

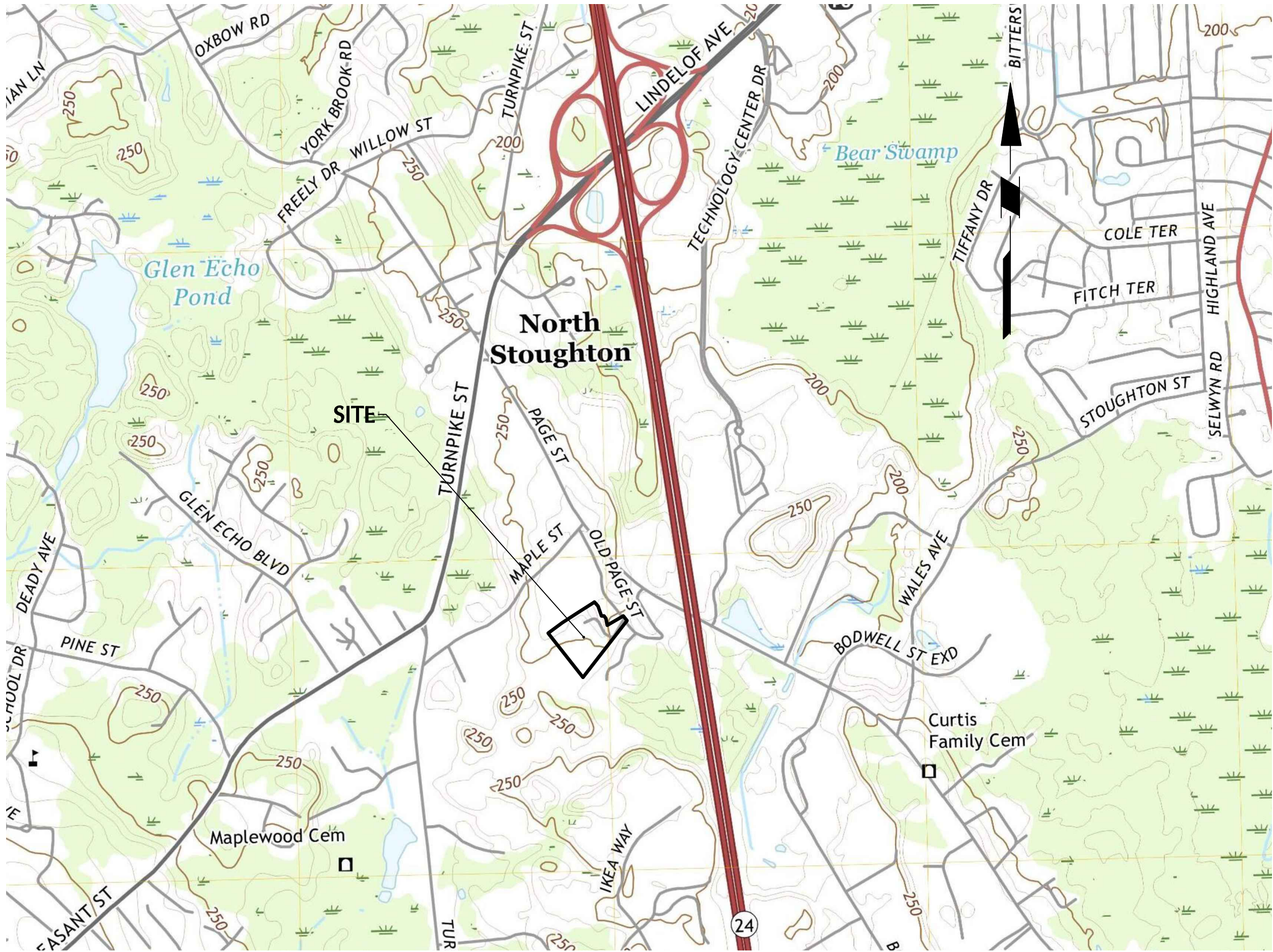
OFFICE BUILDING  
SITE PLAN REVIEW SUBMISSION  
56 OLD PAGE STREET  
MAP 93, LOT 7  
TOWN OF STOUGHTON, NORFOLK COUNTY, MASSACHUSETTS

DRAWING INDEX

NUMBER	DRAWING TITLE	DATE	LAST REVISED
CS001	COVER SHEET	11/9/2023	12/27/2023
CS002	NOTES AND LEGEND	11/9/2023	
VT101	EXISTING CONDITIONS PLAN	11/9/2023	12/14/2023
CE101	SITE PREPARATION AND SOIL EROSION & SEDIMENT CONTROL PLAN	11/9/2023	12/27/2023
CS101	SITE PLAN	11/9/2023	12/27/2023
CG101	GRADING, DRAINAGE, AND UTILITY PLAN	11/9/2023	12/27/2023
CS501	SITE DETAILS I	11/9/2023	
CS502	SITE DETAILS II	11/9/2023	
CS503	SITE DETAILS III	11/9/2023	12/27/2023
LL101	LANDSCAPE LIGHTING PLAN	11/9/2023	
LL501	LIGHTING DETAILS	11/9/2023	
LP101	LANDSCAPING PLANTING PLAN	11/9/2023	
LP501	PLANTING DETAILS	11/9/2023	
A1.1	SCHEMATIC FIRST FLOOR PLAN	11/9/2023	
A1.2	SCHEMATIC SECOND FLOOR PLAN	11/9/2023	
A2.1	SCHEMATIC ELEVATIONS	11/9/2023	
A3.1	SCHEMATIC BUILDING SECTION	11/9/2023	
GI101	SIGNED PLANNING BOARD DECISION	11/9/2023	

RELEASE DATES

DATE	ISSUED FOR
11/09/2023	PLANNING BOARD SITE PLAN SUBMISSION
12/27/2023	TECHNICAL REVIEW REVISION



MAP REFERENCE: USGS BLUE HILLS QUADRANGLE (7.5-MINUTE SERIES)

LOCATION MAP

SCALE: 1"=1000'

ARCHITECT  
RIVERMOOR ENGINEERING LLC  
146 FRONT STREET, SUITE 211  
SCITUATE, MA 02066  
(781) 545-2848

LAND SURVEYOR, CIVIL ENGINEER, AND  
LANDSCAPE ARCHITECT  
LANGAN ENGINEERING &  
ENVIRONMENTAL SERVICES, INC  
C/O: HILARY HOLMES  
100 CAMBRIDGE STREET, SUITE 1310  
BOSTON, MA 02114  
(617) 824-9100

OWNER & APPLICANT  
PARCEL 093-007:  
J F WHITE CONTRACTING CO  
56 OLD PAGE STREET  
STOUGHTON, MA 02072







GENERAL NOTES

1. THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, DEED INFORMATION AND RECORDED SURVEYS.
2. THE MERIDIAN OF THIS SURVEY IS REFERENCED TO MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NAD 83 (EPOCH 2001). POSITION WAS DETERMINED BY GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS) AS PROVIDED BY HXGN SMARTNET CONTINUOUSLY OPERATED REFERENCE STATIONS (CORS).
3. ELEVATIONS SHOWN ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (GEOID 12B) AS DETERMINED BY GNSS.
4. PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND AND AERIAL SURVEYS BY LANGAN ENVIRONMENTAL AND ENGINEERING SERVICES. FIELD WORK COMPLETED DURING THE MONTH OF NOVEMBER 2022.
5. AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP ENTITLED "NORFOLK COUNTY, MASSACHUSETTS PANEL 214 OF 430, MAP NUMBER 25021C0214E, EFFECTIVE DATE JULY 17, 2012" THE PROJECT AREA IS IN ZONE X (UNSHADED).
6. UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE, THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.
7. ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC.) DATA IS SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.
8. UNLESS SPECIFICALLY NOTED HEREON, THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.
9. ALL BUILDINGS AND STRUCTURES WERE LOCATED AND MEASURED AT GROUND LEVEL. THE SURVEYOR MAKES NO DETERMINATIONS OR GUARANTEES AS TO THE ABSENCE, EXISTENCE OR LOCATION OF UNDERGROUND STRUCTURES, FOUNDATIONS, FOOTINGS, PROJECTIONS, WALLS, TANKS, SEPTIC SYSTEMS, ETC. NO TEST PITS, EXCAVATIONS OR GROUND PENETRATING RADAR WERE PERFORMED AS PART OF THIS SURVEY.
10. PRIOR TO ANY DESIGN OR CONSTRUCTION, THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.
11. THIS SURVEY IS NOT VALID WITHOUT THE EMBOSSED OR INKED SEAL OF THE PROFESSIONAL.

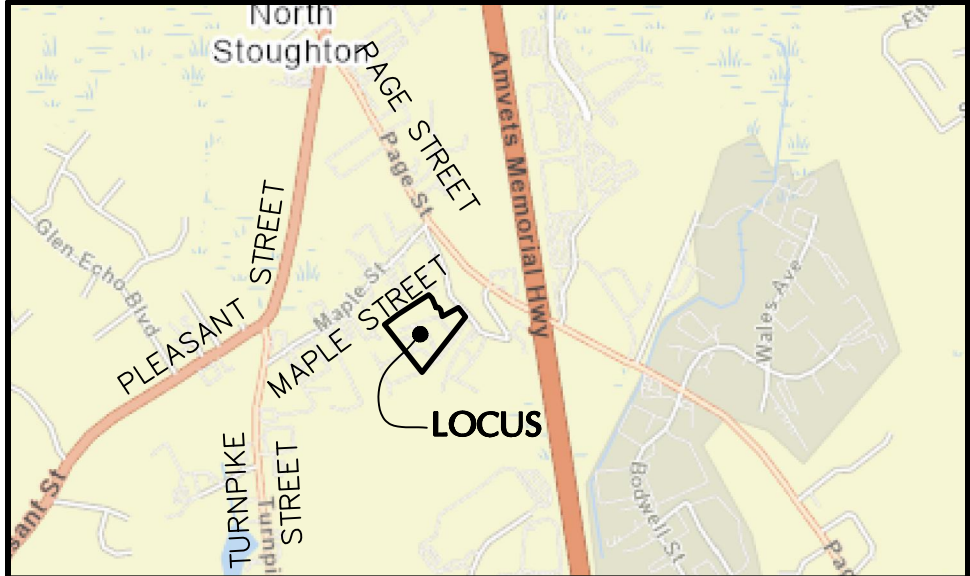
LEGEND (NOT SHOWN TO SCALE)

	AIR CONDITIONING UNIT
	BOLLARD
	MAILBOX
	SIGN
	SHRUB
	TREE
	WETLAND FLAG
	CATCH BASIN
	ELECTRIC BOX
	ELECTRIC METER
	FIRE HYDRANT
	FLARED END SECTION
	GAS METER
	GAS VALVE
	GUY WIRE
	HAND HOLE
	MANHOLE (TYPE AS LABELED)
	POWER POLE
	WATER METER
	WATER VALVE
	SPOT ELEVATION
	BITUMINOUS
	CONCRETE
	LANDSCAPED AREA
	BUILDING OVERHANG
	BOTTOM OF WALL
	EDGE OF PAVEMENT
	CAPE COD BURM
	VERTICAL GRANITE CURB
	SINGLE WHITE STRIPE
	DOUBLE YELLOW STRIPE
	METAL GUARD RAIL
	CHAINLINK FENCE
	TREE LINE
	OVERHEAD WIRE
	DELINEATED WETLAND LINE
	EASEMENT LINE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	CONTOUR LINE
	DRAINAGE MARK OUT LINE
	DRAINAGE LINE (OBSERVED)
	ELECTRIC MARK OUT LINE
	COMMUNICATION MARK OUT LINE
	GAS MARK OUT LINE
	SANITARY SEWER MARK OUT LINE
	SANITARY SEWER LINE
	WATER MARK OUT LINE
	STEAM MARK OUT LINE
	UNKNOWN MARK OUT LINE



ZONING DIMENSIONAL AND DENSITY REQUIREMENTS

MINIMUM LOT AREA (SQ FT):	80,000
MINIMUM LOT WIDTH (FT):	125
MINIMUM LOT DEPTH (FT):	125
MINIMUM FRONT YARD (FT):	25
MINIMUM SIDE YARD (FT):	20
MINIMUM REAR YARD (FT):	40
MAXIMUM HEIGHT (FT):	40
MAXIMUM STORIES:	4
MAXIMUM BUILDING AREA (%):	50
MINIMUM OPEN SPACE (%):	25



PROJECT LOCATION MAP

SOURCE: ESRI, ARCMAP

12/14/2023 CONNEX BOXES REMOVED No.

REVISIONS

**LANGAN**

Langan Engineering and  
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100 Cambridge Street, Suite 1310  
Boston, MA 02114

T: 617.824.9100 F: 617.824.9101 www.langan.com

Project

**OFFICE BUILDING  
56 OLD PAGE STREET**

ASSESSOR MAP 093, LOT 7  
STOUGHTON

NORFOLK COUNTY MASSACHUSETTS

Drawing Title

**BOUNDARY AND  
TOPOGRAPHIC  
PLAN**

Project No.

151022801

Date

NOVEMBER 9, 2023

Drawn By

BAL

Checked By

ICW

Drawing No.

**VB201**

Sheet 1 of 1

Filename: C:\msl\langan-pw-01\0451593\151022801-0401-VB201-0101.dwg Date: 12/13/2023 Time: 15:35 User: blambert Style Table: Langan.sbt Layout: VB201



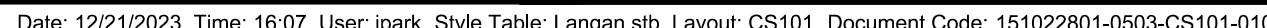
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STOUGHTON

NORFOLK COUNTY	MASSACHUSETTS
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Project No. <b>151022801</b>	Drawing No.  <div style="font-size: 2em; font-weight: bold; text-align: center;">CE101</div>
Date <b>11/09/2023</b>	
Drawn By <b>JSP</b>	
Checked By <b>HAH</b>	





## Revisions



Project

NORFOLK COUNTY                  STOUGHTON                  MASSACHUSETTS

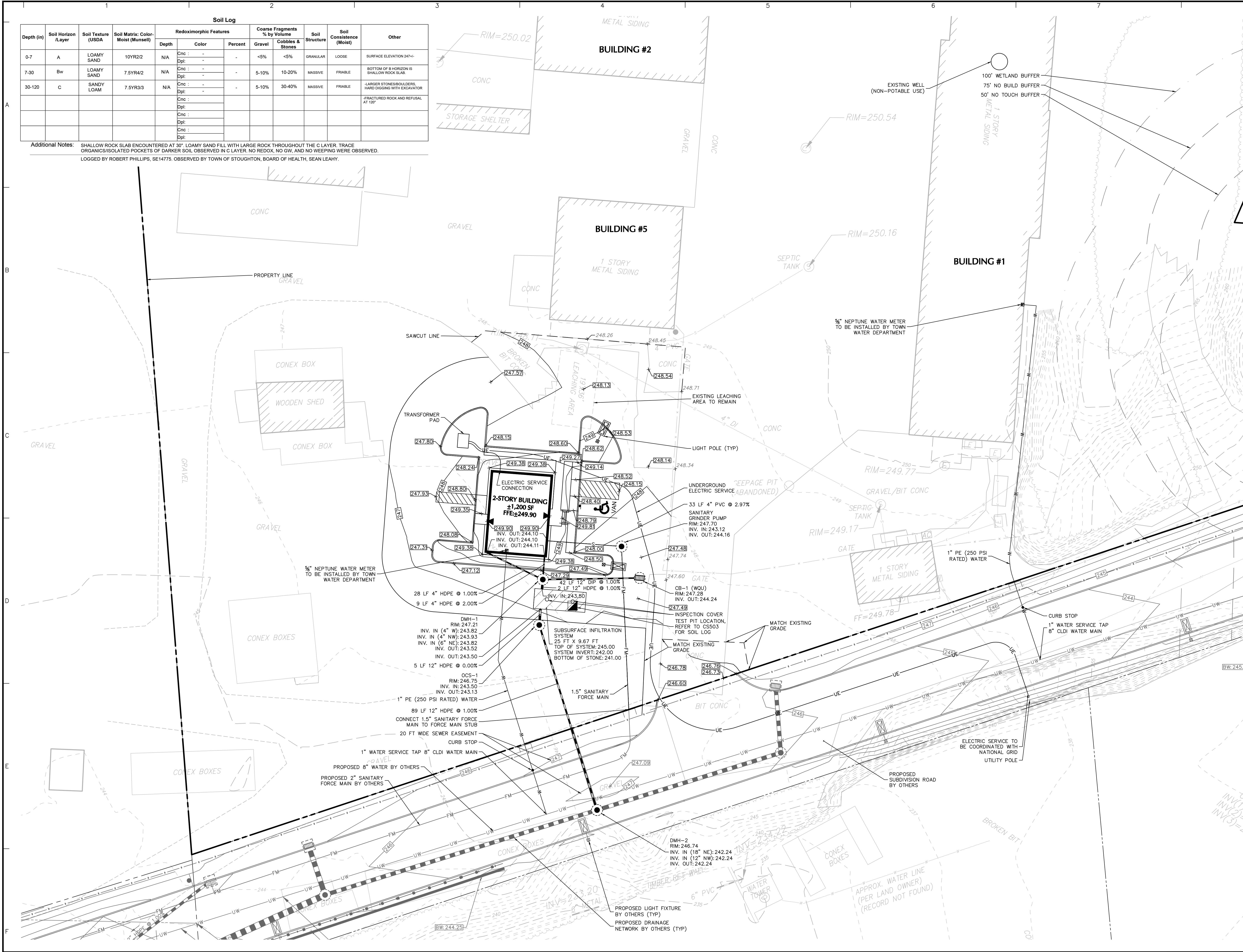
## SITE PLAN

Project No. <b>151022801</b>	Drawing No.  <b>CS101</b>
Date <b>11/09/2023</b>	
Drawn By <b>JSP</b>	
Checked By <b>HAH</b>	



Soil Log										
Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)
				Depth	Color	Percent	Gravel	Cobbles & Stones		
0-7	A	LOAMY SAND	10YR2/2	N/A	Cnc: - Dpl: -	-	<5%	<5%	GRANULAR	LOOSE
7-30	Bw	LOAMY SAND	7.5YR4/2	N/A	Cnc: - Dpl: -	-	5-10%	10-20%	MASSIVE	FRIABLE
30-120	C	SANDY LOAM	7.5YR3/3	N/A	Cnc: - Dpl: -	-	5-10%	30-40%	MASSIVE	FRIABLE
					Cnc: - Dpl: -					
					Cnc: - Dpl: -					
					Cnc: - Dpl: -					
					Cnc: - Dpl: -					
					Cnc: - Dpl: -					
					Cnc: - Dpl: -					

Additional Notes: SHALLOW ROCK SLAB ENCOUNTERED AT 30". LOAMY SAND FILL WITH LARGE ROCK THROUGHOUT THE C LAYER. TRACE ORGANICS/ISOLATED POCKETS OF DARKER SOIL OBSERVED IN C LAYER. NO REDOX. NO GW. AND NO WEeping WERE OBSERVED. LOGGED BY ROBERT PHILLIPS, SE14775. OBSERVED BY TOWN OF STOUGHTON, BOARD OF HEALTH, SEAN LEAHY.



12/27/23

TECHNICAL REVIEW

1

Date	Description	No.
Revisions		

COMMONWEALTH OF MASSACHUSETTS

FRANK HOLMES CIVIL No. 40203 REGISTERED PROFESSIONAL ENGINEER

FRANK HOLMES

LANGAN

Langan Engineering and Environmental Services, Inc.

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Project

OFFICE BUILDING  
56 OLD PAGE STREET

STOUGHTON  
NORFOLK COUNTY MASSACHUSETTS

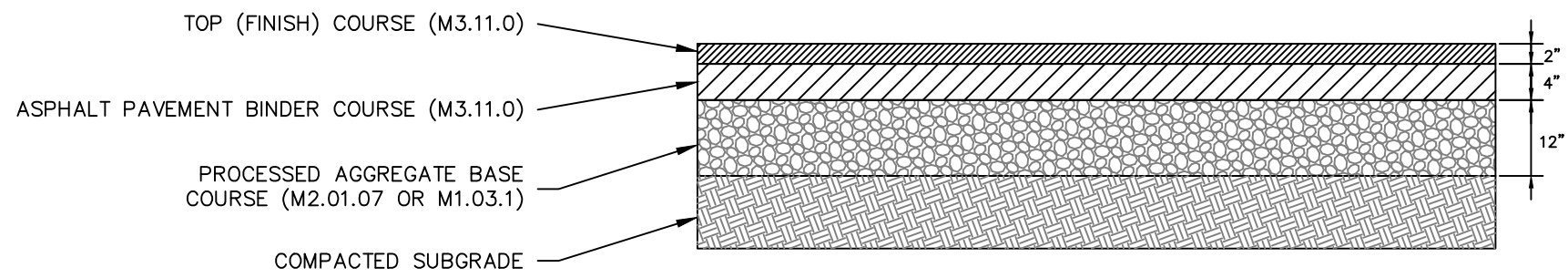
Drawing Title

GRADING,  
DRAINAGE, AND  
UTILITY PLAN

Project No.	Drawing No.
151022801	CG101
Date	
11/03/2023	
Drawn By	
JSP	
Checked By	
HAH	



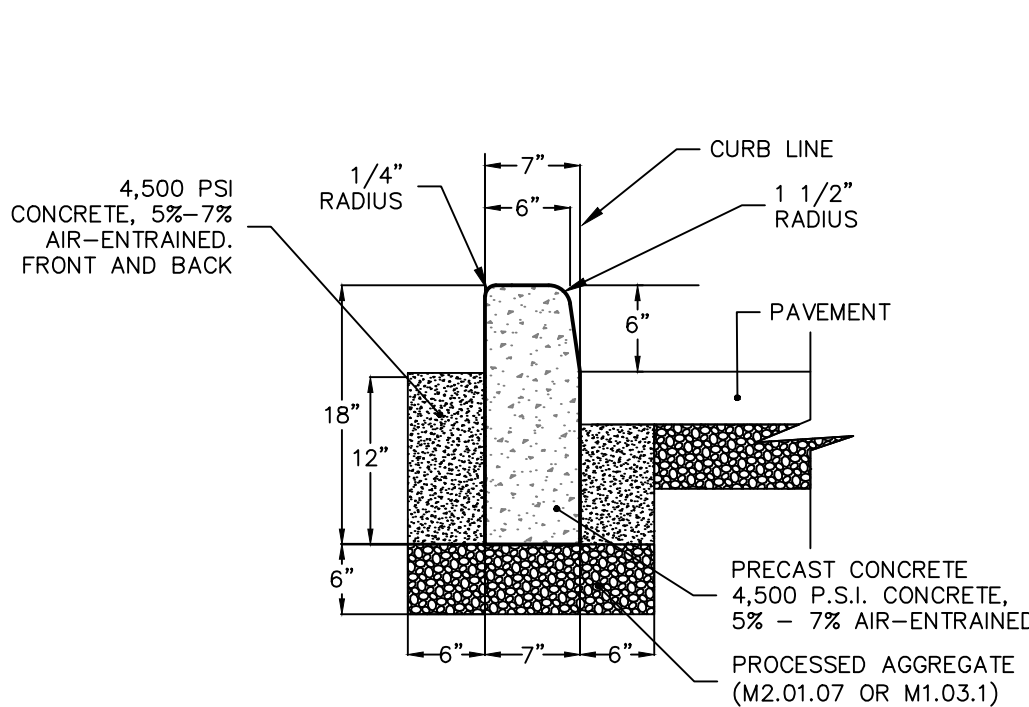
A  
B  
C  
D  
E  
F



- NOTES:
- PAVING COURSES SHALL BE CONSTRUCTED IN LAYERS WITH A 2 INCH THICK LIFT.
  - ALL AREAS TO BE PAVED SHALL BE PROOFROLLED WITH AT LEAST 6 PASSES OF A SMOOTH ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT OF 10 TONS. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH CLEAN, GRANULAR, FREE-DRAINING SOIL. FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12-INCHES AND SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.
  - PAVEMENT CLASSES REFER TO MASSACHUSETTS, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION (MDOT SS) M3.11.0 PROCESSED AGGREGATE SHALL REFER TO M2.01.07 OR M1.03.1.

## 1 ASPHALT PAVEMENT

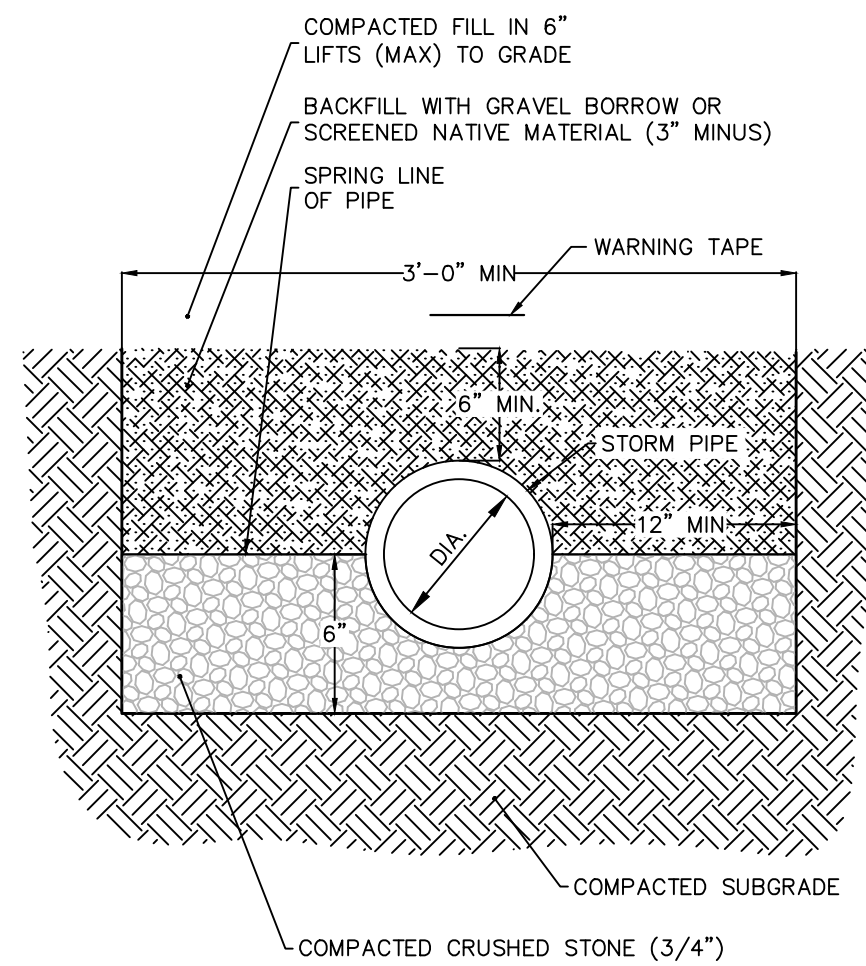
N.T.S.



- NOTES:
- TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB AT 20 FOOT INTERVALS AND SHALL BE FILLED WITH PREFORMED BITUMINOUS JOINT FILLER.
  - ALL CURBS SHALL BE INSTALLED ON AN APPROVED, COMPACTED SUBGRADE. A MINIMUM OF SIX INCHES OF PROCESSED AGGREGATE (M2.01.07 OR M1.03.1) SHALL BE INSTALLED AS THE SUBBASE.

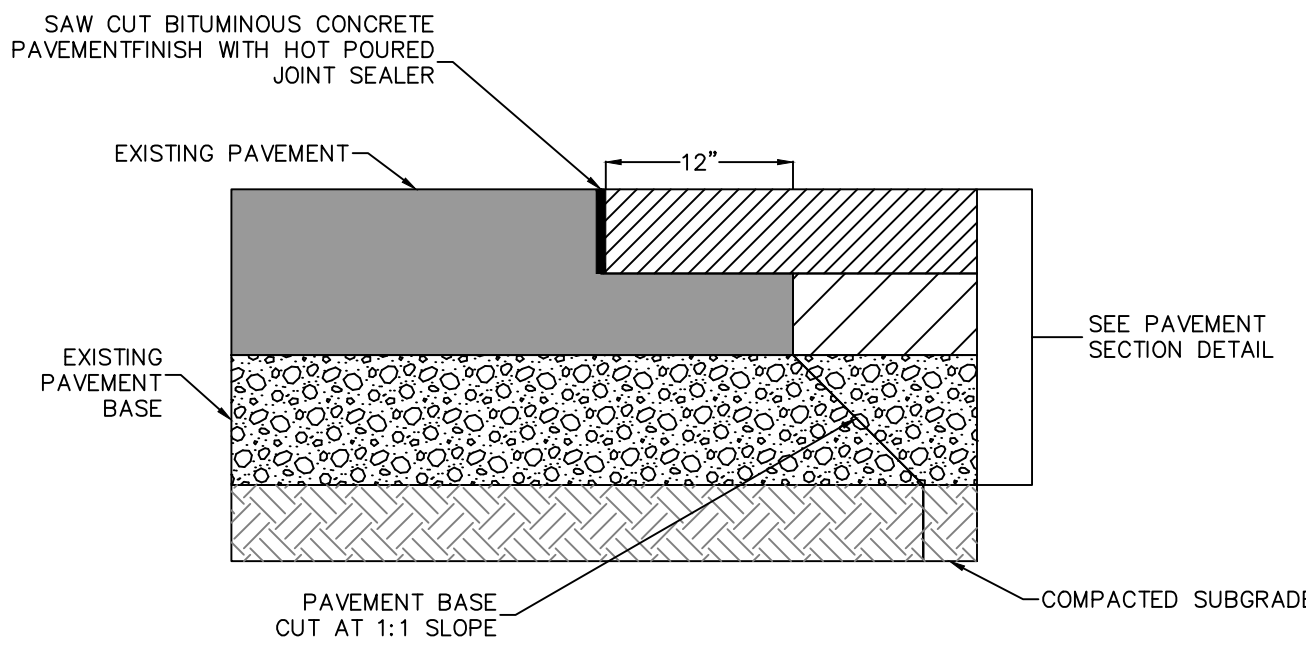
## 5 6-INCH CONCRETE CURB

N.T.S.



## 6 STORM PIPE BEDDING

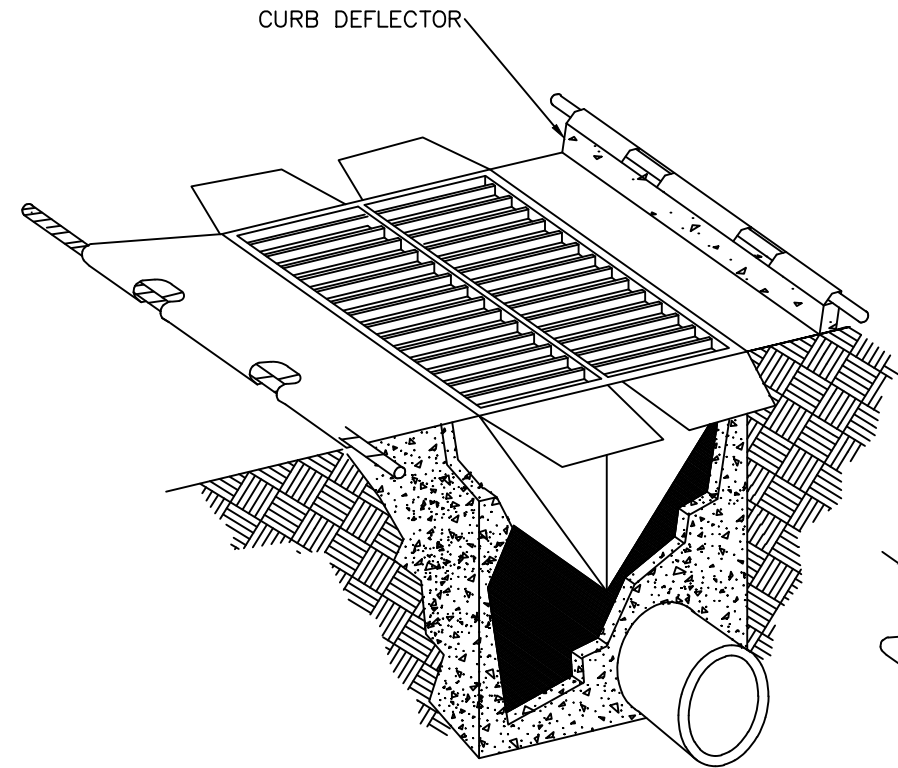
N.T.S.



- NOTES:
- CONTRACTOR TO INSTALL TACK COAT ON ALL BUTT EDGES OF EXISTING PAVEMENT

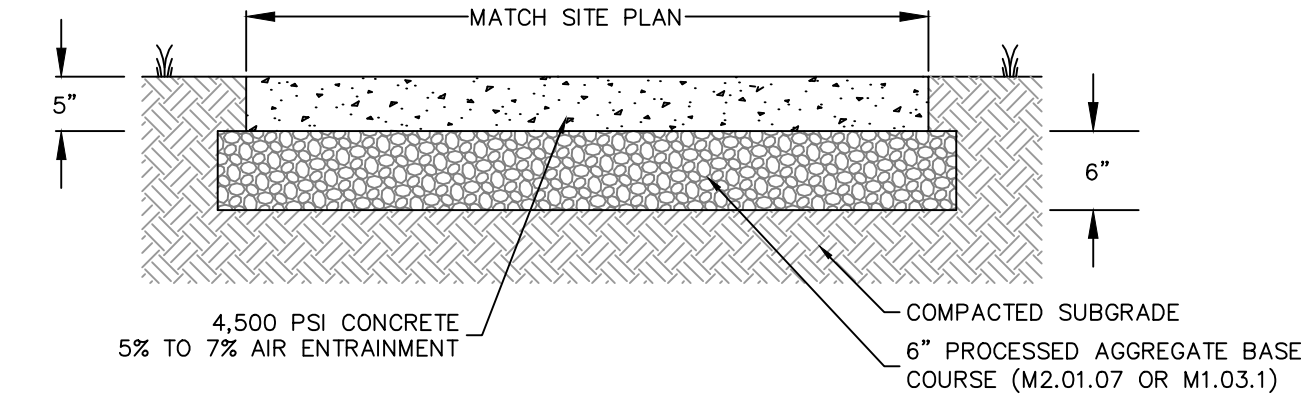
## 2 SAWCUT PAVEMENT SECTION

N.T.S.



- NOTES:
- CONTRACTOR IS TO CLEAN INLET FILTER WHEN RESTRAINT CORD IS NO LONGER VISIBLE AS PER MANUFACTURER'S SPECIFICATIONS.
  - CONTRACTOR TO REMOVE FILTER JUST PRIOR TO PAVING.

## 7



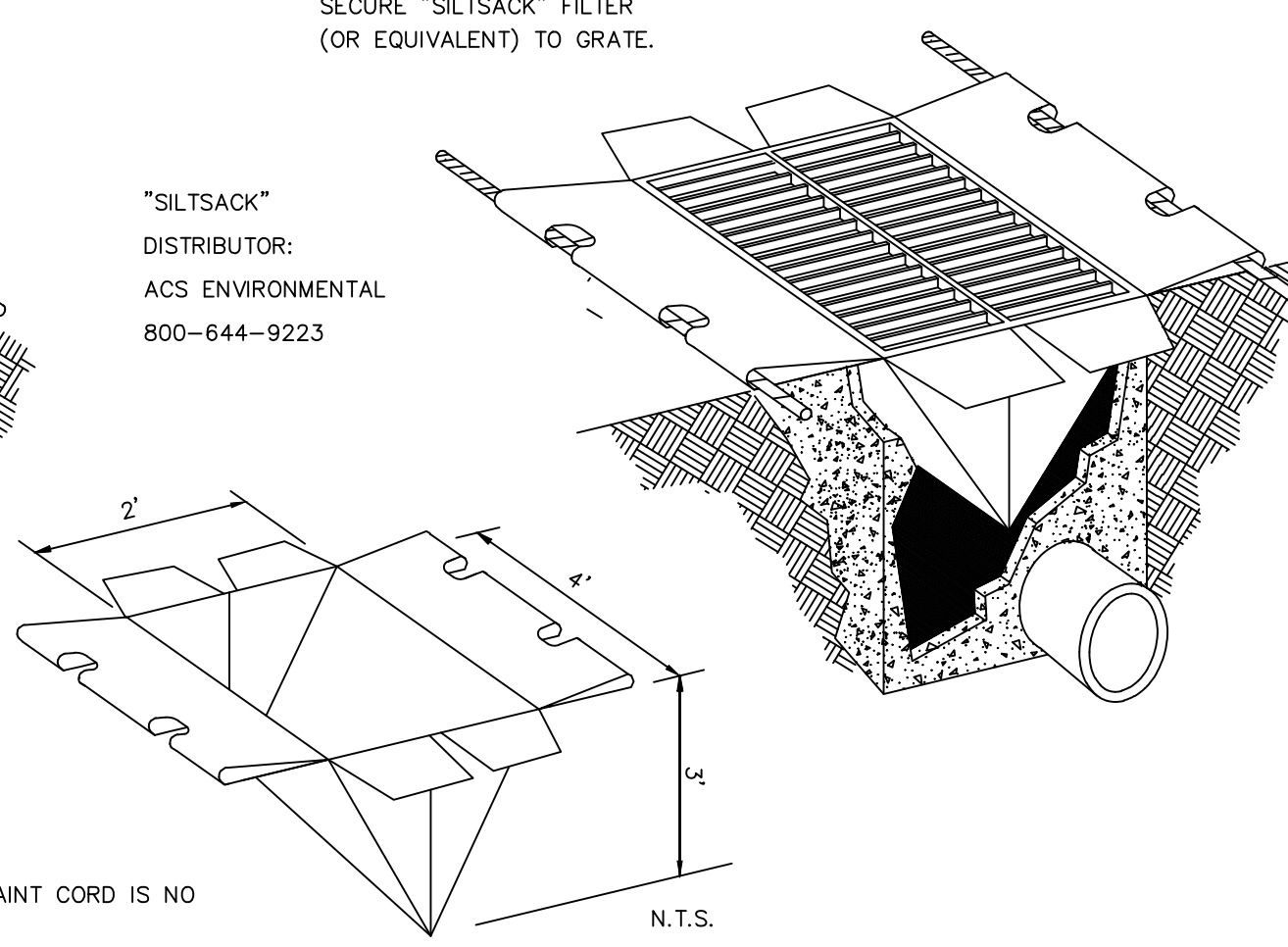
- NOTES:
- ALL CONTROL JOINTS TO BE SAWCUT
  - SIDEWALKS TO COMPLY WITH TOWN STANDARDS WHERE APPLICABLE.
  - EXPANSION AND CONTROL JOINTS SHALL BE INSTALLED PER LAYOUT AND DIMENSIONING PLANS. IF NOT SPECIFICALLY DETAILED MAXIMUM SPACING OF JOINTS SHALL BE AS FOLLOWS:  
EXPANSION - 20 FT.  
CONTROL - 6 FT.
  - CONTRACTION JOINTS SHALL BE SPACED EQUAL TO THE WIDTH BUT SHALL NOT EXCEED 6 FT. CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE, FREE OF SAGS AND SHORT GRADE CHANGES.
  - SURFACE TEXTURE SHALL BE A LIGHT BROOMING, TRANSVERSE TO THE LENGTH OF THE WALK.

## 3 CONCRETE SIDEWALK

N.T.S.

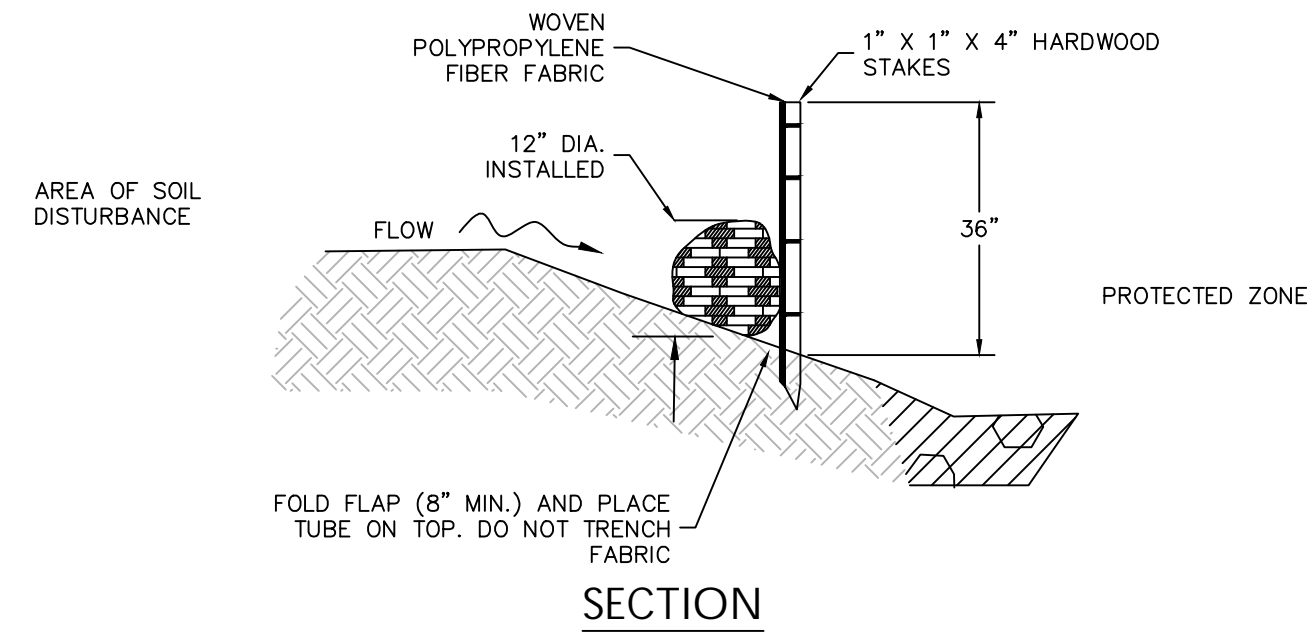
SECURE "SILTSACK" FILTER (OR EQUIVALENT) TO GRATE.

"SILTSACK" DISTRIBUTOR:  
ACS ENVIRONMENTAL  
800-644-9223



## INLET PROTECTION

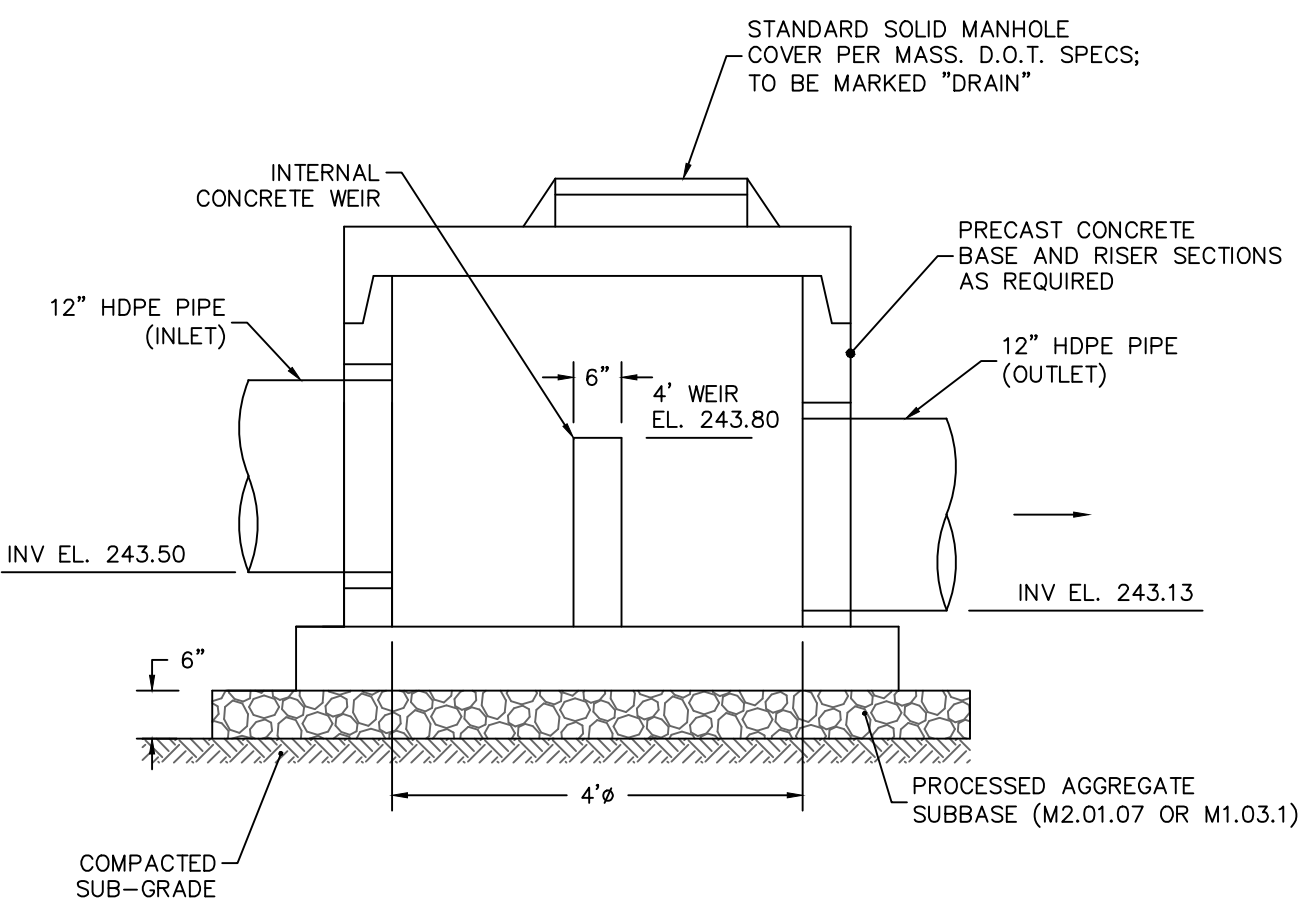
N.T.S.



- NOTES:
- MAINTENANCE SHALL CONSIST OF INSPECTION AND REMOVAL OF ACCUMULATED SEDIMENT BEFORE IT HAS ACCUMULATED TO HALF OF THE ABOVE-GROUND HEIGHT OF ANY PERIMETER CONTROL. SAGGING, FRAYED, TORN OR OTHERWISE DAMAGED FABRIC OR TUBE SHOULD BE REPAIRED OR REPLACED. REPAIR END RUNS AND UNDERCUTTING. INSPECT REINFORCEMENT AND STAKING MATERIALS FOR STRUCTURAL INTEGRITY AND REPLACE WHEN NECESSARY. AFTER A STORM EVENT, IF THERE IS EVIDENCE OF STORMWATER CIRCUMVENTING OR UNDERCUTTING THE PERIMETER CONTROL, EXTEND CONTROLS AND/OR REPAIR UNDERCUT AREAS TO FIX THE PROBLEM.

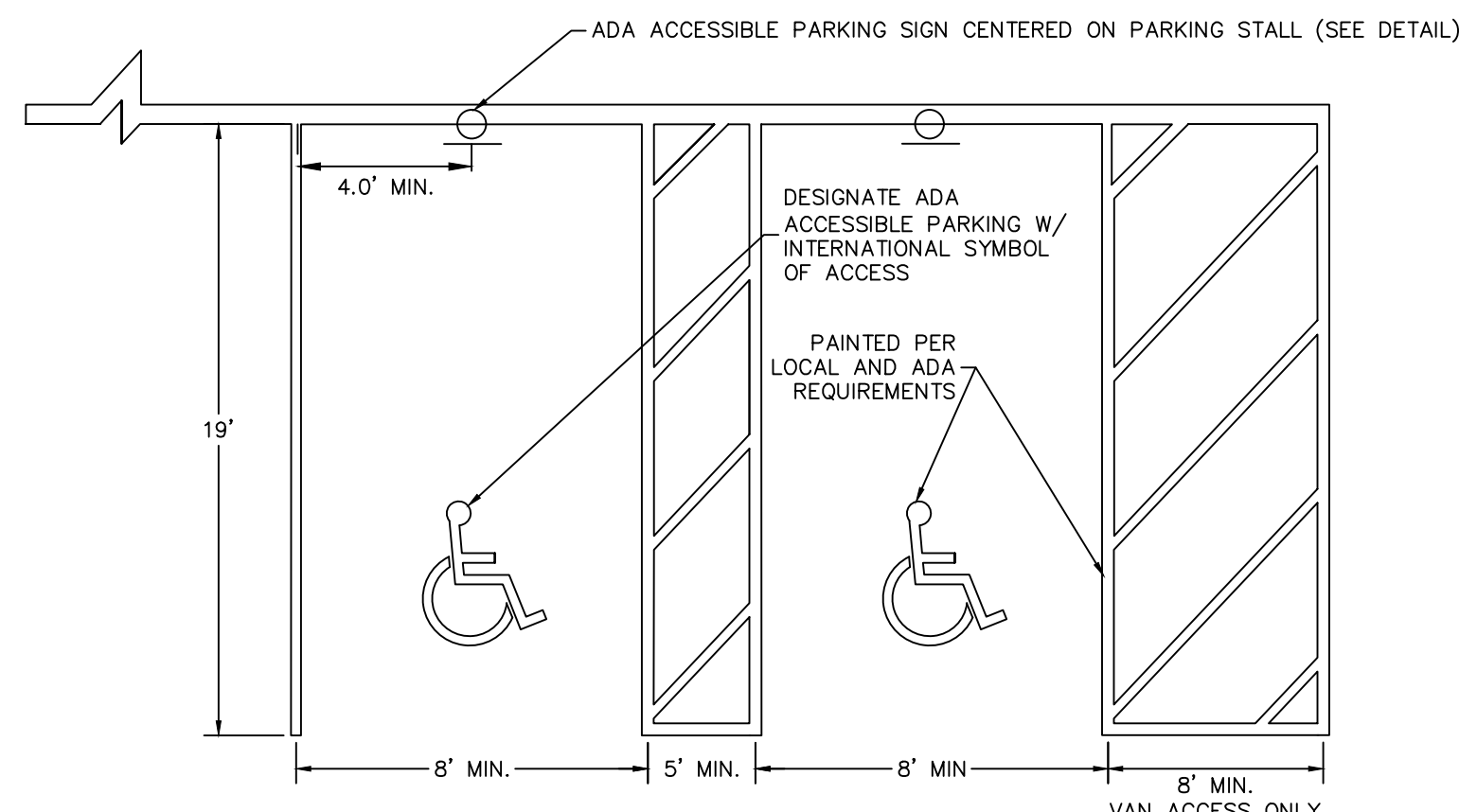
## 4 COMPOST FILTER TUBE & SILT FENCE

N.T.S.



## 8 OUTLET CONTROL STRUCTURE

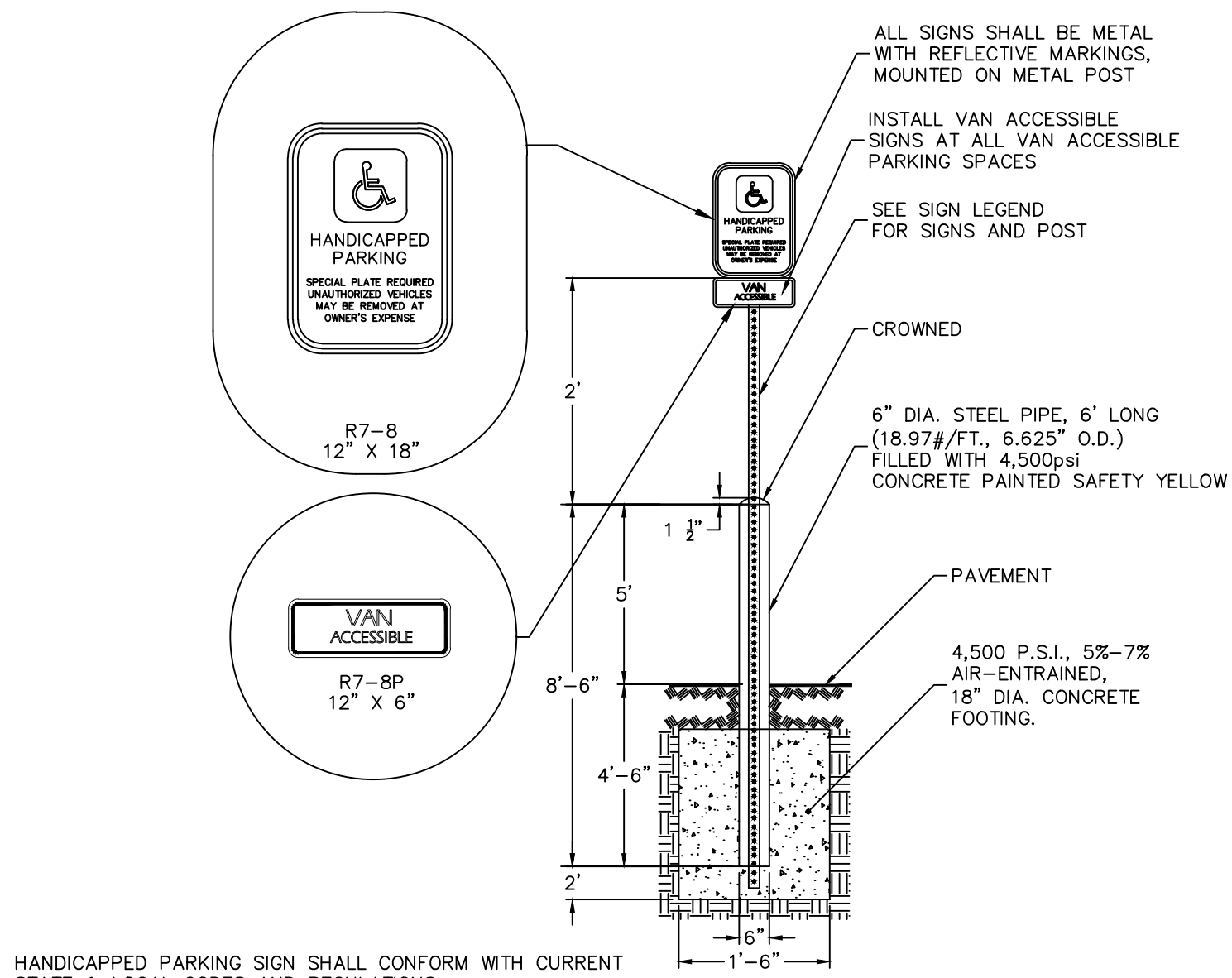
N.T.S.



- NOTES:
- ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE F, PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.
  - SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (ADA), THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND ALL STATE AND LOCAL REQUIREMENTS.
  - TWO COATS OF EPOXY PAINT SHALL BE USED FOR PARKING STALL STRIPING. ALLOW FOR A MINIMUM CURE TIME OF 24 HOURS BETWEEN APPLICATIONS.

## 9 ADA STALL STRIPING

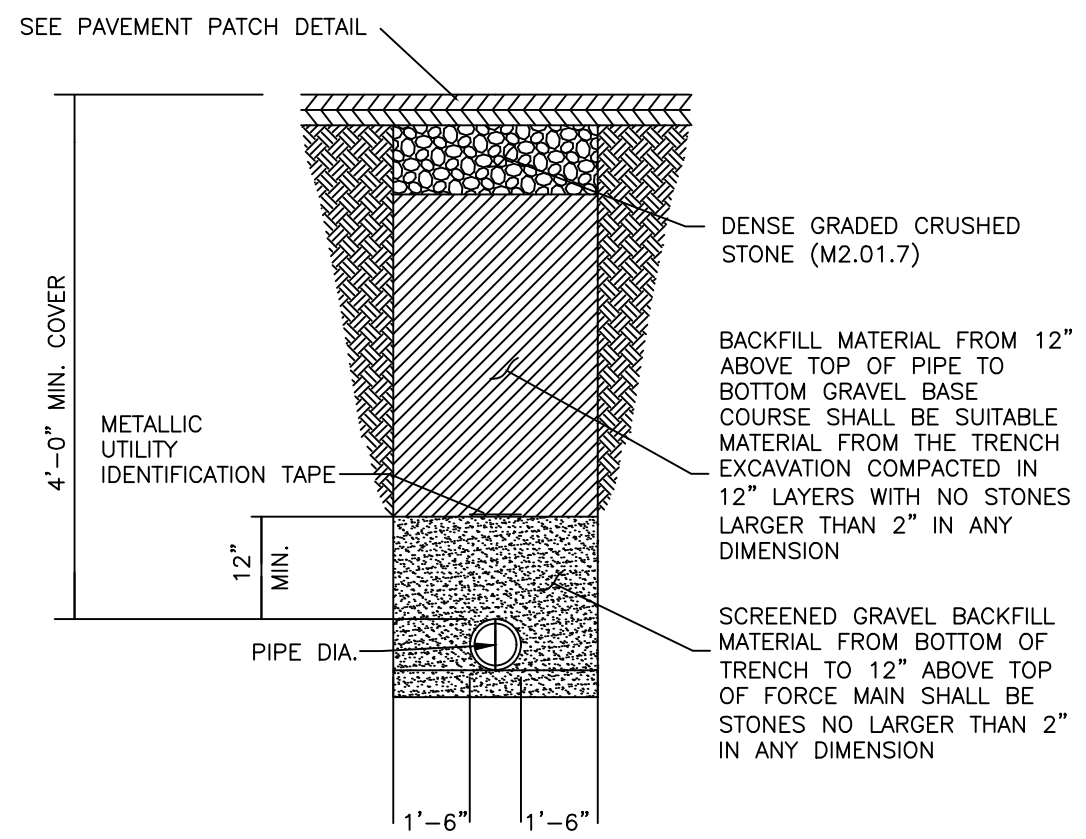
N.T.S.



- HANDICAPPED PARKING SIGN SHALL CONFORM WITH CURRENT STATE & LOCAL CODES AND REGULATIONS.
- NOTES:
- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
  - ALL POSTS SHALL BE EMBEDDED 4'-6" MINIMUM BELOW GRADE.
  - ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
  - POSTS SHALL BE BREAKAWAY TYPE II TWO-PIECE U-POST OR OTHER BREAKAWAY STRUCTURAL SUPPORT HARDWARE AS NOTED IN THE LATEST EDITION OF AASHTO'S "SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS."
  - SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
  - BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.

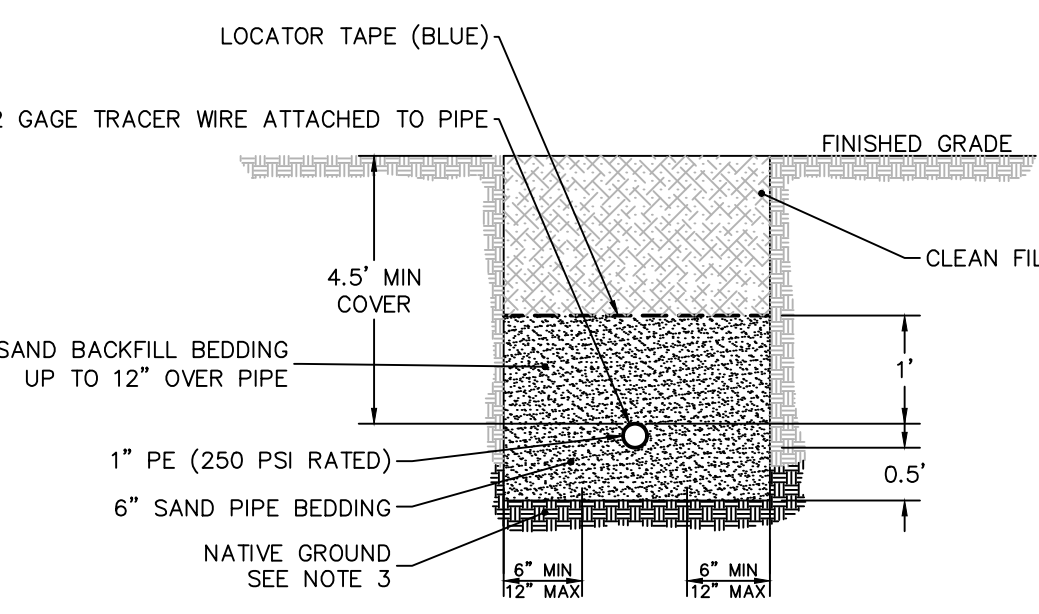
## 10 ADA ACCESSIBLE PARKING SIGN

N.T.S.



## 11 TYPICAL FORCE MAIN TRENCH

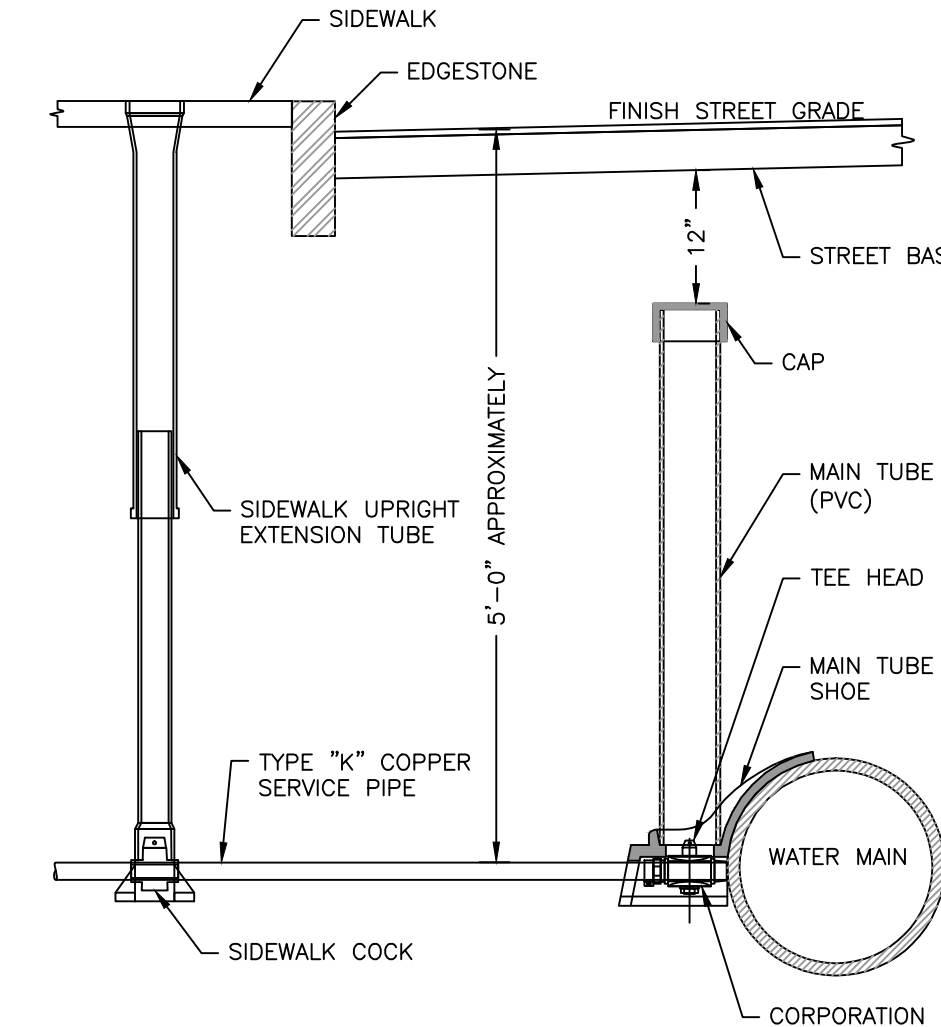
N.T.S.



- NOTES:
- TRENCHES IN STABLE SOIL OVER 5 FT DEEP SHALL BE REINFORCED BY APPROVED OSHA METHODS.
  - TRENCHES SHALL BE COMPACTED.
  - IF NATIVE GROUND IS NOT SUITABLE, THE CONTRACTOR SHALL EXCAVATE TO AN ACCEPTABLE DEPTH AND INSTALL MATERIALS AS APPROVED BY ENGINEERS AND UTILITY COMPANY.


## 12 WATER SERVICE TRENCH

N.T.S.

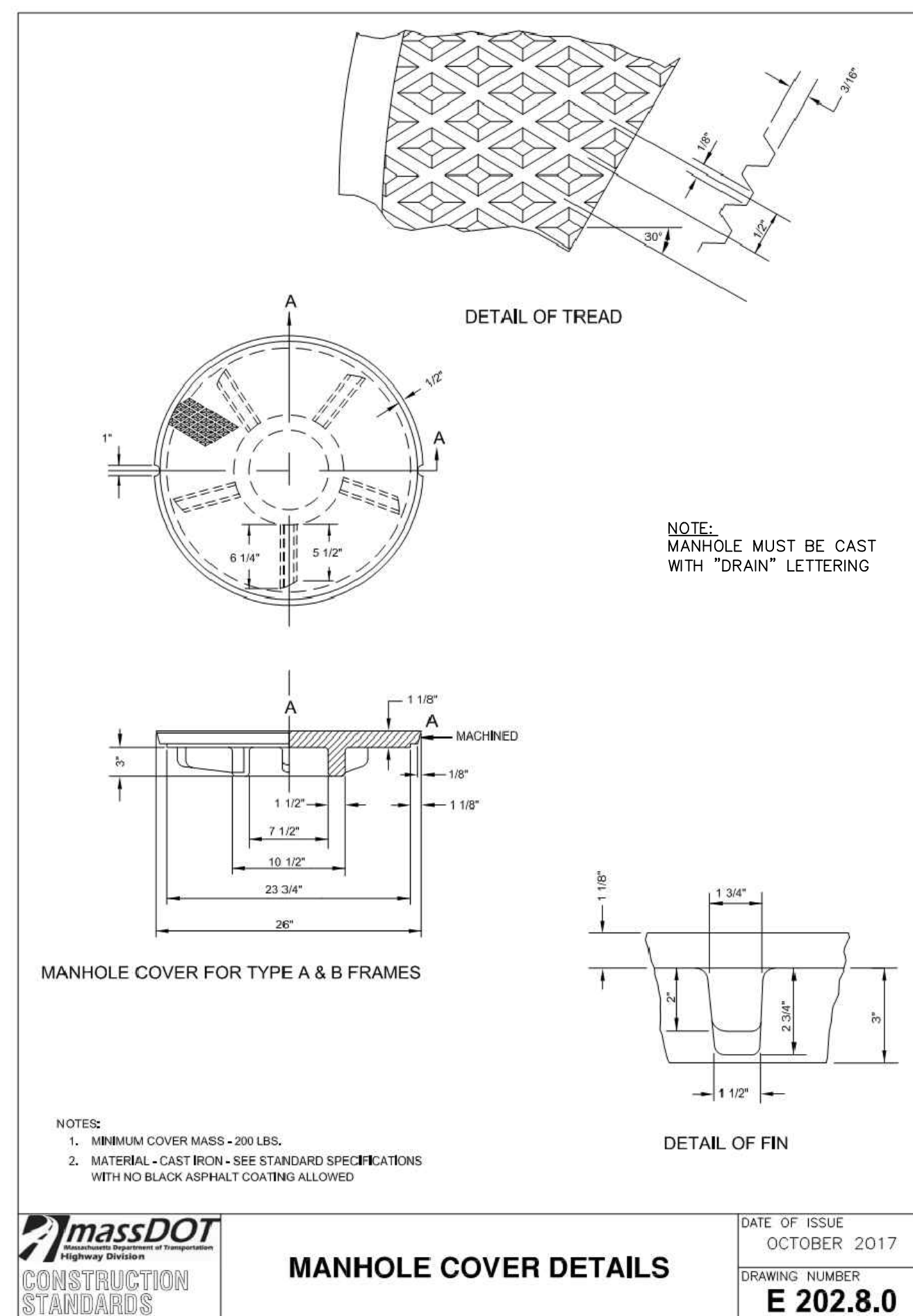


## 13 WATER CONNECTION FOR 1" SERVICE PIPE

N.T.S.

Date	Description	No.
Revisions		
<div> <i>FRANK HOLMES</i></div>		
<div><div><b>LANGAN</b> Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100    F: 617.824.9101    www.langan.com</div></div>		
Project		
<div><div>OFFICE BUILDING 56 OLD PAGE STREET</div><div>STOUGHTON</div><div>NORFOLK COUNTYMASSACHUSETTS</div><div>Drawing Title</div></div>		
SITE DETAILS I		
Project No. 151022801		Drawing No.  CS501
Date 11/09/2023		
Drawn By JSP		
Checked By HAH		



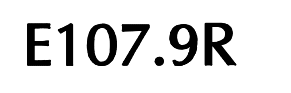


## 4 MANHOLE COVER DETAILS

N.T.S.

## 2 CATCH BASIN FRAME

N.T.S



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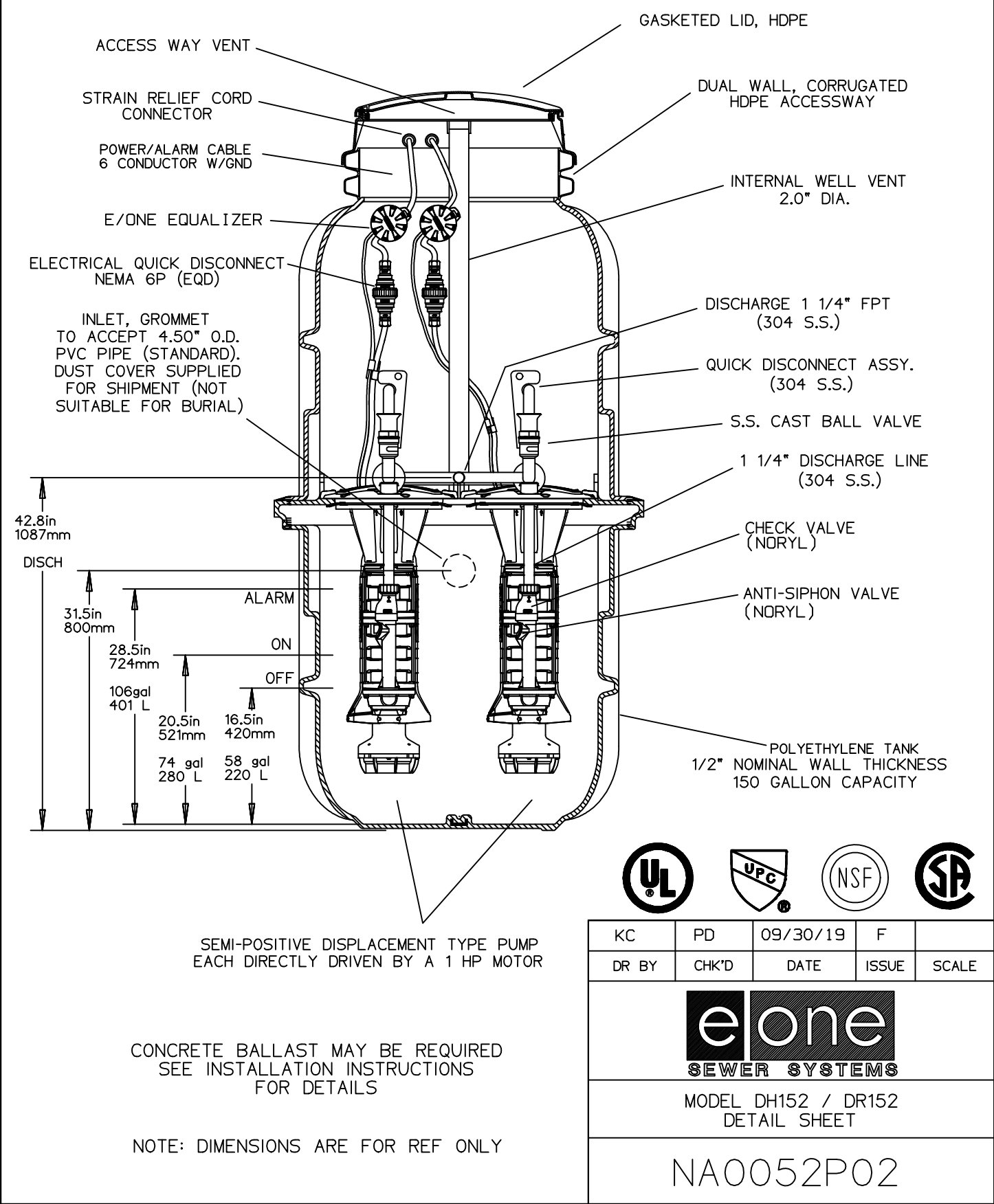
7

## CONCRETE STAIRS

N.T.S.

Date	Description	No.
Revisions		
<div> <div> <div>LANGAN</div> <div> Langan Engineering and Environmental Services, Inc. </div> <div> 100 Cambridge Street, Suite 1310 Boston, MA 02114 </div> <div> T: 617.824.9100    F: 617.824.9101    <a href="http://www.langan.com">www.langan.com</a> </div> </div> <div> Project  <div>OFFICE BUILDING</div> <div>56 OLD PAGE STREET</div> <div>STOUGHTON</div> <div> NORFOLK COUNTY    MASSACHUSETTS </div> <div> Drawing Title  <div>SITE DETAILS II</div> </div> </div> </div>		
Project No.		Drawing No.
151022801		
Date		
11/09/2023		
Drawn By		
JSP		CS502
Checked By		
HAH		

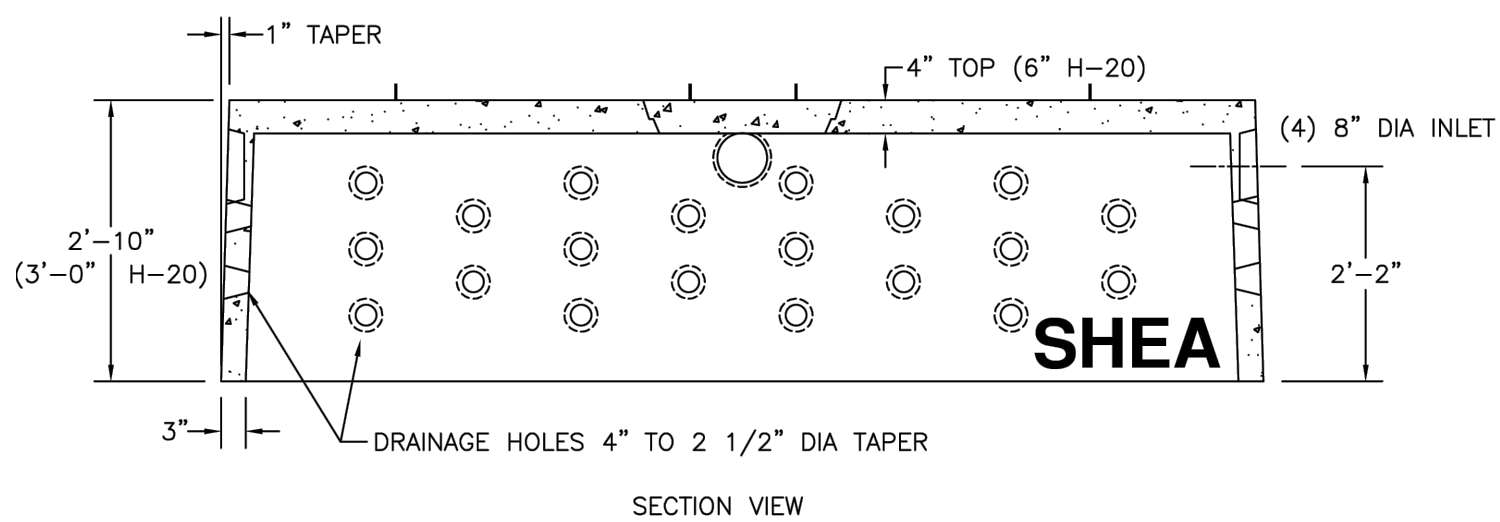
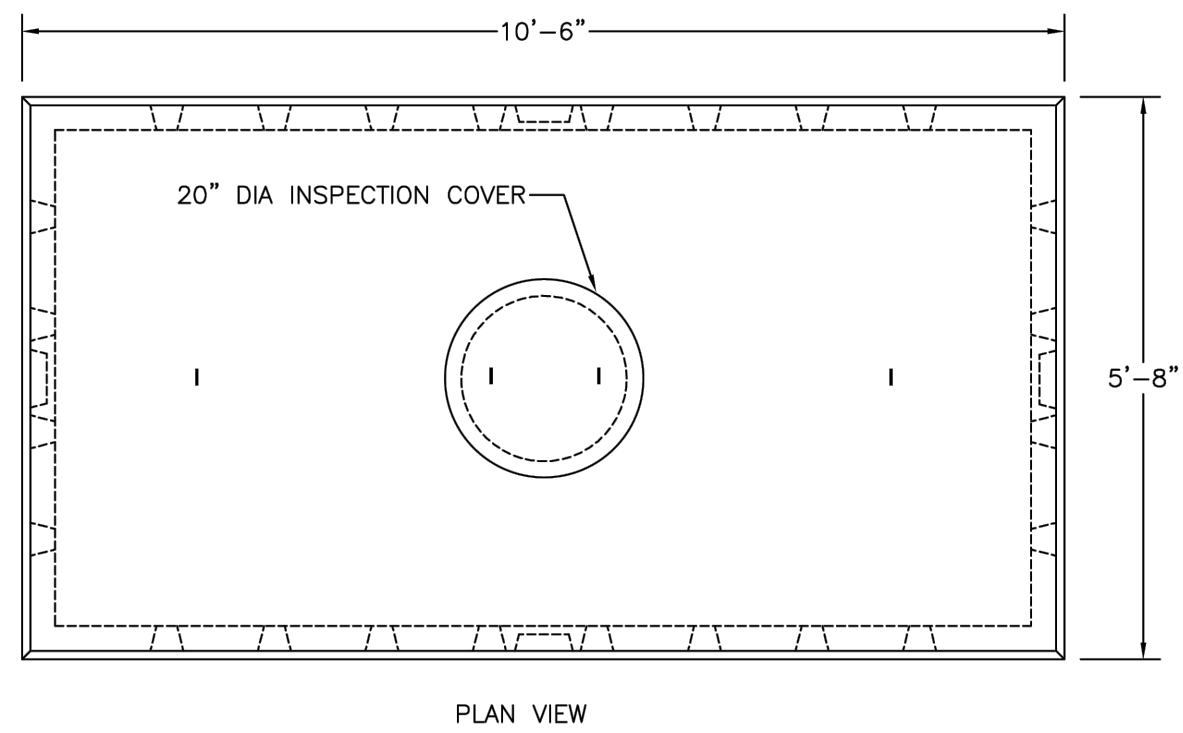




- NOTES:
1. CONCRETE BALLAST MAY BE REQUIRED, SEE INSTALLATION INSTRUCTIONS FOR DETAILS.
  2. DIMENSIONS ARE FOR REFERENCE ONLY.
  3. A CONCRETE COLLAR WITH CAST IRON FRAME AND COVER WITH AIR VENTS SHALL BE PROVIDED AND SHALL BE AASHTO HS-20 LOADING RATED.
  4. THE SANITARY GRINDER PUMP SHALL BE A E ONE SEWER SYSTEMS MODEL DH152-93 WITH HARD WIRED LEVEL CONTROLS OR APPROVED EQUAL.

### SANITARY GRINDER PUMP

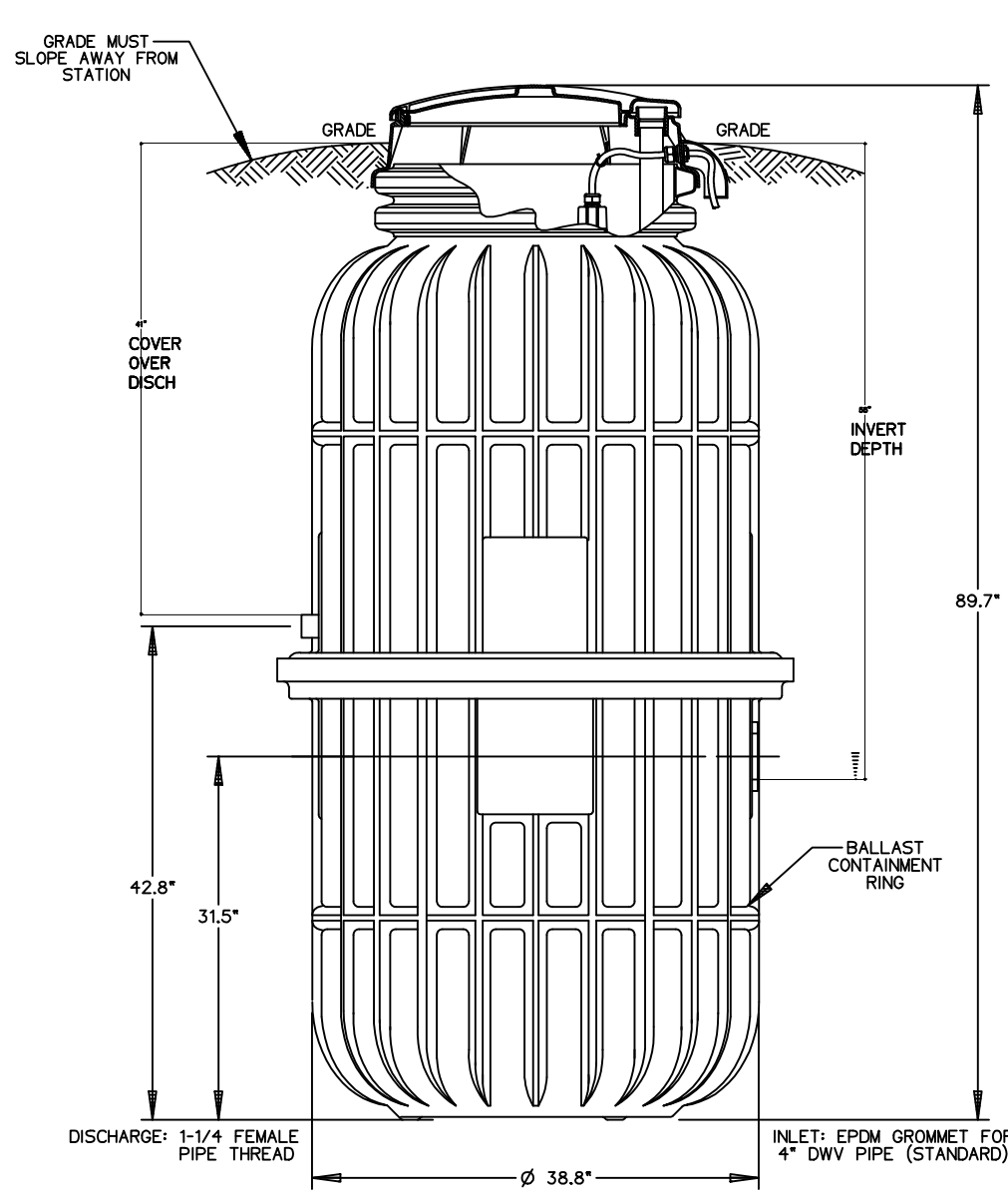
N.T.S. - PROVIDED BY EONE



- NOTES:
1. CONCRETE, 4,000 PSI MINIMUM AFTER 28 DAYS.
  2. DRYWELL SHALL BE AASHTO HS-20 LOADING RATED.
  3. TWO 1,000 GALLON DRYWELLS SHALL BE INSTALLED SIDE BY SIDE, ALONG THE SHORT SIDE FOR AN OVERALL DRYWELL DIMENSION OF 21'-0" BY 5'-8".
  4. DRYWELL SHALL BE INSTALLED ON A 12" STONE BASE WITH 24" OF STONE ON 4 SIDES. STONE SHALL BE 3/4" DOUBLE WASHED CRUSHED STONE AND BE WRAPPED IN 60Z NONWOVEN FILTER FABRIC.
  5. TWO 20" DIAMETER CAST IRON FRAME AND COVER TO BE INSTALLED FOR INSPECTION ACCESS.

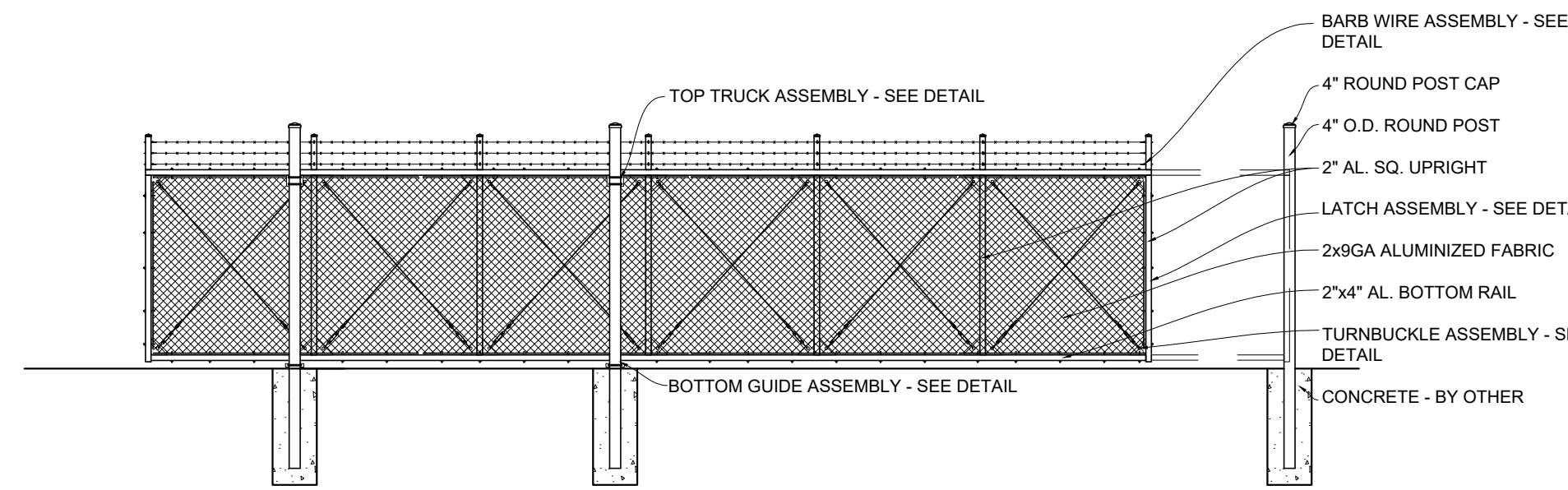
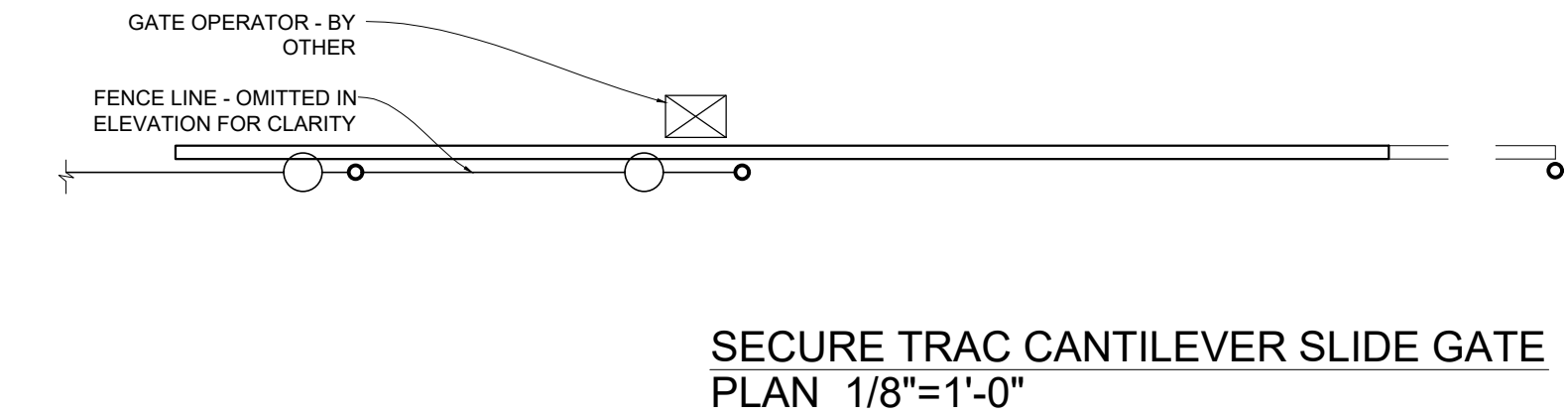
### SUBSURFACE INFILTRATION SYSTEM (1,000 GALLON DRY WELL)

N.T.S. - PROVIDED BY SHEA CONCRETE



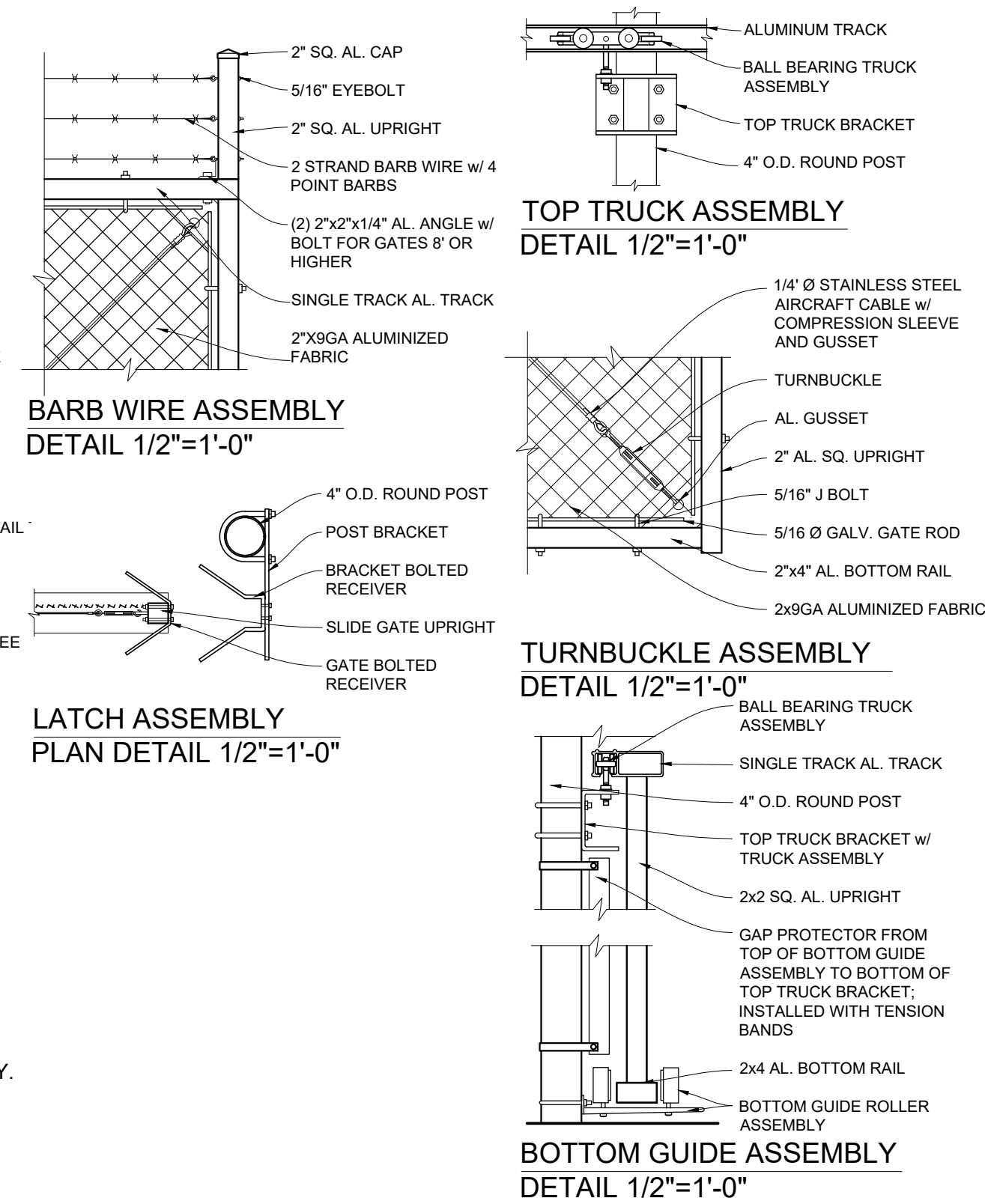
CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY



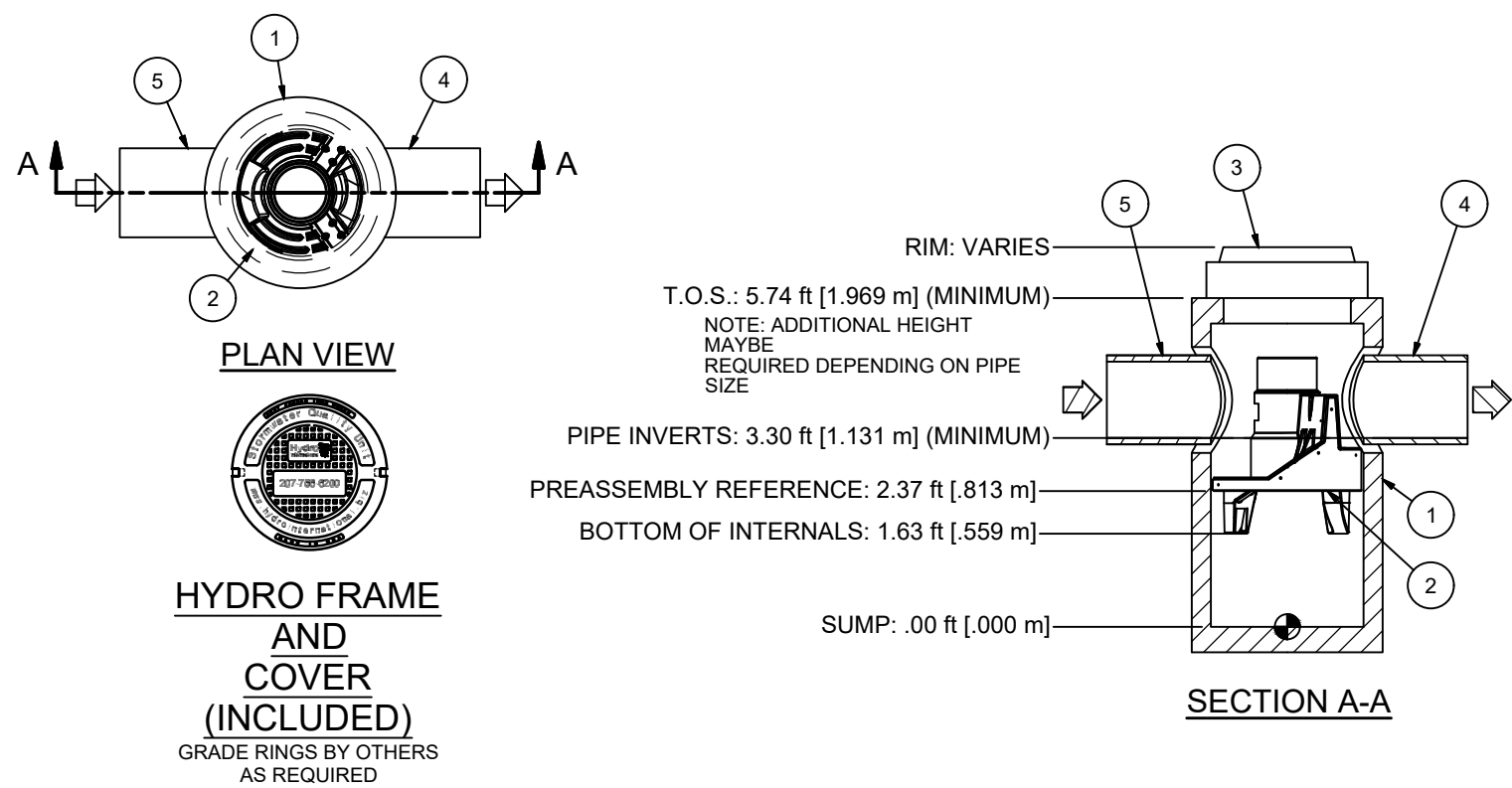
OPENING	OVERALL LENGTH	COUNTERBALANCE
INSIDE FACE OF POST TO INSIDE FACE OF POST	OUTSIDE OF FRAME TO OUTSIDE OF FRAME	OUTSIDE FACE OF POST TO OUTSIDE FACE OF POST
10'-0"	16'-10"	6'-6"
11'-0"	18'-10"	7'-6"
12'-0"	19'-10"	7'-6"
13'-0"	20'-10"	7'-6"
14'-0"	21'-10"	7'-6"
15'-0"	25'-4"	10'-0"
16'-0"	26'-4"	10'-0"
17'-0"	27'-4"	10'-0"
18'-0"	28'-4"	10'-0"
19'-0"	29'-4"	10'-0"
20'-0"	30'-4"	10'-0"
21'-0"	31'-4"	10'-0"
22'-0"	32'-4"	10'-0"
23'-0"	35'-4"	12'-0"
24'-0"	36'-4"	12'-0"
25'-0"	37'-4"	12'-0"
26'-0"	38'-4"	12'-0"
27'-0"	39'-4"	12'-0"
28'-0"	40'-4"	12'-0"
29'-0"	41'-4"	12'-0"
30'-0"	42'-4"	12'-0"

- NOTES:
1. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
  2. ALL COMPONENTS OF THE PANEL TO BE MILL FINISH (UNCOATED)
  3. OUTSIDE LOOKING IN, GATE LATCHES ON RIGHT
  4. GATE WILL BE HUNG ON THE INSIDE OF THE FENCE LINE
  5. HEIGHT IS FROM GRADE TO TOP OF GATE. ACTUAL HEIGHT IS 3" LESS.
  6. BARB WIRE ARMS ARE 1'-0" HIGHER THAN THE GATE HEIGHT
  7. FOR GATES 8' OR HIGHER, THE BARB WIRE ARMS WILL BE BOLTED TO THE GATE. ALL HARDWARE WILL BE SUPPLIED.
  8. FOOTING & POSTS AS REQUIRED BY SITE CONDITIONS & CODES



### 25' POWERED CHAIN LINK SLIDE GATE

N.T.S.



INLET GRATE FRAME AND COVER TO BE PROVIDED WHERE INDICATED, SEE PLAN AND GRATE AND FRAME DETAILS.

#### PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 15.0 cfs (424 l/s)
2. Min Sediment Storage Capacity: 0.4 cu. yd. (0.3 cu. m.)
3. Maximum Inlet/Outlet Pipe Diameters: 18 in. (450 mm)

#### GENERAL NOTES:

1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 18".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan.s)
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.

2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.

3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

STRUCTURE CB-1

FIRST DEFENSE MODEL FDRIC-3 WITH INLET GRATE

12/27/23	TECHNICAL REVIEW	1
Date	Description	No.

#### Revisions

## LANGAN

Langan Engineering and Environmental Services, Inc.

100 Cambridge Street, Suite 1310  
Boston, MA 02114

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Project

### OFFICE BUILDING 56 OLD PAGE STREET

STOUGHTON

NORFOLK COUNTY MASSACHUSETTS



Drawing Title

### SITE DETAILS III

Project No.	Drawing No.
151022801	CS503
Date	
11/09/2023	
Drawn By	
JSP	
Checked By	HAH



SITE LIGHTING SCHEDULE

SYMBOL	KEY	QTY.	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	FIXTURE MOUNTING HEIGHT	LAMP	COLOR TEMPERATURE	OPTICS	LUMENS	LLF	FIXTURE CATALOGUE NO.	POLE MANUFACTURER	POLE DESCRIPTION	POLE LENGTH	POLE CATALOGUE NO.	POLE REMARKS
	A	4	LITHONIA LIGHTING	WDGE3 LED WALL LUMINAIRE	BUILDING MOUNTED FIXTURE	18'-0"	87 W LED	3000K	TYPE-FORWARD THROW OPTIC	11,314	1.0	WDGE3 LED-P4-30K-70CRI-RFT-DBLXD	-	-	-	-	-
	B	2	LITHONIA LIGHTING	DSX1 LED AREA LUMINAIRE	AREA POST TOP FIXTURE	20'-0"	165 W LED	3000K	TYPE IV MEDIUM	18,156	1.0	DSX1 LED-P6-30K-T4M-RPA-DBLXD	LITHONIA LIGHTING	ROUND TAPERED STEEL POLE, BLACK	17'-0"	RTS-27-6-6B-DM19AS-VD-DBLXD	POLE TO BE FACTORY CUT TO LENGTH OF 17'; MOUNTED ON 3' HT. EXPOSED CONCRETE BASE

NOTE:  
1) WALL-MOUNTED LIGHT LOCATIONS TO BE COORDINATED WITH BUILDING ARCHITECT.  
2) ALL MOUNTING METHODS, CONDUITS, WIRING AND THE SUPPLY OF THE CORRECT ELECTRICAL POWER IN ACCORDANCE WITH ALL LOCAL CODES IS THE RESPONSIBILITY OF THE INSTALLER.  
3) REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING VOLTAGES.

TOWN OF STOUGHTON - ZONING BYLAW REGULATIONS COMPLIANCE CHART

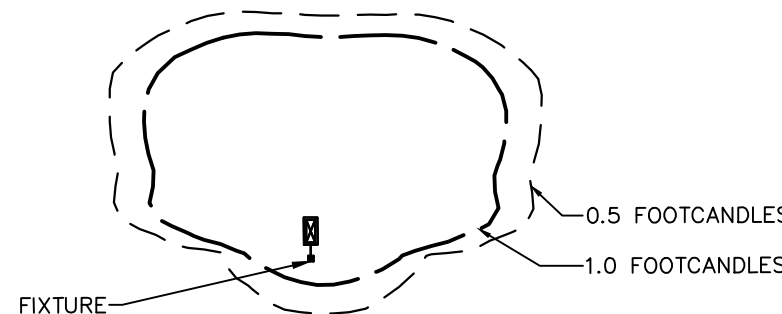
REGULATION SECTION	REQUIRED / PERMITTED	COMPLIANCE
SECTION 5.8 (E)	THE LOCATION OF WALL PACK LUMINAIRES SHALL NOT EXCEED 20'-0" IN HEIGHT.	COMPLIES
SECTION 5.8 (G)	MINIMUM FOOT-CANDLE REQUIREMENT, MEASURED AT GRADE LEVEL IS 1.0 MAXIMUM FOOT-CANDLE REQUIREMENT, MEASURED AT GRADE LEVEL IS 8.0.	COMPLIES

STATISTICS

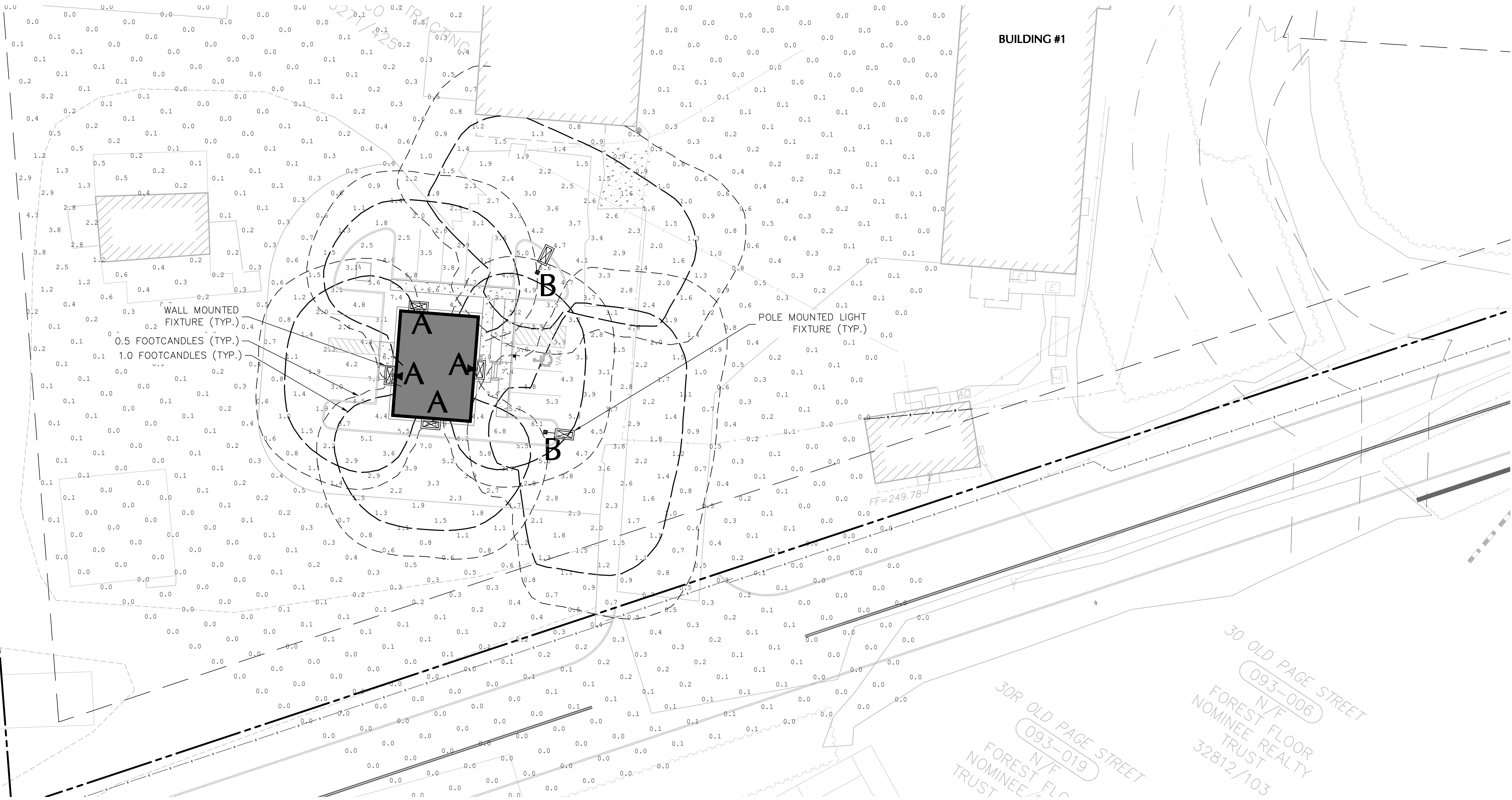
DESCRIPTION	AVG.	MAX.	MIN.	MAX/MIN.	AVG/MIN.
PARKING AREA	3.03 FC	8.0 FC	0.5 FC	16.0:1	6.06:1

NOTE: LIGHT PHOTOMETRY AND CALCULATIONS FOR EXISTING AND ADJACENT LIGHTING TO REMAIN ARE NOT INCLUDED IN THE ABOVE STATISTICS.

PHOTOMETRIC LIGHTING TEMPLATE:



NOTE: THE PHOTOMETRIC TEMPLATE REPRESENTS LIGHT THROW FOR EACH INDIVIDUAL FIXTURE. IT DOES NOT REPRESENT LIGHT COMING FROM OTHER SOURCES.



Date	Description	No.
Revisions		
		
<b>LANGAN</b> Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com		
Project		
OFFICE BUILDING 56 OLD PAGE STREET		
STOUGHTON NORFOLK COUNTY MASSACHUSETTS		
Drawing Title		
SITE LIGHTING PLAN		
Project No.	Drawing No.	
151022801	LL101	
Date	11/03/2023	
Drawn By	VC	
Checked By	MH	



SITE LIGHTING NOTES:

GENERAL

1. POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES SHOWN ON THE PLANS ARE NOT AN INDICATION OF THE INITIAL LIGHT INTENSITIES OF THE LAMPS. THESE VALUES ARE AN APPROXIMATION OF THE MAINTAINED INTENSITIES DELIVERED TO THE GROUND PLANE USING INDUSTRY STANDARD LIGHT LOSS FACTORS (LLF) WHICH COVER LAMP DEGRADATION AND NATURAL BUILDUP / DIRT DEGRADATION ON THE FIXTURE LENS. THE LIGHTING PLAN IS DESIGNED WITH AN INDUSTRY STANDARD LLF IN ACCORDANCE WITH GUIDANCE AS PROVIDED BY IESNA. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. THEREFORE, AS-BUILT LIGHT INTENSITIES MAY VARY, IN EITHER DIRECTION, FROM WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS.NO GUARANTEE OF LIGHT LEVELS IS EXPRESSED OR IMPLIED BY THE POINT BY POINT CALCULATIONS SHOWN ON THESE PLANS.
2. LIGHT LEVEL POINT SPACING IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM. POINT BY POINT CALCULATIONS ARE BASED ON THE LIGHT LOSS FACTOR AS STATED IN THE LIGHTING SCHEDULE.
3. ALL LIGHTING IS TO BE FULL CUT-OFF.

COMPLIANCE

3. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.
4. LIGHTING LAYOUT COMPLIES WITH THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) SAFETY STANDARDS FOR LIGHT LEVELS.

COORDINATION

5. CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO ENSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.
6. REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.
7. CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
8. INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.
9. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.

POLES AND FOOTINGS

10. PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND/OR IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE. THE USE OF ALTERNATE LIGHTING FOUNDATIONS, SUCH AS PRECAST, MAY CHANGE THE SIZING AND REINFORCEMENT REQUIREMENTS FROM THOSE SHOWN ON THESE PLANS. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING ANY SUBSTITUTED PRODUCTS.
11. CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.
12. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.
13. ALL POLES HIGHER THAN 25 FT. SHALL BE EQUIPPED WITH FACTORY INSTALLED VIBRATION DAMPENERS.

WALL MOUNTED FIXTURES

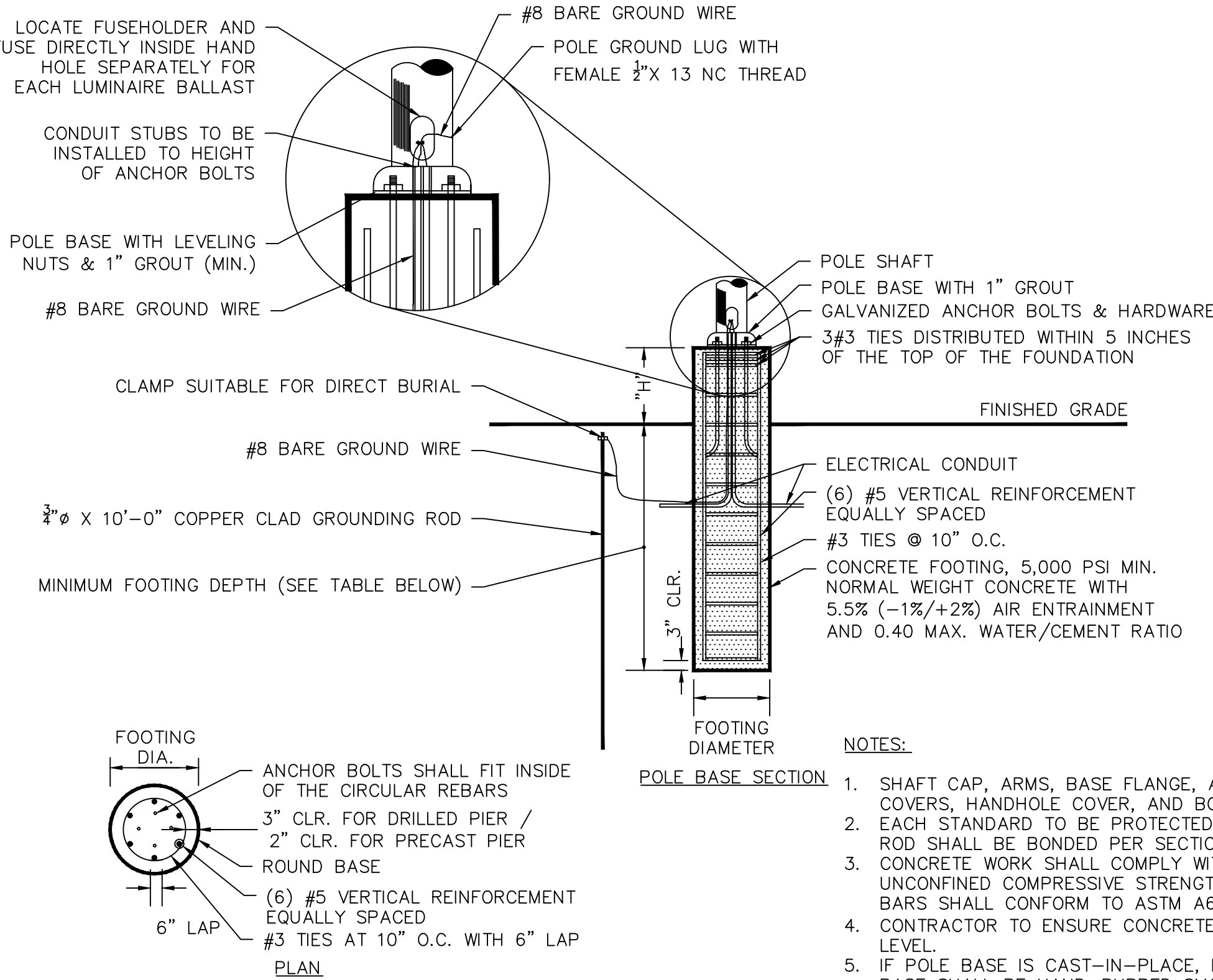
14. CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MEP, ARCHITECT, AND/OR OWNER.
15. INSTALLATION AND ELECTRICAL CONNECTIONS FOR WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, UTILITY AND SITE PLANS AND TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES.

ADJUSTMENT AND INSPECTION

16. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.
17. CONTRACTOR TO AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.
18. CONTRACTOR TO CONFIRM THAT LIGHT FIXTURES, TILT ANGLE AND AIMING MATCH SPECIFICATIONS ON THE PLANS.

REQUIREMENTS FOR ALTERNATES

19. ALL LIGHTING SUBSTITUTIONS MUST BE MADE WITHIN 14 DAYS PRIOR TO THE BID DATE TO PROVIDE AMPLE TIME FOR REVIEW AND TO ISSUE AN ADDENDUM INCORPORATING THE SUBSTITUTION WITH THE FOLLOWING REQUIREMENTS:
- A. ANY SUBSTITUTION TO LIGHTING FIXTURES, POLES, ETC. MUST BE APPROVED BY THE OWNER, ENGINEER AND TENANTS. ANY COST ASSOCIATED WITH REVIEW AND/OR APPROVAL OF THE SUBSTITUTIONS SHALL BE ENTIRELY BORNE BY THE CONTRACTOR
- B. COMPUTER PREPARED PHOTOMETRIC LAYOUT OF THE PROPOSED LIGHTED AREA WHICH INDICATES, BY ISOFOOTCANDLE, THE SYSTEM'S PERFORMANCE.
- C. A PHOTOMETRIC REPORT FROM A NATIONAL INDEPENDENT TESTING LABORATORY WITH REPORT NUMBER, DATE, FIXTURE CATALOG NUMBER, LUMINAIRE AND LAMP SPECIFICATIONS, IES CALCULATIONS, POINT BY POINT FOOT CANDLE PLAN, STATISTIC ZONES SHOWING AVERAGE, MAXIMUM, MINIMUM AND UNIFORMITY RATIOS, SUMMARY, ISOLUX PLOT, AND CATALOGUE CUTS. CATALOGUE CUTS MUST IDENTIFY OPTICS, LAMP TYPE, DISTRIBUTION TYPE, REFLECTOR, LENS, BALLASTS, WATTAGE, VOLTAGE, FINISH HOUSING DESCRIPTION AND ALL OTHER PERTINENT INFORMATION.
- D. POLE MANUFACTURER AASHTO CALCULATIONS INDICATING THE POLE AND ANCHOR BOLTS BEING SUBMITTED ARE CAPABLE OF SUPPORTING THE POLE AND FIXTURE SYSTEMS BEING UTILIZED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- E. THE UNDERWRITERS LABORATORY LISTING AND FILE NUMBER FOR THE SPECIFIC FIXTURE(S) TO BE UTILIZED.
- F. A COLOR PHOTOGRAPH THAT CLEARLY SHOWS THE REPLACEMENT FIXTURE POLE MOUNTED, THE FIXTURE'S COLOR, FINISH, AND PHYSICAL CHARACTERISTICS.

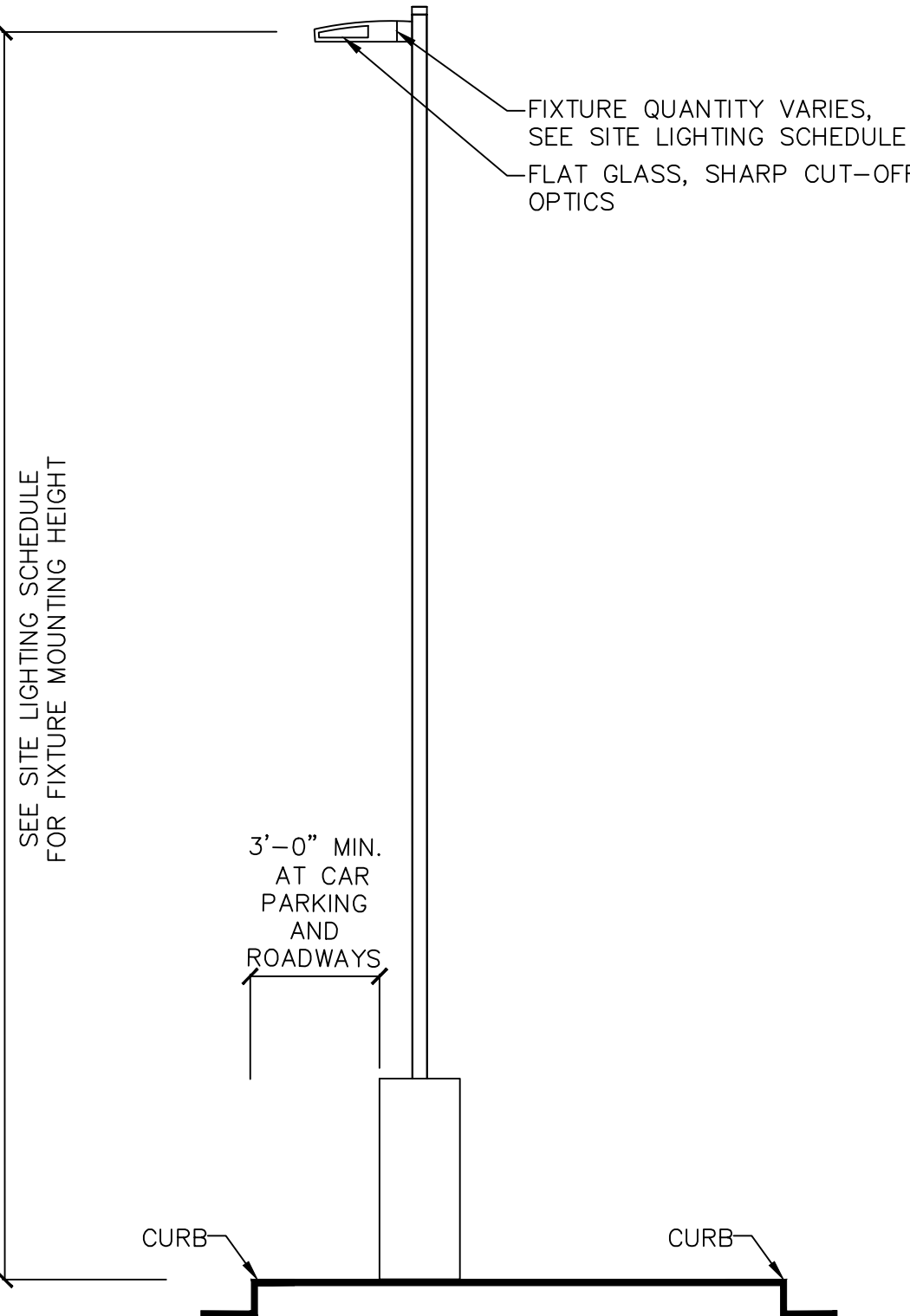


NOTES:

1. SHAFT CAP, ARMS, BASE FLANGE, ANCHOR BOLTS, LEVELING NUTS, CONNECTION HARDWARE, BOLT COVERS, HANDHOLE COVER, AND BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY POLE MANUFACTURER.
2. EACH STANDARD TO BE PROTECTED AGAINST LIGHTNING WITH AN INTERCONNECTED GROUND ROD. THIS ROD SHALL BE BONDED PER SECTION NUMBER 250-86, N.E.C.
3. CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENT OF ACI 318. CAST-IN-PLACE SHALL HAVE UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI AT 28-DAYS. DEFORMED REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
4. CONTRACTOR TO ENSURE CONCRETE POLE BASES ARE POURED / PLACED ABSOLUTELY VERTICAL & LEVEL.
5. IF POLE BASE IS CAST-IN-PLACE, POLE BASE SHALL BE ONE CONTINUOUS POUR. EXPOSED PORTION OF BASE SHALL BE HAND-RUBBED SMOOTH.
6. CONTRACTOR TO COMPACT SUBGRADE AROUND POLE BASE PER EARTHWORK SPECIFICATIONS / GEOTECH REPORT.
7. THE INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAILED BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURERS RECOMMENDATIONS.
8. CONTRACTOR TO CONFIRM GROUNDING DESIGN WITH MEP.

LIGHT POLE FOUNDATION DETAIL

N.T.S.



NOTE:

1. ALL LIGHTS WITH 25' MOUNTING HEIGHT OR GREATER TO RECEIVE FACTORY INSTALLED VIBRATION DAMPENERS.

FIXTURE ASSEMBLY

N.T.S.



Specifications
EPA: 0.01 ft 0.01 ft
Length: 30.71" (781mm)
Width: 14.26" (362mm)
Height H1: 12.88" (327mm)
Height H2: 2.73" (69mm)
Weight: 34 lbs (15.4kg)

**Introduction**

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficiency, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPSA NLTAR2 PIRHN DBXBD									
Series	LEDs	Color temperature*	Color rendering index	Distribution	Wattage	Wattage	Wattage	Wattage	Wattage
DSX1 LED	Forward optics P7 P8 P9 P10 P11 P12 P13	3000 4000 5000 5000 5000 5000 5000	70CRI 70CRI 70CRI 70CRI 70CRI 70CRI 70CRI	AS1 AS2 AS3 AS4 AS5 AS6 AS7	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W
Other options									
DSX1 LED	Forward optics P7 P8 P9 P10 P11 P12 P13	3000 4000 5000 5000 5000 5000 5000	70CRI 70CRI 70CRI 70CRI 70CRI 70CRI 70CRI	AS1 AS2 AS3 AS4 AS5 AS6 AS7	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W	15W 15W 15W 15W 15W 15W 15W



Specifications
Depth (D1): 9"
Depth (D2): 1.5"
Height: 9"
Width: 18"
Weight: 19.5 lbs

**Introduction**

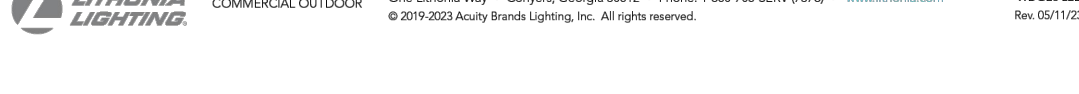
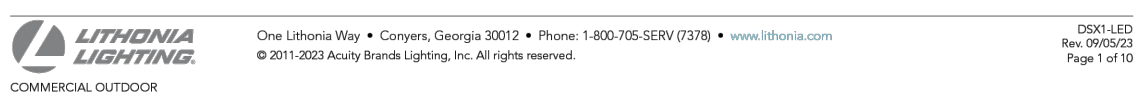
The WDGE LED family is designed to meet specific every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean, rectangular design comes in four sizes with lumen packages ranging from 1,200 to 5,000 lumens, providing a true site-wide solution. Embedded with Light8® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE3 has been designed to deliver up to 12,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

WDGE LED Family Overview									
Luminaire	Standard (D1, D2)	CAHSE, DFC	Mount	P1	P2	P3	P4	P5	P6
WDGE1 LED	6W	12W	Standard / Right	1,200	2,000	3,000	4,000	5,000	6,000
WDGE2 LED	12W	12W	Standard / Right	1,200	2,000	3,000	4,000	5,000	6,000
WDGE3 LED	12W	12W	Standard / Right	1,200	2,000	3,000	4,000	5,000	6,000

EXAMPLE: WDGE3 LED P3 40K 70CRI R3 MVOLT SRN DBXBD									
Series	Package	Color Temperature	CR	Beam Spread	Wattage	Wattage	Wattage	Wattage	Wattage
WDGE3 LED	P1 P2 P3 P4	3000 4000 5000 5000	70CRI 70CRI 70CRI 70CRI	120° 120° 120° 120°	12W 12W 12W 12W	12W 12W 12W 12W	12W 12W 12W 12W	12W 12W 12W 12W	12W 12W 12W 12W

EXAMPLE: WDGE3 LED P3 40K 70CRI R3 MVOLT SRN DBXBD									
Series	Package	Color Temperature	CR	Beam Spread	Wattage	Wattage	Wattage	Wattage	Wattage
WDGE3 LED	P1 P2 P3 P4	3000 4000 5000 5000	70CRI 70CRI 70CRI 70CRI	120° 120° 120° 120°	12W 12W 12W 12W	12W 12W 12W 12W	12W 12W 12W 12W	12W 12W 12W 12W	12W 12W 12W 12W



FEATURES & SPECIFICATIONS

INTENDED USE

CONSTRUCTION — Round tapered steel general purpose pole for up to 55 foot mounting heights.

PALE SHAFT: Hot-dipped galvanized steel, commercial quality carbon steel tubing with a minimum yield of 55,000 psi. Uniform wall thickness of 1/4" (page 1) (1.125") or 7/8" (page 1) (1.125"). Shafts are one-piece construction with a full-length longitudinal high-tensile electric resistance weld. Round cross-section having a uniform taper of approximately 1/4" per foot.

PALE TOP: Options include round top, drilled for side mount fixture, fence with drilling (includes extra hardware) and opening top. Side drilled and open top poles include a removable steel top cap with set screws.

HANDHOLE: Removable end cap with handhole having nominal dimensions of 14 1/2" x 17 1/2" (shaft end) and shaped to 4 x 6 1/2" for all other shafts. Come with attachment screws included. Handhole is located 18" above the base.

BASE COVER: Two-piece ABS plastic 14 base cover is provided with each pole assembly on pole shaft diameters of 6" or less. Shaft diameters greater than 6" have a sheet metal two-piece base cover. Additional base cover options are available upon factory request. Full cover caps can be substituted on most pole shaft sizes. Options include heavy duty two-piece cast aluminum full base cover and full cover cap. All base covers and full cover caps are finished to match pole.

ANCHOR BASE: Anchor base is fabricated from hot rolled carbon steel plate that conforms to ASTM A36 that meets or exceeds a minimum yield of 50,000 psi. Base plate and shaft are counter-drilled welded top and bottom. By part of anchor bolt is polished per ASTM A315. Head of nut and bearing, minimum yield strength of 55,000 psi. Each anchor bolt is finished with two hex nuts and one flat washer.

WARNING: — Fixtures are high-voltage powered, use plastic or rubber cover.

FINISH: — Easy double powder finish is coated with TFC (Fluoropolymer) Polyester powder that meets 50 and 50 classification of ASTM D3359. Powder coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to: Rusty Red, Dark Aluminum, Red, Green, Copper, and others.

GROUNDING: — Provision for ground rod installation. Grounding hardware is not included (provided by others).

UL LISTED: — Product with the BAA option is assembled in the USA and meets the UL listing requirements.

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REFER TO SHEET LL101 FOR SITE LIGHTING PLAN, SITE LIGHTING SCHEDULE, AND SITE LIGHTING STATISTICS.

POLE-MOUNTED FIXTURE

N.T.S.

WALL-MOUNTED FIXTURE

N.T.S.

LIGHT POLE

N.T.S.

LL501

N.T.S.

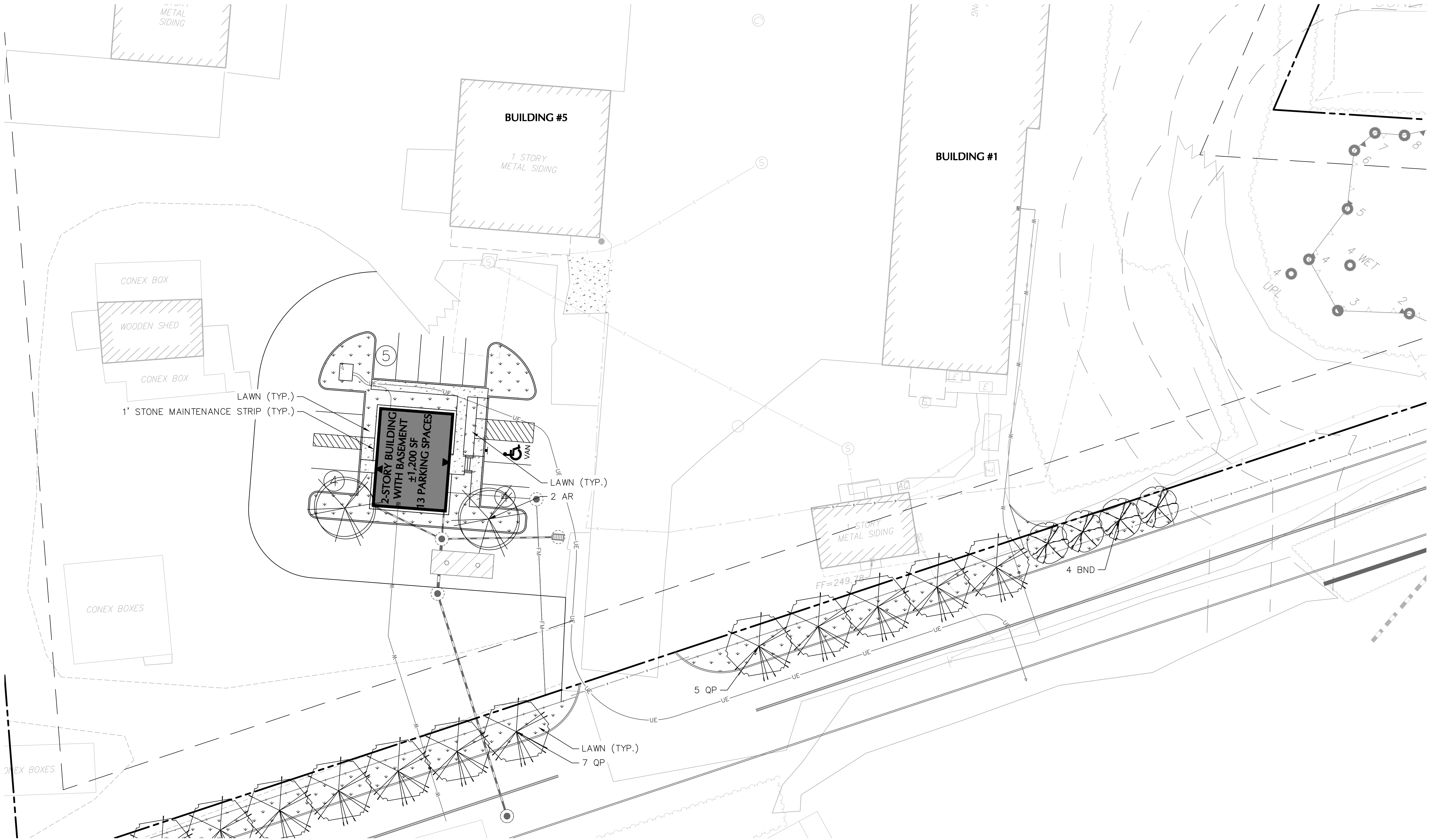
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PLANT SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREE(S)						
AR	2	ACER RUBRUM	RED MAPLE	2 1/2-3" CAL.	B+B	-
QP	12	QUERCUS PALUSTRIS	PIN OAK	2 1/2-3" CAL.	B+B	-
ORNAMENTAL TREE(S)						
BND	4	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	10-12'	B+B	-

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.



Date	Description	No.
Revisions		
		
<b>LANGAN</b> Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com		
Project <b>OFFICE BUILDING 56 OLD PAGE STREET</b> STOUGHTON NORFOLK COUNTY MASSACHUSETTS		
Drawing Title <b>PLANTING PLAN</b>		
Project No. <b>151022801</b>	Drawing No. <b>LP101</b>	
Date <b>11/03/2023</b>		
Drawn By <b>VC</b>		
Checked By <b>MH</b>		



GENERAL LANDSCAPE PLANTING NOTES

1. NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
2. ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.
3. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
4. STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH "GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
5. NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR, AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
7. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER, TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
8. LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
9. THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING THE PERIOD OF PLANTING. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIAL IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
10. DELIVERY, STORAGE, AND HANDLING
- A. PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETEIORATION DURING DELIVERY, AND WHILE STORED AT SITE.
- B. TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED, DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BING-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSIT. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY OR HANDLING.
- C. ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE ROOT BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
- D. THE CONTRACTOR SHALL REMOVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL TRIM TREES AND SHRUBS IN SHAPE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
11. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
12. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
13. NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF ONE YEAR FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
14. THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
15. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
16. THE BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER THE SPECIFICATIONS.
17. AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
18. MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.
19. ALL FENCE INSTALLATION SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, LAWN AND GRASSES, OR IRRIGATION WORK.
20. FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND PLANTING PLAN THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.
21. PLANT MATERIALS SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.
22. ALL PLANT INSTALLATIONS SHALL BE COMPLETED BEFORE APRIL 1 - JUNE 15 OR AUGUST 15 - NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. SEE LAWN SEEDING DATES IN SEEDING NOTES.

LANDSCAPE MAINTENANCE NOTES

1. MAINTENANCE OPERATIONS BEFORE APPROVAL
- A. PLANT CARE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED AND SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
- B. CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS AS ORIGINALLY INSTALLED, WATERING WHEN NEEDED OR DIRECTED, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
- C. CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.
2. MAINTENANCE DURING CONSTRUCTION:
- A. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEEDED, PRUNED, SPRAYED, FERTILIZED, CULTIVATED, AND OTHERWISE MAINTAINED AND PROTECTED UNTIL PROVISIONAL ACCEPTANCE. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE AND POSITION. PLANTING SAUCER RESTORED AND DEAD MATERIAL REMOVED. STAKES AND WIRES SHALL BE TIGHTENED AND REPAIRED. DEFECTIVE WORK SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
- B. IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEEMED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
- C. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST OR THAT WHICH WAS TO REMAIN OR BE RELOCATED. THEY SHALL BE FURNISHED AND PLANTED PRIOR TO THE TIME THE COST SHALL BE BORNE BY THE CONTRACTOR. 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 CURTALMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
- D. PLANTS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
- E. AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR UNSATISFACTORY TO THE LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.
3. LAWN MAINTENANCE:
- A. BEGIN MAINTENANCE IMMEDIATELY AFTER EACH PORTION OF LAWN IS PLANTED AND CONTINUE FOR 8 WEEKS AFTER ALL LAWN PLANTING IS COMPLETED.
- B. WATER TO KEEP SURFACE SOIL MOIST, REPAIR WASHED OUT AREAS BY FILLING WITH TOPSOIL, LIMING, FERTILIZING AND RE-SEEDING; MOW TO 2 1/2 - 3 INCHES AFTER GRASS REACHES 3 1/2 INCHES IN HEIGHT, AND MOW FREQUENTLY ENOUGH TO KEEP GRASS FROM EXCEEDING 3 1/2 INCHES. WEED BY LOCAL SPOT APPLICATION OF SELECTIVE HERBICIDE ONLY AFTER GRASS IS WELL-ESTABLISHED.

LAWN SEED MIX

1. LAWN SEED MIX: LESCO GRASS SEED - ALL PRO TRANSITION MIX (3 TURF-TYPE TALL-FESCUE GRASSES)
- NOTES:
- A. SEED RATE:
- 1) NEW ESTABLISHMENT: SEED AT A RATE OF 6-8 LBS/1000 SQ FT
- 2) RENOVATION: 20-50% EXISTING COVER: 5-7 LBS/1000 SQ FT
- 50-75% EXISTING COVER: 4-6 LBS/1000 SQ FT
2. GENERAL SEED NOTES:
- A) FINAL SEED MIXTURES, RATES, AND SPECIES TO BE DETERMINED BASED ON PROJECT LANDSCAPE ARCHITECT REVIEW.
- B) SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 15) OR THE FALL (SEPTEMBER 1 TO OCTOBER 15).
- C) ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A GLYPHOSATE-BASED HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
- D) IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRUAX-TYPE DRILL SEEDER WHERE APPLICABLE.
- E) THERE MUST BE CONTINUOUS SOIL MOISTURE FOR 4-6 WEEKS TO ALLOW FOR PROPER GERMINATION.

LAWN WATERING SCHEDULE

THE FOLLOWING WATERING SCHEDULE COVERS ROUGHLY 6 WEEKS TO ESTABLISH A HEALTHY STAND OF GRASS FROM SEED. THE CONTRACTOR SHALL BE OBLIGATED TO ENSURE A HEALTHY STAND OF GRASS AT THE END OF THE MAINTENANCE/BOND PERIOD. ANY BARE OR DEAD AREAS IN THE LAWN SHALL BE PREPARED, RESEEDED AND REESTABLISHED PRIOR TO THE END OF THE MAINTENANCE/BOND PERIOD AND TO THE SATISFACTION OF THE PROJECT LANDSCAPE ARCHITECT AND THE OWNER.

IMPORTANT ASPECTS TO ATTAINING AND SUSTAINING A HEALTHY STAND OF GRASS ARE THE INSTALLATION OF TOPSOIL, SEED BED PREPARATION, ATTAINING OPTIMAL pH FOR THE INTENDED PLANT SPECIES, FERTILIZING, MULCH COVERING, AND SUFFICIENT WATERING PER THESE NOTES AND/OR PROJECT SPECIFICATIONS.

1. SEEDING SHALL BE DONE DURING THE SEASONS SPECIFIED IN THE LAWN SEED MIX NOTES AND/OR PROJECT SPECIFICATIONS.
2. AFTER THE SEEDBED IS PREPARED, SEED IS INSTALLED, AND MULCH IS APPLIED, WATER LIGHTLY TO KEEP THE TOP 2 INCHES OF SOIL CONSISTENTLY MOIST, NOT SATURATED. AT NO TIME SHOULD WATER BE APPLIED TO THE POINT OF RUNOFF OR THE DISPLACEMENT OF SEED.
3. DEPENDING ON SOIL TEMPERATURES, IT MAY TAKE SEVERAL WEEKS FOR GERMINATION TO OCCUR. DIFFERENT SPECIES WITHIN THE MIX GERMINATE AT DIFFERENT TIMES AND THEREFORE CONTRACTOR SHOULD CONTINUE THE LIGHT WATERING, AS DESCRIBED ABOVE, UNTIL THERE IS AT LEAST 2 INCHES OF GROWTH THROUGHOUT.
4. AT THIS POINT, WATERING FREQUENCY MAY BE REDUCED TO EVERY 3 TO 5 DAYS. WATER SHALL BE APPLIED TO WET A 6 INCH MINIMUM SOIL DEPTH TO PROMOTE HEALTHY DEEP ROOTS.
5. BEGIN MOWING ONCE PER WEEK AFTER THE GRASS HAS REACHED 3 INCHES HEIGHT. MOW TO A HEIGHT OF NO LESS THAN 2-3 INCHES. AFTER 2 TO 3 WEEKS OF MOWING, CONTINUE TO WATER TO A 6 INCH MINIMUM SOIL DEPTH AS NECESSARY PER WEATHER CONDITIONS, AND SOIL MOISTURE SENSORS IF APPLICABLE.

PLANTING SOIL SPECIFICATIONS

1. PLANTING SOIL, ALTERNATIVELY MAY BE REFERRED TO AS TOPSOIL, SHOULD BE FRIABLE, FERTILE, WELL DRAINED, FREE OF DEBRIS, TOXINS, TRASH AND STONES OVER 1/2" DIA. IT SHOULD HAVE A HIGH ORGANIC CONTENT SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING HAVING NO NOXIOUS ODORS.
2. PLANTING SOIL:
- REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOIL, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS.

SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BOGS, MARSHES OR CONTAMINATED SITES.

CONTRACTOR SHALL TEST SOILS AND FURNISH SAMPLES UPON REQUEST. PACKAGED MATERIALS SHALL BE UNOPENED BAGS OR CONTAINERS, EACH BEARING A NAME, GUARANTEE, AND TRADEMARK OF THE PRODUCER. MATERIAL COMPOSITION, MANUFACTURER'S CERTIFIED ANALYSIS, AND THE WEIGHT OF THE MATERIALS, SOIL OR AMENDMENT MATERIALS SHALL BE STORED ON SITE TEMPORARILY IN STOCKPILES PRIOR TO PLACEMENT AND SHALL BE PROTECTED FROM INTRUSION OF CONTAMINANTS AND DROSS. AFTER MIXING, SOIL MATERIALS SHALL BE COVERED WITH A TARPULIN UNTIL TIME OF ACTUAL USE.

ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED BY ADDING AMENDMENTS, THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.

- A. THE FOLLOWING TESTING SHOULD BE PERFORMED AND RESULTS GIVEN TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE INSTALLATION:
- a. PARTICLE SIZE ANALYSIS: LOAMY SAND: 60-75% SAND, 25-40% SILT, AND 5-15% CLAY.
- b. FERTILITY ANALYSIS: pH (5.5-6.5), SOLUBLE SALTS (LESS THAN 2 MMH/CM), NITRATE, PHOSPHATE, POTASSIUM, CALCIUM AND MAGNESIUM
- c. ORGANIC MATTER CONTENT: 2.5-5% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS
- d. TOXIC SUBSTANCE ANALYSIS
- e. MATERIAL DRAINAGE RATE: 60% PASSING IN 2 MINUTES, 40% RETAINED
- f. NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE

3. SOIL AMENDMENT FOR PLANT MATERIAL:
- IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE WEED FREE, ORGANIC MATTER. SOIL AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8, MOISTURE CONTENT 35-55% BY WEIGHT 100% PASSING THROUGH 1" SIEVE, SOLUBLE SALT CONTENT LESS THAN 0.5 MM H2O/CM, MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL.

- A. ORGANIC MATTER AS A SOIL AMENDMENT: LEAF MULD WITH 60-90% ORGANIC CONTENT BY WEIGHT, SHREDDED LEAF LITTER, COMPOSTED FOR A MINIMUM OF 1 YR. SHOULD BE FREE OF DEBRIS, STONES OVER 1/2", WOOD CHIPS OVER 1".

- B. SOIL IN BEDS AND PLANTING ISLANDS OTHER THAN BACKFILL MATERIAL AND TOPSOIL, SHOULD BE FRIABLE, WELL DRAINED, AND FREE OF DEBRIS, INCLUDING STONES AND TRASH.

- C. AMENDMENTS FOR BACK FILL IN TREE AND SHRUB PITS:
- a. GROUND LIMESTONE (WITH A MIN. OF 88% OF CALCIUM AND MAGNESIUM CARBONATES) USED PENDING RESULTS OF SOIL ANALYSIS.
- b. BRING PH LEVELS TO 4.5 MIN. TO 5.5 FOR NON-ERICAECIOUS PLANTS
- c. BRING PH LEVELS TO 4.5 MIN. TO 5.5 FOR ERICAECIOUS PLANTS
- d. TERRA-SORB BY PLANT HEALTH CARE 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN PLANTER BACKFILL MIXTURE WITH TREES AND SHRUBS.
- e. MYCOR-ROOT SAYER BY PLANT HEALTH CARE 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN BACKFILL MIXTURE WITH TREES.

4. WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES.

5. CLEAN SOIL FILL IN LANDSCAPE AREAS
- LANDSCAPE FILL MATERIAL, BELOW PLANTING SOILS, SHALL HAVE THE PHYSICAL PROPERTIES OF A SANDY LOAM WITH AN ORGANIC CONTENT OF LESS THAN 2% AND A PH BETWEEN 5 - 7.

6. SOIL PLACEMENT:
- A. CONTRACTOR TO PROVIDE SIX INCHES (6") MINIMUM DEPTH PLANTING SOIL LAYER IN LAWN AREAS, TWELVE INCHES (12") MINIMUM DEPTH PLANTING SOIL LAYER IN GROUNDCOVER AND PERENNIAL AREAS, EIGHTEEN INCHES (18") MINIMUM DEPTH PLANTING SOIL LAYER IN SHRUB AREAS, AND THIRTY-SIX INCHES (36") MINIMUM DEPTH PLANTING SOIL LAYER IN TREE PLANTING AREAS.

- B. SCARIFY AND/OR TILL COMPACTED SUBSOILS TO A MINIMUM DEPTH OF 6 INCHES. THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOIL INTO THE SUBSOIL PRIOR TO PLACING PLANTING SOIL. AT THE DEPTHS INDICATED ABOVE, PLANTING SOIL SHALL BE PLACED IN 12-18" LIFTS AND WATER THOROUGHLY BEFORE INSTALLING NEXT LIFT. REPEAT UNTIL DEPTHS AND FINISH GRADES HAVE BEEN ACHIEVED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.

- C. PLANTING SOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE PLANTING SOIL UTILIZED IN ALL PLANTING AREAS.

7. SOIL CONDITIONING:
- A. ADJUST pH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER pH USING ELEMENTAL SULFUR OR PEAT MOSS OR COPPER SULFATE MAY NOT BE USED. GROUND LIMESTONE AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH MINIMUM 88% CALCIUM AND MAGNESIUM CARBONATES AND SHALL HAVE 100% PASSING THE 10 MESH SIEVE, MINIMUM 90% PASSING 20 MESH SIEVE, AND MINIMUM 60% PASSING 100 MESH SIEVE.

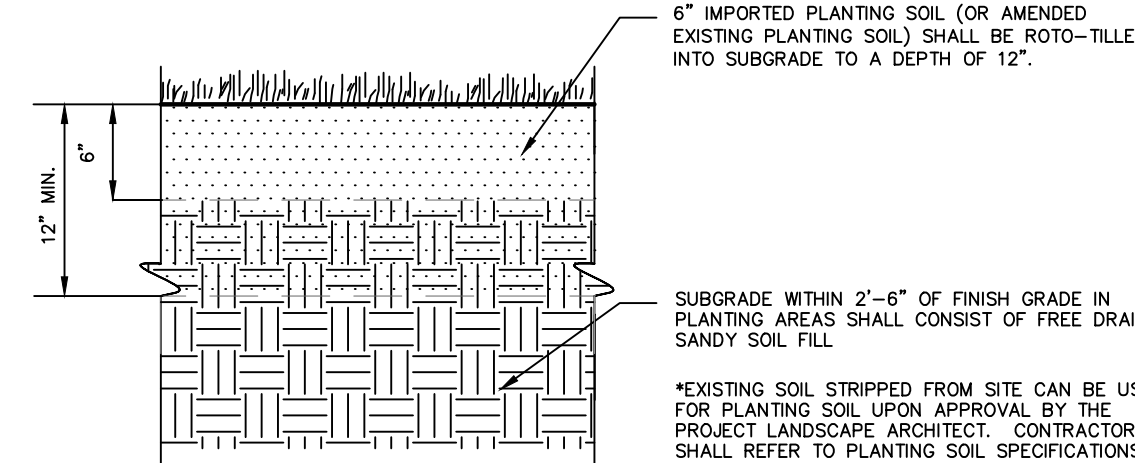
- B. ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

- C. SOIL MODIFICATIONS (PENDING RESULTS OF SOIL ANALYSIS):
- a. THOROUGHLY TILL ORGANIC MATTER (LEAF COMPOST) INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A pH HIGHER THAN 7.0. PEAT MOSS MAY NOT BE USED AS ORGANIC MATTER AMENDMENT.

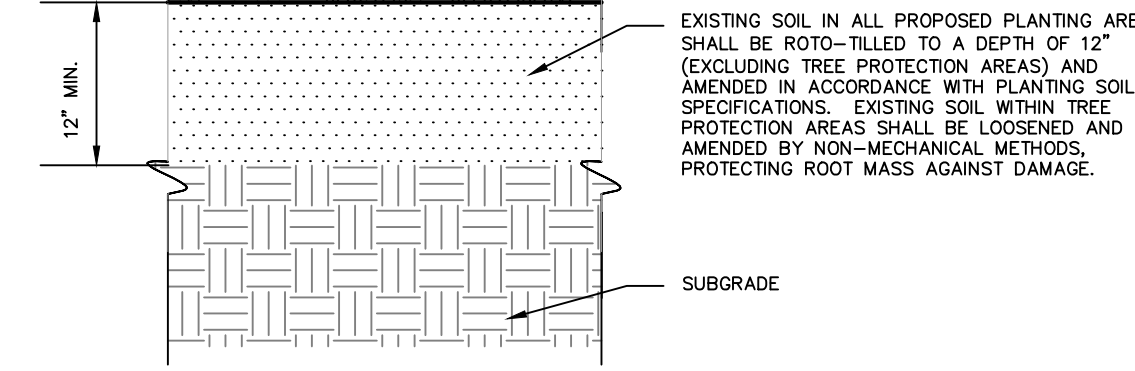
- b. MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
- c. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

GENERAL NOTE:

DUE TO GENERAL CONSTRUCTION ACTIVITIES AND ADJACENT SITE COMPACTION REQUIREMENTS, SUBGRADE SOILS WITHIN PROPOSED PLANTING AREAS TEND TO BECOME HIGHLY COMPACTED. IN ORDER TO CREATE A HEALTHY GROWTH MEDIUM TO ALLOW PROPOSED PLANTINGS TO ESTABLISH A VIGOROUS ROOT MASS, THIS SUBGRADE SOIL MUST UNDERGO A RESTORATION PROCESS. IN ADDITION, IMPORTED OR AMENDED EXISTING SOILS SHALL BE MIXED WITH SUBGRADE SOILS WHERE THEY MEET IN ORDER TO CREATE A TRANSITIONAL GRADIENT TO ALLOW FOR PROPER DRAINAGE.



PLANTING SOIL WITHIN AREAS OF CUT OR RAISED GRADE



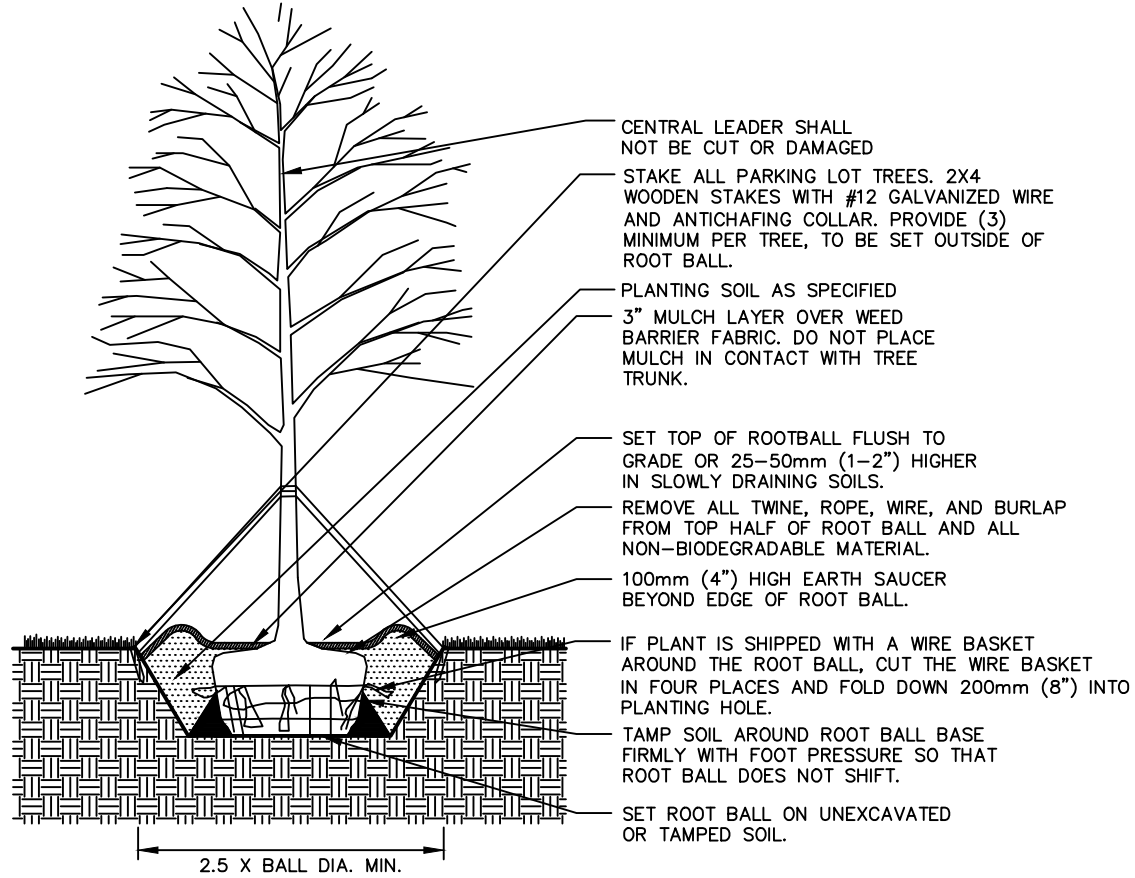
PLANTING SOIL WITHIN AREAS OF UNCHANGED GRADE

NOTES:

1. CONTRACTOR IS RESPONSIBLE TO SEND SAMPLES OF EXISTING SOILS INTENDED FOR USE IN PLANTING AREAS (1 PER 500 CY) TO TESTING LABORATORY OR UNIVERSITY COOPERATIVE EXTENSION FOR TESTING. ALL TESTING COSTS ARE AT THE CONTRACTOR'S EXPENSE.
2. RECYCLED CRUSHED CONCRETE AND ASPHALT MILLINGS SHALL NOT BE PLACED WITHIN 2"-6" OF FINISH GRADE IN PROPOSED LANDSCAPE AREAS.
3. IMPORTED FILL SHALL CONTAIN NO CONTAMINATION IN EXCESS OF THE APPLICABLE STATE ENVIRONMENTAL STANDARDS AND MEET THE REQUIREMENTS FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF COMPLIANCE PRIOR TO DELIVERY OF ANY FILL TO THE SITE.
4. CONTRACTOR TO LIGHTLY COMPACT ALL PLACED PLANTING SOILS AND RAISE GRADES ACCORDINGLY TO ALLOW FOR FUTURE SETTLEMENT OF PLANTING SOILS (TYP.).
5. NO STONES, WOOD CHIPS, OR DEBRIS LARGER THAN 1/2" SHALL BE ACCEPTABLE WITHIN PLANTING AREAS.

1 PLANTING SOIL

NTS

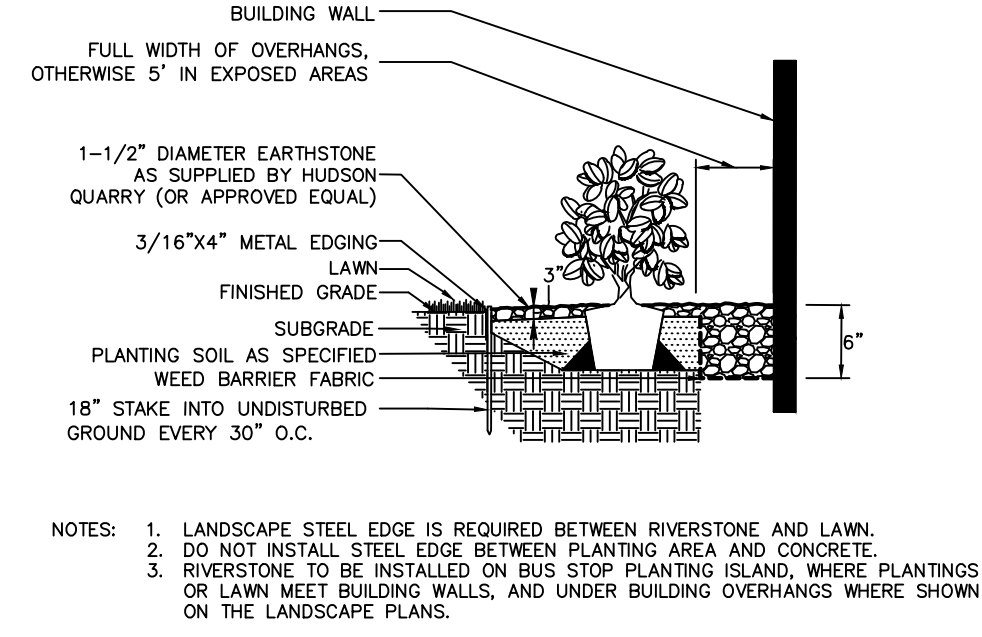


2 DECIDUOUS TREE PLANTING

NTS

4 PLANTING IMAGES

NTS



3 DECORATIVE RIVERSTONE

NTS

SHADE TREE



ACER RUBRUM  
RED MAPLE



QUERCUS PALUSTRIS  
PIN OAK

ORNAMENTAL TREE



BETULA NIGRA 'DURA HEAT'  
DURA HEAT RIVER BIRCH

Date	Description	No.
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Revisions
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Project

OFFICE BUILDING  
56 OLD PAGE STREET

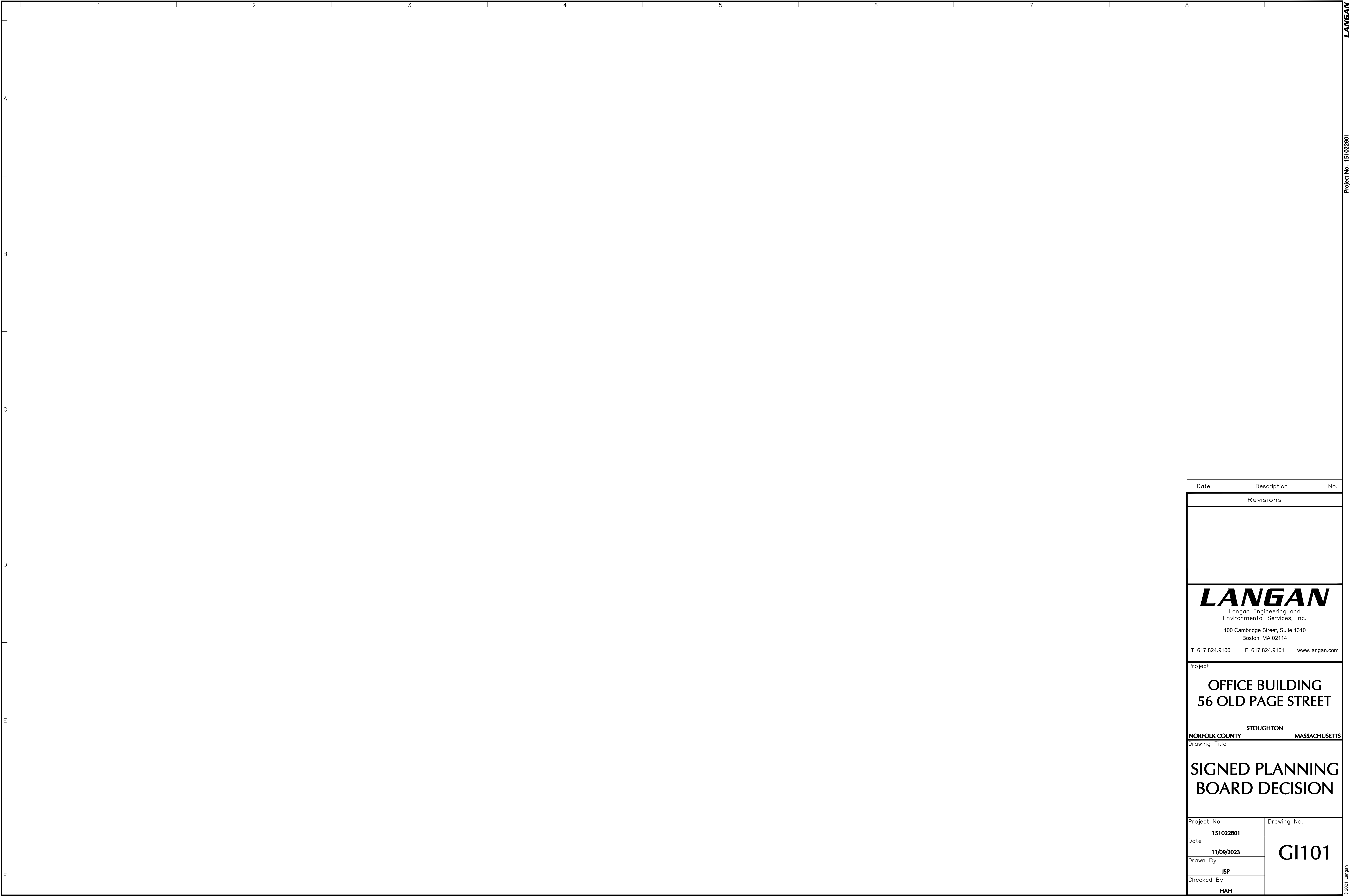
STOUGHTON  
NORFOLK COUNTY MASSACHUSETTS

Drawing Title

PLANTING DETAILS

Project No.	Drawing No.
151022801	LP501
Date	
11/03/2023	
Drawn By	
Checked By	VC
	MH





Project No. 151022801

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Date	Description	No.
Revisions		
<div></div>		
<div><div><div>LANGAN</div><div>Langan Engineering and Environmental Services, Inc.</div><div>100 Cambridge Street, Suite 1310 Boston, MA 02114</div><div>T: 617.824.9100    F: 617.824.9101    www.langan.com</div></div></div>		
Project		
OFFICE BUILDING 56 OLD PAGE STREET		
STOUGHTON NORFOLK COUNTYMASSACHUSETTS		
Drawing Title		
SIGNED PLANNING BOARD DECISION		
Project No. 151022801		GI101
Date 11/09/2023		
Drawn By JSP		
Checked By HAH		