTING FIXTURES, UNLESS OTHERWISE NOTED WITHIN THIS PLAN SET, HAVE THE PHOTOCELL OPTION ENABLED.
- 9. EXISTING LIGHTING FIXTURES CONTROLLED BY OUTSIDE ENTITIES (E.G. LANDLORD) HAVE BEEN EXCLUDED FROM THE LIGHTING ANALYSIS REFLECTED WITHIN THE PLAN SET. THE PROPOSED LIGHT LEVELS HAVE BEEN

DESIGNED TO COMPLY WITH ALL APPLICABLE ATM AND SAFETY LIGHTING REQUIREMENTS INDEPENDENT OF ANY UNCONTROLLED LIGHT FIXTURES.



								FOR MUNICIPAL REVIEW	DESCRIPTION
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STON engineering &

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JOSHUA H. KLINE, P.E. MÁSSACHUSETTS LICENSE No. 53936 LICENSED PROFESSIONAL ENGINEER

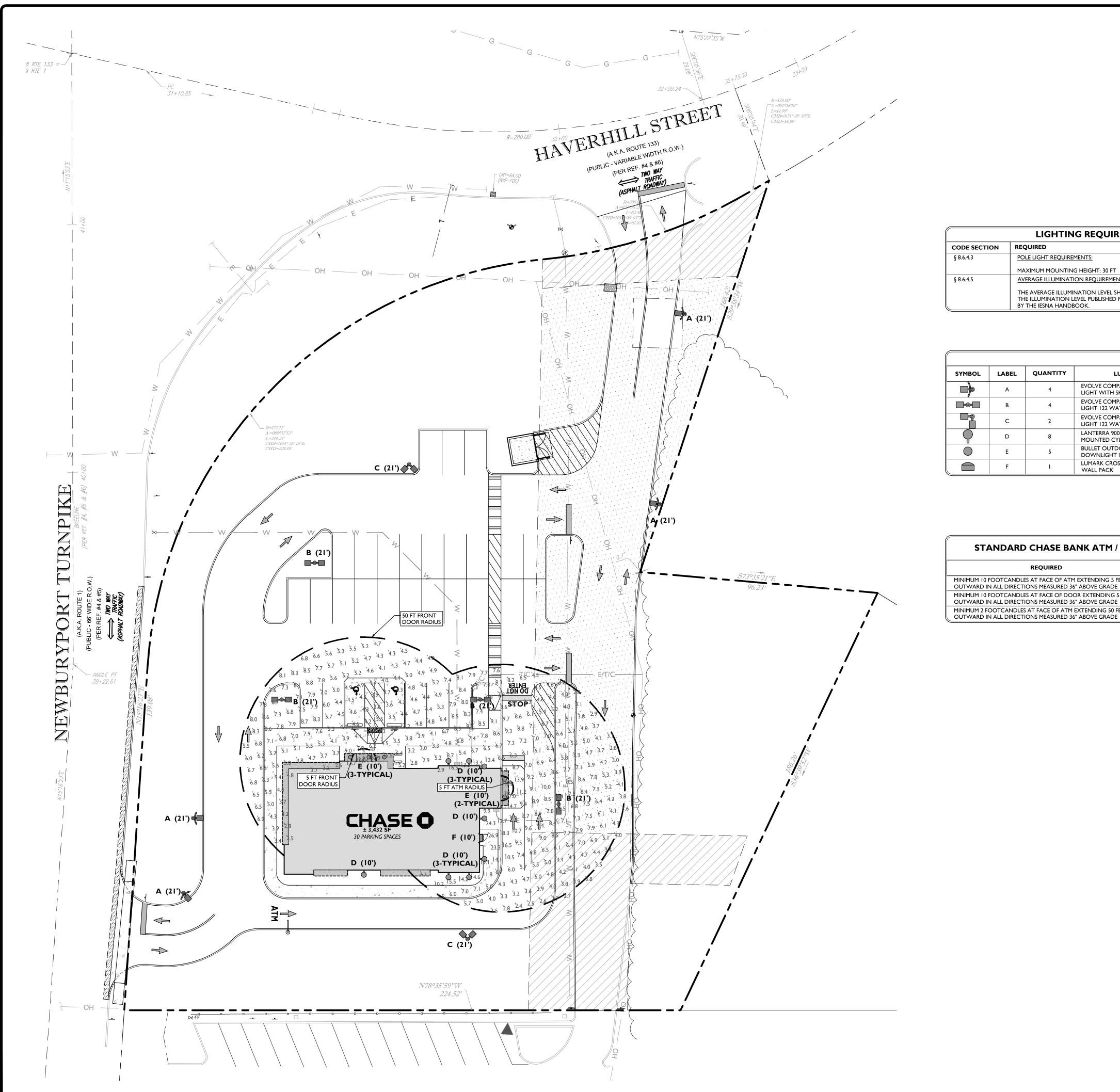


I" = 20' PROJECT ID: BOS-230034

LIGHTING PLAN

**DRAWING:** 

**C-7** 





**DESCRIPTION** 

PROPOSED ISOMETRIC LINE

(MOUNTING HEIGHT)

PROPOSED AREA LIGHT

(FOOTCANDLES)

PROPOSED LIGHTING FIXTURE

PROPOSED LIGHTING INTENSITY

PROPOSED BUILDING MOUNTED LIGHT

PROPOSED CALCULATION AREA

#### LIGHTING REQUIREMENTS CODE SECTION REQUIRED **PROPOSED** POLE LIGHT REQUIREMENTS: MAXIMUM MOUNTING HEIGHT: 30 FT 21 FT AVERAGE ILLUMINATION REQUIREMENTS: THE AVERAGE ILLUMINATION LEVEL SHALL NOT EXCEED THE ILLUMINATION LEVEL PUBLISHED FOR SUCH ACTIVITY COMPLIES BY THE IESNA HANDBOOK.

PROPOSED LUMINAIRE SCHEDULE								
SYMBOL	LABEL	QUANTITY	LUMINAIRE	DISTRIBUTION	LLF	MANUFACTURER	IES FILE	
	Α	4	EVOLVE COMPACT (EACL) AREA LIGHT WITH SHIELD 122 WATTS, 4K	TYPE III	0.90	GE CURRENT	EACL01_F3AW740ELS-EAC -ABL-BLCK.IES	
	В	4	EVOLVE COMPACT (EACL) AREA LIGHT 122 WATTS, 4K	TYPE IV	0.90	GE CURRENT	EACL01_F4AF740IES	
	С	2	EVOLVE COMPACT (EACL) AREA LIGHT 122 WATTS, 4K	TYPE IV	0.90	GE CURRENT	EACL01_F4AF740IES	
9	D	8	LANTERRA 9004 LED, WALL MOUNTED CYLINDER	DOWNLIGHT	0.90	COOPER LIGHTING	9004-WI-(RW, RI)-LED4080-W-WT- LI-UNV (I).IES	
	E	5	BULLET OUTDOOR RECESSED FIXED DOWNLIGHT IP66	CANOPY	0.90	ILLUMINATION	5811-1SAT20L8040W.IES	
	F	I	LUMARK CROSSTOUR MAXX LED WALL PACK	FORWARD	0.90	EATON	XTOR6B-W.IES	

STANDARD CHASE BANK ATM / AHD REQUIREMENTS						
REQUIRED	PROPOSED					
MINIMUM 10 FOOTCANDLES AT FACE OF ATM EXTENDING 5 FEET OUTWARD IN ALL DIRECTIONS MEASURED 36" ABOVE GRADE	17.0 FC					
MINIMUM 10 FOOTCANDLES AT FACE OF DOOR EXTENDING 5 FEET OUTWARD IN ALL DIRECTIONS MEASURED 36" ABOVE GRADE	16.0 FC					
MINIMUM 2 FOOTCANDLES AT FACE OF ATM EXTENDING 50 FEET OUTWARD IN ALL DIRECTIONS MEASURED 36" ABOVE GRADE	2.4 FC					

### GENERAL LIGHTING NOTES

**SYMBOL** 

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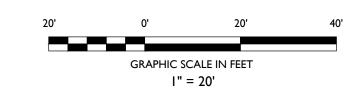
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- I. THE LIGHTING LEVELS DEPICTED WITHIN THE PLAN SET ARE CALCULATED UTILIZING DATA OBTAINED FROM THE LISTED MANUFACTURER. ACTUAL ILLUMINATION LEVELS AND PERFORMANCE OF ANY PROPOSED LIGHTING FIXTURE MAY VARY DUE TO UNCONTROLLABLE VARIABLES SUCH ARE WEATHER, VOLTAGE SUPPLY, LAMP TOLERANCE, EQUIPMENT SERVICE LIFE AND OTHER VARIABLE FIELD CONDITIONS.
- WHERE APPLICABLE, THE EXISTING LIGHT LEVELS DEPICTED WITHIN THE PLAN SET SHALL BE CONSIDERED APPROXIMATE. THE EXISTING LIGHT LEVELS ARE BASED ON FIELD OBSERVATIONS AND THE MANUFACTURER'S DATA OF THE ASSUMED OR MOST SIMILAR LIGHTING FIXTURE MODEL.
- 3. UNLESS NOTED ELSEWHERE WITHIN THIS PLAN SET, THE LIGHT LOSS FACTORS USED IN THE LIGHTING ANALYSIS ARE AS FOLLOWS: LIGHT EMITTING DIODES (LED): 0.90 HIGH PRESSURE SODIUM:
- METAL HALIDE: 4. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING, PRIOR TO THE START OF CONSTRUCTION, OF ANY PROPOSED LIGHTING LOCATIONS THAT CONFLICT WITH EXISTING/ PROPOSED DRAINAGE, UTILITY, OR OTHER IMPROVEMENTS.
- 5. THE CONTRACTOR IS RESPONSIBLE TO PREPARE A WIRING PLAN AND PROVIDE ELECTRIC SERVICE TO ALL PROPOSED LIGHTING FIXTURES. THE CONTRACTOR IS REQUIRED TO PREPARE AN AS-BUILT PLAN OF WIRING AND PROVIDE COPIES TO THE OWNER AND STONEFIELD ENGINEERING & DESIGN,

# **ATM LIGHTING NOTES:**

- I. THE CONTRACTOR SHALL REPLACE LAMP COVERS, RE-LAMP AND RE-BALLAST EXISTING LIGHT FIXTURES AS INDICATED WITHIN THE PLAN SET. THE EXISTING FIXTURE HEIGHT SHALL BE MAINTAINED UNLESS INDICATED OTHERWISE.
- 2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING IF THE EXISTING LIGHT FIXTURES ARE NOT THE MINIMUM WATTAGE SPECIFIED WITHIN THE PLAN SET.
- 3. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY EXISTING LIGHT POLES IDENTIFIED FOR REUSE WITH A PROPOSED LIGHT FIXTURE(S) SHALL BE IN ACCEPTABLE WORKING CONDITION AND HAVE THE CAPACITY TO SUPPORT THE PROPOSED LIGHT FIXTURE(S). ANY MOUNTING EQUIPMENT REQUIRED TO ATTACH THE PROPOSED LIGHTING FIXTURE TO THE EXISTING LIGHT POLE SHALL BE PROVIDED BY THE CONTRACTOR.
- 4. THE CONTRACTOR SHALL CONFIRM THAT THE LOCATION OF ANY PROPOSED BUILDING MOUNTED LIGHTING FIXTURE WILL NOT CONFLICT WITH ANY EXISTING OR PROPOSED STRUCTURAL ELEMENT (E.G. CANOPY SUPPORT BEAMS). THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IN WRITING OF ANY FIXTURE CONFLICT PRIOR TO THE START OF CONSTRUCTION.
- 5. ALL EXISTING TREE LIMBS WITHIN THE 60 FOOT ATM RADIUS SHOWN IN THE PLAN SET SHALL BE TRIMMED TO A MINIMUM OF 6 FEET ABOVE GRADE. ALL SHRUBS WITHIN THE 60 FOOT ATM RADIUS SHALL BE TRIMMED TO A MINIMUM OF 36 INCHES ABOVE GRADE. ALL BRUSH SHALL BE REMOVED. THE CONTRACTOR SHALL CONSIDER ALL FUTURE GROWTH AND FULL BLOOM WHEN TRIMMING LANDSCAPING. EXISTING TREE LIMBS ADJACENT TO LIGHTING FIXTURES SHALL BE TRIMMED AS REQUIRED TO PREVENT LIGHT INTERFERENCE.
- 6. PRIOR TO BID, CONTRACTOR SHALL VERIFY EXISTING EXTERIOR LIGHTING CONDITIONS AFTER DUSK AND NOTIFY THE DEVELOPER/OWNER AND STONEFIELD ENGINEERING & DESIGN, LLC. OF DAMAGED OR INOPERABLE LIGHTS. THE CONTRACTOR SHALL REPAIR ALL INOPERABLE LIGHTS UNLESS OTHERWISE NOTED WITHIN THIS PLAN SET.
- 7. THE ILLUMINATION LEVELS DEPICTED WITHIN THE PLAN SET ARE BASED ON REGULATORY STATE STANDARDS FOR SAFETY LIGHTING AND ON CLIENT STANDARDS.
- 8. ALL LIGHTING FIXTURES, UNLESS OTHERWISE NOTED WITHIN THIS PLAN SET,
- HAVE THE PHOTOCELL OPTION ENABLED. 9. EXISTING LIGHTING FIXTURES CONTROLLED BY OUTSIDE ENTITIES (E.G.
- LANDLORD) HAVE BEEN EXCLUDED FROM THE LIGHTING ANALYSIS REFLECTED WITHIN THE PLAN SET. THE PROPOSED LIGHT LEVELS HAVE BEEN DESIGNED TO COMPLY WITH ALL APPLICABLE ATM AND SAFETY LIGHTING REQUIREMENTS INDEPENDENT OF ANY UNCONTROLLED LIGHT FIXTURES.



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JOSHUA H. KLINE, P.E. MÁSSACHUSETTS LICENSE No. 53936 LICENSED PROFESSIONAL ENGINEER

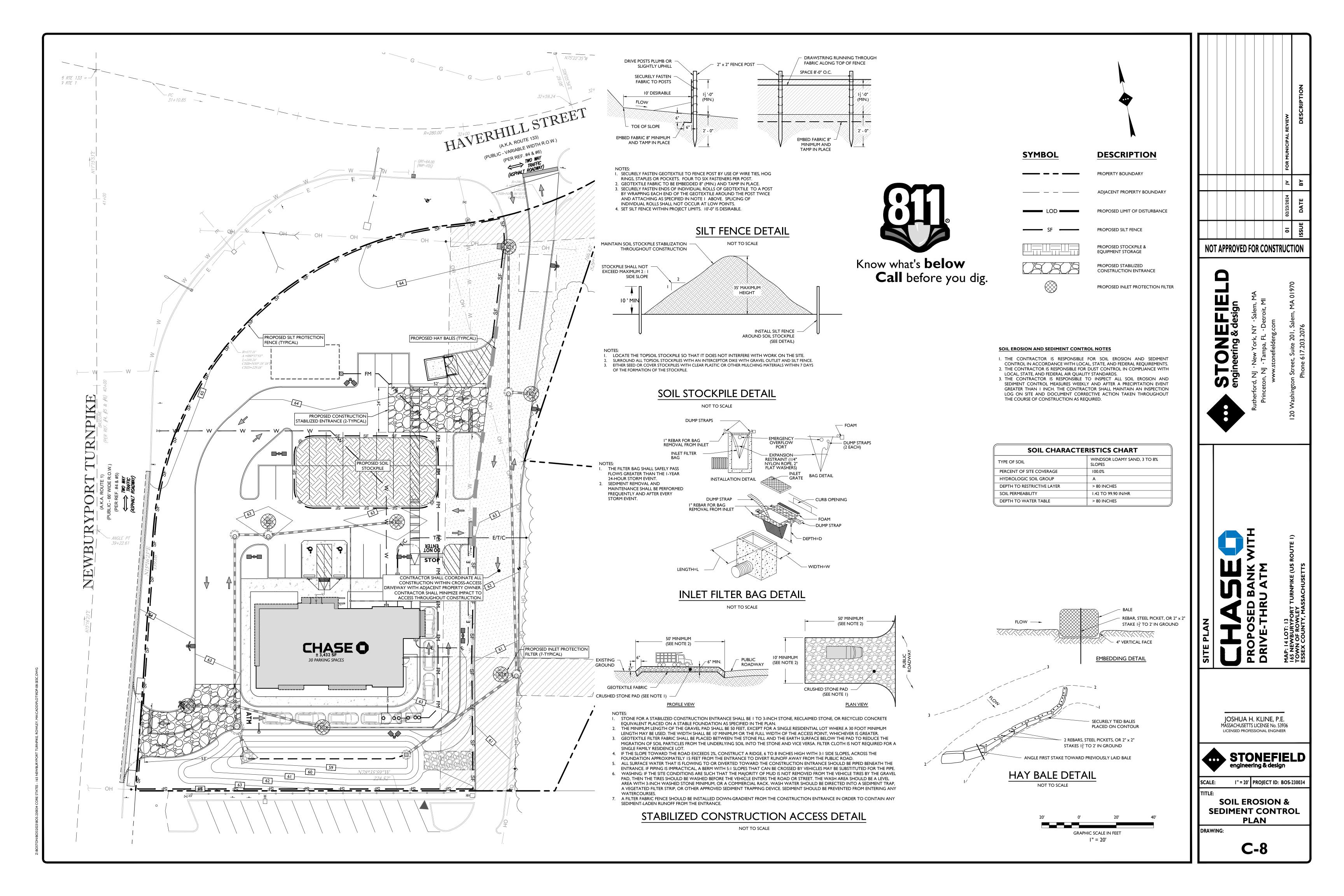


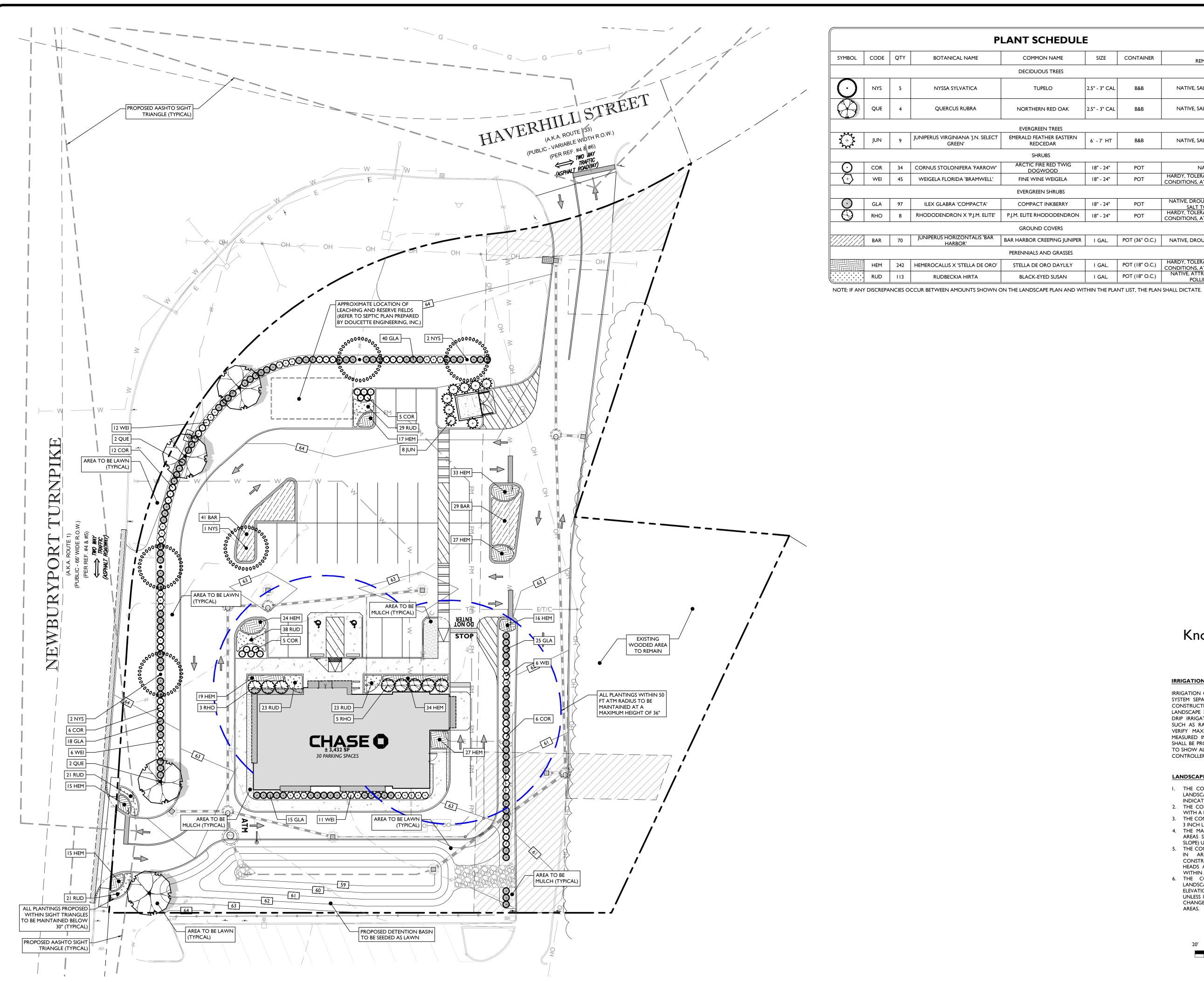
I" = 20' PROJECT ID: BOS-230034

**SECURITY LIGHTING PLAN** 

**DRAWING:** 

C-7.1





	PLANT SCHEDULE								
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS		
	DECIDUOUS TREES								
0	NYS	5	nyssa sylvatica	TUPELO	2.5" - 3" CAL	B&B	NATIVE, SALT TOLERANT		
	QUE 4 QUERCUS RUBRA			NORTHERN RED OAK	2.5" - 3" CAL	B&B	NATIVE, SALT TOLERANT		
	EVERGREEN TREES								
3)+4	JUN	9	JUNIPERUS VIRGINIANA 'J.N. SELECT GREEN'	EMERALD FEATHER EASTERN REDCEDAR	6` - 7` HT	B&B	NATIVE, SALT TOLERANT		
				SHRUBS					
0	COR	34	CORNUS STOLONIFERA 'FARROW'	ARCTIC FIRE RED TWIG DOGWOOD	18" - 24"	POT	NATIVE		
+	WEI	45	WEIGELA FLORIDA 'BRAMWELL'	FINE WINE WEIGELA 18" - 24"		POT	HARDY, TOLERANT OF CLIMATIC CONDITIONS, ATTRACTS WILDLI		
				EVERGREEN SHRUBS					
0	GLA	97	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	18" - 24"	POT	NATIVE, DROUGHT TOLERANT SALT TOLERANT		
0	RHO	8	RHODODENDRON X 'P.J.M. ELITE'	P.J.M. ELITE RHODODENDRON	18" - 24"	POT	HARDY, TOLERANT OF CLIMATIC CONDITIONS, ATTRACTS WILDLI		
	•			GROUND COVERS					
	BAR	70	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	I GAL.	POT (36" O.C.)	NATIVE, DROUGHT TOLERANT		
				PERENNIALS AND GRASSES					
	HEM	242	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	I GAL.	POT (18" O.C.)	HARDY, TOLERANT OF CLIMATIC CONDITIONS, ATTRACTS WILDLI		
+ + + + + + + + + + + + + + + + + + + +	RUD	113	RUDBECKIA HIRTA	BLACK-EYED SUSAN	I GAL.	POT (18" O.C.)	NATIVE, ATTRACTS INSECTS & POLLINATORS		



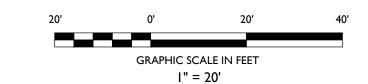
# Know what's **below Call** before you dig.

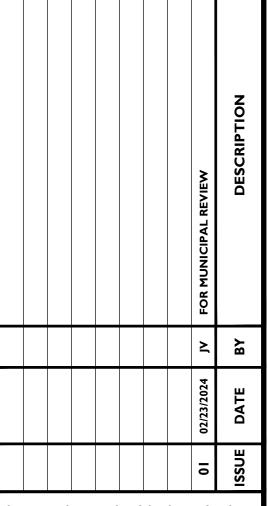
# **IRRIGATION NOTE:**

IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO VERIFY MAXIMUM ON SITE DYNAMIC WATER PRESSURE AVAILABLE MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDSCAPE AREAS.

# LANDSCAPING NOTES

- I. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- 2. THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH LAYER OF TOPSOIL AND SEED. 3. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM
- 3 INCH LAYER OF MULCH. 4. THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION AREAS SHALL BE 3 FEET HORIZONTAL TO 1 FOOT VERTICAL (3:1
- SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. 5. THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS IN AREA OF LANDSCAPING DISTURBANCE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
- 6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING





NOT APPROVED FOR CONSTRUCTION

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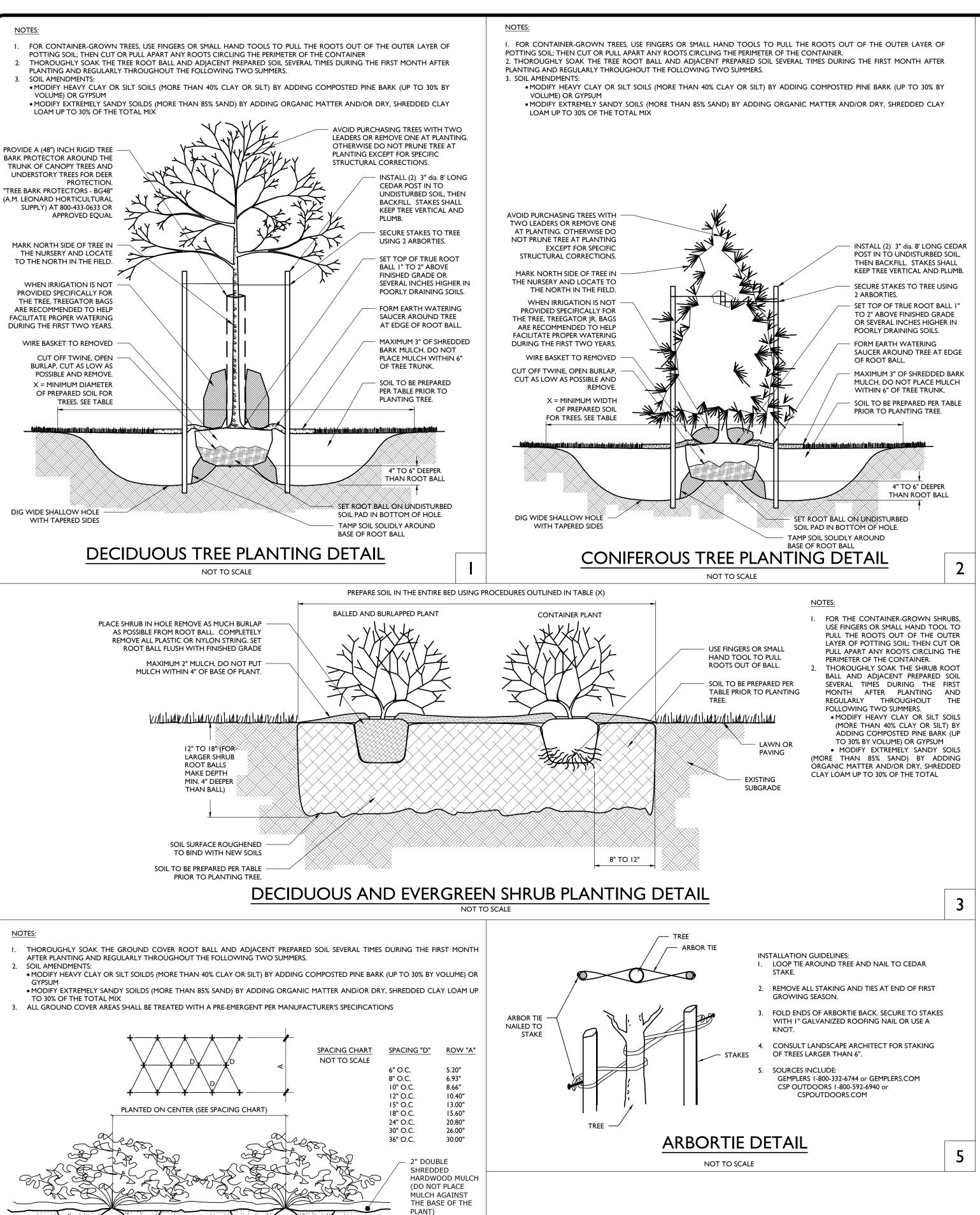


I" = 20' PROJECT ID: BOS-230034

LANDSCAPING PLAN

DRAWING:

**C-9** 



GENTLY PULL ROOTS AWAY FROM TOPSOIL MASS WITH

1 PART SOIL AMENDMENT

(BASED ON SOIL TEST)

3 PARTS NATIVE TOPSOIL

FINGERS

GROUND COVER/PERENNIAL/ANNUAL

PLANTING DETAIL

BACKFILL SOIL

### GENERAL LANDSCAPING NOTES:

- SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIALS, OR OWNER/OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENTION OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
- WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE
- PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL. 3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. BEFORE ORDERING OR PURCHASING MATERIALS. TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL,
- IF SO REQUESTED.
- 4. IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND SEED VERIFYING TYPE AND PURITY. 5. UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE
- VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE DESIGNER, OR GOVERNING MUNICIPAL OFFICIAL

ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING

6. THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY PLACE.

### PROTECTION OF EXISTING VEGETATION NOTES

- BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. FENCING SHALL BE LOCATED AT THE DRIP-LINE OR LIMIT OF DISTURBANCE AS DEPICTED WITHIN THE APPROVED OR FINAL PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE. FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL." NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE INSPECTED REGULARLY BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION
- IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL USE ANY AND ALL PRECAUTIONARY MEASURES WHEN PERFORMING WORK AROUND TREES, WALKS, PAVEMENTS, UTILITIES, AND ANY OTHER FEATURES FITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT 3. IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRIP-LINE OF TREES TO REMAIN, THE
- WORK SHALL BE PERFORMED AS FOLLOWS: • TRENCHING: WHEN TRENCHING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT. BUT THE TRENCH SHALL BE TUNNELED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO
- THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE. RAISING GRADES: WHEN THE GRADE AT AN EXISTING TREE IS BELOW THE NEW FINISHED GRADE. AND FILL NOT EXCEPDING 6 INCHES (6") IS REQUIRED. CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES A MINIMUM OF 18 INCHES (18") AND FINISH APPROXIMATELY TWO INCHES (2") ABOVE THE FINISH GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL. WHERE FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED. IF APPLICABLE, TREE WELL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE WELL DETAIL."
- LOWERING GRADES: EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION, NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST WHERE CUT EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID RETAINING WALL SHALL BE CONSTRUCTED. IF APPLICABLE, THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL."

#### **SOIL PREPARATION AND MULCH NOTES:**

- I. LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLE TO NOTIFICATION OF RESULTS.
- . BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIME AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SEED SPECIFICATION" OR "SOD SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL AMENDMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS
- MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM
- UP TO 30% OF THE TOTAL MIX. TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL TOPSOIL OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL OBTAINED FROM A WELL-DRAINED ARABLE SITE, FREE FROM ALL CLAY, LUMPS, COARSE SANDS, STONES, PLANTS,
- ROOTS, STICKS, AND OTHER FOREIGN MATERIAL GREATER THAN ONE INCH (1"). 4. TOPSOIL SHALL HAVE A PH RANGE OF 5.0-7.0 AND SHALL NOT CONTAIN LESS THAN 6% ORGANIC MATTER BY WEIGH 5. OBTAIN TOPSOIL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT THE PROIECT SITE.
- 5. CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS.
- UNLESS OTHERWISE NOTED IN THE CONTRACT, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBED AREA OF THE SITE. LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LES REOUIRED TOPSOIL). IN ACCORDANCE WITH THE APPROVED OR FINAL GRADING PLAN.
- 9. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THE APPROVED OR FINAL CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL
- IO. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO INSTALLATION. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE
- II. DOUBLE SHREDDED HARDWOOD MULCH OR APPROVED EQUAL SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND ALL TREES PLANTED BY LANDSCAPE CONTRACTOR, GROUND COVER, PERENNIAL, AND ANNUAL PLANTING BEDS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE OF SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF
- 13. SOIL SHALL BE LOOSENED WITH A BACKHOE OR OTHER LARGE COARSE-TILING EQUIPMENT UNLESS THE SOIL IS FROZEN OR EXCESSIVELY WET. TILING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE.

2. WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING.

- 14. APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL 15. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:
- MYCRO® TREE SAVER A DRY GRANULAR MYCORRHIZAL FUNGI INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM), BENEFICIAL RHIZOSPHERE BACTERIA, TERRA-SORB SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND
- DIRECTIONS FOR USE: USE 3-OZ PER EACH FOOT DIAMETER OF THE ROOT BALL, OR 3-OZ PER INCH CALIPER. MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE UPPER PORTION OF THE ROOT BALL. EXTENDING FROM THE SOIL SURFACE TO A DEPTH OF ABOUT 8 INCHES. AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL, APPLY WATER TO SOIL SATURATION MYCOR® TREE SAVER® IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE.
- SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9.
- FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION. • OTHER PESTICIDES: HERBICIDES AND INSECTICIDES DO NOT NORMALLY INTERFERE WITH MYCORRHIZAL FUNGAL
- DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.

# • FERTILIZER TABLETS ARE PLACED IN THE UPPER 4 INCHES OF BACKFILL SOIL WHEN PLANTING TREES AND SHRUBS.

SELECTED ORGANIC MICROBIAL NUTRIENTS

• TABLETS ARE FORMULATED FOR LONG-TERM RELEASE BY SLOW BIODEGRADATION, AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12-8-8 NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PROTEIN BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE. DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT I TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.

IRRIGATION DURING ESTABLISHMENT							
SIZE AT PLANTING	IRRIGATION FOR VITALITY	IRRIGATION FOR SURVIVAL					
< 2" CALIPER	DAILY FOR TWO WEEKS, EVERY OTHER DAY FOR TWO MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR TWO TO THREE MONTHS					
2"-4 CALIPER	DAILY FOR ONE MONTH, EVERY OTHER DAY FOR THREE MONTHS, WEEKLY UNTIL ESTABLISHED	TWO TO THREE TIMES WEEKLY FOR THREE TO FOUR MONTHS					
4 >" CALIPER	DAILY FOR SIX WEEKS, EVERY OTHER DAY FOR FIVE MONTHS, WEEKLY UNTIL ESTABLISHED	TWICE WEEKLY FOR FOUR TO FIVE MONTHS					

I. AT EACH IRRIGATION, APPLY TWO TO THREE GALLONS PER INCH TRUNK CALIPER TO THE ROOT BALL SURFACE. APPLY IT IN A MANNER SO ALL WATER SOAKS THE ENTIRE ROOT BALL. DO NOT WATER IF ROOT BALL IS WET/SATURATED ON THE IRRIGATION DAY.

2. WHEN IRRIGATING FOR VITALITY, DELETE DAILY IRRIGATION WHEN PLANTING IN WINTER OR WHEN PLANTING IN COOL CLIMATES. ESTABLISHMENT TAKES THREE TO FOUR MONTHS PER INCH TRUNK CALIPER. NEVER APPLY IRRIGATION IF THE SOIL IS SATURATED.

3. WHEN IRRIGATION FOR SURVIVAL, TREES TAKE MUCH LONGER TO ESTABLISH THAN REGULARLY IRRIGATED TREES. IRRIGATION MAY BE REQUIRED IN THE NORMAL HOT, DRY PORTIONS OF THE FOLLOWING YEAR.

#### PLANT QUALITY AND HANDLING NOTES

- I. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE I. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004) OR LATEST REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
  - 2. IN ALL CASES, BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLANT LIST SHALL TAKE PRECEDENCE OVER COMMON NAMES 3. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN
  - THEIR DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, NUMBER OF BRANCHES, COMPACTNESS AND SYMMETRY. ALL PLANTS SHALL HAVE A NORMAL HABIT OR SOUND. HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEM. PLANTS SHALL BE FREE OF DISEASE, INSECT PESTS, EGGS OR LARVAE.
  - 4. PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR
  - FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (I-1/4") WHICH HAVE NOT COMPLETELY CALLOUSED SHALL BE 5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY
- TAGGED WITH THE PROPER NAME AND SIZE. 6. THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY-EIGHT HOURS (48 HRS.) IN ADVANCE OF THE
  - '. ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) MUST BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH FIRMLY WRAPPED WITH BURLAP. THE DIAMETER AND DEPTH OF THE BALLS OF EARTH MUST BE SUFFICIENT TO encompass the fibrous root feeding systems necessary for the healthy development of the plant. No plant SHALL BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING. THE BALLS SHALL REMAIN INTACT DURING ALL OPERATIONS. ALL PLANTS THAT CANNOT BE PLANTED AT ONCE MUST BE HEELED-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS
  - USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED. 8. PLANTS TRANSPORTED TO THE PROJECT IN OPEN VEHICLES SHALL BE COVERED WITH TARPS OR OTHER SUITABLE COVERS securely fastened to the body of the vehicle to prevent iniury to the plants. Closed vehicles shall be ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS, EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DIGGING, CARELESSNESS WHILE IN TRANSIT, OR IMPROPER HANDLING OR STORAGE SHALL BE CAUSE FOR REJECTION OF PLANT MATERIAL. ALL PLANTS SHALL BE KEPT MOIST, FRESH, AND PROTECTED. SUCH PROTECTION SHALL ENCOMPASS THE
  - ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT. BEING HANDLED, OR ARE IN TEMPORARY STORAGE. 9. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING DETAILS.
  - 10. LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHEN POSSIBLE. THE ROOT BALL SHALL BE KEPT MOIST AT ALL TIME AND COVERED WITH MOISTENED MULCH OR AGED WOODCHIPS. PROPER IRRIGATION SHALL BE SUPPLIED SO AS TO NOT ALLOW THE ROOT BALL TO DRY OUT. PLANTINGS HALL BE UNTIED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING, AND LEAF LOSS. PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH AND WATERED AS REQUIRED TO PRESERVE ROOT MOISTURE. II. NO PLANT MATERIAL SHALL BE PLANTED IN MUDDY OR FROZEN SOIL.
  - 12. PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DISEASED OR INJURED PLANTS SHALL BE REMOVED. 13. IF ROCK OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO
  - RELOCATE OR ENLARGE PLANTING PITS OR DELETE PLANT MATERIAL FROM THE CONTRACT. 14. IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8') ABOVE GRADE, AND SHRUBS, GROUND COVER, PERENNIALS, AND ANNUALS SHALL BE MAINTAINED TO A HEIGHT NOT TO EXCEED TWO FEET (2") ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OR
  - 15. INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS: PLANTS (MARCH 15 - DECEMBER 15)

LAWNS (MARCH 15 - JUNE 15 OR SEPTEMBER 1 - DECEMBER 1) 16. THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPLANT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15)

(31/AKTIINO SELTELIDEK 13).		
ABIES CONCOLOR	CORNUS VARIETIES	OSTRYA VIRGINIANA
ACER BUERGERIANUM	CRATAEGUS VARIETIES	PINUS NIGRA
ACER FREEMANII	CUPRESSOCYPARIS LEYLANDII	PLATANUS VARIETIES
ACER RUBRUM	FAGUS VARIETIES	POPULUS VARIETIES
ACER SACCHARINUM	HALESIA VARIETIES	PRUNUS VARIETIES
BETULA VARIETIES	ILEX X FOSTERII	PYRUS VARIETIES
CARPINUS VARIETIES	ILEX NELLIE STEVENS	QUERCUS VARIETIES (NOT Q. PALUSTRIS)
CEDRUS DEODARA	ILEX OPACA	SALIX WEEPING VARIETIES
CELTIS VARIETIES	JUNIPERUS VIRGINIANA	SORBUS VARIETIES
CERCIDIPHYLLUM VARIETIES	KOELREUTERIA PANICULATA	TAXODIUM VARIETIES

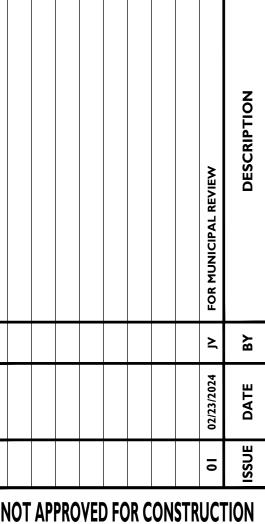
- **CERCIS CANADENSIS** LIQUIDAMBAR VARIETIES TAXUX B REPANDENS **CORNUS VARIETIES** LIRIODENDRON VARIETIES TILIA TOMENTOSA VARIETIES ULMUS PARVIFOLIA VARIETIES CRATAEGUS VARIETIES MALUS IN LEAF NYSSA SYLVATICA ZELKOVA VARIETIES
- 17. IF A PROPOSED PLANT IS UNATTAINABLE OR ON THE FALL DIGGING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REQUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL PRIOR TO ORDERING AND INSTALLATION.
- 18. DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY and promptly removed at the end of each work day. All debris, materials, and tools shall be properly STORED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED.
- 19. THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY. 20. A 90-DAY MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED.
- 21. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR DTHER MEANS. REPAIRING AND RESHAPING WATER RINGS OR SAUCERS. MAINTAINING STAKES AND GUYS IF ORIGINALI REQUIRED, WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
- 2. MOW ALL GRASS AREAS AT REGULAR INTERVALS TO KEEP THE GRASS HEIGHT FROM EXCEEDING THREE INCHES (3"). MOWING SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS LENGTH. WHEN THE AMOUNT OF GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT DESTRUCTION OF THE underlying turf. Mow grass areas in such a manner as to prevent clippings from blowing on paved areas, and sidewalks. Cleanup after mowing shall include sweeping or blowing of paved areas and sidewalks to
- CLEAR THEM FROM MOWING DEBRIS. 23. GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL
- OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND 24. SHOULD THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE
- CONTRACT SHALL BE ESTABLISHED. 25. LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY
- MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION, THE LANDSCAPE CONTRACTOR SHALL FURNISH IT BY MEANS OR A WATERING TRUCK OR OTHER ACCEPTABLE MANNER. 26. THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT
- INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL. 27. IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND

# PLANT MATERIAL GUARANTEE NOTES

- the Landscape Contractor Shall Guarantee all plant material for a period of one year (1 yr.) from approval OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S I. THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE.
- THE LANDSCAPE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS. 3. ALL REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
- 4. THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

# **LAWN (SEED OR SOD) NOTES:**

- . SEED MIXTURE SHALL BE FRESH, CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS.
- .. SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND WITHIN THE PROVIDED "SEED SPECIFICATION" OR "SOD SPECIFICATION." 3. REFERENCE LANDSCAPE PLAN FOR AREAS TO BE SEEDED OR LAID WITH SOD
- 4. SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY SEEDING SPECIFICATION.'
- . PROTECT NEW LAWN AREAS AGAINST TRESPASSING WHILE THE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGNS, BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TRESPASS. EROSION. WASHOUT, SETTLEMENT OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.







JOSHUA H. KLINE, P.E. ASSACHUSETTS LICENSE No. 53936 LICENSED PROFESSIONAL ENGINEER

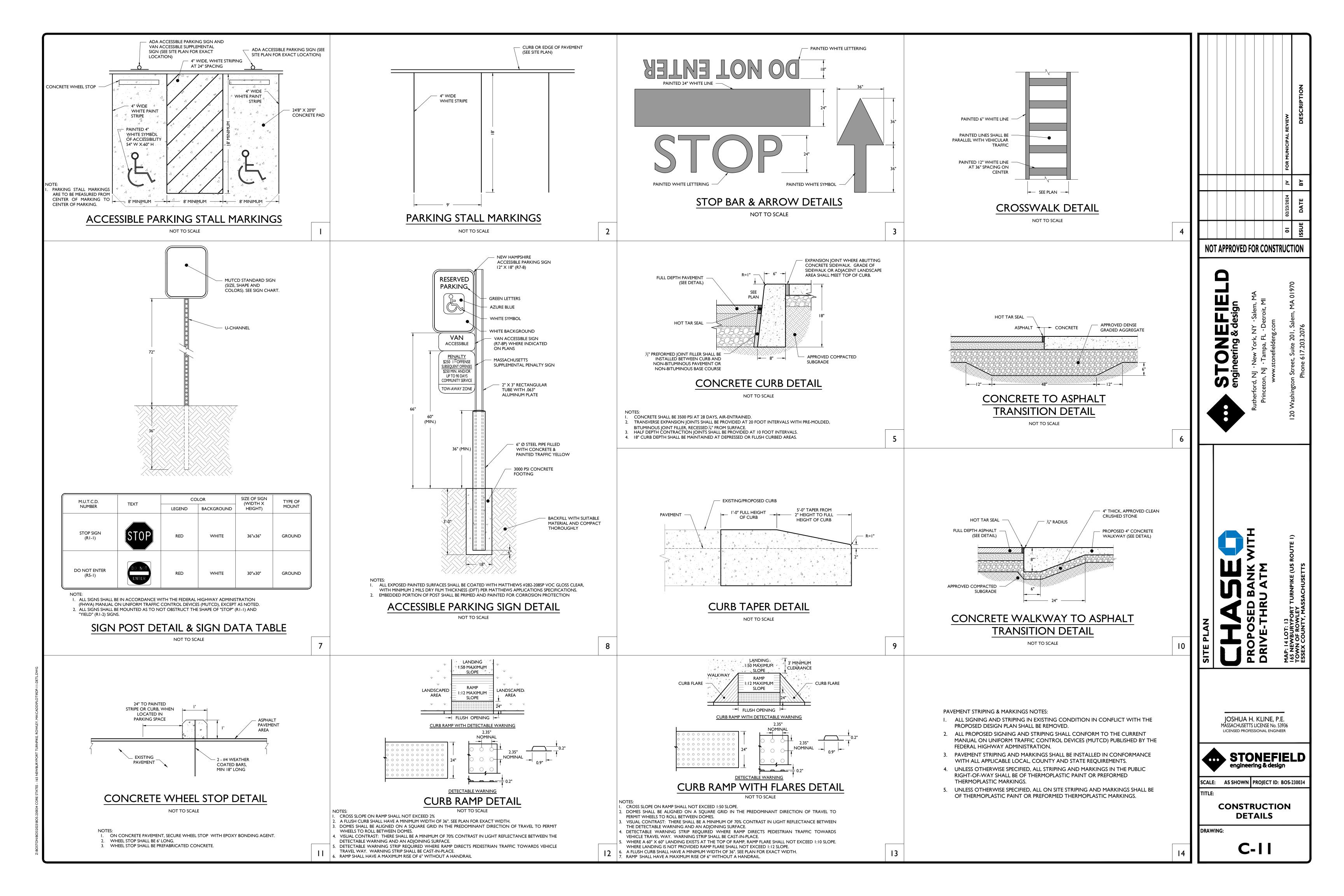


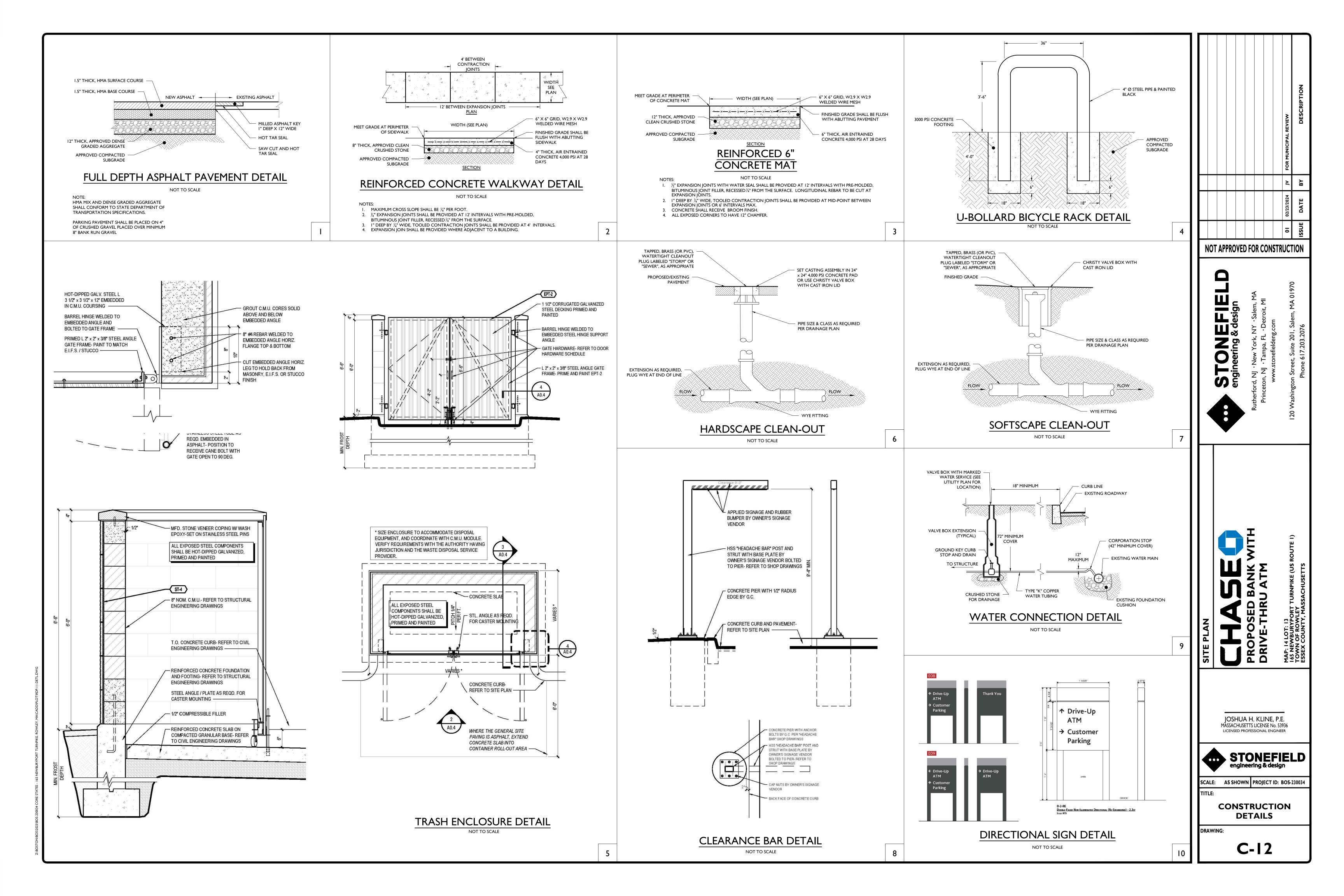


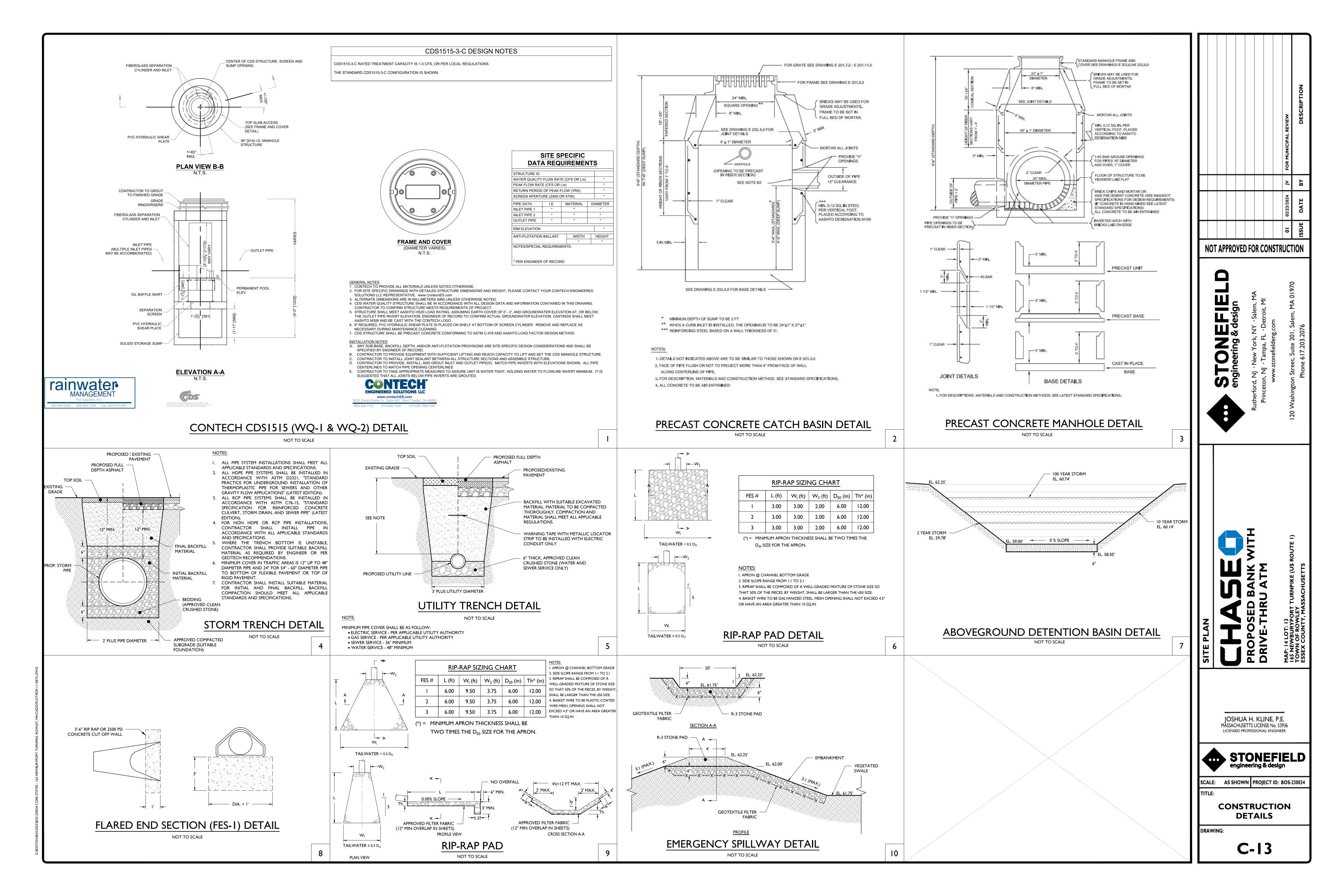
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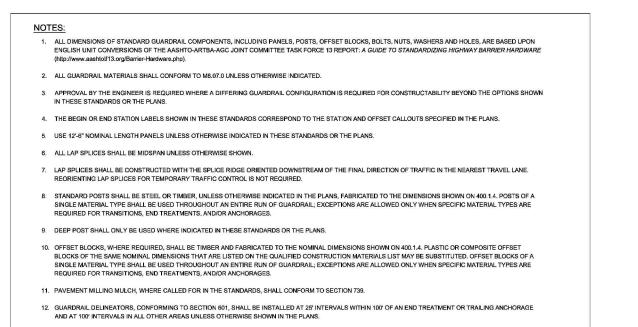
LANDSCAPING DETAILS

**DRAWING:** 









# MASSDOT GENERAL CONSTRUCTION NOTES

**GENERAL NOTES** 

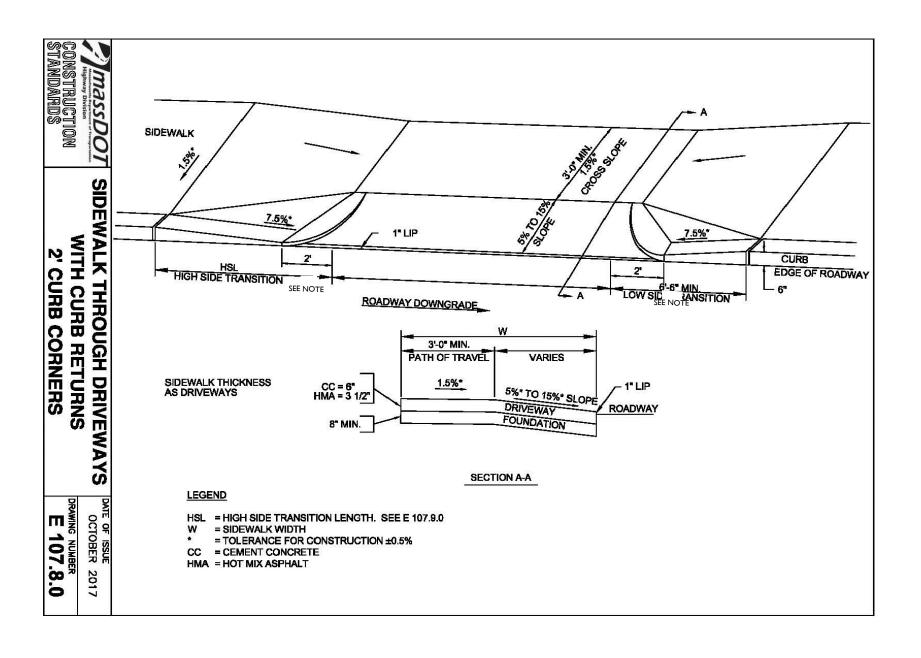
OCTOBER 2017 CRAWING NUMBER 400.1.0

13. MINIMUM OFFSET DISTANCE FROM FACE OF W-BEAM PANEL TO A FIXED (NON-BREAKAWAY) OBJECT SHALL BE 48" FOR TL-2 AND 60" FOR TL-3.

NOT TO SCALE

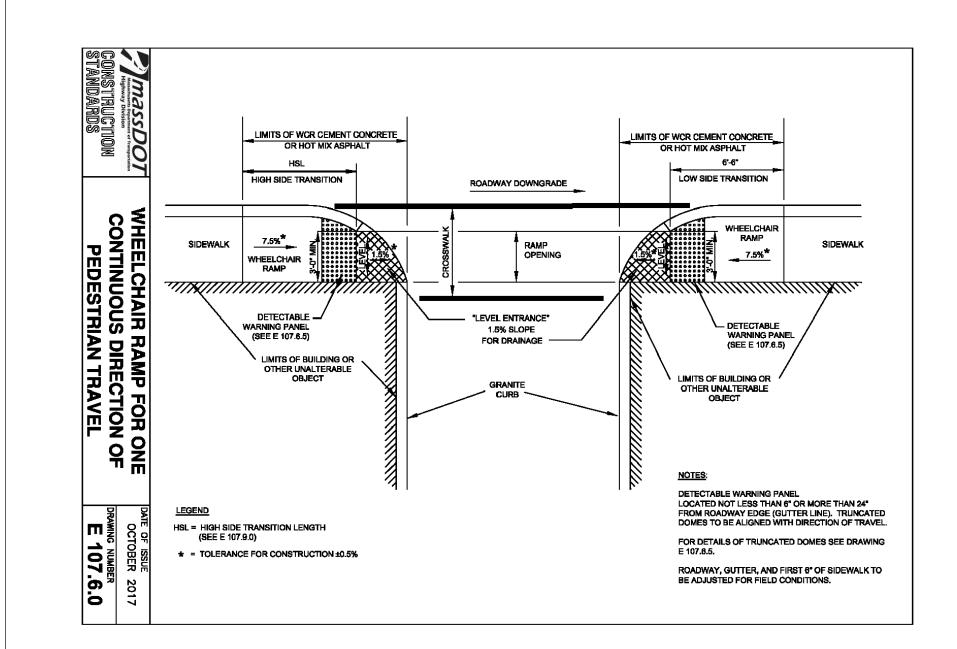
ImassDOT  Improved Distriction  CONSTRUCTION STANDARDS	ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
CURB TRANSITION LENGTH	%	ENGLISH UNITS
TRAI HEE	=0%	6'-6"
I CI NSII	>0% TO 1%	7'-8"
A O	>1% TO 2%	9'-0"
8 E	>2% TO 3%	11'-0"
LENGTH RAMPS	>3% TO 4%	14'-0"
☞ 코	>4% TO 5%	15' <b>-</b> 0" Max
DATE OF ISSUE OCTOBER 2017 DRAWING NUMBER E 107.9.0	NOTE:  * BASED ON A DE  7.5% AND A REV	

MASSDOT CURB TRANSITION LENGTH TABLE



# MASSDOT SIDEWALK THROUGH DRIVEWAY DETAIL

NOT TO SCALE



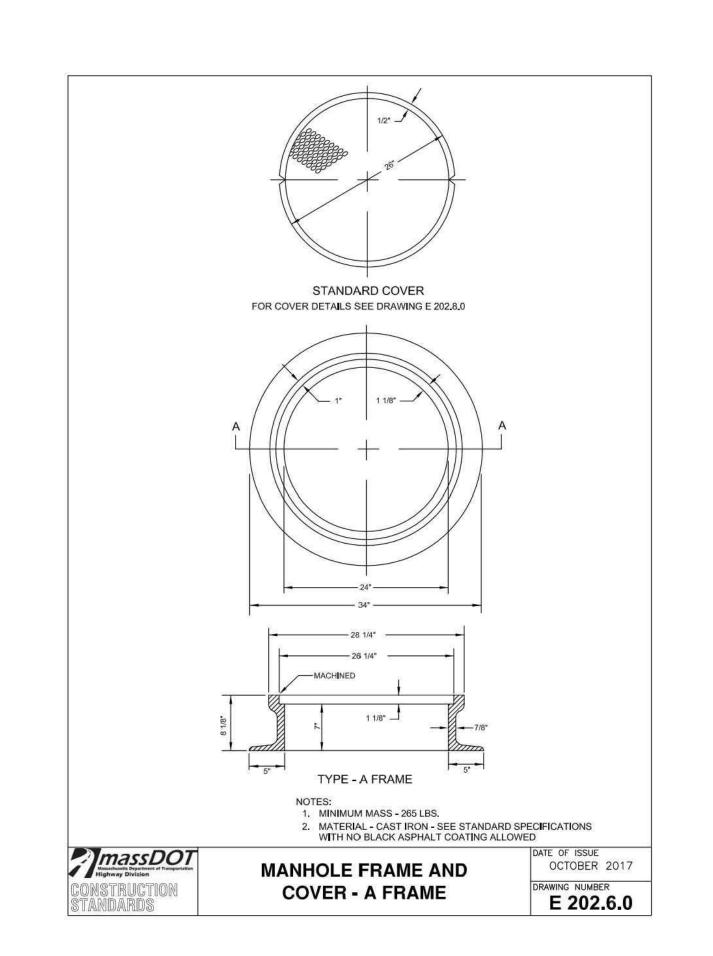
# MASSDOT WHEELCHAIR RAMP DETAIL

HMA BINDER COURSE -6" REVEAL EXCEPT ON BRIDGES VERTICAL CURB VERTICAL CURB --- BASE COURSE **CEMENT CONCRETE LIMITS** 1. THIS PROCEDURE IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE COURSE IS IN PLACE PRIOR TO BINDER AND TOP PLACEMENT. 2. CUT NEAT LINE 6" FROM CURB LINE AND REMOVE BASE AND GRAVEL. REPLACE WITH 3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT TO BE USED AS A SUBSTITUTE. 106

> MASSDOT GENERAL VERTICAL CURBING DETAIL NOT TO SCALE NOT TO SCALE

TRANSITION RAMP STANDARD SIDEWALK STANDARD SIDEWALK GUTTER LINE 6" DEPTH OF PLAIN -STREET FOR APEX RAMPS AND RAMPS NOT ALIGNED WITH CROSSWALK NORMAL CURB REVEAL -- TRANSITION CURB TRANSITION CURB - NORMAL CURB REVEAL TYPICAL INSTALLATION **DETAIL OF DETECTABLE WARNING PANEL** NOTE: PANELS MAY BE CONCRETE PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL PERMANENTLY APPLIED TO THE RAMP. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. DETECTABLE WARNING PANEL OCTOBER 2017 FOR WHEELCHAIR RAMPS AND STANDARD RAMP TERMINOLOGY | E 107.6.5

MASSDOT DETECTABLE WARNING STRIP DETAIL



MASSDOT FRAME AND COVER DETAIL NOT TO SCALE

NOT APPROVED FOR CONSTRUCTION

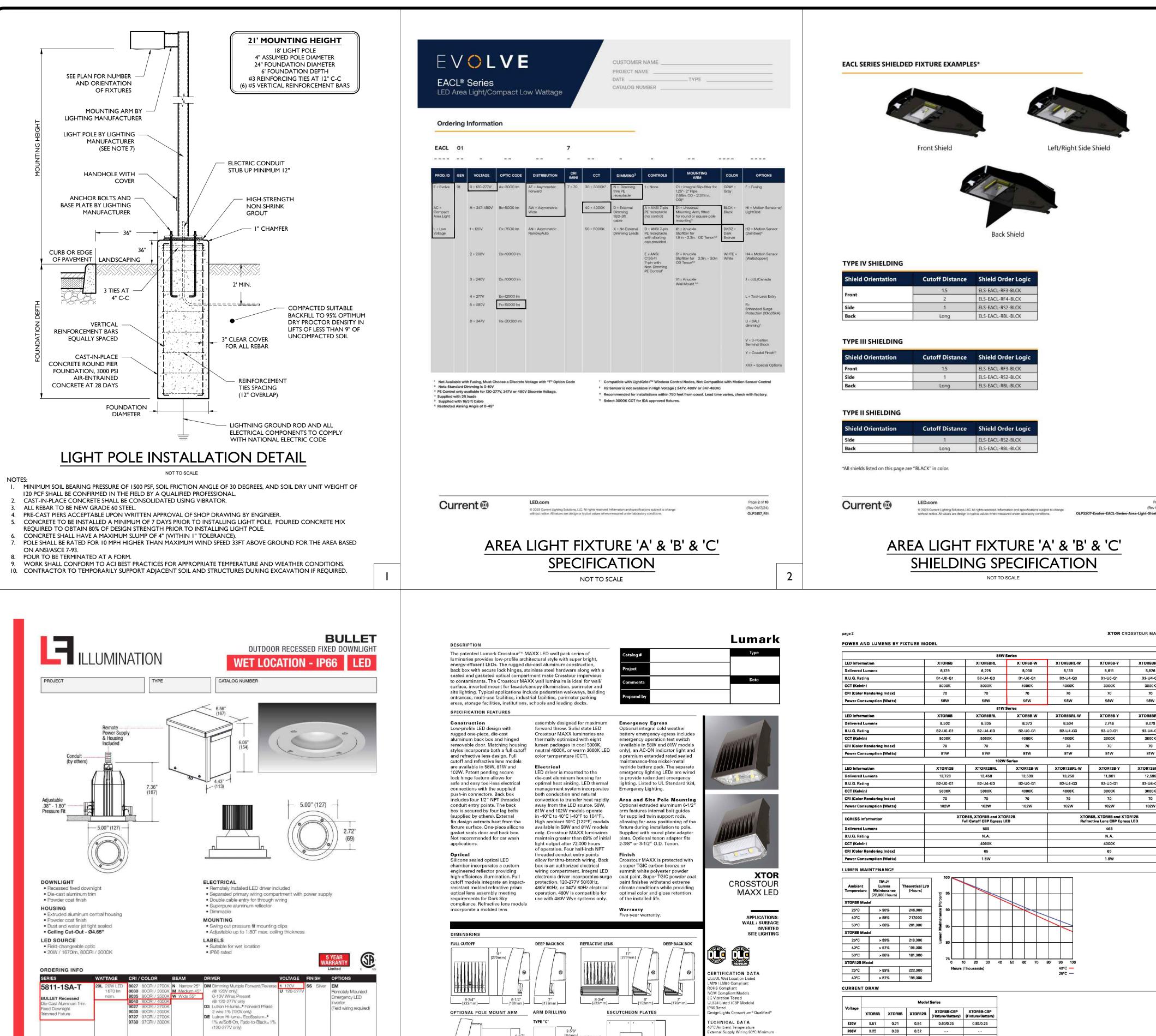
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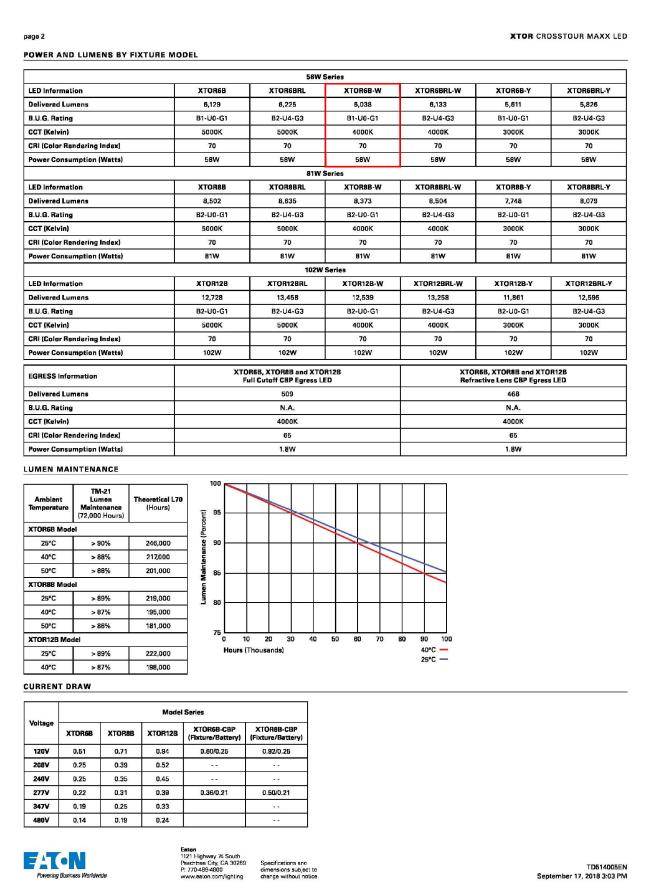
STONEFIELD engineering & design

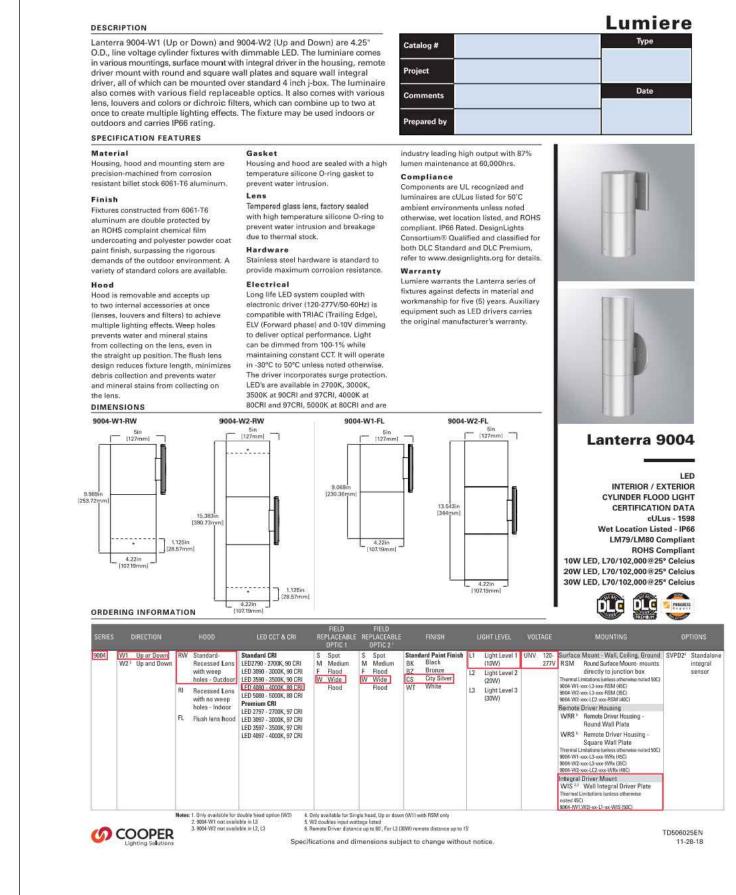
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**CONSTRUCTION** 

**DETAILS DRAWING:** 







AREA LIGHT FIXTURE 'D' SPECIFICATIONS



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CONSTRUCTION

**DETAILS** 

**DRAWING:** 

**C-15** 

AREA LIGHT FIXTURE 'F' SPECIFICATIONS

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Ordering Example: 5811-1SA-T-20L-8030-M-DM-U-SS

HEADQUARTERS

9200 Deering Avenue

Chatsworth CA 91311

AREA LIGHT FIXTURE 'E' SPECIFICATIONS

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Telephone: 818-885-1335

Toll Free: 855-885-1335

Fax: 818-576-1335

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We reserve the right to change or

withdraw specifications without prior notice.

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Effective Projected Area (Sq. Ft.): (TOR6B, XTOR8B, XTOR12B=0.54 With Pole Mount Arm=0.98

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HIPPING DATA: pproximate Net Weight -15 lbs. [5.4-6.8 kgs.]