

# SITE DEVELOPMENT PLANS

FOR

33 RIVERSIDE DRIVE  
PEMBROKE, MA

MAY 24, 2023

SHEET INDEX						
SHEET No.	DESCRIPTION	LATEST REVISED DATE	CONSTRUCTION	REVISIONS		
1	COVER SHEET					
2	EXISTING CONDITIONS PLAN					
3	LAYOUT PLAN					
4	GRADING PLAN					
5	SEWER & DRAINAGE PLAN					
6	UTILITY PLAN					
7	DETAIL SHEET					
8	DETAIL SHEET					
9	DETAIL SHEET					
	PHOTOMETRIC PLAN					

## OWNER/APPLICANT:

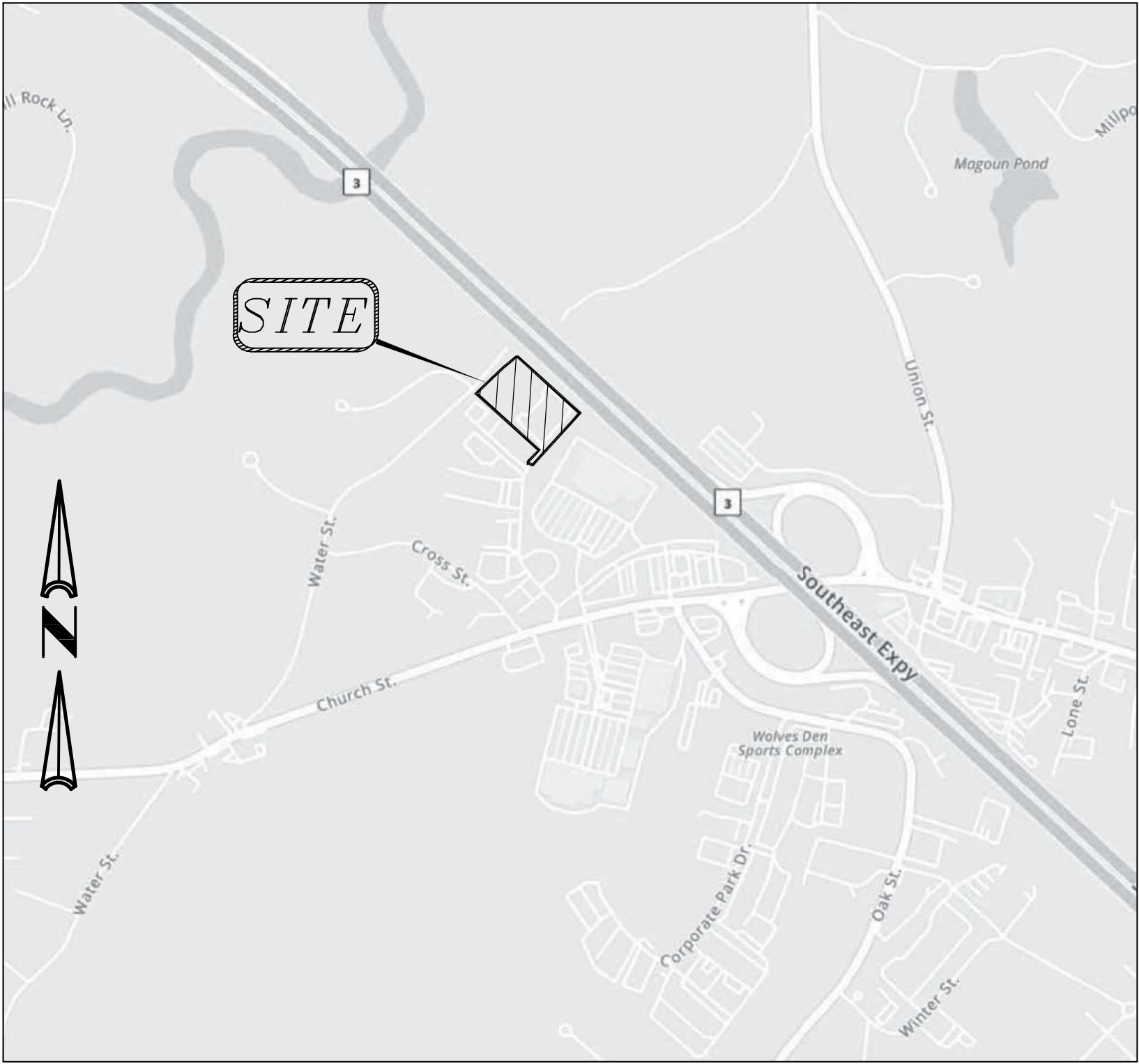
KRR PEMBROKE LLC  
c/o RADER PROPERTIES  
80 WASHINGTON ST. BLDG J-40  
NORWELL, MA 02061

## CIVIL ENGINEERS:

KELLY ENGINEERING GROUP, INC.  
0 CAMPANELLI DRIVE  
BRAINTREE, MA 02184

## ARCHITECT:

ROTH & SEELEN, INC  
50 SOUTH STREET  
HINGHAM, MA 02043

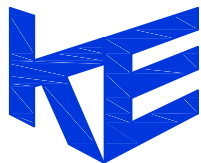


LOCATION MAP

Brandon Li  
2023.05.25  
16:51:27  
-04'00'



SCALE	JOB #
NA	F:\P\2023-026
DATE	DRAWN BY
05/24/23	C.J.L.
SHEET	CHKD BY
1 of 9	DAM
FILE #	APPD BY
TS00	BGL



33 RIVERSIDE DRIVE  
PEMBROKE, MA

KELLY ENGINEERING GROUP  
civil engineering consultants  
0 Campanelli Drive, Braintree, MA 02184  
Phone: 781-843-4333 www.kellyengineeringgroup.com

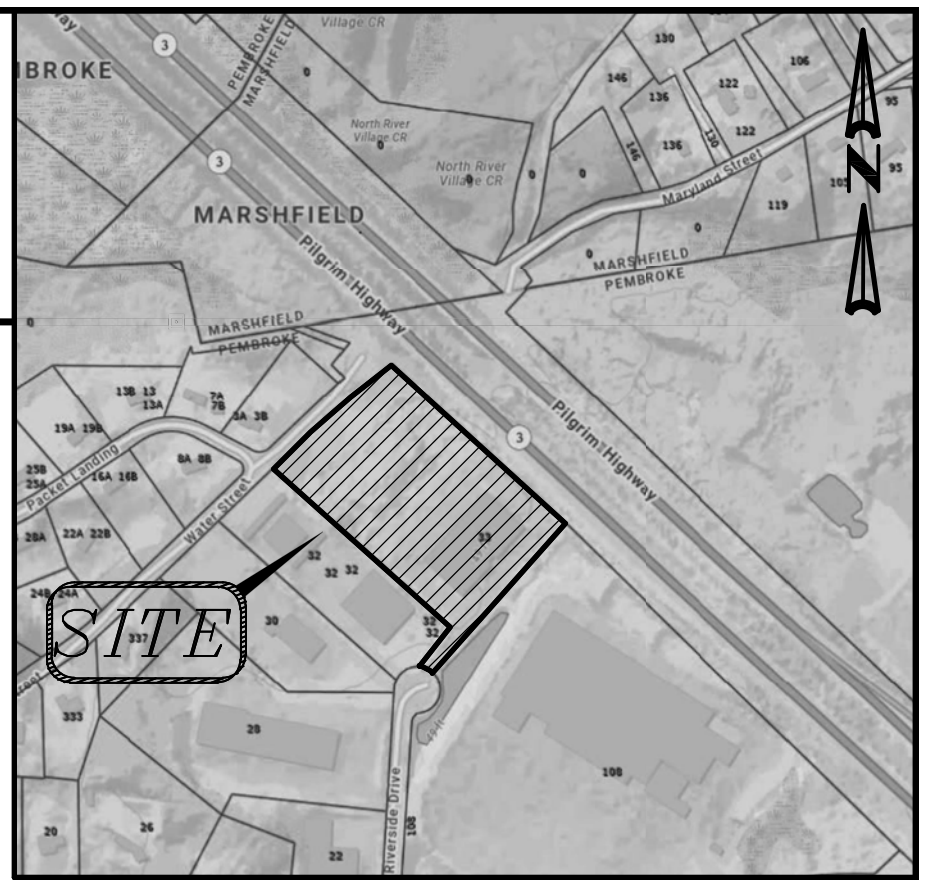
SHEET NO.

1



ROUTE 3  
COMMONWEALTH OF MASSACHUSETTS  
(PUBLIC - 300' WIDE LIMITED ACCESS HIGHWAY)

BENCHMARK: MAG NAIL  
SET IN PAVEMENT  
EL. = 46.01



LOCUS MAP  
(NOT TO SCALE)

LEGEND

	CATCH BASIN
	DRAIN MANHOLE
	TELEPHONE MANHOLE
	SEWER MANHOLE
	MANHOLE
	TREE LINE
	POST INDICATOR VALVE
	HYDRANT
	WATER VALVE
	GAS METER
	GAS VALVE
	OVERHEAD ELECTRIC
	GUY POLE
	UTILITY POLE
	ELECTRIC HAND HOLE
	LIGHT POLE
	GUY WIRE
	SIGN
	SLOPED GRANITE CURB
	BITUMINOUS CONCRETE CURB
	VERTICAL GRANITE CURB
	CAPE COD BERM
	CONCRETE
	BITUMINOUS
	LANDSCAPED
	STONE BOUND/ DRILL HOLE FOUND
	DRILL HOLE FOUND
	HANDICAP PARKING
	BOLLARD
	MAILBOX
	GUARDRAIL
	WETLAND FLAG
	WETLAND
	WETLAND LINE
	MAJOR CONTOUR
	MINOR CONTOUR
	SPOT GRADE
	SEWER LINE
	WATER LINE
	GAS LINE
	DRAIN LINE
	TELEPHONE LINE
	TEST PITS
	BORING

PLAN REFERENCES:

(Plymouth County Registry of Deeds)

- 1.) Plan 173 of 1984
- 2.) Plan 480 of 2012
- 3.) Plan 799 of 1983
- 4.) Plan 830 of 1997

CURRENT OWNER:

KRR PEMBROKE LLC  
Deed Bk: 18507 Pg: 5  
Property ID#: F15-60

NOTES:

- 1.) UNDERGROUND FEATURES HAVE BEEN COMPILED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND KELLY ENGINEERING GROUP, INC. DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS PLAN AS A RESULT. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE EXISTENCE OF WHICH ARE UNKNOWN TO KELLY ENGINEERING GROUP, INC. THE SIZE, LOCATION, AND EXISTENCE OF ALL SUCH FEATURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION.
- 2.) THE LOCATION OF ALL UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED USING ASCE 38-02 (STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA) QUALITY LEVEL C.
- 3.) THE SITE DETAIL AND SURFACE IMPROVEMENTS DEPICTED HEREON WERE OBTAINED FROM AN ON THE GROUND SURVEY PERFORMED BY KELLY ENGINEERING GROUP ON MARCH 20, 2023.
- 4.) THE SURVEYED PREMISES IS LOCATED WITHIN FLOOD ZONE "X" (UN-SHADED) AND FLOOD ZONE "A" SHOWN ON THE FLOOD INSURANCE RATE MAPS (FIRM'S) FOR THE TOWN OF PEMBROKE, MASS. DATED 07/06/2021, COMMUNITY PANEL NUMBER 25023C0207K.
- 5.) THE VERTICAL DATUM SHOWN HEREON IS BASED ON NAVD83 (NORTH AMERICAN VERTICAL DATUM OF 1988), ESTABLISHED VIA GPS.
- 6.) THE FIELD SURVEY FOR BOUNDARY AND TOPOGRAPHY SHOWN HEREON WAS ON THE GROUND BETWEEN JUNE OF 2021 AND JUNE OF 2022 BY KELLY ENGINEERING GROUP, INC.

GRAPHIC SCALE



( IN FEET )  
1 inch = 30 ft.

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SCALE  
1" = 30'

DATE  
05/24/2023

SHEET  
2 of 9

FILE #  
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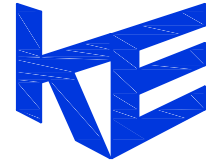
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DRAWN BY  
JPM

CHKD BY  
SMH

APPD BY  
SMH

RADER PROPERTIES, INC  
33 RIVERSIDE DRIVE  
PEMBROKE, MASSACHUSETTS  
EXISTING CONDITIONS  
PLAN



KELLY ENGINEERING GROUP  
civil engineering consultants  
0 Campanelli Drive, Braintree, MA 02184  
Phone: 781-843-4333 www.kellyengineeringgroup.com



Steven M. Horsfall  
Digitally signed by Steven M. Horsfall  
Date: 2023.05.25 16:57:27 -0400

SHEET NO.

2



ROUTE 3  
COMMONWEALTH OF MASSACHUSETTS  
(PUBLIC - 300' WIDE LIMITED ACCESS HIGHWAY)

ZONING LEGEND

ZONING DISTRICT: INDUSTRIAL B  
OVERLAY DISTRICT: MEDICAL MARIJUANA OVERLAY

	REQUIRED	EXISTING	PROVIDED	COMPLIANCE
MIN. AREA	80,000 S.F.	272,000 S.F.	SAME	YES
MIN. FRONTAGE	200'	411.01'	SAME	YES
MIN. LOT WIDTH	135'	408.9'	SAME	YES
MIN. YARD -FRONT	60'	>60' (1)	140.4'	YES
-SIDE	20'	77.3'	58.7'	YES
-REAR	20'	74.2'	50.2'	YES
MAX. STORIES	4	2	SAME	YES
MAX. COVERAGE	80% (2)	40%	79%	YES
MAX. BFA	0.45 (3)	0.24	0.34	YES
PARKING TOTAL	98 (4)	172	270 [98 NEW] (4)	YES
-SIZE	9' X 18'	NA	9' X 18'	YES
-HANDICAP	7	3	7	YES
-LOADING	2	0	14	YES
MAX. DRVWY. WIDTH	41' (5)	24'	SAME	YES
MIN. LANDSCAPING				
-FRONT	50% (6)	> 50%	70%	YES
-SIDE	40% (6)	> 40%	45%	YES
-REAR	40% (6)	56%	SAME	YES

NOTES:

- LOT LINES ADJACENT TO RIVERSIDE DRIVE AND WATER STREET ARE FRONT YARDS, THE LOT LINE OPPOSITE RIVERSIDE DRIVE IS THE REAR YARD, AND ALL OTHER LOT LINES ARE SIDE YARDS.
- COVERAGE: THE SUM OF THE GROUND AREA OF THE LOT COVERED, OR TO BE COVERED, BY ALL BUILDINGS OR STRUCTURES AND ALL PAVED AREAS, TO INCLUDE WALKWAYS, PATIOS, ROADWAYS, ACCESS WAYS, TURNAROUNDS, LOADING AREAS, AND PARKING AREAS SHALL NOT EXCEED EIGHTY PERCENT OF THE TOTAL SITE AREA.
- BUILDING FLOOR AREA: THE BUILDING FLOOR AREA SHALL NOT EXCEED FORTY-FIVE PERCENT OF THE TOTAL SITE AREA.  
 $BFA = (33,268 \text{ S.F. (1ST FLOOR)}) + 15,000 \text{ S.F. (2ND FLOOR)} + 45,000 \text{ S.F.} / 272,000 \text{ S.F.} = 0.34$
- PARKING REQUIRED:

ASSUMED:  
85% OF THE BUILDING IS WAREHOUSE SPACE AND THE OTHER 15% IS OFFICE SPACE.  
THE NUMBER OF EMPLOYEES IN WAREHOUSE IS 1 EMPLOYEE PER 1,000 S.F. OF WAREHOUSE SPACE.  
THE NUMBER OF EMPLOYEES IN OFFICE IS 1 EMPLOYEE PER 150 S.F. OF OFFICE SPACE.

INDUSTRIAL, MANUFACTURING AND WHOLESALE USES: ONE SPACE FOR EACH EMPLOYEE ON ANY ONE SHIFT.

85% OF THE TOTAL BUILDING (45,000 S.F.) = 38,250 S.F.

# OF WAREHOUSE EMPLOYEE SPACES =  $38,250 \text{ S.F.} / 1,000 \text{ S.F.} = 38 \text{ EMPLOYEES SPACES}$

OFFICES, BANKS AND SIMILAR BUSINESS: ONE SPACE FOR EACH ONE HUNDRED AND FIFTY SQUARE FEET OF FLOOR AREA PLUS ONE SPACE FOR EACH THREE EMPLOYEES OR NEAREST MULTIPLE THEREOF.

15% OF THE TOTAL BUILDING (45,000 S.F.) = 6,750 S.F.

PARKING FOR OFFICE FLOOR AREA =  $6,750 \text{ S.F.} / 150 \text{ S.F.} = 45 \text{ SPACES}$

# OF OFFICE EMPLOYEE SPACES =  $(6,750 \text{ S.F.} / 150 \text{ S.F.}) / 3 \text{ EMPLOYEES} = 15 \text{ EMPLOYEES SPACES}$

TOTAL REQUIRED PARKING FOR PROPOSED BUILDING = 98 SPACES

PARKING FOR PROPOSED BUILDING = 98 SPACES

PARKING FOR EXISTING BUILDING = 172 SPACES

TOTAL PROPOSED PARKING = 270 SPACES = 172 EXISTING SPACES + 98 NEW SPACES FOR PROPOSED

- DRIVEWAYS: DRIVEWAYS PROVIDING A MEANS OF ACCESS AND EGRESS FOR EACH INDIVIDUAL LOT OR SHALL NOT EXCEED ONE FOOT IN WIDTH FOR EACH TEN FEET OF FRONTAGE, EXCLUDING RADII, AND THERE SHALL NOT BE MORE THAN TWO SUCH DRIVEWAYS. COMMON DRIVEWAYS PROVIDING A MEANS OF ACCESS AND EGRESS FOR MORE THAN ONE LOT SHALL NOT BE ALLOWED.

- LANDSCAPING: AT LEAST FIFTY PERCENT OF ANY YARD OR BUFFER STRIP ABUTTING A RESIDENTIAL USE OR DISTRICT SHALL BE LANDSCAPED OR LEFT IN A NATURAL STATE. ALONG ANY LOT LINE ABUTTING A RESIDENTIAL USE OR DISTRICT THERE SHALL BE PLANTED A DENSE NATURAL HEDGE GREATER THAN SIX FEET IN HEIGHT AND LOCATED WITHIN TEN FEET OF SAID LOT LINE. SAID NATURAL HEDGE SHALL PROVIDE A VISUAL SCREEN BETWEEN ANY STRUCTURE OR PARKING AREA AND THE RESIDENTIAL AREA.

SCALE 1" = 30'				
DATE 05/24/2023	REV	DATE	REVISION	BY
SHEET 3 of 9				
FILE # LA00				
JOB # F:\P\2023-026				
DRAWN BY AJV				
CHKD BY GSH				
APPD BY BG				
RADER PROPERTIES, INC 33 RIVERSIDE DRIVE PEMBROKE, MASSACHUSETTS LAYOUT PLAN				
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com				

COMMONWEALTH OF MASSACHUSETTS BRANDON G. LI CIVIL No. 57736 REGISTERED PROFESSIONAL ENGINEER	Brandon Li 2023.05.2 5:16:51:48 -04'00'
SHEET NO.	3

PROPOSED BUILDING  
45,000 S.F. ± (FOOTPRINT)  
1 STORY  
98 PARKING SPACES  
14 LOADING DOCK SPACES

LOT AREA  
272,000 S.F.  
6.24 AC.

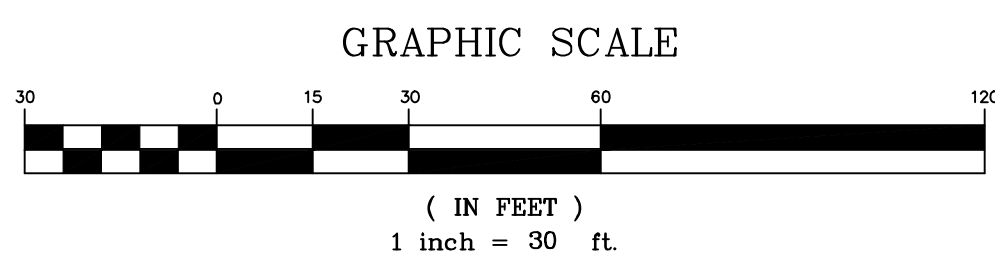
EXISTING BUILDING  
FOOTPRINT AREA = 33,268± S.F.  
2 STORIES  
#33 RIVERSIDE DRIVE  
2ND FLOOR AREA = 15,000 S.F.  
172 EXISTING PARKING SPACES

PLANTING LEGEND

TREES	KEY	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	SPEC
	1	4	BRADFORD CALLERY	PYRUS CALLERYANA "BRADFORD"	2 1/2" - 3"	B & B
	2	6	ARISTOCRAT CALLERY PEAR	PYRUS CALLERYANA VAR. ARISTOCRAT	2" - 2 1/2" CALIPER	B & B
	3	8	GREENSPIRE LINDEN	TILIA CORDATA "GREENSPIRE"	2" - 2 1/2" CALIPER	B & B
	4	8	NORWAY SPRUCE	PICEA ABIES	8"	B & B
SHRUBS	S1	24	AMERICAN CRANBERRY BUSH	VIBURNUM TRILOBUM	#2 POT	B & B
	S2	18	SHASTA VIBURNUM	VIBURNUM PLICATUM VAR. SHASTA	#2 POT	B & B
	S3	18	SHAMROCK INKBERRY	LIECH GLABRA VAR. SHAMROCK	#2 POT	B & B

PROPOSED LEGEND

CCB	CAPE COD BERM
ICC	INTEGRATED CONCRETE CURB
CC	CONCRETE CURB
♿	HANDICAP SPACE
♿	VAN HANDICAP SPACE
→	HANDICAP RAMP
—	CURB STOP
---	SAW CUT/ MATCH PAVEMENT LINE
▨	HEAVY DUTY PAVEMENT
→	TRAFFIC FLOW
—	SIGN
—	WOOD POST GUARDRAIL
—	CHAIN LINK FENCE
—	SNOW STORAGE
□	LIGHT POLES
▢	WALL MOUNTED LIGHT
▶	DOOR LOCATION
●	OVERHEAD DOOR LOCATION



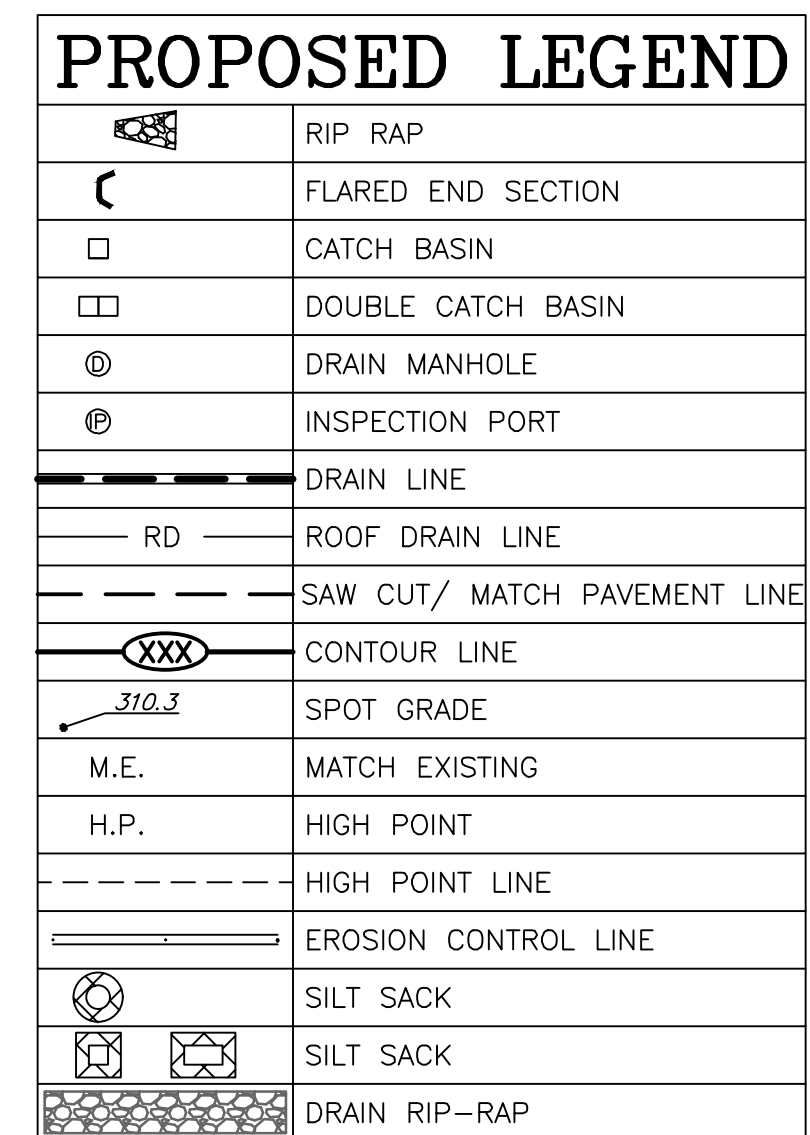
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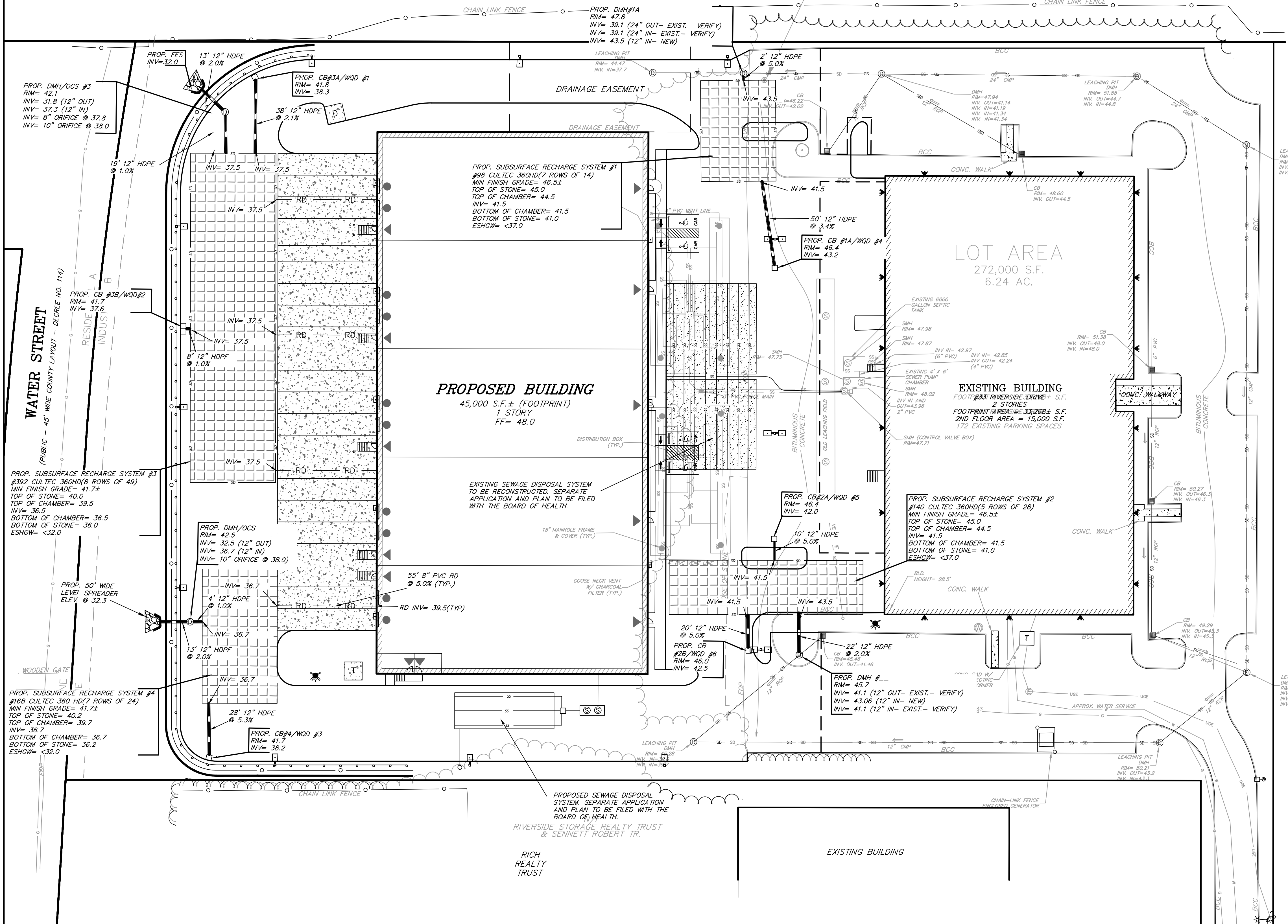


SCALE				
1"= 30'				
DATE				
05/24/2023	REV	DATE	REVISION	BY
SHEET	<b>RADER PROPERTIES, INC</b> <b>33 RIVERSIDE DRIVE</b> <b>PEMBROKE, MASSACHUSETTS</b>  <b>GRADING</b> <b>PLAN</b>			
4 of 9				
FILE #	 Brandon Li 2023.05.25 16:52:04 -04'00'			
GD00				
JOB #	 <b>KELLY ENGINEERING GROUP</b> civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 811-843-4333 www.kellyengineeringgroup.com			
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DRAWN BY	SHEET NO.			
AJY				
CHKD BY				
BGL	<div style="font-size: 48pt; font-weight: bold;">4</div>			
APPD BY				



ROUTE 3  
COMMONWEALTH OF MASSACHUSETTS  
(PUBLIC - 300' WIDE LIMITED ACCESS HIGHWAY)

BENCHMARK: MAG NAIL  
SET IN PAVEMENT  
EL. = 46.01



PROPOSED LEGEND

	RIP RAP
	FLARED END SECTION
	CATCH BASIN
	DRAIN MANHOLE
	INSPECTION PORT
	WATER QUALITY DEVICE
	DRAIN LINE
	ROOF DRAIN LINE
	SEWER MANHOLE
	SEWER LINE

- NOTES:
1. ALL STRUCTURE INVERTS ARE LISTED WITH OUTLET FIRST THEN CLOCKWISE AROUND STRUCTURE.
  2. FOR EXISTING SYMBOL LEGEND SEE SHEET 02

GRAPHIC SCALE



( IN FEET )  
1 inch = 30 ft.

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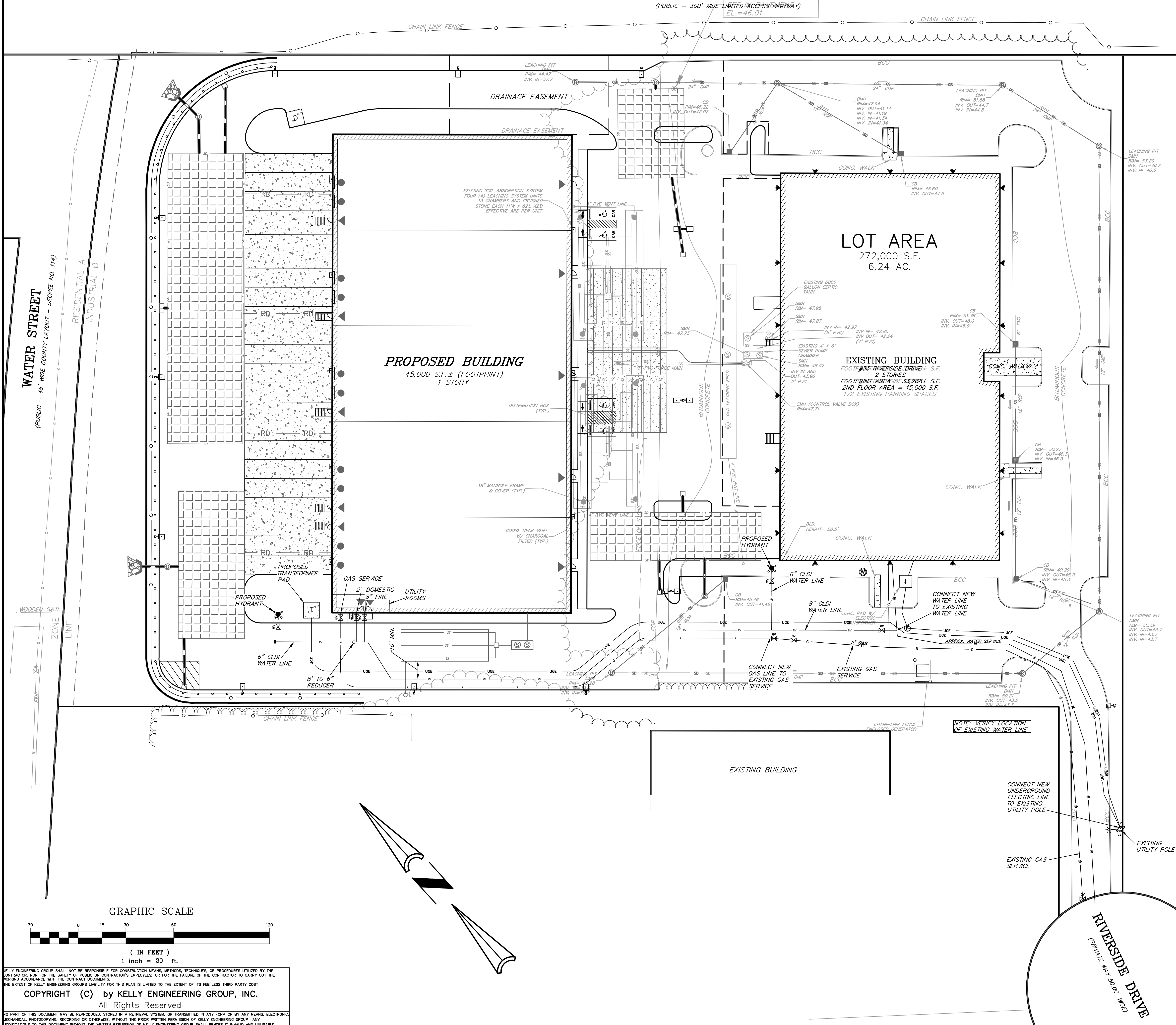
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SHEET 5 of 9				
FILE # SD00				
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DRAWN BY AJV				
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<b>RADER PROPERTIES, INC</b> 33 RIVERSIDE DRIVE PEMBROKE, MASSACHUSETTS <b>SEWER AND DRAINAGE PLAN</b>				
<b>KELLY ENGINEERING GROUP</b> civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com				
Brandon Li 2023.05.25 16:52:19 -04'00'				
SHEET NO. <b>5</b>				



ROUTE 3  
COMMONWEALTH OF MASSACHUSETTS  
(PUBLIC - 300' WIDE LIMITED ACCESS HIGHWAY)  
EL. = 46.01



PROPOSED LEGEND



	RIP RAP
	FLARED END SECTION
	CATCH BASIN
	DRAIN MANHOLE
	INSPECTION PORT
	DRAIN LINE
	ROOF DRAIN LINE
	SEWER MANHOLE
	SEWER LINE
	GAS VALVE
	GAS LINE
	HYDRANT
	WATER VALVE
	WATER LINE
	TRANSFORMER
	UNDERGROUND ELECTRIC LINE

NOTE:  
FOR EXISTING SYMBOL LEGEND SEE SHEET 2

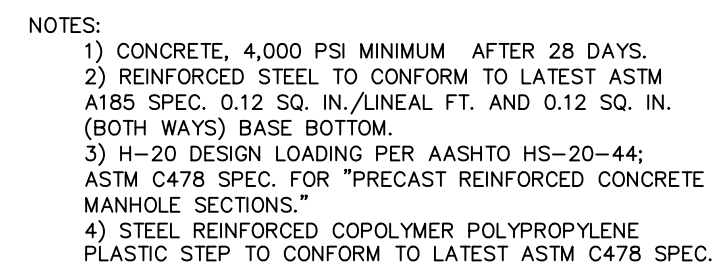
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SHEET 6 of 9				
FILE # UT00				
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SHEET NO. 6				



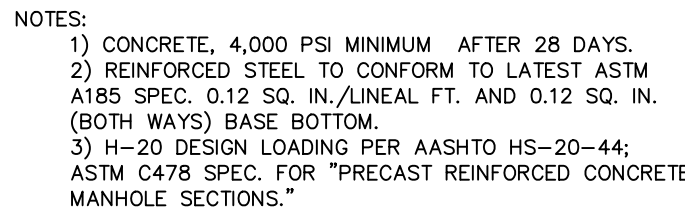


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SHEET	RADER PROPERTIES, INC 33 RIVERSIDE DRIVE PEMBROKE, MASSACHUSETTS					
7 of 9						
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D100	DETAIL SHEET					
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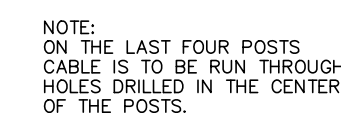





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NOT TO SCALE




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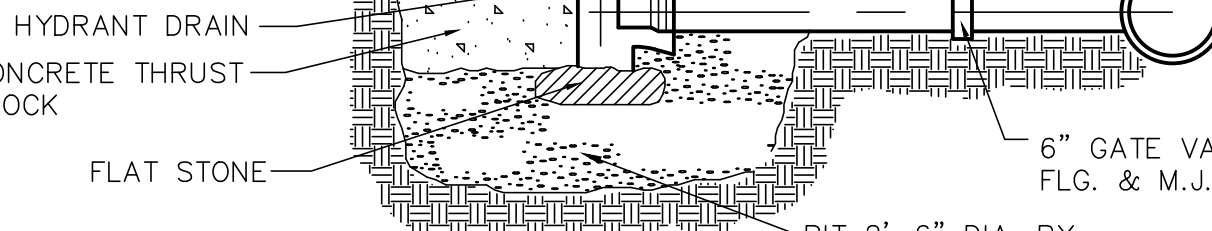


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NOTE: FOR FITTINGS W/LESS THAN 45°  
DEFLECTION USE BEARING AREA FOR 45° BEND  
BASED ON INTERNAL PRESSURE OF 80 PSI



NOT TO SCALE

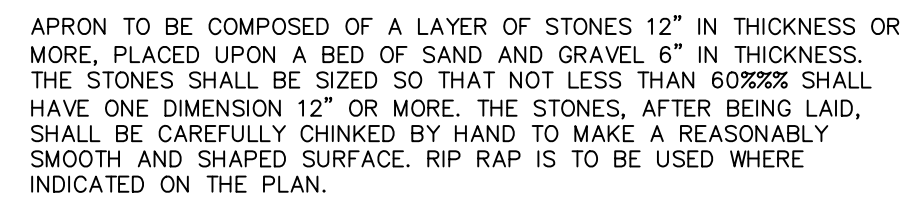
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TRENCH WIDTH: WS OR WU

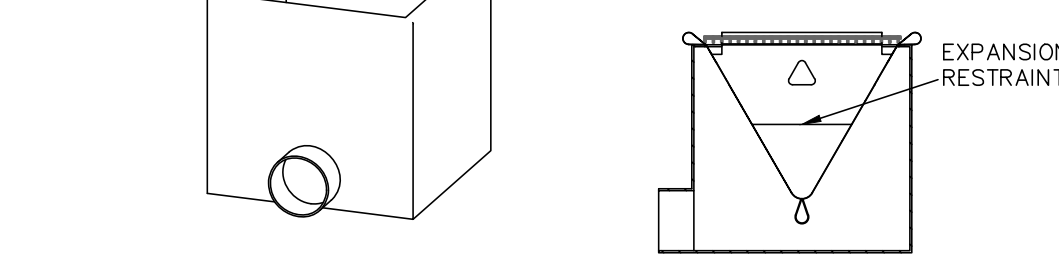


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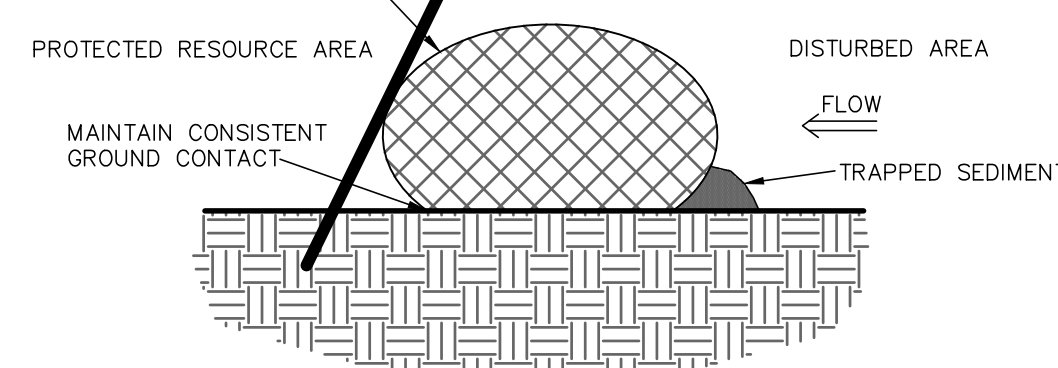


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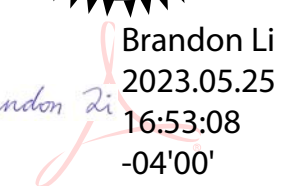


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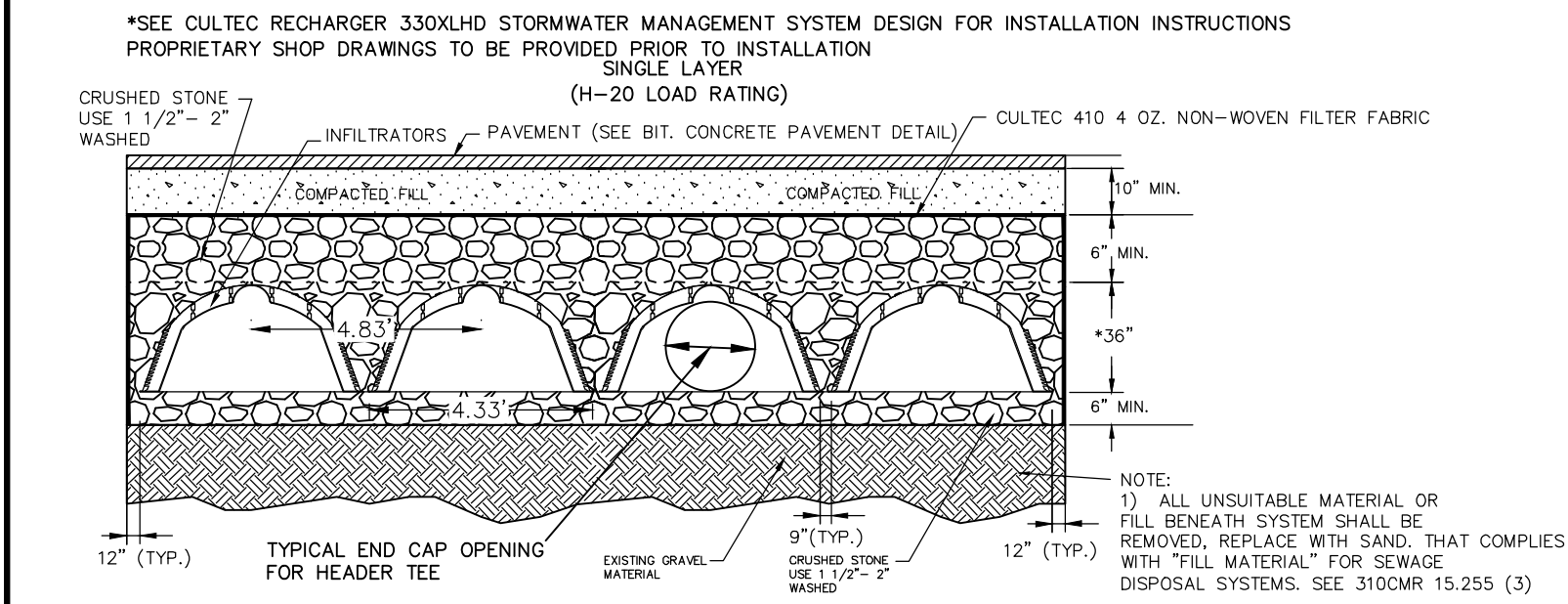


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**TYPICAL SUBSURFACE RECHARGE AREA (CULTEC 360XLHD)  
PLAN VIEW (INFILTRATION TO BE CULTEC OR APPROVED EQUAL)**



**SECTION 1-1 (PARTIAL)**

- STORMWATER MANAGEMENT SYSTEM CONSTRUCTION OPERATION + MAINTENANCE NOTES:**
1. EXTREME CARE SHALL BE TAKEN DURING CONSTRUCTION TO AVOID SILTATION DURING THE CONSTRUCTION PROCESS. SILT CAGES AND HAYBALE DIKES SHALL BE INSPECTED DAILY AND REPLACED IF NECESSARY.
  2. EXTREME CARE SHALL BE TAKEN TO PREVENT COMPACTION OF UNDISTURBED SOILS BENEATH RECHARGE SYSTEM.
  3. THERE SHALL BE NO DISCHARGE OF WATER FOR CONSTRUCTION DEWATERING ACTIVITIES INTO THE STORMWATER MANAGEMENT SYSTEM.
  4. THERE SHALL BE NO DISCHARGE OF STORMWATER INTO THE RECHARGE SYSTEM UNTIL THE SITE HAS BEEN STABILIZED.

**CONSTRUCTION INSPECTION AND MAINTENANCE SCHEDULE:**

**CONSTRUCTION INSPECTION SCHEDULE**

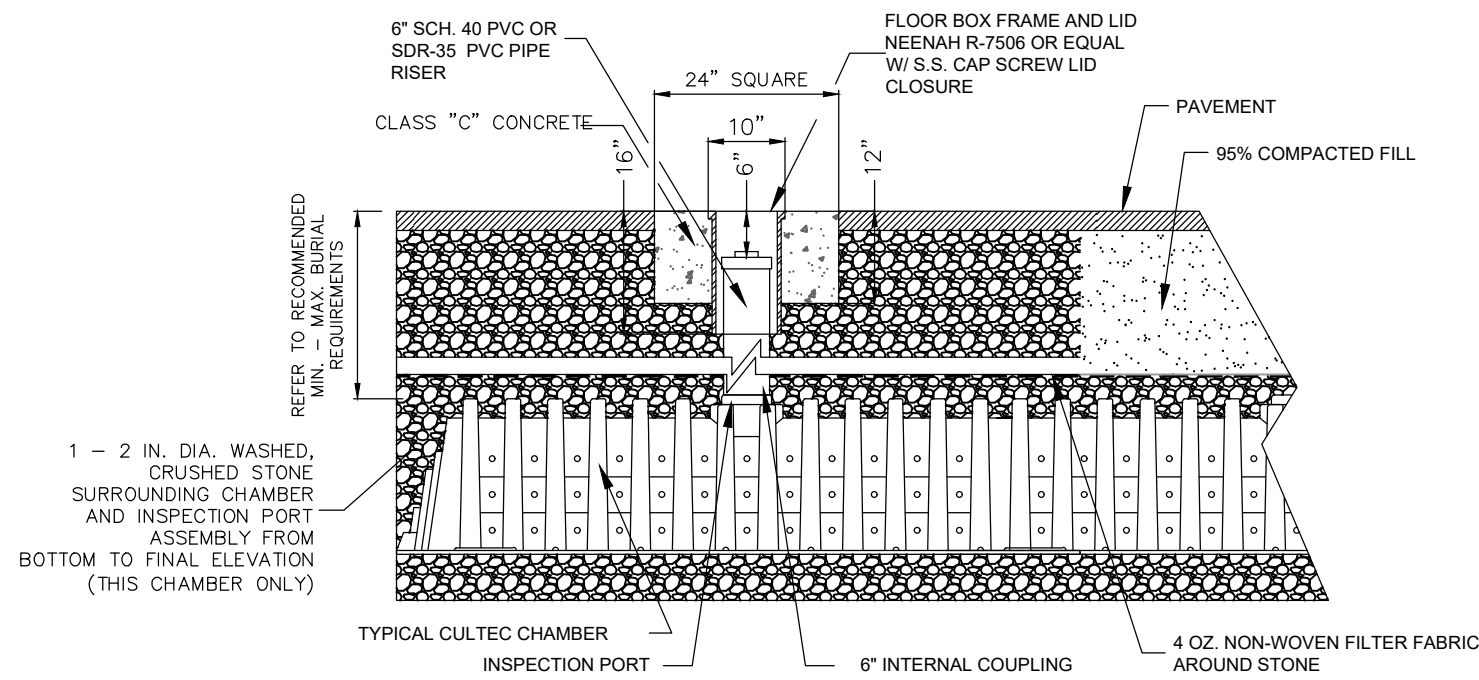
1. WEEKLY INSPECTIONS SHALL BE PERFORMED BY THE APPLICANTS ENGINEER AND A REPRESENTATIVE FROM THE TOWN'S ENGINEERING DEPARTMENT.
2. INSPECTIONS SHALL INCLUDE THE PAVEMENT TO DETERMINE IF ACCUMULATED SEDIMENT IS TO BE REMOVED, OF THE CATCH BASINS TO DETERMINE DEPTH OF SEDIMENTS AND REQUIRED CLEANING, INSPECTION OF THE STORMCEPTOR TO DETERMINE IF CLEANING IS NECESSARY AND INSPECTION OF THE LEACHING SYSTEM SHALL BE CONDUCTED BY THE ENGINEER AND THE TOWN'S ENGINEERING DEPARTMENT.
3. AN INSPECTION OF THE EXCAVATION OF THE LEACHING SYSTEM SHALL BE CONDUCTED BY THE ENGINEER AND A REPRESENTATIVE THE TOWN'S ENGINEERING DEPARTMENT PRIOR TO PLACEMENT OF ANY MATERIAL OR CHAMBERS.

**CONSTRUCTION MAINTENANCE SCHEDULE**

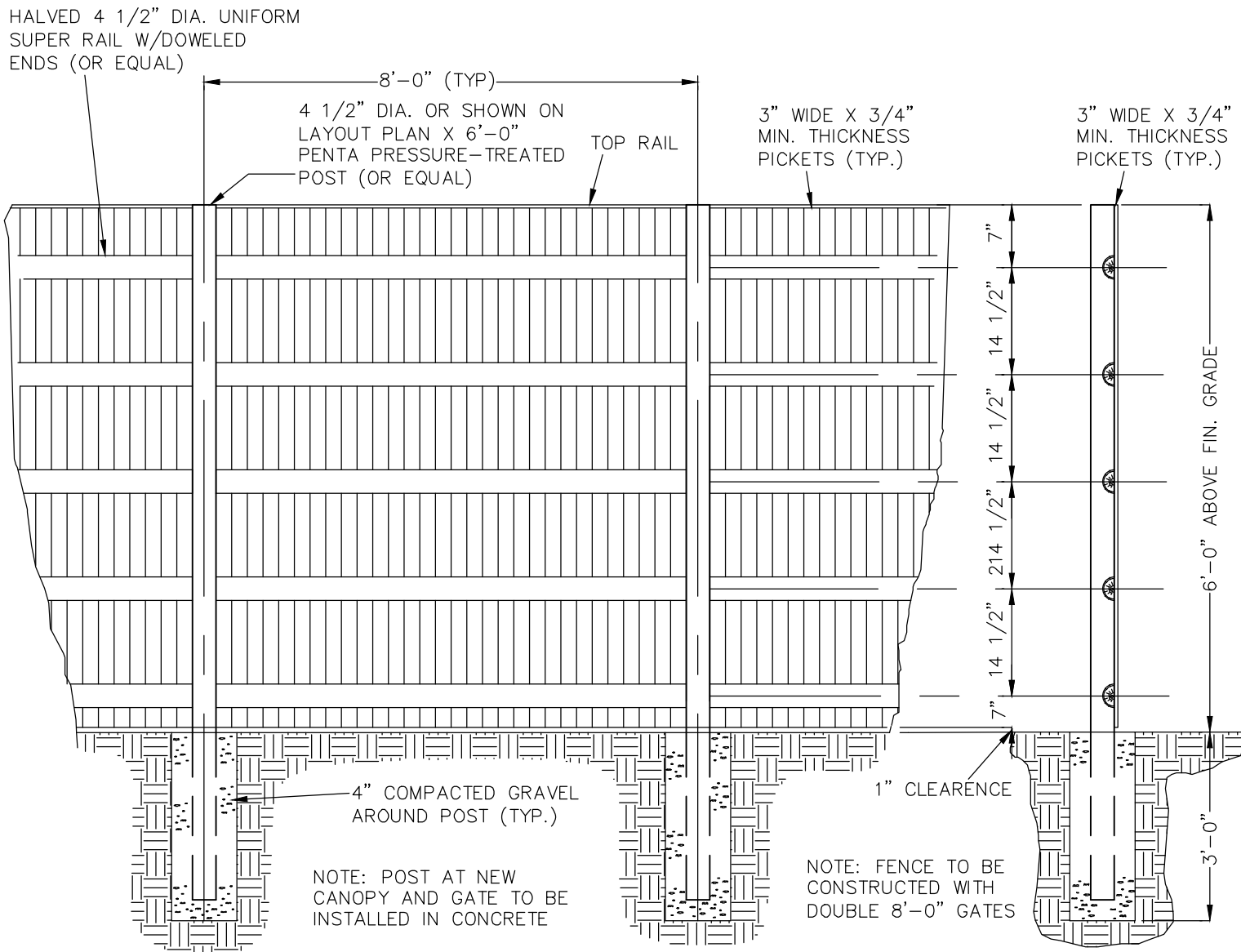
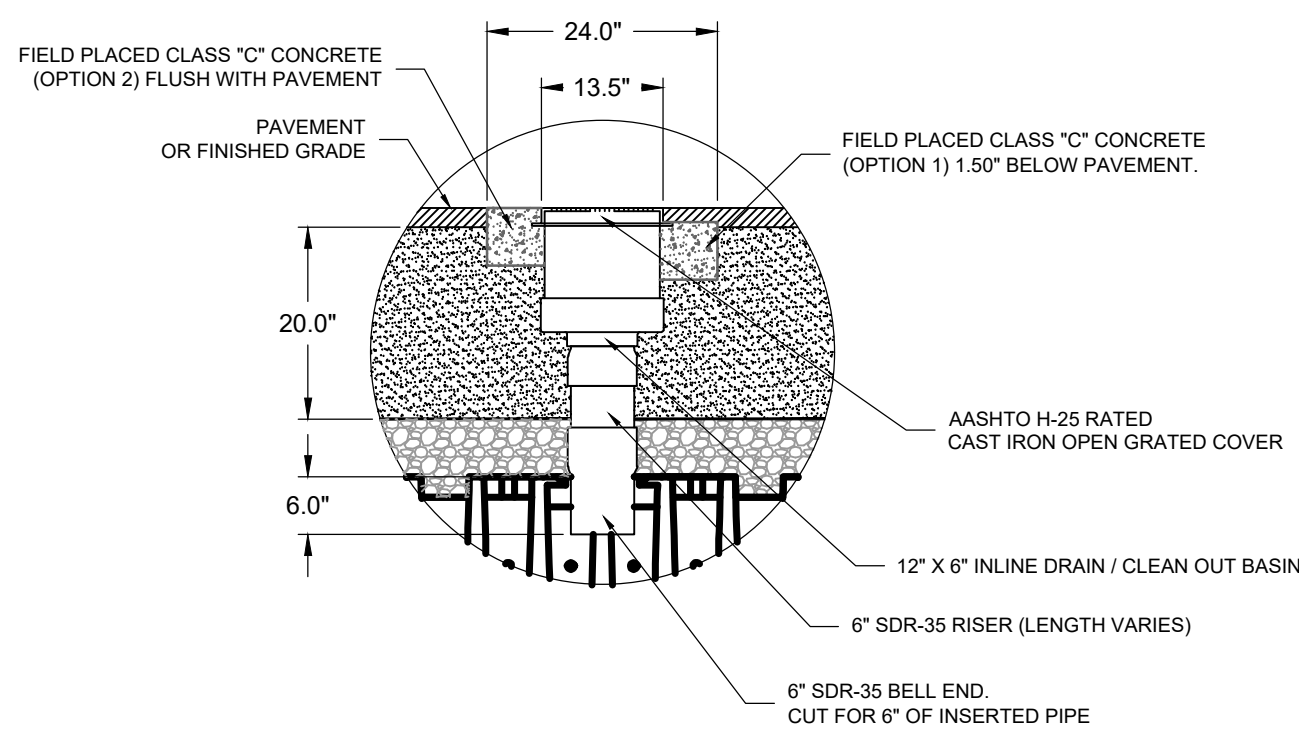
1. WHEN THE BINDER COURSE HAS BEEN INSTALLED THE PAVEMENT SHALL BE KEPT CLEAR OF ACCUMULATED SEDIMENTS. IF ACCUMULATED SEDIMENTS ARE DEPOSITED ON THE PAVEMENT THE SEDIMENT SHALL BE CLEANED IMMEDIATELY. THE PAVEMENT SHALL BE SWEEP AS NECESSARY BASED ON THE WEEKLY INSPECTIONS. THE CONTRACTOR SHALL INSPECT THE PAVEMENT ON A DAILY BASIS AND REMOVE ACCUMULATED SEDIMENTS AS NECESSARY.
2. "SILT SAKS" SHALL BE INSTALLED AT ALL CATCH BASIN AND DROP INLET LOCATIONS. THE CONTRACTOR SHALL INSPECT THE "SILT SAKS" ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND EMPTIED BASED ON MANUFACTURERS RECOMMENDATIONS.
3. THE CATCH BASINS SHALL BE INSPECTED ON A WEEKLY BASIS ANDS AFTER HEAVY RAINSTORMS. THE CATCH BASINS SHALL BE CLEANED WHEN 6" OF SEDIMENT HAS ACCUMULATED IN THE SUMP.
4. THE STORMCEPTOR SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS. THE STORMCEPTOR SHALL BE CLEANED BASED ON THE MANUFACTURERS RECOMMENDATIONS.
5. THE INFILTRATION GALLEYS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER HEAVY RAINSTORMS AND SHALL BE CLEANED WHEN 2" OF SEDIMENT HAS ACCUMULATED IN THE INLET CHAMBER.

**INFILTRATOR SUBSURFACE DETENTION  
AREA PLAN VIEW**

NOT TO SCALE (INFIL-SUB-DET) KELLY ENGINEERING GROUP, INC. ©

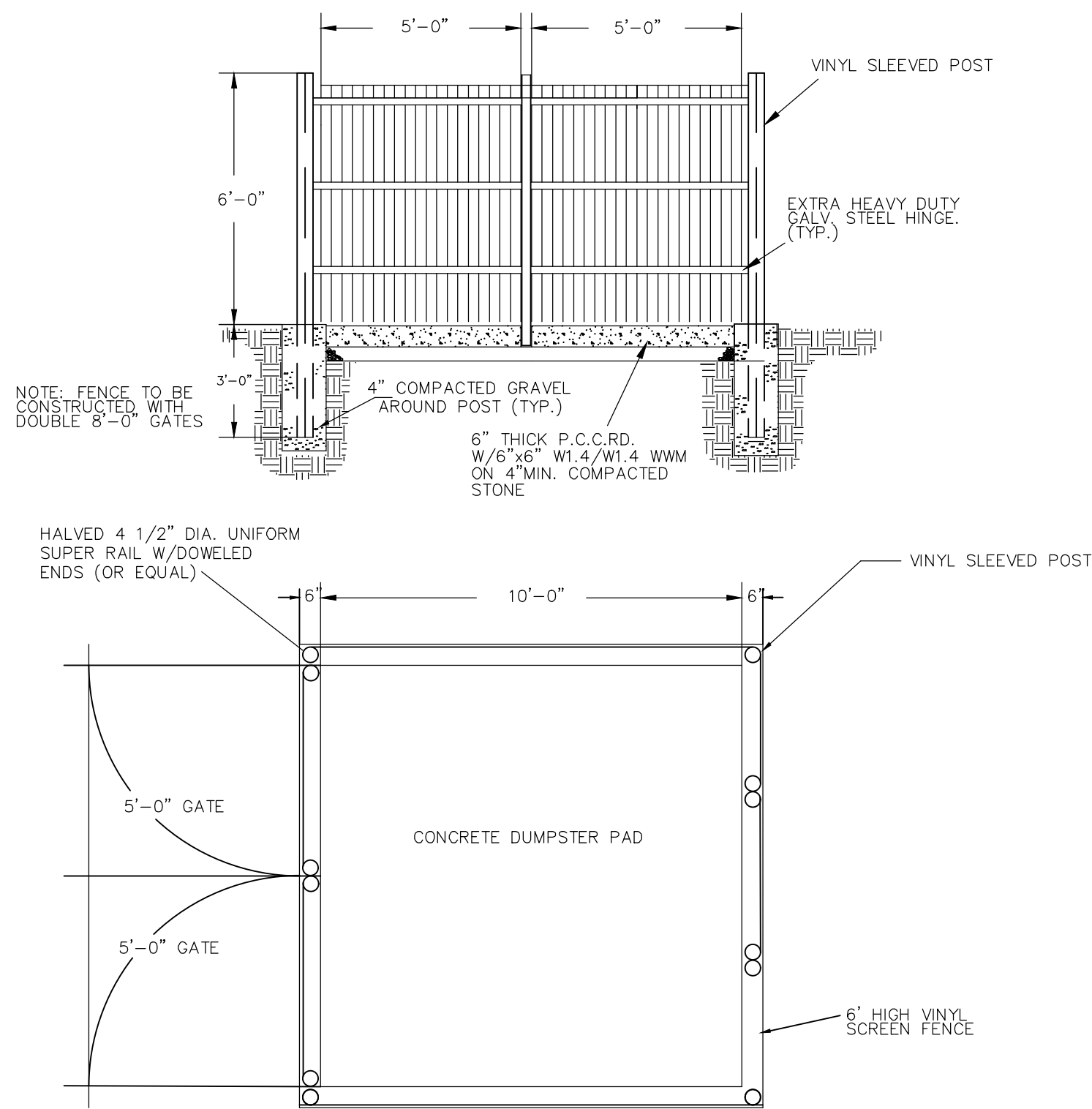


**TYPICAL H2O INSPECTION PORT DETAIL**



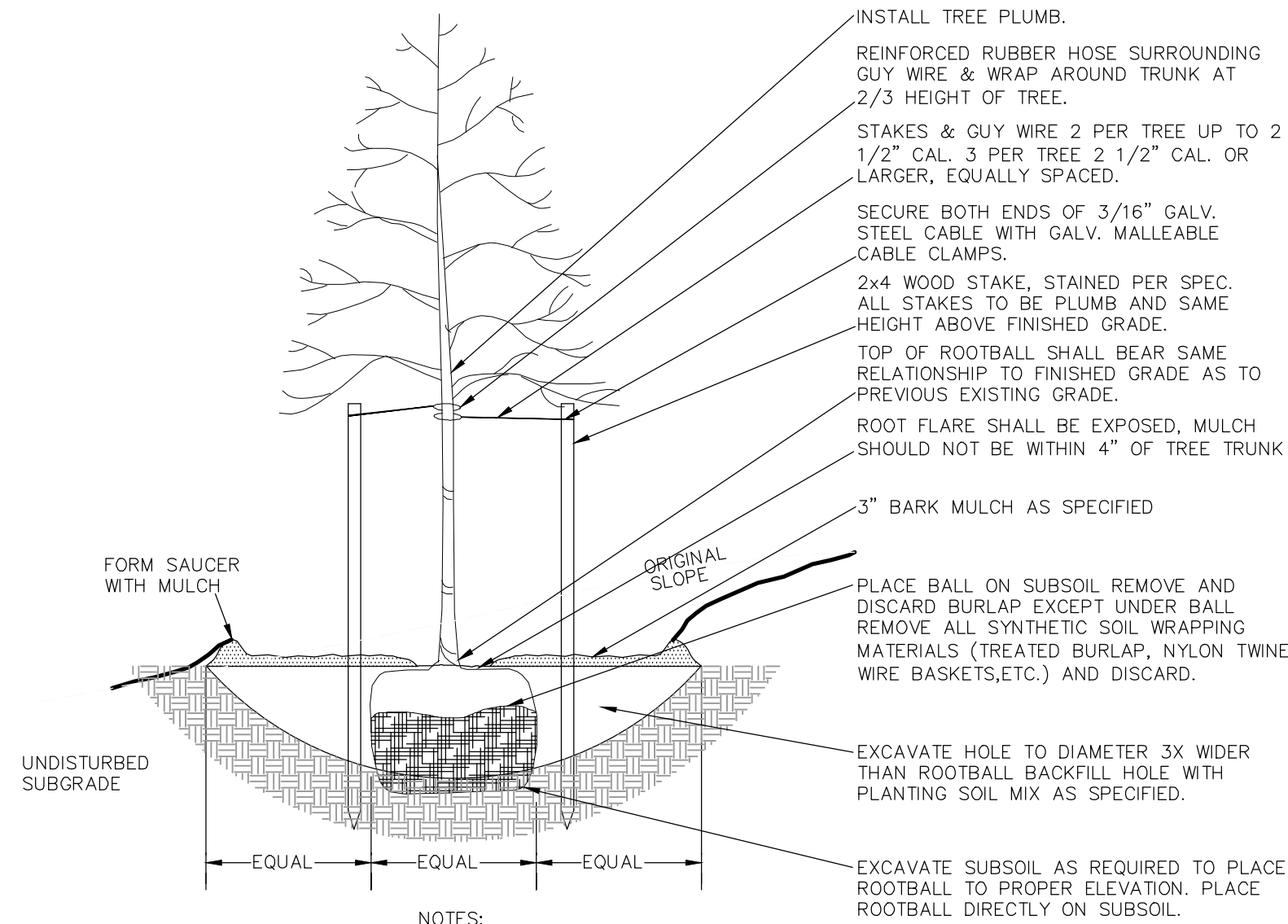
**6' HIGH CEDAR SCREEN FENCE DETAIL**

NOT TO SCALE KELLY ENGINEERING GROUP, INC. ©



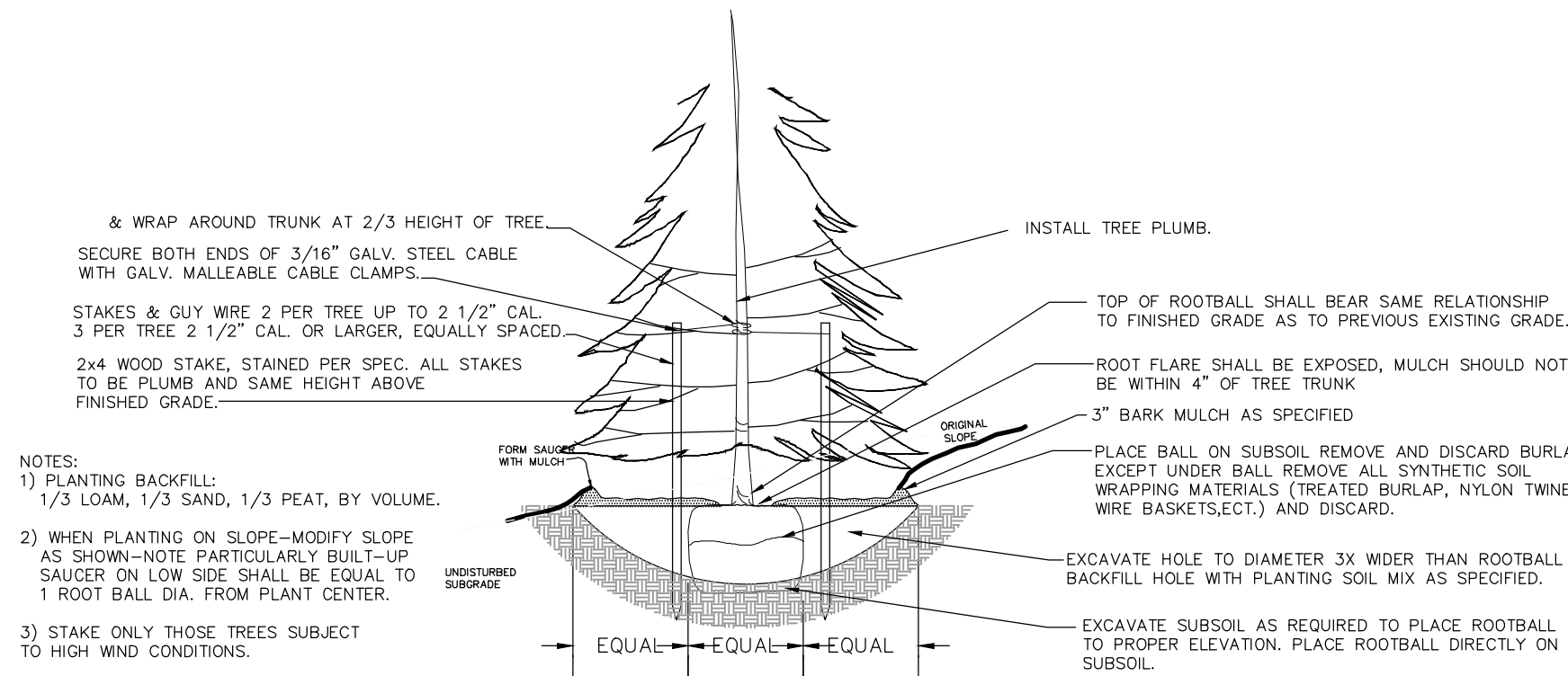
**DUMPSTER SCREEN GATE /DUMPSTER PAD DETAIL**

NOT TO SCALE (DUMPSTER-DETAIL) KELLY ENGINEERING GROUP, INC. ©



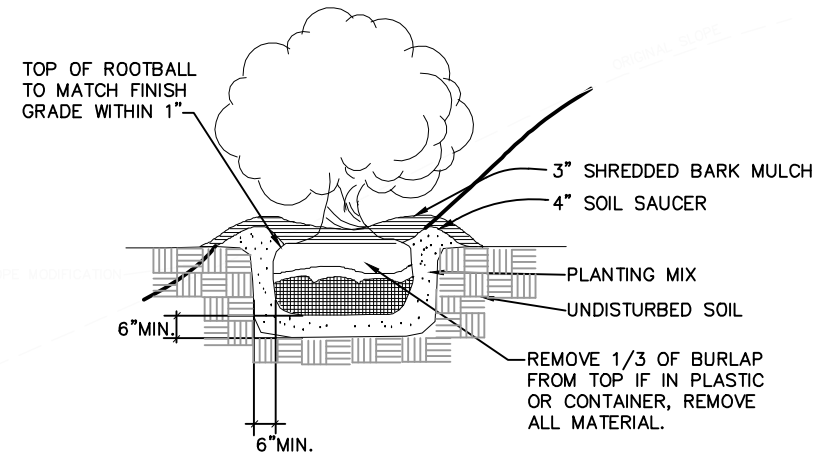
**DECIDUOUS TREE PLANTING DETAIL**

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**EVERGREEN TREE PLANTING DETAIL**

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**SHRUB PLANTING DETAIL**

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THE EXTENT OF KELLY ENGINEERING GROUPS LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST

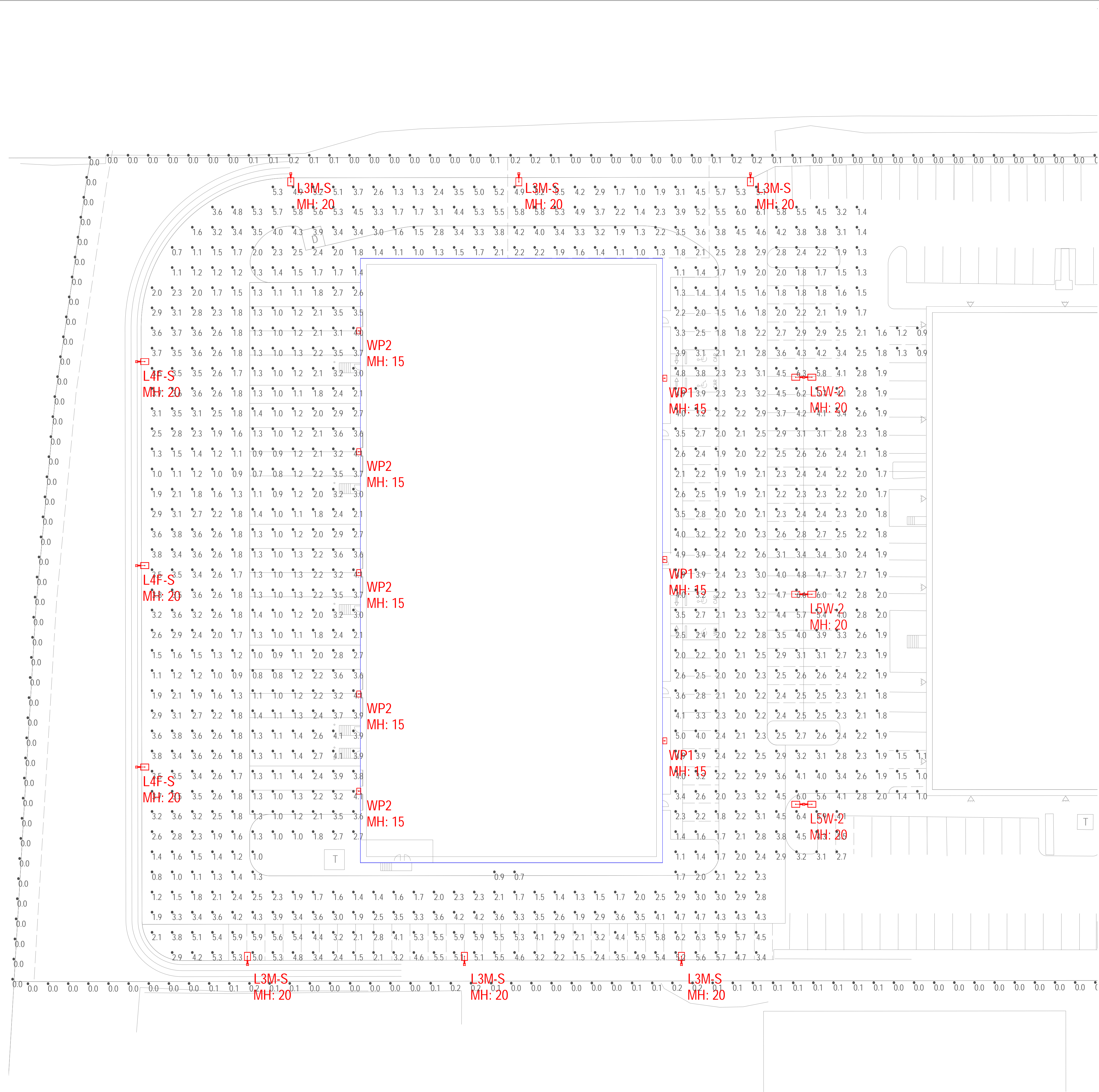
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SCALE				
NA				
DATE	05/24/2023	REV		DATE
SHEET	9 of 9			
FILE #	D700			
JOB #	F:\P\2023-026			
DRAWN BY	C.J.L.			
CHKD BY	DAM			
APPD BY	B.L.			
RADER PROPERTIES, INC 33 RIVERSIDE DRIVE PEMBROKE, MASSACHUSETTS				
DETAIL SHEET				
KELLY ENGINEERING GROUP civil engineering consultants 0 Campanelli Drive, Braintree, MA 02184 Phone: 781-843-4333 www.kellyengineeringgroup.com				

COMMONWEALTH OF MASSACHUSETTS BRANDON G. LI CIVIL No. 57736 REGISTERED PROFESSIONAL ENGINEER	Brandon Li 2023.05.25 16:53:25 -04'00'
SHEET NO.	9





TYPE L: 200" Mounting Height  
TYPE WP: 150" Mounting Height

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Manufacturer	Description	Lum. Lumens	Lum. Watts	LLF
	6	L3M-S	Single	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-III-M-80LED-700mA-40K-HS	17315	173.6	0.920
	3	L4F-S	Single	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-IV-FT-80LED-700mA-40K-HS	16903	173.6	0.920
	3	L5W-2	Back-Back	U.S. ARCHITECTURAL LIGHTING	RZR-PLED-VSQ-W-80LED-525mA-40K	18643	129.4	0.920
	3	WP1	Single	U.S. ARCHITECTURAL LIGHTING	RZR-WM1-PLED-II-20LED-1050mA-40K	7771	64.1	0.920
	5	WP2	Single	U.S. ARCHITECTURAL LIGHTING	RZR-WM1-PLED-IV-20LED-1050mA-40K	7847	64.1	0.920

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Property Line	Illuminance	Fc	0.0	0.2	0.0	N.A.	N.A.
Site	Illuminance	Fc	2.7	6.6	0.7	3.9	9.4

U.S. ARCHITECTURAL & SUN VALLEY LIGHTING  
660 W AVE O PALMDALE CA 93551  
(661) 233-2000

Point-By-Point Illuminance Calculation  
(At Grade)

33 Riverside Drive  
Pembroke, MA

DRAWN BY: L.C.P.  
AGENCY: Apex Lighting Solutions, LLC  
Date: 5/25/2023

SCALE: 1" = 250"

NOTES:  
See schedule for luminaire specifications.  
Luminaire Symbols are not to scale.  
Varying the position, mounting height,  
or orientation from what is specified in this  
drawing will invalidate the calculation performed.

Page 1 of 1