

ZONING TABLE		
ZONE	SINGLE RESIDENCE A	
DIMENSIONAL CONTROLS	REQUIRED/ALLOWED	PROPOSED
FRONT SETBACK TO CENTERLINE	50 ft.	150± ft.
FRONT YARD SETBACK	30 ft.	130± ft.
SIDE YARD SETBACK	15 ft.	18± ft.
REAR YARD SETBACK	20 ft.	21 ±ft.
MIN. FRONTAGE	110 ft.	259± ft.
MIN. LOT AREA	15,000 s.f.	81,000± s.f.
MAX. BUILDING HEIGHT	40 ft.	± ft.
MAX. LOT COVERAGE (bldgs.)	35%	17±%
PARKING	--	56 spaces

EXISTING IMPERVIOUS AREA = 58,534 S.F. (72%)
 PROPOSED IMPERVIOUS AREA = 41,584 S.F. (51%)
 CHANGE IN IMPERVIOUSNESS = -16,950 S.F.

Prepared For:
 Owner / Applicant
 Top Tier Properties
 95 Maple Street
 Malden, MA 02148

Prepared By:
 Hayes Engineering, Inc.
 603 Salem Street
 Wakefield, MA 01880
 Ph: 781.246.2800
 Fax: 781.246.7596
 www.hayeseng.com

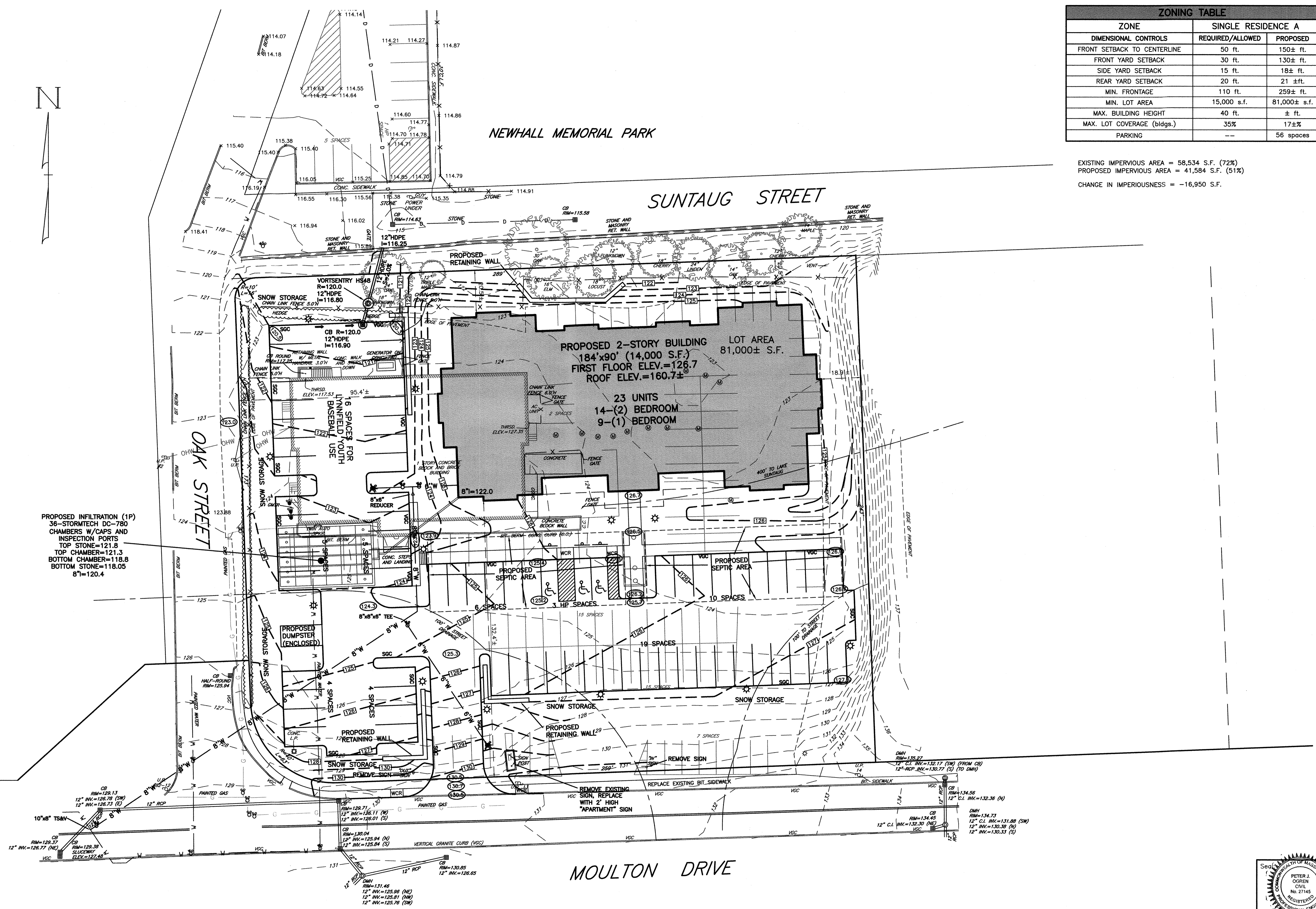
Design By: PJO
 Drawn By: EBL
 Checked By: PJO
 Project File: LYF-0934A
 Comp. No: LYF365
 Issued For Permit
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No.	Revision	Date
10		
9		
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3	REVISD PARKING LAYOUT	8/21/2018
2	REVISED PARKING LAYOUT PER LFD	8/6/18
1		

Scale: 1"=20'
 0' 10' 20' 40'
 Date: July 6, 2018

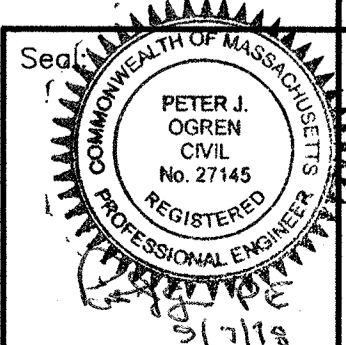
Drawing Title:
 SITE PLAN
 #160 MOULTON DRIVE
 BALI HAI
 LYNNFIELD, MASS.

Drawing No.:
 C1
 SHEET 1 OF 4

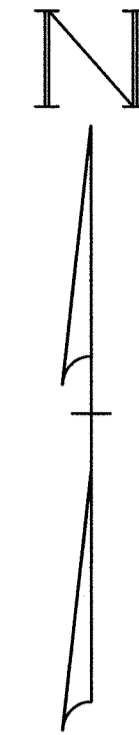


PROPOSED INFILTRATION (1P)
 36-STORMTECH DC-780
 CHAMBERS W/CAPS AND
 INSPECTION PORTS
 TOP STONE=121.8
 TOP CHAMBER=121.3
 BOTTOM CHAMBER=118.8
 BOTTOM STONE=118.05
 8"=120.4

MOULTON DRIVE



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NEWHALL MEMORIAL PARK

SUNTAUG STREET

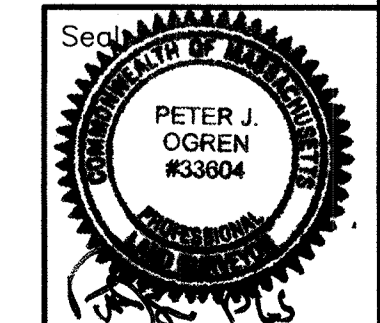
LOT AREA
81,000± S.F.

MOULTON DRIVE

NORTHERN CIRCUMFERENTIAL HIGHWAY
(ROUTE 128 - 1959 STATE HIGHWAY ALTERATION)

ZONE: SINGLE RESIDENCE A (RA)

MINIMUM SETBACKS:
FRONT = 30'
SIDE = 15'
REAR = 20'
MIN. FRONTAGE=110'
MIN. LOT AREA=15,000 S.F.



Drawing No.:
C2
SHEET 2 OF 4

Drawing Title:

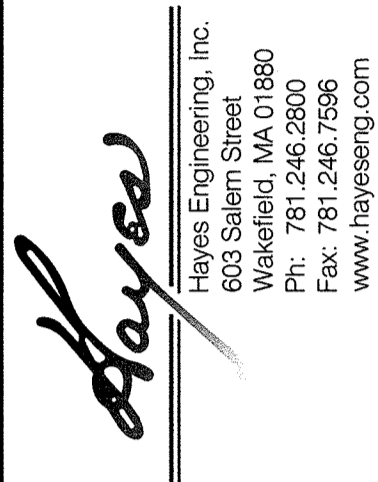
EXISTING CONDITIONS PLAN
MOULTON DRIVE
LYNNFIELD, MASS.

Scale: 1"=20'
0' 10' 20' 40'
Date: July 6, 2018

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10		
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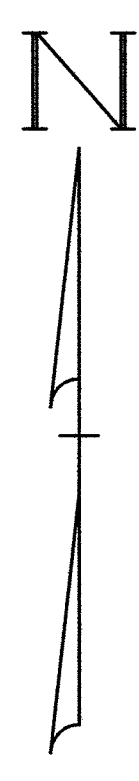
Prepared By:



Owner / Applicant
 Top Tier Properties
 93 Maple Street
 Malden, MA 02148

Prepared For:

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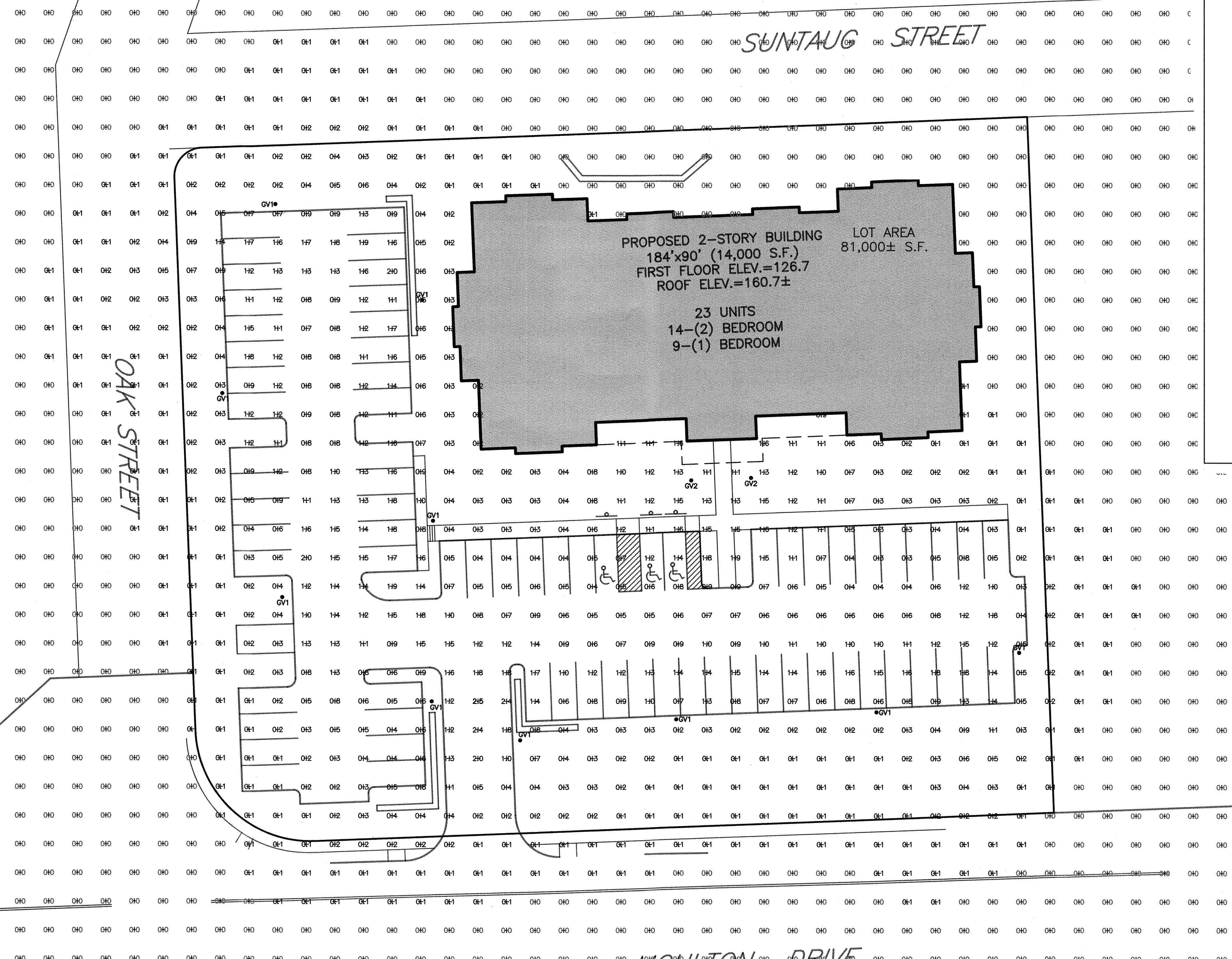
NEWHALL MEMORIAL PARK

SUNTAUG STREET

OAK STREET

MOULTON DRIVE

NORTHERN CIRCUMFERENTIAL HIGHWAY
(ROUTE 128 - 1959 STATE HIGHWAY ALTERATION)



PROPOSED 2-STORY BUILDING
184'x90' (14,000 S.F.)
FIRST FLOOR ELEV.=126.7
ROOF ELEV.=160.7±

23 UNITS
14-(2) BEDROOM
9-(1) BEDROOM

LOT AREA
81,000± S.F.

Maximum weight - 47 lbs
Maximum effective projected area - 1.38 sq. ft.

ORDERING INFORMATION:
 HOUSING: GVD2 - GRANVILLE CLASSIC UTILITY
 BEST PERFORMANCE PRODUCT (SEE PRODUCT COMPATIBILITY LIST FOR OPTIONS)
 P30 = AS-30W/AH-30W
 P35 = AS-35W/AH-35W
 P40 = AS-40W/AH-40W
 P50 = AS-50W/AH-50W
 P60 = AS-60W/AH-60W
 P75 = AS-75W/AH-75W
 P90 = AS-90W/AH-90W

HOUSING COLORS:
 BK = BLACK
 BR = BRONZE
 GR = GRAPHITE
 WH = WHITE
 CR = CRUCES
 T = TRIM FINISH, TRD
 XX = STD FINISH, TRD

TRIM:
 R = RIBS & BAND
 N = NO TRIM
 B = BUSHING STYLE WITH COVER (IN HOUSING ONLY)

TRANSFORMER COLORS:
 BK = BLACK
 BR = BRONZE
 GR = GRAPHITE
 WH = WHITE
 CR = CRUCES
 T = TRIM FINISH, TRD
 XX = STD FINISH, TRD

ACCESSORIES:
 GVD200 - DECORATIVE BAND (INSERT TRIM FINISH FOR X), FOR EXAMPLE: GVBANDBK (BLACK)

OPTIONAL NEMA LABEL LOCATION

ORDERING INFORMATION:
 GVD2 P30 30K AS M BZ 5 R S BZ

OPTIONS:
 CONTROL OPTIONS
 DEP = FIELD ADJUSTABLE OUTPUT
 PFD = FACTORY PROGRAMMED DRIVER (N/A) (SEE LUMENS OR WATTS)
 PFC = FACTORY PROGRAMMED DRIVER (N/A) (SEE LUMENS OR WATTS)
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 PFC = FACTORY PROGRAMMED DRIVER (N/A) (SEE LUMENS OR WATTS)

COVER OPTIONS:
 F = FIELD COVER
 M¹ = MAYFIELD 1/2 COVER

NEMA WATTAGE LABEL OPTIONS:
 NLX1 = 1 X 1 NEMA LABEL
 NLX2 = 2 X 2 NEMA LABEL

PREWIRED LEAD OPTIONS:
 L1 = 15 FEET OF PREWIRED LEADS
 L2 = 20 FEET OF PREWIRED LEADS
 L3 = 25 FEET OF PREWIRED LEADS
 L4 = 30 FEET OF PREWIRED LEADS
 L5 = 35 FEET OF PREWIRED LEADS

NOTES ARE LOCATED ON PAGE 3

ORDER #:
TYPE:
DATE:
REVISED:

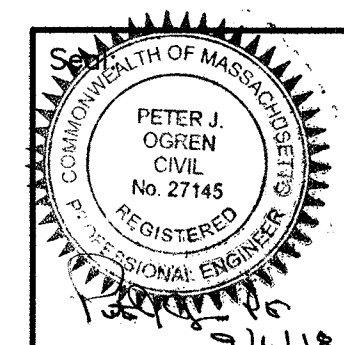
Target Point Set
1321 points at z=0, sp 10ft by 10ft

HORIZONTAL FOOTCANDLES

Average	2.5
Maximum	3.0
Minimum	0.0
Max:Min	N/A
Coef. Var	1.62
Unit/Grad	N/A

Holophane GVD2 P30 30K AS 3 N F GVDHSS18
 SCALED PHOTOMETRY test report no. ISF 33910P16
 lamp(s): LED
 ballast: LED DRIVER
 candela file: GVD2_P30_30K_AS_3_N_F_GVDHSS18.ies
 1 lamp(s) per luminaire, photometry is absolute
 Light Loss Factor = 0.910, watts per luminaire = 60
 mounting height = 14 ft
 number locations = 10, number luminaires = 10
 kw all locations = 0.6

Holophane GPD2 P30 30K AS 5 N
 SCALED PHOTOMETRY test report no. ISF 30285P3
 lamp(s): LED
 ballast: LED DRIVER
 candela file: GPD2_P30_30K_AS_5_N.ies
 1 lamp(s) per luminaire, photometry is absolute
 Light Loss Factor = 0.910, watts per luminaire = 60
 mounting height = 14 ft
 number locations = 2, number luminaires = 2
 kw all locations = 0.1



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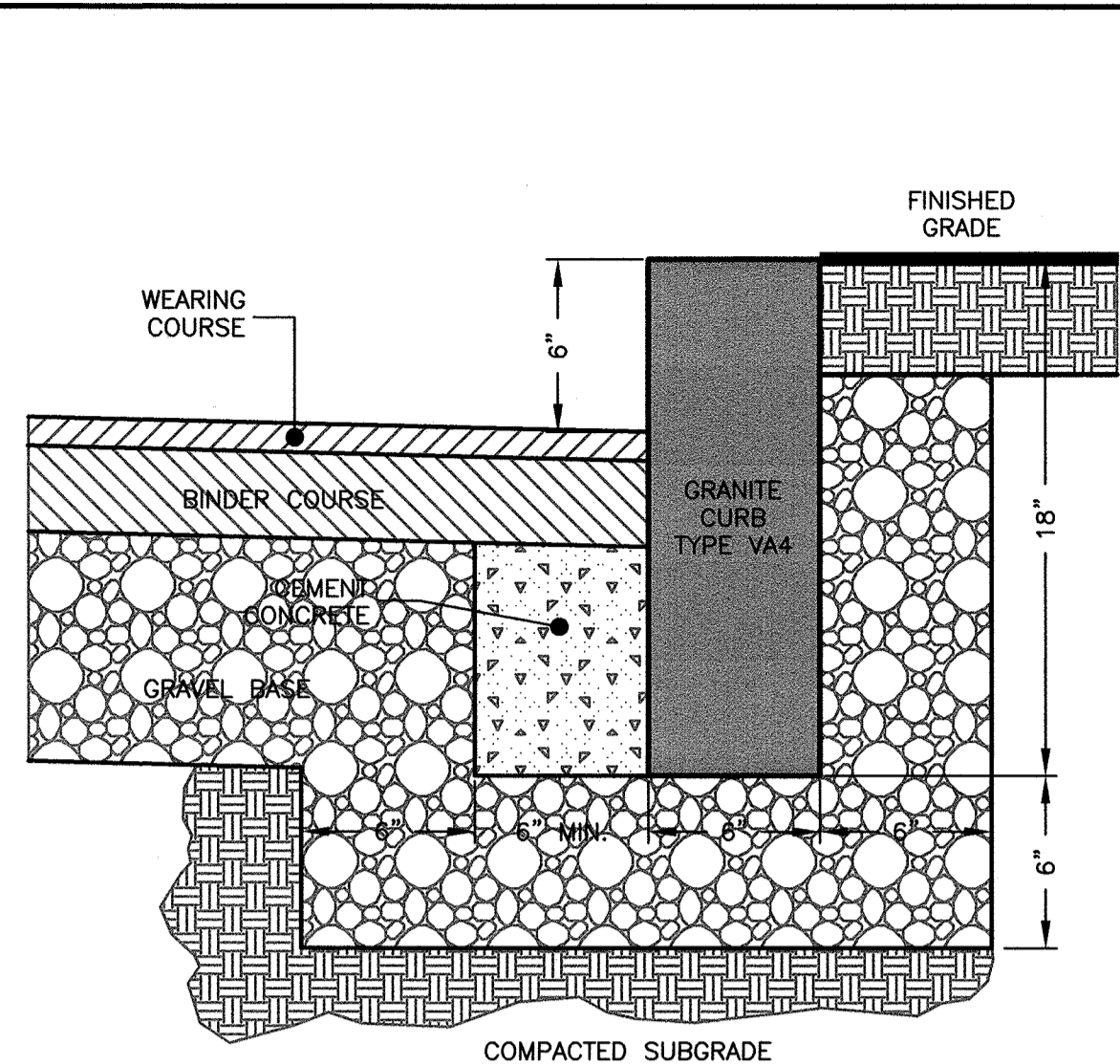
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Date: July 6, 2018

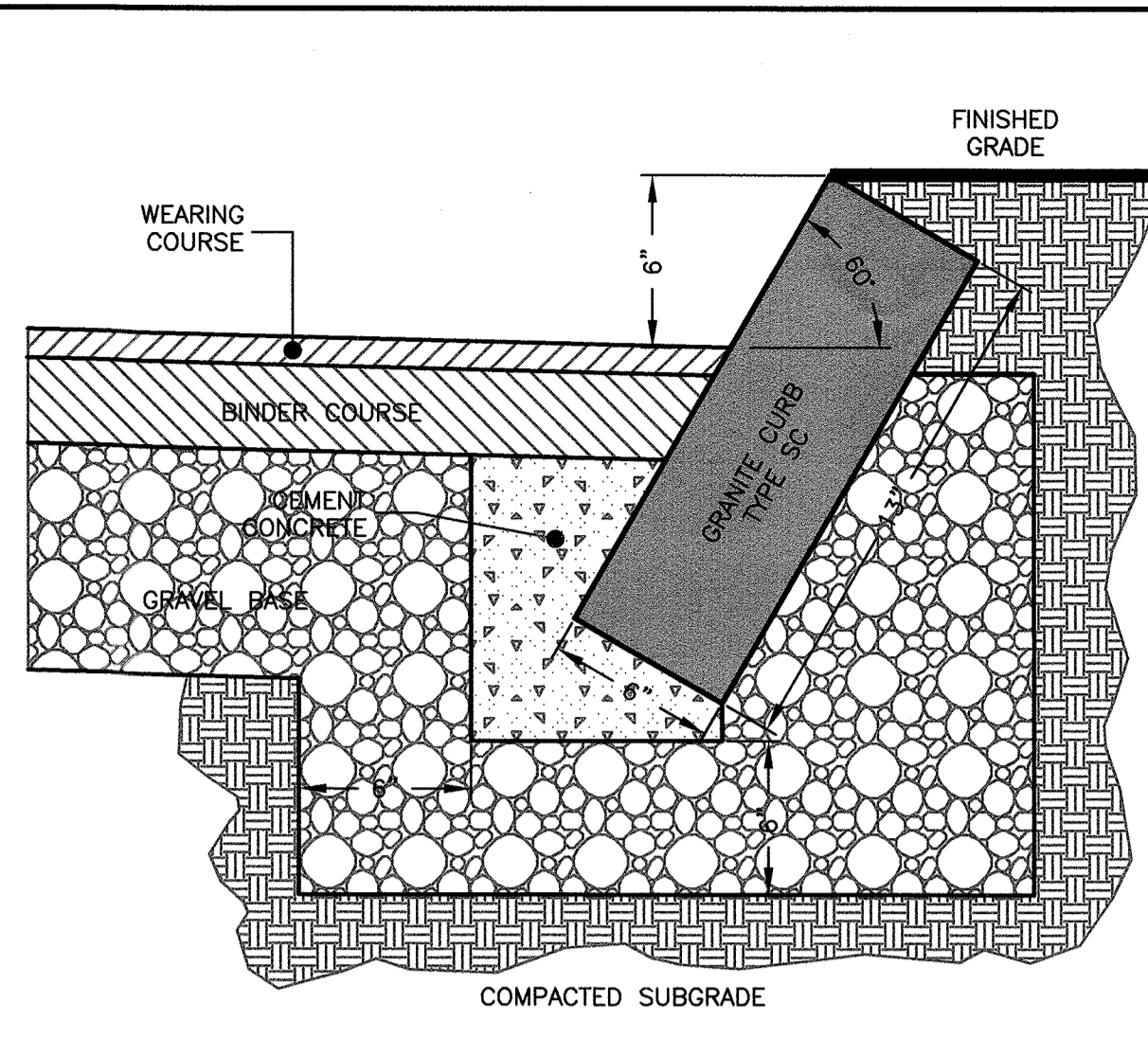
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 PHOTOMETRICS PLAN
 #160 MOULTON DRIVE
 BALI HAI
 LYNNFIELD, MASS.

Drawing No.:
 C3

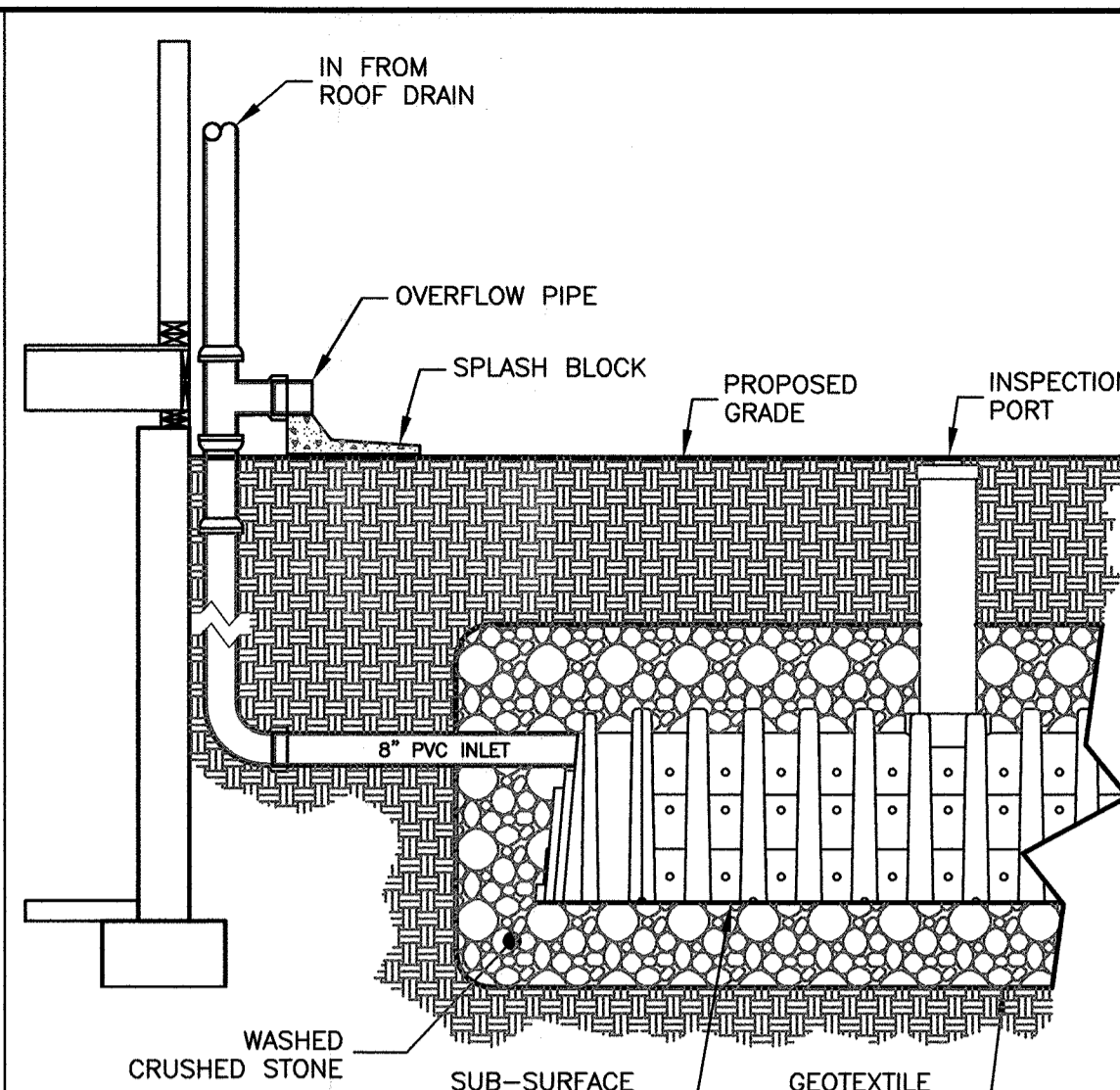
SHEET 3 OF 4



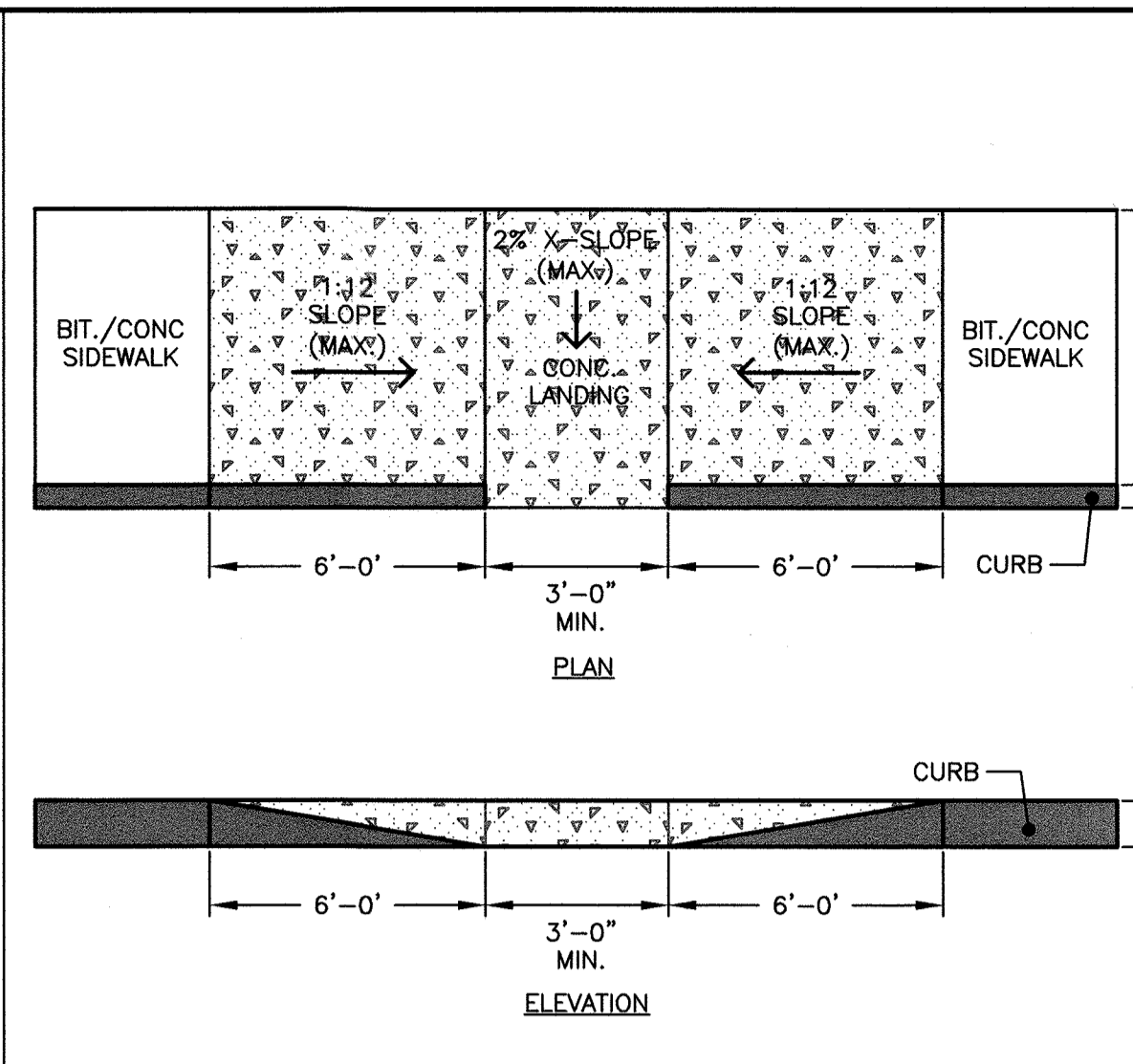
VERTICAL GRANITE CURB
NOT TO SCALE



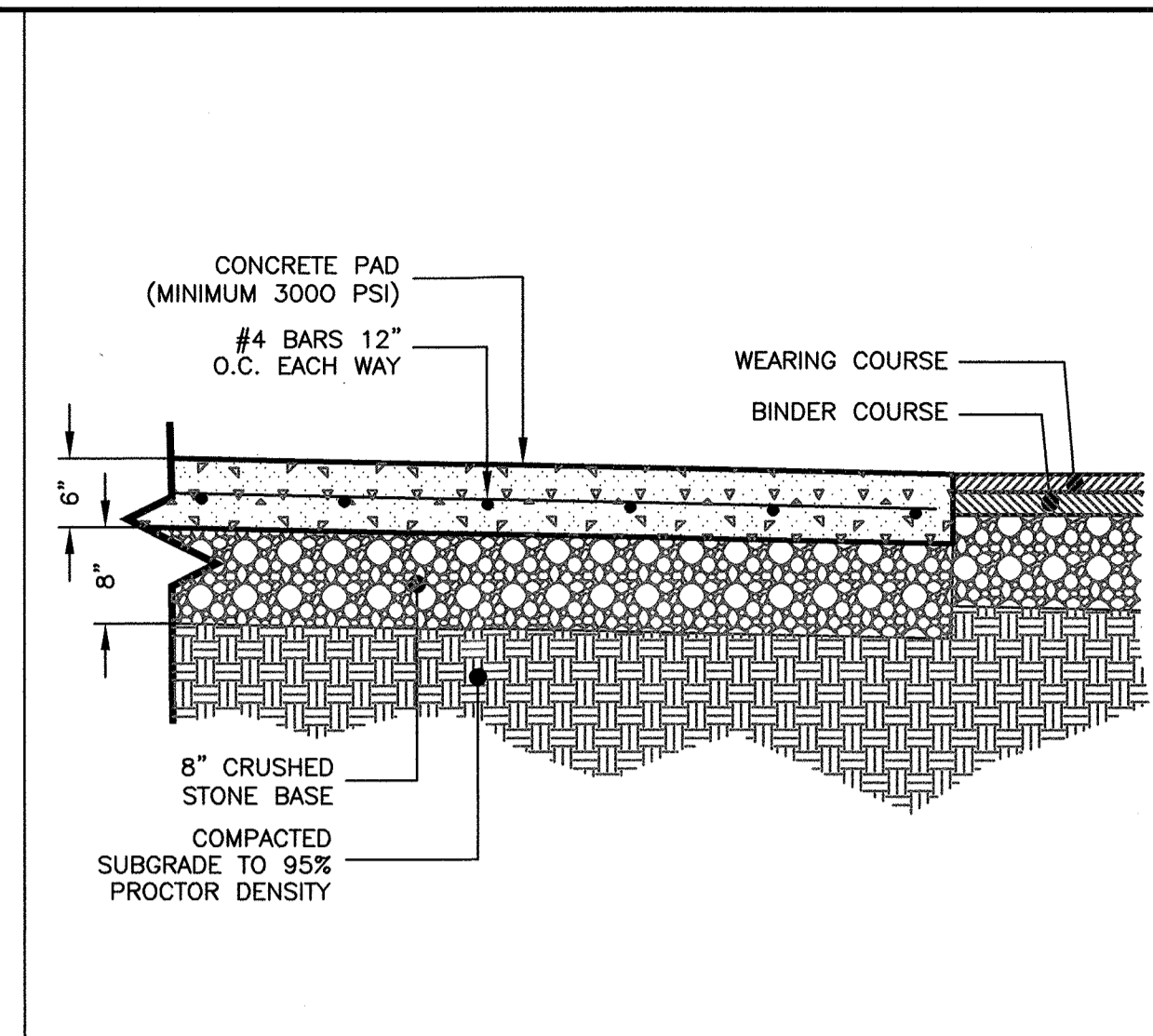
SLOPED GRANITE CURB
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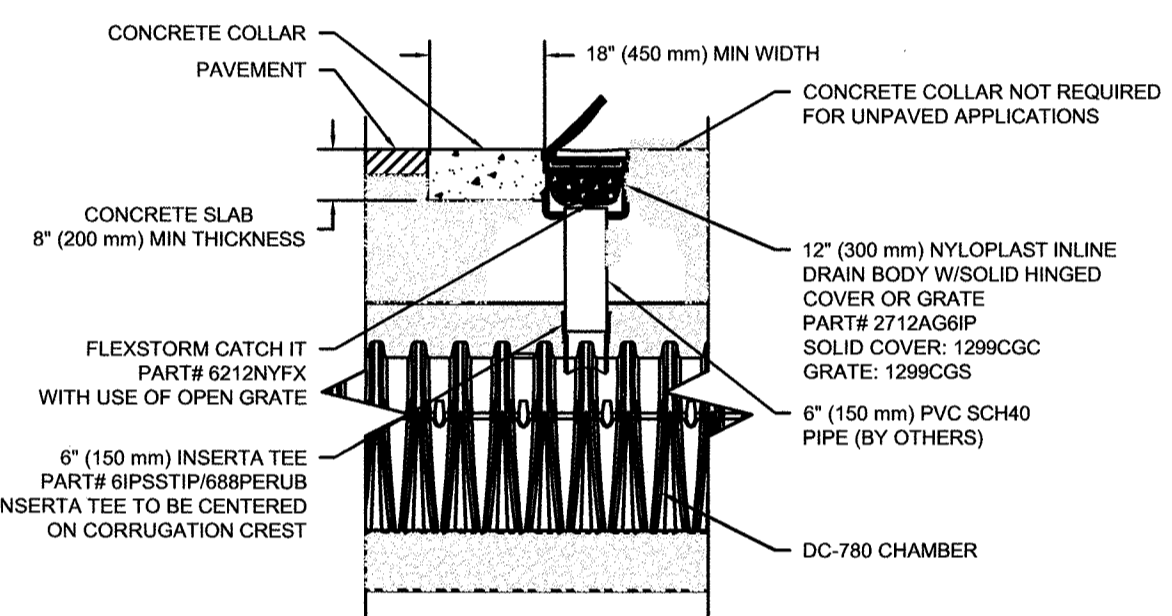
ROOF DRAIN TO SUB-SURFACE CHAMBER
NOT TO SCALE



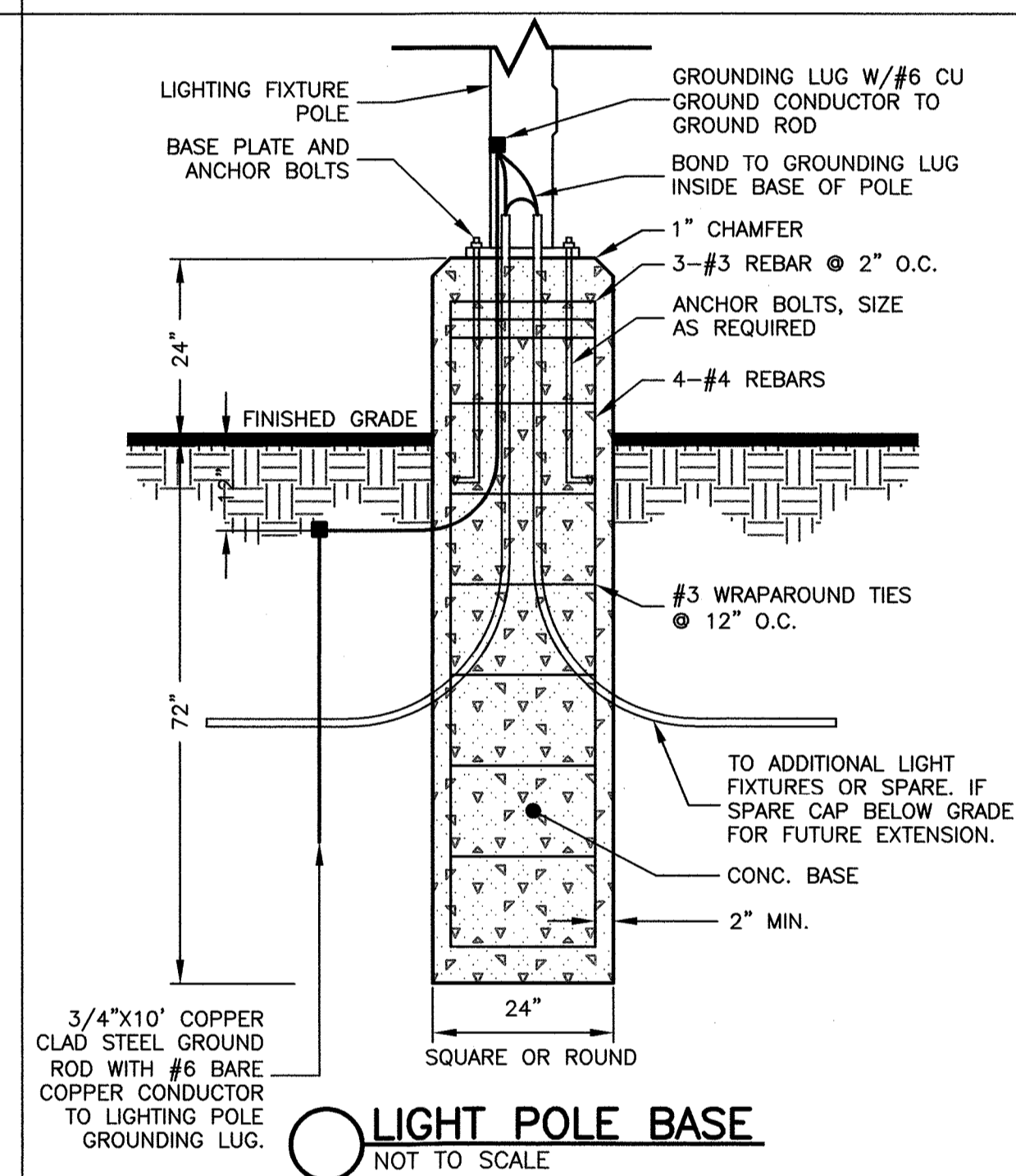
WHEELCHAIR RAMP
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DUMPSTER PAD
NOT TO SCALE



DC-780 6" INSPECTION PORT DETAIL
NOT TO SCALE

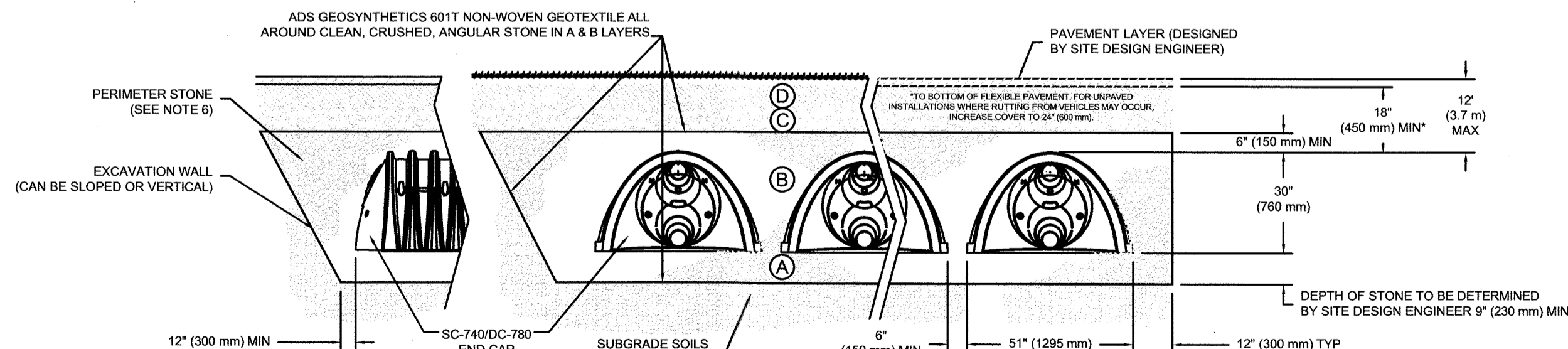


LIGHT POLE BASE
NOT TO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH DC-780 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- DC-780 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- DC-780 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

DC-780 STANDARD CROSS SECTION

DATE: 11/19/14 PROJECT #:

DRAWN: JLM CHECKED: JLM

REV. DATE DESCRIPTION

1. 11/19/14 UPDATE

StormTech

75 WOODHOLE BLVD. ROOBY HILL, CT 06887
 860-888-8888 (888)888-8888
 1-800-733-7473

FOR INFORMATION ONLY: THIS PRODUCT IS REGISTERED WITH THE MASSACHUSETTS REGISTER OF PROFESSIONAL ENGINEERS TO PROVIDE THE SERVICES OF A REGISTERED PROFESSIONAL ENGINEER.

SHEET 1 OF 1

Prepared For:

Owner / Applicant
 Top Tier Properties
 93 Maple Street
 Malden, MA 02148

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 Hayes Engineering, Inc.
 103 Salem Street
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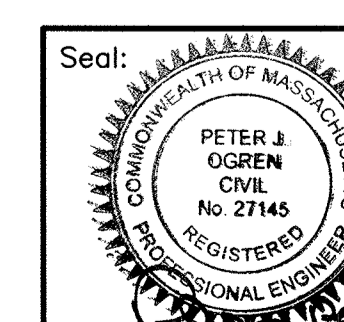
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Scale: 1"=N.T.S.
 Date: July 6, 2018

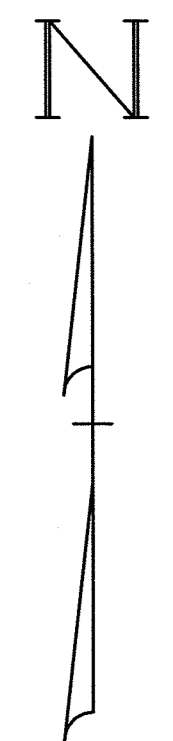
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DETAIL SHEET
 #160 MOULTON DRIVE
 BALI HAI
 LYNNFIELD, MASS.

Drawing No.:
 C4
 SHEET 4 OF 4

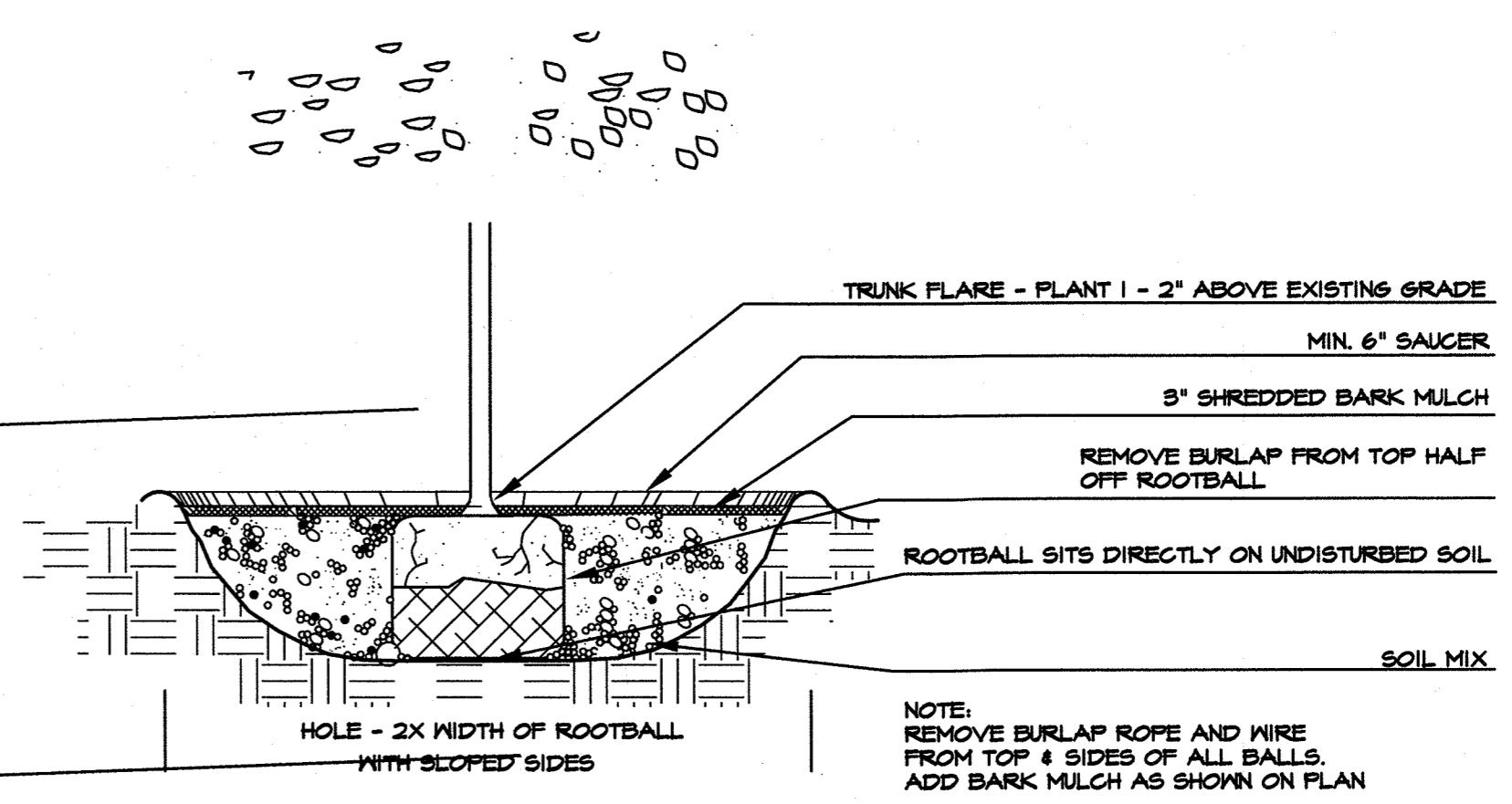
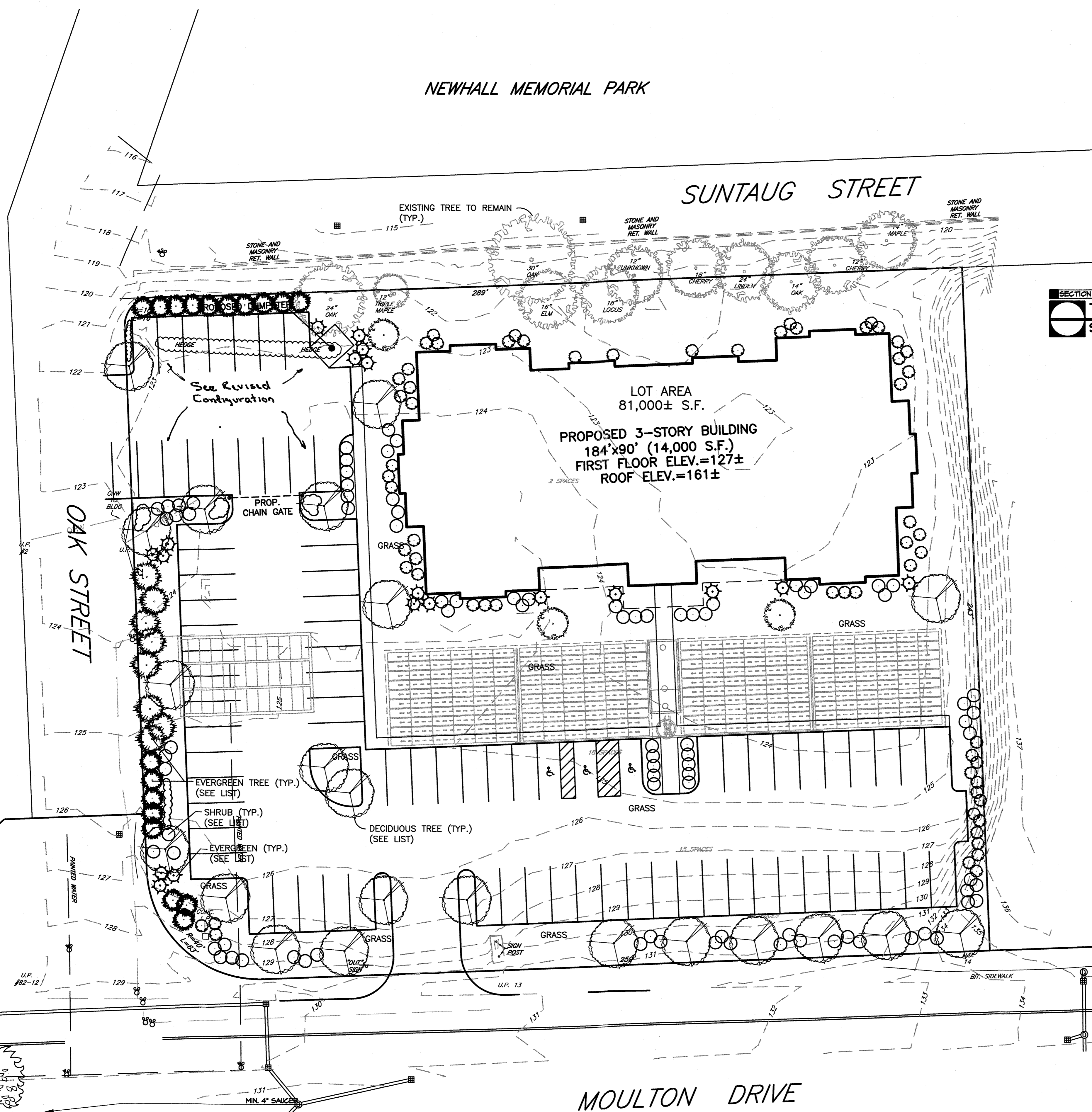


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NEWHALL MEMORIAL PARK

SUNTAUG STREET



SECTION
TREE PLANTING
SCALE: 1/2"=1'-0"

Plant Schedule

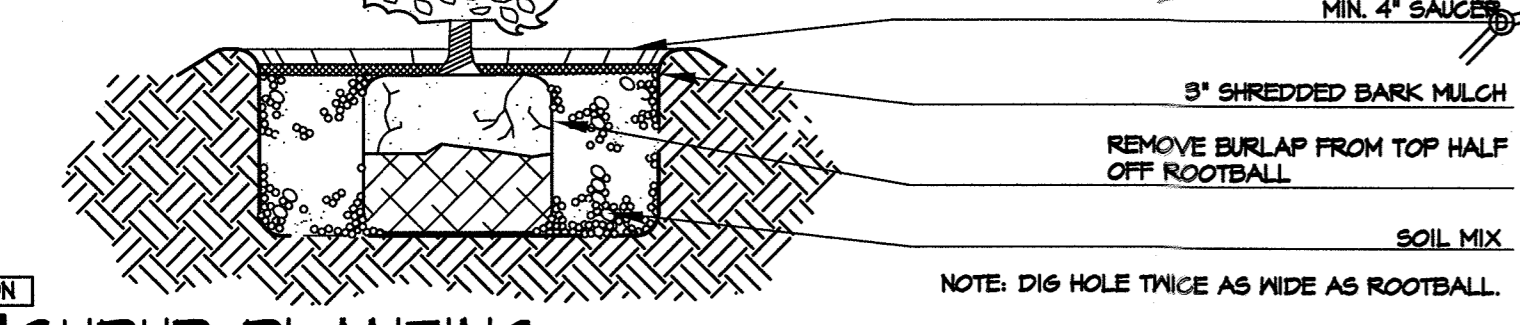
Botanical Name	Common Name	Size
DECIDUOUS TREE OPTIONS:		
Acer rubrum 'Red Sunset'	Red Sunset Maple	2-2.5'cal
Acer saccharum 'Green Mountain'	Sugar Maple	2-2.5'cal
Carpinus caroliniana	American Hornbeam	2-2.5'cal
Carya ovata	Shagbark Hickory	2-2.5'cal
Ostrya virginiana	Hophornbeam	2-2.5'cal
Platanus x acerifolia	London Planetree	2-2.5'cal
Quercus coccinea	Scarlet Oak	2-2.5'cal
Quercus palustris	Pin Oak	2-2.5'cal
Tilia americana	Basswood	2-2.5'cal
Tilia cordata 'Greenspire'	Greenspire Linden	2-2.5'cal
Zelkova serrata	Japanese Zelkova	2-2.5'cal

Botanical Name	Common Name	Size
EVERGREEN TREE OPTIONS:		
Abies concolor	White Fir	8-10'
Picea abies	Norway Spruce	8-10'
Picea glauca	White Spruce	8-10'
Picea omorika	Serbian Spruce	8-10'
Picea pungens 'Glauca'	Colorado Blue Spruce	8-10'
Pinus thunbergii	Japanese Black Pine	8-10'
Tsuga canadensis	Hemlock	8-10'
Juniperus chinensis 'Blue Point'	Blue Point Juniper	6-7'
Juniperus chinensis 'Mountbatten'	Mountbatten Juniper	8-10'
Juniperus virginiana	Eastern Red Cedar	8-10'
Pinus resinosa	Red Pine	8-10'
Pinus strobus	White Pine	8-10'
Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	8-10'
Thuja x plicata 'Green Giant'	Green Giant Arborvitae	8-10'

Botanical Name	Common Name	Size
FLOWERING TREE OPTIONS:		
Cercis canadensis	Eastern Redbud	2-2.5'cal
Cornus florida	White Dogwood	2-2.5'cal
Cornus kousa	Korean Dogwood	2-2.5'cal
Cornus mas	Corneliancherry	2-2.5'cal
Crataegus phaenopyrum	Washington Hawthorne	2-2.5'cal
Magnolia x soulangiana	Saucer Magnolia	8-10'
Sophora japonica	Japanese Pagodatree	2-2.5'cal

Botanical Name	Common Name	Size
SHRUB OPTIONS:		
Cornus alba 'Elegantissima'	Variegated Red Twig Dogwood	2-3'
Cornus racemosa	Grey Dogwood	2-3'
Forsythia	Forsythia	2-3'
Ilex glabra 'Shamrock'	Shamrock Inkberry	2-3'
Ilex verticillata	Winterberry	2-3'
Itea virginica	Virginia Sweetstirpe	2-3'
Kalmia latifolia	Mountain Laurel	2-3'
Myrica pennsylvanica	Northern Bayberry	2-3'
Physocarpus opulifolius 'Monlo'	Diabolo Ninebark	2-3'
Prunus Maratima	Beach Plum	2-3'
Syringa vulgaris	Common Lilac	2-3'
Viburnum dentatum	Arrowwood	2-3'

SECTION
SHRUB PLANTING
SCALE: 1/2"=1'-0"



NORTHERN CIRCUMFERENTIAL HIGHWAY
(ROUTE 128 - 1959 STATE HIGHWAY ALTERATION)

ASSESSORS MAP 47 PARCEL 2548

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Scale: 1"=20'
0' 10' 20' 40'

Date: June 26, 2018

Drawing Title:

LANDSCAPE PLAN
#160 MOULTON DRIVE
BALI HAI
LYNNFIELD, MASS.

Drawing No.:

1-1

SHEET 1 OF 1