GeoInsight®
Environmental Strategy & Engineering
Practical in Nature

November 3, 2017

Juliet Walker
Director of Planning
and
Dexter Legg
Planning Board Chairman
City of Portsmouth
City Hall, 3rd Floor
1 Junkins Avenue
Portsmouth, NH 03801

RE: Deer Street Associates ("DSA")
Continued Application for Site Plan Review
Residences at Foundry Place, Lot 6
Foundry Place and Hill Street
181 Hill Street, Tax Map 138 Lot 62
Portsmouth, NH 03801

Ms. Walker and Mr. Legg:

GeoInsight, Inc. prepared this letter for the Planning Board to provide additional clarification, information and responses regarding several comments and recommendations by the Planning Board during the October 19, 2017 Hearing for the above project (the site). These issues were primarily raised after public and applicant comment was closed, which we believe ultimately resulted in the project being continued instead of approved with conditions.

We offer the following information for the Planning Board's consideration.

PLAN CHANGES

On Sheet C3.0, a "STOP AHEAD" pavement marking was added on the driveway ramp exiting to Foundry Place and the construction detail was added to Sheet C7.2. A note was revised on C3.0 to state that the parallel parking spaces on Hill Street are to be defined by a contrasting color brick course.

The Cast-In-Place Retaining Wall Detail 10 on Sheet C7.1 was modified to remove a small parallel drain behind a short retaining wall proposed for the southwest side of the building. A series of small weepholes will be used instead as a contingency feature to relieve potential hydrostatic pressure on the buried back side of the wall. The weep holes will be well above even estimated seasonal

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high water, making it highly unlikely that water will ever accumulate behind the wall in a manner that would result in a discharge. In the event water did seep from the weepholes, it will be insignificant discharge onto the side entrance sidewalk with negligible potential influence on the City's drainage system.

As discussed at the last Hearing, the City has confirmed that a new Lot 6 gas line will not be installed in Foundry Place but will instead be moved and enter from Hill Street. We have amended Sheet C5.0 to identify the revised gas line alignment. The Cast-In-Place Retaining Wall Detail 10 on Sheet C7.1 remains the same because the gas line will still pass underneath the side entrance sidewalk to reach the gas meters, but from a different direction.

TAC-RECOMMENED PEER REVIEW

It is GeoInsight's understanding that TAC recommended (in their conditional approval letter to the Planning Board dated October 5, 2017) that the City pursue a third-party peer review of a "geohydrologic study and drainage design" to evaluate "groundwater rates and ability of detention system to accommodate groundwater flow now and into the future." This recommendation was made with specific regard to DSA's previous intent to pursue a permanent sump pump below the lowest level garage. However, as GeoInsight explained at the October 19, 2017 Hearing, the sump has been eliminated in favor of waterproofing the garage slab bottom and perimeter foundation walls.

Accordingly, DSA respectfully requests that peer review of the stormwater management system be retracted since both TAC and the Planning Board did not take issue with GeoInsight's Stormwater Management Plan. In fact, it appeared that the majority of the Planning Board members indicated that the design submitted for stormwater management (including the stormwater analysis and the proposed stormwater management features) was not deficient and met the City's requirements. While the City certainly can, where needed, seek third party peer review for certain proposed design elements that are outside of the norm, we feel strongly that the proposed stormwater management system for the project is straightforward and sufficient, thus it is not necessary or reasonable to require DSA to contribute financial resources for peer review.

PROPOSED ADDITIONAL REQUIREMENT TO REDUCE RUNOFF VOLUME

It is DSA's and GeoInsight's understanding that at the October 19, 2017 Hearing, the Planning Board was prepared to provide approval of the DSA design submittal with several reasonable conditions recommended by TAC. Instead, a detailed technical discussion regarding stormwater management amongst the Planning Board began after applicant and public input had been closed. Response and/or clarification from the DSA team would have significantly benefitted the Planning Board regarding its evaluation of these issues raised during the closed portion of the Hearing. This discussion transformed into consideration of requiring DSA to provide additional stormwater management outside the normal standards and resulted in the Planning Board postponing a decision on the Lot 6 project.

GeoInsight is completely familiar with Portsmouth stormwater management requirements and standards of care in our industry. GeoInsight and DSA recognize and fully appreciate the need and benefit of protecting surface water and groundwater from adverse impacts from new development. We appreciate always try to meet or approach a "no net increase" in volume for post development where practical. For example, some stormwater at the site is infiltrated into planting beds along Foundry Place and precipitation in the building courtyard is lost to evapotranspiration before reaching the underlying capture layer. In addition, the detention basin proposed for the site is significantly oversized, providing over 18,000 gallons of storage instead of the 15,000 gallons required. This retention system significantly reduces the volume of stormwater flow into the City stormwater system at peak periods, which is the required consideration. In fact, the total runoff rate from the site is reduced by a third from pre-existing conditions, which is considerably less than required and what developers typically provide.

The Lot 6 site, (as well as the other sites to be developed by DSA), includes a number of physical conditions and regulatory considerations that we believe the Planning Board did not take into account during their closed session discussions, which are described in the following bullets.

- Infiltrating water is impractical and largely impossible at Lot 6 due to impermeable geology close the surface (i.e., bedrock, clay, and dense silty till, see attached Figure C-1).

- Infiltrating water is impractical and largely impossible at Lot 6 due to seasonal high-water levels that range from approximately elevation 10 feet to 8 feet from Hill Street to Foundry Place, respectively, which prevents achieving the required separation distance of 3 feet (see attached Figure C-1), which is supposed to include 1 foot of native soil.

- The New Hampshire Stormwater Manual requires only that a volume of runoff based upon a 0.40-inch depth (for Type A soils) across the area with increased post-development impervious cover be recharged through infiltration and that the water quality volume due to the 1st inch of rainfall be treated by infiltration or other water quality BMP. These both represent very small volumes at the site; and while these volumes received peak flow rate treatment by detention, infiltration was not practical, as described in our Stormwater Report.

- and City Site Plan regulations pertaining to stormwater management require that "efforts" be made to intercept, treat, and infiltrate runoff, but do not require a definitive recharge or water quality volume. Because nearly all stormwater is intercepted and treated by detention and some water quality treatment and volume reduction is planned through the tree wells and planters along Foundry Place and the courtyard, we feel the efforts are reasonable for the site.

- The proposed design will provide stormwater runoff that is actually much cleaner than existing conditions.

- Although the Alteration of Terrain (AOT) rules allow exceptions for increased post-development peak flow rates when discharging into a tidal water, the proposed design does not pursue this exemption.

- Because the proposed stormwater management design meets the City's requirements, as reviewed by TAC, GeoInsight believes that imposing requirements upon DSA that are more stringent than the applicable regulations, and more stringent compared to other downtown projects recently approved in the City, is unreasonable as it would not result in any measurable benefit despite the additional costs incurred by DSA.

- NHDES addresses groundwater quality at contaminated sites in Env-OR 600, and leaching of contaminants from impact soils due to infiltration would be prohibited if it caused exceedances of ambient groundwater quality standards established in Env-Or 603.03.

- Similarly, the AOT regulations prohibit infiltration into areas that have contaminants in groundwater above the ambient groundwater quality standards established in Env-Or 603.03 or in soil above site-specific soil standards developed pursuant to Env-Or 600.

- Furthermore, if more precipitation is infiltrated at the Site, it could result in an elevated water table below Foundry Place and decrease the stability of the subsurface conditions supporting the roadway, 191 Hill Street building, and proposed Lot 6 improvements.

- Precipitation infiltrated into the ground, or discharged into the municipal drain system per our engineered designs, will eventually be received by the North Mill Pond. Based upon environmental testing and mapping by both the City and DSA, subsurface water flows towards the North Mill Pond. Therefore, the Planning Board recommendation that water be infiltrated instead of discharged into the storm drain does not meet the Board's objective to reduce the volume entering the Pond.

- The average volume of post-development stormwater flow from Lot 6 into the City drainage system would increase by 40% by our calculations for the 2-year, 24-hour storm event. This translates into an increase of approximately 1,700 cubic feet (or approximately 13,000 gallons), which will be released slowly over time from the proposed detention system. It is our understanding that the City drainage system serves approximately half of downtown Portsmouth and flows to the Pond through a large (48") culvert. The increased volume of water from Lot 6, with peak flows reduced through retention, is inconsequential relative to the flows into the North Mill Pond through the City drainage system.

- Although the invert of the storm water retention structure on Lot 6 is below a potential "worst case" 100-year high tide flooding scenario due to potential sea rise, the outflow from the retention structure is above that flood level. Any backflow from the City's 48" drainage line from the North Mill Pond would flood large areas of Portsmouth before it could reach the outflow pipe elevation level that leads from the Lot 6 retention structure.

It is our understanding that the City is exploring the possibility of installing flood gates at the Maplewood bridge (or other options) to alleviate this potential future "worst case" flood scenario.

In summary, we request that the Board, upon considering the foregoing, accept the Stormwater Management Plan as submitted and reviewed and approved by TAC.

ALTERATION OF TERRAIN PERMIT

A question was raised about construction stormwater management and whether an AOT permit applied to the proposed commercial development proposed by DSA. While GeoInsight's initial inquiry with NHDES resulted in a negative finding, discussions are still continuing with NHDES as of the date of this letter. Many of the AOT requirements have relatively little practical applicability to Lot 6, and would be somewhat duplicative of existing stormwater management designs and anticipated erosion and sedimentation documentation.

During the previously noted closed Hearing discussions, GeoInsight could not clarify that a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) application will be prepared to address the entire DSA development area. Noting that Lot 6 is presently almost entirely impervious surface, the proposed post-development conditions result in treatment of nearly all of the precipitation that contacts the site, with most addressed by the controls that route water directly or indirectly into detention structures for eventual discharge into the municipal stormwater system.

Should NHDES require an AOT permit for the entirety of the DSA development, it will likely also require an AOT permit to address the City development of Foundry Place, the parking garage, and adjacent areas. DSA anticipates that a number of allowable waivers will likely be pursued under the AOT program given the location of the Lot 6 project.

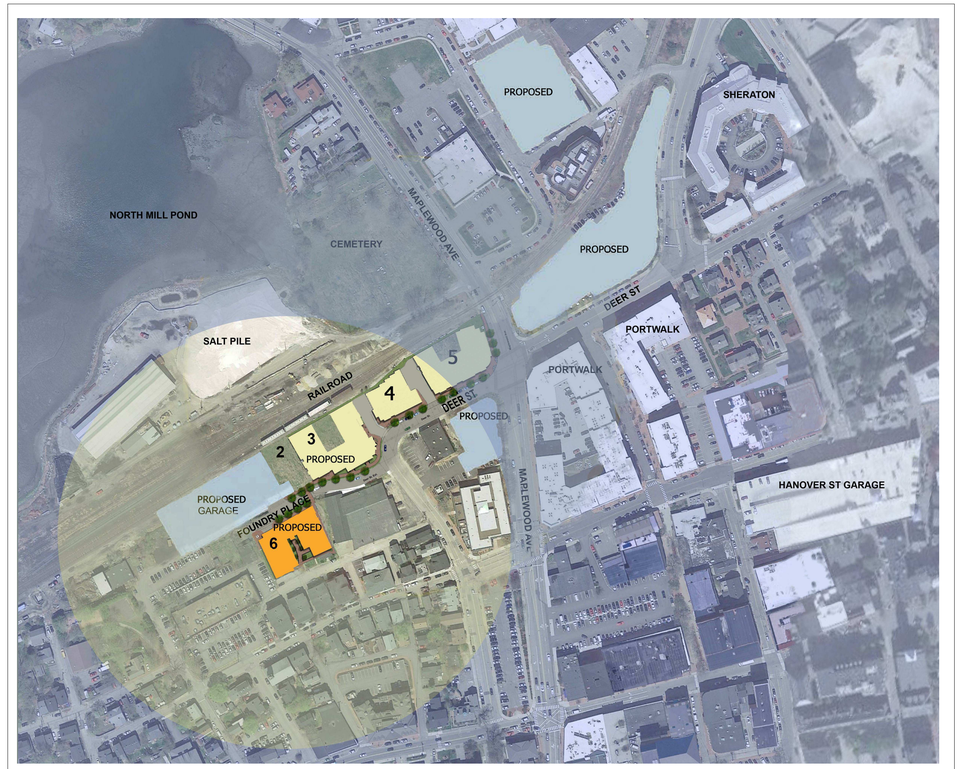
DSA respectfully requests that the Planning Board approve the DSA site plan application at this time and include issuance of the AOT Permit as a condition of approval, if it is required. The AOT Permit application process, which includes design review by NHDES, will likely take several months. With Planning Board approval at this junction, DSA can move forward with other aspects of the project concurrently with the AOT Permit application, again if the permit is required by NHDES.

We trust the additional information above and attached is sufficient for the Board to approve the final design for Lot 6.

Sincerely,
GEOINSIGHT, INC.

Michael C. Penney, P.E., L.S.P.
Principal/Senior Engineer

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62



DRAWING SHEET LIST

SHEET NO.	NAME	3/17/2017	6/15/2017	8/21/2017
COVER SHEETS				
T.01 T	COVER SHEET	•	•	•
T.02 T	ZONING ORDINANCE REQUIREMENTS		•	•
CIVIL				
X5	EXISTING CONDITIONS SITE PLAN			•
C1.0	GENERAL NOTES SHEET 1 OF 2	•	•	•
C1.1	GENERAL NOTES SHEET 2 OF 2		•	•
C2.0	DEMOLITION PLAN	•	•	•
C3.0	SITE PLAN	•	•	•
C3.1	SITE PLAN - BUILDING HEIGHT INCENTIVE CALCULATION		•	•
C3.2	OPEN SPACE PLAN		•	•
C4.0	GRADING & DRAINAGE PLAN	•	•	•
C4.1	GRADING DETAIL	•	•	•
C4.2	AVERAGE GRADE PLANE CALCULATION			•
C5.0	UTILITIES PLAN	•	•	•
C5.1	OFFSITE ELECTRICAL IMPROVEMENTS PLAN		•	•
C6.0	EROSION & SEDIMENT CONTROL PLAN	•	•	•
C6.1	DRAINAGE & EROSION CONTROL DETAILS	•	•	•
C7.0	TRAFFIC AND PAVEMENT DETAILS	•	•	•
C7.1	STANDARD DETAILS	•	•	•
C7.2	STANDARD DETAILS	•	•	•
C7.3	STANDARD DETAILS		•	•
C7.4	STANDARD DETAILS			•
C8.0	DRAIN PROFILES AND CROSS-SECTIONS	•	•	•
E4	EASEMENT PLAN		•	•
C3.1-	LAYOUT & MATERIALS PLAN	•		
C3.2-	SITE PLAN - INCENTIVE COMMUNITY SPACE CALCULATION	•		
C3.3	PROPOSED EASEMENT PLAN (PRELIMINARY)	•		
SITE ELECTRIC				
SE1.1	BUILDING #6 ELECTRICAL & COMMUNICATION PLAN	•	•	•
SE1.2	BUILDING #6 LIGHTING PLAN	•	•	•
SE1.3	BUILDING #6 PHOTOMETRIC PLAN	•	•	•
SE1.4	SITE STREET LIGHTING PLAN		•	•
SE2.1	SITE ELECTRICAL DETAILS		•	•
SE2.2	SITE ELECTRICAL DETAILS		•	•
SE2.3	SITE ELECTRICAL DETAILS		•	•
SE3.1	SITE ELECTRICAL PLAN		•	•
SE3.2	SITE COMMUNICATION PLAN		•	•
SED1.1	SITE ELECTRICAL DEMOLITION PLAN - EXISTING CONDITIONS	•	•	•
SE1.4-	ELECTRIC METERING LOCATIONS	•		
LANDSCAPE				
L1	MATERIALS PLAN	•	•	•
L2	PLANTING PLAN AND DETAILS	•	•	•
L3	DETAILS AND SECTIONS	•	•	•
L-1	OVERALL HARDSCAPE PLAN (OFFSITE)	•		
L-2	OVERALL LANDSCAPE PLAN (OFFSITE)	•		
ARCHITECTURE				
A1.01 T	GROUND LEVEL (FOUNDRY PL) PLAN	•	•	•
A1.02 T	LEVEL 1 FLOOR (HILL ST) PLAN		•	•
A1.03 T	ROOF PLAN		•	•
A2.01 T	EXTERIOR ELEVATIONS	•	•	•
A2.02 T	EXTERIOR ELEVATIONS	•	•	•
A2.03 T	EXTERIOR ELEVATIONS	•	•	•
A3.00 T	3D VIEWS	•	•	•

SITE PLAN REVIEW
AUGUST 21, 2017

NOTE:
1. ALL CONDITIONS ON THIS PLAN SET SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.

CITY OF PORTSMOUTH PLANNING BOARD

CHAIRPERSON DATE

JSA
ARCHITECTS
INTERIORS
PLANNERS

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ENGINEERED SYSTEMS INC.
MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 3950
THE STATE OF NEW HAMPSHIRE

Scale: **3/32" = 1'-0"**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

COVER SHEET

T.01 T

Residences at Foundry Place - Area and Use Summary

June 15, 2017		AREA ANALYSIS							
Building Name	**Use**	Ground Floor (below grade) Area SF	1st Floor Area SF	2nd Floor Area SF	3rd Floor Area SF	4th Floor Area SF	Penthouse Area SF	Total Gross Floor Area - to inside face of exterior wall	Total Unit Count
Building 6	(development incentive 10.5A47.10)	**Building 6**							
	Parking Garage	16,364	5,156						0
	Parking easement for Hill Hanover Group								0
	Multi-Family Dwelling		3,097	13,969	13,969	12,964	6,023		43
	Multi-Family Decks / Balconies			511	631	819	3,647		0
	Office		4,296						0
	Retail Sales		1,867						0
	total area	16,364	14,416	14,480	14,600	13,783	9,670	**83,313**	43

Residences at Foundry Place - Parking Summary

June 15, 2017		PARKING ANALYSIS									
		Parking required - Downtown Overlay District 10.1115.20		Parking required - Development Incentive 10.5A47.10		Downtown overlay district - 10.1115.23	**Total parking spaces required**	Parking spaces provided on site	Parking spaces provided at Municipal Garage (see references below)	**Total parking spaces provided**	Surplus Parking Spaces
Building Name	**Use**	Spaces per residential unit	Quantity	Spaces per residential unit	Quantity	Reduction = 4 parking spaces	**Quantity**	Quantity	Quantity	**Quantity**	Quantity
Building 6	(development incentive 10.5A47.10)	**Building 6**									
	Parking Garages	0	0	0	0	0	**0**	33	**0**	**0**	0
	Parking easement for Hill Hanover Group	0	14	0	0	0	**0**	14	**0**	**0**	0
	Exterior parking	0	0	0	0	0	**0**	3	**0**	**0**	0
	Multi-Family Dwelling	0	0	1.00	43	0	**0**	0	**0**	**0**	0
	Multi-Family Decks / Balconies	0	0	0	0	0	**0**	0	**0**	**0**	0
	Office	0	0	0	0	0	**0**	0	**0**	**0**	0
	Retail Sales	0	0	0	0	0	**0**	0	**0**	**0**	0
	total area	0	14	0	43	(4.00)	**53**	50	**15**	**65**	12

New Municipal Foundry Place Parking Garage

Reference City/DSA Post Closing Obligations Agreement & Parking Agreement documents dated 9/09/2016, and per Section 10.1113.111 Municipal Garage Spaces qualify as "off-street parking" as held by City Legal Department.

DSA Parking Garage spaces - interior	58
DSA Flex Parking Spaces - exterior / interior	10
Total spaces	**68**

PORTSMOUTH CHARACTER ZONING - D5 - DEER STREET LOT 6 - 181 HILL STREET		
	PER CD5	PROPOSED
BUILDING PLACEMENT - PRINCIPAL BUILDING*		
MAXIMUM PRINCIPAL FRONT YARD	5 FT	> 5 FT
MAXIMUM SECONDARY FRONT YARD	5 FT	> 5 FT
SIDE YARD	NR	NR
MINIMUM REAR YARD	GREATER OF 5 FT FROM REAR LOT LINE OR 10 FT FROM CENTER LINE OF ALLEY	5 FT
* EXCEPT FOR ITEMS LISTED UNDER SECTION 10.5A42.12		
BUILDING AND LOT OCCUPATION		
MAXIMUM BUILDING BLOCK LENGTH	225 FT	152
MAXIMUM FAÇADE MODULATION LENGTH	100 FT	60 FT
MAXIMUM ENTRANCE SPACING	50 FT	MAX <50 FT
MAXIMUM BUILDING COVERAGE	95%	73%
MAXIMUM BUILDING FOOTPRINT (INCLUDES INCREASED FOOTPRINT INCENTIVE)	20,000 SF	16,364
MINIMUM LOT AREA	NR	NR
MINIMUM LOT AREA PER DWELLING UNIT	NR	NR
MINIMUM OPEN SPACE	5%	18%
BUILDING FORM - PRINCIPAL BUILDING		
*BUILDING HEIGHT (INCLUDES INCREASED HEIGHT INCENTIVE)	50 FT + 10 FT + 2 FT	61 FT 10 INCHES
BUILDING STORIES (INCLUDES INCREASED HEIGHT INCENTIVE)	4 STORIES + 1 STORY	4 STORIES + PENTHOUSE
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE	36 INCHES	< 36 INCHES
MINIMUM GROUND STORY HEIGHT	12 FT	18 FT 11 INCH
MINIMUM SECOND STORY HEIGHT	10 FT	11 FT
FAÇADE GLAZING		
SHOPFRONT FAÇADE	70% MIN.	72%
OTHER FAÇADE TYPES	20% MIN TO 50% MAX	33%
ROOF TYPE	FLAT, GABLE, HIP, GAMBREL, MANSARD	FLAT
ROOF PITCH, IF ANY	FLAT	FLAT
TOTAL OUTDOOR LIGHT OUTPUT ALLOWANCE 10.1143.10 - BUSINESS DISTRICTS - MAX MEAN LUMENS / NET ACRE	300,000	LESS THAN 300,000 - SEE LIGHTING REPORT ATTACHMENT

* BUILDING HEIGHT + INCENTIVE HEIGHT + 2 FEET FOR PENTHOUSE LEVEL PER MAP 10.5A21B BUILDING HEIGHT STANDARDS

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PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

ZONING ORDINANCE REQUIREMENTS

T.02 T

LENGTH TABLE

LINE	BEARING	DISTANCE
L5	S40°13'28"E	4.32'
L6	S50°00'27"W	161.76'

EASEMENT AND RESTRICTION NOTES:

1) SUBJECT PARCEL IS SUBJECT TO A PARKING EASEMENT FOR THE BENEFIT OF TAX MAP 125 LOT 14, LOCATION IS NOT FIXED. SEE R.C.R.D. 5518/2747 & 5518/2759.

2) SUBJECT PARCEL IS SUBJECT TO A UTILITY EASEMENT TO THE CITY OF PORTSMOUTH. SEE R.C.R.D. 5518/2759.

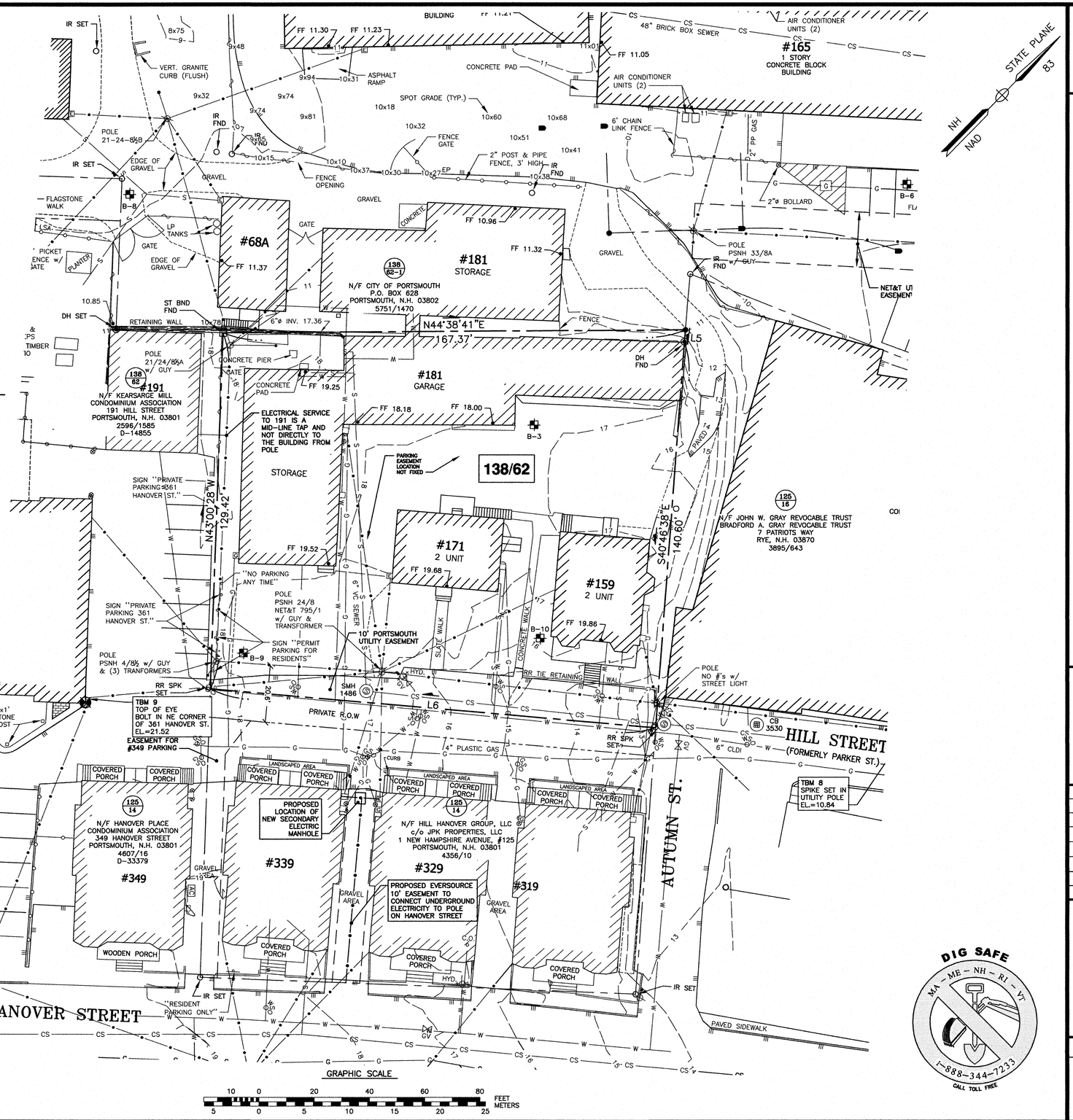
3) SEE ALSO PARTIAL RELEASE OF PARKING RELOCATION RIGHTS, R.C.R.D. 5751/1463.

4) SEE ALSO TEMPORARY ENCROACHMENT EASEMENT DEED, R.C.R.D. 5751/1485.

5) SUBJECT PARCEL IS SUBJECT TO A PRIVATE RIGHT OF WAY.

LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
11/21	MAP 11 / LOT 21
RR SPK FND	RAILROAD SPIKE FOUND/SET
IR FND	IRON ROD FOUND/SET
IP FND	IRON PIPE FOUND/SET
DH FND	DRILL HOLE FOUND/SET
CONC BND w/DH	CONCRETE BOUND w/ DRILL HOLE
ST BND w/DH	STONE BOUND w/DRILL HOLE
FM	FORCE MAIN
S	SEWER LINE
G	GAS LINE
D	STORM DRAIN
W	WATER LINE
	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC/WIRES
	CHAIN LINK FENCE
100	CONTOUR
97x3	SPOT ELEVATION
	EDGE OF PAVEMENT (EP)
	UTILITY POLE (w/ GUY)
W	SHUT OFF (GAS / WATER)
GV	GATE VALVE
	BOLLARD
HYD	HYDRANT
G W E	METER (GAS, ELECTRIC)
	CATCH BASIN
T	TELEPHONE MANHOLE
S	SEWER MANHOLE
D	DRAIN MANHOLE
B-1	TEST BORING
AC	AIR CONDITIONER UNIT
	SIGNS
AC	ASBESTOS CEMENT PIPE
CI	CAST IRON PIPE
DI	DUCTILE IRON PIPE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
VC	VITRIFIED CLAY PIPE
PP	PLASTIC PIPE
EL.	ELEVATION
EP	EDGE OF PAVEMENT
FF	FINISHED FLOOR
INV.	INVERT
TBM	TEMPORARY BENCHMARK
TYP.	TYPICAL
VGC/SGC	VERTICAL/SLOPED GRANITE CURB
CCB	CAPE COD BERM
AG	ABOVE GRADE



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road – Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

STATE PLANE NH 83 NAD

NOTES:

1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 62.

2) OWNERS OF RECORD:
DEER STREET ASSOCIATES
PO BOX 100
YORK HARBOR, ME
3395/2669, 5534/2077, 5453/138

3) PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 330150295E, EFFECTIVE DATE MAY 17, 2005.

4) EXISTING LOT AREAS:
22,538 S.F.
0.5174 ACRES

5) PARCEL IS LOCATED IN THE CD5 CHARACTER BASED ZONING DISTRICT.

6) DIMENSIONAL REQUIREMENTS:
SEE ZONING ORDINANCE

7) THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON THE SUBJECT PARCELS.

8) HORIZONTAL DATUM AND BASIS OF BEARING IS NEW HAMPSHIRE STATE PLANE NAD83(2011). BASIS OF HORIZONTAL DATUM IS RTK GPS OBSERVATIONS.

9) VERTICAL DATUM IS MEAN SEA LEVEL-NAVD88. BASIS OF VERTICAL DATUM IS NGS PID OC0290 – B 2 1923, ELEVATION 19.55.

10) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

11) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

DEER STREET ASSOCIATES, INC. SITE REDEVELOPMENT PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	ELECTRIC, WATER, EASEMENTS	8/10/17
1	ADD SPOT ELEVATIONS ON LOT 1	4/6/17
0	ISSUED FOR COMMENT	11/14/16

REVISIONS

STATE OF NEW HAMPSHIRE — No. 7138 — JOHN R. CHAGNON — REGISTERED LAND SURVEYOR

DIG SAFE
MA – ME – NH – RI – VT
1-888-344-7233
CALL TOLL FREE

SCALE: 1" = 20' OCTOBER 2016

EXISTING CONDITIONS SITE PLAN

X5

FB 230, PG 31

2271

GENERAL CONSTRUCTION NOTES

1. THESE PLANS ARE BASED ON THE "EXISTING CONDITIONS SITE PLAN" PRODUCED BY AMBIT ENGINEERING, INC. WITH AN INITIAL ISSUED DATE OF 11/14/16 AND "FOUNDRY PLACE PARKING GARAGE" BY TIGHE AND BOND, INC WITH AN ISSUE DATE OF 07/28/2017. SEE THE EXISTING CONDITION SITE PLAN FOR BENCHMARK INFORMATION AND THE FOUNDRY PLACE PARKING GARAGE PLAN SET FOR FOUNDRY PLACE DETAILS.
2. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT IN RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSPECTIONS, BONDS, ETC., AND OTHER APPROVAL RELATED ITEMS. NO CONSTRUCTION SHALL COMMENCE UNTIL SUCH PERMITS HAVE BEEN SECURED.
4. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE NHDOT, STATE, AND CITY OF PORTSMOUTH REGULATIONS, SPECIFICATIONS, AND ORDINANCES, UTILITY EASEMENTS, AND APPLICABLE CODES.
5. CONTRACTOR TO CONFIRM AND VERIFY THE VALIDITY, LOCATION, MATERIAL, AND AVAILABILITY TO USE EXISTING UTILITIES ON OR NEAR THE PROJECT SITE PROPERTY. CONTRACTOR TO LOCATE EXISTING UTILITIES AND CONFIRM SAID UTILITIES WITH ALL APPLICABLE MUNICIPALITIES AND UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. ONCE UTILITIES HAVE BEEN CONFIRMED IN THE FIELD BY CONTRACTOR AND VERIFIED BY APPLICABLE MUNICIPALITY AND UTILITY COMPANY AND CONNECTION HAS BEEN APPROVED BY ENTITY, ONLY THEN SHALL THE CONTRACTOR CONSTRUCT AND UTILIZE THESE UTILITIES. CONTRACTOR TO IMMEDIATELY INFORM THE ENGINEER OF RECORD OF ANY DEVIATIONS TO PLANS.
6. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES SHOWN ON THESE PLANS MAY BE ONLY APPROXIMATELY CORRECT AND THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, SEWER, ELECTRIC, AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
8. RELOCATION OF ANY UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE AND COMPLETED WITH THE UTILITY WORK. THE OWNER AND ENGINEER SHALL BE NOTIFIED IN WRITING AS TO THE RELOCATIONS REQUIRED AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, CURBS, ETC., THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
10. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
11. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE DOCUMENTS AND SUBSEQUENT ISSUED PLAN REVISIONS. ANY DEVIATIONS FROM THESE DOCUMENTS SHALL REQUIRE NOTIFICATION TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTING ANY CHANGE. THE CONTRACTOR WILL OTHERWISE BE WORKING AT HIS OR HER OWN RISK.
12. ALL WATER, DRAIN, AND SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF PORTSMOUTH RULES, SPECIFICATIONS, AND REGULATIONS.
13. GROUNDWATER SHALL BE TEMPORARILY LOWERED TO A MINIMUM OF 2' BELOW EXCAVATIONS. CONTRACTOR SHALL REPAIR ADVERSE IMPACTS FROM REMOVAL OF SOIL AT ITS OWN EXPENSE.
14. DISCHARGE FROM DEWATERING ACTIVITIES SHALL BE INFILTRATED ONSITE. IF DISCHARGE IS UNABLE TO BE INFILTRATED THEN CONTRACTOR SHALL OBTAIN A DEWATERING PERMIT FROM THE CITY TO DISCHARGE INTO THE CITY'S STORM DRAIN OR SEWER, OR PROPERLY TRANSPORT AND DISPOSE OF OFFSITE PER FEDERAL, STATE AND LOCAL REGULATIONS.
15. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS UTILITY SERVICE AND ACCESS TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. IF A TEMPORARY DISCONNECT OF UTILITIES OR ACCESS IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE OWNER, AND THE PLACE OF BUSINESS OR HOME OWNER 3 DAYS PRIOR TO THE DAY OF THE DISCONNECTION.
16. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS, LATEST REVISIONS.
17. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY, AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
18. THE CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS WITH ALL UPDATED INFORMATION ON THE PROJECT SITE AND INPUT INFORMATION TO A DIGITAL/ ELECTRONIC FORMAT AT LEAST MONTHLY. AS-BUILT INFORMATION MUST BE FORWARDED TO THE OWNER AND ENGINEER MONTHLY FOR APPROVAL, AND BE USED TO PREPARE A FINISHED SET OF PLANS.

EROSION CONTROL NOTES:

1. SEE SHEET C6.1 FOR GENERAL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.

DEMOLITION NOTES:

1. THE DEMOLITION PLAN OR THE EXISTING CONDITIONS SITE PLAN DOES NOT NECESSARILY DEPICT THE EXACT LOCATION AND SIZE OF ALL UTILITIES WHICH MAY EXIST AT THE TIME OF DEMOLITION INSIDE OR OUTSIDE OF EXISTING OR PROPOSED BUILDINGS, ON THE SUBJECT PROPERTY, WITHIN THE STREET ROW, OR ON ABUTTING LOTS.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES. REQUEST FOR MARKINGS CAN BE MADE BY CALLING DIG-SAFE AT 1-888-344-7233, AND THE CITY OF PORTSMOUTH DPW AT 603-427-1530 AT LEAST 72 HOURS PRIOR TO EXCAVATION. STREET OPENING PERMITS SHOULD ALSO BE FILED AT THAT TIME.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE NOT GUARANTEED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE AND EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL PERMIT APPROVALS.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
7. ALL EXISTING UTILITY SERVICE CONNECTIONS TO BUILDING BEING REMOVED SHALL BE ABANDONED UNLESS NOTED OTHERWISE. THE WATER AND SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAIN IN THE STREET BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY OF PORTSMOUTH STANDARDS. THE EXISTING GAS, ELECTRIC AND/OR CATV INSTALLATION AND ABANDONMENT OF EXISTING CONNECTIONS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE COMPANIES.
8. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED BY THE OWNER. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES, AND CODES.
9. FINAL DEMARCATION POINTS FOR GAS, ELECTRIC, TELEPHONE, AND COMMUNICATION SERVICE ENTRANCES ARE SUBJECT TO APPROVALS OF EACH PROVIDER.
10. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING ANY COURTESY ABUTTER NOTIFICATIONS THAT MAY BE WARRANTED.
11. THE CONTRACTOR SHALL SAWCUT AND REMOVE PAVEMENT FOR ULTITIY CONSTRUCTION OR REMOVAL AND CONSTUCT TRENCH PATCH AFTER INSTALLATION.
12. NO TRENCHES ARE ALLOWED TO REMAIN OPEN OVERNIGHT. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF THE WORK DAY OR COVERED WITH STEEL PLATES PER STATE AND LOCAL REGULATIONS AND SPECIFICATIONS. IF STEEL PLATES ARE USED, THE TOTAL LENGTH OF PLATES IN THE TRAVELED WAY SHALL BE LIMITED TO 50'.
13. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
14. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDERGROUND PIPING, POLES, SIGNS, FENCES,RAMPS, WALLS, BOLLARDS, TREES AND LANDSCAPING AS MAY BE APPLICABLE.
15. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
16. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO REPLACE ANY DISTURBED MONUMENTATION.

GENERAL UTILITY NOTES:

1. COORDINATE WORK WITH OTHER CONTRACTORS AS MAY BE APPLICABLE, ALSO COORDINATE ALL UTILITY WORK WITH THE OWNER AND THE APPROPRIATE UTILITY COMPANY.

WATER & SEWER:	CITY OF PORTSMOUTH CONTACT: DAVE DESFOSSES PHONE: (603) 427-1530
ELECTRIC:	EVERSOURCE ENERGY CONTACT: NICK KOSKO PHONE: (603) 332-4227 EXT. 5555334
TELEPHONE/DATA:	FAIRPOINT COMMUNICATIONS CONTACT: JOSEPH CONSIDINE PHONE: (603) 427-5525
CABLE/DATA:	COMCAST CONTACT: MIKE COLLINS PHONE: (603) 679-5695 EXT. 1037
GAS:	UNITIL CONTACT: DAVID BEAULIEU PHONE: (603) 294-5144

2. PROPOSED GAS LINE AND ELECTRIC, TELEPHONE AND CABLE (ETC) CONDUIT LOCATIONS AND CONFIGURATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION CONTRACTOR TO COORDINATE FINAL LOCATION, MATERIALS AND SPECIFICATIONS WITH INDIVIDUAL UTILITY COMPANIES.
3. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
5. ALL EXISTING UTILITY SERVICES LOCATED WITHIN THE WORK AREA ARE TO BE CUT, CAPPED AND ABANDONED AT HE MAIN (OR SOURCE) OR AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS OR APPLICABLE UTILITY PROVIDER.
6. ALL UTILITIES SHOWN ON THIS SITE ARE TO THE EXTERIOR OF THE BUILDING FOUNDATION ONLY. UTILITIES THROUGH THE FOUNDATION, ABOVE FG AND CONNECTED TO THE BUILDING, AND INSIDE THE BUILDING ARE THE RESPONSIBILITY OF THE MECHANICAL AND/ OR PLUMBING ENGINEER AND LOCATED IN THE BUILDING PLANS.
7. ALL UTILITY WORK PERFORMED WITHIN RIGHT-OF-WAY SHALL BE PERFORMED BY A CONTRACTOR LICENSED BY THE CITY OF PORTSMOUTH AND WHO HAS OBTAINED A PERMIT FOR SUCH WORK FROM THE DPW, IF REQUIRED.
8. ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS AND NOT BE ALLOWED TO ACCUMULATE FOR MORE THAN THREE CONSECUTIVE DAYS. SITE SHALL BE KEPT FREE AND CLEAR OF ALL DEBRIS AND TRASH AT ALL TIMES. ALL DEBRIS SHALL BE STORED IN SEGREGATED RECYCLING TOTES/ BINS/ CONTAINERS AND TRANSPORTED TO AN APPROPRIATE RECYCLING CENTER.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL UTILITIES AS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS AND STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SPECIFICATIONS OF MATERIALS AND INSTALLATION PROCEDURES AND INSTALL IN ACCORDANCE WITH APPLICABLE REGULATIONS.
10. THE CONTRACTOR IS RESPONSIBLE TO CONTACT AND DETERMINE, COORDINATE AND SCHEDULE ALL NECESSARY INSPECTIONS AND MONITORING WITH ALL APPROPRIATE UTILITY COMPANIES.
11. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO PERFORM THE WORK.
12. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE PROJECT BENCHMARK AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF ITS WORK.
14. WATER AND SEWER TESTING SHALL CONFORM TO CITY OF PORTSMOUTH REGULATIONS, REQUIREMENTS, AND SPECIFICATIONS. COORDINATE TESTING OF SEWER AND WATER LINE CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
15. ALL MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
16. ALL SEWER AND WATER PIPE MATERIALS, STRUCTURES, APPURTENANCES AND INSTALLATION SHALL BE IN ACCORDANCE TO THE CITY OF PORTSMOUTH CONSTRUCTION SPECIFICATIONS AND REQUIREMENTS.
17. ALL GRAVITY SEWER PIPE SHALL BE PVC (SDR35) AND BE GREEN IN COLOR.
18. ALL WATER MAIN AND SERVICE PIPE SHALL BE DUCTILE IRON CEMENT LINED (DICL) CLASS 52.
19. ALL HYDRANTS, VALVES, AND FITTINGS SHALL MEET CITY OF PORTSMOUTH SPECIFICATIONS AND REQUIREMENTS.
20. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, COVERS, PLATES, ANCILLARY MATERIALS AND HARDWARE, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION COMPLETE AND OPERATIONAL AND ACCEPTABLE TO THE CITY OF PORTSMOUTH AND PRIVATE UTILITIES.
21. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION SHALL BE FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
22. TRENCH AREAS FOR THE CONSTRUCTION OF THE UNDERGROUND UTILITIES ARE TO BE REPATCHED WITH SAME MATERIAL AT THE SAME DEPTH AS THE EXISTING MATERIAL, SEE UTILITY TRENCH DETAIL. THE AREAS OF TRENCHING SHALL BE NEATLY SAW-CUT AND THE NEW REPATCHING MATERIAL SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE PLAN DETAILS AND THE CITY OF PORTSMOUTH SPECIFICATIONS AND REQUIREMENTS.
23. DURING EXCAVATION AND CONSTRUCTION OF PIPES AND STRUCTURES, TRENCHES MUST BE ADEQUATELY BRACED AND PROTECTED AGAINST CAVE-IN.
24. SEE ELECTRICAL PLANS FOR ADDITIONAL UTILITY NOTES.
25. CONTRACTOR SHALL COORDINATE ALL FINAL APPROVALS ASSOCIATED WITH GAS, ELECTRIC, TELEPHONE, & CABLE WITH APPROPRIATE UTILITY PROVIDER.

JSA
ARCHITECTS
INTERIORS
PLANNERS
273 CORPORATE DRIVE
PORTSMOUTH, NH 03801
T 603.436.2551
F 603.436.6973
www.jsainc.com

GEOINSIGHT, INC.
GEOTECH & CIVIL
MANCHESTER, NEW HAMPSHIRE

GREENMAN-PEDERSEN, INC.
LANDSCAPE ARCHITECT
PORTSMOUTH, NEW HAMPSHIRE

JSN ASSOCIATES, INC.
STRUCTURAL ENGINEER
PORTSMOUTH, NEW HAMPSHIRE

ENGINEERED SYSTEMS INC.
MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:
Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:
STATE OF NEW HAMPSHIRE - JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

GENERAL NOTES SHEET 1 OF 2

C1.0

I:\80900\DWG\CIVIL\80900-LOT-6 DETAILS.dwg

PROJECT NOTES:

1. PROPERTY LOCATION: 181 HILL STREET
   PORTSMOUTH, NH 03801

2. ASSESSORS MAP: MAP 138, LOT 62

3. ZONE: CHARACTER DISTRICT 5

4. USE: OFFICE, RESIDENTIAL, RETAIL

5. OWNER/APPLICANT: DEER STREET ASSOCIATES
   7 BANKS ROCK ROAD
   YORK HARBOR, ME 03911
   TEL: (207) 363-3540

6. CIVIL & GEOTECH: GEOINSIGHT, INC.
   186 GRANITE STREET, 3RD FLOOR SUITE A
   MANCHESTER, NH 03101
   TEL: (603) 314-0820

7. ARCHITECT: JSA INC.
   273 CORPORATE DRIVE, SUITE 100
   PORTSMOUTH, NH 03801
   TEL: (603) 436-2551

8. LANDSCAPE ARCHITECT: GREENMAN - PEDERSEN, INC.
   21 DANIELS STREET
   PORTSMOUTH, NH 03801
   TEL: (802) 359-4070

9. STRUCTURAL: JSN ASSOCIATES, INC.
   1 AUTUMN STREET
   PORTSMOUTH, NH 03801
   TEL: (603) 433-8639

10. MPFP ENGINEER ENGINEERED SYSTEMS, INC.
    237 LEXINGTON STREET, SUITE 207
    WOBURN, MA 01801
    TEL: (781) 569-6520

11. ELECTRICAL ENGINEER: ENGINEERED BUILDING SYSTEMS, INC.
    22 MANCHESTER RD, SUITE 8-A
    DERRY, NH 03038
    TEL: (603) 870-9009

12. LAND SURVEYOR: AMBIT ENGINEERING, INC.
    200 GRIFFIN RD, UNIT 3
    PORTSMOUTH, NH 03801
    TEL: (603) 430-9282

13. EXISTING CONDITIONS INFORMATION SHOWN IN THESE PLANS IS BASED ON THE PLAN TITLED "EXISTING CONDITIONS SITE PLAN" BY AMBIT ENGINEERING, INC. WITH DATE OF NOVEMBER 14, 2016.

14. ELEVATIONS ARE BASED ON THE MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD-88).

15. FOR BENCHMARK INFORMATION SEE "EXISTING CONDITIONS SITE PLAN" BY AMBIT ENGINEERING, INC. WITH DATE OF NOVEMBER 14, 2016.

16. PARCELS ARE NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. MAY 17, 2005.

17. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXECUTE THE NPDES CONSTRUCTION GENERAL PERMIT NOI AND SWPPP AND PROVIDE A COPY TO THE CITY OF PORTSMOUTH.

18. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL PREPARE AND SUBMIT AS-BUILT MYLARS AND DIGITAL FORMAT (.DWG FILE) ON DISK TO THE ENGINEER FOR REVIEW. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER AND CONFORM TO THE CITY OF PORTSMOUTH STANDARDS.

19. ALL WATER AND SEWER CONSTRUCTION ACTIVITIES MUST BE PERFORMED BY A LICENSED CITY DRAIN LAYER. ALL TESTING RESULTS FOR THE UTILITIES AND SERVICE TIE CARDS ARE REQUIRED TO BE SUBMITTED TO THE CITY OF PORTSMOUTH DPW.

20. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN THE FOLLOWING LOCAL PERMITS PRIOR TO CONSTRUCTION ACTIVITIES:

CITY OF PORTSMOUTH
- A. SEWER CONNECTION PERMIT
- B. WATER CONNECTION PERMIT
- C. STORMWATER PERMIT
- D. DRIVEWAY PERMIT
- E. TEMPORARY DEWATERING PERMIT

NHDES ③
- A. SEWER CONNECTION PERMIT

USEPA
- A. NPDES CONSTRUCTION GENERAL PERMIT (CGP)

21. THE CONTRACTOR SHALL REFER TO FORCOMING REPORTS REGARDING SITE GEOTECHNICAL AND ENVIRONMENTAL CONDITIONS, TO BE PROVIDED BY THE OWNER.

GRADING AND DRAINAGE NOTES:

1. A DUST EMISSION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED BY THE CONTRACTOR IF CONDITIONS WARRANT. ALL STORM DRAIN PIPES SHALL BE ADS HP STORM UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS, AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
3. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" OF LOAM WITH SEED, FERTILIZER AND MULCH.
4. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT'S STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
5. SEE GEOTECHNICAL REPORT PREPARED BY GEOINSIGHT, INC. FOR SOIL FILL MATERIAL AND COMPACTION REQUIREMENTS.
6. ALL DRAIN PIPE SHALL MEET THE FOLLOWING SPECIFICATIONS.
   - ALL ROOF DRAINS SHALL BE CAST IRON UP TO BUILDING CONNECTION. SEE BUILDING PLUMBING PLANS (BY OTHERS) FOR CONTINUATION UNDER BUILDING.
   - ALL CATCH BASIN DRAINS SHALL BE 12" Ø OR LARGER AND SHALL BE ADS HP STORM. IF THE COVER IN TRAFFIC AREAS IS LESS THAN 2', CLASS V RCP SHALL BE USED. ALL MANHOLES, CATCH BASINS, VALVE BOXES, CURB BOXES, ETC WITHIN THE LIMIT OF WORK TO FINISH GRADE SHALL BE ADJUSTED TO FINISH GRADE.
7. CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS IN FIELD PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE OWNER'S CONSTRUCTION REPRESENTATIVE IF ELEVATIONS DIFFER FROM PLAN.
   A TEMPORARY DEWATERING PERMIT SHALL BE OBTAINED FROM THE CITY BEFORE DISCHARGING GROUNDWATER OFFSITE DURING CONSTRUCTION
8. ANY GROUNDWATER DISCHARGES PROPOSED FOR THE FINAL STORMWATER SYSTEM DESIGN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL OF CAPACITY.

SITE NOTES

1. EXTERIOR PAVEMENT MARKINGS SHALL BE INSTALLED AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, PAINTED ISLANDS, AND CENTERLINES. ALL MARKINGS SHALL BE WHITE UNLESS NOTED OTHERWISE. ALL THERMOPLASTIC PAVEMENT MARKINGS INCLUDING LEGENDS, ARROWS, CROSSWALKS, AND STOP BARS SHALL MEET THE AASHTO M249 REQUIREMENTS. ALL PAINTED PAVEMENT MARKINGS SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F".
2. ALL PAVEMENT MARKINGS, ROADWAY SIGNAGE SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE AMERICANS WITH DISABILITIES ACT, AND "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", LATEST EDITIONS.
3. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE, WHITE THERMOPLASTIC AND CONFORM TO CURRENT MUTCD STANDARDS.
4. EDGE, LANE, AND CENTERLINES SHALL BE FOUR (4) INCH WIDE LINES.
5. EDGE AND LANE DEMARCATION LINES SHALL BE PAINTED WHITE.
6. LANE DEMARCATION MARKINGS SEPARATING OPPOSING TRAFFIC DIRECTIONS SHALL BE PAINTED YELLOW.
7. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
8. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED ENGINEER/SURVEYOR TO DETERMINE ALL LINES AND GRADES.
9. ALL WORK SHALL CONFORM THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORK'S STANDARD SPECIFICATIONS.
10. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED.

I:\18090\DWG\CIVIL\18090-LOT-6 DETAILS.dwg

CIVIL ABBREVIATIONS

ADD	ADDITIONAL INFORMATION
APPROX.	APPROXIMATE
BIT CONC	BITUMINOUS CONCRETE
BC	BOTTOM OF CURB
BH	BORING HOLE
BLDG	BUILDING
BOW	BOTTOM OF WALL
BOT	BOTTOM
DPW	CITY DEPARTMENT OF PUBLIC WORKS
CO	CLEAN OUT
CONC	CONCRETE
CY	CUBIC YARD
DICL	DUCTILE IRON CEMENT LINED PIPE
DSYL	DOUBLE SOLID YELLOW CENTER LINE
ECB	EXISTING CATCH BASIN
EDMH	EXISTING DRAIN MANHOLE
ELE	ELEVATION
EOP	EDGE OF PAVEMENT
ESMH	EXISTING SEWER MANHOLE
ETC	ELECTRIC TELEPHONE CABLE
EX	EXISTING
FE	FLANGED END
FT	FEET
GFA	GROSS FLOOR AREA
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
HYD	HYDRANT
INV	INVERT
LOC.	LOCATION
LOW	LIMIT OF WORK
MJ	MECHANICAL JOINT
N/F	NOW OR FORMERLY
OHW	OVER HEAD WIRE
PC	POINT OF CURVATURE
PCB	PROPOSED CATCH BASIN
PDMH	PROPOSED DRAIN MANHOLE
PFES	PROPOSED FLARED END SECTION
PGT	PROPOSED GREASE TRAP
PHW	PROPOSED HEADWALL
POS	PROPOSED OUTLET STRUCTURE
PSMH	PROPOSED SEWER MANHOLE
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	PIPE POLYVINYL CHLORIDE PIPE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RET	RETAINING
ROW	RIGHT OF WAY
SC	STORM CEPTOR
SF	SQUARE FEET
SGC	SLOPED GRANITE CURB
STA	STATION
SSWL	SINGLE SOLID WHITE LINE
SSYL	SINGLE SOLID YELLOW LINE
SDWL	SINGLE DASHED WHITE LINE
SDYL	SINGLE DASHED YELLOW LINE
SYL	SOLID YELLOW LINE
SY	SQUARE YARD
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TOW	TOP OF WALL
TP	TEST PIT
TYP	TYPICAL
UGE	UNDER GROUND ELECTRIC
UP	UTILITY POLE
VGC	VERTICAL GRANITE CURB
W/	WITH

PLAN LEGEND

- PROPERTY LINE
- SETBACK LINE
- ABUTTING PROPERTY LINE
- PROPOSED BUILDING
- CURB
- RETAINING WALL
- TRAFFIC ARROWS
- (10) PARKING SPACE COUNT
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED STORM DRAIN
- 80.00 PROP. SPOT GRADE
- PROPOSED SEWER MANHOLE
- PROPOSED SANITARY SEWER LINE
- W PROPOSED WATER MAIN
- WV PROPOSED WATER VALVE
- PROPOSED HYDRANT
- G PROPOSED GAS LINE
- GV PROPOSED GAS VALVE
- UGE PROPOSED UNDERGROUND POWER
- COM PROPOSED UNDERGROUND COMMUNICATIONS
- T PROPOSED TRANSFORMER
- 16 EXISTING GRADE
- 16 PROPOSED GRADE
- E PROPOSED ELECTRICAL HANDHOLE

SEE EXISTING CONDITIONS SITE PLAN FOR EXISTING CONDITION SYMBOLS AND LEGEND

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ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE · JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER ·

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

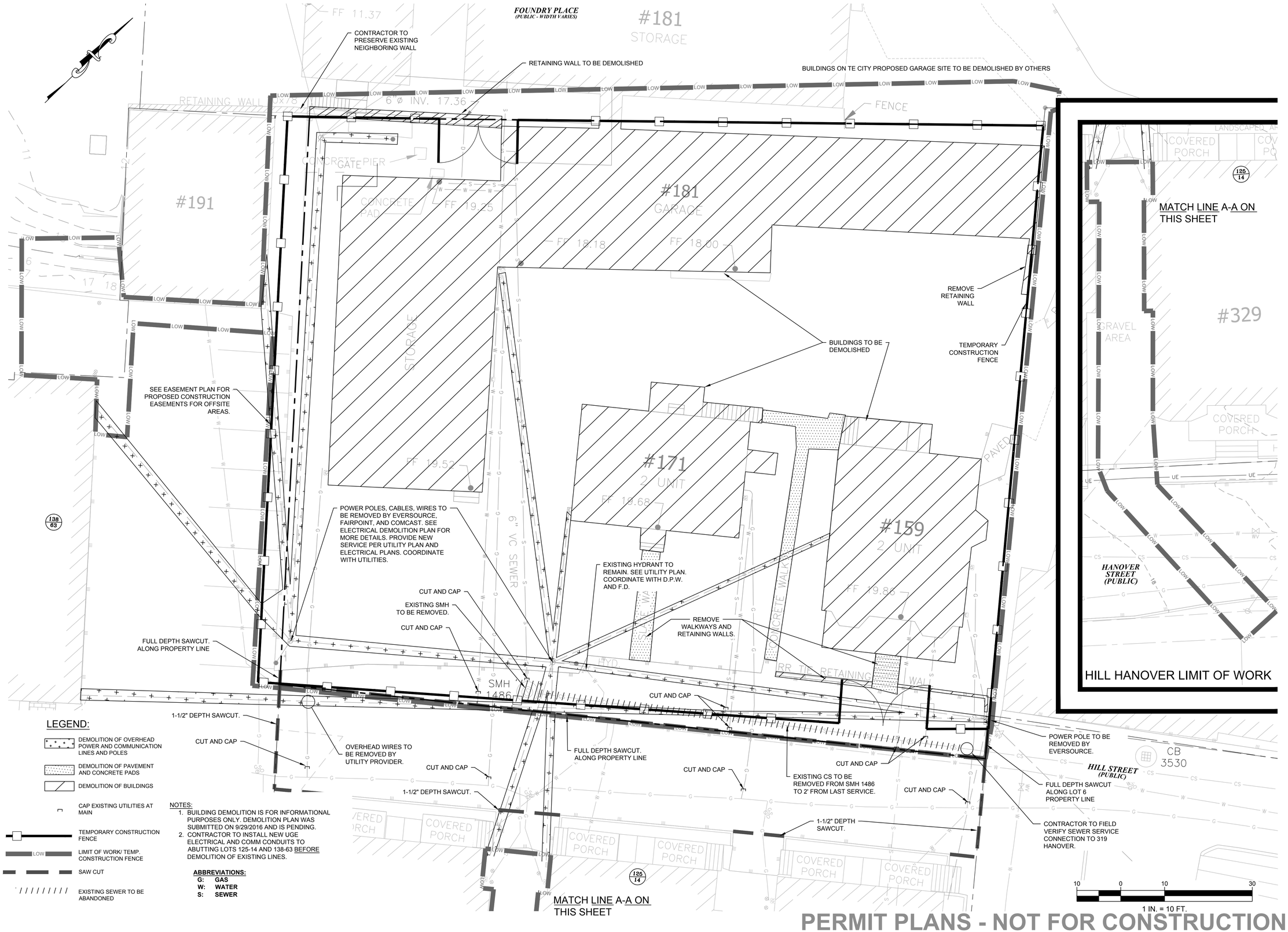
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
③	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

GENERAL NOTES SHEET 2 OF 2

C1.1



LEGEND:

- DEMOLITION OF OVERHEAD POWER AND COMMUNICATION LINES AND POLES
- DEMOLITION OF PAVEMENT AND CONCRETE PADS
- DEMOLITION OF BUILDINGS
- CAP EXISTING UTILITIES AT MAIN
- TEMPORARY CONSTRUCTION FENCE
- LOW — LIMIT OF WORK/ TEMP. CONSTRUCTION FENCE
- SAW CUT
- EXISTING SEWER TO BE ABANDONED

NOTES:

1. BUILDING DEMOLITION IS FOR INFORMATIONAL PURPOSES ONLY. DEMOLITION PLAN WAS SUBMITTED ON 9/29/2016 AND IS PENDING.
2. CONTRACTOR TO INSTALL NEW UGE ELECTRICAL AND COMM CONDUITS TO ABUTTING LOTS 125-14 AND 138-63 BEFORE DEMOLITION OF EXISTING LINES.

ABBREVIATIONS:

G:	GAS
W:	WATER
S:	SEWER

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED PROFESSIONAL ENGINEER

Scale:	1"=10'
Date:	3/17/2017
Project Number:	14837.03

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

DEMOLITION PLAN

C2.0

CITY GARAGE MAIN ENTRANCE

APPROXIMATE LOCATION OF CITY GARAGE FOOT PRINT

FOUNDRY PLACE (PUBLIC - WIDTH VARIES)

ACCESSIBLE CURB RAMP TO BE COORDINATED WITH CITY

PROPOSED 11' WIDE CROSSWALK. COORDINATE WITH CITY.

24'

21.55'

BRICK SIDEWALK

VGC BY CITY

PROP. STOP BAR AND NON-ADA CROSSWALK

NEW BIT CONC PAVEMENT

VGC BY CITY

22'

BRICK SIDEWALK

GARBAGE CAN

BIKE RACK

BENCH (TYP.)

VGC (BY CITY)

PROP TIP DOWN

R12

R15'

VGC

VGC

L.S.A.

14.1'

7.5'

WALK WIDTH 8'

14.1'

6.52'

R2'

8'x7.5' TRANSFORMER PAD

T

5'

10.18'

6.03'

5'

19'

22' GARAGE ENTRANCE

DOOR (TYP.)

SPLIT LEVEL RETAIL SPACE

7.75'

BRICK SIDEWALK (TYP.)

CONC WALKWAY

#191

6.49'

6" SSWL

AHEAD STOP

4

WASTE RECYCLE ROOM

ELECTRIC METERS

WATER ENTRY/ MECHANICAL ROOM

7.5'± HIGH RETAINING WALL

GAS METERS

FLOOR LEVEL BREAK

CONC WALK

6.04'

STAIR 1

STAIR 2

22'

END OF BASEMENT RAMP DOWN

BELOW GRADE PARKING GARAGE 31 TOTAL SPACES

EXTENT OF BUILDING FOUNDATION FOOTING (TYP.)

SEAT WALL (TYP).

L.S.A.

LOT 6 BUILDING

BUILDING FOOTPRINT: 16,364 SF
STORIES: 4 PLUS PENTHOUSE
HEIGHT: 59 FT-10 3/4" IN
USES: RETAIL, OFFICE, AND RESIDENTIAL

EXTENT OF BUILDING FOUNDATION (TYP.)

L.S.A.

0-4.5' HIGH RETAINING WALL

L.S.A.

FIRST FLOOR PARKING PARKING GARAGE 16 TOTAL SPACES.

BENCH (TYP.)

BRICK SIDEWALK (TYP.)

FOOTING OUTLINE (TYP.)

PROP VGC WITH 6" REVEAL FACING HEINEMANN BUILDING

VGC

9.32'

9.81'

FIRST FLOOR OFFICE SPACE

PEDESTRIAN PATHWAY (PUBLIC ACCESS)

138/63

BRICK SIDEWALK

L.S.A.

SIGN R7-108

3 SHORT TERM PARKING SPACES WITH BRICK PAVEMENT (TYP.)

4" THICK MAX. RETAINING WALL

20' GARAGE ENTRANCE

5.25'

8.68'

12.81'

L.S.A.

5'

R2'

10'

3

5'

VGC

VGC

3

20'

VGC

9.63'

25.82'

R2'

BRICK SIDEWALK

5' REAR SETBACK

EXTENT OF BUILDING FOUNDATION (TYP.)

10'

EXIST. 20' CITY UTILITY EASEMENT

7.01'

29.37'

FLUSH VGC

FOOTING OUTLINE (0.23' MIN. FROM LOT LINE)

SAW CUT

29.1'

SAW CUT

1-1/2" MILL & OVERLAY PAVEMENT

CONSTRUCT FULL DEPTH PAVEMENT WITH RECLAIMED BASE

4 CONTRASTING COLOR BRICK COURSE TO DEFINE PARKING SPACES - SEE LANDSCAPE PLAN

CB 3530

HILL STREET (PUBLIC)

EXIST. VGC

EXIST. VGC

COVERED PORCH

COVERED PORCH

COVERED PORCH

COVERED PORCH

COVERED PORCH

COVERED PORCH

138/64

126/16

ABBREVIATIONS:

LOW	LIMIT OF WORK
LSA	LANDSCAPED AREA
SSWL	SINGLE SOLID WHITE LINE
VGC	VERTICAL GRANITE CURB

LEGEND:

- T — TRANSFORMER
- SITE BOUNDARY LINE
- ABUTTER LOT LINE
- PROPOSED BUILDING
- REAR SETBACK
- FOUNDATION EXTENTS
- RETAINING WALL
- SAW CUT
- 126/16 — ACCESSOR'S MAP# / LOT#
- BRICK PAVEMENT
- FULL DEPTH ASPHALT SECTION
- ASPHALT MILL AND OVERLAY
- LANDSCAPE (SEE ATTACHED LANDSCAPE PLANS FOR DETAILS)
- PROPOSED HYDRANT
- 3 — EXTERIOR PARKING SPACES

ARCHITECTURE NOTES:
1. SEE ARCHITECTURAL SHEET AT.02T FOR FULL BUILDING INFORMATION
2. SEE ARCHITECTURAL SHEET A1.01T AND A1.02T FOR FULL PARKING AND FLOOR LAYOUT.
3. SEE LANDSCAPE SHEET L1 FOR LANDSCAPE AND COURTYARD DETAILS.

NOTE:
1. ALL CONDITIONS OF THE PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REGULATIONS.
2. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
3. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
4. ALL SNOW TO BE REMOVED AND HAULED OFF SITE.

10 0 10 30

1 IN. = 10 FT.

I:\18090\DWG\CIVIL\18090-LOT-6.dwg

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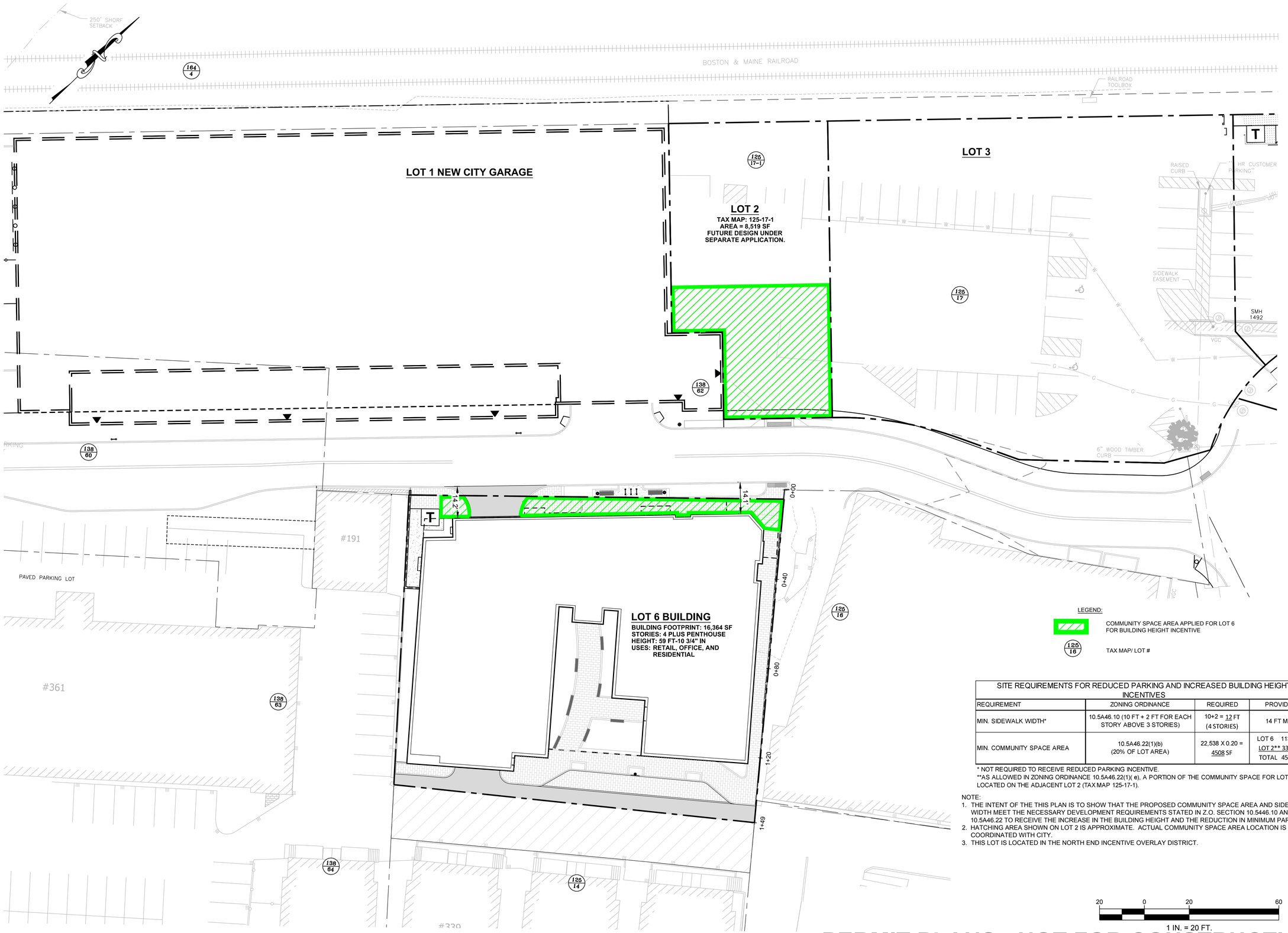
REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB SUBMISSION	10/10/2017
4	PB #2 SUBMISSION	11/07/2017

SITE PLAN REVIEW

SITE PLAN

C3.0



LEGEND:

COMMUNITY SPACE AREA APPLIED FOR LOT 6 FOR BUILDING HEIGHT INCENTIVE

125/16 TAX MAP/ LOT #

SITE REQUIREMENTS FOR REDUCED PARKING AND INCREASED BUILDING HEIGHT INCENTIVES			
REQUIREMENT	ZONING ORDINANCE	REQUIRED	PROVIDED
MIN. SIDEWALK WIDTH*	10.5A46.10 (10 FT + 2 FT FOR EACH STORY ABOVE 3 STORIES)	10+2 = 12 FT (4 STORIES)	14 FT MIN.
MIN. COMMUNITY SPACE AREA	10.5A46.22(1)(b) (20% OF LOT AREA)	22,538 X 0.20 = 4508 SF	LOT 6 1134 SF LOT 2** 3374 SF TOTAL 4508 SF

* NOT REQUIRED TO RECEIVE REDUCED PARKING INCENTIVE.
**AS ALLOWED IN ZONING ORDINANCE 10.5A46.22(1)(e), A PORTION OF THE COMMUNITY SPACE FOR LOT 6 IS LOCATED ON THE ADJACENT LOT 2 (TAX MAP 125-17-1).

NOTE:
1. THE INTENT OF THE THIS PLAN IS TO SHOW THAT THE PROPOSED COMMUNITY SPACE AREA AND SIDEWALK WIDTH MEET THE NECESSARY DEVELOPMENT REQUIREMENTS STATED IN Z.O. SECTION 10.5446.10 AND 10.5A46.22 TO RECEIVE THE INCREASE IN THE BUILDING HEIGHT AND THE REDUCTION IN MINIMUM PARKING.
2. HATCHING AREA SHOWN ON LOT 2 IS APPROXIMATE. ACTUAL COMMUNITY SPACE AREA LOCATION IS TO BE COORDINATED WITH CITY.
3. THIS LOT IS LOCATED IN THE NORTH END INCENTIVE OVERLAY DISTRICT.

20 0 20 60
1 IN. = 20 FT.

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A / E Seal:

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JOSEPH H KIEFFNER No. 13174 LICENSED
PROFESSIONAL ENGINEER

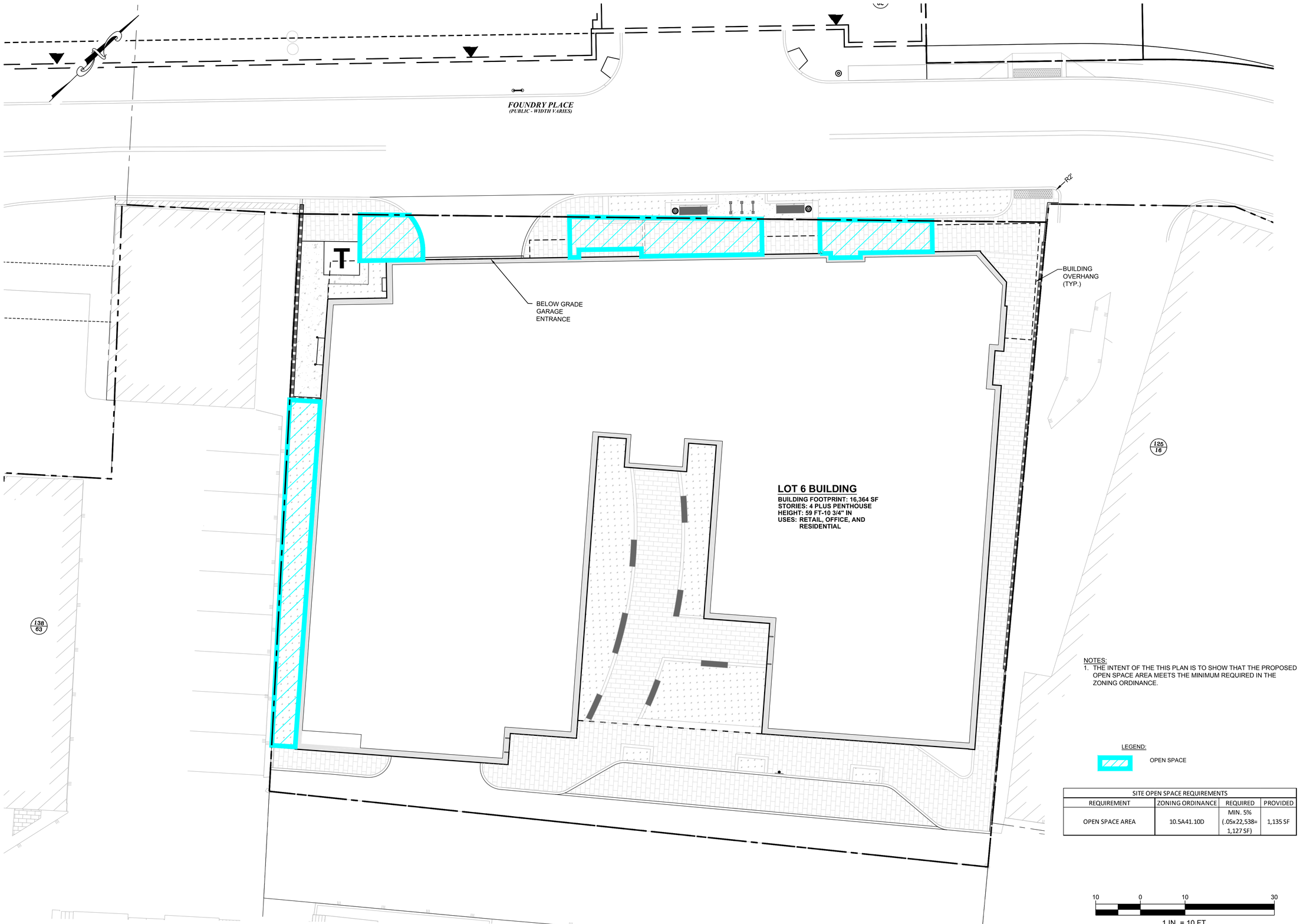
Scale: **1"=20'**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

DEVEOPMENT INCENTIVES PLAN

C3.1



NOTES:
1. THE INTENT OF THE THIS PLAN IS TO SHOW THAT THE PROPOSED OPEN SPACE AREA MEETS THE MINIMUM REQUIRED IN THE ZONING ORDINANCE.

LEGEND:

OPEN SPACE

SITE OPEN SPACE REQUIREMENTS			
REQUIREMENT	ZONING ORDINANCE	REQUIRED	PROVIDED
OPEN SPACE AREA	10.5A41.10D	MIN. 5% (.05x22,538= 1,127 SF)	1,135 SF

10 0 10 30

1 IN. = 10 FT.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

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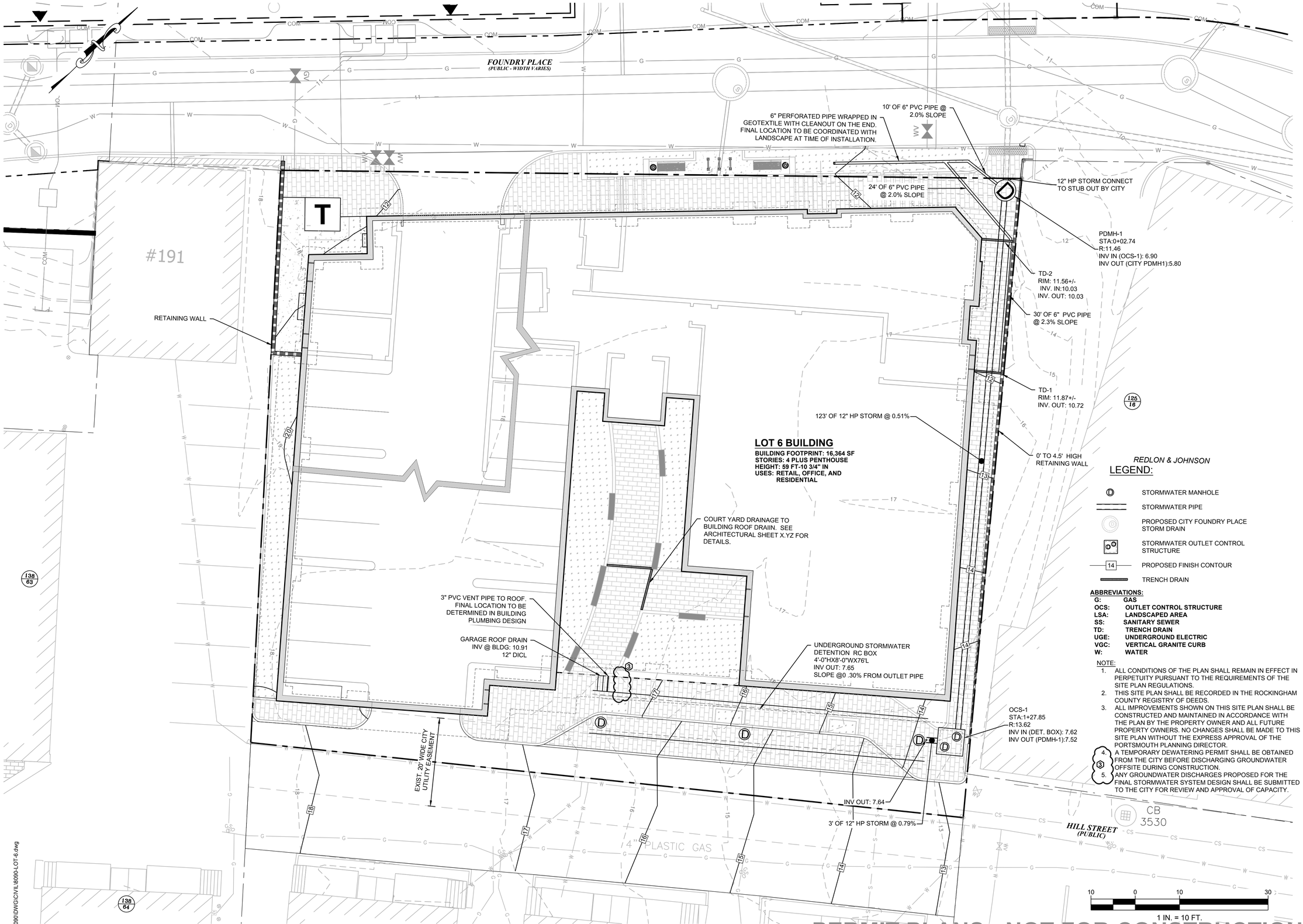
REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

OPEN SPACE PLAN

C3.2



ABBREVIATIONS:

G:	GAS
OCS:	OUTLET CONTROL STRUCTURE
LSA:	LANDSCAPED AREA
SS:	SANITARY SEWER
TD:	TRENCH DRAIN
UGE:	UNDERGROUND ELECTRIC
VGC:	VERTICAL GRANITE CURB
W:	WATER

NOTE:

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2. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
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4. (3) A TEMPORARY DEWATERING PERMIT SHALL BE OBTAINED FROM THE CITY BEFORE DISCHARGING GROUNDWATER OFFSITE DURING CONSTRUCTION.
5. ANY GROUNDWATER DISCHARGES PROPOSED FOR THE FINAL STORMWATER SYSTEM DESIGN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL OF CAPACITY.

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A / E Seal:

STATE OF NEW HAMPSHIRE - JOSEPH H. KIEFFNER No. 13174 - PROFESSIONAL ENGINEER - LICENSED

1" =10'

Scale:
Date: **3/17/2017**
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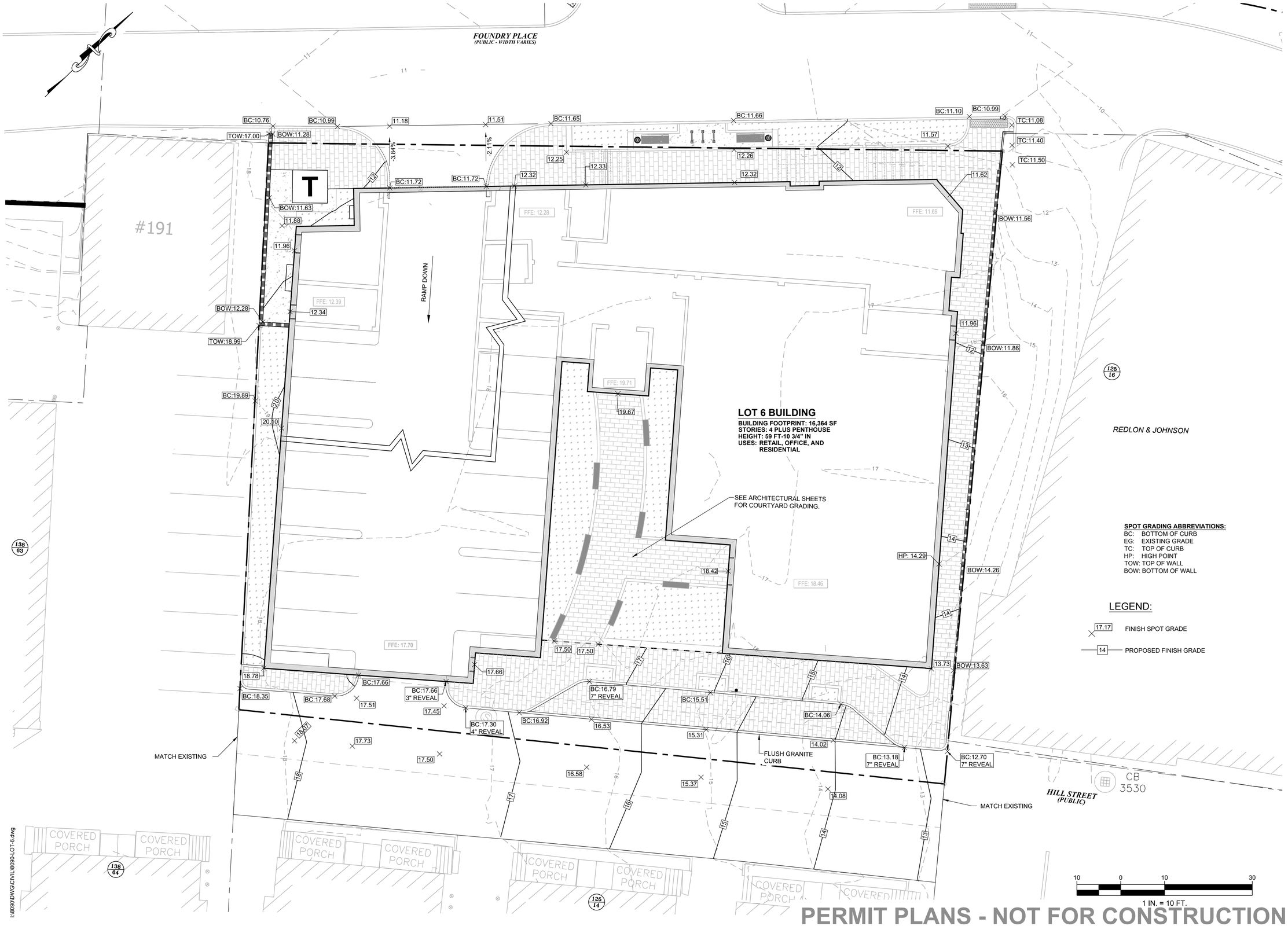
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
(3)	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

GRADING AND DRAINAGE PLAN

C4.0



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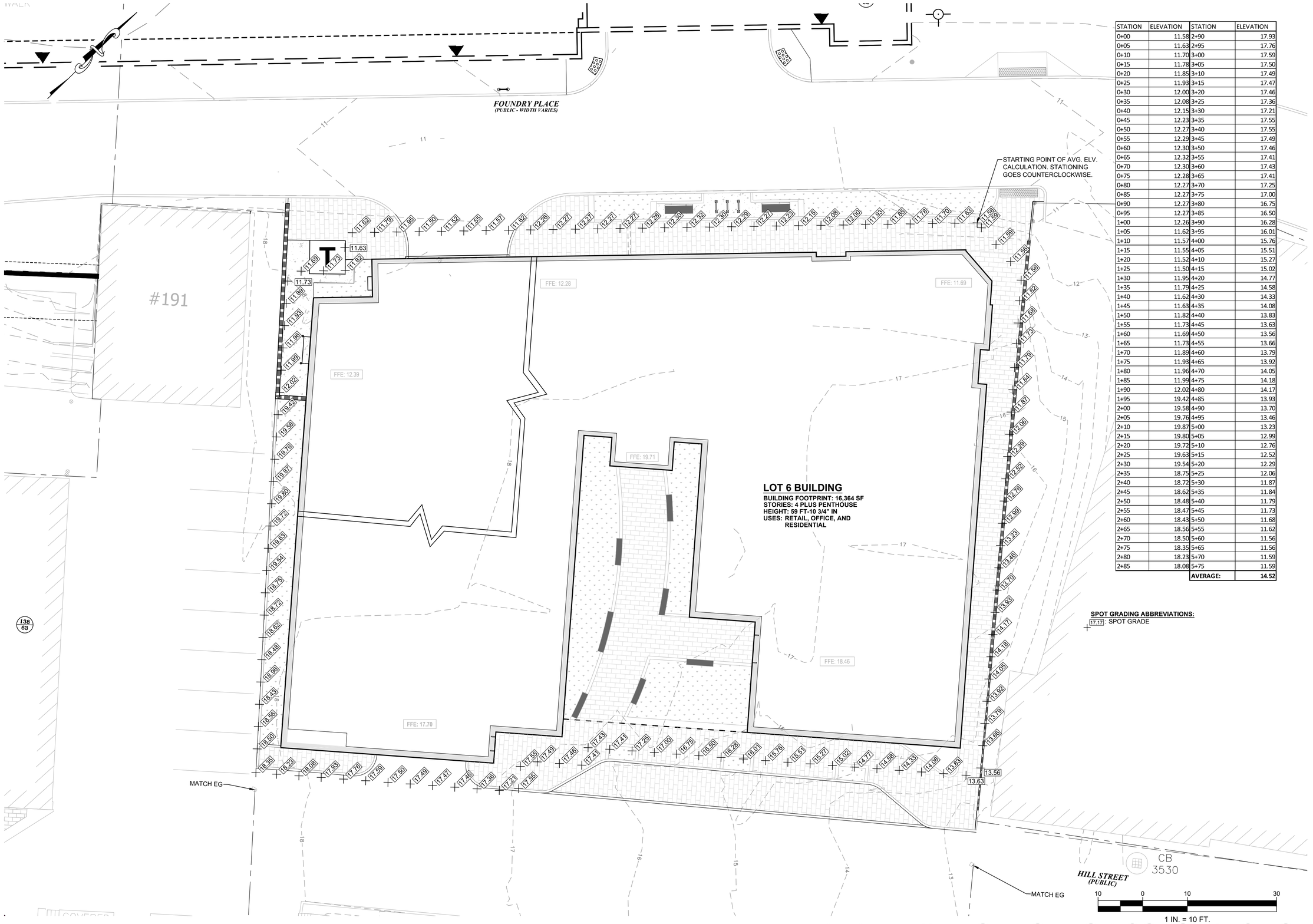
3	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

GRADING DETAIL

C4.1



STATION	ELEVATION	STATION	ELEVATION
0+00	11.58	2+90	17.93
0+05	11.63	2+95	17.76
0+10	11.70	3+00	17.59
0+15	11.78	3+05	17.50
0+20	11.85	3+10	17.49
0+25	11.93	3+15	17.47
0+30	12.00	3+20	17.46
0+35	12.08	3+25	17.36
0+40	12.15	3+30	17.21
0+45	12.23	3+35	17.55
0+50	12.27	3+40	17.55
0+55	12.29	3+45	17.49
0+60	12.30	3+50	17.46
0+65	12.32	3+55	17.41
0+70	12.30	3+60	17.43
0+75	12.28	3+65	17.41
0+80	12.27	3+70	17.25
0+85	12.27	3+75	17.00
0+90	12.27	3+80	16.75
0+95	12.27	3+85	16.50
1+00	12.26	3+90	16.28
1+05	11.62	3+95	16.01
1+10	11.57	4+00	15.76
1+15	11.55	4+05	15.51
1+20	11.52	4+10	15.27
1+25	11.50	4+15	15.02
1+30	11.95	4+20	14.77
1+35	11.79	4+25	14.58
1+40	11.62	4+30	14.33
1+45	11.63	4+35	14.08
1+50	11.82	4+40	13.83
1+55	11.73	4+45	13.63
1+60	11.69	4+50	13.56
1+65	11.73	4+55	13.66
1+70	11.89	4+60	13.79
1+75	11.93	4+65	13.92
1+80	11.96	4+70	14.05
1+85	11.99	4+75	14.18
1+90	12.02	4+80	14.17
1+95	19.42	4+85	13.93
2+00	19.58	4+90	13.70
2+05	19.76	4+95	13.46
2+10	19.87	5+00	13.23
2+15	19.80	5+05	12.99
2+20	19.72	5+10	12.76
2+25	19.63	5+15	12.52
2+30	19.54	5+20	12.29
2+35	18.75	5+25	12.06
2+40	18.72	5+30	11.87
2+45	18.62	5+35	11.84
2+50	18.48	5+40	11.79
2+55	18.47	5+45	11.73
2+60	18.43	5+50	11.68
2+65	18.56	5+55	11.62
2+70	18.50	5+60	11.56
2+75	18.35	5+65	11.56
2+80	18.23	5+70	11.59
2+85	18.08	5+75	11.59
		AVERAGE:	**14.52**

SPOT GRADING ABBREVIATIONS:
17.17: SPOT GRADE

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DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - LICENSED
JOSEPH H. KIEFFNER No. 13174

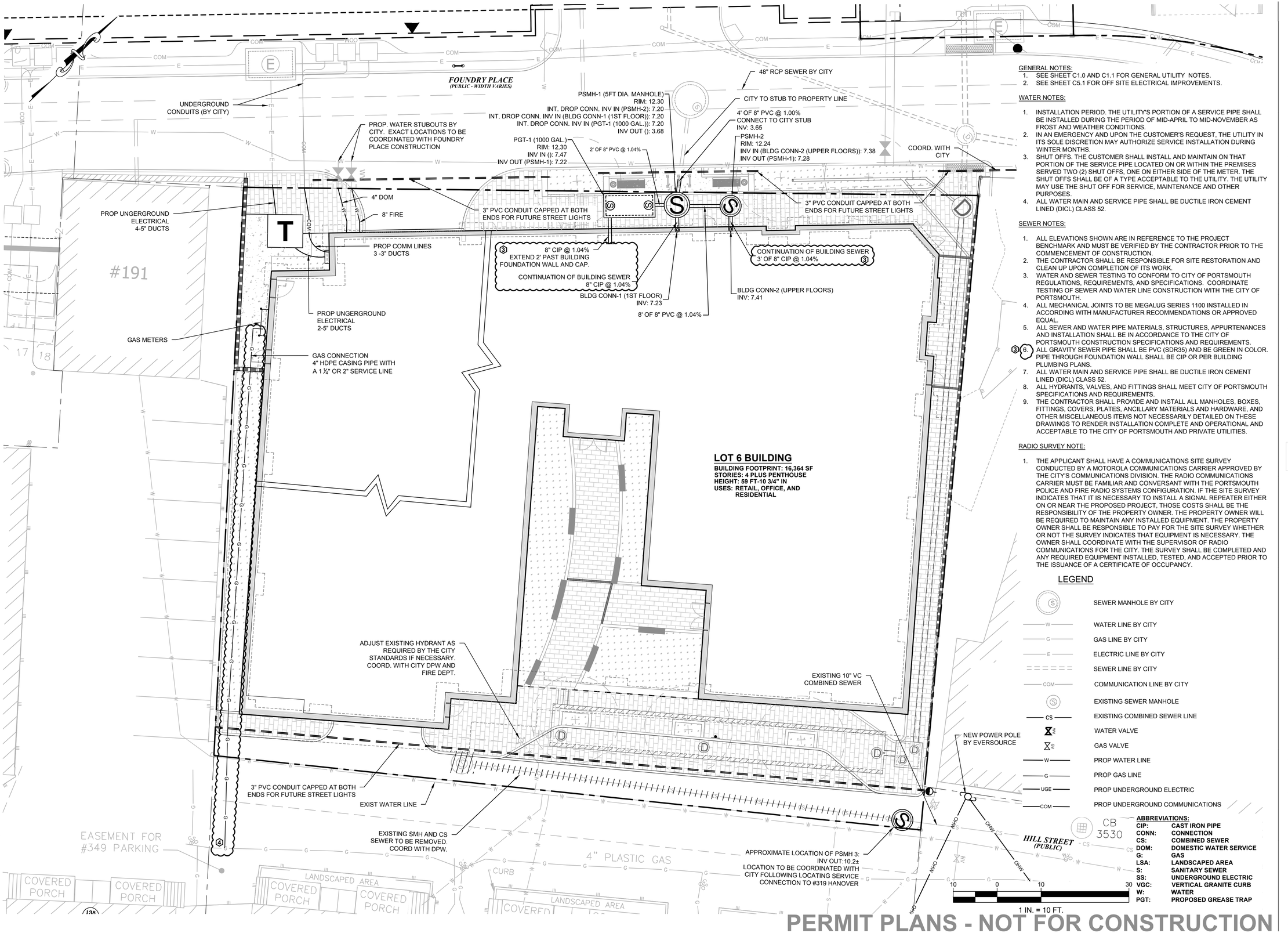
Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

AVERAGE GRADE PLANE CALCULATION

C4.2



GENERAL NOTES:

1. SEE SHEET C1.0 AND C1.1 FOR GENERAL UTILITY NOTES.
2. SEE SHEET C5.1 FOR OFF SITE ELECTRICAL IMPROVEMENTS.

WATER NOTES:

1. INSTALLATION PERIOD. THE UTILITY'S PORTION OF A SERVICE PIPE SHALL BE INSTALLED DURING THE PERIOD OF MID-APRIL TO MID-NOVEMBER AS FROST AND WEATHER CONDITIONS.
2. IN AN EMERGENCY AND UPON THE CUSTOMER'S REQUEST, THE UTILITY IN ITS SOLE DISCRETION MAY AUTHORIZE SERVICE INSTALLATION DURING WINTER MONTHS.
3. SHUT OFFS. THE CUSTOMER SHALL INSTALL AND MAINTAIN ON THAT PORTION OF THE SERVICE PIPE LOCATED ON OR WITHIN THE PREMISES SERVED TWO (2) SHUT OFFS, ONE ON EITHER SIDE OF THE METER. THE SHUT OFFS SHALL BE OF A TYPE ACCEPTABLE TO THE UTILITY. THE UTILITY MAY USE THE SHUT OFF FOR SERVICE, MAINTENANCE AND OTHER PURPOSES.
4. ALL WATER MAIN AND SERVICE PIPE SHALL BE DUCTILE IRON CEMENT LINED (DICL) CLASS 52.

SEWER NOTES:

1. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE PROJECT BENCHMARK AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF ITS WORK.
3. WATER AND SEWER TESTING TO CONFORM TO CITY OF PORTSMOUTH REGULATIONS, REQUIREMENTS, AND SPECIFICATIONS. COORDINATE TESTING OF SEWER AND WATER LINE CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
4. ALL MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
5. ALL SEWER AND WATER PIPE MATERIALS, STRUCTURES, APPURTENANCES AND INSTALLATION SHALL BE IN ACCORDANCE TO THE CITY OF PORTSMOUTH CONSTRUCTION SPECIFICATIONS AND REQUIREMENTS.
6. (3) ALL GRAVITY SEWER PIPE SHALL BE PVC (SDR35) AND BE GREEN IN COLOR. PIPE THROUGH FOUNDATION WALL SHALL BE CIP OR PER BUILDING PLUMBING PLANS.
7. ALL WATER MAIN AND SERVICE PIPE SHALL BE DUCTILE IRON CEMENT LINED (DICL) CLASS 52.
8. ALL HYDRANTS, VALVES, AND FITTINGS SHALL MEET CITY OF PORTSMOUTH SPECIFICATIONS AND REQUIREMENTS.
9. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, COVERS, PLATES, ANCILLARY MATERIALS AND HARDWARE, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION COMPLETE AND OPERATIONAL AND ACCEPTABLE TO THE CITY OF PORTSMOUTH AND PRIVATE UTILITIES.

RADIO SURVEY NOTE:

1. THE APPLICANT SHALL HAVE A COMMUNICATIONS SITE SURVEY CONDUCTED BY A MOTOROLA COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE PORTSMOUTH POLICE AND FIRE RADIO SYSTEMS CONFIGURATION. IF THE SITE SURVEY INDICATES THAT IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER WILL BE REQUIRED TO MAINTAIN ANY INSTALLED EQUIPMENT. THE PROPERTY OWNER SHALL BE RESPONSIBLE TO PAY FOR THE SITE SURVEY WHETHER OR NOT THE SURVEY INDICATES THAT EQUIPMENT IS NECESSARY. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY. THE SURVEY SHALL BE COMPLETED AND ANY REQUIRED EQUIPMENT INSTALLED, TESTED, AND ACCEPTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

LEGEND

- SEWER MANHOLE BY CITY
- W — WATER LINE BY CITY
- G — GAS LINE BY CITY
- E — ELECTRIC LINE BY CITY
- SEWER LINE BY CITY
- COM — COMMUNICATION LINE BY CITY
- EXISTING SEWER MANHOLE
- CS — EXISTING COMBINED SEWER LINE
- WV — WATER VALVE
- GV — GAS VALVE
- W — PROP WATER LINE
- G — PROP GAS LINE
- UGE — PROP UNDERGROUND ELECTRIC
- COM — PROP UNDERGROUND COMMUNICATIONS

ABBREVIATIONS:

CIP:	CAST IRON PIPE
CONN:	CONNECTION
CS:	COMBINED SEWER
DOM:	DOMESTIC WATER SERVICE
G:	GAS
LSA:	LANDSCAPED AREA
S:	SANITARY SEWER
SS:	UNDERGROUND ELECTRIC
VGC:	VERTICAL GRANITE CURB
W:	WATER
PGT:	PROPOSED GREASE TRAP

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB SUBMISSION	10/10/2017
4	PB #2 SUBMISSION	11/07/2017

SITE PLAN REVIEW

UTILITIES PLAN

C5.0

PERMIT PLANS - NOT FOR CONSTRUCTION

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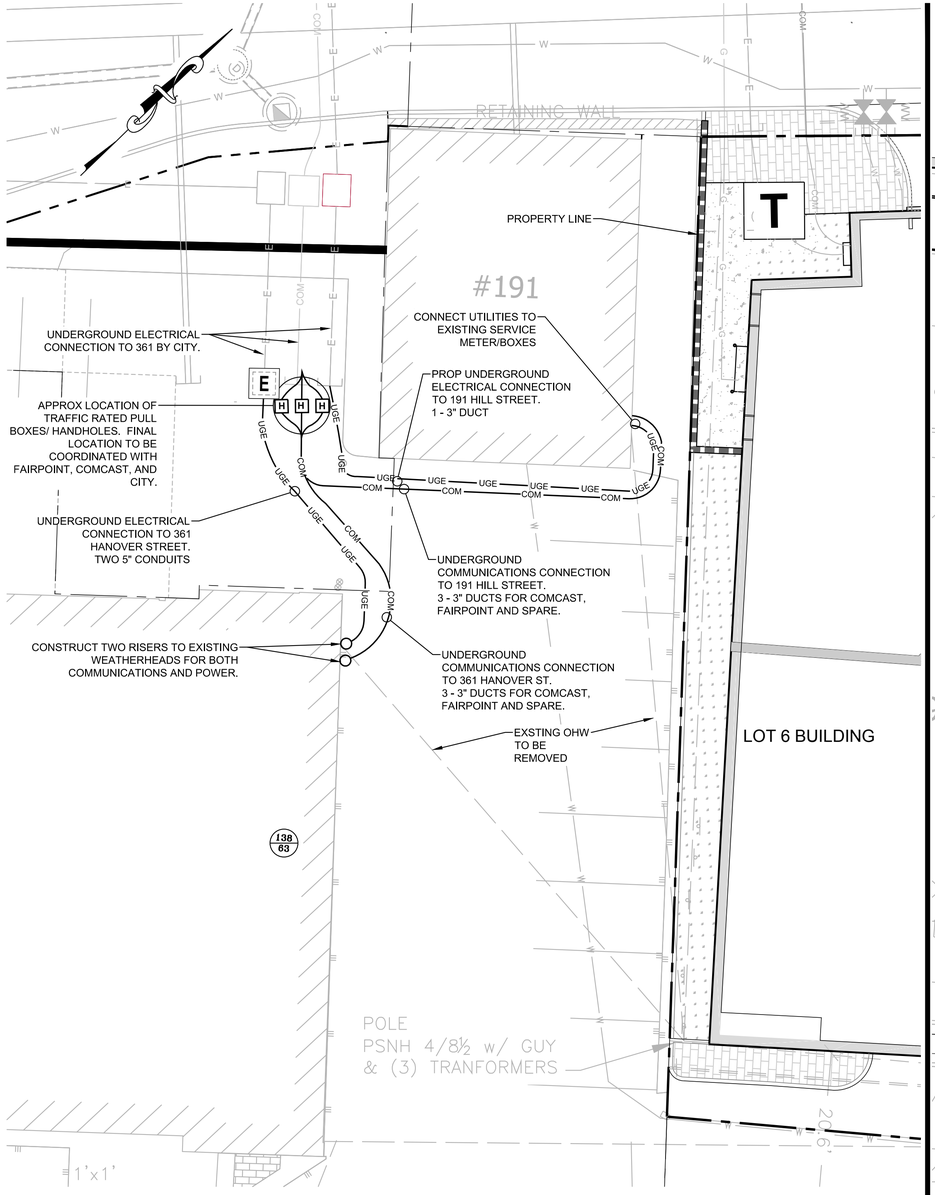
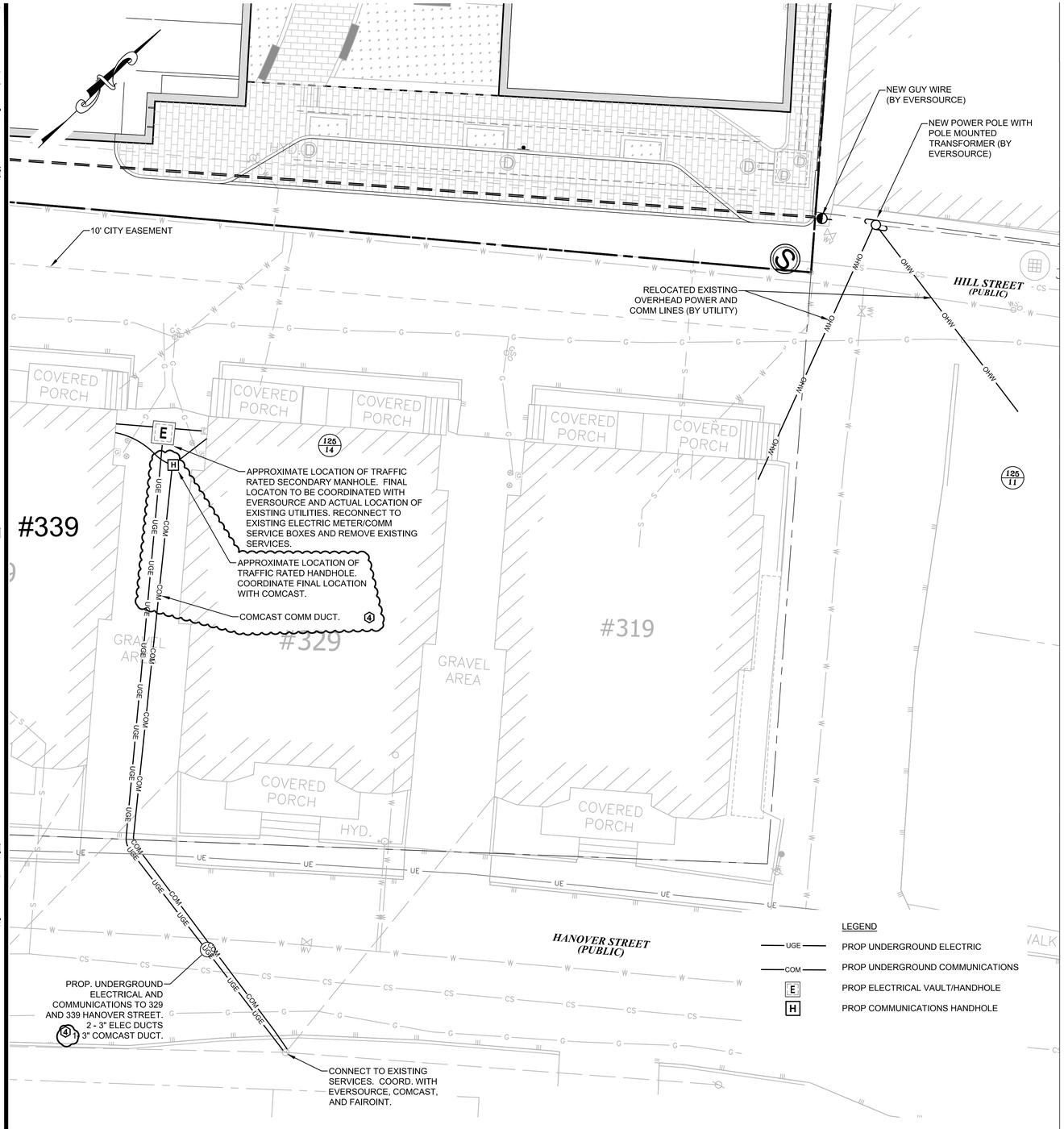


KEARSARGE MILL CONDOMINIUMS LOT OFFSITE
ELECTRICAL IMPROVEMENTS
ASSESSOR'S MAP 138, LOT 63

UTILITY NOTES:

1. SEE ELECTRICAL SHEET SERIES "SE" FOR ELECTRICAL AND COMMUNICATION DETAILS.
2. THE CONTRACTOR SHALL COORDINATE UTILTY INSTALLATION WITH APPROPRIATE UTILITY, AFFECTED LAND OWNERS, AND THE CITY DPW.
3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES BY CONDUCTING TEST PITS AS NEED TO LOCATE THE PROPOSED UTILITIES PER APPLICABLE REGULATORY AND UTILITY REQUIREMENTS.
4. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE DUCTS FROM THE POLE TO THE SERVICE METER CONNECTION AND THE ELECTRICAL CONTRACTOR WILL PROVIDE AND INSTALL THE CONDUCTORS FROM THE POLE TO THE BUILDING CONNECTION.
5. THE ELECTRICAL POWER AND COMMUNICATION DUCTS SHALL BE INSTALLED IN ACCORDANCE WITH UTILITY SPECIFICATIONS. IT SHALL BE COMPOSED OF A MATERIAL WHICH IS ACCEPTABLE TO THE UTILITY AND THE INSTALLATION AND PIPE SHALL BE IN CONFORMANCE WITH GOOD ENGINEERING PRACTICES AND IN ACCORD THE REQUIREMENTS OF LAW.
6. THE ELECTRICAL POWER DUCTS SHALL HAVE A MINIMUM GROUND COVER OF THREE (3) FEET IN VEHICULAR TRAVEL WAYS AND TWO FEET IN OTHER AREAS UNLESS AUTHORIZED IN WRITING BY THE UTILITY.
7. PROPOSED LOCATIONS ARE APPROXIMATE, AND FINAL LOCATIONS WILL BE LOCATED IN THE FIELD AFTER EXISTING UTILITIES LOCATIONS HAVE BEEN DETERMINED BY TEST PITS. FINAL LOCATION TO BE COORDINATED AND APPROVED BY THE APPROPRIATE UTILITY PROVIDER.



HILL STREET OFFSITE ELECTRICAL IMPROVEMENTS
ASSESSOR'S MAP 125, LOT 14 AND 15

10 0 10 30
1 IN. = 10 FT.

PERMIT PLANS - NOT FOR CONSTRUCTION

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:
Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:
JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	TAC SUPPLEMENT	9/18/2017
4	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

OFF SITE ELECTRICAL IMPROVEMENTS PLAN

C5.1

HILL HANOVER LIMIT OF WORK SHEET C6.0

TEMPORARY CONSTRUCTION

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED
PROFESSIONAL ENGINEER

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EROSION & SEDIMENT CONTROL PLAN

C6.0

GENERAL EROSION CONTROL NOTES

1. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION GENERAL PERMIT ISSUED BY THE EPA AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SUBMITTED WITH THE PERMIT DOCUMENTS.

2. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES TO ENSURE PROPER OPERATION THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT OR UNTIL IT IS ACCEPTED BY THE OWNER. THE OWNER IS RESPONSIBLE THEREAFTER.

3. NO DUST WILL BE ALLOWED ON OR OFF THE WORK SITE. CONTRACTOR MUST CONDUCT CONTINUOUS EFFORTS TO CONTROL DUST. LACK OF SUFFICIENT DUST CONTROL COULD CAUSE THE PROJECT TO BE STOPPED UNTIL ISSUES ARE RESOLVED. CONTRACTOR TO PAY ALL PENALTIES RESULTING PLUS $100/ OFFENSE AS DETERMINED BY CITY.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ROADS, CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SITE AND ALL ADJACENT ROADS BE MAINTAINED IN A MUD AND DUST-FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, CAREFUL USE OF WATER, CALCIUM CHLORIDE, AND/OR CRUSHED STONE OR COARSE GRAVEL AS CONTROL BMPS.

5. ALL PROPOSED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND DETAILS. ALL VEHICLE TRAFFIC ENTERING OR EXITING THE WORK AREA SHALL PASS OVER THE CONSTRUCTION ENTRANCES TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE SURROUNDING ROADWAYS UNTIL THE SITE IS STABILIZED.

6. THE CONTRACTOR SHALL INSTALL ALL PERIMETER SEDIMENT CONTROL BARRIERS AS SHOWN ON THE EROSION CONTROL PLAN. SILT FENCE OR SILT SOCK SHALL ALSO BE INSTALLED AROUND ANY SOIL STOCKPILE AREAS.THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS AS QUICKLY AS PRACTICABLE. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEEDED, OR OTHERWISE STABILIZED OR RESTORED TO THEIR ORIGINAL STATE. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHEREVER FEASIBLE.

7. THE CONTRACTOR MAY USE TEMPORARY SEDIMENTATION AND/ OR INFILTRATION BASINS ON THE SITE DURING CONSTRUCTION. THESE STRUCTURES SHOULD BE STRATEGICALLY LOCATED AND SIZED COMMESURATE WITH THE PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL REMOVE AND STABILIZE THESE STRUCTURES WHEN NO LONGER REQUIRED.

8. TEMPORARY COVERINGS OR OTHER APPROVED STABILIZATION METHOD SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.

9. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED SOIL AREAS THAT HAVE REACHED FINISHED LANDSCAPE GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED PERMANENT SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 1. WHERE AREAS HAVE REACHED FINISHED GRADE AND ARE NOT INTENDED TO BE VEGETATED, TEMPORARY TARPS OR OTHER STABILIZING COVERS MAY BE PLACED.

10. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHOULD BE MULCHED IMMEDIATELY FOLLOWING SEEDING IN ADDITION TO AREAS WHICH CANNOT BE SEEDED WITHIN THE RECOMMENDED SEEDING DATES AND ANY SOIL STOCKPILE AREAS. TEMPORARY MULCHING SHOULD BE PERFORMED AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.STRAW OR HAY MULCH, WOOD FIBER MULCH, AND HYDROMULCH ARE RECOMMENDED MULCHES.

11. IF SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, USE THE TEMPORARY MULCHING MEASURE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

12. WHERE TEMPORARY COVERS ARE USED OVER STOCKPILES AND/ OR DISTURBED SOIL AREAS, THE COVERS SHALL BE SUFFICIENTLY ANCHORED AGAINST WIND. THE CONTRACTOR MUST ANTICIPATE AND MANAGE RUNOFF FROM SUCH COVERINGS.

13. ANY EXISTING OR PROPOSED CATCH BASINS THAT MAY BE SUBJECT TO SEDIMENTATION PROCESSES SHALL HAVE SILT SACKS INSTALLED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED STORM DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED SITE. THE PROPER INLET PROTECTION DEVICES SHALL BE INSTALLED WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF ANY DISTURBED DRAINAGE AREA.

14. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES AND THE NEW HAMPSHIRE STORMWATER MANUAL VOL. 3 AND OTHER APPLICABLE REGULATIONS.

15. WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORM WATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., SHALL BE STORED AT THE END OF EACH DAY IN A STORAGE TRAILER OR COVERED LOCATION, OR TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.

16. GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WIRING, PAINTS AND PAINT CANS, SOLVENTS, WALL BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. IN ADDITION, CONSTRUCTION WASTE MUST BE PROPERLY DISPOSED OF IN ORDER TO AVOID EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY.

17. REPAIRS OR REPLACEMENT OF DRAINAGE STRUCTURES, SWALES, OR OTHER DRAINAGE ELEMENTS SHOULD BE DONE WITHIN 12 HRS OF NOTIFICATION OF A DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR IMPACT TO NEARBY RESIDENTS.

18. IMMEDIATELY PRIOR TO THE END OF CONSTRUCTION OR ACCEPTANCE BY THE OWNER, THE CONTRACTOR SHALL INSPECT ALL ON-SITE STORMWATER MANAGEMENT FACILITIES AND CLEAN AND FLUSH AS NECESSARY AND REQUESTED BY THE ENGINEER AND/ OR THE OWNER.

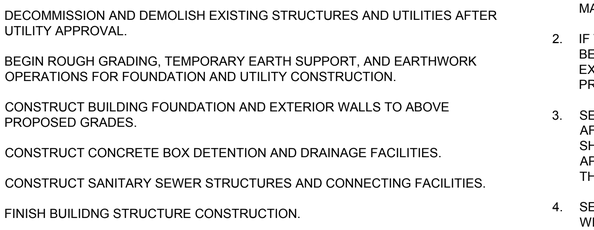
19. THE CONTRACTOR OR NOMINEE WILL BE THE PARTY RESPONSIBLE FOR THE INSPECTION, MAINTENANCE, AND REQUIRED DOCUMENTATION OF ALL STORMWATER STRUCTURES UNTIL FORMAL PROJECT COMPLETION.

I:\80900\DWG\CIVIL\80900-LOT-6 DETAILS.dwg

PROJECT SPECIFIC CONSTRUCTION SEQUENCING:

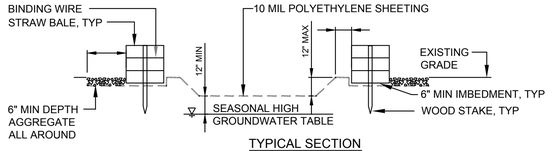
DESCRIBED BELOW ARE THE MAJOR CONSTRUCTION ACTIVITIES ANTICIPATED. THEY ARE PRESENTED IN THE ORDER (OR SEQUENCE) THEY ARE EXPECTED TO BEGIN, BUT EACH ACTIVITY WILL NOT NECESSARILY BE COMPLETED BEFORE THE NEXT BEGINS. ALSO, THESE ACTIVITIES COULD OCCUR IN A DIFFERENT ORDER IF NECESSARY TO MAINTAIN ADEQUATE EROSION AND SEDIMENTATION CONTROL. ALL ACTIVITIES AND THE TIMEFRAME (BEGINNING AND ENDING DATES) SHALL BE RECORDED BY THE CONTRACTOR:

1. CONTRACTOR TO REVIEW ALL APPLICABLE LOCAL, STATE AND FEDERAL PERMITS.
2. REVIEW AND CERTIFY THE STORMWATER POLLUTION PREVENTION PLAN.
3. INSTALL TEMPORARY CONSTRUCTION FENCING.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. INSTALL EROSION CONTROL MEASURES PRIOR TO EARTH MOVING OPERATIONS.
6. DECOMMISSION AND DEMOLISH EXISTING STRUCTURES AND UTILITIES AFTER UTILITY APPROVAL.
7. BEGIN ROUGH GRADING, TEMPORARY EARTH SUPPORT, AND EARTHWORK OPERATIONS FOR FOUNDATION AND UTILITY CONSTRUCTION.
8. CONSTRUCT BUILDING FOUNDATION AND EXTERIOR WALLS TO ABOVE PROPOSED GRADES.
9. CONSTRUCT CONCRETE BOX DETENTION AND DRAINAGE FACILITIES.
10. CONSTRUCT SANITARY SEWER STRUCTURES AND CONNECTING FACILITIES.
11. FINISH BUILIDNG STRUCTURE CONSTRUCTION.
12. SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 12-HOURS AFTER CONSTRUCTION ACTIVITIES CEASE. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR ON THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21-DAYS, THE AREA SHALL BE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
    D. EROSION CONTROL BLANKETS OR TEMPORARY TARPING HAVE BEEN PROPERLY INSTALLED.
13. INSTALL AND CONNECT ALL UNDERGROUND UTILITIES.
14. CONSTRUCT ROADWAYS, DRIVEWAYS, AND HARDSCAPE ACCORDING TO THE PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
15. SURFACE TREATMENT OF ALL DISTURBED AREAS NOT BUILT UPON, PAVED OR OTHERWISE LANDSCAPED SHALL BE TREATED WITH 4" OF LOAM AND SEED.
16. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES CONSISTENT WITH THE PROCEDURE AND SCHEDULE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN.
17. COMPLETE PERMANENT SEEDING AND LANDSCAPING, AND OTHER SURFACE STABILIZATION.
18. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT COMPACTED GRAVELS, OR OTHER INTENDED FINAL COVERINGS.



PLAN — WASHOUT SIGN

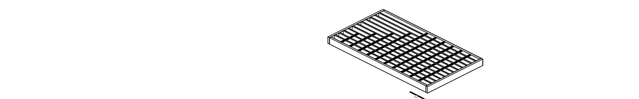
NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.



TYPICAL SECTION

CONCRETE WASHOUT AREA

NOT TO SCALE

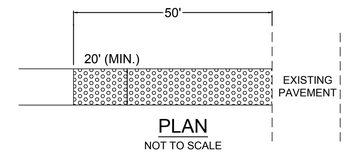


MAINTENANCE:

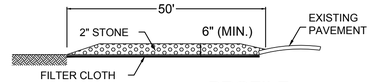
1. FILTER SOCK SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, REPLACE PROMPTLY.
3. SEDIMENT DEPOSITS SHALL BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS SHALL BE REMOVED WITH FILTER SOCK UPON COMPLETION OF CONSTRUCTION ACTIVITIES.
5. IF ANCHORING THE FILTER SOCK IS NOT POSSIBLE USING STAKES, SUCH AS ON PAVED AREAS, USE SAND BAGS, MASONRY BLOCKS, OR OTHER REMOVABLE WEIGHTS TO KEEP SOCK IN PLACE AT INTENDED LOCATION

FILTER SOCK INSTALLATION DETAIL

NOT TO SCALE



PLAN
NOT TO SCALE



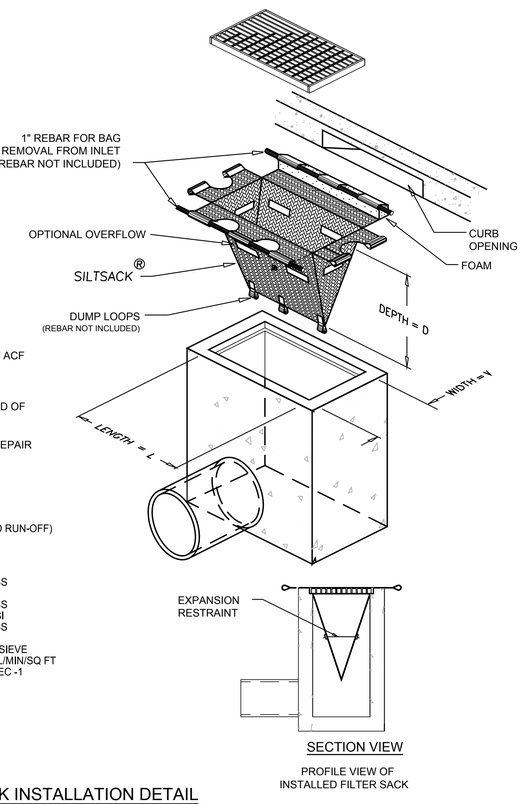
PROFILE
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:

1. USE 2" DIAMETER STONE OR RECLAIMED/RECYCLED CONCRETE EQUIVALENT.
2. RECOMMENDED LENGTH GREATER THAN 50 FEET WHERE PRACTICAL.
3. THICKNESS NOT LESS THAN 6 INCHES.
4. 10 FOOT MINIMUM WIDTH, BUT NOT LESS THAN FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCUR.
5. FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WILL BE PERMITTED.
7. ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR.
9. REMOVE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO PLACEMENT OF BITUMINOUS CONCRETE PAVEMENT.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:
1. CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES) OR EQUAL.

2. INSERT TO BE EMPTIED AND PROPERLY DISPOSED OF WHEN IT IS 1/2 FULL OF SEDIMENT.

3. INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

EROSION CONTROL NOTES & DETAILS

SECTION VIEW

PROFILE VIEW OF INSTALLED FILTER SACK

SILT SACK INSTALLATION DETAIL

NOT TO SCALE

PERMIT PLANS - NOT FOR CONSTRUCTION

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LANDSCAPE ARCHITECT
PORTSMOUTH, NEW HAMPSHIRE

JSN ASSOCIATES, INC.
STRUCTURAL ENGINEER
PORTSMOUTH, NEW HAMPSHIRE

ENGINEERED SYSTEMS INC.
MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE — JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale: NTS
Date: **3/17/2017**
Project Number: **14837.03**

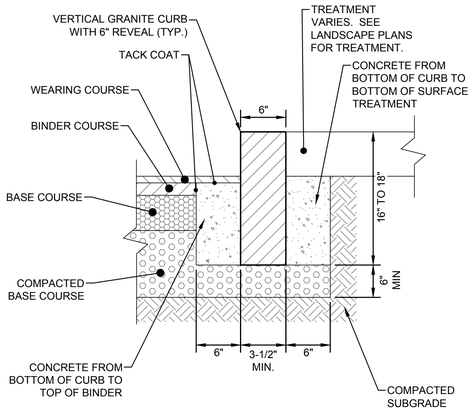
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EROSION & SEDIMENT CONTROL DETAILS

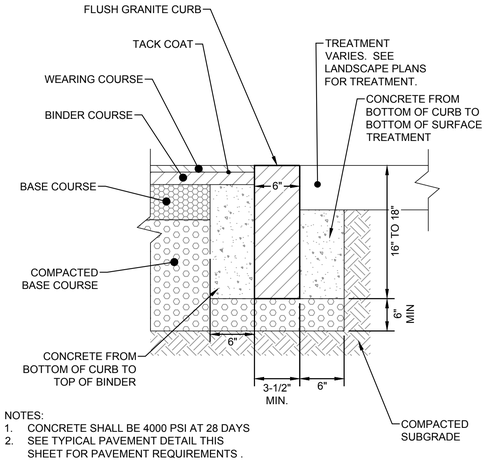
C6.1



CURB RADIUS TABLE	
RADIUS	MAX. LENGTH
< 21'	USE CURVED CURB
21'	3'
22' - 28'	4'
29' - 35'	5'
36' - 42'	6'
43' - 49'	7'
50' - 56'	8'
57' - 60'	9'
> 60'	10'

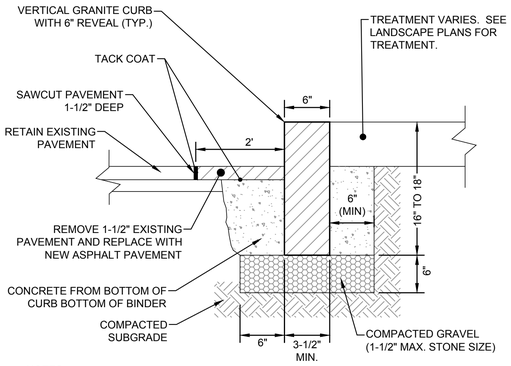
NOTES:
1. REVEAL IS 6" UNLESS NOTED OTHERWISE. REVEAL IS 0" AT PEDESTRIAN SIDEWALK (CURB) RAMPS.
2. SEE SITE PLAN(S) FOR PROPOSED VERTICAL GRANITE CURB (VGC) LOCATIONS
3. CONCRETE SHALL BE 4000 PSI AT 28 DAYS
4. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH
5. MINIMUM LENGTH OF STRAIGHT CURB STONES - 3'
6. MAXIMUM LENGTH OF STRAIGHT CURB STONES - 10'
7. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART
8. ALL RADII LESS THAN 21' SHALL HAVE CURVED SECTIONS
9. SEE TYPICAL PAVEMENT DETAIL THIS SHEET FOR PAVEMENT REQUIREMENTS .

1 VERTICAL GRANITE CURB
N.T.S.



NOTES:
1. CONCRETE SHALL BE 4000 PSI AT 28 DAYS
2. SEE TYPICAL PAVEMENT DETAIL THIS SHEET FOR PAVEMENT REQUIREMENTS .

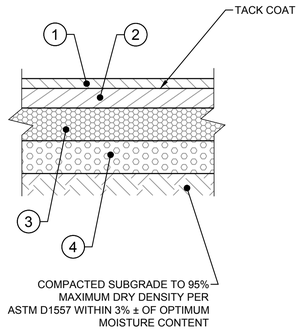
2 FLUSH GRANITE CURB
N.T.S.



NOTES:
1. REVEAL IS 6" (TYP.) UNLESS NOTED OTHERWISE. REVEAL IS 0" AT PEDESTRIAN SIDEWALK (CURB) RAMPS.
2. SEE SITE PLAN(S) FOR PROPOSED VERTICAL GRANITE CURB (VGC) LOCATIONS.
3. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH A TACK COAT PRIOR TO PLACING WEARING COURSE.
4. FOR RADIUS DETAILS SEE VERTICAL GRANITE CURB DETAIL - THIS SHEET.

3 VERTICAL GRANITE CURB IN EXISTING PAVEMENT
N.T.S.

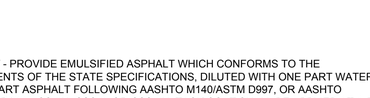
NOTES:
1. SEE SITE PLANS FOR PROPOSED PAVEMENT LOCATIONS.
2. SEE GRADING AND DRAINAGE PLAN FOR PAVEMENT GRADES.
3. REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.
4. CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 401 OF THE NHDOT STANDARD SPECIFICATIONS AND PORTSMOUTH SPECIFICATIONS.
5. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PRIOR TO PLACING WEARING COURSE.
6. HBP - HOT BITUMINOUS PAVEMENT



STANDARD PAVEMENT MATERIALS
1. 1.5" - HBP SURFACE COURSE (3/8" NHDOT SECTION 401)
2. 3.5" - HBP BINDER COURSE (3/4" NHDOT SECTION 401)
3. 8" - CRUSHED GRAVEL BASE (NHDOT ITEM 304.3)
4. 12" - BANK RUN GRAVEL SUBBASE (NHDOT ITEM 304.2)

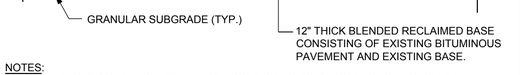
AGGREGATE COURSE MATERIALS NHDOT SECTION 304			
ITEM NO.	304.2	304.3	304.4
SIEVE SIZE	% PASSING BY WEIGHT		
6"	100	---	---
3"	100	---	---
2"	---	95 - 100	100
1"	---	55 -85	---
#4	25 -70	27 - 52	45-75
#200	0 - 12	0 -12	0-5

4 STANDARD BITUMINOUS PAVEMENT SECTION
N.T.S.



NOTE:
TACK COAT - PROVIDE EMULSIFIED ASPHALT WHICH CONFORMS TO THE REQUIREMENTS OF THE STATE SPECIFICATIONS, DILUTED WITH ONE PART WATER TO ONE ONE PART ASPHALT FOLLOWING AASHTO M140/ASTM D997, OR AASHTO M208/ASTM D2397, SS-1H, CSS-1, OR CSS-1H. TACK COAT SHALL BE APPLIED AT A RATE OF 0.04-0.08 GAL/YD².

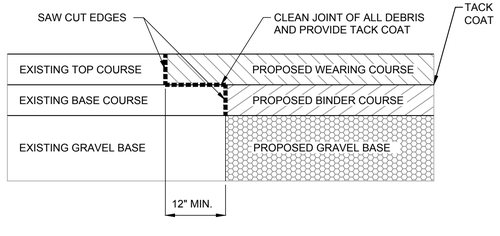
5 MILL AND OVERLAY PAVEMENT DETAIL
N.T.S.



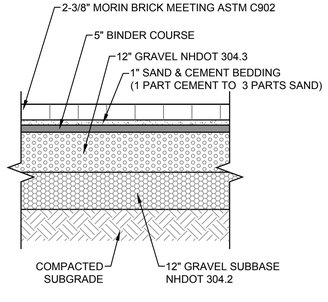
NOTES:
1. CONTRACTOR SHALL REMOVE HARD SPOTS PRIOR TO RECONSTRUCTING ROADWAY PAVEMENTS.
2. REMOVE CLAY MATERIAL IF NECESSARY TO OBTAIN A MIN. OF 12" THICK BASE.
3. RECLAIMED BASE SHALL MEET THE MATERIAL AND CONSTRUCTION REQUIREMENTS OF NHDOT 306 AND CITY SPECIFICATIONS.
3. CONTRACTOR SHALL ADD STONE AS REQUIRED TO MEET THE NHDOT SPECIFICATIONS.

6 ROADWAY SECTION WITH RECLAIMED BASE
N.T.S.

NOTE:
TACK COAT - PROVIDE EMULSIFIED ASPHALT WHICH CONFORMS TO THE REQUIREMENTS OF THE STATE SPECIFICATIONS, DILUTED WITH ONE PART WATER TO ONE ONE PART ASPHALT FOLLOWING AASHTO M140/ASTM D997, OR AASHTO M208/ASTM D2397, SS-1H, CSS-1, OR CSS-1H.

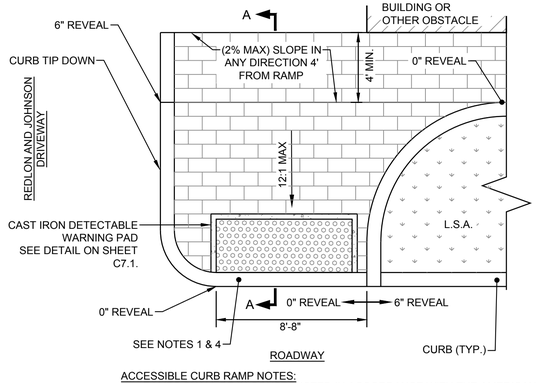


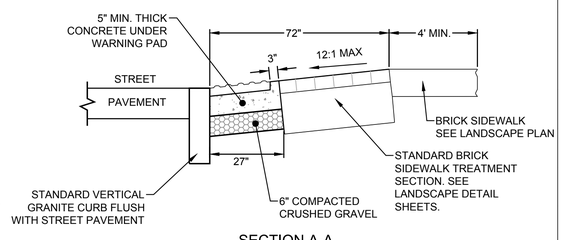
7 PAVEMENT CUT KEY DETAIL
N.T.S.



NOTES:
- BRICK PAVERS SHALL CONFORM TO ASTM C902 "PEDESTRIAN AND LIGHT TRAFFIC BRICK"
- PAVERS SHALL BE TYPE 1, CLASS SX

8 VEHICULAR PAVER SECTION
N.T.S.





SECTION A-A

ACCESSIBLE CURB RAMP NOTES:
1. RAMPS SHALL BE IN CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND STATE AND LOCAL REQUIREMENTS.
2. FOR ROADWAY CURB MATERIALS AND INSTALLATION DETAILS, SEE THIS SHEET.
3. FOR SIDEWALK DETAILS, SEE LANDSCAPE SHEETS.
4. DETECTABLE WARNING PANELS SHALL BE THE FULL WIDTH OF THE LANDING, BLENDED TRANSITION, OR CURB RAMP.
5. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.
6. WARNING PAD SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

9 ACCESSIBLE CURB RAMP DETAIL
N.T.S.

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MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED
PROFESSIONAL ENGINEER

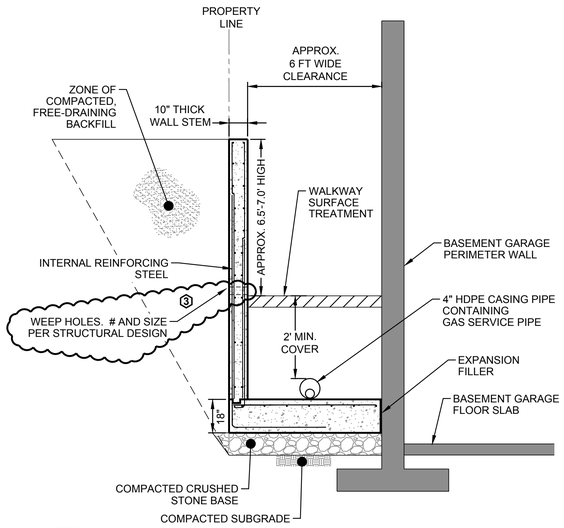
Scale: NTS
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

STANDARD DETAILS

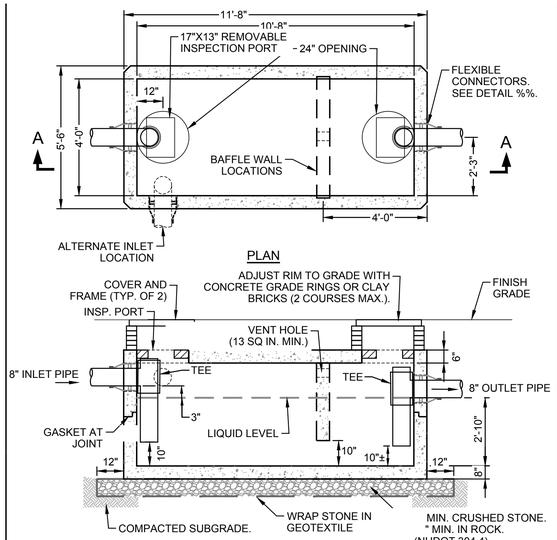
C7.0



NOTES:
1. EXCAVATION AND BACKFILL FOR WALL TO OCCUR WITHIN TEMPORARY CONSTRUCTION EASEMENT.
2. GARAGE WILL INCLUDE A PERIMETER FOUNDATION DRAIN.
3. DIMENSIONS AND INFORMATION SHOWN ARE APPROXIMATE.
4. WALL SHALL REQUIRE A STRUCTURAL DESIGN.
5. TEXTURE VISIBLE FACE TO IMITATE GRANITE BLOCKS.

GAS SERVICE NOTES:
CASING PIPE SHALL BE INSTALLED WHEN SERVICE PIPE IS WITHIN 1' OF STRUCTURE FOOTING.
6. CASING/SLEEVE MATERIAL SHALL BE HDPE DR-11 GAS PIPE APPROVED BY UNITIL.
7. CASING SLEEVE SHALL BE INSTALLED WHERE SERVICE RISER PENETRATES THROUGH PAVED SERVICE TREATEMENT.
8. CASING PIPE SHALL BE INSTALLED USING TYPICAL GAS TRENCH MATERIAL
9. CARRIER RISER PIPE SHALL BE MADE OF ANODELESS MATERIAL.

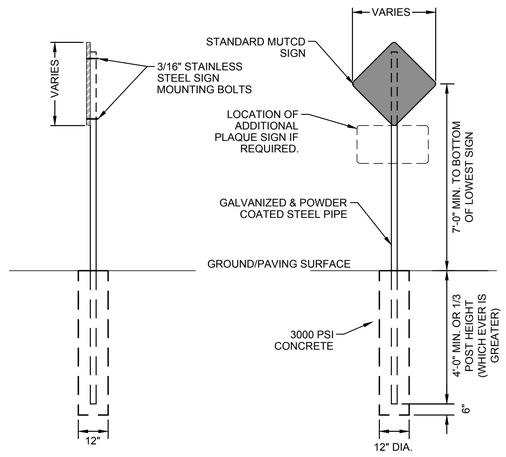
10 CAST-IN-PLACE RETAINING WALL DETAIL
N.T.S.



SECTION A-A

GREASE INTERCEPTOR NOTES
1. GREASE TRAP SHALL BE HS20-44 LOAD RATED.
2. INTERCEPTOR DESIGN SHALL CONFORM TO ASTM C1613, NHDES, AND CITY OF PORTSMOUTH REQUIREMENTS AND SPECIFICATIONS.
3. GREASE TRAP SHALL HAVE A MIN. OF 2 INTERIOR BAFFLES OR TEES OR COMBINATION THEREOF.
4. REINFORCEMENT: AS REQUIRED FOR WATER, SOIL, TRAFFIC, AND HYDRAULIC PRESSURE LOADING.
5. GREASE TRAP BY CONCRETE SYSTEMS, INC. (CSI) OR EQUAL.
6. COVER AND FRAME TO MEET MUNICIPAL STANDARD FOR SANITARY SEWER
7. GEOTEXTILE SHALL BE MIRAFI 600X.
8. TANK PIPING AND TEE DIAMETERS SHALL MATCH CONNECTING PIPES. MATERIAL SHALL BE PVC SDR 35.
9. PIPING RISERS SHALL BE BRACED WITH A MINIMUM OF TWO 1/4" X 1-1/2" S.S. STRAP W/ S.S. EXPANSION ANCHORS.
10. INSPECTION PORTS SHALL BE REMOVABLE AND MATERIAL SHALL BE S.S. OR 6061 ALUMINUM.

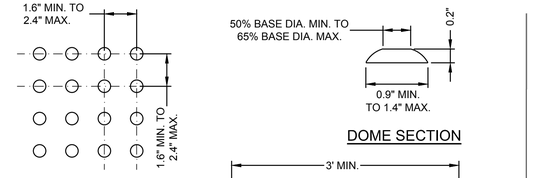
11 1000 GALLON PRECAST GREASE INTERCEPTOR DETAIL
N.T.S.



SIDE VIEW FRONT VIEW

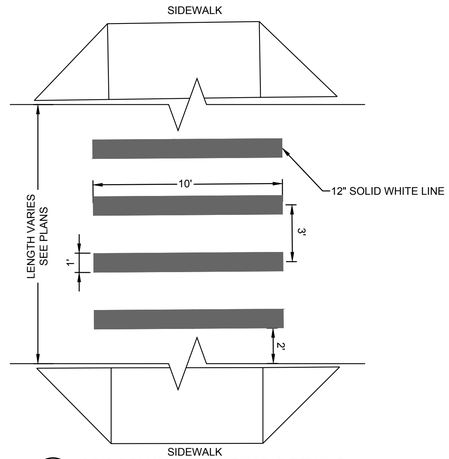
SIGN POST NOTES:
1. ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED.
2. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. SIGN MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH NHDOT STANDARD SPECIFICATIONS AND LOCAL REQUIREMENTS.
4. STEEL POSTS
   - STEEL POST SHALL BE SCHEDULE 40 WITH O.D. OF 2.375"
   - STEEL POSTS SHALL CONFORM TO ASTM A-499, GRADE 60) OR ASTM A 576, GRADE 1070-1080.
   - COATINGS SHALL BE IN ACCORDANCE TO NHDOT STANDARD SPECIFICATION SECTION 708, DUPLEX COATINGS - POWDER COATING OVER GALVANIZING
   - GALVANIZED SURFACE SHALL BE PREPARED FOR POWDER COATING PER ASTM D7803
   - WEIGHT BE 2.5LBS/FT MINIMUM.
   - 3/8" HOLES SHALL BE DRILLED OR PUNCHED BEFORE COATINGS ARE APPLIED. HOLES SHALL BEGIN 1" FROM TOP OF POSTS AND CONTINUE AT 1" CENTERS FOR THE ENTIRE LENGTH OF POSTS.
   - POST SHALL BE POWDER COATED GLOSS BLACK.

12 SIGN POST DETAILS
N.T.S.

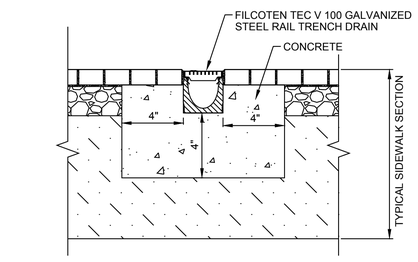


NOTES:
1. DETECTABLE WARNING PANELS SHALL BE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND STATE AND LOCAL REQUIREMENTS.

13 CAST IRON DETECTABLE WARNING SURFACE
N.T.S.

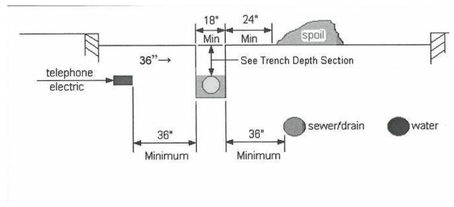


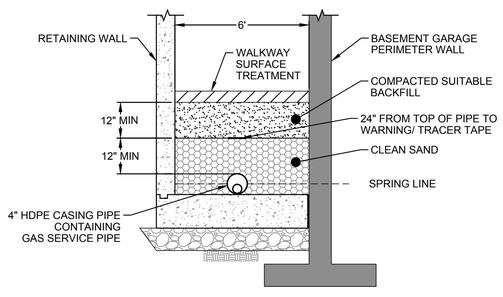
14 CROSSWALK STRIPING DETAILS
N.T.S.



NOTES:
1. CONCRETE SHALL BE 4000 PSI AT 28 DAYS
2. GRATE SHALL BE HEEL PROOF AND BE CLASS C LOAD RATED PER EN 1433.
3. TRENCH SYSTEM SHALL BE INSTALLED PER THE MANUFACTURER'S DIRECTIONS AND SPECIFICATIONS

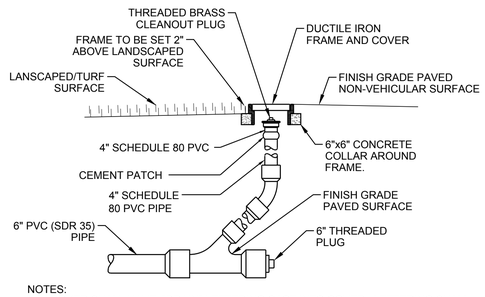
15 TYPICAL TRENCH DRAIN SECTION
N.T.S.





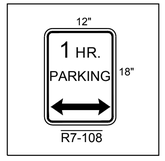
NOTES:
1. GAS PIPE SHALL BE INSTALLED PER UTILITY AND STANDARDS AND SPECIFICATIONS.
2. COORDINATE ALL INSTALLATIONS WITH UNITIL AND CITY OR PORTSMOUTH.
3. TRENCH PROTECTION SHALL BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. "S" = TRENCH PROTECTION WALL WIDTH

17 TYPICAL GAS SERVICE TRENCH DETAIL
N.T.S.



NOTES:
1. COVER SHALL HAVE "DRAIN" LETTERING CAST INTO COVER. LETTERING SHALL BE 1" HIGH

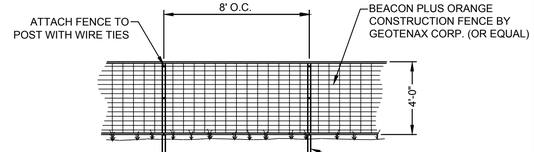
16 CLEANOUT DETAIL
N.T.S.



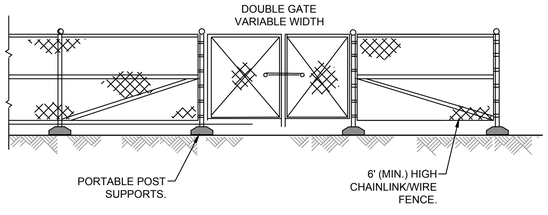
NOTES:

1. SIGNAGE SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION AND STATE AND LOCAL REQUIREMENTS.
2. REGULATORY SIGNS SHALL HAVE SCHEDULE 40 STEEL POSTS

18 TRAFFIC SIGN LEGEND
N.T.S.



SHORT TERM TEMPORARY SAFETY FENCE



NOTES:
1. CONTRACTOR MAY USE CAST-IN-PLACE SUPPORTS IF DESIRED.
2. FENCE LAYOUT AND DESIGN TO BE PROVIDED BY CONTRACTOR.

LONG TERM TEMPORARY CONSTRUCTION FENCE

19 TEMPORARY CONSTRUCTION FENCE
N.T.S.

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DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE – JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale: NTS
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB #2 SUBMISSION	11/07/2017

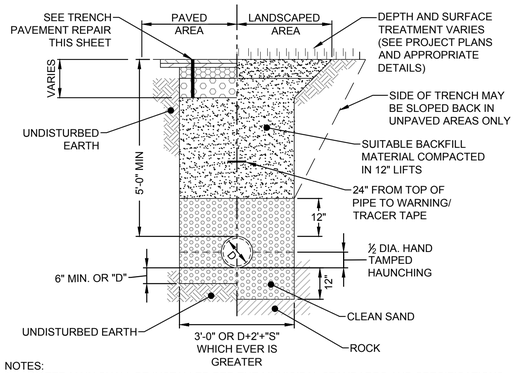
SITE PLAN REVIEW

STANDARD DETAILS

C7.1

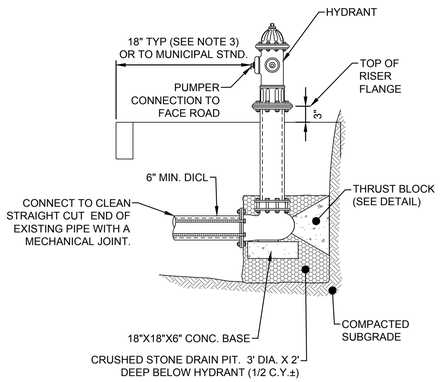
I:\8090\DWG\CIVIL\8090-LOT-6 DETAILS.dwg

PERMIT PLANS - NOT FOR CONSTRUCTION



NOTES:
1. WATER MAIN SHALL BE INSTALLED PER THE MUNICIPAL STANDARDS AND SPECIFICATIONS.
2. DOMESTIC WATER SERVICE AND FIRE SERVICE MAIN MAY BE PLACED IN A SINGLE TRENCH WITH 3' CENTER TO CENTER SEPARATION OR A MIN. OF 2' CLEAR SPACE BETWEEN PIPES WHICH EVER IS GREATER.
3. TRENCH PROTECTION SHALL BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. "S" = TRENCH PROTECTION WALL WIDTH

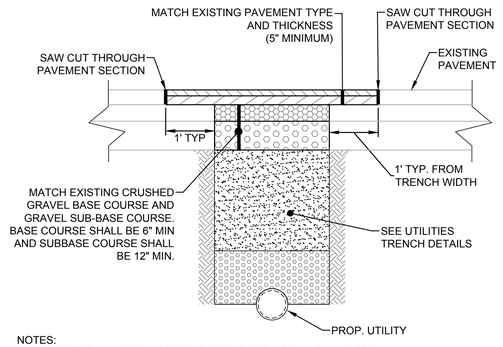
20 TYPICAL DI WATER MAIN AND PVC FORCEMAIN TRENCH DETAIL
N.T.S.



NOTES:

1. MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 3 FEET AT HYDRANT.

21 EXISTING HYDRANT ADJUSTMENT DETAIL
N.T.S.



NOTES:
1. REFER TO MUNICIPAL SPECIFICATIONS FOR ASPHALT MIX DESIGN.
2. CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 401 OF THE NHDOT STANDARD SPECIFICATIONS AND MUNICIPAL SPECIFICATIONS.
3. A TACK COAT SHALL BE PLACED ON CLEANED AND STRAIGHT VERTICAL SAWCUT SURFACE PRIOR TO PLACING BINDER AND WEARING COURSE.
4. TAC COAT SHALL BE RS-1 EMULSION PER NHDOT AND MUNICIPAL SPECIFICATIONS.
5. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE OF PRIOR TO PLACING WEARING COURSE.

22 TYPICAL UTILITY TRENCH PERMANENT PAVEMENT REPAIR DETAIL
N.T.S.

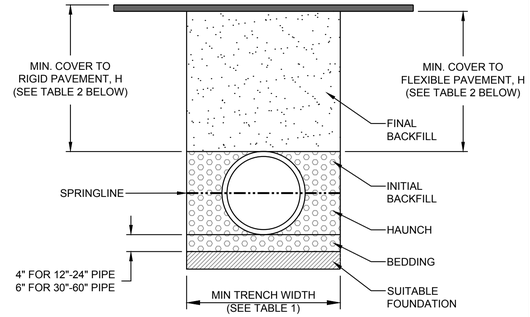


TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
60"	96"

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

	CLASS I	CLASS II			CLASS III			CLASS IV
PIPE DIA	COMPACTED	95%	90%	85%	95%	90%	95%	
12"	41	28	21	16	20	16	16	
15"	42	29	21	16	21	16	16	
18"	44	30	21	16	22	17	16	
24"	37	26	18	14	19	14	14	
30"	39	27	19	14	19	15	14	
36"	28	20	14	10	14	11	10	
42"	30	21	14	10	15	11	10	
48"	29	20	14	9	14	10	10	
60"	29	20	14	9	14	10	9	

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

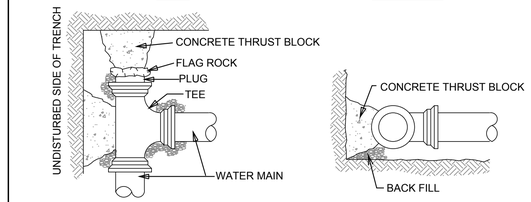
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 12"-24" DIAMETER PIPE; 6" FOR 30"-60" DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04 IN SECTION 8 OF *THE ADS DRAINAGE HANDBOOK*.

27 TYPICAL HP STORM TRENCH DETAIL
N.T.S.

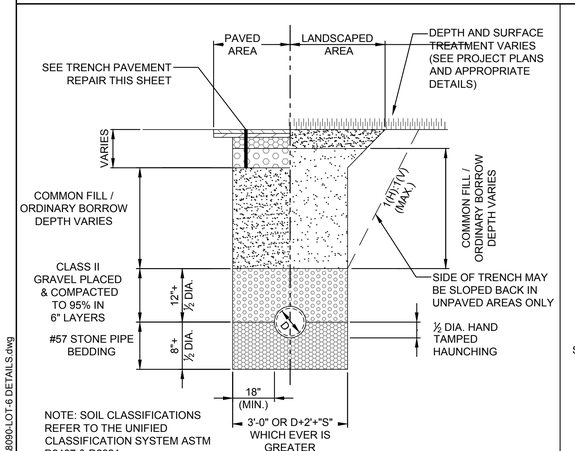


NOTES:
1. ALL WATER MAIN FITTINGS, BENDS, TEES, PLUGS ETC. SHALL BE RESTRAINED W/ THRUST BLOCKS EXCEPT WHERE NOTED.
2. ALL THRUST BLOCKS & COLLARS SHALL BE INSTALLED SO THAT THEY BEAR AGAINST UNDISTURBED EARTH.
3. SIZE OF CONCRETE THRUST BLOCKS SHALL BE AS NOTED BELOW.
4. MINIMUM COMPRESSIVE STRENGTH OF THRUST BLOCK CONCRETE SHALL BE 3,000 P.S.I.
5. KEEP CONCRETE CLEAR OF MECHANICAL JOINTS.
6. THE BELOW PREDICATED ON A WATER PRESSURE OF 225 PSI AND A SOIL RESISTANCE OF 2000 PSF (TILL). FOR OTHER SOILS THE VALUES IN THE BELOW TABLE SHALL BE MULTIPLIED BY:

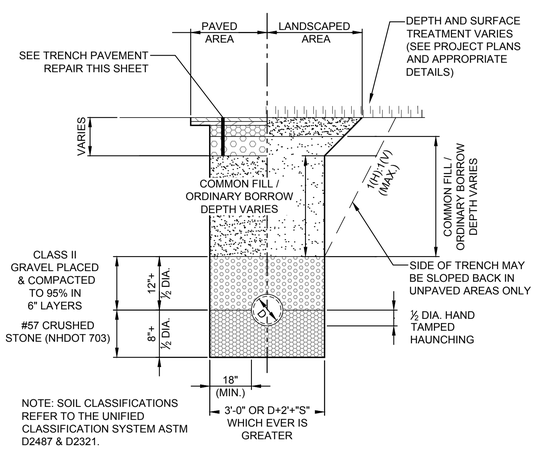
SOFT CLAY	4
SAND	2
SAND & GRAVEL	1.33
SHALE	0.4

MINIMUM THRUST BLOCK BEARING AREAS				
PIPE DIAMETER	90° BEND (SQ. FT.)	45° BEND (SQ. FT.)	22.5° BEND (SQ. FT.)	TEES, PLUGS, CAPS & HYDRANTS (SQ.FT.)
6"	5	3	2	4
8"	8	5	3	6
10"	13	7	4	9
12"	18	10	5	13

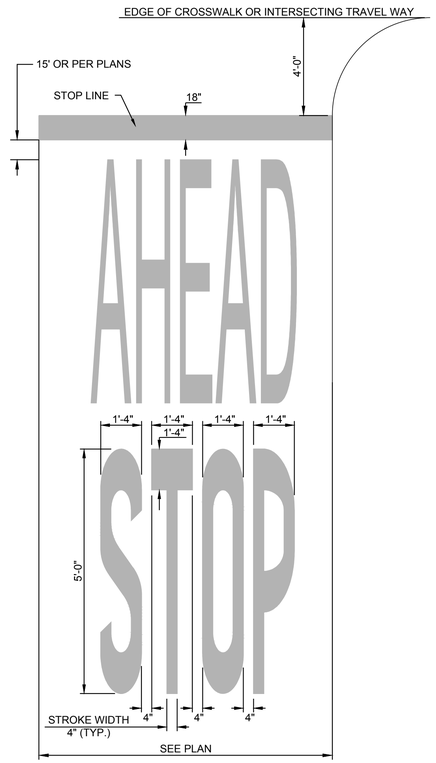
23 TYPICAL THRUST BLOCK DETAIL
N.T.S.



24 TYPICAL STORM DRAIN TRENCH DETAIL
N.T.S.



25 TYPICAL SANITARY SEWER TRENCH DETAIL
N.T.S.



NOTE:

1. WORDS AND LINES SHALL BE APPLIED IN ACCORDANCE WITH SECTIONS 3B.16 AND 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. THESE WORDS AND BAR ARE TO BE PAINTED RETROREFLECTIVE WHITE. (60 MIL)
3. DIMENSIONS SHOWN ARE TYPICAL AND APPLY TO ALL LETTERING.

3 26 TYPICAL PAINTED LETTERING DETAIL
N.T.S.

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DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE — JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale: NTS
Date: **3/17/2017**
Project Number: **14837.03**

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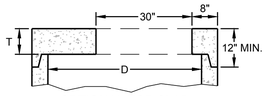
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB #2 SUBMISSION	11/07/2017

SITE PLAN REVIEW

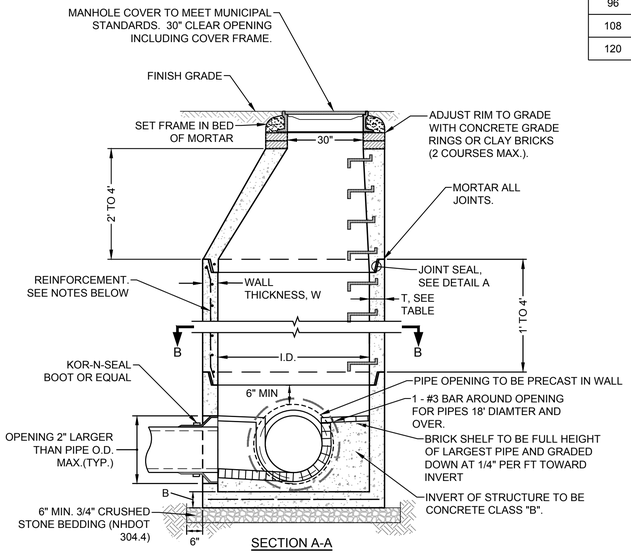
STANDARD DETAILS

C7.2

I:\80900\DWG\CIVIL\80900-LOT-6 DETAILS.dwg

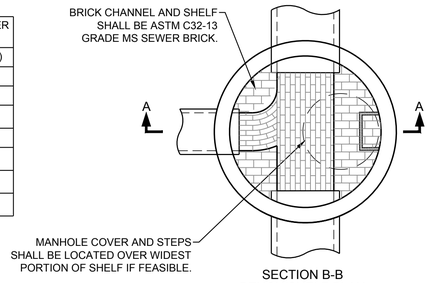


OPTIONAL TOP SLAB



SECTION A-A

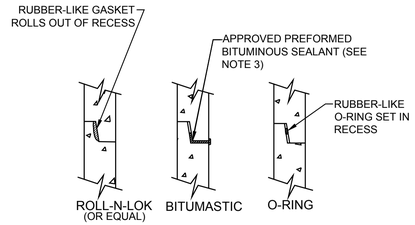
MINIMUM DIMENSIONS FOR INNDER DIAMETER, I.D.			
I.D. (IN)	W (IN)	B (IN)	T (IN)
48	5	6	8
60	6	8	8
72	7	8	8
84	9	10	10
96	9	10	12
108	10	10	12
120	11	10	12



SECTION B-B
BENCH/SHELF PLAN

NOTES:
1. MANHOLE I.D. SHALL BE 48" UNLESS STATED OTHERWISE ON PLANS.
2. THESE MANHOLE DETAILS TO BE USED FOR BOTH SANITARY SEWER AND STORM DRAIN MANHOLES.
3. PRECAST MANHOLES SHALL CONFORM TO AASHTO M199/ ASTM C478 SPECIFICATIONS.
4. REINFORCEMENT:
   4.1. DEFORMED BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
   4.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185
5. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
6. REIN. STEEL SHALL HAVE 1' MINIMUM COVER.
7. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FOOT.
8. THE STRUCTURES SHALL BE DESIGNED FOR HS 20-44 LOADING.
9. CRUSHED STONE BEDDING SHALL CONFORM TO NHDOT 304.4.
10. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
11. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
12. ALL STRUCTURES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES, AND NO HOLES CLOSER THAN 6" TO JOINTS.
13. SANITARY SEWER MANHOLES SHALL HAVE AN EXTERIOR ASPHALTIC WATER PROOF COATING APPLIED (2 COATS MIN.).
14. BASE SHALL BE A SINGLE POUR MONOLITHIC SECTION TO A MINIMUM OF 6" PIPE OPENING
15. INVERTS AND SHELVES:
   15.1. BRICK SHALL BE ASTM C32-13 GRADE MS SEWER BRICK.
   15.2. BRICK SHELVES SHALL BE CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW.
   15.3. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO WALL OF THE PIPE.
   15.4. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE CHANNEL
   15.5. INVERTS AND SHELVES SHALL ONLY BE PLACED AFTER LEAKAGE TESTS ARE PERFORMED.
16. FRAMES AND COVERS:
   16.1. FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN
   16.2. 4" (MINIMUM) HEIGHT LETTERS SHALL BE USED FOR COVER LETTERS. SEWERS SHALL HAVE "SEWER" AND STORM DRAIN COVERS SHALL HAVE "DRAIN" CAST INTO THE CENTER OF EACH COVER.
   16.3. LEAKAGE TEST SHALL CONFORM TO MUNICIPAL SPECIFICATIONS.
17. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND SPECIFICATIONS.

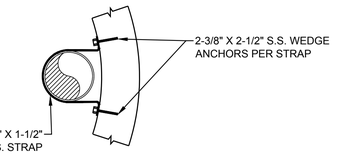
27 TYPICAL PRECAST CONCRETE JUNCTION MANHOLE
N.T.S.



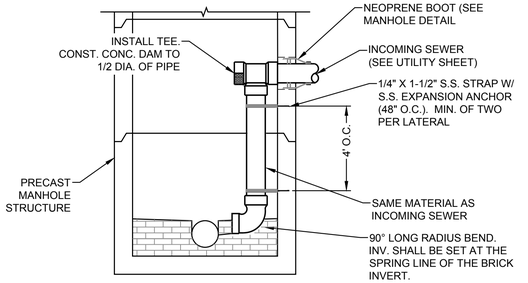
NOTES:

1. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
2. HORIZONTAL JOINT SEAL SHALL BE PREFORMED BITUMASTIC SEALANT OR RUBBER-LIKE O-RING AND INSTALLED ACCCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SPECIFICATIONS.
3. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER THE CITY OF PORTSMOUTH STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW OF ELASTORMERIC OR MASTIC-LIKE GASKET.

DETAIL A



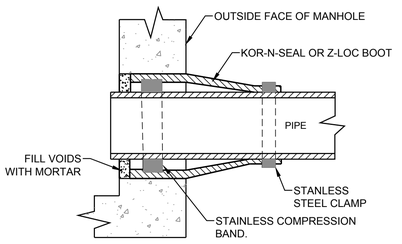
PIPE STRAP DETAIL



NOTE:

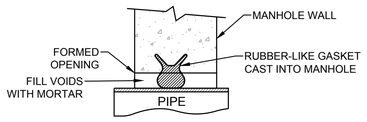
1. INTERIOR MANHOLE DROP SHALL ONLY BE INSTALLED IN 5' DIA. OR LARGER MANHOLES.
2. DROP CONNECTION SHALL BE USED WHERE THE INCOMING PIPE INVERT IS 24" HIGHER THAN BRICK OUTLET PIPE INVERT.
3. DROP PIPE AND FITTINGS SHALL BE THE SAME MATERIAL AND DIAMETER OF INCOMING PIPE.
4. ALL HARDWARE SHALL BE STAINLESS STEEL (S.S.).
5. STAINLESS STEEL SHALL BE TYPE 304 FOR STORM WATER STRUCTURES AND TYPE 316 FOR SANITARY SEWER STRUCTURES.
6. DROP PIPE INVERT ELEVATIONS:
   6.1. WHEN DROP PIPE DIA. IS EQUAL TO THE MANHOLE OUTLET PIPE THEN THE DROP INVERT SHALL BE 0.1' ABOVE OUTLET INVERT.
   6.2. WHEN DROP PIPE DIA. IS LESS THEN OUTLET PIPE DIA. THEN DROP INVERT SHALL BE SET AT THE MID POINT OF THE BRICK SHELF.
7. SEE TYPICAL MANHOLE DETAIL FOR MANHOLE CONSTUCTION.

28 TYPICAL MANHOLE INTERIOR MANHOLE DROP CONNECTION
N.T.S.



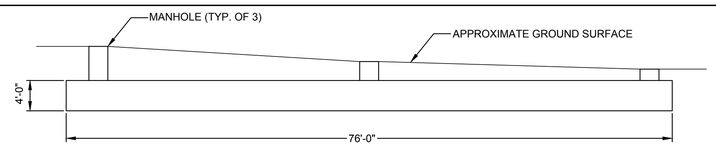
BOOT CONNECTOR

NOTE:
1. SEALS SHALL CONFORM TO ASTM C923.
2. STAINLESS STEEL SHALL BE TYPE 304
3. CONNECTOR SEALS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN SPECIFICATIONS AND INSTRUCTIONS.
3. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARDS.

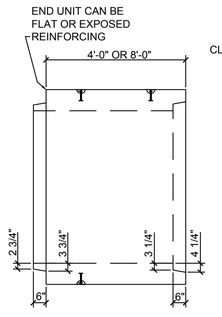


A-LOK RESILIENT CONNECTOR

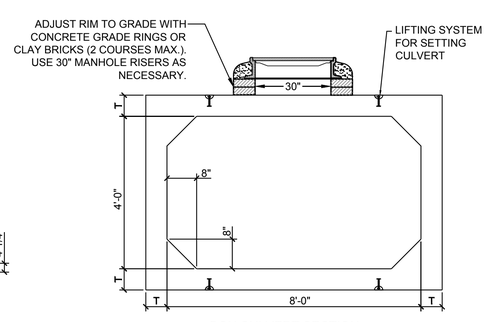
29 PIPE CONNECTION TO PRECAST MANHOLE STRUCTURES
N.T.S.



BOX CULVERT PROFILE DETAIL



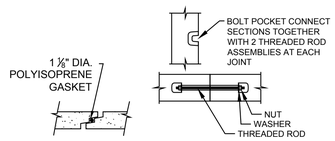
SIDE ELEVATION



BOX CULVERT SECTION

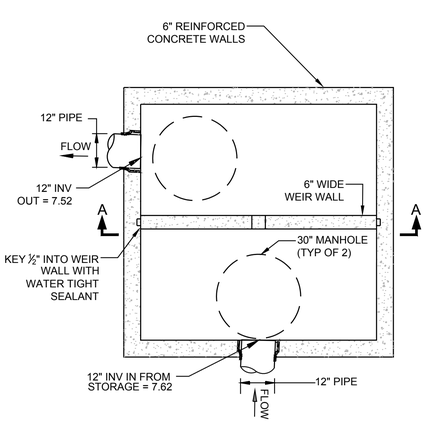
NOTES:
1. BOX CULVERT SHALL BE DESIGNED FOR HS-20-44 LOADING AND TO PREVENT FLOTATION IF FULLY SUBMERGED.
2. CULVERT SHALL CONFORM TO AASHTO M273
3. ALL SECTIONS TO BE JOINED WITH SS 304 FASTENERS. HARDWARE TO BE DESIGNED BY THE PRECAST MANUFACTURER.
4. CONCRETE DESIGN STRENGTH SHALL BE 5000 PSI.
5. REINFORCEMENT:
   5.1. DEFORMED BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
   5.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 - GRADE 70
6. REFER TO DETAIL 29 FOR PIPE CONNECTION DETAIL.
7. MANHOLES TO BE PLACED AT ALL PIPE CONNECTIONS.
8. SEE PLAN FOR MANHOLE ENTRANCE LOCATIONS.
5. THE STRUCTURE SHALL BE DESIGNED FOR HS 20-44 LOADING.

T=PER MANUFACTURER'S STRUCTURAL DESIGN

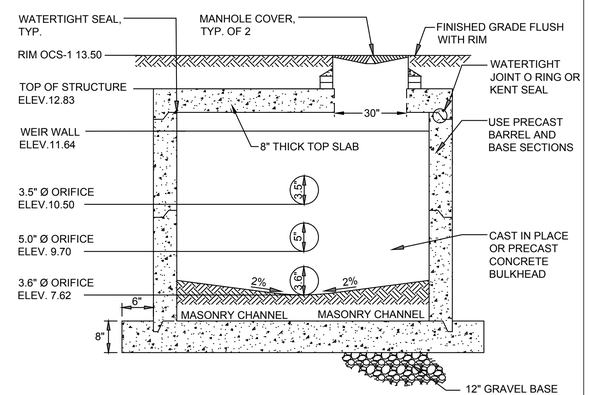


TYPICAL JOINT DETAIL BOLT POCKET DETAIL

30 8'x4'x76' DETENTION BOX DETAIL
N.T.S.



PLAN



SECTION A-A

NOTES:

1. PRECAST BOX STRUCTURE SHALL CONFORM TO ASTM C913 SPECIFICATIONS.
2. SEE DETAIL TITLE PIPE CONNECTION TO PRECAST MANHOLE STRUCTURES (THIS SHEET).
3. REINFORCEMENT:
   3.1. DEFORMED BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
   3.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185-GRADE 70
4. ALL SECTIONS SHALL BE 5,000 PSI CONCRETE.
5. REIN. STEEL SHALL HAVE 1' MINIMUM COVER.
6. THE STRUCTURE SHALL BE DESIGNED FOR HS 20-44 LOADING AND TO PREVENT FLOTATION IF FULLY SUBMERGED.
7. CRUSHED STONE BEDDING SHALL CONFORM TO NHDOT 304.4.
8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.

31 6'x6' OUTLET CONTROL STRUCTURE
N.T.S.

PERMIT PLANS - NOT FOR CONSTRUCTION

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273 CORPORATE DRIVE
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JSN ASSOCIATES, INC.
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PORTSMOUTH, NEW HAMPSHIRE

ENGINEERED SYSTEMS INC.
MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:
Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:
STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED
PROFESSIONAL ENGINEER
Joseph H. Kieffner

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

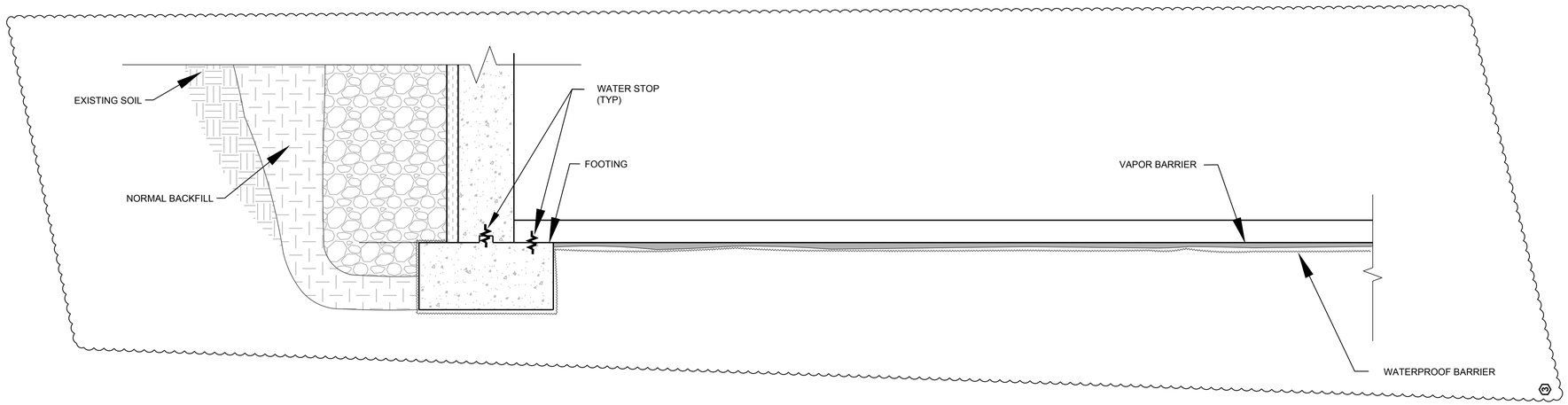
REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

STANDARD DETAILS

C7.3

I:\80900\DWG\CIVIL\80090-LOT-6 DETAILS.dwg



33 SUB SLAB WATERPROOFING SECTION
N.T.S.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

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LICENSED
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Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
⟨2⟩	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

FOUNDAIN WATERPROOFING

C7.4

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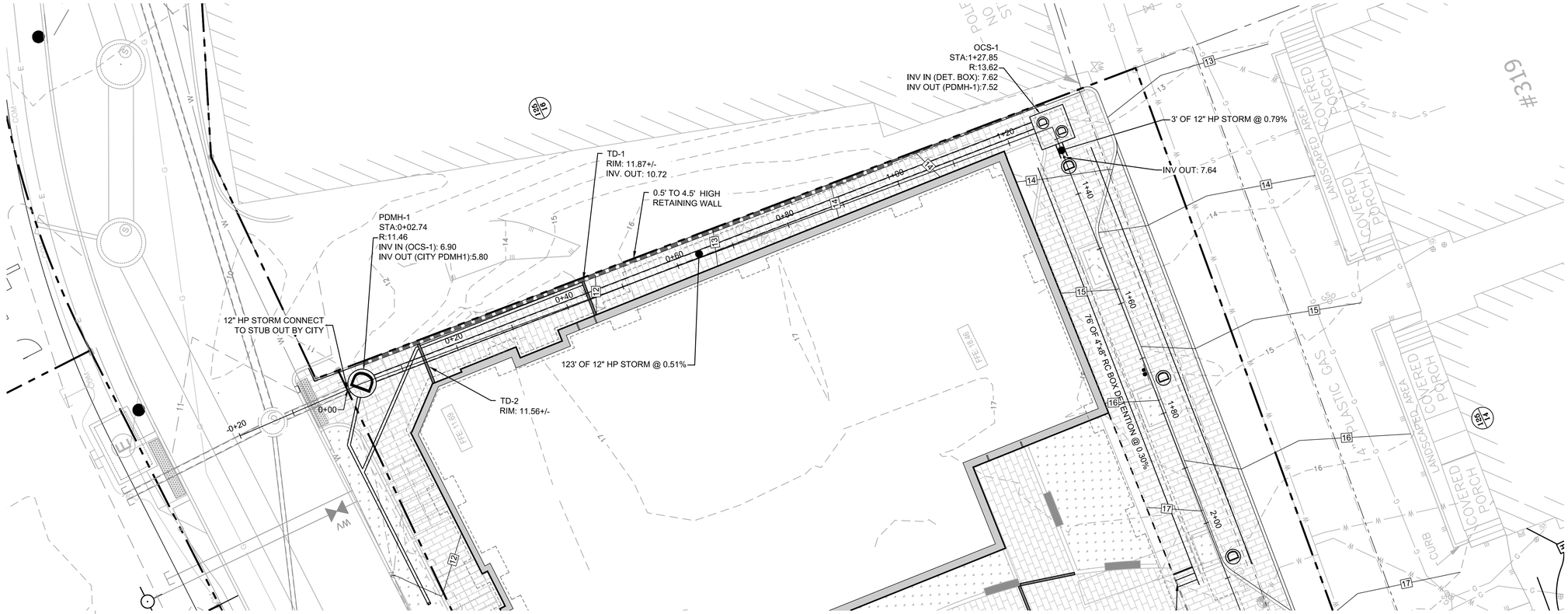
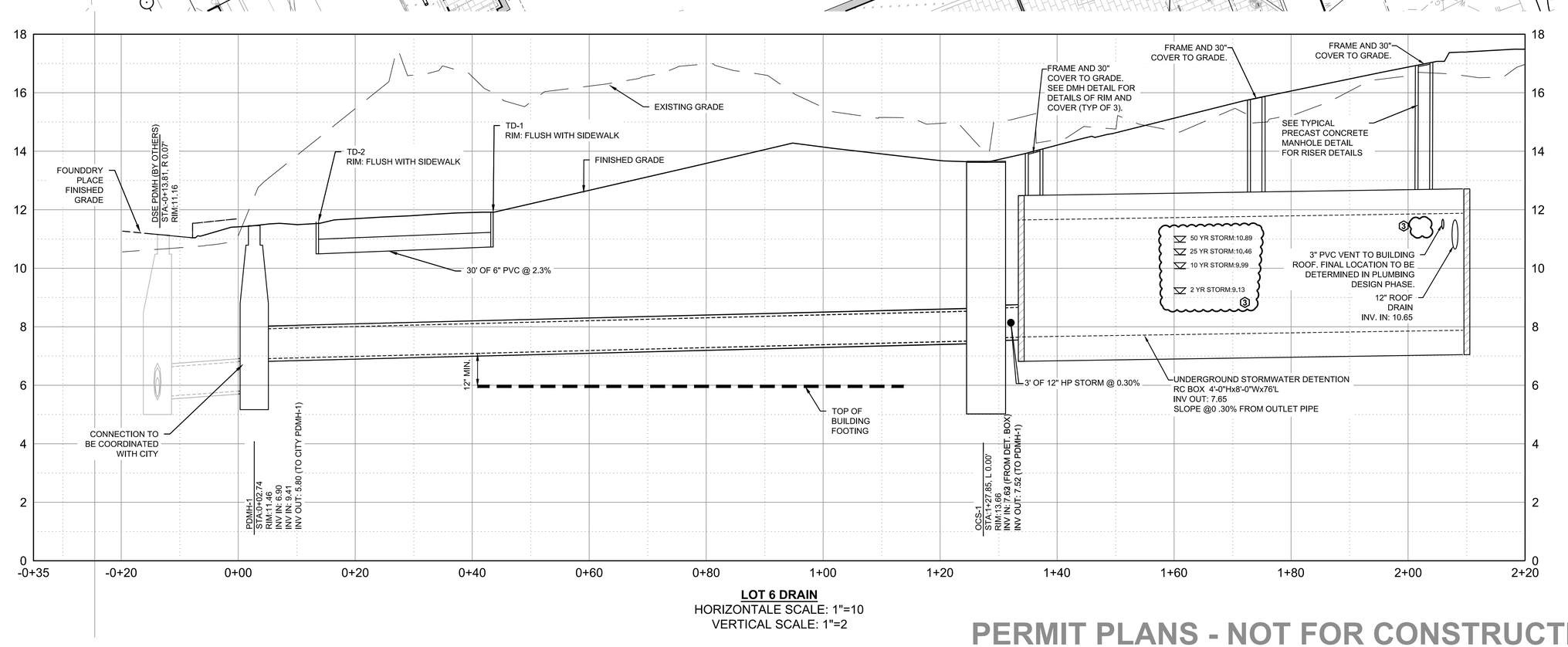
PERMIT PLANS - NOT FOR CONSTRUCTION





LOT 6 DRAIN
HORIZONTALE SCALE: 1"=10
VERTICAL SCALE: 1"=2

PERMIT PLANS - NOT FOR CONSTRUCTION

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - LICENSED
JOSEPH H. KIEFFNER No. 13174

Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

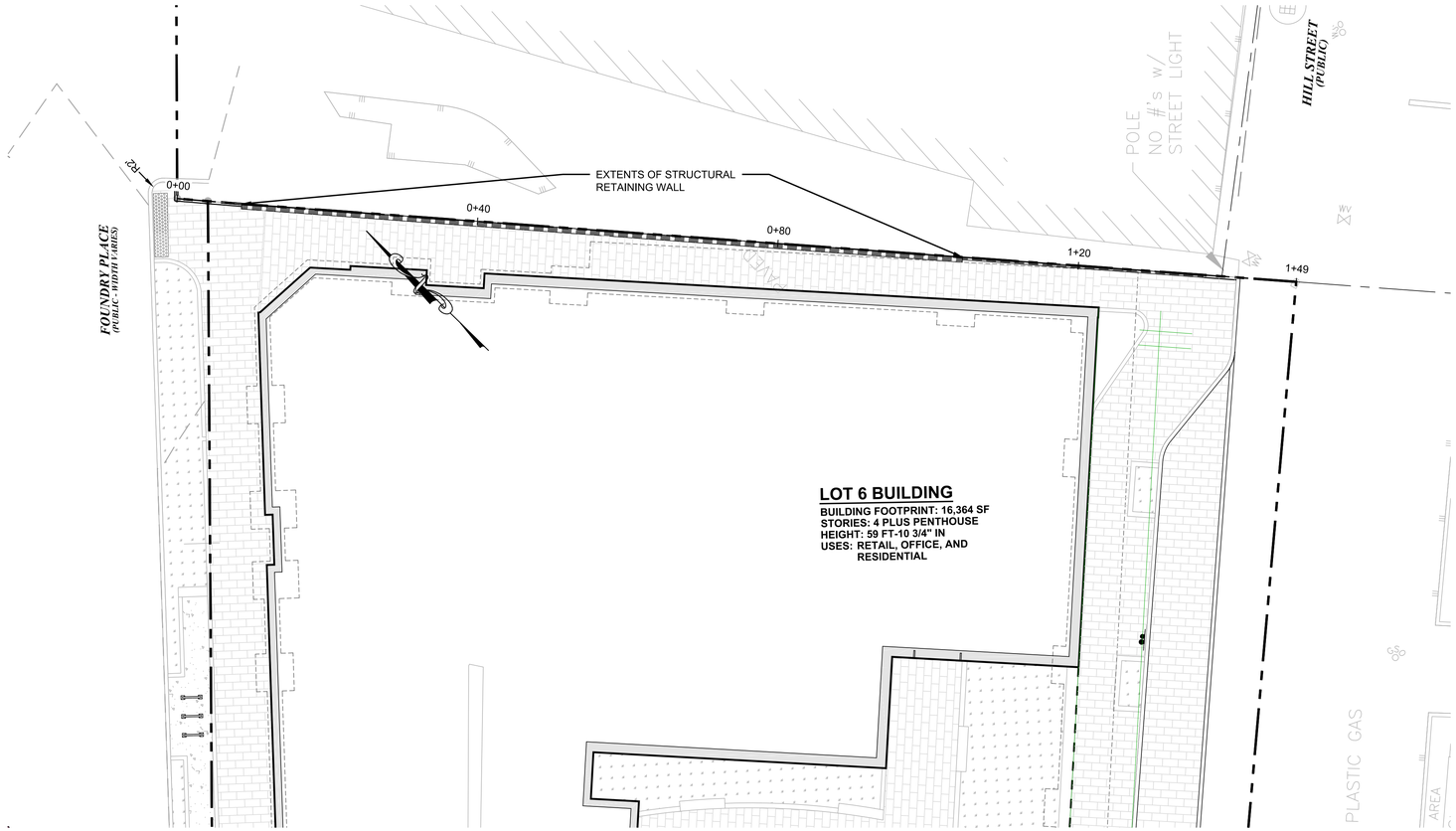
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB SUBMISSION	10/10/2017

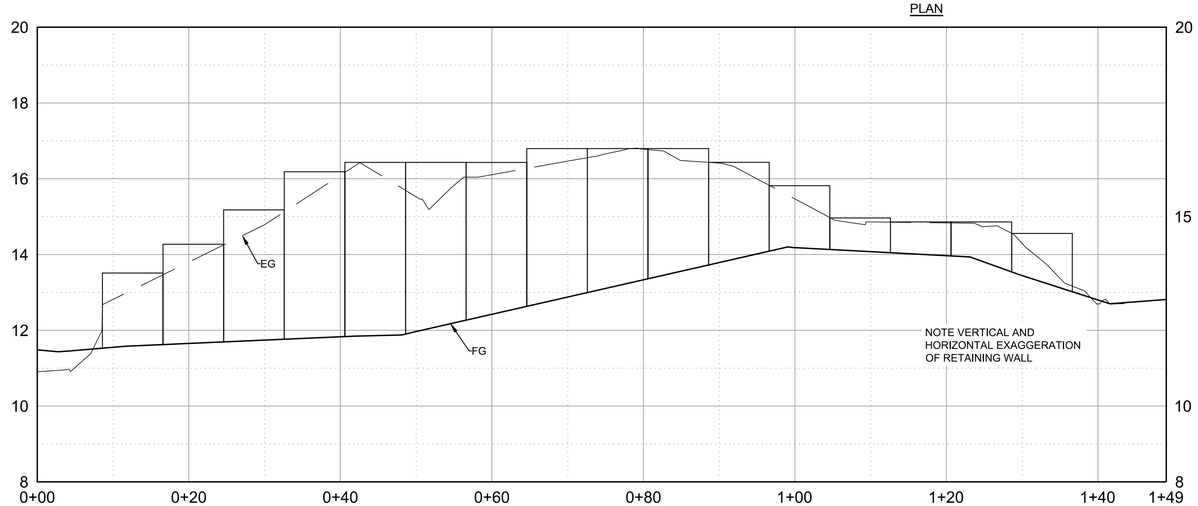
SITE PLAN REVIEW

DRAIN PLAN & PROFILES AND CROSS-SECTIONS

C8.0

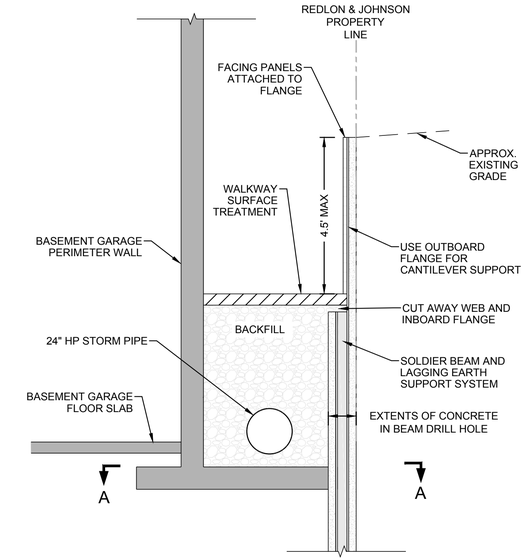


PLAN

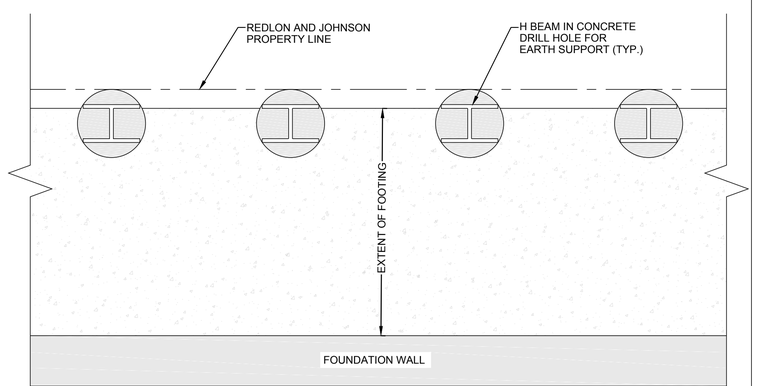


RETAINING WALL ALIGNMENT
HORIZONTALE SCALE: 1"=10
VERTICAL SCALE: 1"=2

NOTE:
1. WHERE AREAS OF RETENTION ARE GREATER THAN 18", WALL SHALL BE CONSTRUCTED BY ATTACHING PANELS TO THE OUTBOARD FLANGE OF THE SOLDIER BEAM PILE (THE INBOARD FLANGE AND THE WEB WILL BE CUT AWAY). THE PANELS WILL BE COMPRISED OF PRECAST CONCRETE, METAL, OR PRESSURE TREATED WOOD.
2. WHERE AREAS OF RETENTION ARE LESS THAN 18", WALL SHALL BE CONSTRUCTED OF PUSH IN PANELS OR MANUALLY EXCAVATED AND INSTALLED PANELS.
3. A HAND RAILING SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF THE TOP OF THE RETAINING WALL.



TYPICAL SECTION



PLAN A-A

34 RETAINING WALL DETAIL
N.T.S.

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ELECTRICAL ENGINEER
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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:
Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:
STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED PROFESSIONAL ENGINEER

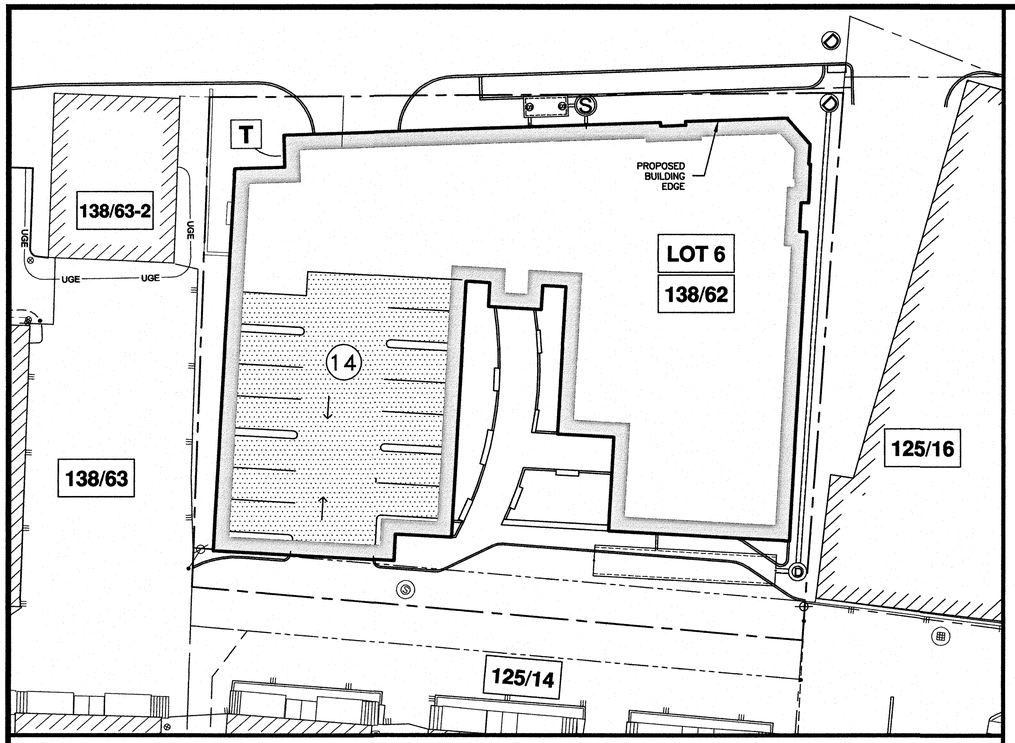
Scale:	1"=10'
Date:	3/17/2017
Project Number:	14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

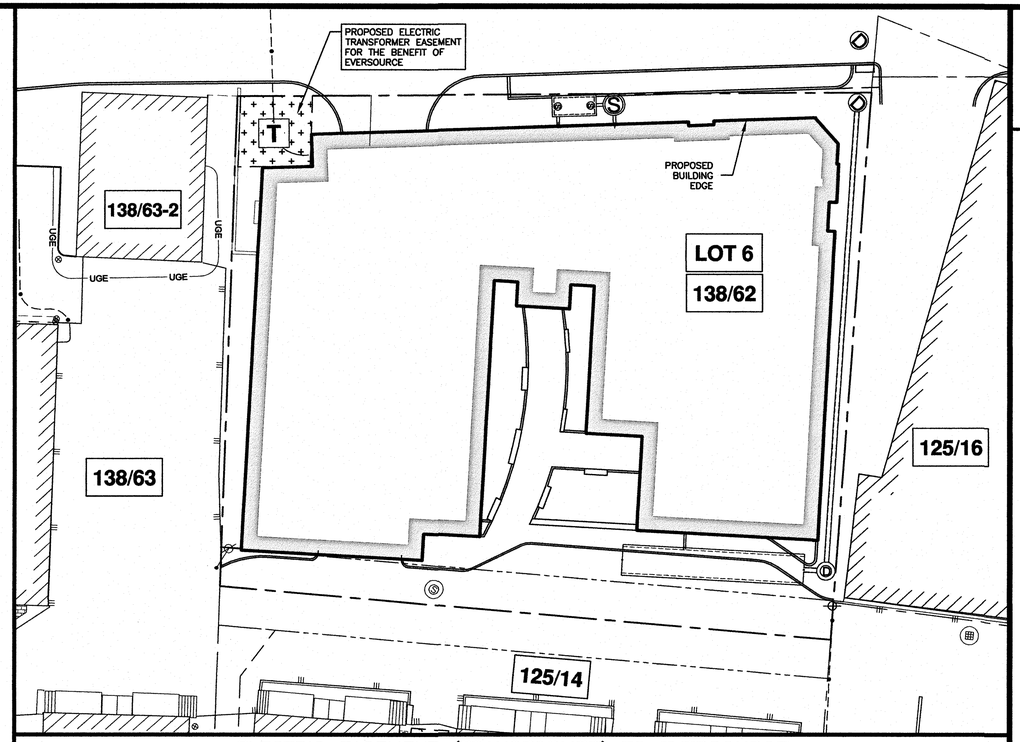
SITE PLAN REVIEW

RETAINING WALL PLAN AND PROFILE

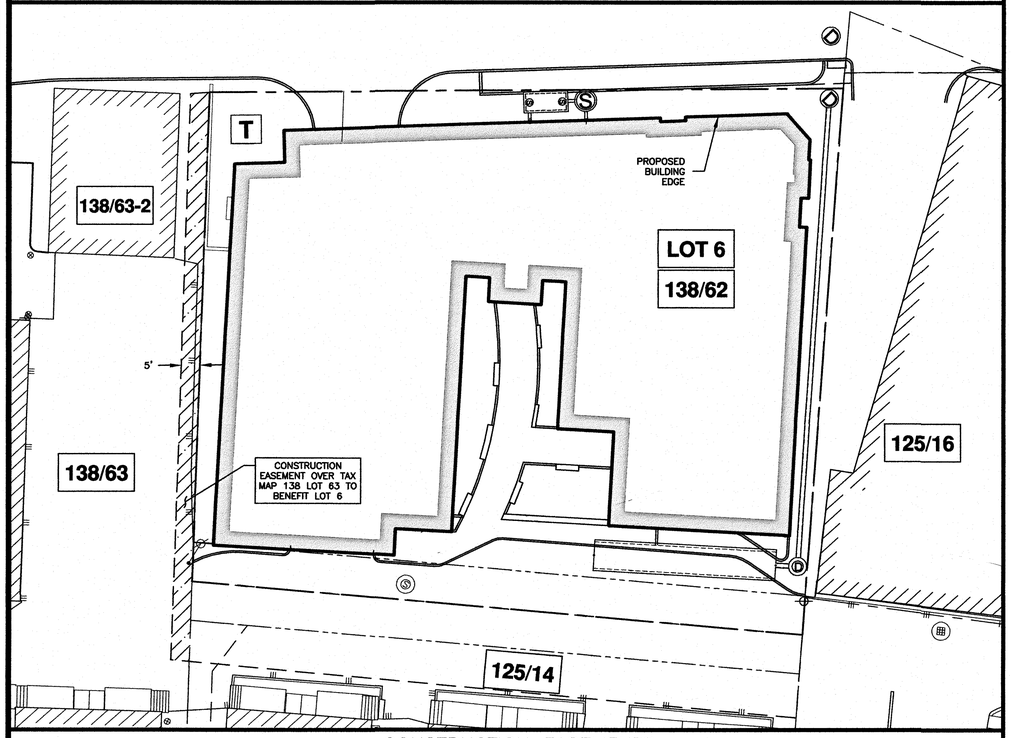
C8.1



PARKING EASEMENT TO TAX MAP 125 LOT 14



ELECTRIC EASEMENT (TRANSFORMER) TO EVERSOURCE



CONSTRUCTION EASEMENTS

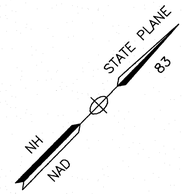
AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road – Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAPS AS MAP 138 LOT 62.

2) OWNER:
DEER STREET ASSOCIATES
PO BOX 100
YORK HARBOR, ME 03911
3395/2669, 5534/2077, & 5453/138
D-39699

3) THE PURPOSE OF THIS PLAN IS TO SHOW PROPOSED EASEMENTS FOR REVIEW AND APPROVAL FOR TAX MAP 138-62 (SUBDIVISION LOT 6).

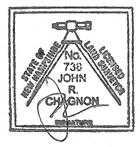


GRAPHIC SCALE
10 0 10 20 30 40 50 FEET
3 0 5 10 15 METERS

DEER STREET ASSOCIATES
FOUNDRY PLACE
PORTSMOUTH, NH

NO.	DESCRIPTION	DATE
3	REMOVED ELECTRIC EASEMENTS	9/15/17
2	PARKING & CONSTRUCTION EASEMENTS	8/10/17
1	ISSUED FOR REVIEW	6/16/17
0	ISSUED FOR COMMENT	5/26/17

REVISIONS



SCALE: 1"=20' MAY 2017

EASEMENT PLAN
TAX MAP 138 LOT 62
SUBDIVISION LOT 6

E4

FB 250, PG 22

2271

J:\JOBS\2200s\2271\01\2271-01-016 Dwg\+ Work\Plans & Specs\Site\2271-12xA EASEMENTS_2017JUN16_E4-LOTS

NOTE: THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN EMERGENCY RESPONDER RAPID REPEATER SYSTEM FOR THE BUILDING IN ACCORDANCE WITH THE REQUIREMENTS OF 2009 INTERNATIONAL BUILDING CODE, SECTION 915 IF DEEMED NECESSARY BY THE PORTSMOUTH FIRE DEPARTMENT.

REFER TO CIVIL DRAWINGS FOR STREET DUCTBANK WORK PROVIDED BY THE CITY OF PORTSMOUTH.

COUPLE TO PRIMARY DUCTBANK PROVIDED BY OTHERS

NEW EVERSOURCE SINGLE PHASE PAD MOUNTED TRANSFORMER FOR REPAIR SHOP.

NEW PAD MOUNTED EVERSOURCE TRANSFORMER FOR BUILDING 6 ON PAD PROVIDED BY DSA.

COUPLE TO PRIMARY DUCTBANK PROVIDED BY OTHERS

BUILDING #6 ELECTRIC METERS WILL BE LOCATED IN THE 1ST FLOOR MAIN ELECTRIC ROOM AND WILL INCLUDE:
(43) METERS FOR RESIDENCES
(1) METER FOR OFFICE TENANT
(1) METER FOR RETAIL TENANT
(1) METER FOR HOUSE LOADS

SECTION F-F

SECONDARY DUCTBANK AND CONDUCTORS PROVIDED BY OTHERS

SECONDARY HANDHOLE PROVIDED BY DSA

REPAIR SHOP #191 TO REMAIN

NATURAL GAS FIRED ROOFTOP STANDBY/EMERGENCY GENERATOR

BUILDING #6

CONNECT TO EXITING METER/BREAKER DEVICE

CONNECT TO EXISTING 800A 120/208V-3Φ-4W SERVICE @ WEATHERHEAD

(2) 4" R.S. CONDUIT RISERS UP TO EXISTING SERVICE WEATHERHEADS ON SIDE OF BUILDING

361 HANOVER TO REMAIN

5/11/2017 12:15:40 PM C:_Revit Projects 2016\2016 - 837.03 - Deer St_Hill St. Housing - CENTRAL - CURRENT_2017-02-28_tkozak.rvt

\\SERVO\2016 Jobs\216214\DWGs\Building 6 - TAC Submission\216214-SE1.1 - BUILDING 6 ELECTRIC.dwg, 8/18/2017 10:46:25 AM, _DWG To PDF.pc3

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MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED PROFESSIONAL ENGINEER

Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

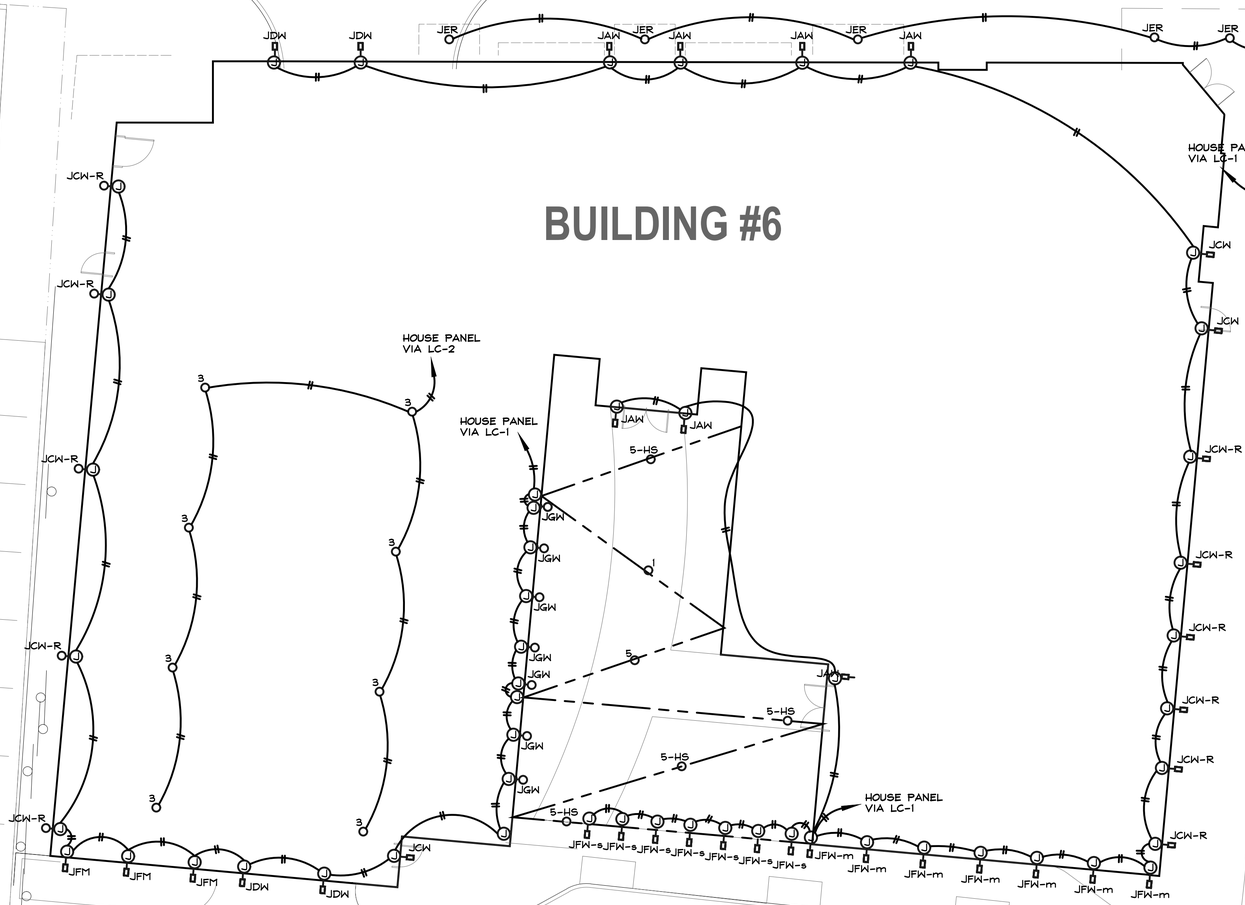
BUILDING #6 ELECTRICAL & COMMUNICATION PLAN

SE1.1

FOUNDRY PLACE

REPAIR
SHOP #191
TO REMAIN

BUILDING #6



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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HAFEY
LICENSED PROFESSIONAL ENGINEER

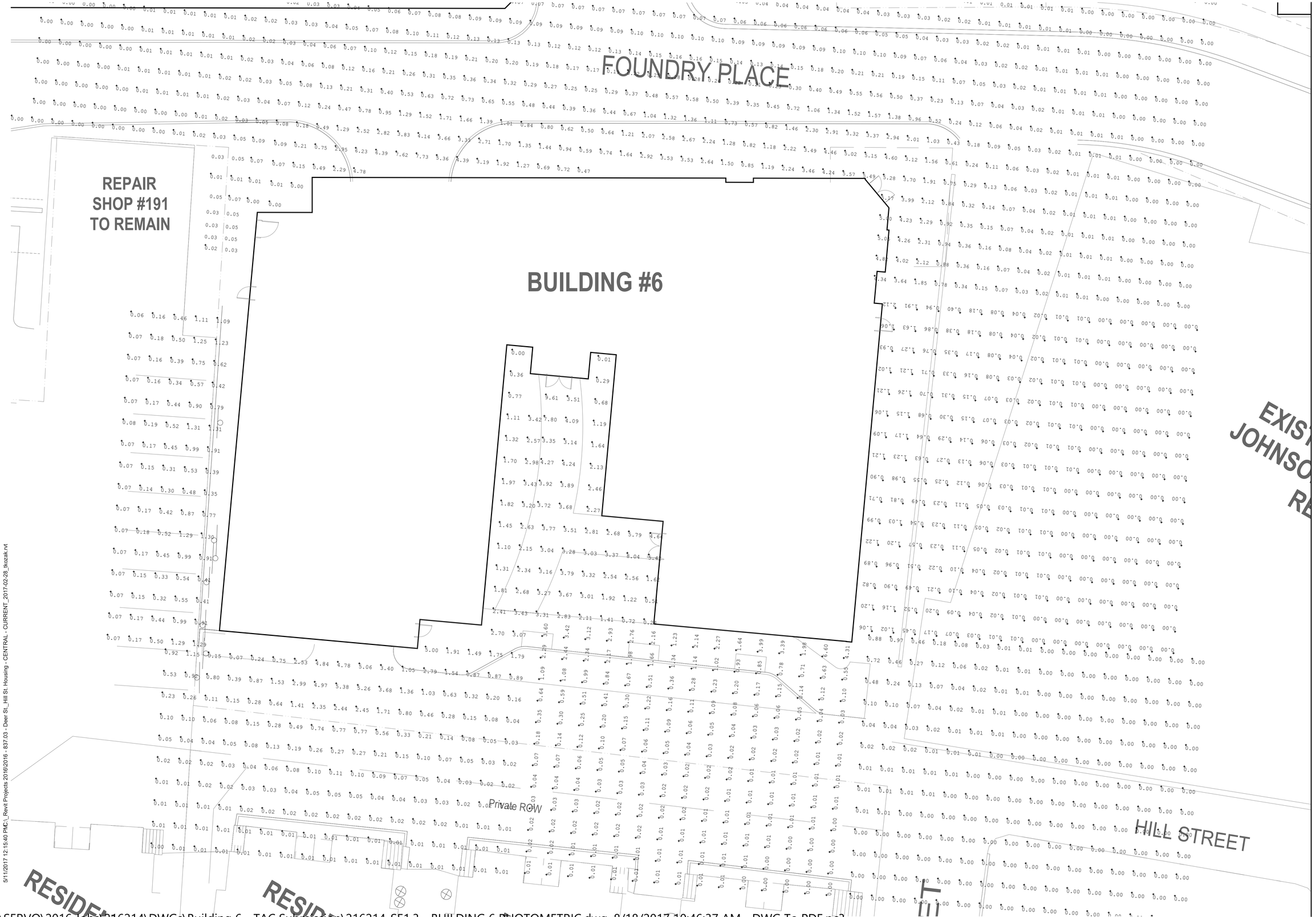
Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

BUILDING #6
LIGHTING PLAN

SE1.2



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\\SERVO\2016 Jobs\216214\DWGs\Building 6 - TAC Submission\216214-SE1.3 - BUILDING 6 PHOTOMETRIC.dwg, 8/18/2017 10:46:37 AM, _DWG To PDF.pc3

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ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED
PROFESSIONAL ENGINEER

Scale: 1"=40'
Date: 3/17/2017
Project Number: 14837.03

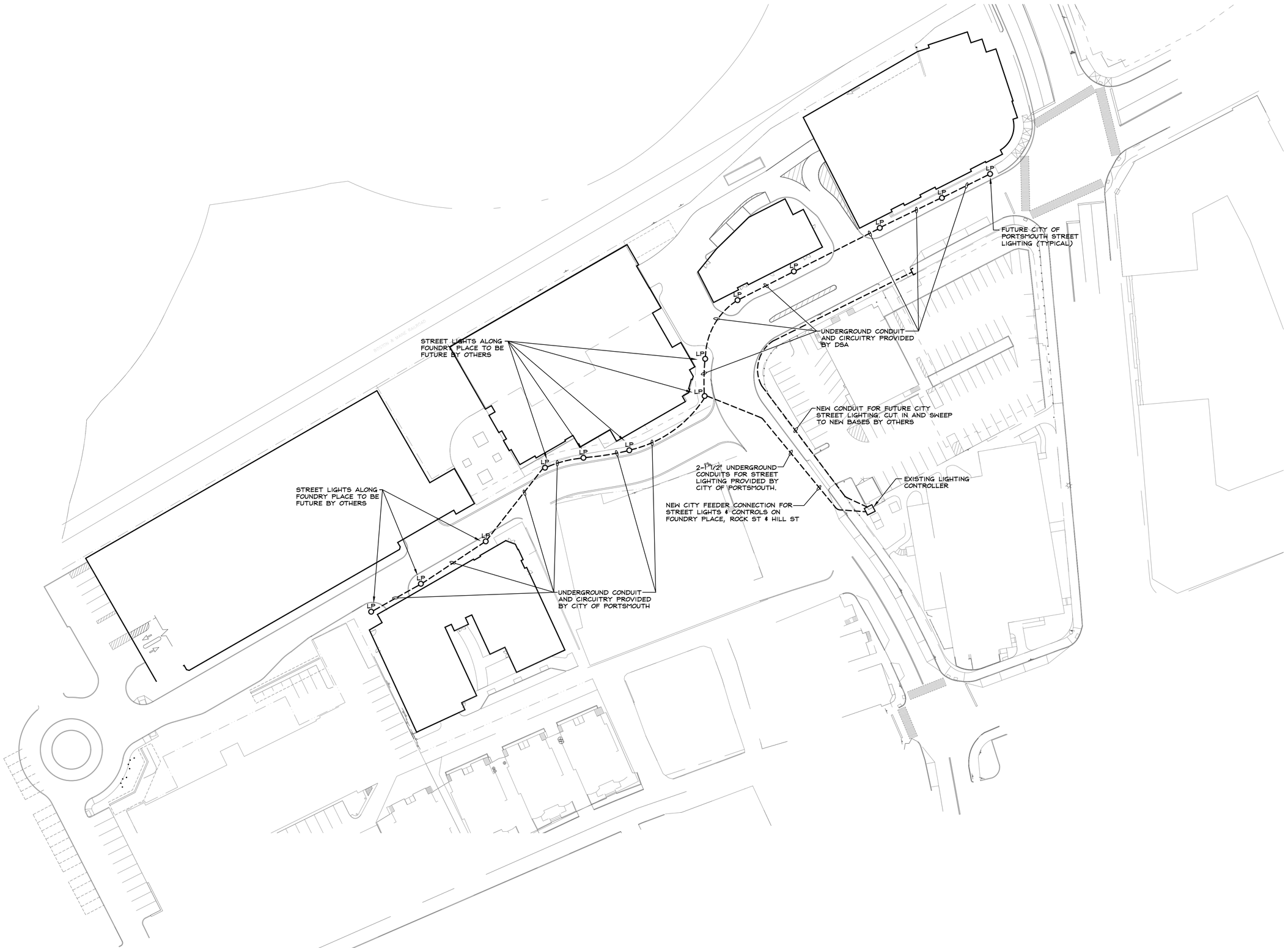
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

BUILDING #6
PHOTOMETRIC
PLAN

SE1.3



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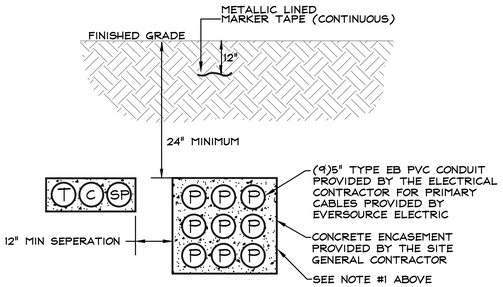
SITE PLAN REVIEW

SITE STREET LIGHTING PLAN

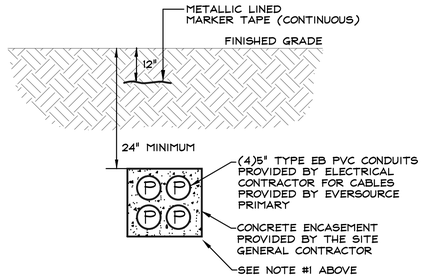
SE1.4

UNDERGROUND CONDUIT BANK DETAILS

NOTES:
1. CONCRETE ENCASEMENT OF UNDERGROUND DUCT BANKS SHALL BE PROVIDED BY THE SITE OR GENERAL CONTRACTOR IN ACCORDANCE WITH LOCAL UTILITY COMPANY STANDARDS.
2. ALL SCHEDULE 40 PVC RACEWAYS UTILIZED SHALL BE UL LISTED ELECTRICAL CONDUITS.
3. ALL UNDERGROUND CONDUIT BANKS AND CABLING SHALL COMPLY WITH EVERSOURCE, FAIRPOINT, COMCAST AND BAYRING RULES, REGULATIONS AND DESIGN STANDARDS.



SECTION A-A



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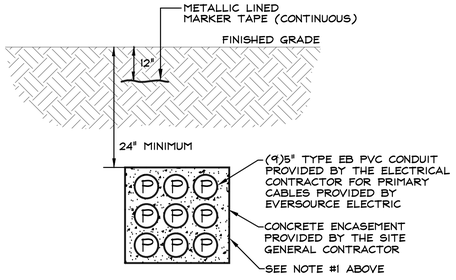

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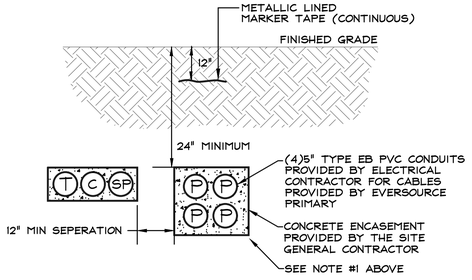

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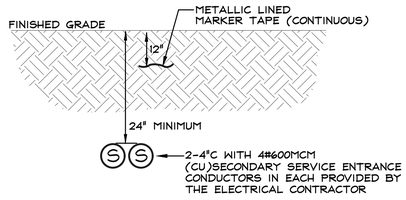

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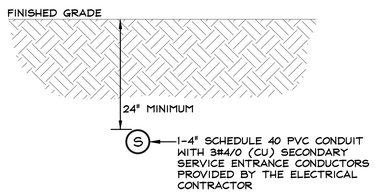

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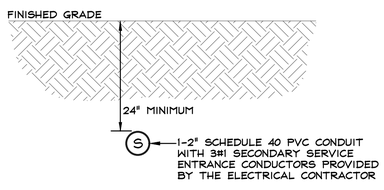

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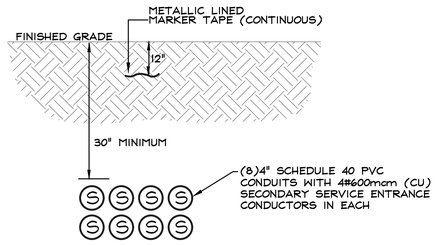

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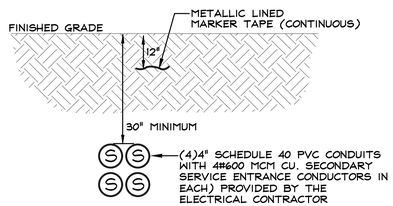

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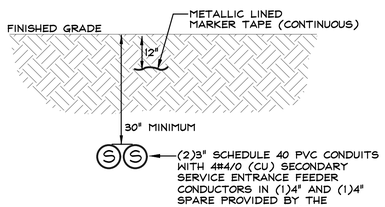
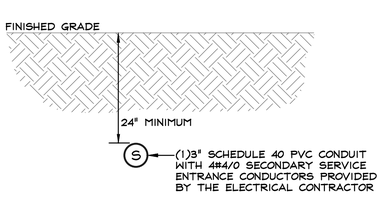


SECTION J-J



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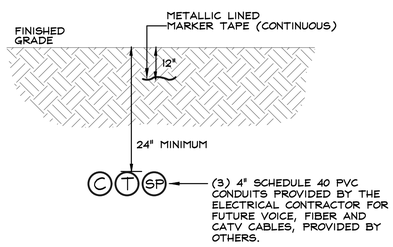

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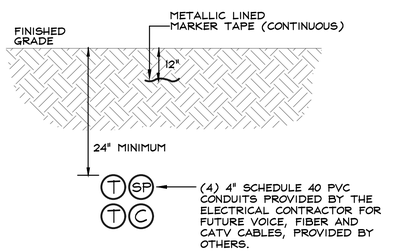

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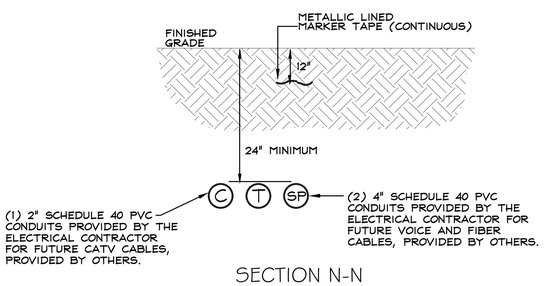

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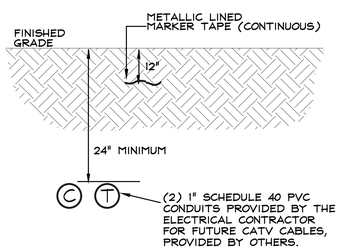

SECTION O-O

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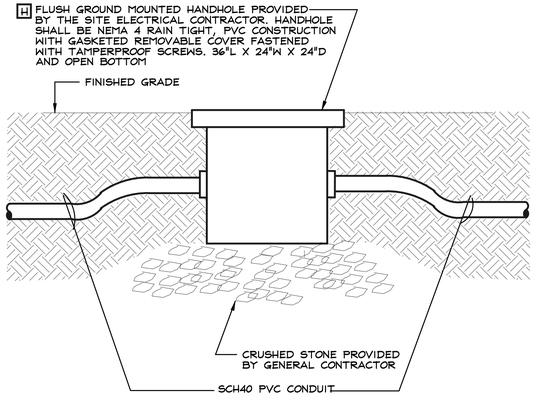
SITE PLAN REVIEW

SITE ELECTRICAL DETAILS

SE2.1

TYPICAL SITE LIGHTING HANDHOLE DETAIL



BUILDING 6 - ELECTRICAL LOAD CALCULATIONS

Engineered Building Systems, Inc.
Consulting Engineers

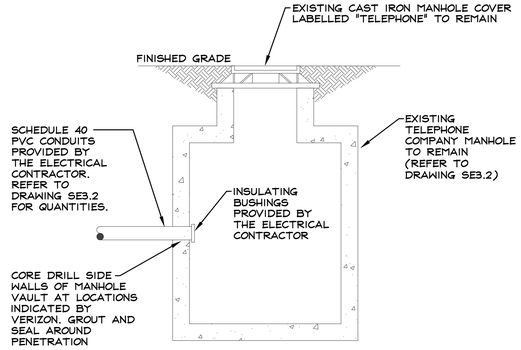
DEER STREET DEVELOPMENT – B6
43 UNITS + RETAIL + OFFICE
PRELIMINARY TOTAL BUILDING CALCULATIONS
USING OPTIONAL CALCULATION METHOD 220.84

		DEMAND KW
• **DWELLING UNIT LOADS**		
General Lighting load (220-12) = 2.7 KW unit x 43 Units = 116.1		116.1
Small Appliance 220-52(a)(b) = 3.0 KW unit x 43 Units = 129.0		129.0
Fixed Appliance Load (220-53) = 2.7 KW x 43 Units = 116.1		116.1
Clothes Dryer (Common) (220-54) = 5.0KW x 43 Units =215.0		215.0
Range/Cooktop (Electric) (220-55) = 8.0 KW x 43 Units = 344.0		328.0
Heating System (Electric) (220.60) = -0- KW unit x 43 Units =		-0-
Air Conditioning Load (Electric) = 4.0 KW x 43 Units = 172.0		172.0
Hot Water (Gas Central) = -0- KW x 43 Units = 0.0		-0-
Ventilation Systems = 0.5 KW x 43 Units = 21.5		21.5
Subtotal Dwelling Electrical Load =		1113.7
1113.7 KW x 27% =		300.7

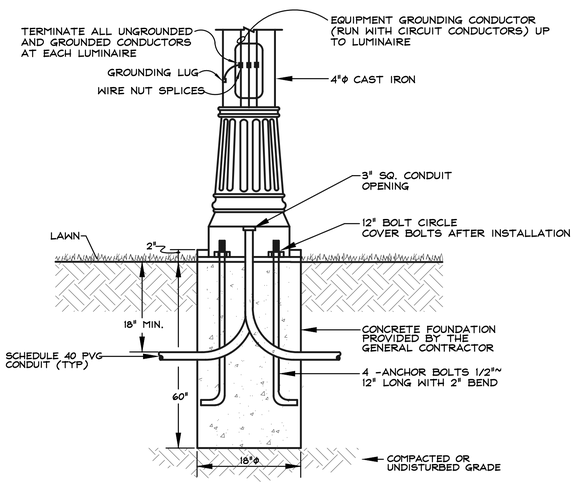
			DEMAND KW
• **NON-DWELLING UNIT LOADS**			
Exterior Lighting	3.0 KW @ 100% =		3.0
Lighting	16.0 KW @ 100% =		16.0
1 Elevator	40.0 KW @ 100%=		40.0
Miscellaneous	10.0 KW @ 100% =	10.0	
Ventilation Systems	8.0 KW @ 100% =		8.0
Heat Load	-0- KW @ 0% =	-0-	
Fire Pump Load	-0- KW @ 0% =	-0-	
A/C Load	20 Tons x 1.5 KW =	30.0	
Laundry Load	0.0 KW @ 0% =	-0-	
Subtotal Non-Dwelling Unit Electrical Load			107.0
• **OFFICE ELECTRICAL LOADS** 3,000 SQ. FT. x 12w/sq. ft.			36.0
• **RETAIL ELECTRICAL LOADS** 1,800 SQ. FT. x 20w/sq. ft.			36.0
Total Building Demand Load			480.7

479.7 KW @ 208 Volts, 3 Phase = 1331 AMPS
Recommend Minimum 1600 Ampere Service @ 120/208 Volts, 3 Phase, 4 Wire

EXISTING TELEPHONE MANHOLE ACTIVATION DETAIL

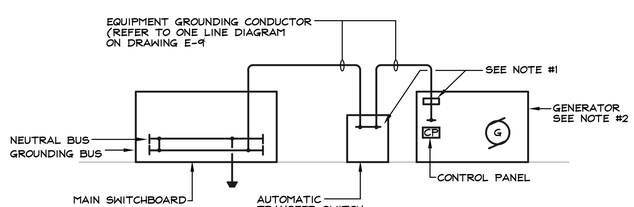


TYPICAL LP1 OR LP2 FIXTURE POLE BASE DETAIL



NOTE: SUPPORT VERTICAL CONDUCTORS IN ACCORDANCE WITH 300-19

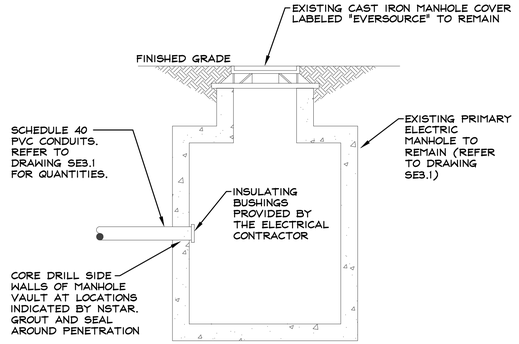
EMERGENCY GENERATOR SERVICE GROUND DETAIL



NOTES:

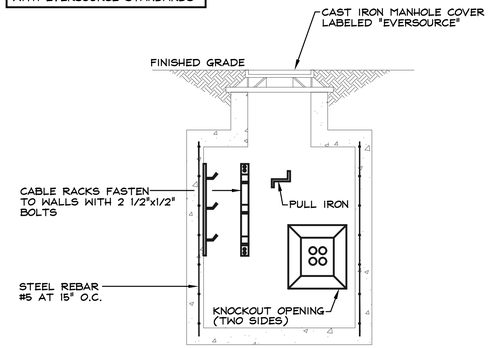
1. CONNECT EQUIPMENT GROUNDING CONDUCTOR TO GROUNDING BAR, ENCLOSURES AND GENERATOR FRAME.
2. THE EMERGENCY/STANDBY GENERATOR IS NOT A SEPERATELY DERIVED SYSTEM AND SHALL BE GROUNDED ACCORDINGLY.

EXISTING PRIMARY ELECTRIC MANHOLE ACTIVATION DETAIL



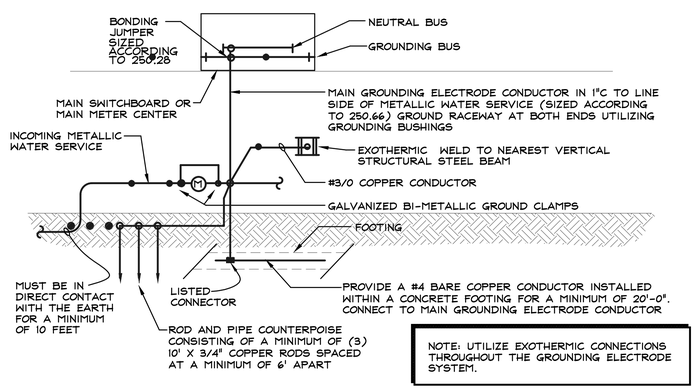
TYPICAL EVERSOURCE PRIMARY MANHOLE DETAIL

NOTE: MANHOLES AND MANHOLE GROUND GRIDS SHALL COMPLY WITH EVERSOURCE STANDARDS



MAIN SERVICE GROUNDING ELECTRODE SYSTEM DIAGRAM

NOTE: PROVIDE A GROUNDING ELECTRODE SYSTEM AS DETAILED BELOW (IF AVAILABLE ON THE PREMISES) UNTIL A MAXIMUM RESISTANCE LEVEL OF 25 OHMS TO GROUND IS ATTAINED.



NOTE: UTILIZE EXOTHERMIC CONNECTIONS THROUGHOUT THE GROUNDING ELECTRODE SYSTEM.

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Deer Street Associates

STATE OF NEW HAMPSHIRE JOHN A. HARPER LICENSED PROFESSIONAL ENGINEER

Scale:
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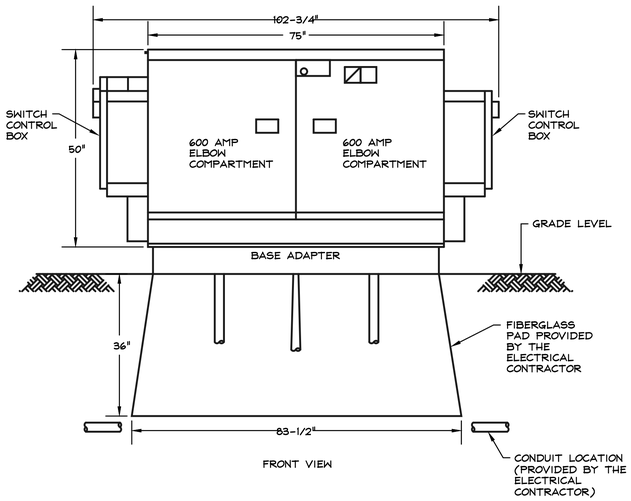
SITE PLAN REVIEW

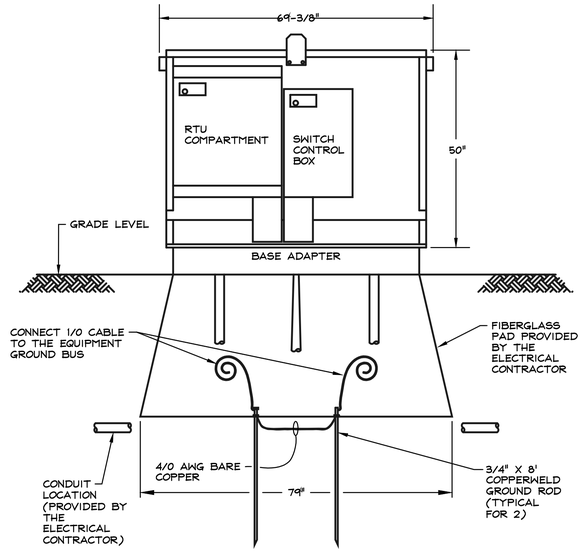
SITE ELECTRICAL DETAILS

SE2.2

EVERSOURCE PRIMARY SWITCH BOX DETAIL

NOTE: PRIMARY SWITCH IS FURNISHED AND INSTALLED BY NSTAR, ELECTRIC GROUNDING GRID PROVIDED BY THE ELECTRICAL CONTRACTOR



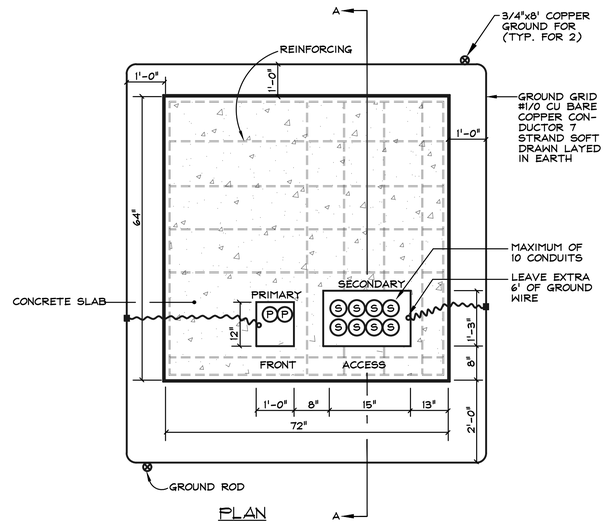


EVERSOURCE DISTRIBUTION TRANSFORMER PAD DETAIL

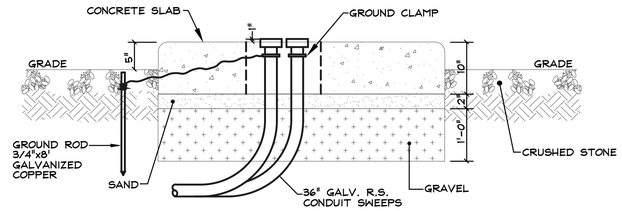
PAD CONSTRUCTION NOTES

1. NO ABOVE GROUND STRUCTURES, SHRUBS, ETC. SHALL BE INSTALLED WITHIN 4 FEET OF PAD AND WITHIN 6 FEET OF TRANSFORMER DOORS.
2. PRIMARY CONDUIT SWEEPS TO BE 5" STEEL PIPES T.¢C.
3. FOR PAD MOUNTED TRANSFORMERS, LARGER THAN 1000 KVA, INCREASE THE WIDTH OF THE PAD FROM 7'-2" TO 10' AND THE DEPTH FROM 6'-5" TO 9'.
4. THE GENERAL CONTRACTOR MUST CALL EVERSOURCE ENERGY PRIOR TO POURING PAD.
5. TRANSFORMER PAD MUST BE LOCATED 15' FROM EGRESS DOORS OR OPERABLE WINDOWS.

PAD MATERIAL:
CONCRETE, 4000 PSI MIX, NOT MORE THAN 5 1/2 GALLONS OF WATER PER BAG OF CEMENT.

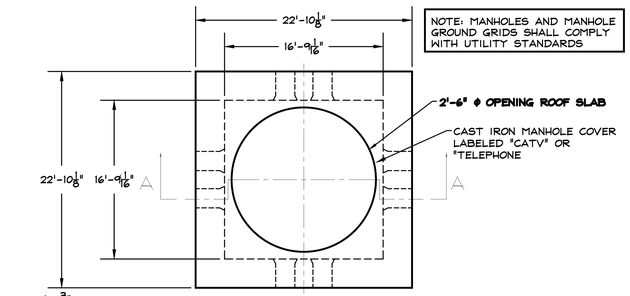


PLAN

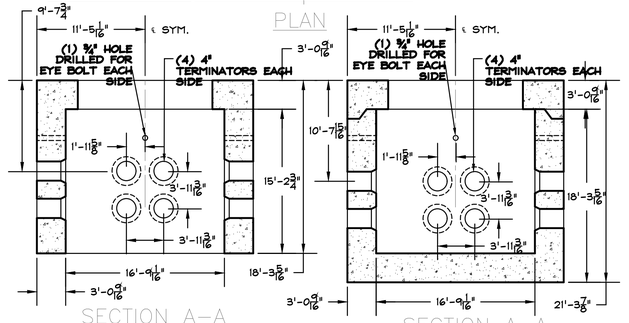


SECTION A-A

TYPICAL CATV AND TELEPHONE HANDHOLE DETAIL



PLAN



SECTION A-A

36" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333	2680LBS

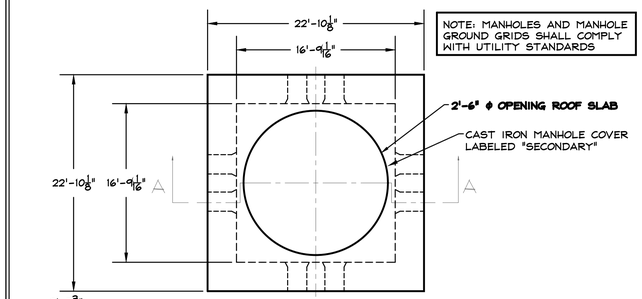
SECTION A-A

48" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333A	3690LBS

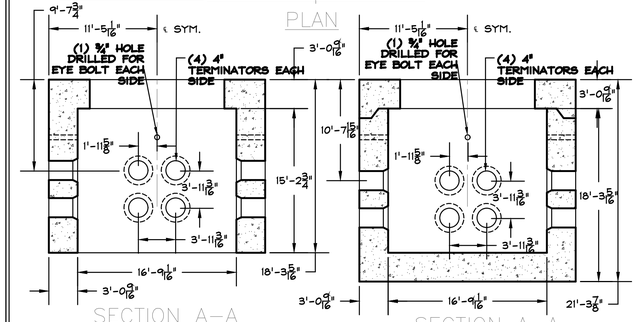
NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60. MINIMUM STEEL COVER 1".
3. DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
4. OPTIONAL OPENINGS AVAILABLE BY SPECIAL ORDER.

TYPICAL SECONDARY HANDHOLE DETAIL



PLAN



SECTION A-A

36" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333	2680LBS

SECTION A-A

48" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333A	3690LBS

NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60. MINIMUM STEEL COVER 1".
3. DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
4. OPTIONAL OPENINGS AVAILABLE BY SPECIAL ORDER.

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DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE JOHN A. HARPER LICENSED PROFESSIONAL ENGINEER

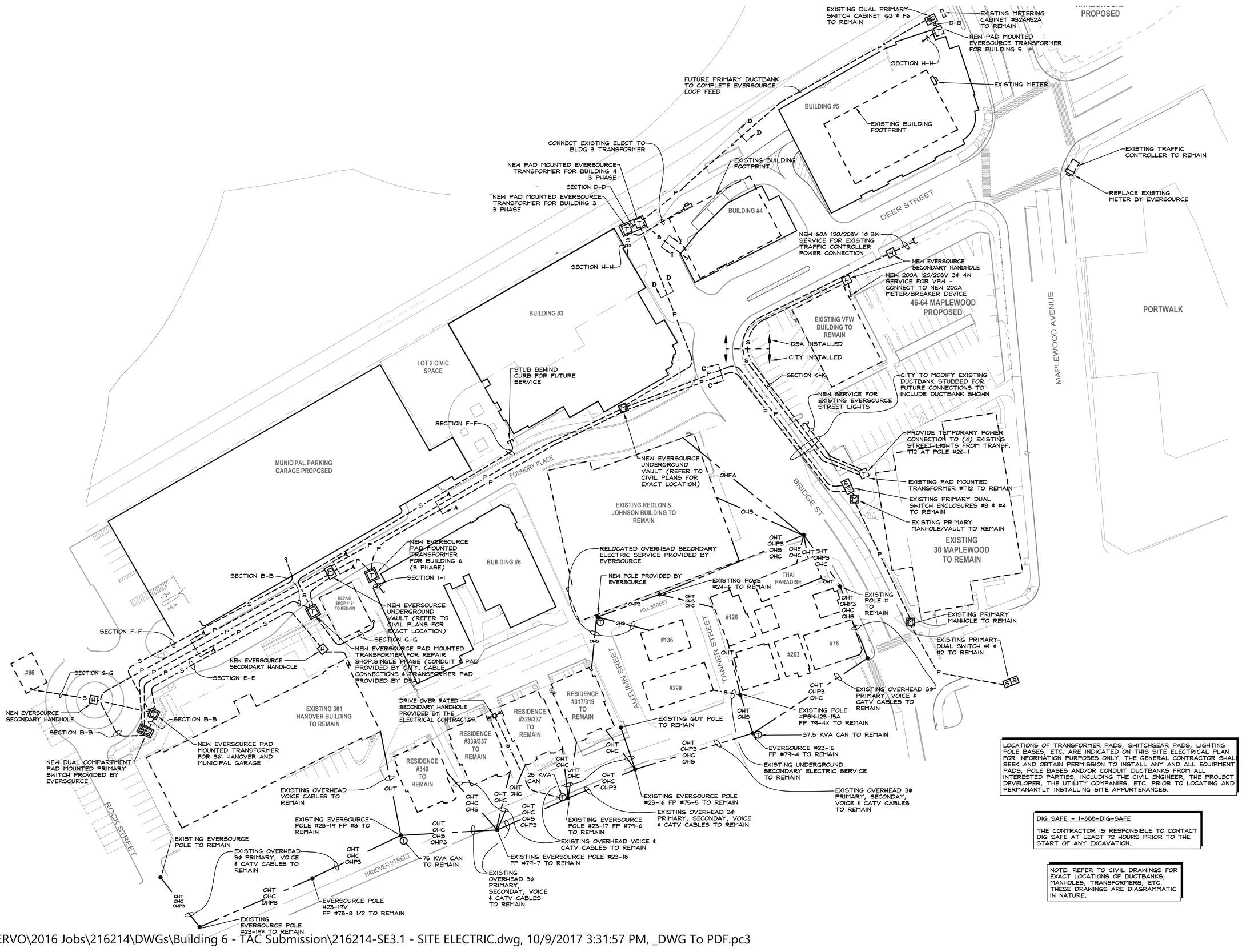
Scale:
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

SITE ELECTRICAL DETAILS

SE2.3



LOCATIONS OF TRANSFORMER PADS, SWITCHGEAR PADS, LIGHTING POLE BASES, ETC. ARE INDICATED ON THIS SITE ELECTRICAL PLAN FOR INFORMATION PURPOSES ONLY. THE GENERAL CONTRACTOR SHALL SEEK AND OBTAIN PERMISSION TO INSTALL ANY AND ALL EQUIPMENT PADS, POLE BASES AND/OR CONDUIT DUCTBANKS FROM ALL INTERESTED PARTIES, INCLUDING THE CIVIL ENGINEER, THE PROJECT DEVELOPER, THE UTILITY COMPANIES, ETC. PRIOR TO LOCATING AND PERMANANTLY INSTALLING SITE APPURTENANCES.

DIG SAFE - 1-888-DIG-SAFE

THE CONTRACTOR IS RESPONSIBLE TO CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF ANY EXCAVATION.

NOTE: REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS OF DUCTBANKS, MANHOLES, TRANSFORMERS, ETC. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE — JOHN A. HOPPER — LICENSED PROFESSIONAL ENGINEER

Scale: 1"=40'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS

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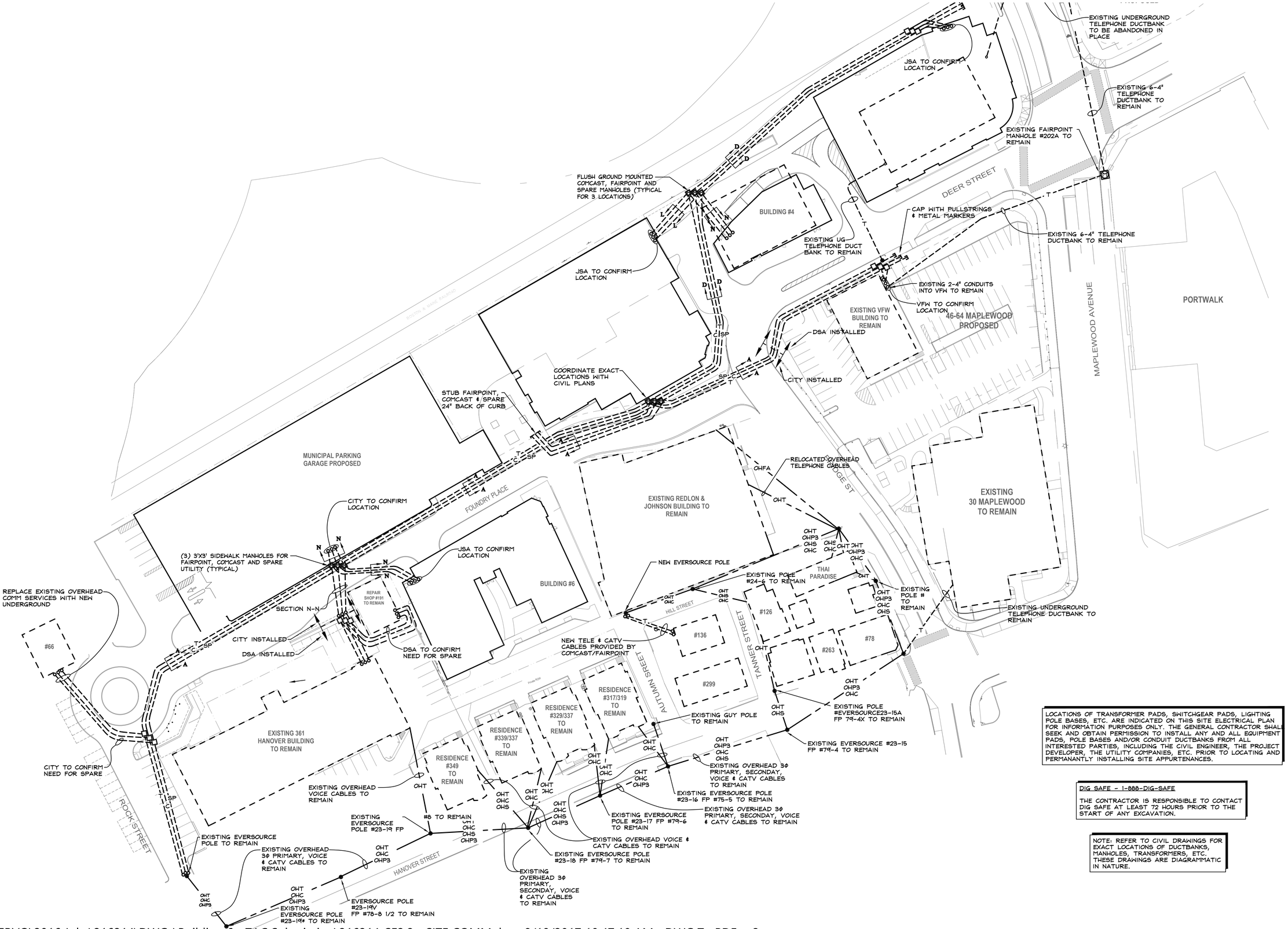
SITE PLAN REVIEW

SITE ELECTRICAL PLAN

SE3.1



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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

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STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED PROFESSIONAL ENGINEER

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SITE PLAN REVIEW

SITE COMMUNICATION PLAN

SE3.2

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SITE PLAN REVIEW

SITE ELECTRICAL DEMOITION PLAN - EXISTING CONDITIONS

SED1.1

5/11/2017 12:15:40 PM C:_Revit Projects 2016\2016 - 837.03 - Deer St_ Hill St. Housing - CENTRAL - CURRENT_2017-02-28_lkozak.rvt

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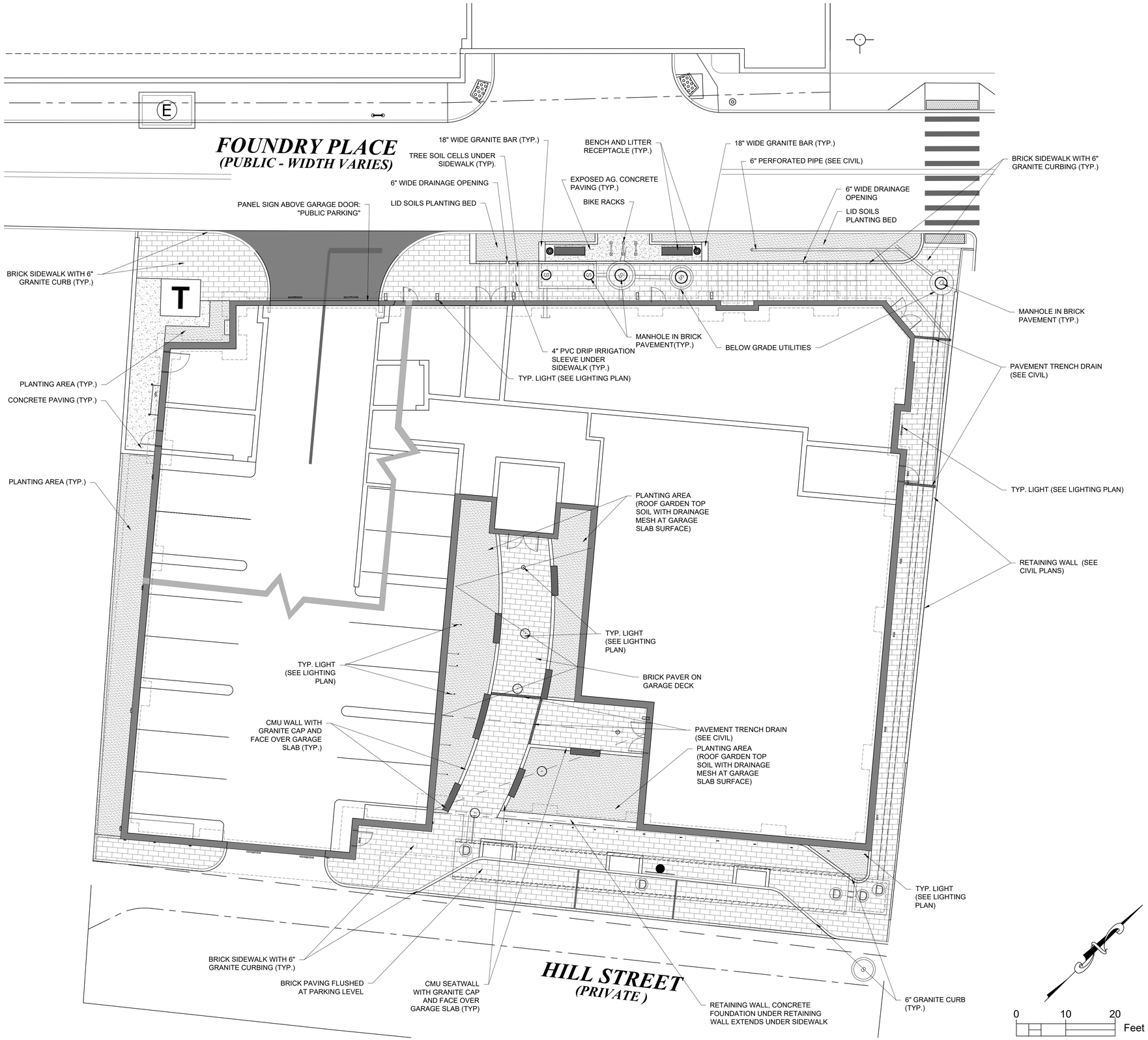

SCALE: 1" = 10'

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED LANDSCAPE ARCHITECT
ROBERT A. WHITE
083
STATE OF NEW HAMPSHIRE

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SITE PLAN REVIEW

MATERIALS PLAN

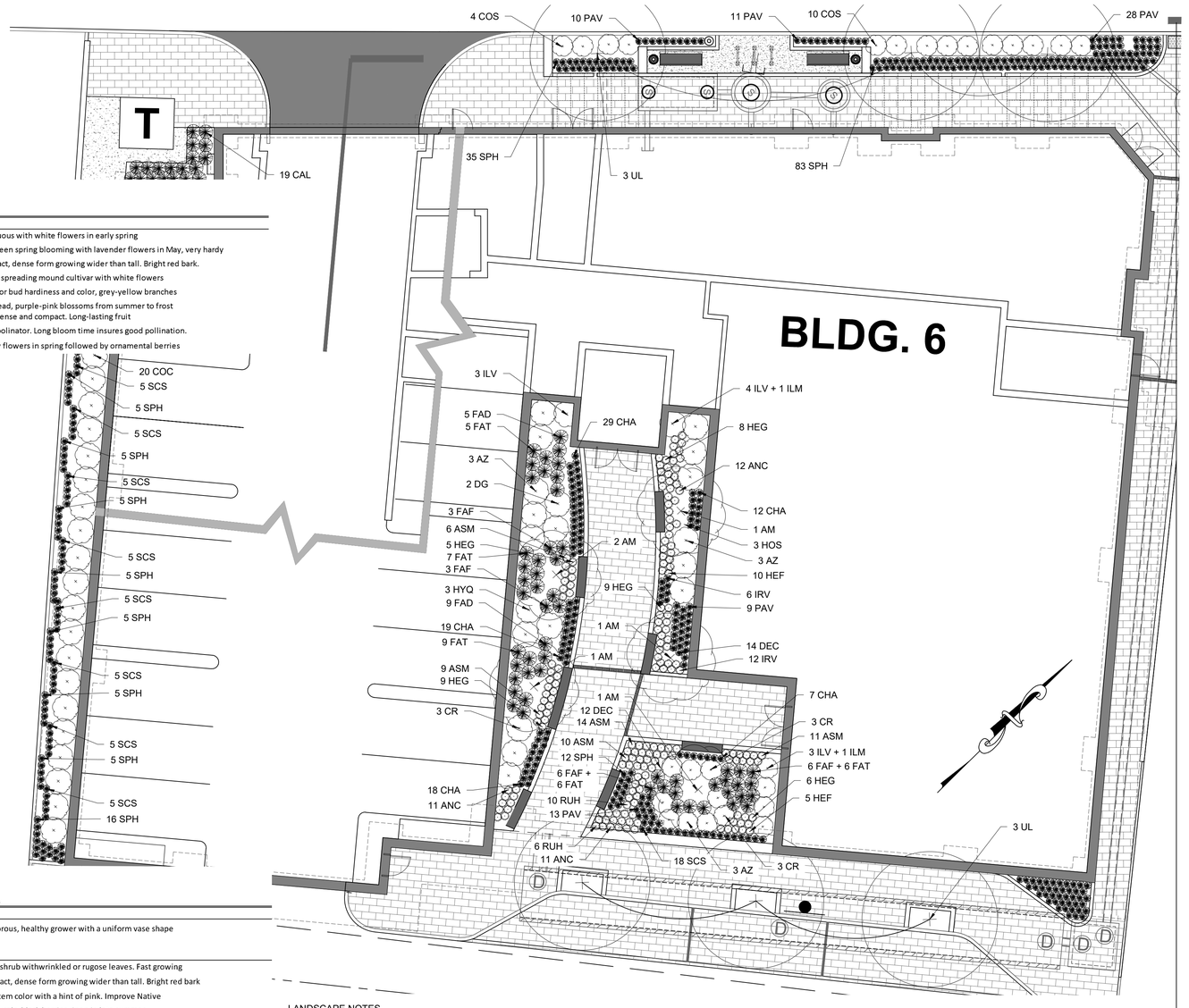
L1

LOT 6 -Courtyard

Symbol	Scientific Name	Common Name	Size	Spacing	Mature Height	Crown Spread	Growth Habit	TOLERANCES: Drought	Poor Drainage	Alkaline Soil	Salt	Air Pollution	Shade	Notes
Shrubs														
AM	AMELANCHIER Canadensis multi-stem	Serviceberry, Shadblow	8-10' ht.	see plan	16-24'	8'	Oval	moderate	moderate	moderate	moderate	tolerant	moderate	Deciduous with white flowers in early spring
AZ	AZALEA x 'Karen' (Gable Hybrid)	Karen Azalea	3-4' ht	see plan	2-4'	3-4'	Spreeding	moderate	moderate	moderate	moderate	tolerant	moderate	Evergreen spring blooming with lavender flowers in May, very hardy
CR	CORNUS sericea 'Isanti'	Dogwood, Isanti Red-Osier	3-4' ht	see plan	4-5'	5-7'	Mounded	moderate	moderate	moderate	moderate	tolerant	moderate	Compact, dense form growing wider than tall. Bright red bark.
DG	DEUTZIA gracilis 'Nikko'	slender deutzia	3-4' ht	see plan	1-2'	2-5'	Mounded	moderate	moderate	moderate	moderate	tolerant	moderate	Dense spreading mound cultivar with white flowers
FN	FORSYTHIA 'Northern Gold'	Forsythia	3-4' ht	see plan	6-8'	6-8'	Upright	moderate	moderate	moderate	moderate	tolerant	moderate	superior bud hardiness and color, grey-yellow branches
HYQ	HYDRANGEA 'Bloom Struck'	Hydrangea	3-4' ht	see plan	3-4'	3-4'	Mounded	moderate	moderate	moderate	moderate	tolerant	tolerant	Mophead, purple-pink blossoms from summer to frost
IV	ILEX verticillata 'Red Sprite' *(female)*	Winterberry 'Red Sprite'	3-4' ht	see plan	3-4'	3-4'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Very dense and compact. Long-lasting fruit
ILM	ILEX verticillata 'Jim Dandy' *(male)*	Winterberry	3-4' ht	see plan	4-5'	5-6'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Male polinator. Long bloom time insures good pollination.
LB	LINDERA benzoin	Spicebush	3-4' ht	see plan	8-10'	8-10'	Rounded	tolerant	tolerant	moderate	moderate	tolerant	tolerant	Yellow flowers in spring followed by ornamental berries

Planting Schedule

Symbol	Scientific Name	Common Name	Size	Spacing	Mature Height	Crown Spread	Growth Habit	TOLERANCES: Drought	Poor Drainage	Alkaline Soil	Salt	Air Pollution	Shade	Notes
Trees														
UA	ULMUS americana 'Princeton'	American Elm ' Princeton'	2-2.5" cal.	see plan	30-40'	24'	Vase	tolerant	tolerant	tolerant	Moderate	tolerant	moderate	A vigorous, healthy grower with a uniform vase shape
Shrubs														
ALR	ALNUS rugosa	Speckled Alder	3-4' ht	see plan	15-25'	15-25'	multi-trunked	intolerant	tolerant	moderate	moderate	tolerant	moderate	Large shrub withwrinkled or rugose leaves. Fast growing
COS	CORNUS sericea 'Artic Fire'	Dogwood, Artic-Fire Red-Osier	3-4' ht	see plan	3-4'	3-4'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Compact, dense form growing wider than tall. Bright red bark
COC	CORNUS sericea 'Cardinal'	Dogwood, Cardinal Red-Osier	3-4' ht	see plan	8-10'	8-10'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Red stem color with a hint of pink. Improve Native
GAB	GAYLUSSACIA baccata	Black Huckleberry	3-4' ht	see plan	1-3'	1-3'	Upright	tolerant	moderate	moderate	moderate	tolerant	moderate	The purple-black berries ripen in late summer
ILV	ILEX verticillata 'Red Sprite' *(female)*	Winterberry 'Red Sprite'	3-4' ht	see plan	3-4'	3-4'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Very dense and compact. Long-lasting fruit
ILM	ILEX verticillata 'Jim Dandy' *(male)*	Winterberry	3-4' ht	see plan	4-5'	5-6'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Male polinator. Long bloom time insures good pollination.
LIB	LINDERA benzoin	Spicebush	3-4' ht	see plan	8-10'	8-10'	Rounded	tolerant	tolerant	moderate	moderate	tolerant	tolerant	Yellow flowers in spring followed by ornamental red berries.
SPA	SPIRAEA alba	White Meadowsweet	3-4' ht	see plan	3-4'	3-4'	Mounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Common to wet meadow edges, white flowers in summer
SPT	SPIRAEA tormentosa	Meadowsweet	3-4' ht	see plan	2-4'	3-5'	Mounded	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Common to wet meadow edges, white flowers in summer
Ornamental Grasses														
CAL	CALAMAGROSTIS acutiflora 'Karl Foerster'	Feather Reed Grass	1 gal.	18" o.c.	3-5'	1.5-2'	Upright	moderate	tolerant	moderate	moderate	tolerant	moderate	Strong upright habit with showy flowers
CCO	CAREX comosa	Long-hair Sedge	1 gal.	18" o.c.	2-4'	2'	Fountain like	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Attractive seedheads. Very adaptable, grows well in damp soil
CCR	CAREX crinita	Fringed Sedge	1 gal.	18" o.c.	2-3'	2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	moderate	Evergreen sedge with short creeping rhizomes
CAV	Carex vulpinoidea	Fox sedge	1 gal.	18" o.c.	2-3'	2'	Clump	intolerant	tolerant	moderate	moderate	tolerant	moderate	The seedheads mature in late summer and resemble fox tails
ELP	ELEOCHARIS palustris	Marsh Spikerush	1 gal.	18" o.c.	2-3'	2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Sedge that forms dense rhizomatous mats in shallow waters
JUE	JUNCUS effusus	Common Rush	1 gal.	18" o.c.	3-4'	2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Easily grown in moist to wet soils, including standing water to 4"
PAV	PANICUM virgatum ' Shenandoah'	Switch Grass	2 gal.	18" o.c.	3-4'	2-3'	Upright	moderate	tolerant	moderate	moderate	tolerant	moderate	Green leaves in early summer turning to dark red
SCS	SCHIZACHYRIUM scoparium	Little bluestem	1 gal.	18" o.c.	1-2'	1-2'	Clump	moderate	tolerant	moderate	moderate	tolerant	intolerant	Finely textured clumping grass with a blue-green summer color
SPH	SPOROBOLUS heterolepis	Prairie Dropseed	1 gal.	18" o.c.	2-3'	2-3'	Clump	moderate	tolerant	moderate	moderate	tolerant	intolerant	Foliage turns golden with orange hues in fall
Perennials														
ACH	ACHILLEA 'Moonshine'	'Moonshine' yarrow	1 gal.	18" o.c.	1-2'	1'	Clusters	tolerant	moderate	moderate	moderate	tolerant	intolerant	Carefree and generous bloomers, yarrow has tight clusters of deep yellow
ASC	ASTILBE chinenses	Astilbe visions in pink	1 gal.	18" o.c.	1'	1'	Clump	moderate	tolerant	moderate	moderate	tolerant	moderate	Light pink flower plumes against a coarsely textured, blue-green foliage
CAP	CALTHA palustris	Marsh marigold	1 gal.	18" o.c.	8-12"	8-12"	Clump	intolerant	tolerant	moderate	moderate	tolerant	moderate	Bright yellow buttercup flowers early spring, found in marshesand wet
CHG	CHELONE glabra	Turtlehead	1 gal.	18" o.c.	2-4'	1-2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	moderate	Spikes of elegant white flowers top shiny green foliage in late summer
DIE	DICENTRA eximia 'Luxuriant'	Bleeding Heart	1 gal.	18" o.c.	12-18"	12-18"	Clump	moderate	tolerant	moderate	moderate	tolerant	tolerant	Pink flowers on 12-15" spikes, cutleaf blue-green foliage
COM	COREOPSIS verticillata 'Moonbeam'	Tickseed, Moonbeam	1 gal.	18" o.c.	1.5-2'	1.5-2'	Clump	tolerant	moderate	moderate	moderate	tolerant	intolerant	Creamy yellow flowers from summer to fall on threadleaf foliage
ECP	ECHINACEA purpurea	Purple Coneflower	1 gal.	18" o.c.	2-5'	1.5-2'	Upright	tolerant	moderate	moderate	moderate	tolerant	moderate	Large, daisy-like flowers that bloom all summer
LOC	LOBELIA cardinalis	Cardinal Flower	1 gal.	18" o.c.	2-3'	1-2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	moderate	Perennial forb common to wet meadows
MOD	MONARDA didyma 'Marshall's Delight'	Marshall's Delight Bee Balm	1 gal.	18" o.c.	2-4'	2-3'	Upright	moderate	tolerant	moderate	moderate	tolerant	moderate	True medium pink flowers top the stout
NEF	NEPETA x faassenii 'Walker's Low'	Walker's Low Catmint	1 gal.	18" o.c.	1-2'	1.5-3'	Clump	tolerant	intolerant	moderate	moderate	tolerant	tolerant	Spikes of lavender-blue flowers cover the silvery-green mounds in late spring
RUH	RUDBECKIA hirta	Black-eyed Susan	1 gal.	18" o.c.	2-3'	1-2'	Clump	moderate	moderate	moderate	moderate	tolerant	moderate	A showy wildflower
SAS	SALVIA x silvestris 'Mainacht'	Salvia May Night	1 gal.	18" o.c.	1.5-2'	1-1.5'	Clump	tolerant	moderate	moderate	moderate	tolerant	intolerant	Long bloomer with deep dark violet-blue flowers
SAN	SALVIA nemerosa 'Wesuwe'	Salvia Vesuvius	1 gal.	18" o.c.	1-1.5'	1.5-2'	Clump	tolerant	moderate	moderate	moderate	tolerant	intolerant	Softly hairy, scented leaves. Will flower twice if cut to ground after first flowerin



LANDSCAPE NOTES

1. The property owner and all future property owners shall be responsible for the maintenance, repair and replacement of all required screening and landscape materials.
2. All required plant materials shall be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse and debris. All required fences and walls shall be maintained in good repair.
3. The property owner shall be responsible to remove and replace dead or diseased plant materials immediately with the same type, size and quantity of plant materials as originally installed, unless alternative plantings are requested, justified and approved by the Planning Board or Planning Director.

0 10 20 Feet

SCALE: 1" = 10'

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LOT 6: 181 HILL STREET,
ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

REGISTERED LANDSCAPE ARCHITECT
ROBERT A. WHITE
083
STATE OF NEW HAMPSHIRE

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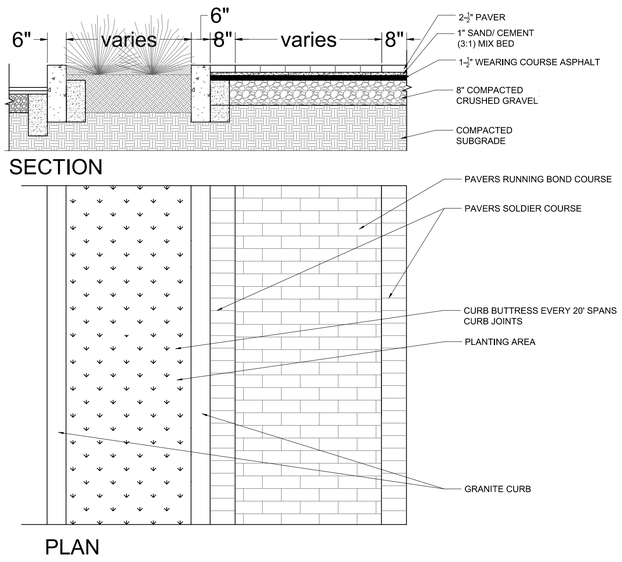
SITE PLAN REVIEW

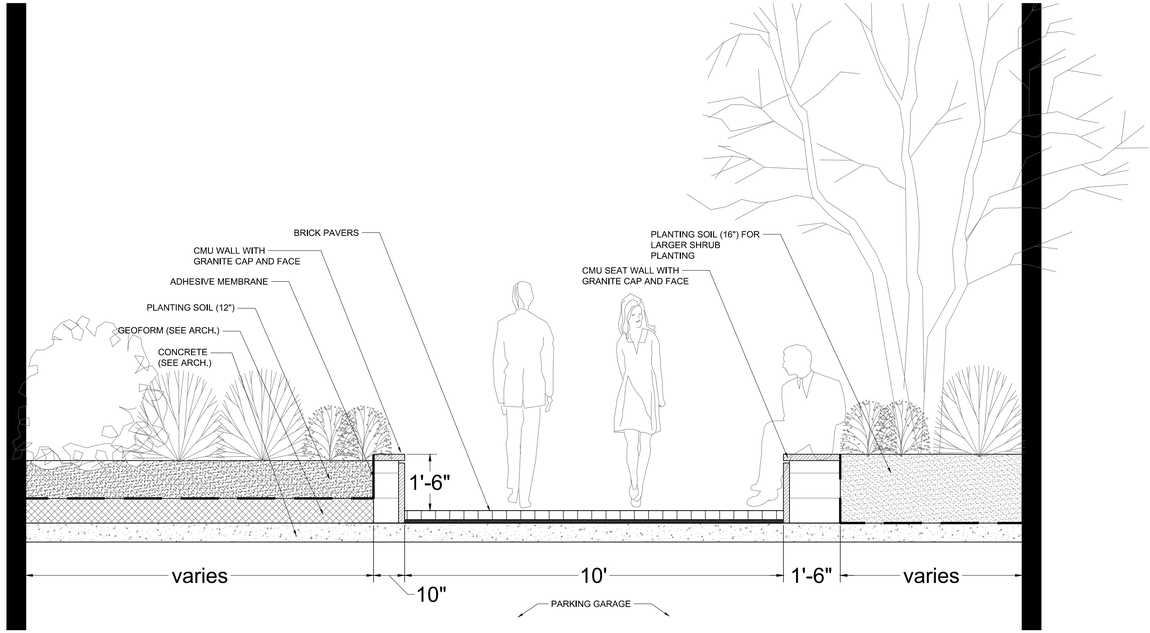
PLANTING PLAN

L2



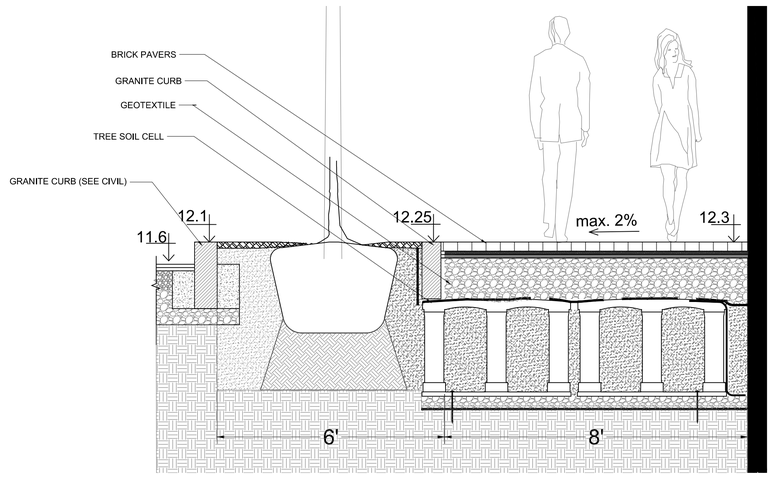
1 Typ. Sidewalk Detail

Scale 6"=1'-0"



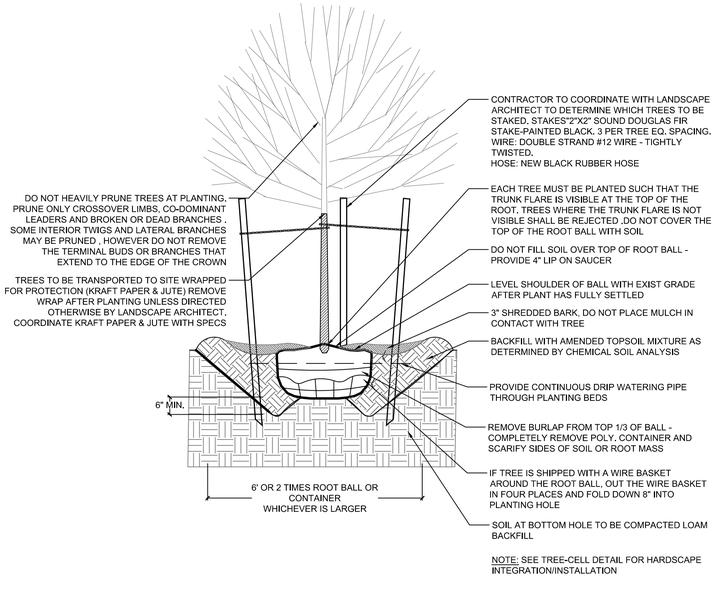
3 Section 1-1 Through Courtyard

Scale 6"=1'-0"



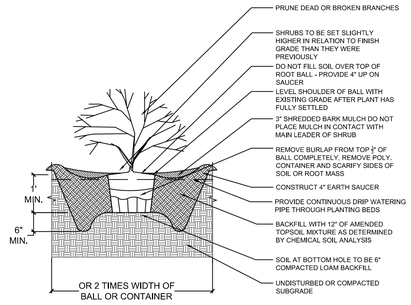
2 Section 2-2 Through Streetscape

Scale 6"=1'-0"



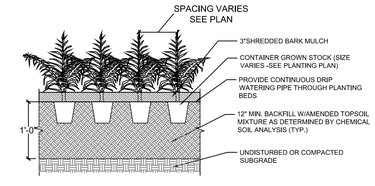
4 Tree Planting Detail

nts



5 Shrub Planting Detail

nts



6 Perennial Planting Detail

nts

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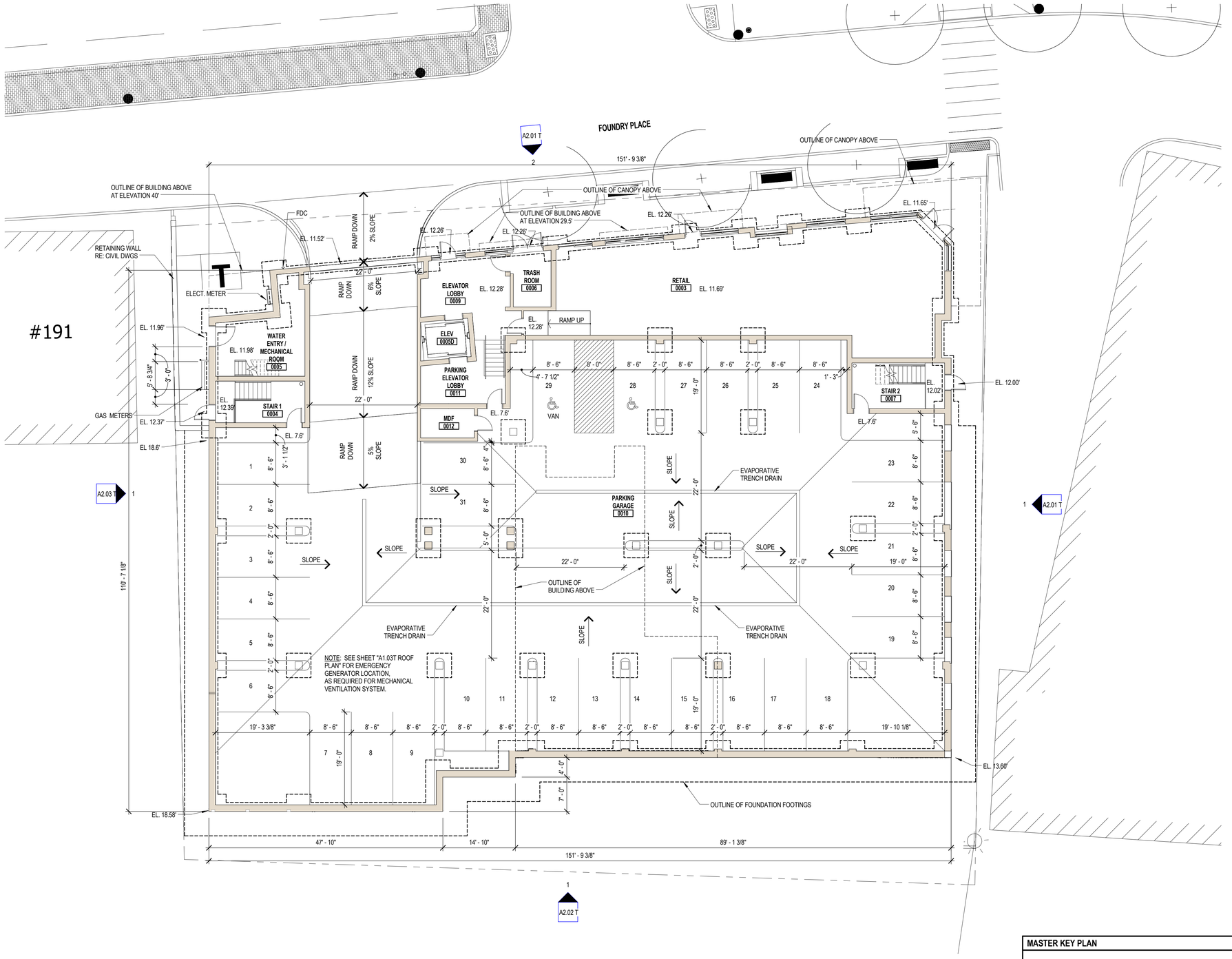
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	TAC PUBLIC HEARING	10/10/2017

SITE PLAN REVIEW

DETAILS AND SECTIONS

L3

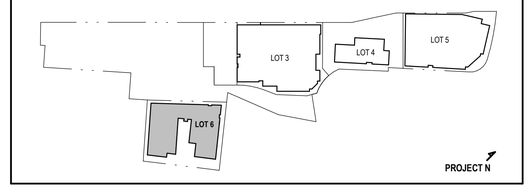


1 GROUND LEVEL (FOUNDRY PL)
3/32" = 1'-0"

GRAPHIC SCALE: 3/32" = 1'-0"
0' 5' 10' 20'

NOTES:
1. KNOX BOXES TO BE LOCATED AT ALL EXTERIOR ENTRY DOORS. KEYING TO BE COORDINATED WITH PORTSMOUTH FIRE DEPART REQUIREMENTS.

MASTER KEY PLAN



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F 603.436.6973
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JSN ASSOCIATES, INC.
STRUCTURAL ENGINEER
PORTSMOUTH, NEW HAMPSHIRE

ENGINEERED SYSTEMS INC.
MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT MARK K. MOELLER No. 5353

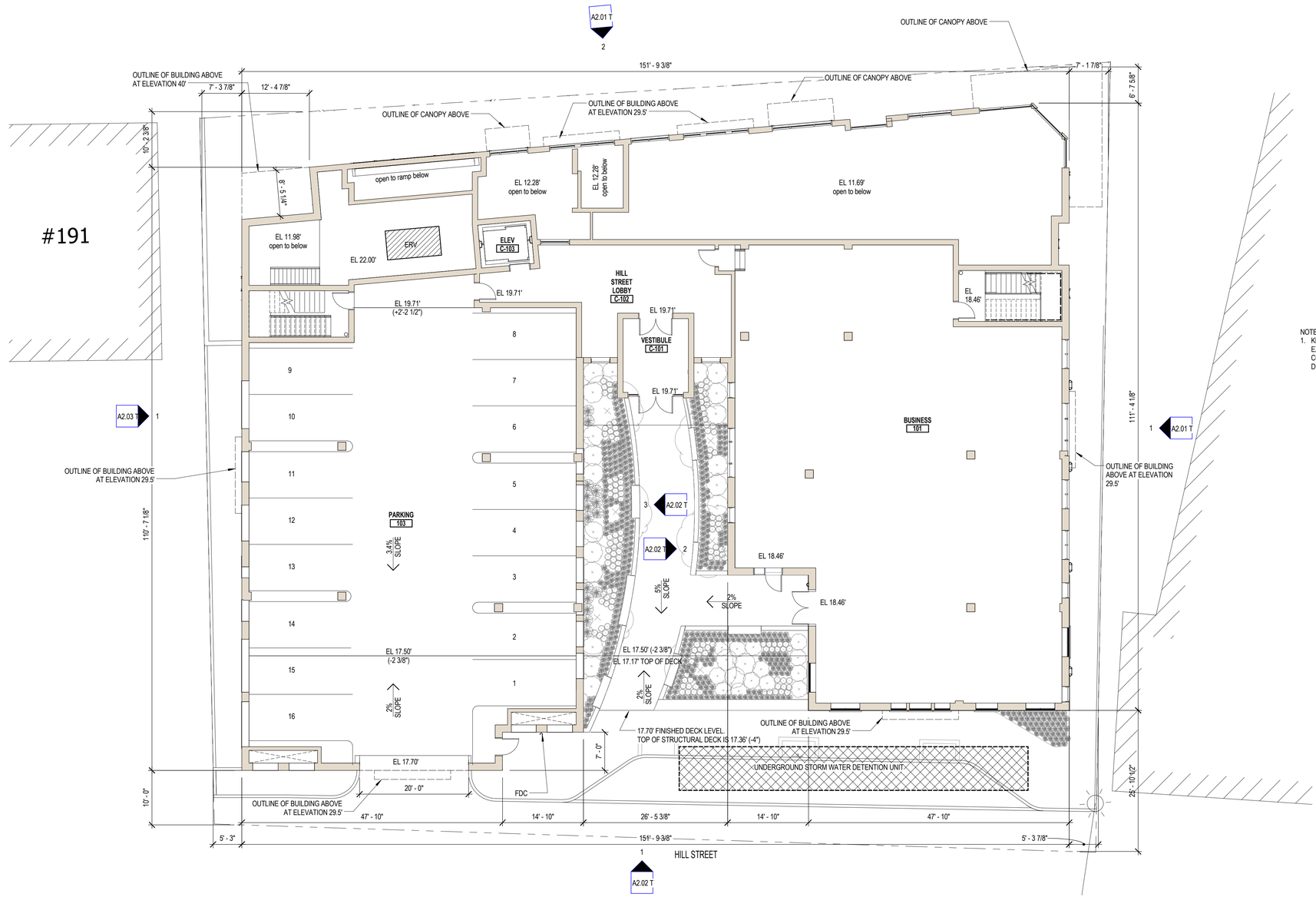
Scale: **As indicated**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

GROUND LEVEL (FOUNDRY PL) PLAN

A1.01 T

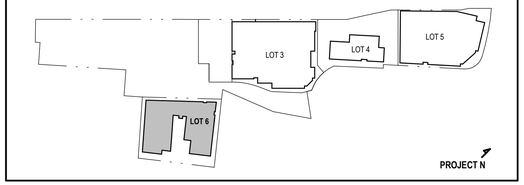


NOTES:
1. KNOX BOXES TO BE LOCATED AT ALL EXTERIOR ENTRY DOORS. KEYING TO BE COORDINATED WITH PORTSMOUTH FIRE DEPART REQUIREMENTS.

1 **GROUND LEVEL (HILL STREET)**
3/32" = 1'-0"

GRAPHIC SCALE: 3/32" = 1'-0"
0' 5' 10' 20'

MASTER KEY PLAN



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ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 3369
STATE OF NEW HAMPSHIRE

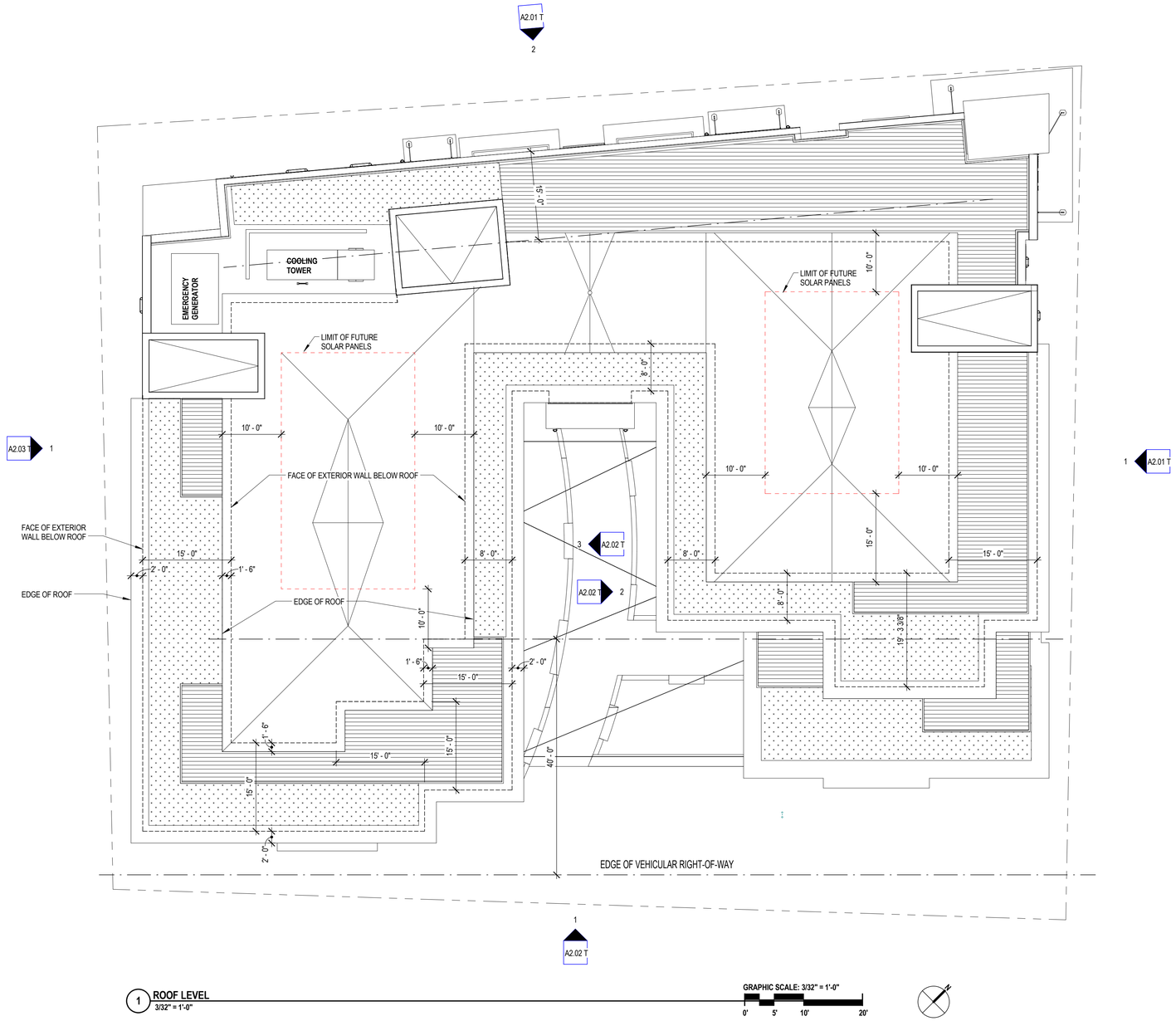
Scale: **As indicated**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

LEVEL 1 FLOOR (HILL ST) PLAN

A1.02 T



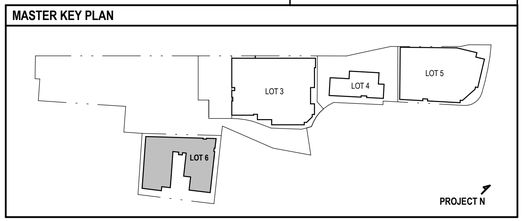
1 **ROOF LEVEL**
3/32" = 1'-0"

GRAPHIC SCALE: 3/32" = 1'-0"
0' 5' 10' 20'

ROOF LEGEND

- AREA OF PROPOSED GREEN ROOF PLANTINGS
- AREA OF ROOF TERRACES

MASTER KEY PLAN



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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 5353
THE STATE OF NEW HAMPSHIRE

Scale: **As indicated**
Date: **3/17/2017**
Project Number: **14837.03**

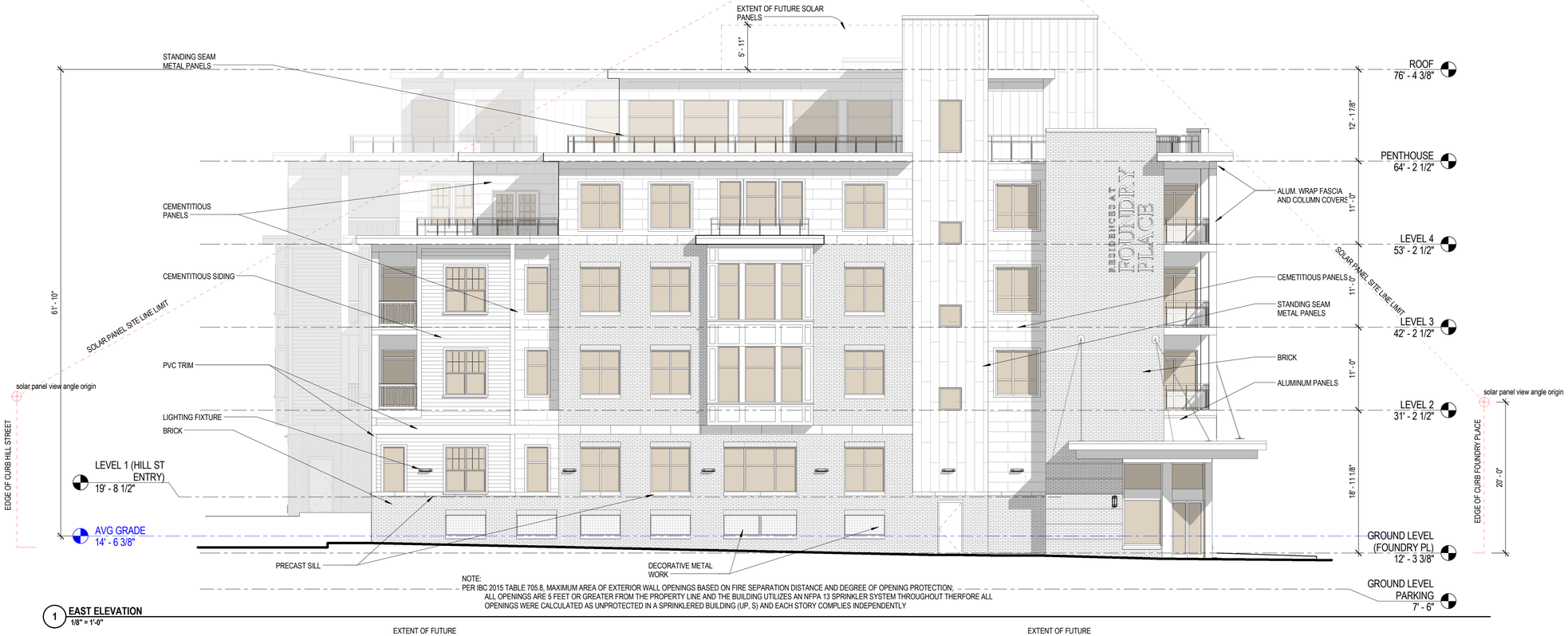
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

ROOF PLAN

A1.03 T



1 **EAST ELEVATION**
1/8" = 1'-0"

NOTE:
PER IBC 2015 TABLE 705.8, MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION;
ALL OPENINGS ARE 5 FEET OR GREATER FROM THE PROPERTY LINE AND THE BUILDING UTILIZES AN NFPA 13 SPRINKLER SYSTEM THROUGHOUT THERFORE ALL OPENINGS WERE CALCULATED AS UNPROTECTED IN A SPRINKLERED BUILDING (UP, S) AND EACH STORY COMPLIES INDEPENDENTLY

2 **NORTH ELEVATION (FOUNDRY PLACE)**
1/8" = 1'-0"

8/17/2017 11:09:15 AM C:_Revit Projects 2016\2016 - 837.03 - Deer St - Lot 6 - CENTRAL - CURRENT_2017-08-08_mparma.rvt

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 5263
THE STATE OF NEW HAMPSHIRE

Scale:	**1/8" = 1'-0"**
Date:	**3/17/2017**
Project Number:	**14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

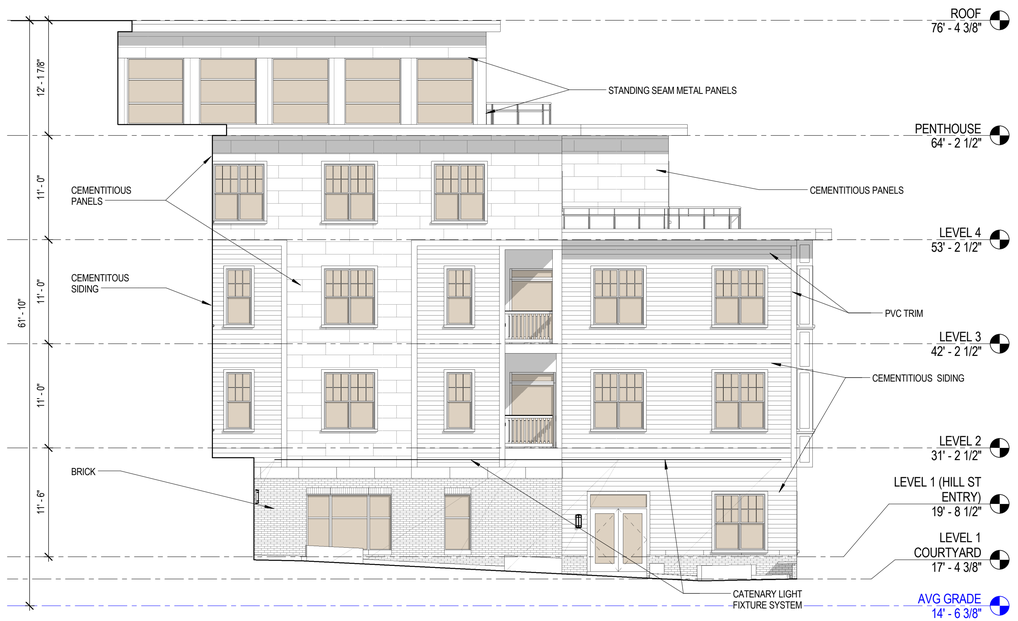
SITE PLAN REVIEW

EXTERIOR ELEVATIONS

A2.01 T

1 **SOUTH ELEVATION (HILL STREET)**
1/8" = 1'-0"

3 **COURTYARD EAST ELEVATION**
1/8" = 1'-0"



2 **COURTYARD WEST ELEVATION**
1/8" = 1'-0"

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WOBURN, MASSACHUSETTS

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ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 3059
STATE OF NEW HAMPSHIRE

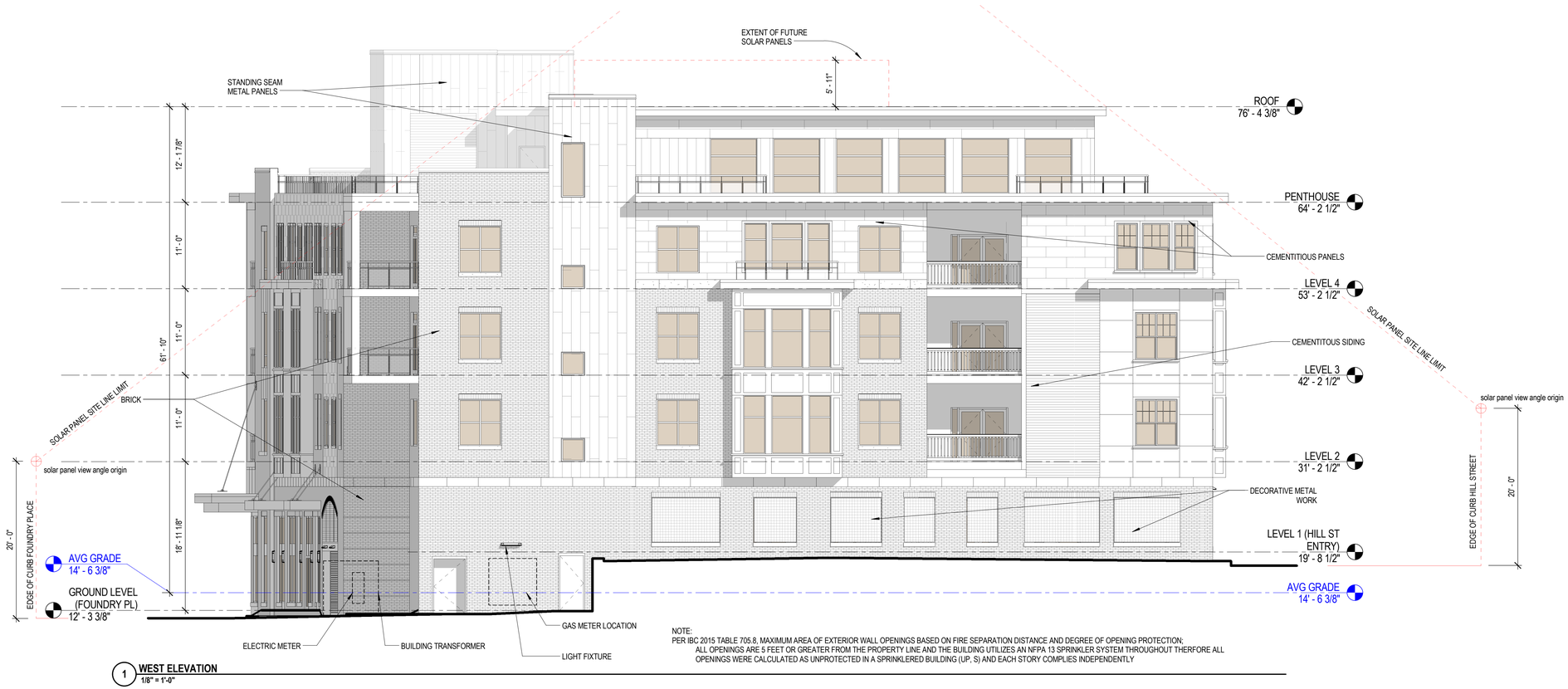
Scale: **1/8" = 1'-0"**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EXTERIOR ELEVATIONS

A2.02 T



NOTE:
PER IBC 2015 TABLE 705.8, MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION;
ALL OPENINGS ARE 5 FEET OR GREATER FROM THE PROPERTY LINE AND THE BUILDING UTILIZES AN NFPA 13 SPRINKLER SYSTEM THROUGHOUT THERFORE ALL OPENINGS WERE CALCULATED AS UNPROTECTED IN A SPRINKLERED BUILDING (UP, S) AND EACH STORY COMPLIES INDEPENDENTLY

1 **WEST ELEVATION**
1/8" = 1'-0"

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

Scale: **1/8" = 1'-0"**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EXTERIOR ELEVATIONS

A2.03 T

1-HILL STREET

2- FOUNDRY PLACE

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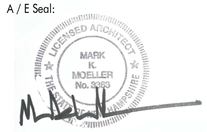
RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:



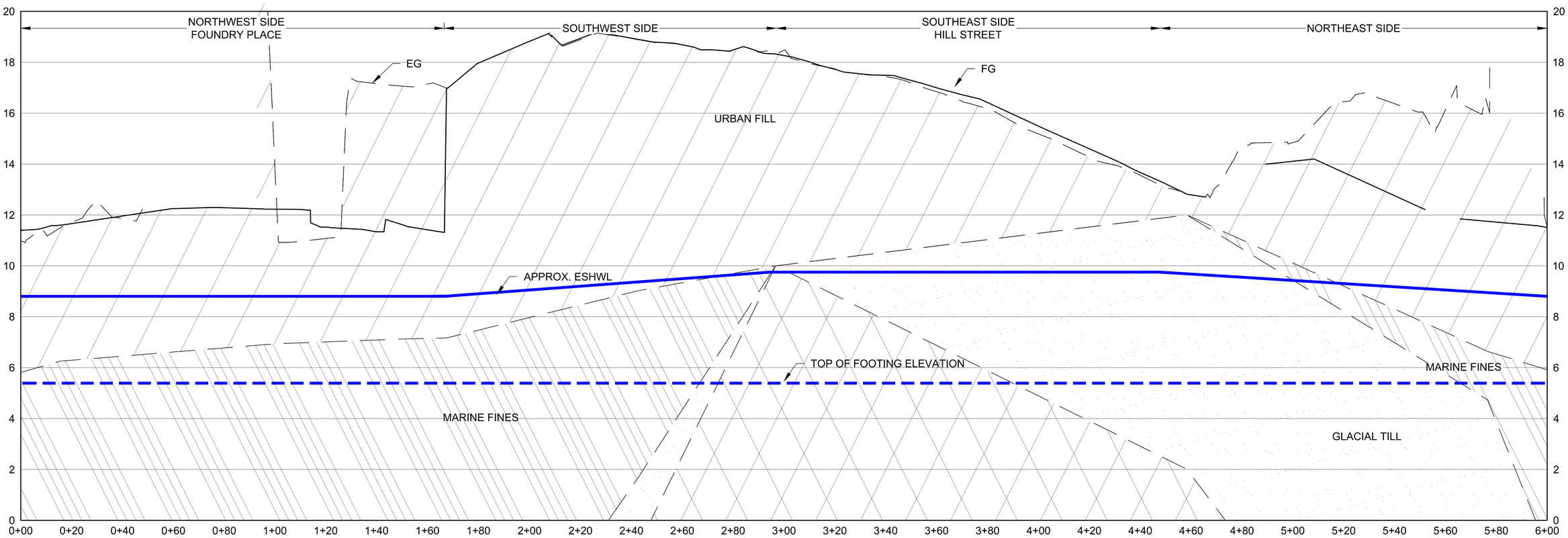
Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

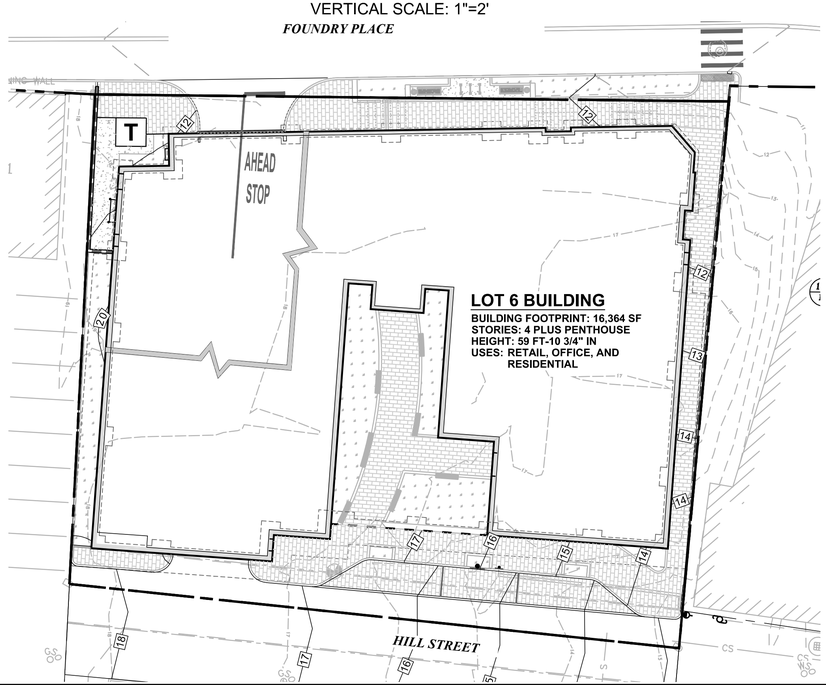
SITE PLAN REVIEW

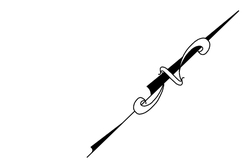
3D VIEWS

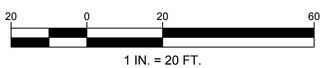
A3.00 T



LOT 6 SUBSURFACE CONDITIONS
HORIZONTALE SCALE: 1"=20'
VERTICAL SCALE: 1"=2'







PRELIMINARY DRAFT PROFILE OF LOT 6 SUBSURFACE CONDITIONS. THIS PROFILE IS EXPECTED TO BE UPDATED WITH ADDITIONAL DATA.

CLIENT: DEER STREET ASSOCIATES			
PROJECT: THE RESIDENCES AT FOUNDRY PLACE LOT 6: 181 HILL STREET			
TITLE: PERIMETER SUBSURFACE PROFILE EXHIBIT			
DESIGNED: ARC	DRAWN: ARC	CHECKED: MCP	APPROVED: MCP
SCALE: 1" = 20'	DATE: 11/06/17	FILE NO.: 8090-LOT-6	PROJECT NO.: 8090

GeoInsight
Practical in Nature

FIGURE NO.: EXB-1

Deer Street Associates, LLP
Development Design Approval Package
Lot 6 (181 Hill Street) / Map 138 Lot 62
Foundry Place and Hill Street
Portsmouth, NH

REVISIONS		
No.	Description	DATE
1	7/5/17 TAC Hearing Comments	8/18/17
2	10/3/17 TAC Hearing Comments	10/10/17

TABLE OF CONTENTS

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Environmental Strategy & Engineering
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October 10, 2017 GeoInsight Project 8090-000

Mr. Dexter Legg
Planning Board Chairman
City of Portsmouth
City Hall, 3rd Floor
1 Junkins Avenue
Portsmouth, NH 03801

RE: Application for Site Plan Review
Residence's at Foundry Place, Lot 6
Foundry Place and Hill Street
181 Hill Street, Tax Map 138 Lot 62
Portsmouth, NH 03801

Mr. Legg and Planning Board Members:

On behalf of Deer Street Associates, LLP (DSA) GeoInsight, Inc. (GeoInsight) is pleased to submit revised site plans for review and approval by the Planning Board. This letter and attachments update Site Plan permit package for the October 19, 2017 public hearing for Lot 6 of the DSA project.

Named "The Residences at Foundry Place", the Lot 6 phase of the project proposes to redevelop the property located at 181 Hill Street (Tax Map 138, Lot 62) into a mixed-use, four-story building with a Penthouse. The new building will provide interior parking garages on two levels, retail space on the ground floor, office space on the first floor, and 43 residential units on the second, third, fourth, and penthouse floors. This letter and the attached documents and plan set provide updated and additional information intended to assist the Planning Board in the review of the project.

The TAC Committee has sent a letter with a recommendation of approval with stipulations regarding the Lot 6 design to DSA on October 5, 2017. DSA agrees with these stipulations and have addressed them as follows:

1) **The Applicant shall remove proposed stop sign coming out of garage as shown on Site Plan.**
The stop sign has been removed from the Site Plan (Sheet C3.0).

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186 Granite Street, 3rd Floor, Suite A
Manchester, NH 03101-2643
Tel (603) 314-0820
Fax (603) 314-0821

GeoInsight, Inc.
One Monarch Drive, Suite 201
Littleton, MA 01460-1440
Tel (978) 679-1600
Fax (978) 679-1601

GeoInsight, Inc.
200 Court Street, 2nd Floor
Middletown, CT 06457-3341
Tel (860) 894-1022
Fax (860) 894-1023

GeoInsight, Inc.
4 Market Place Drive, 2nd Floor
York, ME 03909
Tel (207) 606-1043

www.geoinsight.com

2) **The curb at each end of the private road shall be rounded.**
Rounded curbs have been added at the ends of the curb (Sheet C3.0).

3) **Sheet 5 – Any water or sewer pipes designated as "CIP" outside of building should be revised to "PVC" and notes shall be adjusted as well.**
Sheet C5.0 has been revised to clarify the location of "PVC" and "CIP" pipe. In summary, all sanitary sewer pipes exiting the building at the foundation wall are noted to be CIP to the private manholes onsite. All subsequent pipe to the City sewer is called out as PVC.

4) **A note shall be added to Site Notes on Sheet C1.1 that any damage during construction by applicant to curbing constructed by the City shall be repaired by the applicant.**
A note stating such was added to Sheet C1.1.

5) **Correct error noted in drainage study P.3.**
Flood elevation of 11.5-feet was revised to the correct value of 11.2-feet.

6) **A peer review of the geohydrologic study and drainage design shall be required….**
The foundation design has been modified to permanently water proof the foundation allowing the removal of the foundation drain which eliminates groundwater being discharged into the storm drain system. The site plans and stormwater report were revised to reflect the removal of the foundation drain and pump. Consequently, the applicant feels a geohydrologic study and subsequent peer review should not be necessary.

7) **Requirement of a construction dewatering permit.**
The applicant is aware that a construction dewatering permit will be required and is planning additional groundwater sampling and testing.

Other minor revisions were made to the following plan sheets and documents to reflect additional information received since the October 3, 2017 TAC submittal and are listed below:

1) **Sheet C4.1** – Redundant spot grades along the proposed Hill Street curb were removed for clarity.

2) **Sheet C5.1,** – The number of conduits required by Comcast under Hanover Street for service to 329 and 339 Hanover St. was reduced from two to one, a Comcast handhole was added, and all handholes/manholes were noted to be traffic rated.

3) **Sheet SE3.1** – Electrical and Comcast service to 319 Hanover Street was corrected to reflect offsite improvements shown on sheet C5.1.

4) **Sheet SE1.4** – For agreement with sheet C5.0, clarification notes were added to state that the street lights, "LP", along Lot 6 and Foundry Place are to be constructed in the future.

5) **Attachment B** – The easement list was updated to reflect the revised Easement Plan (sheet E4) that was submitted for TAC review.

DSA appreciates the continued opportunity to work with the Planning Board and interested members of the public on this project. If the Board has questions about the information in this cover letter or the attached materials, please contact us at (603) 314-0820.

Sincerely,
GEOINSIGHT, INC.

Joseph H. Kieffner, P.E.
Senior Project Engineer

ATTACHMENT A

TAC Review
Recommendation Letter

CITY OF PORTSMOUTH
Community Development Department
(603) 610-7281
Planning Department
(603) 610-7216

TECHNICAL ADVISORY COMMITTEE

October 5, 2017

Deer Street Associates
P.O. Box 100
York Harbor, ME 03911

RE: Site Plan Application for Property Located at 181 Hill Street (Lot 6)

Dear Mr. Rogers:

The Technical Advisory Committee, at its regularly scheduled meeting of October 3, 2017, considered your Site Review application for the construction of a 4-story mixed use building with a penthouse (including interior parking garages on two levels, retail space on the ground floor, office space on the first floor and 43 residential units on the second, third, fourth and penthouse floors) with a footprint of 12,574 ± s.f. and gross floor area of 81,498 ± s.f., with related paving, lighting, utilities, landscaping, drainage and associated site improvements. As a result of said consideration, the Committee voted to **recommend approval** to the Planning Board with the following stipulations:

A) Prior to Planning Board Approval:
1) Applicant shall remove proposed stop sign coming out of garage as shown on Site Plan.
2) The curb at each end of the private road shall be rounded.
3) Sheet 5 – Any water or sewer pipes designated as "CIP" outside of the building should be revised to "PVC" and notes shall be adjusted as well.
4) A note shall be added to Site Notes on Sheet C1.1 that any damage during construction by applicant to curbing constructed by the City shall be repaired by applicant.
5) Correct error noted in Drainage Study p.3.

B) Subsequent to Planning Board Approval:
6) A peer review of geohydrologic study and drainage design shall be required to evaluate groundwater rates and ability of detention system to accommodate groundwater flow now and into the future. Based on the results of the peer review to be coordinated with DPW, the permanent foundation dewatering system discharges to City's drainage system may require a storm drain permit and a capacity use surcharge.
7) The construction groundwater dewatering discharge shall require a temporary dewatering discharge permit. DPW shall determine if the groundwater needs to be sampled/tested for both the temporary and permanent connection to the City's drainage system to determine if any treatment is required prior to discharge.

This matter will be placed on the Planning Board Agenda for **Thursday, October 19, 2017** at 7:00 pm. Twelve (12) copies of revised plans (2 sets of full size plans and 10 sets of 11"x17" size plans) and/or exhibits must be filed in the Planning Department no later than **Tuesday, October 10, 2017**. Please remember to include a CD with a pdf of all exhibits.

The minutes and audio recording of this meeting are available through the Planning Department.

Very truly yours,

Juliet T. H. Walker, Planning Director
Chair of the Technical Advisory Committee
JTHW/jms
cc: Robert T. Marsilia, Building Inspector
Tracy Kozak, JSA, Inc.

ATTACHMENT B

Summary of Easements / Access Requirements

LOT 6	Type	From	To	Purpose	Description
LOT 6	Easement	DSA Lot 2	DSA Lot 6	Temporary Parking	During Construction
LOT 6	Easement	DSA Lot 6	Eversource	Transformer installation and access	Eversource
LOT 6	Easement	Kearsarge Mill	DSA Lot 6	Permanent Maintenance & Construction	Exterior Cleaning & Repair and building construction

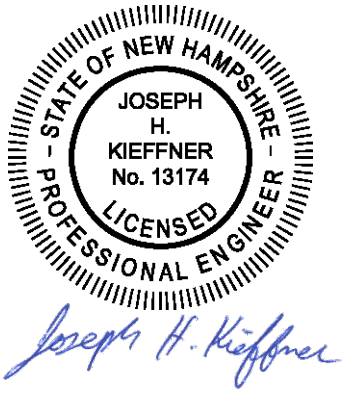
ATTACHMENT C

Updated Stormwater Management Report

STORMWATER MANAGEMENT PLAN
PROPOSED SITE DEVELOPMENT
181 HILL STREET
PORTSMOUTH, NH 03801
MAP 138 LOT 62

Prepared For:

Deer Street Associates, a NH Limited Partnership
c/o G.L. Rogers and Company, Inc., Manager
P. O. Box 100
York Harbor, Maine 03911



Prepared By:

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Environmental Strategy & Engineering
Practical in Nature

June 15, 2017 **REVISED 10-10-2017**

GeoInsight Project 8090-000

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STORMWATER MANAGEMENT PLAN
PROPOSED SITE DEVELOPMENT
181 HILL STREET
PORTSMOUTH, NH 03801

1.1 INTRODUCTION

The applicant proposes to redevelop 181 Hill St., located in Portsmouth, NH (the site, refer to Figure 1) to include a new building with residential, retail, and commercial uses. The project also consists of associated infrastructure including driveways, parking, landscaping, drainage facilities and utilities. Drainage associated with the site redevelopment will be collected and routed through best management practice controls sized to address the local stormwater regulations and provide detention prior to discharge to the City of Portsmouth (the City) municipal stormdrain system.

1.2 SITE LOCATION AND DESCRIPTION

The area of the project site is approximately 22,540 ft^2. Existing elevations range from a high of approximately 19 feet along the southern corner of the site at the property line of Heinemann Publishing, to a low of approximately 11feet at the northern corner at the property line of Redlon and Johnson. There are currently two 2-story residential duplexes, and two large 2-story storage buildings on the site (refer to Figure 2). These existing buildings and associated infrastructure will be demolished to facilitate the redevelopment.

The Natural Resource Conservation Service Soil Survey for Rockingham County does not have hydrologic soil group data for the site. Soil borings and associated sampling conducted at the site indicated that the soil on the site is a combination of fill and native material comprised of loamy sand, with properties of an Hydrologic Soil Group (HSG) A type soil, with a layer of native clay below (refer to Appendix A). The site is not located in a flood zone, as indicated on the FEMA FIRM map (refer to Figure 3).

1.3 EXISTING SITE CONDITIONS

The pre-development condition consists of two watershed areas contributing to two study points. Study Point #1 (SP-1) consists of overland flow into a catch basin east of the site on Hill Street, which drains into the Deer Street Drainage System. Study Point #2 (SP-2) consists of overland flow to the northwest corner of the site, which ultimately flows into a drainage inlet on what is currently the lot for the proposed Foundry Place Garage. This inlet drains to the City's existing combined sewer. Existing surfaces include building roofs, grassed lawns, hard-packed un-paved driveway and parking areas, street pavement, and concrete. The total area of existing impervious surfaces on the site is 19,386 ft^2, 86% of the total site area. Refer to Appendix H for the existing

watershed plan.

Contributing areas to the existing conditions SP-1 and SP-2 are detailed in the following tables.

Watershed	Cover Area and Area (ft^2)				
	Grass cover	Woods/Grass Combo	Roofs	Pavement	Gravel
EWA-1	3,154	0	3,008	2,340	7,293
EWA-2	0	1,266	5,479	0	0

Study Point	Watershed Area	Area (ft^2)	Tc(min)	CN
SP-1	EWA-1	15,795	5	85
SP-2	EWA-2	6,745	5	88

1.4 PROPOSED SITE CONDITIONS

The applicant proposes to develop the site into a mixed use 4-story building plus a penthouse that will occupy most of the property footprint. The project consists of the construction of the building, as well as associated infrastructure including driveways, landscaping, drainage facilities and utilities. Drainage will be managed through a series of roof drains, courtyard drains, underground detentions basins, street gutters, and catch basins. The entirety of the lot will be disturbed during construction. New impervious area will include roadways, driveways, sidewalk, and roof tops totaling to an approximate area of 21,673 ft^2, which is an increase of approximately 13 percent over the existing impervious area (reference Appendix I).

The approved utility design of the City's proposed Foundry Place roadway provides one storm drain connection for the site, which will connect to Deer Street drain system. This connection will receive onsite stormwater from the entire roof and courtyard area, as well as overflow from water that drains to the planters from two trench drains on the northeast side of the site. This flow, with the exception of the overflow from the planters, will be conveyed to an 8-ft x 4-ft x 76-ft underground detention structure before entering the Foundry Place drainage connection. Runoff from Hill Street and the proposed adjacent sidewalk will flow in the same general path as the existing flow conditions, which leads to a catch basin inlet on Hill Street and eventually flows to Bridge Street. The walkway and sidewalk on the northwest side of the site will flow to catch basins in the proposed Foundry Place roadway which will convey water to the Brewster Street Storm drain.

The proposed stormwater model analyzed flow into the same city storm drain systems as the existing model above. SP-1 is composed of four individual sub-watersheds, which accounts for all the water that drains into the Deer Street system from the site. SP-1 receives flow from the proposed detention basin and PWA-1,3, and 4. SP-2 is located near the western corner of the site, and receives flow from PWA-5. This relatively miniscule flow drains overland to a proposed inlet on the proposed Foundry Place roadway. The study points are summarized in the following table:

Study Point	**Watershed Area**	**Area (ft^2)**	**Tc**	**CN**
SP-1	PWA-1	641	5	98
	PWA-2	16,149	5	98
	PWA-3	3,894	5	95
	PWA-4	544	5	98
SP-2	PWA-5	1,312	5	96

The drainage from the Deer Street drainage system empties into North Mill Pond, a tidally influenced body of water. The mean higher high water (MHHW) level of the Piscataqua River, which influences the level of North Mill Pond, is 4.4 feet above NAVD, per the City of Portsmouth's Climate Change Vulnerability Assessment and Adaptation Plan. This MHHW value affects the existing drainage system on Deer Street, which has an invert mostly below an elevation of 2 feet. This MHHW value is not expected to affect the proposed drainage system for the proposed site development during dry weather, which connects the drainage system in Foundry Place at an elevation of 5.90 feet. The backwater effect on the drainage system during higher intensity rainstorms at high tide is unknown and is not analyzed or discussed in this report. The building entrance elevations of the new building will be set at or above 11.69 feet and the garage entrance is set at 11.7 which are above 11.2 feet, the elevation of the theoretical 100-year storm surge occurring at high tide, provided in the Climate Change Vulnerability Assessment and Adaptation Plan.

No subsurface drainage (foundation drain) is proposed, and no groundwater shall be collected or discharged into the City's drainage system except for temporary construction dewatering for which a permit will be obtained.

1.4.1 Imperviousness

The total impervious area on the proposed site, including pavement, rooftops, and the courtyard comprises approximately 98% of the total property area. The courtyard will be landscaped but cannot provide infiltration because of the subsurface garage underneath. The following table shows the total area of each type of impervious surface:

Surface	Area (ft^2)	Percent Impervious (%)
Pavement	5,884	26
Roofs	16,149	72

1.4.2 Infiltration Analysis

Several borings were performed on the Site (and adjacent DSA sites) to analyze subsurface conditions including groundwater elevations. The soil characteristics were typical of urban fill and, consequently, did not show visual characteristics to estimate an average seasonal high water elevation (refer to Appendix A). Therefore, to obtain an approximate estimated seasonal high water elevation, the Modified Frimpter Method was used. This method takes observed water levels and adds an increase based on nearby wells with seasonal high data. The analysis estimates that the seasonal high water table could occasionally rise within 3 ft to 4 ft of the surface, which does not allow for adequately sized infiltrating stormwater BMP's while providing sufficient room for pavement (refer to Appendix B). The NHDES Stormwater Manual states to provide a minimum of one foot of native soil plus two feet of filtering soil above the seasonal high groundwater for infiltration practices. This thickness cannot be reasonably obtained due to the close proximity of existing and proposed City streets and the urban environment. The borings also show the existence of a relatively shallow clay soil layer and areas of bedrock which could prevent proper infiltration. For these reasons stormwater infiltration is not considered reasonably feasible at this site.

1.4.3 Site Data for Stormwater Modeling

The values in the previous tables were calculated in HydroCAD using a Type III 24-hr storm event specific to Portsmouth, NH. The Cornell/NECC extreme 24-hr rainfall values were used in the model and are shown in the table below. The flows were calculated using the TR-20 method and static routing between points.

Storm	24-hr Rainfall (in)
2-YR	3.20
10-YR	4.86
25-YR	6.16
50-YR	7.37

1.4.4 Peak Discharge Comparison

The proposed site detention structure attenuates the post-development peak flow to the Deer Street storm drain to remain equal to or less than the existing flow for the 2, 10, 25, and 50-YR storms. The change in watershed area and required detention significantly reduce the overall post-development flow rates below the existing rate as shown in the following tables.

Study Point 1 – Flow Rates to Deer Street Storm Drain (ft^3/sec):

Flow Condition	Storm Event			
	2-YR	10-YR	25-YR	50-YR
Pre-Development	0.77	1.41	1.92	2.39
Post-Development	0.69	0.99	1.51	1.99

Study Point 2 – Flow Rates to Brewster Street Storm Drain via Foundry Place (ft^3/sec):

Flow Condition	Storm Event			
	2-YR	10-YR	25-YR	50-YR
Pre-Development	0.37	0.65	0.87	1.07
Post-Development	0.09	0.14	0.18	0.22

Total Site Run-Off Comparison (ft^3/sec):

Flow Condition	Storm Event			
	2-YR	10-YR	25-YR	50-YR
Pre-Development	1.15	2.07	2.79	3.46
Post-Development	0.78	1.13	1.66	2.16

1.5 FINDINGS

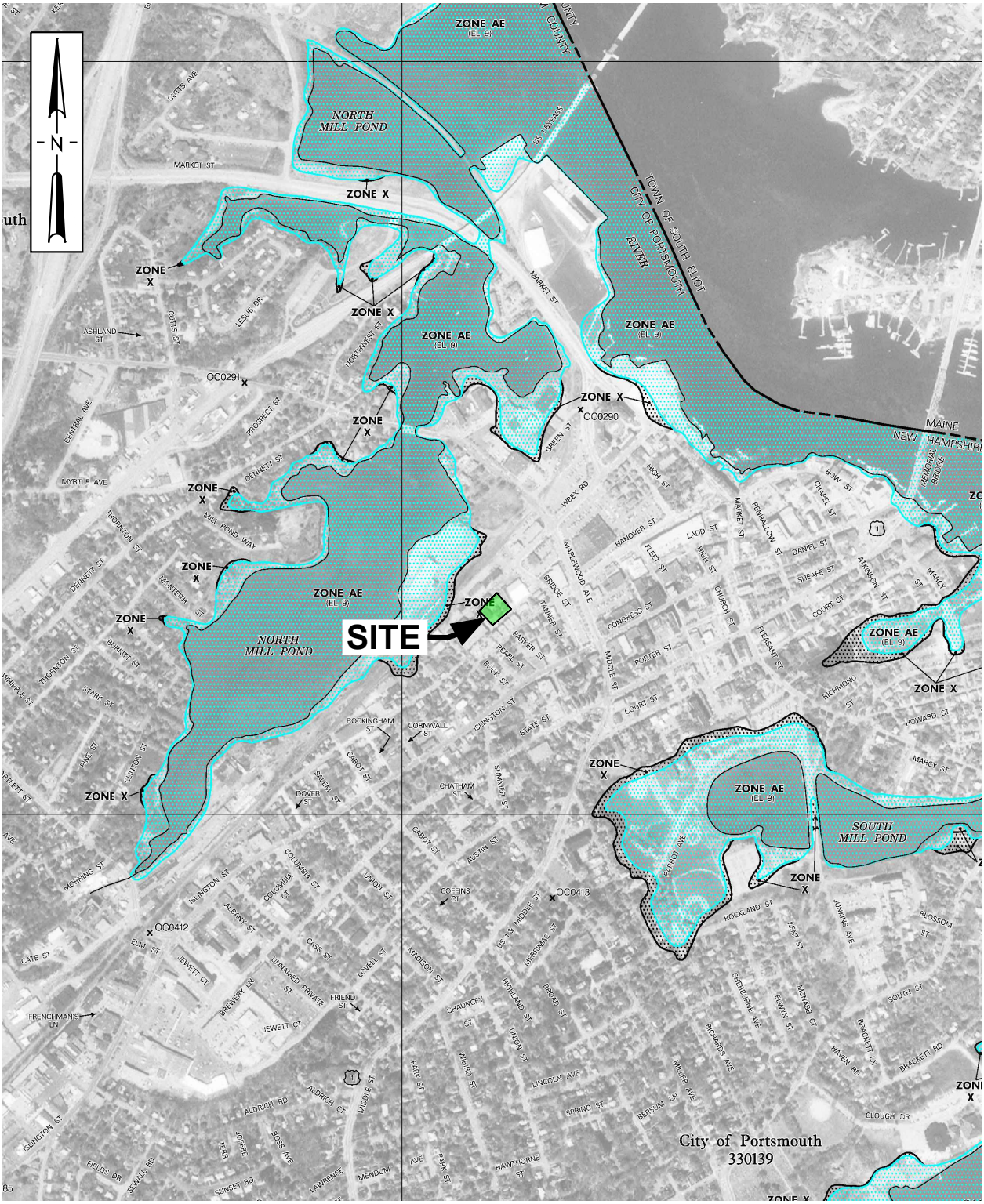
Due to the increase in impervious cover, a detention system is required to reduce the peak flow to Deer Street to the pre-development peak flow. The post-development drainage scheme was designed to direct all the flow from the roof and courtyard, to the detention structure, and to make the post-development peak flow equal to or less than the pre-development peak flow for the 2, 10, 25, and 50-YR storms for both study points. A small amount of flow from sidewalks on the northwest side of the site will be directed to the curb inlets along Foundry Place, which flows to the Brewster Street drain. This peak flow is calculated to be much less than the pre-development peak flow.

FIGURES

SOURCE:
USGS EARTHSTAR GEOGRAPHICS

0 1000 2000 Feet

CLIENT: DEER STREET ASSOCIATES AND DEVELOPMENT CORP.				GeoInsight Practical in Nature
PROJECT: DEER STREET DEVELOPMENTS LOTS 6				
TITLE: ORTHO MAP				
DESIGNED: ARC	DRAWN: ARC	CHECKED: MCP	APPROVED: JHK	
SCALE: 1" = 1000'	DATE: 1/12/17	FILE NO.: 8090LOCUS	PROJECT NO.: 8090-001	FIGURE NO.: 1



SOURCE:

FIRM PANEL 33015C0259E. MAY 17, 2005

0 1000 2000 Feet

CLIENT:	DEER STREET ASSOCIATES AND DEVELOPMENT CORP.			
PROJECT:	DEER STREET DEVELOPMENTS LOT 6			
TITLE:	FEMA FIRM MAP			
DESIGNED: ARC	DRAWN: ARC	CHECKED: MCP	APPROVED: JHK	
SCALE: 1" = 1000'	DATE: 1/12/17	FILE NO.: 8090LOCUS	PROJECT NO.: 8090-001	FIGURE NO.: 2

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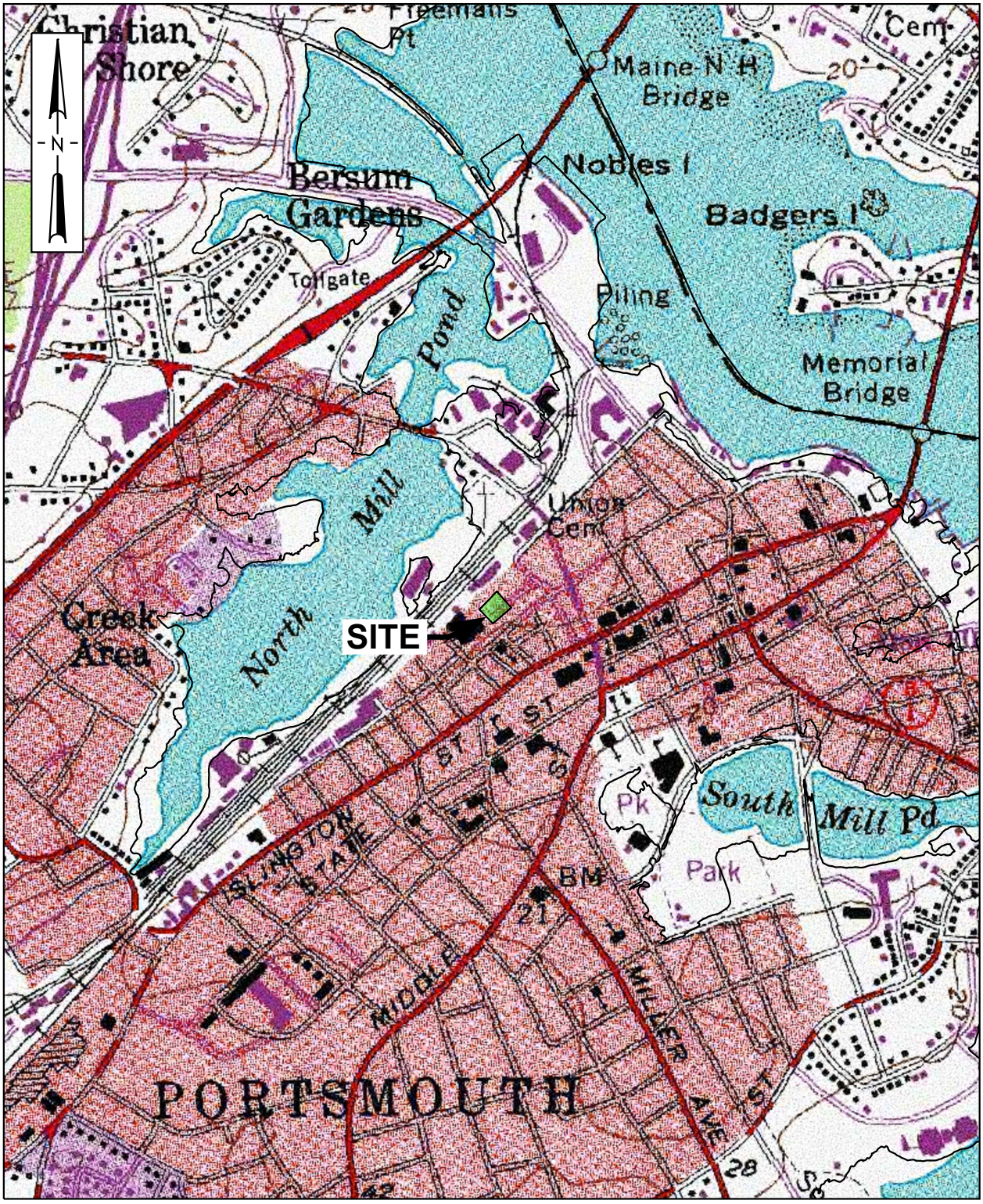

SOURCE:
USGS QUAD FOR PORTSMOUTH

0 1000 2000 Feet

CLIENT: DEER STREET ASSOCIATES AND DEVELOPMENT CORP.				
PROJECT: DEER STREET DEVELOPMENTS LOT 6				
TITLE: USGS QUAD MAP				
DESIGNED: ARC	DRAWN: ARC	CHECKED: MCP	APPROVED: JHK	
SCALE: 1" = 1000'	DATE: 1/12/17	FILE NO.: 8090LOCUS	PROJECT NO.: 8090-001	FIGURE NO.: 3

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APPENDIX A

BORING LOGS

SOIL BORING LOG

GeoInsight
Environmental Strategy & Engineering

Client: Deer Street Associates		**Boring Identification:** B-108	
Project: Deer Street Development			**Sheet:** 1 of 2
Location: Portsmouth, NH		**Checked By:** BTN	**Project Number:** 8090
Drilling Company: Technical Drilling Services, Inc.		**Boring Location:**	
Foreman: Gary		**Ground Surface Elevation:** 17 ft	**Datum:**
GeoInsight Engineer/Geologist: ATS		**Date Started:** 10/27/16	**Date Completed:** 10/27/16

DRILLING METHOD	SAMPLER	GROUNDWATER MEASUREMENTS			
		Date	**Depth (ft)**	**Reference**	**Stabilization**
Vehicle: Truck	**Type:** SS (auto)	10/27/2016	12	Ground Surface	After Drilling
Model: CME	**Hammer (lb):** 140				
Method: HSA/4" Casing w/ Drive & Wash	**Fall (in):** 30				

DEPTH (ft)	SAMPLE INFORMATION #	Pen/Rec (in)	Depth (ft)	Blows/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0	S1	24-6	0-2	4	S1: Loose, brown, fine to coarse SAND and GRAVEL, trace Silt, damp.	FILL	<1	1
				6				
1				4				
				2				
2	S2	24/6	2-4	2	S2: Similar to S1, except trace Brick particles.		<1	1
				2				
3				2				
				2				
4	S3	24/0	4-6	2	S3: No recovery. Auger cuttings similar to S2.			
				1				
5				1				
				2				
6	S4	24/12	6-8	2	S4: Loose, brown, fine to coarse SAND, little Silt, trace Gravel and Brick particles, damp.		<1	1
				3				
7				2				
				4				
8	S5	24/14	8-10	6	S5: Medium dense, brown, fine to coarse SAND, little Gravel, trace Silt, damp.		<1	1
				11				
9				16				
				17				
10	S6	24/16	10-12	13	S6: Medium dense, brown, fine to coarse SAND, little Silt, trace Gravel, tip of sampler wet.	NATIVE GLACIAL TILL		2
				13				
11				14				
				14				
12	S7	24/16	12-14	13	S7: Similar to S6, except medium dense and wet.			
				13				
13				12				
				11				
14								
15								
16								
17								
18	S8	24/12	18-20	21	S8: Dense, light brown, fine to coarse SAND, little Gravel and Silt, wet.			
				20				
19				16				
				8				
20								

GRANULAR SOILS		COHESIVE SOILS	
Blows/ft.	**Density**	**Blows/ft.**	**Consistency**
0-4	V. LOOSE	<2	V. SOFT
5-10	LOOSE	2-4	SOFT
11-30	M. DENSE	4-8	M. STIFF
31-50	DENSE	8-15	STIFF
>50	V. DENSE	15-30	V. STIFF
		>30	HARD

NOTES

1. Composite laboratory sample B108A collected.
2. Grab laboratory sample B108B collected.
3. Temporary groundwater monitoring well installed.

SOIL BORING LOG

GeoInsight
Environmental Strategy & Engineering

Client: Deer Street Associates		**Boring Identification:** B-108	
Project: Deer Street Development			**Sheet:** 2 of 2
Location: Portsmouth, NH		**Checked By:** BTN	**Project Number:** 8090
Drilling Company: Technical Drilling Services, Inc.		**Boring Location:**	
Foreman: Gary		**Ground Surface Elevation:** 17 ft	**Datum:**
GeoInsight Engineer/Geologist: ATS		**Date Started:** 10/27/16	**Date Completed:** 10/27/16

DRILLING METHOD	SAMPLER	GROUNDWATER MEASUREMENTS			
		Date	**Depth (ft)**	**Reference**	**Stabilization**
Vehicle: Truck	**Type:** SS (auto)	10/27/2016	12	Ground Surface	After Drilling
Model: CME	**Hammer (lb):** 140				
Method: HSA/4" Casing w/ Drive & Wash	**Fall (in):** 30				

DEPTH (ft)	SAMPLE INFORMATION #	Pen/Rec (in)	Depth (ft)	Blows/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
20						NATIVE GLACIAL TILL		
21								
22								
23	S9	24/14	23-25	33	S9: Medium dense, light brown, fine to medium SAND, trace Gravel and Silt, wet.			
24				12				
				13				
25				12				
26								
27								
28	S10	12/10	28-29	22	S10: Very dense, light brown, fine to medium SAND, trace Gravel and Silt, wet. Fractured Rock in tip of sampler.			
29				42				
				50/0"	End of Boring - 29 feet. Practical roller bit refusal on probable Bedrock.	BEDROCK		
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

GRANULAR SOILS		COHESIVE SOILS		NOTES
Blows/ft.	**Density**	**Blows/ft.**	**Consistency**	
0-4	V. LOOSE	<2	V. SOFT	
5-10	LOOSE	2-4	SOFT	
11-30	M. DENSE	4-8	M. STIFF	
31-50	DENSE	8-15	STIFF	
>50	V. DENSE	15-30	V. STIFF	
		>30	HARD	

SOIL BORING LOG

GeoInsight
Environmental Strategy & Engineering

Client: Deer Street Associates		**Boring Identification:** B-109	
Project: Deer Street Development			**Sheet:** 1 of 2
Location: Portsmouth, NH		**Checked By:** BTN	**Project Number:** 8090
Drilling Company: Technical Drilling Services, Inc.		**Boring Location:**	
Foreman: Gary		**Ground Surface Elevation:** 18 ft	**Datum:**
GeoInsight Engineer/Geologist: ATS		**Date Started:** 10/27/16	**Date Completed:** 10/27/16

DRILLING METHOD	SAMPLER	GROUNDWATER MEASUREMENTS			
		Date	**Depth (ft)**	**Reference**	**Stabilization**
Vehicle: Truck	**Type:** SS (auto)	10/27/2016	10	Ground Surface	After Drilling
Model: CME	**Hammer (lb):** 140				
Method: HSA/4" Casing w/ Drive & Wash	**Fall (in):** 30				

DEPTH (ft)	SAMPLE INFORMATION #	Pen/Rec (in)	Depth (ft)	Blows/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0	S1	24/12	0-2	12	S1: Medium dense, brown to dark brown, fine to coarse SAND, some Gravel, trace Silt and Asphalt particles, damp.	FILL	<1	1
1				7				
				7				
2				7				
	S2	24/8	2-4	5	S2: Loose, light brown, fine to medium SAND, trace Gravel and Silt, damp.		<1	1
3				4				
				3				
4				4				
	S3	10/8	4-4.8	15	S3: Very dense, gray, fine to coarse SAND and GRAVEL, trace Silt, damp.		<1	1
5				55/4"				
					Note: Auger refusal at 5 feet. Offset boring 4 ft east.			
6					Note: Auger refusal at 4 feet. Offset boring 8 ft south.			
7								
8	S4	24/12	8-10	7	S4: Dense, brown, fine to coarse SAND, trace Gravel and Silt, damp.		<1	1
				14				
9				17				
				20				
10	S5	24/12	10-12	14	S5: Dense, light brown, fine to medium SAND, little Gravel, trace Silt, wet.	NATIVE GLACIAL TILL		2
				22				
11				14				
				12				
12								
13								
14								
15	S6	24/12	15-17	4	S6: Medium dense, gray/brown, fine to coarse SAND, little Gravel and Silt, wet.			
				6				
16				8				
				12				
17								
18								
19								
20								

GRANULAR SOILS		COHESIVE SOILS		NOTES
Blows/ft.	**Density**	**Blows/ft.**	**Consistency**	1. Composite laboratory sample B109A collected.
0-4	V. LOOSE	<2	V. SOFT	2. Grab laboratory sample B109B collected.
5-10	LOOSE	2-4	SOFT	
11-30	M. DENSE	4-8	M. STIFF	
31-50	DENSE	8-15	STIFF	
>50	V. DENSE	15-30	V. STIFF	
		>30	HARD	

SOIL BORING LOG

GeoInsight
Environmental Strategy & Engineering

Client: Deer Street Associates		**Boring Identification:** B-109	
Project: Deer Street Development			**Sheet:** 2 of 2
Location: Portsmouth, NH		**Checked By:** BTN	**Project Number:** 8090
Drilling Company: Technical Drilling Services, Inc.		**Boring Location:**	
Foreman: Gary		**Ground Surface Elevation:** 18 ft	**Datum:**
GeoInsight Engineer/Geologist: ATS		**Date Started:** 10/27/16	**Date Completed:** 10/27/16

DRILLING METHOD	SAMPLER	GROUNDWATER MEASUREMENTS			
		Date	**Depth (ft)**	**Reference**	**Stabilization**
Vehicle: Truck	**Type:** SS (auto)	10/27/2016	10	Ground Surface	After Drilling
Model: CME	**Hammer (lb):** 140				
Method: HSA/4" Casing w/ Drive & Wash	**Fall (in):** 30				

DEPTH (ft)	SAMPLE INFORMATION #	Pen/Rec (in)	Depth (ft)	Blows/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
20	S7	15/10	20-21.3	20	S7: Very dense, gray/brown, fine to coarse SAND and GRAVEL, trace Silt. Fractured Rock in tip of sampler.			
				33		NATIVE GLACIAL TILL		
21				50/5"				
22					End of Boring - 22 feet. Auger refusal on probable Bedrock.	BEDROCK		
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

GRANULAR SOILS		COHESIVE SOILS	
Blows/ft.	**Density**	**Blows/ft.**	**Consistency**
0-4	V. LOOSE	<2	V. SOFT
5-10	LOOSE	2-4	SOFT
11-30	M. DENSE	4-8	M. STIFF
31-50	DENSE	8-15	STIFF
>50	V. DENSE	15-30	V. STIFF
		>30	HARD

NOTES

GeoInsight
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SOIL BORING LOG

Project:	Bridge Street Development	Boring I.D.:	B-3
Location:	Deer St & Bridge St, Portsmouth, NH	Sheet:	1 Of: 2
Drilling Co.:	Northern Drilling	Project Number:	7462
Foreman:	Tim Tucker	Chkd. By:	BTN
GeoInsight Eng./Geol:	ATS	Boring Location:	See Plan
		Ground Surface Elevation:	~17 ft Datum:
		Date Started: 11/7/2014	Date Completed: 11/10/2014

DRILLING METHOD		SAMPLER		GROUND WATER READINGS			
Vehicle:	ATV	Type:	Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Mobile B-48	Hammer(lb):	140	11/10/2014	11.1	Ground Surface	5 hours
Method:	Drive & Wash (4")	Fall (in):	30 (auto)				

DEPTH (ft)	SAMPLE NO.	REC/PEN (in)	DEPTH (ft)	BLOWS/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0	S1	12/24	0-2	6	S1: Loose, black/brown, fine to coarse SAND, little Gravel, trace Silt	Gravelly SAND (FILL)		
				5			<1	
				3				
				2				
	S2	2/24	2-4	1	S2: Loose, brown/black, fine to coarse SAND and SILT, trace Gravel and miscellaneous debris (brick).	Silty SAND (FILL)	<1	
				2				
				2				
				2				
	S3	12/24	4-6	2	S3: Loose, tan, fine to medium SAND, some Gravel, trace Silt.	Gravelly SAND (FILL)	<1	
				2				
5				5				
				9				
	S4	12/24	6-8	15	S4: Medium dense, tan, fine to medium SAND, little Silt, trace Gravel.	Silty SAND (FILL)	<1	
				5				
				11				
				32				
	S5	1/1	8-8.1	50/1"	S5: Rock in tip of sampler.			
					Note: Roller bit past boulder from 8.1 to 9 feet.			
					Note: Cannot drive casing past 8.1 feet. Roller bit to termination depth of boring (open hole). Return wash water consists of brown sand.			
10						(POSSIBLE NATIVE)		
					Note: Change to native soil estiamted based upon nearby test borings.			
15								

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY
0-4	V. LOOSE	<2	V. SOFT
5-10	LOOSE	2-4	SOFT
11-30	M. DENSE	5-8	M. STIFF
31-50	DENSE	9-15	STIFF
>50	V. DENSE	16-30	V. STIFF
		>30	HARD

Notes:

1. Soil samples field screened using a MiniRae2000 photoionization detector calibrated to read as benzene.
2. Temporary groundwater monitoring well installed in borehole.

GeoInsight
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SOIL BORING LOG

Project:	Bridge Street Development	Boring I.D.:	B-3
Location:	Deer St & Bridge St, Portsmouth, NH	Sheet:	2 Of: 2
Drilling Co.:	Northern Drilling	Project Number:	7462
Foreman:	Tim Tucker	Chkd. By:	BTN
GeoInsight Eng./Geol:	ATS	Boring Location:	See Plan
		Ground Surface Elevation:	~17 ft Datum:
		Date Started:	11/7/2014 Date Completed: 11/10/2014

DRILLING METHOD		SAMPLER		GROUND WATER READINGS			
Vehicle:	ATV	Type:	Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Mobile B-48	Hammer(lb):	140	11/10/2014	11.1	Ground Surface	5 hours
Method:	Drive & Wash (4")	Fall (in):	30 (auto)				

DEPTH (ft)	SAMPLE NO.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	BLOWS/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
20					Note: Roller bit to termination depth of boring.	(POSSIBLE NATIVE)		
25								
30					Note: Drill action indicates increased soil density and/or gravel content at 29.5 feet.			
					Apparent rock encountered at 31.5 feet. Roller bit to 33.5 feet. Dark gray rock particles in wash water.	PROBABLE BEDROCK		
					End of Boring - 33.5 feet.			
35								

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY
0-4	V. LOOSE	<2	V. SOFT
5-10	LOOSE	2-4	SOFT
11-30	M. DENSE	5-8	M. STIFF
31-50	DENSE	9-15	STIFF
>50	V. DENSE	16-30	V. STIFF
		>30	HARD

Notes:

1. Soil samples field screened using a MiniRae2000 photoionization detector calibrated to read as benzene.
2. Temporary groundwater monitoring well installed in borehole.

GeoInsight
Practical in Nature

SOIL BORING LOG

Project:	Bridge Street Development	Boring I.D.:	B-9
Location:	Deer St & Bridge St, Portsmouth, NH	Sheet:	1 Of: 1
Drilling Co.:	Northern Drilling	Project Number:	7462
Foreman:	Tim Tucker	Chkd. By:	BTN
GeoInsight Eng./Geol:	ATS	Boring Location:	See Plan
		Ground Surface Elevation:	~ 18 ft Datum:
		Date Started:	Date Completed:

DRILLING METHOD		SAMPLER		GROUND WATER READINGS			
Vehicle:	ATV	Type:	Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Mobile B-48	Hammer(lb):	140		Unknown (see note)		
Method:	Drive & Wash (4")	Fall (in):	30 (auto)				

DEPTH (ft)	SAMPLE NO.	REC/PEN (in)	DEPTH (ft)	BLOWS/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0	S1	20/24	0-2	6	S1: Loose, dark brown/black, fine to coarse SAND, some fine Gravel, trace Silt.			
				4			<1	
				3				
				3				
	S2	12/24	2-4	2	S2: Medium dense, brown, Clayey SILT. Possible large Gravel/Cobble 3-4 feet.	Gravelly SAND (FILL)	<1	
				3				
				21				
				68				
	S3	8/24	4-6	48	S3: Very dense, tan, fine to coarse SAND and GRAVEL, trace Silt.		<1	
				33				
5				24				
				25				
	S4	20/24	6-8	22	S4: Dense, tan, fine SAND and SILT, trace fine Gravel.		<1	
				21				
				15				
				12				
	S5	0/1	8-8.1	50/1"	S5: No recovery.			
					Apparent rock encountered at 8.1 feet. Roller bit to 9.1 feet. Dark gray rock particles in wash water.	PROBABLE BEDROCK		
					End of Boring - 9.1 feet.			
10								
15								

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY
0-4	V. LOOSE	<2	V. SOFT
5-10	LOOSE	2-4	SOFT
11-30	M. DENSE	5-8	M. STIFF
31-50	DENSE	9-15	STIFF
>50	V. DENSE	16-30	V. STIFF
		>30	HARD

Notes:

1. Soil samples field screened using a MiniRae2000 photoionization detector calibrated to read as benzene.
2. Borehole not left open long enough to record groundwater level. Water in borehole not indicative of groundwater level due to the drilling method employed.

GeoInsight
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SOIL BORING LOG

Project:	Bridge Street Development	Boring I.D.:	**B-10**
Location:	Deer St & Bridge St, Portsmouth, NH	Sheet:	1 Of: 1
Drilling Co.:	Northern Drilling	Project Number:	7462
Foreman:	Tim Tucker	Chkd. By:	BTN
GeoInsight Eng./Geol:	ATS	Boring Location:	See Plan
		Ground Surface Elevation:	~ 16 ft Datum:
		Date Started:	Date Completed:

DRILLING METHOD		SAMPLER		GROUND WATER READINGS			
Vehicle:	ATV	Type:	Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Mobile B-48	Hammer(lb):	140		Unknown (see note)		
Method:	Drive & Wash (4")	Fall (in):	30 (auto)				

DEPTH (ft)	SAMPLE NO.	REC/PEN (in)	DEPTH (ft)	BLOWS/6"	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0	S1	12/24	0-2	1	S1: Very loose, brown, fine SAND and SILT, trace fine Gravel and fine Roots.			
				1			<1	
				2		Silty SAND (FILL)		
				1				
	S2	1/24	2-4	2	S2: Very loose, brown, fine SAND and SILT, trace fine Gravel and fine Roots.		<1	
				1				
				1				
				4				
	S3	24/24	4-6	5	S3: Very Stiff, tan, Silty CLAY.			
				9				
5				10				
				12				
	S4	22/24	6-8	14	S4: Very stiff, brown/gray, Silty CLAY.	(GLACIAL TILL)		
				15				
				13				
				12				
	S5	22/24	8-10	3	S5: Stiff, brown/gray, Silty CLAY.			
				4				
				8				
				14				
10								
	S6	12/24	14-16	65	S6: Very dense, brown, GRAVEL, trace fine to medium Sand and Silt.			
				38				
15				33				
				47				
					Apparent rock encountered at 17 feet. Roller bit to 18 feet. Dark gray rock particles in wash water.	PROBABLE BEDROCK		
					End of Boring - 18 feet.			

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY
0-4	V. LOOSE	<2	V. SOFT
5-10	LOOSE	2-4	SOFT
11-30	M. DENSE	5-8	M. STIFF
31-50	DENSE	9-15	STIFF
>50	V. DENSE	16-30	V. STIFF
		>30	HARD

Notes:

1. Soil samples field screened using a MiniRae2000 photoionization detector calibrated to read as benzene.
2. Borehole not left open long enough to record groundwater level. Water in borehole not indicative of groundwater level due to the drilling method employed.

APPENDIX B

GROUND WATER LEVEL EVALUATION

GeoInsight®
Environmental Strategy & Engineering
Practical in Nature

December 16, 2016 GeoInsight Project 8090-000

Ania Rogers
Deer Street Associates
P.O. Box 100
York Harbor, ME 03911

Re: Groundwater Elevation Evaluation
Deer Street Development
Deer Street and Maplewood Avenue
Portsmouth, New Hampshire

Mrs. Rogers:

GeoInsight, Inc. (GeoInsight) prepared this letter for Deer Street Associates (DSA) to present the results of a seasonal high groundwater evaluation related to the proposed Deer Street development west of the intersection of Deer Street and Maplewood Avenue in Portsmouth, New Hampshire (the Site).

As part of GeoInsight's stormwater management design for the project, estimation of the seasonal high water table elevation is necessary. Based upon subsurface investigations performed by GeoInsight at the Site, near-surface soil conditions generally consist of a layer of fill placed over a native organic deposit and/or native marine fines deposit.

Estimation of seasonal high groundwater table is typically determined by observing the overburden soils for presence of iron concentrations or depletions (i.e., "mottles"). The mottles are created when soil is saturated for extended periods. Where static depths to groundwater were recorded in the subsurface explorations conducted at the Site (i.e., where monitoring wells were installed the borings), the depth to water was typically recorded near the top the native marine fines layer, and ranged from approximately 8 to 9 feet below ground surface (bgs). Soils above the observed water table generally included man-placed miscellaneous fill materials. In most cases, determination of the seasonal high water table is not possible in miscellaneous fill materials due to the general miscellaneous nature of the fill, which makes distinguishing soil mottles unreliable; or soil mottles may not be present.

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As one alternative to direct observation of soil mottles, groundwater levels can be monitored for extended periods of time to determine the typical seasonal high water table elevation. Subsurface explorations at the Site performed by GeoInsight were conducted in November 2014 and October 2014, which are typically not periods where seasonal high groundwater tables are most often present; therefore, another alternate method of seasonal high water table estimation was considered necessary. As such, GeoInsight performed an evaluation of the probable seasonal high water table elevation using a modification of the Frimpter Method.

The Frimpter Method is an estimation approach that considers the well-established seasonal fluctuation of groundwater levels at nearby U.S. Geological Society (USGS) monitoring wells and uses that data to relate water levels recorded at a given site (and a certain time period) to potential maximum groundwater levels at that site. This method is considered acceptable by the Massachusetts Department of Environmental Protection due to the Massachusetts-specific study that was performed to develop the method. While the Frimpter Method is not a recognized seasonal high water table estimation method by the New Hampshire Department of Environmental Services (NHDES), GeoInsight considered the method to be technically reasonable for this Site-specific evaluation.

GeoInsight conducted a modified Frimpter Method to calculate the probable estimated seasonal high water table (PESHWT) at the Site. Rather than using USGS monitoring well data, GeoInsight used groundwater level measurements collected by others from a nearby property located approximately 750 feet northwest of the Site (203 Maplewood Avenue). The 203 Maplewood Avenue data included a total of 26 water level measurements collected between 2006 and 2016. Using this relatively robust set of data, we statistically reduced the information to determine a theoretical increase to the water levels observed at the DSA Site. The PESHWT increase was applied to on-Site groundwater elevation data collected from four temporary groundwater monitoring wells on November 10, 2014 and October 24-25, 2016 (refer to Figure 1 for approximate on-Site well locations). The resulting statistical increase in water levels to the Site wells are summarized in Table 1, below.

Table 1 – Summary of Modified Frimpter Method Evaluation

Exploration Identification	Ground Surface Elevation (feet)	Date of Groundwater Level Observation	Observed Groundwater Elevation (feet)	Estimated Increase in Seasonal High Water Table Above Observed Elevation (feet)	Estimated Elevation of Probable High Water Table (feet)
B-101	14.0	10-24-16	5.7	3.8	9.5
B-103	13.1	10-25-16	4.8	3.8	8.6
B-1	11.0	11-10-14	3.6	3.9	7.5
B-8	10.0	11-10-14	4.9	3.9	8.8

GeoInsight also reviewed other groundwater monitoring well data recorded in environmental reports for nearby properties obtained from the NHDES online OneStop database to further evaluate the PESHWT data presented above. Specifically, we reviewed water table fluctuations

at three other nearby properties, in addition to the 203 Maplewood property. The reviewed data is summarized in Table 2, below.

Table 2 – Summary of Nearby Water Table Fluctuation Data

Property Address (Portsmouth, NH)	Number of Dates Groundwater Level Measurements Recorded	Maximum Observed Water Table Fluctuation (feet)
31 Raynes Avenue	4	1.4
233 Vaughan Street	6	3.0
Maplewood Ave & Route 1	2	0.9
203 Maplewood Ave	26	3.5

Based upon the above-referenced groundwater table fluctuation data recorded at nearby properties, the maximum recorded water table fluctuation of approximately 3.5 feet compares reasonably-well to the Site-specific modified Frimpter Method evaluation results presented in Table 1. Therefore, GeoInsight recommends using the PESHWT elevations presented in Table 1 for design of stormwater management structures at the Site.

GeoInsight appreciates the opportunity to be of service to DSA. If you have questions about this letter or any other matter, please contact the undersigned at (603) 314-0820.

Sincerely,
GEOINSIGHT, INC.

Brian T. Nereson, P.E.
Senior Project Engineer

Michael C. Penney, P.E., L.S.P.
Senior Engineer/Principal

Attachments: Figure 1 – Temporary Monitoring Well Locations

8090 Water Level Estimate Evaluation.docx

Note: Analysis based on modified Frimpter method (modified to use nearby groundwater level data)
Note: Water levels may or may not be tidally influenced

Project Name Deer Street Development
Project No. 8090
Date 11/14/2016
Analyst BTN

				203 Maplewood Ave Well Data					Est Depth To Probable High Water	Est Increase from Obsevation Date (ft)		
Exploration ID	Date	Sc	Well Measurement Date]	GW Depth (Owc)	Max Recorded Level (Owmax)	Min Recorded Level	Range of Water (Owr)	Sr	Sh		Ground El	GW El
B-101	10/24/2016	8.34	10/6/2016	8.23	5.62	8.3	2.68	3.9	4.5	3.8	14	**9.5**
B-103	10/25/2016	8.34	10/6/2016	8.23	5.62	8.3	2.68	3.9	4.5	3.8	13.1	**8.6**
B-1	11/10/2014	7.4	10/2/2014	8.88	6.06	8.9	2.84	3.9	3.5	3.9	11	**7.5**
B-8	11/10/2014	5.1	10/2/2014	8.88	6.06	8.9	2.84	3.9	1.2	3.9	10	**8.8**

^^GW depths interpolated between measured well data ^^90% confidence

$S_h = S_c - (S_r/OW_r)(OW_c-OW_{max})$

Sc = measured depth to water at the site
Sh = estimated depth to probable high water at the site
Owc = measured depth to water int eh observation well used to correlate with water levels at the site
Owmax = depth to recorded maximum water level at the observation well which was used to correlate with the water levels at the site
Sr = range of water level where the site is located. Values of range with varying exceedance probabilites selected from figure below
Owr = recorded upper limit of annual range of water level at the obseration well which is used to corrlate with water levels at the site

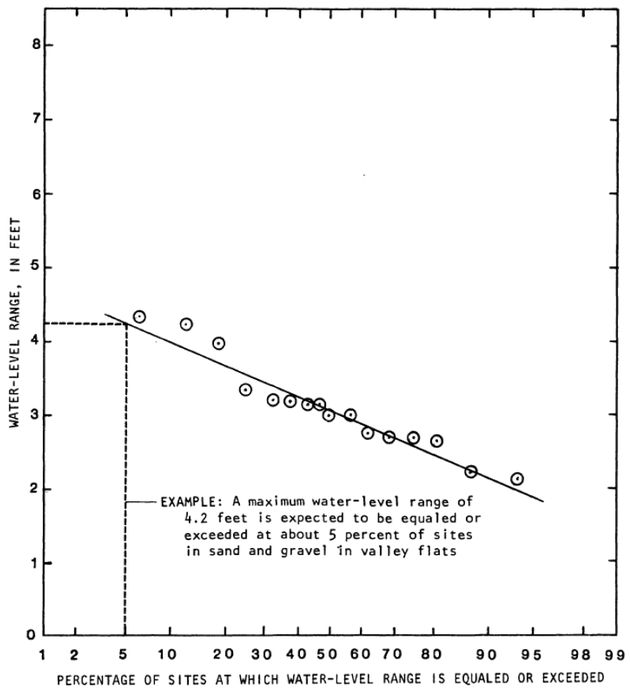
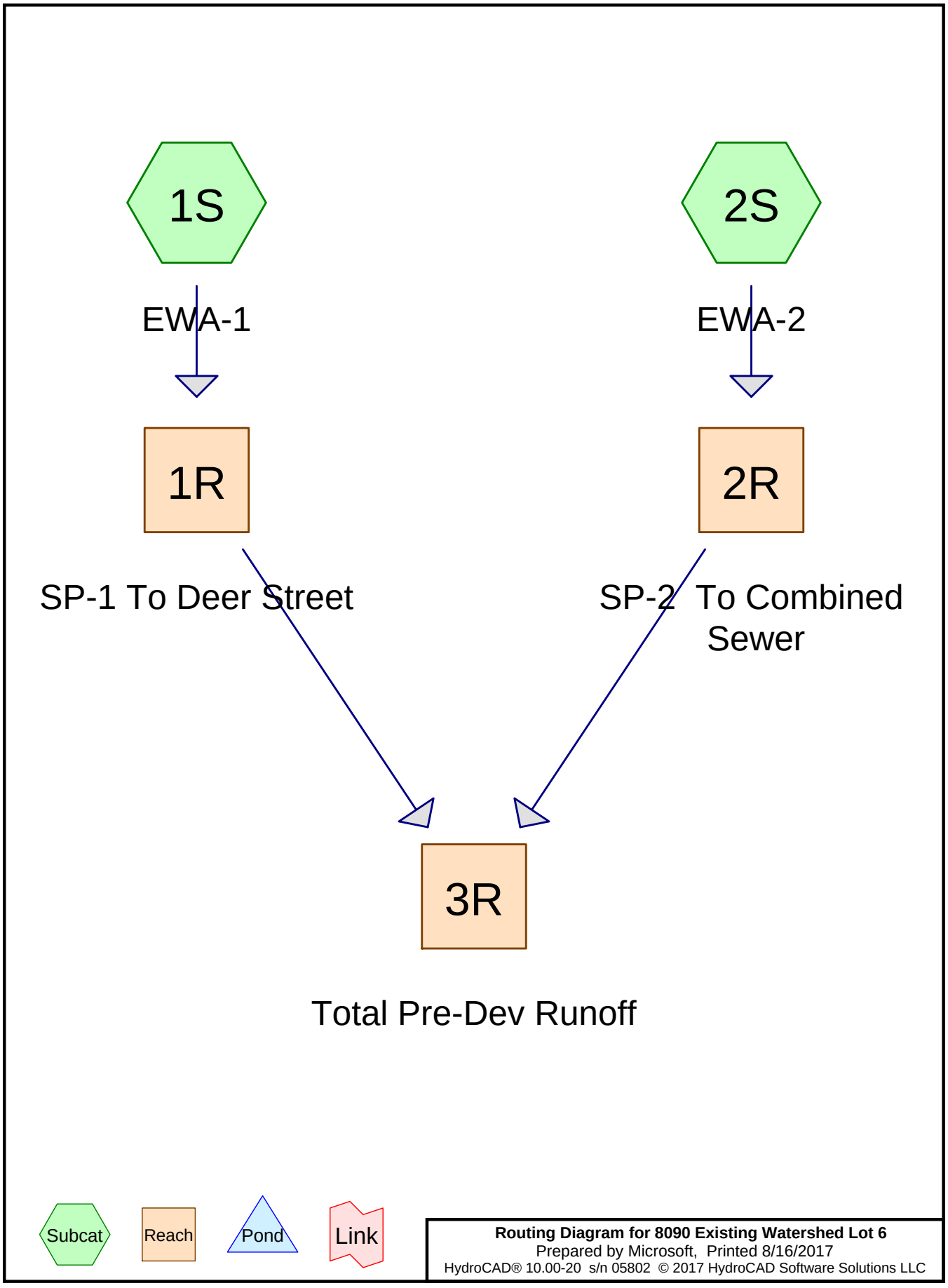


Figure 12.--Probability of water-level range in sand and gravel in valley flats

APPENDIX C

PRE-DEVELOPMENT CONDITIONS MODEL



Routing Diagram for 8090 Existing Watershed Lot 6
Prepared by Microsoft, Printed 8/16/2017

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
3,154	39	>75% Grass cover, Good, HSG A (1S)
7,293	96	Gravel surface, HSG A (1S)
2,340	98	Pavement, HSG A (1S)
8,487	98	Roofs, HSG A (1S, 2S)
1,266	43	Woods/grass comb., Fair, HSG A (2S)
22,540	**86**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
22,540	HSG A	1S, 2S
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
22,540		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
3,154	0	0	0	0	3,154	>75% Grass cover, Good	
7,293	0	0	0	0	7,293	Gravel surface	
2,340	0	0	0	0	2,340	Pavement	
8,487	0	0	0	0	8,487	Roofs	
1,266	0	0	0	0	1,266	Woods/grass comb., Fair	
22,540	**0**	**0**	**0**	**0**	**22,540**	**TOTAL AREA**	

Summary for Subcatchment 1S: EWA-1

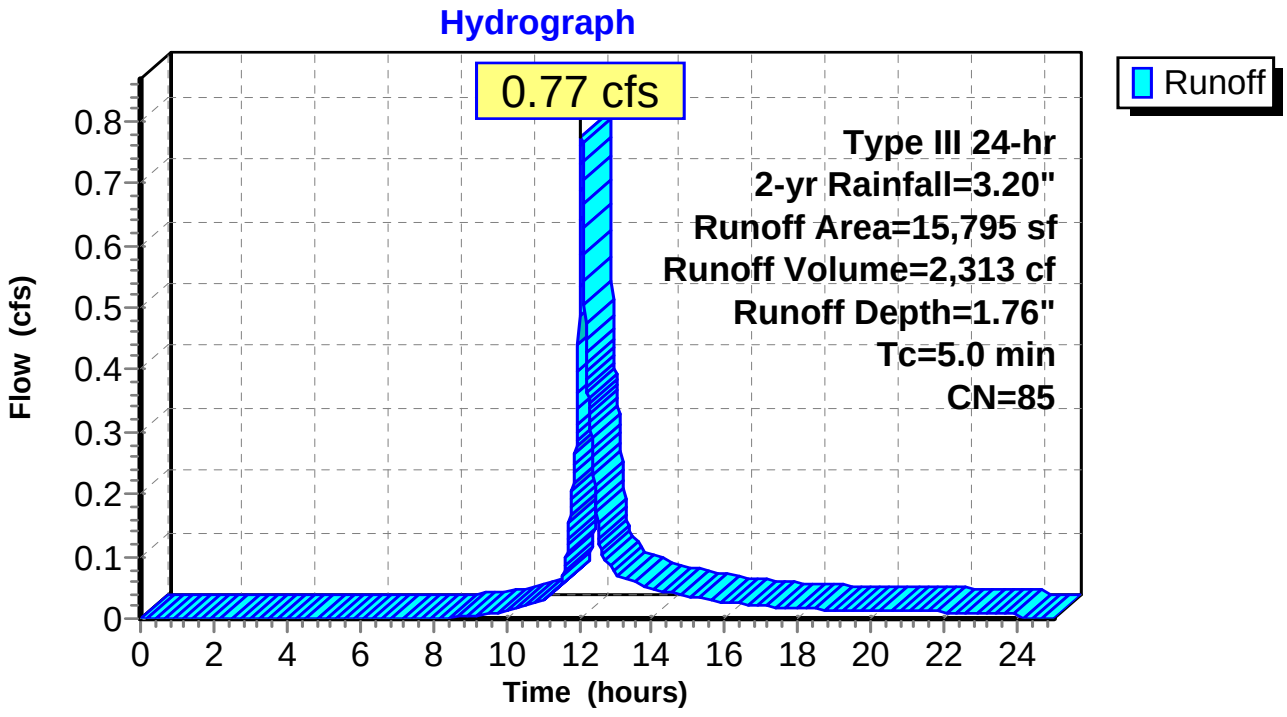
Runoff = 0.77 cfs @ 12.08 hrs, Volume= 2,313 cf, Depth= 1.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (sf)	CN	Description
	3,008	98	Roofs, HSG A
*	2,340	98	Pavement, HSG A
	3,154	39	>75% Grass cover, Good, HSG A
*	7,293	96	Gravel surface, HSG A
	15,795	85	Weighted Average
	10,447		66.14% Pervious Area
	5,348		33.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: EWA-1



Summary for Subcatchment 2S: EWA-2

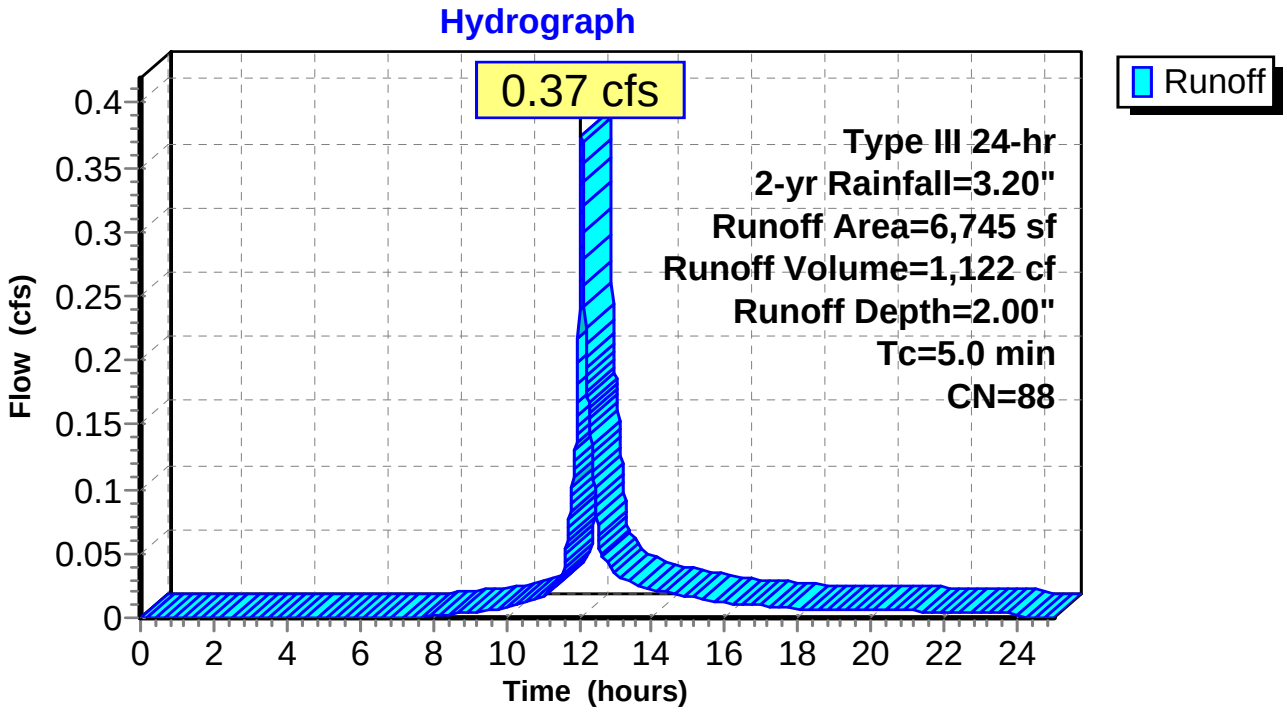
Runoff = 0.37 cfs @ 12.07 hrs, Volume= 1,122 cf, Depth= 2.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.20"

Area (sf)	CN	Description
1,266	43	Woods/grass comb., Fair, HSG A
5,479	98	Roofs, HSG A
6,745	88	Weighted Average
1,266		18.77% Pervious Area
5,479		81.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: EWA-2



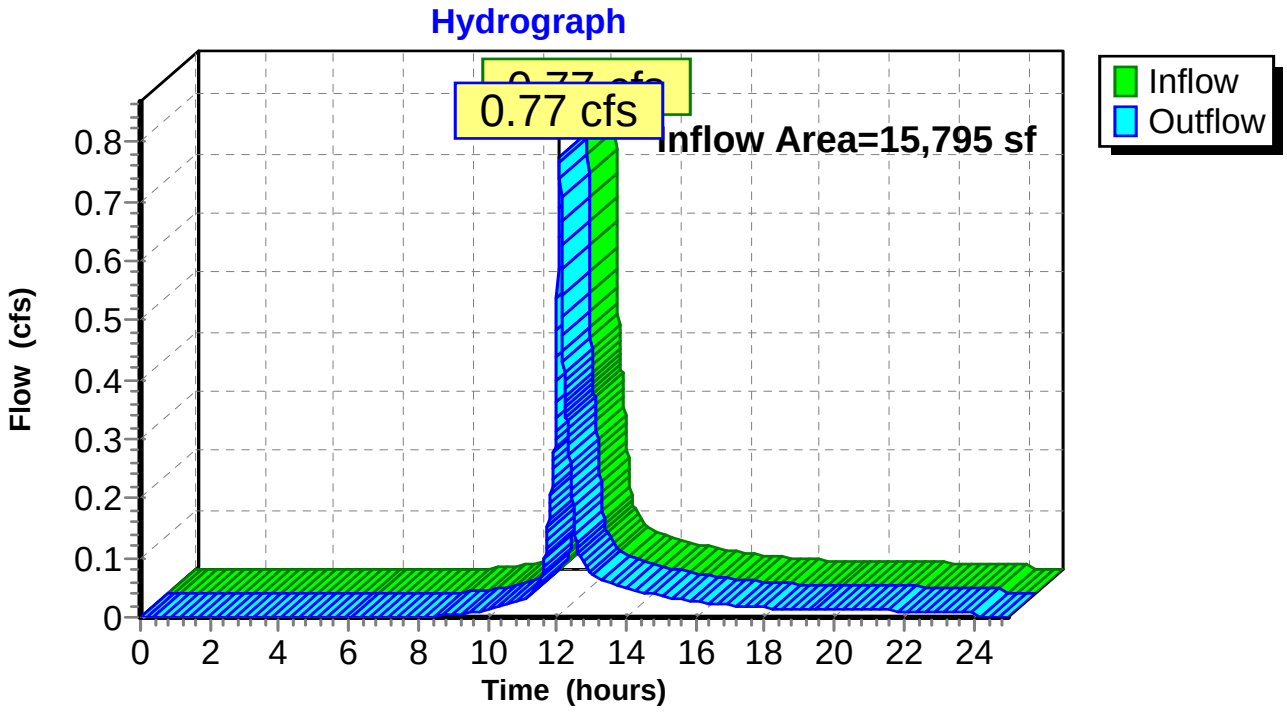
Summary for Reach 1R: SP-1 To Deer Street

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 15,795 sf, 33.86% Impervious, Inflow Depth = 1.76" for 2-yr event
Inflow = 0.77 cfs @ 12.08 hrs, Volume= 2,313 cf
Outflow = 0.77 cfs @ 12.08 hrs, Volume= 2,313 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs

Reach 1R: SP-1 To Deer Street



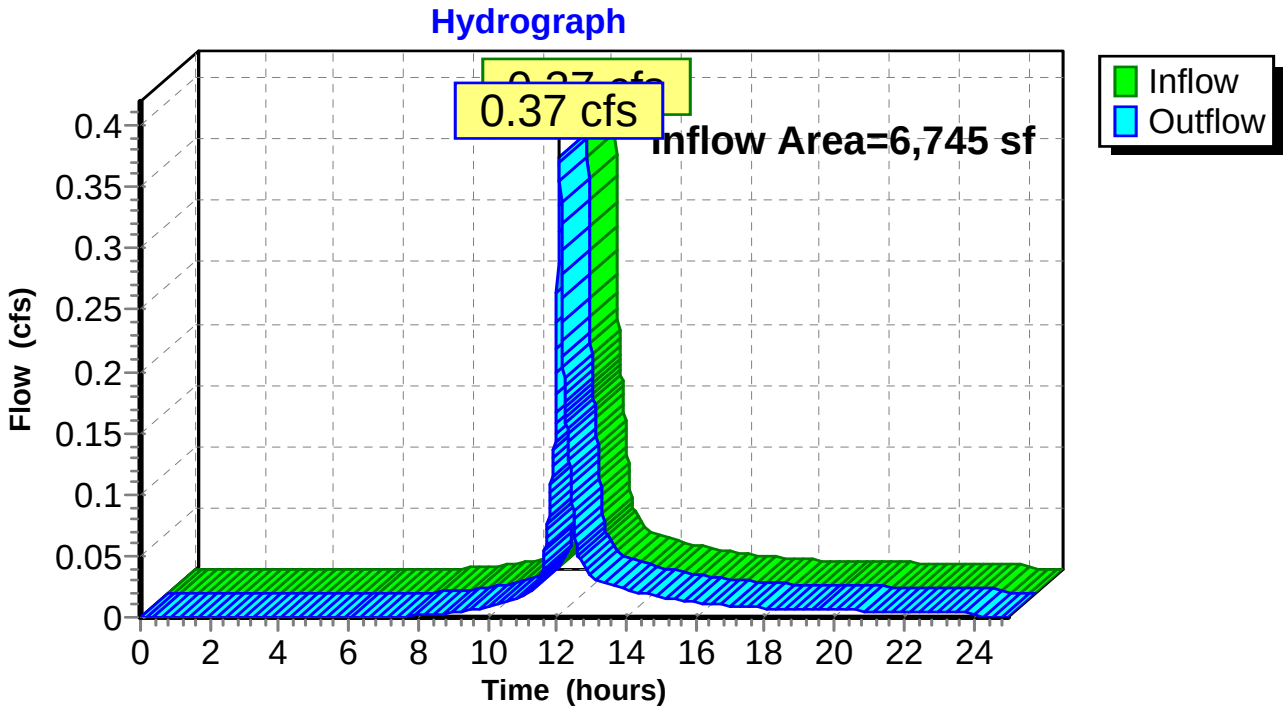
Summary for Reach 2R: SP-2 To Combined Sewer

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6,745 sf, 81.23% Impervious, Inflow Depth = 2.00" for 2-yr event
Inflow = 0.37 cfs @ 12.07 hrs, Volume= 1,122 cf
Outflow = 0.37 cfs @ 12.07 hrs, Volume= 1,122 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs

Reach 2R: SP-2 To Combined Sewer

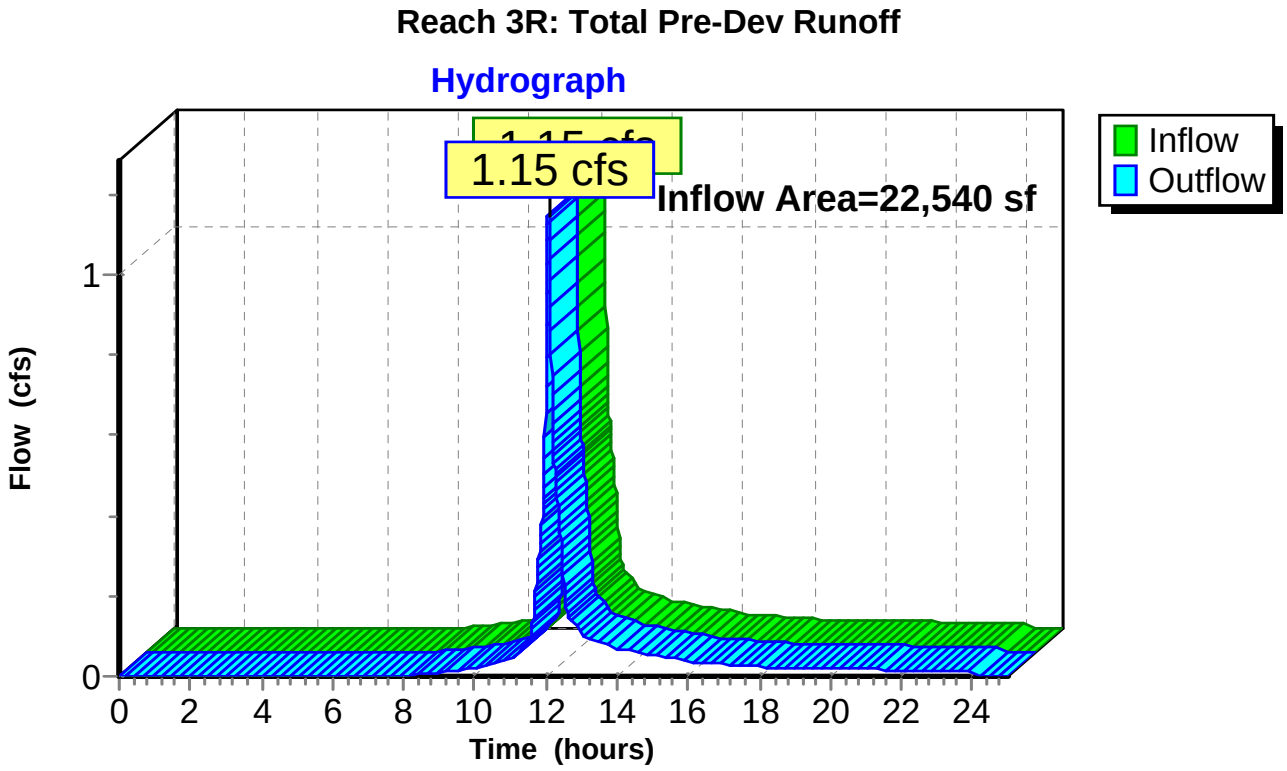


Summary for Reach 3R: Total Pre-Dev Runoff

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22,540 sf, 48.03% Impervious, Inflow Depth = 1.83" for 2-yr event
Inflow = 1.15 cfs @ 12.07 hrs, Volume= 3,436 cf
Outflow = 1.15 cfs @ 12.07 hrs, Volume= 3,436 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs



Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EWA-1 Runoff Area=15,795 sf 33.86% Impervious Runoff Depth=3.24"
Tc=5.0 min CN=85 Runoff=1.41 cfs 4,263 cf

Subcatchment 2S: EWA-2 Runoff Area=6,745 sf 81.23% Impervious Runoff Depth=3.54"
Tc=5.0 min CN=88 Runoff=0.65 cfs 1,988 cf

Reach 1R: SP-1 To Deer Street Inflow=1.41 cfs 4,263 cf
Outflow=1.41 cfs 4,263 cf

Reach 2R: SP-2 To Combined Sewer Inflow=0.65 cfs 1,988 cf
Outflow=0.65 cfs 1,988 cf

Reach 3R: Total Pre-Dev Runoff Inflow=2.07 cfs 6,251 cf
Outflow=2.07 cfs 6,251 cf

Total Runoff Area = 22,540 sf Runoff Volume = 6,251 cf Average Runoff Depth = 3.33"
51.97% Pervious = 11,713 sf 48.03% Impervious = 10,827 sf

Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EWA-1 Runoff Area=15,795 sf 33.86% Impervious Runoff Depth=4.45"
Tc=5.0 min CN=85 Runoff=1.92 cfs 5,862 cf

Subcatchment 2S: EWA-2 Runoff Area=6,745 sf 81.23% Impervious Runoff Depth=4.78"
Tc=5.0 min CN=88 Runoff=0.87 cfs 2,687 cf

Reach 1R: SP-1 To Deer Street Inflow=1.92 cfs 5,862 cf
Outflow=1.92 cfs 5,862 cf

Reach 2R: SP-2 To Combined Sewer Inflow=0.87 cfs 2,687 cf
Outflow=0.87 cfs 2,687 cf

Reach 3R: Total Pre-Dev Runoff Inflow=2.79 cfs 8,549 cf
Outflow=2.79 cfs 8,549 cf

Total Runoff Area = 22,540 sf Runoff Volume = 8,549 cf Average Runoff Depth = 4.55"
51.97% Pervious = 11,713 sf 48.03% Impervious = 10,827 sf

Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EWA-1 Runoff Area=15,795 sf 33.86% Impervious Runoff Depth=5.61"
Tc=5.0 min CN=85 Runoff=2.39 cfs 7,380 cf

Subcatchment 2S: EWA-2 Runoff Area=6,745 sf 81.23% Impervious Runoff Depth=5.95"
Tc=5.0 min CN=88 Runoff=1.07 cfs 3,346 cf

Reach 1R: SP-1 To Deer Street Inflow=2.39 cfs 7,380 cf
Outflow=2.39 cfs 7,380 cf

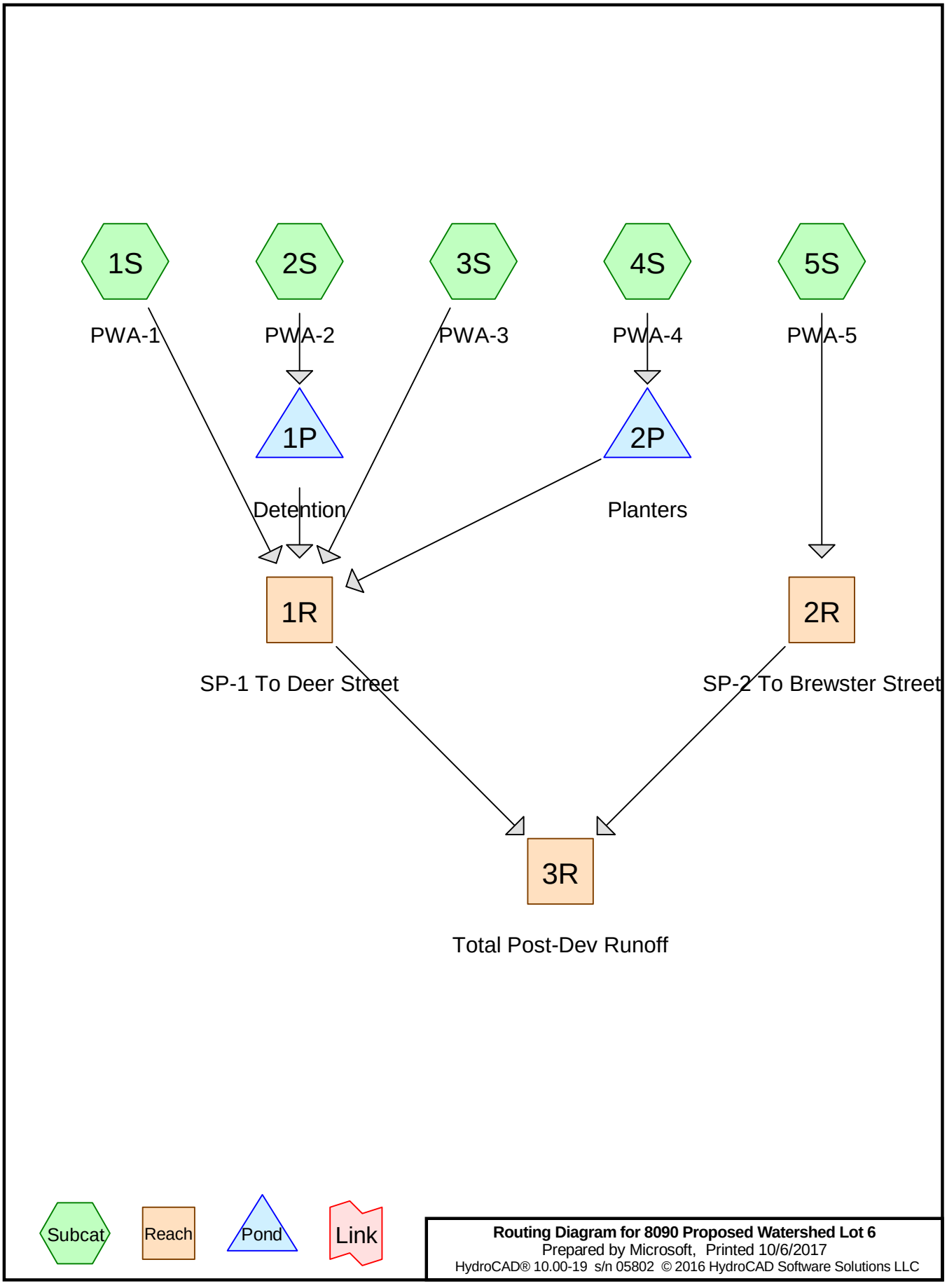
Reach 2R: SP-2 To Combined Sewer Inflow=1.07 cfs 3,346 cf
Outflow=1.07 cfs 3,346 cf

Reach 3R: Total Pre-Dev Runoff Inflow=3.46 cfs 10,726 cf
Outflow=3.46 cfs 10,726 cf

Total Runoff Area = 22,540 sf Runoff Volume = 10,726 cf Average Runoff Depth = 5.71"
51.97% Pervious = 11,713 sf 48.03% Impervious = 10,827 sf

APPENDIX D

POST-DEVELOPMENT CONDITIONS MODEL



Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
507	69	50-75% Grass cover, Fair, HSG B (3S, 5S)
1,143	98	Brick Sidewalk & Paved Parking, HSG A (5S)
1,185	98	Brick Sidewalk, HSG A (1S, 4S)
3,556	98	Paved parking, HSG A (3S)
16,149	98	Roofs, HSG A (2S)
22,540	**97**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
22,033	HSG A	1S, 2S, 3S, 4S, 5S
507	HSG B	3S, 5S
0	HSG C	
0	HSG D	
0	Other	
22,540		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Su Nu
0	507	0	0	0	507	50-75% Grass cover, Fair	
1,185	0	0	0	0	1,185	Brick Sidewalk	
1,143	0	0	0	0	1,143	Brick Sidewalk & Paved Parking	
3,556	0	0	0	0	3,556	Paved parking	
16,149	0	0	0	0	16,149	Roofs	
22,033	**507**	**0**	**0**	**0**	**22,540**	**TOTAL AREA**	

Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1S: PWA-1 Runoff Area=641 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.05 cfs 159 cf

Subcatchment 2S: PWA-2 Runoff Area=16,149 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=1.19 cfs 3,993 cf

Subcatchment 3S: PWA-3 Runoff Area=3,894 sf 91.32% Impervious Runoff Depth=2.64"
Tc=5.0 min CN=95 Runoff=0.27 cfs 858 cf

Subcatchment 4S: PWA-4 Runoff Area=544 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.04 cfs 135 cf

Subcatchment 5S: PWA-5 Runoff Area=1,312 sf 87.12% Impervious Runoff Depth=2.54"
Tc=5.0 min CN=94 Runoff=0.09 cfs 278 cf

Reach 1R: SP-1 To Deer Street Inflow=0.69 cfs 5,355 cf
Outflow=0.69 cfs 5,355 cf

Reach 2R: SP-2 To Brewster Street Inflow=0.09 cfs 278 cf
Outflow=0.09 cfs 278 cf

Reach 3R: Total Post-Dev Runoff Inflow=0.78 cfs 5,633 cf
Outflow=0.78 cfs 5,633 cf

Pond 1P: Detention Peak Elev=9.13' Storage=919 cf Inflow=1.19 cfs 3,993 cf
Outflow=0.40 cfs 4,204 cf

Pond 2P: Planters Inflow=0.04 cfs 135 cf
Primary=0.04 cfs 135 cf

Total Runoff Area = 22,540 sf Runoff Volume = 5,423 cf Average Runoff Depth = 2.89"
2.25% Pervious = 507 sf 97.75% Impervious = 22,033 sf

Summary for Subcatchment 1S: PWA-1

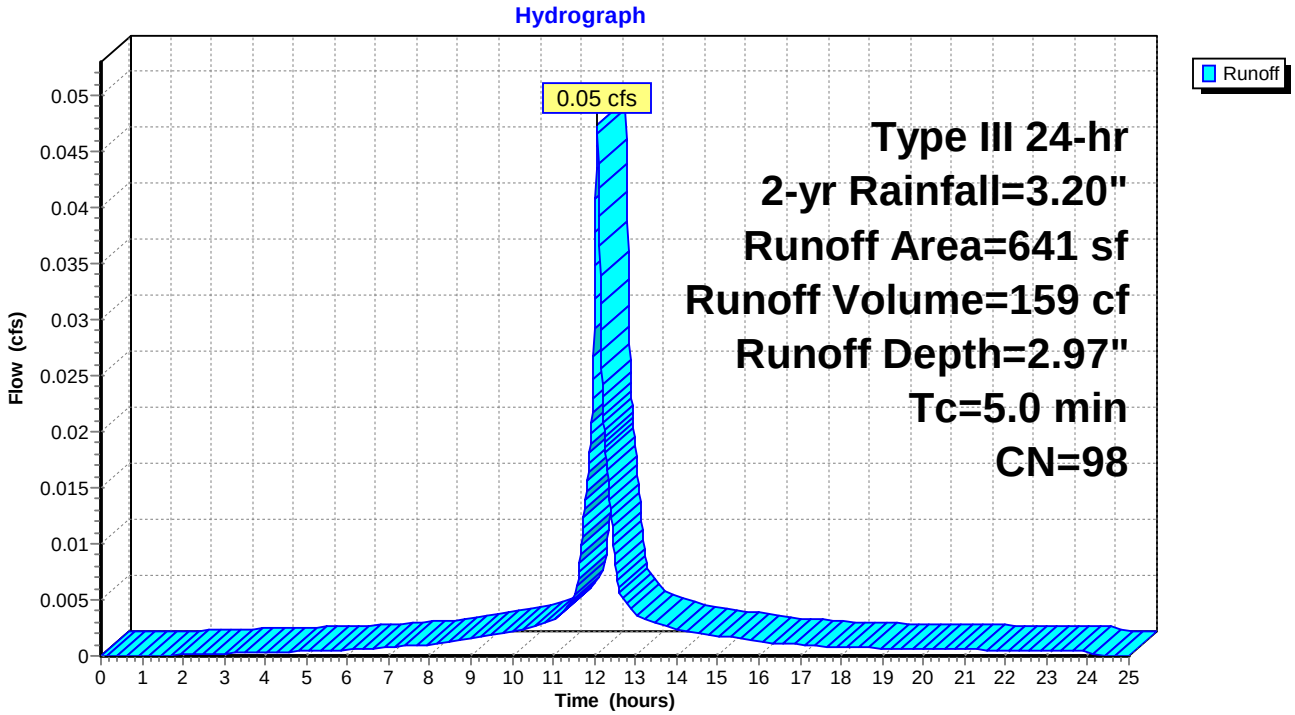
Runoff = 0.05 cfs @ 12.07 hrs, Volume= 159 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (sf)	CN	Description
*	641	98	Brick Sidewalk, HSG A
	641		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 1S: PWA-1



Summary for Subcatchment 2S: PWA-2

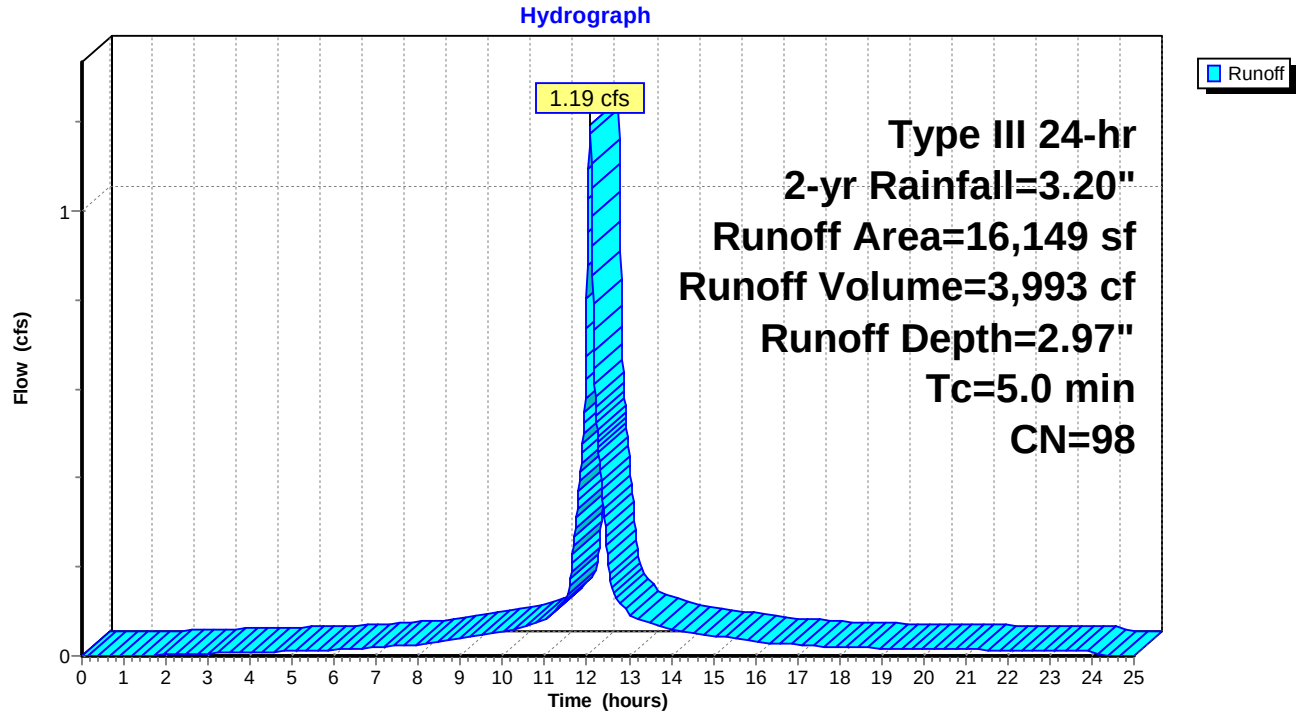
Runoff = 1.19 cfs @ 12.07 hrs, Volume= 3,993 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.20"

Area (sf)	CN	Description
16,149	98	Roofs, HSG A
16,149		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 2S: PWA-2



Summary for Subcatchment 3S: PWA-3

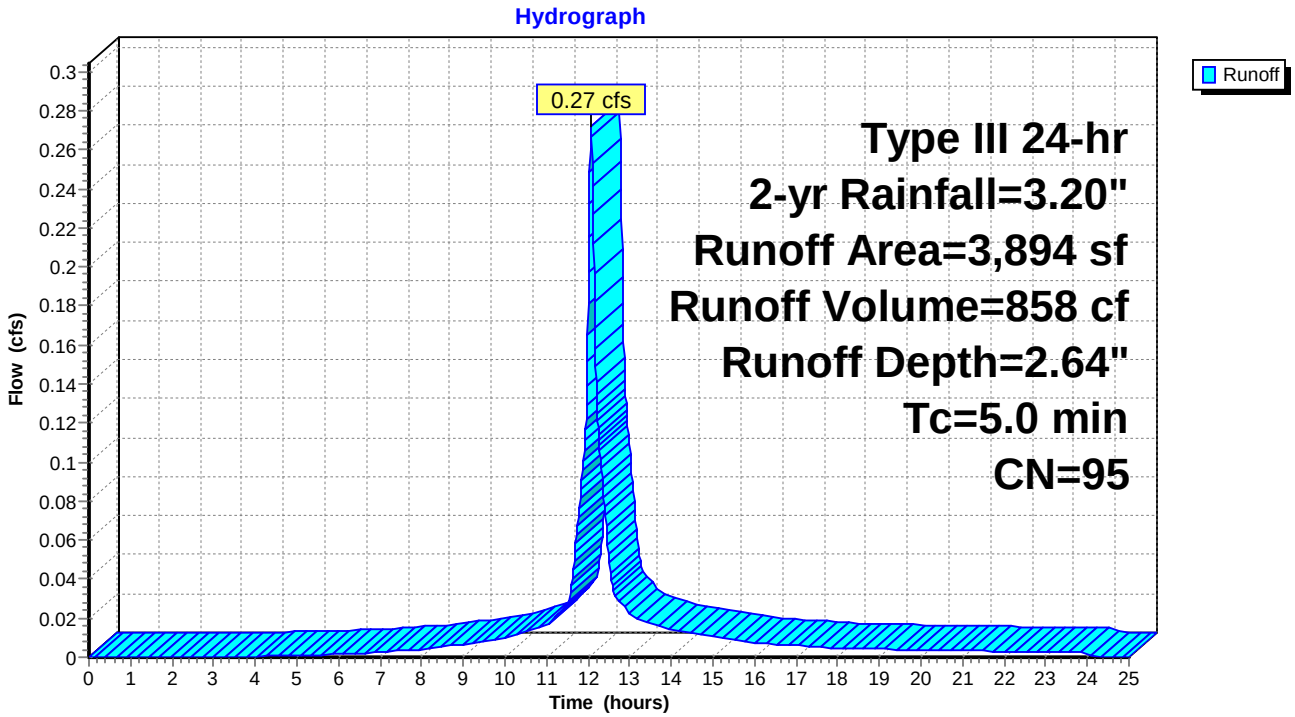
Runoff = 0.27 cfs @ 12.07 hrs, Volume= 858 cf, Depth= 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.20"

Area (sf)	CN	Description
3,556	98	Paved parking, HSG A
338	69	50-75% Grass cover, Fair, HSG B
3,894	95	Weighted Average
338		8.68% Pervious Area
3,556		91.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 3S: PWA-3



Summary for Subcatchment 4S: PWA-4

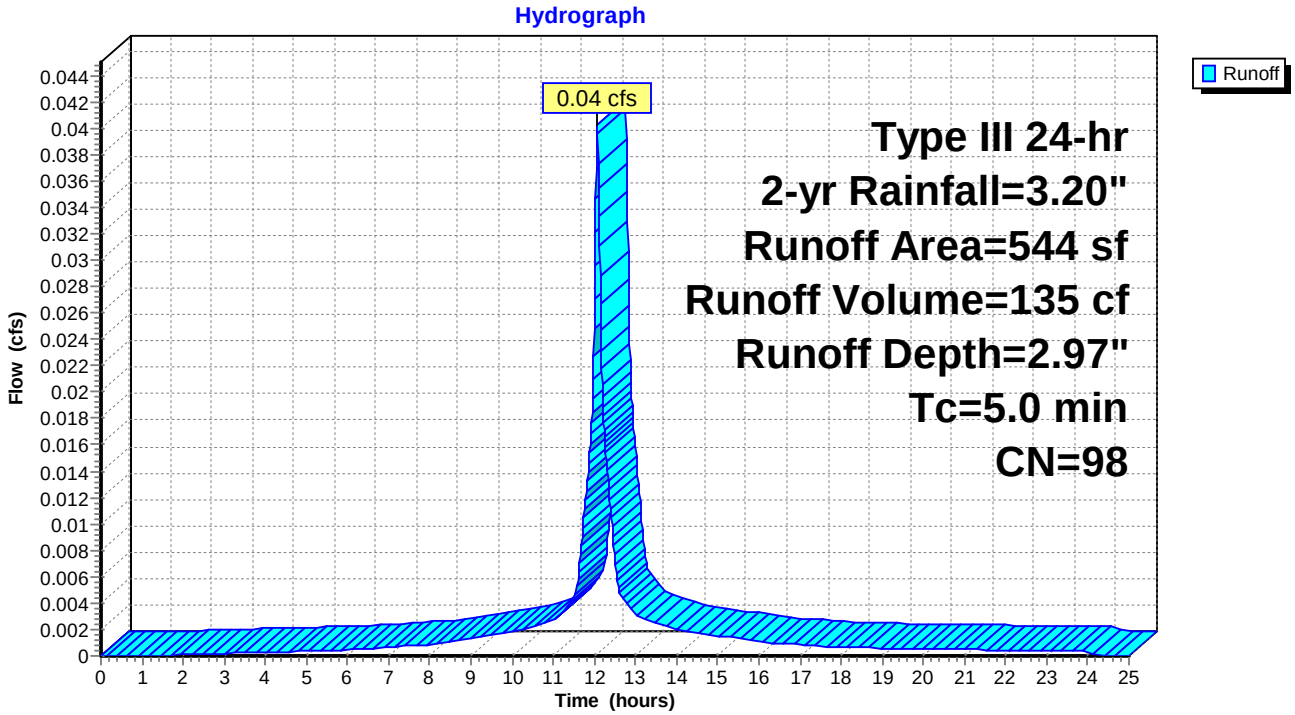
Runoff = 0.04 cfs @ 12.07 hrs, Volume= 135 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (sf)	CN	Description
*	544	98	Brick Sidewalk, HSG A
	544		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 4S: PWA-4



Summary for Subcatchment 5S: PWA-5

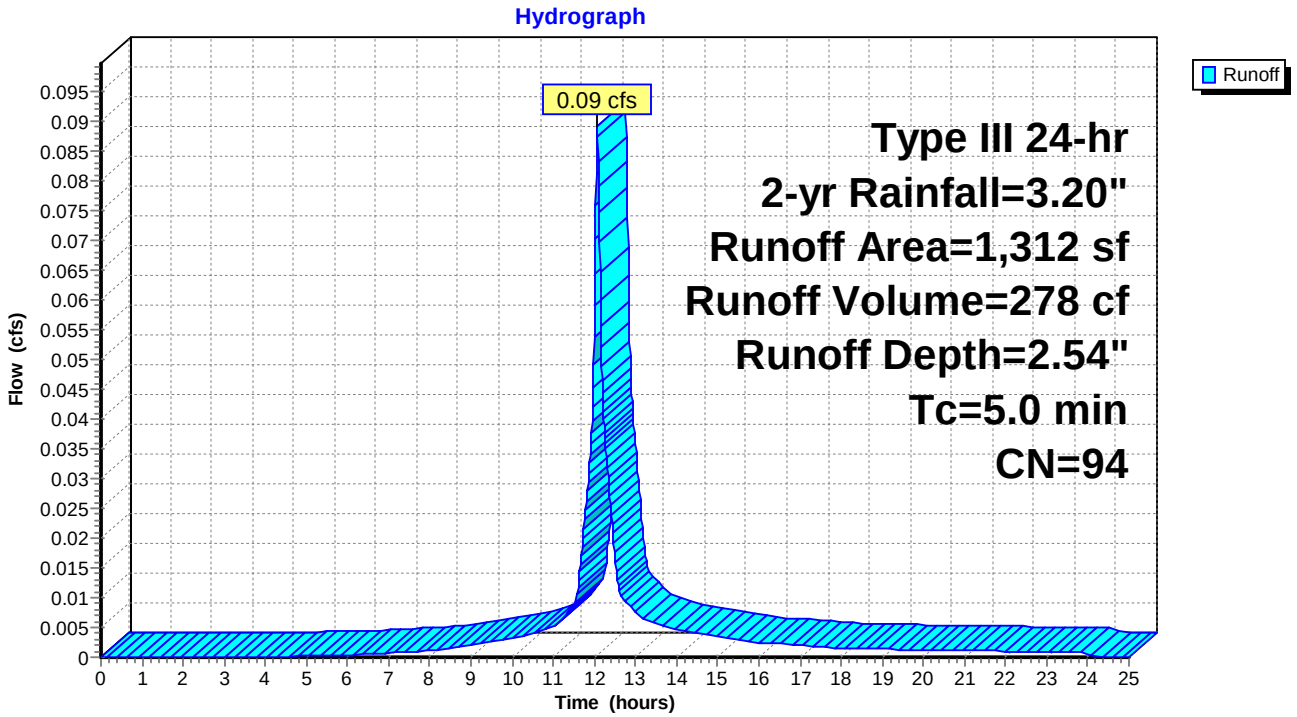
Runoff = 0.09 cfs @ 12.07 hrs, Volume= 278 cf, Depth= 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-yr Rainfall=3.20"

	Area (sf)	CN	Description
*	1,143	98	Brick Sidewalk & Paved Parking, HSG A
	169	69	50-75% Grass cover, Fair, HSG B
	1,312	94	Weighted Average
	169		12.88% Pervious Area
	1,143		87.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 5S: PWA-5



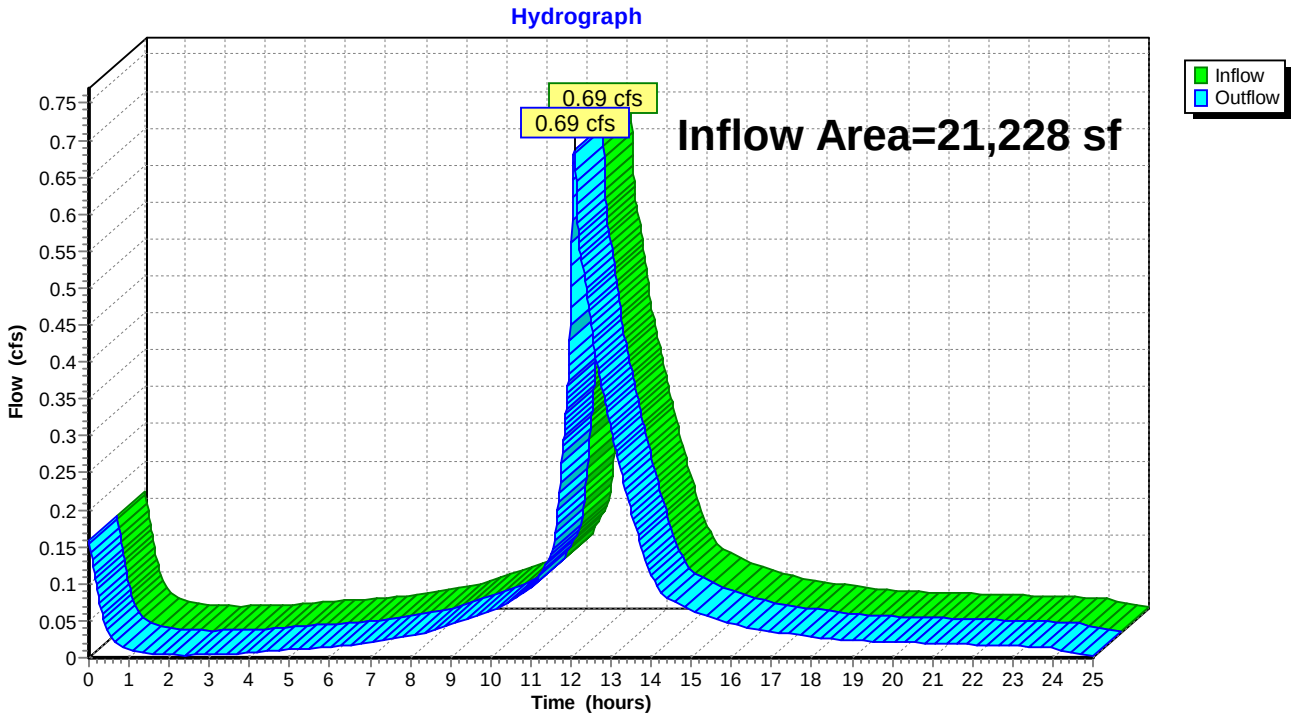
Summary for Reach 1R: SP-1 To Deer Street

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 21,228 sf, 98.41% Impervious, Inflow Depth > 3.03" for 2-yr event
Inflow = 0.69 cfs @ 12.08 hrs, Volume= 5,355 cf
Outflow = 0.69 cfs @ 12.08 hrs, Volume= 5,355 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs

Reach 1R: SP-1 To Deer Street



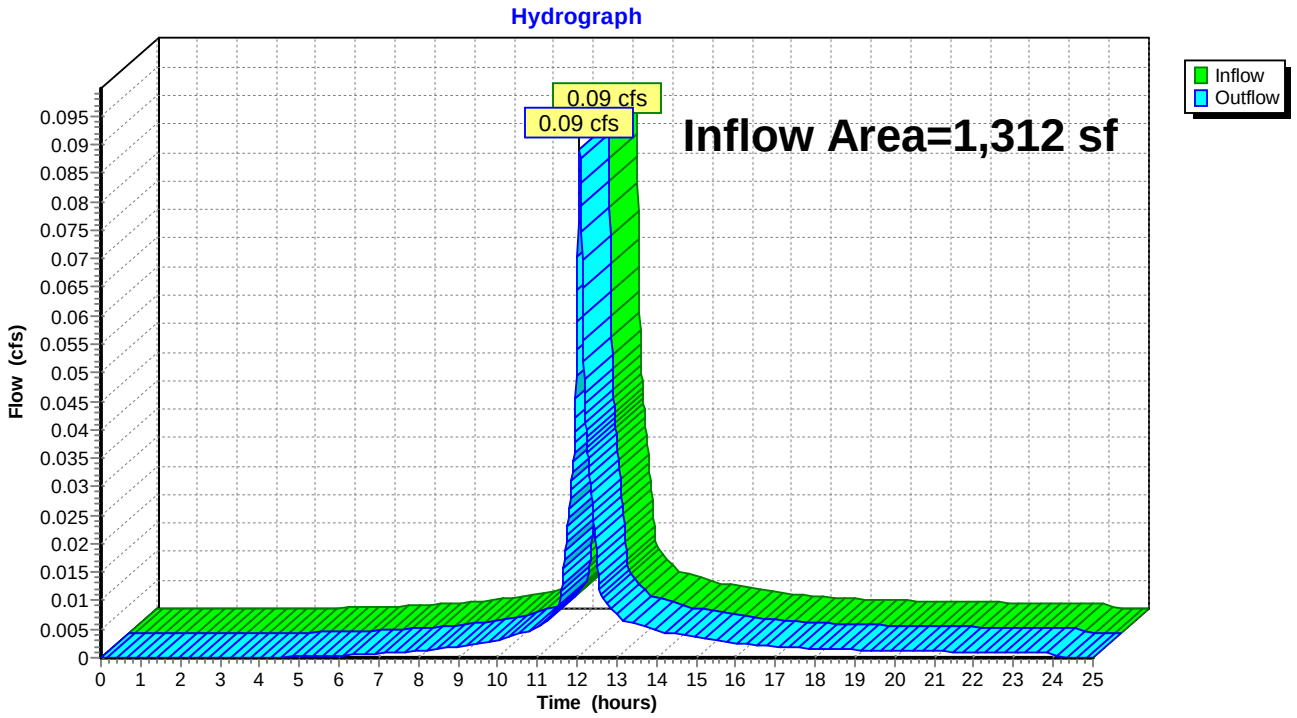
Summary for Reach 2R: SP-2 To Brewster Street

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1,312 sf, 87.12% Impervious, Inflow Depth = 2.54" for 2-yr event
Inflow = 0.09 cfs @ 12.07 hrs, Volume= 278 cf
Outflow = 0.09 cfs @ 12.07 hrs, Volume= 278 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs

Reach 2R: SP-2 To Brewster Street



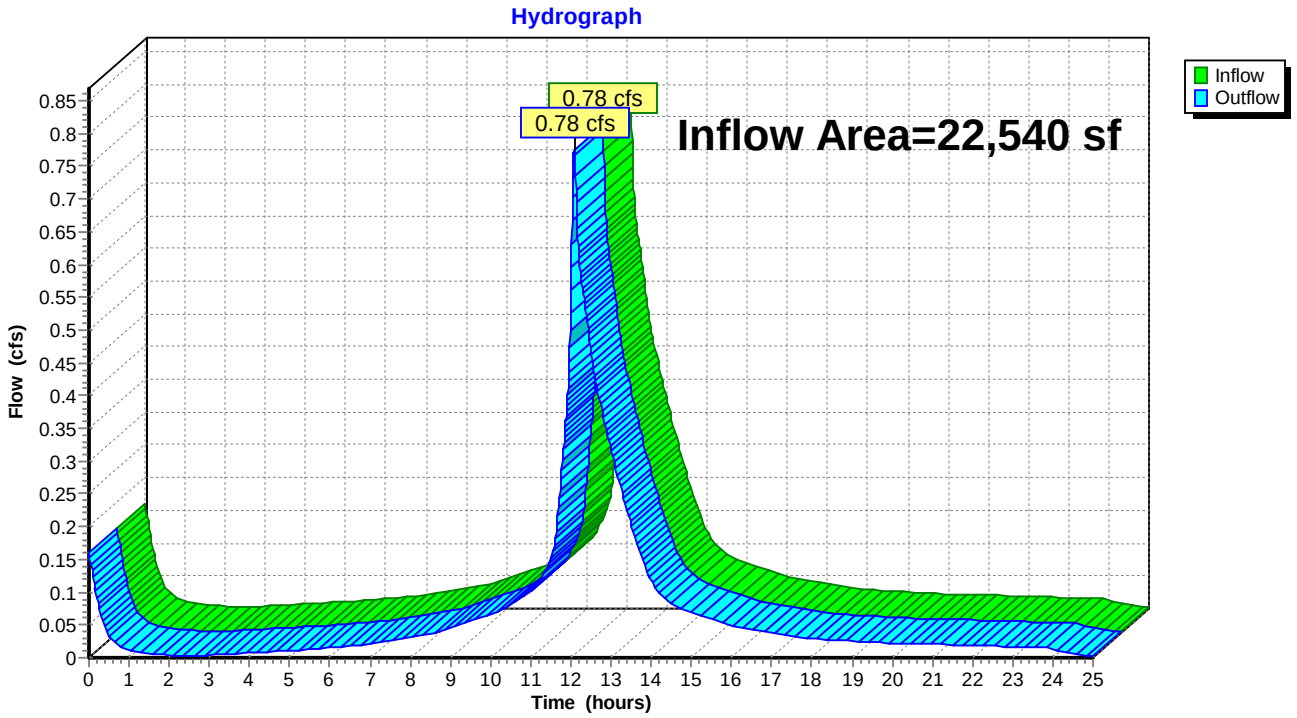
Summary for Reach 3R: Total Post-Dev Runoff

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 22,540 sf, 97.75% Impervious, Inflow Depth > 3.00" for 2-yr event
Inflow = 0.78 cfs @ 12.08 hrs, Volume= 5,633 cf
Outflow = 0.78 cfs @ 12.08 hrs, Volume= 5,633 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs

Reach 3R: Total Post-Dev Runoff



Summary for Pond 1P: Detention

Inflow Area = 16,149 sf,100.00% Impervious, Inflow Depth = 2.97" for 2-yr event
Inflow = 1.19 cfs @ 12.07 hrs, Volume= 3,993 cf
Outflow = 0.40 cfs @ 12.33 hrs, Volume= 4,204 cf, Atten= 67%, Lag= 15.8 min
Primary = 0.40 cfs @ 12.33 hrs, Volume= 4,204 cf

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs / 3
Starting Elev= 7.99' Surf.Area= 622 sf Storage= 212 cf
Peak Elev= 9.13' @ 12.33 hrs Surf.Area= 622 sf Storage= 919 cf (707 cf above start)

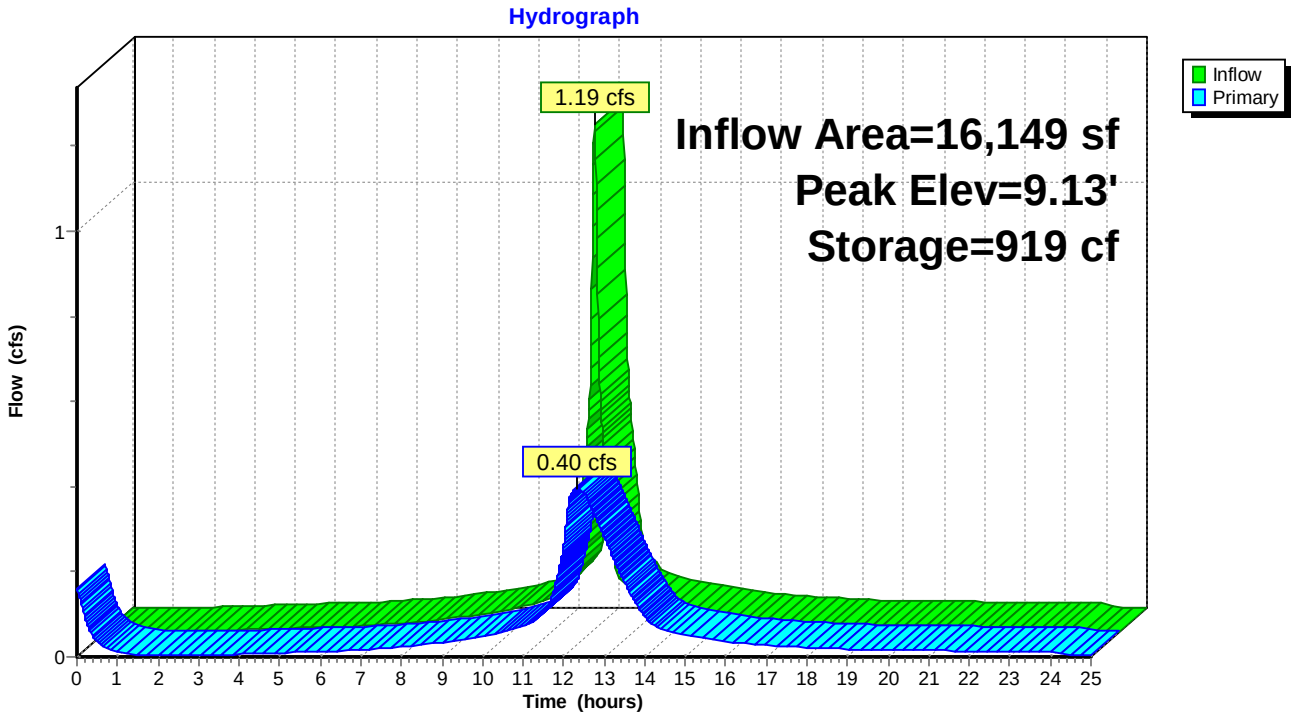
Plug-Flow detention time= 29.1 min calculated for 3,992 cf (100% of inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	7.65'	2,432 cf	**8.00'W x 76.00'L x 4.00'H Prismatoid**
#2	7.62'	85 cf	**6.00'D x 6.00'H Vertical Cone/Cylinder** x 0.5
		2,517 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round RCP_Round 12"** L= 125.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 7.52' / 6.90' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	7.62'	**3.6" Vert. Orifice/Grate** C= 0.600
#3	Device 1	9.70'	**5.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	10.50'	**3.5" Vert. Orifice/Grate** C= 0.600
#5	Device 1	11.64'	**5.0' long Sharp-Crested Rectangular Weir** 0 End Contraction(s)

Primary OutFlow Max=0.40 cfs @ 12.33 hrs HW=9.13' (Free Discharge)
└**1=RCP_Round 12"** (Passes 0.40 cfs of 3.17 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.40 cfs @ 5.61 fps)
  ├**3=Orifice/Grate** (Controls 0.00 cfs)
  ├**4=Orifice/Grate** (Controls 0.00 cfs)
  └**5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: Detention



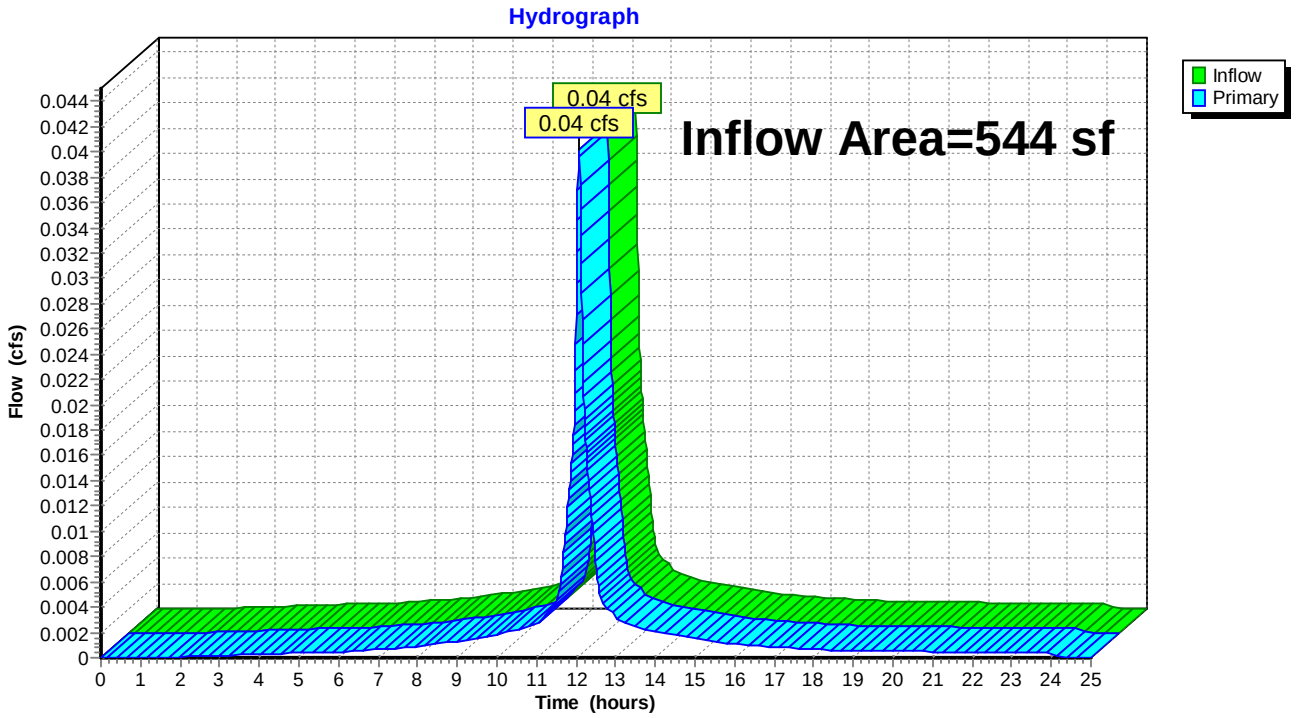
Summary for Pond 2P: Planters

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 544 sf,100.00% Impervious, Inflow Depth = 2.97" for 2-yr event
Inflow = 0.04 cfs @ 12.07 hrs, Volume= 135 cf
Primary = 0.04 cfs @ 12.07 hrs, Volume= 135 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-25.00 hrs, dt= 0.01 hrs

Pond 2P: Planters



Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1S: PWA-1 Runoff Area=641 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=0.07 cfs 247 cf

Subcatchment 2S: PWA-2 Runoff Area=16,149 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=1.83 cfs 6,222 cf

Subcatchment 3S: PWA-3 Runoff Area=3,894 sf 91.32% Impervious Runoff Depth=4.28"
Tc=5.0 min CN=95 Runoff=0.43 cfs 1,389 cf

Subcatchment 4S: PWA-4 Runoff Area=544 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=0.06 cfs 210 cf

Subcatchment 5S: PWA-5 Runoff Area=1,312 sf 87.12% Impervious Runoff Depth=4.17"
Tc=5.0 min CN=94 Runoff=0.14 cfs 456 cf

Reach 1R: SP-1 To Deer Street Inflow=0.99 cfs 8,275 cf
Outflow=0.99 cfs 8,275 cf

Reach 2R: SP-2 To Brewster Street Inflow=0.14 cfs 456 cf
Outflow=0.14 cfs 456 cf

Reach 3R: Total Post-Dev Runoff Inflow=1.13 cfs 8,731 cf
Outflow=1.13 cfs 8,731 cf

Pond 1P: Detention Peak Elev=9.99' Storage=1,457 cf Inflow=1.83 cfs 6,222 cf
Outflow=0.69 cfs 6,429 cf

Pond 2P: Planters Inflow=0.06 cfs 210 cf
Primary=0.06 cfs 210 cf

Total Runoff Area = 22,540 sf Runoff Volume = 8,524 cf Average Runoff Depth = 4.54"
2.25% Pervious = 507 sf 97.75% Impervious = 22,033 sf

Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1S: PWA-1 Runoff Area=641 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=0.09 cfs 316 cf

Subcatchment 2S: PWA-2 Runoff Area=16,149 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=2.32 cfs 7,969 cf

Subcatchment 3S: PWA-3 Runoff Area=3,894 sf 91.32% Impervious Runoff Depth=5.57"
Tc=5.0 min CN=95 Runoff=0.55 cfs 1,808 cf

Subcatchment 4S: PWA-4 Runoff Area=544 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=0.08 cfs 268 cf

Subcatchment 5S: PWA-5 Runoff Area=1,312 sf 87.12% Impervious Runoff Depth=5.46"
Tc=5.0 min CN=94 Runoff=0.18 cfs 596 cf

Reach 1R: SP-1 To Deer Street Inflow=1.51 cfs 10,567 cf
Outflow=1.51 cfs 10,567 cf

Reach 2R: SP-2 To Brewster Street Inflow=0.18 cfs 596 cf
Outflow=0.18 cfs 596 cf

Reach 3R: Total Post-Dev Runoff Inflow=1.66 cfs 11,164 cf
Outflow=1.66 cfs 11,164 cf

Pond 1P: Detention Peak Elev=10.46' Storage=1,747 cf Inflow=2.32 cfs 7,969 cf
Outflow=1.04 cfs 8,175 cf

Pond 2P: Planters Inflow=0.08 cfs 268 cf
Primary=0.08 cfs 268 cf

Total Runoff Area = 22,540 sf Runoff Volume = 10,958 cf Average Runoff Depth = 5.83"
2.25% Pervious = 507 sf 97.75% Impervious = 22,033 sf

Time span=0.00-25.00 hrs, dt=0.01 hrs, 2501 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1S: PWA-1 Runoff Area=641 sf 100.00% Impervious Runoff Depth=7.13"
Tc=5.0 min CN=98 Runoff=0.11 cfs 381 cf

Subcatchment 2S: PWA-2 Runoff Area=16,149 sf 100.00% Impervious Runoff Depth=7.13"
Tc=5.0 min CN=98 Runoff=2.78 cfs 9,596 cf

Subcatchment 3S: PWA-3 Runoff Area=3,894 sf 91.32% Impervious Runoff Depth=6.77"
Tc=5.0 min CN=95 Runoff=0.66 cfs 2,198 cf

Subcatchment 4S: PWA-4 Runoff Area=544 sf 100.00% Impervious Runoff Depth=7.13"
Tc=5.0 min CN=98 Runoff=0.09 cfs 323 cf

Subcatchment 5S: PWA-5 Runoff Area=1,312 sf 87.12% Impervious Runoff Depth=6.66"
Tc=5.0 min CN=94 Runoff=0.22 cfs 728 cf

Reach 1R: SP-1 To Deer Street Inflow=1.99 cfs 12,703 cf
Outflow=1.99 cfs 12,703 cf

Reach 2R: SP-2 To Brewster Street Inflow=0.22 cfs 728 cf
Outflow=0.22 cfs 728 cf

Reach 3R: Total Post-Dev Runoff Inflow=2.16 cfs 13,431 cf
Outflow=2.16 cfs 13,431 cf

Pond 1P: Detention Peak Elev=10.89' Storage=2,019 cf Inflow=2.78 cfs 9,596 cf
Outflow=1.41 cfs 9,801 cf

Pond 2P: Planters Inflow=0.09 cfs 323 cf
Primary=0.09 cfs 323 cf

Total Runoff Area = 22,540 sf Runoff Volume = 13,226 cf Average Runoff Depth = 7.04"
2.25% Pervious = 507 sf 97.75% Impervious = 22,033 sf

APPENDIX E

PIPE DESIGN

GeoInsight®
Environmental Strategy & Engineering

Computation Sheet

Title: *Rational Method Pipe Sizing Spreadsheet*
Project: *Deer Street Development - Lot 6*
Date: *June 16, 2017*
Project Number: *8090*
Storm Event: *10-Year Storm*
Cc-factor *1.00*

Location: Portsmouth, NH
Designed By: ARC
Checked By: MCP
Revised: August 18, 2017

LOCATION			DRAINAGE AREA (Acres)					RUNOFF (cfs)		FLOW IN PIPE: PIPE				FULL FLOW		DESIGN FLOW					
Description	*From*	*To*	*Area Ac*	*Runoff Coeff., Cc*	*Increment CA*	*Sum CA*	*Duration (Tc)*	*Intensity (In/Hr)*	*Design Flow*	*Diam (In.)*	*Length (Ft.)*	*Slope (Ft./Ft.)*	*Manning Coeff.*	*Capacity (Cfs)*	*Velocity (Fps)*	*Depth (Ft.)*	*Velocity (Fps.)*	*Time In Section*	*Angle*	*Hydraulic Radius*	***PIPE % FULL***
PCA Areas																					
PWA-2	RD-1	DET/OCS-1	0.371	0.90	0.33		5.0	4.9	1.99	12	6	0.0104	0.012	3.9	5.0	0.51	5.0	0.0	3.10	0.25	51
	OCS-1	PDMH-1	Flow taken from HydrOcad Model 10-Yr Event						1.02	12	125	0.005	0.012	2.7	3.5	0.42	3.2	0.7	2.82	0.22	38
PWA-4	TD-2	PDMH-1	0.013	0.90	0.01		5.0	4.9	0.05	6	40	0.02	0.012	0.9	4.4	0.11	3.0	0.2	1.95	0.07	6
	PDMH-1	CITY PDMH1			0.00	0.34	5.0	4.9	1.67	12	14	0.0145	0.012	4.7	5.9	0.41	5.4	0.0	2.78	0.22	36

APPENDIX F

OPERATIONS AND MAINTENANCE PLAN

OPERATION AND MAINTENANCE PLAN

In accordance with the standards set forth by the United States Department of Environmental Protection, GeoInsight has prepared the following O&M plan for the stormwater management system that will be implemented for the proposed development.

This plan is broken in to two major sections. The first section describes construction-related erosion and sedimentation controls. The second section is devoted to a post-development O&M plan.

CONSTRUCTION ACTIVITIES

1. Contact the City's Engineering Department at least three (3) days prior to start of construction.

2. Install filter tubes, hay bales, and/or construction fencing as shown on the Erosion and Sediment Control Plan, which can be found in the site plan package.

3. Site access shall be achieved only from the designated temporary construction entrance.

4. All erosion control measures shall be inspected weekly and after all rainfall events, and shall be maintained, repaired, or replaced as required or at the direction of the owner's engineer, the City's Engineer, or the City's Conservation Agent.

5. Sediment accumulation up gradient of the silt socks greater than 6 inches in depth shall be removed and disposed of in accordance with all applicable regulations.

6. Sediment accumulation on all adjacent catch basin inlets shall be removed and the silt sack replaced if torn or damaged.

7. The contractor shall comply with the General Conditions and Erosion Notes as shown on the Site Development Plans.

POST-DEVELOPMENT ACTIVITIES

Refer to “Long Term Operations and Maintenance Plan”

APPENDIX G

LONG TERM OPERATIONS AND MAINTENANCE PLAN

LONG TERM OPERATIONS AND MAINTENANCE PROGRAM

August 18, 2017

This Long Term Operations and Maintenance Program Plan has been prepared in accordance with the New Hampshire Stormwater Handbook issued by the Department of Environmental Services (DES) for the *Residences at Foundry Place,* a mixed use building located on Foundry Place, Portsmouth, NH. Upon a period beginning twelve months after the completion of the project, all structural BMP's shall be inspected twice annually, once in April and once in November. The inspection shall be performed as indicated below:

Snow Storage / Removal

Snow plowed from the proposed driveways and walkways will be placed or disposed of in accordance with the policy developed by NHDES. All snow in areas requiring removal will be removed and hauled off site.

De-icing

Salt for de-icing on the paved areas during the winter months shall be limited to the minimum amount practicable. Sand containing the minimum amount of calcium chloride (or approved equivalent) needed for handling may be applied as part of the routine winter maintenance activities.

Trench/Strip Drains

The trench/strip drains shall be inspected at least twice annually, once in April and once in November and after the first storm event following any landscape/vegetation maintenance in the court yard area. Any and all debris and/or sediments shall be removed from the units and be disposed of at an approved offsite location in accordance with all applicable local, state, and federal regulations.

Subsurface Detention System

The subsurface detention system shall be inspected at least twice annually, once in April and once in November and after the first storm event following landscape/vegetation maintenance in the court yard area. Any and all debris and/or sediments shall be removed from the units and be disposed of at an approved offsite location in accordance with all applicable local, state, and federal regulations.

Vegetated Areas

All vegetated areas on the site shall be stabilized and maintained to control erosion. Any disturbed areas shall be re-seeded as soon as practicable.

OSHA Regulations

Work within any drainage structures shall performed in accordance with the latest Occupational Safety and Health Administration (OSHA) regulations, and only by individuals with appropriate OSHA certification.

Maintenance Responsibilities

All post-construction stormwater-related maintenance activities shall be documented and kept on file and made available to the proper City and State authorities upon request.

Transfer of Ownership

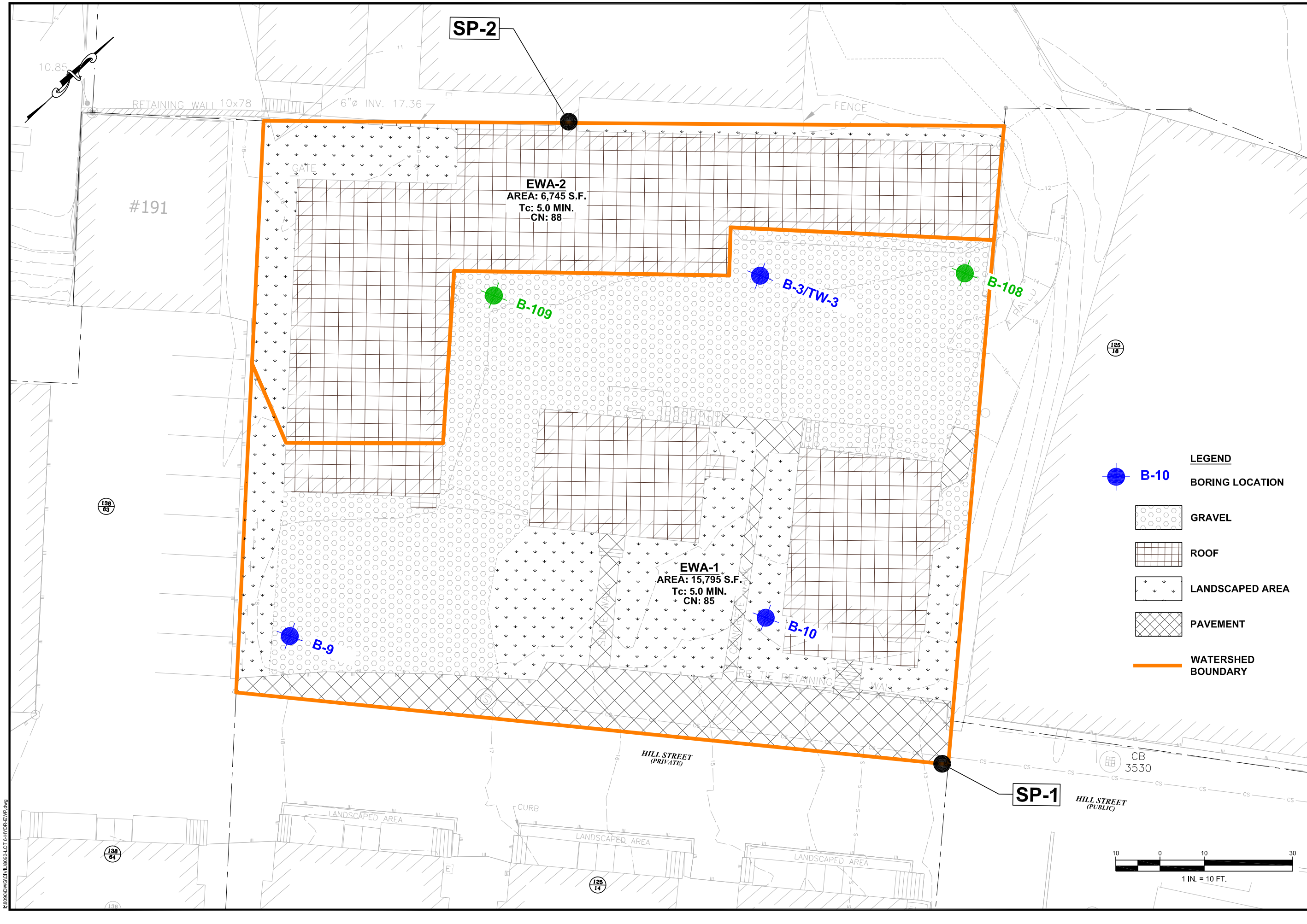
If ownership of the property is transferred, the new owner(s) shall become the responsible party(ies).

Estimated Operations and Maintenance Budget

It is anticipated that the stormwater system including the subsurface detention structure will be maintained by the operator. An annual budget of $750 a year should be specified in the owner's documents for operations and maintenance of the obligations.

APPENDIX H

EXISTING WATERSHED PLAN



PREPARED BY:
GeoInsight
Practical in Nature
186 GRANITE STREET, SUITE 3A
MANCHESTER, NEW HAMPSHIRE 03101
PH: (603) 314-0820 FAX: (603) 314-0821
ENVIRONMENTAL STRATEGY AND ENGINEERING

OWNER/APPLICANT:
DEER STREET ASSOCIATES
7 BANKS ROCK ROAD
YORK HARBOR, ME 03911
PH: (207) 363-3540

DEER SREET ASSOCIATES
DEER STREET DEVELOPMENT - LOT 6
PORTSMOUTH, NH

REVISIONS		
NO.	DATE	DESCRIPTION
1	08/18/17	REVISED CN VALUES

DWG SCALE: 1" = 10'	PREPARED BY: ARC
DATE ISSUED: 06/16/17	CHECKED BY: JHK
PROJECT #: 8090	APPROVED BY: MCP

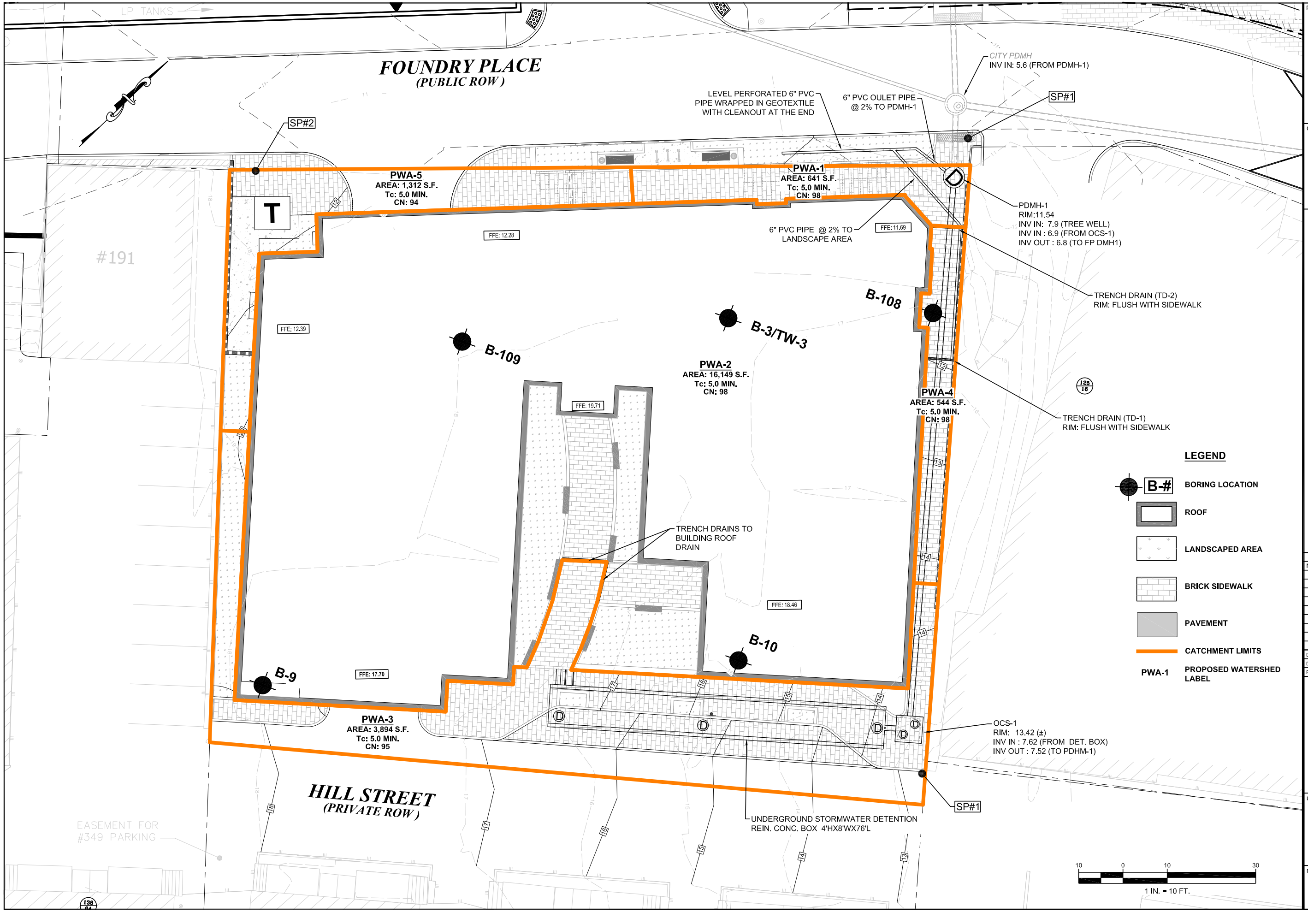
DRAWING TITLE:
EXISTING WATERSHED PLAN

DRAWING #:
H 1.0

R:\8090\DWG\CIVIL\8090-LOT 6-HYDR-EWP.dwg

APPENDIX I

PROPOSED WATERSHED PLAN



PREPARED BY:
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186 GRANITE STREET, SUITE 3A
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PH: (207) 363-3540

DEER STREET ASSOCIATES
RESIDENCES AT FOUNDRY PLACE
PORTSMOUTH, NH

REVISIONS		
NO.	DATE	DESCRIPTION
1	08/18/17	REVISED PWA'S

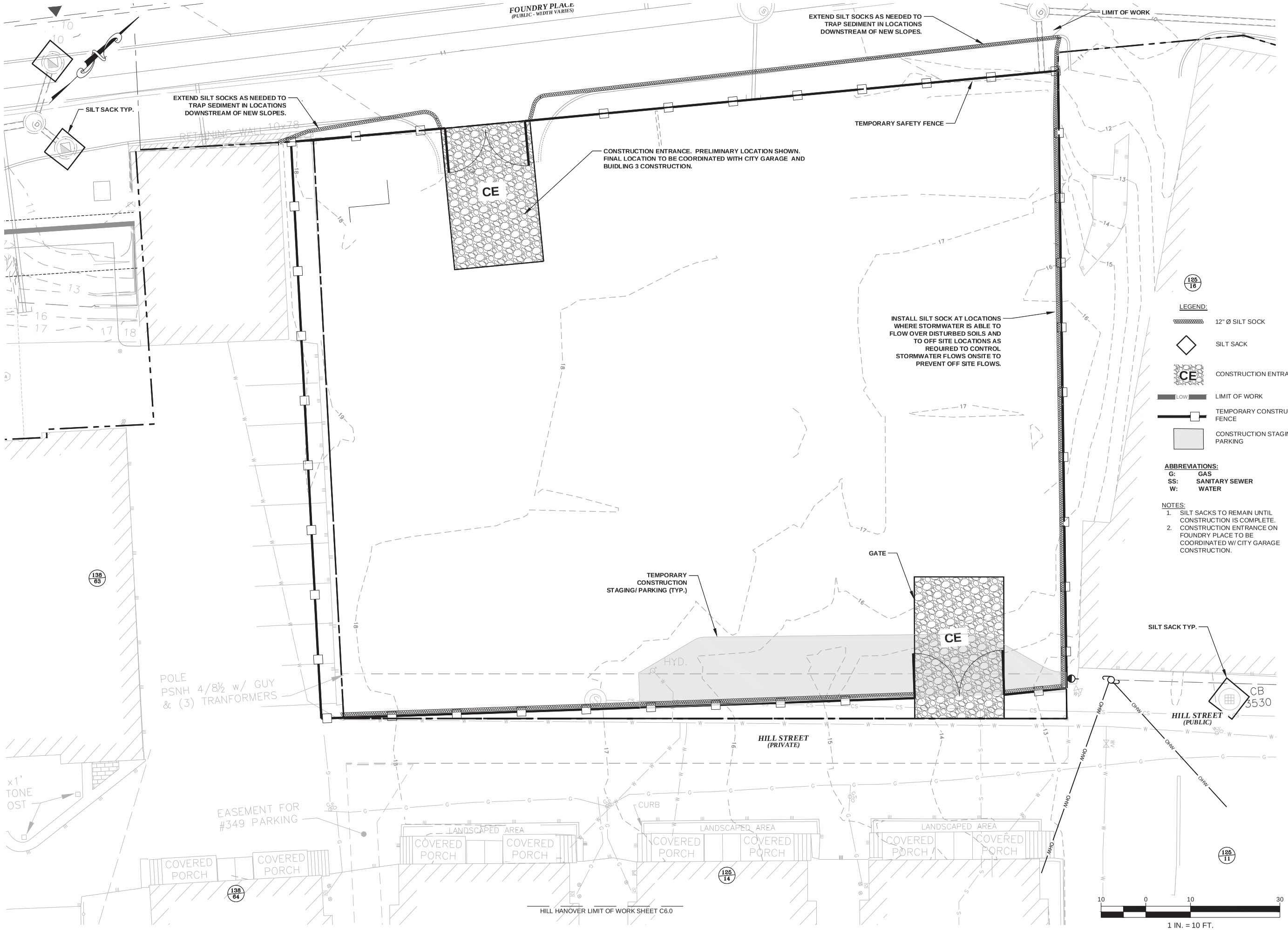
DWG SCALE: 1" = 10'	PREPARED BY: ARC
DATE ISSUED: 06/16/17	CHECKED BY: JHK
PROJECT #: 8090	APPROVED BY: MCP

DRAWING TITLE:
PROPOSED WATERSHED AREAS

DRAWING #:
H2.0

APPENDIX J

EROSION AND SEDIMENTATION CONTROL PLAN



TEMPORARY CONSTRUCTION

PERMIT PLANS - NOT FOR CONSTRUCTION

JSA
ARCHITECTS
INTERIORS
PLANNERS

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ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED
PROFESSIONAL ENGINEER

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EROSION & SEDIMENT CONTROL PLAN

C6.0

GENERAL EROSION CONTROL NOTES

1. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION GENERAL PERMIT ISSUED BY THE EPA AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SUBMITTED WITH THE PERMIT DOCUMENTS.

2. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES TO ENSURE PROPER OPERATION THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT OR UNTIL IT IS ACCEPTED BY THE OWNER. THE OWNER IS RESPONSIBLE THEREAFTER.

3. NO DUST WILL BE ALLOWED ON OR OFF THE WORK SITE. CONTRACTOR MUST CONDUCT CONTINUOUS EFFORTS TO CONTROL DUST. LACK OF SUFFICIENT DUST CONTROL COULD CAUSE THE PROJECT TO BE STOPPED UNTIL ISSUES ARE RESOLVED. CONTRACTOR TO PAY ALL PENALTIES RESULTING PLUS $100/ OFFENSE AS DETERMINED BY CITY.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ROADS, CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SITE AND ALL ADJACENT ROADS BE MAINTAINED IN A MUD AND DUST-FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, CAREFUL USE OF WATER, CALCIUM CHLORIDE, AND/OR CRUSHED STONE OR COARSE GRAVEL AS CONTROL BMPS.

5. ALL PROPOSED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND DETAILS. ALL VEHICLE TRAFFIC ENTERING OR EXITING THE WORK AREA SHALL PASS OVER THE CONSTRUCTION ENTRANCES TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE SURROUNDING ROADWAYS UNTIL THE SITE IS STABILIZED.

6. THE CONTRACTOR SHALL INSTALL ALL PERIMETER SEDIMENT CONTROL BARRIERS AS SHOWN ON THE EROSION CONTROL PLAN. SILT FENCE OR SILT SOCK SHALL ALSO BE INSTALLED AROUND ANY SOIL STOCKPILE AREAS.THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS AS QUICKLY AS PRACTICABLE. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEEDED, OR OTHERWISE STABILIZED OR RESTORED TO THEIR ORIGINAL STATE. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHEREVER FEASIBLE.

7. THE CONTRACTOR MAY USE TEMPORARY SEDIMENTATION AND/ OR INFILTRATION BASINS ON THE SITE DURING CONSTRUCTION. THESE STRUCTURES SHOULD BE STRATEGICALLY LOCATED AND SIZED COMMESURATE WITH THE PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL REMOVE AND STABILIZE THESE STRUCTURES WHEN NO LONGER REQUIRED.

8. TEMPORARY COVERINGS OR OTHER APPROVED STABILIZATION METHOD SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.

9. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED SOIL AREAS THAT HAVE REACHED FINISHED LANDSCAPE GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED PERMANENT SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 1. WHERE AREAS HAVE REACHED FINISHED GRADE AND ARE NOT INTENDED TO BE VEGETATED, TEMPORARY TARPS OR OTHER STABILIZING COVERS MAY BE PLACED.

10. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHOULD BE MULCHED IMMEDIATELY FOLLOWING SEEDING IN ADDITION TO AREAS WHICH CANNOT BE SEEDED WITHIN THE RECOMMENDED SEEDING DATES AND ANY SOIL STOCKPILE AREAS. TEMPORARY MULCHING SHOULD BE PERFORMED AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.STRAW OR HAY MULCH, WOOD FIBER MULCH, AND HYDROMULCH ARE RECOMMENDED MULCHES.

11. IF SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, USE THE TEMPORARY MULCHING MEASURE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

12. WHERE TEMPORARY COVERS ARE USED OVER STOCKPILES AND/ OR DISTURBED SOIL AREAS, THE COVERS SHALL BE SUFFICIENTLY ANCHORED AGAINST WIND. THE CONTRACTOR MUST ANTICIPATE AND MANAGE RUNOFF FROM SUCH COVERINGS.

13. ANY EXISTING OR PROPOSED CATCH BASINS THAT MAY BE SUBJECT TO SEDIMENTATION PROCESSES SHALL HAVE SILT SACKS INSTALLED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED STORM DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED SITE. THE PROPER INLET PROTECTION DEVICES SHALL BE INSTALLED WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF ANY DISTURBED DRAINAGE AREA.

14. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES AND THE NEW HAMPSHIRE STORMWATER MANUAL VOL. 3 AND OTHER APPLICABLE REGULATIONS.

15. WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORM WATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., SHALL BE STORED AT THE END OF EACH DAY IN A STORAGE TRAILER OR COVERED LOCATION, OR TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.

16. GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WIRING, PAINTS AND PAINT CANS, SOLVENTS, WALL BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. IN ADDITION, CONSTRUCTION WASTE MUST BE PROPERLY DISPOSED OF IN ORDER TO AVOID EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY.

17. REPAIRS OR REPLACEMENT OF DRAINAGE STRUCTURES, SWALES, OR OTHER DRAINAGE ELEMENTS SHOULD BE DONE WITHIN 12 HRS OF NOTIFICATION OF A DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR IMPACT TO NEARBY RESIDENTS.

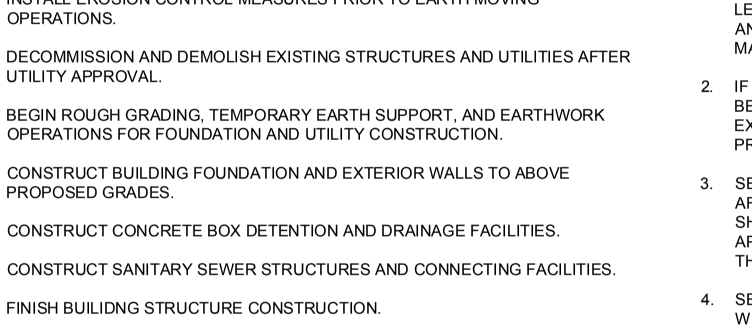
18. IMMEDIATELY PRIOR TO THE END OF CONSTRUCTION OR ACCEPTANCE BY THE OWNER, THE CONTRACTOR SHALL INSPECT ALL ON-SITE STORMWATER MANAGEMENT FACILITIES AND CLEAN AND FLUSH AS NECESSARY AND REQUESTED BY THE ENGINEER AND/ OR THE OWNER.

19. THE CONTRACTOR OR NOMINEE WILL BE THE PARTY RESPONSIBLE FOR THE INSPECTION, MAINTENANCE, AND REQUIRED DOCUMENTATION OF ALL STORMWATER STRUCTURES UNTIL FORMAL PROJECT COMPLETION.

PROJECT SPECIFIC CONSTRUCTION SEQUENCING:

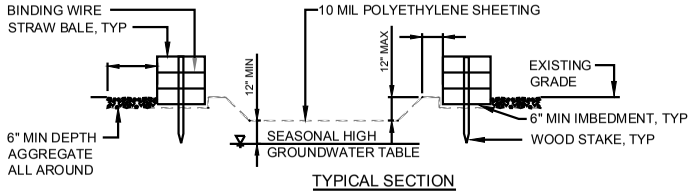
DESCRIBED BELOW ARE THE MAJOR CONSTRUCTION ACTIVITIES ANTICIPATED. THEY ARE PRESENTED IN THE ORDER (OR SEQUENCE) THEY ARE EXPECTED TO BEGIN, BUT EACH ACTIVITY WILL NOT NECESSARILY BE COMPLETED BEFORE THE NEXT BEGINS. ALSO, THESE ACTIVITIES COULD OCCUR IN A DIFFERENT ORDER IF NECESSARY TO MAINTAIN ADEQUATE EROSION AND SEDIMENTATION CONTROL. ALL ACTIVITIES AND THE TIMEFRAME (BEGINNING AND ENDING DATES) SHALL BE RECORDED BY THE CONTRACTOR:

1. CONTRACTOR TO REVIEW ALL APPLICABLE LOCAL, STATE AND FEDERAL PERMITS.
2. REVIEW AND CERTIFY THE STORMWATER POLLUTION PREVENTION PLAN.
3. INSTALL TEMPORARY CONSTRUCTION FENCING.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. INSTALL EROSION CONTROL MEASURES PRIOR TO EARTH MOVING OPERATIONS.
6. DECOMMISSION AND DEMOLISH EXISTING STRUCTURES AND UTILITIES AFTER UTILITY APPROVAL.
7. BEGIN ROUGH GRADING, TEMPORARY EARTH SUPPORT, AND EARTHWORK OPERATIONS FOR FOUNDATION AND UTILITY CONSTRUCTION.
8. CONSTRUCT BUILDING FOUNDATION AND EXTERIOR WALLS TO ABOVE PROPOSED GRADES.
9. CONSTRUCT CONCRETE BOX DETENTION AND DRAINAGE FACILITIES.
10. CONSTRUCT SANITARY SEWER STRUCTURES AND CONNECTING FACILITIES.
11. FINISH BUILIDNG STRUCTURE CONSTRUCTION.
12. SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 12-HOURS AFTER CONSTRUCTION ACTIVITIES CEASE. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR ON THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21-DAYS, THE AREA SHALL BE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
    D. EROSION CONTROL BLANKETS OR TEMPORARY TARPING HAVE BEEN PROPERLY INSTALLED.
13. INSTALL AND CONNECT ALL UNDERGROUND UTILITIES.
14. CONSTRUCT ROADWAYS, DRIVEWAYS, AND HARDSCAPE ACCORDING TO THE PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
15. SURFACE TREATMENT OF ALL DISTURBED AREAS NOT BUILT UPON, PAVED OR OTHERWISE LANDSCAPED SHALL BE TREATED WITH 4" OF LOAM AND SEED.
16. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES CONSISTENT WITH THE PROCEDURE AND SCHEDULE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN.
17. COMPLETE PERMANENT SEEDING AND LANDSCAPING, AND OTHER SURFACE STABILIZATION.
18. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT COMPACTED GRAVELS, OR OTHER INTENDED FINAL COVERINGS.



PLAN — WASHOUT SIGN

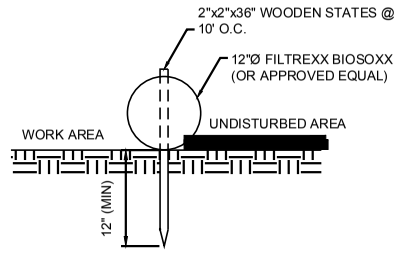
NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.



TYPICAL SECTION

CONCRETE WASHOUT AREA

NOT TO SCALE

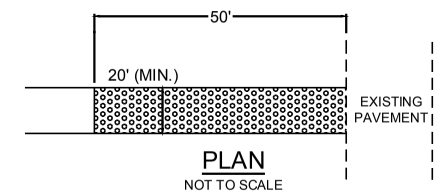


MAINTENANCE:

1. FILTER SOCK SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, REPLACE PROMPTLY.
3. SEDIMENT DEPOSITS SHALL BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS SHALL BE REMOVED WITH FILTER SOCK UPON COMPLETION OF CONSTRUCTION ACTIVITIES.
5. IF ANCHORING THE FILTER SOCK IS NOT POSSIBLE USING STAKES, SUCH AS ON PAVED AREAS, USE SAND BAGS, MASONRY BLOCKS, OR OTHER REMOVABLE WEIGHTS TO KEEP SOCK IN PLACE AT INTENDED LOCATION

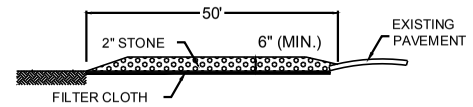
FILTER SOCK INSTALLATION DETAIL

NOT TO SCALE



PLAN

NOT TO SCALE



PROFILE

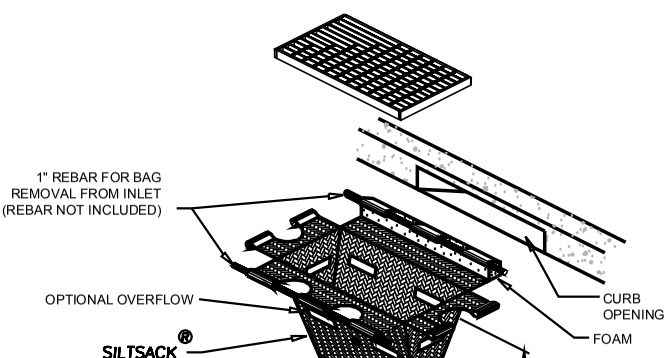
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:

1. USE 2" DIAMETER STONE OR RECLAIMED/RECYCLED CONCRETE EQUIVALENT.
2. RECOMMENDED LENGTH GREATER THAN 50 FEET WHERE PRACTICAL.
3. THICKNESS NOT LESS THAN 6 INCHES.
4. 10 FOOT MINIMUM WIDTH, BUT NOT LESS THAN FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCUR.
5. FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WILL BE PERMITTED.
7. ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR.
9. REMOVE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO PLACEMENT OF BITUMINOUS CONCRETE PAVEMENT.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:
1. CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES) OR EQUAL.

2. INSERT TO BE EMPTIED AND PROPERLY DISPOSED OF WHEN IT IS 1/2 FULL OF SEDIMENT.

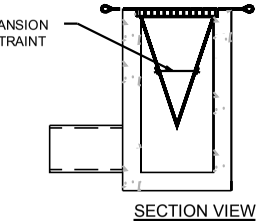
3. INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

EROSION CONTROL NOTES & DETAILS



SECTION VIEW

PROFILE VIEW OF INSTALLED FILTER SACK

SILT SACK INSTALLATION DETAIL

NOT TO SCALE

PERMIT PLANS - NOT FOR CONSTRUCTION

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ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE — JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale:	NTS
Date:	3/17/2017
Project Number:	14837.03

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EROSION & SEDIMENT CONTROL DETAILS

C6.1

ATTACHMENT D

Architectural Supplemental Pages

RESIDENCES AT FOUNDRY PLACE, LOT #6
181 HILL STREET, ASSESSORS MAP 138, LOT 62
LIGHTING COMPLIANCE TO SITE PLAN REVIEW REGULATIONS
ORIGINAL SUBMISSION 06-15-2017
REVISED SUBMISSION 08-21-2017

SUBMITTED BY J & M LIGHTING DESIGN, INC
207-967-5223
jmlight2@roadrunner.com

CITY OF PORTSMOUTH, NEW HAMPSHIRE

SITE PLAN REVIEW REGULATIONS

Adopted by Planning Board: December 17, 2009
Amended: February 18, 2016

Article 10 Outdoor Lighting

Section 10.1 General Provisions

All projects submitted for Site Plan Review shall provide dark sky friendly outdoor lighting according to these regulations in order to:

(a) Permit reasonable uses of outdoor lighting for night-time safety, utility, security, productivity, enjoyment and commerce;

(b) Minimize glare, obtrusive light, and artificial sky glow by limiting outdoor lighting that is misdirected, excessive, or unnecessary;

(c) Conserve energy and resources to the greatest extent possible.

DESIGNER'S COMMENTS 06-05-2017: Project follows the above provisions.

Section 10.2 Compliance with Zoning Ordinance

All projects shall comply with the outdoor lighting dark sky friendly standards provided in the Zoning Ordinance.

DESIGNER'S COMMENTS 06-05-2017: Project is not completely in compliance. West well is over by .07 foot-candles from ordinance criteria of 0.50 average foot-candles.

Section 10.3 Lighting Plan

1. When a proposed project includes outdoor lighting, the Site Plan shall include a lighting plan which shall show:

   (a) The location on the site where outdoor lighting fixtures (both pole and mounted) will be installed.

DESIGNER'S COMMENTS 06-15-2017: See all architectural elevations for the building mounted luminaires

(b) Scaled plans indicating the location of outdoor lighting fixtures on the site, the height of each fixture, the types of outdoor lighting proposed, and the level of wattage and initial lumens for all light sources.

DESIGNER'S COMMENTS 06-15-2017: See attached schedule for compliance verification. "Delivered lumens" values have been used for the calculations.

(c) A description of the outdoor lighting fixtures including but not limited to manufacturer's catalog descriptions and drawings. The required plans and descriptions shall be sufficiently complete to enable the Planning Board to readily determine compliance with the requirements of this regulation.

DESIGNER'S COMMENTS 06-15-2017: See attached catalog pages, photometric report and in some cases photometric template for all fixtures specified

(d) A photometric (iso-lux) plan indicating levels of illumination, in foot candles, at ground level.

DESIGNER'S COMMENTS 06-15-2017: See attached plots Foundry Place first floor and Hill Street second floor for illumination levels Calculation values are presented on 5'-0" centers and carried out to 2 decimal places. These values are initial foot-candles. Iso-lux contours have been provided to illustrate the light of a full moon with no atmospheric particulates, at 0.20 foot-candles a value usually used for minimum security lighting and an arbitrary 1.00 foot-candles.

2. The maintained horizontal illuminance standards set by the Illuminating Engineering Society of North America (IESNA) shall be observed.

DESIGNER'S COMMENTS 06-15-2017:
The following publications were used as references for the design
RP-33-2014 "Lighting for Exterior Environments"
RP-08-2014 "Roadway Lighting"
RP-20-2014 revised "Lighting for Parking Facilities"
IES 10th Edition Handbook.

3. Should any outdoor light fixture, or the type of light source therein, be changed after the building permit has been issued an amended site plan approval shall be required.

Section 10.4 Lamps (LED SOURCES) (08-21-2017)

1. Lamp types shall be selected for optimum color rendering as measured by their color rendering index (CRI), as listed by the lamp manufacturer.

   DESIGNER'S COMMENTS 08-21-2017: All lamps (LED sources) used have a CRI of 80 or above.

2. Lamps with a color rendering index lower than 50 are not permitted. This requirement shall not apply to decorative lighting which may include colored lamps, such as holiday lighting.

   DESIGNER'S COMMENTS 08-21-2017: Project follows this criteria with all lamps (LED sources) having a CRI above 80.

3. Commercial lighting shall meet minimum IESNA illumination levels while not exceeding IESNA uniformity ratios and average illuminance recommendations.

   North side sidewalk during business hours till 11:00 P.M.
   Illumination levels shall be:
   - 2.74 average foot-candles
   - 5.60 Maximum foot-candles
   - 0.5 Minimum foot-candles
   - 5.48:1 Average/minimum
   - 11.20:1 Maximum/minimum

   These illumination levels DO NOT include contribution from City Standard Decorative pole luminaires.

   West well dusk to dawn.
   Illumination levels shall be:
   - 0.57 average foot-candles
   - 2.50 Maximum foot-candles
   - 0.1 Minimum foot-candles
   - 5.70:1 Average/minimum
   - 25.00:1 Maximum/minimum

   West side (ADDED 08-21-2017)
   Illumination levels shall be:
   - 0.47 average foot-candles
   - 1.31 Maximum foot-candles
   - 0.06 Minimum foot-candles
   - 7.83:1 Average/minimum
   - 21.83:1 Maximum/minimum

   East Path during business hours till 11:00 P.M.
   Illumination levels shall be:

1.08 average foot-candles
2.1 Maximum foot-candles
0.7 Minimum foot-candles
1.54:1 Average/minimum
3.00:1 Maximum/Minimum

After 11:00 P.M. 2 luminaires shall be on a separate circuit and shut-off to comply with the 0.50 average requirement

South side sidewalk
Illumination levels shall be:

2.18 average foot-candles
5.0 Maximum foot-candles
0.5 Minimum foot-candles
4.36:1 Average/minimum
10.0:1 Maximum/Minimum

Courtyard Walkway
Illumination levels shall be:

4.0 average foot-candles
9.6 Maximum foot-candles
2.2 Minimum foot-candles
1.82:1 Average/minimum
4.36:1 Maximum/Minimum

At 11:00 P.M. single luminaire shall be left on to reduce illumination level to under 0.50 average foot-candles.

RESIDENCES AT FOUNDRY PLACE, LOT #6
181 HILL STREET, ASSESSORS MAP 138, LOT 62
LIGHTING COMPLIANCE TO ZONING
ORDINANCE OUTDOOR LIGHTING
ORIGINAL SUBMISSION 06-15-2017
REVISED SUBMISSION 08-21-2017

SUBMITTED BY J & M LIGHTING DESIGN, INC
207-967-5223
jmlight2@roadrunner.com

CITY OF PORTSMOUTH, NEW HAMPSHIRE

ZONING ORDINANCE

Adopted by Portsmouth City Council: December 21, 2009
Effective Date: January 1, 2010

As Amended Through: January 9, 2017

Table of Articles and Sections

ARTICLE 11 SITE DEVELOPMENT STANDARDS

Section 10.1140 Outdoor Lighting

10.1141 Purpose

The purpose of this section is to enhance public safety and welfare by providing for adequate and appropriate outdoor lighting, providing for lighting that will complement the character of the City, reduce glare, minimize light trespass, reduce the cost and waste of unnecessary energy consumption, and prevent the degradation of the night sky.

10.1142 General Requirement and Applicability

10.1142.10 All public and private new or replacement outdoor lighting installed in the City of Portsmouth shall be in conformance with the requirements established by this Ordinance.

DESIGNER COMMENTS 06-15-2017: Project shall follow all provisions of the ordinance, except 1. The west well is .07 foot-candles over the ordinance value of 0.50.

10.1142.20 Any luminaire that does not conform to the standards of this Ordinance but was lawfully in place prior to the adoption of these standards shall be permitted to remain. However, any luminaire that replaces a nonconforming luminaire, or any nonconforming luminaire that is moved, must meet the standards of this Ordinance.

DESIGNER COMMENTS 06-15-2017: No existing luminaires are on this project.

10.1142.30 The following types of lighting are exempt from the requirements of this section:

10.1142.31 All temporary lighting required for construction projects related to road construction and repair, installation of sewer and water facilities, and other public infrastructure.

10.1142.32 All temporary emergency lighting needed by the police or fire departments or other emergency services, as well as all vehicular luminaires.

10.1142.33 State or Federal regulated lighting such as airports, towers

requiring lighting, highway signage and traffic signals, etc.

10.1142.34 Low wattage or low voltage temporary decorative lighting used for holidays, festivals and special events, provided they do not pose a safety or nuisance problem due to light trespass or glare.

DESIGNER COMMENTS 06-15-2017:
Items 10.1142.31, 10.1142.32, 10.142.33 are exempt from this submittal. 10.1142.34 shall be on the project at some-time but not designed or submitted as part of this submission.

10.1143 Total Outdoor Light Output Allowance

10.1143.10 Total outdoor light output for a parcel shall not exceed the lumen limits given in the following table. Values in this table are upper limits and not design goals; design goals should be the lowest levels that meet requirements of the task.

Zoning Districts	Maximum Mean Lumens Per Net Acre
Airport District (AIR)	Exempt
All Business Districts, except within the Historic District All Industrial Districts Airport Industrial, Pease Industrial, Airport Business Commercial	300,000
All Residential Districts All Mixed Residential Districts All Conservation Districts Historic District	55,000

10.1143.20 The total lumens shall be 100 percent of the lumens from outdoor light fixtures installed on grade, on poles, and on the top or sides of buildings or other structures.

DESIGNER'S COMMENTS 06-15-2017: Project is in the Business District (CD5-District) allowing 300,000 mean lumens.

Lighting in the indoor garages are not part of the defined outdoor light fixtures per 10.1143.40b.

10.1143.30 "Net acres" shall mean the total parcel area excluding the area of (a) proposed and existing streets within the parcel, and (b) sports playing fields exempted from the lumens per acre cap under Section 10.1143.50.

DESIGNER'S COMMENTS 06-15-2017: Net acres for LOT #6 is 0.517 acres x 300,000 lumens allowance = 155,100 allowed lumens. There are no sport playing fields on this project. Our net lumens equal 16,000 lumens under the allotted value, we are in compliance.

Lighting in the indoor garages are not part of the "Net Acres" lumen count per 10.1143.40b

10.1143.40 Outdoor lighting fixtures meeting one of the following conditions shall not be counted in determining the total light output:

(a) Full cut-off fixtures installed under canopies, building overhangs, or roof eaves.

DESIGNER'S COMMENTS 06-15-2017: Full-cut-off is a deprecated term. The Illuminating Engineering Society (IES) has replaced the designation by the "BUG" rating. All luminaires used have upward component of U = "0"

The following fixtures are included in net lumen acre lumens values.

Type JAW	at 1,047	x	7 = 7,329
Type JBW	at 74	x	54 = 3,996
Type JFW-m	at 160	x	8 = 1,280
Type JFW-s	at 131	x	6 = 786
Type JHP			
run #3 & #6	at 1,950	x	2 = 3,900
run #1, #2, #4, #5	at 1,190	x	4 = 4,760

22,051 total lumens

Allowance is 155,100 project is under allowance

The following luminaires are NOT included due to a BUG rating of U-0 [Full cut-off].

Type JCW
Type JCW-R
Type JDW
Type JER
Type JGW

(b) Light fixtures shielded by the canopy, building overhang, or roof eaves in such a manner that no lamp or vertical element of a lens or diffuser is visible from off-site.

DESIGNER'S COMMENTS 06-15-2017: Garage fixtures meet the criteria of protected by building above and are not included in the net lumen quantity

10.1143.50 Sports venue lighting is exempt from any lumens per acre standard for the playing field only.

DESIGNER'S COMMENTS 06-15-2017: There are no sports venue lighting on this project.

10.1144 Luminaire Design and Height

10.1144.10 Any luminaire with a lamp or lamps rated at a total of more than 1,800 lumens (and any flood or spot luminaires of more than 900 lumens) shall be a full-cutoff fixture and shall not emit any direct light above a horizontal plane passing through the lowest part of the light-emitting luminaire

DESIGNER'S COMMENTS 06-15-2017: All luminaires used on this project have a lumen output of under 1,800 lumens. Luminaires that do not have a BUG rating of "U0" [full-cut-off classification]
TYPE JAW
TYPE JFW-s
TYPE JFW-m
TYPE JHP #1, #2, #4, #5
All under 1,800 lumens
TYPE JHP #3 & JHP #6
These 2 units have a lumen output of 1,950 lumens, 150 lumens over criteria.

10.1144.20 Any luminaire, regardless of lumen rating, shall be equipped with whatever additional shielding, lenses, or cutoff devices are required to prevent light trespass onto any residential property that adjoins or is directly across a street, highway or stream from the lot on which the luminaire is located, and to prevent glare perceptible to persons on such residential property.

DESIGNER'S COMMENTS 06-15-2017: TYPE JAW shall be visible from off site. All luminaires used on this project shall use luminaires that restrict the light to the Lot #6 property depending on the viewers elevation in relation to the fixture.

10.1144.30 Building façades may be illuminated with low intensity lighting as follows:

10.1144.21 The light source for the building façade illumination shall be concealed.

DESIGNER'S COMMENTS 06-15-2017: Building facades shall be illuminated down-ward by the shielded luminaires mounted to the building. At the courtyard on the first floor, grills at the garage shall be illuminated from cantilevered luminaires mounted above the grills. TYPE JGW. These illuminated vertical surfaces on the west side of the courtyard are shielded from view by the building wing to the east. Residential properties to the southeast might see some luminance depending on color of the grating. Luminaires shall be enclosed and are classified flood or spot luminaires with a lumen output of under 900 lumens

10.1144.22 Building entrances may be illuminated using recessed lighting in overhangs and soffits, or by use of spotlighting focused on the building entrances with the light source

concealed (e.g., in landscaped areas).

DESIGNER'S COMMENTS 06-15-2017: On the North side of the building along Foundry Place commercial entrances use recess luminaires.

10.1144.23 Direct lighting of limited exterior building areas is permitted when necessary for security purposes.

DESIGNER'S COMMENTS 06-15-2017: There shall be no lighting for security purposes. Lighting for security shall be designed luminaires in this project.

10.1144.40 Increased lighting interrupts or changes the natural duration of night light and can prevent some trees from going into dormancy, thereby making them more susceptible to winter weather and can decrease their effectiveness in tolerating pollution.

10.1144.41 Wherever possible, placement of lighting should be done in such a way as to direct light away from trees.

DESIGNER'S COMMENTS 06-15-2017: In the courtyard lighting shall illuminate some of the plantings as part of the design to make the courtyard inviting. The courtyard is blocked by the east and west wings of the building.
On the rest of the building west, north and east lighting shall be directed away from the trees when possible. Trees and light placement are being coordinated by the responsible design disciplines.

10.1144.42 When lighting will be directed at trees, high pressure sodium lamps and any incandescent lamps are not allowed.

DESIGNER'S COMMENTS 06-15-2017: In the courtyard lighting shall be in the trees. All lighting shall follow the ordinance by the use of LED 3,000 k, with a CRI of over 80 to be in compliance with the provisions of the section.

10.1144.43 When planting trees where supplemental lighting already exists, trees shall be selected that have low sensitivity to light.

DESIGNER'S COMMENTS 06-15-2017: SEE NARRATIVE ON LANDSCAPE PLAN.

10.1144.50 A flood or spot luminaire with a lamp or lamps rated at 900 lumens or less may be used without restriction to light distribution, provided that it is aimed, directed, or focused so as not to cause direct light from the luminaire to be directed toward any residential property that adjoins or is directly across a street, highway or stream from the lot on which the luminaire is located, or to create glare perceptible to persons operating motor vehicles on public ways.

DESIGNER'S COMMENTS 06-15-2017:
TYPE JGW shall be directed toward the project building and not focused off property

10.1144.60 The maximum mounting height of a luminaire shall be 20 feet above grade except as follows:

10.1144.61 Flood or spot luminaires with a lamp or lamps rated at 900 lumens or less, and other luminaires with a lamp or lamps rated at a total of 1800 lumens or less, may be used without restriction to mounting height.

DESIGNER'S COMMENTS 06-15-2017: We have luminaires installed above 20'-0" on the balconies and decks, but they have a lumen output of 74 lumens (TYPE JBW). The project complies with this requirement.

10.1144.62 Luminaires used for public-roadway illumination may be installed at a maximum height of 25 feet and may be positioned at that height up to the edge of any bordering property.

DESIGNER'S COMMENTS 06-15-2017: There are no luminaires used for public roadway illumination. In compliance.

10.1144.63 Luminaires used primarily for sign illumination may be mounted at any height to a maximum of 25 feet, regardless of lumen rating.

DESIGNER'S COMMENTS 06-15-2017: Sign Lighting is not part of this submission.

10.1144.64 Luminaires used for athletic fields are exempt from the height limitations.

DESIGNER'S COMMENTS 06-15-2017: There are no athletic fields on this project. In compliance

10.1145 Hours of Operation

10.1145.10 Outdoor lighting shall not be illuminated between 11:00 p.m. and 6:00 a.m. with the following exceptions:

10.1145.11 If the use is being operated, such as a business open to customers, or where employees are working or where an institution or place of public assembly is conducting an activity, normal illumination shall be allowed during the activity and for not more than one hour after the activity ceases.

DESIGNER'S COMMENTS 06-15-2017: This project is primarily

residential property. On the north side of the building Ground floor is commercial space

10.1145.12 Low level lighting sufficient for the security of persons or property on the lot may be in operation between 11:00 p.m. and 6:00 am, provided the average illumination on the ground or on any vertical surface is not greater than 0.5 foot-Candles

DESIGNER'S COMMENTS 06-15-2017: See photometric plan for foot-candle illustrating compliance.

10.1146 Recreational Facilities

10.1146.10 Any light source permitted by this Ordinance may be used for lighting of outdoor recreational facilities (public or private), such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts, or show areas, provided all of the following conditions are met:

10.1146.11 All fixtures used for lighting recreational fields and facilities shall be full-cutoff fixtures.

10.1146.12 All lighting installations shall be designed to achieve no greater than the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA).

10.1146.13 All events shall be scheduled so as to complete all activity before or as near to 11:00 pm as practical, but under no circumstances shall any illumination of the playing field, court, or track be permitted after 11:00 pm except to conclude a scheduled event that was in progress before 11:00 pm and circumstances prevented concluding before 11:00 pm.

DESIGNER'S COMMENTS 06-15-2017: Does not apply. There are no outdoor recreational facilities on this project.

10.1147 Outdoor Display Lots

10.1147.10 Any light source permitted by this Ordinance may be used for lighting of outdoor display lots as defined by this Ordinance, provided that both of the following conditions are met:

10.1147.11 All fixtures used for lighting the display lots shall be full-cutoff fixtures.

10.1147.12 All lighting installations shall be designed to achieve no greater than the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA).

DESIGNER'S COMMENTS 06-15-2017: Does not apply. There are no Outdoor Display Lots on this project.

10.1148 Temporary Outdoor Lighting

10.1148.10 Any temporary outdoor lighting that conforms to the requirements of this Ordinance shall be allowed. Nonconforming temporary outdoor lighting may be permitted by the Board of Adjustment after considering:

(a) the public and/or private benefits that will result from the temporary lighting;

(b) any annoyance or safety problems that may result from the use of the temporary lighting; and

(c) the duration of the temporary nonconforming lighting.

10.1148.20 The applicant shall submit a detailed description of the proposed temporary nonconforming lighting to the Board of Adjustment and shall comply with all procedures for special exceptions as stated in Article 2.

DESIGNER'S COMMENTS 06-15-2017: Project does not anticipate temporary lighting at this submission except for lighting for the holiday season.

10.1149 Prohibitions

The following uses and types of lighting are prohibited:

10.1149.10 The use of laser source light or any similar high intensity light for outdoor advertising or entertainment, when projected above the horizontal.

10.1149.20 The operation of searchlights except by civil authorities for public safety.

10.1149.30 The nighttime use of white or white strobe lighting on communication towers unless written proof of FAA requirement is provided.

DESIGNER'S COMMENTS 06-15-2017: Project shall be in conformance with section.

FOUNDRY PLACE ELEVATION 0 (12'-3-3/8" ACTUAL ELEVATION)
ALL LIGHT LEVELS INITIAL HORIZONTAL FOOT-CANDLES

J & M LIGHTING DESIGN, INC
207-067-5223
jmlight2@roadrunner.com
JUNE 15, 2017

Job File: FoundryPlace 06-13-2017.AGI
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

Luminaire Definition(s)

JAW
CL-ADA-XL-LED15-4K-EBU-SGR 102063649CHI-031

Filename	102063649CHI-031.ies
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	2094
Luminaire Lumens	2094
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.400
Luminaire Watts	10
Arrangement Watts	10
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type IV, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.50

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	51.5	N.A.	2.5
LCS-FM	307.5	N.A.	14.7
LCS-FH	361.4	N.A.	17.3
LCS-FVH	203.4	N.A.	9.7
LCS-BL	13.4	N.A.	0.6
LCS-BM	43.7	N.A.	2.1
LCS-BH	40.6	N.A.	1.9
LCS-BVH	22.0	N.A.	1.1
LCS-UL	225.7	N.A.	10.8
LCS-UH	824.4	N.A.	39.4
Total	2093.6	N.A.	100.0
BUG Rating	B0-U4-G2		
Indoor Classification	General Diffuse		
LER	209		

JCW
AEL12-10W 4000K

Filename	AEL12-10W-4000K.ies
Lumens Per Lamp	N.A.
Number of Lamps	28
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	726
Luminaire Lumens	726
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.800
Luminaire Watts	10.8
Arrangement Watts	10.8
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type III, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	133.9	N.A.	18.4
LCS-FM	398.4	N.A.	54.9

Job File: FoundryPlace 06-13-2017.AGI
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

Luminaire Definition(s) - Cont.

LCS-FH	117.9	N.A.	16.2
LCS-FVH	4.5	N.A.	0.6
LCS-BL	19.0	N.A.	2.6
LCS-BM	33.5	N.A.	4.6
LCS-BH	17.0	N.A.	2.3
LCS-BVH	1.7	N.A.	0.2
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	725.9	N.A.	100.0
BUG Rating	B0-U0-G0		
Indoor Classification	Direct		
LER	67		

JCW-R
AEL12-10W 4000K REDUCED

Filename	AEL12-10W-4000K.ies
Lumens Per Lamp	N.A.
Number of Lamps	28
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	726
Luminaire Lumens	726
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.560
Luminaire Watts	7
Arrangement Watts	7
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type III, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	133.9	N.A.	18.4
LCS-FM	398.4	N.A.	54.9
LCS-FH	117.9	N.A.	16.2
LCS-FVH	4.5	N.A.	0.6
LCS-BL	19.0	N.A.	2.6
LCS-BM	33.5	N.A.	4.6
LCS-BH	17.0	N.A.	2.3
LCS-BVH	1.7	N.A.	0.2
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	725.9	N.A.	100.0
BUG Rating	B0-U0-G0		
Indoor Classification	Direct		
LER	104		

JDW
1403201050-001 MOD# AEL36-14W 4000K

Filename	AEL36-15W-4000K.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	1213

Job File: FoundryPlace 06-13-2017.AGI
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

Luminaire Definition(s) - Cont.

Luminaire Lumens	1213
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.800
Luminaire Watts	14.1
Arrangement Watts	14.1
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type II, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	271.9	N.A.	22.4
LCS-FM	568.7	N.A.	46.9
LCS-FH	117.9	N.A.	9.7
LCS-FVH	6.3	N.A.	0.5
LCS-BL	108.6	N.A.	9.0
LCS-BM	114.2	N.A.	9.4
LCS-BH	24.4	N.A.	2.0
LCS-BVH	1.1	N.A.	0.1
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	1213.1	N.A.	100.0
BUG Rating	B0-U0-G0		
Indoor Classification	Direct		
LER	86		

JER
1020-B1-S-10-LRTD4-9020-M2-30KS-80-NCSM

Filename	1020-B1-S-10-LRTD4-9020-M2-30KS-80.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	1037
Luminaire Lumens	1037
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	1.000
Luminaire Watts	21.1
Arrangement Watts	21.1
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type V, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	192.5	N.A.	18.6
LCS-FM	287.3	N.A.	27.7
LCS-FH	36.7	N.A.	3.5
LCS-FVH	1.9	N.A.	0.2
LCS-BL	192.5	N.A.	18.6
LCS-BM	287.3	N.A.	27.7
LCS-BH	36.7	N.A.	3.5
LCS-BVH	1.9	N.A.	0.2
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	1036.8	N.A.	100.0

Luminaire Definition(s) - Cont.

BUG Rating	B1-U0-G0
Indoor Classification	Direct
LER	49

Job File: FoundryPlace 06-13-2017.AGI
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

Luminaire Location(s)

Luminaire Locations
Project Name : Project_1
Coordinates in Feet

Lum. No.	Label	X	Y	Z	Orient	Tilt	Roll	Spin	Aiming Point X	Aiming Point Y	Aiming Point Z	Status
2	JCW	216.821	115.548	11.22	0	0	0	0	216.821	115.548	11.22	On
4	JCW	214.808	124.795	11.22	0	0	0	0	214.808	124.795	11.22	On
5	JER	218.989	133.293	13.56	94.535	0	0	0	218.989	133.293	13.56	On
6	JDW	89.929	140.529	8.11	95.381	0	0	0	89.929	140.529	8.11	On
7	JDW	101.202	141.528	8.11	95.381	0	0	0	101.202	141.528	8.11	On
8	JAW	108.214	142.13	6.85	96.027	0	0	0	108.214	142.13	6.85	On
9	JER	219.068	142.415	13.56	94.535	0	0	0	219.068	142.415	13.56	On
10	JAW	118.617	143.032	6.85	96.027	0	0	0	118.617	143.032	6.85	On
11	JER	112.877	143.846	13.56	94.535	0	0	0	112.877	143.846	13.56	On
12	JAW	134.021	144.52	6.85	96.027	0	0	0	134.021	144.52	6.85	On
15	JAW	158.995	146.651	6.85	96.027	0	0	0	158.995	146.651	6.85	On
16	JAW	173.963	148.077	6.85	96.027	0	0	0	173.963	148.077	6.85	On
17	JER	166.438	149.001	13.56	94.535	0	0	0	166.438	149.001	13.56	On
18	JER	199.816	152.564	13.56	94.535	0	0	0	199.816	152.564	13.56	On
19	JER	209.729	153.42	13.56	94.535	0	0	0	209.729	153.42	13.56	On
20	JER	218.911	154.052	13.56	94.535	0	0	0	218.911	154.052	13.56	On
3	JCW-R	63.381	118.462	8.18	180	0	0	0	63.381	118.462	8.18	On

Summary By Label
Project Name : Project_1

Label	On	Off	Total
JAW	5	0	5
JCW	2	0	2
JCW-R	1	0	1
JDW	2	0	2
JER	7	0	7

Job File: FoundryPlace 06-13-2017.AGI
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

06-15-2017

We reserve the right to revise the design or components of any product without notice.

CATALOG #	BASIC-R-XL1-ME-LED-10W-3K-EBU-D7-SGR-OQT-TOP ONLY	TYPE
PROJECT/LOCATION	LOT #6	JAW
APPROVED BY	JMLD	

Galileo ADA

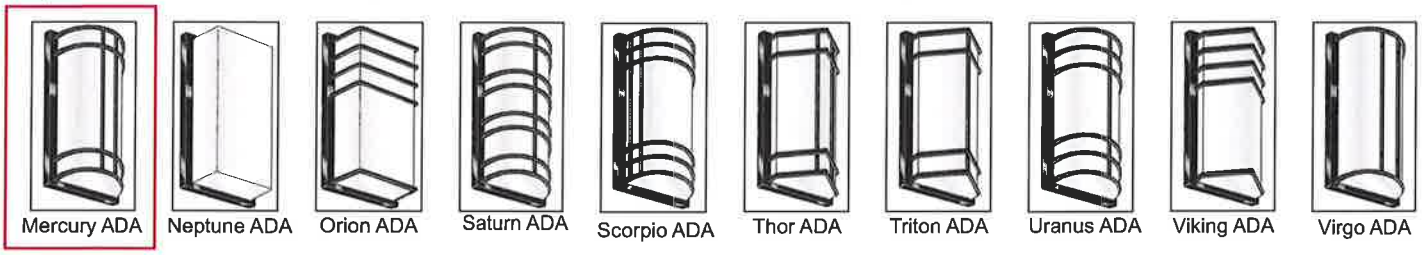
4" PROJECTION LED SCONCE
ANY Shape Diffuser
may include Perfex and/or Shield

SPECIFICATIONS

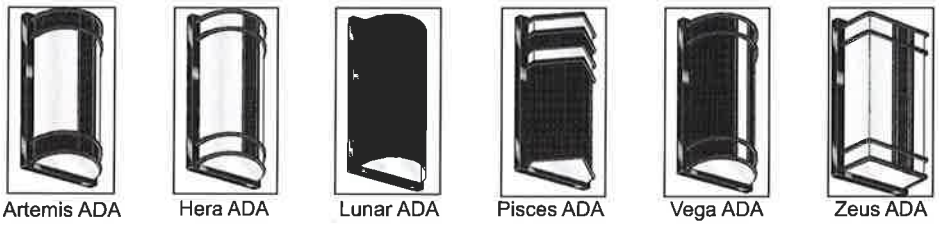
- BACKPLATE — 16 Ga. aluminum (AL).
- BACKBOX — 16 Ga. aluminum (AL) with wire access on four sides and back through 7/8" dia. KO flattened water tight (Optional for surface conduit entry or standard with emergency battery).
- CAGE — Modular design using 3/8" or 1/2" Square extruded aluminum bars (SQB) permanently secured by hidden means to the frame. Standard configurations shown. Custom spacing available.
- DIFFUSER — White translucent, fully enclosed non-yellowing 100% virgin acrylic, .125 Thick (1/8"). Optional Clear (CTB) top and/or bottom — CTB is Standard with Uplight and/or Downlight; Opaque (OQTB) top and/or bottom; or Open (ONTB) top and/or bottom — Dry Location Only.
- FASTENERS — Stainless steel tamperproof screws —(2) To secure lens in place.
- FINISH — Corrosion and Weather resistant, extremely durable pre-treated oven baked polyester powder.
- GASKETING — High Temp., non-aging black EPDM and/or neoprene rubber around the entire lens perimeter & rear wire entrance hole to protect against dust, moisture & outside contaminants.
- MOUNTING — Use (4) or (6) 5/16" diameter holes for 1/4" diameter bolts for outdoor or indoor. 7/8" KO in Center for Wire Access. Must derate lamping for horizontal.
- PERFEX/SHIELD — PX: Perforated Aluminum Panel Insert with 1/16" dia. holes, SHLD: Solid Aluminum Opaque Shield (lamp/watt limits). Specify Finish if choosing Perfex or Shield.
- WALL WASH — CTB is Standard with Uplight or/and Downlight. For wall wash patterns specify: UP (Uplight) or DN (Downlight) or UP/DN (Up and Downlight).
- COMPLIANCE — Built to comply with U.S. and Canadian safety standards. Suitable for wet locations.

Galileo Basic R/Basic T: Round/Rectangular or Triangular Diffuser with **No Perfex, No Shield**


Apollo ADA, Aztec ADA, Classic ADA, Galaxy ADA, Gemini ADA, Juno ADA, Jupiter ADA, Leo ADA, Libra ADA, Mariner ADA


Mercury ADA, Neptune ADA, Orion ADA, Saturn ADA, Scorpio ADA, Thor ADA, Triton ADA, Uranus ADA, Viking ADA, Virgo ADA

Galileo Signature: Any Shape Diffuser with **Perfex** ***(Consult Factory: May Require Lower Wattage)***


Artemis ADA, Hera ADA, Lunar ADA, Pisces ADA, Vega ADA, Zeus ADA

Galileo Elite: Any Shape Diffuser with **Shield** ***(Consult Factory: May Require Lower Wattage)***


Aurora ADA, Cancer ADA, Capricorn ADA, Comet ADA, Sagittarius ADA, Titan ADA

ECLIPSE™ LIGHTING

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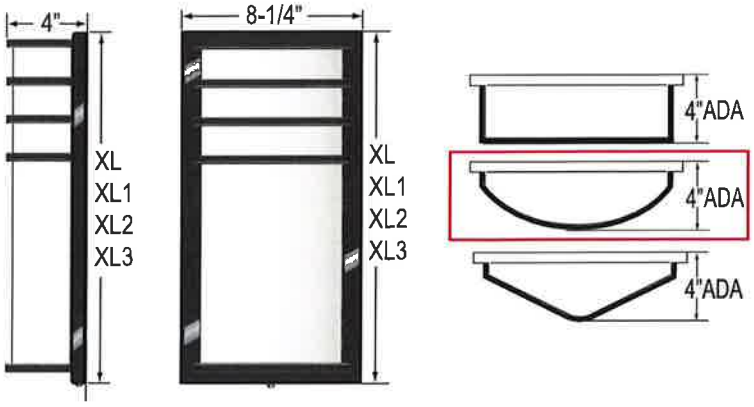
Galileo ADA

4" PROJECTION LED SCONCE
ANY Shape Diffuser
may include Perfex and/or Shield



LAMP TYPE/QTY/WATTAGE[1] Visit www.eclipselightinginc.com for available IES files					
Fixture Size		XL	XL1	XL2	XL3
Dimensions - W x H x D		8¼" x 18" x 4"	8¼" x 21" x4"	8¼" x 26¼" x 4"	8¼" x 30" x 4"
Light Emitting Diode	LED	15w	~~20w~~ 10	25w	25w
Light Emitting Diode[48] Uplight/Downlight *Clear Top/Bottom (CTB) Standard with UP/DN*	UP/DN	5w			
**Consult Factory for CFL, Linear Fluorescent, HID, and Induction Lamping*					

ORDERING GUIDE:

Series	Size	Lamp/Qty/Watt	Color Temp	Voltage: Primary/Emergency	Finish	Options
BASIC R	XL1	ME-LED10W	3K	EBU-D7	SGR	OQT - TOP ONLY

SERIES
Refer to Index Page—Choose any rectangular, round or triangular model from Basic R, Basic T, Elite or Signature Series.

SIZE
XL = 8.25" Wide x 18" Tall x 4" Deep
XL1 = 8.25" Wide x 21" Tall x 4" Deep
XL2 = 8.25" Wide x 26" Tall x 4" Deep
XL3 = 8.25" Wide x 30" Tall x 4" Deep

LAMP TYPE/QUANTITY/WATTAGE
Refer to Above Chart

LED COLOR TEMPERATURE
3K = ±3000K Range
4K = ±4000K Range
5K = ±5000K Range

VOLTAGE
120 = 120 Volts
277 = 277 Volts
347 = 347 Volts
EBU = Universal Volt (120-277v) Electronic Driver
2EBU = Two Universal Drivers

STANDARD PAINTED FINISH
BK = Black Finish
BZ = Bronze Finish — Standard
PNA = Painted Natural Aluminum
SGR = Silver Gray
WH = White Finish

CUSTOM ORDER PAINTED FINISH
CC = Custom Color (Provide Specs)
CH = Corvel Chrome
HBA = Hand Brushed Aluminum w/ Clear Coat

OPTIONS
9002 = Tamperproof Screwdriver
ATBS = Aluminum Top & Bottom Shield (No Light)
BB = 2" Backbox For EL or Surface Conduit
CM = Ceiling Mount[6]
CR = Custom Requirements
CTB = Clear Top & Bottom (Standard with Up/Downlight)[48]
FUS = Single Fusing
DFUS = Double Fusing
GTD = Generator Transfer Device (Bodine)
GV = Gravura Custom Engraving
HM = Horizontal Mount[6]
OQTB = Opaque Top ~~& Bottom~~ (reduces light transmission)
ONTB = Open Top & Bottom — Indoor only

LED OPTIONS
BL1 = Bi-Level Light (High/Low)
— Single AC Input Feed, with Switch Sensor (Required)
BL2 = Bi-Level Light (High/Low)
— Wired for Dual AC Input Feeds
D7 = 0-10V low-voltage LED Dimming (100-30% Standard, Consult Factory for Other)
MSE = Motion Sensor External[2]
—Single circuit-all on, all off
Specify Finish: White (WH)/Bronze (BZ)
MSE2 = Motion Sensor External[2]
—Dual circuit, half on half off
Specify Finish: White (WH)/Bronze (BZ)
MSI1 = Motion Sensor Integral[20] *(Microwave)*
—Single Circuit:-OFF / ALL-ON
MSI2 = Motion Sensor Integral[20] *(Microwave)*
—Single Circuit: HALF-ON / ALL-ON

EMERGENCY OPTIONS[3][35]
No onsite Emergency Power (AC or DC) is provided
Specify Fixture Voltage: 120V or 277V Power Feed
A=120V or B=277V

LED Emergency Battery
*CONSULT FACTORY for Remote LED Emergency Battery Options

NOTES:
1. Consult Factory with requests regarding lamp sources including LED, color temp, wattages or voltages not shown.
2. Backbox (BB) Required *(where text bold and Note[2] shown)*
3. Consult Factory for additional Emergency Battery options not shown
6. Consult Factory: May Require Lower Wattage or Backbox
20. Max mounting height of fixture is 10' (10 feet)
48. Clear Top and Bottom (CTB) is Standard with Uplight and/or Downlight (UP/DN)
52. Consult Factory for other Voltage.
31. Battery Available as Integral or Remote - Specify REL for Remote option (ie. EL1 = Integral; REL1 = Remote)
35. Due to form and fit, final selection of the Battery Pack under discretion of Factory

ECLIPSE™ LIGHTING
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	**DRAWING DESIGNATION**	**DESCRIPTION**	**MANUFACTURER**	**CATALOG NUMBER**	**MOUNTING**	**LAMP SOURCE**	**COLOR TEMP**	**CRI**	**WATTS**	**VOLTS**	**BEAM SPREAD**	**LAMP LUMENS**	**DELIVERED LUMENS *1**	**CURRENT RATING**	**DIMING PROTOCOL**	**DIMING THRESHOLD**	**CONTROL CONCEPT**	**COLOR**	**BUG RATING**	**DLC**	**UL LISTED**	**TOTAL QTY**	**LED REPLACEABLE**	**NOTES**	**PHOTOMETRIC FILE**
2																									
3	JAW	CUT-OFF WALK-WAY	ECLIPSE	BASIC-R-XL1-ME-ADA-LED10W-3K-EBU-D7-SGR-OQT-TOP ONLY	SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS	LED	3,000 k	84	10	120	NA	NA	1046.8	AC	0-10V	DOWN TO 10%	FOUNDRY PLACE ON DUSK TO DAWN, AT THE COURTYARD FIXTURE OFF FROM 11:00 P.M. TILL DAWN	(SGR) SILVER GRAY	B-0; U-4; G-2	NO	WET	6	YES		102063649CHI-031 - 20 WATT PRO-RATA TO 10 WATTS TO BE UNDER THE 1,800 LUMEN CRITERIA
4	JBW	RECESS STEP LIGHT	WAC LIGHTING	WL-LED300-C-WT	RECESS IN WALL 2'-6" AFF TO BOTTOM OF EYELID	LED	3,000 k	85	3.9	120	NA	NA	74	AC	ELV	DOWN TO 10%	DIMMABLE AT EACH RESIDENCE AT DOOR TO DECK	(WT) WHITE	B-0; U-0; G-0	NO	WET	54	YES	MOUNT ON A BLOCK TO REDUCE PENETRATION INTO INSULATION	WL-LED300-C-WT.IES
5	JCW	WALL MOUNT ABOVE DOORS OR ON EAST SIDE	LUMINAIRE	AEL 12-10W-3000-120-277-DP-SVH-A/B	MOUNT UTILITY DOORS, PEOPLE DOOR TO GARAGE ON 1ST LEVEL AND ON EAST SIDE OF BUILDING WALKWAYS - SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS	LED	3,000 k	82	10.8	120-277	NA	NA	747	AC	ON/OFF	NA	ON-OFF ONLY DUSK TO DAWN	(SVH) HAMMERTONE SILVER	B-0; U-0; G-0	NO	WET	4	YES	FIXTURES ARE MOUNTED ON 1" BACKBOX SURFACE MOUNTED ON WALL	AEL12-10W-4000K.ies (LLI-14257-1) lumens adjusted for 3k
6	JCW-R	WALL MOUNT ABOVE DOORS	LUMINAIRE	AEL 12-7W-3000 K-120--DP-SVH-A/B	MOUNT UTILITY DOORS ON WEST SIDE FOUNDRY PLACE - SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS	LED	3,000 k	82	7	120-277	NA	NA	406.56	AC	ON/OFF	NA	ON-OFF ONLY DUSK TO DAWN	(SVH) HAMMERTONE SILVER	B-0; U-0; G-0	NO	WET	6	YES	FIXTURES ARE MOUNTED ON 1" BACKBOX SURFACE MOUNTED ON WALL	AEL12-10W-4000K.ies (LLI-14257-1) lumens adjusted for 3k, adjusted 30% lower watts & lumens (x.70)
7	JCW-R	WALL MOUNT	LUMINAIRE	AEL 12-7W-3000 K-120--DP-SVH-A/B	MOUNT ON WEST SIDE HILL STREET - SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS	LED	3,000 k	82	7	120-277	NA	NA	406.56	AC	ON/OFF	NA	ON-OFF ONLY DUSK TO DAWN	(SVH) HAMMERTONE SILVER	B-0; U-0; G-0	NO	WET	6	YES	FIXTURES ARE MOUNTED ON 1" BACKBOX SURFACE MOUNTED ON WALL	AEL12-10W-4000K.ies (LLI-14257-1) lumens adjusted for 3k, adjusted 30% lower watts & lumens (x.70)
8	JDW	WALL MOUNT ABOVE GARAGE	LUMINAIRE	AEL 36-15-3000-120-277-DP-SVH-DIM A/B	MOUNT ABOVE GARAGE DOORS - SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS	LED	3,000 k	82	14.1	120-277	NA	NA	1248	AC	0-10V	DOWN TO 10%	NORTH SIDE GARAGE VEHICLE ENTRANCE ON DUSK TO DAWN - SOUTH SIDE GARAGE VEHILCLE ENTRANCE LIGHTS ON WHEN OWNERS ARE USING THE FACILITY	(SVH) HAMMERTONE SILVER	B-0; U-0; G-0	NO	WET	4	YES	FIXTURES ARE MOUNTED ON 1" BACKBOX SURFACE MOUNTED ON WALL	AEL36-15W-4000K.IES CALCULATION LUMENS AT 1,213 FOR 3,000 k
9	JER	RECESS LIGHTS AT CANOPIES	USAI LIGHTING	1020-W-B1-S-10-LRTD4-9020-M2-30KS-80-NCSM-120-DIML2-CB27	RECESS IN CEILING OF CANOPIES	LED	3,000 k	80	21.1	120	80	1,500	1,037	AC	0-10V	DOWN TO 10%	ON DUSK TO DAWN	WHITE	B-1 U-0: G-0	ENERGY STAR	WET	7	YES		1020-B1-S-10-LRTD4-9020-M2-30KS-80.IES (228892
10	JFW-m	SOUTH SIDE WALKWAY	BEGA	22372-19522-BZ	RECESS IN WALL - SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS	LED	3,000 k	85	12.8	120	NA	NA	160	AC	0-10V	DOWN TO 10%	ON DUSK TO DAWN	(BZ) BRONZE	B-0; U-1: G-0	NO	WET	8	YES		
11	JFW-s	SOUTH SIDE WALKWAY	BEGA	22272-BZ	RECESS IN WALL - SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS	LED	3,000 k	85	12.05	120	NA	NA	131	AC	0-10V	DOWN TO 10%	ON DUSK TO DAWN	BRONZE	B-0; U-1: G-0	NO	WET	6	YES		22272.IES (L12131401)
12	JGW	GARAGE GRILL SCREENS LIGHT	BEACHSIDE	L-011-S-120V-8W-SP-BGS-PR-SGCM1	WALL MOUNT - SEE ARCHITECTURAL ELEVATIONS FOR MOUINTING HEIGHTS	LED	3,000 k	90	8	120	55	NA	500	AC	TRAILING EDGE DIMMERS	DOWN TO 20%	ON DUSK TO 11:00 p.m.	BRASS PATINA	FLOOD	NO	WET	7	YES	SORAA LAMP SM16GA-07-10D-830-03	
13	JHP RUN #1	CANTENARY COURTYARD	SELUX	LALC-R5S-CL-5G150-10-30-SV-120-HL20-JMLD-HS	PENDENT MOUNTED OFF CATENARY STAINLESS CABLE 5/16" DIA. PROVIDED AND INSTALL BY DIVISON #5 CONTRACTOR	LED	3,000 k	80	15	120	NA	4463	1190	AC	HI-LO	HI-100%-LO-20%	DUSK TO 11:00 p.m. HIGH, THAN LOW TO DAWN	(SV) SILVER	B-2; U-1; G-1	NO	WET	1		HI-LO SWITCHING 4 CONDUCTORS	LALC-R56S-CL-X-5G450-30-XX-120.IES - COMPUTER GENERATED PHOTOMETRY BY PHOTOPIA
14	JHP RUN #2	CANTENARY COURTYARD	SELUX	LALC-R5S-CL-5G150-25-30-SV-120-HL20-JMLD-HS	PENDENT MOUNTED OFF CATENARY STAINLESS CABLE 5/16" DIA. PROVIDED AND INSTALL BY DIVISON #5 CONTRACTOR	LED	3,000 k	80	15	120	NA	4463	1190	AC	HI-LO	HI-100%-LO-20%	DUSK TO 11:00 p.m. HIGH, THAN LOW TO DAWN	(SV) SILVER	B-2; U-1; G-1	NO	WET	1		HI-LO SWITCHING 4 CONDUCTORS	LALC-R56S-CL-X-5G450-30-XX-120.IES - COMPUTER GENERATED PHOTOMETRY BY PHOTOPIA
15	JHP RUN #3	CANTENARY COURTYARD	SELUX	LALC-DB-FL-5G150-10-30-SV-120-HL20-JMLD-HS	PENDENT MOUNTED OFF CATENARY STAINLESS CABLE 5/16" DIA. PROVIDED AND INSTALL BY DIVISON #5 CONTRACTOR	LED	3,000 k	80	15	120	NA	3981	1950	AC	HI-LO	HI-100%-LO-20%	DUSK TO 11:00 p.m. HIGH, THAN LOW TO DAWN	(SV) SILVER	B-1; U-3; G-2	NO	WET	1		HI-LO SWITCHING 4 CONDUCTORS	LALC-DB-FL-X-5G450-30-XX-120.IES - 11528333.01A

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
1	**DRAWING DESIGNATION**	**DESCRIPTION**	**MANUFACTURER**	**CATALOG NUMBER**	**MOUNTING**	**LAMP SOURCE**	**COLOR TEMP**	**CRI**	**WATTS**	**VOLTS**	**BEAM SPREAD**	**LAMP LUMENS**	**DELIVERED LUMENS *1**	**CURRENT RATING**	**DIMING PROTOCOL**	**DIMING THRESHOLD**	**CONTROL CONCEPT**	**COLOR**	**BUG RATING**	**DLC**	**UL LISTED**	**TOTAL QTY**	**LED REPLACEABLE**	**NOTES**	**PHOTOMETRIC FILE**
2																									
16	JHP RUN #4	CANTENARY COURTYARD	SELUX	LALC-R5S-CL-5G150-15-30-SV-120-HL20-JMLD-HS	PENDENT MOUNTED OFF CATENARY STAINLESS CABLE 5/16" DIA. PROVIDED AND INSTALL BY DIVISON #5 CONTRACTOR	LED	3,000 k	80	15	120	NA	4463	1190	AC	HI-LO	HI-100%-LO-20%	DUSK TO 11:00 p.m. HIGH, THAN LOW TO DAWN	(SV) SILVER	B-2; U-1; G-1	NO	WET	1		HI-LO SWITCHING 4 CONDUCTORS	LALC-R56S-CL-X-5G450-30-XX-120.IES - COMPUTER GENERATED PHOTOMETRY BY PHOTOPIA
17	JHP RUN #5	CANTENARY COURTYARD	SELUX	LALC-R5S-CL-5G150-20-30-SV-120-HL20-JMLD-HS	PENDENT MOUNTED OFF CATENARY STAINLESS CABLE 5/16" DIA. PROVIDED AND INSTALL BY DIVISON #5 CONTRACTOR	LED	3,000 k	80	15	120	NA	4463	1190	AC	HI-LO	HI-100%-LO-20%	DUSK TO 11:00 p.m. HIGH, THAN LOW TO DAWN	(SV) SILVER	B-2; U-1; G-1	NO	WET	1		HI-LO SWITCHING 4 CONDUCTORS	LALC-R56S-CL-X-5G450-30-XX-120.IES - COMPUTER GENERATED PHOTOMETRY BY PHOTOPIA
18	JHP RUN #6	CANTENARY COURTYARD	SELUX	LALC-DB-FL-5G150-10-30-SV-120-HL20-JMLD-HS	PENDENT MOUNTED OFF CATENARY STAINLESS CABLE 5/16" DIA. PROVIDED AND INSTALL BY DIVISON #5 CONTRACTOR	LED	3,000 k	80	15	120	NA	3981	1950	AC	HI-LO	HI-100%-LO-20%	DUSK TO 11:00 p.m. HIGH, THAN LOW TO DAWN	(SV) SILVER	B-1; U-3; G-2	NO	WET	1		HI-LO SWITCHING 4 CONDUCTORS	LALC-DB-FL-X-5G450-30-XX-120.IES - 11528333.01A
19																									
20			*1 = delivered lumens used for "NET Acres" lumen values																						

J M LIGHTING DESIGN, INC. 207-967-5223
jmlight2@roadrunner.com

HILL STREET - COURTYARD ILLUMINATION LEVELS
COURTYARD ELEVATION 5.07 FEET ABOVE FOUNDRY PLACE ELEVATION.
CALCULATIONS ON HILL STREET ON A SLOPE PLANE RUNNING EAST TO TOP
ELEVATION OF EAST SIDE PATH
ALL LIGHT LEVELS INITIAL HORIZONTAL FOOT-CANDLES

J & M LIGHTING DESIGN, INC
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jmlight2@roadrunner.com
JUNE 15, 2017

Job File: Hill Street 06-13-2017.AGI
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

Luminaire Definition(s)

JAW
CL-ADA-XL-LED15-4K-EBU-SGR 102063649CHI-031

Filename	102063649CHI-031.ies
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	2094
Luminaire Lumens	2094
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.400
Luminaire Watts	10
Arrangement Watts	10
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type IV, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.50

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	51.5	N.A.	2.5
LCS-FM	307.5	N.A.	14.7
LCS-FH	361.4	N.A.	17.3
LCS-FVH	203.4	N.A.	9.7
LCS-BL	13.4	N.A.	0.6
LCS-BM	43.7	N.A.	2.1
LCS-BH	40.6	N.A.	1.9
LCS-BVH	22.0	N.A.	1.1
LCS-UL	225.7	N.A.	10.8
LCS-UH	824.4	N.A.	39.4
Total	2093.6	N.A.	100.0
BUG Rating	B0-U4-G2		
Indoor Classification	General Diffuse		
LER	209		

JCW
AEL12-10W 4000K

Filename	AEL12-10W-4000K.ies
Lumens Per Lamp	N.A.
Number of Lamps	28
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	726
Luminaire Lumens	726
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.800
Luminaire Watts	10.8
Arrangement Watts	10.8
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type III, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	133.9	N.A.	18.4
LCS-FM	398.4	N.A.	54.9

Luminaire Definition(s) - Cont.

LCS-FH	117.9	N.A.	16.2
LCS-FVH	4.5	N.A.	0.6
LCS-BL	19.0	N.A.	2.6
LCS-BM	33.5	N.A.	4.6
LCS-BH	17.0	N.A.	2.3
LCS-BVH	1.7	N.A.	0.2
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	725.9	N.A.	100.0
BUG Rating	B0-U0-G0		
Indoor Classification	Direct		
LER	67		

JCW-R
AEL12-10W 4000K

Filename	AEL12-10W-4000K.ies
Lumens Per Lamp	N.A.
Number of Lamps	28
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	726
Luminaire Lumens	726
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.400
Luminaire Watts	5.4
Arrangement Watts	5.4
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type III, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	133.9	N.A.	18.4
LCS-FM	398.4	N.A.	54.9
LCS-FH	117.9	N.A.	16.2
LCS-FVH	4.5	N.A.	0.6
LCS-BL	19.0	N.A.	2.6
LCS-BM	33.5	N.A.	4.6
LCS-BH	17.0	N.A.	2.3
LCS-BVH	1.7	N.A.	0.2
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	725.9	N.A.	100.0
BUG Rating	B0-U0-G0		
Indoor Classification	Direct		
LER	134		

JDW
1403201050-001 MOD# AEL36-14W 4000K

Filename	AEL36-15W-4000K.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	1213

Luminaire Definition(s) - Cont.

Luminaire Lumens	1213
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.800
Luminaire Watts	14.1
Arrangement Watts	14.1
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type II, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	271.9	N.A.	22.4
LCS-FM	568.7	N.A.	46.9
LCS-FH	117.9	N.A.	9.7
LCS-FVH	6.3	N.A.	0.5
LCS-BL	108.6	N.A.	9.0
LCS-BM	114.2	N.A.	9.4
LCS-BH	24.4	N.A.	2.0
LCS-BVH	1.1	N.A.	0.1
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	1213.1	N.A.	100.0
BUG Rating	B0-U0-G0		
Indoor Classification	Direct		
LER	86		

JFW-m
22 372

Filename	22372.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	160
Luminaire Lumens	160
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.800
Luminaire Watts	14.11
Arrangement Watts	14.11
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type II, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.04

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	24.0	N.A.	15.0
LCS-FM	100.9	N.A.	63.0
LCS-FH	25.1	N.A.	15.7
LCS-FVH	4.0	N.A.	2.5
LCS-BL	0.0	N.A.	0.0
LCS-BM	0.0	N.A.	0.0
LCS-BH	0.0	N.A.	0.0
LCS-BVH	0.0	N.A.	0.0
LCS-UL	2.4	N.A.	1.5
LCS-UH	3.8	N.A.	2.4
Total	160.2	N.A.	100.0

Luminaire Definition(s) - Cont.

BUG Rating	B0-U1-G0
Indoor Classification	Direct
LER	11

JFW-s
22 272

Filename	22272.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	131
Luminaire Lumens	131
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.800
Luminaire Watts	12.05
Arrangement Watts	12.05
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type II, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.04

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	14.8	N.A.	11.3
LCS-FM	77.3	N.A.	59.0
LCS-FH	28.8	N.A.	22.0
LCS-FVH	4.6	N.A.	3.5
LCS-BL	< 0.05	N.A.	0.0
LCS-BM	< 0.05	N.A.	0.0
LCS-BH	< 0.05	N.A.	0.0
LCS-BVH	< 0.05	N.A.	0.0
LCS-UL	2.0	N.A.	1.5
LCS-UH	3.4	N.A.	2.6
Total	130.9	N.A.	100.0
BUG Rating	B0-U1-G0		
Indoor Classification	Direct		
LER	11		

JGW
E8-2W-A-FL

Filename	IES_E8-2W-A-FL.IES
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	54
Luminaire Lumens	54
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.800
Luminaire Watts	2.26
Arrangement Watts	2.26
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type V, Very Short, N.A. (deprecated)

Luminaire Definition(s) - Cont.

Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	21.0	N.A.	39.1
LCS-FM	5.0	N.A.	9.4
LCS-FH	0.7	N.A.	1.4
LCS-FVH	0.1	N.A.	0.1
LCS-BL	21.0	N.A.	39.1
LCS-BM	5.0	N.A.	9.4
LCS-BH	0.7	N.A.	1.4
LCS-BVH	0.1	N.A.	0.1
LCS-UL	0.0	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	53.6	N.A.	100.0
BUG Rating	B0-U0-G0		
Indoor Classification	Direct		
LER	24		

JHP-FROSTED
LALC-DB-FL-X-5G450-30-XX-120

Filename	LALC-DB-FL-X-5G450-30-XX-120.ies
Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	3981
Luminaire Lumens	3981
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.264
Luminaire Watts	14.2
Arrangement Watts	14.2
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type V, Very Short, N.A. (deprecated)
Upward Waste Light Ratio	0.07

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	406.9	N.A.	10.2
LCS-FM	854.1	N.A.	21.5
LCS-FH	454.1	N.A.	11.4
LCS-FVH	140.3	N.A.	3.5
LCS-BL	406.9	N.A.	10.2
LCS-BM	854.1	N.A.	21.5
LCS-BH	454.1	N.A.	11.4
LCS-BVH	140.3	N.A.	3.5
LCS-UL	161.7	N.A.	4.1
LCS-UH	108.1	N.A.	2.7
Total	3980.6	N.A.	100.0
BUG Rating	B1-U3-G2		
Indoor Classification	Direct		
LER	280		

JHP-CLEAR v
LALC-R5S-CL-X-5G450-30-XX-120

Filename	LALC-R5S-CL-X-5G450-30-XX-120.ies

Luminaire Definition(s) - Cont.

Lumens Per Lamp	N.A.
Number of Lamps	1
Total Lamp Lumens	N.A.
Arrangement Lamp Lumens	N.A.
Arrangement Luminaire Lumens	4463
Luminaire Lumens	4463
Luminaire Efficiency (%)	N.A.
Total Light Loss Factor	0.246
Luminaire Watts	14.2
Arrangement Watts	14.2
Arrangement	SINGLE
Arm Length	0
Offset	0
Road Classification	Type VS, Short, N.A. (deprecated)
Upward Waste Light Ratio	0.00

Luminaire Classification System (LCS)	Lumens	% Lamp	% Luminaire
LCS-FL	201.1	N.A.	4.5
LCS-FM	1029.3	N.A.	23.1
LCS-FH	988.5	N.A.	22.1
LCS-FVH	13.2	N.A.	0.3
LCS-BL	201.0	N.A.	4.5
LCS-BM	1028.7	N.A.	23.0
LCS-BH	988.1	N.A.	22.1
LCS-BVH	13.3	N.A.	0.3
LCS-UL	< 0.05	N.A.	0.0
LCS-UH	0.0	N.A.	0.0
Total	4463.2	N.A.	100.0
BUG Rating	B2-U1-G1		
Indoor Classification	Direct		
LER	314		

Luminaire Location(s)

Luminaire Locations
Project Name : Project_1
Coordinates in Feet

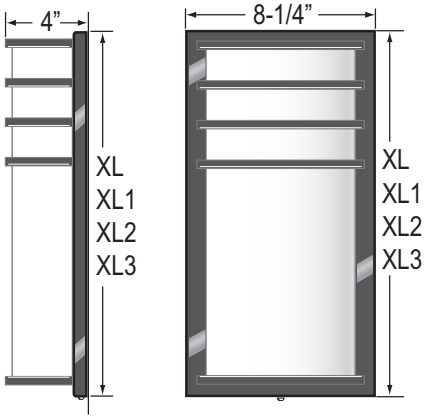
Lum. No.	Label	X	Y	Z	Orient	Tilt	Roll	Spin	Aiming Point X	Aiming Point Y	Aiming Point Z	Status
37	JCW-R	164.826	108.444	11.22	0	0	0	0	164.826	108.444	11.22	On
40	JCW-R	164.826	123.38	11.22	0	0	0	0	164.826	123.38	11.22	On
41	JCW-R	164.826	139.37	11.22	0	0	0	0	164.826	139.37	11.22	On
42	JCW	162.598	149.318	11.22	0	0	0	0	162.598	149.318	11.22	On
1	JDW	39.567	52.554	15.33	270	0	0	0	39.567	52.554	15.33	On
2	JDW	50.375	52.554	15.33	270	0	0	0	50.375	52.554	15.33	On
3	JCW	60.864	56.999	12.78	0	0	0	0	60.864	56.999	12.78	On
4	JFW-m	75.265	61.913	7.06	0	0	0	0	75.265	61.913	7.06	On
12	JFW-m	125.5	63.5	6.73	270	0	0	0	125.5	63.5	6.73	On
13	JFW-m	133	63.5	6.26	270	0	0	0	133	63.5	6.26	On
14	JFW-m	140.5	63.5	5.89	270	0	0	0	140.5	63.5	5.89	On
15	JFW-m	148	63.5	5.51	270	0	0	0	148	63.5	5.51	On
16	JFW-m	155.5	63.5	5.14	270	0	0	0	155.5	63.5	5.14	On
17	JFW-m	163	63.5	4.92	270	0	0	0	163	63.5	4.92	On
21	JCW-R	164.826	71.223	11.22	0	0	0	0	164.826	71.223	11.22	On
31	JCW-R	164.826	89.172	11.22	0	0	0	0	164.826	89.172	11.22	On
35	JGW	77.271	102.389	11.53	180	45	0	0	77.271	102.389	11.53	On
5	JFW-s	90	63.5	6.34	270	0	0	0	90	63.5	6.34	On
6	JFW-s	94.5	63.5	6.34	270	0	0	0	94.5	63.5	6.34	On
7	JFW-s	99	63.5	6.34	270	0	0	0	99	63.5	6.34	On
8	JFW-s	103.5	63.5	6.34	270	0	0	0	103.5	63.5	6.34	On
9	JFW-s	108	63.5	6.34	270	0	0	0	108	63.5	6.34	On
10	JFW-s	112.5	63.5	6.34	270	0	0	0	112.5	63.5	6.34	On
11	JFW-m	118	63.5	7.06	270	0	0	0	118	63.5	7.06	On
22	JGW	77.271	71.93	11.53	180	45	0	0	77.271	71.93	11.53	On
24	JGW	77.271	77.891	11.53	180	45	0	0	77.271	77.891	11.53	On
25	JGW	77.271	83.79	11.53	180	45	0	0	77.271	83.79	11.53	On
30	JGW	77.271	88.297	11.53	180	45	0	0	77.271	88.297	11.53	On
32	JGW	77.271	94.076	11.53	180	45	0	0	77.271	94.076	11.53	On
34	JGW	77.271	96.466	11.53	180	45	0	0	77.271	96.466	11.53	On
29	JAW	116.219	86.958	11.22	180	0	0	0	116.219	86.958	11.22	On
18	JHP-CLEAR v	83.482	64.656	11.65	90	0	0	0	83.482	64.656	11.65	On
39	JHP-FROSTED	88.715	115.135	11.65	326.283	0	0	0	88.715	115.135	11.65	On
46	JHP-CLEAR v	90.323	101.82	11.65	90	0	0	0	90.323	101.82	11.65	On
45	JHP-CLEAR v	89.788	90.517	11.65	90	0	0	0	89.788	90.517	11.65	On
43	JHP-CLEAR v	96.229	74.328	11.65	90	0	0	0	96.229	74.328	11.65	On
44	JHP-FROSTED	110.809	83.629	11.65	90	0	0	0	110.809	83.629	11.65	On

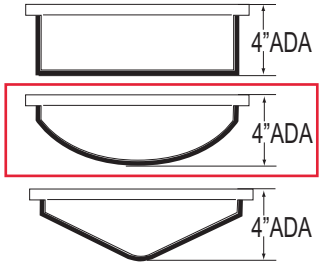
Summary By Label
Project Name : Project_1

Label	On	Off	Total
JAW	1	0	1
JCW	2	0	2
JCW-R	5	0	5
JDW	2	0	2
JFW-m	8	0	8
JFW-s	6	0	6
JGW	7	0	7
JHP-FROSTED	2	0	2
JHP-CLEAR v	4	0	4

Galileo ADA

4" PROJECTION LED SCONCE
ANY Shape Diffuser
may include Perfex and/or Shield





LAMP TYPE/QTY/WATTAGE[1] Visit www.eclipselightinginc.com for available IES files					
Fixture Size		**XL**	**XL1**	**XL2**	**XL3**
Dimensions - W x H x D		**8¼" x 18" x 4"**	**8¼" x 21" x4"**	**8¼" x 26¼" x 4"**	**8¼" x 30" x 4"**
Light Emitting Diode	**LED**	15w	~~20w~~ 10	25w	25w
Light Emitting Diode[48] Uplight/Downlight *Clear Top/Bottom (CTB) Standard with UP/DN*	**UP/DN**	5w			
Consult Factory for CFL, Linear Fluorescent, HID, and Induction Lamping					

ORDERING GUIDE:

Series	Size	Lamp/Qty/Watt	Color Temp	Voltage: Primary/Emergency	Finish	Options
BASIC R	XL1	ME-LED10W	3K	EBU-D7	SGR	OQT - TOP ONLY

SERIES
Refer to Index Page—Choose any rectangular, round or triangular model from Basic R, Basic T, Elite or Signature Series.

SIZE
XL = 8.25" Wide x 18" Tall x 4" Deep
XL1 = 8.25" Wide x 21" Tall x 4" Deep
XL2 = 8.25" Wide x 26" Tall x 4" Deep
XL3 = 8.25" Wide x 30" Tall x 4" Deep

LAMP TYPE/QUANTITY/WATTAGE
Refer to Above Chart

LED COLOR TEMPERATURE
3K = ±3000K Range
4K = ±4000K Range
5K = ±5000K Range

VOLTAGE
120 = 120 Volts
277 = 277 Volts
347 = 347 Volts
EBU = Universal Volt (120-277v) Electronic Driver
2EBU = Two Universal Drivers

STANDARD PAINTED FINISH
BK = Black Finish
BZ = Bronze Finish — Standard
PNA = Painted Natural Aluminum
SGR = Silver Gray
WH = White Finish

CUSTOM ORDER PAINTED FINISH
CC = Custom Color (Provide Specs)
CH = Corvel Chrome
HBA = Hand Brushed Aluminum w/ Clear Coat

OPTIONS
9002 = Tamperproof Screwdriver
ATBS = Aluminum Top & Bottom Shield (No Light)
BB = 2" Backbox For EL or Surface Conduit
CM = Ceiling Mount[6]
CR = Custom Requirements
CTB = Clear Top & Bottom (Standard with Up/Downlight)[48]
FUS = Single Fusing
DFUS = Double Fusing
GTD = Generator Transfer Device (Bodine)
GV = Gravura Custom Engraving
HM = Horizontal Mount[6]
OQTB = Opaque Top ~~& Bottom~~ (reduces light transmission)
ONTB = Open Top & Bottom — Indoor only

LED OPTIONS
BL1 = Bi-Level Light (High/Low)
— Single AC Input Feed, with Switch Sensor (Required)
BL2 = Bi-Level Light (High/Low)
— Wired for Dual AC Input Feeds
D7 = 0-10V low-voltage LED Dimming (100-30% Standard, Consult Factory for Other)
MSE = Motion Sensor External[2]
—Single circuit-all on, all off
Specify Finish: White (WH)/Bronze (BZ)
MSE2 = Motion Sensor External[2]
—Dual circuit, half on half off
Specify Finish: White (WH)/Bronze (BZ)
MSI1 = Motion Sensor Integral[20] *(Microwave)*
—Single Circuit:-OFF / ALL-ON
MSI2 = Motion Sensor Integral[20] *(Microwave)*
—Single Circuit: HALF-ON / ALL-ON

EMERGENCY OPTIONS[3][55]
No onsite Emergency Power (AC or DC) is provided
Specify Fixture Voltage: 120V or 277V Power Feed
A=120V or B=277V

LED Emergency Battery
*CONSULT FACTORY for Remote LED Emergency Battery Options

NOTES:
[1] Consult Factory with requests regarding lamp sources including LED, color temp, wattages or voltages not shown.
[2] Backbox (BB) Required *(where text bold and Note[2] shown)*
[3] Consult Factory for additional Emergency Battery options not shown
[6] Consult Factory: May Require Lower Wattage or Backbox
[20] Max mounting height of fixture is 10' (10 feet)
[48] Clear Top and Bottom (CTB) is Standard with Uplight and/or Downlight (UP/DN)
[52] Consult Factory for other Voltage.
[53] Battery Available as Integral or Remote - Specify REL for Remote option (ie. EL1 = Integral; REL1 = Remote)
[55] Due to form and fit, final selection of the Battery Pack under discretion of Factory

ECLIPSE™ LIGHTING
9245 W. Ivanhoe St. I Schiller Park, IL 60176
P: 847-260-0333 I F:847-260-0344 I E: quotes@eclipselightinginc.com I W: eclipselightinginc.com

06-15-2017

TYPE JAW

REDUCE LUMEN OUTPUTUSE A FACTOR OF .40 FOR ACTUAL LUMEN OUTPUT.

IES ROAD REPORT
PHOTOMETRIC FILENAME : 102063649CHI-031.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] 102063649CHI-031
[TESTDATE] 2/13/2017
[TESTLAB] INTERTEK
[ISSUEDATE]
[MANUFAC] ECLIPSE LIGHTING INC
[LUMCAT] CL-ADA-XL-LED15-4K-EBU-SGR
[LUMINAIRE] WALL PACK
[LAMP] LED
[_TOTALLUMINAIRELUMENS] 2095.5

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2094
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	~~19.3~~ 10 WATTS
Ballast Factor	1.00
Upward Waste Light Ratio	0.50
Maximum Candela	507.54
Maximum Candela Angle	360H 87.5V
Maximum Candela (<90 Degrees Vertical)	507.54
Maximum Candela Angle (<90 Degrees Vertical)	360H 87.5V
Maximum Candela At 90 Degrees Vertical	507.37 (24.2% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	507.54 (24.2% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : 102063649CHI-031.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	51.5	N.A.	2.5
FM - Front-Medium (30-60)	307.5	N.A.	14.7
FH - Front-High (60-80)	361.4	N.A.	17.3
FVH - Front-Very High (80-90)	203.4	N.A.	9.7
BL - Back-Low (0-30)	13.4	N.A.	0.6
BM - Back-Medium (30-60)	43.7	N.A.	2.1
BH - Back-High (60-80)	40.6	N.A.	1.9
BVH - Back-Very High (80-90)	22.0	N.A.	1.1
UL - Uplight-Low (90-100)	225.7	N.A.	10.8
UH - Uplight-High (100-180)	824.4	N.A.	39.4
Total	2093.6	N.A.	100.0
BUG Rating	B0-U4-G2		

IES ROAD REPORT
PHOTOMETRIC FILENAME : 102063649CHI-031.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	**22.5**	**45.0**	**67.5**	**90.0**	**112.5**	**135.0**	**157.5**	**180.0**	**202.5**
0.0	27.91	27.91	27.91	27.91	27.91	27.91	27.91	27.91	27.91	27.91
2.5	33.48	33.23	31.69	30.21	28.79	27.70	27.15	27.14	27.30	27.14
5.0	44.47	43.37	40.22	36.19	31.83	28.38	26.73	26.47	26.65	26.47
7.5	59.29	57.17	51.77	44.64	36.28	29.44	26.24	25.78	25.77	25.78
10.0	75.96	73.09	65.22	54.56	41.86	30.83	25.69	25.12	24.95	25.12
12.5	94.62	90.65	79.93	65.38	48.19	32.48	25.07	24.35	24.03	24.35
15.0	114.80	109.33	95.62	76.83	54.75	34.35	24.30	23.58	23.23	23.58
17.5	135.64	128.39	111.89	88.73	61.67	36.42	23.51	22.69	22.38	22.69
20.0	156.78	147.93	128.13	100.78	68.64	38.53	22.62	21.72	21.34	21.72
22.5	176.62	167.54	144.21	112.77	75.82	40.75	21.70	20.66	20.10	20.66
25.0	197.74	187.11	160.29	124.62	82.98	42.95	20.70	19.50	18.98	19.50
27.5	218.18	206.38	176.12	136.39	90.05	45.11	19.64	18.36	17.85	18.36
30.0	239.56	225.35	191.92	147.91	96.96	47.28	18.56	17.19	16.77	17.19
32.5	260.18	244.04	207.39	159.10	103.74	49.40	17.45	16.04	15.71	16.04
35.0	279.10	262.15	222.21	169.98	110.35	51.41	16.36	14.86	14.56	14.86
37.5	298.20	279.61	236.48	180.34	116.68	53.38	15.29	13.65	13.40	13.65
40.0	317.50	296.40	250.27	190.40	122.69	55.23	14.17	12.45	12.17	12.45
42.5	335.41	312.54	263.56	200.13	128.47	56.96	13.03	11.30	11.07	11.30
45.0	353.15	328.30	276.48	209.44	134.03	58.50	11.90	10.16	9.90	10.16
47.5	368.87	343.51	288.84	218.37	139.35	60.04	10.77	8.98	8.79	8.98
50.0	383.96	357.82	300.61	226.83	144.38	61.44	9.67	7.81	7.65	7.81
52.5	398.84	371.35	311.74	234.75	149.06	62.80	8.57	6.71	6.56	6.71
55.0	412.94	384.34	322.32	242.31	153.41	63.97	7.47	5.64	5.50	5.64
57.5	426.43	396.63	332.19	249.29	157.42	64.99	6.39	4.62	4.47	4.62
60.0	438.80	407.70	341.28	255.74	161.10	65.83	5.33	3.65	3.55	3.65
62.5	449.69	417.82	349.60	261.58	164.40	66.61	4.30	2.79	2.85	2.79
65.0	459.82	427.27	357.49	267.02	167.43	67.28	3.34	2.08	2.32	2.08
67.5	469.53	435.96	364.65	272.05	170.18	67.87	2.50	1.61	2.11	1.61
70.0	478.15	443.75	370.88	276.43	172.57	68.35	1.83	1.55	0.00	1.55
72.5	485.83	450.51	376.27	280.12	174.54	68.76	1.39	0.00	0.00	0.00
75.0	492.51	456.31	380.95	283.26	176.19	69.17	1.38	0.00	0.00	0.00
77.5	497.95	461.16	384.82	285.80	177.46	69.55	1.41	0.00	0.00	0.00
80.0	501.93	464.81	387.72	287.55	178.34	69.99	1.41	0.00	0.00	0.00
82.5	504.54	467.42	389.72	288.79	178.85	70.35	1.43	0.00	0.00	0.00
85.0	506.46	469.17	391.13	289.61	179.18	70.59	1.44	0.00	0.00	0.00
87.5	507.54	470.20	392.02	290.20	179.43	70.78	1.43	0.00	0.00	0.00
90.0	507.37	470.00	392.01	290.57	180.13	71.38	1.45	0.00	0.00	0.00
92.5	506.52	469.22	391.50	290.77	180.79	71.98	1.47	0.00	0.00	0.00
95.0	505.31	468.25	390.87	290.43	180.79	72.05	1.47	0.00	0.00	0.00
97.5	503.54	466.55	389.68	289.85	180.69	72.05	1.47	0.00	0.00	0.00
100.0	500.76	463.94	387.77	288.80	180.38	71.92	1.46	0.00	0.00	0.00
102.5	496.64	460.32	384.89	287.09	179.71	71.71	1.46	0.00	0.00	0.00
105.0	491.72	455.73	381.23	284.80	178.68	71.65	1.45	1.74	0.00	1.74
107.5	485.65	450.02	376.80	281.91	177.25	71.52	1.68	1.72	2.41	1.72
110.0	478.01	443.15	371.25	278.27	175.46	71.30	2.23	1.74	2.37	1.74
112.5	469.05	435.14	364.98	274.01	173.13	71.05	2.96	2.08	2.47	2.08
115.0	459.54	426.57	358.16	269.24	170.64	70.67	3.80	2.70	2.90	2.70
117.5	449.60	417.60	350.88	264.15	167.94	70.23	4.74	3.45	3.51	3.45
120.0	438.58	407.57	342.77	258.66	164.85	69.62	5.72	4.31	4.31	4.31
122.5	426.42	396.29	333.59	252.43	161.24	68.83	6.73	5.26	5.24	5.26
125.0	412.97	383.96	323.72	245.26	157.12	67.82	7.73	6.22	6.14	6.22
127.5	398.87	370.91	313.23	237.67	152.86	66.68	8.73	7.20	7.05	7.20
130.0	384.15	357.34	302.08	229.89	148.34	65.50	9.76	8.19	7.97	8.19

CANDELA TABULATION - (Cont.)

132.5	368.77	342.98	290.46	221.66	143.47	64.12	10.80	9.23	8.95	9.23
135.0	352.41	328.04	278.12	212.84	138.20	62.63	11.87	10.32	10.06	10.32
137.5	334.89	312.30	265.32	203.48	132.65	60.99	12.90	11.40	11.22	11.40
140.0	316.85	295.96	251.84	193.80	126.98	59.38	13.93	12.49	12.31	12.49
142.5	298.50	279.18	237.96	183.81	120.98	57.49	14.94	13.52	13.38	13.52
145.0	279.94	261.64	223.61	173.20	114.62	55.40	15.96	14.57	14.43	14.57
147.5	259.84	243.48	208.28	162.08	107.80	53.32	16.98	15.63	15.57	15.63
150.0	238.93	224.51	192.85	150.89	100.93	51.09	17.95	16.69	16.70	16.69
152.5	218.10	205.51	177.22	139.33	93.97	48.83	18.91	17.74	17.78	17.74
155.0	197.57	186.63	161.35	127.48	86.85	46.47	19.85	18.71	18.84	18.71
157.5	176.51	167.18	145.27	115.56	79.62	44.03	20.75	19.69	19.67	19.69
160.0	154.50	146.96	128.56	103.16	72.20	41.64	21.65	20.59	20.52	20.59
162.5	133.25	126.82	111.87	90.70	64.89	39.11	22.44	21.38	21.41	21.38
165.0	112.56	107.55	95.36	78.63	57.64	36.66	23.19	22.16	22.20	22.16
167.5	92.29	88.43	79.45	66.93	50.46	34.25	23.92	22.86	22.90	22.86
170.0	72.94	70.37	64.59	55.66	43.67	32.03	24.54	23.53	23.54	23.53
172.5	55.96	54.39	50.92	45.00	37.50	29.95	25.07	24.08	24.08	24.08
175.0	41.31	40.68	39.04	35.93	32.12	28.10	25.48	24.65	24.63	24.65
177.5	30.51	30.47	30.13	29.36	28.17	26.75	25.66	25.16	25.21	25.16
180.0	26.17	26.17	26.17	26.17	26.17	26.17	26.17	26.17	26.17	26.17

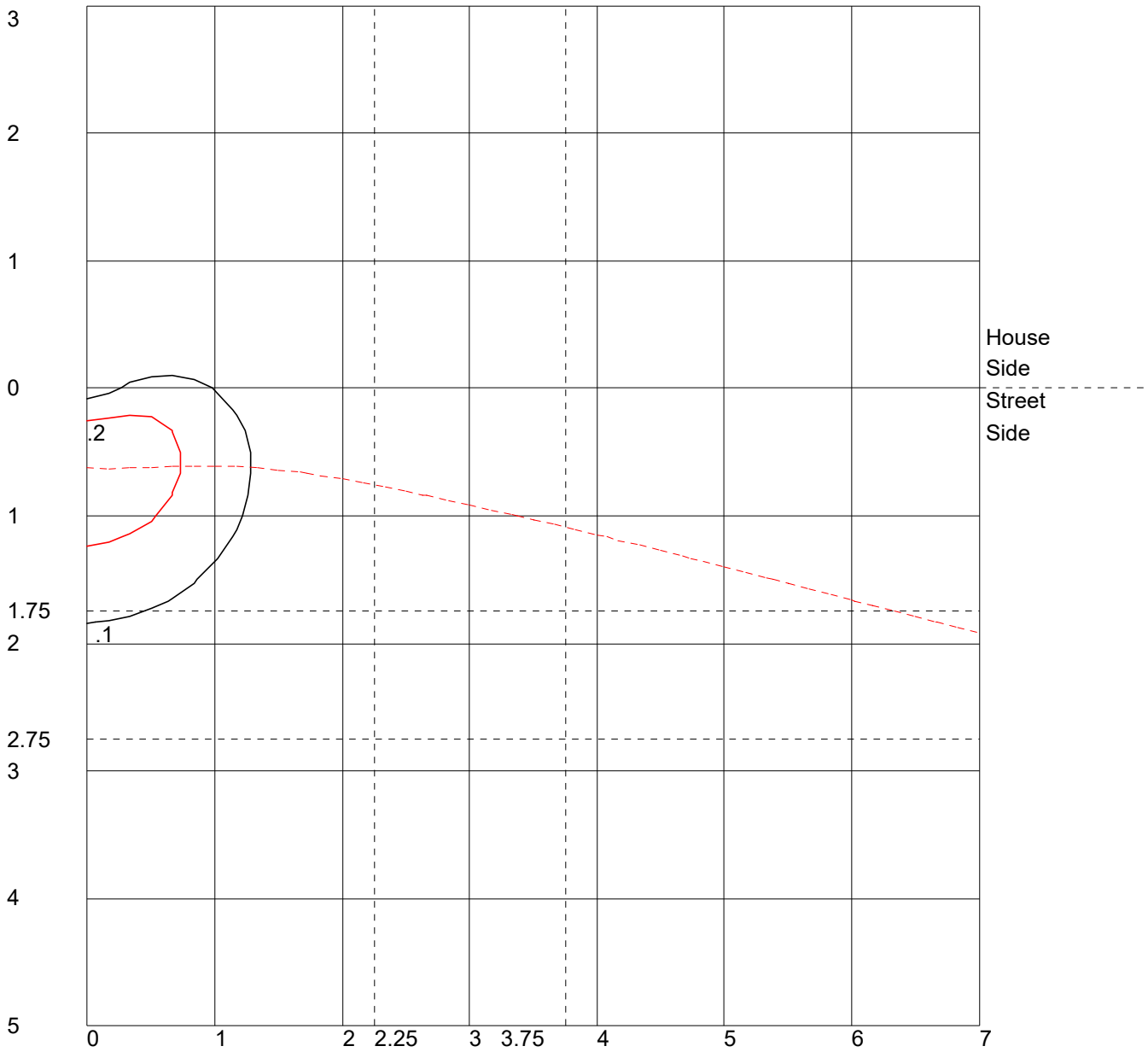
Vert. Angles	**Horizontal Angles**						
	225.0	**247.5**	**270.0**	**292.5**	**315.0**	**337.5**	**360.0**
0.0	27.91	27.91	27.91	27.91	27.91	27.91	27.91
2.5	27.15	27.70	28.79	30.21	31.69	33.23	33.48
5.0	26.73	28.38	31.83	36.19	40.22	43.37	44.47
7.5	26.24	29.44	36.28	44.64	51.77	57.17	59.29
10.0	25.69	30.83	41.86	54.56	65.22	73.09	75.96
12.5	25.07	32.48	48.19	65.38	79.93	90.65	94.62
15.0	24.30	34.35	54.75	76.83	95.62	109.33	114.80
17.5	23.51	36.42	61.67	88.73	111.89	128.39	135.64
20.0	22.62	38.53	68.64	100.78	128.13	147.93	156.78
22.5	21.70	40.75	75.82	112.77	144.21	167.54	176.62
25.0	20.70	42.95	82.98	124.62	160.29	187.11	197.74
27.5	19.64	45.11	90.05	136.39	176.12	206.38	218.18
30.0	18.56	47.28	96.96	147.91	191.92	225.35	239.56
32.5	17.45	49.40	103.74	159.10	207.39	244.04	260.18
35.0	16.36	51.41	110.35	169.98	222.21	262.15	279.10
37.5	15.29	53.38	116.68	180.34	236.48	279.61	298.20
40.0	14.17	55.23	122.69	190.40	250.27	296.40	317.50
42.5	13.03	56.96	128.47	200.13	263.56	312.54	335.41
45.0	11.90	58.50	134.03	209.44	276.48	328.30	353.15
47.5	10.77	60.04	139.35	218.37	288.84	343.51	368.87
50.0	9.67	61.44	144.38	226.83	300.61	357.82	383.96
52.5	8.57	62.80	149.06	234.75	311.74	371.35	398.84
55.0	7.47	63.97	153.41	242.31	322.32	384.34	412.94
57.5	6.39	64.99	157.42	249.29	332.19	396.63	426.43
60.0	5.33	65.83	161.10	255.74	341.28	407.70	438.80
62.5	4.30	66.61	164.40	261.58	349.60	417.82	449.69
65.0	3.34	67.28	167.43	267.02	357.49	427.27	459.82
67.5	2.50	67.87	170.18	272.05	364.65	435.96	469.53
70.0	1.83	68.35	172.57	276.43	370.88	443.75	478.15
72.5	1.39	68.76	174.54	280.12	376.27	450.51	485.83
75.0	1.38	69.17	176.19	283.26	380.95	456.31	492.51
77.5	1.41	69.55	177.46	285.80	384.82	461.16	497.95

CANDELA TABULATION - (Cont.)

80.0	1.41	69.99	178.34	287.55	387.72	464.81	501.93
82.5	1.43	70.35	178.85	288.79	389.72	467.42	504.54
85.0	1.44	70.59	179.18	289.61	391.13	469.17	506.46
87.5	1.43	70.78	179.43	290.20	392.02	470.20	507.54
90.0	1.45	71.38	180.13	290.57	392.01	470.00	507.37
92.5	1.47	71.98	180.79	290.77	391.50	469.22	506.52
95.0	1.47	72.05	180.79	290.43	390.87	468.25	505.31
97.5	1.47	72.05	180.69	289.85	389.68	466.55	503.54
100.0	1.46	71.92	180.38	288.80	387.77	463.94	500.76
102.5	1.46	71.71	179.71	287.09	384.89	460.32	496.64
105.0	1.45	71.65	178.68	284.80	381.23	455.73	491.72
107.5	1.68	71.52	177.25	281.91	376.80	450.02	485.65
110.0	2.23	71.30	175.46	278.27	371.25	443.15	478.01
112.5	2.96	71.05	173.13	274.01	364.98	435.14	469.05
115.0	3.80	70.67	170.64	269.24	358.16	426.57	459.54
117.5	4.74	70.23	167.94	264.15	350.88	417.60	449.60
120.0	5.72	69.62	164.85	258.66	342.77	407.57	438.58
122.5	6.73	68.83	161.24	252.43	333.59	396.29	426.42
125.0	7.73	67.82	157.12	245.26	323.72	383.96	412.97
127.5	8.73	66.68	152.86	237.67	313.23	370.91	398.87
130.0	9.76	65.50	148.34	229.89	302.08	357.34	384.15
132.5	10.80	64.12	143.47	221.66	290.46	342.98	368.77
135.0	11.87	62.63	138.20	212.84	278.12	328.04	352.41
137.5	12.90	60.99	132.65	203.48	265.32	312.30	334.89
140.0	13.93	59.38	126.98	193.80	251.84	295.96	316.85
142.5	14.94	57.49	120.98	183.81	237.96	279.18	298.50
145.0	15.96	55.40	114.62	173.20	223.61	261.64	279.94
147.5	16.98	53.32	107.80	162.08	208.28	243.48	259.84
150.0	17.95	51.09	100.93	150.89	192.85	224.51	238.93
152.5	18.91	48.83	93.97	139.33	177.22	205.51	218.10
155.0	19.85	46.47	86.85	127.48	161.35	186.63	197.57
157.5	20.75	44.03	79.62	115.56	145.27	167.18	176.51
160.0	21.65	41.64	72.20	103.16	128.56	146.96	154.50
162.5	22.44	39.11	64.89	90.70	111.87	126.82	133.25
165.0	23.19	36.66	57.64	78.63	95.36	107.55	112.56
167.5	23.92	34.25	50.46	66.93	79.45	88.43	92.29
170.0	24.54	32.03	43.67	55.66	64.59	70.37	72.94
172.5	25.07	29.95	37.50	45.00	50.92	54.39	55.96
175.0	25.48	28.10	32.12	35.93	39.04	40.68	41.31
177.5	25.66	26.75	28.17	29.36	30.13	30.47	30.51
180.0	26.17	26.17	26.17	26.17	26.17	26.17	26.17

IES ROAD REPORT
PHOTOMETRIC FILENAME : 102063649CHI-031.IES

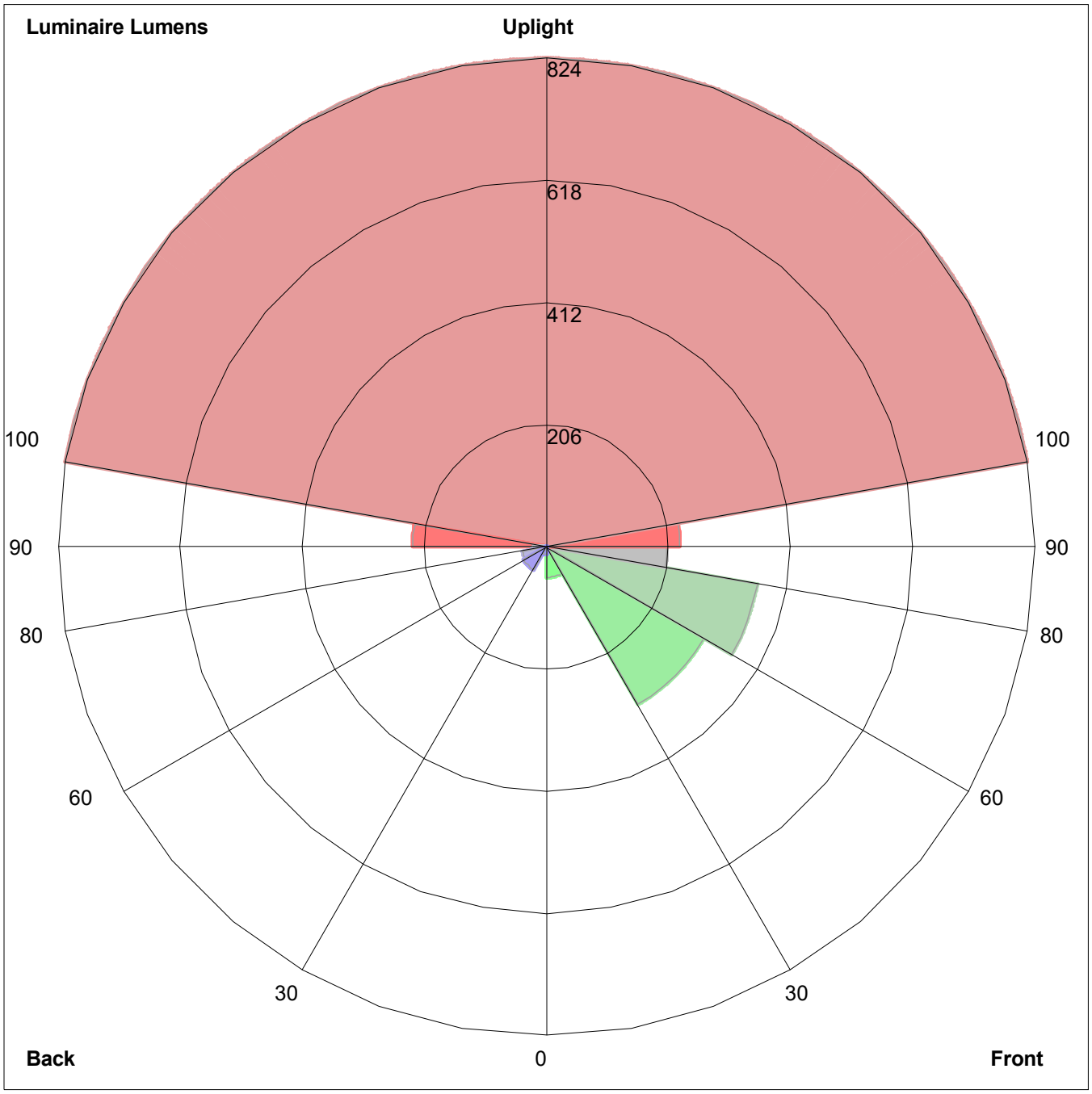
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : 102063649CHI-031.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=51.5, Medium=307.5, High=361.4, Very High=203.4
Back: Low=13.4, Medium=43.7, High=40.6, Very High=22.0
Uplight: Low=225.7, High=824.4

BUG Rating : B0-U4-G2

IES ROAD REPORT
PHOTOMETRIC FILENAME : WL-LED300-C-WT.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2001
[TEST]
[TESTLAB] WAC LIGHTING PHOTOMETRIC LAB
[TESTDATE] 2011-10-28
[ISSUEDATE] 18-FEB-2001
[NEARFIELD]
[LAMPPOSITION] 0,0
[OTHER] EVERFINE
[MANUFAC] WAC LIGHTING
[LUMCAT] WL-LED300-C-WT
[LUMINAIRE] recessed light
[LAMPCAT] LED
[LAMP] SAMSUNG LED

CHARACTERISTICS

IES Classification	N.A.
Longitudinal Classification	N.A.
Lumens Per Lamp	271 (1 lamp)
Total Lamp Lumens	271
Luminaire Lumens	74
Downward Total Efficiency	27 %
Total Luminaire Efficiency	27 %
Luminaire Efficacy Rating (LER)	19
Total Luminaire Watts	3.9
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	49.6
Maximum Candela Angle	270H 50V
Maximum Candela (<90 Degrees Vertical)	49.6
Maximum Candela Angle (<90 Degrees Vertical)	270H 50V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Lamp Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	2.2 (0.8% Lamp Lumens)
Cutoff Classification (deprecated)	Full Cutoff

IES ROAD REPORT
PHOTOMETRIC FILENAME : WL-LED300-C-WT.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	9.7	3.6	13.1
FM - Front-Medium (30-60)	23.3	8.6	31.5
FH - Front-High (60-80)	4.6	1.7	6.3
FVH - Front-Very High (80-90)	0.3	0.1	0.4
BL - Back-Low (0-30)	9.4	3.5	12.7
BM - Back-Medium (30-60)	21.8	8.1	29.5
BH - Back-High (60-80)	4.5	1.7	6.1
BVH - Back-Very High (80-90)	0.4	0.1	0.5
UL - Uplight-Low (90-100)	0.0	0.0	0.0
UH - Uplight-High (100-180)	0.0	0.0	0.0
Total	74.0	27.4	100.0
BUG Rating	B0-U0-G0		

IES ROAD REPORT
PHOTOMETRIC FILENAME : WL-LED300-C-WT.IES

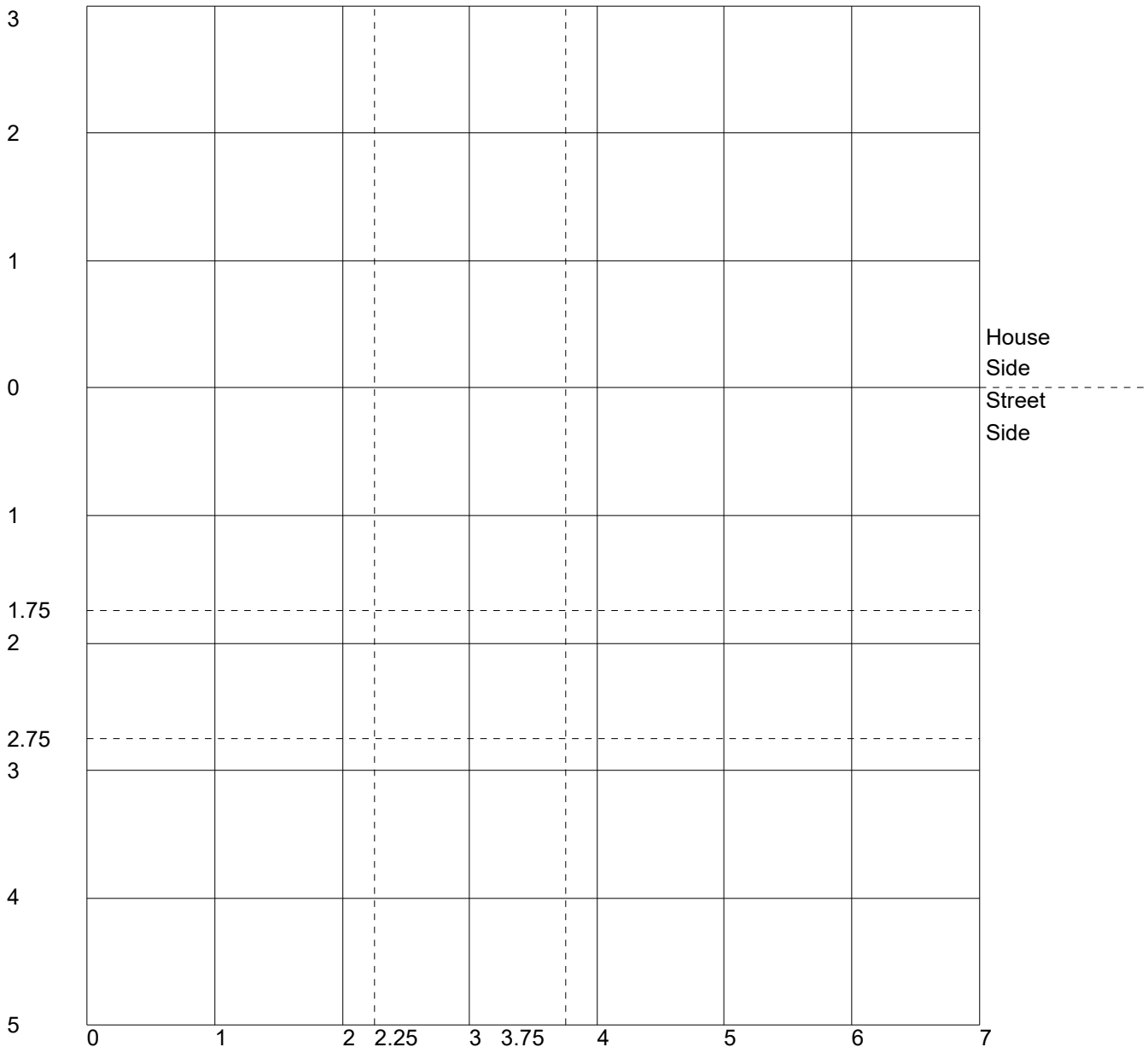
CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**30**	**60**	**90**	**120**	**150**	**180**	**210**	**240**	**270**
0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
5	22.8	22.1	22.1	21.4	22.0	22.0	22.7	22.6	22.7	22.7
10	22.5	21.4	20.9	19.9	20.8	21.1	22.4	22.3	22.9	25.1
15	22.0	20.3	19.5	18.1	19.3	19.9	21.9	21.9	25.4	29.8
20	21.4	19.1	17.8	16.4	17.5	18.5	21.1	22.2	28.9	34.4
25	20.5	17.7	16.2	14.7	15.9	17.0	20.2	23.1	32.2	38.5
30	19.5	16.1	14.5	13.2	14.2	15.3	19.1	24.1	35.1	42.2
35	18.0	14.4	13.0	11.9	12.8	13.7	17.8	24.3	37.4	44.9
40	16.1	12.6	11.5	10.6	11.4	12.1	15.8	23.7	38.8	47.0
45	13.8	10.9	10.3	9.5	10.2	10.5	13.6	22.2	39.8	48.9
50	11.4	9.2	9.0	8.3	9.0	9.0	11.1	17.5	39.7	49.6
55	9.0	7.7	7.8	7.2	7.8	7.6	8.9	10.7	34.8	45.5
60	6.9	6.2	6.7	6.1	6.7	6.3	6.9	6.6	18.5	22.0
65	5.3	5.0	5.5	5.0	5.6	5.0	5.3	4.6	7.8	7.9
70	4.1	3.7	4.4	3.8	4.4	3.9	4.1	3.2	4.3	3.6
75	2.8	2.6	3.2	2.7	3.3	2.7	2.9	1.9	2.4	2.0
80	1.6	1.5	2.1	1.6	2.2	1.6	1.9	1.0	1.3	0.8
85	0.6	0.5	0.9	0.6	1.1	0.6	0.8	0.2	0.3	0.1
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

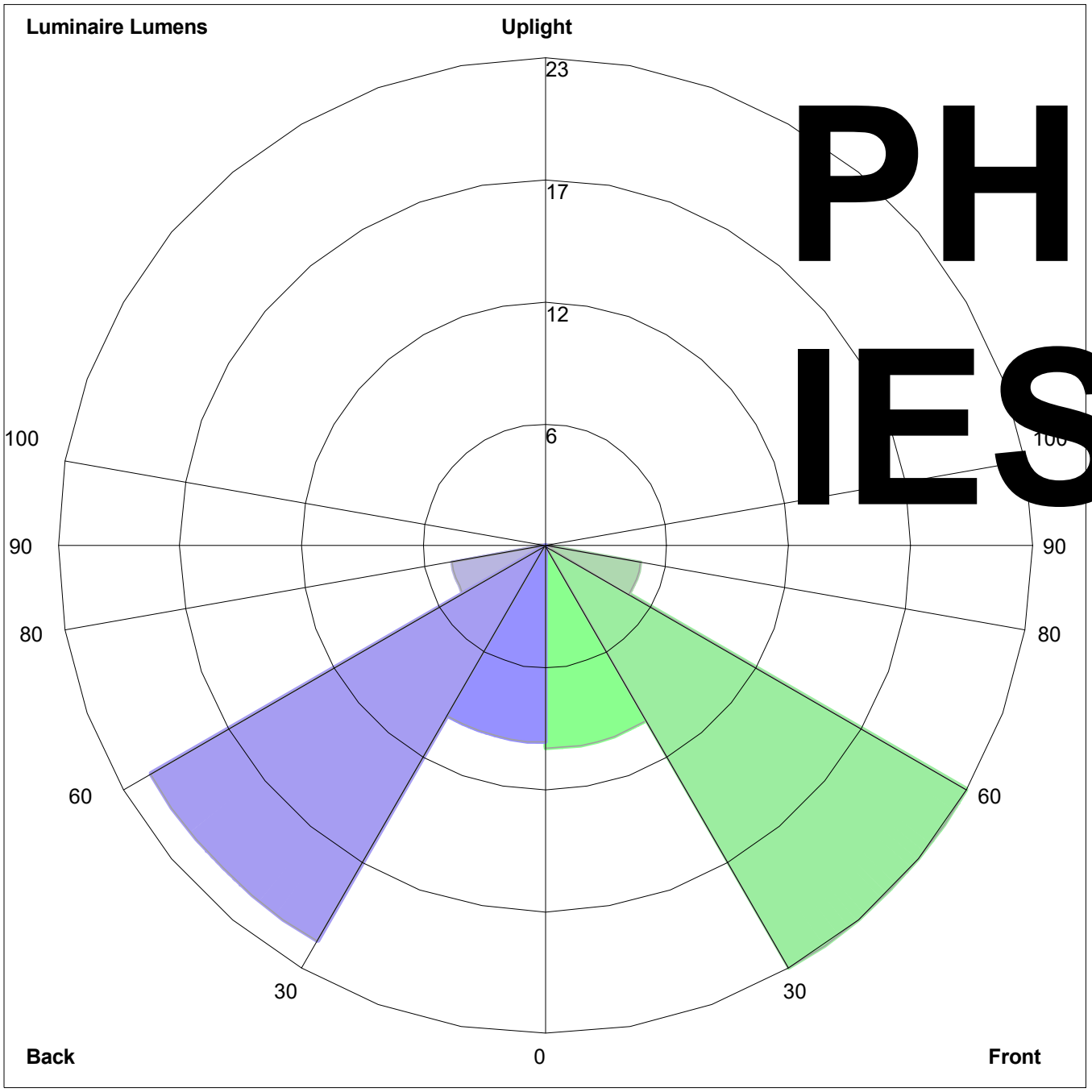
Vert. Angles	Horizontal Angles		
	300	**330**	**360**
0	22.9	22.9	22.9
5	22.7	22.6	22.8
10	23.1	22.3	22.5
15	26.1	22.6	22.0
20	30.0	24.2	21.4
25	33.7	25.9	20.5
30	37.1	27.5	19.5
35	39.8	28.2	18.0
40	41.6	28.1	16.1
45	43.0	26.9	13.8
50	43.5	22.3	11.4
55	40.2	13.0	9.0
60	22.6	7.3	6.9
65	8.6	4.9	5.3
70	4.5	3.2	4.1
75	2.5	1.9	2.8
80	1.2	0.9	1.6
85	0.3	0.2	0.6
90	0.0	0.0	0.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : WL-LED300-C-WT.IES

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height

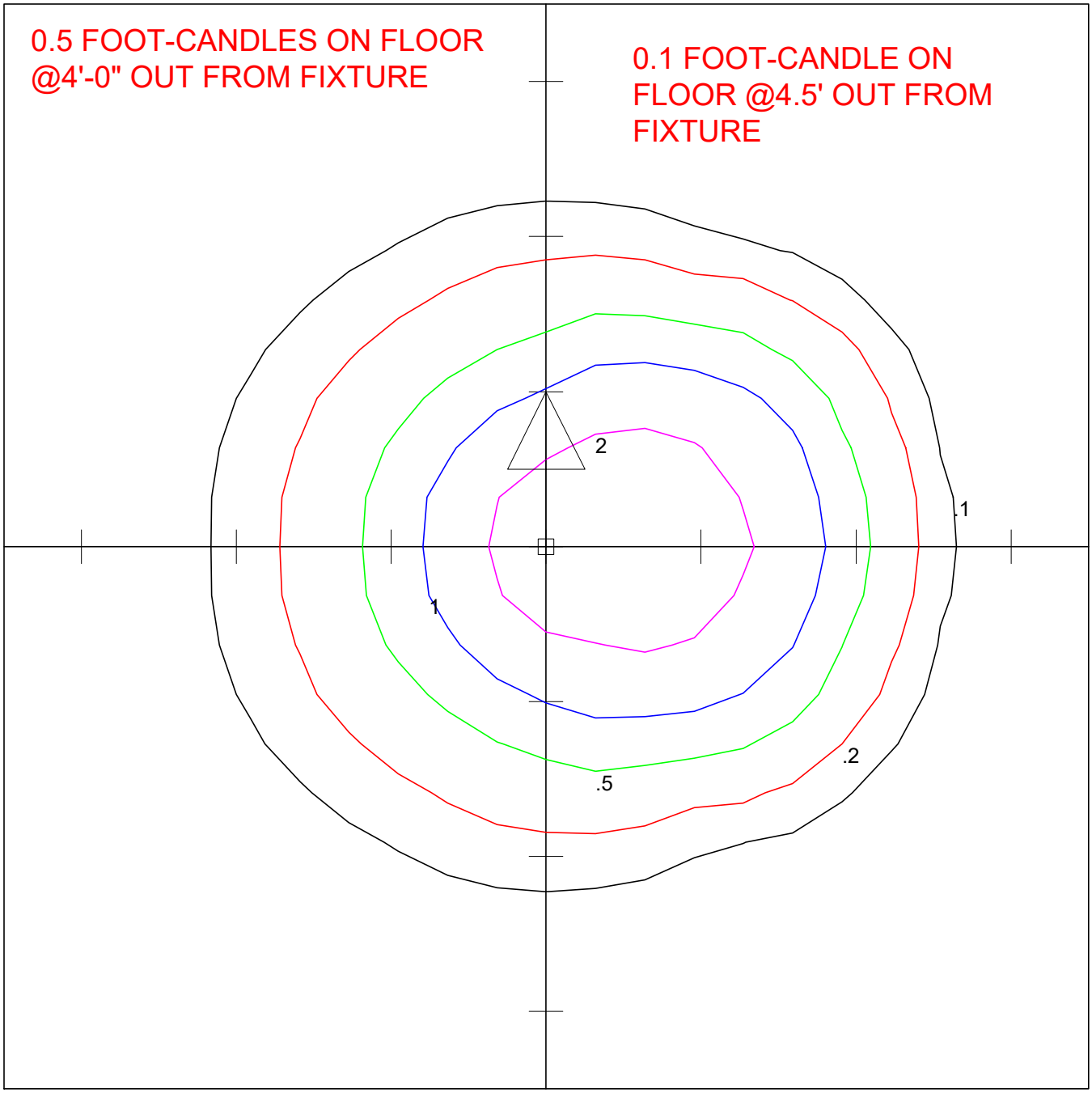

Luminaire Lumens
Uplight
23
17
12
6
100
90
80
60
30
0
Back
Front

PHO

IES F

06-15-2017

TYPE JBW
BALCONIES



WAC LIGHTING
WL-LED300-C-WT
recessed light
SAMSUNG LED

MOUNTING HEIGHT 2'-6"

Horizontal Footcandles
Scale: 1 Inch = 2 Ft.
Light Loss Factor = 0.80
Lumens Per Lamp = 271
Total Lamp Lumens = 271
Mounting Height = 2.50 Ft
Maximum Calculated Value = 3.62 Fc
Arrangement: Single

PHOTOMETRIC FILENAME : WL-LED300-C-WT.IES

DESCRIPTIVE INFORMATION (From Photometric File)

WAC LIGHTING
WL-LED300-C-WT
recessed light
SAMSUNG LED

TEMPLATE SPECIFICATION

Horizontal Footcandles
Scale: 1 Inch = 2 Ft.
Light Loss Factor = 0.80
Lumens Per Lamp = 271
Total Lamp Lumens = 271
Mounting Height = 2.50 Ft
Maximum Calculated Value = 3.62 Fc
Arrangement: Single

LUMINAIRE LAYOUT INFORMATION

#	X	Y	Z	Orient	Tilt	Roll	Spin	Tilt Correction
1	0.00	0.00	2.50	90.00	0.00	0.00	0.00	1.00

06-15-2017

Model: WL-LED300

LEDme® Step Light

WAC LIGHTING
Responsible Lighting®

Fixture Type: JBW

Catalog Number: SEE BELOW

Project:

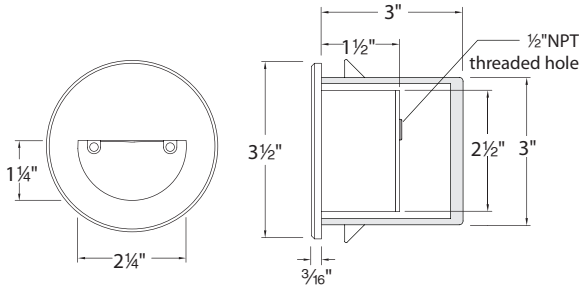
Location: EXTERIOR DECKS

PRODUCT DESCRIPTION

Circular scoop LEDme® Step Light. Designed for safety and style on stairways, patios, decks, balcony areas, walkways and building perimeters.
Features an architectural design. Energy efficient for long-lasting indoor and outdoor lighting solutions. Creates an attractive, romantic impression at night. Colored lights can be used for way finding.

FEATURES

- Direct wiring, no driver needed
- Low profile, flush to wall aesthetics with no visible hardware
- 40,000 hour rated life
- Balanced lighting, free of shadows with minimum glare
- Up to 200 fixtures can be connected in parallel
- Replaceable LED module
- 5 year WAC Lighting product warranty



ORDER NUMBER

Model		Light Color		Finish		Lumens
WL-LED300	120V	C	White	BN*	Brushed Nickel	30
				BZ	Bronze	33
				WT	White	74
		AM	Amber	BN*	Brushed Nickel	19
				BZ	Bronze	21
				WT	White	38
		RD	Red	BN*	Brushed Nickel	2
				BZ	Bronze	2
				WT	White	4
		BL	Blue	BN*	Brushed Nickel	3
				BZ	Bronze	4
				WT	White	8

*Brushed Nickel Finish is for interior use only

WL-LED300 – C – WT

Example: **WL-LED300-C-WT**

SPECIFICATIONS

Construction: Die-cast aluminum

Power: Direct wiring, no remote driver needed
Input voltage: 120VAC 50/60Hz

Light Source: 3000K CCT Samsung HV-AC High Power LED, CRI: 85
Total power consumption of 3.9W

Mounting: Supplied with junction box for recessed installation

Dimming: Dim to 10% with electronic low voltage (ELV) dimmer
Approved dimmers: Lutron Nova-T NTELV-300 & NTELV-600, Lutron Vietri VTELV-600, Lutron Diva DVELV-300P, Lutron Skylark SELV-300P, Lutron Maestro MAELV-600

Standards: IP66, UL & cUL Listed for wet locations

FINISHES

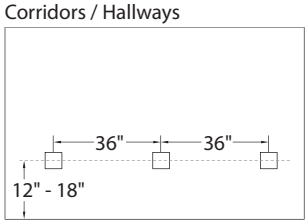
BN

BZ

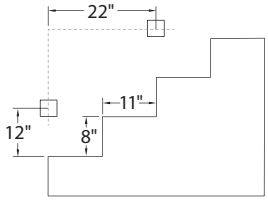
WT

SPACING RECOMMENDATIONS FOR OPTIMAL LIGHT DISTRIBUTION

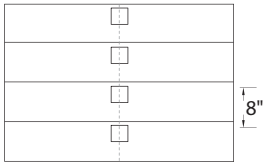
Corridors / Hallways



Stairs - Wall Mount



Stairs - Step Mount



Mount in center of stair as close to the upper tread as possible.
For best results use one light per step for steps narrower than 5'.

waclighting.com
Phone (800) 526.2588
Fax (800) 526.2585

Headquarters/Eastern Distribution Center
44 Harbor Park Drive
Port Washington, NY 11050

Central Distribution Center
1600 Distribution Ct
Lithia Springs, GA 30122

Western Distribution Center
1750 Archibald Avenue
Ontario, CA 91760

ARCHITECTURAL EGRESS

Vandal Resistant

AEL Full Cut-0ff LED

WALL MOUNT
LED

Fixture Type | Date

Job Name | Approved By

Catalog Number

SPECIFICATIONS

Description The Architectural Egress Luminaire combines a unique, patented design shaped with high performance, full cut-off optics to achieve completely unobtrusive illumination of a space or path of egress. When mounted over a doorway, the fixture is perceived as an element of the building structure and, additionally, provides water protection in the form of a drip cap over the doorway. Multiple lengths are available to match a given door opening and our unique quick mount system facilitates installation and maintenance.

Housing Marine grade heat treated extruded aluminum.
Chemically primed and finished with robotically applied polyester powder coat.

Wall Mount Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat. Designed to provide quick mounting to housing and secured with (2) captive stainless steel TORX® head screws.

Lens Frame Marine grade heat treated extruded aluminum, clear anodized. Secured to fixture via integral concealed hinge and (3) captive stainless steel TORX® head screws.

Lens UV stabilized diffused extruded polycarbonate.

End Caps Die-cast marine grade aluminum continuously welded to housing. All welds ground smooth.

Reflector Electrostatically brightened anodized aluminum PVD coated and absolutely color-free of iridescence. Shaped to provide full cutoff, LED point dispersion and maximum efficiency.

Drivers Constant current drivers at 350mA. High output version utilizes 700mA.

LED Samsung LM561B+ Series @ 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of 130,000 hours at 50ºC. Tested in accordance with LM-80. Ten year warranty on LED boards against operational defects.

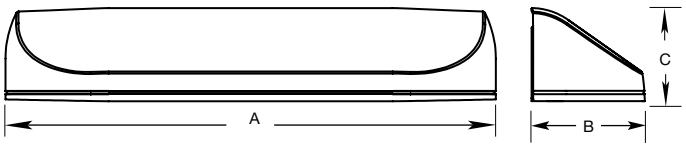
Gaskets Closed cell self-adhesive neoprene to provide watertight seal between fixture and wall and between fixture and lens frame.

UL Listing U.L., C.UL., Wet standard.

Lifetime Warranty Luminaire LED Incorporated will repair or replace any fixture damaged due to vandalism for the lifetime of the installation.

DIMENSIONAL DATA

	A	B	C
AEL 12	20.79	5.40	3.60
AEL 24	32.04	5.40	3.60
AEL 36	43.29	5.40	3.60
AEL 48	54.75	5.40	3.60
AEL 72	78.75	5.40	3.60



Luminaire Led
www.luminaireled.net

5 Sutton Place
P.O. Box 2162
Edison, NJ 08818

P. 732.549.0056
F. 732.549.9737

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Rev: 05/17+

ARCHITECTURAL EGRESS

Vandal Resistant

AEL Full Cut-0ff LED

Fixture Type

ORDERING INFORMATION

SERIES	LED	CCT	VOLTS	LENS	COLOR	OPTIONS		TX/SD
								TX/SD
AEL 12	12” - 10W	3000K	120-277	DP	BKH	DIM	EMBDA	
AEL 24	24” - 10W	3500K	347		BZH	A/B	EMB310	
AEL 36	24” - 20W	4000K			SVH	2B	EMB310ST	
AEL 48	36” - 15W	5000K			WOP	PC	EMB20R	
AEL 72	36” - 30W				PCP	GLR	EMB125R	
	48” - 20W				CUST	OCC	EMB250R	
	48” - 35W						ST/SC	
	72” - 30W							
	72” - 55W							

OPTIONS

LENS DP = Diffused Polycarbonate.

COLORS BKH = Black (Hammertone) BZH = Bronze (Hammertone) SVH = Silver (Hammertone) WOP = White (Textured White) PCP = Black (Prime Coat Paintable) CUST = Custom Color (Consult Factory)

DIM 0-10V dimming driver. N/A with AEL12. 10% at lowest level.

A/B Aluminum surface back box. Finished with polyester powder coat to match the fixture.

PC Photoelectric switch.

2B (2) LED drivers for independent LED b d operation. N/A with AEL12. N/A with the OCC option.

GLR Fuse and fuse holder.

EMB310 1000 lumen self-contained, 90 minute emergency battery pack. Available for 36”, 48” and 72” lengths only. 0°C (32°F) to 55°C (131°F). Not available in 347V.

EMB310ST 1000 lumen self-testing, self-contained, 90 minute emergency battery pack. Available for 36”, 48” and 72” lengths only. 0°C (32°F) to 55°C (131°F). Not available in 347V.

EMB20R Remote mounted micro inverter that will operate a 25W maximum load for 90 minutes. 0°C (32°F) to 45°C (113°F).

EMB125R Remote inverter that will operate a 125W maximum load for 90 minutes. 20°C (68°F) to 30°C (86°F). Not available in 347V.

EMB250R Remote inverter that will operate a 250W maximum load for 90 minutes. 20°C(68°F) to 30°C (86°F). Not available in 347V.

EMBDA Two drivers and two emergency battery packs self-contained within fixture for independent light engine operation. Each battery pack will operate each light engine for a minimum of 90 minutes. Available in the 72” length only. Not available in 347V.

OCC Passive infrared sensor mounted in machine hole in end cap. Maximum coverage of 10’ radius from 8’ height.

ST/SC Slotted screws instead of TORX® head.

TX/SD TORX® head bit.

Luminaire Led
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Rev: 05/17+

ARCHITECTURAL EGRESS

Vandal Resistant

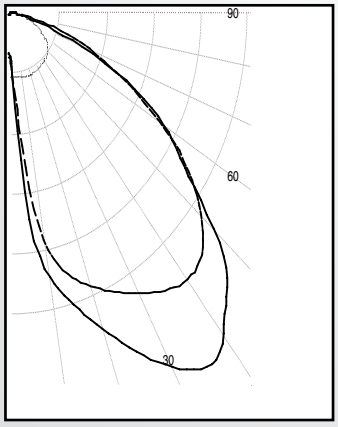
Fixture Type

AEL Full Cut-0ff LED

PHOTOMETRIC DATA

Model	Watts	Input Watts		Delivered Lumens							
				3000K		3500K		4000K		5000K	
AEL 12	10W	10.8W		747		760		784		807	
AEL 24	10W	9.4W		832		847		873		899	
AEL 24	20W	17.6W		1557		1585		1634		1682	
AEL 36	15W	14.9W		1248		1271		1310		1348	
AEL 36	30W	26.3W		2995		3049		3143		3237	
AEL 48	20W	18.8W		1935		1969		2030		2090	
AEL 48	35W	35.2W		3616		3682		3796		3909	
AEL 72	30W	27.9W		3162		3217		3317		3417	
AEL 72	55W	52.2W		5911		6017		6203		6389	

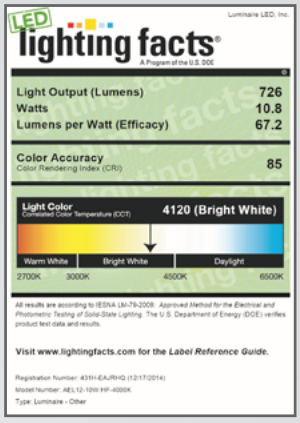
MODEL AEL12-10W-4000K
Delivered Lumens: 726 Lumens



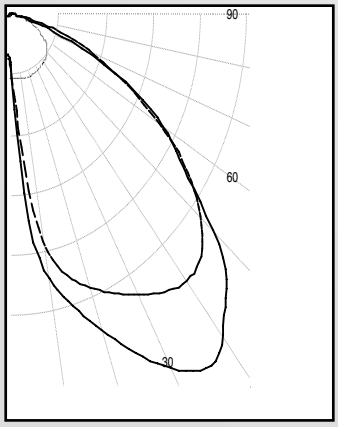
IES FILE: AEL12-10W-4000K
Total Power: 10.8W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G0

Zone	Lumens	% Lamps
0 - 30	153	21.1
0 - 40	287	39.5
0 - 60	585	80.6
60 - 90	726	100.0
0 - 90	439	60.5
90 -180	0	0.0
0 - 180	726	100.0



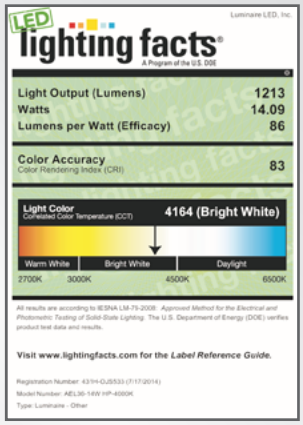
MODEL AEL36-15W-4000K
Delivered Lumens: 1213 Lumens



IES FILE: AEL36-15W-4000K
Total Power: 14.09W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U1G0

Zone	Lumens	% Lamps
0 - 30	381	31.4
0 - 40	635	52.3
0 - 60	1063	87.7
60 - 90	150	12.3
0 - 90	1213	100.0
90 -180	0	0.0
0 - 180	1213	100.0



Luminaire Led
www.luminaireled.net

5 Sutton Place
P.O. Box 2162
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Rev: 05/17+

ARCHITECTURAL EGRESS

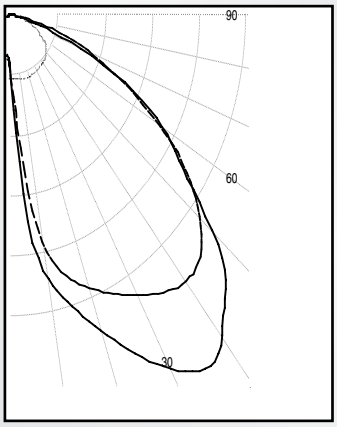
Vandal Resistant

Fixture Type

AEL Full Cut-0ff LED

PHOTOMETRIC DATA

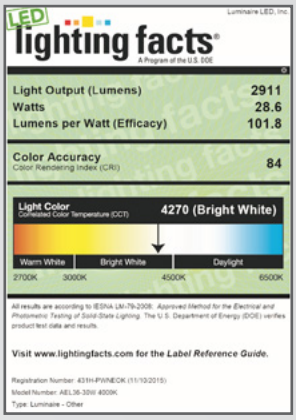
MODEL AEL36-30W-4000K
Delivered Lumens: 2911 Lumens



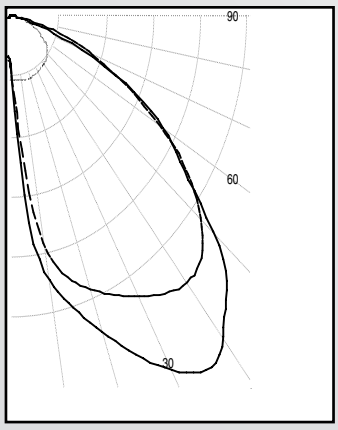
IES FILE: AEL36-30W-4000K
Total Power: 28.6W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G0

Zone	Lumens	% Lamps
0 - 30	754	25.9
0 - 40	1308	44.9
0 - 60	2417	83.0
60 - 90	494	17.0
0 - 90	2911	100.0
90 -180	0	0.0
0 - 180	2911	100.0



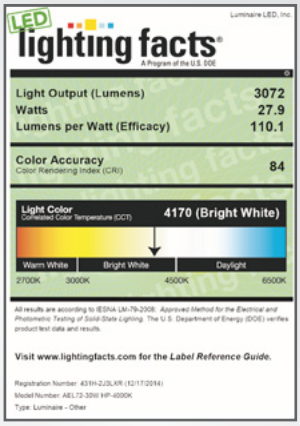
MODEL AEL72-30W-4000K
Delivered Lumens: 3072 Lumens



IES FILE: AEL72-30W-4000K
Total Power: 27.09W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B1U0G1

Zone	Lumens	% Lamps
0 - 30	771	25.1
0 - 40	1353	44.1
0 - 60	2529	82.3
60 - 90	3072	100.0
0 - 90	1718	17.7
90 -180	542	0.0
0 - 180	3072	100.0



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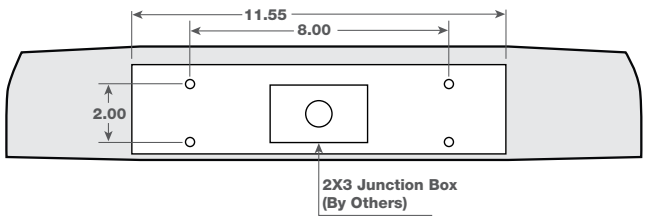
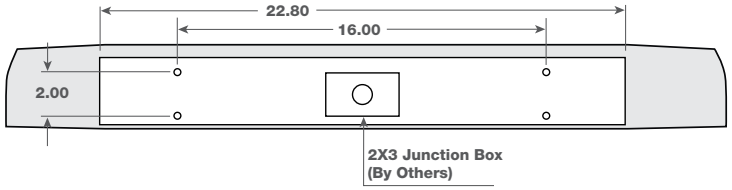
Rev: 05/17+

MOUNTING PLATE DETAILS

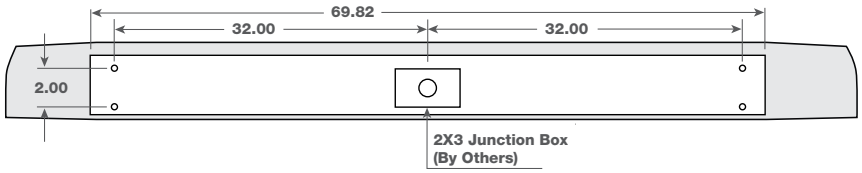
AEL 12



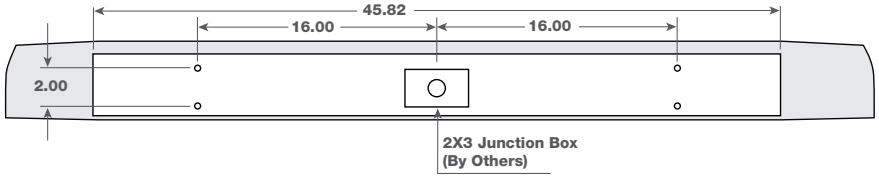
AEL 24



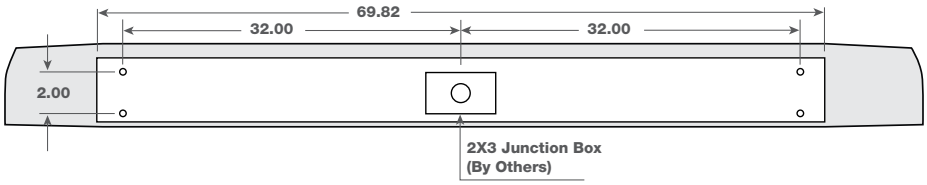
AEL 36



AEL 48



AEL 72



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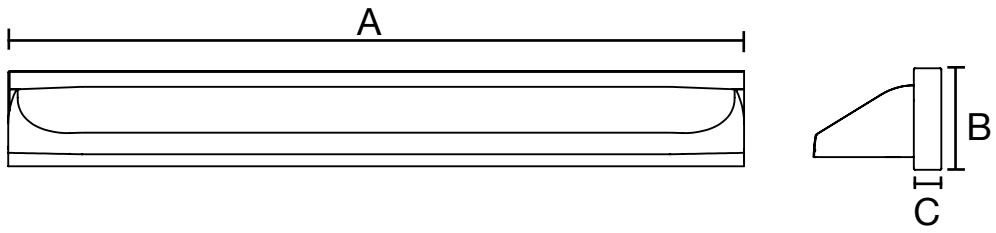
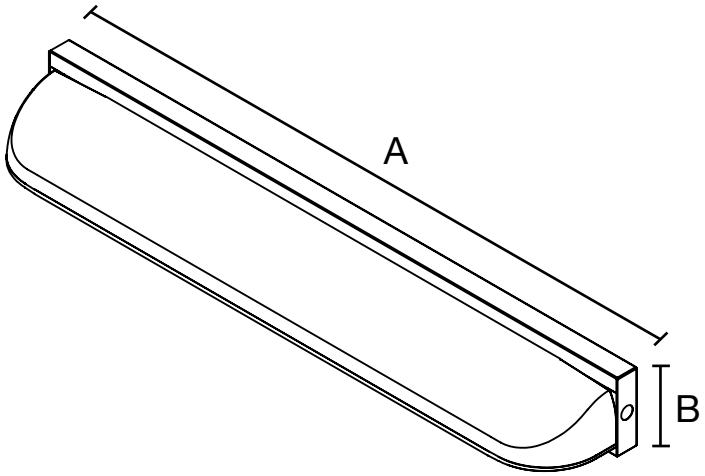
ALUMINUM BACKBOX DETAIL

A/B Detail

	A	B	C
AEL 12 Backbox	20.80	5.20	1.50
AEL 24 Backbox	31.48	5.20	1.50
AEL 36 Backbox	43.30	5.20	1.50
AEL 48 Backbox	54.75	5.20	1.50
AEL 72 Backbox	78.75	5.20	1.50





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06-15-2017

TYPE JCW

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LLI-14257-1
[TESTLAB] LightLab International (www.LightLabInt.com)
[MANUFAC] Luminaire LED, Inc., Edison, New Jersey, 08817
[LUMCAT] AEL12-10W 4000K
[LUMINAIRE] Luminaire LED Architectural Egress Luminaire. Cat No:AEL12-10W 4000K
[MORE] Painted extruded aluminum body with endcaps and a horizontal finely etched planar glass diffuser 2.5"x10.4".
[MORE] Two piece aluminum asymmetric reflector with single 1 x 28 array of LEDs spaced at 0.38".
[MORE] LED strip screws to black extruded heat sink. Luminaire extents ~ 5-1/2 x 21 x 3-1/2".
[MORE] One integral Thomas Research Products LED12W-16-C0700 100-277V 50/60Hz driver.
[MORE] Tested wall mount position at 120V.
[OTHER] Absolute test - lamp lumens value set to -1
[MORE] NA conventions used for C0 plane alignment and C-plane rotation direction.
[MORE] The sample was tested at a distance of 8m.
[MORE] This IES file created by LightLab/LSA Report program version 3.804a.
[DATE] This file created: Thursday, 23 October 2014 3:27:26 PM
[ISSUEDATE] Thursday, 23 October 2014 3:27:26 PM

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	726
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	10.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	540.37
Maximum Candela Angle	0H 36.5V
Maximum Candela (<90 Degrees Vertical)	540.37
Maximum Candela Angle (<90 Degrees Vertical)	0H 36.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	32.97 (4.5% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	133.9	N.A.	18.4
FM - Front-Medium (30-60)	398.4	N.A.	54.9
FH - Front-High (60-80)	117.9	N.A.	16.2
FVH - Front-Very High (80-90)	4.5	N.A.	0.6
BL - Back-Low (0-30)	19.0	N.A.	2.6
BM - Back-Medium (30-60)	33.5	N.A.	4.6
BH - Back-High (60-80)	17.0	N.A.	2.3
BVH - Back-Very High (80-90)	1.7	N.A.	0.2
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	725.9	N.A.	100.0
BUG Rating	B0-U0-G0		

IES ROAD REPORT
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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	**10.0**	**20.0**	**22.5**	**30.0**	**40.0**	**45.0**	**50.0**	**60.0**	**67.5**
0.0	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53
0.5	87.05	87.12	86.53	86.60	86.09	85.09	84.57	84.14	82.87	82.06
1.0	95.76	95.51	94.48	94.39	93.26	91.25	90.17	89.11	86.67	84.91
1.5	106.04	105.63	103.77	103.42	101.52	98.27	96.40	94.63	90.74	87.76
2.0	117.91	117.27	114.75	114.14	111.03	106.28	103.65	100.74	95.15	91.02
2.5	131.94	130.87	127.62	126.53	122.30	115.37	111.65	107.93	100.09	94.39
3.0	147.96	146.62	141.76	140.51	134.91	125.65	120.91	115.64	105.36	98.08
3.5	165.77	163.90	157.90	156.36	149.02	137.10	130.76	124.18	111.11	102.16
4.0	184.70	182.69	175.24	173.48	164.58	149.96	141.97	133.70	117.46	106.28
4.5	204.39	201.90	193.47	191.35	180.82	163.38	153.89	143.97	124.18	110.66
5.0	223.86	220.94	211.83	209.54	197.73	177.83	166.53	154.85	131.48	115.53
5.5	242.25	239.21	229.87	227.15	214.68	192.68	180.10	166.67	139.25	120.43
6.0	258.70	255.97	246.37	243.84	230.88	207.66	193.75	178.80	147.45	125.90
6.5	273.52	270.62	261.67	258.98	246.28	222.25	207.57	191.21	155.96	131.42
7.0	286.29	283.64	275.04	272.62	260.42	236.20	221.12	203.73	165.15	137.43
7.5	297.55	294.96	286.86	284.39	272.82	249.20	234.05	216.10	174.49	143.66
8.0	307.12	304.61	297.09	294.96	283.91	261.13	246.30	228.07	184.12	150.02
8.5	315.59	313.17	306.24	304.18	293.78	272.28	257.61	239.69	194.09	156.83
9.0	322.97	320.39	314.18	312.10	302.58	281.81	268.12	250.52	203.71	163.82
9.5	329.26	326.95	321.02	319.17	310.11	290.70	277.59	260.49	213.23	171.00
10.0	334.62	332.60	327.08	325.34	316.77	298.56	286.24	269.86	222.87	178.28
10.5	339.39	337.63	332.35	330.68	322.65	305.54	293.92	278.22	232.04	185.69
11.0	344.11	342.02	337.02	335.47	327.94	311.88	300.75	285.94	240.84	193.01
11.5	348.10	346.20	341.46	339.92	332.65	317.59	307.17	293.02	249.33	200.53
12.0	352.16	350.23	345.30	344.03	336.86	322.42	312.76	299.39	257.29	207.85
12.5	356.11	354.13	349.18	347.95	340.82	326.84	317.75	305.27	264.58	214.99
13.0	360.04	358.14	353.05	351.60	344.45	331.03	322.55	310.48	271.49	222.15
13.5	363.76	362.10	356.79	355.23	347.96	334.76	326.65	315.20	277.77	228.86
14.0	367.83	365.88	360.50	359.03	351.42	338.42	330.36	319.29	283.52	235.29
14.5	371.84	369.90	364.36	362.58	354.75	341.80	333.83	323.14	288.71	241.45
15.0	375.96	373.81	368.10	366.19	358.10	344.84	337.06	326.79	293.46	247.25
15.5	379.91	378.09	371.92	370.00	361.53	347.95	340.37	329.92	297.79	252.65
16.0	384.27	382.00	375.81	373.73	364.97	351.03	343.08	332.98	301.64	257.68
16.5	388.69	386.08	379.45	377.50	368.41	353.93	345.83	335.49	305.04	262.55
17.0	392.84	390.29	383.43	381.35	371.84	356.82	348.53	338.03	308.10	266.96
17.5	397.01	394.47	387.16	385.08	375.40	359.76	350.88	340.22	310.84	271.26
18.0	401.32	398.41	390.91	388.87	378.70	362.72	353.15	342.26	313.41	275.17
18.5	405.42	402.64	394.72	392.52	382.40	365.43	355.77	344.10	315.91	278.86
19.0	409.78	406.76	398.61	396.45	385.82	368.22	357.91	346.06	318.10	282.27
19.5	413.77	410.90	402.59	399.75	389.15	371.03	359.99	347.79	320.13	285.62
20.0	418.20	415.18	406.17	403.91	392.49	373.60	362.14	349.81	321.97	288.57
20.5	422.56	419.37	410.19	407.56	395.87	376.10	364.29	351.68	323.77	291.47
21.0	427.06	423.52	413.99	411.20	399.12	378.67	366.44	353.50	325.35	293.96
21.5	431.38	427.88	417.98	415.06	402.48	381.02	368.55	355.46	326.86	296.34
22.0	436.13	432.50	421.97	418.71	405.85	383.68	370.81	357.36	328.30	298.49
22.5	441.01	437.00	426.23	422.68	409.16	385.94	372.95	359.21	329.46	300.38
23.0	445.95	441.55	430.17	426.60	412.50	388.42	375.15	361.11	330.68	302.20
23.5	450.63	446.41	434.39	430.58	415.82	390.79	377.32	363.09	331.89	303.66
24.0	455.69	451.16	438.49	434.52	419.04	393.31	379.52	365.05	333.00	305.03
24.5	460.49	455.63	442.61	438.59	422.37	395.65	381.76	366.81	334.06	306.22
25.0	465.43	460.58	446.93	442.90	425.79	398.24	384.03	368.55	335.13	307.06
25.5	470.14	465.29	451.18	446.98	429.35	400.66	385.99	370.22	336.07	307.98
26.0	475.08	469.83	455.46	451.10	432.79	403.07	387.85	371.93	336.92	308.79

CANDELA TABULATION - (Cont.)

26.5	479.71	474.47	459.86	455.31	436.12	405.73	389.88	373.69	337.97	309.42
27.0	484.20	478.85	463.95	459.58	439.64	408.16	391.88	375.02	338.82	309.98
27.5	488.52	483.40	468.48	463.67	443.01	410.56	393.79	376.71	339.91	310.49
28.0	493.10	487.71	472.64	467.94	446.40	413.34	395.79	378.24	340.55	310.89
28.5	497.18	491.77	476.86	472.02	449.80	415.73	397.78	379.71	341.28	311.35
29.0	501.30	496.04	480.71	476.09	453.24	418.37	399.80	381.25	342.35	311.51
29.5	505.41	500.08	484.62	479.90	456.27	420.97	401.66	382.39	342.91	311.90
30.0	509.50	503.94	488.54	483.60	459.70	423.53	403.65	384.00	343.86	312.04
30.5	513.36	507.82	492.34	487.17	462.88	425.93	405.66	385.49	344.46	312.22
31.0	516.92	511.45	495.90	490.49	466.08	428.45	407.60	386.84	345.14	312.32
31.5	520.52	515.06	499.57	494.00	469.07	430.95	409.57	388.13	345.46	312.26
32.0	523.53	518.53	502.84	496.95	472.09	433.34	411.46	389.55	345.89	312.17
32.5	526.77	521.90	506.23	500.09	474.98	435.69	413.56	390.97	346.11	312.14
33.0	529.61	524.97	509.24	503.00	477.66	437.84	415.35	392.47	346.48	311.88
33.5	532.24	527.79	512.18	505.49	480.29	440.13	417.29	393.74	346.71	311.57
34.0	534.85	530.19	514.83	508.14	482.71	442.15	419.20	395.15	346.91	311.08
34.5	537.02	532.44	517.28	510.63	485.28	444.06	420.93	396.57	346.83	310.48
35.0	538.42	534.21	519.38	512.63	487.43	445.92	422.51	397.65	346.82	309.74
35.5	539.69	535.69	521.10	514.37	489.31	447.73	424.04	398.81	346.70	308.75
36.0	540.31	536.72	522.58	515.91	491.23	449.50	425.62	400.03	346.38	307.92
36.5	540.37	537.26	523.79	517.13	492.84	451.28	426.98	400.87	345.95	307.03
37.0	539.79	537.47	524.43	518.09	494.20	452.80	428.10	401.96	345.42	305.97
37.5	538.54	536.81	524.60	518.54	495.31	454.36	429.46	402.74	344.82	305.18
38.0	536.60	535.67	524.39	518.59	496.28	455.59	430.64	403.54	344.22	304.33
38.5	533.91	533.48	523.44	518.15	496.86	456.74	431.60	404.11	343.56	303.63
39.0	530.35	530.65	522.27	517.54	497.31	457.88	432.52	404.36	342.98	303.01
39.5	526.79	527.19	520.35	516.17	497.27	458.61	433.12	404.82	342.44	302.23
40.0	522.53	523.15	517.82	514.26	496.68	459.31	433.70	404.84	341.97	301.49
40.5	517.78	518.79	514.46	511.74	495.72	459.69	434.02	404.65	341.69	300.79
41.0	513.39	514.44	510.69	508.59	494.29	459.68	434.18	404.41	341.44	300.05
41.5	509.20	509.85	506.44	504.83	492.55	459.67	434.18	404.15	340.89	299.27
42.0	505.14	505.47	502.23	500.70	490.17	459.12	433.84	403.80	340.57	298.56
42.5	501.43	501.36	497.58	496.27	487.29	458.36	433.25	403.21	340.27	297.68
43.0	497.87	497.42	493.11	491.89	484.08	457.30	432.30	402.64	339.99	297.07
43.5	494.21	493.76	488.88	487.35	480.27	455.86	431.09	401.90	339.67	296.16
44.0	490.68	490.27	484.64	483.03	476.30	453.81	429.58	401.27	339.15	295.16
44.5	487.34	486.90	480.79	478.85	471.96	451.29	427.73	400.24	338.78	294.38
45.0	483.65	483.29	476.98	474.63	467.73	448.38	425.92	399.35	338.15	293.36
45.5	479.80	479.63	473.05	470.58	463.35	444.90	423.79	398.27	337.59	292.17
46.0	475.34	475.65	469.33	466.74	459.08	440.92	421.38	396.97	336.97	290.90
46.5	470.80	471.56	465.34	462.77	455.00	436.75	418.74	395.44	335.93	289.68
47.0	465.86	466.65	461.09	458.70	450.88	432.15	415.88	393.87	334.93	288.35
47.5	459.91	461.46	456.65	454.60	446.83	427.50	412.67	391.96	333.76	286.83
48.0	453.53	455.65	451.85	450.16	442.57	422.60	409.08	389.67	332.48	285.28
48.5	446.19	449.23	446.56	445.11	438.31	417.67	405.08	387.54	331.17	283.51
49.0	438.15	441.94	440.89	439.90	433.77	412.77	401.11	384.80	329.73	281.73
49.5	429.32	434.00	434.59	434.21	429.13	407.78	396.85	381.78	327.98	279.77
50.0	419.81	425.33	427.75	427.89	424.33	403.04	392.31	378.61	326.07	277.86
50.5	409.66	415.83	420.14	421.06	418.71	398.25	387.73	374.87	323.85	275.79
51.0	399.55	405.90	412.11	413.74	412.82	393.39	383.13	371.17	321.50	273.70
51.5	389.48	395.94	403.25	405.54	406.48	388.52	378.47	366.93	318.94	271.63
52.0	379.99	386.11	393.78	396.75	399.68	383.43	373.59	362.29	316.19	269.38
52.5	371.07	376.62	384.17	387.60	392.17	378.43	368.63	357.58	313.41	267.15
53.0	363.01	367.79	374.55	378.25	384.28	373.14	363.76	352.43	310.38	264.86
53.5	354.90	359.46	365.29	368.88	375.85	367.49	358.35	347.29	307.19	262.50
54.0	347.93	351.82	356.43	359.64	366.79	361.73	353.08	341.96	303.91	259.88

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CANDELA TABULATION - (Cont.)

54.5	341.20	344.59	348.22	350.93	357.45	355.45	347.86	336.54	300.45	257.36
55.0	334.76	337.62	340.14	342.67	348.05	348.69	341.89	331.06	296.90	254.45
55.5	328.92	331.23	332.69	334.81	338.81	341.87	335.93	325.31	293.16	251.46
56.0	322.94	325.28	325.52	327.33	329.79	334.64	329.65	319.51	289.01	248.32
56.5	317.28	319.21	318.87	320.19	321.20	326.94	322.91	313.63	284.83	244.97
57.0	311.96	313.39	312.43	313.51	312.97	318.96	316.18	307.85	280.31	241.81
57.5	306.04	307.56	306.22	306.89	305.15	310.77	309.05	301.84	275.69	238.33
58.0	300.66	301.79	300.31	300.49	297.62	302.38	301.74	295.61	270.70	234.59
58.5	295.11	296.10	294.12	294.06	290.44	293.84	294.23	289.39	265.64	230.90
59.0	289.28	290.24	288.31	287.90	283.53	285.25	286.32	282.95	260.37	226.90
59.5	283.30	284.09	282.27	281.65	276.63	277.11	278.32	276.20	254.97	222.92
60.0	277.07	278.06	276.21	275.38	269.93	268.96	270.53	268.94	249.40	218.69
60.5	270.64	271.72	270.03	268.89	263.63	261.17	262.45	262.05	243.74	214.42
61.0	264.03	265.12	263.81	262.49	256.96	253.61	254.53	254.59	238.01	210.02
61.5	257.11	258.28	257.32	255.78	250.56	246.19	246.55	247.22	232.22	205.47
62.0	250.00	250.93	250.63	249.03	243.96	239.09	238.98	239.61	226.37	200.87
62.5	242.28	243.56	243.46	242.05	237.57	231.99	231.31	231.95	220.36	196.12
63.0	234.53	235.84	236.40	234.82	230.98	225.14	223.96	224.28	214.41	191.29
63.5	226.40	227.81	228.82	227.56	224.22	218.60	216.77	216.89	208.27	186.39
64.0	217.61	219.51	220.97	220.13	217.20	211.60	209.63	209.42	202.00	181.30
64.5	208.85	210.73	212.86	212.27	210.20	204.84	202.76	202.13	195.71	176.00
65.0	199.33	201.80	204.71	204.07	202.99	198.01	195.67	195.01	189.43	170.85
65.5	189.87	192.50	196.27	195.83	195.45	191.33	188.86	187.81	183.01	165.64
66.0	180.19	182.85	187.47	187.31	188.13	184.33	182.17	180.90	176.47	160.27
66.5	169.96	173.12	178.47	178.75	180.21	177.64	175.51	174.15	170.09	154.96
67.0	159.72	163.06	169.34	170.01	172.29	170.63	168.85	167.33	163.52	149.57
67.5	149.04	152.79	160.03	161.09	164.29	163.62	162.12	160.76	157.13	144.20
68.0	138.83	142.64	150.36	151.99	156.21	156.72	155.45	154.32	150.71	138.79
68.5	128.83	132.45	140.74	142.71	147.92	149.82	148.88	147.71	144.21	133.39
69.0	118.60	122.58	131.25	133.30	139.64	142.79	142.02	141.43	138.07	128.09
69.5	109.30	112.90	122.05	124.16	131.29	135.77	135.73	135.15	131.96	122.74
70.0	100.42	104.07	112.81	115.26	122.80	128.53	129.10	128.90	125.80	117.43
70.5	92.10	95.58	104.12	106.91	114.68	121.70	122.43	122.59	119.95	112.23
71.0	84.68	87.73	95.83	98.96	106.43	114.56	116.05	116.49	114.13	107.07
71.5	77.46	80.48	88.28	90.98	98.78	107.56	109.56	110.33	108.47	101.77
72.0	71.00	73.73	81.12	83.64	91.26	100.80	103.27	104.39	102.93	96.84
72.5	64.89	67.53	74.89	76.62	84.28	94.01	96.97	98.58	97.37	91.98
73.0	59.17	61.69	68.93	70.41	77.64	87.49	90.67	92.74	92.23	86.92
73.5	54.24	56.49	63.17	64.47	71.58	81.20	84.73	86.95	86.89	82.18
74.0	49.54	51.70	57.54	59.01	65.65	75.11	78.84	81.41	81.85	77.61
74.5	45.20	47.05	52.51	54.16	60.27	69.41	73.29	75.93	76.99	73.07
75.0	41.25	43.03	47.85	49.62	55.35	63.94	67.86	70.96	72.18	68.61
75.5	37.58	39.21	43.94	45.15	50.71	58.88	62.67	65.83	67.65	64.37
76.0	34.11	35.55	39.92	41.26	46.51	54.34	58.02	60.95	63.04	60.30
76.5	30.95	32.46	36.28	37.58	42.31	49.81	53.33	56.53	58.84	56.29
77.0	28.25	29.53	33.06	34.26	38.69	45.69	48.99	52.03	54.60	52.39
77.5	25.45	26.72	29.95	31.06	35.18	41.86	44.99	47.97	50.63	48.67
78.0	23.38	24.21	27.19	28.25	31.93	38.16	41.18	44.09	46.72	45.14
78.5	20.94	21.87	24.47	25.48	29.07	34.96	37.63	40.19	42.98	41.74
79.0	18.93	19.67	22.15	22.98	26.27	31.65	34.33	36.85	39.47	38.44
79.5	16.91	17.68	19.95	20.81	23.75	28.70	31.16	33.42	36.21	35.16
80.0	15.20	15.65	17.93	18.54	21.30	26.00	28.35	30.51	32.97	32.14
80.5	13.53	14.13	16.00	16.50	19.06	23.27	25.46	27.52	30.00	29.40
81.0	12.09	12.50	14.25	14.73	17.00	20.88	22.97	24.81	27.10	26.61
81.5	10.65	11.02	12.54	13.14	15.06	18.66	20.53	22.19	24.39	23.95
82.0	9.42	9.72	10.96	11.42	13.29	16.50	18.24	19.86	21.85	21.47

CANDELA TABULATION - (Cont.)

82.5	8.17	8.41	9.61	10.08	11.70	14.55	16.14	17.57	19.41	19.17
83.0	7.24	7.50	8.42	8.66	10.28	12.74	14.12	15.41	17.19	17.05
83.5	6.03	6.42	7.23	7.48	8.79	10.98	12.40	13.47	14.95	14.89
84.0	5.12	5.47	6.24	6.36	7.45	9.44	10.55	11.62	13.04	12.93
84.5	4.27	4.61	5.27	5.35	6.17	7.96	9.04	9.94	11.27	11.14
85.0	3.61	3.68	4.35	4.38	5.29	6.66	7.58	8.36	9.47	9.47
85.5	2.98	3.05	3.53	3.68	4.29	5.49	6.32	6.88	7.90	7.94
86.0	2.25	2.53	2.75	2.84	3.33	4.46	5.20	5.73	6.54	6.47
86.5	2.10	1.93	2.26	2.33	2.59	3.47	4.00	4.35	5.19	5.26
87.0	1.45	1.58	1.73	1.80	2.04	2.58	3.15	3.54	3.98	4.08
87.5	1.21	1.18	1.39	1.24	1.48	1.83	2.19	2.46	3.05	3.04
88.0	1.07	0.87	0.91	0.93	1.02	1.45	1.62	1.66	2.16	2.27
88.5	0.62	0.62	0.80	0.63	0.73	1.05	0.95	1.25	1.47	1.57
89.0	0.43	0.41	0.46	0.46	0.41	0.78	0.63	0.68	0.90	1.03
89.5	0.31	0.23	0.30	0.30	0.23	0.26	0.37	0.35	0.39	0.52
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**									
	70.0	**80.0**	**90.0**	**100.0**	**110.0**	**112.5**	**120.0**	**130.0**	**135.0**	**140.0**
0.0	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53
0.5	81.75	80.66	79.56	78.45	77.32	77.07	76.26	75.47	75.13	74.75
1.0	84.22	81.89	79.61	77.45	75.44	74.94	73.63	72.20	71.58	70.97
1.5	86.79	83.17	79.63	76.47	73.69	73.04	71.26	69.41	68.65	67.89
2.0	89.58	84.46	79.68	75.58	72.11	71.31	69.23	67.03	66.14	65.38
2.5	92.56	85.85	79.77	74.76	70.63	69.69	67.36	65.00	64.04	63.28
3.0	95.74	87.29	79.84	73.96	69.26	68.27	65.77	63.28	62.34	61.49
3.5	99.04	88.76	79.94	73.15	68.07	67.02	64.36	61.84	60.87	60.04
4.0	102.66	90.21	80.02	72.39	66.92	65.84	63.14	60.59	59.63	58.78
4.5	106.45	91.79	80.08	71.68	65.92	64.77	62.11	59.51	58.54	57.75
5.0	110.49	93.35	80.16	71.02	64.97	63.84	61.06	58.57	57.58	56.80
5.5	114.74	94.99	80.24	70.35	64.17	62.95	60.24	57.68	56.68	55.96
6.0	119.14	96.66	80.30	69.72	63.33	62.20	59.44	56.91	55.96	55.18
6.5	123.86	98.41	80.42	69.18	62.66	61.51	58.76	56.22	55.26	54.47
7.0	128.76	100.22	80.58	68.62	62.01	60.86	58.11	55.59	54.61	53.85
7.5	133.93	102.07	80.72	68.18	61.41	60.24	57.55	55.03	54.04	53.21
8.0	139.35	104.05	80.86	67.66	60.91	59.75	57.03	54.49	53.47	52.67
8.5	145.07	106.06	81.00	67.25	60.42	59.26	56.57	53.96	52.98	52.07
9.0	150.87	108.07	81.15	66.82	59.97	58.83	56.14	53.50	52.48	51.59
9.5	156.92	110.22	81.29	66.41	59.54	58.43	55.69	53.07	51.98	51.11
10.0	163.22	112.40	81.40	66.02	59.12	57.98	55.33	52.67	51.57	50.67
10.5	169.53	114.68	81.53	65.60	58.70	57.55	54.95	52.27	51.13	50.18
11.0	176.01	116.91	81.60	65.17	58.37	57.26	54.57	51.88	50.72	49.79
11.5	182.55	119.24	81.70	64.80	57.98	56.89	54.22	51.50	50.34	49.36
12.0	189.15	121.60	81.79	64.40	57.64	56.53	53.89	51.12	49.98	48.94
12.5	195.72	124.03	81.85	64.10	57.28	56.20	53.53	50.77	49.60	48.52
13.0	202.26	126.41	81.91	63.74	56.96	55.87	53.19	50.40	49.19	48.10
13.5	208.65	128.80	81.96	63.41	56.64	55.57	52.88	50.04	48.81	47.71
14.0	214.80	131.31	81.99	63.06	56.37	55.22	52.55	49.69	48.43	47.32
14.5	220.78	133.81	81.99	62.69	56.04	54.95	52.18	49.34	48.05	46.84
15.0	226.50	136.27	81.98	62.39	55.70	54.63	51.89	48.99	47.66	46.46
15.5	232.10	138.86	82.00	62.01	55.41	54.33	51.55	48.66	47.26	45.97
16.0	237.37	141.48	81.97	61.71	55.08	53.99	51.25	48.26	46.89	45.56
16.5	242.47	144.18	81.95	61.33	54.77	53.68	50.92	47.87	46.41	45.02
17.0	247.38	146.92	81.92	60.97	54.39	53.34	50.60	47.47	46.00	44.54
17.5	252.01	149.72	81.90	60.64	54.07	52.98	50.25	47.08	45.54	44.02

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

CANDELA TABULATION - (Cont.)

18.0	256.47	152.54	81.82	60.29	53.73	52.65	49.86	46.63	45.09	43.50
18.5	260.63	155.40	81.81	59.99	53.38	52.32	49.50	46.27	44.57	42.94
19.0	264.59	158.36	81.78	59.62	53.04	51.96	49.12	45.76	44.04	42.36
19.5	268.28	161.28	81.72	59.28	52.74	51.59	48.73	45.30	43.55	41.77
20.0	271.73	164.16	81.72	58.99	52.39	51.29	48.35	44.80	42.97	41.22
20.5	274.99	167.08	81.66	58.65	52.06	50.91	47.95	44.30	42.41	40.57
21.0	278.06	170.00	81.64	58.31	51.73	50.56	47.58	43.75	41.82	39.89
21.5	280.89	172.90	81.58	58.01	51.42	50.23	47.13	43.22	41.23	39.19
22.0	283.43	175.72	81.53	57.75	51.08	49.87	46.77	42.63	40.59	38.49
22.5	285.80	178.60	81.51	57.43	50.76	49.58	46.32	42.04	39.95	37.76
23.0	287.99	181.39	81.43	57.10	50.44	49.23	45.92	41.54	39.28	36.90
23.5	289.93	184.17	81.38	56.76	50.09	48.88	45.49	40.90	38.53	36.12
24.0	291.67	186.84	81.33	56.46	49.74	48.51	45.06	40.27	37.85	35.29
24.5	293.23	189.48	81.23	56.17	49.40	48.17	44.59	39.67	37.04	34.44
25.0	294.57	192.06	81.17	55.86	49.06	47.81	44.14	38.99	36.23	33.56
25.5	295.66	194.62	81.12	55.58	48.71	47.46	43.68	38.33	35.50	32.69
26.0	296.63	196.94	81.07	55.24	48.37	47.06	43.17	37.64	34.67	31.83
26.5	297.43	199.40	81.02	54.95	48.04	46.70	42.72	36.95	33.85	31.05
27.0	298.18	201.71	80.93	54.65	47.68	46.30	42.19	36.19	33.02	30.25
27.5	298.83	203.97	80.90	54.36	47.31	45.94	41.65	35.44	32.25	29.53
28.0	299.46	206.14	80.81	54.02	46.97	45.53	41.13	34.68	31.42	28.81
28.5	299.92	208.19	80.74	53.73	46.59	45.11	40.62	33.94	30.63	28.17
29.0	300.28	210.18	80.69	53.39	46.18	44.69	40.03	33.14	29.92	27.54
29.5	300.56	212.03	80.57	53.11	45.78	44.28	39.51	32.37	29.18	27.03
30.0	300.69	213.78	80.49	52.81	45.43	43.83	38.89	31.62	28.52	26.59
30.5	300.80	215.49	80.40	52.47	45.07	43.38	38.33	30.88	27.94	26.11
31.0	300.83	216.94	80.23	52.10	44.65	42.98	37.76	30.16	27.35	25.69
31.5	300.75	218.27	80.07	51.82	44.22	42.56	37.22	29.48	26.85	25.41
32.0	300.58	219.40	79.89	51.51	43.87	42.12	36.74	28.83	26.39	25.23
32.5	300.32	220.29	79.76	51.18	43.44	41.61	36.23	28.21	25.94	25.01
33.0	299.96	221.03	79.58	50.85	42.98	41.16	35.82	27.63	25.51	24.83
33.5	299.38	221.52	79.41	50.50	42.56	40.71	35.45	27.08	25.15	24.54
34.0	298.69	221.92	79.22	50.18	42.14	40.19	34.96	26.60	24.89	24.14
34.5	297.82	222.21	79.05	49.83	41.67	39.69	34.44	26.19	24.66	23.80
35.0	296.96	222.41	78.92	49.48	41.18	39.25	33.80	25.78	24.48	23.61
35.5	295.94	222.60	78.74	49.13	40.69	38.72	33.03	25.42	24.29	23.39
36.0	294.99	222.76	78.63	48.82	40.24	38.13	32.15	25.09	23.90	23.17
36.5	293.95	223.00	78.53	48.48	39.78	37.61	31.19	24.73	23.54	23.07
37.0	293.01	223.20	78.36	48.13	39.28	37.08	30.29	24.42	23.26	22.88
37.5	292.14	223.42	78.24	47.77	38.81	36.50	29.45	24.11	23.02	22.72
38.0	291.32	223.57	78.06	47.43	38.30	35.94	28.67	23.83	22.81	22.59
38.5	290.54	223.68	77.95	47.08	37.80	35.38	28.03	23.45	22.65	22.44
39.0	289.86	223.71	77.84	46.76	37.30	34.82	27.45	23.11	22.46	22.34
39.5	289.15	223.65	77.70	46.37	36.74	34.26	26.90	22.81	22.32	22.19
40.0	288.39	223.45	77.60	46.04	36.25	33.63	26.37	22.56	22.11	22.09
40.5	287.64	223.16	77.45	45.66	35.71	33.04	25.89	22.32	21.94	21.97
41.0	286.91	222.78	77.30	45.31	35.15	32.45	25.36	22.13	21.80	21.90
41.5	286.08	222.26	77.15	44.95	34.62	31.85	24.94	21.93	21.67	21.78
42.0	285.27	221.74	77.01	44.59	34.07	31.26	24.48	21.74	21.53	21.73
42.5	284.34	221.08	76.85	44.25	33.49	30.67	24.05	21.54	21.42	21.68
43.0	283.47	220.34	76.67	43.87	32.97	30.04	23.70	21.37	21.30	21.62
43.5	282.48	219.45	76.48	43.51	32.41	29.47	23.32	21.20	21.20	21.56
44.0	281.50	218.51	76.25	43.10	31.83	28.92	22.95	21.08	21.12	21.52
44.5	280.41	217.39	76.02	42.70	31.25	28.35	22.66	20.92	21.00	21.52
45.0	279.24	216.27	75.77	42.34	30.67	27.77	22.32	20.74	20.94	21.46
45.5	278.01	215.06	75.52	41.97	30.15	27.25	22.03	20.61	20.86	21.45

CANDELA TABULATION - (Cont.)

46.0	276.69	213.67	75.23	41.54	29.59	26.71	21.71	20.48	20.75	21.44
46.5	275.28	212.16	74.88	41.12	29.04	26.23	21.42	20.34	20.71	21.41
47.0	273.72	210.54	74.61	40.73	28.49	25.68	21.19	20.22	20.64	21.39
47.5	271.97	208.90	74.26	40.32	27.88	25.22	20.95	20.11	20.57	21.37
48.0	270.08	207.10	73.92	39.90	27.35	24.74	20.71	19.98	20.53	21.37
48.5	268.14	205.40	73.52	39.45	26.81	24.26	20.45	19.91	20.48	21.38
49.0	266.23	203.66	73.20	39.03	26.30	23.86	20.24	19.79	20.45	21.41
49.5	264.21	201.83	72.77	38.59	25.80	23.40	20.01	19.72	20.40	21.39
50.0	262.19	199.94	72.37	38.12	25.29	23.03	19.78	19.61	20.36	21.43
50.5	260.08	198.14	71.93	37.66	24.77	22.60	19.52	19.51	20.31	21.44
51.0	258.00	196.17	71.46	37.21	24.35	22.21	19.37	19.42	20.27	21.43
51.5	255.87	194.21	70.99	36.74	23.92	21.86	19.16	19.39	20.26	21.46
52.0	253.68	192.19	70.49	36.23	23.42	21.49	18.92	19.28	20.22	21.47
52.5	251.45	190.10	69.95	35.75	23.02	21.10	18.74	19.21	20.24	21.46
53.0	249.25	187.95	69.41	35.23	22.58	20.79	18.57	19.13	20.17	21.52
53.5	246.89	185.68	68.86	34.72	22.17	20.47	18.39	19.07	20.19	21.52
54.0	244.39	183.33	68.23	34.18	21.78	20.18	18.22	19.04	20.15	21.55
54.5	241.81	180.88	67.60	33.68	21.42	19.89	18.04	18.96	20.09	21.53
55.0	239.13	178.37	66.92	33.17	21.01	19.56	17.88	18.88	20.11	21.57
55.5	236.33	175.75	66.25	32.60	20.67	19.25	17.70	18.81	20.06	21.56
56.0	233.35	173.02	65.53	32.09	20.26	18.94	17.53	18.73	20.03	21.54
56.5	230.27	170.28	64.78	31.52	19.94	18.66	17.38	18.66	20.03	21.54
57.0	227.04	167.45	64.01	31.00	19.64	18.39	17.18	18.63	19.94	21.51
57.5	223.67	164.63	63.19	30.46	19.28	18.12	17.01	18.53	19.91	21.47
58.0	220.21	161.75	62.33	29.87	18.95	17.84	16.87	18.45	19.86	21.43
58.5	216.64	158.75	61.45	29.33	18.61	17.60	16.67	18.37	19.78	21.40
59.0	213.02	155.76	60.56	28.73	18.29	17.32	16.52	18.31	19.76	21.29
59.5	209.32	152.71	59.62	28.14	18.01	17.03	16.38	18.17	19.67	21.25
60.0	205.46	149.58	58.63	27.56	17.66	16.80	16.21	18.03	19.58	21.13
60.5	201.52	146.40	57.68	26.98	17.31	16.55	16.05	18.01	19.47	21.08
61.0	197.48	143.18	56.60	26.40	17.04	16.28	15.84	17.86	19.34	20.97
61.5	193.31	139.84	55.55	25.80	16.71	15.98	15.69	17.74	19.20	20.86
62.0	189.08	136.51	54.42	25.20	16.42	15.74	15.49	17.60	19.08	20.75
62.5	184.71	133.08	53.30	24.60	16.10	15.45	15.36	17.44	18.93	20.56
63.0	180.20	129.67	52.12	24.02	15.81	15.20	15.17	17.30	18.78	20.39
63.5	175.65	126.19	50.99	23.41	15.50	14.93	14.96	17.18	18.61	20.19
64.0	171.02	122.74	49.76	22.79	15.20	14.70	14.74	16.96	18.41	20.01
64.5	166.28	119.20	48.53	22.21	14.87	14.43	14.54	16.75	18.21	19.74
65.0	161.50	115.64	47.32	21.61	14.61	14.14	14.33	16.54	18.00	19.50
65.5	156.65	112.11	46.04	21.03	14.28	13.88	14.12	16.31	17.78	19.24
66.0	151.77	108.54	44.77	20.43	13.96	13.64	13.89	16.13	17.47	18.95
66.5	146.86	104.95	43.51	19.83	13.65	13.31	13.70	15.88	17.24	18.63
67.0	141.88	101.33	42.19	19.26	13.33	13.03	13.42	15.58	16.95	18.34
67.5	136.86	97.74	40.89	18.65	13.03	12.78	13.19	15.34	16.63	17.99
68.0	131.87	94.21	39.60	18.05	12.68	12.45	12.94	15.05	16.33	17.64
68.5	126.87	90.62	38.26	17.51	12.42	12.18	12.67	14.75	15.98	17.26
69.0	121.85	87.16	36.92	16.94	12.10	11.88	12.41	14.42	15.66	16.87
69.5	116.89	83.59	35.64	16.36	11.77	11.55	12.10	14.14	15.25	16.47
70.0	111.93	80.11	34.30	15.81	11.42	11.29	11.84	13.78	14.93	16.07
70.5	107.11	76.66	32.98	15.23	11.12	10.98	11.50	13.42	14.50	15.60
71.0	102.21	73.24	31.68	14.66	10.76	10.66	11.25	13.07	14.13	15.22
71.5	97.39	69.87	30.35	14.14	10.46	10.35	10.89	12.69	13.73	14.73
72.0	92.71	66.56	29.14	13.57	10.10	10.03	10.60	12.32	13.30	14.28
72.5	88.02	63.31	27.83	13.04	9.78	9.69	10.27	11.90	12.83	13.81
73.0	83.46	60.07	26.52	12.48	9.40	9.37	9.91	11.50	12.43	13.33
73.5	78.97	56.93	25.34	11.95	9.09	9.06	9.58	11.13	11.97	12.83

Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

74.0	74.54	53.88	24.11	11.43	8.74	8.70	9.24	10.71	11.53	12.36
74.5	70.25	50.87	22.88	10.90	8.45	8.35	8.89	10.32	11.08	11.84
75.0	66.06	47.93	21.69	10.40	8.04	8.01	8.54	9.95	10.60	11.35
75.5	62.03	45.05	20.55	9.90	7.70	7.72	8.19	9.50	10.17	10.89
76.0	58.04	42.26	19.41	9.37	7.34	7.34	7.83	9.00	9.70	10.40
76.5	54.26	39.57	18.24	8.89	7.02	6.98	7.44	8.63	9.25	9.87
77.0	50.57	37.00	17.16	8.42	6.65	6.66	7.12	8.19	8.80	9.41
77.5	47.00	34.45	16.10	7.92	6.30	6.27	6.72	7.76	8.34	8.93
78.0	43.57	31.98	15.05	7.45	5.98	5.98	6.40	7.33	7.89	8.44
78.5	40.28	29.66	13.98	6.99	5.63	5.63	6.02	6.94	7.44	7.98
79.0	37.14	27.37	13.03	6.49	5.32	5.30	5.66	6.52	7.00	7.52
79.5	34.11	25.19	12.04	6.09	4.94	4.98	5.33	6.14	6.56	7.09
80.0	31.20	23.08	11.13	5.68	4.64	4.65	5.00	5.76	6.17	6.59
80.5	28.44	21.04	10.21	5.22	4.31	4.37	4.61	5.37	5.77	6.19
81.0	25.83	19.14	9.31	4.84	4.01	4.03	4.31	5.01	5.36	5.77
81.5	23.32	17.26	8.49	4.42	3.70	3.70	4.00	4.62	4.99	5.34
82.0	20.91	15.54	7.66	3.99	3.42	3.44	3.68	4.29	4.62	4.98
82.5	18.65	13.90	6.90	3.66	3.14	3.15	3.37	3.94	4.23	4.57
83.0	16.53	12.33	6.11	3.31	2.81	2.83	3.12	3.62	3.93	4.24
83.5	14.51	10.85	5.41	2.94	2.57	2.60	2.84	3.35	3.58	3.87
84.0	12.63	9.44	4.74	2.70	2.34	2.35	2.55	3.02	3.28	3.54
84.5	10.88	8.13	4.12	2.29	2.08	2.14	2.34	2.81	3.04	3.23
85.0	9.22	6.91	3.53	1.99	1.87	1.94	2.11	2.46	2.76	2.99
85.5	7.72	5.83	2.99	1.72	1.62	1.68	1.91	2.27	2.54	2.75
86.0	6.36	4.77	2.49	1.50	1.51	1.48	1.70	2.10	2.25	2.49
86.5	5.09	3.88	2.05	1.28	1.28	1.33	1.52	1.88	2.05	2.30
87.0	4.01	3.02	1.66	1.08	1.16	1.16	1.34	1.71	1.87	2.06
87.5	3.03	2.29	1.30	0.90	0.99	1.01	1.20	1.54	1.66	1.82
88.0	2.21	1.74	0.99	0.73	0.82	0.89	1.06	1.18	1.12	1.07
88.5	1.55	1.23	0.81	0.59	0.67	0.68	0.64	0.51	0.30	0.23
89.0	1.01	0.86	0.53	0.39	0.29	0.31	0.12	0.02	0.04	0.05
89.5	0.53	0.49	0.31	0.12	0.06	0.04	0.03	0.05	0.02	0.04
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**				
	150.0	**157.5**	**160.0**	**170.0**	**180.0**
0.0	79.53	79.53	79.53	79.53	79.53
0.5	74.23	73.81	73.78	73.65	73.55
1.0	70.13	69.56	69.46	69.23	69.07
1.5	66.84	66.16	66.07	65.68	65.56
2.0	64.19	63.49	63.38	62.92	62.82
2.5	62.02	61.34	61.18	60.73	60.60
3.0	60.31	59.58	59.40	58.99	58.83
3.5	58.82	58.17	58.04	57.50	57.41
4.0	57.58	56.88	56.74	56.28	56.12
4.5	56.51	55.86	55.67	55.11	55.05
5.0	55.57	54.89	54.72	54.22	54.06
5.5	54.72	54.01	53.83	53.36	53.15
6.0	53.92	53.24	53.01	52.53	52.35
6.5	53.22	52.48	52.31	51.72	51.57
7.0	52.53	51.80	51.60	51.04	50.84
7.5	51.89	51.19	50.92	50.30	50.12
8.0	51.31	50.54	50.33	49.69	49.49
8.5	50.73	49.94	49.69	49.03	48.78
9.0	50.15	49.34	49.14	48.45	48.17

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

CANDELA TABULATION - (Cont.)

9.5	49.65	48.82	48.52	47.82	47.57
10.0	49.12	48.24	47.99	47.20	46.97
10.5	48.61	47.73	47.45	46.66	46.37
11.0	48.15	47.17	46.89	46.11	45.77
11.5	47.62	46.67	46.36	45.46	45.17
12.0	47.16	46.13	45.79	44.89	44.57
12.5	46.66	45.58	45.22	44.28	43.96
13.0	46.24	44.99	44.66	43.65	43.28
13.5	45.67	44.40	44.04	43.01	42.57
14.0	45.17	43.85	43.48	42.35	41.90
14.5	44.65	43.24	42.84	41.70	41.22
15.0	44.11	42.65	42.21	41.01	40.48
15.5	43.58	42.02	41.56	40.35	39.83
16.0	43.00	41.35	40.91	39.61	39.07
16.5	42.42	40.77	40.22	38.85	38.29
17.0	41.84	40.03	39.58	38.09	37.51
17.5	41.21	39.38	38.83	37.27	36.64
18.0	40.56	38.60	38.00	36.40	35.71
18.5	39.90	37.84	37.22	35.46	34.81
19.0	39.20	36.99	36.39	34.52	33.79
19.5	38.49	36.18	35.50	33.53	32.79
20.0	37.68	35.28	34.58	32.59	31.77
20.5	36.85	34.40	33.63	31.59	30.78
21.0	36.04	33.41	32.69	30.60	29.85
21.5	35.14	32.46	31.75	29.69	28.95
22.0	34.24	31.52	30.82	28.87	28.19
22.5	33.29	30.64	29.94	28.08	27.49
23.0	32.40	29.80	29.15	27.39	26.81
23.5	31.55	29.04	28.40	26.80	26.30
24.0	30.69	28.31	27.74	26.28	25.81
24.5	29.84	27.67	27.20	25.82	25.39
25.0	29.11	27.08	26.60	25.47	25.02
25.5	28.42	26.63	26.21	25.13	24.76
26.0	27.78	26.12	25.79	24.84	24.55
26.5	27.21	25.79	25.43	24.58	24.23
27.0	26.72	25.39	25.14	24.39	24.10
27.5	26.25	25.18	24.86	24.21	23.92
28.0	25.86	24.90	24.64	24.05	23.81
28.5	25.53	24.71	24.45	23.92	23.73
29.0	25.28	24.49	24.29	23.83	23.56
29.5	25.13	24.28	24.09	23.73	23.48
30.0	24.91	24.15	23.97	23.61	23.40
30.5	24.67	23.99	23.84	23.53	23.40
31.0	24.33	23.81	23.76	23.49	23.35
31.5	24.11	23.71	23.64	23.43	23.33
32.0	23.90	23.61	23.57	23.38	23.28
32.5	23.78	23.51	23.50	23.36	23.30
33.0	23.63	23.44	23.44	23.36	23.26
33.5	23.54	23.40	23.37	23.38	23.25
34.0	23.36	23.32	23.34	23.38	23.35
34.5	23.27	23.29	23.33	23.41	23.34
35.0	23.19	23.24	23.29	23.45	23.43
35.5	23.12	23.24	23.29	23.46	23.46
36.0	23.02	23.20	23.30	23.51	23.53
36.5	22.98	23.21	23.31	23.59	23.63
37.0	22.90	23.24	23.31	23.65	23.69

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

CANDELA TABULATION - (Cont.)

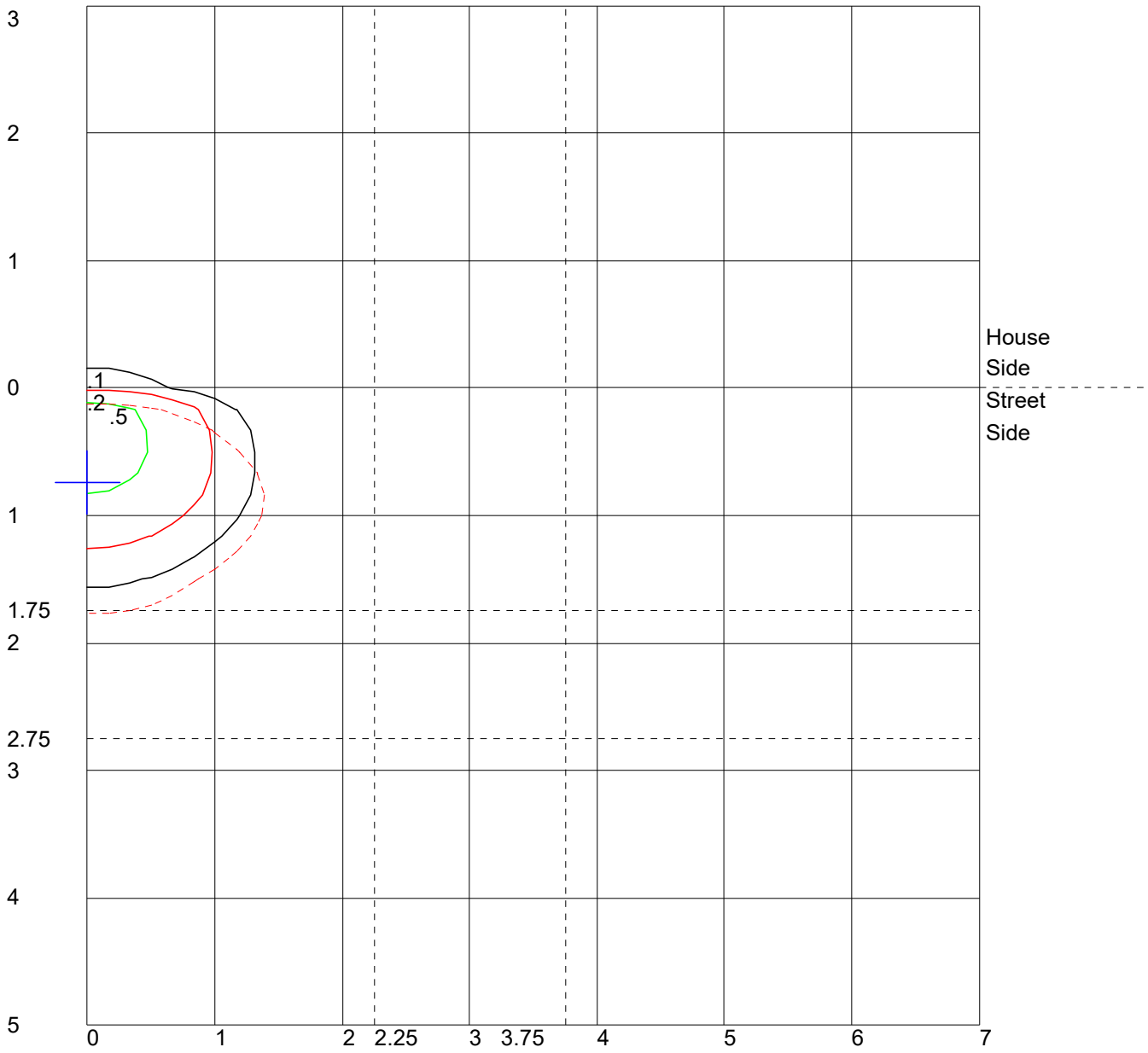
37.5	22.86	23.20	23.31	23.72	23.82
38.0	22.82	23.25	23.39	23.85	23.92
38.5	22.76	23.26	23.39	23.97	24.02
39.0	22.76	23.31	23.47	24.07	24.21
39.5	22.73	23.35	23.53	24.19	24.35
40.0	22.73	23.45	23.62	24.31	24.47
40.5	22.71	23.49	23.70	24.45	24.65
41.0	22.72	23.53	23.79	24.58	24.78
41.5	22.73	23.64	23.87	24.71	24.94
42.0	22.75	23.66	23.98	24.90	25.21
42.5	22.78	23.78	24.10	25.06	25.31
43.0	22.84	23.88	24.22	25.22	25.55
43.5	22.88	23.97	24.35	25.37	25.69
44.0	22.91	24.12	24.41	25.52	25.95
44.5	23.00	24.21	24.57	25.73	26.12
45.0	23.03	24.33	24.73	25.92	26.33
45.5	23.11	24.44	24.86	26.12	26.56
46.0	23.18	24.59	24.99	26.31	26.77
46.5	23.25	24.70	25.19	26.53	27.01
47.0	23.37	24.88	25.30	26.72	27.15
47.5	23.43	25.03	25.47	26.92	27.40
48.0	23.52	25.14	25.61	27.11	27.58
48.5	23.65	25.25	25.75	27.26	27.82
49.0	23.67	25.39	25.89	27.45	28.01
49.5	23.80	25.53	26.05	27.60	28.22
50.0	23.89	25.65	26.17	27.83	28.38
50.5	23.95	25.77	26.34	28.01	28.57
51.0	24.05	25.95	26.45	28.20	28.78
51.5	24.11	26.03	26.60	28.32	28.93
52.0	24.24	26.15	26.70	28.53	29.10
52.5	24.33	26.25	26.82	28.66	29.28
53.0	24.39	26.40	26.95	28.81	29.50
53.5	24.41	26.47	27.08	28.91	29.55
54.0	24.51	26.60	27.16	29.00	29.73
54.5	24.57	26.64	27.23	29.16	29.83
55.0	24.61	26.74	27.35	29.26	29.93
55.5	24.63	26.77	27.39	29.33	30.03
56.0	24.68	26.78	27.47	29.35	30.06
56.5	24.71	26.83	27.46	29.41	30.13
57.0	24.68	26.85	27.48	29.45	30.16
57.5	24.68	26.84	27.42	29.44	30.09
58.0	24.62	26.84	27.46	29.37	30.11
58.5	24.63	26.79	27.43	29.36	30.06
59.0	24.57	26.73	27.37	29.29	29.98
59.5	24.53	26.62	27.25	29.20	29.86
60.0	24.42	26.54	27.19	29.08	29.73
60.5	24.32	26.39	27.06	28.89	29.56
61.0	24.19	26.24	26.87	28.74	29.35
61.5	24.04	26.06	26.72	28.50	29.13
62.0	23.89	25.92	26.49	28.26	28.93
62.5	23.68	25.65	26.22	27.98	28.61
63.0	23.46	25.45	26.00	27.68	28.28
63.5	23.18	25.17	25.68	27.38	27.94
64.0	22.96	24.82	25.35	26.97	27.62
64.5	22.64	24.49	25.00	26.62	27.18
65.0	22.39	24.13	24.66	26.20	26.73

CANDELA TABULATION - (Cont.)

65.5	22.05	23.77	24.28	25.76	26.24
66.0	21.66	23.34	23.81	25.25	25.77
66.5	21.32	22.93	23.38	24.79	25.30
67.0	20.89	22.45	22.96	24.27	24.75
67.5	20.51	22.00	22.43	23.78	24.27
68.0	20.06	21.52	21.92	23.25	23.73
68.5	19.58	21.00	21.45	22.68	23.15
69.0	19.11	20.49	20.88	22.11	22.59
69.5	18.62	19.96	20.34	21.55	22.01
70.0	18.14	19.40	19.78	20.96	21.39
70.5	17.65	18.89	19.22	20.34	20.77
71.0	17.09	18.31	18.66	19.71	20.14
71.5	16.59	17.74	18.06	19.11	19.48
72.0	16.05	17.17	17.50	18.49	18.88
72.5	15.53	16.57	16.90	17.90	18.25
73.0	14.97	15.95	16.32	17.23	17.61
73.5	14.43	15.39	15.72	16.62	16.92
74.0	13.84	14.81	15.06	15.92	16.27
74.5	13.30	14.20	14.48	15.33	15.62
75.0	12.75	13.63	13.89	14.68	15.00
75.5	12.23	13.05	13.27	14.06	14.34
76.0	11.64	12.45	12.65	13.40	13.65
76.5	11.12	11.85	12.07	12.73	13.03
77.0	10.55	11.28	11.47	12.16	12.39
77.5	9.97	10.72	10.89	11.54	11.76
78.0	9.48	10.13	10.33	10.94	11.15
78.5	8.95	9.53	9.73	10.30	10.55
79.0	8.41	9.01	9.19	9.77	9.95
79.5	7.91	8.45	8.64	9.15	9.40
80.0	7.44	7.94	8.11	8.62	8.81
80.5	6.97	7.47	7.59	8.09	8.30
81.0	6.52	6.97	7.13	7.57	7.70
81.5	6.03	6.50	6.64	7.07	7.21
82.0	5.62	6.04	6.17	6.57	6.72
82.5	5.22	5.61	5.73	6.14	6.24
83.0	4.84	5.20	5.31	5.69	5.83
83.5	4.45	4.82	4.93	5.27	5.41
84.0	4.10	4.46	4.56	4.91	5.04
84.5	3.78	4.12	4.20	4.56	4.66
85.0	3.49	3.81	3.87	4.23	4.34
85.5	3.21	3.55	3.64	3.95	4.07
86.0	2.99	3.32	3.38	3.70	3.82
86.5	2.72	3.03	3.09	3.41	3.51
87.0	2.49	2.76	2.83	2.96	3.02
87.5	1.85	1.74	1.70	1.79	1.82
88.0	1.03	0.76	0.70	0.55	0.45
88.5	0.08	0.07	0.06	0.06	0.02
89.0	0.02	0.03	0.02	0.03	0.03
89.5	0.05	0.02	0.00	0.05	0.04
90.0	0.00	0.00	0.00	0.00	0.00

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

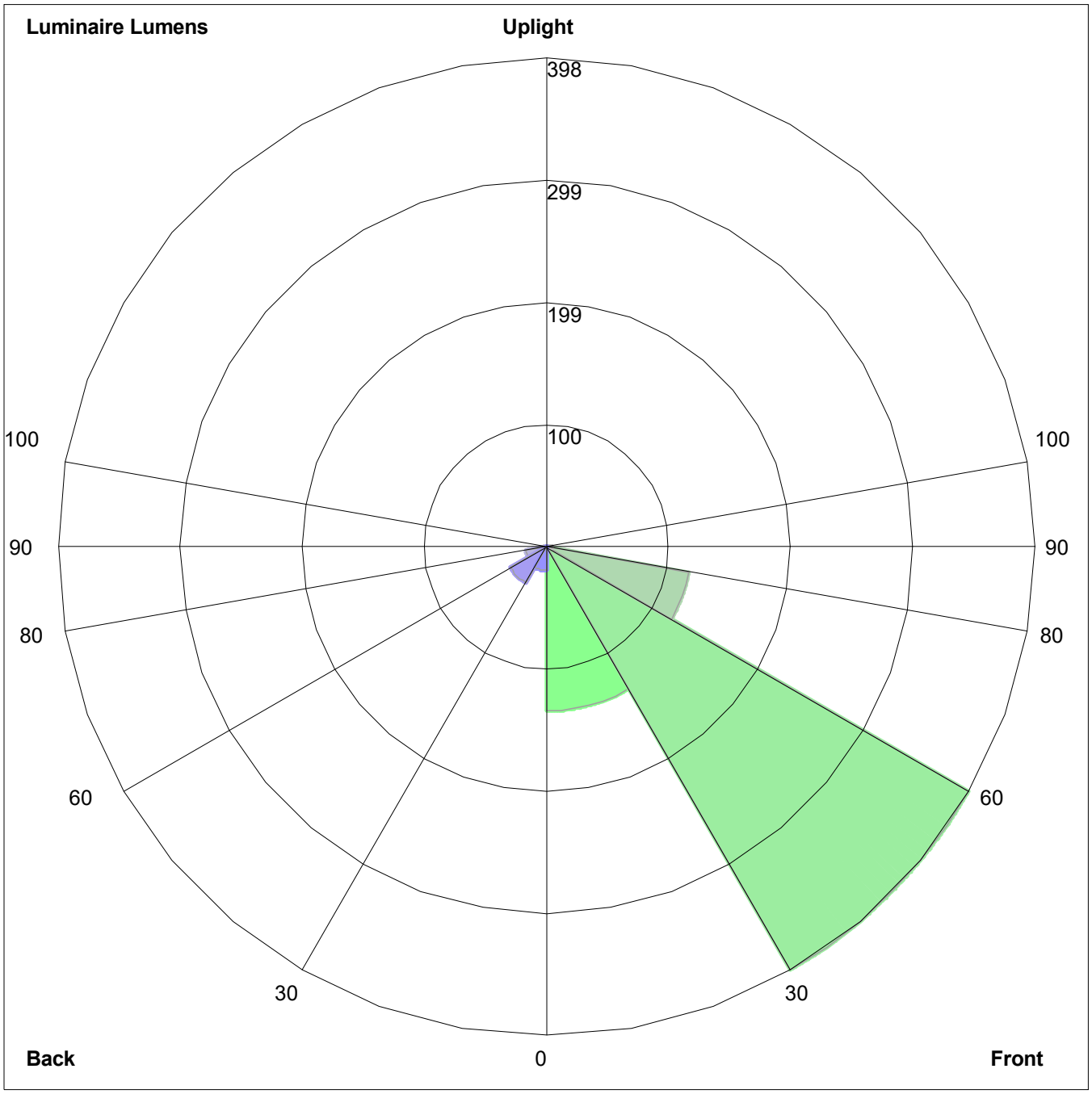
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=133.9, Medium=398.4, High=117.9, Very High=4.5
Back: Low=19.0, Medium=33.5, High=17.0, Very High=1.7
Uplight: Low=0.0, High=0.0

BUG Rating : B0-U0-G0

ARCHITECTURAL EGRESS

Vandal Resistant

AEL Full Cut-0ff LED

WALL MOUNT
LED

Fixture Type | Date

Job Name | Approved By

Catalog Number

SPECIFICATIONS

Description The Architectural Egress Luminaire combines a unique, patented design shaped with high performance, full cut-off optics to achieve completely unobtrusive illumination of a space or path of egress. When mounted over a doorway, the fixture is perceived as an element of the building structure and, additionally, provides water protection in the form of a drip cap over the doorway. Multiple lengths are available to match a given door opening and our unique quick mount system facilitates installation and maintenance.

Housing Marine grade heat treated extruded aluminum.
Chemically primed and finished with robotically applied polyester powder coat.

Wall Mount Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat. Designed to provide quick mounting to housing and secured with (2) captive stainless steel TORX® head screws.

Lens Frame Marine grade heat treated extruded aluminum, clear anodized. Secured to fixture via integral concealed hinge and (3) captive stainless steel TORX® head screws.

Lens UV stabilized diffused extruded polycarbonate.

End Caps Die-cast marine grade aluminum continuously welded to housing. All welds ground smooth.

Reflector Electrostatically brightened anodized aluminum PVD coated and absolutely color-free of iridescence. Shaped to provide full cutoff, LED point dispersion and maximum efficiency.

Drivers Constant current drivers at 350mA. High output version utilizes 700mA.

LED Samsung LM561B+ Series @ 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of 130,000 hours at 50ºC. Tested in accordance with LM-80. Ten year warranty on LED boards against operational defects.

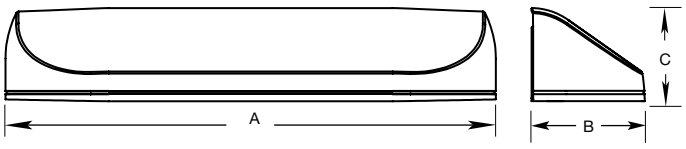
Gaskets Closed cell self-adhesive neoprene to provide watertight seal between fixture and wall and between fixture and lens frame.

UL Listing U.L., C.UL., Wet standard.

Lifetime Warranty Luminaire LED Incorporated will repair or replace any fixture damaged due to vandalism for the lifetime of the installation.

DIMENSIONAL DATA

	A	B	C
AEL 12	20.79	5.40	3.60
AEL 24	32.04	5.40	3.60
AEL 36	43.29	5.40	3.60
AEL 48	54.75	5.40	3.60
AEL 72	78.75	5.40	3.60



Luminaire Led
www.luminaireled.net

5 Sutton Place
P.O. Box 2162
Edison, NJ 08818

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F. 732.549.9737

Luminaire LED Incorporated products are manufactured in the USA with components purchased from USA suppliers, and meet the Buy American requirements under the ARRA. Content of specification sheets is subject to change; please consult our website for current product information.

Rev: 05/17+

ARCHITECTURAL EGRESS

Vandal Resistant

AEL Full Cut-0ff LED

Fixture Type

REDUCE LUMEN OUTPUT AND WATTAGE

ORDERING INFORMATION

SERIES	LED	CCT	VOLTS	LENS	COLOR	OPTIONS		TX/SD
								TX/SD
AEL 12	12” - 10W	3000K	120-277	DP	BKH	DIM	EMBDA	
AEL 24	24” - 10W	3500K	347		BZH	A/B	EMB310	
AEL 36	24” - 20W	4000K			SVH	2B	EMB310ST	
AEL 48	36” - 15W	5000K			WOP	PC	EMB20R	
AEL 72	36” - 30W				PCP	GLR	EMB125R	
	48” - 20W				CUST	OCC	EMB250R	
	48” - 35W						ST/SC	
	72” - 30W							
	72” - 55W							

OPTIONS

LENS DP = Diffused Polycarbonate.

COLORS BKH = Black (Hammertone) BZH = Bronze (Hammertone) SVH = Silver (Hammertone) WOP = White (Textured White) PCP = Black (Prime Coat Paintable) CUST = Custom Color (Consult Factory)

DIM 0-10V dimming driver. N/A with AEL12. 10% at lowest level.

A/B Aluminum surface back box. Finished with polyester powder coat to match the fixture.

PC Photoelectric switch.

2B (2) LED drivers for independent LED b d operation. N/A with AEL12. N/A with the OCC option.

GLR Fuse and fuse holder.

EMB310 1000 lumen self-contained, 90 minute emergency battery pack. Available for 36”, 48” and 72” lengths only. 0ºC (32ºF) to 55ºC (131ºF). Not available in 347V.

EMB310ST 1000 lumen self-testing, self-contained, 90 minute emergency battery pack. Available for 36”, 48” and 72” lengths only. 0ºC (32ºF) to 55ºC (131ºF). Not available in 347V.

EMB20R Remote mounted micro inverter that will operate a 25W maximum load for 90 minutes. 0ºC (32ºF) to 45ºC (113ºF).

EMB125R Remote inverter that will operate a 125W maximum load for 90 minutes. 20ºC (68ºF) to 30ºC (86ºF). Not available in 347V.

EMB250R Remote inverter that will operate a 250W maximum load for 90 minutes. 20ºC(68ºF) to 30ºC (86ºF). Not available in 347V.

EMBDA Two drivers and two emergency battery packs self-contained within fixture for independent light engine operation. Each battery pack will operate each light engine for a minimum of 90 minutes. Available in the 72” length only. Not available in 347V.

OCC Passive infrared sensor mounted in machine hole in end cap. Maximum coverage of 10’ radius from 8’ height.

ST/SC Slotted screws instead of TORX® head.

TX/SD TORX® head bit.

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Rev: 05/17+

ARCHITECTURAL EGRESS

Vandal Resistant

Fixture Type

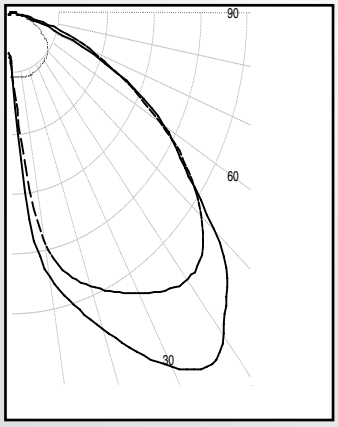
AEL Full Cut-Off LED

PHOTOMETRIC DATA

7 WATTS 406.56

Model	Watts	Input Watts		Delivered Lumens					
				3000K		3500K		4000K	5000K
AEL 12	10W	10.8W		747		760		784	807
AEL 24	10W	9.4W		832		847		873	899
AEL 24	20W	17.6W		1557		1585		1634	1682
AEL 36	15W	14.9W		1248		1271		1310	1348
AEL 36	30W	26.3W		2995		3049		3143	3237
AEL 48	20W	18.8W		1935		1969		2030	2090
AEL 48	35W	35.2W		3616		3682		3796	3909
AEL 72	30W	27.9W		3162		3217		3317	3417
AEL 72	55W	52.2W		5911		6017		6203	6389

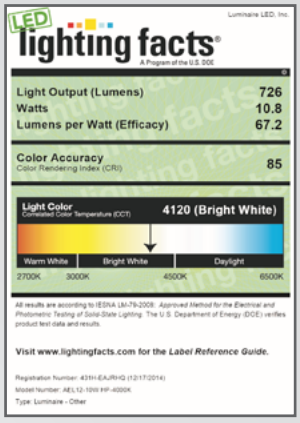
MODEL AEL12-10W-4000K
Delivered Lumens: 726 Lumens



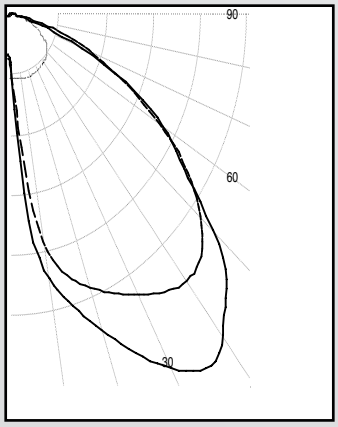
IES FILE: AEL12-10W-4000K
Total Power: 10.8W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G0

Zone	Lumens	% Lamps
0 - 30	153	21.1
0 - 40	287	39.5
0 - 60	585	80.6
60 - 90	726	100.0
0 - 90	439	60.5
90 -180	0	0.0
0 - 180	726	100.0



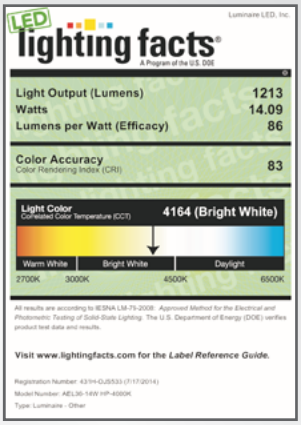
MODEL AEL36-15W-4000K
Delivered Lumens: 1213 Lumens



IES FILE: AEL36-15W-4000K
Total Power: 14.09W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U1G0

Zone	Lumens	% Lamps
0 - 30	381	31.4
0 - 40	635	52.3
0 - 60	1063	87.7
60 - 90	150	12.3
0 - 90	1213	100.0
90 -180	0	0.0
0 - 180	1213	100.0



Luminaire Led
www.luminaireled.net

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F. 732.549.9737

Luminaire LED Incorporated products are manufactured in the USA with components purchased from USA suppliers, and meet the Buy American requirements under the ARRA. Content of specification sheets is subject to change; please consult our website for current product information.

Rev: 05/17+

ARCHITECTURAL EGRESS

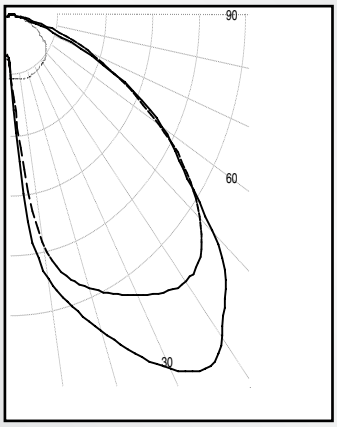
Vandal Resistant

Fixture Type

AEL Full Cut-0ff LED

PHOTOMETRIC DATA

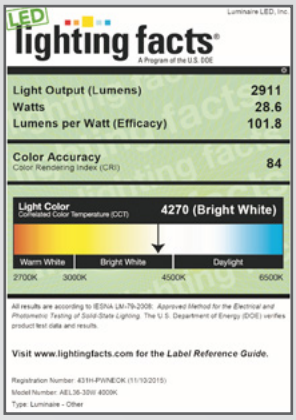
MODEL AEL36-30W-4000K
Delivered Lumens: 2911 Lumens



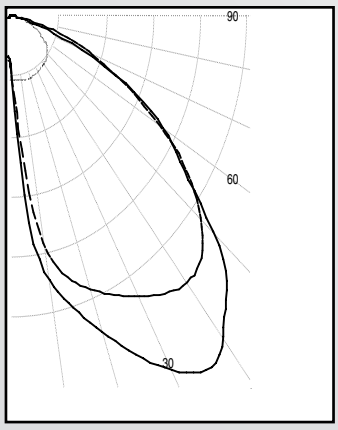
IES FILE: AEL36-30W-4000K
Total Power: 28.6W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G0

Zone	Lumens	% Lamps
0 - 30	754	25.9
0 - 40	1308	44.9
0 - 60	2417	83.0
60 - 90	494	17.0
0 - 90	2911	100.0
90 -180	0	0.0
0 - 180	2911	100.0



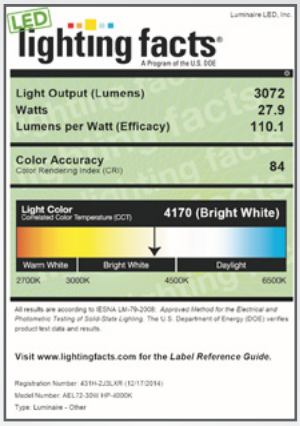
MODEL AEL72-30W-4000K
Delivered Lumens: 3072 Lumens



IES FILE: AEL72-30W-4000K
Total Power: 27.09W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B1U0G1

Zone	Lumens	% Lamps
0 - 30	771	25.1
0 - 40	1353	44.1
0 - 60	2529	82.3
60 - 90	3072	100.0
0 - 90	1718	17.7
90 -180	542	0.0
0 - 180	3072	100.0



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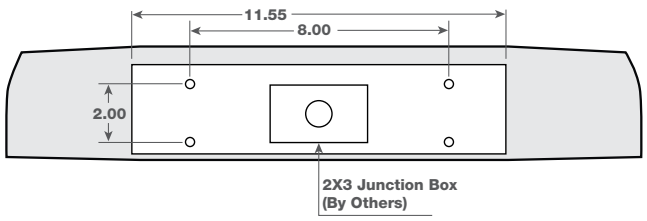
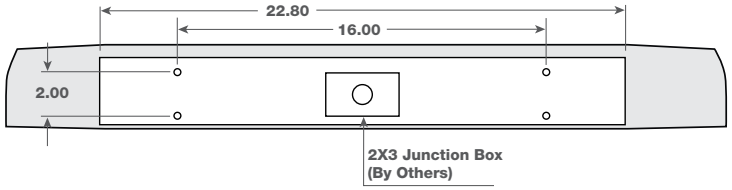
Rev: 05/17+

MOUNTING PLATE DETAILS

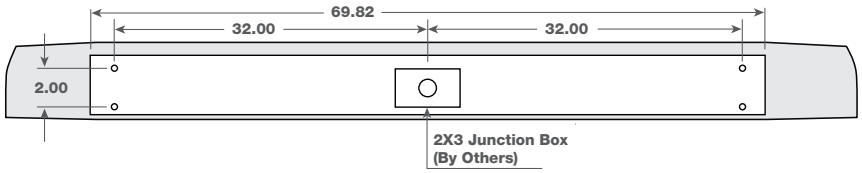
AEL 12



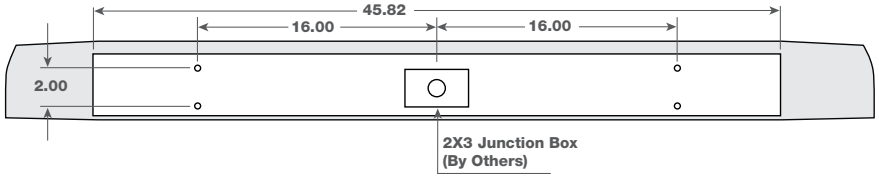
AEL 24



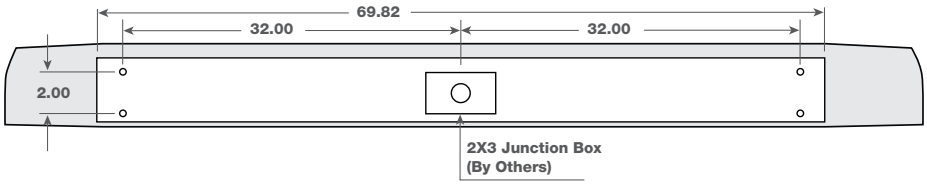
AEL 36



AEL 48



AEL 72



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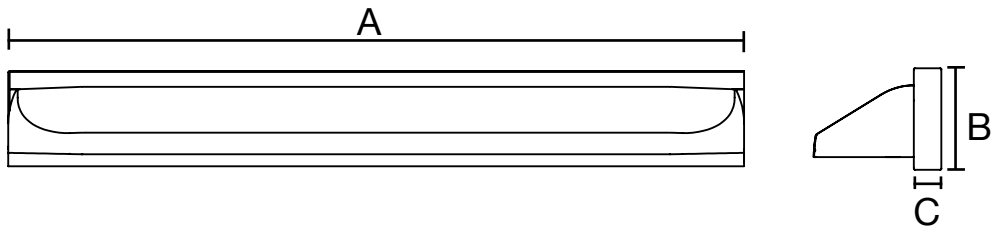
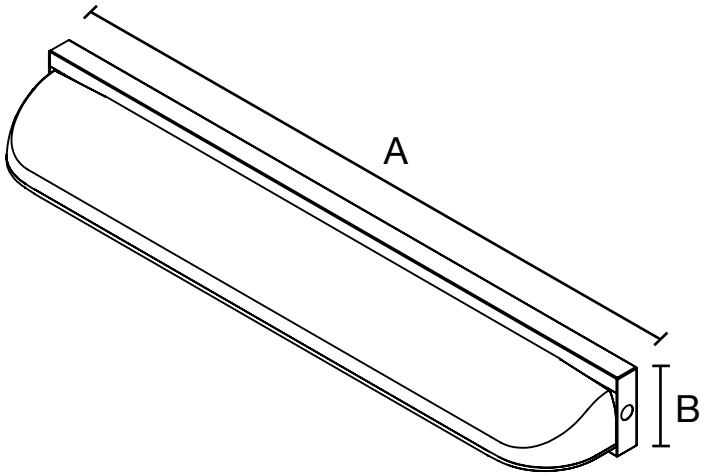
ALUMINUM BACKBOX DETAIL

A/B Detail

	A	B	C
AEL 12 Backbox	20.80	5.20	1.50
AEL 24 Backbox	31.48	5.20	1.50
AEL 36 Backbox	43.30	5.20	1.50
AEL 48 Backbox	54.75	5.20	1.50
AEL 72 Backbox	78.75	5.20	1.50





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06-15-2017

TYPE JCW-R

REDUCED OUTPUT USE X .56
MULTIPLIER TO ALL VALUES

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] LLI-14257-1
[TESTLAB] LightLab International (www.LightLabInt.com)
[MANUFAC] Luminaire LED, Inc., Edison, New Jersey, 08817
[LUMCAT] AEL12-10W 4000K
[LUMINAIRE] Luminaire LED Architectural Egress Luminaire. Cat No:AEL12-10W 4000K
[MORE] Painted extruded aluminum body with endcaps and a horizontal finely etched planar glass diffuser 2.5"x10.4".
[MORE] Two piece aluminum asymmetric reflector with single 1 x 28 array of LEDs spaced at 0.38".
[MORE] LED strip screws to black extruded heat sink. Luminaire extents ~ 5-1/2 x 21 x 3-1/2".
[MORE] One integral Thomas Research Products LED12W-16-C0700 100-277V 50/60Hz driver.
[MORE] Tested wall mount position at 120V.
[OTHER] Absolute test - lamp lumens value set to -1
[MORE] NA conventions used for C0 plane alignment and C-plane rotation direction.
[MORE] The sample was tested at a distance of 8m.
[MORE] This IES file created by LightLab/LSA Report program version 3.804a.
[DATE] This file created: Thursday, 23 October 2014 3:27:26 PM
[ISSUEDATE] Thursday, 23 October 2014 3:27:26 PM

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	726
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	~~10.8~~ 7 WATTS
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	540.37
Maximum Candela Angle	0H 36.5V
Maximum Candela (<90 Degrees Vertical)	540.37
Maximum Candela Angle (<90 Degrees Vertical)	0H 36.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	32.97 (4.5% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	133.9	N.A.	18.4
FM - Front-Medium (30-60)	398.4	N.A.	54.9
FH - Front-High (60-80)	117.9	N.A.	16.2
FVH - Front-Very High (80-90)	4.5	N.A.	0.6
BL - Back-Low (0-30)	19.0	N.A.	2.6
BM - Back-Medium (30-60)	33.5	N.A.	4.6
BH - Back-High (60-80)	17.0	N.A.	2.3
BVH - Back-Very High (80-90)	1.7	N.A.	0.2
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	725.9	N.A.	100.0
BUG Rating	B0-U0-G0		

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	**10.0**	**20.0**	**22.5**	**30.0**	**40.0**	**45.0**	**50.0**	**60.0**	**67.5**
0.0	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53
0.5	87.05	87.12	86.53	86.60	86.09	85.09	84.57	84.14	82.87	82.06
1.0	95.76	95.51	94.48	94.39	93.26	91.25	90.17	89.11	86.67	84.91
1.5	106.04	105.63	103.77	103.42	101.52	98.27	96.40	94.63	90.74	87.76
2.0	117.91	117.27	114.75	114.14	111.03	106.28	103.65	100.74	95.15	91.02
2.5	131.94	130.87	127.62	126.53	122.30	115.37	111.65	107.93	100.09	94.39
3.0	147.96	146.62	141.76	140.51	134.91	125.65	120.91	115.64	105.36	98.08
3.5	165.77	163.90	157.90	156.36	149.02	137.10	130.76	124.18	111.11	102.16
4.0	184.70	182.69	175.24	173.48	164.58	149.96	141.97	133.70	117.46	106.28
4.5	204.39	201.90	193.47	191.35	180.82	163.38	153.89	143.97	124.18	110.66
5.0	223.86	220.94	211.83	209.54	197.73	177.83	166.53	154.85	131.48	115.53
5.5	242.25	239.21	229.87	227.15	214.68	192.68	180.10	166.67	139.25	120.43
6.0	258.70	255.97	246.37	243.84	230.88	207.66	193.75	178.80	147.45	125.90
6.5	273.52	270.62	261.67	258.98	246.28	222.25	207.57	191.21	155.96	131.42
7.0	286.29	283.64	275.04	272.62	260.42	236.20	221.12	203.73	165.15	137.43
7.5	297.55	294.96	286.86	284.39	272.82	249.20	234.05	216.10	174.49	143.66
8.0	307.12	304.61	297.09	294.96	283.91	261.13	246.30	228.07	184.12	150.02
8.5	315.59	313.17	306.24	304.18	293.78	272.28	257.61	239.69	194.09	156.83
9.0	322.97	320.39	314.18	312.10	302.58	281.81	268.12	250.52	203.71	163.82
9.5	329.26	326.95	321.02	319.17	310.11	290.70	277.59	260.49	213.23	171.00
10.0	334.62	332.60	327.08	325.34	316.77	298.56	286.24	269.86	222.87	178.28
10.5	339.39	337.63	332.35	330.68	322.65	305.54	293.92	278.22	232.04	185.69
11.0	344.11	342.02	337.02	335.47	327.94	311.88	300.75	285.94	240.84	193.01
11.5	348.10	346.20	341.46	339.92	332.65	317.59	307.17	293.02	249.33	200.53
12.0	352.16	350.23	345.30	344.03	336.86	322.42	312.76	299.39	257.29	207.85
12.5	356.11	354.13	349.18	347.95	340.82	326.84	317.75	305.27	264.58	214.99
13.0	360.04	358.14	353.05	351.60	344.45	331.03	322.55	310.48	271.49	222.15
13.5	363.76	362.10	356.79	355.23	347.96	334.76	326.65	315.20	277.77	228.86
14.0	367.83	365.88	360.50	359.03	351.42	338.42	330.36	319.29	283.52	235.29
14.5	371.84	369.90	364.36	362.58	354.75	341.80	333.83	323.14	288.71	241.45
15.0	375.96	373.81	368.10	366.19	358.10	344.84	337.06	326.79	293.46	247.25
15.5	379.91	378.09	371.92	370.00	361.53	347.95	340.37	329.92	297.79	252.65
16.0	384.27	382.00	375.81	373.73	364.97	351.03	343.08	332.98	301.64	257.68
16.5	388.69	386.08	379.45	377.50	368.41	353.93	345.83	335.49	305.04	262.55
17.0	392.84	390.29	383.43	381.35	371.84	356.82	348.53	338.03	308.10	266.96
17.5	397.01	394.47	387.16	385.08	375.40	359.76	350.88	340.22	310.84	271.26
18.0	401.32	398.41	390.91	388.87	378.70	362.72	353.15	342.26	313.41	275.17
18.5	405.42	402.64	394.72	392.52	382.40	365.43	355.77	344.10	315.91	278.86
19.0	409.78	406.76	398.61	396.45	385.82	368.22	357.91	346.06	318.10	282.27
19.5	413.77	410.90	402.59	399.75	389.15	371.03	359.99	347.79	320.13	285.62
20.0	418.20	415.18	406.17	403.91	392.49	373.60	362.14	349.81	321.97	288.57
20.5	422.56	419.37	410.19	407.56	395.87	376.10	364.29	351.68	323.77	291.47
21.0	427.06	423.52	413.99	411.20	399.12	378.67	366.44	353.50	325.35	293.96
21.5	431.38	427.88	417.98	415.06	402.48	381.02	368.55	355.46	326.86	296.34
22.0	436.13	432.50	421.97	418.71	405.85	383.68	370.81	357.36	328.30	298.49
22.5	441.01	437.00	426.23	422.68	409.16	385.94	372.95	359.21	329.46	300.38
23.0	445.95	441.55	430.17	426.60	412.50	388.42	375.15	361.11	330.68	302.20
23.5	450.63	446.41	434.39	430.58	415.82	390.79	377.32	363.09	331.89	303.66
24.0	455.69	451.16	438.49	434.52	419.04	393.31	379.52	365.05	333.00	305.03
24.5	460.49	455.63	442.61	438.59	422.37	395.65	381.76	366.81	334.06	306.22
25.0	465.43	460.58	446.93	442.90	425.79	398.24	384.03	368.55	335.13	307.06
25.5	470.14	465.29	451.18	446.98	429.35	400.66	385.99	370.22	336.07	307.98
26.0	475.08	469.83	455.46	451.10	432.79	403.07	387.85	371.93	336.92	308.79

CANDELA TABULATION - (Cont.)

26.5	479.71	474.47	459.86	455.31	436.12	405.73	389.88	373.69	337.97	309.42
27.0	484.20	478.85	463.95	459.58	439.64	408.16	391.88	375.02	338.82	309.98
27.5	488.52	483.40	468.48	463.67	443.01	410.56	393.79	376.71	339.91	310.49
28.0	493.10	487.71	472.64	467.94	446.40	413.34	395.79	378.24	340.55	310.89
28.5	497.18	491.77	476.86	472.02	449.80	415.73	397.78	379.71	341.28	311.35
29.0	501.30	496.04	480.71	476.09	453.24	418.37	399.80	381.25	342.35	311.51
29.5	505.41	500.08	484.62	479.90	456.27	420.97	401.66	382.39	342.91	311.90
30.0	509.50	503.94	488.54	483.60	459.70	423.53	403.65	384.00	343.86	312.04
30.5	513.36	507.82	492.34	487.17	462.88	425.93	405.66	385.49	344.46	312.22
31.0	516.92	511.45	495.90	490.49	466.08	428.45	407.60	386.84	345.14	312.32
31.5	520.52	515.06	499.57	494.00	469.07	430.95	409.57	388.13	345.46	312.26
32.0	523.53	518.53	502.84	496.95	472.09	433.34	411.46	389.55	345.89	312.17
32.5	526.77	521.90	506.23	500.09	474.98	435.69	413.56	390.97	346.11	312.14
33.0	529.61	524.97	509.24	503.00	477.66	437.84	415.35	392.47	346.48	311.88
33.5	532.24	527.79	512.18	505.49	480.29	440.13	417.29	393.74	346.71	311.57
34.0	534.85	530.19	514.83	508.14	482.71	442.15	419.20	395.15	346.91	311.08
34.5	537.02	532.44	517.28	510.63	485.28	444.06	420.93	396.57	346.83	310.48
35.0	538.42	534.21	519.38	512.63	487.43	445.92	422.51	397.65	346.82	309.74
35.5	539.69	535.69	521.10	514.37	489.31	447.73	424.04	398.81	346.70	308.75
36.0	540.31	536.72	522.58	515.91	491.23	449.50	425.62	400.03	346.38	307.92
36.5	540.37	537.26	523.79	517.13	492.84	451.28	426.98	400.87	345.95	307.03
37.0	539.79	537.47	524.43	518.09	494.20	452.80	428.10	401.96	345.42	305.97
37.5	538.54	536.81	524.60	518.54	495.31	454.36	429.46	402.74	344.82	305.18
38.0	536.60	535.67	524.39	518.59	496.28	455.59	430.64	403.54	344.22	304.33
38.5	533.91	533.48	523.44	518.15	496.86	456.74	431.60	404.11	343.56	303.63
39.0	530.35	530.65	522.27	517.54	497.31	457.88	432.52	404.36	342.98	303.01
39.5	526.79	527.19	520.35	516.17	497.27	458.61	433.12	404.82	342.44	302.23
40.0	522.53	523.15	517.82	514.26	496.68	459.31	433.70	404.84	341.97	301.49
40.5	517.78	518.79	514.46	511.74	495.72	459.69	434.02	404.65	341.69	300.79
41.0	513.39	514.44	510.69	508.59	494.29	459.68	434.18	404.41	341.44	300.05
41.5	509.20	509.85	506.44	504.83	492.55	459.67	434.18	404.15	340.89	299.27
42.0	505.14	505.47	502.23	500.70	490.17	459.12	433.84	403.80	340.57	298.56
42.5	501.43	501.36	497.58	496.27	487.29	458.36	433.25	403.21	340.27	297.68
43.0	497.87	497.42	493.11	491.89	484.08	457.30	432.30	402.64	339.99	297.07
43.5	494.21	493.76	488.88	487.35	480.27	455.86	431.09	401.90	339.67	296.16
44.0	490.68	490.27	484.64	483.03	476.30	453.81	429.58	401.27	339.15	295.16
44.5	487.34	486.90	480.79	478.85	471.96	451.29	427.73	400.24	338.78	294.38
45.0	483.65	483.29	476.98	474.63	467.73	448.38	425.92	399.35	338.15	293.36
45.5	479.80	479.63	473.05	470.58	463.35	444.90	423.79	398.27	337.59	292.17
46.0	475.34	475.65	469.33	466.74	459.08	440.92	421.38	396.97	336.97	290.90
46.5	470.80	471.56	465.34	462.77	455.00	436.75	418.74	395.44	335.93	289.68
47.0	465.86	466.65	461.09	458.70	450.88	432.15	415.88	393.87	334.93	288.35
47.5	459.91	461.46	456.65	454.60	446.83	427.50	412.67	391.96	333.76	286.83
48.0	453.53	455.65	451.85	450.16	442.57	422.60	409.08	389.67	332.48	285.28
48.5	446.19	449.23	446.56	445.11	438.31	417.67	405.08	387.54	331.17	283.51
49.0	438.15	441.94	440.89	439.90	433.77	412.77	401.11	384.80	329.73	281.73
49.5	429.32	434.00	434.59	434.21	429.13	407.78	396.85	381.78	327.98	279.77
50.0	419.81	425.33	427.75	427.89	424.33	403.04	392.31	378.61	326.07	277.86
50.5	409.66	415.83	420.14	421.06	418.71	398.25	387.73	374.87	323.85	275.79
51.0	399.55	405.90	412.11	413.74	412.82	393.39	383.13	371.17	321.50	273.70
51.5	389.48	395.94	403.25	405.54	406.48	388.52	378.47	366.93	318.94	271.63
52.0	379.99	386.11	393.78	396.75	399.68	383.43	373.59	362.29	316.19	269.38
52.5	371.07	376.62	384.17	387.60	392.17	378.43	368.63	357.58	313.41	267.15
53.0	363.01	367.79	374.55	378.25	384.28	373.14	363.76	352.43	310.38	264.86
53.5	354.90	359.46	365.29	368.88	375.85	367.49	358.35	347.29	307.19	262.50
54.0	347.93	351.82	356.43	359.64	366.79	361.73	353.08	341.96	303.91	259.88

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CANDELA TABULATION - (Cont.)

54.5	341.20	344.59	348.22	350.93	357.45	355.45	347.86	336.54	300.45	257.36
55.0	334.76	337.62	340.14	342.67	348.05	348.69	341.89	331.06	296.90	254.45
55.5	328.92	331.23	332.69	334.81	338.81	341.87	335.93	325.31	293.16	251.46
56.0	322.94	325.28	325.52	327.33	329.79	334.64	329.65	319.51	289.01	248.32
56.5	317.28	319.21	318.87	320.19	321.20	326.94	322.91	313.63	284.83	244.97
57.0	311.96	313.39	312.43	313.51	312.97	318.96	316.18	307.85	280.31	241.81
57.5	306.04	307.56	306.22	306.89	305.15	310.77	309.05	301.84	275.69	238.33
58.0	300.66	301.79	300.31	300.49	297.62	302.38	301.74	295.61	270.70	234.59
58.5	295.11	296.10	294.12	294.06	290.44	293.84	294.23	289.39	265.64	230.90
59.0	289.28	290.24	288.31	287.90	283.53	285.25	286.32	282.95	260.37	226.90
59.5	283.30	284.09	282.27	281.65	276.63	277.11	278.32	276.20	254.97	222.92
60.0	277.07	278.06	276.21	275.38	269.93	268.96	270.53	268.94	249.40	218.69
60.5	270.64	271.72	270.03	268.89	263.63	261.17	262.45	262.05	243.74	214.42
61.0	264.03	265.12	263.81	262.49	256.96	253.61	254.53	254.59	238.01	210.02
61.5	257.11	258.28	257.32	255.78	250.56	246.19	246.55	247.22	232.22	205.47
62.0	250.00	250.93	250.63	249.03	243.96	239.09	238.98	239.61	226.37	200.87
62.5	242.28	243.56	243.46	242.05	237.57	231.99	231.31	231.95	220.36	196.12
63.0	234.53	235.84	236.40	234.82	230.98	225.14	223.96	224.28	214.41	191.29
63.5	226.40	227.81	228.82	227.56	224.22	218.60	216.77	216.89	208.27	186.39
64.0	217.61	219.51	220.97	220.13	217.20	211.60	209.63	209.42	202.00	181.30
64.5	208.85	210.73	212.86	212.27	210.20	204.84	202.76	202.13	195.71	176.00
65.0	199.33	201.80	204.71	204.07	202.99	198.01	195.67	195.01	189.43	170.85
65.5	189.87	192.50	196.27	195.83	195.45	191.33	188.86	187.81	183.01	165.64
66.0	180.19	182.85	187.47	187.31	188.13	184.33	182.17	180.90	176.47	160.27
66.5	169.96	173.12	178.47	178.75	180.21	177.64	175.51	174.15	170.09	154.96
67.0	159.72	163.06	169.34	170.01	172.29	170.63	168.85	167.33	163.52	149.57
67.5	149.04	152.79	160.03	161.09	164.29	163.62	162.12	160.76	157.13	144.20
68.0	138.83	142.64	150.36	151.99	156.21	156.72	155.45	154.32	150.71	138.79
68.5	128.83	132.45	140.74	142.71	147.92	149.82	148.88	147.71	144.21	133.39
69.0	118.60	122.58	131.25	133.30	139.64	142.79	142.02	141.43	138.07	128.09
69.5	109.30	112.90	122.05	124.16	131.29	135.77	135.73	135.15	131.96	122.74
70.0	100.42	104.07	112.81	115.26	122.80	128.53	129.10	128.90	125.80	117.43
70.5	92.10	95.58	104.12	106.91	114.68	121.70	122.43	122.59	119.95	112.23
71.0	84.68	87.73	95.83	98.96	106.43	114.56	116.05	116.49	114.13	107.07
71.5	77.46	80.48	88.28	90.98	98.78	107.56	109.56	110.33	108.47	101.77
72.0	71.00	73.73	81.12	83.64	91.26	100.80	103.27	104.39	102.93	96.84
72.5	64.89	67.53	74.89	76.62	84.28	94.01	96.97	98.58	97.37	91.98
73.0	59.17	61.69	68.93	70.41	77.64	87.49	90.67	92.74	92.23	86.92
73.5	54.24	56.49	63.17	64.47	71.58	81.20	84.73	86.95	86.89	82.18
74.0	49.54	51.70	57.54	59.01	65.65	75.11	78.84	81.41	81.85	77.61
74.5	45.20	47.05	52.51	54.16	60.27	69.41	73.29	75.93	76.99	73.07
75.0	41.25	43.03	47.85	49.62	55.35	63.94	67.86	70.96	72.18	68.61
75.5	37.58	39.21	43.94	45.15	50.71	58.88	62.67	65.83	67.65	64.37
76.0	34.11	35.55	39.92	41.26	46.51	54.34	58.02	60.95	63.04	60.30
76.5	30.95	32.46	36.28	37.58	42.31	49.81	53.33	56.53	58.84	56.29
77.0	28.25	29.53	33.06	34.26	38.69	45.69	48.99	52.03	54.60	52.39
77.5	25.45	26.72	29.95	31.06	35.18	41.86	44.99	47.97	50.63	48.67
78.0	23.38	24.21	27.19	28.25	31.93	38.16	41.18	44.09	46.72	45.14
78.5	20.94	21.87	24.47	25.48	29.07	34.96	37.63	40.19	42.98	41.74
79.0	18.93	19.67	22.15	22.98	26.27	31.65	34.33	36.85	39.47	38.44
79.5	16.91	17.68	19.95	20.81	23.75	28.70	31.16	33.42	36.21	35.16
80.0	15.20	15.65	17.93	18.54	21.30	26.00	28.35	30.51	32.97	32.14
80.5	13.53	14.13	16.00	16.50	19.06	23.27	25.46	27.52	30.00	29.40
81.0	12.09	12.50	14.25	14.73	17.00	20.88	22.97	24.81	27.10	26.61
81.5	10.65	11.02	12.54	13.14	15.06	18.66	20.53	22.19	24.39	23.95
82.0	9.42	9.72	10.96	11.42	13.29	16.50	18.24	19.86	21.85	21.47

CANDELA TABULATION - (Cont.)

82.5	8.17	8.41	9.61	10.08	11.70	14.55	16.14	17.57	19.41	19.17
83.0	7.24	7.50	8.42	8.66	10.28	12.74	14.12	15.41	17.19	17.05
83.5	6.03	6.42	7.23	7.48	8.79	10.98	12.40	13.47	14.95	14.89
84.0	5.12	5.47	6.24	6.36	7.45	9.44	10.55	11.62	13.04	12.93
84.5	4.27	4.61	5.27	5.35	6.17	7.96	9.04	9.94	11.27	11.14
85.0	3.61	3.68	4.35	4.38	5.29	6.66	7.58	8.36	9.47	9.47
85.5	2.98	3.05	3.53	3.68	4.29	5.49	6.32	6.88	7.90	7.94
86.0	2.25	2.53	2.75	2.84	3.33	4.46	5.20	5.73	6.54	6.47
86.5	2.10	1.93	2.26	2.33	2.59	3.47	4.00	4.35	5.19	5.26
87.0	1.45	1.58	1.73	1.80	2.04	2.58	3.15	3.54	3.98	4.08
87.5	1.21	1.18	1.39	1.24	1.48	1.83	2.19	2.46	3.05	3.04
88.0	1.07	0.87	0.91	0.93	1.02	1.45	1.62	1.66	2.16	2.27
88.5	0.62	0.62	0.80	0.63	0.73	1.05	0.95	1.25	1.47	1.57
89.0	0.43	0.41	0.46	0.46	0.41	0.78	0.63	0.68	0.90	1.03
89.5	0.31	0.23	0.30	0.30	0.23	0.26	0.37	0.35	0.39	0.52
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**									
	70.0	**80.0**	**90.0**	**100.0**	**110.0**	**112.5**	**120.0**	**130.0**	**135.0**	**140.0**
0.0	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53	79.53
0.5	81.75	80.66	79.56	78.45	77.32	77.07	76.26	75.47	75.13	74.75
1.0	84.22	81.89	79.61	77.45	75.44	74.94	73.63	72.20	71.58	70.97
1.5	86.79	83.17	79.63	76.47	73.69	73.04	71.26	69.41	68.65	67.89
2.0	89.58	84.46	79.68	75.58	72.11	71.31	69.23	67.03	66.14	65.38
2.5	92.56	85.85	79.77	74.76	70.63	69.69	67.36	65.00	64.04	63.28
3.0	95.74	87.29	79.84	73.96	69.26	68.27	65.77	63.28	62.34	61.49
3.5	99.04	88.76	79.94	73.15	68.07	67.02	64.36	61.84	60.87	60.04
4.0	102.66	90.21	80.02	72.39	66.92	65.84	63.14	60.59	59.63	58.78
4.5	106.45	91.79	80.08	71.68	65.92	64.77	62.11	59.51	58.54	57.75
5.0	110.49	93.35	80.16	71.02	64.97	63.84	61.06	58.57	57.58	56.80
5.5	114.74	94.99	80.24	70.35	64.17	62.95	60.24	57.68	56.68	55.96
6.0	119.14	96.66	80.30	69.72	63.33	62.20	59.44	56.91	55.96	55.18
6.5	123.86	98.41	80.42	69.18	62.66	61.51	58.76	56.22	55.26	54.47
7.0	128.76	100.22	80.58	68.62	62.01	60.86	58.11	55.59	54.61	53.85
7.5	133.93	102.07	80.72	68.18	61.41	60.24	57.55	55.03	54.04	53.21
8.0	139.35	104.05	80.86	67.66	60.91	59.75	57.03	54.49	53.47	52.67
8.5	145.07	106.06	81.00	67.25	60.42	59.26	56.57	53.96	52.98	52.07
9.0	150.87	108.07	81.15	66.82	59.97	58.83	56.14	53.50	52.48	51.59
9.5	156.92	110.22	81.29	66.41	59.54	58.43	55.69	53.07	51.98	51.11
10.0	163.22	112.40	81.40	66.02	59.12	57.98	55.33	52.67	51.57	50.67
10.5	169.53	114.68	81.53	65.60	58.70	57.55	54.95	52.27	51.13	50.18
11.0	176.01	116.91	81.60	65.17	58.37	57.26	54.57	51.88	50.72	49.79
11.5	182.55	119.24	81.70	64.80	57.98	56.89	54.22	51.50	50.34	49.36
12.0	189.15	121.60	81.79	64.40	57.64	56.53	53.89	51.12	49.98	48.94
12.5	195.72	124.03	81.85	64.10	57.28	56.20	53.53	50.77	49.60	48.52
13.0	202.26	126.41	81.91	63.74	56.96	55.87	53.19	50.40	49.19	48.10
13.5	208.65	128.80	81.96	63.41	56.64	55.57	52.88	50.04	48.81	47.71
14.0	214.80	131.31	81.99	63.06	56.37	55.22	52.55	49.69	48.43	47.32
14.5	220.78	133.81	81.99	62.69	56.04	54.95	52.18	49.34	48.05	46.84
15.0	226.50	136.27	81.98	62.39	55.70	54.63	51.89	48.99	47.66	46.46
15.5	232.10	138.86	82.00	62.01	55.41	54.33	51.55	48.66	47.26	45.97
16.0	237.37	141.48	81.97	61.71	55.08	53.99	51.25	48.26	46.89	45.56
16.5	242.47	144.18	81.95	61.33	54.77	53.68	50.92	47.87	46.41	45.02
17.0	247.38	146.92	81.92	60.97	54.39	53.34	50.60	47.47	46.00	44.54
17.5	252.01	149.72	81.90	60.64	54.07	52.98	50.25	47.08	45.54	44.02

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CANDELA TABULATION - (Cont.)

18.0	256.47	152.54	81.82	60.29	53.73	52.65	49.86	46.63	45.09	43.50
18.5	260.63	155.40	81.81	59.99	53.38	52.32	49.50	46.27	44.57	42.94
19.0	264.59	158.36	81.78	59.62	53.04	51.96	49.12	45.76	44.04	42.36
19.5	268.28	161.28	81.72	59.28	52.74	51.59	48.73	45.30	43.55	41.77
20.0	271.73	164.16	81.72	58.99	52.39	51.29	48.35	44.80	42.97	41.22
20.5	274.99	167.08	81.66	58.65	52.06	50.91	47.95	44.30	42.41	40.57
21.0	278.06	170.00	81.64	58.31	51.73	50.56	47.58	43.75	41.82	39.89
21.5	280.89	172.90	81.58	58.01	51.42	50.23	47.13	43.22	41.23	39.19
22.0	283.43	175.72	81.53	57.75	51.08	49.87	46.77	42.63	40.59	38.49
22.5	285.80	178.60	81.51	57.43	50.76	49.58	46.32	42.04	39.95	37.76
23.0	287.99	181.39	81.43	57.10	50.44	49.23	45.92	41.54	39.28	36.90
23.5	289.93	184.17	81.38	56.76	50.09	48.88	45.49	40.90	38.53	36.12
24.0	291.67	186.84	81.33	56.46	49.74	48.51	45.06	40.27	37.85	35.29
24.5	293.23	189.48	81.23	56.17	49.40	48.17	44.59	39.67	37.04	34.44
25.0	294.57	192.06	81.17	55.86	49.06	47.81	44.14	38.99	36.23	33.56
25.5	295.66	194.62	81.12	55.58	48.71	47.46	43.68	38.33	35.50	32.69
26.0	296.63	196.94	81.07	55.24	48.37	47.06	43.17	37.64	34.67	31.83
26.5	297.43	199.40	81.02	54.95	48.04	46.70	42.72	36.95	33.85	31.05
27.0	298.18	201.71	80.93	54.65	47.68	46.30	42.19	36.19	33.02	30.25
27.5	298.83	203.97	80.90	54.36	47.31	45.94	41.65	35.44	32.25	29.53
28.0	299.46	206.14	80.81	54.02	46.97	45.53	41.13	34.68	31.42	28.81
28.5	299.92	208.19	80.74	53.73	46.59	45.11	40.62	33.94	30.63	28.17
29.0	300.28	210.18	80.69	53.39	46.18	44.69	40.03	33.14	29.92	27.54
29.5	300.56	212.03	80.57	53.11	45.78	44.28	39.51	32.37	29.18	27.03
30.0	300.69	213.78	80.49	52.81	45.43	43.83	38.89	31.62	28.52	26.59
30.5	300.80	215.49	80.40	52.47	45.07	43.38	38.33	30.88	27.94	26.11
31.0	300.83	216.94	80.23	52.10	44.65	42.98	37.76	30.16	27.35	25.69
31.5	300.75	218.27	80.07	51.82	44.22	42.56	37.22	29.48	26.85	25.41
32.0	300.58	219.40	79.89	51.51	43.87	42.12	36.74	28.83	26.39	25.23
32.5	300.32	220.29	79.76	51.18	43.44	41.61	36.23	28.21	25.94	25.01
33.0	299.96	221.03	79.58	50.85	42.98	41.16	35.82	27.63	25.51	24.83
33.5	299.38	221.52	79.41	50.50	42.56	40.71	35.45	27.08	25.15	24.54
34.0	298.69	221.92	79.22	50.18	42.14	40.19	34.96	26.60	24.89	24.14
34.5	297.82	222.21	79.05	49.83	41.67	39.69	34.44	26.19	24.66	23.80
35.0	296.96	222.41	78.92	49.48	41.18	39.25	33.80	25.78	24.48	23.61
35.5	295.94	222.60	78.74	49.13	40.69	38.72	33.03	25.42	24.29	23.39
36.0	294.99	222.76	78.63	48.82	40.24	38.13	32.15	25.09	23.90	23.17
36.5	293.95	223.00	78.53	48.48	39.78	37.61	31.19	24.73	23.54	23.07
37.0	293.01	223.20	78.36	48.13	39.28	37.08	30.29	24.42	23.26	22.88
37.5	292.14	223.42	78.24	47.77	38.81	36.50	29.45	24.11	23.02	22.72
38.0	291.32	223.57	78.06	47.43	38.30	35.94	28.67	23.83	22.81	22.59
38.5	290.54	223.68	77.95	47.08	37.80	35.38	28.03	23.45	22.65	22.44
39.0	289.86	223.71	77.84	46.76	37.30	34.82	27.45	23.11	22.46	22.34
39.5	289.15	223.65	77.70	46.37	36.74	34.26	26.90	22.81	22.32	22.19
40.0	288.39	223.45	77.60	46.04	36.25	33.63	26.37	22.56	22.11	22.09
40.5	287.64	223.16	77.45	45.66	35.71	33.04	25.89	22.32	21.94	21.97
41.0	286.91	222.78	77.30	45.31	35.15	32.45	25.36	22.13	21.80	21.90
41.5	286.08	222.26	77.15	44.95	34.62	31.85	24.94	21.93	21.67	21.78
42.0	285.27	221.74	77.01	44.59	34.07	31.26	24.48	21.74	21.53	21.73
42.5	284.34	221.08	76.85	44.25	33.49	30.67	24.05	21.54	21.42	21.68
43.0	283.47	220.34	76.67	43.87	32.97	30.04	23.70	21.37	21.30	21.62
43.5	282.48	219.45	76.48	43.51	32.41	29.47	23.32	21.20	21.20	21.56
44.0	281.50	218.51	76.25	43.10	31.83	28.92	22.95	21.08	21.12	21.52
44.5	280.41	217.39	76.02	42.70	31.25	28.35	22.66	20.92	21.00	21.52
45.0	279.24	216.27	75.77	42.34	30.67	27.77	22.32	20.74	20.94	21.46
45.5	278.01	215.06	75.52	41.97	30.15	27.25	22.03	20.61	20.86	21.45

CANDELA TABULATION - (Cont.)

46.0	276.69	213.67	75.23	41.54	29.59	26.71	21.71	20.48	20.75	21.44
46.5	275.28	212.16	74.88	41.12	29.04	26.23	21.42	20.34	20.71	21.41
47.0	273.72	210.54	74.61	40.73	28.49	25.68	21.19	20.22	20.64	21.39
47.5	271.97	208.90	74.26	40.32	27.88	25.22	20.95	20.11	20.57	21.37
48.0	270.08	207.10	73.92	39.90	27.35	24.74	20.71	19.98	20.53	21.37
48.5	268.14	205.40	73.52	39.45	26.81	24.26	20.45	19.91	20.48	21.38
49.0	266.23	203.66	73.20	39.03	26.30	23.86	20.24	19.79	20.45	21.41
49.5	264.21	201.83	72.77	38.59	25.80	23.40	20.01	19.72	20.40	21.39
50.0	262.19	199.94	72.37	38.12	25.29	23.03	19.78	19.61	20.36	21.43
50.5	260.08	198.14	71.93	37.66	24.77	22.60	19.52	19.51	20.31	21.44
51.0	258.00	196.17	71.46	37.21	24.35	22.21	19.37	19.42	20.27	21.43
51.5	255.87	194.21	70.99	36.74	23.92	21.86	19.16	19.39	20.26	21.46
52.0	253.68	192.19	70.49	36.23	23.42	21.49	18.92	19.28	20.22	21.47
52.5	251.45	190.10	69.95	35.75	23.02	21.10	18.74	19.21	20.24	21.46
53.0	249.25	187.95	69.41	35.23	22.58	20.79	18.57	19.13	20.17	21.52
53.5	246.89	185.68	68.86	34.72	22.17	20.47	18.39	19.07	20.19	21.52
54.0	244.39	183.33	68.23	34.18	21.78	20.18	18.22	19.04	20.15	21.55
54.5	241.81	180.88	67.60	33.68	21.42	19.89	18.04	18.96	20.09	21.53
55.0	239.13	178.37	66.92	33.17	21.01	19.56	17.88	18.88	20.11	21.57
55.5	236.33	175.75	66.25	32.60	20.67	19.25	17.70	18.81	20.06	21.56
56.0	233.35	173.02	65.53	32.09	20.26	18.94	17.53	18.73	20.03	21.54
56.5	230.27	170.28	64.78	31.52	19.94	18.66	17.38	18.66	20.03	21.54
57.0	227.04	167.45	64.01	31.00	19.64	18.39	17.18	18.63	19.94	21.51
57.5	223.67	164.63	63.19	30.46	19.28	18.12	17.01	18.53	19.91	21.47
58.0	220.21	161.75	62.33	29.87	18.95	17.84	16.87	18.45	19.86	21.43
58.5	216.64	158.75	61.45	29.33	18.61	17.60	16.67	18.37	19.78	21.40
59.0	213.02	155.76	60.56	28.73	18.29	17.32	16.52	18.31	19.76	21.29
59.5	209.32	152.71	59.62	28.14	18.01	17.03	16.38	18.17	19.67	21.25
60.0	205.46	149.58	58.63	27.56	17.66	16.80	16.21	18.03	19.58	21.13
60.5	201.52	146.40	57.68	26.98	17.31	16.55	16.05	18.01	19.47	21.08
61.0	197.48	143.18	56.60	26.40	17.04	16.28	15.84	17.86	19.34	20.97
61.5	193.31	139.84	55.55	25.80	16.71	15.98	15.69	17.74	19.20	20.86
62.0	189.08	136.51	54.42	25.20	16.42	15.74	15.49	17.60	19.08	20.75
62.5	184.71	133.08	53.30	24.60	16.10	15.45	15.36	17.44	18.93	20.56
63.0	180.20	129.67	52.12	24.02	15.81	15.20	15.17	17.30	18.78	20.39
63.5	175.65	126.19	50.99	23.41	15.50	14.93	14.96	17.18	18.61	20.19
64.0	171.02	122.74	49.76	22.79	15.20	14.70	14.74	16.96	18.41	20.01
64.5	166.28	119.20	48.53	22.21	14.87	14.43	14.54	16.75	18.21	19.74
65.0	161.50	115.64	47.32	21.61	14.61	14.14	14.33	16.54	18.00	19.50
65.5	156.65	112.11	46.04	21.03	14.28	13.88	14.12	16.31	17.78	19.24
66.0	151.77	108.54	44.77	20.43	13.96	13.64	13.89	16.13	17.47	18.95
66.5	146.86	104.95	43.51	19.83	13.65	13.31	13.70	15.88	17.24	18.63
67.0	141.88	101.33	42.19	19.26	13.33	13.03	13.42	15.58	16.95	18.34
67.5	136.86	97.74	40.89	18.65	13.03	12.78	13.19	15.34	16.63	17.99
68.0	131.87	94.21	39.60	18.05	12.68	12.45	12.94	15.05	16.33	17.64
68.5	126.87	90.62	38.26	17.51	12.42	12.18	12.67	14.75	15.98	17.26
69.0	121.85	87.16	36.92	16.94	12.10	11.88	12.41	14.42	15.66	16.87
69.5	116.89	83.59	35.64	16.36	11.77	11.55	12.10	14.14	15.25	16.47
70.0	111.93	80.11	34.30	15.81	11.42	11.29	11.84	13.78	14.93	16.07
70.5	107.11	76.66	32.98	15.23	11.12	10.98	11.50	13.42	14.50	15.60
71.0	102.21	73.24	31.68	14.66	10.76	10.66	11.25	13.07	14.13	15.22
71.5	97.39	69.87	30.35	14.14	10.46	10.35	10.89	12.69	13.73	14.73
72.0	92.71	66.56	29.14	13.57	10.10	10.03	10.60	12.32	13.30	14.28
72.5	88.02	63.31	27.83	13.04	9.78	9.69	10.27	11.90	12.83	13.81
73.0	83.46	60.07	26.52	12.48	9.40	9.37	9.91	11.50	12.43	13.33
73.5	78.97	56.93	25.34	11.95	9.09	9.06	9.58	11.13	11.97	12.83

Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

74.0	74.54	53.88	24.11	11.43	8.74	8.70	9.24	10.71	11.53	12.36
74.5	70.25	50.87	22.88	10.90	8.45	8.35	8.89	10.32	11.08	11.84
75.0	66.06	47.93	21.69	10.40	8.04	8.01	8.54	9.95	10.60	11.35
75.5	62.03	45.05	20.55	9.90	7.70	7.72	8.19	9.50	10.17	10.89
76.0	58.04	42.26	19.41	9.37	7.34	7.34	7.83	9.00	9.70	10.40
76.5	54.26	39.57	18.24	8.89	7.02	6.98	7.44	8.63	9.25	9.87
77.0	50.57	37.00	17.16	8.42	6.65	6.66	7.12	8.19	8.80	9.41
77.5	47.00	34.45	16.10	7.92	6.30	6.27	6.72	7.76	8.34	8.93
78.0	43.57	31.98	15.05	7.45	5.98	5.98	6.40	7.33	7.89	8.44
78.5	40.28	29.66	13.98	6.99	5.63	5.63	6.02	6.94	7.44	7.98
79.0	37.14	27.37	13.03	6.49	5.32	5.30	5.66	6.52	7.00	7.52
79.5	34.11	25.19	12.04	6.09	4.94	4.98	5.33	6.14	6.56	7.09
80.0	31.20	23.08	11.13	5.68	4.64	4.65	5.00	5.76	6.17	6.59
80.5	28.44	21.04	10.21	5.22	4.31	4.37	4.61	5.37	5.77	6.19
81.0	25.83	19.14	9.31	4.84	4.01	4.03	4.31	5.01	5.36	5.77
81.5	23.32	17.26	8.49	4.42	3.70	3.70	4.00	4.62	4.99	5.34
82.0	20.91	15.54	7.66	3.99	3.42	3.44	3.68	4.29	4.62	4.98
82.5	18.65	13.90	6.90	3.66	3.14	3.15	3.37	3.94	4.23	4.57
83.0	16.53	12.33	6.11	3.31	2.81	2.83	3.12	3.62	3.93	4.24
83.5	14.51	10.85	5.41	2.94	2.57	2.60	2.84	3.35	3.58	3.87
84.0	12.63	9.44	4.74	2.70	2.34	2.35	2.55	3.02	3.28	3.54
84.5	10.88	8.13	4.12	2.29	2.08	2.14	2.34	2.81	3.04	3.23
85.0	9.22	6.91	3.53	1.99	1.87	1.94	2.11	2.46	2.76	2.99
85.5	7.72	5.83	2.99	1.72	1.62	1.68	1.91	2.27	2.54	2.75
86.0	6.36	4.77	2.49	1.50	1.51	1.48	1.70	2.10	2.25	2.49
86.5	5.09	3.88	2.05	1.28	1.28	1.33	1.52	1.88	2.05	2.30
87.0	4.01	3.02	1.66	1.08	1.16	1.16	1.34	1.71	1.87	2.06
87.5	3.03	2.29	1.30	0.90	0.99	1.01	1.20	1.54	1.66	1.82
88.0	2.21	1.74	0.99	0.73	0.82	0.89	1.06	1.18	1.12	1.07
88.5	1.55	1.23	0.81	0.59	0.67	0.68	0.64	0.51	0.30	0.23
89.0	1.01	0.86	0.53	0.39	0.29	0.31	0.12	0.02	0.04	0.05
89.5	0.53	0.49	0.31	0.12	0.06	0.04	0.03	0.05	0.02	0.04
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**				
	150.0	**157.5**	**160.0**	**170.0**	**180.0**
0.0	79.53	79.53	79.53	79.53	79.53
0.5	74.23	73.81	73.78	73.65	73.55
1.0	70.13	69.56	69.46	69.23	69.07
1.5	66.84	66.16	66.07	65.68	65.56
2.0	64.19	63.49	63.38	62.92	62.82
2.5	62.02	61.34	61.18	60.73	60.60
3.0	60.31	59.58	59.40	58.99	58.83
3.5	58.82	58.17	58.04	57.50	57.41
4.0	57.58	56.88	56.74	56.28	56.12
4.5	56.51	55.86	55.67	55.11	55.05
5.0	55.57	54.89	54.72	54.22	54.06
5.5	54.72	54.01	53.83	53.36	53.15
6.0	53.92	53.24	53.01	52.53	52.35
6.5	53.22	52.48	52.31	51.72	51.57
7.0	52.53	51.80	51.60	51.04	50.84
7.5	51.89	51.19	50.92	50.30	50.12
8.0	51.31	50.54	50.33	49.69	49.49
8.5	50.73	49.94	49.69	49.03	48.78
9.0	50.15	49.34	49.14	48.45	48.17

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CANDELA TABULATION - (Cont.)

9.5	49.65	48.82	48.52	47.82	47.57
10.0	49.12	48.24	47.99	47.20	46.97
10.5	48.61	47.73	47.45	46.66	46.37
11.0	48.15	47.17	46.89	46.11	45.77
11.5	47.62	46.67	46.36	45.46	45.17
12.0	47.16	46.13	45.79	44.89	44.57
12.5	46.66	45.58	45.22	44.28	43.96
13.0	46.24	44.99	44.66	43.65	43.28
13.5	45.67	44.40	44.04	43.01	42.57
14.0	45.17	43.85	43.48	42.35	41.90
14.5	44.65	43.24	42.84	41.70	41.22
15.0	44.11	42.65	42.21	41.01	40.48
15.5	43.58	42.02	41.56	40.35	39.83
16.0	43.00	41.35	40.91	39.61	39.07
16.5	42.42	40.77	40.22	38.85	38.29
17.0	41.84	40.03	39.58	38.09	37.51
17.5	41.21	39.38	38.83	37.27	36.64
18.0	40.56	38.60	38.00	36.40	35.71
18.5	39.90	37.84	37.22	35.46	34.81
19.0	39.20	36.99	36.39	34.52	33.79
19.5	38.49	36.18	35.50	33.53	32.79
20.0	37.68	35.28	34.58	32.59	31.77
20.5	36.85	34.40	33.63	31.59	30.78
21.0	36.04	33.41	32.69	30.60	29.85
21.5	35.14	32.46	31.75	29.69	28.95
22.0	34.24	31.52	30.82	28.87	28.19
22.5	33.29	30.64	29.94	28.08	27.49
23.0	32.40	29.80	29.15	27.39	26.81
23.5	31.55	29.04	28.40	26.80	26.30
24.0	30.69	28.31	27.74	26.28	25.81
24.5	29.84	27.67	27.20	25.82	25.39
25.0	29.11	27.08	26.60	25.47	25.02
25.5	28.42	26.63	26.21	25.13	24.76
26.0	27.78	26.12	25.79	24.84	24.55
26.5	27.21	25.79	25.43	24.58	24.23
27.0	26.72	25.39	25.14	24.39	24.10
27.5	26.25	25.18	24.86	24.21	23.92
28.0	25.86	24.90	24.64	24.05	23.81
28.5	25.53	24.71	24.45	23.92	23.73
29.0	25.28	24.49	24.29	23.83	23.56
29.5	25.13	24.28	24.09	23.73	23.48
30.0	24.91	24.15	23.97	23.61	23.40
30.5	24.67	23.99	23.84	23.53	23.40
31.0	24.33	23.81	23.76	23.49	23.35
31.5	24.11	23.71	23.64	23.43	23.33
32.0	23.90	23.61	23.57	23.38	23.28
32.5	23.78	23.51	23.50	23.36	23.30
33.0	23.63	23.44	23.44	23.36	23.26
33.5	23.54	23.40	23.37	23.38	23.25
34.0	23.36	23.32	23.34	23.38	23.35
34.5	23.27	23.29	23.33	23.41	23.34
35.0	23.19	23.24	23.29	23.45	23.43
35.5	23.12	23.24	23.29	23.46	23.46
36.0	23.02	23.20	23.30	23.51	23.53
36.5	22.98	23.21	23.31	23.59	23.63
37.0	22.90	23.24	23.31	23.65	23.69

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CANDELA TABULATION - (Cont.)

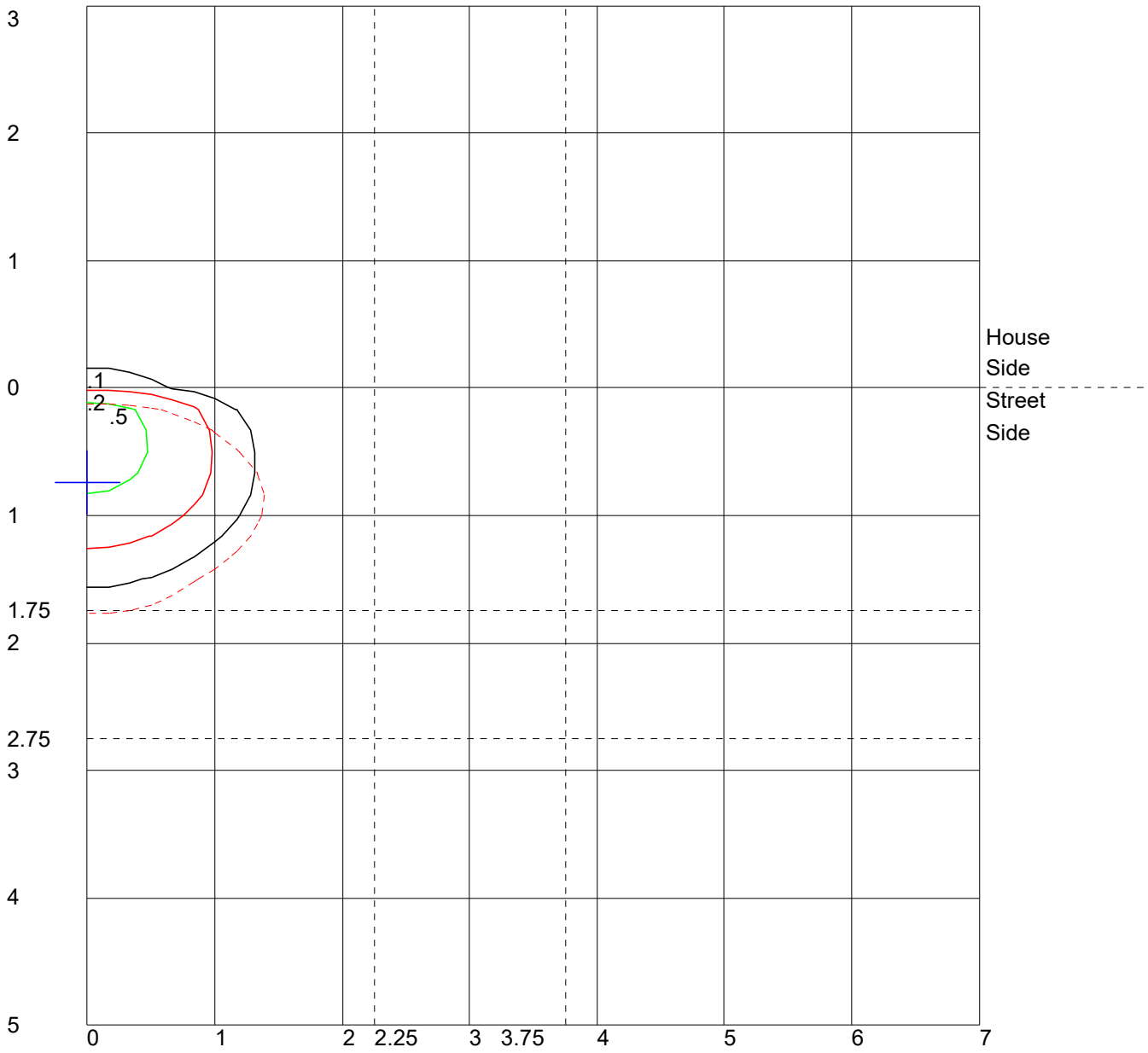
37.5	22.86	23.20	23.31	23.72	23.82
38.0	22.82	23.25	23.39	23.85	23.92
38.5	22.76	23.26	23.39	23.97	24.02
39.0	22.76	23.31	23.47	24.07	24.21
39.5	22.73	23.35	23.53	24.19	24.35
40.0	22.73	23.45	23.62	24.31	24.47
40.5	22.71	23.49	23.70	24.45	24.65
41.0	22.72	23.53	23.79	24.58	24.78
41.5	22.73	23.64	23.87	24.71	24.94
42.0	22.75	23.66	23.98	24.90	25.21
42.5	22.78	23.78	24.10	25.06	25.31
43.0	22.84	23.88	24.22	25.22	25.55
43.5	22.88	23.97	24.35	25.37	25.69
44.0	22.91	24.12	24.41	25.52	25.95
44.5	23.00	24.21	24.57	25.73	26.12
45.0	23.03	24.33	24.73	25.92	26.33
45.5	23.11	24.44	24.86	26.12	26.56
46.0	23.18	24.59	24.99	26.31	26.77
46.5	23.25	24.70	25.19	26.53	27.01
47.0	23.37	24.88	25.30	26.72	27.15
47.5	23.43	25.03	25.47	26.92	27.40
48.0	23.52	25.14	25.61	27.11	27.58
48.5	23.65	25.25	25.75	27.26	27.82
49.0	23.67	25.39	25.89	27.45	28.01
49.5	23.80	25.53	26.05	27.60	28.22
50.0	23.89	25.65	26.17	27.83	28.38
50.5	23.95	25.77	26.34	28.01	28.57
51.0	24.05	25.95	26.45	28.20	28.78
51.5	24.11	26.03	26.60	28.32	28.93
52.0	24.24	26.15	26.70	28.53	29.10
52.5	24.33	26.25	26.82	28.66	29.28
53.0	24.39	26.40	26.95	28.81	29.50
53.5	24.41	26.47	27.08	28.91	29.55
54.0	24.51	26.60	27.16	29.00	29.73
54.5	24.57	26.64	27.23	29.16	29.83
55.0	24.61	26.74	27.35	29.26	29.93
55.5	24.63	26.77	27.39	29.33	30.03
56.0	24.68	26.78	27.47	29.35	30.06
56.5	24.71	26.83	27.46	29.41	30.13
57.0	24.68	26.85	27.48	29.45	30.16
57.5	24.68	26.84	27.42	29.44	30.09
58.0	24.62	26.84	27.46	29.37	30.11
58.5	24.63	26.79	27.43	29.36	30.06
59.0	24.57	26.73	27.37	29.29	29.98
59.5	24.53	26.62	27.25	29.20	29.86
60.0	24.42	26.54	27.19	29.08	29.73
60.5	24.32	26.39	27.06	28.89	29.56
61.0	24.19	26.24	26.87	28.74	29.35
61.5	24.04	26.06	26.72	28.50	29.13
62.0	23.89	25.92	26.49	28.26	28.93
62.5	23.68	25.65	26.22	27.98	28.61
63.0	23.46	25.45	26.00	27.68	28.28
63.5	23.18	25.17	25.68	27.38	27.94
64.0	22.96	24.82	25.35	26.97	27.62
64.5	22.64	24.49	25.00	26.62	27.18
65.0	22.39	24.13	24.66	26.20	26.73

CANDELA TABULATION - (Cont.)

65.5	22.05	23.77	24.28	25.76	26.24
66.0	21.66	23.34	23.81	25.25	25.77
66.5	21.32	22.93	23.38	24.79	25.30
67.0	20.89	22.45	22.96	24.27	24.75
67.5	20.51	22.00	22.43	23.78	24.27
68.0	20.06	21.52	21.92	23.25	23.73
68.5	19.58	21.00	21.45	22.68	23.15
69.0	19.11	20.49	20.88	22.11	22.59
69.5	18.62	19.96	20.34	21.55	22.01
70.0	18.14	19.40	19.78	20.96	21.39
70.5	17.65	18.89	19.22	20.34	20.77
71.0	17.09	18.31	18.66	19.71	20.14
71.5	16.59	17.74	18.06	19.11	19.48
72.0	16.05	17.17	17.50	18.49	18.88
72.5	15.53	16.57	16.90	17.90	18.25
73.0	14.97	15.95	16.32	17.23	17.61
73.5	14.43	15.39	15.72	16.62	16.92
74.0	13.84	14.81	15.06	15.92	16.27
74.5	13.30	14.20	14.48	15.33	15.62
75.0	12.75	13.63	13.89	14.68	15.00
75.5	12.23	13.05	13.27	14.06	14.34
76.0	11.64	12.45	12.65	13.40	13.65
76.5	11.12	11.85	12.07	12.73	13.03
77.0	10.55	11.28	11.47	12.16	12.39
77.5	9.97	10.72	10.89	11.54	11.76
78.0	9.48	10.13	10.33	10.94	11.15
78.5	8.95	9.53	9.73	10.30	10.55
79.0	8.41	9.01	9.19	9.77	9.95
79.5	7.91	8.45	8.64	9.15	9.40
80.0	7.44	7.94	8.11	8.62	8.81
80.5	6.97	7.47	7.59	8.09	8.30
81.0	6.52	6.97	7.13	7.57	7.70
81.5	6.03	6.50	6.64	7.07	7.21
82.0	5.62	6.04	6.17	6.57	6.72
82.5	5.22	5.61	5.73	6.14	6.24
83.0	4.84	5.20	5.31	5.69	5.83
83.5	4.45	4.82	4.93	5.27	5.41
84.0	4.10	4.46	4.56	4.91	5.04
84.5	3.78	4.12	4.20	4.56	4.66
85.0	3.49	3.81	3.87	4.23	4.34
85.5	3.21	3.55	3.64	3.95	4.07
86.0	2.99	3.32	3.38	3.70	3.82
86.5	2.72	3.03	3.09	3.41	3.51
87.0	2.49	2.76	2.83	2.96	3.02
87.5	1.85	1.74	1.70	1.79	1.82
88.0	1.03	0.76	0.70	0.55	0.45
88.5	0.08	0.07	0.06	0.06	0.02
89.0	0.02	0.03	0.02	0.03	0.03
89.5	0.05	0.02	0.00	0.05	0.04
90.0	0.00	0.00	0.00	0.00	0.00

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

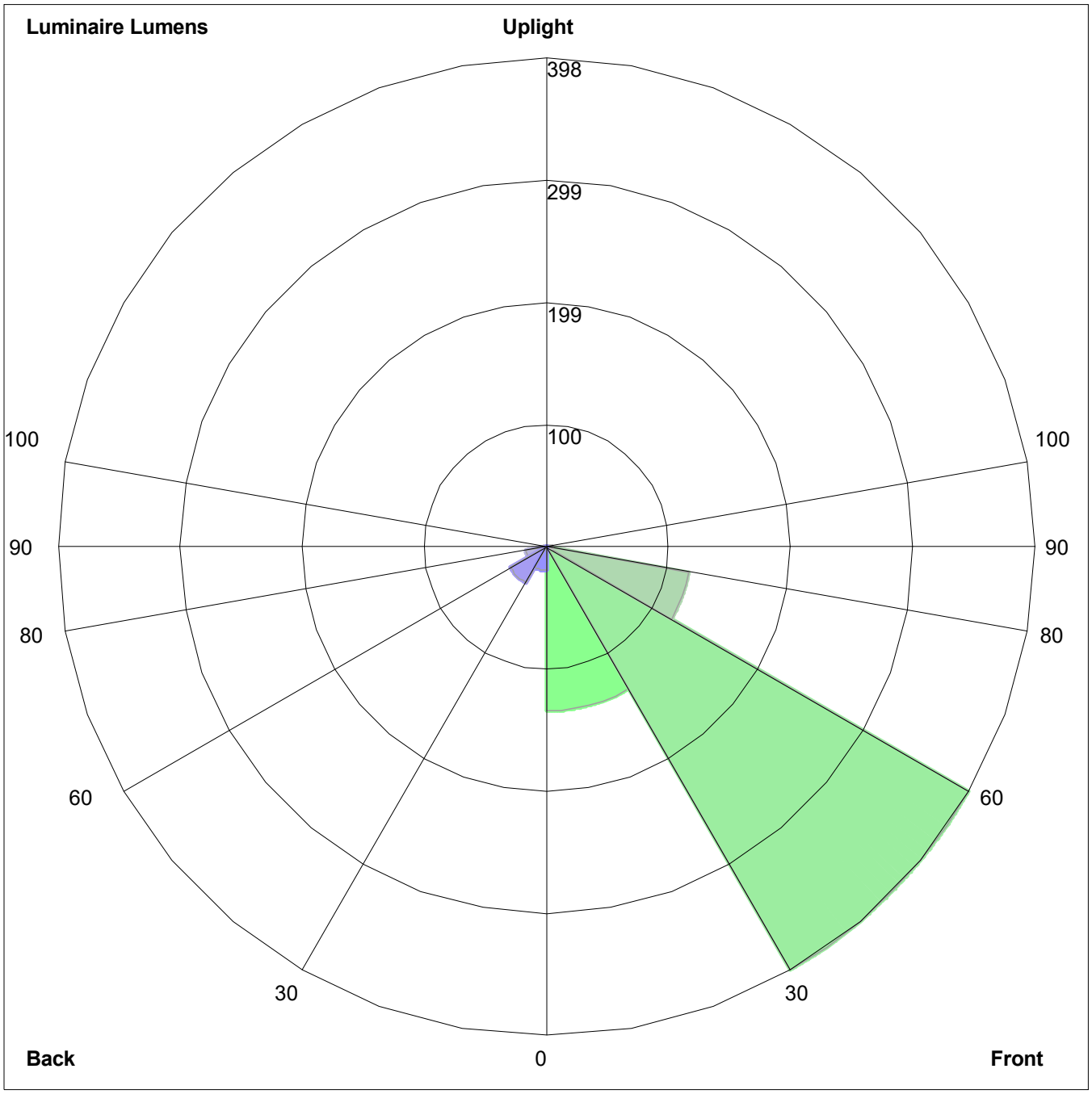
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL12-10W-4000K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=133.9, Medium=398.4, High=117.9, Very High=4.5
Back: Low=19.0, Medium=33.5, High=17.0, Very High=1.7
Uplight: Low=0.0, High=0.0

BUG Rating : B0-U0-G0

ARCHITECTURAL EGRESS

Vandal Resistant

AEL Full Cut-0ff LED

WALL MOUNT
LED

Fixture Type

Date

Job Name

Approved By

Catalog Number

SPECIFICATIONS

Description The Architectural Egress Luminaire combines a unique, patented design shaped with high performance, full cut-off optics to achieve completely unobtrusive illumination of a space or path of egress. When mounted over a doorway, the fixture is perceived as an element of the building structure and, additionally, provides water protection in the form of a drip cap over the doorway. Multiple lengths are available to match a given door opening and our unique quick mount system facilitates installation and maintenance.

Housing Marine grade heat treated extruded aluminum.
Chemically primed and finished with robotically applied polyester powder coat.

Wall Mount Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat. Designed to provide quick mounting to housing and secured with (2) captive stainless steel TORX® head screws.

Lens Frame Marine grade heat treated extruded aluminum, clear anodized. Secured to fixture via integral concealed hinge and (3) captive stainless steel TORX® head screws.

Lens UV stabilized diffused extruded polycarbonate.

End Caps Die-cast marine grade aluminum continuously welded to housing. All welds ground smooth.

Reflector Electrostatically brightened anodized aluminum PVD coated and absolutely color-free of iridescence. Shaped to provide full cutoff, LED point dispersion and maximum efficiency.

Drivers Constant current drivers at 350mA. High output version utilizes 700mA.

LED Samsung LM561B+ Series @ 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of 130,000 hours at 50ºC. Tested in accordance with LM-80. Ten year warranty on LED boards against operational defects.

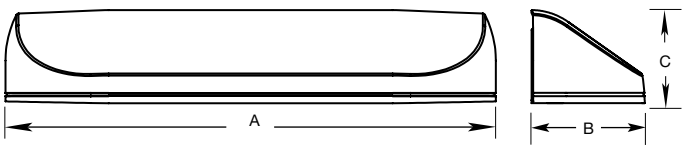
Gaskets Closed cell self-adhesive neoprene to provide watertight seal between fixture and wall and between fixture and lens frame.

UL Listing U.L., C.UL., Wet standard.

Lifetime Warranty Luminaire LED Incorporated will repair or replace any fixture damaged due to vandalism for the lifetime of the installation.

DIMENSIONAL DATA

	A	B	C
AEL 12	20.79	5.40	3.60
AEL 24	32.04	5.40	3.60
AEL 36	43.29	5.40	3.60
AEL 48	54.75	5.40	3.60
AEL 72	78.75	5.40	3.60



Luminaire Led
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Rev: 05/17+

ARCHITECTURAL EGRESS

Vandal Resistant

Fixture Type

AEL Full Cut-0ff LED

ORDERING INFORMATION

SERIES	LED	CCT	VOLTS	LENS	COLOR	OPTIONS		TX/SD
								TX/SD
AEL 12	12" - 10W	3000K	120-277	DP	BKH	DIM	EMBDA	
AEL 24	24" - 10W	3500K	347		BZH	A/B	EMB310	
AEL 36	24" - 20W	4000K			SVH	2B	EMB310ST	
AEL 48	36" - 15W	5000K			WOP	PC	EMB20R	
AEL 72	36" - 30W				PCP	GLR	EMB125R	
	48" - 20W				CUST	OCC	EMB250R	
	48" - 35W						ST/SC	
	72" - 30W							
	72" - 55W							

OPTIONS

LENS DP = Diffused Polycarbonate.

COLORS BKH = Black (Hammertone) BZH = Bronze (Hammertone) SVH = Silver (Hammertone) WOP = White (Textured White) PCP = Black (Prime Coat Paintable) CUST = Custom Color (Consult Factory)

DIM 0-10V dimming driver. N/A with AEL12. 10% at lowest level.

A/B Aluminum surface back box. Finished with polyester powder coat to match the fixture.

PC Photoelectric switch.

2B (2) LED drivers for independent LED b d operation. N/A with AEL12. N/A with the OCC option.

GLR Fuse and fuse holder.

EMB310 1000 lumen self-contained, 90 minute emergency battery pack. Available for 36", 48" and 72" lengths only. 0°C (32°F) to 55°C (131°F). Not available in 347V.

EMB310ST 1000 lumen self-testing, self-contained, 90 minute emergency battery pack. Available for 36", 48" and 72" lengths only. 0°C (32°F) to 55°C (131°F). Not available in 347V.

EMB20R Remote mounted micro inverter that will operate a 25W maximum load for 90 minutes. 0°C (32°F) to 45°C (113°F).

EMB125R Remote inverter that will operate a 125W maximum load for 90 minutes. 20°C (68°F) to 30°C (86°F). Not available in 347V.

EMB250R Remote inverter that will operate a 250W maximum load for 90 minutes. 20°C(68°F) to 30°C (86°F). Not available in 347V.

EMBDA Two drivers and two emergency battery packs self-contained within fixture for independent light engine operation. Each battery pack will operate each light engine for a minimum of 90 minutes. Available in the 72" length only. Not available in 347V.

OCC Passive infrared sensor mounted in machine hole in end cap. Maximum coverage of 10' radius from 8' height.

ST/SC Slotted screws instead of TORX® head.

TX/SD TORX® head bit.

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Rev: 05/17+

ARCHITECTURAL EGRESS

Vandal Resistant

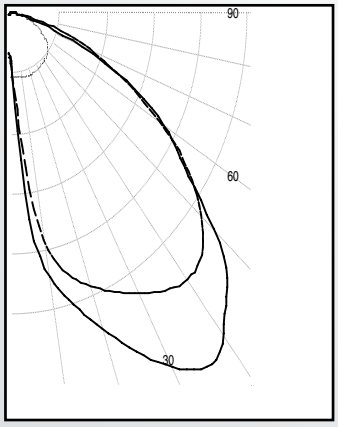
Fixture Type

AEL Full Cut-0ff LED

PHOTOMETRIC DATA

Model	Watts	Input Watts		Delivered Lumens							
				3000K		3500K		4000K		5000K	
AEL 12	10W	10.8W		747		760		784		807	
AEL 24	10W	9.4W		832		847		873		899	
AEL 24	20W	17.6W		1557		1585		1634		1682	
AEL 36	15W	14.9W		1248		1271		1310		1348	
AEL 36	30W	26.3W		2995		3049		3143		3237	
AEL 48	20W	18.8W		1935		1969		2030		2090	
AEL 48	35W	35.2W		3616		3682		3796		3909	
AEL 72	30W	27.9W		3162		3217		3317		3417	
AEL 72	55W	52.2W		5911		6017		6203		6389	

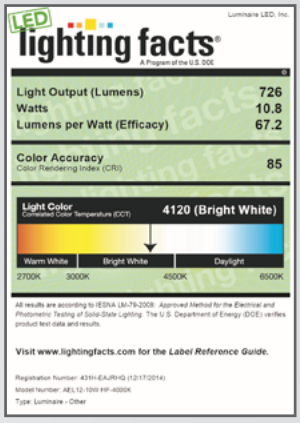
MODEL AEL12-10W-4000K
Delivered Lumens: 726 Lumens



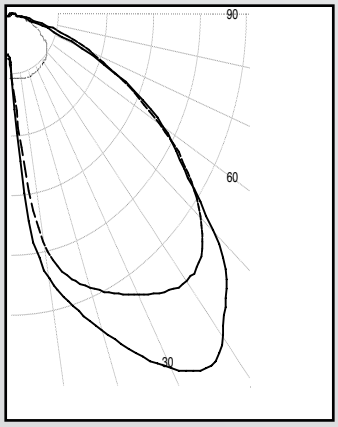
IES FILE: AEL12-10W-4000K
Total Power: 10.8W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G0

Zone	Lumens	% Lamps
0 - 30	153	21.1
0 - 40	287	39.5
0 - 60	585	80.6
60 - 90	726	100.0
0 - 90	439	60.5
90 -180	0	0.0
0 - 180	726	100.0



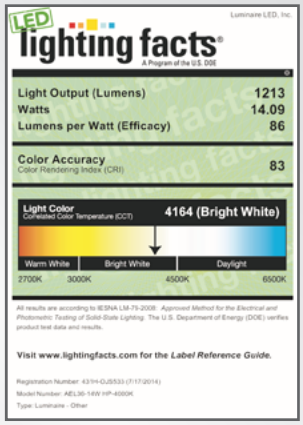
MODEL AEL36-15W-4000K
Delivered Lumens: 1213 Lumens



IES FILE: AEL36-15W-4000K
Total Power: 14.09W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U1G0

Zone	Lumens	% Lamps
0 - 30	381	31.4
0 - 40	635	52.3
0 - 60	1063	87.7
60 - 90	150	12.3
0 - 90	1213	100.0
90 -180	0	0.0
0 - 180	1213	100.0



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Rev: 05/17+

ARCHITECTURAL EGRESS

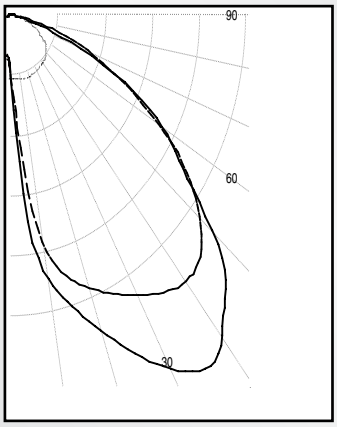
Vandal Resistant

Fixture Type

AEL Full Cut-0ff LED

PHOTOMETRIC DATA

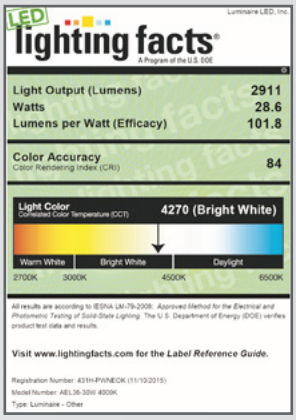
MODEL AEL36-30W-4000K
Delivered Lumens: 2911 Lumens



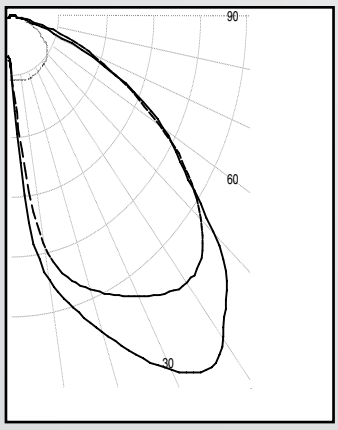
IES FILE: AEL36-30W-4000K
Total Power: 28.6W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G0

Zone	Lumens	% Lamps
0 - 30	754	25.9
0 - 40	1308	44.9
0 - 60	2417	83.0
60 - 90	494	17.0
0 - 90	2911	100.0
90 -180	0	0.0
0 - 180	2911	100.0



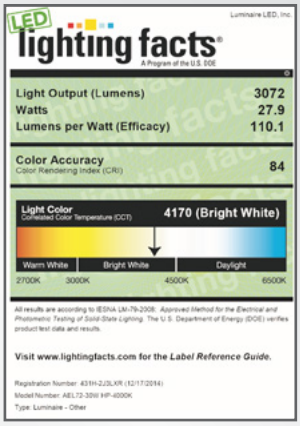
MODEL AEL72-30W-4000K
Delivered Lumens: 3072 Lumens



IES FILE: AEL72-30W-4000K
Total Power: 27.09W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B1U0G1

Zone	Lumens	% Lamps
0 - 30	771	25.1
0 - 40	1353	44.1
0 - 60	2529	82.3
60 - 90	3072	100.0
0 - 90	1718	17.7
90 -180	542	0.0
0 - 180	3072	100.0



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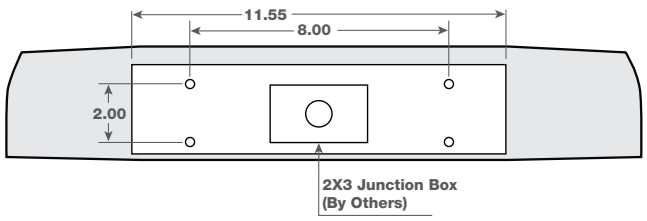
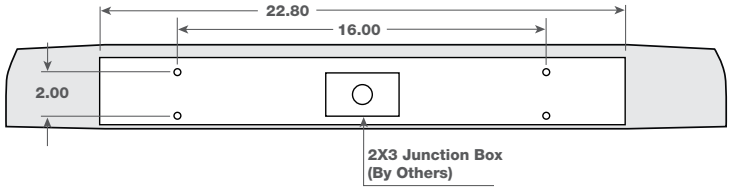
Rev: 05/17+

MOUNTING PLATE DETAILS

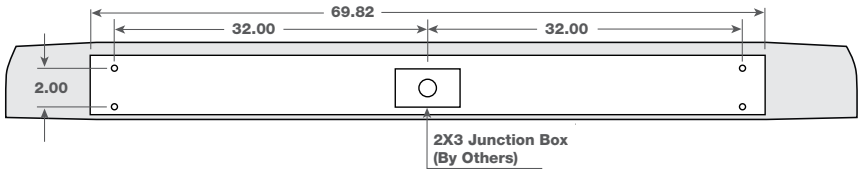
AEL 12



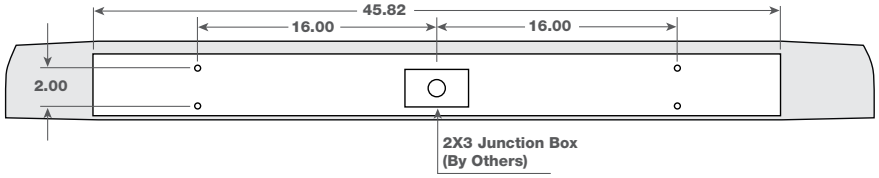
AEL 24



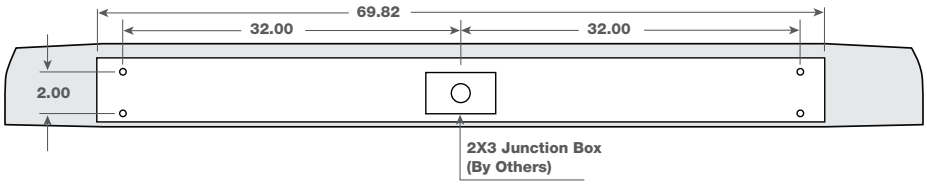
AEL 36



AEL 48



AEL 72



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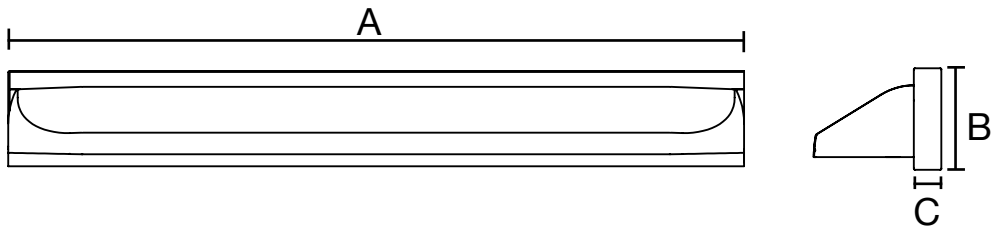
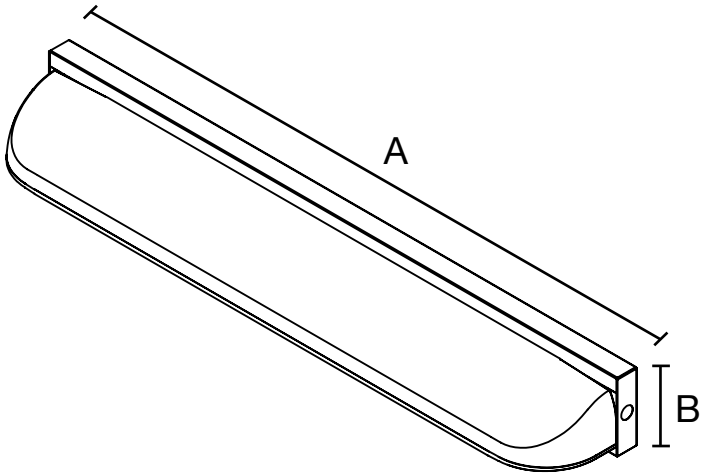
ALUMINUM BACKBOX DETAIL

A/B Detail

	A	B	C
AEL 12 Backbox	20.80	5.20	1.50
AEL 24 Backbox	31.48	5.20	1.50
AEL 36 Backbox	43.30	5.20	1.50
AEL 48 Backbox	54.75	5.20	1.50
AEL 72 Backbox	78.75	5.20	1.50





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06-15-2017

TYPE JDW

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL36-15W-4000K.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]
[TESTLAB]Intertek
[ISSUEDATE] 4/ 2/2014
[MANUFAC]LUMINAIRE LED, INC.
[LUMCAT]1403201050-001 MOD# AEL36-14W 4000K
[LUMINAIRE]EGRESS LED LUMINAIRE
[LAMP]LED
[LAMPCAT]NA. LUMINAIRE OUTPUT = 1212 LMS
[OTHER]120.08 VAC, 127.08 mA, 14.088 W, 0.9232 PF

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1213
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	14.1
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	848.9
Maximum Candela Angle	360H 37.5V
Maximum Candela (<90 Degrees Vertical)	848.9
Maximum Candela Angle (<90 Degrees Vertical)	360H 37.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	36.6 (3.0% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL36-15W-4000K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	271.9	N.A.	22.4
FM - Front-Medium (30-60)	568.7	N.A.	46.9
FH - Front-High (60-80)	117.9	N.A.	9.7
FVH - Front-Very High (80-90)	6.3	N.A.	0.5
BL - Back-Low (0-30)	108.6	N.A.	9.0
BM - Back-Medium (30-60)	114.2	N.A.	9.4
BH - Back-High (60-80)	24.4	N.A.	2.0
BVH - Back-Very High (80-90)	1.1	N.A.	0.1
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	1213.1	N.A.	100.0
BUG Rating	B0-U0-G0		

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL36-15W-4000K.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	**22.5**	**45.0**	**67.5**	**90.0**	**112.5**	**135.0**	**157.5**	**180.0**	**202.5**
0.0	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8	451.8
2.5	527.6	524.9	518.9	510.2	493.0	419.0	361.7	335.3	328.1	335.3
5.0	604.5	595.9	578.5	547.2	491.0	376.0	316.8	299.0	295.2	299.0
7.5	644.7	633.8	614.7	575.1	488.1	341.6	294.0	283.8	281.6	283.8
10.0	670.8	658.8	636.7	594.1	484.3	316.3	281.3	273.0	270.6	273.0
12.5	690.9	677.8	652.0	607.2	479.4	298.0	271.7	262.7	259.7	262.7
15.0	702.8	692.8	665.5	615.9	472.8	283.8	262.6	251.1	247.0	251.1
17.5	711.2	704.7	677.8	621.3	463.7	271.5	251.5	237.3	232.8	237.3
20.0	720.1	712.7	687.8	624.0	451.7	259.4	238.2	221.7	216.4	221.7
22.5	739.3	725.3	693.2	624.2	437.2	246.2	221.8	202.9	195.1	202.9
25.0	766.0	745.5	695.2	620.1	420.7	231.2	203.2	180.9	168.7	180.9
27.5	791.2	768.3	696.8	611.4	400.7	214.0	183.5	157.1	143.2	157.1
30.0	815.3	790.5	701.0	599.2	377.2	195.3	164.0	135.9	125.7	135.9
32.5	835.0	806.0	702.6	581.0	351.1	176.6	145.1	120.1	114.7	120.1
35.0	847.8	814.9	694.7	554.4	327.8	160.0	125.8	108.8	107.0	108.8
37.5	848.9	812.2	676.7	523.1	308.4	146.7	107.9	99.7	101.4	99.7
40.0	834.2	792.9	642.6	496.5	286.3	134.0	92.8	91.3	96.6	91.3
42.5	804.9	755.3	599.6	474.7	255.6	119.0	81.5	83.8	92.3	83.8
45.0	763.5	702.6	556.8	444.6	219.0	102.3	72.8	76.6	87.9	76.6
47.5	707.2	641.0	517.1	401.7	183.3	85.5	65.8	69.8	82.7	69.8
50.0	633.6	571.9	478.4	349.7	153.0	70.5	59.2	63.3	77.4	63.3
52.5	554.5	498.1	434.8	296.2	130.1	58.5	52.6	57.2	71.9	57.2
55.0	484.4	426.2	385.7	248.6	114.4	49.7	46.3	51.5	66.3	51.5
57.5	419.9	359.1	332.6	210.9	102.6	43.2	40.2	46.2	60.3	46.2
60.0	357.2	299.5	279.1	182.5	91.0	37.7	34.4	41.0	53.9	41.0
62.5	293.8	248.0	230.0	158.4	78.2	32.5	29.5	35.8	47.5	35.8
65.0	231.6	202.3	187.7	135.1	65.5	27.5	24.9	30.8	40.9	30.8
67.5	174.5	162.0	152.0	111.4	54.1	22.6	20.7	25.9	34.2	25.9
70.0	127.0	126.6	121.7	89.6	43.9	18.2	16.9	21.2	28.0	21.2
72.5	90.8	95.8	95.7	70.2	34.7	14.1	13.3	16.9	22.0	16.9
75.0	64.4	70.4	73.1	53.6	26.4	10.4	9.9	12.6	16.5	12.6
77.5	44.5	50.1	53.4	39.5	19.0	7.3	7.0	9.2	11.7	9.2
80.0	29.4	34.0	36.6	27.5	12.5	4.4	4.5	6.1	7.9	6.1
82.5	17.9	21.2	22.7	17.4	7.2	2.1	2.5	3.7	4.9	3.7
85.0	9.4	11.1	11.8	9.2	3.0	0.5	1.0	1.7	2.2	1.7
87.5	3.5	4.2	4.0	3.1	0.5	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL36-15W-4000K.IES

CANDELA TABULATION - (Cont.)

132.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

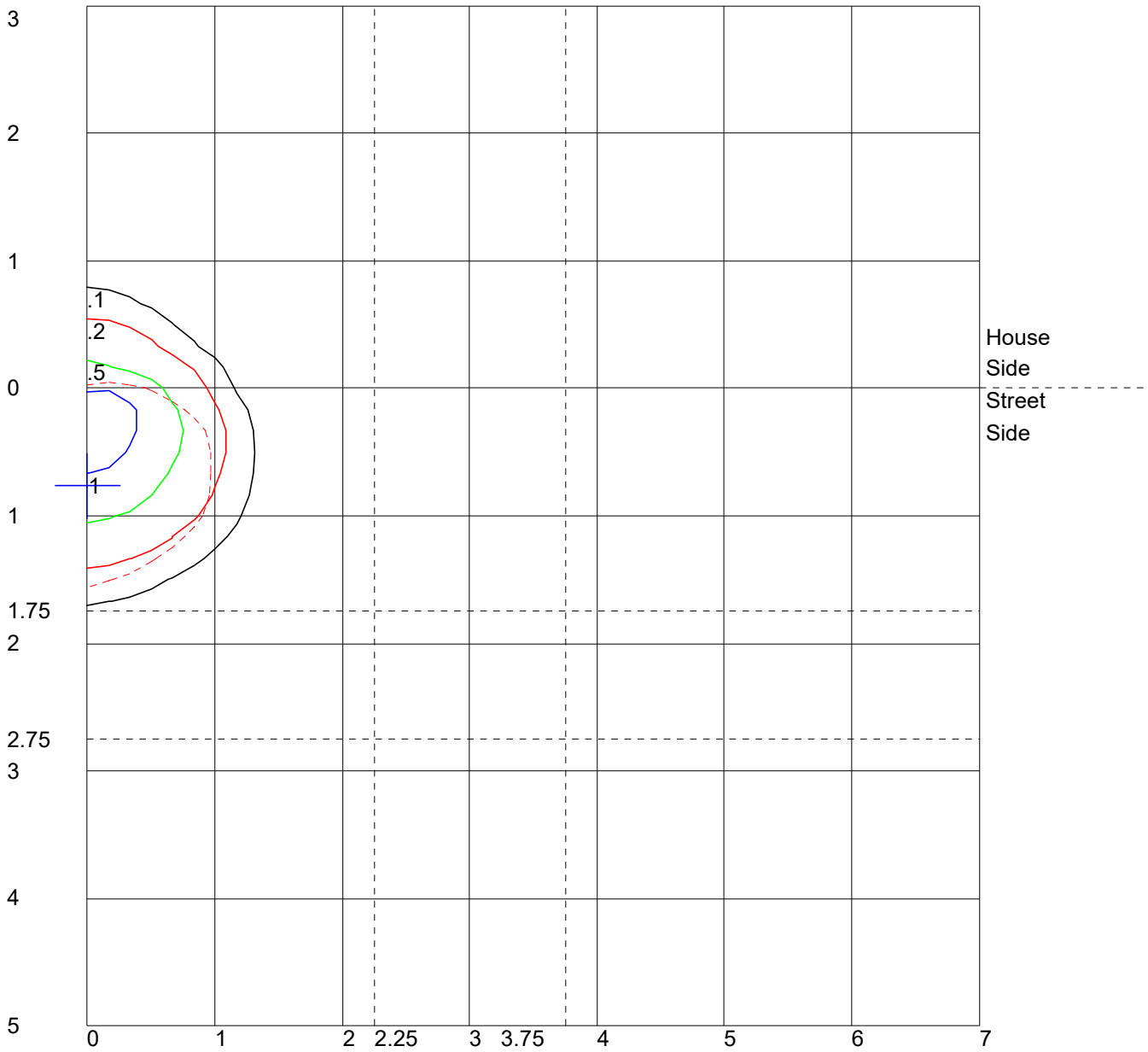
Vert. Angles	**Horizontal Angles**						
	225.0	**247.5**	**270.0**	**292.5**	**315.0**	**337.5**	**360.0**
0.0	451.8	451.8	451.8	451.8	451.8	451.8	451.8
2.5	361.7	419.0	493.0	510.2	518.9	524.9	527.6
5.0	316.8	376.0	491.0	547.2	578.5	595.9	604.5
7.5	294.0	341.6	488.1	575.1	614.7	633.8	644.7
10.0	281.3	316.3	484.3	594.1	636.7	658.8	670.8
12.5	271.7	298.0	479.4	607.2	652.0	677.8	690.9
15.0	262.6	283.8	472.8	615.9	665.5	692.8	702.8
17.5	251.5	271.5	463.7	621.3	677.8	704.7	711.2
20.0	238.2	259.4	451.7	624.0	687.8	712.7	720.1
22.5	221.8	246.2	437.2	624.2	693.2	725.3	739.3
25.0	203.2	231.2	420.7	620.1	695.2	745.5	766.0
27.5	183.5	214.0	400.7	611.4	696.8	768.3	791.2
30.0	164.0	195.3	377.2	599.2	701.0	790.5	815.3
32.5	145.1	176.6	351.1	581.0	702.6	806.0	835.0
35.0	125.8	160.0	327.8	554.4	694.7	814.9	847.8
37.5	107.9	146.7	308.4	523.1	676.7	812.2	848.9
40.0	92.8	134.0	286.3	496.5	642.6	792.9	834.2
42.5	81.5	119.0	255.6	474.7	599.6	755.3	804.9
45.0	72.8	102.3	219.0	444.6	556.8	702.6	763.5
47.5	65.8	85.5	183.3	401.7	517.1	641.0	707.2
50.0	59.2	70.5	153.0	349.7	478.4	571.9	633.6
52.5	52.6	58.5	130.1	296.2	434.8	498.1	554.5
55.0	46.3	49.7	114.4	248.6	385.7	426.2	484.4
57.5	40.2	43.2	102.6	210.9	332.6	359.1	419.9
60.0	34.4	37.7	91.0	182.5	279.1	299.5	357.2
62.5	29.5	32.5	78.2	158.4	230.0	248.0	293.8
65.0	24.9	27.5	65.5	135.1	187.7	202.3	231.6
67.5	20.7	22.6	54.1	111.4	152.0	162.0	174.5
70.0	16.9	18.2	43.9	89.6	121.7	126.6	127.0
72.5	13.3	14.1	34.7	70.2	95.7	95.8	90.8
75.0	9.9	10.4	26.4	53.6	73.1	70.4	64.4
77.5	7.0	7.3	19.0	39.5	53.4	50.1	44.5

CANDELA TABULATION - (Cont.)

80.0	4.5	4.4	12.5	27.5	36.6	34.0	29.4
82.5	2.5	2.1	7.2	17.4	22.7	21.2	17.9
85.0	1.0	0.5	3.0	9.2	11.8	11.1	9.4
87.5	0.0	0.0	0.5	3.1	4.0	4.2	3.5
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL36-15W-4000K.IES

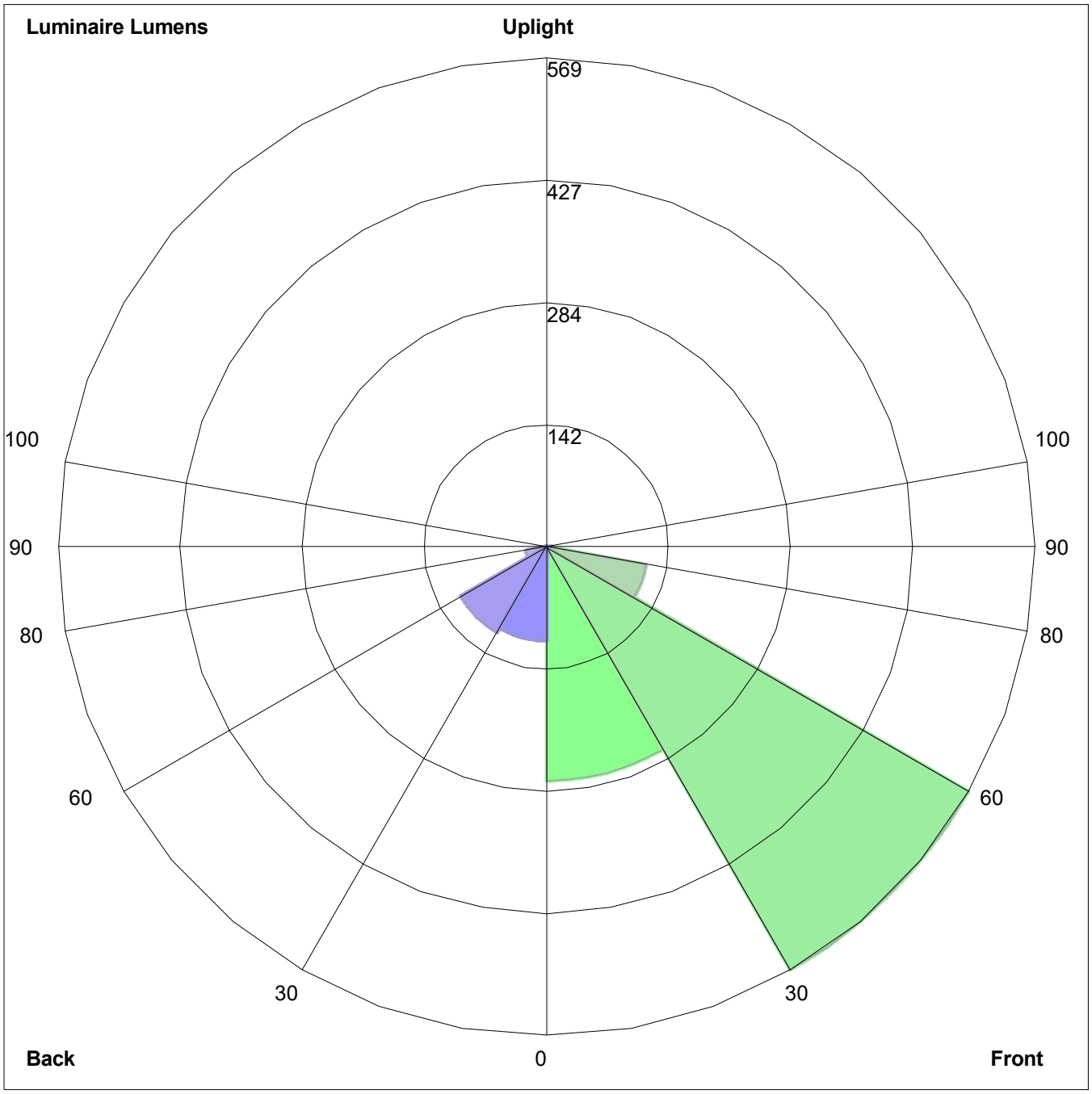
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : AEL36-15W-4000K.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=271.9, Medium=568.7, High=117.9, Very High=6.3
Back: Low=108.6, Medium=114.2, High=24.4, Very High=1.1
Uplight: Low=0.0, High=0.0

BUG Rating : B0-U0-G0

BeveLED® BASIC

PROJECT INFORMATION

PROJECT LOT #6

DATE 06-15-2017

TYPE JER

DOWNLIGHT 1020

1" REGRESS

BeveLED Basic Recessed Downlight - Our narrow footprint housing provides an economical architectural solution while delivering high performance with LEDs.

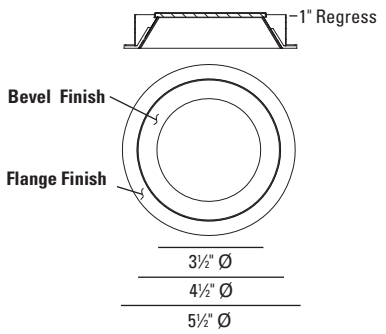
DELIVERED PERFORMANCE

BeveLED Basic DOWNLIGHT	14 Watts	20 Watts
Color Rendering Index	80+ CRI	80+ CRI
Lumens per Watt	66	59
Source Lumens	1100	1500
Delivered Lumens	**975**	**1250**
Color Consistency	2-Step MacAdam Ellipse	

Performance based on 3000K

CCT MULTIPLIER	2700K	3000K	3500K	4000K
Color Rendering Index	80+ CRI	80+ CRI	80+ CRI	80+ CRI
Multiplier for Lumen Output	1.00	1.00	1.08	1.08

1" Regress



HOW TO SPECIFY

Ordering Example: Specify trim code and housing code to order: Example : **1020W - B1 - S - 10 - LRTD4 - 9014 - M2 - 27KS - 30 - NCSM - 277V - DIML2 - CB27**

TRIM ORDERING INFORMATION

TRIM	OPTION		BEVEL STYLE		LENS		FLANGE FINISH
1020	W	-	B1	-	S	-	10

1020 Round Downlight 1" Regress	**W** Wet location [1] **TZ** 6" TechZone Ceiling Compatible (NCSM only) N/A with 01 or 02 flange finishes	**B1** 1" Regress Bevel, Painted Die Cast Matches Flange Finish **AB1** 1" Regress Bevel, Black Anodized **AC1** 1" Regress Bevel, Clear Matte	**S** Solite (provided standard) **F** Frosted	**01** Clear Matte (AC Bevel only) **02** Black Anodized (AB Bevel only) **10** White **13** Statuary Bronze **21** Black **28** Metalized Grey **RAL** Custom Color (specify RAL #)	

[1] Wet location, use with B1 trims only.

HOUSING ORDERING INFORMATION

HOUSING CODE		WATTAGE		ENGINE CODE		COLOR		REFLECTOR		HOUSING TYPE		SELECT ONE VOLTAGE		DIMMING DRIVER OPTIONS		ACCESSORIES
LRTD4	-	9020	-	M2	-	30 KS	-	80	-	NCSM	-	120	-	DIML2	-	CB27

LRTD4	**9014** 14W LED, 975 lumens **9020** 20W LED, 1250 lumens	**M2**	**27KS** 2700K, 80+ CRI **30KS** 3000K, 80+ CRI **35KS** 3500K, 80+ CRI **40KS** 4000K, 80+ CRI	**30** 30° beam **50** 50° beam **80** 80° beam	**NCSM** New Construction, Narrow Width **IC** Insulation-Contact Rated / Airtight [2] **CP** Chicago Plenum [2]	**120V** **277V**	**For use with 120V or 277V** **DIML2** 0-10V dim, 10% (provided standard) **DIML4** Lutron A 3-wire/ECO, 1% **DIML4E** Lutron 5 ECO, 5% **DIML4H** Lutron H ECO, 1% Fade **DIML6A** EldoLED 0-10V, 0.1%, logarithmic / Lutron controls **DIML6B** EldoLED 0-10V Linear, 0.1%, linear controls **DIML6E** EldoLED 0-10V, 1%, logarithmic/Lutron controls **DIML6F** EldoLED 0-10V, 1%, linear controls **DIML7** EldoLED DALI, 0.1%	**CB27** 27" C-Channel Bars **CB52** 52" C-Channel Bars **EML** Emergency battery [3] **EMLW** Emergency battery, wet location [3] **TZ** 6" TechZone ceiling compatible N/A with 01 or 02 flange finishes [4]
						120V	**For use with 120V only** **DIML3** Lutron A 2-wire, 1% 120V only **DIML19** Phase 2-wire dimming, 1% 120V only	

2 Step MacAdam ellipse is standard for all

[2] N/A with EM

[3] NCSM housings require above ceiling access. Not for use with IC or CP housings.

[4] With NCSM housing only

USAI® Lighting

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1126 River Road
New Windsor, NY 12553

T 845–565–8500
F 845–561–1130

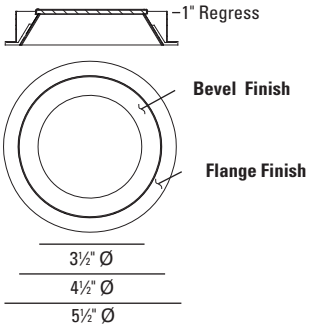
Revised 01/30/2017

BeveLED® BASIC

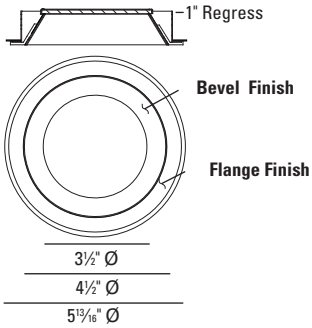
DOWNLIGHT 1020

TRIM INFORMATION

1" Regress

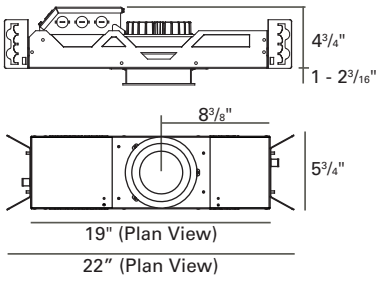


1" Regress - 6" TechZone Ceiling Compatible

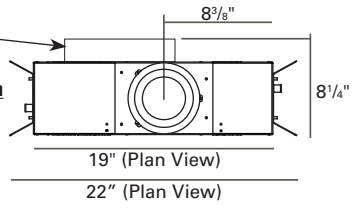


HOUSING INFORMATION

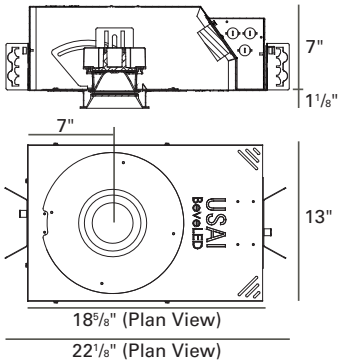
New Construction, Narrow Width - NCSM



Shown with EM option



IC / Airtight - IC
Chicago Plenum - CP



SPECIFICATIONS

TRIM: 4-1/2" round aperture with a 1" regressed bevel and 1/2" flange, retained by two mounting clips. Die cast aluminum bevel is self-flanged and is available in white, statuary bronze, black, and metalized grey finishes. Also available in black anodized or clear matte bevel, with self finish or with contrasting painted flange. Custom color flanges available (provide RAL#). TechZone compatible trim option is not available with "01" or "02" flange finishes.

TRIM LENS: Trim is shipped with integral solite lens standard; frosted lens available as an option.

REFLECTOR: Interchangeable precision injection molded specular polycarbonate reflector optimized for 30°, 50° or 80° beam distribution.

FIELD REPLACEABLE LIGHT ENGINE: Available in 2 lumen packages: 14W (975 delivered lumens) and 20W (1250 delivered lumens). Engine is field replaceable through the aperture without tools.

COLOR: BeveLED is available in 4 color temperatures (2700K, 3000K, 3500K, 4000K). All color options are tightly binned for fixture-to-fixture color consistency within a 2-Step MacAdam Ellipse. 80+ color rendering index provided standard.

RATED LIFE: Based on IESNA LM80-2008 50,000 hours at 70% lumen maintenance (L70).

THERMAL MANAGEMENT: Proprietary high performance aluminum die cast heatsink for maximum LED life. Ambient temperatures at fixture location should not exceed 40°C during normal operation.

FIELD REPLACEABLE DRIVER: 0-10V, 100%-10% solid state electronic constant current driver with a high power factor provided standard and sources 2mA. Specify 120V or 277V. Driver complies with IEEE C62.41 surge protection.

DIMMING OPTIONS: Multiple dimming drivers available. See compatibility chart attached. Some on-time delay may be experienced depending on control system used. Note: DIML6A and DIML6E logarithmic control are intended for use with Lutron control systems; DIML6B and DIML6F linear control are intended for use with non-Lutron controls. DIML6 drivers source 2mA.

EMERGENCY: Emergency lighting battery pack is provided with remote test switch and require above ceiling access for service. EM option is not available with IC or CP housings.

MOUNTING: Butterfly brackets and adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers.

HOUSING: Fabricated of 20 ga. galvanized steel with thru wire J-box, 4 in 4 out at min. 90°C, #12 AWG thru branch circuit wiring. IC rated housing rated for direct contact with insulation. NCSM with TZ option is compatible with 6" TechZone ceiling systems.

MAXIMUM CEILING THICKNESS: As per drawings above.

CEILING CUT OUT: 5-1/16" Ø

LISTINGS: Dry/Damp. Wet location option available with B1 trim only. NRTL/CSA-US tested to UL standards. IBEW union made. Energy Star Qualified under Luminaires Specification V2.0. Please see Energy Star website for exact model #s included in the listing. Please note that only B1-S-10 trims, 30° and 50° optics, and DIML2 dimming drivers are Energy Star Qualified.

WARRANTY: 5 years

NOTES:
- Not for use in corrosive environment.
- Use of pressure washer voids warranty.

PHOTOMETRICS: Consult factory or website for IES files. Tested in accordance with IESNA LM79-2008.

USAI® Lighting

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Revised 01/30/2017

USAI Lighting

DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D2 / DIML2

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

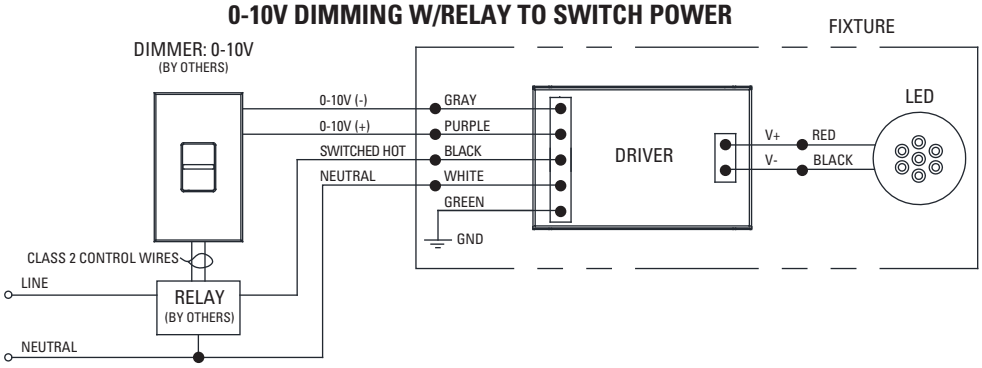
D2 / DIML2 LED: 0-10V Dimming Driver Wiring (Dims down to 10%)

D2 / DIML2 Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
120V / 277V				Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Crestron	iLux dimmer expansion module	CLS-EXP-DIMFLV	100% - 10%	
Crestron	DIN Rail dimmer	DIN-4DIMFLV4	100% - 10%	
Crestron	DIN Rail analog output module	DIN-A08	100% - 10%	
Crestron	8 Channel dimmer module	GLX-DIMFLV8	100% - 10%	
Crestron	8 Channel dimmer module	GLXP-DIMFLV8	100% - 10%	
Leviton	IllumaTech dimmer	IP710-DLX	100% - 10%	
Lightolier (Philips)	Vega	V2000FAMU	100% - 10%	
Lutron	Diva	DVTV-XX	100% - 10%	

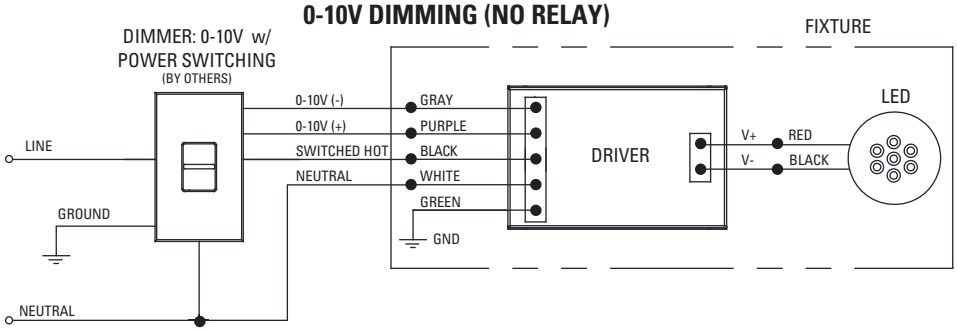
* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D2 / DIML2
0-10V DIMMING W/RELAY TO SWITCH POWER



NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

D2 / DIML2
0-10V DIMMING (NO RELAY)



NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

USAI Lighting

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I2-264-2 Revised 03/22/2017

06-15-2017

TYPE JER

IES ROAD REPORT
PHOTOMETRIC FILENAME : 1020-B1-S-10-LRTD4-9020-M2-30KS-80.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]228892
[TESTLAB]UL Verification Services
[ISSUEDATE] 6/14/2013
[MANUFAC]USA ILLUMINATION INC
[LUMCAT]1020-B1-S-10-LRTD4-9020-M2-30KS-80-NCSM
[LUMINAIRE]n/a
[LAMP]n/a
[LAMPCAT]n/a. LUMINAIRE OUTPUT = 1036 LMS
[OTHER]120.0VAC 0.1765A 21.13W PF=0.997

CHARACTERISTICS

IES Classification	Type V
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1037
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	49
Total Luminaire Watts	21.1
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	481.9
Maximum Candela Angle	0H 0V
Maximum Candela (<90 Degrees Vertical)	481.9
Maximum Candela Angle (<90 Degrees Vertical)	0H 0V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	8.8 (0.8% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : 1020-B1-S-10-LRTD4-9020-M2-30KS-80.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	192.5	N.A.	18.6
FM - Front-Medium (30-60)	287.3	N.A.	27.7
FH - Front-High (60-80)	36.7	N.A.	3.5
FVH - Front-Very High (80-90)	1.9	N.A.	0.2
BL - Back-Low (0-30)	192.5	N.A.	18.6
BM - Back-Medium (30-60)	287.3	N.A.	27.7
BH - Back-High (60-80)	36.7	N.A.	3.5
BVH - Back-Very High (80-90)	1.9	N.A.	0.2
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	1036.8	N.A.	100.0
BUG Rating	B1-U0-G0		

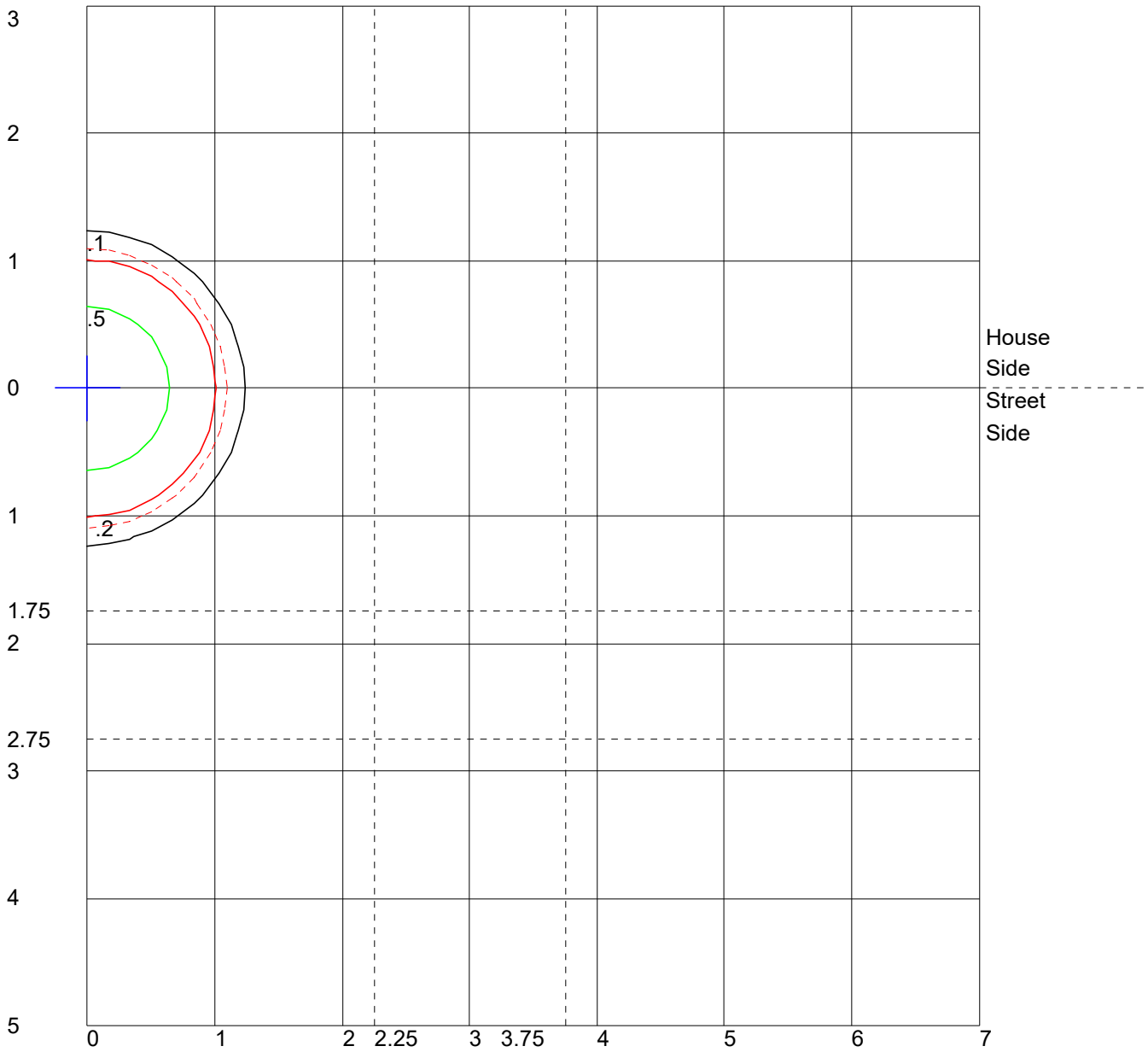
IES ROAD REPORT
PHOTOMETRIC FILENAME : 1020-B1-S-10-LRTD4-9020-M2-30KS-80.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles
	0
0.0	481.9
2.5	481.6
5.0	481.1
7.5	480.3
10.0	478.9
12.5	476.6
15.0	473.0
17.5	468.2
20.0	462.6
22.5	455.6
25.0	446.8
27.5	436.0
30.0	422.8
32.5	406.9
35.0	388.5
37.5	367.1
40.0	341.7
42.5	312.1
45.0	278.1
47.5	240.6
50.0	201.6
52.5	164.0
55.0	131.5
57.5	105.3
60.0	84.5
62.5	67.6
65.0	53.6
67.5	41.7
70.0	31.6
72.5	23.2
75.0	16.3
77.5	12.0
80.0	8.8
82.5	5.8
85.0	3.2
87.5	0.9
90.0	0.0

IES ROAD REPORT
PHOTOMETRIC FILENAME : 1020-B1-S-10-LRTD4-9020-M2-30KS-80.IES

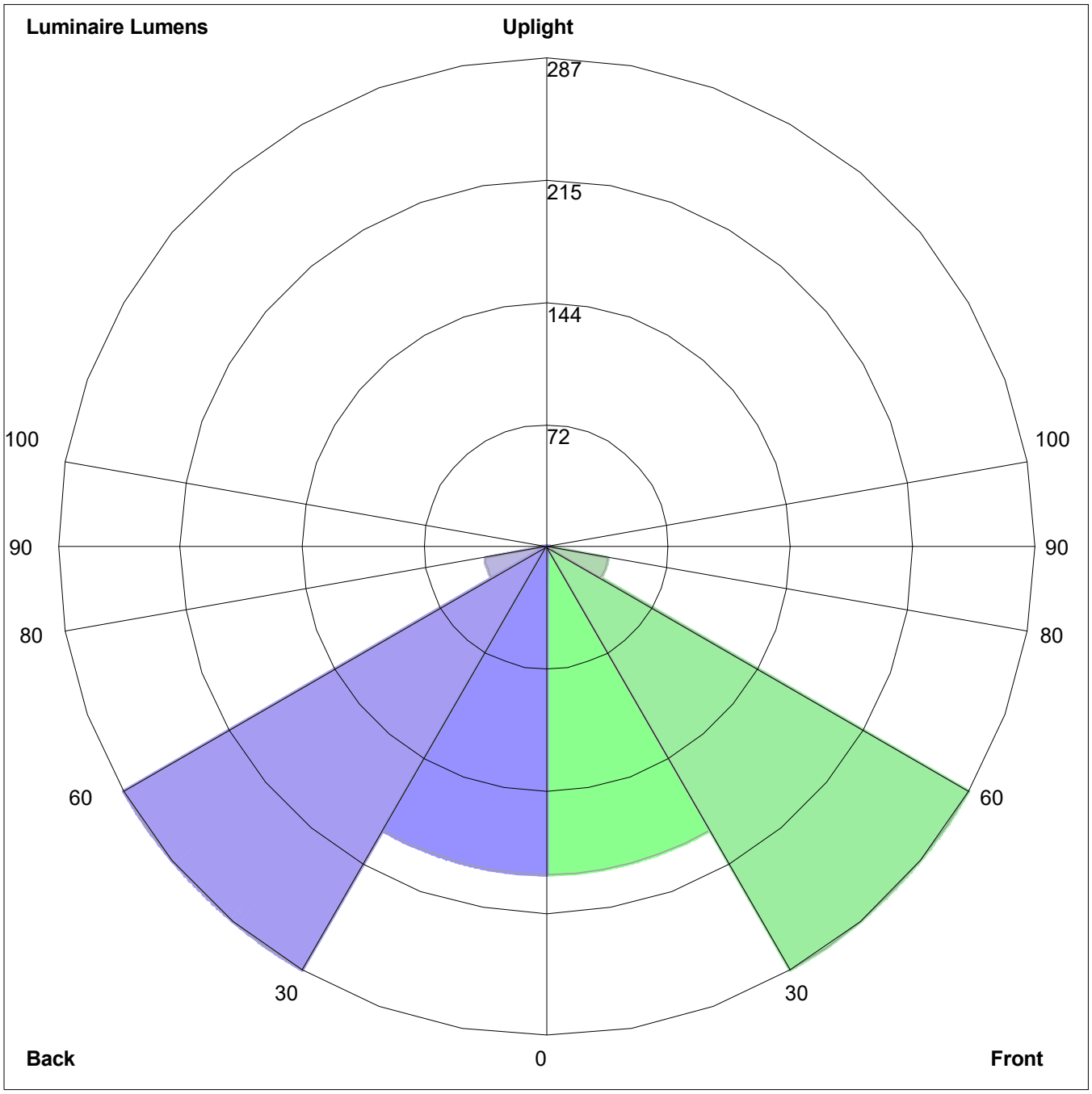
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : 1020-B1-S-10-LRTD4-9020-M2-30KS-80.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=192.5, Medium=287.3, High=36.7, Very High=1.9
Back: Low=192.5, Medium=287.3, High=36.7, Very High=1.9
Uplight: Low=0.0, High=0.0

BUG Rating : B1-U0-G0

Recessed wall luminaires · shielded

06-15-2017

Housing: Die-cast aluminum with integral wiring compartment. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: One piece die-cast aluminum faceplate. $\frac{1}{8}$" thick, tempered glass; clear with white translucent ceramic coating. Faceplate is secured by four (4) socket head, stainless steel, captive screws threaded into stainless steel inserts in the housing casting. Continuous high temperature O-ring gasket for weather tight operation.

Electrical: 6.5W LED luminaire, 9 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

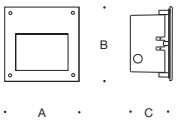
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 2.2 lbs.

Luminaire Lumens: 131
Tested in accordance with LM-79-08

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



Recessed Luminaires · **shielded** light

		Lamp	A	B	C
22272	ADA	6.5W LED	5 7/8	5 7/8	4 1/8

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

06-15-2017

Recessed wall luminaires · shielded

Housing: Die-cast aluminum with integral wiring compartment. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: One piece die-cast aluminum faceplate. ⅛" thick, tempered glass; clear with white translucent ceramic coating. Faceplate is secured by four (4) socket head, stainless steel, captive screws threaded into stainless steel inserts in the housing casting. Continuous high temperature O-ring gasket for weather tight operation.

Electrical: 10.5W LED luminaire, 12.8 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with an 85 CRI. Available in 4000K (85 CRI); add suffix K4 to order.

Note: LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

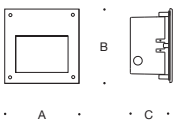
Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 3.5 lbs.

Luminaire Lumens: 160
Tested in accordance with LM-79-08

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



Recessed Luminaires · **shielded** light

		Lamp	A	B	C	CPC
22372	ADA	10.5W LED	7½	7½	4	**19522**

BEGA-US 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

06-15-2017

TYPE JFW-m

IES ROAD REPORT
PHOTOMETRIC FILENAME : 22372.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L09133709
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 09/20/2013
[MANUFAC] BEGA-US
[LUMCAT] 22 372
[LUMINAIRE] 7-1/2"SQ. X 4-1/4"H. LED FIXTURE
[MORE] FROSTED LENS
[BALLASTCAT] INVENTRONICS LUC-012S070DSM
[BALLAST] INPUT: 100-277VAC, 50/60HZ, 0.2A OUTPUT: 9-17VDC, 0.07-0.7ADC
[LAMPPOSITION] 0,0
[LAMPCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[_INPUT] 120VAC, 14.11W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	160
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	11
Total Luminaire Watts	14.11
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	217.25
Maximum Candela Angle	0H 25V
Maximum Candela (<90 Degrees Vertical)	217.25
Maximum Candela Angle (<90 Degrees Vertical)	0H 25V
Maximum Candela At 90 Degrees Vertical	10.21 (6.4% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	15.58 (9.7% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : 22372.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	24.0	N.A.	15.0
FM - Front-Medium (30-60)	100.9	N.A.	63.0
FH - Front-High (60-80)	25.1	N.A.	15.7
FVH - Front-Very High (80-90)	4.0	N.A.	2.5
BL - Back-Low (0-30)	0.0	N.A.	0.0
BM - Back-Medium (30-60)	0.0	N.A.	0.0
BH - Back-High (60-80)	0.0	N.A.	0.0
BVH - Back-Very High (80-90)	0.0	N.A.	0.0
UL - Uplight-Low (90-100)	2.4	N.A.	1.5
UH - Uplight-High (100-180)	3.8	N.A.	2.4
Total	160.2	N.A.	100.0
BUG Rating	B0-U1-G0		

IES ROAD REPORT
PHOTOMETRIC FILENAME : 22372.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.57	0.58	0.58	0.57	0.56	0.55	0.53	0.51	0.49	0.47
10	2.90	2.92	2.86	2.78	2.67	2.52	2.34	2.13	1.89	1.61
15	29.06	29.35	28.40	27.11	25.24	22.96	19.93	16.16	11.67	6.52
20	131.02	131.20	124.95	117.28	106.96	93.76	77.94	60.10	40.05	30.77
25	217.25	215.09	209.54	200.43	188.47	173.81	157.33	139.72	114.67	86.46
30	211.28	210.67	210.20	209.52	208.66	207.51	206.00	191.68	166.96	140.34
35	194.91	194.52	194.44	194.75	194.59	194.81	194.99	189.90	182.51	161.44
40	173.44	173.29	173.58	173.94	174.54	175.43	174.94	173.00	166.30	151.46
45	146.24	146.41	147.36	148.27	150.09	152.12	152.14	151.84	144.85	134.42
50	113.94	114.30	115.80	118.07	121.09	123.79	126.25	126.70	122.83	112.65
55	84.95	85.38	86.93	89.01	91.68	95.11	97.95	99.27	97.21	91.35
60	59.77	60.38	62.17	63.97	66.63	69.58	71.90	72.99	73.05	68.78
65	41.88	42.46	43.70	44.81	46.77	48.89	50.95	52.06	52.10	50.13
70	29.13	29.56	30.52	31.16	32.34	33.59	34.71	35.71	35.25	33.98
75	20.59	20.91	21.39	21.83	22.23	22.73	23.39	23.38	23.04	22.01
80	15.02	15.30	15.45	15.54	15.58	15.45	15.14	14.92	15.33	13.96
85	11.54	11.84	11.82	11.65	11.31	10.73	9.90	9.01	8.04	7.03
90	10.11	10.21	10.06	9.77	9.30	8.59	7.68	6.60	5.55	4.46
95	8.91	8.75	8.73	8.47	7.99	7.32	6.50	5.53	4.62	3.75
100	6.95	7.05	6.85	6.63	6.24	5.69	5.04	4.34	3.64	3.02
105	5.40	5.42	5.37	5.13	4.77	4.40	3.90	3.41	2.94	2.48
110	4.15	4.18	4.16	3.92	3.75	3.43	3.08	2.72	2.39	2.10
115	3.21	3.22	3.21	3.12	2.92	2.70	2.49	2.25	1.98	1.77
120	2.53	2.53	2.52	2.45	2.31	2.19	2.04	1.84	1.69	1.53
125	1.99	2.00	1.99	1.95	1.88	1.79	1.66	1.56	1.43	1.31
130	1.59	1.61	1.60	1.58	1.53	1.46	1.40	1.31	1.23	1.14
135	1.32	1.31	1.30	1.27	1.25	1.22	1.17	1.11	1.05	0.98
140	1.08	1.07	1.08	1.06	1.03	1.00	0.98	0.95	0.90	0.86
145	0.91	0.91	0.90	0.89	0.88	0.86	0.83	0.80	0.77	0.73
150	0.78	0.76	0.75	0.75	0.75	0.72	0.70	0.68	0.65	0.62
155	0.61	0.61	0.62	0.62	0.61	0.60	0.59	0.58	0.55	0.52
160	0.51	0.51	0.51	0.51	0.50	0.48	0.47	0.46	0.45	0.44
165	0.41	0.41	0.41	0.41	0.41	0.40	0.39	0.38	0.37	0.37
170	0.34	0.34	0.34	0.33	0.33	0.32	0.32	0.31	0.30	0.29
175	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.23	0.23	0.23
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	Horizontal Angles									
	50	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.45	0.42	0.39	0.36	0.33	0.29	0.26	0.22	0.00	0.00
10	1.30	0.96	0.60	0.54	0.48	0.41	0.34	0.27	0.00	0.00
15	3.01	2.49	1.93	1.33	0.69	0.55	0.45	0.33	0.00	0.00
20	22.50	12.95	3.37	2.53	1.65	0.72	0.54	0.40	0.00	0.00
25	56.61	35.17	20.93	5.89	2.63	1.44	0.62	0.45	0.00	0.00
30	107.60	70.96	38.73	20.59	3.49	2.09	0.69	0.50	0.00	0.00
35	131.08	99.67	60.27	30.62	11.81	2.49	1.04	0.53	0.00	0.00
40	130.44	96.86	65.41	35.03	15.35	2.46	1.21	0.56	0.00	0.00
45	115.23	92.49	64.25	35.44	13.30	3.55	1.30	0.61	0.00	0.00
50	104.68	81.47	54.70	30.67	10.35	3.94	1.42	0.66	0.00	0.00
55	83.92	65.46	46.11	24.94	10.31	3.78	1.49	0.67	0.00	0.00

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

60	61.83	51.68	36.50	21.30	9.76	3.41	1.50	0.70	0.00	0.00
65	45.31	37.56	27.60	16.68	7.67	2.97	1.48	0.73	0.00	0.00
70	30.97	26.41	19.84	12.17	5.54	2.57	1.45	0.78	0.00	0.00
75	20.34	17.72	13.03	8.25	4.15	2.24	1.37	0.80	0.00	0.00
80	12.41	10.63	7.84	5.15	3.02	1.92	1.27	0.81	0.00	0.00
85	6.08	5.12	4.14	3.05	2.21	1.65	1.18	0.78	0.00	0.00
90	3.49	2.79	2.33	2.01	1.76	1.44	1.08	0.78	0.00	0.00
95	3.00	2.43	2.04	1.75	1.52	1.28	1.00	0.74	0.00	0.00
100	2.52	2.10	1.80	1.55	1.32	1.13	0.89	0.69	0.00	0.00
105	2.12	1.83	1.59	1.38	1.17	1.00	0.81	0.64	0.00	0.00
110	1.83	1.59	1.40	1.23	1.06	0.90	0.74	0.62	0.00	0.00
115	1.58	1.40	1.24	1.09	0.95	0.81	0.68	0.57	0.00	0.00
120	1.37	1.24	1.11	0.97	0.86	0.75	0.64	0.53	0.00	0.00
125	1.20	1.09	0.98	0.88	0.78	0.68	0.58	0.49	0.00	0.00
130	1.04	0.96	0.87	0.79	0.70	0.61	0.53	0.45	0.00	0.00
135	0.92	0.86	0.77	0.70	0.63	0.56	0.49	0.43	0.00	0.00
140	0.81	0.75	0.69	0.62	0.56	0.50	0.43	0.38	0.00	0.00
145	0.69	0.64	0.60	0.55	0.51	0.45	0.40	0.36	0.00	0.00
150	0.59	0.56	0.52	0.48	0.44	0.40	0.35	0.32	0.00	0.00
155	0.49	0.47	0.44	0.41	0.38	0.34	0.31	0.28	0.00	0.00
160	0.42	0.40	0.38	0.35	0.33	0.30	0.28	0.26	0.00	0.00
165	0.35	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.00	0.00
170	0.28	0.27	0.25	0.24	0.23	0.22	0.21	0.20	0.00	0.00
175	0.23	0.22	0.22	0.21	0.21	0.20	0.20	0.19	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**									
	100	**105**	**110**	**115**	**120**	**125**	**130**	**135**	**140**	**145**
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**						
	150	**155**	**160**	**165**	**170**	**175**	**180**
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES ROAD REPORT
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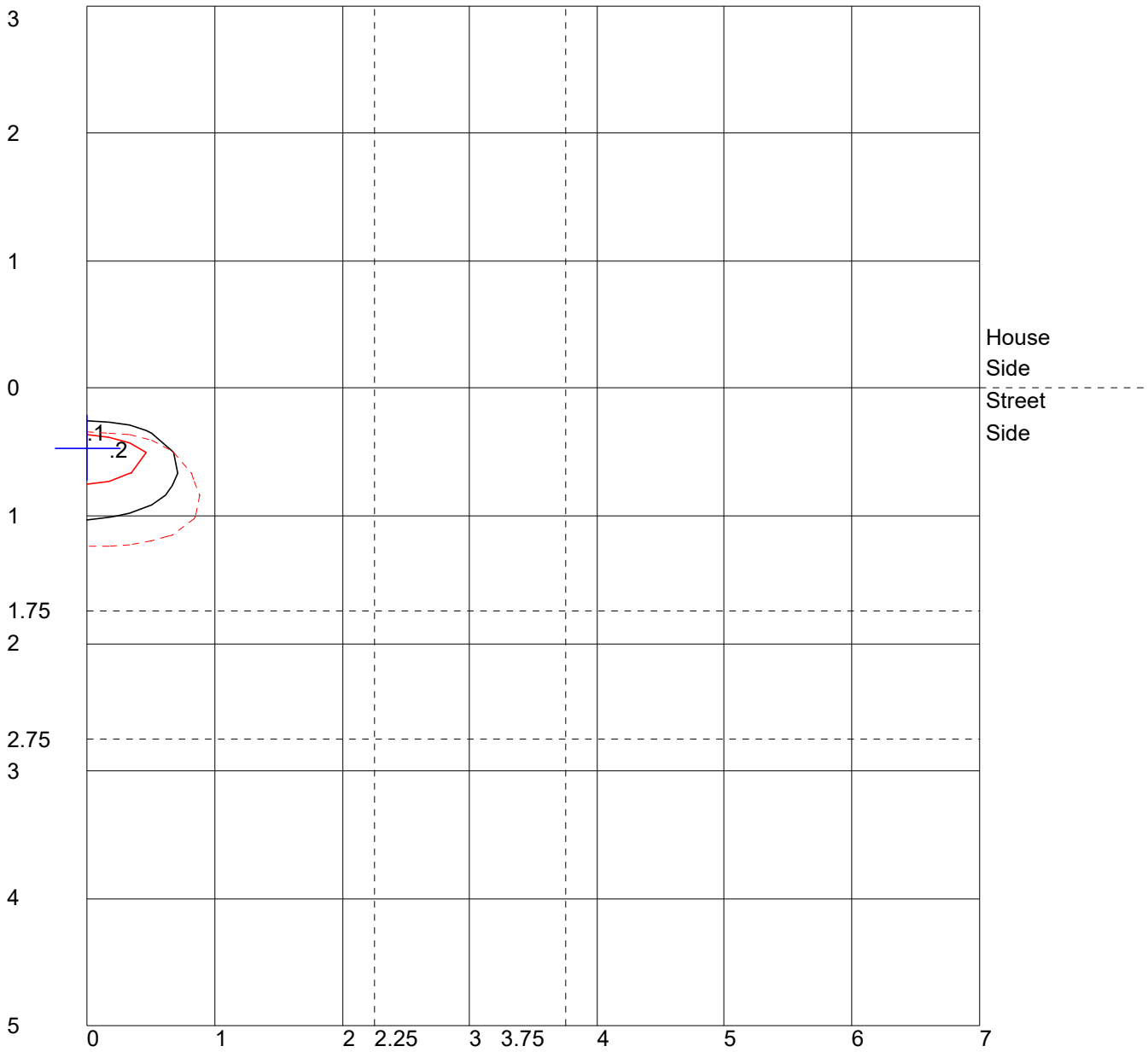
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
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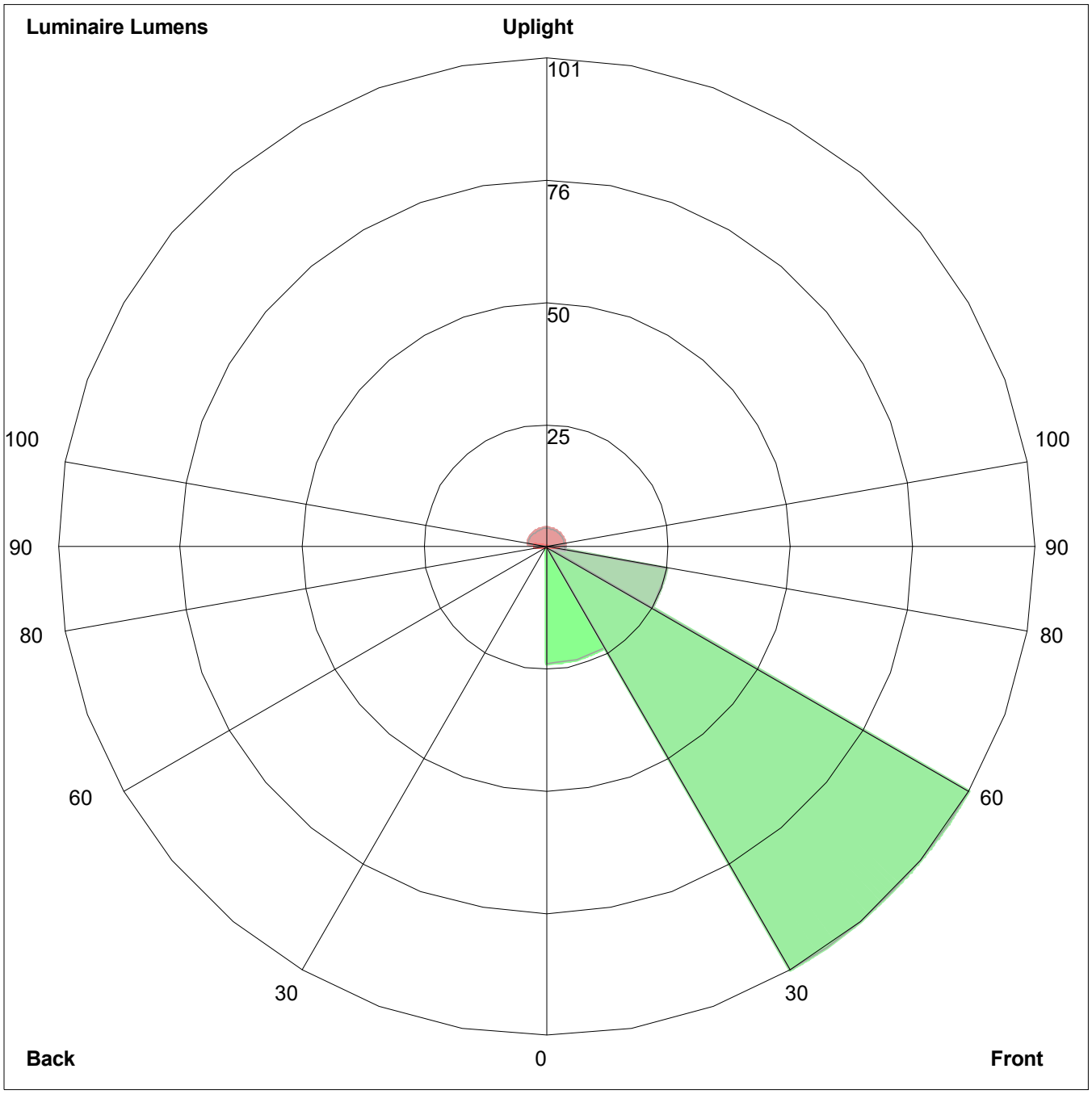
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=24.0, Medium=100.9, High=25.1, Very High=4.0
Back: Low=0.0, Medium=0.0, High=0.0, Very High=0.0
Uplight: Low=2.4, High=3.8

BUG Rating : B0-U1-G0

06-15-20127

TYPE JFW-S

IES ROAD REPORT
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DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L12131401
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 01/06/2014
[MANUFAC] BEGA-US
[LUMCAT] 22 272
[LUMINAIRE] 6"SQ. X 4-1/4"H. LED FIXTURE
[MORE] FROSTED LENS
[BALLASTCAT] BIAS BPWXLD 6-9U-070
[BALLAST] INPUT: 100-308VAC, 50/60HZ OUTPUT: 0-10 VDC
[LAMPPOSITION] 0,0
[LAMPCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[_INPUT] 120VAC, 12.05W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	131
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	11
Total Luminaire Watts	12.05
Ballast Factor	1.00
Upward Waste Light Ratio	0.04
Maximum Candela	148.53
Maximum Candela Angle	0H 30V
Maximum Candela (<90 Degrees Vertical)	148.53
Maximum Candela Angle (<90 Degrees Vertical)	0H 30V
Maximum Candela At 90 Degrees Vertical	7.81 (6.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	22.08 (16.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : 22272.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	14.8	N.A.	11.3
FM - Front-Medium (30-60)	77.3	N.A.	59.1
FH - Front-High (60-80)	28.8	N.A.	22.0
FVH - Front-Very High (80-90)	4.6	N.A.	3.5
BL - Back-Low (0-30)	< 0.05	N.A.	0.0
BM - Back-Medium (30-60)	< 0.05	N.A.	0.0
BH - Back-High (60-80)	< 0.05	N.A.	0.0
BVH - Back-Very High (80-90)	< 0.05	N.A.	0.0
UL - Uplight-Low (90-100)	2.0	N.A.	1.5
UH - Uplight-High (100-180)	3.4	N.A.	2.6
Total	130.9	N.A.	100.0
BUG Rating	B0-U1-G0		

IES ROAD REPORT
PHOTOMETRIC FILENAME : 22272.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**
0	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
5	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.15
10	0.78	0.77	0.75	0.73	0.69	0.65	0.60	0.54	0.48	0.41
15	19.24	18.94	17.81	16.52	14.95	13.33	11.29	8.84	6.00	2.79
20	77.63	77.51	73.66	68.87	62.29	54.17	44.61	33.82	21.97	16.32
25	147.29	145.55	141.03	133.79	123.87	110.67	95.13	78.23	61.48	45.00
30	148.53	148.17	147.55	146.48	144.92	142.27	138.27	123.06	98.66	71.08
35	141.58	141.42	141.16	140.82	139.88	138.72	136.73	127.27	114.85	93.94
40	132.06	132.06	131.84	131.47	130.82	129.70	126.37	119.36	106.57	94.40
45	121.10	121.25	121.12	120.74	119.89	118.43	115.22	109.63	96.50	86.94
50	106.55	106.76	106.97	106.99	106.63	105.23	103.06	97.48	88.01	79.14
55	90.15	90.45	90.84	91.14	91.02	90.23	89.85	84.55	75.95	68.12
60	71.58	72.22	72.71	73.77	72.54	73.83	73.14	71.26	62.96	56.76
65	53.80	54.47	55.33	56.03	56.72	57.69	57.88	55.55	50.31	46.37
70	39.76	40.38	40.99	40.94	41.91	42.10	42.37	41.62	37.24	34.76
75	29.87	30.25	30.36	30.40	30.12	29.97	29.86	28.17	25.73	23.95
80	21.63	21.90	22.08	21.96	21.54	21.03	20.26	18.86	16.57	14.96
85	13.37	13.66	14.21	14.19	13.94	13.47	12.77	11.56	9.59	8.40
90	7.77	7.81	7.71	7.48	7.11	6.58	5.97	5.43	4.89	4.14
95	7.09	7.08	6.98	6.77	6.43	5.90	5.33	4.72	4.15	3.48
100	6.14	6.14	6.07	5.83	5.48	5.03	4.53	3.98	3.44	2.89
105	4.96	4.98	4.93	4.70	4.41	4.05	3.62	3.18	2.76	2.33
110	3.92	3.92	3.88	3.66	3.48	3.18	2.86	2.53	2.20	1.89
115	3.04	3.03	3.02	2.87	2.72	2.50	2.27	2.03	1.80	1.55
120	2.36	2.37	2.34	2.24	2.10	1.99	1.81	1.63	1.48	1.32
125	1.86	1.85	1.82	1.75	1.67	1.60	1.47	1.36	1.24	1.12
130	1.49	1.46	1.44	1.40	1.35	1.29	1.22	1.13	1.05	0.97
135	1.15	1.16	1.16	1.14	1.11	1.06	1.02	0.94	0.89	0.83
140	0.95	0.95	0.94	0.94	0.92	0.88	0.86	0.82	0.77	0.73
145	0.81	0.81	0.80	0.79	0.77	0.75	0.72	0.70	0.66	0.63
150	0.68	0.67	0.67	0.66	0.65	0.64	0.63	0.60	0.58	0.55
155	0.54	0.55	0.55	0.55	0.54	0.53	0.52	0.51	0.49	0.47
160	0.44	0.45	0.45	0.45	0.44	0.44	0.43	0.42	0.40	0.38
165	0.37	0.37	0.37	0.36	0.36	0.35	0.34	0.33	0.32	0.30
170	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.26	0.26	0.25
175	0.20	0.21	0.21	0.21	0.21	0.20	0.20	0.20	0.20	0.20
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	Horizontal Angles									
	50	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**
0	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
5	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.00
10	0.33	0.25	0.17	0.16	0.16	0.15	0.15	0.14	0.14	0.00
15	0.74	0.62	0.49	0.34	0.19	0.18	0.17	0.16	0.15	0.00
20	11.42	6.02	0.83	0.64	0.44	0.23	0.20	0.19	0.17	0.00
25	28.42	17.04	9.70	2.07	0.70	0.42	0.24	0.21	0.19	0.00
30	48.60	31.90	18.97	9.90	0.97	0.63	0.27	0.24	0.20	0.00
35	66.54	44.28	30.83	18.16	6.69	0.84	0.42	0.28	0.22	0.00
40	79.68	58.24	41.92	25.14	11.43	1.08	0.57	0.30	0.24	0.00
45	75.35	64.28	48.74	31.03	14.14	3.03	0.77	0.34	0.25	0.00
50	67.79	57.52	47.07	34.51	15.56	5.09	0.94	0.36	0.27	0.00
55	60.14	50.29	39.20	29.58	15.27	5.61	1.02	0.39	0.30	0.00

CANDELA TABULATION - (Cont.)

60	50.94	44.01	34.44	23.20	12.69	5.14	1.10	0.45	0.32	0.00
65	41.51	35.32	28.90	19.54	9.86	4.33	1.14	0.51	0.34	0.00
70	32.05	27.33	22.13	16.12	7.62	3.46	1.13	0.56	0.37	0.00
75	22.73	20.17	16.54	12.80	5.80	2.69	1.07	0.58	0.37	0.00
80	13.94	12.89	10.35	8.22	4.01	1.98	0.99	0.59	0.39	0.00
85	7.49	6.51	4.74	3.94	2.26	1.44	0.88	0.61	0.39	0.00
90	3.49	2.85	2.08	1.65	1.32	1.08	0.83	0.59	0.41	0.00
95	2.84	2.24	1.71	1.38	1.17	0.99	0.76	0.57	0.41	0.00
100	2.37	1.90	1.51	1.25	1.04	0.87	0.70	0.54	0.39	0.00
105	1.93	1.59	1.32	1.11	0.93	0.79	0.63	0.50	0.39	0.00
110	1.61	1.37	1.16	0.99	0.84	0.70	0.58	0.47	0.37	0.00
115	1.35	1.18	1.02	0.88	0.76	0.65	0.53	0.43	0.36	0.00
120	1.17	1.02	0.91	0.79	0.69	0.58	0.48	0.39	0.32	0.00
125	1.01	0.90	0.82	0.72	0.62	0.53	0.45	0.38	0.32	0.00
130	0.88	0.80	0.72	0.64	0.57	0.49	0.41	0.35	0.29	0.00
135	0.78	0.71	0.65	0.58	0.51	0.45	0.38	0.32	0.27	0.00
140	0.68	0.64	0.58	0.52	0.47	0.41	0.35	0.30	0.25	0.00
145	0.60	0.56	0.50	0.45	0.40	0.36	0.32	0.28	0.24	0.00
150	0.51	0.47	0.43	0.39	0.35	0.32	0.29	0.25	0.22	0.00
155	0.44	0.41	0.37	0.34	0.31	0.29	0.26	0.23	0.20	0.00
160	0.36	0.34	0.31	0.29	0.27	0.25	0.23	0.21	0.19	0.00
165	0.29	0.28	0.26	0.25	0.24	0.22	0.20	0.19	0.17	0.00
170	0.24	0.23	0.22	0.21	0.20	0.20	0.19	0.18	0.17	0.00
175	0.19	0.19	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**									
	100	**105**	**110**	**115**	**120**	**125**	**130**	**135**	**140**	**145**
0	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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PHOTOMETRIC FILENAME : 22272.IES

CANDELA TABULATION - (Cont.)

135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	**Horizontal Angles**						
	150	**155**	**160**	**165**	**170**	**175**	**180**
0	0.14	0.14	0.14	0.14	0.14	0.14	0.14
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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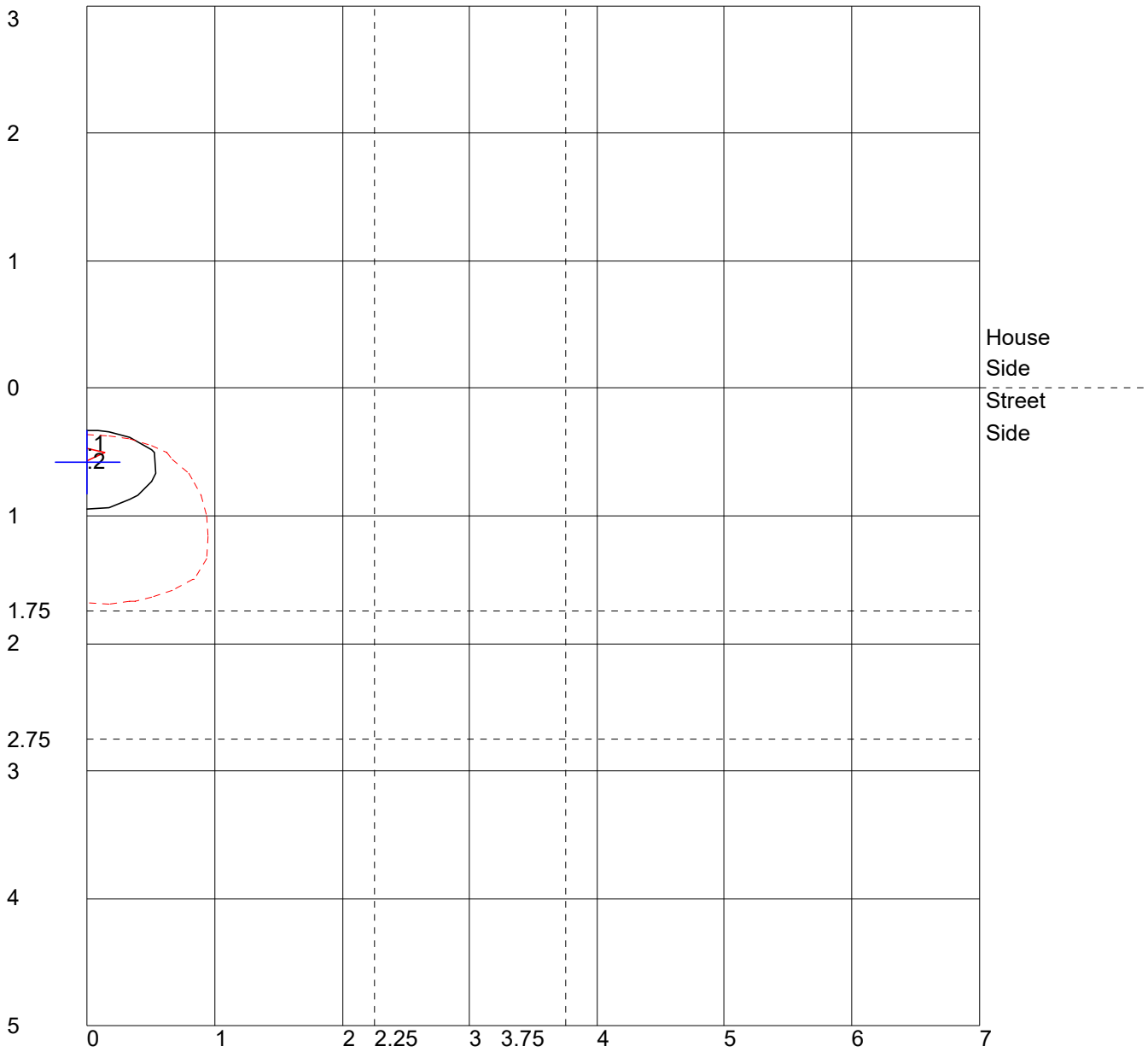
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

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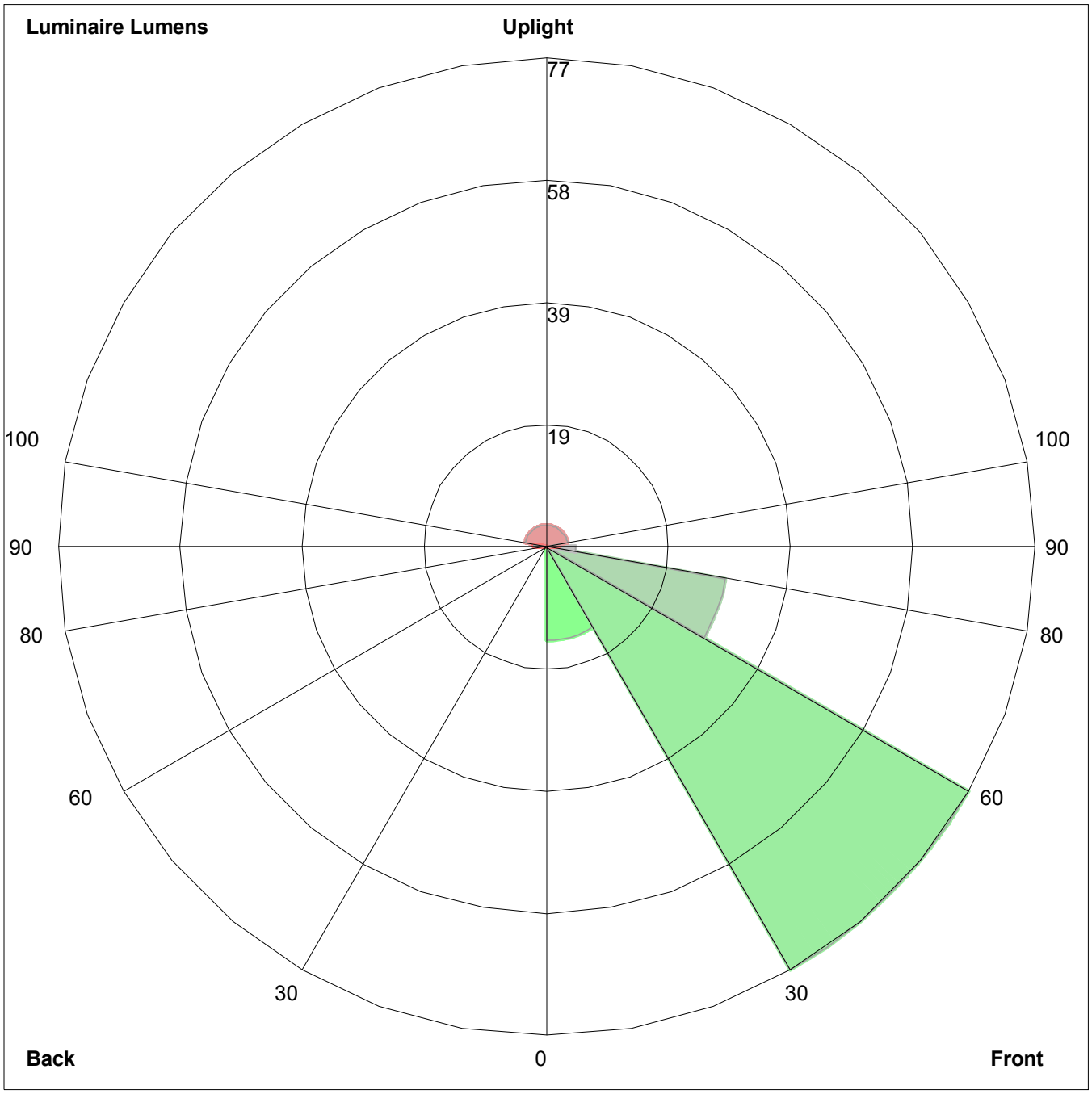
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=14.8, Medium=77.3, High=28.8, Very High=4.6
Back: Low=0.0, Medium=0.0, High=0.0, Very High=0.0
Uplight: Low=2.0, High=3.4

BUG Rating : B0-U1-G0

CMDC / CM / SGCM

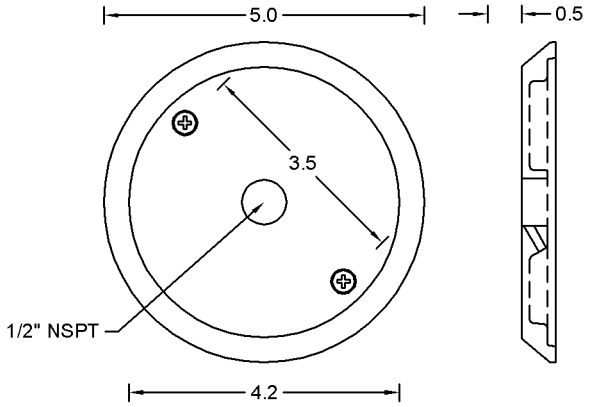
The CMDC, CM, and SGCM are all cast brass canopy mounts for use with Beachside's wall mounted fixtures.

__ **CMDC1** Die cast brass canopy mount with (1) 1/2" NSPT. Standard on L-011-CM1.
__ **CMDC2** Die cast brass canopy mount with (2) 1/2" NSPT. Standard on L-011-CM2.
__ **CMDC3** Die cast brass canopy mount with (3) 1/2" NSPT. Standard on L-011-CM2 with motion sensor accessory.
__ **CMDC** Die cast brass canopy mount with (1) slip hole. Standard on Beachside's L-013 and L-014 fixtures.

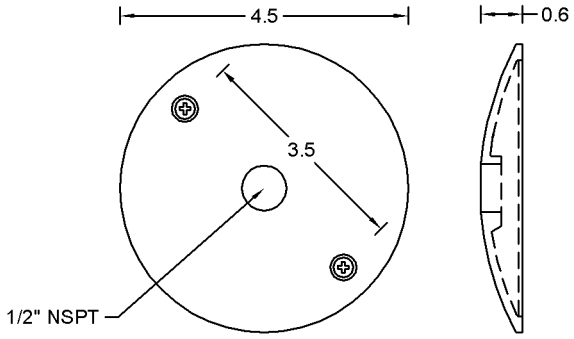
__ **CM1** Sand cast brass canopy mount with (1) 1/2" NSPT. Substitution accessory on Beachside's L-011-CM1.
__ **CM2** Sand cast brass canopy mount with (2) 1/2" NSPT. Substitution accessory on Beachside's L-011-CM2.
__ **CM3** Sand cast brass canopy mount with (3) 1/2" NSPT. Substitution accessory on Beachside's L-011-CM2 with motion sensor.
__ **CM** Sand cast brass canopy mount with (1) slip hole. Substitution accessory on Beachside's L-013 and L-014 fixtures.

__ **SGCM1** Sand cast brass rectangular canopy mount with (1) 1/2" NSPT. Substitution accessory on Beachside's wall mounted directionals.
__ **SGCM** Sand cast brass rectangular canopy mount with (1) slip hole. Substitution accessory on Beachside's L-013 and L-014 fixtures.

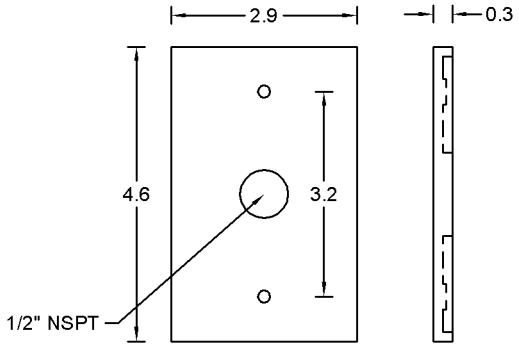
TYPE JGW MOUNTING PLATE



CMDC1



CM1



SGCM

Project: _____ By: _____ Date: _____

For ordering purposes, please specify (example: CM1)

_____
Canopy Mount

06-15-2017

L-011-S TYPE JGW

The L-011-S is an unobtrusive, directional fixture on a brass riser. It can be aimed up or down and is ideal for tall ground cover.

Construction All brass components. 0.140" [3.6mm] thick brass housing. 1/2" schedule 40 brass stem.

Lens Tempered soda lime glass. Stepped to prevent pooling of water on lens.

Stem Height Custom stem heights are available upon request. Standard stem heights are:

__ **8**	8" [20 cm]	
__ **12**	12" [30 cm]	
__ **16**	16" [40 cm]	
__ **20**	20" [51 cm]	

L-011-S 12 Volts, Remote transformer required

MR16 Halogen GU5.3, 50 Watts max	__ **BAB**	20 Watt	36° flood	
	__ **FMV**	35 Watt	24° narrow flood	
	__ **EXT**	50 Watt	12° spot	
GU5.3, MR16 LED Cree chipset (5W) Lumiled chipset (7W) Soraa chipset (8W) Warm White (3000K)	__ **5W-SP**	5 Watt	15° spot	320 lm
	__ **5W-NFL**	5 Watt	25° narrow flood	320 lm
	__ **5W-FL**	5 Watt	40° flood	320 lm
	__ **5W-WFL**	5 Watt	100° wide flood	320 lm
	__ **7W-NFL**	7 Watt	25° narrow flood	483 lm
	__ **7W-FL**	7 Watt	40° flood	487 lm
	__ **7W-WFL**	7 Watt	60° wide flood	483 lm
	__ **8W-SP**	8 Watt	10° spot	500 lm
	__ **8W-NFL**	8 Watt	25° narrow flood	525 lm
	__ **8W-FL**	8 Watt	36° flood	525 lm

L-011-S-120V 120 Volts
~~**L-011-S-230V** 230 Volts~~

MR16 LED Cree chipset, GU10 Warm White (3000K)	__ **5W-NFL**	5 Watt	25° narrow flood
	__ **5W-FL**	5 Watt	40° flood
	__ **5W-WFL**	5 Watt	100° wide flood
MR16 LED Soraa chipset, GU10 Warm White (3000K)	__ **8W-SP**	8 Watt	10° spot
	__ **8W-NFL**	8 Watt	25° narrow flood
	__ **8W-FL**	8 Watt	36° flood

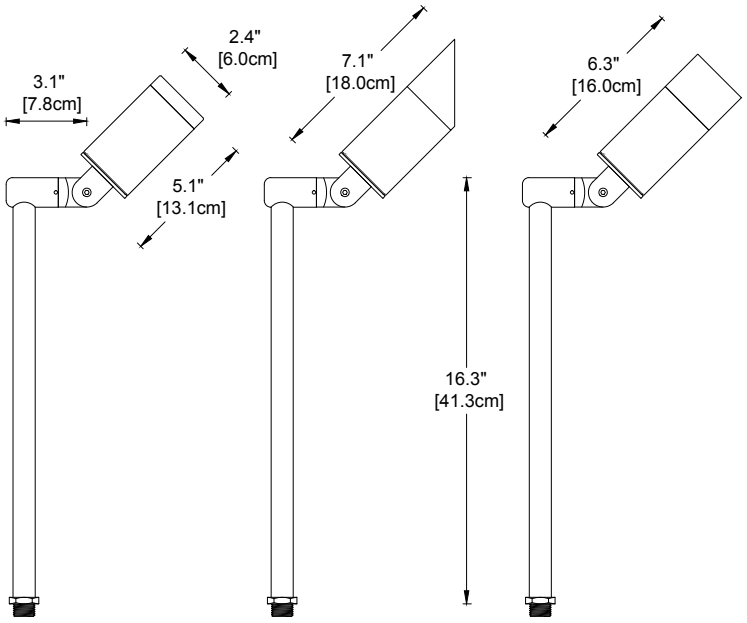
Optical Accessories

__ **BGS**	Brass glare shield, 45° cutoff
__ **BGSF**	Brass glare shield, full cutoff with weep hole
__ **FR**	Frosted lens
__ **HL1**	Honeycomb louver, 1/8" [3mm] thick
__ **HL2**	Honeycomb louver, 1/4" [6mm] thick
__ **PR**	Prismatic spread lens
__ **RT**	Rectilinear spread lens
__ **SL**	Solite lens

Mounting Accessories 1/2" male threads. Mounts into any standard j-box or:

__ **GS2**	Heavy-duty ground spike
__ **GS2BC**	Heavy-duty ground spike with cast brass cap
__ **GS3R**	Heavy-duty ground spike with brass cap for telescoping fixture riser
__ **GS4**	* Standard ground spike with cast brass cap
__ **JB**	Cast brass junction box

* This accessory for 12 Volt fixture only.



L-011-S **L-011-S with BGS** **L-011-S with BGSF**

Fixtures shown with 16" stems

Finish: Unfinished is standard; no specification required. The fixture will weather to a natural patina. The patina process is natural with brass and copper. Rate of patina and eventual color is dependent upon climate and proximity to the ocean. Thus, Beachside does not guarantee any specific appearance.

Weight: 4.0 lbs [1.8 kg] with 16" stem

IP 66
CSA Listed, file #190030
10 year fixture warranty
3 year warranty for MR16 LED lamps

MADE IN USA

Project _____ By _____ Date _____

For ordering purposes, please specify (example: **L-011-S-120V—16—5W-NFL—GS2—BGS—HL1**)

L-011-S- ____ — ____ — ____ — ____ — ____

Fixture | Stem Height | Lamp | Accessory | Accessory

SORAA
SIMPLY PERFECT LIGHT

TYPE JGW LAMP

MR16-GU10 7.5W

OUTPUT RANGE: VIVID SERIES	390 - 455 lumen
OUTPUT RANGE: BRILLIANT SERIES	475 - 525 lumen
BEAM ANGLE RANGE	10°, 25°, 36°, 60°
COLOR TEMPERATURE RANGE	2700K, 3000K, 4000K
APPLICATION	Halogen replacement for indoor & outdoor applications

120V GU10 DIM IR UV

POINT SOURCE OPTICS

Exceptional beam control enables unique 10° narrow spot and smooth uniform beams

Single light source, single crisp shadow

VP$_3$ VIVID COLOR AND VP$_3$ NATURAL WHITE

VIVID series provides accurate color rendering across the visible spectrum from 400nm to 700nm, with CRI/95, R9/95, Rf/90, Rg/100

Whiteness rendering matches or exceeds that of halogen and incandescent sources at 2700K and 3000K

ENERGY EFFICIENCY AND LONG LIFE

85% more energy efficient than standard halogen lamps

Typical payback of one year or less

Rated lifetime to L70: 35,000hrs

Warranty: 3yrs or 25,000hrs whichever comes first

Detailed warranty information available at soraa.com/resources/legal

CERTIFICATIONS

UL/CUL, FCC Title 47 Part 15B, RoHS

c UL us RoHS

HIGHLY COMPATIBLE

Narrow spot compatible with Soraa SNAP System accessories

Geometrically compatible with standard fixtures and suitable for damp locations

This lamp is suitable for use in fully enclosed fixtures, subject to the maximum heatsink temperature limits stated in this data sheet. A list of qualified enclosed fixtures can be found at www.soraa.com/resources

Works with trailing edge and leading edge phase cut dimmers (see www.soraa.com/resources)

INTENDED USE AND APPLICATIONS

Intended for use in GU10 compatible recessed downlights, track lighting and other indoor and outdoor applications

Soraa lamps are designed to safely turn down in any thermal environment not conducive to minimum airflow or proper ventilation

GENERAL SPECIFICATIONS

Form Factor

Width: 49.9mm (1.96")

Height: 53.5mm (2.10")

Weight: 61g

Operating Temperature

Minimum: -40°C (ambient)

Typical: 85°C - 95°C (base)

Maximum: 100°C (base)

Electrical

Wattage: 7.5W

Power factor: 0.93

Voltage: 120V +/- 12V

Frequency: 50/60Hz

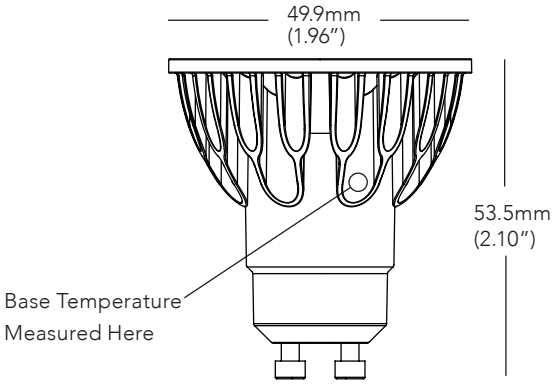
Dimming and Flicker

Dimmable to <20%

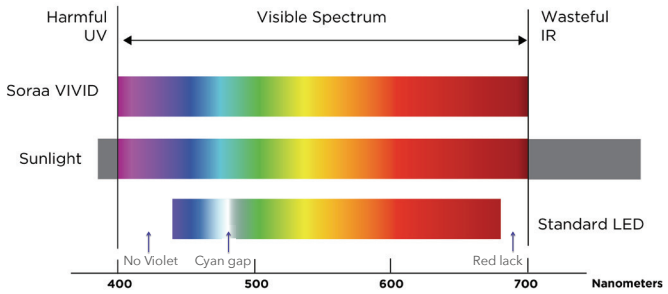
Flicker Index: <0.12

Percent Flicker: 40%

DIMENSIONS

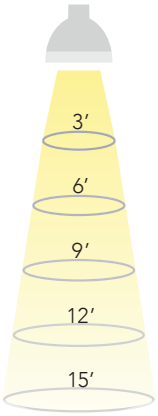


COLOR RENDERING



10 DEGREE BEAM

Beam Dia at 50% CBCP (ft)	Field Dia at 10% CBCP (ft)	Foot-candles (% of CBCP)
0.5	1.1	11.1%
1.0	2.1	2.8%
1.6	3.2	1.2%
2.1	4.2	0.7%
2.6	5.3	0.4%

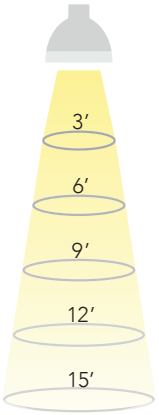


25 DEGREE BEAM

Beam Dia at 50% CBCP (ft)	Field Dia at 10% CBCP (ft)	Foot-candles (% of CBCP)
1.3	2.1	11.1%
2.7	4.1	2.8%
4.0	6.2	1.2%
5.3	8.3	0.7%
6.7	10.3	0.4%

36 DEGREE BEAM

Beam Dia at 50% CBCP (ft)	Field Dia at 10% CBCP (ft)	Foot-candles (% of CBCP)
1.9	3.1	11.1%
3.9	6.1	2.8%
5.8	9.2	1.2%
7.8	12.2	0.7%
9.7	15.3	0.4%



60 DEGREE BEAM

Beam Dia at 50% CBCP (ft)	Field Dia at 10% CBCP (ft)	Foot-candles (% of CBCP)
3.5	5.4	11.1%
6.9	10.8	2.8%
10.4	16.2	1.2%
13.9	21.6	0.7%
17.3	27.0	0.4%

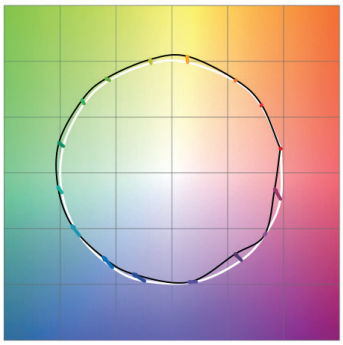
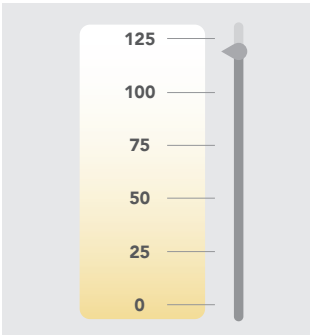
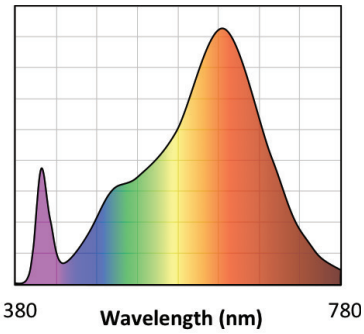
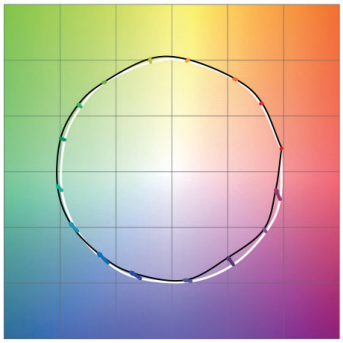
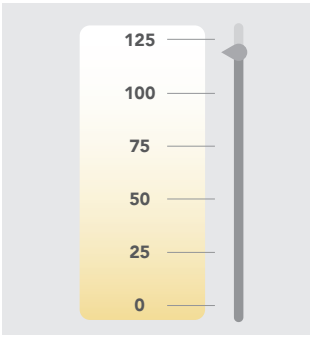
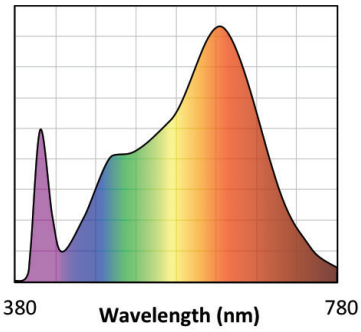
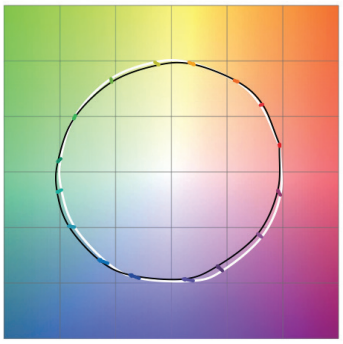
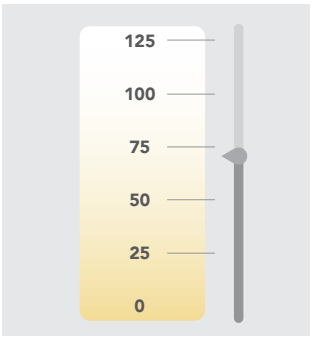
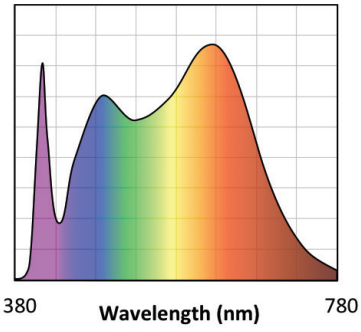
Note: Footcandles may be calculated by multiplying the CBCP of the desired model number by the percentage in the tables above

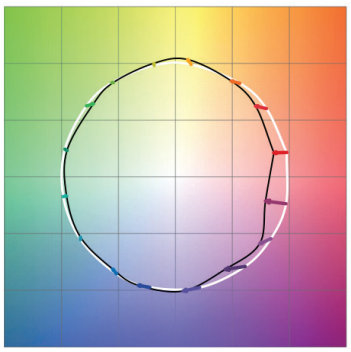
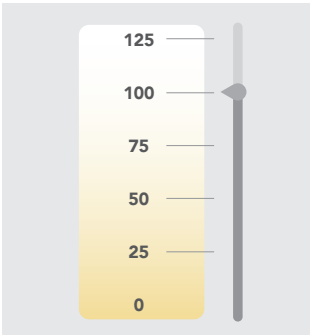
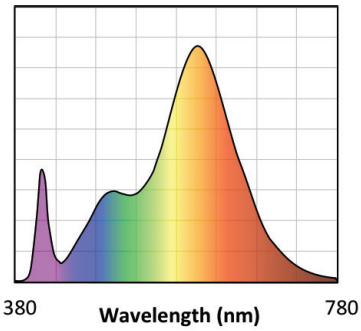
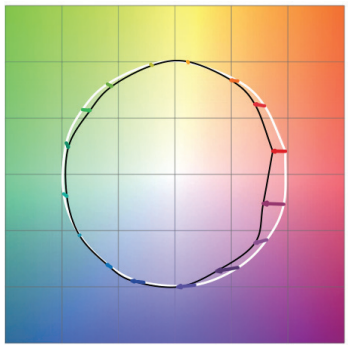
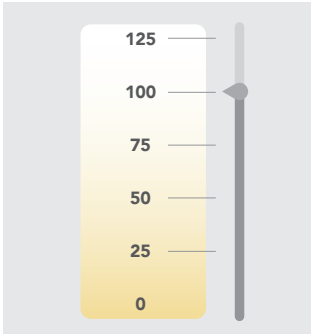
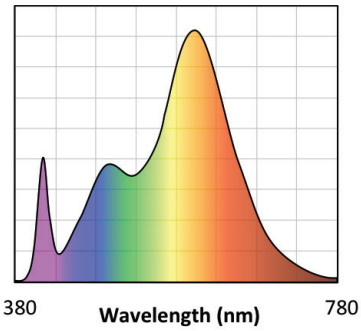
SPECIFICATIONS BY MODEL NUMBER* SORAA LED MR16-GU10 7.5W

Model #	Product Code	CCT (K)	Beam Angle	Field Angle	CBCP (Cd)	Halogen Equivalent	Total Flux (Lm)	Efficacy (Lm/W)	McA	SNAP
VIVID SERIES										
SM16GA-07-10D-927-03	01111	2700	10	17	5710	50	390	52	3	YES
SM16GA-07-25D-927-03	01123	2700	25	38	2260	50	410	55	3	-
SM16GA-07-36D-927-03	01135	2700	36	54	1070	50	410	55	3	-
SM16GA-07-60D-927-03	01573	2700	60	84	420	50	410	55	3	-
SM16GA-07-10D-930-03	01115	3000	10	17	6000	50	410	55	3	YES
SM16GA-07-25D-930-03	01127	3000	25	38	2400	50	435	58	3	-
SM16GA-07-36D-930-03	01139	3000	36	54	1130	50	435	58	3	-
SM16GA-07-60D-930-03	01577	3000	60	84	440	50	435	58	3	-
SM16GA-07-10D-940-03	01117	4000	10	17	6290	50	430	57	4	YES
SM16GA-07-25D-940-03	01129	4000	25	38	2510	50	455	61	4	-
SM16GA-07-36D-940-03	01141	4000	36	54	1190	50	455	61	4	-
SM16GA-07-60D-940-03	01579	4000	60	84	460	50	455	61	4	-
BRILLIANT SERIES										
SM16GA-07-10D-827-03	01109	2700	10	17	6950	65	475	63	3	YES
SM16GA-07-25D-827-03	01121	2700	25	38	2760	65	500	67	3	-
SM16GA-07-36D-827-03	01133	2700	36	54	1310	65	500	67	3	-
SM16GA-07-60D-827-03	01571	2700	60	84	510	65	500	67	3	-
SM16GA-07-10D-830-03	01113	3000	10	17	7320	65	500	67	3	YES
SM16GA-07-25D-830-03	01125	3000	25	38	2900	65	525	70	3	-
SM16GA-07-36D-830-03	01137	3000	36	54	1370	65	525	70	3	-
SM16GA-07-60D-830-03	01575	3000	60	84	540	65	525	70	3	-

CCT: Correlated Color Temperature **McA**: White Point Accuracy in McA step **SNAP:** SORAA SNAP System Compatible

***Specifications are at stable warm operating conditions (25°C ambient)

SERIES/CCT	COLOR ACCURACY	WHITENESS INDEX	SPECTRAL POWER DISTRIBUTION
VIVID 2700K	 Rf: 90, Rg: 100, Rfh1: 95	 Rw: 120	 CRI: 95, R9: 95
VIVID 3000K	 Rf: 90, Rg: 100, Rfh1: 95	 Rw: 120	 CRI: 95, R9: 95
VIVID 4000K	 Rf: 90, Rg: 100, Rfh1: 95	 Rw: 70	 CRI: 95, R9: 95

SERIES/CCT	COLOR ACCURACY	WHITENESS INDEX	SPECTRAL POWER DISTRIBUTION
BRILLIANT 2700K	 Rf: 85, Rg: 92, Rfh1: 77	 Rw: 100	 CRI: 85, R9: >0
BRILLIANT 3000K	 Rf: 85, Rg: 92, Rfh1: 77	 Rw: 100	 CRI: 85, R9: >0

Rf: TM-30 metric measuring color fidelity (whether colors are similar to those under natural light). Rf is a more accurate version of the CRI Ra. Rf is 100 for natural light.
Rg: TM-30 metric measuring color gamut (whether colors are more saturated than under natural light). Rg is 100 for natural light.
Rfh1: TM-30 metric measuring color fidelity for red tones. Rfh1 is a more accurate version of the CRI R9. Rfh1 is 100 for natural light.
Rw: Soraa-developed metric to measure white fidelity. Rw measures the magnitude of excitation of whitening agents within whites. Rw is about 100 for natural light.

Soraa Inc. 6500 Kaiser Drive, Suite 110, Fremont, CA 94555
855 GO-SORAA / 855 467-6722 | www.soraa.com

06-15-2017

TYPE JHP-RUN #1, 2, 4, 5

REDUCE LUMEN OUTPUT
USED A FACTOR OF .264

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-R5S-CL-X-5G450-30-XX-120.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TESTLAB] Photopia 2017.0.2 see: www.ltioptics.com/ies
[ISSUEDATE]
[TESTDATE] Fri Dec 16 17:55:52 2016
[TEST] 1
[MANUFAC] SELUX Corporation
[LUMCAT] LALC-R5S-CL-X-5G450-30-XX-120
[LUMINAIRE] Formed aluminum housing, frosted lens, clear plastic enclo
[MORE] sure
[LAMP] Seven white LEDs
[BALLAST] Osram Optotronic #79370
[OTHER] 25.3 C, 119.973 V, 0.277184 A, 42.5 W, 0.994118 PF, 59.9979
[MORE] Hz
[OTHER] This test was performed using the calibrated photodetector met
[MORE] hod of absolute photometry.

CHARACTERISTICS

IES Classification	Type VS
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4463
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	~~42.5~~ 15 WATTS
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	1795.909
Maximum Candela Angle	45H 65V
Maximum Candela (<90 Degrees Vertical)	1795.909
Maximum Candela Angle (<90 Degrees Vertical)	45H 65V
Maximum Candela At 90 Degrees Vertical	.234 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	114.221 (2.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-R5S-CL-X-5G450-30-XX-120.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	201.1	N.A.	4.5
FM - Front-Medium (30-60)	1029.3	N.A.	23.1
FH - Front-High (60-80)	988.5	N.A.	22.1
FVH - Front-Very High (80-90)	13.2	N.A.	0.3
BL - Back-Low (0-30)	201.0	N.A.	4.5
BM - Back-Medium (30-60)	1028.7	N.A.	23.0
BH - Back-High (60-80)	988.1	N.A.	22.1
BVH - Back-Very High (80-90)	13.3	N.A.	0.3
UL - Uplight-Low (90-100)	< 0.05	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	4463.2	N.A.	100.0
BUG Rating	B2-U1-G1		

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-R5S-CL-X-5G450-30-XX-120.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**75**	**85**
0.0	403.149	403.149	403.149	403.149	403.149	403.149	403.149	403.149	403.149	403.149
5.0	407.209	422.066	396.775	399.168	397.677	398.095	404.715	399.281	399.155	391.900
10.0	420.019	423.352	412.054	413.628	428.861	426.447	418.912	421.034	418.256	416.590
15.0	453.046	435.933	439.863	453.806	442.399	442.875	447.741	450.414	441.434	441.350
20.0	472.953	467.961	474.097	465.718	470.112	483.687	474.018	469.782	473.111	465.710
25.0	491.870	503.987	502.705	501.869	508.013	514.968	507.023	501.823	509.571	503.690
30.0	547.978	555.947	551.787	550.192	552.631	567.095	555.718	550.459	554.811	553.692
35.0	617.510	615.748	618.630	618.559	624.202	619.590	623.366	614.248	616.399	617.327
40.0	688.409	679.967	681.141	684.992	686.120	691.909	689.904	683.881	681.162	689.996
45.0	776.445	779.753	776.871	784.009	779.039	786.950	780.776	786.319	777.865	784.749
50.0	924.194	923.150	926.842	926.859	931.048	944.381	934.728	926.566	918.321	926.713
55.0	1130.306	1134.918	1139.942	1143.008	1191.556	1238.751	1198.327	1145.849	1132.361	1142.119
60.0	1369.842	1372.219	1376.567	1410.166	1472.489	1484.836	1477.485	1420.132	1378.802	1374.090
62.5	1468.976	1467.068	1483.366	1559.435	1634.235	1682.043	1638.362	1551.457	1498.448	1477.852
65.0	1563.420	1561.173	1574.748	1628.345	1721.636	1795.909	1718.127	1623.534	1566.527	1550.597
67.5	1582.817	1579.075	1565.137	1610.953	1706.557	1748.869	1703.997	1621.562	1564.201	1581.719
70.0	1108.908	1155.025	1236.834	1363.422	1521.058	1606.630	1519.901	1349.952	1233.392	1133.853
72.5	192.671	214.278	371.885	668.218	1036.619	1229.674	1032.221	678.773	382.335	234.423
75.0	64.153	66.930	92.117	173.090	350.006	529.144	355.198	176.586	95.191	67.870
77.5	45.081	48.874	64.650	109.464	164.502	185.637	166.190	111.172	64.078	51.263
80.0	32.985	35.520	41.205	63.434	85.864	114.221	82.088	63.777	41.184	35.023
82.5	25.053	24.740	27.263	32.513	42.441	72.423	41.318	33.595	26.937	25.717
85.0	17.890	17.940	17.910	19.118	22.463	36.610	23.353	19.481	17.927	17.756
87.5	7.021	8.220	7.498	7.740	9.319	11.578	9.118	6.963	7.640	7.844
90.0	0.071	0.088	0.058	0.050	0.121	0.230	0.146	0.100	0.067	0.063
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles	Horizontal Angles									
	90	**95**	**105**	**115**	**125**	**135**	**145**	**155**	**165**	**175**
0.0	403.149	403.149	403.149	403.149	403.149	403.149	403.149	403.149	403.149	403.149
5.0	405.722	409.109	402.660	401.967	401.641	389.210	398.717	406.290	413.060	409.752
10.0	403.838	413.687	418.824	417.350	425.741	428.360	424.430	425.917	414.159	412.091
15.0	441.726	441.576	439.312	451.880	445.490	441.254	445.348	452.532	445.444	432.587
20.0	462.536	472.318	470.167	475.183	472.589	475.467	470.091	466.161	467.247	472.000
25.0	493.298	501.493	499.238	507.913	507.341	514.893	506.982	507.003	506.142	494.794

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-R5S-CL-X-5G450-30-XX-120.IES

CANDELA TABULATION - (Cont.)

30.0	549.365	558.746	553.270	551.578	547.848	561.933	552.088	547.055	549.953	551.115
35.0	605.627	618.020	614.445	611.199	617.063	619.737	619.691	619.327	615.363	613.217
40.0	677.582	686.262	679.821	681.346	682.891	690.673	687.632	685.773	682.661	686.270
45.0	771.253	778.446	779.837	780.263	779.335	786.140	778.442	786.657	778.997	779.469
50.0	917.987	926.157	918.651	928.868	932.698	943.846	931.211	923.789	919.716	919.361
55.0	1141.358	1140.068	1135.740	1149.157	1201.476	1242.088	1196.748	1152.916	1136.505	1135.035
60.0	1351.172	1367.044	1377.415	1417.313	1466.817	1495.926	1472.293	1417.622	1375.598	1377.043
62.5	1469.937	1476.658	1498.319	1547.564	1641.933	1681.705	1634.911	1560.521	1484.849	1467.297
65.0	1553.011	1563.988	1560.488	1618.120	1715.300	1782.134	1725.930	1625.509	1572.693	1558.541
67.5	1573.432	1569.882	1574.317	1618.789	1699.478	1747.232	1711.215	1611.558	1573.549	1578.895
70.0	1097.459	1129.471	1221.742	1360.093	1521.200	1601.672	1524.817	1360.565	1235.610	1151.742
72.5	198.298	238.141	386.007	674.358	1028.812	1225.878	1033.929	671.380	376.792	210.786
75.0	63.614	64.900	93.525	179.735	356.142	531.099	352.901	175.124	93.362	67.841
77.5	48.222	51.480	64.771	109.656	163.233	180.491	169.531	110.403	64.236	48.870
80.0	35.320	34.230	42.542	64.817	84.841	112.179	85.388	63.902	41.556	34.255
82.5	26.385	25.007	26.903	33.624	43.118	73.521	43.193	32.843	26.774	24.781
85.0	17.347	16.962	17.961	19.936	22.927	36.899	24.030	18.533	17.464	17.246
87.5	7.038	8.107	7.928	7.564	9.406	11.006	8.842	7.702	7.790	7.911
90.0	0.142	0.079	0.071	0.063	0.234	0.192	0.184	0.138	0.071	0.046
95.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles	**Horizontal Angles**
	180
0.0	403.149
5.0	405.270
10.0	427.216
15.0	439.212
20.0	474.415
25.0	491.615
30.0	546.015
35.0	608.839
40.0	687.586
45.0	782.209
50.0	910.790
55.0	1143.096
60.0	1358.715
62.5	1464.273
65.0	1553.358

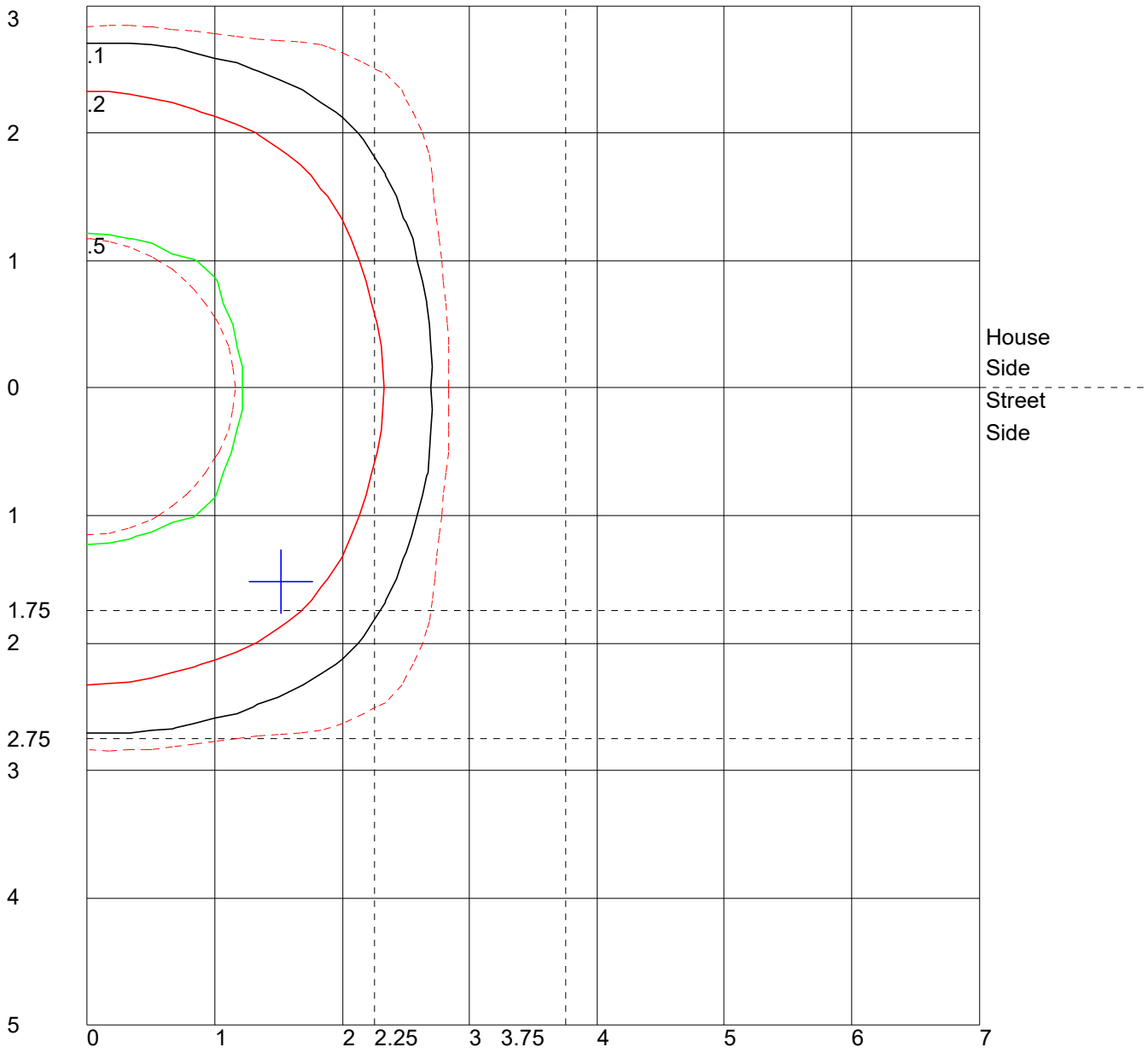
IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-R5S-CL-X-5G450-30-XX-120.IES

CANDELA TABULATION - (Cont.)

67.5	1576.961
70.0	1105.195
72.5	185.324
75.0	64.859
77.5	47.763
80.0	35.261
82.5	24.230
85.0	16.649
87.5	7.606
90.0	0.033
95.0	0.000
100.0	0.000
105.0	0.000
110.0	0.000
115.0	0.000
120.0	0.000
125.0	0.000
130.0	0.000
135.0	0.000
140.0	0.000
145.0	0.000
150.0	0.000
155.0	0.000
160.0	0.000
165.0	0.000
170.0	0.000
175.0	0.000
180.0	0.000

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-R5S-CL-X-5G450-30-XX-120.IES

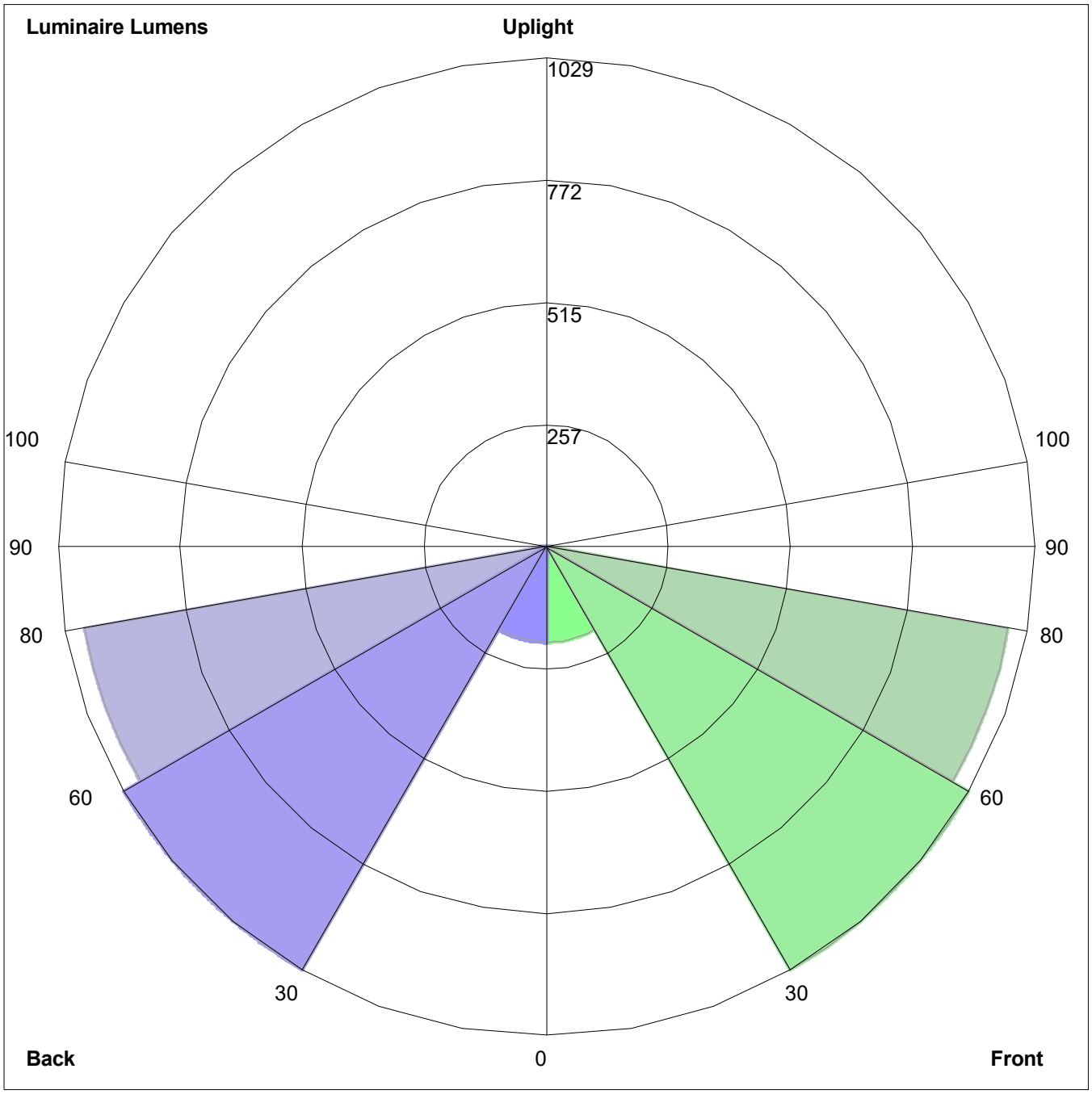
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-R5S-CL-X-5G450-30-XX-120.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=201.1, Medium=1029.3, High=988.5, Very High=13.2
Back: Low=201.0, Medium=1028.7, High=988.1, Very High=13.3
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U1-G1

Date: _____ Customer: _____

Project: _____

Type: _____ Qty: _____

selux

Lanova LED Catenary

Order Code:

LALC	Series	**LALC** Lanova LED catenary						
_____	Optics	**R1** Type I Distribution	**R2** Type II Distribution	**R3** Type III Distribution	**R4** Type IV Distribution	**R5S** Type V Square	**R5R** Type V Round	**DB** Diffuse Bowl
_____	Cylinder	**CL** Clear long	**FL**[1] ½ Frosted Long					[1] R5R or DB optics only
_____	Light Engine	**5G150**[2] 1556lm, 15W	**5G250**[2] 2477lm, 24W	**5G350** 3468lm, 33W	**5G450** 4459lm,42W			[2] Not Available with DM, HL30, or HL50 * Based on R2 distribution and 3000K CCT
_____	Power Cord Length	**XX**[3]						[3] 1ft Increments 5' - 30'
_____	CCT	**30** 3000K	**40** 4000K	for other CCT please consult factory				
_____	Finish	**WH** White	**BK** Black	**BZ** Bronze	**SV** Silver	**SP** Specify Premium Color		
_____	Voltage	**120**	**208**	**240**	**277**	**347**[4,5]	**480**[4,5]	[4] Not available with HL30 or HL50 [5] Requires stepdown transformer, 60 Hz only
_____	Options	**DM** Dimming (0-10V)	**HL30**[6,7] Hi-Lo Switching 30-100%	**HL50**[6,7] Hi-Lo Switching 50-100%	**MC** Mid-Run Connector	**HS** House Side Shield		[6] 120, 240, and 277V Only [7] Not available with DM option

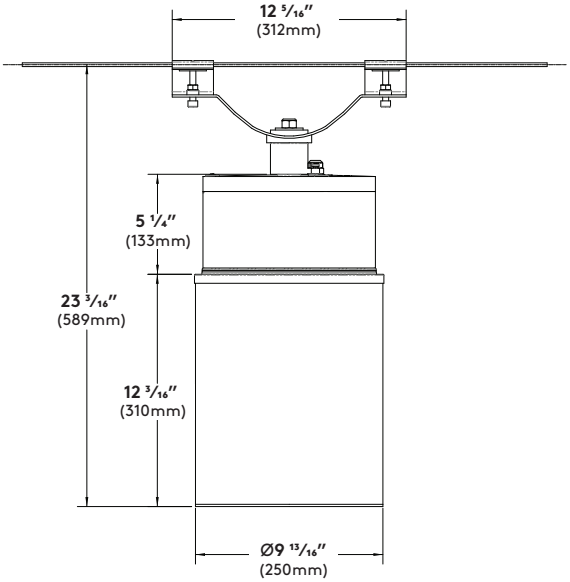
Product Modifications

Please list modification requirements for review by factory:

Approvals

Date:

NRTL WET 5 YEAR LED WARRANTY RoHS COMPLIANT IP65 UNION MADE IBEW LOCAL 363



Net Weight (19.5 lbs)
EPA = 0.68 ft²

Specifications

Luminaire Housing/Hanger
Die-cast aluminum housing made from low copper marine grade aluminum. Hanger bracket made from stainless steel with stainless steel hardware. Hanger Bracket provides 360° rotation and 15° tilt in either direction.

Gasketing
(not shown) Continuous UV resistant silicone gasket provides weatherproofing, dust and insect control at all fixture connections.

LED Array
(not shown) High Flux LEDs mounted to metal core PCB and attached to aluminum heat sink for maximum LED performance and life. CCT tolerance within a 3 step bin and provided with a minimum CRI of 80. LED light engine has a reported lumen maintenance of 93% at 50,000 hours. L70 calculated greater than 100,000 hours.

LED Optics
Clear or half frosted UV stabilized acrylic outer cylinder creates the optical chamber. Technical Optics (R1, R2, R3, R4, R5S and R5R) use Selux signature light pattern acrylic lens holder to secure proprietary silicone optics. Diffuser Bowl (DB) option made of highly diffuse UV stabilized acrylic hides LED source and provides a pleasant/soft light quality.

LED Driver
LEDs are driven by RoHS compliant constant current programmable LED driver. Driver includes 0-10V dimming to 10%, meets the requirements of IP66 and includes a 5 Year warranty.

Surge Protector
(not shown) Independent surge protector device designed to protect luminaire from electrical surge up to 20kA.

Power Cord
(not shown) UV resistant black SJ power cord pre-installed at factory. Please specify power cord length available in 1' increments from 5' – 30'.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide.

5 Year Limited LED Luminaire Warranty -
Selux offers a 5 Year Limited Warranty to the original purchaser that the Lanova LED luminaire shall be free from defects in material and workmanship for up to five (5) years from date of shipment. This limited warranty covers the LED driver and LED array when installed and operated according to Selux instructions. For details, see "Selux Terms and Condition of Sale."

Listings and Ratings: Luminaire tested to IP65 and LM-79 standards. LEDs tested to LM-80 standards.

Luminaire suitable for ambient temperatures from 40°C (104°F) maximum to -40°C (-40°F) minimum.

NRTL Listed (i.e. UL, CSA)

Visit selux.us for our LED End of Life recycling policy.

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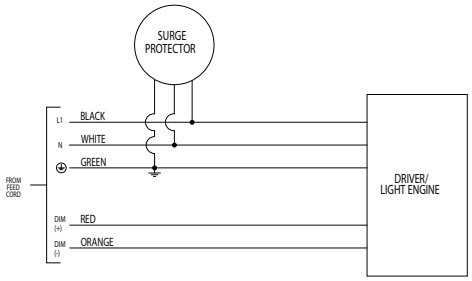
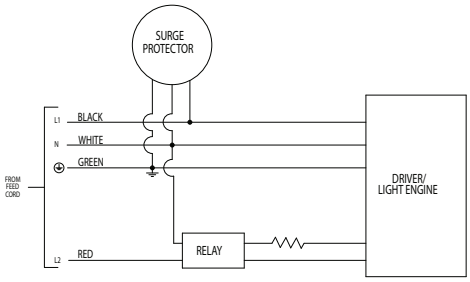
ELECTRICAL SPECIFICATIONS									
CCT	3000K/4000K								
CYLINDER	CL Cylinder Standard						FL Cylinder Standard		
OPTICS	R1, R2, R3, and R4			R5R and R5S			DB		
Light Engine/ Electrical Specs	Delivered Lumens (lm)	Wattage (W)	Efficacy (lm/W)	Delivered Lumens (lm)	Wattage (W)	Efficacy (lm/W)	Delivered Lumens (lm)	Wattage (W)	Efficacy (lm/W)
5G150	1316	14.2	92.9	1488	14.2	105.0	1327	14.2	93.5
5G250	2193	23.6	92.9	2480	23.6	105.0	2211	23.6	93.5
5G350	3070	33.1	92.9	3471	33.1	105.0	3096	33.1	93.5
5G450	3948	42.5	92.9	4463	42.5	105.0	3981	42.5	93.5

Wiring

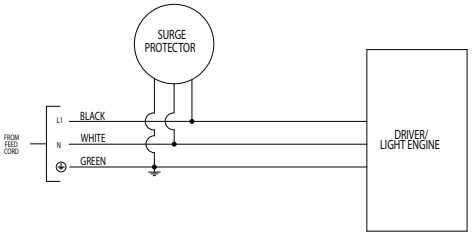
0-10V Dimming Option (DM) Wiring for 120-277V
100% light output at 10V, down to 1% light output at 0V.



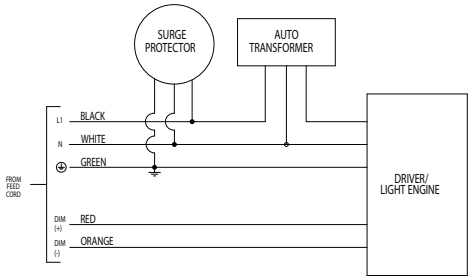
Hi-Lo Switching Option (HL30/HL50) Wiring
120/240/277V. When red is energized, light output will be at "Lo" level.



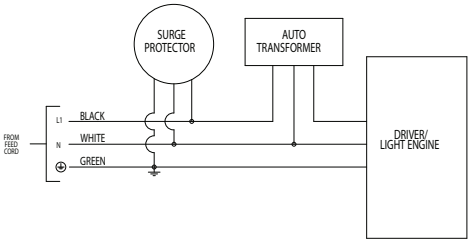
Standard Wiring for 120-277V
Standard wiring for 120-277V with no additional options.



0-10V Dimming Option (DM) Wiring for 347/480V
100% light output at 10V, down to 1% light output at 0V.



Standard Wiring for 347/480V
Standard wiring for 347/480V with no additional options.

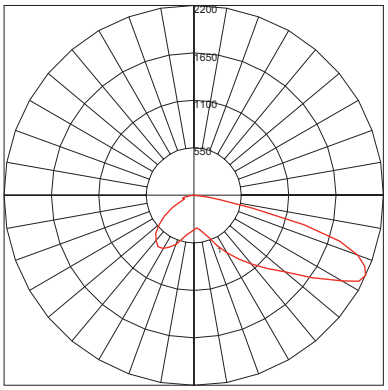


Photometry

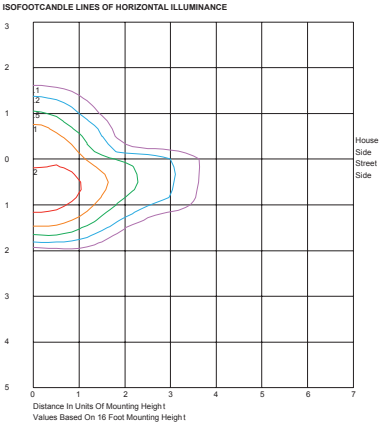
R1 / 42.5W LED / 3000K CCT

Catalog #: LALC-R1-CL-X-5G450-30-XX-120
Maximum candela of 2200 at 65° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



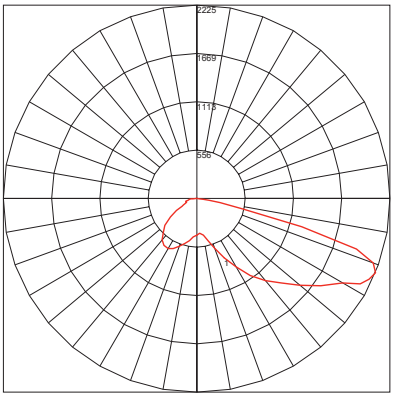
Maximum Candela = 2199.966 Located At Horizontal Angle = 75, Vertical Angle = 65
1 - Vertical Plane Through Horizontal Angles (75 - 255) (Through Max. Cd.)



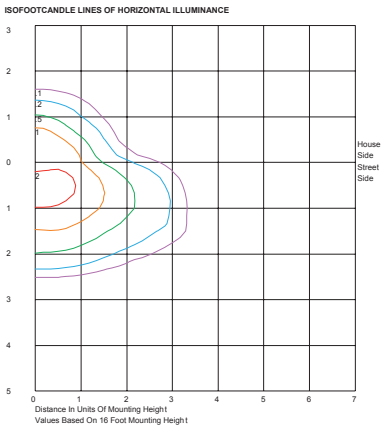
R2 / 42.5W LED / 3000K CCT

Catalog #: LALC-R2-CL-X-5G450-30-XX-120
Maximum candela of 2225 at 67.5° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



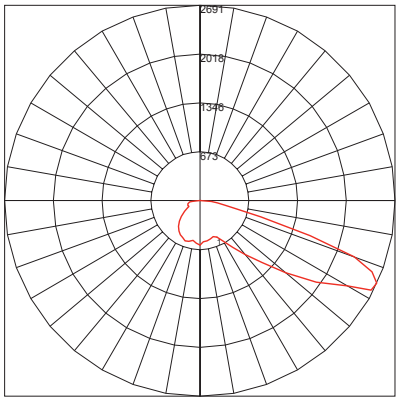
Maximum Candela = 2225.177 Located At Horizontal Angle = 65, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (65 - 245) (Through Max. Cd.)



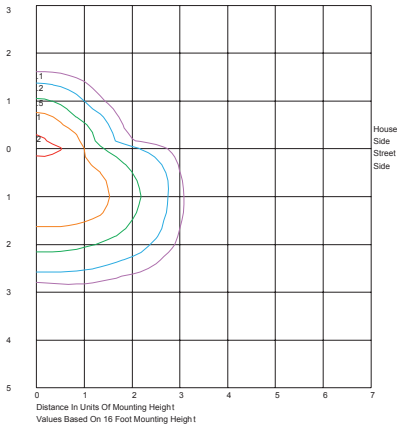
R3 / 42.5W LED / 3000K CCT

Catalog #: LALC-R3-CL-X-5G450-30-XX-120
Maximum candela of 2691 at 65° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



Maximum Candela = 2691.332 Located At Horizontal Angle = 45, Vertical Angle = 65
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)

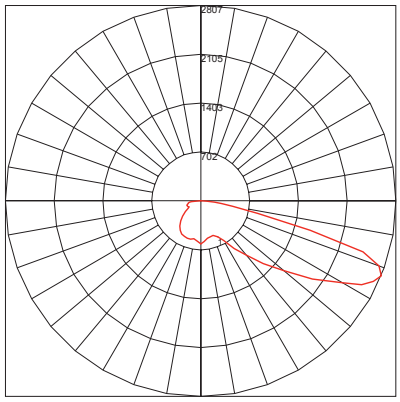


Photometry

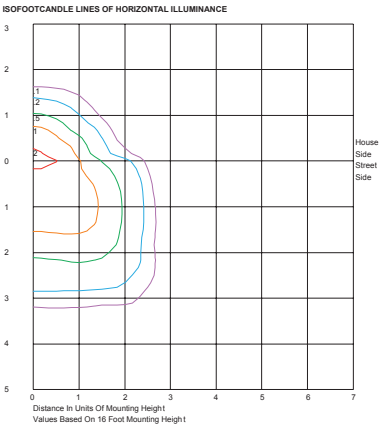
R4 / 42.5W LED / 3000K CCT

Catalog #: LALC-R4-CL-X-5G450-30-XX-120
Maximum candela of 2807 at 67.5° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



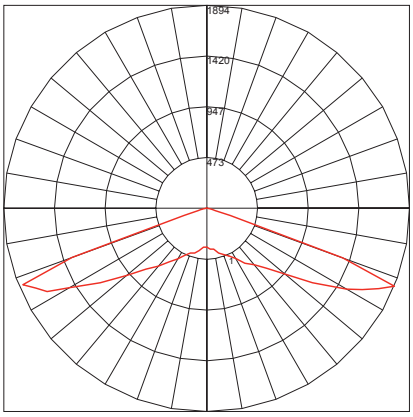
Maximum Candela = 2806.707 Located At Horizontal Angle = 35, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (35 - 215) (Through Max. Cd.)



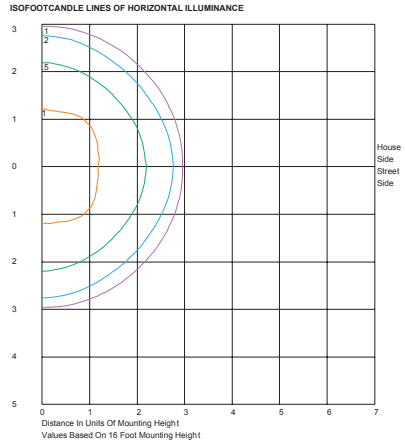
R5R/ 42.5W LED / 3000K CCT

Catalog #: LALC-R4R-CL-X-5G450-30-XX-120
Maximum candela of 1894 at 67.5° from vertical.
Mounting Height = 16' (4.87m)
4463 Delivered Lumens
105 Lumens per Watt
B2-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



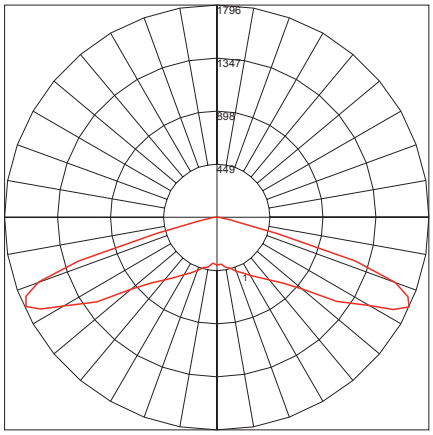
Maximum Candela = 1893.897 Located At Horizontal Angle = 0, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)



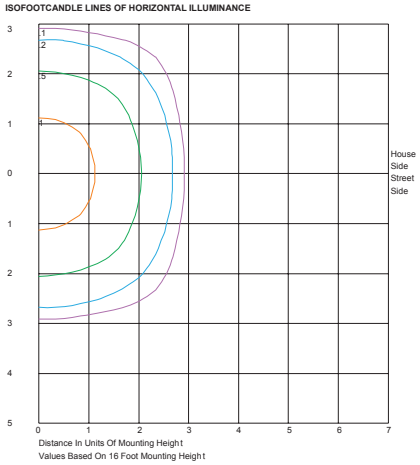
R5S/ 42.5W LED / 3000K CCT

Catalog #: LALC-R4S-CL-X-5G450-30-XX-120
Maximum candela of 1796 at 65° from vertical.
Mounting Height = 16' (4.87m)
4463 Delivered Lumens
105 Lumens per Watt
B2-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



Maximum Candela = 1795.909 Located At Horizontal Angle = 45, Vertical Angle = 65
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)



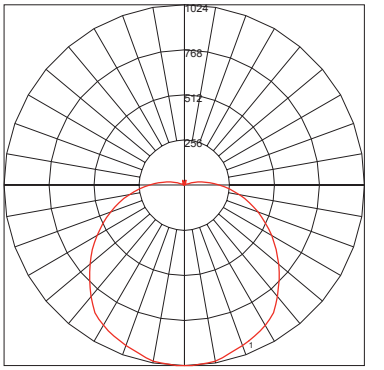
Photometry

DB / 42.5W LED / 3000K CCT

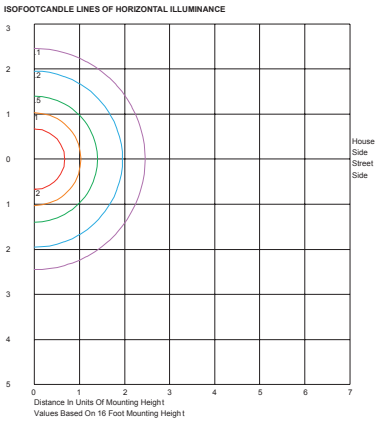
Catalog #: LALC-DB-FL-X-5G450-30-XX-120
Maximum candela of 1024 at 2.5° from vertical.
Mounting Height = 16' (4.87m)
3981 Delivered Lumens
94 Lumens per Watt
B1-U3-G2

DOWNLOAD IES FILES:

http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



Maximum Candela = 1023.981 Located At Horizontal Angle = 0, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)



Date: _____ Customer: _____

Project: _____

Type: _____ Qty: _____

selux

Lanova LED Catenary

Order Code:

LALC	Series	**LALC** Lanova LED catenary						
_____	Optics	**R1** Type I Distribution	**R2** Type II Distribution	**R3** Type III Distribution	**R4** Type IV Distribution	**R5S** Type V Square	**R5R** Type V Round	**DB** Diffuse Bowl
_____	Cylinder	**CL** Clear long	**FL**[1] ½ Frosted Long					[1] R5R or DB optics only
_____	Light Engine	**5G150**[2] 1556lm, 15W	**5G250**[2] 2477lm, 24W	**5G350** 3468lm, 33W	**5G450** 4459lm,42W			[2] Not Available with DM, HL30, or HL50 * Based on R2 distribution and 3000K CCT
_____	Power Cord Length	**XX**[3]						[3] 1ft Increments 5' - 30'
_____	CCT	**30** 3000K	**40** 4000K	for other CCT please consult factory				
_____	Finish	**WH** White	**BK** Black	**BZ** Bronze	**SV** Silver	**SP** Specify Premium Color		
_____	Voltage	**120**	**208**	**240**	**277**	**347**[4,5]	**480**[4,5]	[4] Not available with HL30 or HL50 [5] Requires stepdown transformer, 60 Hz only
_____	Options	**DM** Dimming (0-10V)	**HL30**[6,7] Hi-Lo Switching 30-100%	**HL50**[6,7] Hi-Lo Switching 50-100%	**MC** Mid-Run Connector	**HS** House Side Shield		[6] 120, 240, and 277V Only [7] Not available with DM option

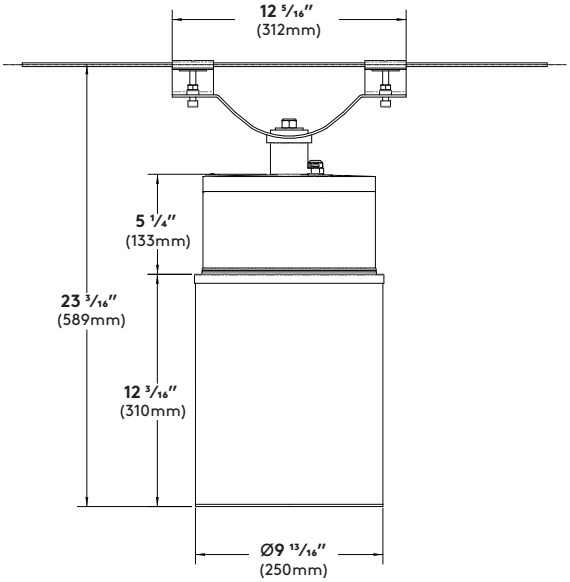
Product Modifications

Please list modification requirements for review by factory:

Approvals

Date:

NRTL WET 5 YEAR LED WARRANTY RoHS COMPLIANT IP65 UNION MADE IBEW LOCAL 363



Net Weight (19.5 lbs)
EPA = 0.68 ft²

Specifications

Luminaire Housing/Hanger
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Gasketing
(not shown) Continuous UV resistant silicone gasket provides weatherproofing, dust and insect control at all fixture connections.

LED Array
(not shown) High Flux LEDs mounted to metal core PCB and attached to aluminum heat sink for maximum LED performance and life. CCT tolerance within a 3 step bin and provided with a minimum CRI of 80. LED light engine has a reported lumen maintenance of 93% at 50,000 hours. L70 calculated greater than 100,000 hours.

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(not shown) Independent surge protector device designed to protect luminaire from electrical surge up to 20kA.

Power Cord
(not shown) UV resistant black SJ power cord pre-installed at factory. Please specify power cord length available in 1' increments from 5' – 30'.

Standard exterior colors are White (WH), Black (BK), Bronze (BZ), and Silver (SV). Selux premium colors (SP) are available, please specify from your Selux color selection guide.

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Selux offers a 5 Year Limited Warranty to the original purchaser that the Lanova LED luminaire shall be free from defects in material and workmanship for up to five (5) years from date of shipment. This limited warranty covers the LED driver and LED array when installed and operated according to Selux instructions. For details, see "Selux Terms and Condition of Sale."

Listings and Ratings: Luminaire tested to IP65 and LM-79 standards. LEDs tested to LM-80 standards.

Luminaire suitable for ambient temperatures from 40°C (104°F) maximum to -40°C (-40°F) minimum.

NRTL Listed (i.e. UL, CSA)

Visit selux.us for our LED End of Life recycling policy.

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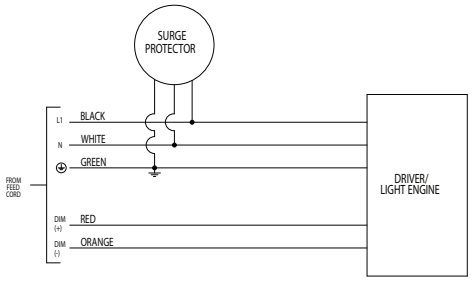
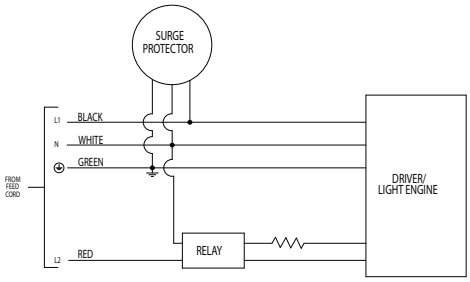
ELECTRICAL SPECIFICATIONS									
CCT	3000K/4000K								
CYLINDER	CL Cylinder Standard						FL Cylinder Standard		
OPTICS	R1, R2, R3, and R4			R5R and R5S			DB		
Light Engine/ Electrical Specs	Delivered Lumens (lm)	Wattage (W)	Efficacy (lm/W)	Delivered Lumens (lm)	Wattage (W)	Efficacy (lm/W)	Delivered Lumens (lm)	Wattage (W)	Efficacy (lm/W)
5G150	1316	14.2	92.9	1488	14.2	105.0	1327	14.2	93.5
5G250	2193	23.6	92.9	2480	23.6	105.0	2211	23.6	93.5
5G350	3070	33.1	92.9	3471	33.1	105.0	3096	33.1	93.5
5G450	3948	42.5	92.9	4463	42.5	105.0	3981	42.5	93.5

Wiring

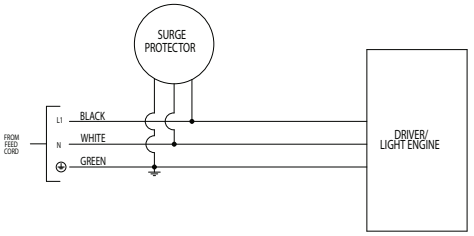
0-10V Dimming Option (DM) Wiring for 120-277V
100% light output at 10V, down to 1% light output at 0V.



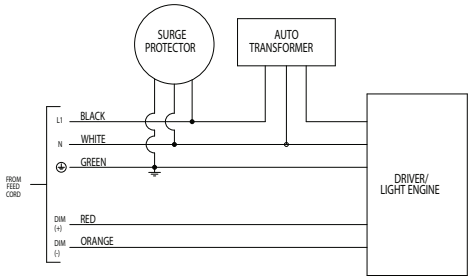
Hi-Lo Switching Option (HL30/HL50) Wiring
120/240/277V. When red is energized, light output will be at "Lo" level.



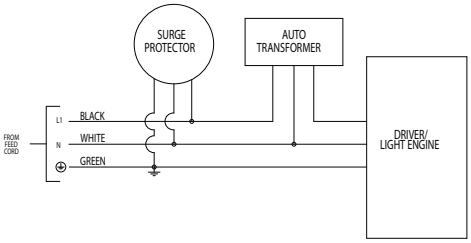
Standard Wiring for 120-277V
Standard wiring for 120-277V with no additional options.



0-10V Dimming Option (DM) Wiring for 347/480V
100% light output at 10V, down to 1% light output at 0V.



Standard Wiring for 347/480V
Standard wiring for 347/480V with no additional options.

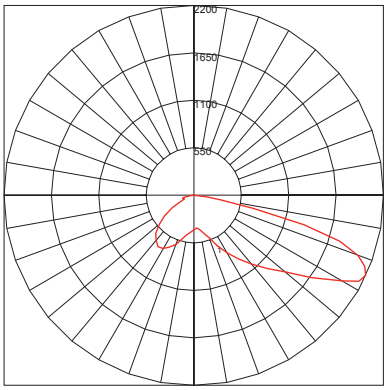


Photometry

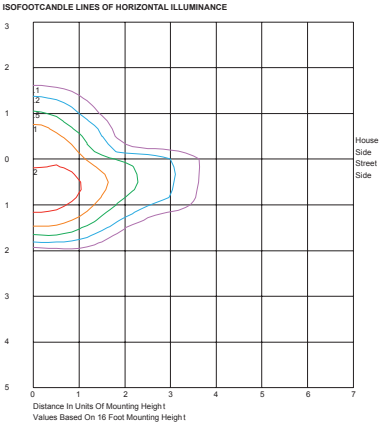
R1 / 42.5W LED / 3000K CCT

Catalog #: LALC-R1-CL-X-5G450-30-XX-120
Maximum candela of 2200 at 65° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



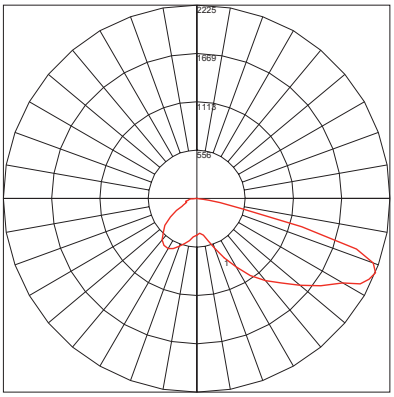
Maximum Candela = 2199.966 Located At Horizontal Angle = 75, Vertical Angle = 65
1 - Vertical Plane Through Horizontal Angles (75 - 255) (Through Max. Cd.)



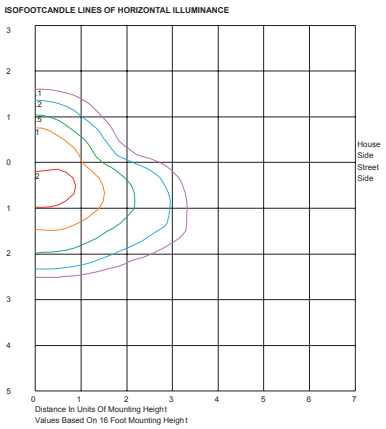
R2 / 42.5W LED / 3000K CCT

Catalog #: LALC-R2-CL-X-5G450-30-XX-120
Maximum candela of 2225 at 67.5° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



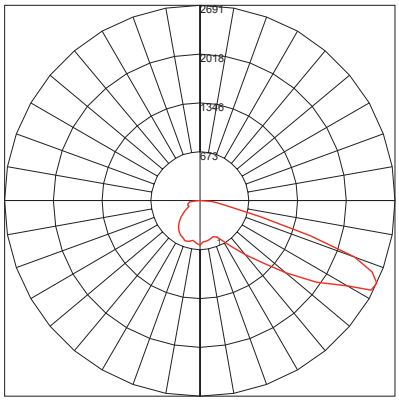
Maximum Candela = 2225.177 Located At Horizontal Angle = 65, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (65 - 245) (Through Max. Cd.)



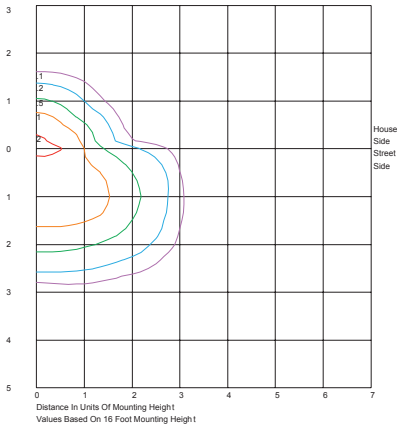
R3 / 42.5W LED / 3000K CCT

Catalog #: LALC-R3-CL-X-5G450-30-XX-120
Maximum candela of 2691 at 65° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



Maximum Candela = 2691.332 Located At Horizontal Angle = 45, Vertical Angle = 65
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)

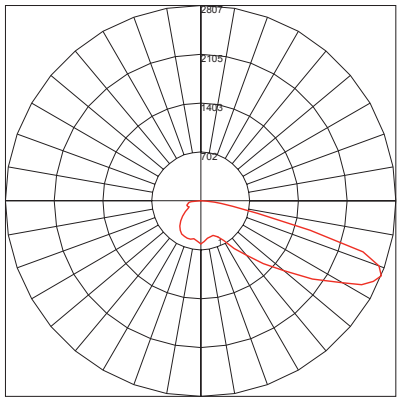


Photometry

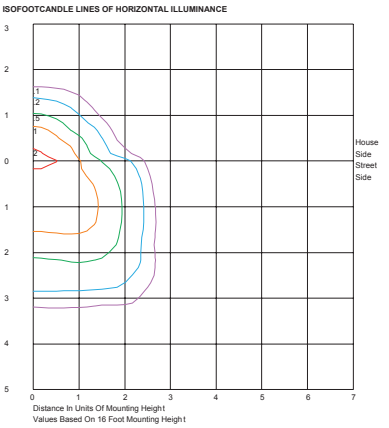
R4 / 42.5W LED / 3000K CCT

Catalog #: LALC-R4-CL-X-5G450-30-XX-120
Maximum candela of 2807 at 67.5° from vertical.
Mounting Height = 16' (4.87m)
3948 Delivered Lumens
93 Lumens per Watt
B1-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



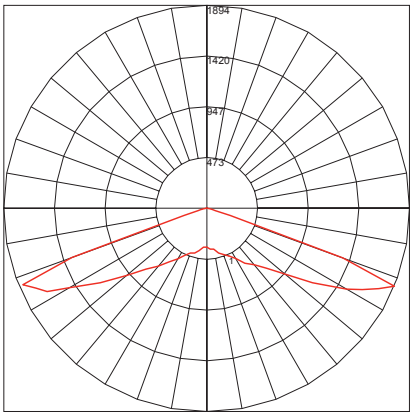
Maximum Candela = 2806.707 Located At Horizontal Angle = 35, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (35 - 215) (Through Max. Cd.)



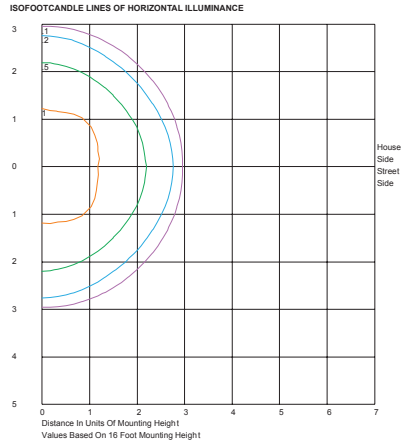
R5R/ 42.5W LED / 3000K CCT

Catalog #: LALC-R4R-CL-X-5G450-30-XX-120
Maximum candela of 1894 at 67.5° from vertical.
Mounting Height = 16' (4.87m)
4463 Delivered Lumens
105 Lumens per Watt
B2-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



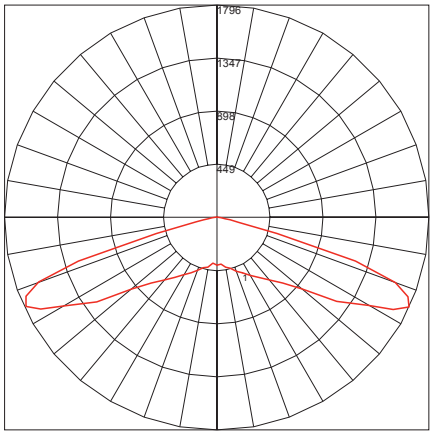
Maximum Candela = 1893.897 Located At Horizontal Angle = 0, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)



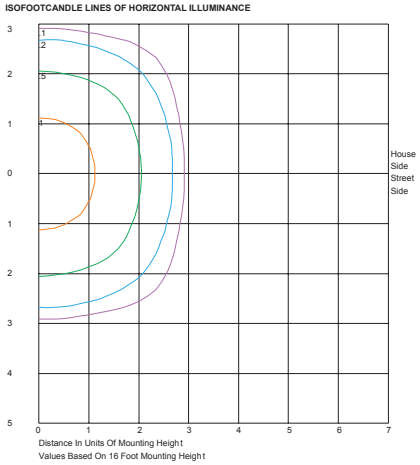
R5S/ 42.5W LED / 3000K CCT

Catalog #: LALC-R4S-CL-X-5G450-30-XX-120
Maximum candela of 1796 at 65° from vertical.
Mounting Height = 16' (4.87m)
4463 Delivered Lumens
105 Lumens per Watt
B2-U1-G1

DOWNLOAD IES FILES:
http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



Maximum Candela = 1795.909 Located At Horizontal Angle = 45, Vertical Angle = 65
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)



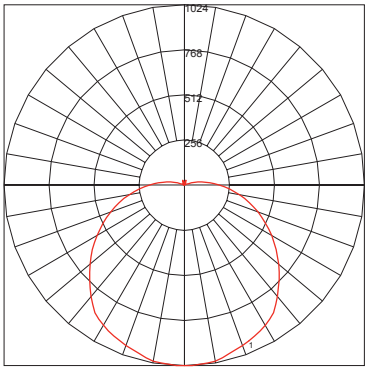
Photometry

DB / 42.5W LED / 3000K CCT

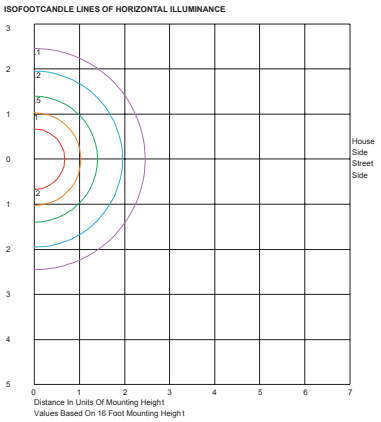
Catalog #: LALC-DB-FL-X-5G450-30-XX-120
Maximum candela of 1024 at 2.5° from vertical.
Mounting Height = 16' (4.87m)
3981 Delivered Lumens
94 Lumens per Watt
B1-U3-G2

DOWNLOAD IES FILES:

http://www.selux.us/fileadmin/us/photometry/Exterior/Lanova.zip



Maximum Candela = 1023.981 Located At Horizontal Angle = 0, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)



06-15-2017

TYPE JHP-RUN 3 & 6

REDUCE LUMEN OUTPUT
USED A FACTOR OF .264

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-DB-FL-X-5G450-30-XX-120.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] 11528333.01A
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 11/23/2016
[MANUFAC] SELUX Corporation
[LUMCAT] LALC-DB-FL-X-5G450-30-XX-120
[LUMINAIRE] Formed aluminum housing, frosted lens, clear plastic enclo
[MORE] sure
[LAMP] Seven white LEDs
[BALLAST] Osram Optotronic #79370
[OTHER] 25.3 C, 119.973 V, 0.277184 A, 42.5 W, 0.994118 PF, 59.9979
[MORE] Hz
[OTHER] This test was performed using the calibrated photodetector met
[MORE] hod of absolute photometry.

CHARACTERISTICS

IES Classification	Type V
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3981
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	~~42.5~~ 15 WATTS
Ballast Factor	1.00
Upward Waste Light Ratio	0.07
Maximum Candela	1023.981
Maximum Candela Angle	0H 2.5V
Maximum Candela (<90 Degrees Vertical)	1023.981
Maximum Candela Angle (<90 Degrees Vertical)	0H 2.5V
Maximum Candela At 90 Degrees Vertical	196.919 (4.9% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	319.72 (8.0% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-DB-FL-X-5G450-30-XX-120.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	406.9	N.A.	10.2
FM - Front-Medium (30-60)	854.1	N.A.	21.5
FH - Front-High (60-80)	454.1	N.A.	11.4
FVH - Front-Very High (80-90)	140.3	N.A.	3.5
BL - Back-Low (0-30)	406.9	N.A.	10.2
BM - Back-Medium (30-60)	854.1	N.A.	21.5
BH - Back-High (60-80)	454.1	N.A.	11.4
BVH - Back-Very High (80-90)	140.3	N.A.	3.5
UL - Uplight-Low (90-100)	161.7	N.A.	4.1
UH - Uplight-High (100-180)	108.1	N.A.	2.7
Total	3980.6	N.A.	100.0
BUG Rating	B1-U3-G2		

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-DB-FL-X-5G450-30-XX-120.IES

CANDELA TABULATION

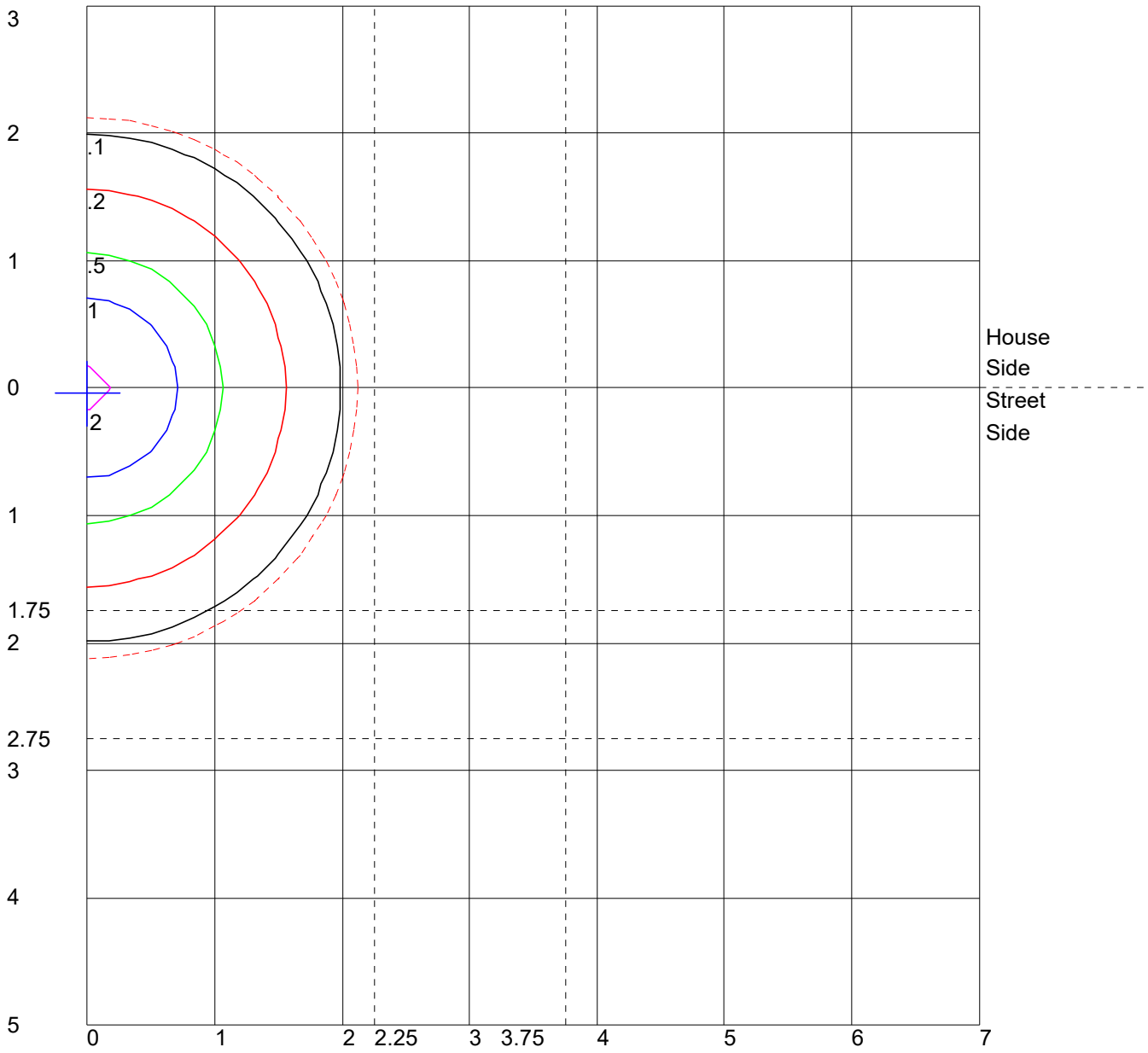
Vert. Angles	Horizontal Angles
	0
0.0	1023.981
2.5	1023.981
5.0	1019.462
7.5	1018.299
10.0	1014.297
12.5	1002.417
15.0	989.633
17.5	978.657
20.0	968.456
22.5	956.060
25.0	944.826
27.5	932.430
30.0	919.130
32.5	902.989
35.0	883.361
37.5	853.404
40.0	823.704
42.5	791.681
45.0	760.690
47.5	729.700
50.0	698.967
52.5	668.364
55.0	637.115
57.5	604.962
60.0	572.939
62.5	540.269
65.0	508.633
67.5	476.868
70.0	444.973
72.5	413.854
75.0	382.476
77.5	351.227
80.0	319.720
82.5	288.342
85.0	256.835
87.5	225.973
90.0	196.919
92.5	171.610
95.0	147.464
97.5	124.092
100.0	101.623
102.5	80.059
105.0	59.915
107.5	41.579
110.0	25.955
112.5	13.946
115.0	7.102
117.5	4.261
120.0	3.099
122.5	2.712
125.0	3.099
127.5	4.132
130.0	5.682

CANDELA TABULATION - (Cont.)

132.5	7.489
135.0	9.039
137.5	10.072
140.0	10.718
142.5	11.105
145.0	10.847
147.5	11.105
150.0	12.654
152.5	15.108
155.0	18.594
157.5	23.243
160.0	27.762
162.5	28.795
165.0	24.922
167.5	18.723
170.0	11.880
172.5	5.423
175.0	1.420
177.5	0.000
180.0	0.000

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-DB-FL-X-5G450-30-XX-120.IES

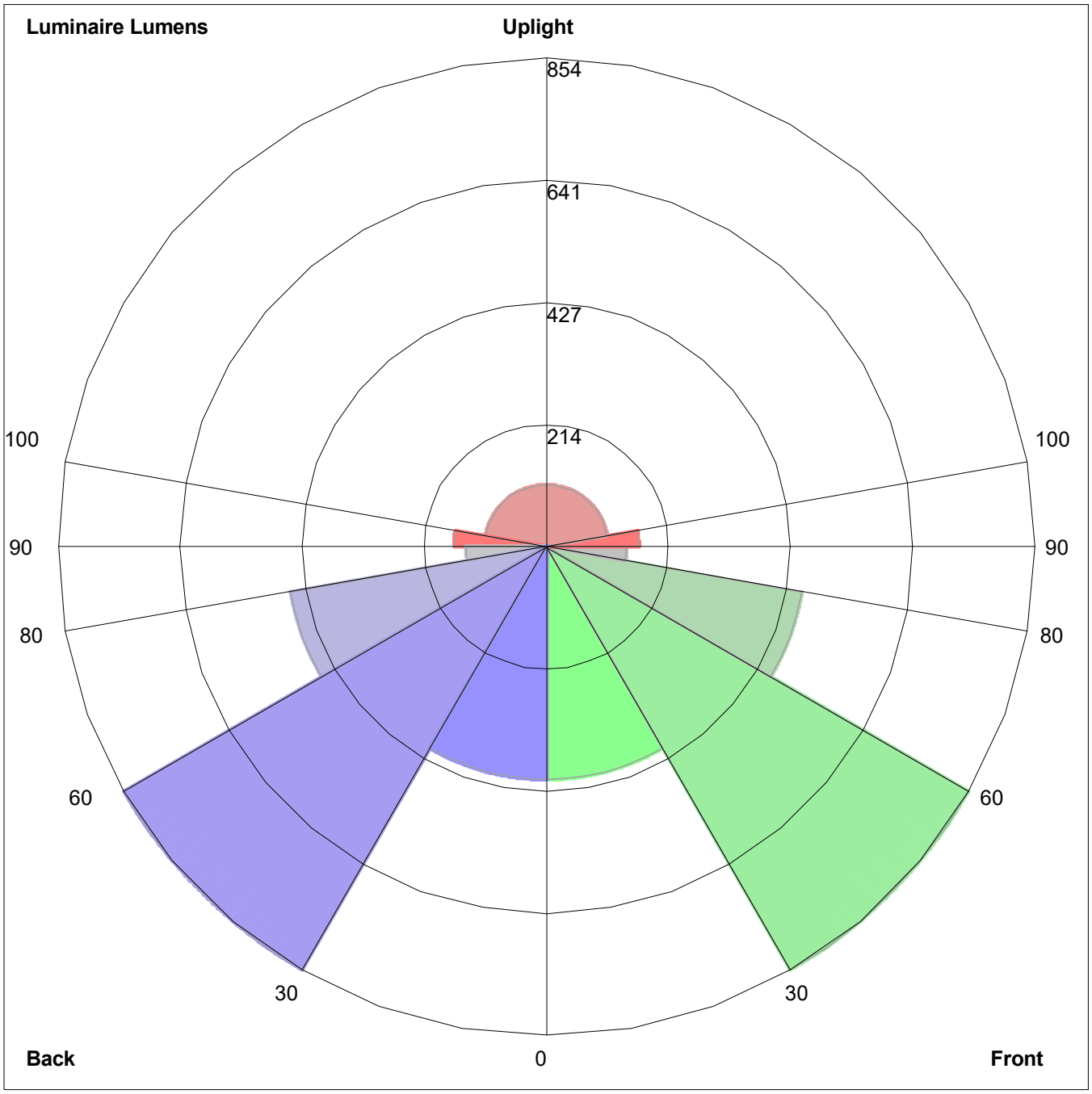
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 22 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : LALC-DB-FL-X-5G450-30-XX-120.IES

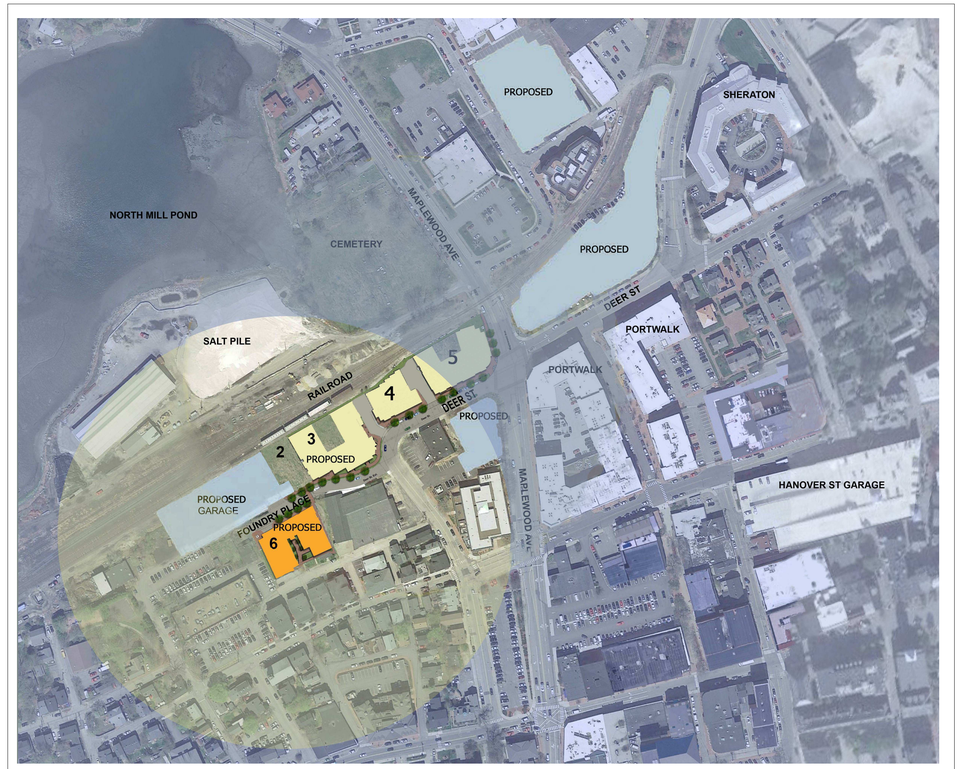
LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=406.9, Medium=854.1, High=454.1, Very High=140.3
Back: Low=406.9, Medium=854.1, High=454.1, Very High=140.3
Uplight: Low=161.7, High=108.1

BUG Rating : B1-U3-G2

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62



DRAWING SHEET LIST

SHEET NO.	NAME	3/17/2017	6/15/2017	8/21/2017
COVER SHEETS				
T.01 T	COVER SHEET	•	•	•
T.02 T	ZONING ORDINANCE REQUIREMENTS		•	•
CIVIL				
X5	EXISTING CONDITIONS SITE PLAN			•
C1.0	GENERAL NOTES SHEET 1 OF 2	•	•	•
C1.1	GENERAL NOTES SHEET 2 OF 2		•	•
C2.0	DEMOLITION PLAN	•	•	•
C3.0	SITE PLAN	•	•	•
C3.1	SITE PLAN - BUILDING HEIGHT INCENTIVE CALCULATION		•	•
C3.2	OPEN SPACE PLAN		•	•
C4.0	GRADING & DRAINAGE PLAN	•	•	•
C4.1	GRADING DETAIL	•	•	•
C4.2	AVERAGE GRADE PLANE CALCULATION			•
C5.0	UTILITIES PLAN	•	•	•
C5.1	OFFSITE ELECTRICAL IMPROVEMENTS PLAN		•	•
C6.0	EROSION & SEDIMENT CONTROL PLAN	•	•	•
C6.1	DRAINAGE & EROSION CONTROL DETAILS	•	•	•
C7.0	TRAFFIC AND PAVEMENT DETAILS	•	•	•
C7.1	STANDARD DETAILS	•	•	•
C7.2	STANDARD DETAILS	•	•	•
C7.3	STANDARD DETAILS		•	•
C7.4	STANDARD DETAILS			•
C8.0	DRAIN PROFILES AND CROSS-SECTIONS	•	•	•
E4	EASEMENT PLAN		•	•
C3.1-	LAYOUT & MATERIALS PLAN	•		
C3.2-	SITE PLAN - INCENTIVE COMMUNITY SPACE CALCULATION	•		
C3.3	PROPOSED EASEMENT PLAN (PRELIMINARY)	•		
SITE ELECTRIC				
SE1.1	BUILDING #6 ELECTRICAL & COMMUNICATION PLAN	•	•	•
SE1.2	BUILDING #6 LIGHTING PLAN	•	•	•
SE1.3	BUILDING #6 PHOTOMETRIC PLAN	•	•	•
SE1.4	SITE STREET LIGHTING PLAN		•	•
SE2.1	SITE ELECTRICAL DETAILS		•	•
SE2.2	SITE ELECTRICAL DETAILS		•	•
SE2.3	SITE ELECTRICAL DETAILS		•	•
SE3.1	SITE ELECTRICAL PLAN		•	•
SE3.2	SITE COMMUNICATION PLAN		•	•
SED1.1	SITE ELECTRICAL DEMOLITION PLAN - EXISTING CONDITIONS	•	•	•
SE1.4-	ELECTRIC METERING LOCATIONS	•		
LANDSCAPE				
L1	MATERIALS PLAN	•	•	•
L2	PLANTING PLAN AND DETAILS	•	•	•
L3	DETAILS AND SECTIONS	•	•	•
L-1	OVERALL HARDSCAPE PLAN (OFFSITE)	•		
L-2	OVERALL LANDSCAPE PLAN (OFFSITE)	•		
ARCHITECTURE				
A1.01 T	GROUND LEVEL (FOUNDRY PL) PLAN	•	•	•
A1.02 T	LEVEL 1 FLOOR (HILL ST) PLAN		•	•
A1.03 T	ROOF PLAN		•	•
A2.01 T	EXTERIOR ELEVATIONS	•	•	•
A2.02 T	EXTERIOR ELEVATIONS	•	•	•
A2.03 T	EXTERIOR ELEVATIONS	•	•	•
A3.00 T	3D VIEWS	•	•	•

SITE PLAN REVIEW
AUGUST 21, 2017

NOTE:
1. ALL CONDITIONS ON THIS PLAN SET SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.

CITY OF PORTSMOUTH PLANNING BOARD

CHAIRPERSON DATE

JSA
ARCHITECTS
INTERIORS
PLANNERS

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WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 3950
THE STATE OF NEW HAMPSHIRE

Scale: **3/32" = 1'-0"**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

COVER SHEET

T.01 T

Residences at Foundry Place - Area and Use Summary

June 15, 2017		AREA ANALYSIS							
Building Name	**Use**	Ground Floor (below grade) Area SF	1st Floor Area SF	2nd Floor Area SF	3rd Floor Area SF	4th Floor Area SF	Penthouse Area SF	Total Gross Floor Area - to inside face of exterior wall	Total Unit Count
Building 6	(development incentive 10.5A47.10)	**Building 6**							
	Parking Garage	16,364	5,156						0
	Parking easement for Hill Hanover Group								0
	Multi-Family Dwelling		3,097	13,969	13,969	12,964	6,023		43
	Multi-Family Decks / Balconies			511	631	819	3,647		0
	Office		4,296						0
	Retail Sales		1,867						0
	total area	16,364	14,416	14,480	14,600	13,783	9,670	**83,313**	43

Residences at Foundry Place - Parking Summary

June 15, 2017		PARKING ANALYSIS									
		Parking required - Downtown Overlay District 10.1115.20		Parking required - Development Incentive 10.5A47.10		Downtown overlay district - 10.1115.23	**Total parking spaces required**	Parking spaces provided on site	Parking spaces provided at Municipal Garage (see references below)	**Total parking spaces provided**	Surplus Parking Spaces
Building Name	**Use**	Spaces per residential unit	Quantity	Spaces per residential unit	Quantity	Reduction = 4 parking spaces	**Quantity**	Quantity	Quantity	**Quantity**	Quantity
Building 6	(development incentive 10.5A47.10)	**Building 6**									
	Parking Garages	0	0	0	0	0	**0**	33	**0**	**0**	0
	Parking easement for Hill Hanover Group	0	14	0	0	0	**0**	14	**0**	**0**	0
	Exterior parking	0	0	0	0	0	**0**	3	**0**	**0**	0
	Multi-Family Dwelling	0	0	1.00	43	0	**0**	0	**0**	**0**	0
	Multi-Family Decks / Balconies	0	0	0	0	0	**0**	0	**0**	**0**	0
	Office	0	0	0	0	0	**0**	0	**0**	**0**	0
	Retail Sales	0	0	0	0	0	**0**	0	**0**	**0**	0
	total area	0	14	0	43	(4.00)	**53**	50	**15**	**65**	12

New Municipal Foundry Place Parking Garage

Reference City/DSA Post Closing Obligations Agreement & Parking Agreement documents dated 9/09/2016, and per Section 10.1113.111 Municipal Garage Spaces qualify as "off-street parking" as held by City Legal Department.

DSA Parking Garage spaces - interior	58
DSA Flex Parking Spaces - exterior / interior	10
Total spaces	**68**

PORTSMOUTH CHARACTER ZONING - D5 - DEER STREET LOT 6 - 181 HILL STREET		
	PER CD5	PROPOSED
BUILDING PLACEMENT - PRINCIPAL BUILDING*		
MAXIMUM PRINCIPAL FRONT YARD	5 FT	> 5 FT
MAXIMUM SECONDARY FRONT YARD	5 FT	> 5 FT
SIDE YARD	NR	NR
MINIMUM REAR YARD	GREATER OF 5 FT FROM REAR LOT LINE OR 10 FT FROM CENTER LINE OF ALLEY	5 FT
* EXCEPT FOR ITEMS LISTED UNDER SECTION 10.5A42.12		
BUILDING AND LOT OCCUPATION		
MAXIMUM BUILDING BLOCK LENGTH	225 FT	152
MAXIMUM FAÇADE MODULATION LENGTH	100 FT	60 FT
MAXIMUM ENTRANCE SPACING	50 FT	MAX <50 FT
MAXIMUM BUILDING COVERAGE	95%	73%
MAXIMUM BUILDING FOOTPRINT (INCLUDES INCREASED FOOTPRINT INCENTIVE)	20,000 SF	16,364
MINIMUM LOT AREA	NR	NR
MINIMUM LOT AREA PER DWELLING UNIT	NR	NR
MINIMUM OPEN SPACE	5%	18%
BUILDING FORM - PRINCIPAL BUILDING		
*BUILDING HEIGHT (INCLUDES INCREASED HEIGHT INCENTIVE)	50 FT + 10 FT + 2 FT	61 FT 10 INCHES
BUILDING STORIES (INCLUDES INCREASED HEIGHT INCENTIVE)	4 STORIES + 1 STORY	4 STORIES + PENTHOUSE
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE	36 INCHES	< 36 INCHES
MINIMUM GROUND STORY HEIGHT	12 FT	18 FT 11 INCH
MINIMUM SECOND STORY HEIGHT	10 FT	11 FT
FAÇADE GLAZING		
SHOPFRONT FAÇADE	70% MIN.	72%
OTHER FAÇADE TYPES	20% MIN TO 50% MAX	33%
ROOF TYPE	FLAT, GABLE, HIP, GAMBREL, MANSARD	FLAT
ROOF PITCH, IF ANY	FLAT	FLAT
TOTAL OUTDOOR LIGHT OUTPUT ALLOWANCE 10.1143.10 - BUSINESS DISTRICTS - MAX MEAN LUMENS / NET ACRE	300,000	LESS THAN 300,000 - SEE LIGHTING REPORT ATTACHMENT

* BUILDING HEIGHT + INCENTIVE HEIGHT + 2 FEET FOR PENTHOUSE LEVEL PER MAP 10.5A21B BUILDING HEIGHT STANDARDS

JSA
ARCHITECTS
INTERIORS
PLANNERS

273 CORPORATE DRIVE
PORTSMOUTH, NH 03801
T 603.436.2551
F 603.436.6973
www.jsainc.com

GEOINSIGHT, INC.
GEOTECH & CIVIL
MANCHESTER, NEW HAMPSHIRE

GREENMAN-PEDERSEN, INC.
LANDSCAPE ARCHITECT
PORTSMOUTH, NEW HAMPSHIRE

JSN ASSOCIATES, INC.
STRUCTURAL ENGINEER
PORTSMOUTH, NEW HAMPSHIRE

ENGINEERED SYSTEMS INC.
MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

ZONING ORDINANCE REQUIREMENTS

T.02 T

LENGTH TABLE

LINE	BEARING	DISTANCE
L5	S40°13'28"E	4.32'
L6	S50°00'27"W	161.76'

EASEMENT AND RESTRICTION NOTES:

1) SUBJECT PARCEL IS SUBJECT TO A PARKING EASEMENT FOR THE BENEFIT OF TAX MAP 125 LOT 14, LOCATION IS NOT FIXED. SEE R.C.R.D. 5518/2747 & 5518/2759.

2) SUBJECT PARCEL IS SUBJECT TO A UTILITY EASEMENT TO THE CITY OF PORTSMOUTH. SEE R.C.R.D. 5518/2759.

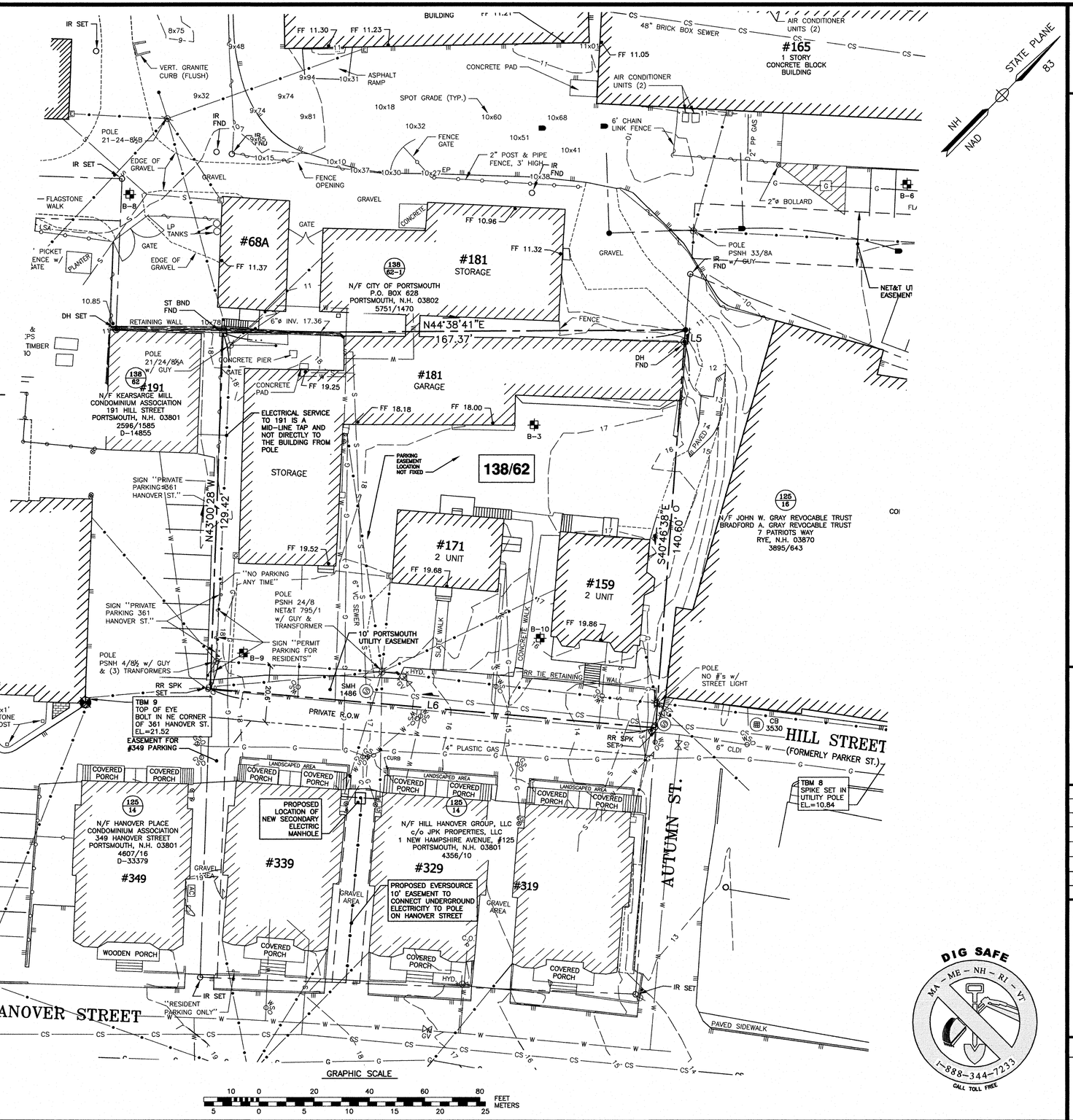
3) SEE ALSO PARTIAL RELEASE OF PARKING RELOCATION RIGHTS, R.C.R.D. 5751/1463.

4) SEE ALSO TEMPORARY ENCROACHMENT EASEMENT DEED, R.C.R.D. 5751/1485.

5) SUBJECT PARCEL IS SUBJECT TO A PRIVATE RIGHT OF WAY.

LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
11/21	MAP 11 / LOT 21
RR SPK FND	RAILROAD SPIKE FOUND/SET
IR FND	IRON ROD FOUND/SET
IP FND	IRON PIPE FOUND/SET
DH FND	DRILL HOLE FOUND/SET
CONC BND w/DH	CONCRETE BOUND w/ DRILL HOLE
ST BND w/DH	STONE BOUND w/DRILL HOLE
FM	FORCE MAIN
S	SEWER LINE
G	GAS LINE
D	STORM DRAIN
W	WATER LINE
	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC/WIRES
	CHAIN LINK FENCE
100	CONTOUR
97x3	SPOT ELEVATION
	EDGE OF PAVEMENT (EP)
	UTILITY POLE (w/ GUY)
W	SHUT OFF (GAS / WATER)
GV	GATE VALVE
	BOLLARD
HYD	HYDRANT
G W E	METER (GAS, ELECTRIC)
	CATCH BASIN
T	TELEPHONE MANHOLE
S	SEWER MANHOLE
D	DRAIN MANHOLE
B-1	TEST BORING
AC	AIR CONDITIONER UNIT
	SIGNS
AC	ASBESTOS CEMENT PIPE
CI	CAST IRON PIPE
DI	DUCTILE IRON PIPE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
VC	VITRIFIED CLAY PIPE
PP	PLASTIC PIPE
EL.	ELEVATION
EP	EDGE OF PAVEMENT
FF	FINISHED FLOOR
INV.	INVERT
TBM	TEMPORARY BENCHMARK
TYP.	TYPICAL
VGC/SGC	VERTICAL/SLOPED GRANITE CURB
CCB	CAPE COD BERM
AG	ABOVE GRADE



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road – Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

STATE PLANE NH 83 NAD

NOTES:

1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 62.

2) OWNERS OF RECORD:
DEER STREET ASSOCIATES
PO BOX 100
YORK HARBOR, ME
3395/2669, 5534/2077, 5453/138

3) PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 330150295E, EFFECTIVE DATE MAY 17, 2005.

4) EXISTING LOT AREAS:
22,538 S.F.
0.5174 ACRES

5) PARCEL IS LOCATED IN THE CD5 CHARACTER BASED ZONING DISTRICT.

6) DIMENSIONAL REQUIREMENTS:
SEE ZONING ORDINANCE

7) THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON THE SUBJECT PARCELS.

8) HORIZONTAL DATUM AND BASIS OF BEARING IS NEW HAMPSHIRE STATE PLANE NAD83(2011). BASIS OF HORIZONTAL DATUM IS RTK GPS OBSERVATIONS.

9) VERTICAL DATUM IS MEAN SEA LEVEL-NAVD88. BASIS OF VERTICAL DATUM IS NGS PID OC0290 – B 2 1923, ELEVATION 19.55.

10) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

11) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

DEER STREET ASSOCIATES, INC. SITE REDEVELOPMENT PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	ELECTRIC, WATER, EASEMENTS	8/10/17
1	ADD SPOT ELEVATIONS ON LOT 1	4/6/17
0	ISSUED FOR COMMENT	11/14/16

REVISIONS

STATE OF NEW HAMPSHIRE — No. 7138 — JOHN R. CHAGNON — REGISTERED LAND SURVEYOR

DIG SAFE
MA – ME – NH – RI – VT
1-888-344-7233
CALL TOLL FREE

SCALE: 1" = 20' OCTOBER 2016

EXISTING CONDITIONS SITE PLAN

X5

FB 230, PG 31

2271

GENERAL CONSTRUCTION NOTES

1. THESE PLANS ARE BASED ON THE "EXISTING CONDITIONS SITE PLAN" PRODUCED BY AMBIT ENGINEERING, INC. WITH AN INITIAL ISSUED DATE OF 11/14/16 AND "FOUNDRY PLACE PARKING GARAGE" BY TIGHE AND BOND, INC WITH AN ISSUE DATE OF 07/28/2017. SEE THE EXISTING CONDITION SITE PLAN FOR BENCHMARK INFORMATION AND THE FOUNDRY PLACE PARKING GARAGE PLAN SET FOR FOUNDRY PLACE DETAILS.
2. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT IN RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSPECTIONS, BONDS, ETC., AND OTHER APPROVAL RELATED ITEMS. NO CONSTRUCTION SHALL COMMENCE UNTIL SUCH PERMITS HAVE BEEN SECURED.
4. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE NHDOT, STATE, AND CITY OF PORTSMOUTH REGULATIONS, SPECIFICATIONS, AND ORDINANCES, UTILITY EASEMENTS, AND APPLICABLE CODES.
5. CONTRACTOR TO CONFIRM AND VERIFY THE VALIDITY, LOCATION, MATERIAL, AND AVAILABILITY TO USE EXISTING UTILITIES ON OR NEAR THE PROJECT SITE PROPERTY. CONTRACTOR TO LOCATE EXISTING UTILITIES AND CONFIRM SAID UTILITIES WITH ALL APPLICABLE MUNICIPALITIES AND UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. ONCE UTILITIES HAVE BEEN CONFIRMED IN THE FIELD BY CONTRACTOR AND VERIFIED BY APPLICABLE MUNICIPALITY AND UTILITY COMPANY AND CONNECTION HAS BEEN APPROVED BY ENTITY, ONLY THEN SHALL THE CONTRACTOR CONSTRUCT AND UTILIZE THESE UTILITIES. CONTRACTOR TO IMMEDIATELY INFORM THE ENGINEER OF RECORD OF ANY DEVIATIONS TO PLANS.
6. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES SHOWN ON THESE PLANS MAY BE ONLY APPROXIMATELY CORRECT AND THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, SEWER, ELECTRIC, AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
8. RELOCATION OF ANY UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE AND COMPLETED WITH THE UTILITY WORK. THE OWNER AND ENGINEER SHALL BE NOTIFIED IN WRITING AS TO THE RELOCATIONS REQUIRED AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, CURBS, ETC., THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
10. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
11. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE DOCUMENTS AND SUBSEQUENT ISSUED PLAN REVISIONS. ANY DEVIATIONS FROM THESE DOCUMENTS SHALL REQUIRE NOTIFICATION TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTING ANY CHANGE. THE CONTRACTOR WILL OTHERWISE BE WORKING AT HIS OR HER OWN RISK.
12. ALL WATER, DRAIN, AND SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF PORTSMOUTH RULES, SPECIFICATIONS, AND REGULATIONS.
13. GROUNDWATER SHALL BE TEMPORARILY LOWERED TO A MINIMUM OF 2' BELOW EXCAVATIONS. CONTRACTOR SHALL REPAIR ADVERSE IMPACTS FROM REMOVAL OF SOIL AT ITS OWN EXPENSE.
14. DISCHARGE FROM DEWATERING ACTIVITIES SHALL BE INFILTRATED ONSITE. IF DISCHARGE IS UNABLE TO BE INFILTRATED THEN CONTRACTOR SHALL OBTAIN A DEWATERING PERMIT FROM THE CITY TO DISCHARGE INTO THE CITY'S STORM DRAIN OR SEWER, OR PROPERLY TRANSPORT AND DISPOSE OF OFFSITE PER FEDERAL, STATE AND LOCAL REGULATIONS.
15. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS UTILITY SERVICE AND ACCESS TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. IF A TEMPORARY DISCONNECT OF UTILITIES OR ACCESS IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE OWNER, AND THE PLACE OF BUSINESS OR HOME OWNER 3 DAYS PRIOR TO THE DAY OF THE DISCONNECTION.
16. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS, LATEST REVISIONS.
17. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY, AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
18. THE CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS WITH ALL UPDATED INFORMATION ON THE PROJECT SITE AND INPUT INFORMATION TO A DIGITAL/ ELECTRONIC FORMAT AT LEAST MONTHLY. AS-BUILT INFORMATION MUST BE FORWARDED TO THE OWNER AND ENGINEER MONTHLY FOR APPROVAL, AND BE USED TO PREPARE A FINISHED SET OF PLANS.

EROSION CONTROL NOTES:

1. SEE SHEET C6.1 FOR GENERAL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.

DEMOLITION NOTES:

1. THE DEMOLITION PLAN OR THE EXISTING CONDITIONS SITE PLAN DOES NOT NECESSARILY DEPICT THE EXACT LOCATION AND SIZE OF ALL UTILITIES WHICH MAY EXIST AT THE TIME OF DEMOLITION INSIDE OR OUTSIDE OF EXISTING OR PROPOSED BUILDINGS, ON THE SUBJECT PROPERTY, WITHIN THE STREET ROW, OR ON ABUTTING LOTS.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES. REQUEST FOR MARKINGS CAN BE MADE BY CALLING DIG-SAFE AT 1-888-344-7233, AND THE CITY OF PORTSMOUTH DPW AT 603-427-1530 AT LEAST 72 HOURS PRIOR TO EXCAVATION. STREET OPENING PERMITS SHOULD ALSO BE FILED AT THAT TIME.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE NOT GUARANTEED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE AND EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL PERMIT APPROVALS.
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
7. ALL EXISTING UTILITY SERVICE CONNECTIONS TO BUILDING BEING REMOVED SHALL BE ABANDONED UNLESS NOTED OTHERWISE. THE WATER AND SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAIN IN THE STREET BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY OF PORTSMOUTH STANDARDS. THE EXISTING GAS, ELECTRIC AND/OR CATV INSTALLATION AND ABANDONMENT OF EXISTING CONNECTIONS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE COMPANIES.
8. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED BY THE OWNER. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES, AND CODES.
9. FINAL DEMARCATION POINTS FOR GAS, ELECTRIC, TELEPHONE, AND COMMUNICATION SERVICE ENTRANCES ARE SUBJECT TO APPROVALS OF EACH PROVIDER.
10. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING ANY COURTESY ABUTTER NOTIFICATIONS THAT MAY BE WARRANTED.
11. THE CONTRACTOR SHALL SAWCUT AND REMOVE PAVEMENT FOR ULTITIY CONSTRUCTION OR REMOVAL AND CONSTUCT TRENCH PATCH AFTER INSTALLATION.
12. NO TRENCHES ARE ALLOWED TO REMAIN OPEN OVERNIGHT. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF THE WORK DAY OR COVERED WITH STEEL PLATES PER STATE AND LOCAL REGULATIONS AND SPECIFICATIONS. IF STEEL PLATES ARE USED, THE TOTAL LENGTH OF PLATES IN THE TRAVELED WAY SHALL BE LIMITED TO 50'.
13. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
14. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDERGROUND PIPING, POLES, SIGNS, FENCES,RAMPS, WALLS, BOLLARDS, TREES AND LANDSCAPING AS MAY BE APPLICABLE.
15. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
16. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO REPLACE ANY DISTURBED MONUMENTATION.

GENERAL UTILITY NOTES:

1. COORDINATE WORK WITH OTHER CONTRACTORS AS MAY BE APPLICABLE, ALSO COORDINATE ALL UTILITY WORK WITH THE OWNER AND THE APPROPRIATE UTILITY COMPANY.

WATER & SEWER:	CITY OF PORTSMOUTH CONTACT: DAVE DESFOSSES PHONE: (603) 427-1530
ELECTRIC:	EVERSOURCE ENERGY CONTACT: NICK KOSKO PHONE: (603) 332-4227 EXT. 5555334
TELEPHONE/DATA:	FAIRPOINT COMMUNICATIONS CONTACT: JOSEPH CONSIDINE PHONE: (603) 427-5525
CABLE/DATA:	COMCAST CONTACT: MIKE COLLINS PHONE: (603) 679-5695 EXT. 1037
GAS:	UNITIL CONTACT: DAVID BEAULIEU PHONE: (603) 294-5144

2. PROPOSED GAS LINE AND ELECTRIC, TELEPHONE AND CABLE (ETC) CONDUIT LOCATIONS AND CONFIGURATIONS ARE APPROXIMATE. PRIOR TO CONSTRUCTION CONTRACTOR TO COORDINATE FINAL LOCATION, MATERIALS AND SPECIFICATIONS WITH INDIVIDUAL UTILITY COMPANIES.
3. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
5. ALL EXISTING UTILITY SERVICES LOCATED WITHIN THE WORK AREA ARE TO BE CUT, CAPPED AND ABANDONED AT HE MAIN (OR SOURCE) OR AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS OR APPLICABLE UTILITY PROVIDER.
6. ALL UTILITIES SHOWN ON THIS SITE ARE TO THE EXTERIOR OF THE BUILDING FOUNDATION ONLY. UTILITIES THROUGH THE FOUNDATION, ABOVE FG AND CONNECTED TO THE BUILDING, AND INSIDE THE BUILDING ARE THE RESPONSIBILITY OF THE MECHANICAL AND/ OR PLUMBING ENGINEER AND LOCATED IN THE BUILDING PLANS.
7. ALL UTILITY WORK PERFORMED WITHIN RIGHT-OF-WAY SHALL BE PERFORMED BY A CONTRACTOR LICENSED BY THE CITY OF PORTSMOUTH AND WHO HAS OBTAINED A PERMIT FOR SUCH WORK FROM THE DPW, IF REQUIRED.
8. ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS AND NOT BE ALLOWED TO ACCUMULATE FOR MORE THAN THREE CONSECUTIVE DAYS. SITE SHALL BE KEPT FREE AND CLEAR OF ALL DEBRIS AND TRASH AT ALL TIMES. ALL DEBRIS SHALL BE STORED IN SEGREGATED RECYCLING TOTES/ BINS/ CONTAINERS AND TRANSPORTED TO AN APPROPRIATE RECYCLING CENTER.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL UTILITIES AS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS AND STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SPECIFICATIONS OF MATERIALS AND INSTALLATION PROCEDURES AND INSTALL IN ACCORDANCE WITH APPLICABLE REGULATIONS.
10. THE CONTRACTOR IS RESPONSIBLE TO CONTACT AND DETERMINE, COORDINATE AND SCHEDULE ALL NECESSARY INSPECTIONS AND MONITORING WITH ALL APPROPRIATE UTILITY COMPANIES.
11. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO PERFORM THE WORK.
12. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE PROJECT BENCHMARK AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF ITS WORK.
14. WATER AND SEWER TESTING SHALL CONFORM TO CITY OF PORTSMOUTH REGULATIONS, REQUIREMENTS, AND SPECIFICATIONS. COORDINATE TESTING OF SEWER AND WATER LINE CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
15. ALL MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
16. ALL SEWER AND WATER PIPE MATERIALS, STRUCTURES, APPURTENANCES AND INSTALLATION SHALL BE IN ACCORDANCE TO THE CITY OF PORTSMOUTH CONSTRUCTION SPECIFICATIONS AND REQUIREMENTS.
17. ALL GRAVITY SEWER PIPE SHALL BE PVC (SDR35) AND BE GREEN IN COLOR.
18. ALL WATER MAIN AND SERVICE PIPE SHALL BE DUCTILE IRON CEMENT LINED (DICL) CLASS 52.
19. ALL HYDRANTS, VALVES, AND FITTINGS SHALL MEET CITY OF PORTSMOUTH SPECIFICATIONS AND REQUIREMENTS.
20. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, COVERS, PLATES, ANCILLARY MATERIALS AND HARDWARE, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION COMPLETE AND OPERATIONAL AND ACCEPTABLE TO THE CITY OF PORTSMOUTH AND PRIVATE UTILITIES.
21. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION SHALL BE FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
22. TRENCH AREAS FOR THE CONSTRUCTION OF THE UNDERGROUND UTILITIES ARE TO BE REPATCHED WITH SAME MATERIAL AT THE SAME DEPTH AS THE EXISTING MATERIAL, SEE UTILITY TRENCH DETAIL. THE AREAS OF TRENCHING SHALL BE NEATLY SAW-CUT AND THE NEW REPATCHING MATERIAL SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE PLAN DETAILS AND THE CITY OF PORTSMOUTH SPECIFICATIONS AND REQUIREMENTS.
23. DURING EXCAVATION AND CONSTRUCTION OF PIPES AND STRUCTURES, TRENCHES MUST BE ADEQUATELY BRACED AND PROTECTED AGAINST CAVE-IN.
24. SEE ELECTRICAL PLANS FOR ADDITIONAL UTILITY NOTES.
25. CONTRACTOR SHALL COORDINATE ALL FINAL APPROVALS ASSOCIATED WITH GAS, ELECTRIC, TELEPHONE, & CABLE WITH APPROPRIATE UTILITY PROVIDER.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:
Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:
STATE OF NEW HAMPSHIRE - JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

GENERAL NOTES SHEET 1 OF 2

C1.0

I:\80900\DWG\CIVIL\80900-LOT-6 DETAILS.dwg

PROJECT NOTES:

1. PROPERTY LOCATION: 181 HILL STREET
   PORTSMOUTH, NH 03801

2. ASSESSORS MAP: MAP 138, LOT 62

3. ZONE: CHARACTER DISTRICT 5

4. USE: OFFICE, RESIDENTIAL, RETAIL

5. OWNER/APPLICANT: DEER STREET ASSOCIATES
   7 BANKS ROCK ROAD
   YORK HARBOR, ME 03911
   TEL: (207) 363-3540

6. CIVIL & GEOTECH: GEOINSIGHT, INC.
   186 GRANITE STREET, 3RD FLOOR SUITE A
   MANCHESTER, NH 03101
   TEL: (603) 314-0820

7. ARCHITECT: JSA INC.
   273 CORPORATE DRIVE, SUITE 100
   PORTSMOUTH, NH 03801
   TEL: (603) 436-2551

8. LANDSCAPE ARCHITECT: GREENMAN - PEDERSEN, INC.
   21 DANIELS STREET
   PORTSMOUTH, NH 03801
   TEL: (802) 359-4070

9. STRUCTURAL: JSN ASSOCIATES, INC.
   1 AUTUMN STREET
   PORTSMOUTH, NH 03801
   TEL: (603) 433-8639

10. MPFP ENGINEER ENGINEERED SYSTEMS, INC.
    237 LEXINGTON STREET, SUITE 207
    WOBURN, MA 01801
    TEL: (781) 569-6520

11. ELECTRICAL ENGINEER: ENGINEERED BUILDING SYSTEMS, INC.
    22 MANCHESTER RD, SUITE 8-A
    DERRY, NH 03038
    TEL: (603) 870-9009

12. LAND SURVEYOR: AMBIT ENGINEERING, INC.
    200 GRIFFIN RD, UNIT 3
    PORTSMOUTH, NH 03801
    TEL: (603) 430-9282

13. EXISTING CONDITIONS INFORMATION SHOWN IN THESE PLANS IS BASED ON THE PLAN TITLED "EXISTING CONDITIONS SITE PLAN" BY AMBIT ENGINEERING, INC. WITH DATE OF NOVEMBER 14, 2016.

14. ELEVATIONS ARE BASED ON THE MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD-88).

15. FOR BENCHMARK INFORMATION SEE "EXISTING CONDITIONS SITE PLAN" BY AMBIT ENGINEERING, INC. WITH DATE OF NOVEMBER 14, 2016.

16. PARCELS ARE NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. MAY 17, 2005.

17. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXECUTE THE NPDES CONSTRUCTION GENERAL PERMIT NOI AND SWPPP AND PROVIDE A COPY TO THE CITY OF PORTSMOUTH.

18. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL PREPARE AND SUBMIT AS-BUILT MYLARS AND DIGITAL FORMAT (.DWG FILE) ON DISK TO THE ENGINEER FOR REVIEW. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER AND CONFORM TO THE CITY OF PORTSMOUTH STANDARDS.

19. ALL WATER AND SEWER CONSTRUCTION ACTIVITIES MUST BE PERFORMED BY A LICENSED CITY DRAIN LAYER. ALL TESTING RESULTS FOR THE UTILITIES AND SERVICE TIE CARDS ARE REQUIRED TO BE SUBMITTED TO THE CITY OF PORTSMOUTH DPW.

20. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN THE FOLLOWING LOCAL PERMITS PRIOR TO CONSTRUCTION ACTIVITIES:

CITY OF PORTSMOUTH
- A. SEWER CONNECTION PERMIT
- B. WATER CONNECTION PERMIT
- C. STORMWATER PERMIT
- D. DRIVEWAY PERMIT
- E. TEMPORARY DEWATERING PERMIT

NHDES ③
- A. SEWER CONNECTION PERMIT

USEPA
- A. NPDES CONSTRUCTION GENERAL PERMIT (CGP)

21. THE CONTRACTOR SHALL REFER TO FORCOMING REPORTS REGARDING SITE GEOTECHNICAL AND ENVIRONMENTAL CONDITIONS, TO BE PROVIDED BY THE OWNER.

GRADING AND DRAINAGE NOTES:

1. A DUST EMISSION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED BY THE CONTRACTOR IF CONDITIONS WARRANT. ALL STORM DRAIN PIPES SHALL BE ADS HP STORM UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS, AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
3. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" OF LOAM WITH SEED, FERTILIZER AND MULCH.
4. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT'S STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
5. SEE GEOTECHNICAL REPORT PREPARED BY GEOINSIGHT, INC. FOR SOIL FILL MATERIAL AND COMPACTION REQUIREMENTS.
6. ALL DRAIN PIPE SHALL MEET THE FOLLOWING SPECIFICATIONS.
   - ALL ROOF DRAINS SHALL BE CAST IRON UP TO BUILDING CONNECTION. SEE BUILDING PLUMBING PLANS (BY OTHERS) FOR CONTINUATION UNDER BUILDING.
   - ALL CATCH BASIN DRAINS SHALL BE 12" Ø OR LARGER AND SHALL BE ADS HP STORM. IF THE COVER IN TRAFFIC AREAS IS LESS THAN 2', CLASS V RCP SHALL BE USED. ALL MANHOLES, CATCH BASINS, VALVE BOXES, CURB BOXES, ETC WITHIN THE LIMIT OF WORK TO FINISH GRADE SHALL BE ADJUSTED TO FINISH GRADE.
7. CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS IN FIELD PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE OWNER'S CONSTRUCTION REPRESENTATIVE IF ELEVATIONS DIFFER FROM PLAN.
   A TEMPORARY DEWATERING PERMIT SHALL BE OBTAINED FROM THE CITY BEFORE DISCHARGING GROUNDWATER OFFSITE DURING CONSTRUCTION
8. ANY GROUNDWATER DISCHARGES PROPOSED FOR THE FINAL STORMWATER SYSTEM DESIGN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL OF CAPACITY.

SITE NOTES

1. EXTERIOR PAVEMENT MARKINGS SHALL BE INSTALLED AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, PAINTED ISLANDS, AND CENTERLINES. ALL MARKINGS SHALL BE WHITE UNLESS NOTED OTHERWISE. ALL THERMOPLASTIC PAVEMENT MARKINGS INCLUDING LEGENDS, ARROWS, CROSSWALKS, AND STOP BARS SHALL MEET THE AASHTO M249 REQUIREMENTS. ALL PAINTED PAVEMENT MARKINGS SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F".
2. ALL PAVEMENT MARKINGS, ROADWAY SIGNAGE SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE AMERICANS WITH DISABILITIES ACT, AND "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", LATEST EDITIONS.
3. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE, WHITE THERMOPLASTIC AND CONFORM TO CURRENT MUTCD STANDARDS.
4. EDGE, LANE, AND CENTERLINES SHALL BE FOUR (4) INCH WIDE LINES.
5. EDGE AND LANE DEMARCATION LINES SHALL BE PAINTED WHITE.
6. LANE DEMARCATION MARKINGS SEPARATING OPPOSING TRAFFIC DIRECTIONS SHALL BE PAINTED YELLOW.
7. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
8. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED ENGINEER/SURVEYOR TO DETERMINE ALL LINES AND GRADES.
9. ALL WORK SHALL CONFORM THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORK'S STANDARD SPECIFICATIONS.
10. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED.

I:\18090\DWG\CIVIL\18090-LOT-6 DETAILS.dwg

CIVIL ABBREVIATIONS

ADD	ADDITIONAL INFORMATION
APPROX.	APPROXIMATE
BIT CONC	BITUMINOUS CONCRETE
BC	BOTTOM OF CURB
BH	BORING HOLE
BLDG	BUILDING
BOW	BOTTOM OF WALL
BOT	BOTTOM
DPW	CITY DEPARTMENT OF PUBLIC WORKS
CO	CLEAN OUT
CONC	CONCRETE
CY	CUBIC YARD
DICL	DUCTILE IRON CEMENT LINED PIPE
DSYL	DOUBLE SOLID YELLOW CENTER LINE
ECB	EXISTING CATCH BASIN
EDMH	EXISTING DRAIN MANHOLE
ELE	ELEVATION
EOP	EDGE OF PAVEMENT
ESMH	EXISTING SEWER MANHOLE
ETC	ELECTRIC TELEPHONE CABLE
EX	EXISTING
FE	FLANGED END
FT	FEET
GFA	GROSS FLOOR AREA
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
HYD	HYDRANT
INV	INVERT
LOC.	LOCATION
LOW	LIMIT OF WORK
MJ	MECHANICAL JOINT
N/F	NOW OR FORMERLY
OHW	OVER HEAD WIRE
PC	POINT OF CURVATURE
PCB	PROPOSED CATCH BASIN
PDMH	PROPOSED DRAIN MANHOLE
PFES	PROPOSED FLARED END SECTION
PGT	PROPOSED GREASE TRAP
PHW	PROPOSED HEADWALL
POS	PROPOSED OUTLET STRUCTURE
PSMH	PROPOSED SEWER MANHOLE
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	PIPE POLYVINYL CHLORIDE PIPE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RET	RETAINING
ROW	RIGHT OF WAY
SC	STORM CEPTOR
SF	SQUARE FEET
SGC	SLOPED GRANITE CURB
STA	STATION
SSWL	SINGLE SOLID WHITE LINE
SSYL	SINGLE SOLID YELLOW LINE
SDWL	SINGLE DASHED WHITE LINE
SDYL	SINGLE DASHED YELLOW LINE
SYL	SOLID YELLOW LINE
SY	SQUARE YARD
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TOW	TOP OF WALL
TP	TEST PIT
TYP	TYPICAL
UGE	UNDER GROUND ELECTRIC
UP	UTILITY POLE
VGC	VERTICAL GRANITE CURB
W/	WITH

PLAN LEGEND

- PROPERTY LINE
- SETBACK LINE
- ABUTTING PROPERTY LINE
- PROPOSED BUILDING
- CURB
- RETAINING WALL
- TRAFFIC ARROWS
- (10) PARKING SPACE COUNT
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED STORM DRAIN
- 80.00 PROP. SPOT GRADE
- PROPOSED SEWER MANHOLE
- PROPOSED SANITARY SEWER LINE
- W PROPOSED WATER MAIN
- WV PROPOSED WATER VALVE
- PROPOSED HYDRANT
- G PROPOSED GAS LINE
- GV PROPOSED GAS VALVE
- UGE PROPOSED UNDERGROUND POWER
- COM PROPOSED UNDERGROUND COMMUNICATIONS
- T PROPOSED TRANSFORMER
- 16 EXISTING GRADE
- 16 PROPOSED GRADE
- E PROPOSED ELECTRICAL HANDHOLE

SEE EXISTING CONDITIONS SITE PLAN FOR EXISTING CONDITION SYMBOLS AND LEGEND

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DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE · JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER ·

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

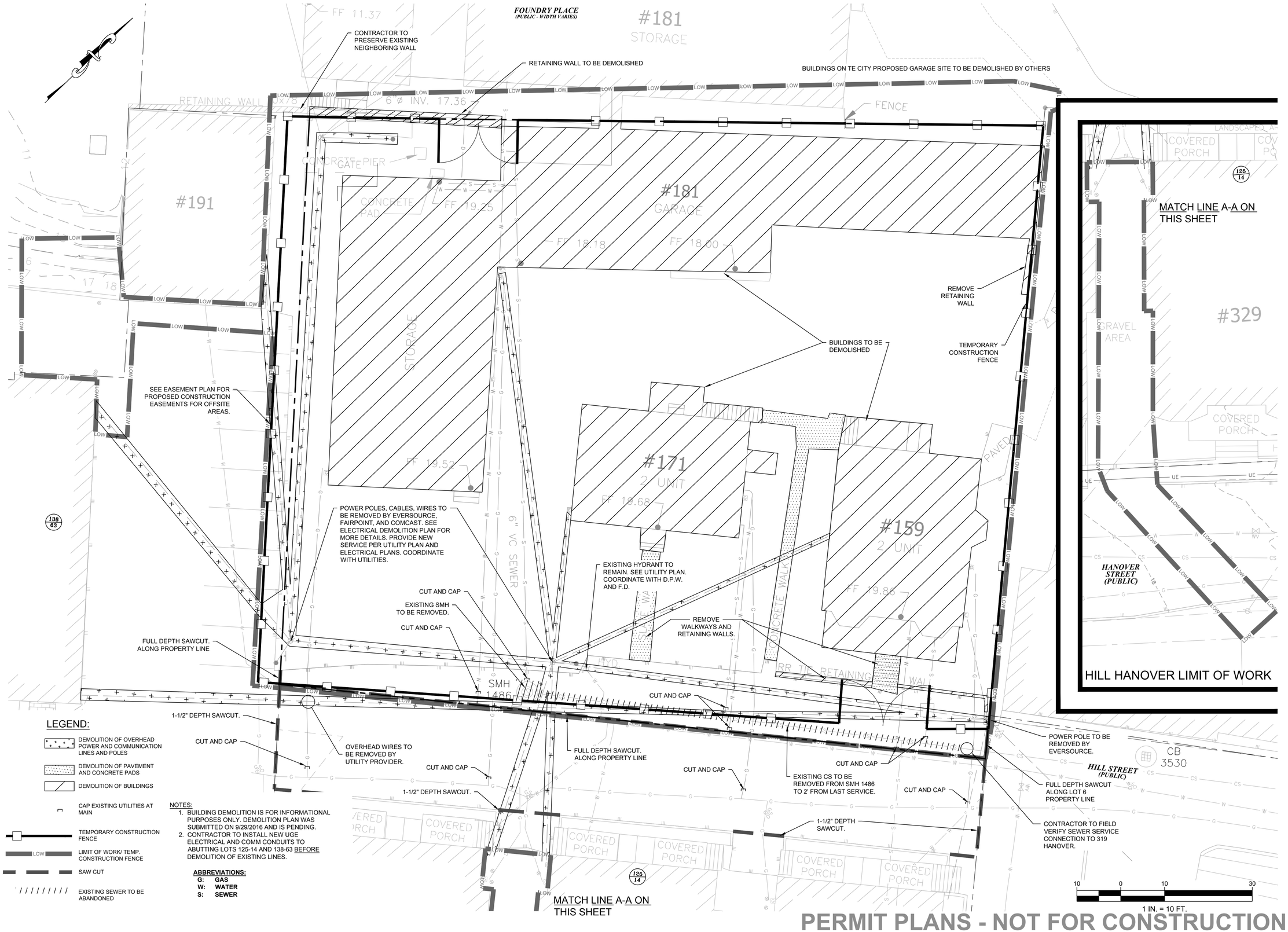
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
③	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

GENERAL NOTES SHEET 2 OF 2

C1.1



LEGEND:

- DEMOLITION OF OVERHEAD POWER AND COMMUNICATION LINES AND POLES
- DEMOLITION OF PAVEMENT AND CONCRETE PADS
- DEMOLITION OF BUILDINGS
- CAP EXISTING UTILITIES AT MAIN
- TEMPORARY CONSTRUCTION FENCE
- LOW — LIMIT OF WORK/ TEMP. CONSTRUCTION FENCE
- SAW CUT
- EXISTING SEWER TO BE ABANDONED

NOTES:

1. BUILDING DEMOLITION IS FOR INFORMATIONAL PURPOSES ONLY. DEMOLITION PLAN WAS SUBMITTED ON 9/29/2016 AND IS PENDING.
2. CONTRACTOR TO INSTALL NEW UGE ELECTRICAL AND COMM CONDUITS TO ABUTTING LOTS 125-14 AND 138-63 BEFORE DEMOLITION OF EXISTING LINES.

ABBREVIATIONS:

G:	GAS
W:	WATER
S:	SEWER

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STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED PROFESSIONAL ENGINEER

Scale:	1"=10'
Date:	3/17/2017
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SITE PLAN REVIEW

DEMOLITION PLAN

C2.0

CITY GARAGE MAIN ENTRANCE

APPROXIMATE LOCATION OF CITY GARAGE FOOT PRINT

FOUNDRY PLACE (PUBLIC - WIDTH VARIES)

ACCESSIBLE CURB RAMP TO BE COORDINATED WITH CITY

PROPOSED 11' WIDE CROSSWALK. COORDINATE WITH CITY.

24'

21.55'

BRICK SIDEWALK

VGC BY CITY

PROP. STOP BAR AND NON-ADA CROSSWALK

NEW BIT CONC PAVEMENT

VGC BY CITY

22'

BRICK SIDEWALK

GARBAGE CAN

BIKE RACK

BENCH (TYP.)

VGC (BY CITY)

PROP TIP DOWN

R12

R15'

VGC

VGC

L.S.A.

14.1'

7.5'

WALK WIDTH 8'

14.1'

6.52'

R2'

8'x7.5' TRANSFORMER PAD

T

5'

10.18'

6.03'

5'

19'

22' GARAGE ENTRANCE

DOOR (TYP.)

SPLIT LEVEL RETAIL SPACE

7.75'

BRICK SIDEWALK (TYP.)

CONC WALKWAY

#191

6.49'

6" SSWL

AHEAD STOP

4

WASTE RECYCLE ROOM

ELECTRIC METERS

WATER ENTRY/ MECHANICAL ROOM

7.5'± HIGH RETAINING WALL

GAS METERS

FLOOR LEVEL BREAK

CONC WALK

6.04'

STAIR 1

STAIR 2

22'

END OF BASEMENT RAMP DOWN

BELOW GRADE PARKING GARAGE 31 TOTAL SPACES

EXTENT OF BUILDING FOUNDATION FOOTING (TYP.)

SEAT WALL (TYP).

L.S.A.

LOT 6 BUILDING

BUILDING FOOTPRINT: 16,364 SF
STORIES: 4 PLUS PENTHOUSE
HEIGHT: 59 FT-10 3/4" IN
USES: RETAIL, OFFICE, AND RESIDENTIAL

EXTENT OF BUILDING FOUNDATION (TYP.)

L.S.A.

0-4.5' HIGH RETAINING WALL

L.S.A.

FIRST FLOOR PARKING PARKING GARAGE 16 TOTAL SPACES.

BENCH (TYP.)

BRICK SIDEWALK (TYP.)

FOOTING OUTLINE (TYP.)

PROP VGC WITH 6" REVEAL FACING HEINEMANN BUILDING

VGC

9.32'

9.81'

FIRST FLOOR OFFICE SPACE

PEDESTRIAN PATHWAY (PUBLIC ACCESS)

138/63

BRICK SIDEWALK

L.S.A.

SIGN R7-108

3 SHORT TERM PARKING SPACES WITH BRICK PAVEMENT (TYP.)

4" THICK MAX. RETAINING WALL

20' GARAGE ENTRANCE

5.25'

8.68'

12.81'

L.S.A.

5'

R2'

10'

3

5'

VGC

VGC

3

20'

VGC

9.63'

25.82'

R2'

BRICK SIDEWALK

5' REAR SETBACK

EXTENT OF BUILDING FOUNDATION (TYP.)

10'

EXIST. 20' CITY UTILITY EASEMENT

7.01'

29.37'

FLUSH VGC

FOOTING OUTLINE (0.23' MIN. FROM LOT LINE)

SAW CUT

29.1'

SAW CUT

1-1/2" MILL & OVERLAY PAVEMENT

CONSTRUCT FULL DEPTH PAVEMENT WITH RECLAIMED BASE

4 CONTRASTING COLOR BRICK COURSE TO DEFINE PARKING SPACES - SEE LANDSCAPE PLAN

CB 3530

HILL STREET (PUBLIC)

EXIST. VGC

EXIST. VGC

COVERED PORCH

COVERED PORCH

COVERED PORCH

COVERED PORCH

COVERED PORCH

COVERED PORCH

138/64

126/16

ABBREVIATIONS:

LOW	LIMIT OF WORK
LSA	LANDSCAPED AREA
SSWL	SINGLE SOLID WHITE LINE
VGC	VERTICAL GRANITE CURB

LEGEND:

- T — TRANSFORMER
- SITE BOUNDARY LINE
- ABUTTER LOT LINE
- PROPOSED BUILDING
- REAR SETBACK
- FOUNDATION EXTENTS
- RETAINING WALL
- SAW CUT
- 126/16 — ACCESSOR'S MAP# / LOT#
- BRICK PAVEMENT
- FULL DEPTH ASPHALT SECTION
- ASPHALT MILL AND OVERLAY
- LANDSCAPE (SEE ATTACHED LANDSCAPE PLANS FOR DETAILS)
- PROPOSED HYDRANT
- 3 — EXTERIOR PARKING SPACES

ARCHITECTURE NOTES:
1. SEE ARCHITECTURAL SHEET AT.02T FOR FULL BUILDING INFORMATION
2. SEE ARCHITECTURAL SHEET A1.01T AND A1.02T FOR FULL PARKING AND FLOOR LAYOUT.
3. SEE LANDSCAPE SHEET L1 FOR LANDSCAPE AND COURTYARD DETAILS.

NOTE:
1. ALL CONDITIONS OF THE PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REGULATIONS.
2. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
3. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
4. ALL SNOW TO BE REMOVED AND HAULED OFF SITE.

10 0 10 30

1 IN. = 10 FT.

I:\18090\DWG\CIVIL\18090-LOT-6.dwg

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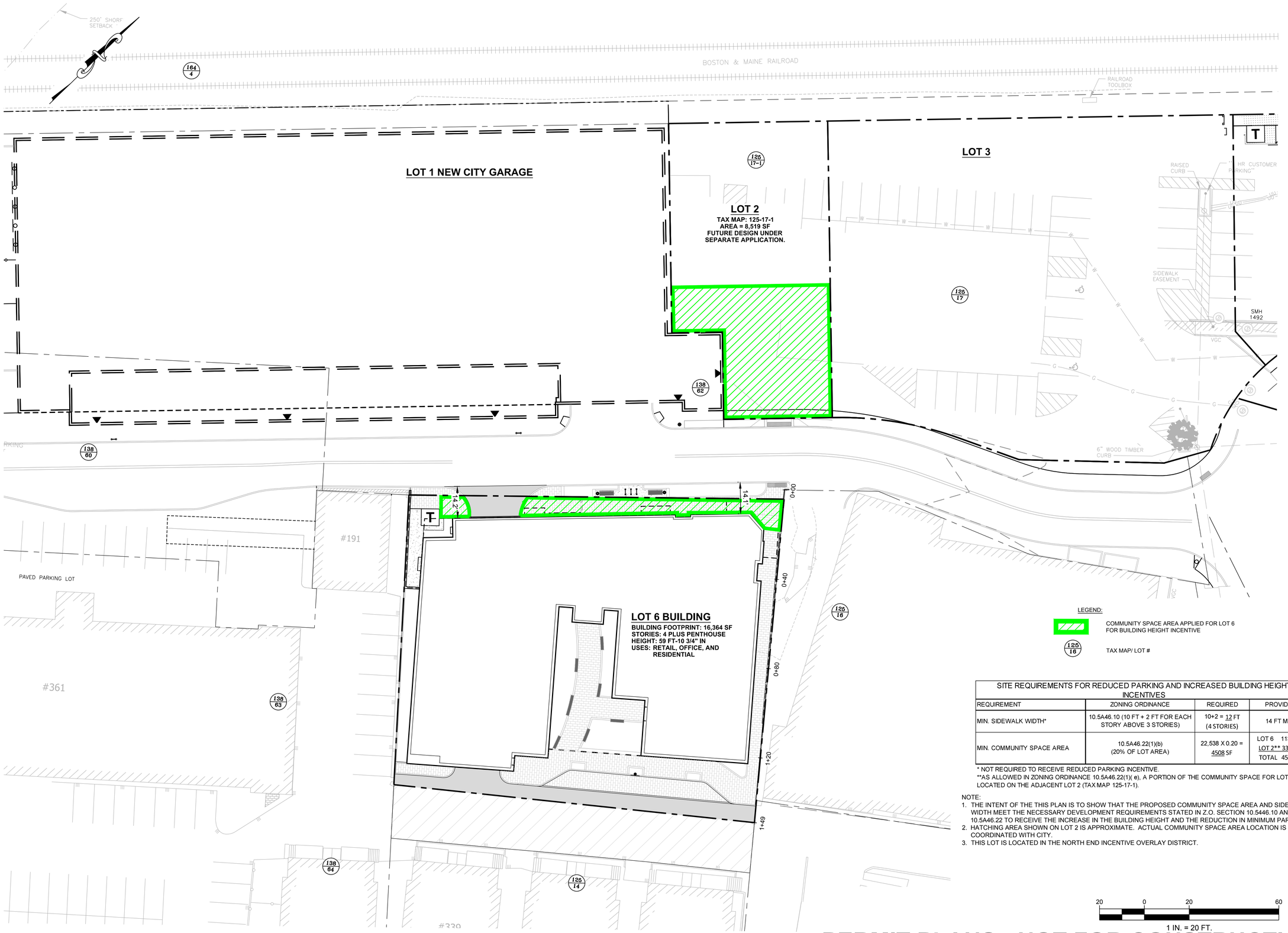
3	PB SUBMISSION	10/10/2017
4	PB #2 SUBMISSION	11/07/2017

SITE PLAN REVIEW

SITE PLAN

C3.0



LEGEND:

COMMUNITY SPACE AREA APPLIED FOR LOT 6 FOR BUILDING HEIGHT INCENTIVE

125/16 TAX MAP/ LOT #

SITE REQUIREMENTS FOR REDUCED PARKING AND INCREASED BUILDING HEIGHT INCENTIVES			
REQUIREMENT	ZONING ORDINANCE	REQUIRED	PROVIDED
MIN. SIDEWALK WIDTH*	10.5A46.10 (10 FT + 2 FT FOR EACH STORY ABOVE 3 STORIES)	10+2 = 12 FT (4 STORIES)	14 FT MIN.
MIN. COMMUNITY SPACE AREA	10.5A46.22(1)(b) (20% OF LOT AREA)	22,538 X 0.20 = 4508 SF	LOT 6 1134 SF LOT 2** 3374 SF TOTAL 4508 SF

* NOT REQUIRED TO RECEIVE REDUCED PARKING INCENTIVE.
**AS ALLOWED IN ZONING ORDINANCE 10.5A46.22(1)(e), A PORTION OF THE COMMUNITY SPACE FOR LOT 6 IS LOCATED ON THE ADJACENT LOT 2 (TAX MAP 125-17-1).

NOTE:
1. THE INTENT OF THE THIS PLAN IS TO SHOW THAT THE PROPOSED COMMUNITY SPACE AREA AND SIDEWALK WIDTH MEET THE NECESSARY DEVELOPMENT REQUIREMENTS STATED IN Z.O. SECTION 10.5446.10 AND 10.5A46.22 TO RECEIVE THE INCREASE IN THE BUILDING HEIGHT AND THE REDUCTION IN MINIMUM PARKING.
2. HATCHING AREA SHOWN ON LOT 2 IS APPROXIMATE. ACTUAL COMMUNITY SPACE AREA LOCATION IS TO BE COORDINATED WITH CITY.
3. THIS LOT IS LOCATED IN THE NORTH END INCENTIVE OVERLAY DISTRICT.

20 0 20 60
1 IN. = 20 FT.

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DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE
JOSEPH H KIEFFNER No. 13174 LICENSED
PROFESSIONAL ENGINEER

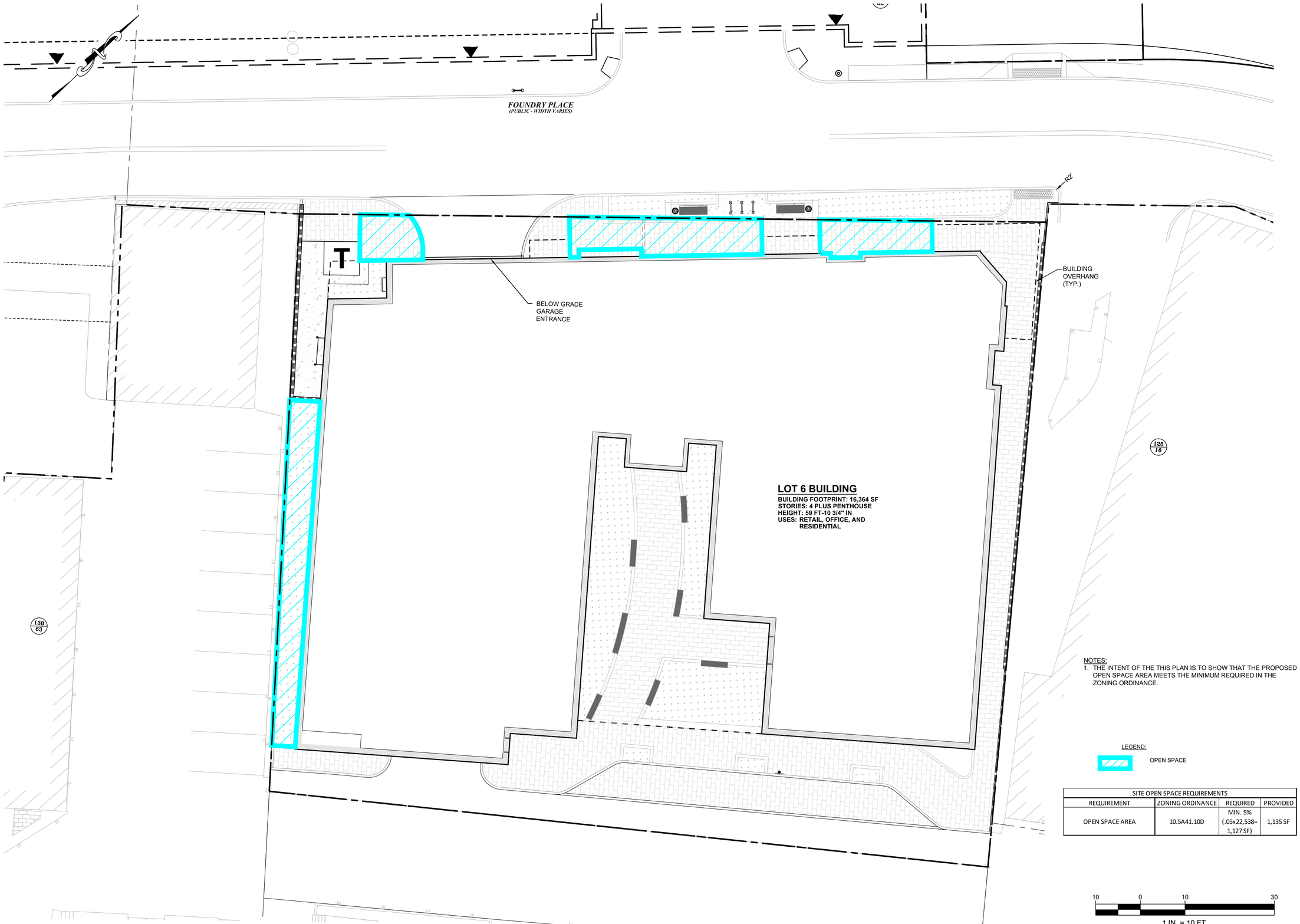
Scale: **1"=20'**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

DEVEOPMENT INCENTIVES PLAN

C3.1



NOTES:
1. THE INTENT OF THE THIS PLAN IS TO SHOW THAT THE PROPOSED OPEN SPACE AREA MEETS THE MINIMUM REQUIRED IN THE ZONING ORDINANCE.

LEGEND:

OPEN SPACE

SITE OPEN SPACE REQUIREMENTS			
REQUIREMENT	ZONING ORDINANCE	REQUIRED	PROVIDED
OPEN SPACE AREA	10.5A41.10D	MIN. 5% (.05x22,538= 1,127 SF)	1,135 SF

10 0 10 30

1 IN. = 10 FT.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

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STATE OF NEW HAMPSHIRE - JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

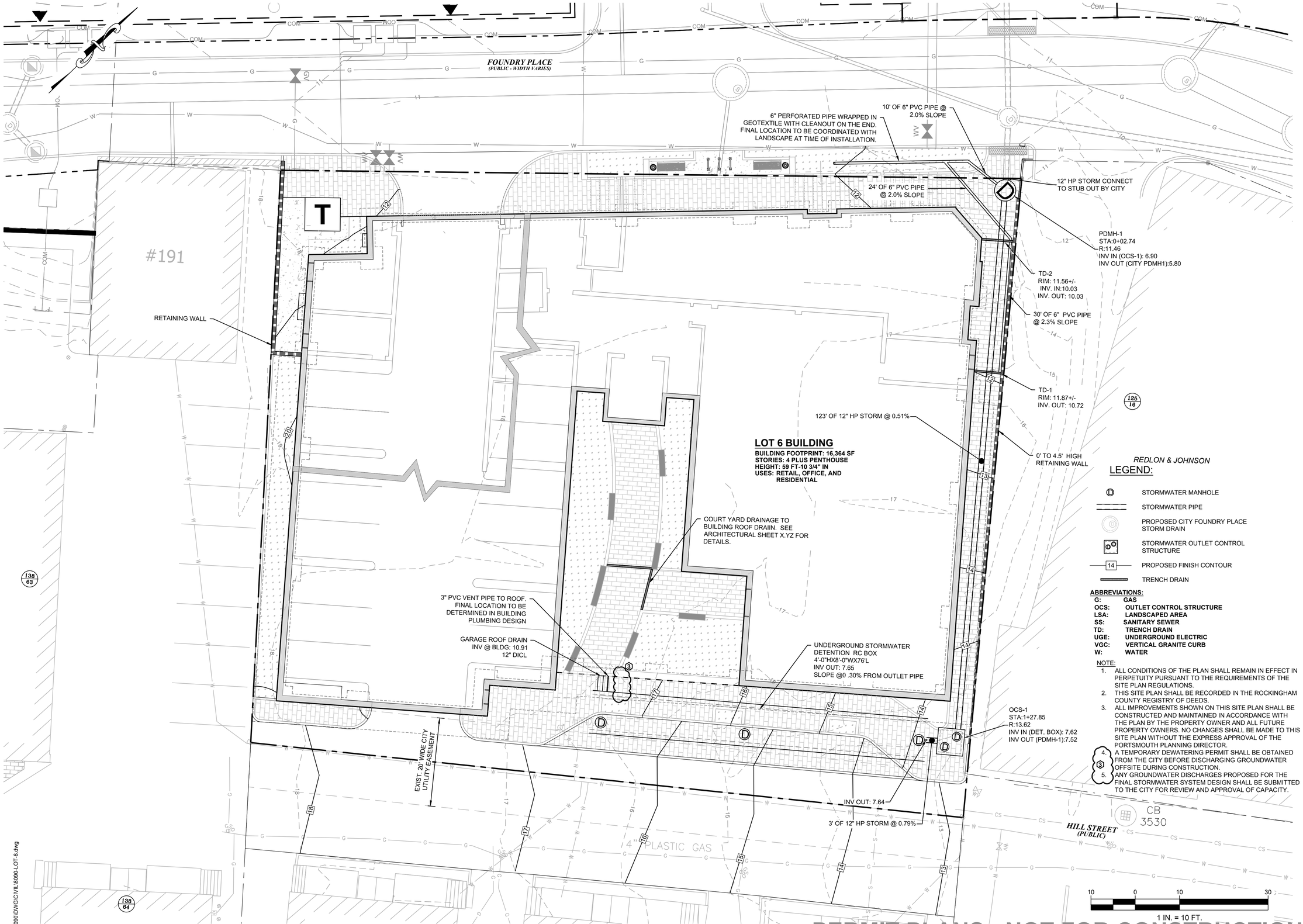
Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

OPEN SPACE PLAN

C3.2



ABBREVIATIONS:

G:	GAS
OCS:	OUTLET CONTROL STRUCTURE
LSA:	LANDSCAPED AREA
SS:	SANITARY SEWER
TD:	TRENCH DRAIN
UGE:	UNDERGROUND ELECTRIC
VGC:	VERTICAL GRANITE CURB
W:	WATER

NOTE:

1. ALL CONDITIONS OF THE PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REGULATIONS.
2. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
3. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
4. (3) A TEMPORARY DEWATERING PERMIT SHALL BE OBTAINED FROM THE CITY BEFORE DISCHARGING GROUNDWATER OFFSITE DURING CONSTRUCTION.
5. ANY GROUNDWATER DISCHARGES PROPOSED FOR THE FINAL STORMWATER SYSTEM DESIGN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL OF CAPACITY.

I:\8090\DWG\CIVIL\8090-LOT-6.dwg

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A / E Seal:

STATE OF NEW HAMPSHIRE - JOSEPH H. KIEFFNER No. 13174 - PROFESSIONAL ENGINEER - LICENSED

1" =10'

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

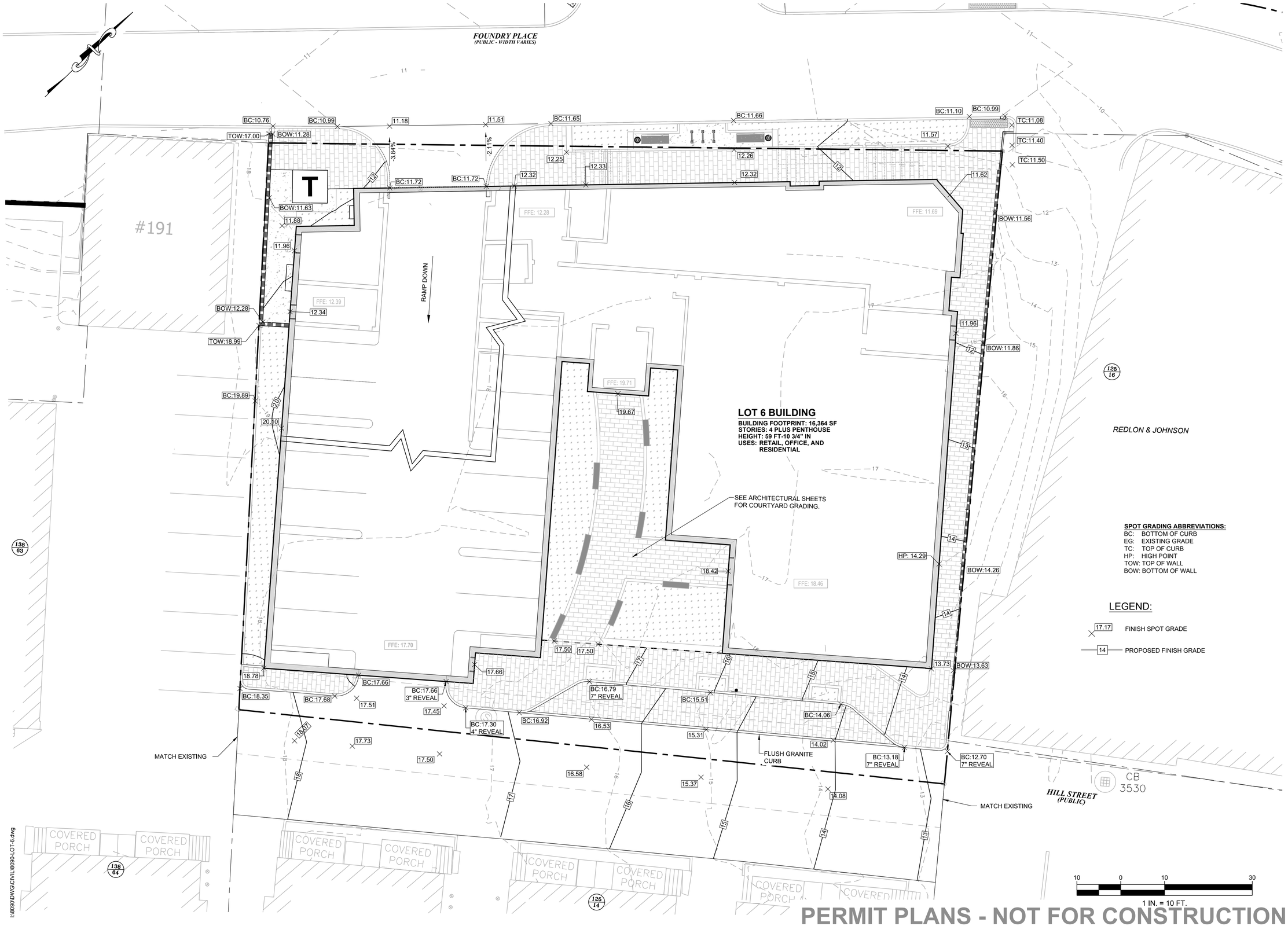
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
(3)	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

GRADING AND DRAINAGE PLAN

C4.0



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LICENSED
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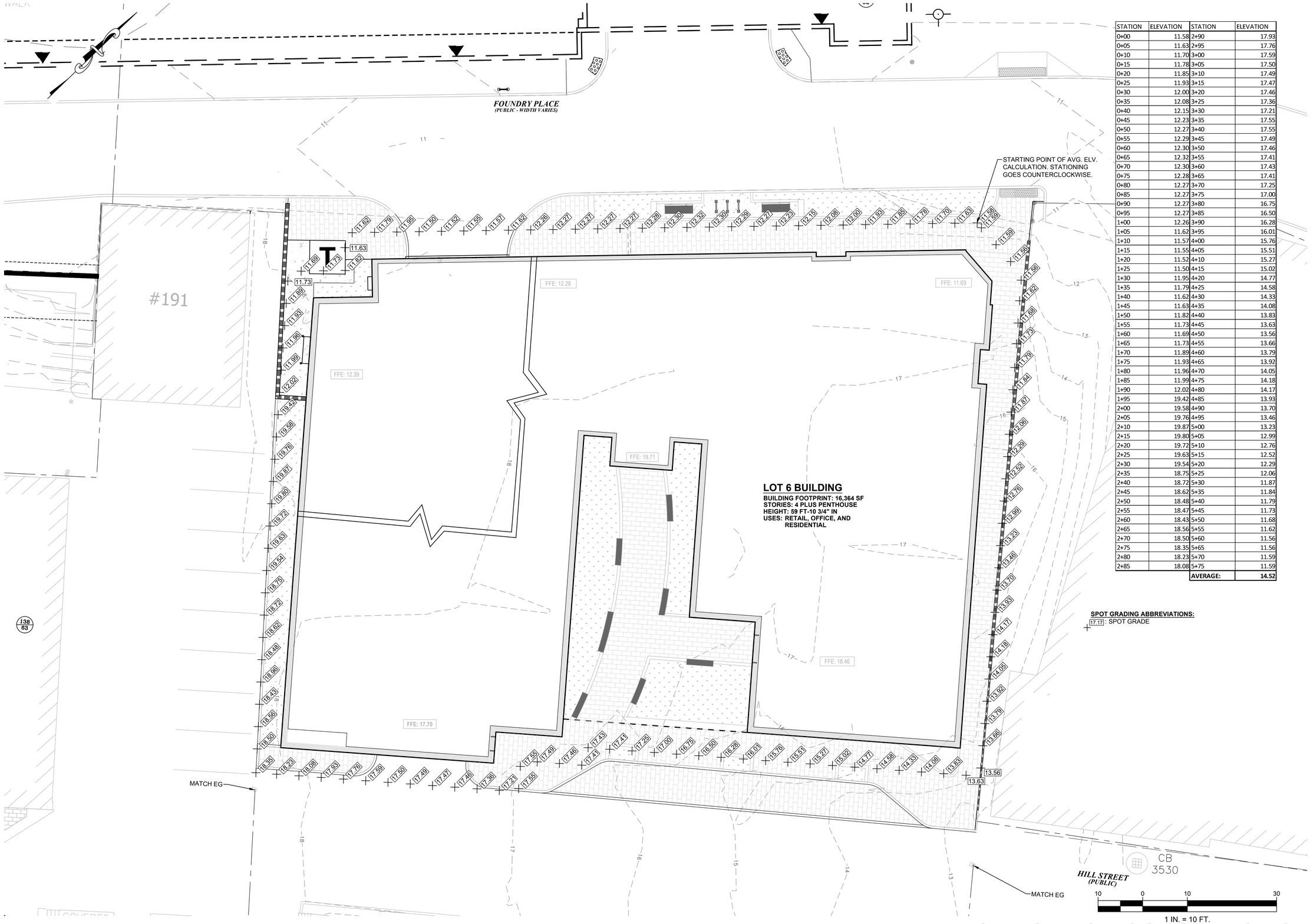
3	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

GRADING DETAIL

C4.1



STATION	ELEVATION	STATION	ELEVATION
0+00	11.58	2+90	17.93
0+05	11.63	2+95	17.76
0+10	11.70	3+00	17.59
0+15	11.78	3+05	17.50
0+20	11.85	3+10	17.49
0+25	11.93	3+15	17.47
0+30	12.00	3+20	17.46
0+35	12.08	3+25	17.36
0+40	12.15	3+30	17.21
0+45	12.23	3+35	17.55
0+50	12.27	3+40	17.55
0+55	12.29	3+45	17.49
0+60	12.30	3+50	17.46
0+65	12.32	3+55	17.41
0+70	12.30	3+60	17.43
0+75	12.28	3+65	17.41
0+80	12.27	3+70	17.25
0+85	12.27	3+75	17.00
0+90	12.27	3+80	16.75
0+95	12.27	3+85	16.50
1+00	12.26	3+90	16.28
1+05	11.62	3+95	16.01
1+10	11.57	4+00	15.76
1+15	11.55	4+05	15.51
1+20	11.52	4+10	15.27
1+25	11.50	4+15	15.02
1+30	11.95	4+20	14.77
1+35	11.79	4+25	14.58
1+40	11.62	4+30	14.33
1+45	11.63	4+35	14.08
1+50	11.82	4+40	13.83
1+55	11.73	4+45	13.63
1+60	11.69	4+50	13.56
1+65	11.73	4+55	13.66
1+70	11.89	4+60	13.79
1+75	11.93	4+65	13.92
1+80	11.96	4+70	14.05
1+85	11.99	4+75	14.18
1+90	12.02	4+80	14.17
1+95	19.42	4+85	13.93
2+00	19.58	4+90	13.70
2+05	19.76	4+95	13.46
2+10	19.87	5+00	13.23
2+15	19.80	5+05	12.99
2+20	19.72	5+10	12.76
2+25	19.63	5+15	12.52
2+30	19.54	5+20	12.29
2+35	18.75	5+25	12.06
2+40	18.72	5+30	11.87
2+45	18.62	5+35	11.84
2+50	18.48	5+40	11.79
2+55	18.47	5+45	11.73
2+60	18.43	5+50	11.68
2+65	18.56	5+55	11.62
2+70	18.50	5+60	11.56
2+75	18.35	5+65	11.56
2+80	18.23	5+70	11.59
2+85	18.08	5+75	11.59
		AVERAGE:	**14.52**

SPOT GRADING ABBREVIATIONS:
17.17: SPOT GRADE

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YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - LICENSED
JOSEPH H. KIEFFNER No. 13174

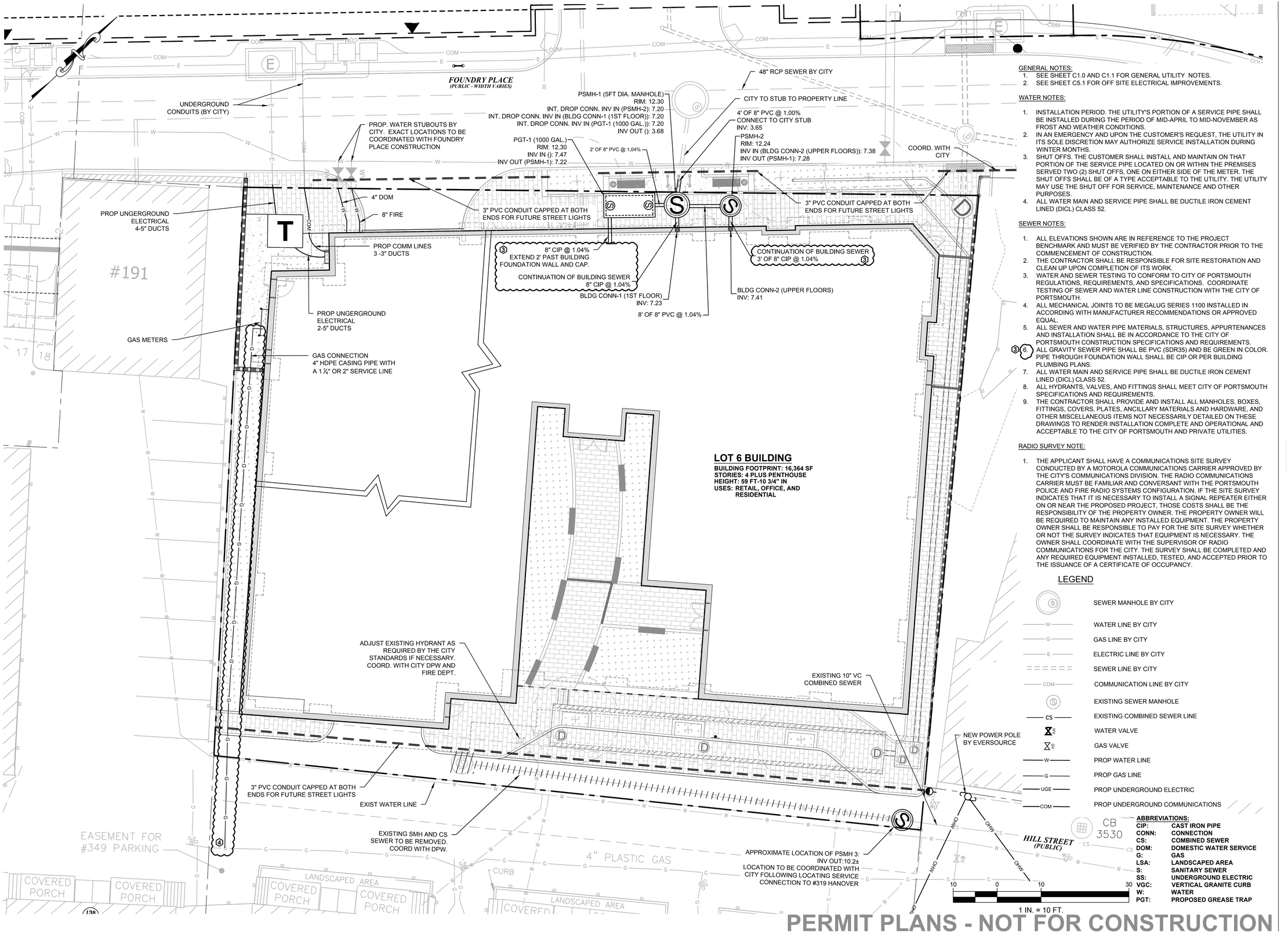
Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

AVERAGE GRADE PLANE CALCULATION

C4.2



GENERAL NOTES:

1. SEE SHEET C1.0 AND C1.1 FOR GENERAL UTILITY NOTES.
2. SEE SHEET C5.1 FOR OFF SITE ELECTRICAL IMPROVEMENTS.

WATER NOTES:

1. INSTALLATION PERIOD. THE UTILITY'S PORTION OF A SERVICE PIPE SHALL BE INSTALLED DURING THE PERIOD OF MID-APRIL TO MID-NOVEMBER AS FROST AND WEATHER CONDITIONS.
2. IN AN EMERGENCY AND UPON THE CUSTOMER'S REQUEST, THE UTILITY IN ITS SOLE DISCRETION MAY AUTHORIZE SERVICE INSTALLATION DURING WINTER MONTHS.
3. SHUT OFFS. THE CUSTOMER SHALL INSTALL AND MAINTAIN ON THAT PORTION OF THE SERVICE PIPE LOCATED ON OR WITHIN THE PREMISES SERVED TWO (2) SHUT OFFS, ONE ON EITHER SIDE OF THE METER. THE SHUT OFFS SHALL BE OF A TYPE ACCEPTABLE TO THE UTILITY. THE UTILITY MAY USE THE SHUT OFF FOR SERVICE, MAINTENANCE AND OTHER PURPOSES.
4. ALL WATER MAIN AND SERVICE PIPE SHALL BE DUCTILE IRON CEMENT LINED (DICL) CLASS 52.

SEWER NOTES:

1. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE PROJECT BENCHMARK AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF ITS WORK.
3. WATER AND SEWER TESTING TO CONFORM TO CITY OF PORTSMOUTH REGULATIONS, REQUIREMENTS, AND SPECIFICATIONS. COORDINATE TESTING OF SEWER AND WATER LINE CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
4. ALL MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
5. ALL SEWER AND WATER PIPE MATERIALS, STRUCTURES, APPURTENANCES AND INSTALLATION SHALL BE IN ACCORDANCE TO THE CITY OF PORTSMOUTH CONSTRUCTION SPECIFICATIONS AND REQUIREMENTS.
6. (3) ALL GRAVITY SEWER PIPE SHALL BE PVC (SDR35) AND BE GREEN IN COLOR. PIPE THROUGH FOUNDATION WALL SHALL BE CIP OR PER BUILDING PLUMBING PLANS.
7. ALL WATER MAIN AND SERVICE PIPE SHALL BE DUCTILE IRON CEMENT LINED (DICL) CLASS 52.
8. ALL HYDRANTS, VALVES, AND FITTINGS SHALL MEET CITY OF PORTSMOUTH SPECIFICATIONS AND REQUIREMENTS.
9. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, COVERS, PLATES, ANCILLARY MATERIALS AND HARDWARE, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION COMPLETE AND OPERATIONAL AND ACCEPTABLE TO THE CITY OF PORTSMOUTH AND PRIVATE UTILITIES.

RADIO SURVEY NOTE:

1. THE APPLICANT SHALL HAVE A COMMUNICATIONS SITE SURVEY CONDUCTED BY A MOTOROLA COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE PORTSMOUTH POLICE AND FIRE RADIO SYSTEMS CONFIGURATION. IF THE SITE SURVEY INDICATES THAT IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER WILL BE REQUIRED TO MAINTAIN ANY INSTALLED EQUIPMENT. THE PROPERTY OWNER SHALL BE RESPONSIBLE TO PAY FOR THE SITE SURVEY WHETHER OR NOT THE SURVEY INDICATES THAT EQUIPMENT IS NECESSARY. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY. THE SURVEY SHALL BE COMPLETED AND ANY REQUIRED EQUIPMENT INSTALLED, TESTED, AND ACCEPTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

LEGEND

- SEWER MANHOLE BY CITY
- W — WATER LINE BY CITY
- G — GAS LINE BY CITY
- E — ELECTRIC LINE BY CITY
- SEWER LINE BY CITY
- COM — COMMUNICATION LINE BY CITY
- EXISTING SEWER MANHOLE
- CS — EXISTING COMBINED SEWER LINE
- WV — WATER VALVE
- GV — GAS VALVE
- W — PROP WATER LINE
- G — PROP GAS LINE
- UGE — PROP UNDERGROUND ELECTRIC
- COM — PROP UNDERGROUND COMMUNICATIONS

ABBREVIATIONS:

CIP:	CAST IRON PIPE
CONN:	CONNECTION
CS:	COMBINED SEWER
DOM:	DOMESTIC WATER SERVICE
G:	GAS
LSA:	LANDSCAPED AREA
S:	SANITARY SEWER
SS:	UNDERGROUND ELECTRIC
VGC:	VERTICAL GRANITE CURB
W:	WATER
PGT:	PROPOSED GREASE TRAP

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

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A / E Seal:

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JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB SUBMISSION	10/10/2017
4	PB #2 SUBMISSION	11/07/2017

SITE PLAN REVIEW

UTILITIES PLAN

C5.0

PERMIT PLANS - NOT FOR CONSTRUCTION

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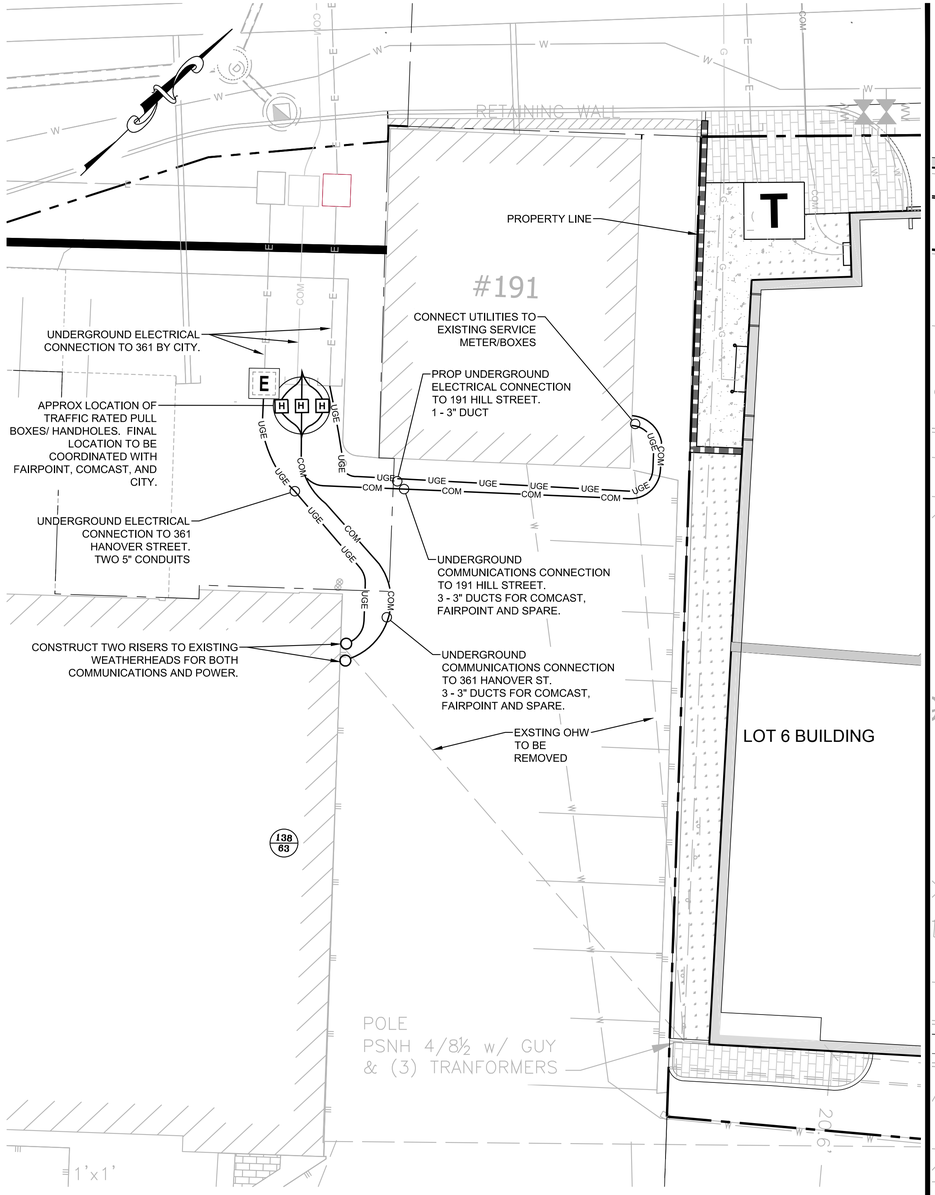
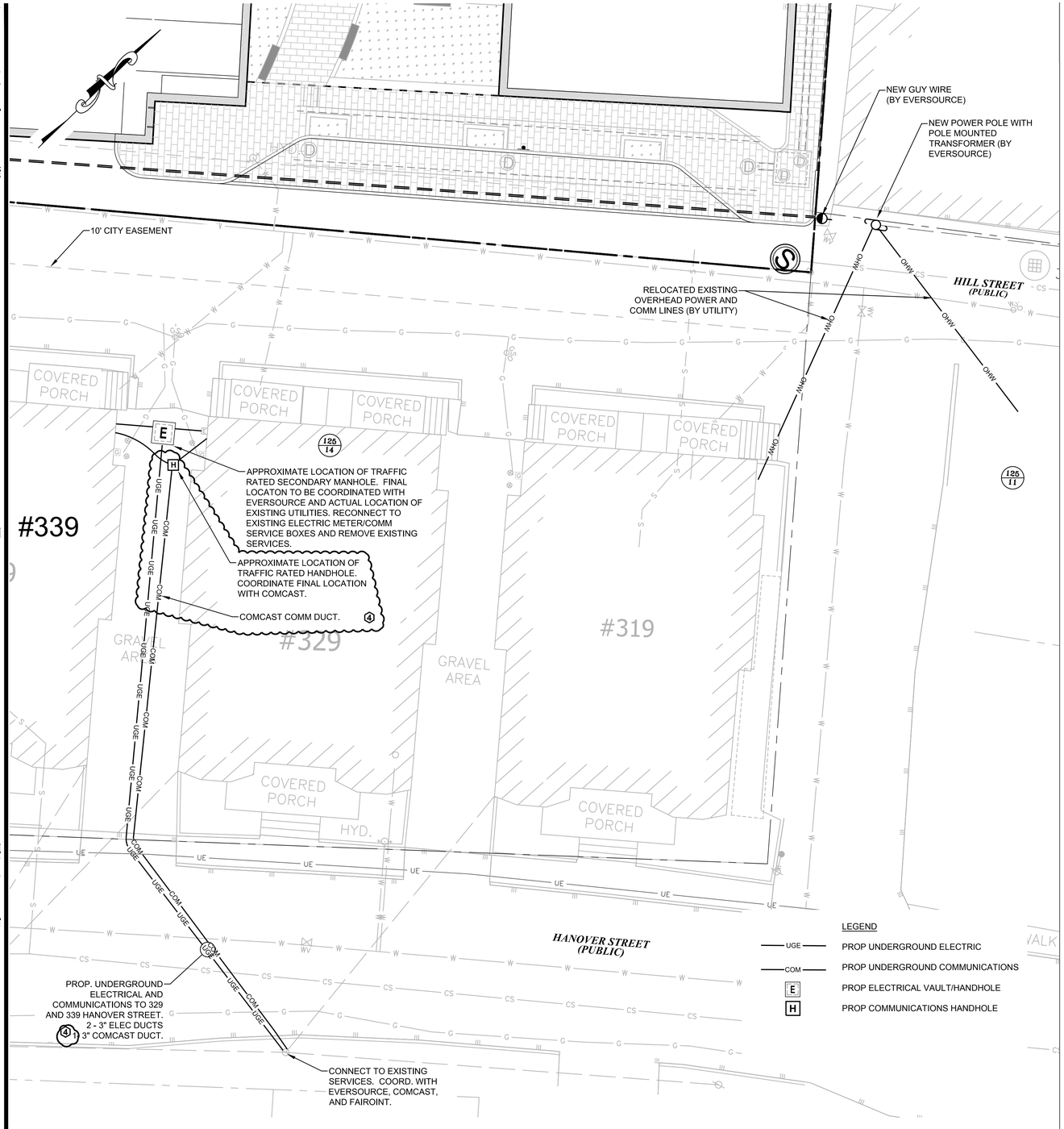


KEARSARGE MILL CONDOMINIUMS LOT OFFSITE
ELECTRICAL IMPROVEMENTS
ASSESSOR'S MAP 138, LOT 63

UTILITY NOTES:

1. SEE ELECTRICAL SHEET SERIES "SE" FOR ELECTRICAL AND COMMUNICATION DETAILS.
2. THE CONTRACTOR SHALL COORDINATE UTILTY INSTALLATION WITH APPROPRIATE UTILITY, AFFECTED LAND OWNERS, AND THE CITY DPW.
3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES BY CONDUCTING TEST PITS AS NEED TO LOCATE THE PROPOSED UTILITIES PER APPLICABLE REGULATORY AND UTILITY REQUIREMENTS.
4. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE DUCTS FROM THE POLE TO THE SERVICE METER CONNECTION AND THE ELECTRICAL CONTRACTOR WILL PROVIDE AND INSTALL THE CONDUCTORS FROM THE POLE TO THE BUILDING CONNECTION.
5. THE ELECTRICAL POWER AND COMMUNICATION DUCTS SHALL BE INSTALLED IN ACCORDANCE WITH UTILITY SPECIFICATIONS. IT SHALL BE COMPOSED OF A MATERIAL WHICH IS ACCEPTABLE TO THE UTILITY AND THE INSTALLATION AND PIPE SHALL BE IN CONFORMANCE WITH GOOD ENGINEERING PRACTICES AND IN ACCORD THE REQUIREMENTS OF LAW.
6. THE ELECTRICAL POWER DUCTS SHALL HAVE A MINIMUM GROUND COVER OF THREE (3) FEET IN VEHICULAR TRAVEL WAYS AND TWO FEET IN OTHER AREAS UNLESS AUTHORIZED IN WRITING BY THE UTILITY.
7. PROPOSED LOCATIONS ARE APPROXIMATE, AND FINAL LOCATIONS WILL BE LOCATED IN THE FIELD AFTER EXISTING UTILITIES LOCATIONS HAVE BEEN DETERMINED BY TEST PITS. FINAL LOCATION TO BE COORDINATED AND APPROVED BY THE APPROPRIATE UTILITY PROVIDER.



HILL STREET OFFSITE ELECTRICAL IMPROVEMENTS
ASSESSOR'S MAP 125, LOT 14 AND 15

10 0 10 30
1 IN. = 10 FT.

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2	TAC PUBLIC HEARING	8/21/2017
3	TAC SUPPLEMENT	9/18/2017
4	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

OFF SITE ELECTRICAL IMPROVEMENTS PLAN

C5.1

HILL HANOVER LIMIT OF WORK SHEET C6.0

TEMPORARY CONSTRUCTION

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MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED
PROFESSIONAL ENGINEER

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EROSION & SEDIMENT CONTROL PLAN

C6.0

GENERAL EROSION CONTROL NOTES

1. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION GENERAL PERMIT ISSUED BY THE EPA AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SUBMITTED WITH THE PERMIT DOCUMENTS.

2. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES TO ENSURE PROPER OPERATION THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT OR UNTIL IT IS ACCEPTED BY THE OWNER. THE OWNER IS RESPONSIBLE THEREAFTER.

3. NO DUST WILL BE ALLOWED ON OR OFF THE WORK SITE. CONTRACTOR MUST CONDUCT CONTINUOUS EFFORTS TO CONTROL DUST. LACK OF SUFFICIENT DUST CONTROL COULD CAUSE THE PROJECT TO BE STOPPED UNTIL ISSUES ARE RESOLVED. CONTRACTOR TO PAY ALL PENALTIES RESULTING PLUS $100/ OFFENSE AS DETERMINED BY CITY.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ROADS, CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SITE AND ALL ADJACENT ROADS BE MAINTAINED IN A MUD AND DUST-FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, CAREFUL USE OF WATER, CALCIUM CHLORIDE, AND/OR CRUSHED STONE OR COARSE GRAVEL AS CONTROL BMPS.

5. ALL PROPOSED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND DETAILS. ALL VEHICLE TRAFFIC ENTERING OR EXITING THE WORK AREA SHALL PASS OVER THE CONSTRUCTION ENTRANCES TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE SURROUNDING ROADWAYS UNTIL THE SITE IS STABILIZED.

6. THE CONTRACTOR SHALL INSTALL ALL PERIMETER SEDIMENT CONTROL BARRIERS AS SHOWN ON THE EROSION CONTROL PLAN. SILT FENCE OR SILT SOCK SHALL ALSO BE INSTALLED AROUND ANY SOIL STOCKPILE AREAS.THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS AS QUICKLY AS PRACTICABLE. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEEDED, OR OTHERWISE STABILIZED OR RESTORED TO THEIR ORIGINAL STATE. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHEREVER FEASIBLE.

7. THE CONTRACTOR MAY USE TEMPORARY SEDIMENTATION AND/ OR INFILTRATION BASINS ON THE SITE DURING CONSTRUCTION. THESE STRUCTURES SHOULD BE STRATEGICALLY LOCATED AND SIZED COMMESURATE WITH THE PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL REMOVE AND STABILIZE THESE STRUCTURES WHEN NO LONGER REQUIRED.

8. TEMPORARY COVERINGS OR OTHER APPROVED STABILIZATION METHOD SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.

9. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED SOIL AREAS THAT HAVE REACHED FINISHED LANDSCAPE GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED PERMANENT SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 1. WHERE AREAS HAVE REACHED FINISHED GRADE AND ARE NOT INTENDED TO BE VEGETATED, TEMPORARY TARPS OR OTHER STABILIZING COVERS MAY BE PLACED.

10. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHOULD BE MULCHED IMMEDIATELY FOLLOWING SEEDING IN ADDITION TO AREAS WHICH CANNOT BE SEEDED WITHIN THE RECOMMENDED SEEDING DATES AND ANY SOIL STOCKPILE AREAS. TEMPORARY MULCHING SHOULD BE PERFORMED AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.STRAW OR HAY MULCH, WOOD FIBER MULCH, AND HYDROMULCH ARE RECOMMENDED MULCHES.

11. IF SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, USE THE TEMPORARY MULCHING MEASURE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.

12. WHERE TEMPORARY COVERS ARE USED OVER STOCKPILES AND/ OR DISTURBED SOIL AREAS, THE COVERS SHALL BE SUFFICIENTLY ANCHORED AGAINST WIND. THE CONTRACTOR MUST ANTICIPATE AND MANAGE RUNOFF FROM SUCH COVERINGS.

13. ANY EXISTING OR PROPOSED CATCH BASINS THAT MAY BE SUBJECT TO SEDIMENTATION PROCESSES SHALL HAVE SILT SACKS INSTALLED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED STORM DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED SITE. THE PROPER INLET PROTECTION DEVICES SHALL BE INSTALLED WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF ANY DISTURBED DRAINAGE AREA.

14. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES AND THE NEW HAMPSHIRE STORMWATER MANUAL VOL. 3 AND OTHER APPLICABLE REGULATIONS.

15. WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORM WATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., SHALL BE STORED AT THE END OF EACH DAY IN A STORAGE TRAILER OR COVERED LOCATION, OR TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.

16. GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WIRING, PAINTS AND PAINT CANS, SOLVENTS, WALL BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. IN ADDITION, CONSTRUCTION WASTE MUST BE PROPERLY DISPOSED OF IN ORDER TO AVOID EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY.

17. REPAIRS OR REPLACEMENT OF DRAINAGE STRUCTURES, SWALES, OR OTHER DRAINAGE ELEMENTS SHOULD BE DONE WITHIN 12 HRS OF NOTIFICATION OF A DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR IMPACT TO NEARBY RESIDENTS.

18. IMMEDIATELY PRIOR TO THE END OF CONSTRUCTION OR ACCEPTANCE BY THE OWNER, THE CONTRACTOR SHALL INSPECT ALL ON-SITE STORMWATER MANAGEMENT FACILITIES AND CLEAN AND FLUSH AS NECESSARY AND REQUESTED BY THE ENGINEER AND/ OR THE OWNER.

19. THE CONTRACTOR OR NOMINEE WILL BE THE PARTY RESPONSIBLE FOR THE INSPECTION, MAINTENANCE, AND REQUIRED DOCUMENTATION OF ALL STORMWATER STRUCTURES UNTIL FORMAL PROJECT COMPLETION.

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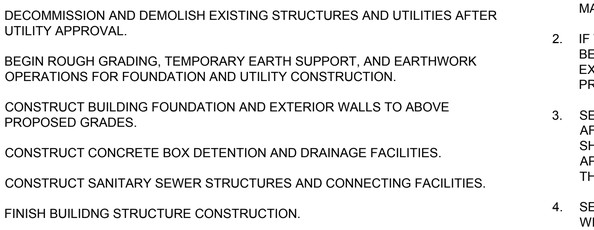
PROJECT SPECIFIC CONSTRUCTION SEQUENCING:

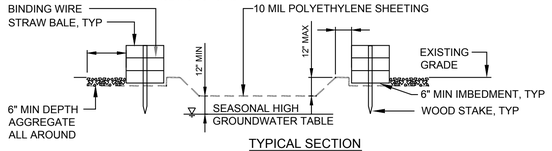
DESCRIBED BELOW ARE THE MAJOR CONSTRUCTION ACTIVITIES ANTICIPATED. THEY ARE PRESENTED IN THE ORDER (OR SEQUENCE) THEY ARE EXPECTED TO BEGIN, BUT EACH ACTIVITY WILL NOT NECESSARILY BE COMPLETED BEFORE THE NEXT BEGINS. ALSO, THESE ACTIVITIES COULD OCCUR IN A DIFFERENT ORDER IF NECESSARY TO MAINTAIN ADEQUATE EROSION AND SEDIMENTATION CONTROL. ALL ACTIVITIES AND THE TIMEFRAME (BEGINNING AND ENDING DATES) SHALL BE RECORDED BY THE CONTRACTOR:

1. CONTRACTOR TO REVIEW ALL APPLICABLE LOCAL, STATE AND FEDERAL PERMITS.
2. REVIEW AND CERTIFY THE STORMWATER POLLUTION PREVENTION PLAN.
3. INSTALL TEMPORARY CONSTRUCTION FENCING.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. INSTALL EROSION CONTROL MEASURES PRIOR TO EARTH MOVING OPERATIONS.
6. DECOMMISSION AND DEMOLISH EXISTING STRUCTURES AND UTILITIES AFTER UTILITY APPROVAL.
7. BEGIN ROUGH GRADING, TEMPORARY EARTH SUPPORT, AND EARTHWORK OPERATIONS FOR FOUNDATION AND UTILITY CONSTRUCTION.
8. CONSTRUCT BUILDING FOUNDATION AND EXTERIOR WALLS TO ABOVE PROPOSED GRADES.
9. CONSTRUCT CONCRETE BOX DETENTION AND DRAINAGE FACILITIES.
10. CONSTRUCT SANITARY SEWER STRUCTURES AND CONNECTING FACILITIES.
11. FINISH BUILIDNG STRUCTURE CONSTRUCTION.
12. SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 12-HOURS AFTER CONSTRUCTION ACTIVITIES CEASE. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR ON THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21-DAYS, THE AREA SHALL BE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
    A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
    B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
    C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
    D. EROSION CONTROL BLANKETS OR TEMPORARY TARPING HAVE BEEN PROPERLY INSTALLED.
13. INSTALL AND CONNECT ALL UNDERGROUND UTILITIES.
14. CONSTRUCT ROADWAYS, DRIVEWAYS, AND HARDSCAPE ACCORDING TO THE PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
15. SURFACE TREATMENT OF ALL DISTURBED AREAS NOT BUILT UPON, PAVED OR OTHERWISE LANDSCAPED SHALL BE TREATED WITH 4" OF LOAM AND SEED.
16. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES CONSISTENT WITH THE PROCEDURE AND SCHEDULE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN.
17. COMPLETE PERMANENT SEEDING AND LANDSCAPING, AND OTHER SURFACE STABILIZATION.
18. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT COMPACTED GRAVELS, OR OTHER INTENDED FINAL COVERINGS.



PLAN — WASHOUT SIGN

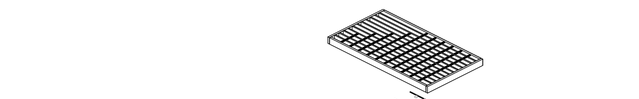
NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.



TYPICAL SECTION

CONCRETE WASHOUT AREA

NOT TO SCALE

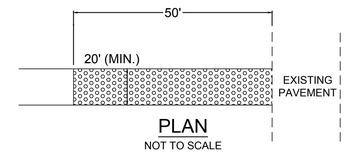


MAINTENANCE:

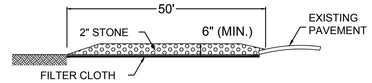
1. FILTER SOCK SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, REPLACE PROMPTLY.
3. SEDIMENT DEPOSITS SHALL BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS SHALL BE REMOVED WITH FILTER SOCK UPON COMPLETION OF CONSTRUCTION ACTIVITIES.
5. IF ANCHORING THE FILTER SOCK IS NOT POSSIBLE USING STAKES, SUCH AS ON PAVED AREAS, USE SAND BAGS, MASONRY BLOCKS, OR OTHER REMOVABLE WEIGHTS TO KEEP SOCK IN PLACE AT INTENDED LOCATION

FILTER SOCK INSTALLATION DETAIL

NOT TO SCALE



PLAN
NOT TO SCALE



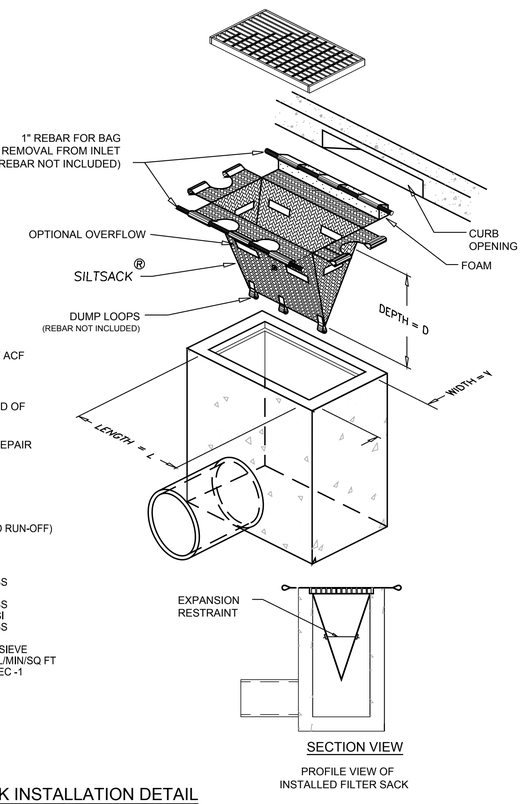
PROFILE
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:

1. USE 2" DIAMETER STONE OR RECLAIMED/RECYCLED CONCRETE EQUIVALENT.
2. RECOMMENDED LENGTH GREATER THAN 50 FEET WHERE PRACTICAL.
3. THICKNESS NOT LESS THAN 6 INCHES.
4. 10 FOOT MINIMUM WIDTH, BUT NOT LESS THAN FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCUR.
5. FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WILL BE PERMITTED.
7. ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR.
9. REMOVE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO PLACEMENT OF BITUMINOUS CONCRETE PAVEMENT.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:
1. CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES) OR EQUAL.

2. INSERT TO BE EMPTIED AND PROPERLY DISPOSED OF WHEN IT IS 1/2 FULL OF SEDIMENT.

3. INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

REGULAR FLOW SILTSACK

(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

EROSION CONTROL NOTES & DETAILS

SECTION VIEW

PROFILE VIEW OF INSTALLED FILTER SACK

SILT SACK INSTALLATION DETAIL

NOT TO SCALE

PERMIT PLANS - NOT FOR CONSTRUCTION

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STATE OF NEW HAMPSHIRE — JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

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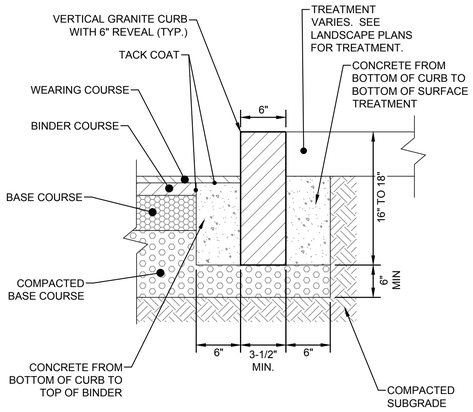
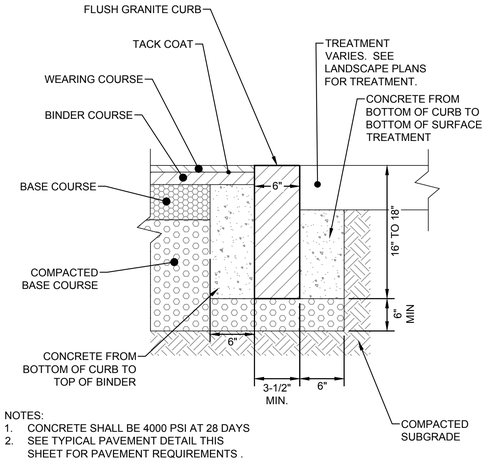


CURB RADIUS TABLE	
RADIUS	MAX. LENGTH
< 21'	USE CURVED CURB
21'	3'
22' - 28'	4'
29' - 35'	5'
36' - 42'	6'
43' - 49'	7'
50' - 56'	8'
57' - 60'	9'
> 60'	10'

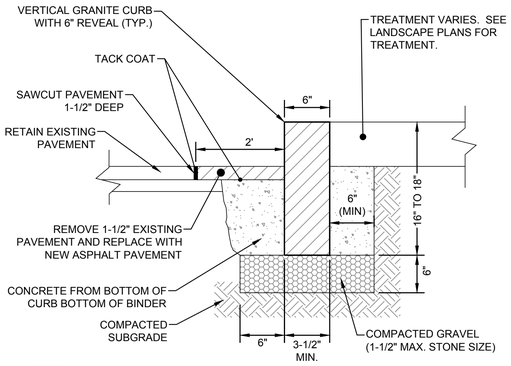
NOTES:
1. REVEAL IS 6" UNLESS NOTED OTHERWISE. REVEAL IS 0" AT PEDESTRIAN SIDEWALK (CURB) RAMPS.
2. SEE SITE PLAN(S) FOR PROPOSED VERTICAL GRANITE CURB (VGC) LOCATIONS
3. CONCRETE SHALL BE 4000 PSI AT 28 DAYS
4. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH
5. MINIMUM LENGTH OF STRAIGHT CURB STONES - 3'
6. MAXIMUM LENGTH OF STRAIGHT CURB STONES - 10'
7. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART
8. ALL RADII LESS THAN 21' SHALL HAVE CURVED SECTIONS
9. SEE TYPICAL PAVEMENT DETAIL THIS SHEET FOR PAVEMENT REQUIREMENTS .

1 VERTICAL GRANITE CURB
N.T.S.



NOTES:
1. CONCRETE SHALL BE 4000 PSI AT 28 DAYS
2. SEE TYPICAL PAVEMENT DETAIL THIS SHEET FOR PAVEMENT REQUIREMENTS .

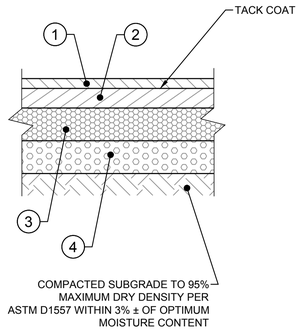
2 FLUSH GRANITE CURB
N.T.S.



NOTES:
1. REVEAL IS 6" (TYP.) UNLESS NOTED OTHERWISE. REVEAL IS 0" AT PEDESTRIAN SIDEWALK (CURB) RAMPS.
2. SEE SITE PLAN(S) FOR PROPOSED VERTICAL GRANITE CURB (VGC) LOCATIONS.
3. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINE WITH A TACK COAT PRIOR TO PLACING WEARING COURSE.
4. FOR RADIUS DETAILS SEE VERTICAL GRANITE CURB DETAIL - THIS SHEET.

3 VERTICAL GRANITE CURB IN EXISTING PAVEMENT
N.T.S.

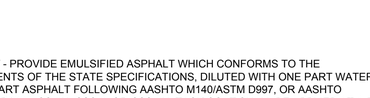
NOTES:
1. SEE SITE PLANS FOR PROPOSED PAVEMENT LOCATIONS.
2. SEE GRADING AND DRAINAGE PLAN FOR PAVEMENT GRADES.
3. REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.
4. CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 401 OF THE NHDOT STANDARD SPECIFICATIONS AND PORTSMOUTH SPECIFICATIONS.
5. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PRIOR TO PLACING WEARING COURSE.
6. HBP - HOT BITUMINOUS PAVEMENT



STANDARD PAVEMENT MATERIALS
1. 1.5" - HBP SURFACE COURSE (3/8" NHDOT SECTION 401)
2. 3.5" - HBP BINDER COURSE (3/4" NHDOT SECTION 401)
3. 8" - CRUSHED GRAVEL BASE (NHDOT ITEM 304.3)
4. 12" - BANK RUN GRAVEL SUBBASE (NHDOT ITEM 304.2)

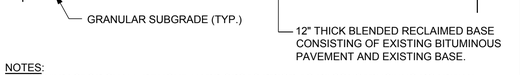
AGGREGATE COURSE MATERIALS NHDOT SECTION 304			
ITEM NO.	304.2	304.3	304.4
SIEVE SIZE	% PASSING BY WEIGHT		
6"	100	---	---
3"	100	---	---
2"	---	95 - 100	100
1"	---	55 -85	---
#4	25 -70	27 - 52	45-75
#200	0 - 12	0 -12	0-5

4 STANDARD BITUMINOUS PAVEMENT SECTION
N.T.S.



NOTE:
TACK COAT - PROVIDE EMULSIFIED ASPHALT WHICH CONFORMS TO THE REQUIREMENTS OF THE STATE SPECIFICATIONS, DILUTED WITH ONE PART WATER TO ONE ONE PART ASPHALT FOLLOWING AASHTO M140/ASTM D997, OR AASHTO M208/ASTM D2397, SS-1H, CSS-1, OR CSS-1H. TACK COAT SHALL BE APPLIED AT A RATE OF 0.04-0.08 GAL/YD².

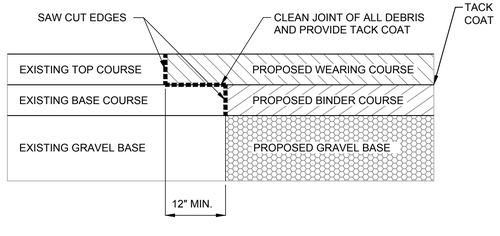
5 MILL AND OVERLAY PAVEMENT DETAIL
N.T.S.



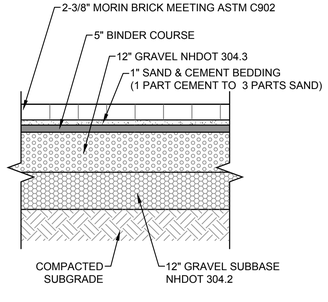
NOTES:
1. CONTRACTOR SHALL REMOVE HARD SPOTS PRIOR TO RECONSTRUCTING ROADWAY PAVEMENTS.
2. REMOVE CLAY MATERIAL IF NECESSARY TO OBTAIN A MIN. OF 12" THICK BASE.
3. RECLAIMED BASE SHALL MEET THE MATERIAL AND CONSTRUCTION REQUIREMENTS OF NHDOT 306 AND CITY SPECIFICATIONS.
3. CONTRACTOR SHALL ADD STONE AS REQUIRED TO MEET THE NHDOT SPECIFICATIONS.

6 ROADWAY SECTION WITH RECLAIMED BASE
N.T.S.

NOTE:
TACK COAT - PROVIDE EMULSIFIED ASPHALT WHICH CONFORMS TO THE REQUIREMENTS OF THE STATE SPECIFICATIONS, DILUTED WITH ONE PART WATER TO ONE ONE PART ASPHALT FOLLOWING AASHTO M140/ASTM D997, OR AASHTO M208/ASTM D2397, SS-1H, CSS-1, OR CSS-1H.

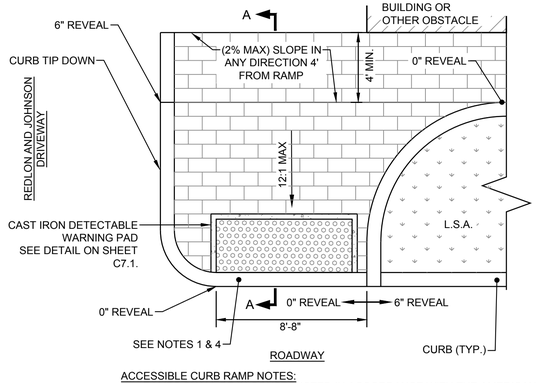


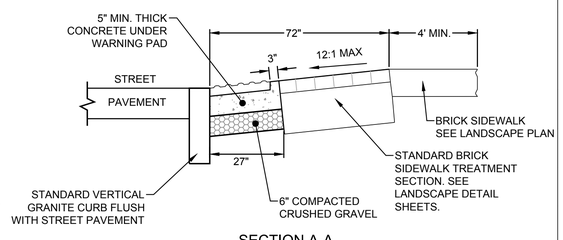
7 PAVEMENT CUT KEY DETAIL
N.T.S.



NOTES:
- BRICK PAVERS SHALL CONFORM TO ASTM C902 "PEDESTRIAN AND LIGHT TRAFFIC BRICK"
- PAVERS SHALL BE TYPE 1, CLASS SX

8 VEHICULAR PAVER SECTION
N.T.S.





SECTION A-A

ACCESSIBLE CURB RAMP NOTES:
1. RAMPS SHALL BE IN CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND STATE AND LOCAL REQUIREMENTS.
2. FOR ROADWAY CURB MATERIALS AND INSTALLATION DETAILS, SEE THIS SHEET.
3. FOR SIDEWALK DETAILS, SEE LANDSCAPE SHEETS.
4. DETECTABLE WARNING PANELS SHALL BE THE FULL WIDTH OF THE LANDING, BLENDED TRANSITION, OR CURB RAMP.
5. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.
6. WARNING PAD SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

9 ACCESSIBLE CURB RAMP DETAIL
N.T.S.

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ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED
PROFESSIONAL ENGINEER

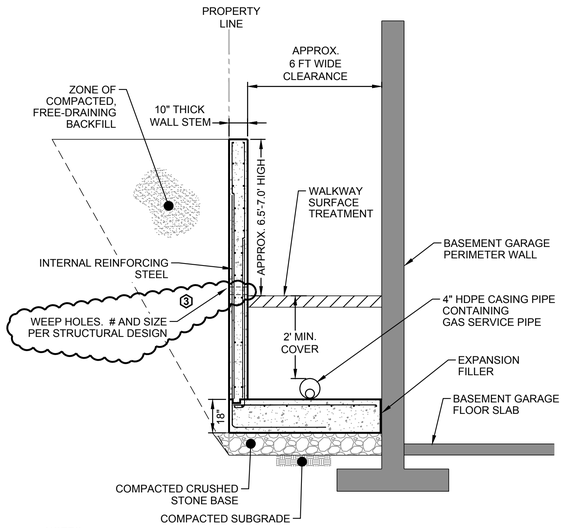
Scale: NTS
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

STANDARD DETAILS

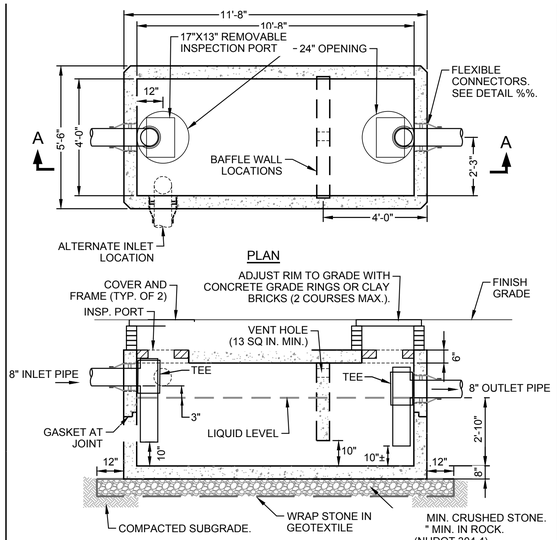
C7.0



NOTES:
1. EXCAVATION AND BACKFILL FOR WALL TO OCCUR WITHIN TEMPORARY CONSTRUCTION EASEMENT.
2. GARAGE WILL INCLUDE A PERIMETER FOUNDATION DRAIN.
3. DIMENSIONS AND INFORMATION SHOWN ARE APPROXIMATE.
4. WALL SHALL REQUIRE A STRUCTURAL DESIGN.
5. TEXTURE VISIBLE FACE TO IMITATE GRANITE BLOCKS.

GAS SERVICE NOTES:
CASING PIPE SHALL BE INSTALLED WHEN SERVICE PIPE IS WITHIN 1' OF STRUCTURE FOOTING.
6. CASING/SLEEVE MATERIAL SHALL BE HDPE DR-11 GAS PIPE APPROVED BY UNITIL.
7. CASING SLEEVE SHALL BE INSTALLED WHERE SERVICE RISER PENETRATES THROUGH PAVED SERVICE TREATEMENT.
8. CASING PIPE SHALL BE INSTALLED USING TYPICAL GAS TRENCH MATERIAL
9. CARRIER RISER PIPE SHALL BE MADE OF ANODELESS MATERIAL.

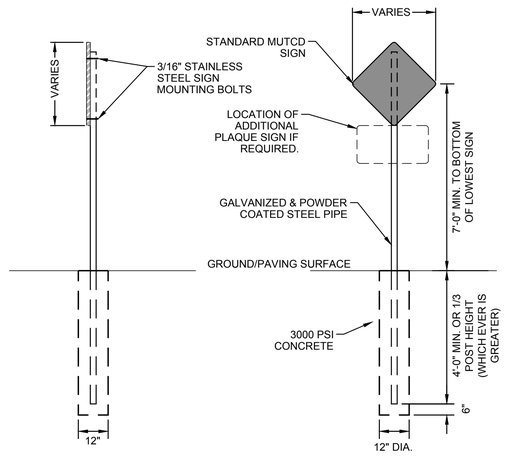
10 CAST-IN-PLACE RETAINING WALL DETAIL
N.T.S.



SECTION A-A

GREASE INTERCEPTOR NOTES
1. GREASE TRAP SHALL BE HS20-44 LOAD RATED.
2. INTERCEPTOR DESIGN SHALL CONFORM TO ASTM C1613, NHDES, AND CITY OF PORTSMOUTH REQUIREMENTS AND SPECIFICATIONS.
3. GREASE TRAP SHALL HAVE A MIN. OF 2 INTERIOR BAFFLES OR TEES OR COMBINATION THEREOF.
4. REINFORCEMENT: AS REQUIRED FOR WATER, SOIL, TRAFFIC, AND HYDRAULIC PRESSURE LOADING.
5. GREASE TRAP BY CONCRETE SYSTEMS, INC. (CSI) OR EQUAL.
6. COVER AND FRAME TO MEET MUNICIPAL STANDARD FOR SANITARY SEWER
7. GEOTEXTILE SHALL BE MIRAFI 600X.
8. TANK PIPING AND TEE DIAMETERS SHALL MATCH CONNECTING PIPES. MATERIAL SHALL BE PVC SDR 35.
9. PIPING RISERS SHALL BE BRACED WITH A MINIMUM OF TWO 1/4" X 1-1/2" S.S. STRAP W/ S.S. EXPANSION ANCHORS.
10. INSPECTION PORTS SHALL BE REMOVABLE AND MATERIAL SHALL BE S.S. OR 6061 ALUMINUM.

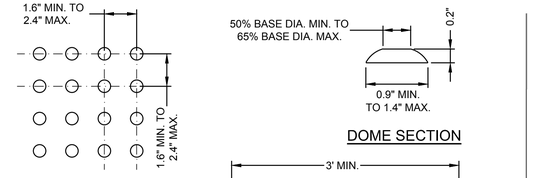
11 1000 GALLON PRECAST GREASE INTERCEPTOR DETAIL
N.T.S.



SIDE VIEW FRONT VIEW

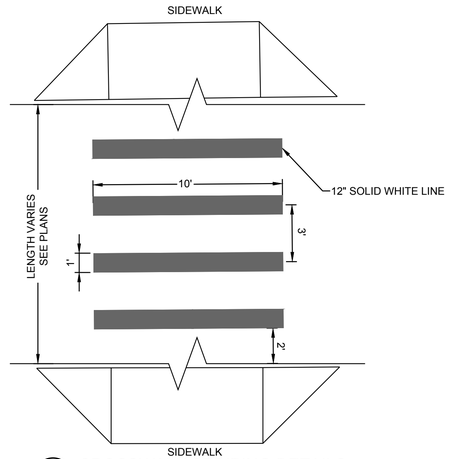
SIGN POST NOTES:
1. ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED.
2. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. SIGN MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH NHDOT STANDARD SPECIFICATIONS AND LOCAL REQUIREMENTS.
4. STEEL POSTS
   - STEEL POST SHALL BE SCHEDULE 40 WITH O.D. OF 2.375"
   - STEEL POSTS SHALL CONFORM TO ASTM A-499, GRADE 60) OR ASTM A 576, GRADE 1070-1080.
   - COATINGS SHALL BE IN ACCORDANCE TO NHDOT STANDARD SPECIFICATION SECTION 708, DUPLEX COATINGS - POWDER COATING OVER GALVANIZING
   - GALVANIZED SURFACE SHALL BE PREPARED FOR POWDER COATING PER ASTM D7803
   - WEIGHT BE 2.5LBS/FT MINIMUM.
   - 3/8" HOLES SHALL BE DRILLED OR PUNCHED BEFORE COATINGS ARE APPLIED. HOLES SHALL BEGIN 1" FROM TOP OF POSTS AND CONTINUE AT 1" CENTERS FOR THE ENTIRE LENGTH OF POSTS.
   - POST SHALL BE POWDER COATED GLOSS BLACK.

12 SIGN POST DETAILS
N.T.S.

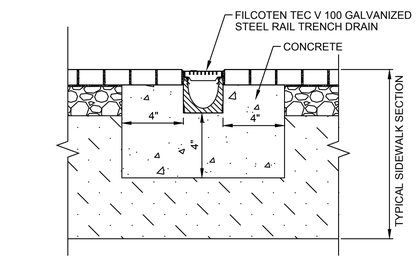


NOTES:
1. DETECTABLE WARNING PANELS SHALL BE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND STATE AND LOCAL REQUIREMENTS.

13 CAST IRON DETECTABLE WARNING SURFACE
N.T.S.

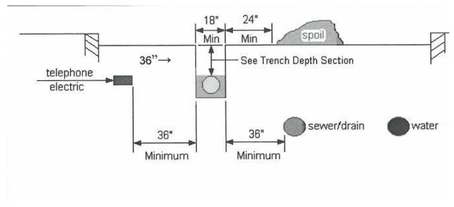


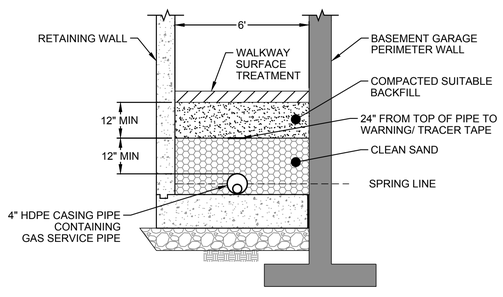
14 CROSSWALK STRIPING DETAILS
N.T.S.



NOTES:
1. CONCRETE SHALL BE 4000 PSI AT 28 DAYS
2. GRATE SHALL BE HEEL PROOF AND BE CLASS C LOAD RATED PER EN 1433.
3. TRENCH SYSTEM SHALL BE INSTALLED PER THE MANUFACTURER'S DIRECTIONS AND SPECIFICATIONS

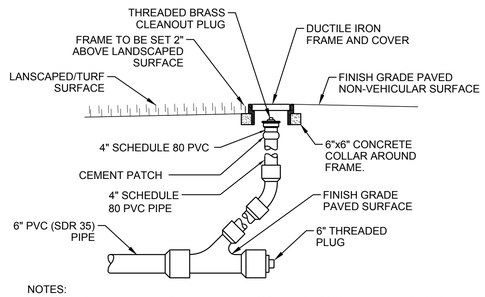
15 TYPICAL TRENCH DRAIN SECTION
N.T.S.





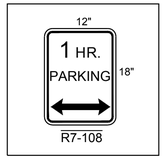
NOTES:
1. GAS PIPE SHALL BE INSTALLED PER UTILITY AND STANDARDS AND SPECIFICATIONS.
2. COORDINATE ALL INSTALLATIONS WITH UNITIL AND CITY OR PORTSMOUTH.
3. TRENCH PROTECTION SHALL BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. "S" = TRENCH PROTECTION WALL WIDTH

17 TYPICAL GAS SERVICE TRENCH DETAIL
N.T.S.



NOTES:
1. COVER SHALL HAVE "DRAIN" LETTERING CAST INTO COVER. LETTERING SHALL BE 1" HIGH

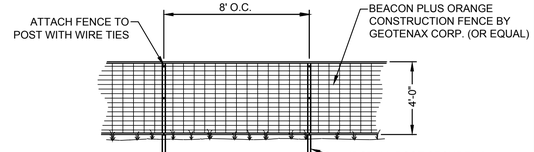
16 CLEANOUT DETAIL
N.T.S.



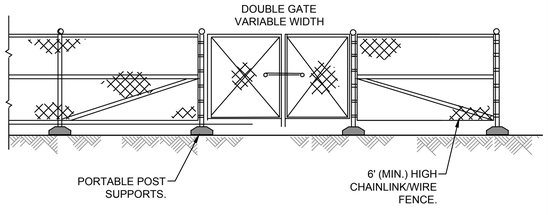
NOTES:

1. SIGNAGE SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION AND STATE AND LOCAL REQUIREMENTS.
2. REGULATORY SIGNS SHALL HAVE SCHEDULE 40 STEEL POSTS

18 TRAFFIC SIGN LEGEND
N.T.S.



SHORT TERM TEMPORARY SAFETY FENCE



NOTES:
1. CONTRACTOR MAY USE CAST-IN-PLACE SUPPORTS IF DESIRED.
2. FENCE LAYOUT AND DESIGN TO BE PROVIDED BY CONTRACTOR.

LONG TERM TEMPORARY CONSTRUCTION FENCE

19 TEMPORARY CONSTRUCTION FENCE
N.T.S.

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ENGINEERED SYSTEMS INC.
MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE – JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale: NTS
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB #2 SUBMISSION	11/07/2017

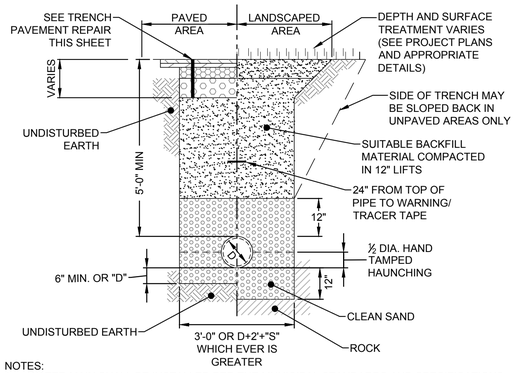
SITE PLAN REVIEW

STANDARD DETAILS

C7.1

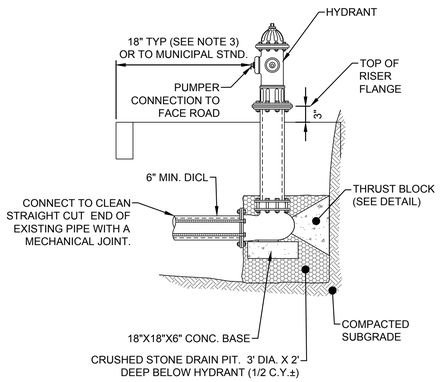
I:\8090\DWG\CIVIL\8090-LOT-6 DETAILS.dwg

PERMIT PLANS - NOT FOR CONSTRUCTION



NOTES:
1. WATER MAIN SHALL BE INSTALLED PER THE MUNICIPAL STANDARDS AND SPECIFICATIONS.
2. DOMESTIC WATER SERVICE AND FIRE SERVICE MAIN MAY BE PLACED IN A SINGLE TRENCH WITH 3' CENTER TO CENTER SEPARATION OR A MIN. OF 2' CLEAR SPACE BETWEEN PIPES WHICH EVER IS GREATER.
3. TRENCH PROTECTION SHALL BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. "S" = TRENCH PROTECTION WALL WIDTH

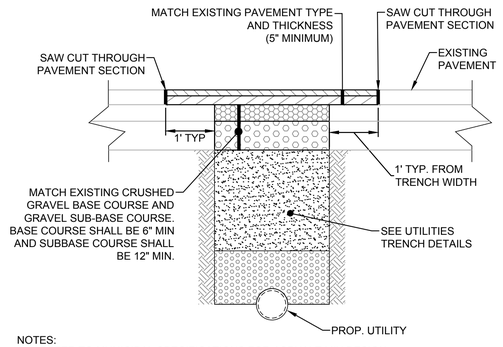
20 TYPICAL DI WATER MAIN AND PVC FORCEMAIN TRENCH DETAIL
N.T.S.



NOTES:

1. MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 3 FEET AT HYDRANT.

21 EXISTING HYDRANT ADJUSTMENT DETAIL
N.T.S.



NOTES:
1. REFER TO MUNICIPAL SPECIFICATIONS FOR ASPHALT MIX DESIGN.
2. CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 401 OF THE NHDOT STANDARD SPECIFICATIONS AND MUNICIPAL SPECIFICATIONS.
3. A TACK COAT SHALL BE PLACED ON CLEANED AND STRAIGHT VERTICAL SAWCUT SURFACE PRIOR TO PLACING BINDER AND WEARING COURSE.
4. TAC COAT SHALL BE RS-1 EMULSION PER NHDOT AND MUNICIPAL SPECIFICATIONS.
5. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE OF PRIOR TO PLACING WEARING COURSE.

22 TYPICAL UTILITY TRENCH PERMANENT PAVEMENT REPAIR DETAIL
N.T.S.

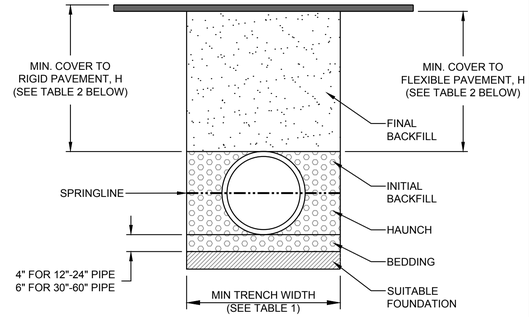


TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
60"	96"

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

	CLASS I	CLASS II			CLASS III			CLASS IV
PIPE DIA	COMPACTED	95%	90%	85%	95%	90%	95%	
12"	41	28	21	16	20	16	16	
15"	42	29	21	16	21	16	16	
18"	44	30	21	16	22	17	16	
24"	37	26	18	14	19	14	14	
30"	39	27	19	14	19	15	14	
36"	28	20	14	10	14	11	10	
42"	30	21	14	10	15	11	10	
48"	29	20	14	9	14	10	10	
60"	29	20	14	9	14	10	9	

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

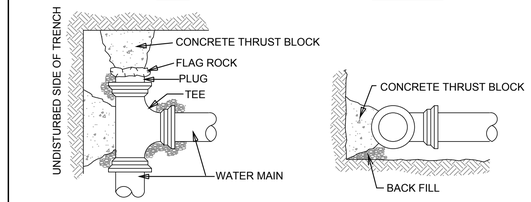
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 12"-24" DIAMETER PIPE; 6" FOR 30"-60" DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04 IN SECTION 8 OF *THE ADS DRAINAGE HANDBOOK*.

27 TYPICAL HP STORM TRENCH DETAIL
N.T.S.

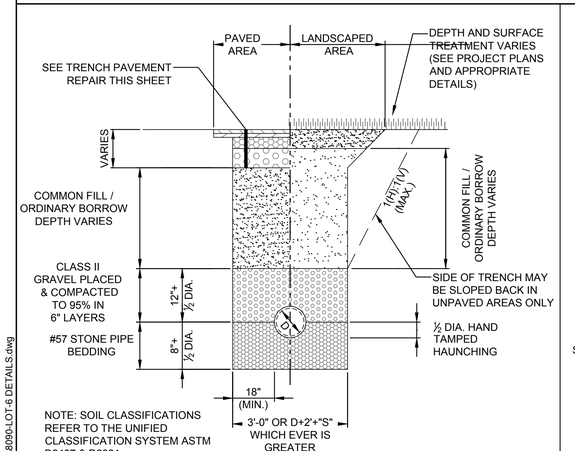


NOTES:
1. ALL WATER MAIN FITTINGS, BENDS, TEES, PLUGS ETC. SHALL BE RESTRAINED W/ THRUST BLOCKS EXCEPT WHERE NOTED.
2. ALL THRUST BLOCKS & COLLARS SHALL BE INSTALLED SO THAT THEY BEAR AGAINST UNDISTURBED EARTH.
3. SIZE OF CONCRETE THRUST BLOCKS SHALL BE AS NOTED BELOW.
4. MINIMUM COMPRESSIVE STRENGTH OF THRUST BLOCK CONCRETE SHALL BE 3,000 P.S.I.
5. KEEP CONCRETE CLEAR OF MECHANICAL JOINTS.
6. THE BELOW PREDICATED ON A WATER PRESSURE OF 225 PSI AND A SOIL RESISTANCE OF 2000 PSF (TILL). FOR OTHER SOILS THE VALUES IN THE BELOW TABLE SHALL BE MULTIPLIED BY:

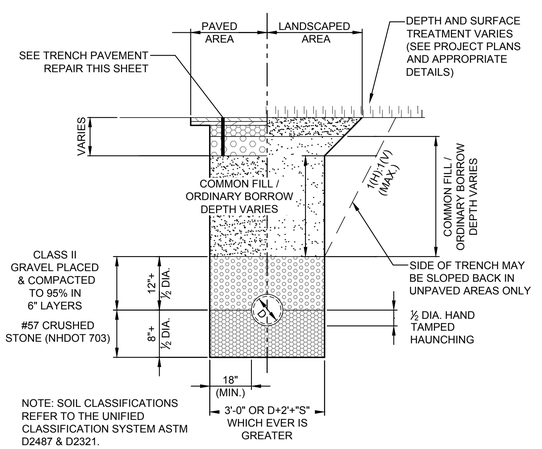
SOFT CLAY	4
SAND	2
SAND & GRAVEL	1.33
SHALE	0.4

MINIMUM THRUST BLOCK BEARING AREAS				
PIPE DIAMETER	90° BEND (SQ. FT.)	45° BEND (SQ. FT.)	22.5° BEND (SQ. FT.)	TEES, PLUGS, CAPS & HYDRANTS (SQ.FT.)
6"	5	3	2	4
8"	8	5	3	6
10"	13	7	4	9
12"	18	10	5	13

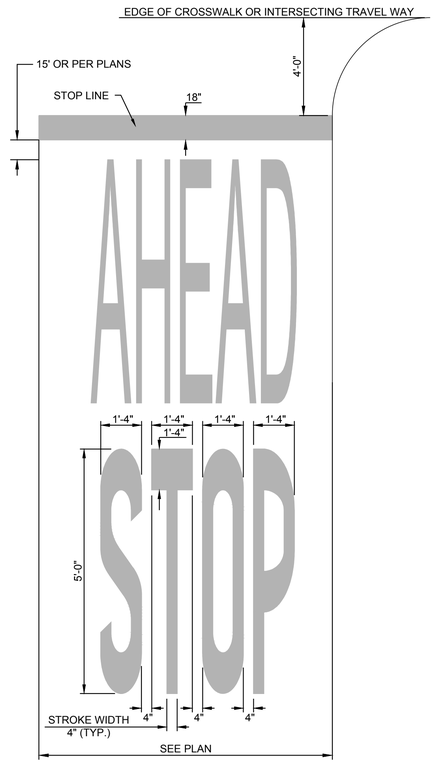
23 TYPICAL THRUST BLOCK DETAIL
N.T.S.



24 TYPICAL STORM DRAIN TRENCH DETAIL
N.T.S.



25 TYPICAL SANITARY SEWER TRENCH DETAIL
N.T.S.



NOTE:

1. WORDS AND LINES SHALL BE APPLIED IN ACCORDANCE WITH SECTIONS 3B.16 AND 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. THESE WORDS AND BAR ARE TO BE PAINTED RETROREFLECTIVE WHITE. (60 MIL)
3. DIMENSIONS SHOWN ARE TYPICAL AND APPLY TO ALL LETTERING.

3 26 TYPICAL PAINTED LETTERING DETAIL
N.T.S.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE — JOSEPH H. KIEFFNER No. 13174 LICENSED PROFESSIONAL ENGINEER

Scale: NTS
Date: **3/17/2017**
Project Number: **14837.03**

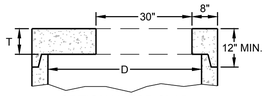
REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB #2 SUBMISSION	11/07/2017

SITE PLAN REVIEW

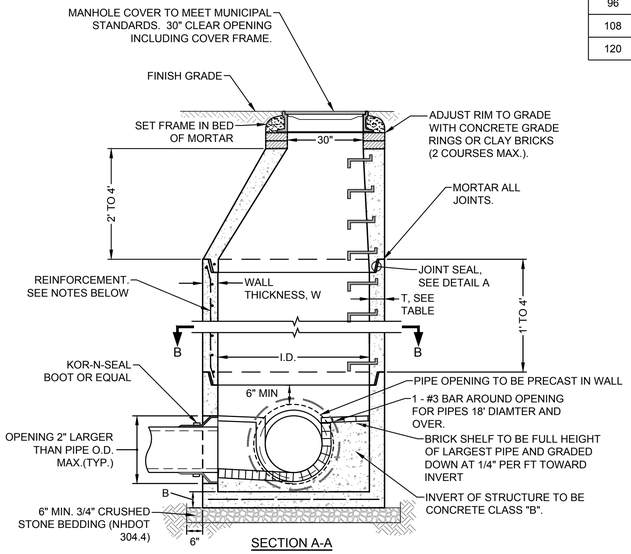
STANDARD DETAILS

C7.2

I:\80900\DWG\CIVIL\80900-LOT-6 DETAILS.dwg

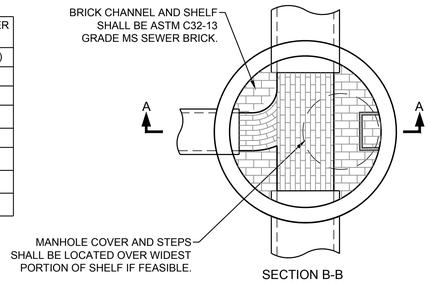


OPTIONAL TOP SLAB



SECTION A-A

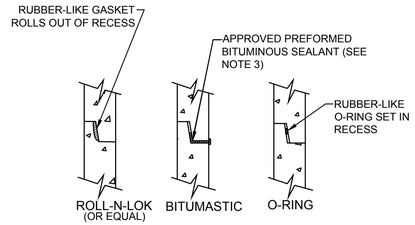
MINIMUM DIMENSIONS FOR INNDER DIAMETER, I.D.			
I.D. (IN)	W (IN)	B (IN)	T (IN)
48	5	6	8
60	6	8	8
72	7	8	8
84	9	10	10
96	9	10	12
108	10	10	12
120	11	10	12



SECTION B-B
BENCH/SHELF PLAN

NOTES:
1. MANHOLE I.D. SHALL BE 48" UNLESS STATED OTHERWISE ON PLANS.
2. THESE MANHOLE DETAILS TO BE USED FOR BOTH SANITARY SEWER AND STORM DRAIN MANHOLES.
3. PRECAST MANHOLES SHALL CONFORM TO AASHTO M199/ ASTM C478 SPECIFICATIONS.
4. REINFORCEMENT:
   4.1. DEFORMED BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
   4.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185
5. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
6. REIN. STEEL SHALL HAVE 1' MINIMUM COVER.
7. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FOOT.
8. THE STRUCTURES SHALL BE DESIGNED FOR HS 20-44 LOADING.
9. CRUSHED STONE BEDDING SHALL CONFORM TO NHDOT 304.4.
10. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
11. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
12. ALL STRUCTURES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES, AND NO HOLES CLOSER THAN 6" TO JOINTS.
13. SANITARY SEWER MANHOLES SHALL HAVE AN EXTERIOR ASPHALTIC WATER PROOF COATING APPLIED (2 COATS MIN.).
14. BASE SHALL BE A SINGLE POUR MONOLITHIC SECTION TO A MINIMUM OF 6" PIPE OPENING
15. INVERTS AND SHELVES:
   15.1. BRICK SHALL BE ASTM C32-13 GRADE MS SEWER BRICK.
   15.2. BRICK SHELVES SHALL BE CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW.
   15.3. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO WALL OF THE PIPE.
   15.4. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE CHANNEL
   15.5. INVERTS AND SHELVES SHALL ONLY BE PLACED AFTER LEAKAGE TESTS ARE PERFORMED.
16. FRAMES AND COVERS:
   16.1. FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN
   16.2. 4" (MINIMUM) HEIGHT LETTERS SHALL BE USED FOR COVER LETTERS. SEWERS SHALL HAVE "SEWER" AND STORM DRAIN COVERS SHALL HAVE "DRAIN" CAST INTO THE CENTER OF EACH COVER.
   16.3. LEAKAGE TEST SHALL CONFORM TO MUNICIPAL SPECIFICATIONS.
17. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND SPECIFICATIONS.

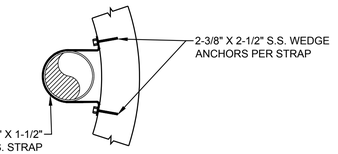
27 TYPICAL PRECAST CONCRETE JUNCTION MANHOLE
N.T.S.



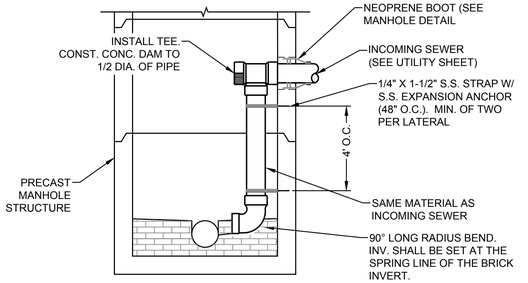
NOTES:

1. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
2. HORIZONTAL JOINT SEAL SHALL BE PREFORMED BITUMASTIC SEALANT OR RUBBER-LIKE O-RING AND INSTALLED ACCCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SPECIFICATIONS.
3. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER THE CITY OF PORTSMOUTH STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW OF ELASTORMERIC OR MASTIC-LIKE GASKET.

DETAIL A



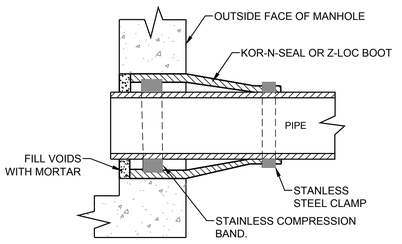
PIPE STRAP DETAIL



NOTE:

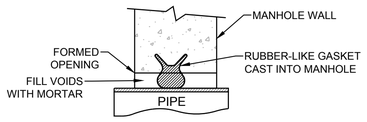
1. INTERIOR MANHOLE DROP SHALL ONLY BE INSTALLED IN 5' DIA. OR LARGER MANHOLES.
2. DROP CONNECTION SHALL BE USED WHERE THE INCOMING PIPE INVERT IS 24" HIGHER THAN BRICK OUTLET PIPE INVERT.
3. DROP PIPE AND FITTINGS SHALL BE THE SAME MATERIAL AND DIAMETER OF INCOMING PIPE.
4. ALL HARDWARE SHALL BE STAINLESS STEEL (S.S.).
5. STAINLESS STEEL SHALL BE TYPE 304 FOR STORM WATER STRUCTURES AND TYPE 316 FOR SANITARY SEWER STRUCTURES.
6. DROP PIPE INVERT ELEVATIONS:
   6.1. WHEN DROP PIPE DIA. IS EQUAL TO THE MANHOLE OUTLET PIPE THEN THE DROP INVERT SHALL BE 0.1' ABOVE OUTLET INVERT.
   6.2. WHEN DROP PIPE DIA. IS LESS THEN OUTLET PIPE DIA. THEN DROP INVERT SHALL BE SET AT THE MID POINT OF THE BRICK SHELF.
7. SEE TYPICAL MANHOLE DETAIL FOR MANHOLE CONSTUCTION.

28 TYPICAL MANHOLE INTERIOR MANHOLE DROP CONNECTION
N.T.S.



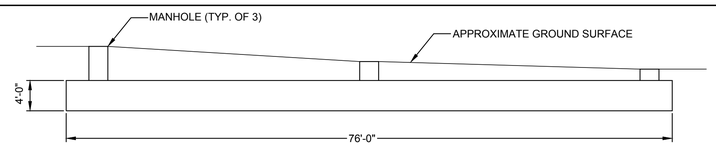
BOOT CONNECTOR

NOTE:
1. SEALS SHALL CONFORM TO ASTM C923.
2. STAINLESS STEEL SHALL BE TYPE 304
3. CONNECTOR SEALS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN SPECIFICATIONS AND INSTRUCTIONS.
3. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARDS.

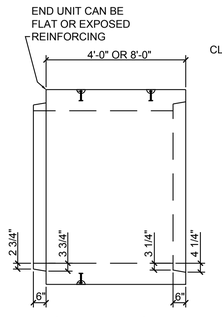


A-LOK RESILIENT CONNECTOR

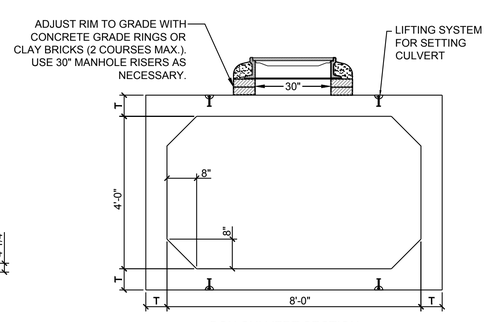
29 PIPE CONNECTION TO PRECAST MANHOLE STRUCTURES
N.T.S.



BOX CULVERT PROFILE DETAIL



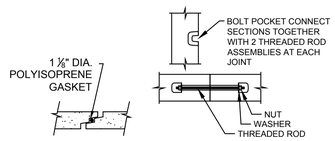
SIDE ELEVATION



BOX CULVERT SECTION

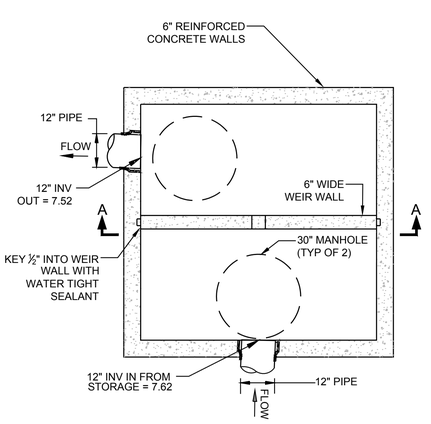
NOTES:
1. BOX CULVERT SHALL BE DESIGNED FOR HS-20-44 LOADING AND TO PREVENT FLOTATION IF FULLY SUBMERGED.
2. CULVERT SHALL CONFORM TO AASHTO M273
3. ALL SECTIONS TO BE JOINED WITH SS 304 FASTENERS. HARDWARE TO BE DESIGNED BY THE PRECAST MANUFACTURER.
4. CONCRETE DESIGN STRENGTH SHALL BE 5000 PSI.
5. REINFORCEMENT:
   5.1. DEFORMED BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
   5.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 - GRADE 70
6. REFER TO DETAIL 29 FOR PIPE CONNECTION DETAIL.
7. MANHOLES TO BE PLACED AT ALL PIPE CONNECTIONS.
8. SEE PLAN FOR MANHOLE ENTRANCE LOCATIONS.
5. THE STRUCTURE SHALL BE DESIGNED FOR HS 20-44 LOADING.

T=PER MANUFACTURER'S STRUCTURAL DESIGN

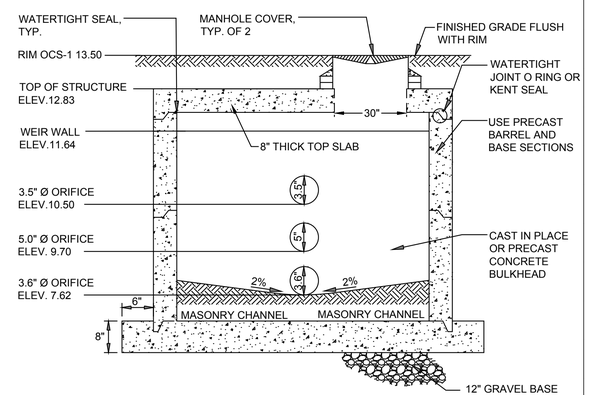


TYPICAL JOINT DETAIL BOLT POCKET DETAIL

30 8'x4'x76' DETENTION BOX DETAIL
N.T.S.



PLAN



SECTION A-A

NOTES:

1. PRECAST BOX STRUCTURE SHALL CONFORM TO ASTM C913 SPECIFICATIONS.
2. SEE DETAIL TITLE PIPE CONNECTION TO PRECAST MANHOLE STRUCTURES (THIS SHEET).
3. REINFORCEMENT:
   3.1. DEFORMED BARS SHALL CONFORM TO ASTM A-615 GRADE 60.
   3.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185-GRADE 70
4. ALL SECTIONS SHALL BE 5,000 PSI CONCRETE.
5. REIN. STEEL SHALL HAVE 1' MINIMUM COVER.
6. THE STRUCTURE SHALL BE DESIGNED FOR HS 20-44 LOADING AND TO PREVENT FLOTATION IF FULLY SUBMERGED.
7. CRUSHED STONE BEDDING SHALL CONFORM TO NHDOT 304.4.
8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.

31 6'x6' OUTLET CONTROL STRUCTURE
N.T.S.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:
Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:
STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED
PROFESSIONAL ENGINEER
Joseph H. Kieffner

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

STANDARD DETAILS

C7.3

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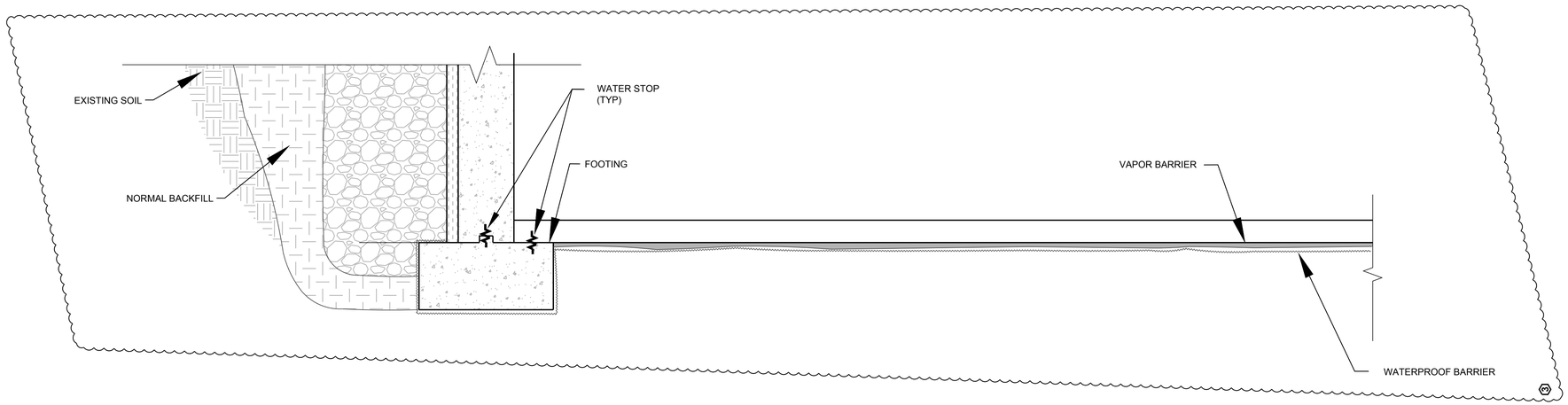

33 SUB SLAB WATERPROOFING SECTION
N.T.S.

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PROFESSIONAL ENGINEER

Scale:
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
⟨2⟩	PB SUBMISSION	10/10/2017

SITE PLAN REVIEW

FOUNDAIN WATERPROOFING

C7.4

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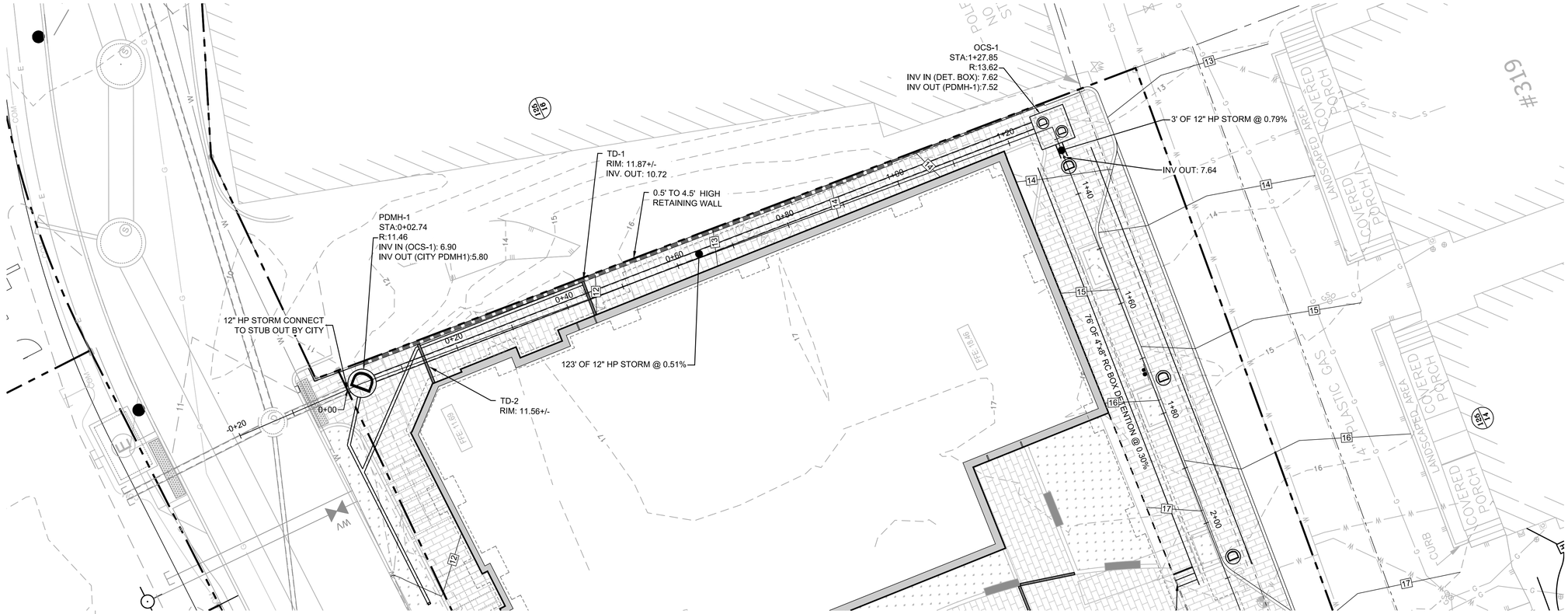
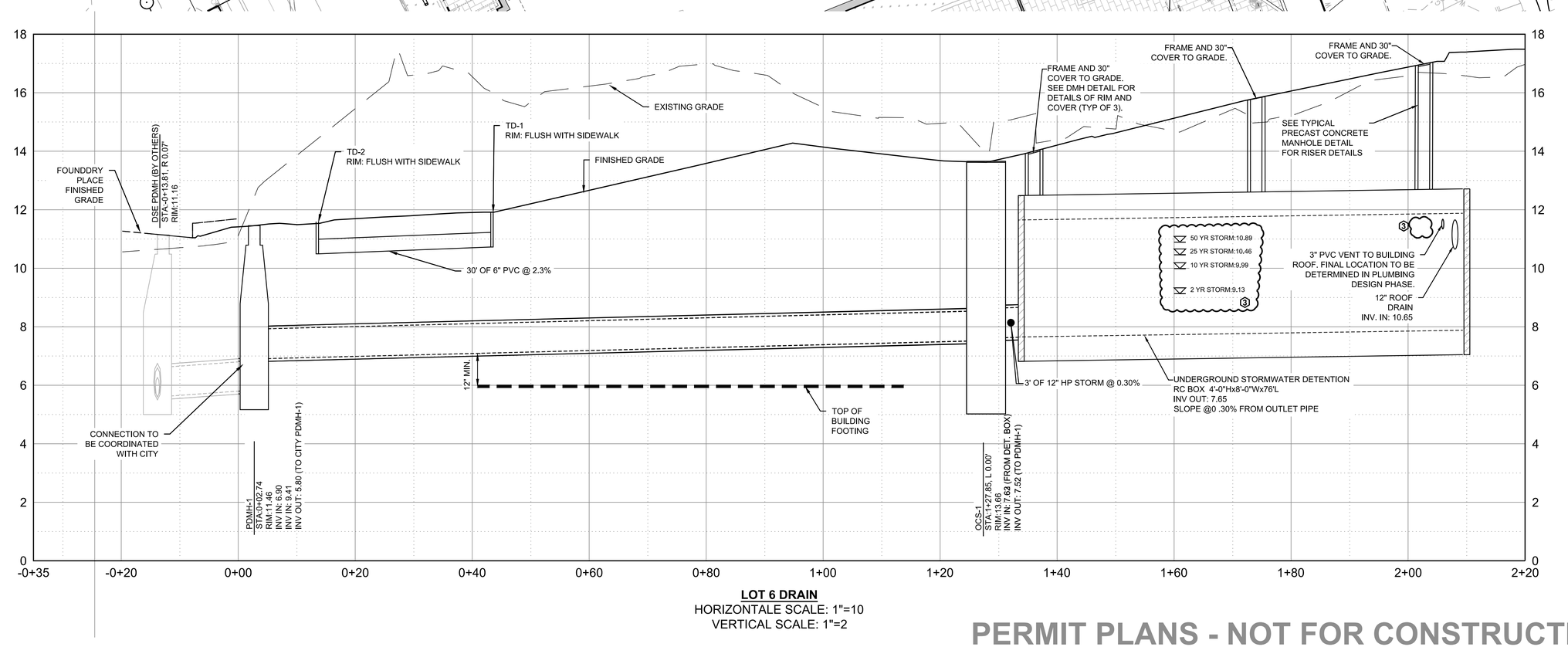
PERMIT PLANS - NOT FOR CONSTRUCTION





LOT 6 DRAIN
HORIZONTALE SCALE: 1"=10
VERTICAL SCALE: 1"=2

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - LICENSED
JOSEPH H. KIEFFNER No. 13174

Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

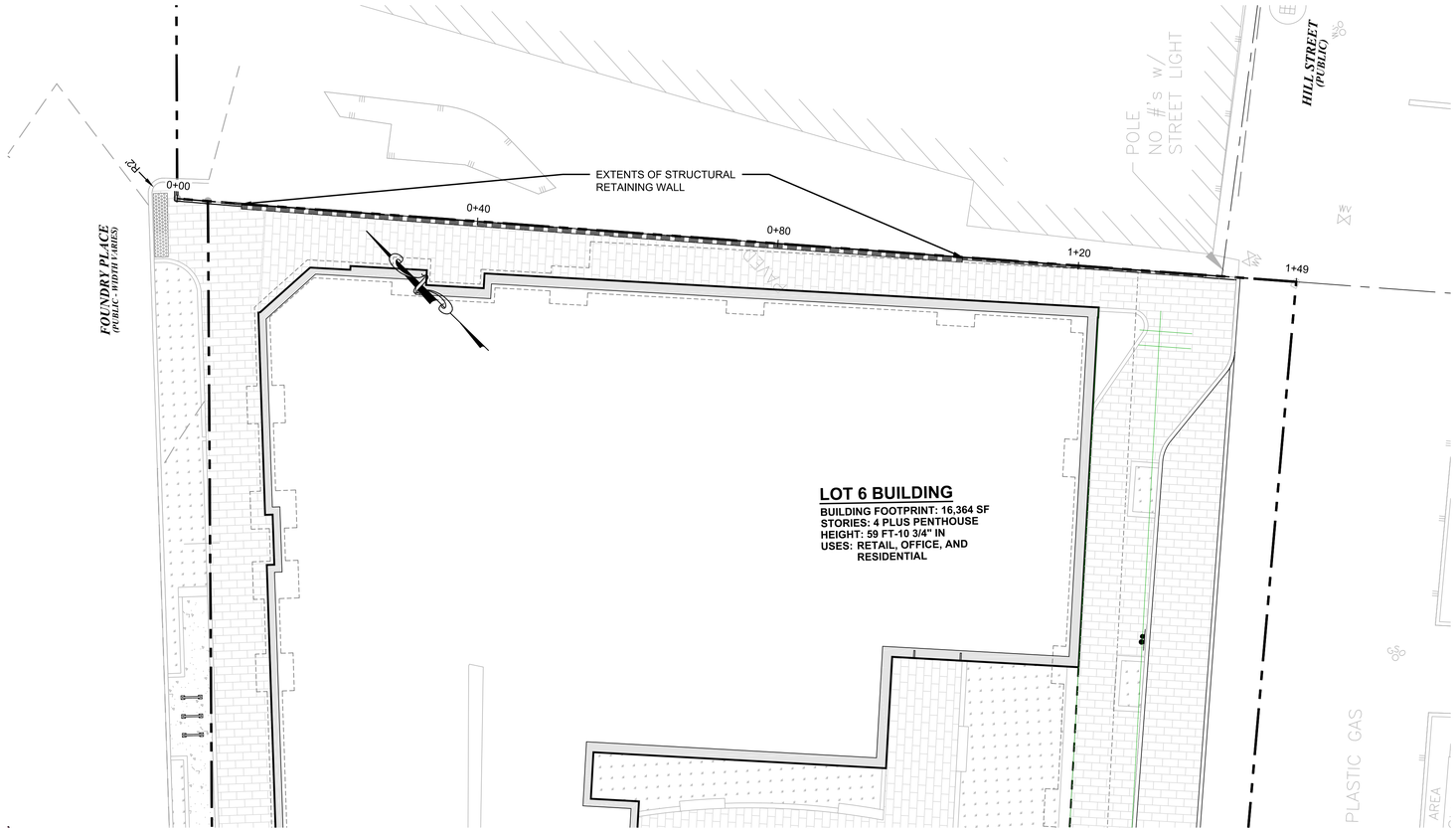
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	PB SUBMISSION	10/10/2017

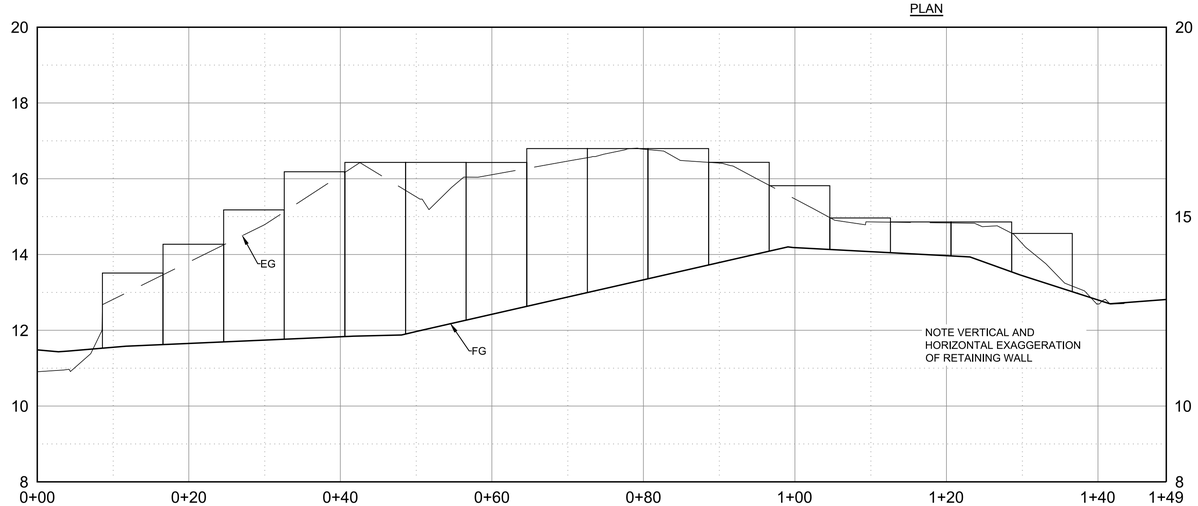
SITE PLAN REVIEW

DRAIN PLAN & PROFILES AND CROSS-SECTIONS

C8.0

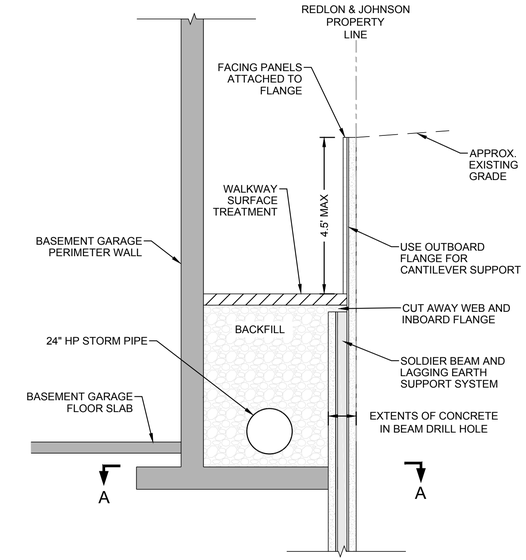


PLAN

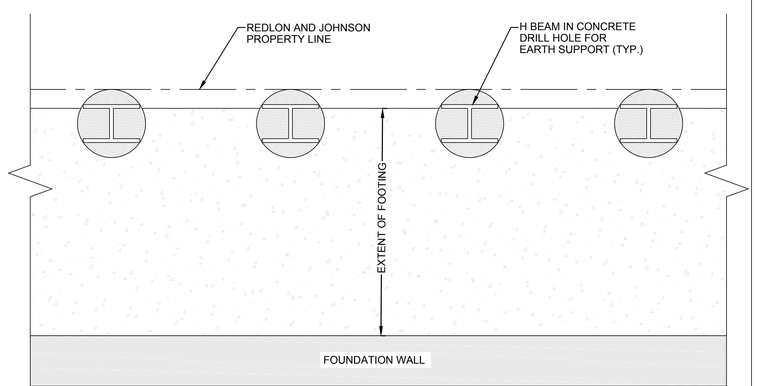


RETAINING WALL ALIGNMENT
HORIZONTALE SCALE: 1"=10
VERTICAL SCALE: 1"=2

NOTE:
1. WHERE AREAS OF RETENTION ARE GREATER THAN 18", WALL SHALL BE CONSTRUCTED BY ATTACHING PANELS TO THE OUTBOARD FLANGE OF THE SOLDIER BEAM PILE (THE INBOARD FLANGE AND THE WEB WILL BE CUT AWAY). THE PANELS WILL BE COMPRISED OF PRECAST CONCRETE, METAL, OR PRESSURE TREATED WOOD.
2. WHERE AREAS OF RETENTION ARE LESS THAN 18", WALL SHALL BE CONSTRUCTED OF PUSH IN PANELS OR MANUALLY EXCAVATED AND INSTALLED PANELS.
3. A HAND RAILING SHALL BE INSTALLED ALONG THE ENTIRE LENGTH OF THE TOP OF THE RETAINING WALL.



TYPICAL SECTION



PLAN A-A

34 RETAINING WALL DETAIL
N.T.S.

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MPFP ENGINEER
WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:
Deer Street Associates
7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:
STATE OF NEW HAMPSHIRE
JOSEPH H. KIEFFNER
No. 13174
LICENSED PROFESSIONAL ENGINEER

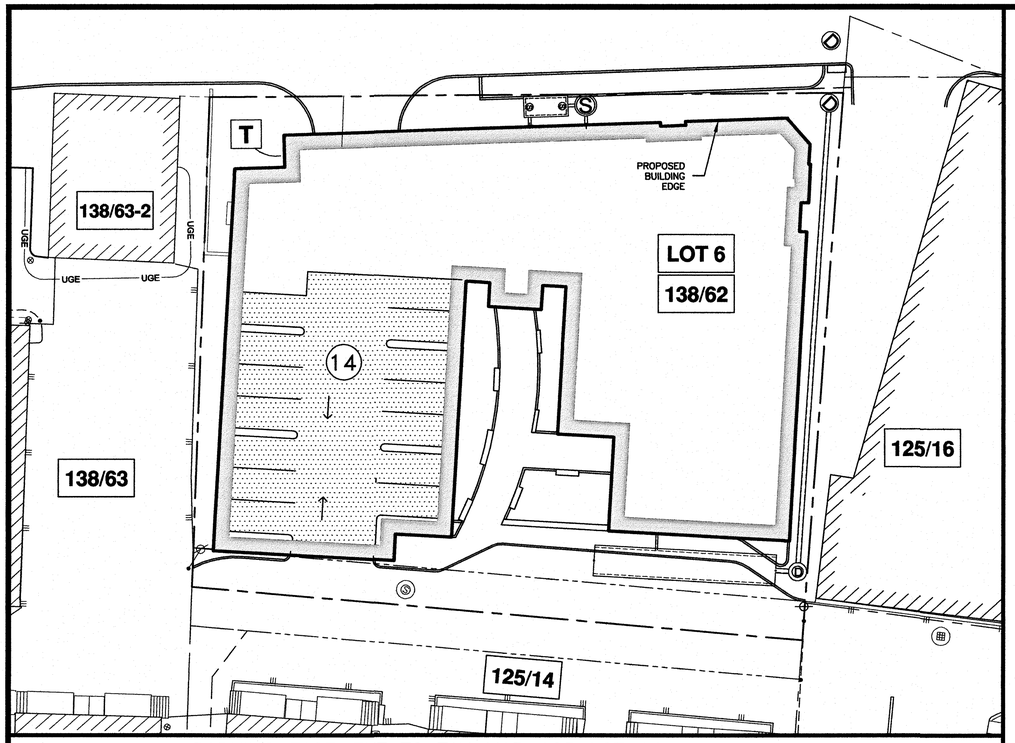
Scale:	1"=10'
Date:	3/17/2017
Project Number:	14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

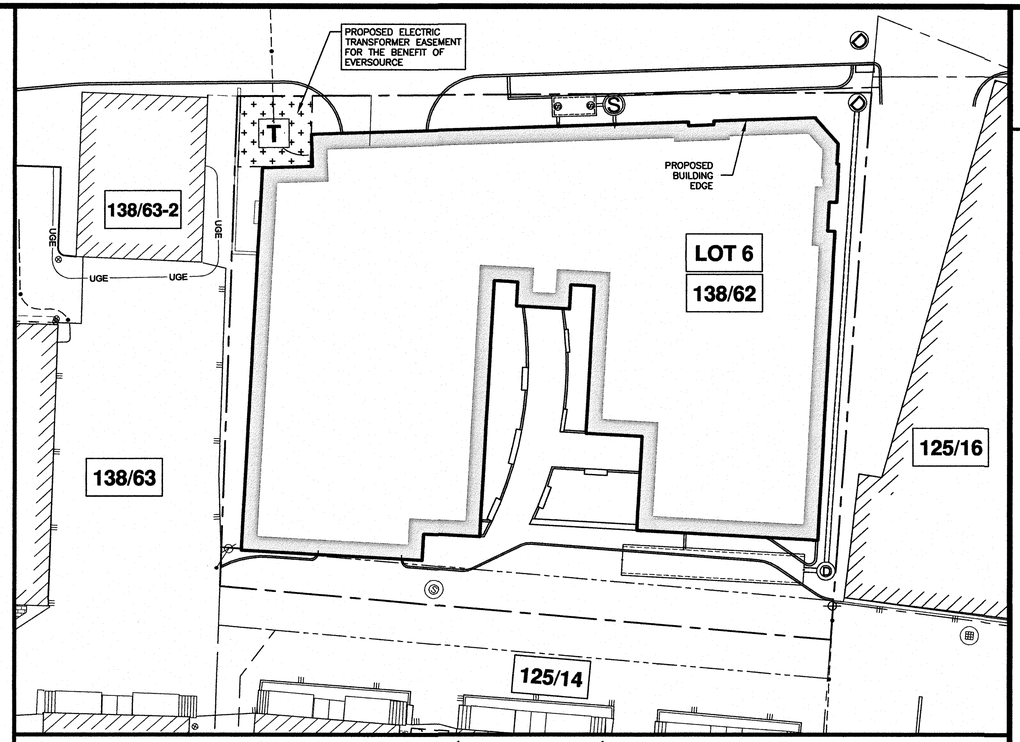
SITE PLAN REVIEW

RETAINING WALL PLAN AND PROFILE

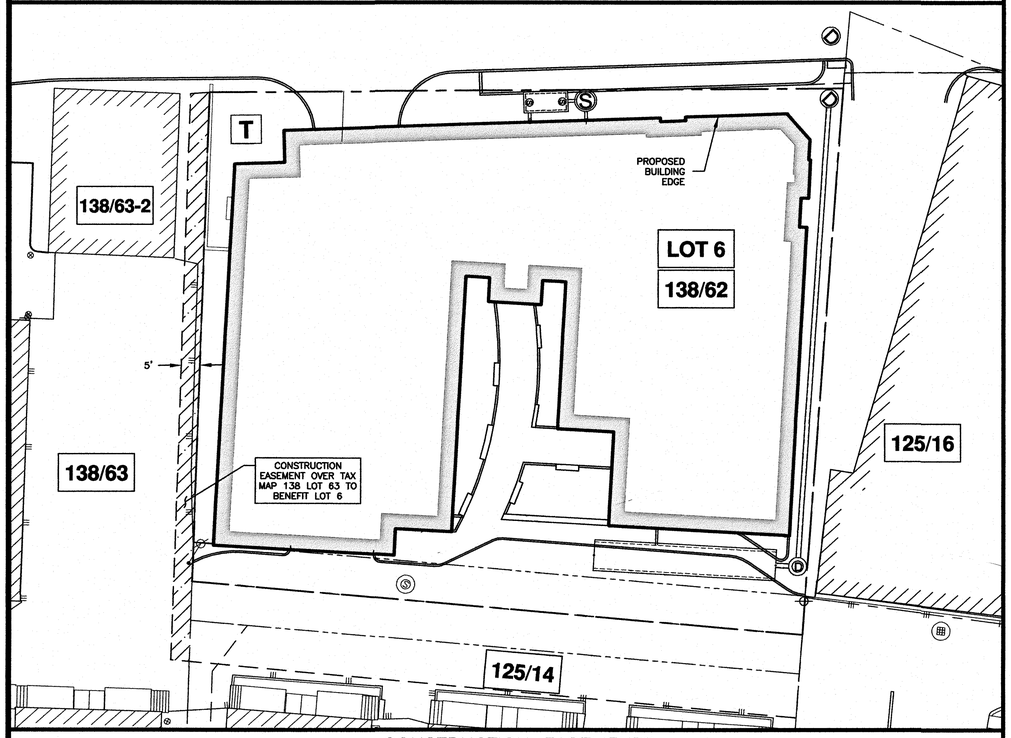
C8.1



PARKING EASEMENT TO TAX MAP 125 LOT 14



ELECTRIC EASEMENT (TRANSFORMER) TO EVERSOURCE



CONSTRUCTION EASEMENTS

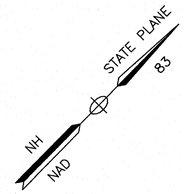
AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road – Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAPS AS MAP 138 LOT 62.

2) OWNER:
DEER STREET ASSOCIATES
PO BOX 100
YORK HARBOR, ME 03911
3395/2669, 5534/2077, & 5453/138
D-39699

3) THE PURPOSE OF THIS PLAN IS TO SHOW PROPOSED EASEMENTS FOR REVIEW AND APPROVAL FOR TAX MAP 138-62 (SUBDIVISION LOT 6).

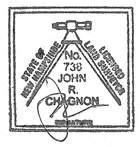


GRAPHIC SCALE
10 0 10 20 30 40 50 FEET
3 0 5 10 15 METERS

DEER STREET ASSOCIATES
FOUNDRY PLACE
PORTSMOUTH, NH

NO.	DESCRIPTION	DATE
3	REMOVED ELECTRIC EASEMENTS	9/15/17
2	PARKING & CONSTRUCTION EASEMENTS	8/10/17
1	ISSUED FOR REVIEW	6/16/17
0	ISSUED FOR COMMENT	5/26/17

REVISIONS



SCALE: 1"=20' MAY 2017

EASEMENT PLAN
TAX MAP 138 LOT 62
SUBDIVISION LOT 6

E4

FB 250, PG 22

2271

J:\JOBS\2200s\2271\01\2271-01-016 Dwg\+ Work\Plans & Specs\Site\2271-12xA EASEMENTS_2017JUN16_E4-LOTS

NOTE: THE ELECTRICAL CONTRACTOR SHALL PROVIDE AN EMERGENCY RESPONDER RAPID REPEATER SYSTEM FOR THE BUILDING IN ACCORDANCE WITH THE REQUIREMENTS OF 2009 INTERNATIONAL BUILDING CODE, SECTION 915 IF DEEMED NECESSARY BY THE PORTSMOUTH FIRE DEPARTMENT.

REFER TO CIVIL DRAWINGS FOR STREET DUCTBANK WORK PROVIDED BY THE CITY OF PORTSMOUTH.

COUPLE TO PRIMARY DUCTBANK PROVIDED BY OTHERS

NEW EVERSOURCE SINGLE PHASE PAD MOUNTED TRANSFORMER FOR REPAIR SHOP.

NEW PAD MOUNTED EVERSOURCE TRANSFORMER FOR BUILDING 6 ON PAD PROVIDED BY DSA.

COUPLE TO PRIMARY DUCTBANK PROVIDED BY OTHERS

BUILDING #6 ELECTRIC METERS WILL BE LOCATED IN THE 1ST FLOOR MAIN ELECTRIC ROOM AND WILL INCLUDE:
(43) METERS FOR RESIDENCES
(1) METER FOR OFFICE TENANT
(1) METER FOR RETAIL TENANT
(1) METER FOR HOUSE LOADS

SECTION F-F

SECONDARY DUCTBANK AND CONDUCTORS PROVIDED BY OTHERS

SECONDARY HANDHOLE PROVIDED BY DSA

REPAIR SHOP #191 TO REMAIN

NATURAL GAS FIRED ROOFTOP STANDBY/EMERGENCY GENERATOR

BUILDING #6

CONNECT TO EXITING METER/BREAKER DEVICE

CONNECT TO EXISTING 800A 120/208V-3Φ-4W SERVICE @ WEATHERHEAD

(2) 4" R.S. CONDUIT RISERS UP TO EXISTING SERVICE WEATHERHEADS ON SIDE OF BUILDING

361 HANOVER TO REMAIN

5/11/2017 12:15:40 PM C:_Revit Projects 2016\2016 - 837.03 - Deer St_Hill St. Housing - CENTRAL - CURRENT_2017-02-28_tkozak.rvt

\\SERVO\2016 Jobs\216214\DWGs\Building 6 - TAC Submission\216214-SE1.1 - BUILDING 6 ELECTRIC.dwg, 8/18/2017 10:46:25 AM, _DWG To PDF.pc3

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MPFP ENGINEER
WOBURN, MASSACHUSETTS

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ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED PROFESSIONAL ENGINEER

Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

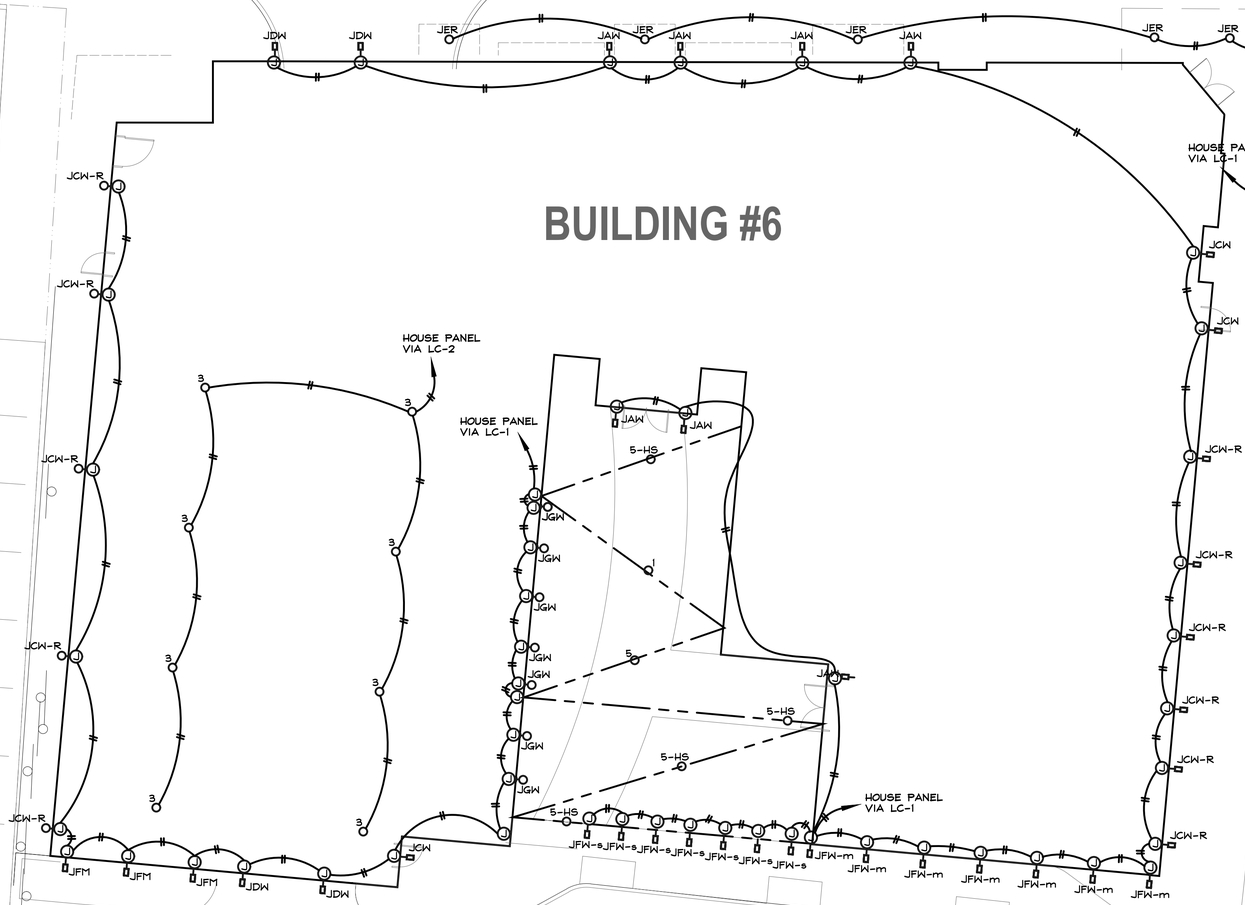
BUILDING #6 ELECTRICAL & COMMUNICATION PLAN

SE1.1

FOUNDRY PLACE

REPAIR
SHOP #191
TO REMAIN

BUILDING #6



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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HAFEY
LICENSED PROFESSIONAL ENGINEER

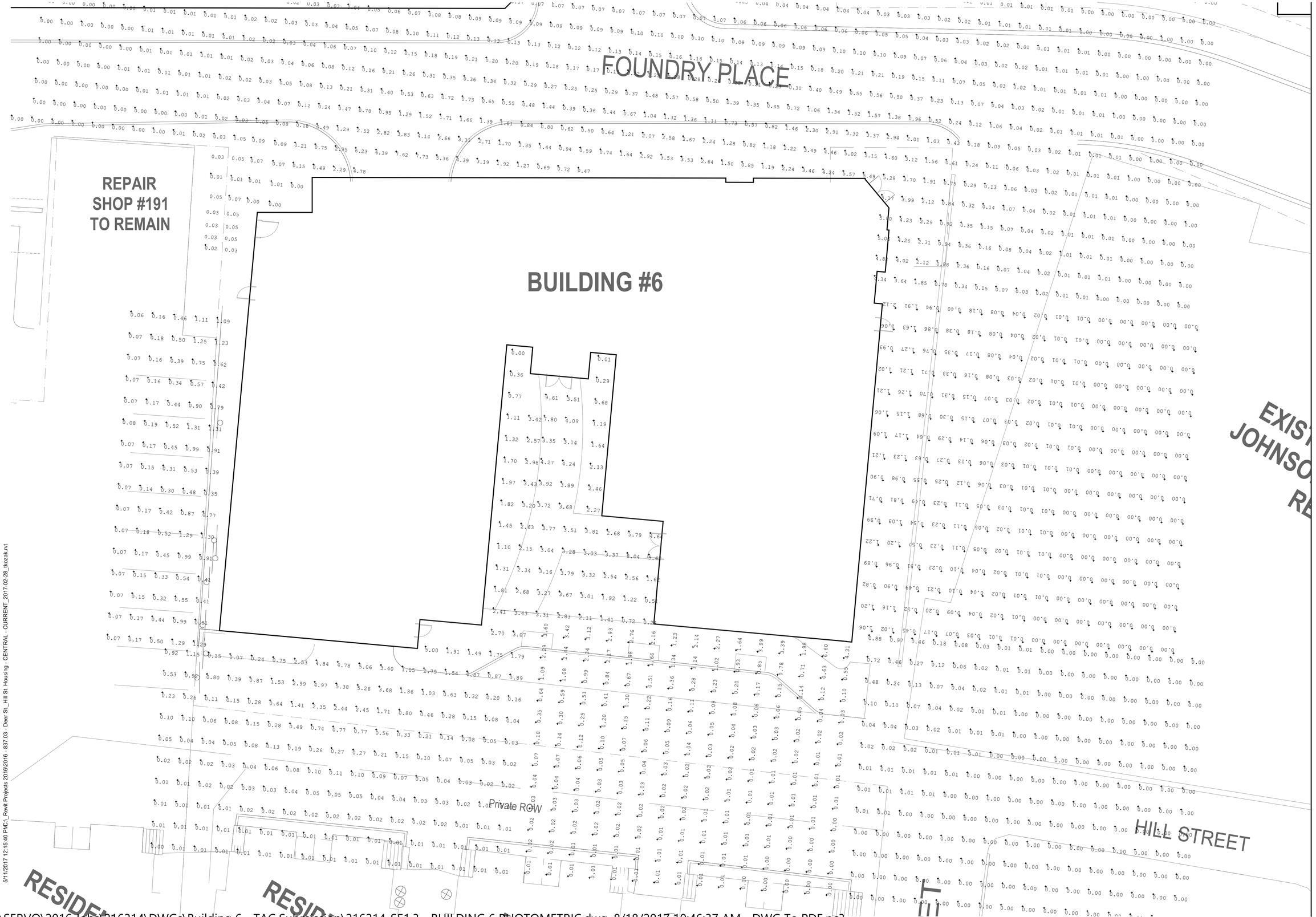
Scale: 1"=10'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

BUILDING #6
LIGHTING PLAN

SE1.2



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\\SERVO\2016 Jobs\216214\DWGs\Building 6 - TAC Submission\216214-SE1.3 - BUILDING 6 PHOTOMETRIC.dwg, 8/18/2017 10:46:37 AM, _DWG To PDF.pc3

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ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED
PROFESSIONAL ENGINEER

Scale: 1"=40'
Date: 3/17/2017
Project Number: 14837.03

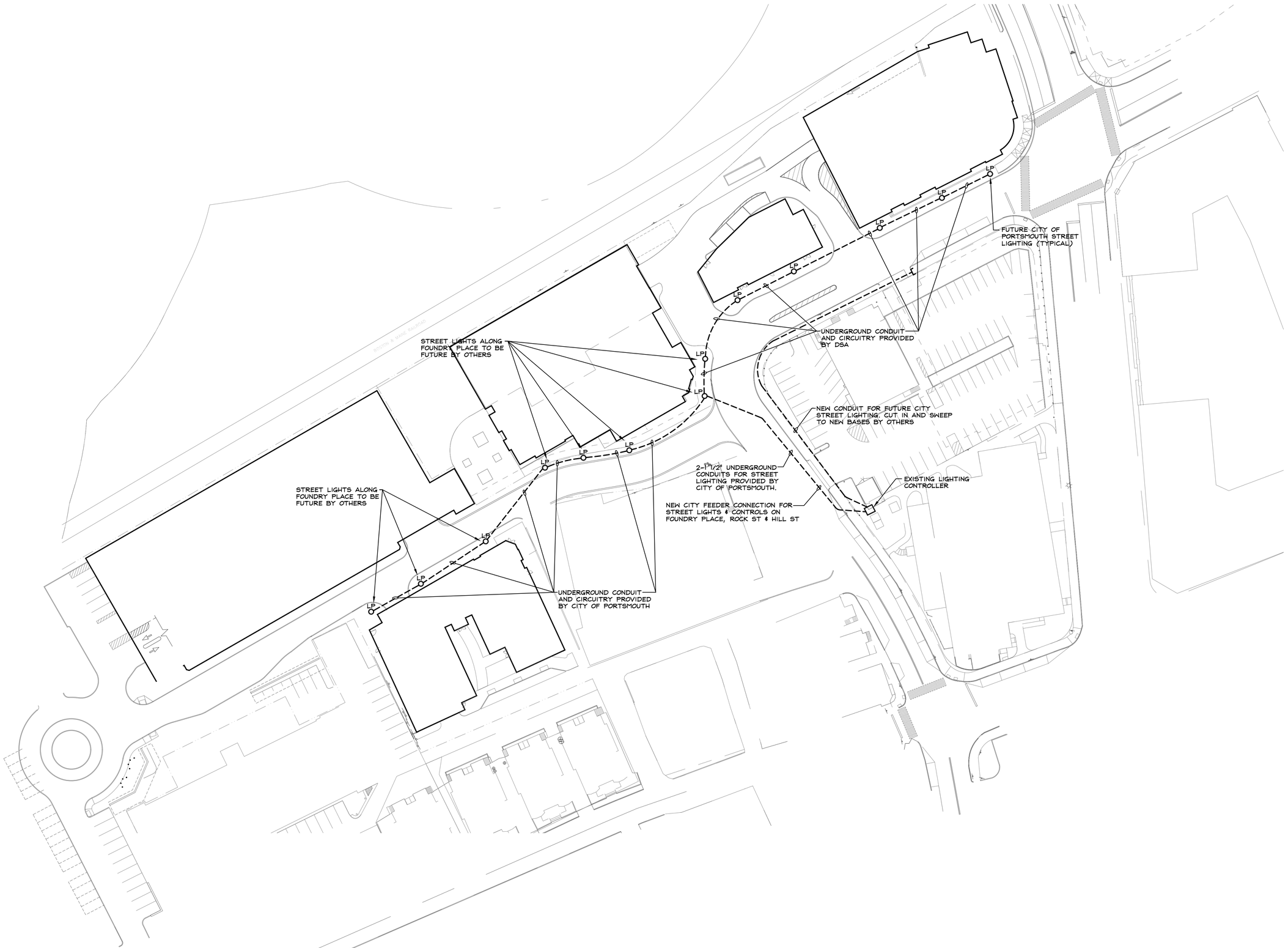
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

BUILDING #6
PHOTOMETRIC
PLAN

SE1.3



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ELECTRICAL ENGINEER
DERRY, NEW HAMPSHIRE

RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED PROFESSIONAL ENGINEER

Scale: 1"=40'
Date: 3/17/2017
Project Number: 14837.03

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

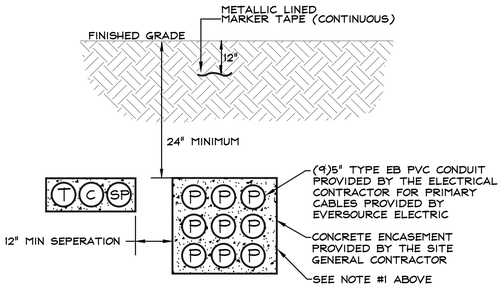
SITE PLAN REVIEW

SITE STREET LIGHTING PLAN

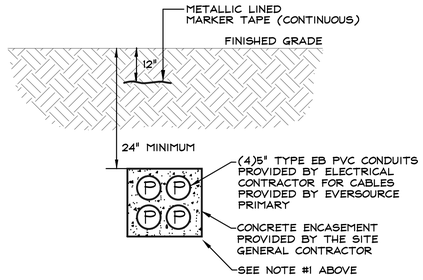
SE1.4

UNDERGROUND CONDUIT BANK DETAILS

NOTES:
1. CONCRETE ENCASEMENT OF UNDERGROUND DUCT BANKS SHALL BE PROVIDED BY THE SITE OR GENERAL CONTRACTOR IN ACCORDANCE WITH LOCAL UTILITY COMPANY STANDARDS.
2. ALL SCHEDULE 40 PVC RACEWAYS UTILIZED SHALL BE UL LISTED ELECTRICAL CONDUITS.
3. ALL UNDERGROUND CONDUIT BANKS AND CABLING SHALL COMPLY WITH EVERSOURCE, FAIRPOINT, COMCAST AND BAYRING RULES, REGULATIONS AND DESIGN STANDARDS.



SECTION A-A



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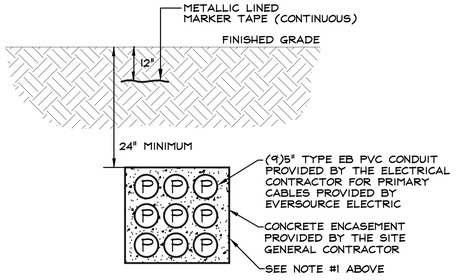

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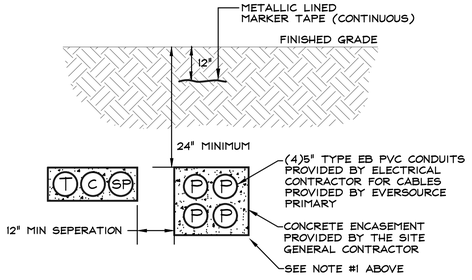

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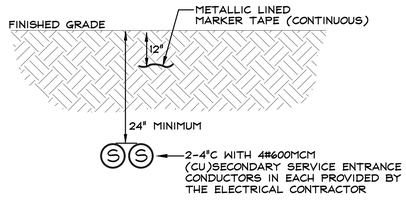

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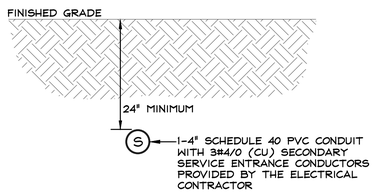

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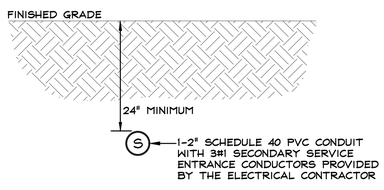
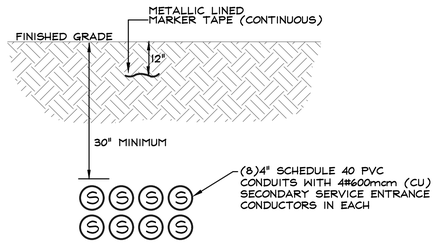
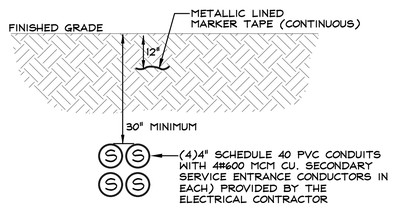


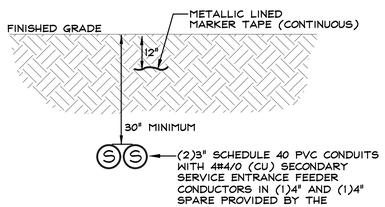
SECTION G-G



SECTION H-H



SECTION I-I



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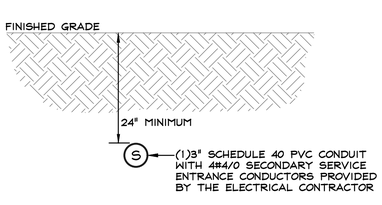

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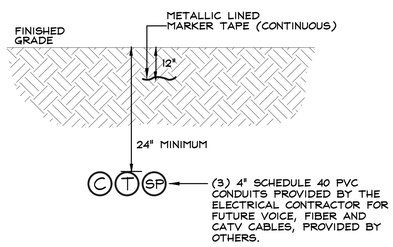

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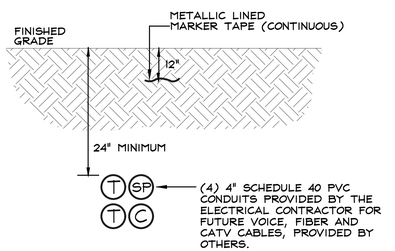

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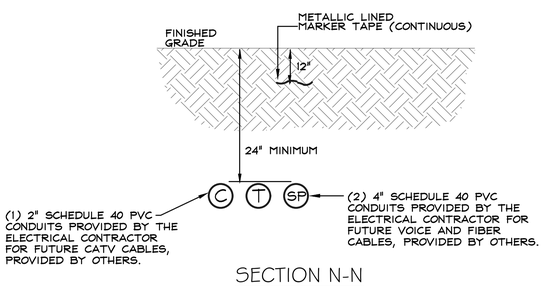

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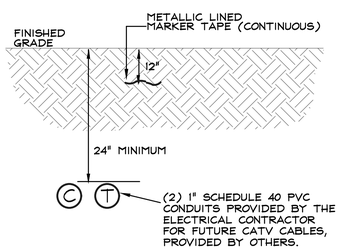

SECTION O-O

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A HARPER
LICENSED PROFESSIONAL ENGINEER

Scale:
Date: 3/17/2017
Project Number: 14837.03

REVISIONS

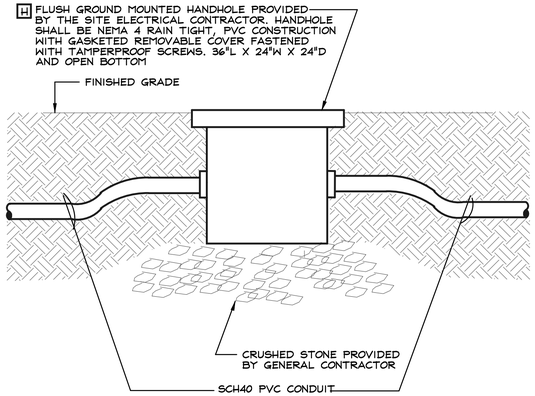
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

SITE ELECTRICAL DETAILS

SE2.1

TYPICAL SITE LIGHTING HANDHOLE DETAIL



BUILDING 6 - ELECTRICAL LOAD CALCULATIONS

Engineered Building Systems, Inc.
Consulting Engineers

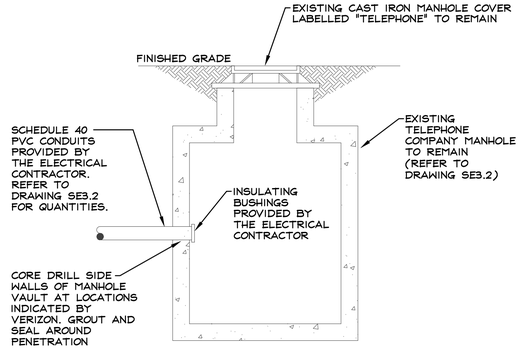
DEER STREET DEVELOPMENT – B6
43 UNITS + RETAIL + OFFICE
PRELIMINARY TOTAL BUILDING CALCULATIONS
USING OPTIONAL CALCULATION METHOD 220.84

		DEMAND KW
• **DWELLING UNIT LOADS**		
General Lighting load (220-12) = 2.7 KW unit x 43 Units = 116.1		116.1
Small Appliance 220-52(a)(b) = 3.0 KW unit x 43 Units = 129.0		129.0
Fixed Appliance Load (220-53) = 2.7 KW x 43 Units = 116.1		116.1
Clothes Dryer (Common) (220-54) = 5.0KW x 43 Units =215.0		215.0
Range/Cooktop (Electric) (220-55) = 8.0 KW x 43 Units = 344.0		328.0
Heating System (Electric) (220.60) = -0- KW unit x 43 Units =		-0-
Air Conditioning Load (Electric) = 4.0 KW x 43 Units = 172.0		172.0
Hot Water (Gas Central) = -0- KW x 43 Units = 0.0		-0-
Ventilation Systems = 0.5 KW x 43 Units = 21.5		21.5
Subtotal Dwelling Electrical Load =		1113.7
1113.7 KW x 27% =		300.7

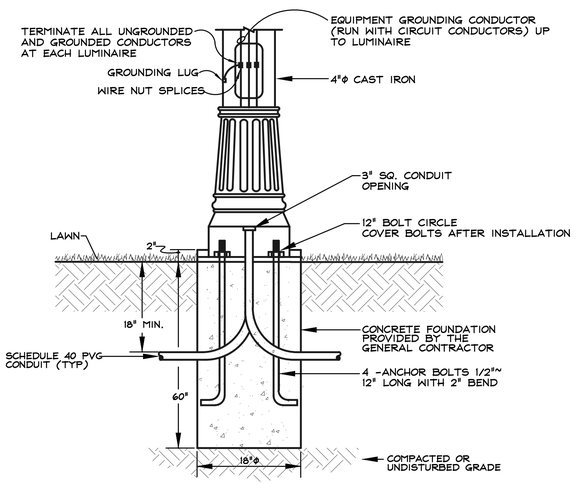
			DEMAND KW
• **NON-DWELLING UNIT LOADS**			
Exterior Lighting	3.0 KW @ 100% =		3.0
Lighting	16.0 KW @ 100% =		16.0
1 Elevator	40.0 KW @ 100%=		40.0
Miscellaneous	10.0 KW @ 100% =	10.0	
Ventilation Systems	8.0 KW @ 100% =		8.0
Heat Load	-0- KW @ 0% =	-0-	
Fire Pump Load	-0- KW @ 0% =	-0-	
A/C Load	20 Tons x 1.5 KW =	30.0	
Laundry Load	0.0 KW @ 0% =	-0-	
Subtotal Non-Dwelling Unit Electrical Load			107.0
• **OFFICE ELECTRICAL LOADS** 3,000 SQ. FT. x 12w/sq. ft.			36.0
• **RETAIL ELECTRICAL LOADS** 1,800 SQ. FT. x 20w/sq. ft.			36.0
Total Building Demand Load			480.7

479.7 KW @ 208 Volts, 3 Phase = 1331 AMPS
Recommend Minimum 1600 Ampere Service @ 120/208 Volts, 3 Phase, 4 Wire

EXISTING TELEPHONE MANHOLE ACTIVATION DETAIL

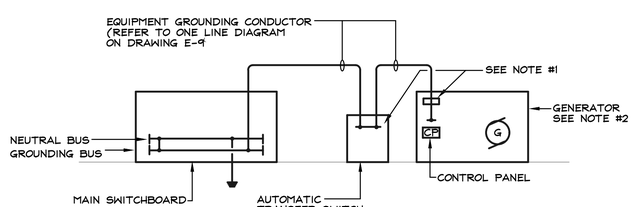


TYPICAL LP1 OR LP2 FIXTURE POLE BASE DETAIL



NOTE: SUPPORT VERTICAL CONDUCTORS IN ACCORDANCE WITH 300-19

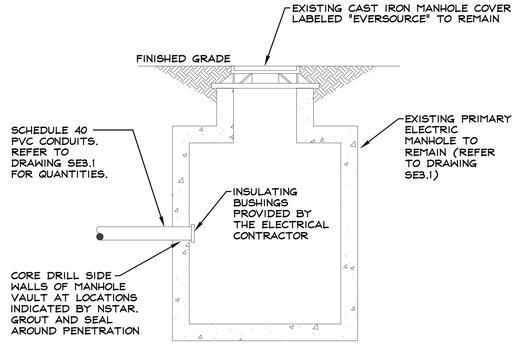
EMERGENCY GENERATOR SERVICE GROUND DETAIL



NOTES:

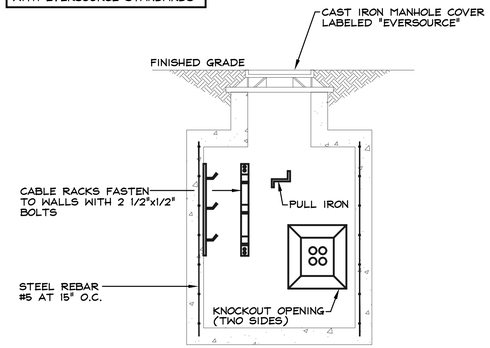
1. CONNECT EQUIPMENT GROUNDING CONDUCTOR TO GROUNDING BAR, ENCLOSURES AND GENERATOR FRAME.
2. THE EMERGENCY/STANDBY GENERATOR IS NOT A SEPERATELY DERIVED SYSTEM AND SHALL BE GROUNDED ACCORDINGLY.

EXISTING PRIMARY ELECTRIC MANHOLE ACTIVATION DETAIL



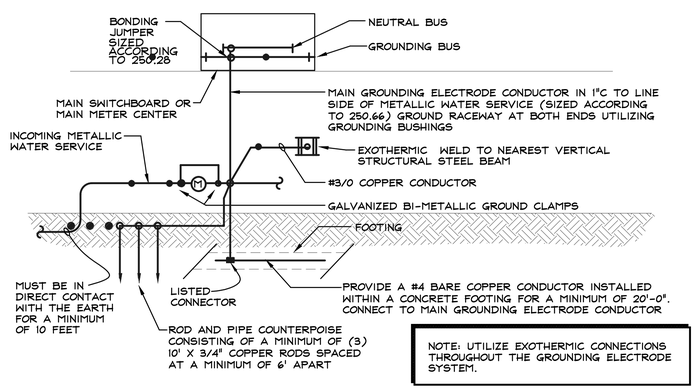
TYPICAL EVERSOURCE PRIMARY MANHOLE DETAIL

NOTE: MANHOLES AND MANHOLE GROUND GRIDS SHALL COMPLY WITH EVERSOURCE STANDARDS



MAIN SERVICE GROUNDING ELECTRODE SYSTEM DIAGRAM

NOTE: PROVIDE A GROUNDING ELECTRODE SYSTEM AS DETAILED BELOW (IF AVAILABLE ON THE PREMISES) UNTIL A MAXIMUM RESISTANCE LEVEL OF 25 OHMS TO GROUND IS ATTAINED.



NOTE: UTILIZE EXOTHERMIC CONNECTIONS THROUGHOUT THE GROUNDING ELECTRODE SYSTEM.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE JOHN A. HARPER LICENSED PROFESSIONAL ENGINEER

Scale:
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

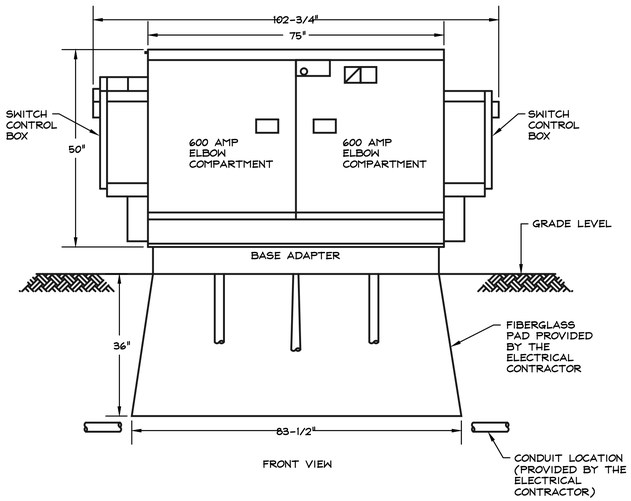
SITE PLAN REVIEW

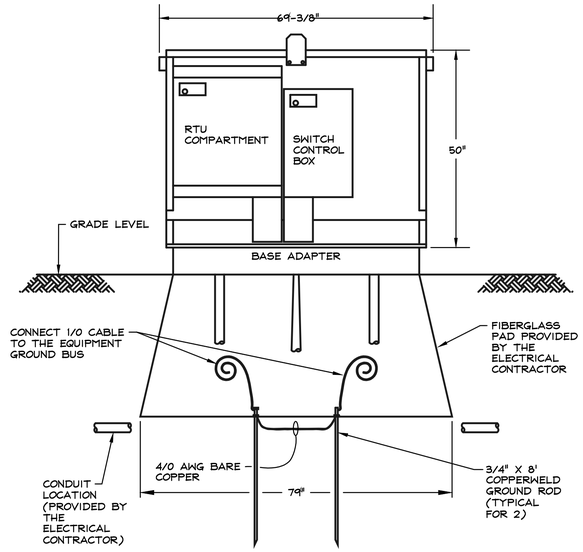
SITE ELECTRICAL DETAILS

SE2.2

EVERSOURCE PRIMARY SWITCH BOX DETAIL

NOTE: PRIMARY SWITCH IS FURNISHED AND INSTALLED BY NSTAR, ELECTRIC GROUNDING GRID PROVIDED BY THE ELECTRICAL CONTRACTOR



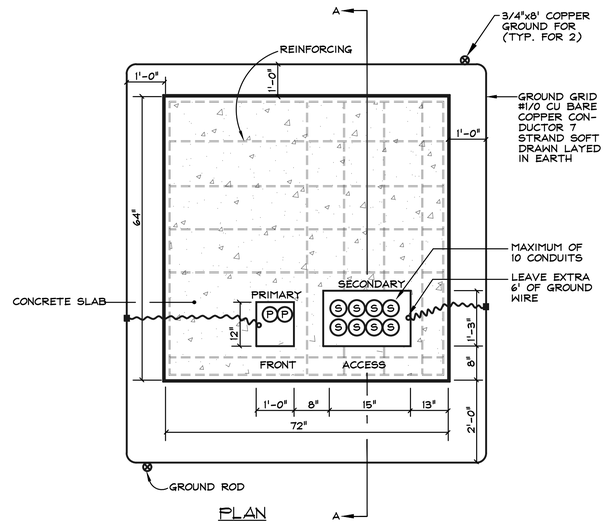


EVERSOURCE DISTRIBUTION TRANSFORMER PAD DETAIL

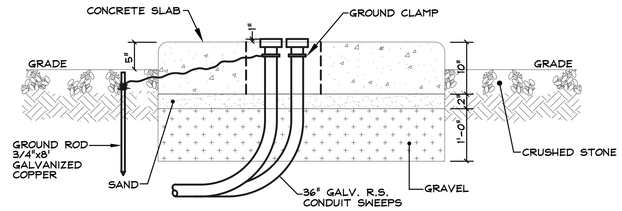
PAD CONSTRUCTION NOTES

1. NO ABOVE GROUND STRUCTURES, SHRUBS, ETC. SHALL BE INSTALLED WITHIN 4 FEET OF PAD AND WITHIN 6 FEET OF TRANSFORMER DOORS.
2. PRIMARY CONDUIT SWEEPS TO BE 5" STEEL PIPES T.¢C.
3. FOR PAD MOUNTED TRANSFORMERS, LARGER THAN 1000 KVA, INCREASE THE WIDTH OF THE PAD FROM 7'-2" TO 10' AND THE DEPTH FROM 6'-5" TO 9'.
4. THE GENERAL CONTRACTOR MUST CALL EVERSOURCE ENERGY PRIOR TO POURING PAD.
5. TRANSFORMER PAD MUST BE LOCATED 15' FROM EGRESS DOORS OR OPERABLE WINDOWS.

PAD MATERIAL:
CONCRETE, 4000 PSI MIX, NOT MORE THAN 5 1/2 GALLONS OF WATER PER BAG OF CEMENT.

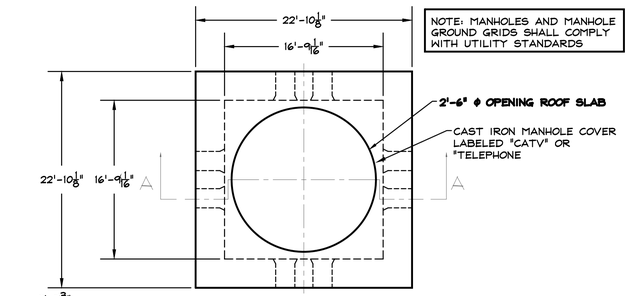


PLAN

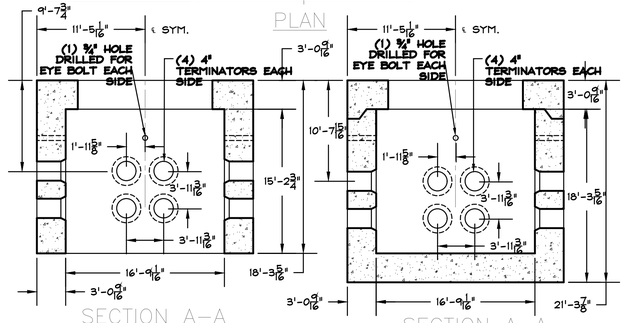


SECTION A-A

TYPICAL CATV AND TELEPHONE HANDHOLE DETAIL



PLAN



SECTION A-A

36" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333	2680LBS

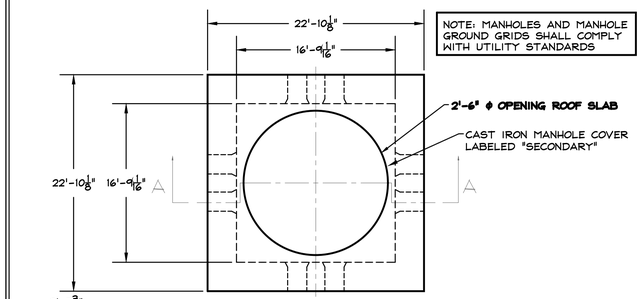
SECTION A-A

48" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333A	3690LBS

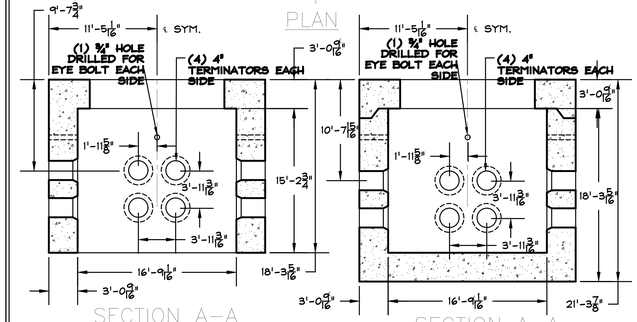
NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60. MINIMUM STEEL COVER 1".
3. DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
4. OPTIONAL OPENINGS AVAILABLE BY SPECIAL ORDER.

TYPICAL SECONDARY HANDHOLE DETAIL



PLAN



SECTION A-A

36" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333	2680LBS

SECTION A-A

48" HIGH STRUCTURE	WEIGHT
ITEM NO. MH333A	3690LBS

NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. STEEL REINFORCEMENT CONFORMS TO ASTM A615, GRADE 60. MINIMUM STEEL COVER 1".
3. DESIGN LOADING: AASHTO HS20-44, 0 TO 5 FEET COVER.
4. OPTIONAL OPENINGS AVAILABLE BY SPECIAL ORDER.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE JOHN A. HARPER LICENSED PROFESSIONAL ENGINEER

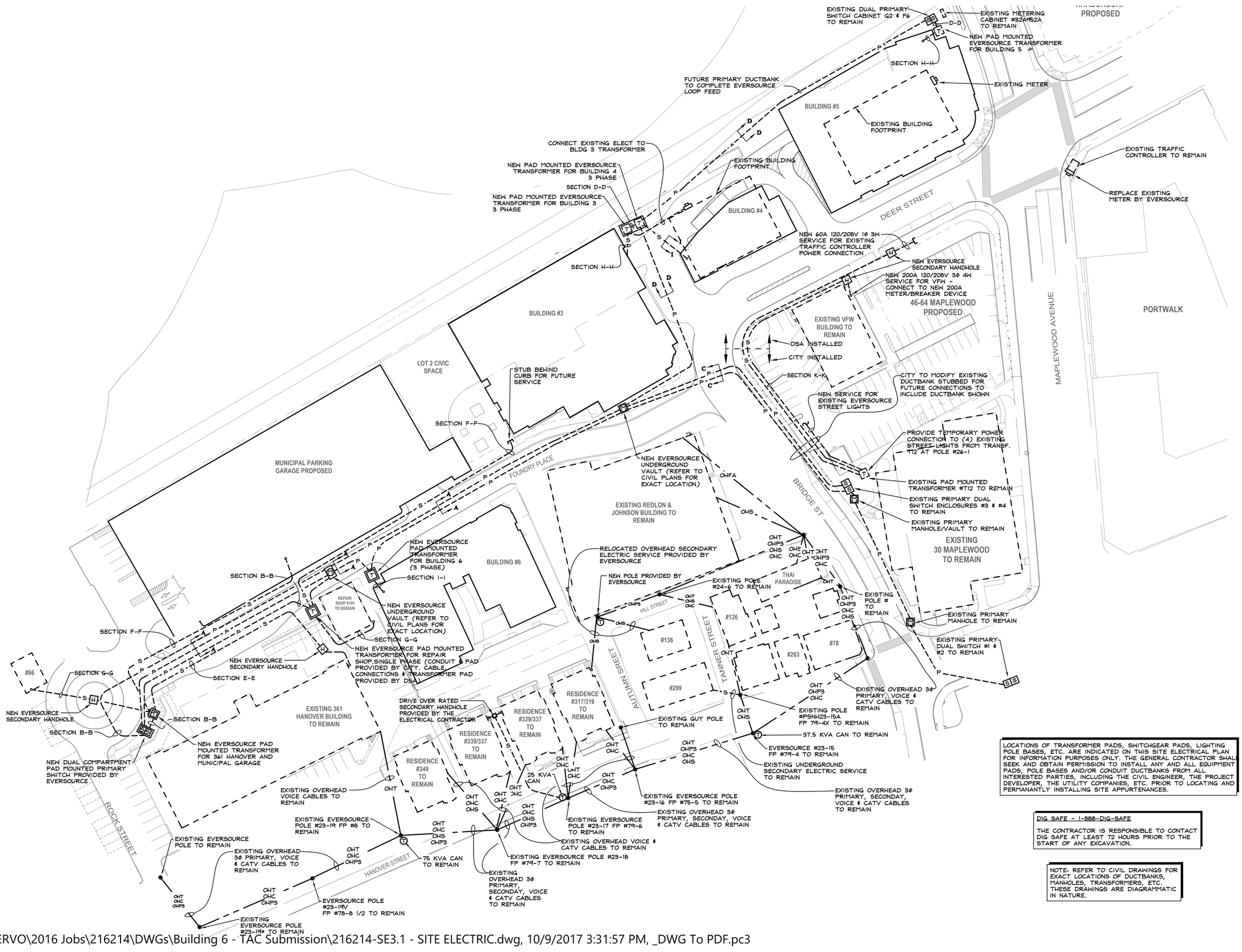
Scale:
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

SITE ELECTRICAL DETAILS

SE2.3



LOCATIONS OF TRANSFORMER PADS, SWITCHGEAR PADS, LIGHTING POLE BASES, ETC. ARE INDICATED ON THIS SITE ELECTRICAL PLAN FOR INFORMATION PURPOSES ONLY. THE GENERAL CONTRACTOR SHALL SEEK AND OBTAIN PERMISSION TO INSTALL ANY AND ALL EQUIPMENT PADS, POLE BASES AND/OR CONDUIT DUCTBANKS FROM ALL INTERESTED PARTIES, INCLUDING THE CIVIL ENGINEER, THE PROJECT DEVELOPER, THE UTILITY COMPANIES, ETC. PRIOR TO LOCATING AND PERMANANTLY INSTALLING SITE APPURTENANCES.

DIG SAFE - 1-888-DIG-SAFE

THE CONTRACTOR IS RESPONSIBLE TO CONTACT DIG SAFE AT LEAST 72 HOURS PRIOR TO THE START OF ANY EXCAVATION.

NOTE: REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS OF DUCTBANKS, MANHOLES, TRANSFORMERS, ETC. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

Deer Street Associates

STATE OF NEW HAMPSHIRE — JOHN A. HOPPER — LICENSED PROFESSIONAL ENGINEER

Scale: 1"=40'
Date: 3/17/2017
Project Number: 14837.03

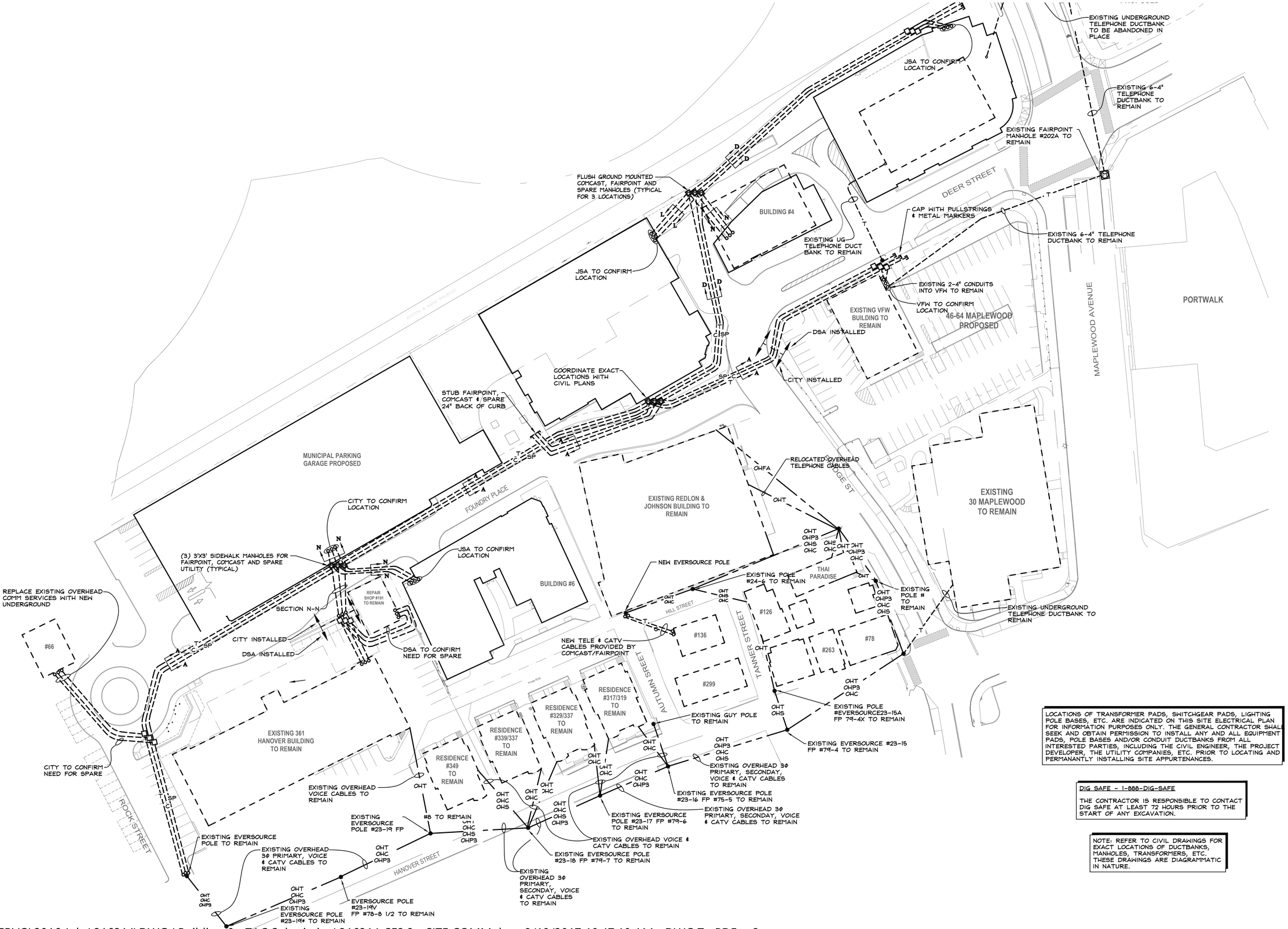
REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

SITE ELECTRICAL PLAN

SE3.1



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NOTE: REFER TO CIVIL DRAWINGS FOR EXACT LOCATIONS OF DUCTBANKS, MANHOLES, TRANSFORMERS, ETC. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE.

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

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STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED PROFESSIONAL ENGINEER

Scale:	1"=40'
Date:	3/17/2017
Project Number:	14837.03

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

SITE COMMUNICATION PLAN

SE3.2

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

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Deer Street Associates

STATE OF NEW HAMPSHIRE
JOHN A. HARPER
LICENSED PROFESSIONAL ENGINEER

Scale:	1"=40'
Date:	3/17/2017
Project Number:	14837.03

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

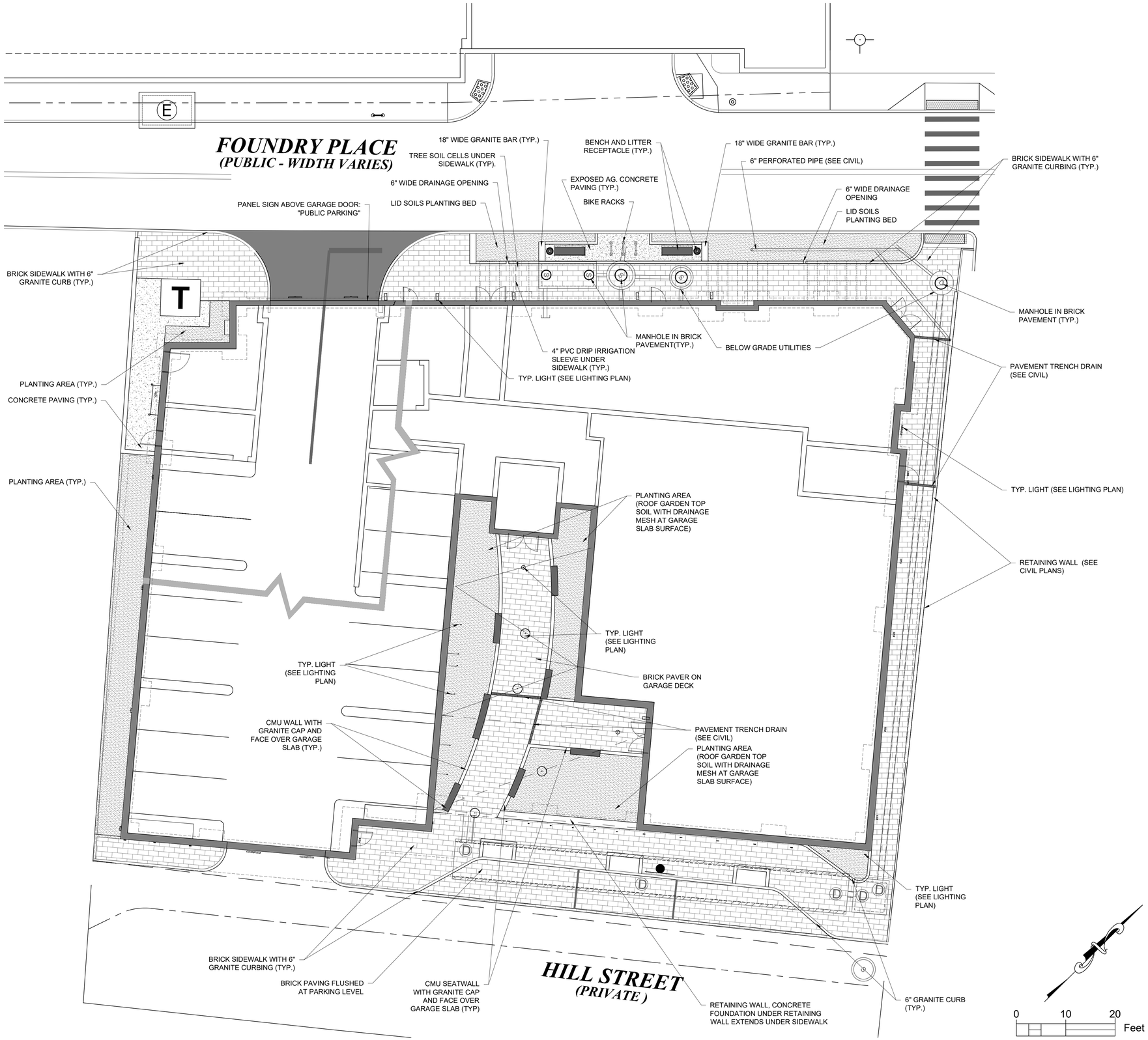
SITE PLAN REVIEW

SITE ELECTRICAL DEMOITION PLAN - EXISTING CONDITIONS

SED1.1

5/11/2017 12:15:40 PM C:_Revit Projects 2016\2016 - 837.03 - Deer St_ Hill St. Housing - CENTRAL - CURRENT_2017-02-28_lkozak.rvt

\\SERVO\2016 Jobs\216214\DWGs\Building 6 - TAC Submission\216214-SED1.1 - SITE DEMO.dwg, 8/18/2017 10:47:15 AM, _DWG To PDF.pc3



SCALE: 1" = 10'

5/10/2017 10:34:15 AM C:_Revit Projects 2016\2016 - 837.03 - Deer St_ Hill St. Housing - CENTRAL - CURRENT_2017-02-28_kozak.rvt

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL STREET, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED LANDSCAPE ARCHITECT
ROBERT A. WHITE
083
STATE OF NEW HAMPSHIRE

Scale:	As indicated
Date:	3/17/2017
Project Number:	14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	TAC PUBLIC HEARING	10/10/2017

SITE PLAN REVIEW

MATERIALS PLAN

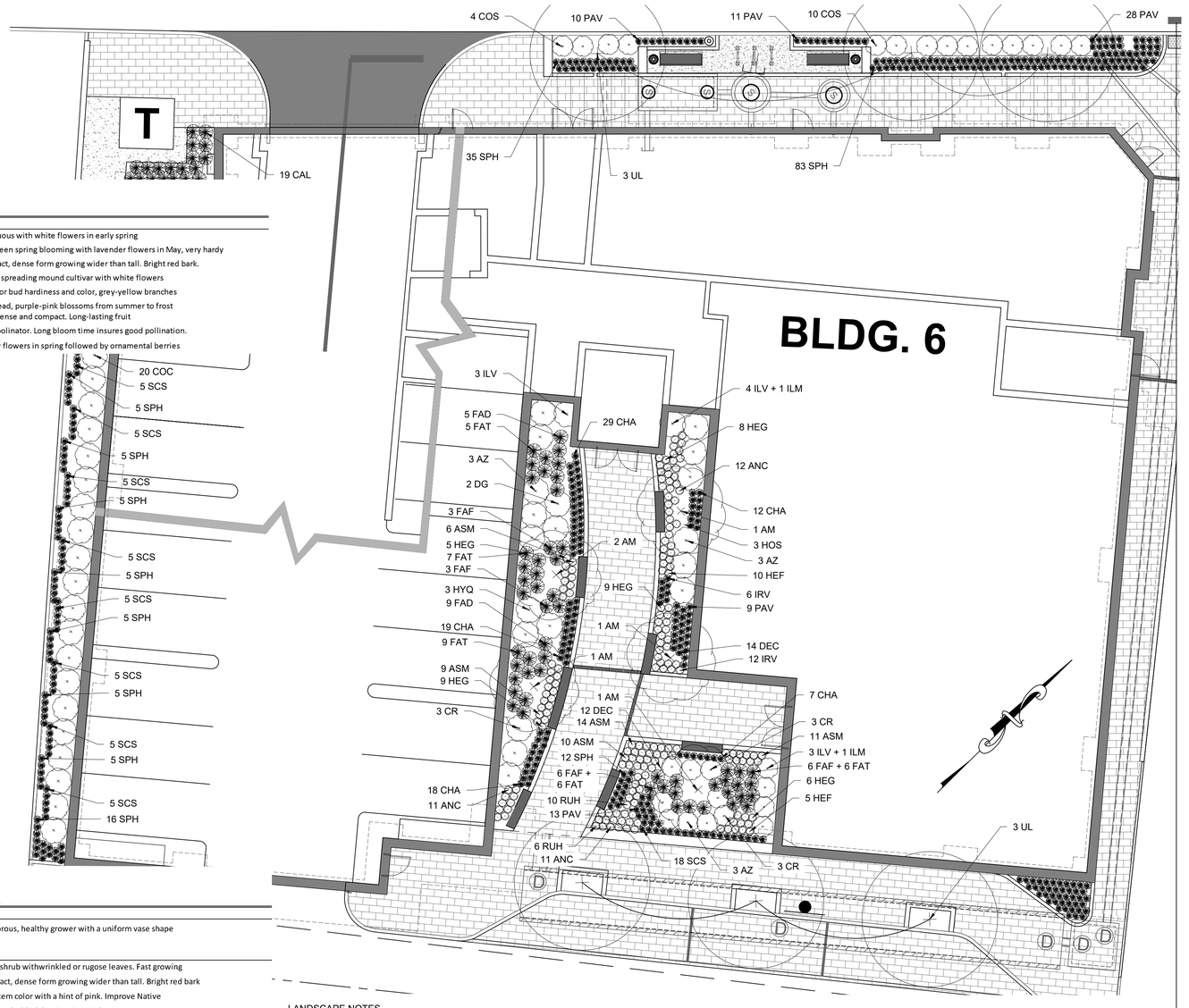
L1

LOT 6 -Courtyard

Symbol	Scientific Name	Common Name	Size	Spacing	Mature Height	Crown Spread	Growth Habit	TOLERANCES: Drought	Poor Drainage	Alkaline Soil	Salt	Air Pollution	Shade	Notes
Shrubs														
AM	AMELANCHIER Canadensis multi-stem	Serviceberry, Shadblow	8-10' ht.	see plan	16-24'	8'	Oval	moderate	moderate	moderate	moderate	tolerant	moderate	Deciduous with white flowers in early spring
AZ	AZALEA x 'Karen' (Gable Hybrid)	Karen Azalea	3-4' ht	see plan	2-4'	3-4'	Spreeding	moderate	moderate	moderate	moderate	tolerant	moderate	Evergreen spring blooming with lavender flowers in May, very hardy
CR	CORNUS sericea 'Isanti'	Dogwood, Isanti Red-Osier	3-4' ht	see plan	4-5'	5-7'	Mounded	moderate	moderate	moderate	moderate	tolerant	moderate	Compact, dense form growing wider than tall. Bright red bark.
DG	DEUTZIA gracilis 'Nikko'	slender deutzia	3-4' ht	see plan	1-2'	2-5'	Mounded	moderate	moderate	moderate	moderate	tolerant	moderate	Dense spreading mound cultivar with white flowers
FN	FORSYTHIA 'Northern Gold'	Forsythia	3-4' ht	see plan	6-8'	6-8'	Upright	moderate	moderate	moderate	moderate	tolerant	moderate	superior bud hardiness and color, grey-yellow branches
HYQ	HYDRANGEA 'Bloom Struck'	Hydrangea	3-4' ht	see plan	3-4'	3-4'	Mounded	moderate	moderate	moderate	moderate	tolerant	tolerant	Mophead, purple-pink blossoms from summer to frost
IV	ILEX verticillata 'Red Sprite' *(female)*	Winterberry 'Red Sprite'	3-4' ht	see plan	3-4'	3-4'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Very dense and compact. Long-lasting fruit
ILM	ILEX verticillata 'Jim Dandy' *(male)*	Winterberry	3-4' ht	see plan	4-5'	5-6'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Male polinator. Long bloom time insures good pollination.
LB	LINDERA benzoin	Spicebush	3-4' ht	see plan	8-10'	8-10'	Rounded	tolerant	tolerant	moderate	moderate	tolerant	tolerant	Yellow flowers in spring followed by ornamental berries

Planting Schedule

Symbol	Scientific Name	Common Name	Size	Spacing	Mature Height	Crown Spread	Growth Habit	TOLERANCES: Drought	Poor Drainage	Alkaline Soil	Salt	Air Pollution	Shade	Notes
Trees														
UA	ULMUS americana 'Princeton'	American Elm ' Princeton'	2-2.5" cal.	see plan	30-40'	24'	Vase	tolerant	tolerant	tolerant	Moderate	tolerant	moderate	A vigorous, healthy grower with a uniform vase shape
Shrubs														
ALR	ALNUS rugosa	Speckled Alder	3-4' ht	see plan	15-25'	15-25'	multi-trunked	intolerant	tolerant	moderate	moderate	tolerant	moderate	Large shrub withwrinkled or rugose leaves. Fast growing
COS	CORNUS sericea 'Artic Fire'	Dogwood, Artic-Fire Red-Osier	3-4' ht	see plan	3-4'	3-4'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Compact, dense form growing wider than tall. Bright red bark
COC	CORNUS sericea 'Cardinal'	Dogwood, Cardinal Red-Osier	3-4' ht	see plan	8-10'	8-10'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Red stem color with a hint of pink. Improve Native
GAB	GAYLUSSACIA baccata	Black Huckleberry	3-4' ht	see plan	1-3'	1-3'	Upright	tolerant	moderate	moderate	moderate	tolerant	moderate	The purple-black berries ripen in late summer
ILV	ILEX verticillata 'Red Sprite' *(female)*	Winterberry 'Red Sprite'	3-4' ht	see plan	3-4'	3-4'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Very dense and compact. Long-lasting fruit
ILM	ILEX verticillata 'Jim Dandy' *(male)*	Winterberry	3-4' ht	see plan	4-5'	5-6'	Rounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Male polinator. Long bloom time insures good pollination.
LIB	LINDERA benzoin	Spicebush	3-4' ht	see plan	8-10'	8-10'	Rounded	tolerant	tolerant	moderate	moderate	tolerant	tolerant	Yellow flowers in spring followed by ornamental red berries.
SPA	SPIRAEA alba	White Meadowsweet	3-4' ht	see plan	3-4'	3-4'	Mounded	intolerant	tolerant	moderate	moderate	tolerant	moderate	Common to wet meadow edges, white flowers in summer
SPT	SPIRAEA tormentosa	Meadowsweet	3-4' ht	see plan	2-4'	3-5'	Mounded	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Common to wet meadow edges, white flowers in summer
Ornamental Grasses														
CAL	CALAMAGROSTIS acutiflora 'Karl Foerster'	Feather Reed Grass	1 gal.	18" o.c.	3-5'	1.5-2'	Upright	moderate	tolerant	moderate	moderate	tolerant	moderate	Strong upright habit with showy flowers
CCO	CAREX comosa	Long-hair Sedge	1 gal.	18" o.c.	2-4'	2'	Fountain like	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Attractive seedheads. Very adaptable, grows well in damp soil
CCR	CAREX crinita	Fringed Sedge	1 gal.	18" o.c.	2-3'	2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	moderate	Evergreen sedge with short creeping rhizomes
CAV	Carex vulpinoidea	Fox sedge	1 gal.	18" o.c.	2-3'	2'	Clump	intolerant	tolerant	moderate	moderate	tolerant	moderate	The seedheads mature in late summer and resemble fox tails
ELP	ELEOCHARIS palustris	Marsh Spikerush	1 gal.	18" o.c.	2-3'	2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Sedge that forms dense rhizomatous mats in shallow waters
JUE	JUNCUS effusus	Common Rush	1 gal.	18" o.c.	3-4'	2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	intolerant	Easily grown in moist to wet soils, including standing water to 4"
PAV	PANICUM virgatum ' Shenandoah'	Switch Grass	2 gal.	18" o.c.	3-4'	2-3'	Upright	moderate	tolerant	moderate	moderate	tolerant	moderate	Green leaves in early summer turning to dark red
SCS	SCHIZACHYRIUM scoparium	Little bluestem	1 gal.	18" o.c.	1-2'	1-2'	Clump	moderate	tolerant	moderate	moderate	tolerant	intolerant	Finely textured clumping grass with a blue-green summer color
SPH	SPOROBOLUS heterolepis	Prairie Dropseed	1 gal.	18" o.c.	2-3'	2-3'	Clump	moderate	tolerant	moderate	moderate	tolerant	intolerant	Foliage turns golden with orange hues in fall
Perennials														
ACH	ACHILLEA 'Moonshine'	'Moonshine' yarrow	1 gal.	18" o.c.	1-2'	1'	Clusters	tolerant	moderate	moderate	moderate	tolerant	intolerant	Carefree and generous bloomers, yarrow has tight clusters of deep yellow
ASC	ASTILBE chinenses	Astilbe visions in pink	1 gal.	18" o.c.	1'	1'	Clump	moderate	tolerant	moderate	moderate	tolerant	moderate	Light pink flower plumes against a coarsely textured, blue-green foliage
CAP	CALTHA palustris	Marsh marigold	1 gal.	18" o.c.	8-12"	8-12"	Clump	intolerant	tolerant	moderate	moderate	tolerant	moderate	Bright yellow buttercup flowers early spring, found in marshesand wet
CHG	CHELONE glabra	Turtlehead	1 gal.	18" o.c.	2-4'	1-2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	moderate	Spikes of elegant white flowers top shiny green foliage in late summer
DIE	DICENTRA eximia 'Luxuriant'	Bleeding Heart	1 gal.	18" o.c.	12-18"	12-18"	Clump	moderate	tolerant	moderate	moderate	tolerant	tolerant	Pink flowers on 12-15" spikes, cutleaf blue-green foliage
COM	COREOPSIS verticillata 'Moonbeam'	Tickseed, Moonbeam	1 gal.	18" o.c.	1.5-2'	1.5-2'	Clump	tolerant	moderate	moderate	moderate	tolerant	intolerant	Creamy yellow flowers from summer to fall on threadleaf foliage
ECP	ECHINACEA purpurea	Purple Coneflower	1 gal.	18" o.c.	2-5'	1.5-2'	Upright	tolerant	moderate	moderate	moderate	tolerant	moderate	Large, daisy-like flowers that bloom all summer
LOC	LOBELIA cardinalis	Cardinal Flower	1 gal.	18" o.c.	2-3'	1-2'	Upright	intolerant	tolerant	moderate	moderate	tolerant	moderate	Perennial forb common to wet meadows
MOD	MONARDA didyma 'Marshall's Delight'	Marshall's Delight Bee Balm	1 gal.	18" o.c.	2-4'	2-3'	Upright	moderate	tolerant	moderate	moderate	tolerant	moderate	True medium pink flowers top the stout
NEF	NEPETA x faassenii 'Walker's Low'	Walker's Low Catmint	1 gal.	18" o.c.	1-2'	1.5-3'	Clump	tolerant	intolerant	moderate	moderate	tolerant	tolerant	Spikes of lavender-blue flowers cover the silvery-green mounds in late spring
RUH	RUDBECKIA hirta	Black-eyed Susan	1 gal.	18" o.c.	2-3'	1-2'	Clump	moderate	moderate	moderate	moderate	tolerant	moderate	A showy wildflower
SAS	SALVIA x silvestris 'Mainacht'	Salvia May Night	1 gal.	18" o.c.	1.5-2'	1-1.5'	Clump	tolerant	moderate	moderate	moderate	tolerant	intolerant	Long bloomer with deep dark violet-blue flowers
SAN	SALVIA nemerosa 'Wesuwe'	Salvia Vesuvius	1 gal.	18" o.c.	1-1.5'	1.5-2'	Clump	tolerant	moderate	moderate	moderate	tolerant	intolerant	Softly hairy, scented leaves. Will flower twice if cut to ground after first flowerin



LANDSCAPE NOTES

1. The property owner and all future property owners shall be responsible for the maintenance, repair and replacement of all required screening and landscape materials.
2. All required plant materials shall be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse and debris. All required fences and walls shall be maintained in good repair.
3. The property owner shall be responsible to remove and replace dead or diseased plant materials immediately with the same type, size and quantity of plant materials as originally installed, unless alternative plantings are requested, justified and approved by the Planning Board or Planning Director.

0 10 20 Feet

SCALE: 1" = 10'

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RESIDENCES AT FOUNDRY PLACE,
LOT 6: 181 HILL STREET,
ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

REGISTERED LANDSCAPE ARCHITECT
ROBERT A. WHITE
083
STATE OF NEW HAMPSHIRE

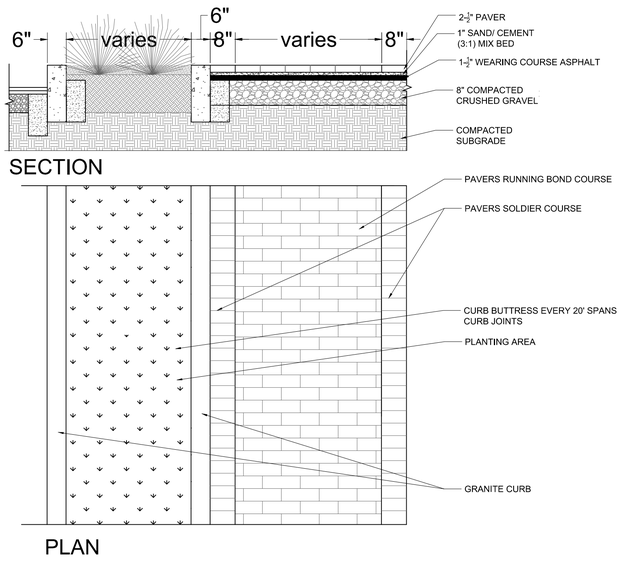
Scale: As indicated
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	TAC PUBLIC HEARING	10/10/2017

SITE PLAN REVIEW

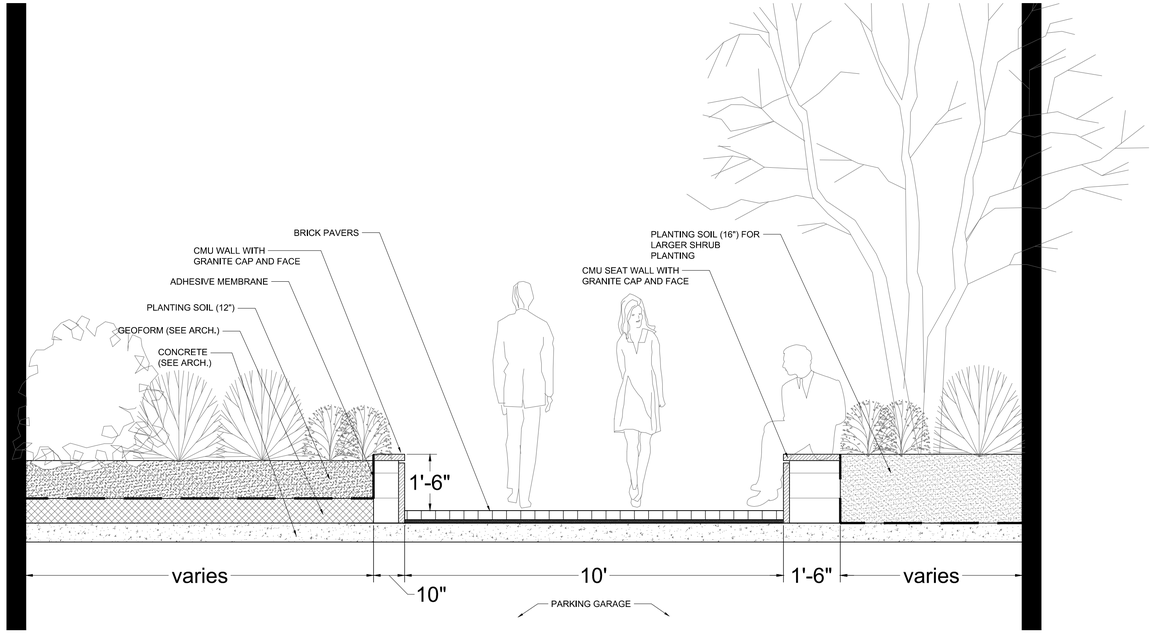
PLANTING PLAN

L2



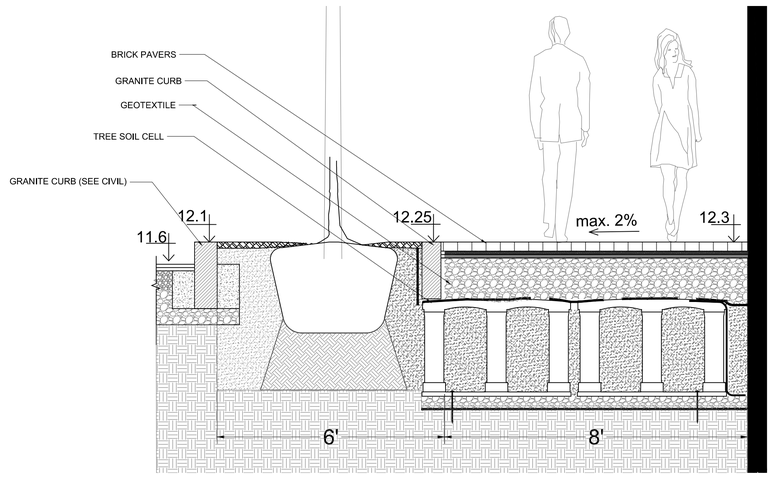
1 Typ. Sidewalk Detail

Scale 6"=1'-0"



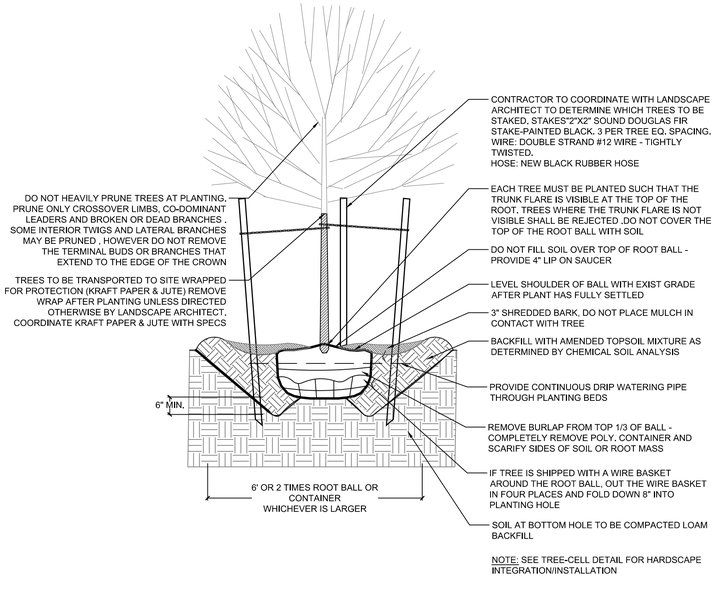
3 Section 1-1 Through Courtyard

Scale 6"=1'-0"



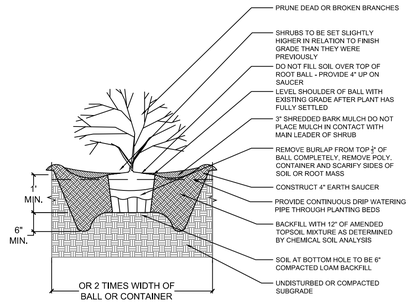
2 Section 2-2 Through Streetscape

Scale 6"=1'-0"



4 Tree Planting Detail

nts



5 Shrub Planting Detail

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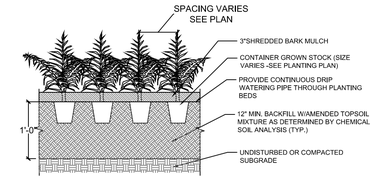

6 Perennial Planting Detail

nts

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ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

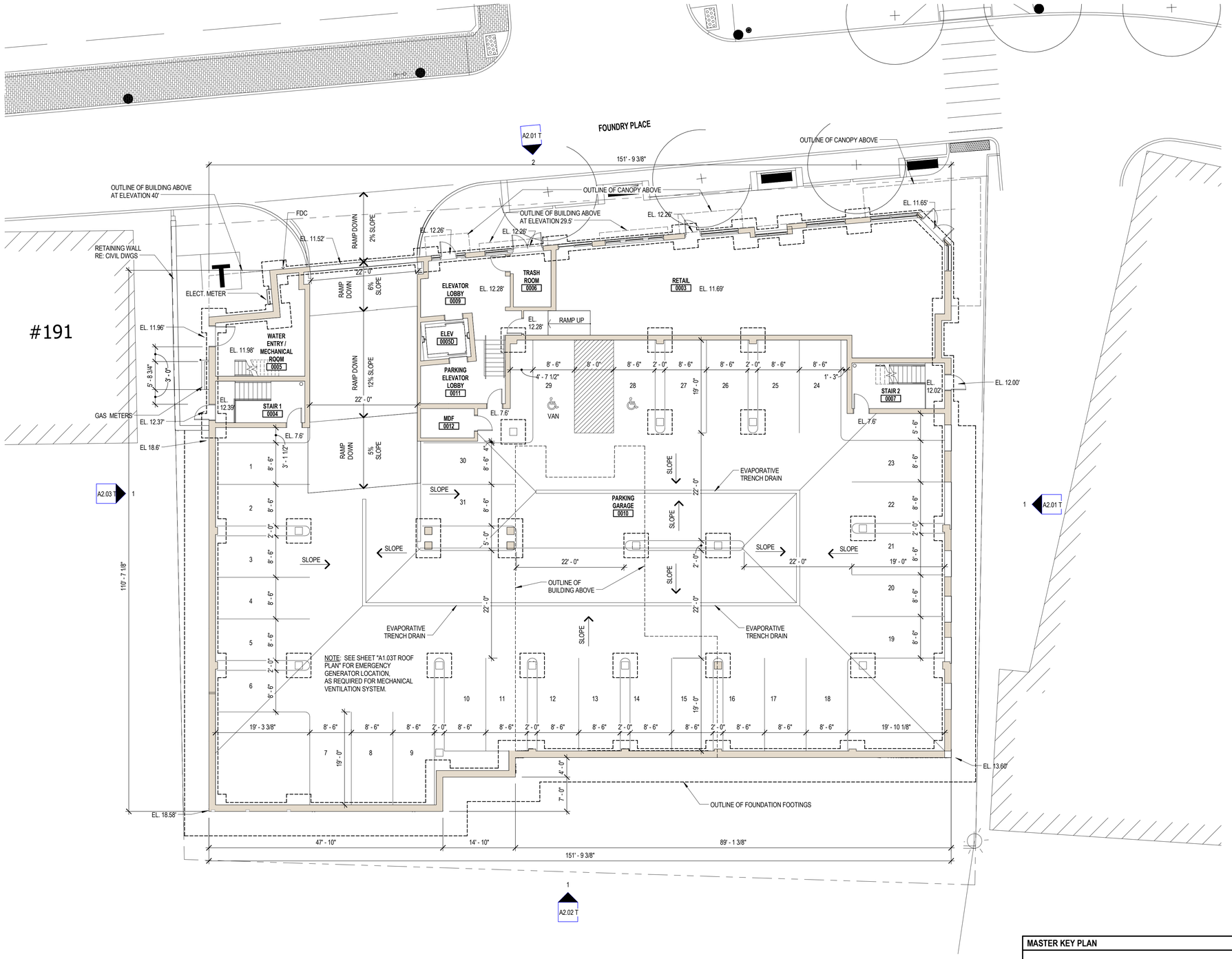
Scale: As indicated
Date: 3/17/2017
Project Number: 14837.03

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017
3	TAC PUBLIC HEARING	10/10/2017

SITE PLAN REVIEW

DETAILS AND SECTIONS

L3

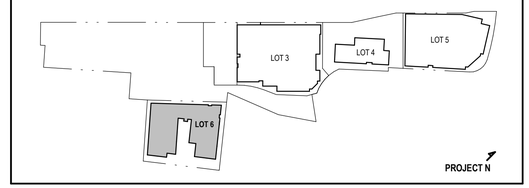


1 GROUND LEVEL (FOUNDRY PL)
3/32" = 1'-0"

GRAPHIC SCALE: 3/32" = 1'-0"
0' 5' 10' 20'

NOTES:
1. KNOX BOXES TO BE LOCATED AT ALL EXTERIOR ENTRY DOORS. KEYING TO BE COORDINATED WITH PORTSMOUTH FIRE DEPART REQUIREMENTS.

MASTER KEY PLAN



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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT MARK K. MOELLER No. 5353

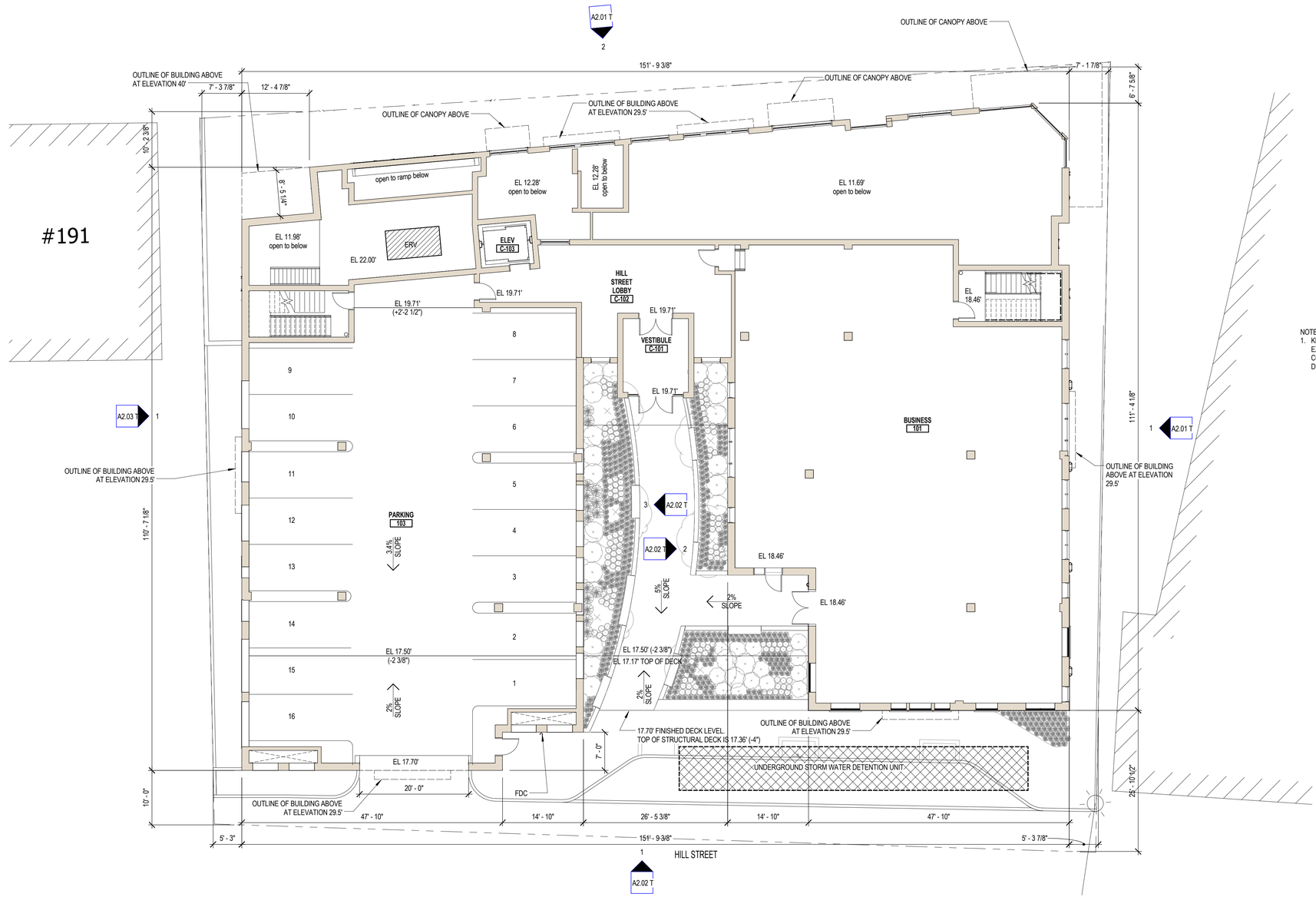
Scale: **As indicated**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

GROUND LEVEL (FOUNDRY PL) PLAN

A1.01 T

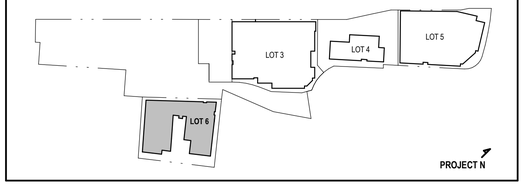


NOTES:
1. KNOX BOXES TO BE LOCATED AT ALL EXTERIOR ENTRY DOORS. KEYING TO BE COORDINATED WITH PORTSMOUTH FIRE DEPART REQUIREMENTS.

1 **GROUND LEVEL (HILL STREET)**
3/32" = 1'-0"

GRAPHIC SCALE: 3/32" = 1'-0"
0' 5' 10' 20'

MASTER KEY PLAN



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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 3369
STATE OF NEW HAMPSHIRE

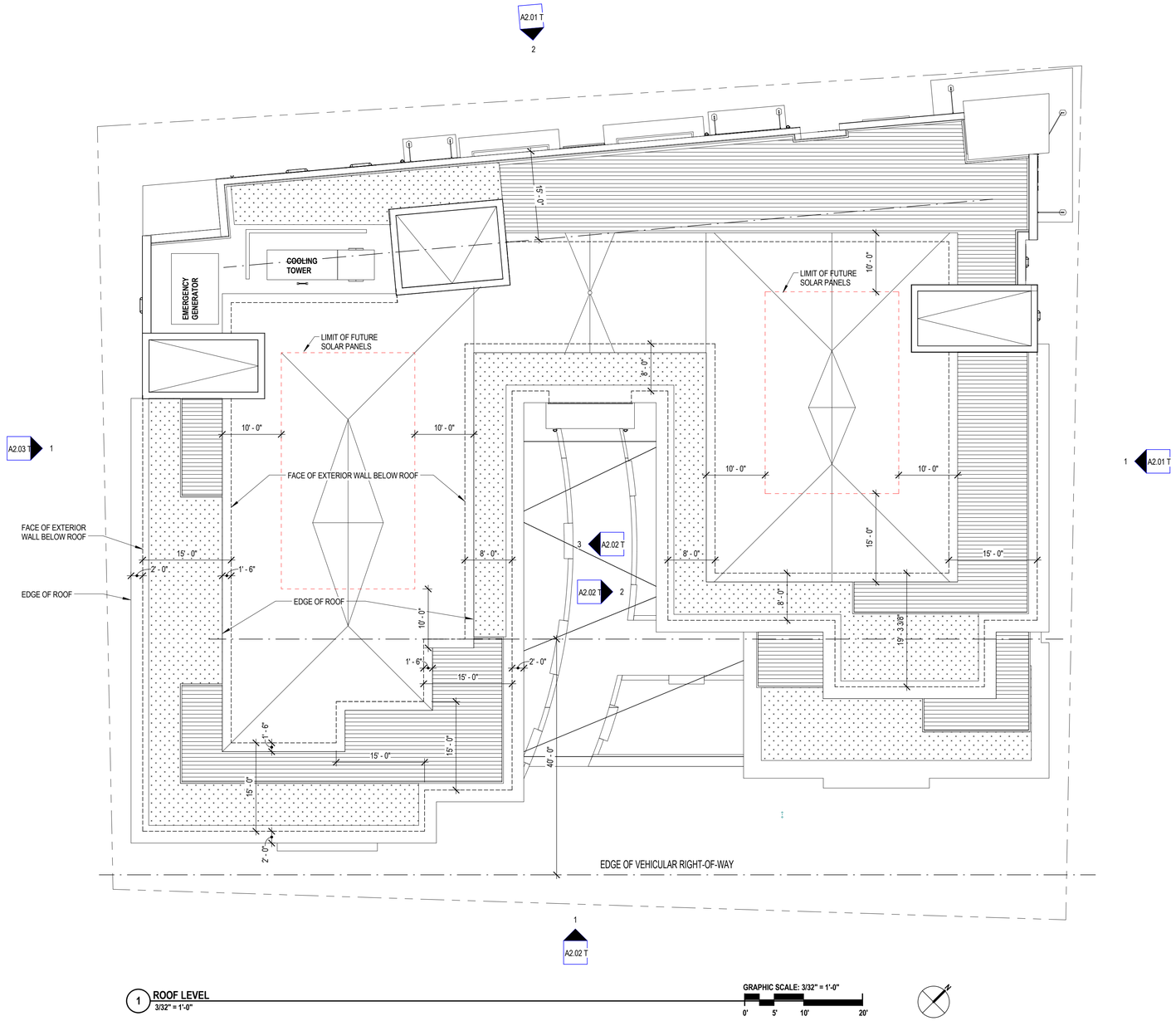
Scale: **As indicated**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

LEVEL 1 FLOOR (HILL ST) PLAN

A1.02 T



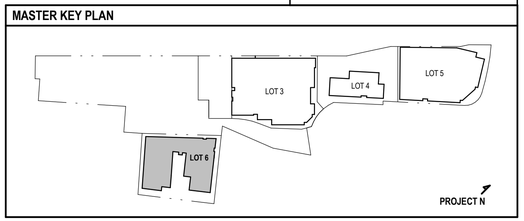
1 **ROOF LEVEL**
3/32" = 1'-0"

GRAPHIC SCALE: 3/32" = 1'-0"
0' 5' 10' 20'

ROOF LEGEND

- AREA OF PROPOSED GREEN ROOF PLANTINGS
- AREA OF ROOF TERRACES

MASTER KEY PLAN



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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

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YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 5353
THE STATE OF NEW HAMPSHIRE

Scale: **As indicated**
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Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
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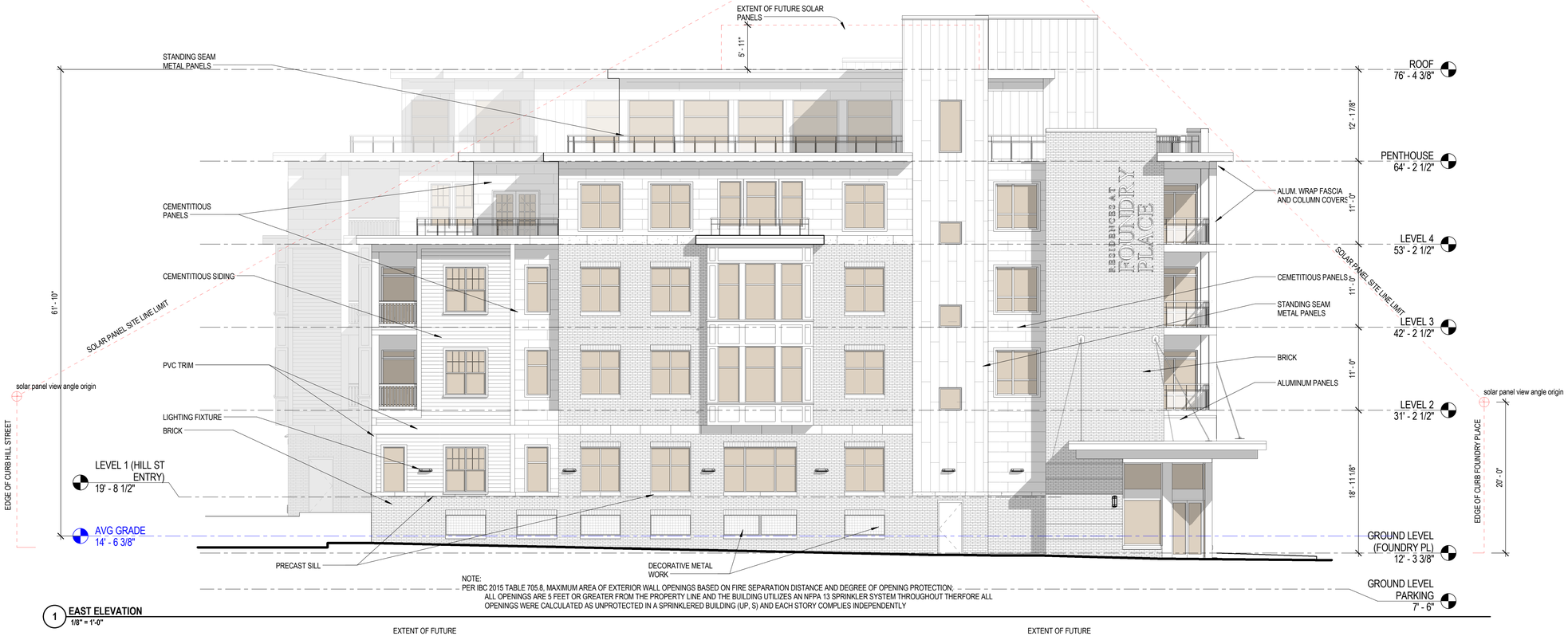
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

ROOF PLAN

A1.03 T



1 **EAST ELEVATION**
1/8" = 1'-0"

NOTE:
PER IBC 2015 TABLE 705.8, MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION;
ALL OPENINGS ARE 5 FEET OR GREATER FROM THE PROPERTY LINE AND THE BUILDING UTILIZES AN NFPA 13 SPRINKLER SYSTEM THROUGHOUT THERFORE ALL OPENINGS WERE CALCULATED AS UNPROTECTED IN A SPRINKLERED BUILDING (UP, S) AND EACH STORY COMPLIES INDEPENDENTLY

2 **NORTH ELEVATION (FOUNDRY PLACE)**
1/8" = 1'-0"

8/17/2017 11:09:15 AM C:_Revit Projects 2016\2016 - 837.03 - Deer St - Lot 6 - CENTRAL - CURRENT_2017-08-08_mparma.rvt

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 5263
THE STATE OF NEW HAMPSHIRE

Scale:	**1/8" = 1'-0"**
Date:	**3/17/2017**
Project Number:	**14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

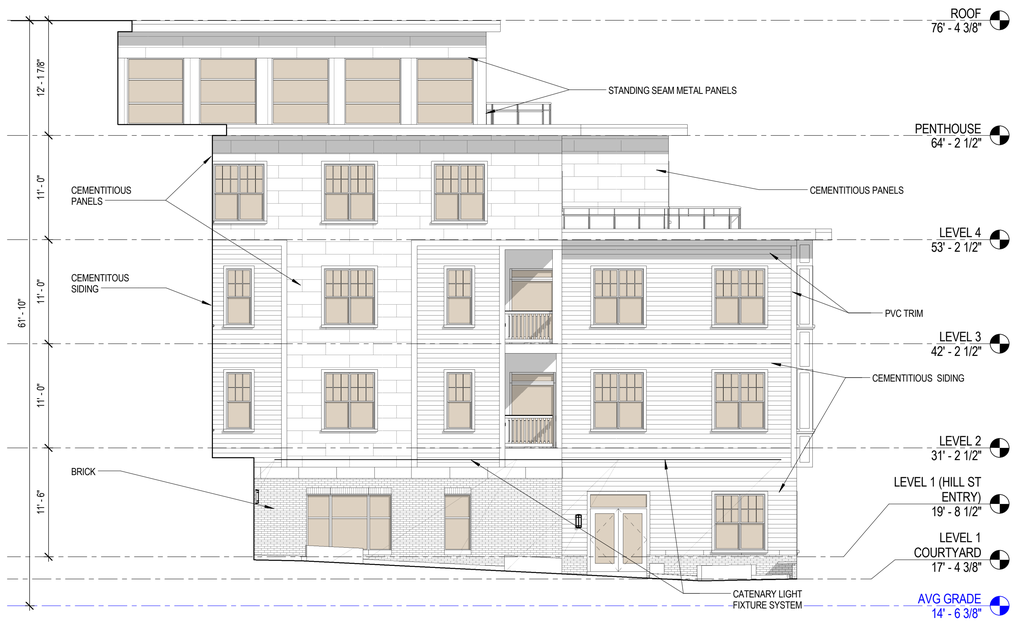
SITE PLAN REVIEW

EXTERIOR ELEVATIONS

A2.01 T

1 **SOUTH ELEVATION (HILL STREET)**
1/8" = 1'-0"

3 **COURTYARD EAST ELEVATION**
1/8" = 1'-0"



2 **COURTYARD WEST ELEVATION**
1/8" = 1'-0"

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

LICENSED ARCHITECT
MARK K. MOELLER
No. 3059
STATE OF NEW HAMPSHIRE

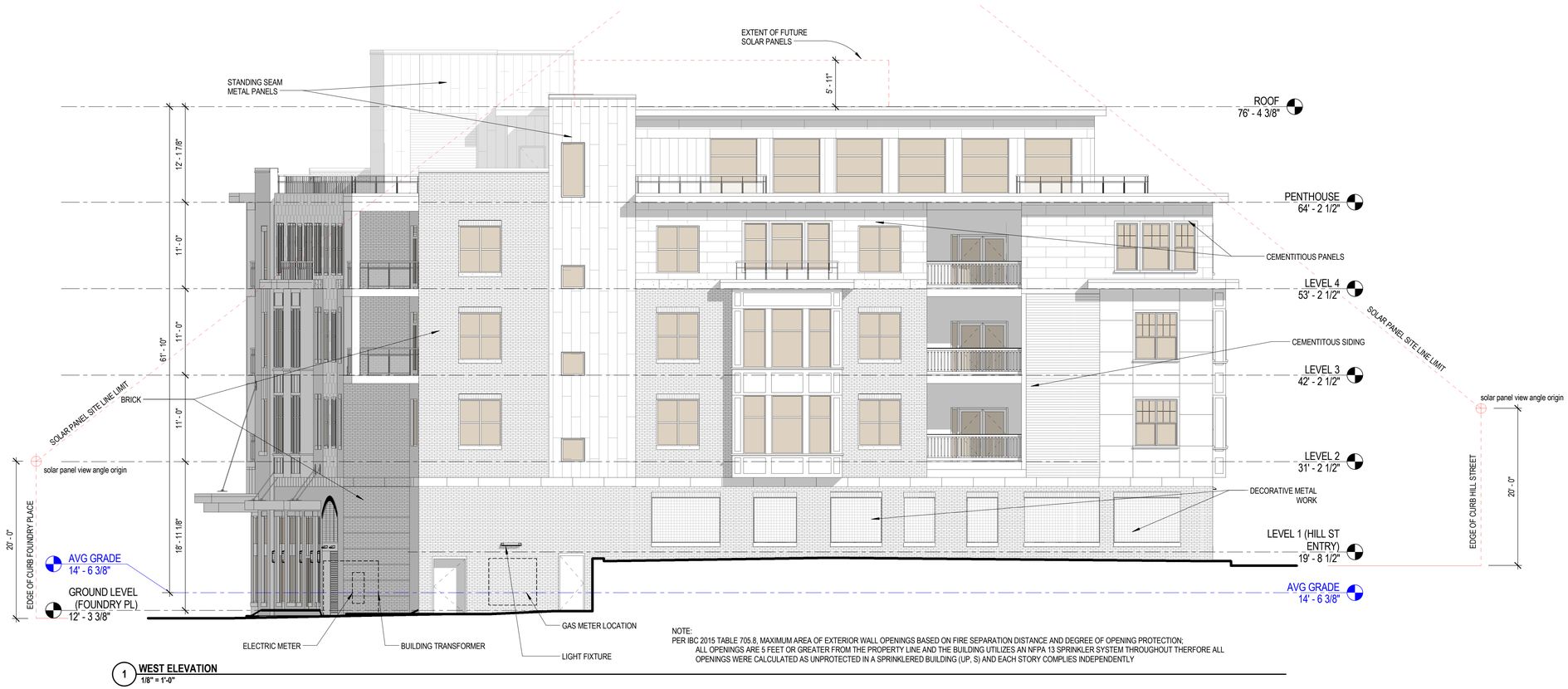
Scale: **1/8" = 1'-0"**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EXTERIOR ELEVATIONS

A2.02 T



NOTE:
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1 **WEST ELEVATION**
1/8" = 1'-0"

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RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62

PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:

Scale: **1/8" = 1'-0"**
Date: **3/17/2017**
Project Number: **14837.03**

REVISIONS

NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
2	TAC PUBLIC HEARING	8/21/2017

SITE PLAN REVIEW

EXTERIOR ELEVATIONS

A2.03 T

1-HILL STREET

2- FOUNDRY PLACE

JSA
ARCHITECTS
INTERIORS
PLANNERS

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WOBURN, MASSACHUSETTS

ENGINEERED BUILDING SYSTEMS
ELECTRICAL ENGINEER
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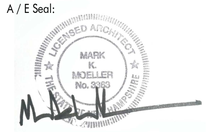
RESIDENCES AT FOUNDRY PLACE, LOT 6: 181 HILL ST, ASSESSORS MAP 138 LOT 62
PORTSMOUTH, NH 03801

OWNER:

Deer Street Associates

7 BANKS ROCK ROAD
YORK HARBOR, ME

A / E Seal:



Scale:
Date: **3/17/2017**
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REVISIONS		
NO.	DESCRIPTION	DATE
1	TAC PUBLIC HEARING	6/15/2017
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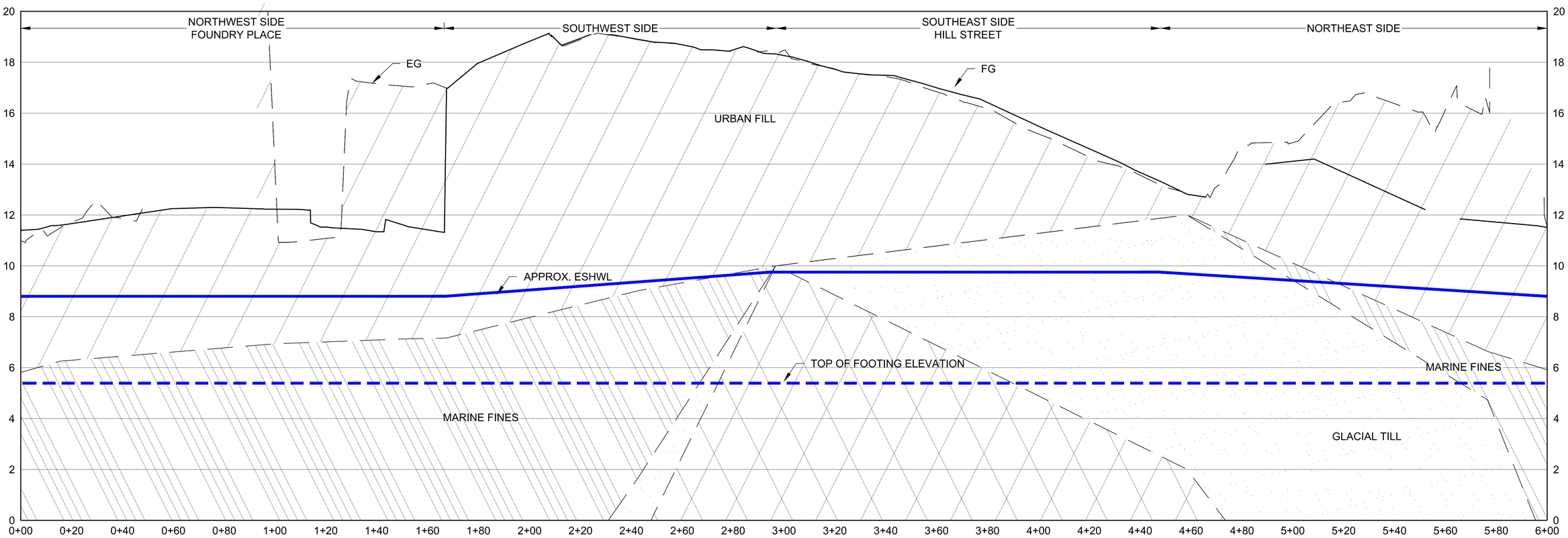
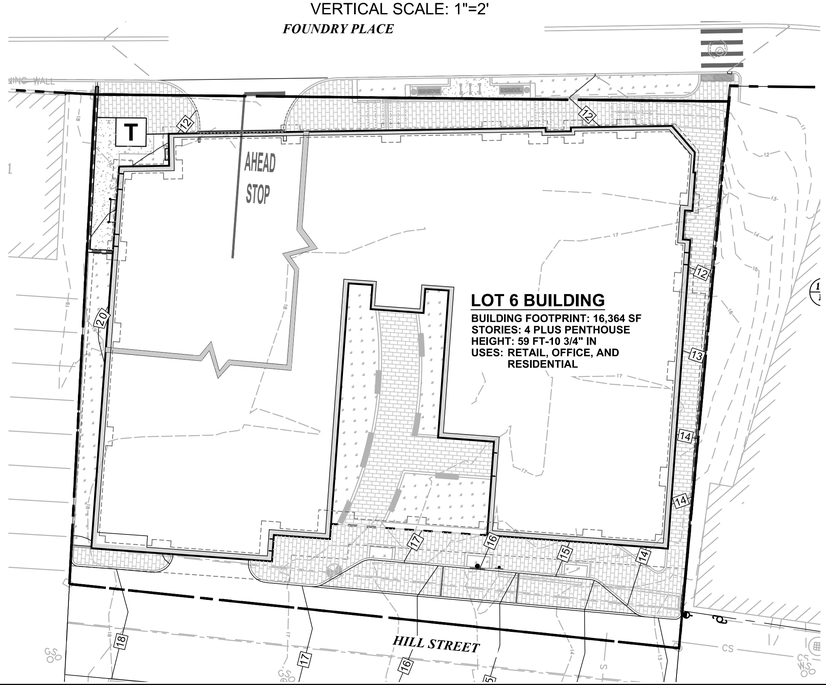
SITE PLAN REVIEW

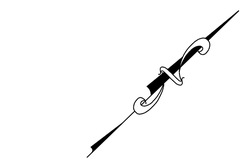
3D VIEWS

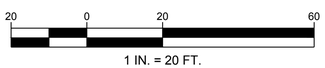
A3.00 T



LOT 6 SUBSURFACE CONDITIONS
HORIZONTALE SCALE: 1"=20'
VERTICAL SCALE: 1"=2'







PRELIMINARY DRAFT PROFILE OF LOT 6 SUBSURFACE CONDITIONS. THIS PROFILE IS EXPECTED TO BE UPDATED WITH ADDITIONAL DATA.

CLIENT: DEER STREET ASSOCIATES			
PROJECT: THE RESIDENCES AT FOUNDRY PLACE LOT 6: 181 HILL STREET			
TITLE: PERIMETER SUBSURFACE PROFILE EXHIBIT			
DESIGNED: ARC	DRAWN: ARC	CHECKED: MCP	APPROVED: MCP
SCALE: 1" = 20'	DATE: 11/06/17	FILE NO.: 8090-LOT-6	PROJECT NO.: 8090

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FIGURE NO.: EXB-1